No. 412.383
v. 28
1921

Digitized by the Internet Archive
in 2011 with funding from
Boston Public Library

http://www.archive.org/details/motorcycle28lond

A REVIEW OF 1921 EVENTS.

# THE MOTOR CYCLE

4D

*Circulation Exceeds 120,000 Weekly.* *Founded 1903.*

COVERS EVERY PHASE OF THE MOVEMENT AND CIRCULATES THROUGHOUT THE WORLD

No. 980. Vol. 28. Thursday, January 5th, 1922. Price 4d.

MOTOR F.N. CYCLES

1922 PRICES

STARTLING REDUCTIONS.

"F.N." 2½ h.p. 2 speeds, disc clutch, shaft and bevel drive model is a sturdy, reliable, go-anywhere mount of moderate weight, with simplicity as its keynote. £55

7 h.p., 4-cylinder, shaft drive "F.N." is the ideal machine for Sidecar use. Smooth, powerful, flexible, economical, and reliable. £95

With "F.N." Coachbuilt Sidecar on strong chassis, wheel in frame, 3-inch tyre. £127

DE LUXE MODELS WITH SUPER POWER PLANTS AND OVERHEAD INLET VALVES

3 h.p. De Luxe Lightweight, single cylinder, hand and foot controlled clutch. Very low frame. Bristling with refinements. £72

8 h.p., 4-cylinder, 3 speeds, engine clutch, ball bearings, mechanical lubrication. The machine for either the speed solo rider or discriminating sidecar user. £135

With Coachbuilt Sidecar. £167

"CAR PRACTICE AT MOTOR CYCLE COST."

"F.N." (England), Ltd., Efenmo Works, Kimberley Road Willesden Lane, London, N.W.6

Telephone—Willesden 2395. Telegrams—"Efenmo, Brond London"

LATEST RECORDS OF The TRUSTY TRIUMPH

The first occasion a four-valve engine has ever been credited with the Blue Riband of track achievements—the 500 c.c. One Hour World's Record—was that upon which Major F. B. Halford, on the famous 3½ h.p. O.H.V. TRIUMPH, covered the remarkable distance of 76 miles, 1,301 yards = 76.74 m.p.h.

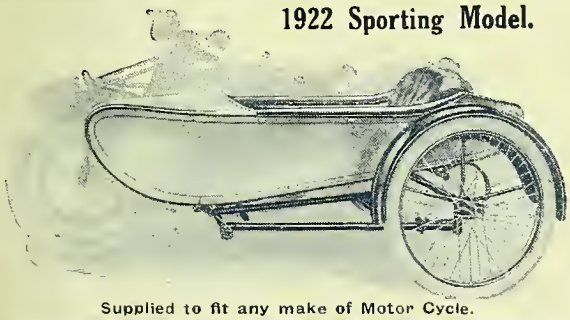
Major Halford has also broken the following British and World's Records, Class C, 500 c.c. :—

BRITISH RECORD.
1 Mile (Flying), 41.0 secs., speed 87.80 m.p.h.

WORLD'S RECORDS.
1 Mile (Fly'g), 42.90 s., sp. 83.91 m.p.h. (meantime)
50 Miles (Std 'g), 38m. 49.4s., speed 77.27 m.p.h.
One Hour .. 76m. 1,301 yds. sp. 76.74 m.p.h.
*Subject to A.C.U. and F.I.C.M. Confirmation*

TRIUMPH CYCLE CO., Ltd., COVENTRY
London: 218, Great Portland Street, W.1
and at Leeds, Manchester, and Glasgow
*AGENTS EVERYWHERE.*

1922 Sporting Model.



Supplied to fit any make of Motor Cycle.
The product of 20 years' riding and manufacturing experience. More comfortable than most heavy touring models. Graceful and distinctive appearance. Strong enough for use with 8 h.p. machines, light enough for use with 3½ h.p. sporting mounts. £23 10 0 ready for the road.

COMPREHENSIVE CATALOGUE FREE ON REQUEST.

DOUBLE YOUR PLEASURE

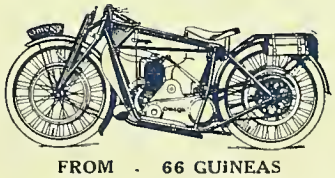
MONTGOMERY SIDECARS

W. Montgomery & Co., Coventry

Bad weather won't keep you indoors if you own an

OMEGA

Weather-proofing the rider has been brought to a fine art on the new 3 h.p. model—a machine *you* should know all about before making your choice.



FROM . 66 GUINEAS

W. J. GREEN, Ltd.
Omega Works,
COVENTRY
London:
Bartletts, 93, Great Portland Street, W
B'ham: Goughs, 183a, Broad Street.

COPYRIGHT—REGISTERED AS A NEWSPAPER FOR TRANSMISSION IN THE U.K.

# In the ROUGH

*A Beardmore-Precision rider in the Kilmacolm Uplands, Renfrewshire*

When the going is rough, the gradient single-figure, the wind head on, the rain lashing your face—that's when you learn the sterling value of a good spring frame.

No need to glue your eyes to the road on the watch for potholes or boulders. They are damped out for you. When you're fighting adversity in the saddle *a good spring frame is half the battle.*

The Beardmore-Precision design combines Comfort with Safety because it cannot distort and upset the steering; with Strength—the strength of a battleship—because of the patent pressed-steel construction. No need for a saving clause in *our* guarantee to say you "musn't misuse the frame." You *can't!*

Beard

more

**Export Houses and Agents Overseas** should get in touch with us at once. The 1922 4½ h.p. spring-frame Beardmore-Precision ("big-single" four-stroke with automatic lubrication, detachable cylinder head, three-speed gear in unit with engine and all-chain drive) is ideal for colonial conditions. "The Motor Cycle" remarks (10th Nov.) that the pre-war "Precision" of this power was *sold overseas in greater quantities than at home.* Our Service-after-Sale, too, is as efficient now as it was then.

**F. E. BAKER, LTD.,**
(Associated with William Beardmore & Co., Ltd.)
**Precision Works, King's Norton.**

'Phone: King's Norton 184-5.
'Grams: Bachuck, Kingsnorton.
London Depot: 112, Gt. Portland Street, W.1
Scotland: James Robertson, 48, West Nile Street Glasgow.

Price 3d.

# THE MOTOR CYCLE

(4).
*4012-3&3
28
1922

## VOLUME XXVIII

## JANUARY TO JUNE, 1922

LONDON :
ILIFFE & SONS LTD., DORSET HOUSE, TUDOR STREET, E.C.4

# INDEX


### A

A.A. Scouts on the Boulevards of Nice, The, 182
Abriachan, 97
Accelerates, Why An Engine, 296
Acceleration and Brake Tests, 574
Accumulators, Fuller Block, 644
Acetylene Refiner, Star, 82
A.C.U. and Private Trials, The, 314
— and the Trade, The, 623
— General Committee Meeting, The, 221
— — Meeting of the, 126
— One-day Trial, The, 232
— — — for Stock Machines, The, 109
— Stock Machine Trial, 23
Airco Exhaust Valve Radiator, The, 530
Air Inlets, Uncontrolled and Controlled, 445
Airman in the Mummer's Role, 289
Airolite, The, 644
Air Valve, Atomiser Co.'s Extra, 11
Alignment, Sidecar, 135
All-night Run into Scotland, 881
Alty-Bady in the Dark, Climbing, 343
Amateur Race in the I.O.M., An (leader), 415
— Road Race, An, 451
— — — The, 549
— T.T., An (leader), 1
American Scooter, The Latest, 370
Among the Accessories, 11, 82, 144, 220, 272, 530
Amulree, 97
Announcing the T.T. Results, 679
Annual General Meeting of the A.C.U., 126
Anti-Dazzle Reflector, Wanted : An, 469
Anzani V. Twin Engine, A British, 402
Appearance, 555
" Arctic " Trial, Results of, 472
Artic Valve, The, 272
Aquamac Suit, An, 130
As Others See Us (leader), 193
Assembled Machines, 62
Astra Dimmer, The, 272
Atlas Lightweight, The, 303
Attention to the Magneto, 833.
Austin Pillion Seat, The, 539
Australian Six Days' Trial, An, 470
Auto Cycle Union Notes, 156
— — — One-day Trial, 316
Autogear Three Wheeler, The, 877
Average Speed Indicator, An, 40
— — Recording the, 173
Awards in S.W. Trial, 734

### B

Bailey's Shock Absorber, S. L., 234
Baker's Rubber and Canvas Belt (patent), 74
Balance, Steering, 175
Balancing, in a New Sense, 307
Ballot, Awards by (leader), 321
Bancroftian Oil Can, 220
— Self-contained Soldering Iron, 82
Barker Prop Stand, The, 272
Bax Sidecar Coupé Top, The, 359
Beacon, The Worcestershire, 234
Beauty Spots of the West, 836
Beauvais', Mr. C. F., Single Track Two-seater, 71
Bednall Helmet and Goggles, 769
Belgian Grand Prix, The, 230
— Motor Cycle Show, Exhibitors at the, 51
Bellairs' Prop-Stand, The, 530
Belt, Baker's Rubber and Canvas (patent), 74
— The Service Super, 82
Binks, A New, 882
— Petrol Filter, 413
Birmingham Inter-Club Trial, 659
— M.C.C. Sporting Trial, 22
Blackburne Engine, Obtaining the Best Results from an 8 h.p., 262
Blackbourne Twins New Medium Size, 637
Bleriot Engines, 164
— Two-Stroke Twin, The, 165
Blue Mountains to Jenolan, Through the, 796
B.M.C.R.C. Meeting at Brooklands, 814
Boat Race, At the, 454
Boat Sidecar, Ford Collapsible, 197
Bonus Bugbear, The, 801, 872
Border, Club Life Across the, 102
Boys and Girls, Motor Cycles for, 226
Bradshaw Single Cylinder Engine, 598
Braking Considerations, 332
— Systems of To-day, 268
Bramham Monocar, The, 545
Brescia, The Circuit, Di, 569
Brierley Petrol Lock, The, 220
Brighton Road, The, 870
" Brig. O. Brown," 97
Brillig Petrol Vapour Lamp, The, 220
British Anzani V. Twin Engine, A, 402
— Industries Fair, The, 303
Broads, The, 392
Brookes Miniature Map Measurer, 806
Brooklands, A Royal Meeting at, 550
— as a Social Rendezvous, 327
— B.M.C.R.C. Meeting at, 814
— Meet, First 1922, 483
— Mounts and Riders, T.T. at, 622
— Re-opened, 168
— Royal Race Meeting at, 688
— 200 Mile Sidecar Race at, 271
— The Navy at, 846
— — Tourist at, 305
Brown & Roper Mono Track Car, 72
Brown's Petrol Tank Attachment, J. R., 234
Brough, 496 c.c. Sports, 841
Brussels Show, The, 347
B.S.A., Shrunk on Copper Fins, 233
— Works Trial, 650
Buckland & Burrell Dimmer, The, 413
Bulbs, Notes on Electric, 600
Buyers' Guide of 1922 Models, 433
Buying a Second-hand Machine, 167

### C

Cairn O' Mount, 99
Camouflaging a Spring Frame, 212
Capacities, Cylinder, 825
Cape of Good Hope, Round About the, 839
Carbide Carrier, The Samson, 272
Car-Owner on Two Wheels, A, 761
Carrbridge, A Scene Near, 131
Carrier Case, The Wearprufe, 272
— The Samson Carbide, 272
Car T.T. Races, Results of the, 843
Caton Four-Speed Gear Box, 345
C.C. or H.P., 339
Championship, Club Team, 817
— The Club Team, 842
Chain Lubrication, 569
Chains, Care of, 805
Channel Isles Classic, A, 882
Channon Tube, The, 881
Chassis Design, Sidecar, 198
Cheapest Transport for Two, The, 424
Chicago, Motor Police in, 455
Chiver's Hand Windscreen (patent), 75
Choice of a Solo Machine, The, 838
Cinema, The Motor Cycle and the, 73
Circuit, Di Brescia, The, 569
City Dweller, The Motor Cycle and the, 450
Clayrite Electric Horn, 769
Cleaning Leather Coats, 156
" Clear-Hooter " Electric Horn, The, 144
Climax Two-Stroke Engine, The, 539
Clincher Tyre, New, 806
Club Debates, 263
— Enterprise, 267
— Life across the Border, 102
— News, 20, 54, 83, 126, 151, 154, 222, 252, 277, 309, 315, 350, 370, 411, 446, 483, 504, 522, 540, 552, 572, 624, 646, 660, 678, 709a, 770, 820, 858, 884
— Pennants and Badges, 504
— Team Championship, 817
— — — The, 842
Coach, A 1¾ h.p. Motor, 272
Collyer Plug Locating Device, The, 82
Colmore Cup Results, 317
Colmore Cup Trial Entries, 247
— — — Notes, 279
— — — The, 76, 214, 281
Comcar, The Gillies, 26
Competitors' Impressions of the London-Exeter Run, 16
— in the Paris-Nice Trial, 311
Complementary Pastimes, 418
Compression Tap, Quickways Sparking Plug and, 769
— Tube, The, 344
Concentric Non-leaking Petrol Tap, 806
Confusing Classification (leader), 292
Constantinople, In and Around, 133
Contrasts on the Riviera, 260
Conversion to Countershaft Chain Drive, 212
Co-operation, Fruits of, 621
Coram Copper Exhaust System for Douglases, 82
Countershaft Gear on an old Machine, 145
Country Diary, A Motor Cyclist's, 590
Coupé Top, The Bax Sidecar, 359
Course, Gear Rations for the T.T., 348
Coventry and Warwickshire M.C. Solo Trial, The, 218
— — — Motor Clubs Trial, 818
— Mascot Medium Weight, The, 567
Cover, Coverley Saddle and Tank, 265
Coverley Saddle and Tank Cover, 265
Crash Helmet originated, How the, 854
Crosswaite Prop Stand, The, 272
Current Chat, 25, 53, 76, 125, 152, 188, 214, 244, 278, 310, 342, 377, 404, 454, 486, 510, 607, 518, 544, 588, 645, 660, 676, 709, 721, 771, 812, 850, 883, 892
Cycle Car, The Bow V, 840
— — — Foster, 196
— — — Tondeur, 196
Cyclone Radial Engine, The, 39
Cylinder Capacities, 825

### D

Dance in the Isle of Man, T.T., 314
Dangerous Bends, 334
— Corner Eliminated, A, 293
Decarbonisation, the " Vril Stick " Mechanical, 220
De Dion-engined Motor Cycle, B. F. C. Fellowes', 66
Dee's Mono Car, Mr. F. C., 71
Demonstrating the Stability of a Scott Motor Cycle, 178
Detecting Faults in a Lighting Circuit, 299
Devonshire Hill, On a New, 867
Diary, A Motor Cyclist's Country, 174
Diary for 1922, The Motor Cyclist's, 157
Dickinson Two-stroke Engine, The, 566
Dimmer, The Astra, 272
— — Buckland and Burrell, 413
Dimming Device, The Wheadon, 644
Dirt Track Racing in the U.S.A., 49
Disabilities, Despite (leader), 233
Disabled Rider's Mount, A, 667
Dogged by Ill-luck, 807
Doleman Machine Tool Type Gear, 51
Dome Handle-bar " Dimmer," The, 144
— Sparking Plug, The, 11
Do not Expect too Much, 203
Doone Country, In the, 671
Dot, An 8 h.p. Sports, 539
— Lock, The, 530
Double Spark Plug, The Runbaken, 272
Douglases, Coram Copper Exhaust System for, 82
Dovedale, Derbyshire, 340
Dublin Hill Climb, 587
Durweston, near Bradford, 827
Dynamo Lighting Set for 25/-, A, 248
Dynamos from old Magnetos, 502

### E

Easter Two-day Highland Trial, 520
—with the Clubs, 490
Easting Screens, One of the First, 197
East Midland Centre A.C.U. Open Trial, 406
— — — Hill Climb, 637
— — — Trial Results, 472
Easy Starting from Cold, 430
Economic Flat Twin Lightweight, The, 247
Edward M. Iliffe, Sir, 780

E.H.C. Generator, The, 145
Eight Thousand Miles on a Sidecar Substitute, 830
Electric Bulbs, Notes on, 600
— Horn, The "Clear Hooter," 144
— Lighting, Grose, 144
— Sidecar, An, 156
Electrical Fittings (leader), 1
— *v.* Hand-timing, 467
Elverson Four-cylinder Engine, The, 344
Empire Extra Air Valve, 11
Enfield Sports Model, The, 539
Engine Design, Modern Practice in, 324
— Starting in Wintry Weather, 72
— The Climax Two-stroke, 539
— — Cyclone Radial, 39
— White and Poppe Two-stroke, 244
Engines and their Position in the Frame, 70
— Bleriot, 164
Entries for the T.T. Races, 453
Essex M.C. Hill Climb at Kop, 410
— — Winter Trial, 240
Evolution of the Motor Cycle, 700
E.W.L. Radiator, The, 530
Exhaust System for Douglases, Coram's Copper, 82
Experiences with a Potterbus, 67
Exploring the Hebrides, 496
Extending the Organisation of Motor Cyclists, 453
Extra Air Valve, Atomiser Co.'s, 11
Ex-W.D. Machine, Improving an, 807

F

Fair, British Industries, 303
Famous Scottish Hills, 96, 230
Feminine Goggles, Through, 107, 297, 466, 530, 712
F.I.C.M. Weight Limits (leader), 1
— — — 201
Filing Tempered Steel, 871
Film, Success of *The Motor Cycle*, 157
— *The Motor Cycle*, 21, 53
Fins, B.S A. Shrunk-on Copper, 238
Fire Brigade, Harley-Davidson Sidecars used by Paris, 310
Five Hundred Mile Race, The 1922, 156
Fletcher, Prop Stand, 28
Flexible Sidecar, Testing an Experimental, 866
Folding Metal Hood, The Reynolds, 302
— Sidecar, The Hopley, 301
Foot Control for Moss Gears, 264
— Gear Control, 51
Ford Collapsible Boat Sidecar, 197
Foster Cycle Car, The, 196
Four-cylinder Engine, Elverson, 244
— — Motor Cycle, The Low, 228
Four-speed Gear Box, The Caton, 345
France in Twelve Days, Encircling, 409
— Progress of the Tour de, 452
France's Premier Event, 879
France, Taking a Motor Cycle to, 529
— The Grand Prix of, 394
— The Tour de, 80, 192, 368
— Tour de, 1922, 22
Freak Hills in Trials (leader), 415
— Trials and the Second-hand Market (leader), 223
— — Manufacturers and, 280
French Non-stop Trial, 266
— One-day Trial, A, 185
— Side-by-side Twins, 164
Front Wheel Driving and Steering, 877
F.R.S. Horn, The, 144
Fruits of Co-operation, The, 621
Fuel Consumption Tests, 382
Fuller Block Accumulators, 644

G

Gamage Anti-dazzle Goggles, 82
— Helmet, The, 530
Garage Charges, Varying (leader), 193
— in the Home, A, 141
Gear Controls on Modern Machines, 828
—Doleman's Machine Tool Type, 51
— Foot Control, 51
—Ratios for the T.T. Course, 348
Generator, The E.H.C., 145
Germany, Number of Motor Cycles in, 300
Gerrard Lightweight Sidecar Outfit, The New, 156
Giesberger Gyroscope Two-wheeler, 71
Gillies Comcar, The, 26
Girling's Interchangeable Wheel, 233
Glasgow Holiday Trial Results, 569
Glendoe, 100
Gloucester Roads, 225
Goggles, Gamage Anti-dazzle, 82
Gold Shock Absorber, The, 144
Gordon's Sidecar Attachment, 234
Goulding Sidecar, The, 265
Grado Self-centering Valve Facing Tool, The, 220
Graham Electric Horn, The, 806
Grand Prix, The, 879
— — of France, The, 394
— — The Belgian, 230
Great Game, The, 84
Gri Engine, The, 155
Grose Electric Lighting, 144
Grose Luggage Grid, 197
— Oilcan, The, 144
— Plug Terminal, The, 530
— Silencer Extension, 272
Guide to London—Edinburgh Run, 735
Guide to London—Land's End Trial, 474
Gulson Carrier for Plugs, The, 806
Gyroscopic Mono-track Car, Wolseley, 72

H

H.A.H., Inspection Lamp, 806
Hall Morgan Jack, The, 220
Handling Sidecars, 575
Hardening and Softening, 800
Hare that Jumped, The, 816
Harley-Davidson Sidecars used by Paris Fire Briagde, 310
Harper Three-wheelers in the Snow, 125
Haunt of the Grayling—Dovedale, Derbyshire, 340
Head Lamp Glare: Can it Be Overcome? 286
Hebrides, Exploring the, 496
Helmet, Originated, How the Crash, 854
— The Gamage, 530
Higham's Sidecar Coupling (patent), 75
Higher Insurance Premiums, 420
Highlands with a Sidecar Outfit, In the Western, 365
Highland Trial, Easter Two-day, 520
Highways, England's, 827
Hill Climb at Peny-Ball, Holywell, 627
— — East Midland Centre, 637
— Climbing in the Riviera, 413
— Climb, Southern Clubs, 734
— — South Midland Centre (A.C.U.) Open, 586
— On a New Devonshire, 867
Hills, Famous Scottish, 96
Hints on Trial Riding, 38
Holland, A Motor Show in, 457
Holt Sidecar, The, 237
Home, A Garage in the, 141
Hopley Folding Sidecar, The, 301
Horn, The F.R.S., 144
How to Climb Freak Hills, 64
Humidifier, The Link, 75
Hunt Inspection Lamp, 769
Hyatt Petrol Tap, The, 272

I

Ice, The First Motor Race on, 53
Ideas: Useful and Ingenious, 142, 204, 318, 333-500, 730
Illuminated Signpost at Wrotham Heath, An, 278
Imports and Exports (1921), 109
— — — 376, 650
Impressions of the Scottish Show, 154
— — — Lightweight and Junior Races, 742
Improving an Ex-W.D. Machine, 807
Impulse Starter, The S.A., 55
In Aid of Charity, 650
— and Around Constantinople 133
Indian Machine, Kickstarter for Old Type, 11
Inspectors, Sidecars for Motor Bus, 395
Insurance Premiums, Higher, 420
— Problems, 857, 871
— The Question of, 267
Interesting Designs, 187
International Six Days' Trial, This Year's, 840
— Touring, 199
Inter-Varsity Hill Climb, 188
In the Centre of Paradise, 417A
— — Doone Country, 671
— — Land of Sunshine, 336
Ireland, Control of the Sport in, 345
— Easter Two Days' Trial in, 521
— Motor Taxation in, 261
— Road Racing in, 330
— Classic Trials, 708n
Irish Olympic Games, 382
— Reliability Trials, 778
— Road Races, Official Sanction for, 691
— Trials, Forthcoming, 192
Isle of Skye, To the, 105
Italian Records, Coincidence in British and, 59
— Three-wheeler, An, 237

J

Jack, The Hall Morgan, 220
J.A.M. Sparking Plug, The, 11
Jebon Automatic Lubrication, 82
Jeff Tube, The, 244
Jenolan, Through the Blue Mountains to, 796
John Bull Handle Bar Muffs, 220
Junior Races, Impression of the Lightweight and, 742

K

"Keep to the Left" Pavement Rule, 209, 837
Kenmore, 98
Kickstarter for Old-type Indian Machines, 11
K.L.G. Plug, A New, 769
"Kool-plug" Radiator, The, 272

L

La Turbie Hill Climb, 413
Ladies in Colonial Type Trials, 861
Lakeland Trials Route, Searching for a, 560
Lake Vyrnwy, 138
Lamp, The Brillig Petrol Vapour, 264
Lamplugh Mechanical Oil Pump, The, 238
Lamps for the New Machine, 52
Land of Sunshine, In the, 336
Land's End to John o' Groats' Trial, 189, 315
Lap Scores of the T.T. Races, 772
Last Word on the T.T. Practising, 733
Lathe, The Patrick, 265
Laws, Suggested New Motor (leader), 463
Le-Vack on an 8 h.p. Brough-Superior-Jap, 405
Leader, 1, 31, 61, 93, 126, 161, 193, 257, 292, 321, 354, 385, 415, 463, 493, 523, 355, 593, 625, 661, 695, [741, 789, 825, 861
Leather Coats, Cleaning, 156
— Wearing, 417b
Little Grunard, 101
Lock, The Brierley Petrol, 220
— — D.O.T., 530
Lodge Racing Plug, A New, 537
London–Coventry–London Trial, 659
— –Edinburgh Results, 860
— — Run, 447
— — — Guide to, 735
— — — The, 774
— — — This Year's, 549
Londoners and a Northern Rally, 266
London–Exeter–London Run, 12
— — Run: Competitors' Impressions, 16
— — Trial Results, 57
— –Land's End Trial, The, 209, 512
— — — — Results, 565
Left, Keep to the, 837
Leg Guards on Twin Machines, 110
— Screen, Slater's (patent), 74
Letters to the Editor, 26, 45, 86, 146, 177, 205, 240, 273, 304, 335, 369, 398, 458, 478, 504, 541, 576, 604, 639, 672, 736, 783, 808, 844, 873
Light Car *v.* Motor Cycle, 866b
Lighting Circuit, Detecting Faults in a, 299
— Grose Electric, 144
— Set, The Wates Accumulator, 210
— Siemens Dry Battery, 130, 210
Light on a Lighting Problem, 169
Lightweight and Junior T.T. Races, The, 727
— — — Races, Impressions of the, 742
— T.T., A 61
— The Economic Flat Twin, 347
Link Humidifier, The, 75
London to Holyhead Trial, The, 660
— — — Results of the, 585
— Rally, Enjoyable N.W., 780
Low Four Cylinder Motor Cycle, The, 228
Lubrication, Jebon Automatic, 82
— Chain, 569
Lugano Lake, 80
Luggage Grid, The Grose, 197
Lutece Motor Cycle, The, 164

M

"Machine Tool" Type Gear, Doleman, 51
Magneto, Attention to the, 833
— Pronunciation of, 47
Manufacturers and Freak Trials, 280
Manx Week, A Pressman's, 798
Map Reading for Motor Cyclists, 140
Martinsyde, The Quick Six, 599
Masses, The Sport and the, 789
Mauser Siegle Track Runabout, The, 71.
McKechnie-Victor Spring Frame, Testing the, 253
M.E.A. Radiator for Douglas Valve Caps, 530
Medsteads' Shaft Transmission (patent), 75
Meet, The Richmond, 519
Mellano Cup Trial, The, 452
Mexican Plains, A Highway Across the, 465
Midland Centre Open One-day Trial, 890
Milestones in the Tourist Trophy Races, 708
Miles per Hour *v.* Gear Ratios, 81
Model Motor Cycle, A, 53
Modern Frame Design, 101
— Practice in Engine Design, 324
Moistening the Mixture, 75
Monocar, The Bramham, 545
Morgan Jack, The Hall-, 220
Motor Coach, A 1½ h.p., 272
— Cycle and the Cinema, The, 73
— — Holiday in London, A, 42
— — The Cygnet, 230
— Cycles for All Purses, 252
— — for Boys and Girls, 226
— — at the Scottish Show, 114
— — Overseas, 562
— Cyclist's Country Diary, A, 174, 590
— Gear & Eng. Co. Valve-cutting Tool, 11
— Taxation, 10
— Tax Revenue and Road Classification, 298
Moss Gears, Foot Control for, 264
Mowbray, Bellairs & Co. Prop Stand, 82
Mud, The Way of the, 68
Muffs, John Bull Handlebar, 220

## N

Naturalist on a Motor Cycle, The, 629
Navy at Brooklands, The, 846
Neal and Doherty Spring Fork, The, 233
Ner-a-Car, Experiences with the, 761
Newark, Replacing a Dangerous Bridge Near, 188
New Gerrard Lightweight Sidecar Outfit, The, 156
— Year, The (leader), 1
North-Eastern A.A. Affairs, 198
Novelty Club Event, Successful, 432
N.W. London M.C.C. London–Gloucester Trial, 56
— — — Trial to Gloucester, 24.
— — Rally, Enjoyable, 780
Norris Streamline Sidecar, 59
Nortons at Last, Overhead Valve, 380
Norton Gathering, A, 316
Notes for the Novice, 135
Norton's Trip to South Africa, Mr. J. L., 150
Nova Scotia, Touring in, 328

## O

Obtaining the Best Results from an 8 h.p. Blackburne Engine, 262
Occasional Comments, 2, 32, 62, 94, 131, 224, 194, 258, 292, 322, 356, 390, 422, 464, 494, 524, 550, 594, 620, 662, 696, 759, 790, 828, 862
Official Test of Stock Machines, 362
— Sanction for Irish Road Races, 691
Oil Cooling and Its Merits, 598
— Can, Bancroftian, 220
— — The Grose, 144
— Pump, The Lamplugh Mechanical, 230
— Where it is not Needed, 762
Old Wyche Road, The, 167
Olympia, An Enlarged, 173
— The New, 210
Olympic Games, Irish, 382
On a New Devonshire Hill, 867
— Balls and Rollers, 78
— Scottish Hills, 664
— the Cumbrian Hills with a Sidecar, 767
One Hundred Miles per Hour, (leader), 385
— — M.P.H. with a 500 c.c. Engine, 386
— Thousand Weeks of the Motor Cycle, 897
— Make or Macy ? 263
On the Hills of the West, 396
Oscilloscope, The, 202
O.S. Magnetic Speedometer, The, 381
Overhauling an Old Machine, 176
Overhead Valve Nortons at Last, 380
Overseas Conditions, 50
— Motor Cycles, 562

## P

Palmer Rear Suspension Set, The, 112
P. and P. Two-stroke, The, 511
" Pannier " Trunk, Robini, 82
Paradise, In the Centre of, 417a
Paragon Folding Sidecar, The, 359
— Lightweight, The, 212
Paris-Nice Trial, Competitors in the, 311
— Pyrenees Trial, The, 869
— Nice Trial, This Year's, 152
Passengers, Fair and Otherwise, 428
Passenger Machine Topics, 196, 301, 358, 476, 627a, 598, 763, 802, 864
Patrick Lathe, The, 265
Patrols for I.O.M., Motor Cycle, 861
Pendine Sands, 50 Mile Race on, 779
Pennants and Badges, Club, 504
Pessimists, A study for, 389
Petrol lock, The Brierley, 220
— Tap, Concentric Non-leaking, 806
— — The Hyatt, 272
Pictorial Echoes of the Land's End Trial, 527
Pidko Cap, The, 769
Pillion Riding, Plain Words on, 482
— Seat and Saddle, The X.L. all, 144
— — The Austin, 539
Piston Tool, Robertson's, 220
Plain Words on Pillion Riding, 482
Plug, A New Lodge Racing, 537
— Locating Device, The Collyer, 82
Plugs, Gulson Carrier for, 806
Plug, The Runbaken " Double-Spark," 272
Pocklington Variable Jet, Sutton, 220
Police in Chicago, Motor, 455
— Sportsmanship, 221
Potterbus, Experiences with a, 67
Premiums, Higher Insurance, 420
Preparing for the Tour, 431
Pressman's Manx Week, A, 798
Prices of Second-hand Motor Cycles, 157
— Second-hand, 54, 568
Private Owners, A T.T. Race for, 170, 231
Prop Stand, The Baker, 272
— — The Crosswaite, 272
— — — Fletcher, 28
— — — Mowbray, Bellairs & Co., 82
— — — Tubular, 272
Pump, The Lamplugh Mechanical Oil, 238
Puncture Proofing, 344
Purdy's Safety Supports (patent), 74

## Q

Questions and Replies, 29, 58, 90, 127, 158, 181, 201, 254, 288, 319, 339, 383, 414, 461, 491, 608, 653, 608, 647, 692, 739, 787, 822, 847, 893
" Quick Six " Martinsyde, The, 599
Quickway's Sparking Plug and Compression Tap, 769

## R

Race, An Amateur Road, 451
— for Private Owners, A T.T., 231
— on Ice, The First Motor, 53
— The Amateur Road, 549
— — 1922, 500 Mile, 156
Races, Two Hundred Mile Sidecar, 852
Radial Engine, The Cyclone, 39
Radiation of Heat, 426
Radiator for Douglas Valve-caps, M.E.L., 530
Railways and Road Rates, 270
Rating of Engines, Rational, 451
Ramont Sidecar Rug, The, 144
Ramstedt Route-card Holder, 530
Rasser two-stroke, Train-engined, 289
Ravenstonedale, 561
Real worth of the Motor Cycle, The, 427
Rear Lights for All (leader), 321
— — on Vehicles, 869
Recent Patents, 74, 233, 708b
Record Broken, Twelve Hour 500 c.c., 891
Recording the Average Speed, 173
Record 24 Hours, 891
Records, Coincidence in British and Italian, 59
— Timing High-speed, 628
Redbourne, Mirror near, 827
Referendum, Taxation, 376
Regulating Road Traffic, 473
Regulations for the T.T., 189
Rejuvenating an Ancient Engine, 66
Replacing a Dangerous Bridge near Newark, 188
Research Work and Motor Cycles (leader), 257
Rest and be Thankful, 99
Retrospect, 1921 in, 4
Revenue and Road Classification, Motor Tax, 298
Reynolds Folding Metal Hood, The, 302
Ricardo Pistons for Motor Cycle Engines, 3
Richmond Meet, The, 519
" Rivals," On the Summit of the, 78
Rival to Beggar's Roost, A, 528
Riviera by Motor Cycle, To the, 34
— Contrasts on the, 260
— Hill Climbing in the, 413
Road Impressions of the Scott Squirrel, 534
— Racing in Ireland, 330
Road Tests of New Models—
8 h.p. Brough Superior Outfit, 312
" Light Six " B.S.A., 498
243 c.c. Calthorpe two-stroke, 570
4 h.p. Harley-Davidson, 216
6 h.p. Martinsyde, 172
496 c.c. V-twin Martinsyde, 834
2¾ h.p. Raleigh, 393
349 c.c. Royal Ruby, 868
Chain-driven Zenith-Bradshaw Sidecar Outfit, 894
Roads to be Avoided, Some, 487
Robertson's Piston Tool, 220
Robini " Pannier Trunk," The, 82
— Windscreen, The, 806
Rollers, On Balls and, 78
Romance and the Sidecar, 535
Ronte-card Holder, Ramstedt, 530
Rowe's Valve Mechanism (patent), 74
Royal Meeting at Brooklands, A, 550
— Motor Race Meeting, 643
— Race Meeting at Brooklands, 680
Rudge Chain Rivet Extractor, The, 11
— Machines in Preparation for the T.T., 581
Rug, The Ramont Sidecar, 144
Runbaken " Double-spark " Plug, The, 272
— Sparking Plug Box Spanner, 530
Russian Purchase of British Motor Cycles, 357

## S

S.A. Impulse Starter, The, 55
Saddle, The X.L. all Pillion Seat and, 144
Safety Supports, Purdy's (patent), 74
Salcombe, Passenger Machines on, 12
Sales by Sidecars, 382
Samson Carbide Carrier, The, 272
Scandinavia, Motor Cycles in, 171
Scientific Layman Criticises, 819
Scooter, The Latest American, 370
Scores of the Races, Lap, 772
Scott Motor Cycle, Demonstrating the Stability of a, 178
Scottish Hills, Famous, 96, 230
— — Impressions of the, 154
— — Motor Cycles at the, 114
— Six Days' Trials, 219
Scottish Trials, Route of the, 453, 489
— Six Days' Trials, The, 532, 582
— — — — Described, The, 610
— — — — Official Results, The, 821
— — — In, 630
Scott Squirrel, Road Impressions of the, 534
Searching for a Lakeland Trials Route, 560
Second-hand Machine, Buying a, 167
— — — Motor Cycles, Prices of, 157
— — Prices, 54, 239, 352, 568
Seeking the Ideal, 841
Service Footboards, 530
— Super Belt, The, 82
Sgonina-Special, The, 645
Shaft Transmission, Mepstead's (patent) 75
Shock Absorber, The Gold, 144
Show, The Brussels, 347
Side-by-side Twins, French, 164
Sidecar Alignment, 135
— and the Small Car, The, 1
— An Electric, 156
— Attachment, F. Gordon's, 234
— Chassis Design, 190
— Coupling, Higham's (patent), 75
— Norris Streamline, 59
— Race at Brooklands, 200 Mile, 271
— Testing an Experimental Flexible, 866
— The Goulding, 265
— — Holt, 237
— — Hopley Folding, 301
— — Paragon Folding, 359
Singapore to London, From, 585
Single Track Carette, The, 71
Six Cylinder Motor Cycle, A, 143
— Days in Scotland, 630
Skids, Sidecar, 861
Skye, To the Isle of, 105
Slater's Leg Screen (patent), 74
Sledging in America, Motor Cycle, 134
Snow Causes Curtailment of Western Centre Trial, 448
— Harper Three-wheelers in the, 125
Sociable, Practical Notes on a Scott, 830
Social Rendezvous, Brooklands as a, 327
Soldering for Amateurs, 718
— Iron, The Bancroftian Self-contained, 82
Solution Storage, Safe, 530
Some Notes on Sparking Plugs, 77
Sidecar Races, Two Hundred Mile, 852
— Romance and The, 535
— Seat, The V.H.L. auxiliary, 144
— 200 Miles Race, The, 650
Sidecars for Motor Bus Inspectors, 395
Sidecar Fuel Consumption Test, A, 249
Sidecars, Handling, 575
— — Long Ago, 716
Sidecar Skids, 861
Sidecars, Unmechanically fitted (leader), 523
Sidecar, Which Side for the, 867
Side-wheel, The, 377
Siemens' Dry Battery Lighting, 130, 210
Signals, Drivers', 153
Silencer Extension, The Grose, 272
Silver Prince Lightweight, The, 843
South African Road Conditions, 568
Southend Club's Hill Climb, 734
South Midland Centre (A.C.U.) Open Hill Climb at Kop, 586
— — Clubs at Brooklands, 734
Spanner, Runbaken Sparking Plug Box, 530
Spare Part Prices (leader), 493
Spark-gap, Sparxsekas, 11
Sparking Plug Box Spanner, Runbaken, 530
— Plug, The Dome, 11
— — — J.A.M., 11
— Plugs, Some Notes on, 77
Sparklets, 30, 60, 92, 128, 160, 183, 256, 213, 320, 341, 384, 416, 462, 492, 509, 592, 609, 648, 788, 824, 849, 894
Sparks and the Two-stroke, Two, 559
Sparxsekas, Spark-gap, 11
Speedometer, The O.S. Magnetic, 381
Speed Possibilities, 1922: 538
— Trials at Weston-super-Mare, 215
Speedway, A 500 Mile, 708c
Speedwell Guard, The, 110
Spittal of Glenshee, 100
Sports Dot, An 8 h.p., 539
— Model Coventry-Eagle, A Modified, 554
— — The Enfield, 539
Spring Fork, The Flexifork, 51
— — — Neal and Doherty, 233
— Frames, 366
Stability of a Scott Motor Cycle, Demonstrating the, 178
Star Acetylene Refiner, The, 82
Starting from Cold, Easy, 430
Staxton Hill Climb, The, 521
Steel Tubing, Weldless, 41
Steering Balance, 175
Stiffening the Classic Runs, 192
Stock Machines, The A.C.U. One-day Trial, 109
— — Official Test of, 362
— — Trial, A.C.U., 23
Study for Pessimists, A, 389

Sutton Bank Hill Climb, 551
— — On, 603
Super-sporting Trials, 403
Surbiton Motor Clubs' Team Contest, 548
S.W. Centre Open Trial, 690
— Trial, Awards in, 734

T

Tale of a Trail, A, 316
Talla Linn, 98
Tank Attachment, U. R. Brown's Petrol, 234
Tap, Concentric Non-leaking Petrol, 806
Taunton-Minehead Road, The, 510
Taxation in Ireland, Motor, 251
— Motor, 10
— Referendum, 376
— Schemes, Alternative, 835
Team Championship, The Club, 842
— Contest, Surbiton Motor Club's, 548
— Trial, The M.C.C., 886
Technical Aspects of the T.T., 792
Terminal, The Grose Plug, 530
Territorial D.R.'s, 32
Test or a Definition ? A (leader), 353
Testing the McKechnie-Victor Spring Frame, 253
Three Miles a Penny, 501, 522
— Wheeler, An Italian, 237
Throttle Auxiliary Control, Watkinson & Northedge, 11
Through Bush, Flood and Veldt, 150
— Feminine Goggles, 107, 297, 466, 530, 712
— Ireland on a Motor Cycle, 294
— the Blue Mountains to Jenolan, 796
Timing High Speed Records, 628
— Sprint Records, 503
T.O.M. Luggage Straps, 769
— Windshield, The, 597
Tondeur Cycle-Car, The, 196
To the Riviera by Motor Cycle, 34
Tour de France, Progress of the, 452
— — — Reliability Trial, The, 409
— — — Scenes on the, 462
— — — 1922, 22, 368
— — — — The, 80, 192, 489, 518
Touring in Nova Scotia, 328
— Without the Sidecar, 287
Tourist at Brooklands, The, 305
Trade, and the A.C.U. 623
Traffic, Regulating Road, 473
Train-engined Rasser Two-stroke, The, 289
Travers Trophy Trial, The, 551
Trial, A.C.U. Stock Machine, 23
— — French One-day, 185
— An Australian Six Days, 470
— Birmingham Inter-Club, 659
— Birmingham M.C.C., Sporting, 22
— B.S.A. Works, 650
— Competitors in the Paris-Nice, 311
— Coventry and Warwickshire Motor Club, 818
— Cumberland County M.C.C. Open, 657
— Easter Two-day Highland, 520
— East Midland Centre A.C.U. Open, 406
— Entries, Colmore Cup, 247
— Essex M.C. Winter, 246
— for Works Staff, A, 547
— French Non-stop, 266
— in Ireland, Easter Two-day, 521
— London–Coventry–London, 659
— — –Land's End Results, 565
— Notes, Colmore Cup, 279
— N.W. London M.C.C. London–Gloucester, 56
— Results, The London–Exeter, 57
Trial, S.W. Centre Open, 690
— The A.C.U. and Private, 214
— — Auto Cycle Union One-day, 316
— — Colmore Cup, 214, 281
— — Coventry and Warwickshire M.C. Solo, 218
— — London–Land's End, 512
— — — –Holyhead, 550
— — Mellano Cup, 452
— — M.C.C. Team, 886
— — Midland Centre Open One-day, 890
— — Paris—Pyrenees, 869
— — Tour de France Reliability, 409
— — Travers Trophy, 551
— This Year's International Six-days', 840
— — — Paris–Nice, 152
— The Western Centre A.C.U. Twelve-hour Reliability, 125
— — West Kent M.C. Speed Judging, 184
— Through Belgium and France, A, 451
— to Gloucester, N.W. London M.C.C., 24
— Victory Cup, 53
— Western M.C.C. (Glasgow) New Year, 56
— Yorkshire Centre A.C.U. Colonial, 855
Trials, Forthcoming Irish, 192
— Manufacturers and Freak, 280
— Snow Causes Curtailment of Western Centre, 448
— Riding, Hints on, 38
— The Scottish Six-days', 532
— — Six-days' Scottish, 610
Trinafour, 99
Triumphs for the T.T., 546
Trinmph, Tuning a 4 h.p., 360
T.T., A Lightweight (leader), 79
— Amateur, An (leader), 1
— and the Public, The, 593
— Course, Gear Ratios for the, 348
— Dance in the Isle of Man, 314
— Dates (leader), 1
— — 21, 53
— Notes and News, 490, 537, 580, 601, 649, 680
— Practising, Last Words on the, 733
— — Revealed, What the, 731
— Race for Private Owners, A, 170, 231
— Races, Entries for the, 453
— — The, 707
— — — Lightweight and Junior, 727
— — Who Suggested the, 271
— Regulations for the, 189
— Results, Announcing the, 679
— Technical Aspects of the, 792
— Triumphs for the, 546
— Warning Signs, 486
— Winning a, 765
Tube, The Channon, 881
— — Compression, 344
— — Jeff, 344
Tubing, Weldless Steel, 41
Tubular Prop Stand, The, 272
Tuning a 4 h.p. Triumph, 360
Two Hundred Mile Sidecar Races, 852
— Sparks and the Two-Stroke, 559
— -Stroke Engines in Practice, 668
— — Engine, The Climax, 539
— — — — Dickinson, 566
— — Train-Engined Rasser, 289

U

U.S.A., Dirt Track Racing in the, 49
— The Motor Cycle Movement in the, 209

V

Valve Bounce Made Visible, The Oscilloscope, 202
— Cutting Tool, Motor Gear & Eng. Co., 11
— Facing Tool, The Grado Self-centering, 220
— Mechanism, J. Rowe's (patent), 74
— The Artic, 272
Variable Jet Automatic Carburetter, The Wex, 567
— — The Sutton-Pocklington, 220
V.H.L. Auxiliary Sidecar Seat, The, 144
Victory Cup Trial, The, 53
— Over Freak Hills, 373
— Trial Results, 412
— — The, 373
Viratelle Engine, The Water-cooled, 165
" Vril Stick " Mechanical Decarbonisation, The, 220
Vrynwy, Lake, 138

W

Warning Signs, T.T., 486
Wates Accumulator Lighting Set, The, 210
Watkinson & Northedge, Auxiliary Throttle Control, 11
Way of the Mud, The, 68
Wearing Leather, 417b
Wearprufe Carrier Case, The, 272
Weather Proofed Machine in a Trial, 694
— Protection on Two Wheels, 538
Weight Limits, F.I.C.M. (leader), 1
— — — 201
Weldless Steel Tubing, 41
Welsh Speed Championships, 778
West, Beauty Spots of the, 836
Western Centre A.C.U. Twelve-hour Reliability Trial, 125
— — Trial, Snow Causes Curtailment of, 448
— Highlands with a Sidecar Outfit, In the, 355
— M.C.C. (Glasgow) New Year Trial, 56
West Kent M.C. Speed Judging Trial, The, 184
Weston-Super-Mare, No Speed Trials at, 215
West, On the Hill of the, 396
Wex Variable Jet Automatic Carburetter, The, 567
What I Rode in 1921, by " Ixion," 136
— the T.T. Practising Revealed, 731
Wheadon Dimming Device, The, 644
Which Side for the Sidecar ? 867
White & Poppe Two-Stroke Engine, The, 244
Who Suggested the T.T. Races ? 271
— Will Win the Senior T.T. ? 711
— — — — T.T. ? 666
Why an Engine Accelerates, 296
Windscreen, Chiver's Hand (patent), 75
Win for the Duke of York, A, 814
Winkle Licence Holder, 806
Winning a T.T., 765
Wolseley Gyroscopic Mono-track Car, 72
Wooler, The Chain-driven, 381
Worcestershire Beacon, The, 234
Works Staffs, A Trial for, 547
Wrotham Heath, An Illuminated Signpost, 278
W.T. Self-contained Lamp, 769
Wyche Road, The Old, 167
Wye Valley from a Pillion, The, 235

Y

Yorkshire Centre (A.C.U.) Colonial Trial, 85
— — — — Results, 885

Z

Zenith Three-speed Model, 878

*Printed by The Cornwall Press Limited, Paris Garden, Stamford Street, London, S.E.1.*

THE MOTOR CYCLE

ESTABLISHED IN 1903

FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2848 (13 lines).

COVENTRY: Hertford Street.
*Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street.
*Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate.
*Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## The New Year.

AT the beginning of a new year it is interesting to pause a moment and reflect upon the outstanding impressions of the old year.

The last six months of the year 1921 were not distinguished by big sales in the motor cycle industry, but a number of circumstances combined to make trade bad. Lack of orders from overseas checked demand, though, fortunately, these adverse conditions are regarded as of a temporary nature. Indifferent export facilities, the unsettled state of Irish affairs, and high prices all limited the market. Towards the end of the year, however, prices dropped to a considerable degree, and a steady business was done at the Olympia Motor Cycle Show.

More encouraging than the actual number of sales was the enormous interest displayed by the public, which is confirmed by the large number of orders and promising enquiries received by manufacturers since the Show. This feature has been particularly marked, and some few manufacturers who came away from Olympia barely satisfied are now busily producing to meet the demand for their good, which arose and extended very promisingly with the close of the year.

The outlook for the New Year is distinctly brighter. With reviving trade, the stabilisation of prices, the steady progress in design, and the more hopeful political outlook, there is excellent promise of a busy spring. Prospects for the trade are hopeful, and prospects for the riders are equally bright, since never before have such admirable machines of every type been offered at such comparatively low prices, and, withal, running expenses are appreciably reduced, thanks to considerable reductions in the cost of the main necessities, *i.e.*, petrol, oil, and tyres. Therefore, we feel that, in offering our readers our heartiest good wishes for the New Year the future outlook may truthfully be said to be far and away more encouraging than was the case twelve months ago.

## Electrical Fittings.

NOW that electrical equipment is being so universally applied to motor cycles, a word to those responsible for the production of the smaller detail fittings will not be out of season.

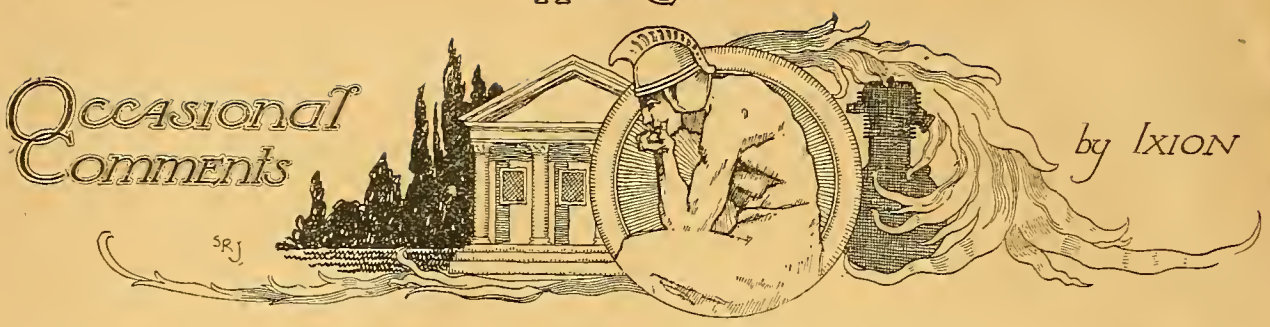
In a somewhat rough and ready way a fairly satisfactory standardisation of sizes was attained in the electrical trade before it became of great interest to motor cyclists, but withal, due to the enormous use of presswork in lamp fittings, switches and other parts, the standard of interchangeability *is* of the rough and ready order.

Ostensibly, all bulbs and bulb-holders of the s.b.c. (small bayonet cap) variety are of the same size, but it frequently happens that a replacement bulb cannot be inserted into a holder without enlargement of the latter, while in the case of the single contact type of bulb, the small blob of solder over the end of the "earth" wire on the bulb cap prevents the complete insertion of the latter in the holder.

Another direction in which head lamp bulbs might be improved is in the positioning of the filament in relation to some definite point, such as the pins of the bayonet cap; this would avoid the frequent difficulty experienced when a new bulb is found to need more adjustment to secure correct focus than the mechanism of the head lamps permits. In many cases head lamp focussing adjustments might with advantage be given a wider range.

Tumbler switches, and suchlike fittings, although satisfactory in the ordinary indoor applications of electrical apparatus, are neither weather nor vibration proof, and the electrical trade has much to learn in this direction. The highly-elaborated products of motor cycle lighting specialists, of course, seldom merit criticism, and these remarks are chiefly made in the interest of those motor cyclists who equip their machines with the ordinary electrical fittings of commerce such as are obtainable from cycle and electrical accessory dealers.

An Index to the advertisements in this issue will be found on the page facing the back cover.




## Nemesis.

EVERY sport has its liars. Anglers still enjoy priority in popular estimation, but when some Gilbert White has arisen to write a motor cycle Selborne, we motor cyclists will push the angler down one place. Our commonest and least convincing liars are those who tell all and sundry that they never have "a mite of trouble." Now I happen to be Greek to the core, though the world only knows me as a twentieth century penny-a-liner. [You *know* you get a lot more than that!—Ed. I know it *sounds* more, but think of my running expenses!—Ixion.] As I was saying when this rude person interrupted me, I am a Greek, and therefore I believe in Nemesis. Nemesis was a goddess of the malevolent kind, who adjusted the balances of fate for profiteers, and Cuthberts, and people of that sort. So after a 1921 season in which I hardly experienced even one trivial stop, I prepared myself for a troublous winter, knowing that the gods are just. It has begun. Item No. 1. I was hogging to catch a distant train on a cold, dark, wet night, my mount being a cycle car. Suddenly, just when the one and only hill of the trip loomed ahead, the sharp, crisp bark of the engine suddenly diminuendoed to a noise which I can only describe as the sort of sound which cottonwool would make if it were audible. Anon it seized. When I at last regained civilisation, in true Greek fashion I poured a small libation to Nemesis. Beer, of course; wine is too costly nowadays.

## False to my Convictions.

BUT the lady wasn't appeased. I shall never again try to economise in religious matters. A goddess who has been accustomed to libations of thick wine for 3,000 years evidently takes no account of the watery stuff which passes for ale nowadays. So she got me again next time out. Once again I was driving a cycle car. Let me premise that I have frequently denounced the silly practice of "blacking out," *i.e.*, extinguishing one's head lamps on meeting another vehicle. Moreover, I have rashly sworn that I would never adopt it. This was how Nemesis squared the account between us. I had just reached a road full of traffic but devoid of garages when all my five electric lamps proceeded to go out. I trod on everything hard. The lamps shone out again. In this fashion we progressed. I had no inspection lamp. I did not even know where the batteries were kept on the cycle car, which was on a press trial, and not my own. When the lamps developed a knack of going out for as much as fifty yards at a time, I stopped, and struck matches. There were literally miles of very thin, semi-insulated cable, precariously affixed to the one-piece three-ply body by little hanks of leather and brass screws, after the fashion of a gardener tying up fruit trees. Suffice it to say that I eventually reached my destination, after many hairbreadth escapes. Perhaps Nemesis will now be satisfied. At any rate, I spilt a few drops of port on the garage floor when I got home.

## Anachronisms.

THAT is the only long word I know. It was a pet word of my colonel's in the great war, and I took it up to curry favour with him. Unfortunately, I didn't quite understand it, and when I applied it to a bad egg, he expounded its true meaning to me at length. It means a tollgate. The other week I remarked that tollgates were moribescent, so to speak—dear me, that colonel has a lot to answer for—and ever since I have had a perfect avalanche of letters from irate motor cyclists, whose jaunts awheel are hampered by these survivals of the Middle Ages. The most pathetic is from a gentleman resident in Barmouth and *fiancé* to a damosel at Portmadoc. These conditions imply a quite expensive spruceness in personal appearance. Buttonholes. New chamois gloves. Then there are chocolates. Finally, two shilling tollgates in as many miles. And the Government appeals to us to be economical, and lend it our money! Another wistful epistle is signed by a Bachelor of Divinity belonging to one of the Nonconformist denominations. I understand that a padre of this connection usually serves about half a gross of chapels dotted over a huge area. My correspondent labours in a part of the country which simply bristles with tollgates. Here is a chance for the Ministry of Transport to wield the super-axe with great popularity.

## Decanted from a Sidecar.

APROPOS of my yarns of humorous incidents connected with trailers, a Southend reader claims to have seen a lady neatly decanted from a sidecar without the driver's knowledge. 'Twas years ago, and the sidecar was of the wicker variety, with nothing in front of its occupant except a low basket-work sill. The outfit was rounding a sharpish corner and the lady was leaning forward at the time. The sidecar bobbed over a pot-hole, and the lady was gently lobbed out, what time the driver was staring hard round the corner to make sure nothing was coming. Informant infers that the pair were married, as the man laughed consumedly when he returned a few minutes later to pick up his passenger, whilst the lady was extremely irate, although she had landed on her feet and was not in the least damaged. My only contribution to this new branch of funny yarns must be that once upon a time I was riding solo behind

**Occasional Comments.—**

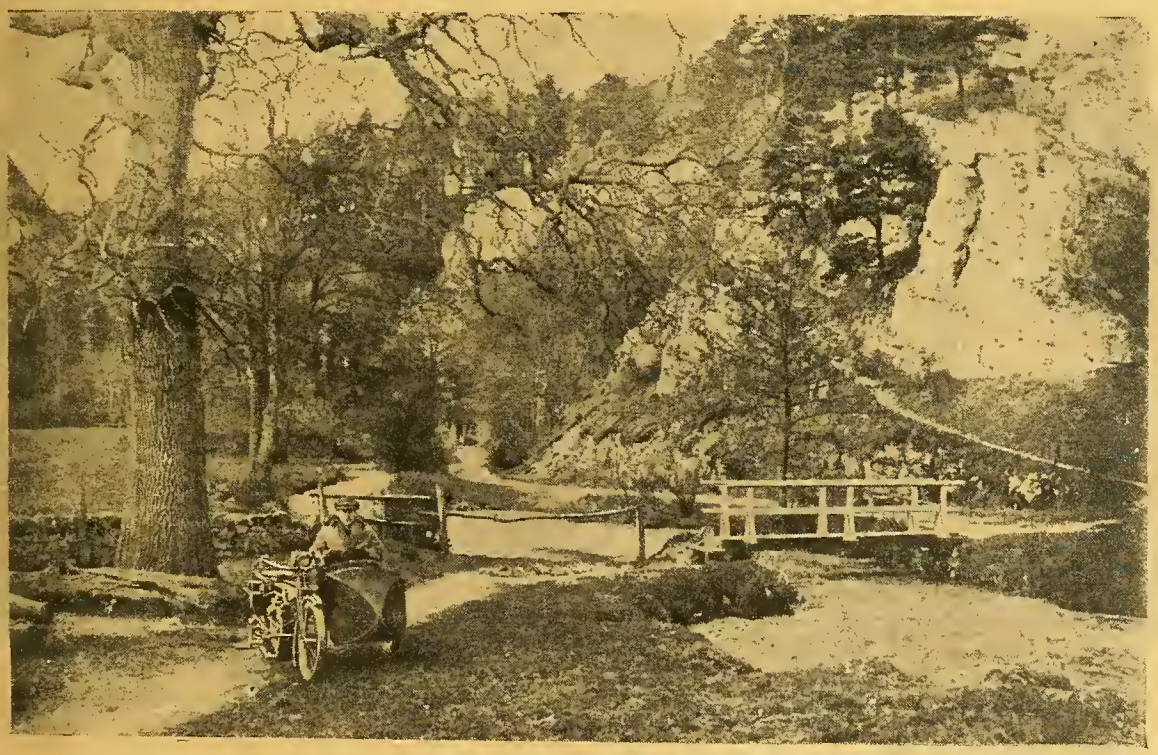
a sidecar when I saw the sidecar wheel detach itself from the axle, run ahead of the sidecar, and finally deposit itself in the ditch. What happened to the outfit meanwhile? Certainly — the driver tilted it over towards the other side, and drove it merrily along poised on the bicycle wheels. After a lively altercation between driver and passenger, the outfit gradually slowed down. At last the bottom of the sidecar touched earth, there was a scrunch and a slew round, after which two frightened and angry men stood in the middle of the road and cursed very solemnly indeed.

## Oversize Tyres.

MY postbag continues to bring testimony that the fitting of 3in. tyres on motor bicycles up to 500 c.c. is the surest method of avoiding punctures and of reducing tyre costs. From a number of letters I cull one signed by Mr. Howard Yeoman, of Madras. He finds it possible to use 28 × 3in. Firestone tyres on Triumph and B.S.A. sidecars. After 2,500 miles the back tyre evinces no perceptible wear whatsoever, and remains untouched. 2,500 miles is a distance which would see a third back tyre of the standard size well advanced in wear on some outfits driven by the engines mentioned. Lots of 500 c.c. sidecar men, using their machines for multi-stop work, find it impossible to get a 2½in. tyre to last 1,500 miles. On all machines which will accept a 3in. cover, the experiment is obviously indicated, and should usually meet the case. Anyhow, there is already a distinct tendency to fitting larger tyres as standard on the so-called dual-purpose machine.

## Ricardo Pistons for Motor Cycle Engines.

SOME years ago I formed what the maidens term a "pash" for steel pistons of the perforated hour-glass pattern. Their sole merits were that they reduced oil friction and lightened the reciprocating parts; so far as cooling went—a very vital point with air-cooled engines—they were probably inferior to the cast iron parts which they replaced; but, nevertheless, they gingered up two or three of my engines very considerably. It follows that when aluminium pistons began to be talked about, and I saw improvements in cooling added to the two merits of the lantern waisted steel piston, I began to get excited. I am not asserting that all my aluminium pistons have proved an unmixed joy. The best aluminium piston is more sensitive to under-lubrication than any of its rivals; and some aluminium pistons are marketed by firms who would be sorely taxed by having to design a boot-scraper. But one or two firms have at last acquired a painful knowledge of the main snags which beset the application of aluminium alloys to pistons, and I rejoice to see that the Ricardo piston is at last standardised to fit all the best-known motor cycle engines. These pistons have figured in most of the finest Brooklands records, and should be of interest to any knuts with ambitions in speed events next competition season. They are not cheap, ranging from 47s. 6d. upwards; but honour is cheaply purchased at that figure, and the man without a Ricardo piston who runs up against the man who has, deserves a licking, and will usually get it. Prolonged track tests by the crack tuners of the motor cycle factories have been a potent factor in the details of the design of these special pistons, which may therefore be regarded as cheap.



Even fairly familiar landscapes assume quite a different aspect when the trees have shed their leaves. The illustration depicts a Welsh beauty spot, which will hardly be recognised by those who have only visited the place in summer. The scene is on the Leeke, between Mold and Ruthin, North Wales.

# 1921 in RETROSPECT

## MOTOR CYCLE HISTORY OF THE PAST YEAR SUMMARISED

### PROGRESS IN DESIGN.

THE motor cycle no longer provides merely a seasonal pastime, for most of us ride throughout the year, summer and winter, wet or fine. Nevertheless, the end of the year and the recent motor cycle Show provide us with an admirable opportunity for studying the progress made in the design of our favourite mounts. Every year the observant will note improvements in detail, though it is but seldom that any radical changes obtain a grip on the buying public in the course of twelve months; rather do the improvements come gradually. Recently we have reached a stage which we have been slowly approaching for some years, when engines of 350 c.c. or less have become acknowledged as sufficient for all normal solo purposes. This is perhaps the most noticeable feature of the year, and proves that engineering progress has enabled our designers to obtain *and maintain* a very much higher power output for a given capacity. The net result is that we are now able to buy lighter, cheaper, and handier machines, capable of as high performance as previous solo models of considerably greater capacity.

#### Greater Comfort.

As a matter of fact, the improvements which have made these facts possible extend also to the larger classes, and the latest big twins are capable of higher sustained speeds and lower petrol consumption than ever before. Of hardly less importance to the average motor cyclist are the improvements in comfort which have taken place since the war. Spring frames, spring saddle suspensions, adjustable footrests, rational footboards, larger tyres, and improved mudguarding, though details in themselves, all help towards the general comfort of the rider, while a new type of vehicle, the open-framed runabout, is being steadily developed, and will provide a means of transport for many business men and elderly persons of both sexes who would be nervous of tackling the normal diamond frame motor cycle.

Perhaps this latter type of vehicle makes no great appeal to the sporting motor cyclist, but we must remember that, in spite of the enormous number of motor cycles on the road, only the fringe of the market has, as yet, been touched; and there are thousands of people who require a safe, effortless, and comfortable means of transit obtainable at a reasonable price.

#### Simplification.

There is a tendency, also, towards simplifying controls, and though this is not as yet very marked, it is of considerable importance. Many prospective purchasers are deterred by the number of controls fitted to the average motor cycle, and, in consequence, single-lever carburetters and automatic oiling systems are steps in the right direction. The ideal machine for the multitude would have but one control in addition to brakes and change-speed lever.

In the matter of reliability we have now reached a stage when any reputable make may be considered as satisfactory under all normal touring conditions.

Again, the low-priced two-wheeler of normal design is making rapid strides, and the day is not far distant when the artisan, living some miles from his daily work, will proceed thither on a simple and foolproof motor cycle well within reach of his purse.

Modern reliability trials have done much to improve the touring machine, but we must not forget the enormous market for the simplest possible machine, which will never be required to tackle a serious hill, and will ultimately replace the pedal cycle to a very large extent. Fortunately, it is clear that some of our designers have this matter in hand, and there has appeared a number of simple two-strokes which are well on the way to achieving this ideal, though there is still some distance to travel as regards price.

One of the bends on six-mile Applecross, which, included in a trial last summer for the first time since 1914, demonstrated the motor cycle's progressive improvement in efficiency during that period.

## COMPETITIONS ON ROAD AND TRACK.

IN THE A.C.U. SIX DAYS TRIALS.
(Left) Competitors lined up at Brooklands preparatory to their start on the open road.
(Above) Sidecar competitors passing through Yeovil.

FROM all points of view what may be called the sporting side has enjoyed a wonderful year in 1921.

There are still people who cannot understand why competitive motor cycling should be regarded as a sport. They imagine that the personal element affects very little the success or otherwise of a particular machine in a reliability trial, race, or similar event. Of course they are wrong. One has only to consider the entry lists—more often than not record entry lists—of last year's competitions to prove them so.

It is admitted now that there were too many "open events" in 1921; yet only a negligibly small proportion failed to achieve remarkable success. The number of amateur riders, who gravitated from participation in their local club "prowls" to an endeavour to win honours in the classic affairs, was, in no small degree, responsible for the record interest and support bestowed on competitions which justified inclusion in our "Important Dates" column.

There is another aspect to the question, however—in some respects a more important one. The sporting appeal may be likened to the sugar coating; the pill is intended to cure weak designs. And if it does not cure, it certainly kills.

For the purpose of review, last year's competitions may be divided into two arbitrary sub-divisions—reliability trials and speed events (the latter including races, hill-climbs, timed speed trials and records).

### RELIABILITY TRIALS.

THEORETICALLY the English Six Days Trials rank as the most important of the year. In a commendable attempt to make them more useful, however, the A.C.U. decided to include fuel consumption, brake, silence, and speed tests, with the two-fold result that many important manufacturers withheld their support on the score that they objected to being dictated to, and that the road portion of the trial became too ridiculously easy, both from the sporting riders' and the spectators' points of view. Porlock and Lynton were the worst, almost the only hills, and, as it refused to rain, not many marks were lost on the score of hill-climbing. The Brooklands speed test, on the other hand, provided several eleventh hour surprises. New Imperial, A.J.S. (two classes), Rover, and P. and M. won the coveted team awards.

In entry, in difficulty, and in interest, the Scottish Six Days event, organised by the Edinburgh M.C. during the hottest week in summer, took a premier position. Dry weather until the last day cheered the competitors and disappointed the club; but one or two new mountaineering "finds"—including the seemingly never-ending Cork-screw at Inverfarigaig—and the reappearance of some old friends in the shape of the six-mile Applecross and the deceptive Glendoe, more than equalised matters. Prospective buyers should look down last year's Scottish award list; only good riders on sound machines gained "golds." Sunbeams gained the team prize and generally made an excellent showing.

#### On the Continent.

It is a pity that the third long-distance trial of the year was not better supported, for the International event, held in Switzerland at the beginning of August, offered climbing tests of a severity that Great Britain cannot provide. Switzerland again won the International Trophy, but outstanding performances were made by individual British riders.

Much of the above comment applies also to the Paris-Nice Trial. The previous year's *débâcle* provided a possible reason for the absence of British entries; but, as it turned out, the organisation was quite good.

Of the multitudinous one day open trials, the A.C.U. event in April, which included a class for stock machines, deserves special mention. It was not of great severity, but finished with a speed test at Brooklands. The result was curious; forty-three "ordinary" and seventeen "stock" machines started; sixteen and ten respectively gained first class certificates. Raleigh, Humber, Triumph, P. and M., Norton, Levis, A.J.S. sidecars (two), and Morgans (two), were the successful ten.

The spring trials proper started earlier than this—on March 10th to be exact—with the classic, if closed,

**1921 in Retrospect.—**

Colmore Cup Trial of the Sutton Coldfield Club. 158 entries, good weather conditions, but considerable rusty driving were the salient features. Of the same nature, but slightly more difficult, was the Birmingham M.C.C. trial for the Victory Cup. The Old Wyche (possibly for the last time) caused few failures. O. Hayes (3½ Sunbeam), an amateur rider, and Bert Kershaw (2¾ Verus) were the respective trophy winners in these two events.

Easter brought the Richmond Meet and the first of the M.C.C.'s big 1921 events—the London-Land's End *Run*. With an 18 m.p.h. minimum over Porlock and Lynton, and some rain, most of the competitors considered that the M.C.C. was unduly depreciatory. The Jarrott and Captain's Cups were won by F. A. Longman (3½ Ariel) and F. W. Giles (7 A.J.S. sc.) respectively.

held a team trial, dammed watersplashes (the competitors would have substituted an "n" in the adjective) causing much unfavourable comment.

In quick succession now came the Arbuthnot Trophy Trial—a naval officers' joy-ride—won jointly by Lieutenant T. H. Back (4 Triumph), C. Plumer (3½ Sunbeam), P. V. James (5 N.U.T.), and Sub-Lieut. H. C. Chads (4 Triumph), and an open trial at Bournemouth with a novel "observed driving" test.

### Ilkley and North Wales.

Clashing with the Scottish Six Days, the Ilkley Trial nevertheless attracted sixty-eight sportsmen, who knew what to expect—and got it. F. W. Giles (7 A.J.S. sc.) made "the best individual performance." Alt-y-bady and an absurd watersplash darkened the clean sheets of seventy-six out of ninety starters in a North Wales open event three weeks later, when G.

At the start of the Junior T.T. race—"No. 1" has got the word go. (Insets, from left to right) H. R. Davies (2¾ A.J.S.), Eric Williams (2¾ A.J.S.), and D. Prentice (2¼ New Imperial), the winners of the Senior, Junior, and 250 c.c. classes respectively.

Because it was a two-day event, the trade refused support to the enterprising Western Centre's trial on April 8th and 9th. No fewer than nineteen club teams alone agreed that it was a most enjoyable and sporting affair. Awarded for the most outstanding performance, the White Challenge Cup went to A. T. Colcombe (4 Indian).

### Nine Hills in Twenty Miles.

A fortnight later, the Midland Centre succeeded in staging nine nearly-freak climbs in twenty miles in the course of a stiff day around Stroud. Next week the Newcastle and District M.C. shared two open permits with the Ealing Club, which chose London to Holyhead.

More records were broken by the M.C.C. London-Edinburgh run at Whitsun, made more difficult by the inclusion of Buttertubs Pass.

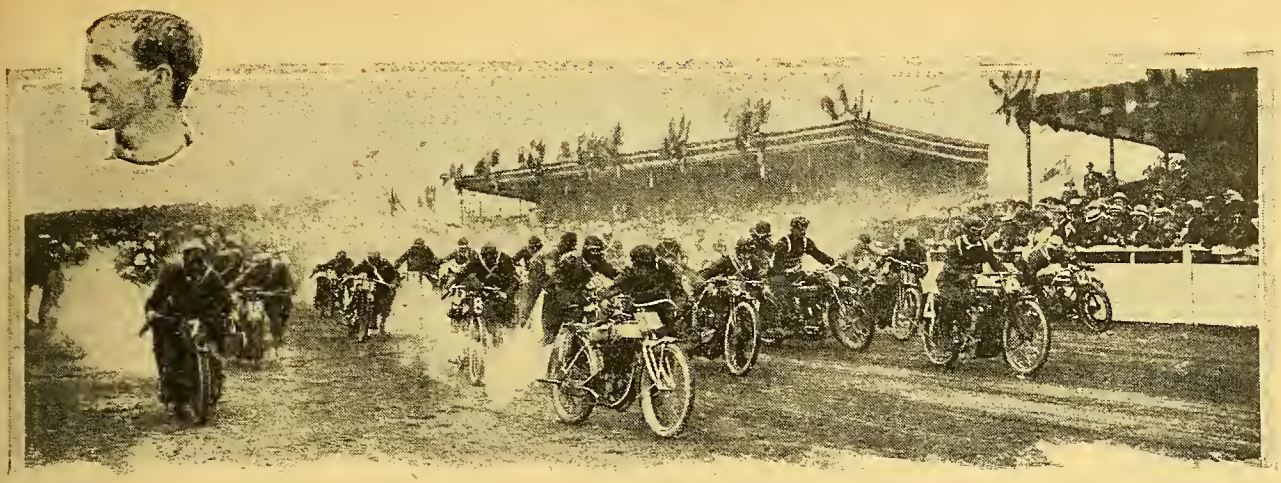
Then, a pause for the T.T., and the Sheffield and Hallamshire M.C.C. won the M.C.C. club team championship, taking home *The Motor Cycle* Cup for the second time. On the same week-end the N.W. Centre

F. Burns (3½ Sunbeam) scored another amateur's success by annexing four of the chief awards; and, on the Saturday after, Wrynose Pass proved just as deadly in a Cumberland event. Bert Kershaw added to his and the New Imperial's laurels in this case. Wonderful weather saved (or ruined, according to viewpoint) the Liverpool M.C. Reliance Cup Trial, the actual route being quite as difficult as the earlier North Wales scramble. Reg. Brown (3½ Sunbeam sc.) and G. W. Shepherd (8 Excelsior sc.) tied for the Reliance Cup.

On the following week-end the Edinburgh M.C. "released" a wonderful hill in a local park for the benefit of returning competitors in the Scottish Two Days Trial.

Towards the end of September a team of English riders, at home, easily beat the representatives of Holland. Birdlip caused many Dutch failures. On the same week-end the M.C.C. proved that Kent has possibilities for a solo machine trial.

Fifty heroes faced the starter in the Scott Trial, "open" only in that open country was traversed; October failed to provide real October weather,



As a contrast to the picture on the preceding page, this scene at the simultaneous start of all the 500 c.c. machines in the Grand Prix is illuminating. (Inset) A. Bennett (3½ Sunbeam) the winner.

however. J. Whalley, of T.T. fame, this time on a Sunbeam, won the amateur class, and C. P. Wood (3¾ Scott) the trade prize. Next Saturday was summer-like, but the M.C. and A.C. found more precipices around Stroud than the local goats knew of. W. B. Gibb (3½ Douglas) was the star performer, consequently gaining the M.C. and A.C. Trophy.

A little more rain would have made High Oak even more interesting in the early November West Midland Trial, but the observers had far from a dull time as it was. Ariel and Sun-Vitesse teams tied for *The Motor Cycle* award; the Norton private owners' prize went to L. Crisp (4½ Humber).

There were two Christmas holiday events—the classic London-Exeter run of the M.C.C. and the open twelve hour London-Gloucester-London trial of the North-west London M.C.C. Both received most encouraging support, and the M.C.C. run in particular, aroused great public interest. Weather conditions were what might have been expected, but there was a good proportion of finishers

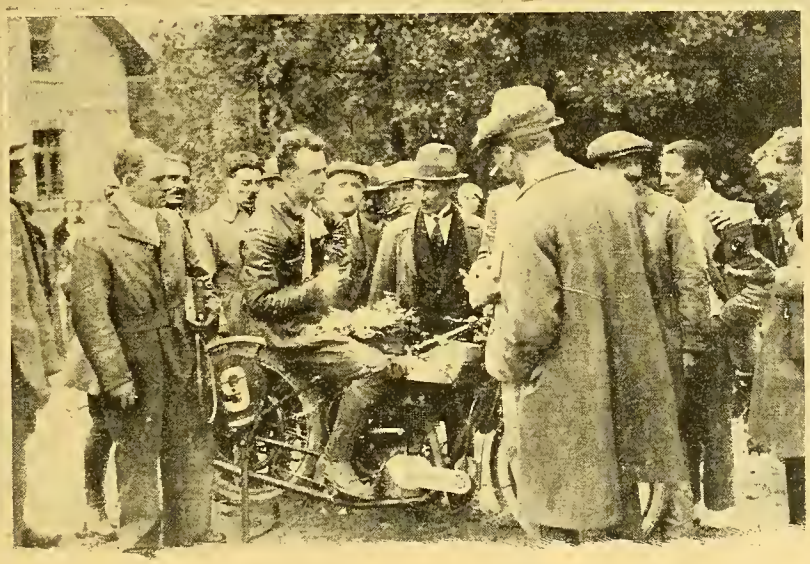
## SPEED EVENTS.

### Road Racing.

UNQUESTIONABLY the most important motor cycle speed event in the world, the T.T. races in the I.O.M. last year produced some sensational results. J. Whalley, on a 2¾ h.p. o.h.v. Massey-Arran, made a lone but stirring fight in the Junior Race against five A.J.S. lightweights. Misfortune overtook him in the last lap, while he was still a possible winner, and Eric Williams, on one of the Wolverhampton machines, won, for the second time in his career, at the record speed of 52.1 m.p.h. Douglas Prentice, on a 2¼ h.p. New Imperial, secured victory and *The Motor Cycle* Cup for a four-stroke in the 250 c.c. class.

After running second for a number of laps to a variety of leaders, H. R. Davies, on a 350 c.c. A.J.S., beat every 500 c.c. machine in the Senior Race at the remarkable, and again record, speed of 54.49 m.p.h. F. G. Edmond (3½ Triumph) made the fastest lap at 56.44 m.p.h., but his luck did not hold and he failed to finish earlier than seventh.

Two Sunbeams, ridden by A. Bennett and T. C. de la Hay, made a clean sweep of the French Grand Prix at Le Mans; and H. Hassall, on a Norton, secured a noteworthy win in the corresponding Belgian event, bringing a Continental award to Birmingham. Thus British machines proved their superiority in the three great international road races.



BRITISH VICTORY IN BELGIUM.

H. Hassall (3½ Norton), snapped immediately after winning the Belgian Grand Prix Race

### Brooklands Racing.

On the track it was a year of unparalleled activity, and, to give due credit to every more or less outstanding success, would require the best part of this issue of *The Motor Cycle*. Taking, therefore, the "more" noteworthy achievements, the 500 Mile Race cannot

**1921 in Retrospect.—**

lightly be dismissed. It was the first long distance event of its kind, and proved an immense success.

The Miller Gold Cup, the premier award, for the first man home irrespective of class, went to H. Le Vack, who piloted a 7-9 h.p. Indian over the distance that London is from Perth at an average speed of 70.42 m.p.h. An amateur rider, E. W. Parham, on a 5-6 h.p. flat twin Coventry-Victor, led the 750 c.c. class at 56.00 m.p.h., but V. Horsman's 490 c.c. Norton, which won the hotly-contested 500 c.c. class at 62.31 m.p.h., was faster. A 2¾ h.p. Ivy two-stroke, ridden by N. Norris, and a 2¼ h.p. New Imperial, with

1921 (published on December 15th, 1921) reveals many changes and, an encouraging point, a considerably greater variety of names—both of riders and machines. Records are far from being anybody's monopoly nowadays.

A speed of 100 miles an hour on a motor cycle was for the first time recorded in this country, when, towards the end of April, D. H. Davidson, on a 7-9 h.p. Harley-Davidson, just succeeded in exceeding the magic figure. On the very next day, however, Le Vack attained no less than 106.52 m.p.h. on an Indian, and has more recently increased this to 107.55 m.p.h. In the 500 c.c. class R. N. Judd (Norton) topped ninety

FIVE HUNDRED MILE RACE.

Over fifty competitors starting on their Marathon around Brooklands track—a striking spectacle. Below are the winners of the five classes and their speeds :

H. le Vack (7-9 Indian) 70.42 m.p.h. | E. W. Parham (5-6 Coventry Victor), 56.00 m.p.h. | V. Horsman (3½ Norton), 62.31 m.p h. | N. Norris (2¾ Ivy), 51.69 m.p.h. | Bert Kershaw (2¼ New Imperial), 50.34 m.p h.

Bert Kershaw "up," were first in their classes at 51.69 and 50.34 m.p.h. respectively. Three Martinsydes gained the team prize.

### B.M.C.R.C. Meetings.

B.M.C.R.C. meetings at Brooklands took place approximately once a month, and, towards the end of the "season," scratch championship races were held. Extraordinarily keen finishes were the rule, and, therefore, considerable credit attaches to the "champions," who are : J. V. Prestwich (2¼ Diamond-Jap), E. Remington (2¾ Blackburne). J. Emerson (3½ Douglas), C. G. Pullin (6 Douglas), and C. F. Temple (7-9 Harley-Davidson) in the solo events, and D. R. O'Donovon (4 Norton sc.) and C. F. Temple (7-9 Harley-Davidson sc.) in the sidecar heats.

### Records.

Records have been broken in a wholesale fashion, and a comparison of the list (published on January 6th, 1921) of 1920 with the corresponding table for

for the first time, but G. Dance, on an o.h.v. Sunbeam, has since sent this up to 93.99 m.p.h.

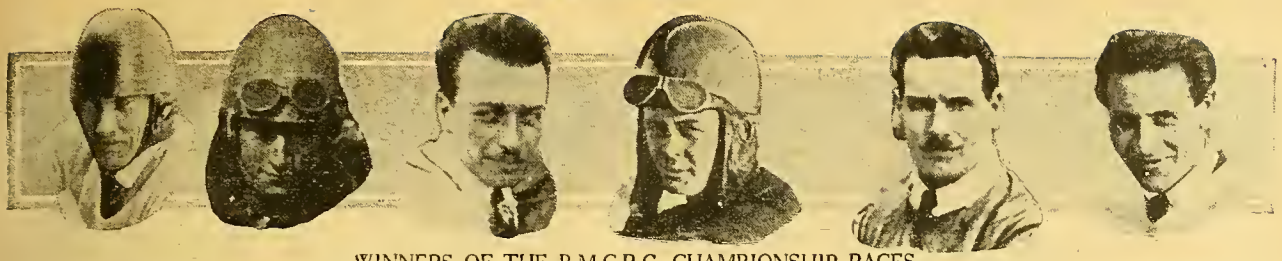
For the first time in history a four-valve single holds the much-coveted, and, consequently, the much-broken, 500 c.c. hour record, F. B. Halford, on an o.h.v. Triumph being the successful rider. There are now, too, a couple of times in the 750 c.c. class, made by H. H. Bowen (6 Martinsyde), which beat the hitherto all-conquering "3½'s."

Two-strokes hold a much stronger position than at the end of 1920, fine records standing to R. N. Judd and D. R. O'Donovon (Velocettes), N. Norris (Ivy), and J. F. Newey (New Comet-Climax sc.).

New Imperial, A.J.S., Douglas, and Norton are, of course, well represented, in addition to the makes already mentioned.

### Speed Trials and Hill-climbs.

As a general rule speed trials and hill-climbs are almost identical events, and last year they attained



WINNERS OF THE B.M.C.R.C. CHAMPIONSHIP RACES.

D. R. O'Donovon (4 Norton)—600 c.c. sidecars

C. G. Pullin (6 Douglas)—750 c.c. solo machines.

J. V. Prestwich (2¼ Diamond-Jap)—250 c.c. solo machines.

C. F. Temple (7-9 Harley-Davidson)—1,000 c.c. sidecar and 1,000 c.c. solo.

E. Remington (2¾ Blackburne)—350 c.c. solo machines.

J. Emerson (3½ Douglas)—500 c.c. solo machines.

great popularity, notwithstanding the fact that the real thrill of racing is usually absent. This latter criticism does not apply, however, to meetings on the sands, where scratch races were actually staged, such as—a typical example—the Welsh open championships at Pendine Sands on August 25th. Scotland, too, held speed championships on the Saturday before the Scottish Trials.

With well over a dozen open timed speed trials or hill-climbs, and one or two of them with thirty to forty classes, it would appear, at first sight, difficult to pick out the most successful riders. However, as George Dance, on his wonderful Sunbeam, almost inevitably made fastest time of the day, he stands out most distinctly as the premier rider in this class of event. At the Norfolk Open Speed Trials on September 8th he more than once streaked down the dusty course at over 90 m.p.h. H. Le Vack (Indian), who won *The Motor Cycle* Cup at the Doncaster event later in the year, and G. W. Walker (3½ Norton) have also both gained a valuable collection of premier awards at these events; and there are twenty or so other names that immediately occur in seeking to honour our speedmen.

During the year the records for Sutton Bank, Style Cop, Kop Hill, and Penkridge Bank have all been bettered.

No wonder 1921 has been called a speed year.

## MOTOR CYCLES AND THE LAW.

THE year 1921 opened with a new system of taxation for all classes of motor vehicles. The owner of the lightweight came off fairly easily, and only had 10s. added to the £1 he had to pay previously, but the owner of a motor bicycle weighing over 200 lb. was mulcted of three times the original fee, and he had to pay £1 extra for the privilege of drawing a sidecar. This means that the rider of a machine of average weight has to pay three times the amount he was forced to contribute before the new regulations came into force, but even then his fate is a great deal better than that of the car owner, as the initial motor cycle tax was proportionately small. Of course, the consequent elimination of the petrol tax of sixpence per gallon was decidedly beneficial to all motorists, especially those whose mileage is extensive.

So far as the year 1921 is concerned, the taxation scheme appears to have worked smoothly, and we rarely receive letters from readers who have difficulties with the taxation authorities; only occasionally do we hear of cases of motor cyclists failing to understand the use of the registration book, which has to be forwarded to the registration authority so soon as a change of ownership takes place.

In August last an order was made rescinding the war time lighting regulations, with the result that not only pedal cycles but solo motor cycles as well were allowed to dispense with their tail lamps. Now, from the motor cyclist's point of view this was undoubtedly a saving of trouble and a great blessing, but from the point of view of other road users it is a severe disadvantage. Every motorist who has any consideration for himself and other people using the King's highway must know how dangerous it is to overtake a vehicle the rear of which is not illuminated in any way, and how many an accident has occurred through neglect of this precaution. It is hardly to be conceived, therefore, that the authorities will allow this state of affairs to continue much longer. But to deal with the present:

RECORD-BREAKERS OF NOTE.

F. B. Halford, holder of the 500 c.c. hour record, on a four-valve Triumph.

D. H. Davidson (7-9 Harley-Davidson), the first British motor cyclist to attain 100 m.p.h.

Geo. Dance, who has recorded 93·99 m.p.h. on a 3½ h.p. Sunbeam.

J. F. Newey (2¼ New Comet Climax sc.), the only holder of sidecar records on a two-stroke.

R. N. Judd (3½ Norton), who first exceeded 90 m.p.h. on a 500 c.c. machine.

1921 in Retrospect.—

cases have occurred of motor bicycles being stopped by the police for not carrying a rear light, but we have been unable to trace cases of actual fines being imposed for this alleged offence, and certainly no test case has been fought by any of the motor cyclists' organisations, though we know that they would be ready and willing to take up a matter of this kind on general principle.

### Speed and Silence Requirement.

There is one point for which motor cyclists may be truly thankful, and that is the practical disappearance of the speed limit police trap. Police persecution is not yet a thing of the past, but it is nice to know that if the average motor cyclist drives carefully in congested areas he need not fear any trap on the open road. The fact, however, remains that the police are in certain districts extraordinarily strict as regards silencing, and we must say that in many cases their action is only too well justified. Undoubtedly, motor cyclists are themselves to blame, as many love the healthy bark of a well-tuned engine, which, unfortunately, is the one thing which the general public absolutely detests. The manufacturers are also likewise in the wrong for aiding and abetting these noise enthusiasts by turning out and selling machines which must of necessity be inadequately silenced. It was definitely established at the last A.C.U. Silencer Trial, held in 1913, that the ideal silencer was as large an expansion chamber as can be fitted and a long exit pipe, such a device giving practically no back pressure and considerably reducing the noise of the exhaust gases. At ordinary speeds, however, there are many machines which are extremely quiet with a "straight through" exhaust pipe. If a machine can be silenced without losing power, there surely can be no objection to rendering the exhaust reasonably quiet, provided the owner obtains the liveliness and speed he requires.

## THE OUTLOOK.

TURNING from the retrospective to the future, the outlook for 1922 is brighter than the most sanguine prophet expected it to be a few months ago. There is a genuine note of optimism in all motor cycle circles, which is the outcome of the Olympia Show, at which it was proved that public interest in motor cycles is greater than ever. This is confirmed by the fact that the circulation of *The Motor Cycle* Show number was over 140,000—a sign of its popularity as well as of the enthusiasm for the machines with which it deals.

It is now fully realised that almost any good make of motor cycle may be regarded as reliable, and that the motor cycle provides the most economical form of mechanical transports for one person or whole families. It is no longer exclusively classified among sports and pastimes, for the motor cycle is already a utilitarian vehicle as well as a means of providing the youth of this country with a fascinating and health-giving pastime.

Prices for 1922 are considerably below those obtaining twelve months ago, and the public which withheld purchasing last year owing to the falling prices has now greater confidence that prices are definitely stabilising.

On every hand we hear expressions of satisfaction with the prospects for the New Year, and already vacant places are being filled in motor cycle factories, which gradually alleviates the unemployment problem. The prospects of a peaceful Ireland, again, also are having a beneficial effect, and, altogether, the outlook for 1922, so far as the motor cycle movement is concerned, is better than was anticipated, and may be regarded as satisfactory.

# MOTOR TAXATION.

## Estimated £5,000,000 Excess in Two Years.

IT is sometimes overlooked that, whilst the financial year for ordinary taxation begins in April and ends in March, the financial year for motor taxation licences ends on December 31st. If, therefore, any alteration, either in principle or detail, is to be secured for 1923, statutory authority must be obtained by the Finance Act, 1922, which will be originated by the introduction of the Budget in April next.

From August, 1915, to March, 1920, the State benefited to the extent of £12,700,000 from special taxation, which at the outset was specially earmarked for the roads. The sum of £8,250,000, which was transferred from the Treasury to the Road Fund at the end of the war, was not in the real sense a set-off against these diverted revenues. It was a contribution in respect of road depreciation due to war conditions.

Even assuming the contrary, the Exchequer made a profit of nearly four and a half millions from motor taxation during the war period.

What was the estimated revenue required, what, on the latest figures, is the yield of taxation, and what is likely to be the yield for 1922?

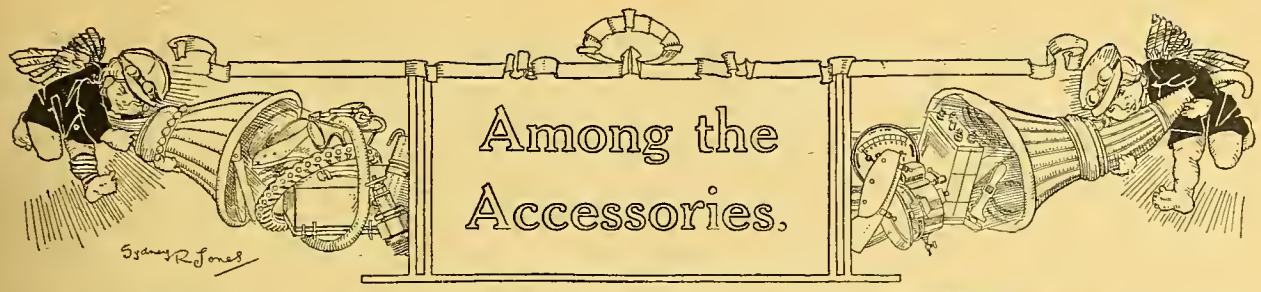
The second paragraph of the report of the Departmental Committee states that the problem was to raise "an annual net revenue, provisionally estimated at £7,000,000." That was the task set the Motor Legislation Committee. This £7,000,000 net became £8,000,000 gross after adding the costs of collection and the sum to be paid local authorities in lieu of carriage licences. By the end of November—that is, after eleven months' operation of the scale—the gross yield exceeded £10,500,000. It is reasonable to assume a gross yield of £11,000,000 for the full year.

The highest estimates of the Chancellor of the Exchequer and of the Ministry have never assumed a greater gross yield than £9,025,000. On April 20th, 1920, Sir Eric Geddes stated in the House of Commons that "£7,000,000 or £8,000,000 a year is necessary," and on April 27th that the object is "to raise, roughly, £8,000,000 a year." Therefore, on the highest estimate of the sum required, there will be this year an excess of nearly £2,000,000.

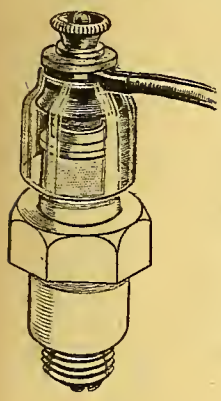
What of 1922? As the present scale of taxation cannot be altered during that year, an increase of a million over the 1921 yield is probably an under-estimate. An excess of £5,000,000 in two years may be regarded, therefore, as a certainty.

Opinion amongst manufacturers, dealers, and users of private and commercial vehicles is practically unanimous that, apart from the unjust and anomalous incidence of burden inseparable from the present system of taxation, the scale upon which the duties are levied has produced already a serious restriction upon the development of mechanical road transport.

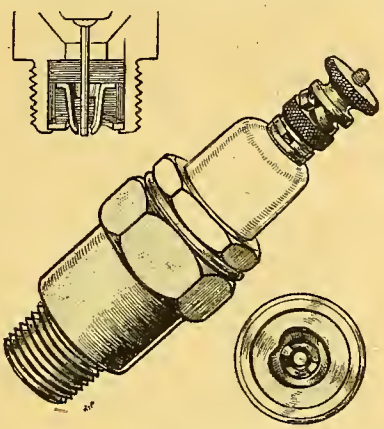
The Motor Legislation Committee is working hard to secure an alteration in the taxation scheme, but prospects are not hopeful unless all sections of motor vehicle owners unite for the presentation of an agreed case for consideration by the Government Departments concerned in the early days of this year.




## Combined Waterproof Terminal and Spark-gap.

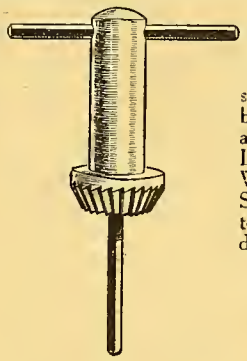


By means of an insulating bush in the "Sparxsekas" terminal, the h.t. wire is insulated from the central electrode, but a spark gap is provided inside the glass dome, the spark being visible although totally enclosed by the chamber. The gap is adjustable by means of washers. (Clifford Pressland, Hampton-on-Thames.)



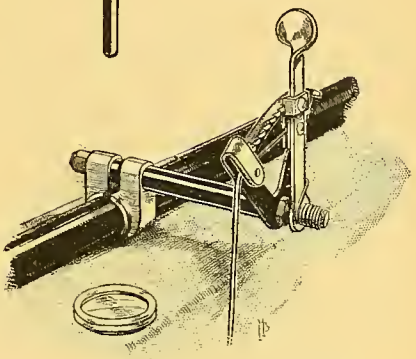
## To Prevent Oiled Plugs.

As the upper section of the electrodes, etc., shows, the Dome plug embodies a spark-gap actually at the firing points, since the current has a double gap to jump before it reaches earth. The plug may be entirely dismantled for cleaning. (Roth and West 67, Cowley Road, London, S.W.14.)



## Renewing Valve Seats.

For re-cutting valve seats, this tool is made by the Motor Gear and Engineering Co., Ltd., Kingswood Works, High Road, Seven Kings, Essex, to suit a variety of different engines

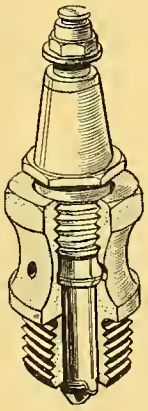


## When the Throttle Wire Breaks.

Ultra-cautious motor cyclists will welcome this device which is intended to be carried in the tool-bag until the throttle or clutch wire breaks. (Watkinson and Northedge, Palatine Villas Morton near Alfreton.)

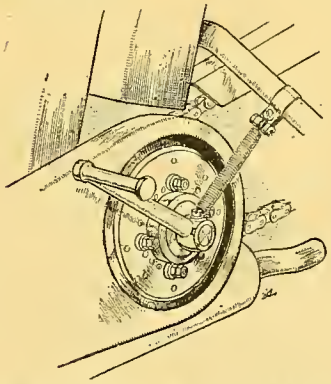
## Easy Starting and Economy.

Simply a handle-bar controlled extra air valve surrounded by absorbent material, the Atomiser Co.'s (East Belden, Durham) Economiser may also be soaked with petrol to act as a priming device



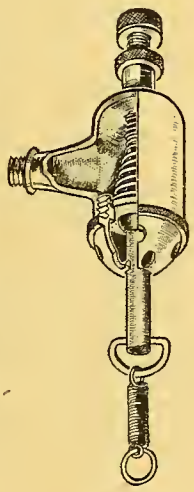
## An Air-cooled Plug.

With an enormously stout central electrode and air-cooling holes in the body, the J.A.M. sparking plug should never become excessively hot. (The Hobson Manfg. Co., 29, Vauxhall Bridge Road, London, S.W.1.)



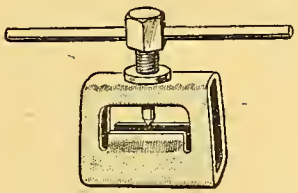
## Kick-starter for an Old Machine.

Working on a simple ratchet principle, this kick-starter has been specially designed for the old type two-speed Indian machines. It fits on the outer clutch plate, and it is only necessary to send this when ordering. 50/- (C. Hopkins, 283, Foleshill Road, Coventry.)



## An Automatic Extra Air Inlet.

At small throttle openings, when the suction in the induction pipe is greatest, the Empire extra air valve automatically admits extra air. It may be hooked out of action if required, by the coil spring and loop provided. (New Motor Speciality Co., Ltd., 113, Oxford Street, London, W.1.)



## Simple and Neat.

Nothing could be simpler than the chain rivet extractor supplied with all three-speed Rudge machines

# LONDON-EXETER-LONDON.

## Record Success of the M.C.C. Classic Holiday Trial. Mixed Weather and a New Hill.

"THERE you are, then!" The idiotically popular catch-phrase of the moment, echoing and re-echoing among a 300 strong crowd of strangely garbed motorists at and around the Bridge House Hotel, Staines, very appropriately expressed the spirit of the occasion—the start of the M.C.C. London-Exeter-London run on Monday night last week.

The 1921 event assumed more than ever the nature of a gigantic re-union of the keenest motor cyclists in the country. One must be keen to leave a cosy fireside on Boxing Day for the purpose of riding through the night to Exeter, then back, under proverbially severe weather conditions, and by no means over the easiest route.

The assembly at Staines, where the start of the trial was made at 8 p.m.

### High Proportion of Finishers.

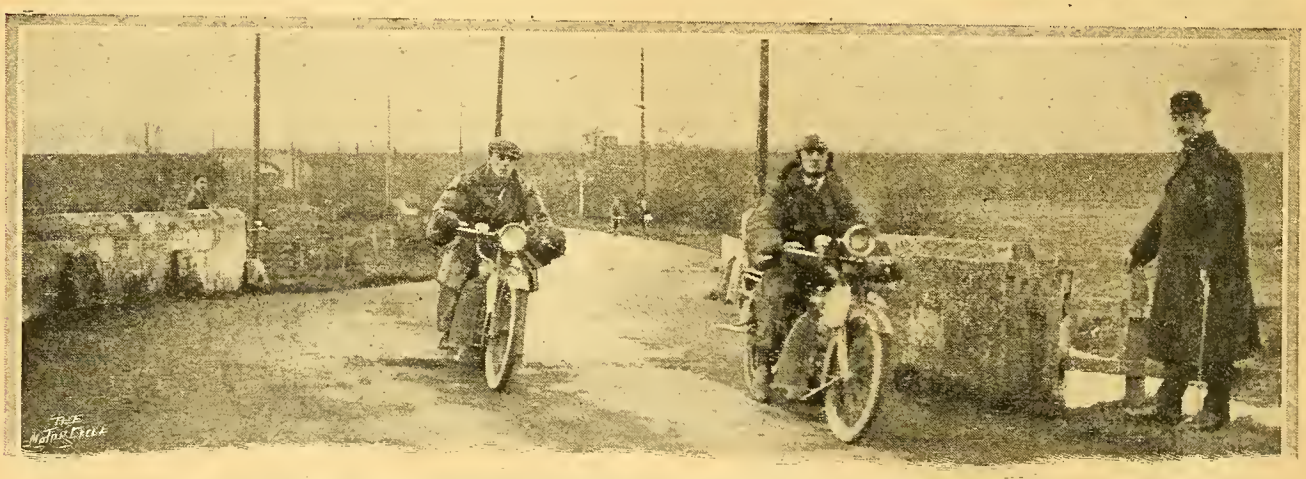
Exactly 200 hundred drivers of solo machines, sidecars, or three-wheelers, as indicated by the entry list, decided to include a mass visit to Devonshire in their Christmas festivity programmes; and 186 actually started—64 solo, 107 sidecars, and 15 three-wheelers. Of these no fewer than 151 (49 solo, 89 sidecars, and 13 three-wheelers) checked in at the finish on the following night, although one or two of these "finishers" had gone no further than Salisbury!

It did not actually rain at the start, and some were rash enough to hazard that the long run of suitably wet Boxing nights was at last to be broken. Few of these false prophets were taking any risks in the matter of clothing, however, and if the members of the general public who lined the starting point in two long avenues were entirely disinterested in motor cycles (which, emphatically they were not), they would have spent an interesting time in viewing the variegated clothing schemes. Nevertheless, here and there, were heroes, obviously new to the run, who had casually flung on old coats on the basis perhaps that they had proved effective in the past during an afternoon's summer rain.

The machines and their lighting arrangements were also very varied. Brand new, old, and old and obsolete outfits were indiscriminately formed two-deep in a long line leading to Mr. Bidlake's car, when A. C. Rhodes on a four-valve Triumph, looking "straight from the crate," and G. E. Cuffe (2½ Metro-Tyler) received the word to go. Thereafter the remainder were despatched in pairs at one-minute intervals, having survived a battery of flashlight photographers, dismal farewells from friends, who were "going by car for a change this year" (!), and queries of "What petrol (carburetter, plug, or chest-protector, etc.) are you using?"

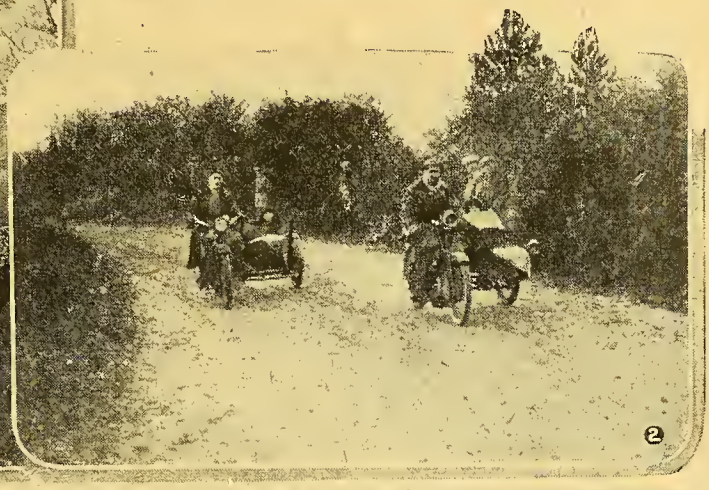
### Born 1899, still going Strong!

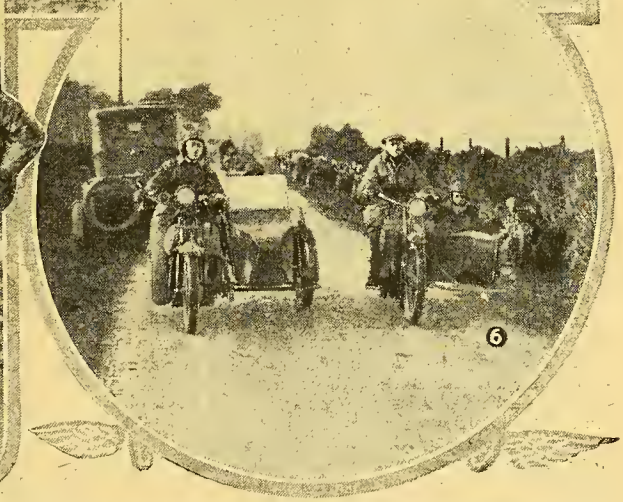
B. F. C. Fellowes' 2¾ h.p. De Dion Bouton (*"ne fronti credé"*) of 1899 vintage was undoubtedly the oldest machine, but it was too well modernised to be the least modern. For example, W. Hill's 8 h.p. Chater-Lea sidecar outfit was very much pre-war, and, despite a carrier that came "unstuck" every quarter of an



V. Gayford and F. C. Townshend, both riding 3½ h.p. Zenith-Bradshaw machines, leaving Salisbury

# Passenger Machines on Salcombe.






(1) C. E. Bennett (8 Morgan) followed by two more three-wheelers. (2) Extreme types, both climbing well—C. Nott (7 Matchless sidecar) and G. F. Mason on a 375 c.c. Connaught outfit. (3) The re-designed 4 h.p. Douglas makes a fine ascent in the hands of G. Kuhn, who has just overtaken W. Hill (8 Chater-Lea sidecar). (4) W. Joyce's Grand Prix Morgan passes two less successful sidecarists. (5) Smiling competitors in the check at the top of the hill. (6) On the level once more, just beyond Salcombe—F. W. Giles (7 A.J.S. sidecar) and H. L. Miserey (7 Matchless sidecar).

**London-Exeter-London.—**

hour or so, with the inevitable consequences to a cheap acetylene tail lamp, it completed the run with remarkable consistency, failing only on Salcombe.

E. H. Fielden's belt-driven Norton also had obviously seen several summers since it left a showroom; in this case a Mabon gear gave a low ratio of only 8 to 1, but Fielden was observed in trouble early in the night, and he failed to finish. There were also several fairly ancient Triumphs and a far from new 2¾ h.p. Zenith.

### Interesting Entries.

Among the other machines that attracted special attention were: S. S. Debenham's 10 h.p. Campion, which was fitted with a Jardine four-speed gear box; J. Wallis's 7-9 h.p. Reading-Standard, which hauled two full-sized passengers in a Plus One sidecar; Neville Hall's little two-stroke O.K. outfit, upon which he made a star performance; the 4½ h.p. Beardmore-Precision, driven by Eli Clarke, jun., who, however, experienced much bad luck; and the three Ner-a-cars.

There was no unanimity in lighting equipment. The general idea appeared to be to mount as many lamps as possible on the available space, although more than one of the solo men were content with a single acetylene head lamp fed by a solitary standard generator.

Since, including cars, the procession of competitors extended to nearly sixty miles along the road, it is impossible to say definitely where and when it started in real earnest to rain. But nobody crossed Salisbury Plain without getting his share, and, for most, those dreary stretches before and after the supper stop at Salisbury itself were a continual battle with the elements. A high-pressure gale from a threequarter front direction bore the water in sheets against the riders, made driving almost dangerous for the soloists and most unpleasant for all, and ruined the reputations of several waterproof coat manufacturers.

Curious things began to happen to the machines. For example, J. A. Watson-Bourne's Brough Superior has a saddle tank, underneath which are carried the high-tension leads to the plugs; water drained in and a concealed "short" developed, which took quite a lot of unearthing (no pun!). A. C. Rhodes (o.h.v. Triumph) repeated his Land's End mishap, and took rather a nasty toss.

Onwards to Yeovil lone enthusiasts here and there kept vigil by the roadside, but mainly it was rain, and then more rain. Hot coffee, as usual, at Moffatt's garage was something to look forward to; then even the weather gods cheered up, and when Chard Hill was climbed (by 99% successfully) it was once more dry overhead. There was a check at the summit, and another at Honiton.

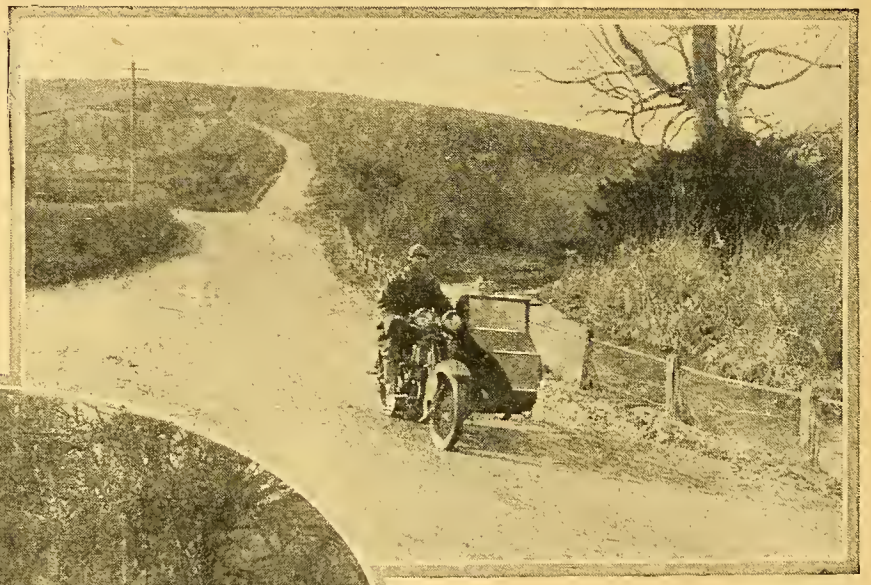
Peak Hill, ascended just before dawn, was in an extremely bad condition, and skids and wheel slip respectively caused many solo and sidecar failures. Parsons chains saved several of the small three-wheelers. Peak was not a non-stop section, but the usual check at the top suitably penalised most of the failures.

Much of the next thirteen and a half miles to Exeter consisted of extremely slimy, narrow, and twisting lanes, and falls were common occurrences.

Two hours and a quarter were allowed for breakfast, and a start was made on the return journey. Forebodings regarding Salcombe Hill proved not unfounded. Although greasy in patches, it is far from being a freak hill, and failures, except from balking, were in most cases inexcusable.

The O.K. sidecar outfit again distinguished itself with a slow but very sure climb, in contrast to one or two of its immediate predecessors and followers, notably A. P. McGowran (4 Triumph sc.), who changed up just after the steepest portion, and C. G. Pullin (6 Douglas sc.). Most of the horde of Matchless sidecars toyed with the hill, but no more effectively than W. C. Hemy's 2¾ h.p. A.J.S. outfit or G. R. Claridge's Triumph. The 350 c.c. Ivy outfit, driven by P. A. Hopkins, was also very sure of its capabilities.

Among the soloists, the lightweights were both best and worst, although the majority of those that were fully expected to fail had retired long before! Except-



(Left) C. C. Labin (Zenith-Bradshaw), one of the travelling marshals, and H. R. Hancock 3½ (Lea-Francis), near Sidmouth.

(Right) On a picturesque portion of the route near Coombe Bissett—S. S. Debenham (10 Campion sidecar).

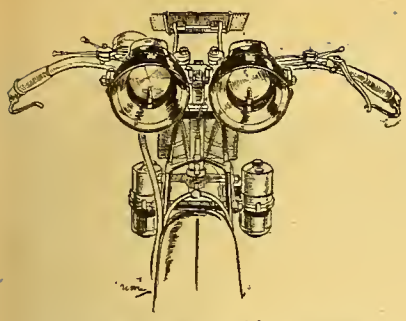
ing W. E. Line's New Hudson and one of the L.S.D.'s, all the three-wheelers (mainly Parsons-aided) were good. Failures here, by the way, were penalised irrespective of arrival time at the subsequent check.

### Improved Weather.

Last year's route was rejoined a mile or two further on, and through Lyme Regis, Dorchester, and Blandford to the lunch stop at Salisbury bright sunshine cheered the sleepy drivers and warmed the sleeping passengers.

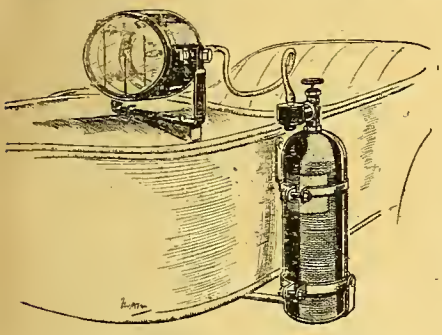
Little batches of local motor cyclists were congregated on almost every upgrade to witness the passage of the competitors, and by the eager way in which they followed every movement they were obviously making most absorbing comparisons of the various machines' "hill-

## DETAILS OF INTEREST ON COMPETING MACHINES.

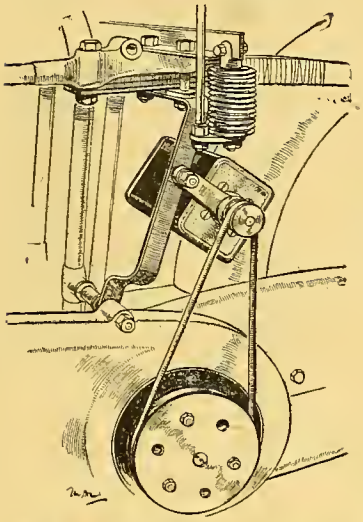


Twin head lamps, with a generator attached to each exhaust pipe, on A. C. Rhodes's Triumph.

climbing" capabilities. This greatly amused most of the drivers, who "T.T.-ed" up each of these (unofficially) observed sections with much danger of getting more than fifteen minutes ahead of schedule. There was an extraordinarily well camouflaged secret check near Salisbury, but memories of a similar occurrence in this area last year made for general caution. Nevertheless, our own observations proved that



Fallolite lamp and dissolved acetylene cylinder carried on W. P. Brandon's Triumph sidecar

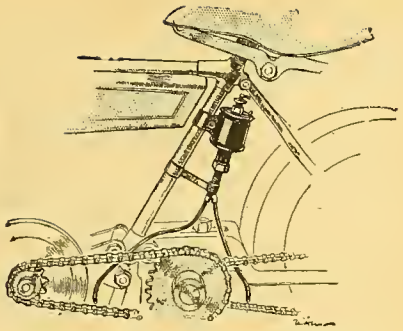


A small lighting dynamo driven by round belt from a pulley on the countershaft of E. Foster's Raleigh.

quite a number unknowingly lost their "golds" at this point.

Only an hour was allowed at the lunch stop, and the travel-stained survivors were despatched on the last lap over the same route as the previous night, but, of course, in the reverse direction. All had to light up before arrival at Staines, and the last twenty miles were rather difficult to follow. There were no enthusiastic spectators grouped on every corner, no urging on by the police force (as further west), and no illuminated arrows.

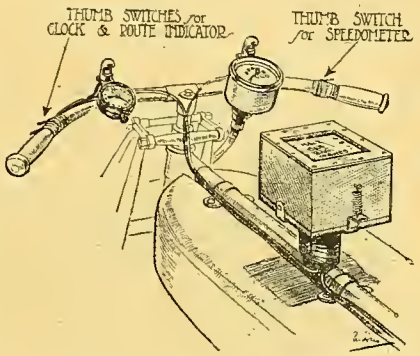
G. Brough (8 Brough Superior), although actually "No. 3," contrived, without imperilling his fifteen minutes ahead allowance, to arrive first, much to the delight of the spectators and the daily



Ordinary gas engine drip feed lubricator and feed pipes to chains on Pike's Levis.

newspaper reporters, some of whom obviously fondled the idea that the event was a race.

Claim cards were signed—these were intended to help the club to eliminate the unsuccessful without unnecessary delving into statistics—number plates returned, and the strenuous 319¼ miles run became a thing of the past. All honour to the finishers!




Method adopted by H. B. Browning (2¾ A.J.S.) to illuminate his route indicator, clock, and speedometer.

A. P. McGowran (4 Triumph sidecar), on the lower part of Salcombe Hill. He made a very good ascent.

# COMPETITORS' IMPRESSIONS.

## To Exeter and Back on an Old Machine.

By W. A. FELL-SMITH.

THERE is a question as old as the "Exeter" itself which an ever-increasing body of motorists ask themselves year by year, and which we again asked in the small hours of Tuesday morning, December 27th, 1921, while battling our way towards Exeter in the teeth of a hurricane.

"Why are we all doing this when we ought to be in bed?"

The answer is to be found at Staines for those fortunates who, having successfully completed their journey to time, experience a feeling of something accomplished in spite of difficulties, intermingled, perhaps, with just a little personal vanity and pride in their machine. The many familiar faces appearing annually in this event are proof of its peculiar fascination, which, once tasted, cannot be denied.

Once more we took a sidecar through the trial, but a hitch at the last moment necessitated a change of mounts, and we had to fall back on an old friend, an 8 h.p. Blackburne, with 14,000 miles to its credit, which started life in the 1919 "Exeter." At such short notice we were unable to make careful preparations, and the glow of the front cylinder during the night reminded us of fireside and home, and caused us to hope that the rumoured severity of Salcombe Hill was exaggerated!

### Chard Hill.

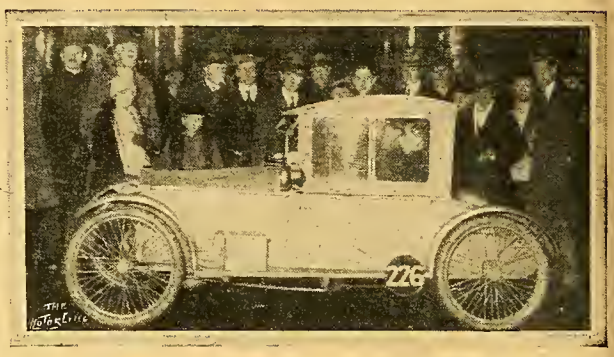
As far as Salisbury all was plain sailing except for a violent head wind, but here the fun started, for torrents of rain fell and beat straight in our faces. Before reaching Chard Hill, however, it had passed off, and we made an easy middle gear ascent in comparative comfort.

Remembering the difficulties of the course between Honiton and Exeter, we now set out to "blind," but trouble with the tail lamp bulb delayed us, and we reached the foot of Peak Hill only six minutes ahead of time. This narrow margin proved none too much, for, to our dismay, the back tyre chose this unfortunate moment to go flat. Finding the valve slightly loose, we blew the tyre up, and it held, and a successful climb brought us to the summit dead on time.

From here to Exeter the road is narrow and winding, and our efforts to put time in hand in case of further trouble were unavailing, but fortunately the tyre still held up.

### The Return.

On returning to the garage after breakfast, however, we found the offending tyre quite flat, and there was nothing for it but to change the wheel after leaving the check, adjustments inside the control being forbidden. This took only four minutes to accomplish, but the tyre on the spare wheel required blowing up, and we finally left Exeter ten minutes behind time. This had to be made up before the Salcombe Hill check, only fifteen miles away; but by dint of driving "all out," we arrived three minutes ahead of time, and rushed the hill with a hot engine, having considerable qualms as to the possibility of success.




Much curiosity was aroused as to how the occupants got inside this Tamplin coupé; the solution is that the upper portion hinges bodily.

An early change down to bottom gear caused our hopes of making a clean ascent to sink, and these completely vanished when we rounded a corner to find crowds of spectators and several hundreds yards of greasy 1 in 6 confronting us, for our back tyre was nearly smooth and three-ribbed! Part of the way up this portion our engine emitted several loud knocks, but slightly retarding the spark did the trick, and away we went, completing the climb with a feeling of mild surprise that it had been accomplished so easily, comparatively speaking, of course.

### Reliable Lighting Arrangements.

The worst was now over, the sun was shining, and up went our spirits again. To describe the rest of the trial would be mere monotony, for nothing of interest occurred. We had to light up again at Hartley Row, but this presented no difficulty with the ever-reliable D.A. to head lamp and dry battery to sidecar and tail lamp system, which we invariably adopt for its simplicity and certainty on competitions.

We checked in at Staines, feeling perfectly fresh; and, having put in our claim for a gold medal, set off for London, feeling at peace with the world and in particular with the M.C.C. for having provided us with such a thoroughly enjoyable outing.

(Left) Riders of V twin solo mounts—E. H. Gifford and A. A. Symes, both on 3½ h.p. Martinsydes. (Right) Over the crossing at Colyford, W. E. Churchill (2¾ Sirrah) and O. P. C. Collier (2¾ Edmund).

**London-Exeter-London.—**

## On a 4 h.p. Sidecar.

By "DUCDAME."

WHY do we do it? Frankly, I do not really know. But the spirit of adventure must have a lot to do with it. Also, it follows closely on the Show, and when you meet the "boys" there, and the question is asked, "Are you going to Exeter this time?" you say, "Yes," of course. To say "No," without a very good reason, suggests that you are afraid of a little (?) rain—a butterfly rider, in fact—and not to be counted with the real sportsmen. (No man who is not a sportsman goes on more than one "Exeter.")

Immediately you say "Yes," you find out what a lot of friends you have: "Good man, put it there. I am going also. Let's send our entries together."

### No Signs of Rain.

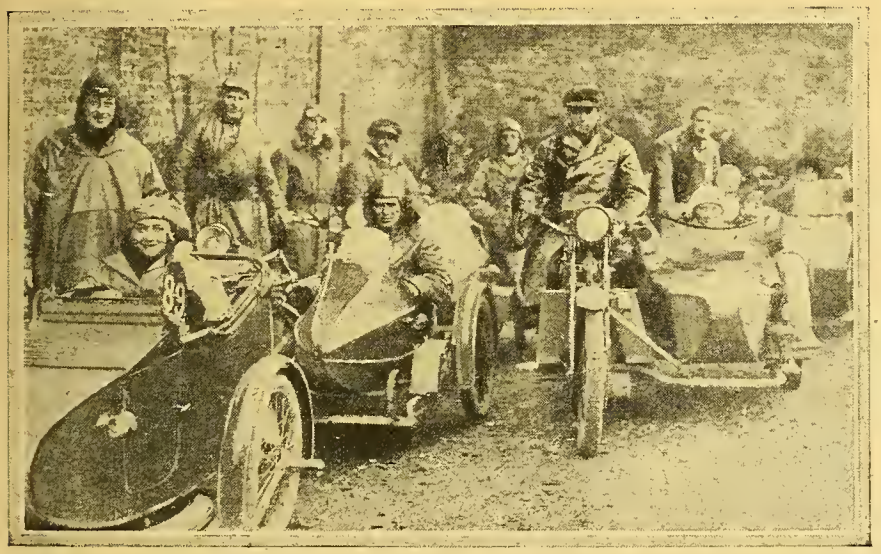
Good wishes simply shower on you while you prepare the machine. Then the usual last minute adjustments, the usual blind up to Staines in the afternoon, and then more reunions, more good wishes, the bustle and crowd and smell of burning oil, and you take your place in the long line leading to the timekeeper and starter, moving up a few yards at a time until it comes to your turn. Then: "Get ready," "Ten seconds," "Go!" and you are off with all the precision of a Brooklands event.

"I think it is going to be nice to-night—no signs of rain," you observe to your passenger, who is studying route card and watch.

Knots of interested people are grouped at corners and outside garages to cheer and shout unintelligible things to you as you pass.

As we get on to higher ground the wind is rising and rain commences to fall, the wind increasing to a raging gale on the port bow as we near the Plain. Luckily our lamps are electric, for one of our neighbours appears to be enjoying the job of lighting his sidecar lamp and tail lamp alternately. Every few miles we see him pulled up by the roadside and striking match after match, then a few minutes later he roars past, to stop again a little further on and repeat the performance. Then that awful wind that blows large pieces of flint about and seems to get under the sidecar as if intent on overturning the outfit. I do not know how the solo riders fared in this. Possibly some of them got on to more sheltered roads before the wind became so strong. But we came across one or two machines obviously suffering from the results of a crash. Second gear on a gradient of about 1 in 25! This is getting serious, but there are others worse off, for we overtake a big twin outfit which is apparently in bottom! Huge hoods and screens may be all right from the passenger's point of view, but ——!

A scene at the White Hart Hotel, Salisbury. J. A. Masters, H. R. Harveyson, C. F. Temple, and J. R. G. Hall, all riding Harley-Davidson sidecars. H. Karslake (Brough Superior sidecar) is seen on the extreme left.



Competitors at the White Hart Hotel, Salisbury, about to resume the journey. The lady passengers looked particularly comfortable, thanks to the efficient weather protection of modern sidecars.

### The Supper Stop.

Salisbury at last, and supper. As we run into the town we notice one of the unfortunates pushing his disabled machine. Hard lines! But it is all in the game. The hot supper improves one's outlook on life wonderfully, and one "buckles on one's armour" (I mean "oilies") to face the weather once more. It is raining in earnest now, and there is a quart or so of water in the sidecar seat. This is soon mopped out, and we are all aboard and off again on the second stage. Now it is the rain's turn, and the deluge of huge drops, hurled into one's face and eyes by the wind, make it well nigh impossible to see. But we carry on somehow, using one eye at a time, to Yeovil, where we pull up for petrol and a cup of coffee "with Mr. Moffat." The petrol consumption is very heavy as a result of the head wind. Then on to Chard. The rain has ceased now, and Chard Hill presents no difficulty. One wonders if this hill ever saves a gold medal. The stars are shining as we sign the check sheet at Honiton, the elements having apparently decided to give up the contest. Peak Hill now has to be tackled. This appeared to be in a looser condition than last year, and a certain amount of wheel spin makes careful driving necessary. Another check sheet to sign, and then on to Exeter well up to time.

Several familiar figures failed to put in an appearance at breakfast, and no riders seemed to know what had happened to them after Salisbury. As we walked (by choice) back to the garage after breakfast, the weather gave promise—

**London-Exeter-London.—**

which was fulfilled later—of being fine, and the return journey proved a joy ride in glorious sunshine. Salcombe Hill was unknown to us, but there was nothing worse than a certain amount of grease, however, and it was climbed mostly on second gear. Lyme Regis looked very pretty with the sun sparkling on the sea. Everyone was on the look out for secret checks now, and, with the exception of occasional stops to keep within schedule time, there were few incidents.

### On to the Finish.

After lunch at Salisbury, more easy going with an eye on the time. (What a nuisance the secret check is!) Near Whitchurch a remark about the time produced no reply from the passenger, and a glance showed that he was sleeping peacefully and looking quite contented! A few miles further on the lights were switched on again, and Staines was reached without mishap a few minutes in front of schedule. After signing the sheet and claim card, we hand in our numbers and receive our "wages" in a neat brown envelope. Glad to be back? Yes! But very glad we went. Another happy memory of excellent organisation, cheerful company, and a "no trouble" run.

I express my personal thanks to the men who stood at corners in vile weather to see that we did not go astray. "A health to you, gentlemen; you deserve a more interesting job."

## A Bijou Sidecar and Limousine Cars.

By NEVILLE HALL.

WELL, it is finished at last, my first London-Exeter! I am glad it rained, because next year, at the finish of the 1922 London-Exeter, I, too, shall say, "Ah, this is nothing; you should have been in last year's run. This has been a picnic."

I suppose it was for many, especially those of the car brigade, but it is not all fun coaxing a 293 c.c. outfit through without even plugs burning out or growing whiskers.

I did not know there were so many telegraph poles in England. We seemed to pass millions, with their glistening wires; it appeared as if they ran from London to Exeter without a break.

The officials were great sports, and did their utmost for all of us. The other competitors, too, were very sporting, and never hesitated to pull to one side to let

About the same age as its driver, B.F.C. Fellowes' De Dion engined machine is well-known at the M.C.C. long-distance runs.

me pass, only they knew not that I was then all out, and had been for some time. I would have given a lot for an extra cylinder once or twice. The hills were not too bad at all—Peak, I think, the worst, but perhaps it was because we took it in the dark. Chard was quite easy, and Salcombe also, although the gradient of the latter was pretty stiff. I confess that I expected plug trouble.

I was very lucky. My back chain slipped off once, and that was my own fault in running it on the slack side. I had no difficulty in keeping up to time, nor in hill-climbing.

We picked up one very nice gauntlet glove, fur covered, which Mr. Bridgman took charge of at the finish. I certainly think the competitors could have been started a couple of hours earlier to enable some of the late comers finishing in daylight, and also I would bar all closed cars. It made me quite bad tempered at breakfast, sitting with my face burning and eyes aching, to see the limousine lads strolling in with posh creases in their trousers and every hair in place. It is not fair to the motor cyclists.

## The Adventures of a 1899 De Dion-engined Machine and its Rider.

By B. F. C. FELLOWES.

THOROUGHNESS is very essential in all things, and especially so to be successful in a long winter trial like the London-Exeter. My machine, when at last ready after overhauling from A to Z, received its usual test by taking a passenger on the carrier, and climbing nicely on top gear two particular pimples near my home. On the level I insist on getting the speedometer needles pointing to quite a respectable figure at which I feel well satisfied.

As the 150 miles run to the starting point is always my surest test that all is O.K., I forsook tuning for a jolly Christmas party, where time went all too quickly, and getting to bed at 2 a.m. resulted in my oversleeping till 9 a.m. on Boxing Day.

I dare not risk the whole journey by road in consequence, so decided to do the first hundred miles by train, and ride from Luton to Staines, and, luckily, I met a fellow competitor on the same train.

We helped each other to get the machines on board (lifting his "'bus" very tenderly, because in all truth it was a very "Superior" one with dazzling plate and enamel).

At the first stop we decided to see if the cycles were still all right, and, on entering the van, were horrified to find

E. M. Chudley, on a 4 h.p. Indian, and E. V Cox with his 5-6 h.p. A.J.S. sidecar, near Charmouth

**London-Exeter-London.—**

them in a ju-jitsu grip on the floor. A murderous glint was in my companion's eyes, and he did not sing carols. Whilst busy getting them upright again, the train moved off, and we finished the next lap in a pitch dark box. However, Luton at last: a brisk run of forty-three miles to Staines, replenishments in plenty for man and machine, and into war paint ready for the fray; 8-9 p.m., and the timekeeper's quiet "Go!" and I was away (with perhaps the most undignified start of any competitor, for mine has not the luxury of a kick-starter).

Up to Salisbury the weather had been fairly kind, but from there onward to Yeovil a severe head wind and drenching rain made the going very hard, and I only kept up the average with difficulty.

The thought of hot coffee at Yeovil acted almost as a magnet, and ere long I was enjoying our host's hospitality. I join with all the competitors when I shower blessings on Moffat, of Yeovil.

Up to Chard Hill the glittering medal was well within my grasp, and I climbed the hill non-stop with ease; but soon after my first and only trouble befell me: the oil pump refused to function, and much valuable time was lost investigating. The trouble was a choked oil pipe, but my endeavours to force the oil through resulted in a bent plunger.

On Peak Hill I met my Waterloo, and decided that a two-speed gear with 10½ to 1 as bottom was not good for Devonshire, particularly with a 2¾ h.p. machine weighing over 2 cwt.

I made Exeter at last, thirty minutes behind schedule time; and, though the coveted gold was now lost, I still determined to try for the lesser honour.

On the return journey, however, I bit the dust yet again at Salcombe Hill.

## ON SALCOMBE HILL. By an Observer.

SALCOMBE Hill, although somewhat more difficult that last year's chief test gradient (Trow), was not so bad in surface as had been anticipated, and its gradient at the worst point could not be steeper than 1 in 6.

To the solo men the hill gave very little trouble; in fact, it would be hard to select anyone as having outshone his fellows. What failures there were would be attributed largely to bad luck, rather than lack of power. The sidecar performances were disappointing in some cases. On the one hand, we had the baby two-strokes making excellent climbs, and on the other 8 h.p. outfits were failing long before the really steep gradient was reached. True, one or two of them had seen quite a few birthdays, while others were suffering from slight over-gearing.

The fastest climbs were undoubtedly made by B. S. Allen, on the rigid frame Matchless outfit, and J. D. Marvin (8 Brough Superior sc.). Which of the two had the honour it would be hard to say, but both rather upset the equanimity of the spectators. E. J. L. Strong (7-9 Harley-Davidson sc.) was also well to the fore on speed, while for good steady climbing the spring frame Matchless was much in evidence. H. W. Glendinning demonstrated very thoroughly that the 4 h.p. Powell is a sidecar mount quite worthy of attention. Giles and Hemy (both on 7 h.p. A.J.S. sidecars) were very sound, Giles, as usual, being rather spectacular. W. H. D. Steer (8 Zenith sc.) found trouble on the corner, his Gradua gear being hardly low enough for the task. W. Hill's rather ancient 8 h.p. Chater-Lea refused the gradient quite early, while G. Kuhn (4 Douglas sc.) went by him in great style. E. J. Pittock (3¾ Scott sc.) also came to a standstill.

## HOW THE COMPETITORS FARED.

Out of the 186 starters in the solo, sidecar, and three-wheeler classes, the following checked in at the finish:

### MOTOR BICYCLES.

A. C. Rhodes (3½ Triumph).
G. E. Cuffe (2½ Metro-Tyler).
G. Brough (8 Brough Superior).
D. H. Davidson (4 Indian Scout).
G. Richardson (2¾ Raleigh).
R. L. Richardson (3½ Alecto).
E. H. Gifford (3½ Martinsyde).
A. A. Symes (3½ Martinsyde).
T. L. Daniels (3½ Douglas).
B. F. C. Fellowes (2¾ De Dion Bouton).
H. F. Fellowes (3½ Norton).
H. W. Deacon (3½ Norton).
R. V. Saltmarsh (4 Harley-Davidson)
A. S. Pinchbeck (3 A.B.C.).
W. Milligan (3½ Sunbeam).
A. Milward (3 A.B.C.).
L. N. Stannah (4 Triumph).
H. C. Nias (4 Triumph).
V. Gayford (3½ Zenith).
F. C. Townshend (3½ Zenith-Bradshaw).
W. D. Pugh (3½ Zeolith-Bradshaw).
W. W. E. Clarke (2¼ Triumph Junior).
E. J. Kehoe (3½ Rudge Multi).
J. J. Boyd-Harvey (3½ Scott Squirrel).
C. Lintott (4½ Humber).
J. A. Hoult (3¾ Scott).
Ivan F. Anderson (2¼ Connaught).
C. C. Lahin (4 Zenith-Bradshaw).
H. R. Hancock (3½ Lea-Francis).
F. R. Cotgrove (3 A.B.C.).
O. P. C. Collier (2¾ Edmund).
W. G. Churchill (2¾ Sirrah).
H. B. Browning (2¾ A.J.S.).
R. C. Staunton (4 Triumph).
B. Gold (2¾ Coulson-B.).
H. Gold (2¾ Francis-Barnett).
H. H. Robinson (2¾ Wooler).
A. G. Wall (2¼ Cedos).
W. J Thomas (3 Ivy).
E. Foster (5-6 Raleigh).
E. M. Chudley (4 Indian Scout).
A. M. Knill (4 Indian Scout).
H. J. Scale (2¾ New Scale).
R. G. Spikins (8 Brough Superior)
William H. Wells (5 N.U.T.).
F. K. Parson (2¼ Ner-a-Car).
R. W. Learned (2¼ Ner-a-Car).
L. Pulham (2¾ Trump-Jap).
F. E. Salter (2¾ Zenith).

### SIDECARS.

P. W. Moffat (8 Douglas).
E. A. Wright (3½ Sunbeam).
E. Atkins (3½ Ariel).
P. W. White (8 Sunbeam).
F. J. Ross (7 Matchless).
R. C. Boxer (7 Matchless).
E. V. Cox (6 A.J.S.).
E. S. Powell (6 A.J.S.).
J. A. Peacock (8 Matchless).
Clifford Wilson (4½ Quadrant).
W. A. Fell-Smith (8 Brough Superior).
S. C. Tait (8 Brough Superior).
H. Clennell (8 Brough Superior).
H. Woollen (6 Martinsyde).
J. T. Bashall (6 Martinsyde).
W. H. Bashall (8 Martinsyde).
D. S. Parsons (8 Matchless).
G. Nott (7 Matchless).
F. W. Stevenson (5 Brough).
E. S. Burnett (4 Triumph).
A. H. Nelson (4 Triumph).
W. F. Guiver (7-9 Matchless).
R. J. Andrews (4¼ B.S.A.).
V. F. Long (8 Excelsior).
William King (7-9 Harley-Davidson).
J. G. Hann (8 New Imperial).
P. Pehrson (4 Dunelt).
C. W. Vallings (4 Dunelt).
R. B. Clark (8 Matchless).
J. A. Hilger (5 Rover).
T. E. Ranger (8 Matchless).
J. A. Masters (7-9 Harley-Davidson).
H. R. Harveyson (7-9 Harley-Davidson).
C. F. Temple (7-9 Harley-Davidson).
H. Karslake (8 Brough Superior).
F. J. Ellis (7 Matchless).
G. D. Hardee (7 Matchless).
C. R. Collier (7 Matchless).
A. H. Ilsley (7 Matchless).
F. Macdonald (8 Matchless).
J. Graham (7 Matchless).
H. L. Misorez (7 Matchless).
F. W. Neill (7-9 Matchless).
Cecil Nott (7 Matchless).
D. D. Tilt (4 Triumph).
A. A Attwood (4½ Quadrant).
W. Reginald Brown (3½ Sunbeam).
G. J. C. Chambers (8 Royal Enfield).
R. Charlesworth (8 Zenith).
Frank Pownall (8 Royal Ruby).
W L. Gard (7 Matchless).
F. W. Giles (7 A.J.S.).
J. G. Biss (4 Norton).
W. C. Hemy (2¾ A.J.S.).
S. S. Debenham (10 Campion).
W. L. Danskin (7-9 Rudge-Whitworth).
F. T. Sibley (7-9 Rudge-Whitworth).
E. J. L. Strong (7-9 Harley-Davidson)
George F. Mason (3½ Connaught).
J. Wallis (7-9 Reading-Standard).
A. C. Ward (4 Triumph).
H. W. Glendinning (4 Powell).
A. S. Guthrie (3 A.B.C.).
J. D. Marvin (8 Brough Superior).
S. Julian (7 A.J.S.).
W. Julian (7-9 Matchless).
N. C. Dear (8 Sunbeam).
J. G. Goodenough (4 Norton).
B. S. Allen (7-9 Matchless).
P. A. Hopkins (3 Ivy).
G. R. Claridge (4 Triumph).
R. H. Attwood (4 Norton).
A. J. Agg (7 A.J.S.).
W. Bucknell (8 Matchless).
A. F. Pulling (8 Royal Enfield).
B. J. Sims (8 Bat).
P. Cunningham (3½ P. and M.).
L. Welch (4¼ B.S.A.).
William Hill (8 Chater-Lea).
A. P. McGowran (4 Triumph).
G. Packman (8 Matchless).
E. J. Pittock (2¾ Scott).
G. Kuhn (4 Douglas).
L. Heller (4 Douglas).
E. J. Hardwick (4 Triumph).
O. S. Bridcutt (4½ Dunelt).
C. G. Pullin (6 Douglas).
Neville Hall (2¾ O.K. Junior).
J. A. Watson-Bourne (8 Brough Superior).

### THREE-WHEELED CYCLE CARS.

W. Joyce (8-10 Grand Prix Morgan).
A. J. Sproston (10 Morgan).
W. H. Elce (8-10 Morgan).
Joseph Richardson (8 Morgan).
H. Beart (8-10 Morgan).
W. E. Line (10 New Hudson).
W. G. Boyer (8 Morgan).
C. E. Bennett (8 Morgan).
F. A. Longman (8-10 L.S.D.).
W. E. Cornwall (9.2 Castle Three).
S. A. McCarthy (8 Morgan).
H. W. Holmes (8 Morgan).
H. E. K. Sawtell (10 Morgan).

### Retirements.

The following retired:

#### MOTOR BICYCLES.

P. Street (3½ Sunbeam).
F. V. Edwards (4¼ B.S.A.).
W. Bray (3½ Sunbeam).
C. J. Wheeler (3¾ Scott).
P. Pike (2¼ Levis).
W. Veasey (3½ Martinsyde).
J. A. W. Armstrong (2½ Metro-Tyler).
P. R. Copland (2¾ Douglas).
G. S Wright (2½ Connaught).
H W. Harrington (2¾ Verus-Jap).
E. H. Fielden (4 Norton).
Martin O'Reilly, 5 N.U.T.).
C. L'Estrange (2¼ Ner-a-Car).
P. L. B. Wills (3½ Rudge Multi).
T. P. Manifold (3 A.B.C.).

#### SIDECARS.

C. W. E. Gaulder (4½ Quadrant).
G. A. Pidgeon (4½ Quadrant).
J. C. Sanford (5 Rover).
C. F. Plowman (3½ Sunbeam).
B. E. Belfield (7-9 American X).
L. Arnold (8 Matchless).
W. P. Brandon (4 Triumph).
S. Farley (10 Ace).
J. R. G. Haill (7-9 Harley-Davidson).
Eli Clark, Jun. (4¾ Beardmore-Precision).
K. Campbell-Cullen (5-6 A.J.S.).
A. F. Scroggs (3½ Sunbeam).
R. Newitt (3½ Douglas).
W. H. D. Steer (8 Zenith).
D I Stone ((2¾ Orbit).
H. H. Saddington (5-6 James).
J. McBirnie (7-9 Indian).
C. N. Green (5-6 Rover).

#### THREE-WHEELED CYCLE CARS.

G. W. Shepherd (8-10 L.S.D.).
F. H. Douglass (10 Morgan).

### Essex M.C.

The annual dinner takes place at 7 p.m. on Saturday next at the Venetian Room, Holborn Restaurant, with Mr. S. G. Cumming in the chair. It will be attended by numerous celebrities in the motor cycle world, and an excellent concert programme has been arranged.

### Worcester and District M.C.C.

Earl Beauchamp (patron of the club) took the chair at the recent annual dinner, being supported by Viscount Deerhurst, Mr. T. W. Badgery (president) and Mrs. Badgery, the Mayor of Worcester (Mr. Samuel Southell), Ald. A. Carlton, and a representative assembly, including several well-known riders and motor cycle manufacturers.

### North-western Centre A.C.U.

The annual general meeting of the centre was held recently at the Albion Hotel, Manchester, and was fairly well attended. The following officials for 1922 were elected: Chairman, Mr. S. W. Phillpott (Liverpool); vice-chairmen, Mr. H. Marsden (Stockport) and Mr. V. Horsman (Liverpool); treasurer, Mr. A. Taylor (Blackpool); auditor, Mr. G. E. Watts (Stalybridge); and delegates to the A.C.U. General Committee, Messrs. V. Horsman, H. Reed, and J. H. Place. Two new clubs were admitted to the centre, viz., Chester and Buxton, making in all twenty-three clubs.

### Stourbridge and District M.C.C.

The club held its annual one-day reliability trial for the "Heroes" Cup on Tuesday, December 27th, starting from the club headquarters at 9 a.m. The morning route included High Oak and Flagstaff Hills, the former being in a bad condition, and only four clean climbs were recorded. A stop and restart test was held on Flagstaff, and a flexibility test on the upper part of Kinver Edge Hill; and from here to the lunch check a short stretch of colonial section was included. After lunch a fifteen-mile circuit was taken, including Hagley Wood, Shut Mill, and Beacon Hills. The following tied with no loss of marks, and the winners were arrived at by means of the flexibility test: W. Worrall (Sunbeam), W. H. Clare (Sunbeam), F. J. Price (Diamond), and J. A. Chadwick (A.J.S.). Results:

HEROES CUP (Best Performance).—W. Worrall (Sunbeam).

COMMITTEE CUP (Best Amateur Performance).—W. H. Clare (Sunbeam).

SPECIAL AWARD (Given by J. Dosher, Esq.).—F. H. Godfrey (Massey-Arran).

SILVER MEDALS.—Class A, F. J. Price (Diamond); Class B, W. Worrall (Sunbeam); Class C, C. Greenwood (Sunbeam sc.).

BRONZE MEDALS.—H. Robinson (Triumph), F. H. Godfrey (Massey-Arran), and T. C. de la Hay (Sunbeam sc.).

SPECIAL AWARD (Loss of no marks and not qualifying for any premier award).—J. A. Chadwick (A.J.S.).

### Bulwell M.C.C.

As the result of a recent meeting of prospective members, a club has been formed as above, Mr. Chas. Marriot, 110, Commercial Road, Bulwell, Notts., acting as secretary *pro tem.* Another meeting of all interested has been called for the 19th inst.

### Doncaster and District M.C.C.

There was a company of nearly fifty at the club's annual dinner at the Red Lion Hotel, the president, Councillor J. Franks, being in the chair. Many valuable trophies, including *The Motor Cycle* Cup, won by H. Le Vack in the open speed trials, were presented during the evening.

### Warrington M.C.

J. Caldwell (10 Morgan) proved the winner of the Ireland Rose Bowl in the club's Christmas holiday trial, held on December 27th. H. Baldwin (4 Norton sc.) and T. L. Hatch (8 Royal Enfield sc.) were second and third respectively. The "single-gear" and "two-stroke" prizes were won by C. Bennett (2¼ Levis).

### Bohemian M.C.C. (Southampton).

A motor cycle club has at last been formed in Southampton, and has been christened as above. It is the outcome of a party of enthusiasts who met occasionally for a jaunt in the New Forest; this was followed by an impromptu hill-climb, and within a fortnight the club was formed, and boasted thirty members. Taking into view the fact that the weather is hardly conducive at this time of year to motoring, the start made is a very promising one. A novel feature is that there are no rules or regulations of any description. A most interesting programme has been arranged. Trade and professional riders are entirely excluded. Intending members are requested to apply for particulars to the hon. secretary, Mr. L. W. Gunnell, 52, Polygon Road, Southampton.

### Dublin and District M.C.C.

The route of the club's holiday trial lay for the most part in the northern portion of Co. Wicklow, and in its ninety-one miles embraced most of the well-known test hills in that district. The entry was rather small, and only nineteen of those who had sent in their names took part in the event. Seven of these were on sidecar machines, but only one of these succeeded in completing the course, as follows:

P. H. Hurse (4¾ B.S.A.), R. H. Hill (2¼ Velocette), J. A. Carville (2¼ B.S.A.), G. A. Daly (4 Triumph), R. Murphy (4 Triumph), Jas. Browne (3½ Douglas), H. Adair (4¼ B.S.A. sc.), J. Healy (4½ James), W. T. Malcolmson (G.N.), R. Humphreys (2¼ Velocette), D. Allen (2¼ Sun), T. J. Slevin (2¼ Velocette), and A. Carton (3½ Norton).

### Cumberland County M.C.C.

Over a hundred sat down at the annual dinner, which was held on Friday evening, December 23rd, 1921, in the Crown and Mitre Hotel, Carlisle, Mr. W. Theodore Carr, M.P., presiding.

### Uxbridge and District L.C. and M.C.C.

Held over a fairly stiff course of about eighty miles, the reliability trial for the Thomas challenge cup had quite a good entry. Results: 1, H. H. Robinson (2¾ Wooler); 2, R. F. Eagle (2¼ Diamond). This club is holding its first annual dinner on Wednesday, January 18th, at 8 p.m., at the Chequers Hotel, Uxbridge. Tickets can be obtained from the hon. sec., Mr. F. F. Hickman, Uxbridge.

### Cork and District M.C.C.

Owing to the state of the roads in the district, the Cork club was compelled to select a circular course for the Boxing Day trial. It embraced a good deal of difficult country, as may be deduced from the fact that the full marks were secured by those who maintained a minimum speed of fifteen miles per hour. The circuit had to be covered three times, and, in addition to a check at the end of each circuit, the lap times were taken at two other points to decide the places of those who made non-stop runs and were on time at the open checks. Twenty-four competitors took part in the trial, and quite a number of new machines were seen in competition, including a four-valve Triumph, ridden by Mulligan.

### Mansfield and District M.C. and L.C.C.

Local riders more than held their own at the speed trials on Boxing Day, the star performance being made by F. Sissons (3½ Norton), who won seven firsts. There were over a hundred entries. Results:

UNDER 300 c.c.—1, J. C. Nichols (2½ J.A.P.), 26⅘s.

UNDER 350 c.c.—1, J. C. Nichols (2½ J.A.P.), 26⅘s.

EXPERTS (Under 350 c.c.).—1, J. H. Simpson (2¾ A.J.S.), 20⅘s.

UNDER 550 c.c.—1, F. Sisson (3½ Norton), 19⅘s.

EXPERTS (Under 550 c.c.).—1, F. Sisson (3½ Norton), 19⅘s.; 2, E. Searle (3½ Sheffield-Henderson).

UNLIMITED TWO-STROKES.—1, F. Nash (Scott), 24s.; 2, J. R. Sylvester (2¼ Velocette).

UNDER 750 c.c.—1, F. Sisson (3½ Norton), 18⅘s.; 2, V. Hancock (3 A.B.C.).

UNDER 750 c.c. (Experts).—1, F. Sisson (3½ Norton), 18⅘s.; 2, F. Hatton (6 Douglas).

UNLIMITED SOLO.—1, F. Sisson (3½ Norton), 18⅘s.; 2, V. Hancock (3 A.B.C.).

UNLIMITED SOLO (Experts).—1, F. Sisson (3½ Norton), 18⅘s.; 2, F. Hatton (6 Douglas).

UNLIMITED SIDECARS.—1, F. Sisson (3½ Norton), 25s.; 2, R. Heelis (7-9 Indian).

350 c.c. SIDECARS (Open).—J. H. Simpson (2¾ A.J.S.), 24⅘s.

550 c.c. SIDECARS (Open).—1, E. Searle (3½ Sheffield-Henderson), 22⅘s.; 2, F. Sisson (3½ Norton).

750 c.c. SIDECARS (Open).—1, F. Hatton (6 Douglas), 22s.; 2, F. Sisson (3½ Norton).

UNLIMITED SIDECARS (Open).—1, F. Hatton (6 Douglas), 22s.; 2, F. Sisson (3½ Norton).

# The Patent Jardine FOUR-SPEED Gear Box

may be fitted, without frame alterations, to the following makes of motor cycles (1922 countershaft models):

| | | |
|---|---|---|
| Armis. | Francis-Barnett. | N.U.T. |
| Bat. | Glendale. | Omega. |
| Beaumont. | Hoskison. | Overseas. |
| Blackburne. | Henley. | Pax. |
| Brough. | Invicta. | Powell. |
| Brough-Superior. | Lincoln Elk. | Quadrant. |
| Campion. | L.M.C. | Rex. |
| Carfield. | Marloe. | Royal Ruby. |
| Coventry Acme. | Massey-Arran. | Sheffield-Henderson. |
| Coventry Victor. | McKechnie. | Slaney. |
| Coventry Eagle. | Mohawk. | Triumph. |
| Coulson. | Monopole. | Trump. |
| Dalton. | Mountaineer. | Verus. |
| Dot. | New Comet. | Victoria. |
| Dunelt. | Nickson B. | Vindec. |
| Duzmo. | New Era. | Wilkin. |
| Excelsior (British). | New Scale. | Wolf. |
| Edmond. | Norton. | XL. |
| Endurance. | New Hudson. | Zenith. |

When you order a new machine, specify a

# Jardine Four-Speed Gear Box

*Catalogue and Particulars from*

**JOHN JARDINE, Ltd., Deering St., NOTTINGHAM**

# BP

"Best Possible — that's all!"

*No. 1 is sold in the New Khaki Can.*
*No. 3 for Commercial Vehicles in the Blue Can.*

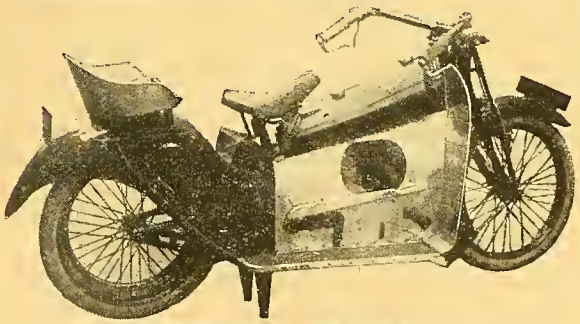
MOTOR "BP" SPIRIT

*Look for this Sign:*

**British Petroleum Co. Ltd.**
**22, FENCHURCH ST, LONDON E.C.3**

## HAGG TANDEM - MOTOR CYCLE -

**CHEAPEST FORM OF MOTORING FOR TWO**



IMMEDIATE DELIVERY.

**Price at Works £95 as illustrated.**

*Deferred payment by arrangement. Send us your enquiries.*

*Agents—*

**TAYLOR & HAYTER,**
**Engineers,**
**Park Street, nr. ST. ALBANS.**

**Extract from "Daily Mail."**

"The only real dual purpose machine ever placed on the market."

## Convert your Existing Acetylene Lamps to Electric for 45/-

Bother no longer with odorous and troublesome acetylene—just switch on and flood your path with brilliant Electric Light. You can equip your Cycle with new lamps or convert your existing Lamps to Electric with

**WATES ELECTRIC CONVERSION SETS**

**Solo Lighting Sets.** Conversion set with new tail lamp ..... **£2 : 5 : 0**
Complete set with new head and tail lamp... **£4 : 0 : 0**

**Sidecar Combination Lighting Sets.**

Conversion set with new side and tail lamp ..... **£3 : 15 : 0**

Complete set with 5 inch head lamp... **£5 : 10 : 0**

Complete set with 7 inch head lamp... **£6 : 5 : 0**

**EXCEPTIONAL ACCUMULATOR OFFER ! !**
**Hart or Peto and Radford Manufacture.**

In metal case with strap handle.)
4 Volts
12 amps. actual, 24 amps. ignition.

| Quantity | Price each | Total price |
|---|---|---|
| 1 | 14/- | 14/- |
| 2 | 13/- | 26/- |
| 3 | 12/8 | 38/- |
| 4 | 12/3 | 49/- |
| 6 | 12/- | 72/- |

Size 5⅜ × 3¼ × 3⅜
All above prices include free delivery.

*Why not write to-day for illustrated list giving prices of complete sets for Solo and Combination work, conversion sets for existing lamps, accumulators, and our motor cycle electrical fittings.*

**WATES BROS.,**
**Retail Offices - 5, High Street, Bloomsbury, W.C**
**- 132, Charing Cross Road, W.C.2**

# T.T. DATES.

## Further Opinions on the Advisability of Holding the Races near Whitsuntide.

SINCE we pointed out the unsuitability of the dates fixed for the Tourist Trophy races we have received many letters from riders and manufacturers expressing surprise that the week preceding Whitsuntide should have been chosen—the busiest period of the manufacturer's year. Secondly (although this is not so important), the annual London-Edinburgh holiday event starts on the day following the Senior race, and with this clashing of dates public interest would be divided.

Several of our correspondents have suggested that the M.C.C. classic be postponed, but one cannot ignore the importance of this event, which is and always has been a holiday run, and last year attracted something like 400 entries.

Below we give extracts from further letters received on this important subject, and in the meantime one hopes that the A.C.U. and R.A.C. will be able to arrange more suitable dates by postponing, for a week or so, the car race, which, at present, restricts the choice of dates for the motor cycle event.

All motor cyclists desire to see the 1922 T.T. races an unqualified success. By dint of hard work and careful organisation the Auto-Cycle Union has created an event regarded by the whole world as a classic race, and any circumstance likely to restrict further progress or minimise its importance is to be deplored. What every sportsman wishes to see is a fully representative entry list for the blue riband event.

The views of MR. D. S. ALEXANDER—a well-known T.T. competitor, who is also an agent—follow:

"I have noted very carefully all you say with regard to the Junior and Senior T.T. races being held on May 30th and June 1st, and I should have been only too pleased had they been held earlier, but I am quite satisfied with the dates already set upon. In 1914 the T.T. race was held in May, and I think that for most agents and motor cycle dealers of Britain the earlier it is held the better, and to corroborate my statement, one of the best financial years for both agents and manufacturers was 1914.

"With regard to Scotland, at any rate, the Whitsuntide holiday does not affect ourselves, and at times such as the Whitsuntide holidays ought not to interfere with business.

"With regard to the second clause of your letter, the date of the London-Edinburgh run could easily be altered by the A.C.U.* to meet such an important event as the T.T. race.

"Undoubtedly, from the points of view of manufacturers, agents, and prospective purchasers of motor cycles, the T.T. race is our finest advertisement, and the earlier it takes place the better it is for the agents, as very often prospective purchasers hold over their orders until such time as the official intimation of the result of such races or events as the T.T. race is given out. Talking personally as an agent in Scotland, I find that this great trial is responsible for a great amount of business, and would prefer greatly that it took place in the earlier part of the year."

[*The London-Edinburgh run being a closed event organised by the Motor Cycling Club, the A.C.U. has no jurisdiction in the matter.—ED.]

MR. HUGH MASON, a T.T. winner and manufacturer of N.U.T. motor cycles, writes:

"The writer agrees with you that from a manufacturer's point of view the time is unsuitable, as the week before the Whitsuntide holidays is usually one of the busiest in the season. He is also of the opinion that it is a great mistake that this should clash with the date of a classic event such as the London-Edinburgh."

THE HOBART CYCLE CO., LTD., state:

"Our opinion is that the T.T. races should take place between Whitsuntide and August."

MR. FRED W. DIXON, who put up such a splendid race last year and was runner up, is another who deplores the dates chosen. He writes:

"To give these races the publicity they deserve I certainly consider it unwise to choose a date which clashes with an event such as the London-Edinburgh.

"For my part, I am most concerned about the weather conditions, both for early morning practice and the actual races. If there is any danger of this earlier date, viz., June 1st, giving us any less favourable weather than we have been favoured with in the past, I should strongly favour holding the T.T. later in the season, and chance the condition of the roads after the car race."

# "THE MOTOR CYCLE" FILM.

FOR three days just before Christmas *The Motor Cycle* film was shown, for the first time in Scotland, at the Cinema House, Renfield Street, Glasgow, on behalf of the Western M.C.C. Mr. J. Robinson, the secretary of the club, now writes:

"*The Motor Cycle* film arrived as per schedule, and was duly exhibited on the 15th, 16th, and 17th ult. The exhibition has proved a great attraction to motor cyclists, not only of Glasgow, but also from outlying districts, who have been glad to avail themselves of an opportunity of becoming acquainted, through the film, with the methods of and with the territory over which these events of first-rate importance were run. The only criticism which I have heard is that there is not sufficient of it, especially the T.T. races. I have to thank you on behalf of the club for the thorough manner in which you have carried through your part of the arrangements, and hope that other clubs will find the exhibition as interesting as we have."

On Friday and Saturday of the same week the York and District M.C. showed the film—on Friday at a private exhibition to club members, and on Saturday at the Grand Picture House, Clarence Street, York. Mr. E. Wasling, the hon. secretary, says:

". . . the members present were highly pleased with the picture . . . everything went off very satisfactorily . . . the film was greatly appreciated."

On Wednesday of last week the Yeovil and District M.C.C. exhibited the film in Yeovil. Mr. C. G. Clapshaw, the hon. secretary of the club, writes:

". . . The film was much appreciated by the audience, including a large number of non-motor cyclists. The Picture Palace was packed, and a few had to stand. I am sure that the film will be the means of gaining one or two more members for the club; in fact, I had two enquiries from prospective members at the show."

Mr. John Howell, hon. secretary of the Worcester and District M.C.C., writes:

"It was shown at the Silver Cinema, Worcester, with huge success, aud the only thing about it is that there is not enough of it. There is no doubt that this film has made history in the motoring world, and it is an effort on which you are to be congratulated."

On Monday next it will be shown at Dewsbury on behalf of the local M.C.C., and on Wednesday at Clitheroe.

# A SUPER-SPORTING TRIAL.

## An Arduous Day at Christmas-time for Birmingham M.C.C. Members.

MEMBERS of the Birmingham M.C.C. recently asked for a super trial with a few stunt sections in it. They certainly had their desires satisfied in the half-day trial held on December 27th.

There were included a colonial section: no fewer than four splashes; five special tests, including a slow climb, brake test, acceleration test, and two grass tracks; and five test hills close upon each other, including the Beacon, Romsley, and Fordrough.

The last event of the year for the Birmingham Club, the trial attracted no fewer than forty-one entries. A circular route of about sixty miles started from the Sanatorium, Yardley Road. Here the competitors were supplied with refreshments by Mrs. Riley, whose kindness was greatly appreciated.

### Early Difficulties.

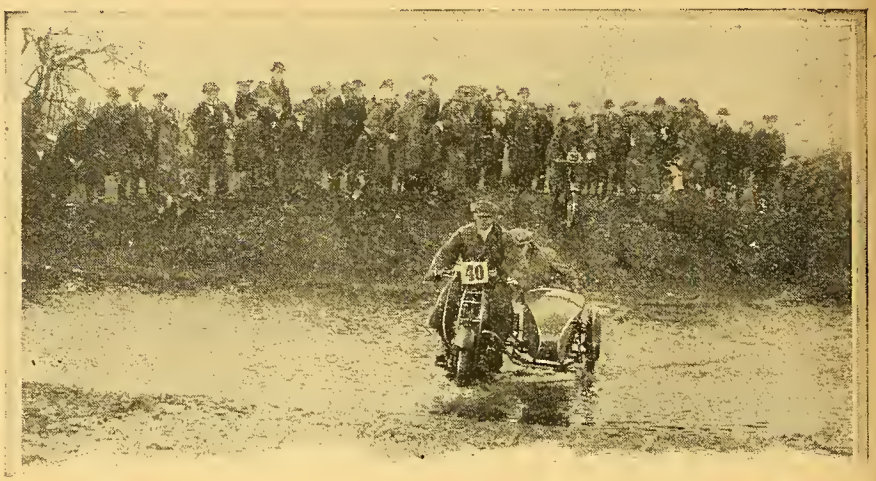
The first man left at 11.1 a.m., proceeding to the colonial section at Bacon's End, near Coleshill; and, judging by the grease, "Bacon's End" is a very appropriate name.

There were ten failures here, as the "roads" were in a very muddy condition, and wheel grip was a matter of luck.

Competitors now returned to the starting point, where a time check was held, many checking in late.

Next followed the splash section. At the first obstacle the approach was bad, as the riders had to slide down a greasy bank before taking to the water. The crossing itself was easy, but five failures were recorded. The other three fords were more formidable, and a greater number failed to negotiate them.

Prior to this, some excitement was caused by F. Hallam tackling the first splash in the wrong position, which resulted in his machine being submerged over the hubs. Several of the spectators had to come to his aid to haul the machine up the bank.



Even though the ford at Yardley was obviously destined not to baulk competitors, many spectators gathered to watch the fun. A. Watson (Sunbeam), followed by C. I. Francis (Francis-Barnett).

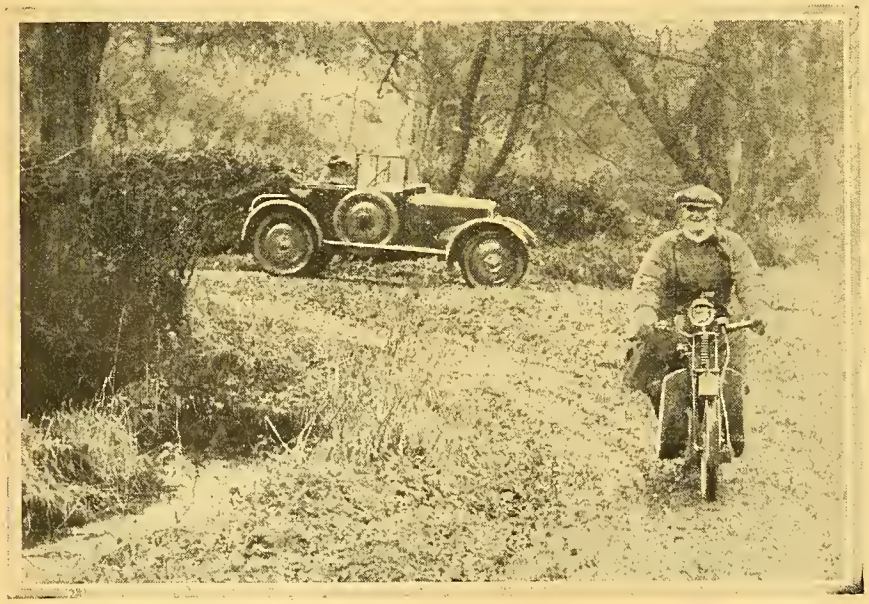
The stop and start test accounted for eight failures, and the brake test for three; but the various hills were surmounted with very little difficulty.

In the slow climb Bert Kershaw put up an excellent performance, but was penalised for putting his foot to the ground. H. C. Jennens also made a very good show. In the sidecar class D. Jenkins made an outstanding climb.

G. Butcher charged the bank on Romsley Hill, and came to a standstill.

One of the competitors entered with the idea that trials were useless, as such things as splashes and hills could be negotiated by anyone with ease. Unfortunately, he failed in the various tests, and eventually retired.

Out of the forty-one who started, only twenty-four checked in at the finish, and of these there were about three who were on time.



Rev. J. M. Philpott (2¼ Velocette) on the leaf-strewn track near Romsley.

---

### THE 1922 TOUR DE FRANCE.

THE Moto Cycle Club of France is organising the Tour de France from March 25th to April 9th, and a copy of the rules and regulations reveals some interesting facts concerning the trial. The journey starts from Paris, and consists of a tour round the whole of France. Every third day or so an exhibition of the competing machines is to be held; for example, the first three days carry the competitors from Paris to Bordeaux, when there is a day of rest for the purpose of exhibiting the machines. The next three days machines pass through Toulouse, Avignon, to Nice, where an exhibition will be held. Thence the route leads from Nice to Grenoble, then to Besançon, and from Besançon to Strasbourg, where another exhibition will be held. The next two days will be spent in travelling from Strasbourg to Lille, *via* Nancy and Rheims, followed by an exhibition at Lille, while the final stage will be from Lille to Paris.

Some interesting country will be traversed, and the length of the trial, some 2,700 miles, will impose severe tests upon the machines, as it is reasonable to suppose that all the roads will not be of billiard-table smoothness. In the southern part of the run, the foot hills of the Pyrenees and the Maritime Alps will be crossed; while after these a considerable portion of Alpine country will be crossed. Other mountain ranges which the competitors will have to cross will be the Jura and the Vosges.

As the trial is of an international character, it will be held under the F.I.C.M. rules, and competing machines will have to conform to these conditions.

# CURRENT CHAT

## Times to Light Lamps.

| | | | | |
|---|---|---|---|---|
| Jan. | 5th | ... | 5.3 | p.m. |
| ,, | 7th | ... | 5.6 | ,, |
| ,, | 9th | ... | 5.9 | ,, |
| ,, | 11th | ... | 5.12 | ,, |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### To All Readers.

A Happy New Year!

### Praise for Police.

We have had several letters from London-Exeter competitors appreciating the services of helpers and police, who, through the long, wet, and windy night directed the riders on their muddy way to Exeter.

### Steel Tubing.

A most interesting paper was read before the Institution of Automobile Engineers on Tuesday last. Mr. W. W. Hackett, who is connected with one of the best known steel tube concerns in the world, described some tests, the results of which are of extreme value to motor cycle manufacturers. He pointed out the suitability of high carbon steel tubes for motor cycle construction and the importance of correct lug design.

It was clearly demonstrated that in many cases fracture cannot be prevented by increasing gauge, but may be cured by tapering the tube or gauge. The whole paper led to the conclusion that motor cycle frames can with advantage be made lighter than at present.

### New Motor Knights.

The New Year's list of honours includes Mr. Alfred Samuel Mays-Smith, president of the Society of Motor Manufacturers and Traders, who is granted a knighthood; and Mr. William Malesbury Letts, managing director of Crossley Motors, Ltd., to be a Knight of the Order of the British Empire.

### Licences.

Renewals of licences for motor cycles are now necessary, and should be obtained from the office from which they were issued last year, or from a main post office. The annual licences cost: For lightweights under 200 lb. 30s., or with sidecar 50s.; over 200 lb. 60s., or with sidecar 80s.; three-wheelers 80s. Quarterly licences are now issued at the following rates: Motor bicycles under 200 lb. 10s., with sidecar 15s.; over 200 lb. 20s., with sidecar 25s.; three-wheelers 25s.

### Motor Cycle Club for Great Yarmouth.

Referring to the recent paragraph in these columns suggesting a motor cycle club for Great Yarmouth, Mr. R. A. Lower, hon. general secretary of the Norfolk M.C. and L.C.C., points out that this club was originally called the Yarmouth and District M.C.C., and that at present it has a number of members belonging to the latter town. The speed trials referred to were actually run by the Norfolk Club, and Mr. Lower suggests that Yarmouth motor cyclists who wish to join a live club should become members of his organisation.

AT THE SUMMIT OF KOP.

Beneath the setting of the crescent moon, the competitors thundering up the gradient, and the long procession of lights in the valley beyond Princes Risborough was an impressive sight to the watchers at the hill-top in the annual London-Gloucester Trial.

## Special Features.

1921 IN RETROSPECT.
THE LONDON-EXETER-LONDON RUN.
NON STOP HILL CLIMBING IN THE DARK.

### Observed Hills at Night.

Peak Hill in the London-Exeter trial and Kop Hill in the London-Gloucester will do much to harden trials riders to observed hills in the darkness. In the latter trial the hill was actually in a non-stop section, and, although easy, accounted for many failures. We await with trembling the inclusion of a really freak hill to be climbed after dark. What about Park Rash or Alt-y-Bady at 11 p.m.?

### A.C.U. Stock Machine Trial.

Preliminary arrangements for the second trial of standard stock machines, to be held on Wednesday, March 15th, are being made by the A.C.U., and, although the complete regulations are not yet available, many prominent manufacturers have expressed their desire to enter motor cycles or cycle cars. For this trial machines are selected at random by A.C.U. representatives from the stocks at the makers' works or at the premises of their agents, and no special preliminary preparation of them for the contest is allowed. It will thus be readily appreciated that machines which score successes in the event are really identical with those which the public can buy, and the trial, therefore, is of great practical value.

### The Motor Cycle in America.

The marketing of motor cycles in the United States of America is exercising the minds of sales and financial experts at the present time. The following statement appears in *Automotive Industries* as being from within the motor cycle industry: "We strive to reach a field of dignified clean cut riders. To do so we educate them in terms of exalted speed and dare-devil exploits of track burners. We bemoan the presence of public disfavour, and to remove it we increase the burden by eternally shouting speed, speed, and more speed."

In Great Britain the motor cycle has taken its place in all spheres of utility, and speed is not the chief factor.

### New Rule of the Footpath.

Citizens generally will welcome the announcement that the Bristol Watch Committee has definitely abandoned the bad old rule, so far as pedestrians are concerned, and requests the public to keep to the left of the pavement, commencing from New Year's Day. It is obvious that, if people walk on the left-hand side of the pavement, they will face vehicular traffic in the adjacent part of the road, and that in consequence fewer accidents will be caused when they step into the roadway than is the case at the present time, when silent and swift motor vehicles overtake from behind. The idea of inaugurating the new rule of the road on New Year's Day was happy and appropriate.

# NON-STOP HILL-CLIMBING IN THE DARK.

## Sporting Open Twelve Hours Trial to Gloucester of the N.W. London M.C.C.

## Mishaps and Failures in the Darkness.

AMONG the winter competitions the London - Gloucester - London open trial ranks next in importance to the M.C.C. London-Exeter run. This year the N.W.L. M.C.C. was forced to change the starting point, and chose the western entrance to the Hendon Aerodrome—quite an excellent place—though rather out of the way. Following on a rainy and windy day, to say nothing of a wild night, Saturday morning broke fine and chilly. The remnant of the storm had veered towards the North, and was still blowing strongly, but was rapidly drying the rain-sodden roads.

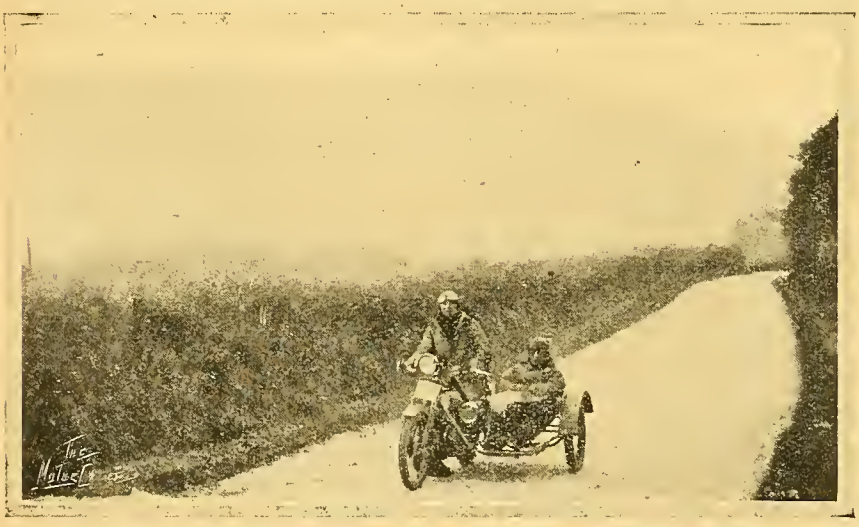
### Some of the Competitors.

A glance round the competing machines revealed some interesting details. B. J. Pooley, riding a Velocette, is the fourteen year old son of the organising secretary of the club, and such a ride as this is no small effort for a schoolboy. J. A. Newman was riding the Douglas he used in the International Six Days Trial. F. W. Stevenson (5 Brough sc.) carried his dynamo behind the magneto of his flat twin engine, driving it by means of an enclosed chain—a very neat arrangement. Several new models made their first appearance in open competition on this the last day of the old year. F. D. Winslow and J. W. Troughton both rode samples of the new X.L., C. C. Labin and S. E. Longman rode new Zenith-Bradshaws, B. N. Taylor was on a Hagg tandem, and his companion, R. N. Thomas, also drove one of these machines with a passenger on the back seat. C. W. Lewis drove a new 4¼ h.p. Beardmore-Precision.

There were several lady drivers: Mrs. Janson, of Ner-a-car fame, whose machine ran very well; Mrs. Hardee, so well known to our readers; and Miss Padgett, who piloted one of the T.B. cycle cars.

A group of competitors near Birdlip on the outward journey—H. Le Vack (7-9 Indian sidecar), J. W. Troughton (4¼ X.L.), and Miss H. Padgett (8 T.B. cycle car).

Once the rough roads of Hendon were left behind, the going was quite good. C. W. Bairstow (Indian sc.) was early in trouble, and stopped to make an adjustment at the top of Stanmore Hill, and pulled up again in Watford High Street. Beyond the latter town we noticed Harding (Triumph) making up lost time. Near Boxmoor Howe's Martinsyde, which had been running faultlessly, developed slight misfiring, which gradually became worse. Carburetter trouble was suspected, and some time was spent investigating matters, which resulted in his being late at the check outside Tring.



A flat twin on Birdlip during the return journey—F. W. Stevenson (5 Brough sidecar).

### The Morning Non-Stop.

Here a turn to the left was taken, and the interesting and tricky morning non-stop section was entered. Soon Waterworks Hill was reached, the surface, like that of others in this section, being moist and rough. It was somewhat steep, possessed an awkward corner, and accounted for more than one failure, as it proved the undoing of H. J. Curtis (Triumph), who was seen looking disconsolately at his mount—magneto trouble was said to be the cause of his failure—L. L. Newman (Duzmo), and Phillips (Norton). The non-stop section introduced the riders to several hills which occurred in the course used last year by the M.C.C. in the team trial for *The Motor Cycle* Cup; but they were reached by devious ways, and often came as a surprise even to those who knew the route to which we have referred. There were several cases of sparking plug trouble over the hilly section. Two of these were Winslow (on the X.L.) and Neville Hall (O.K. sc.), who was driving

**Non-stop Hill-climbing in the Dark.—**

the same miniature sidecar outfit he used in the Exeter run.

After passing the main entrance to Chequers—the Prime Minister's residence—an acute bend was taken to the right, which was exceedingly rough and awkward to negotiate. Whyteleaf Hill accounted for several failures, and proved to be the undoing of Pooley (Velocette). Here Howe's Martinsyde, which had been persistently firing on one cylinder since the beginning of the section, made a splendid climb, only to fail miserably on Kingston Blount, the last hill in the section. The trouble was discovered at this point to be caused by too long a high-tension wire, the insulation of which had been burnt through in three places. After Whyteleaf came the descent of Kop, followed by the negotiation of Princes Risboro' village, where, owing to a petrol lorry driver failing to signal he was about to make a turn, a regular *mêlée* occurred, in which Le Vack and Davidson (driving Indian sidecar outfits) and Howe (Martinsyde) were involved. Happily, all extricated themselves without accidents.

### Clear of Checks Again.

Next ensued a piece of easy country through Chinnor and the final piece of the section, the ascent of Kingston Blount leading to the top of Aston Rowant, halfway down which the check was situated marking the termination of the non-stop section. From the Lambert Arms on to Oxford the roads were excellent and dry.

R. P. Purnell's tiny J.E.S. was too highly geared, and failed on several of the hills. Bourne (New Imperial) was reported to have had trouble with a slipped timing wheel, Crabb (Cleveland) to have had plug trouble in Cirencester, and Stone (Orbit sc.) to have experienced a twisted frame. The luncheon arrangements were excellent, and the same may be said of the organisation throughout the trial.

### The Homeward Journey

After lunch Birdlip had to be negotiated, and though this is a long and trying climb of over a mile, and with a maximum gradient of just under 1 in 6, the wind was behind the competitors, the surface was excellent, and there were few failures. With the keen north-west wind at the back of the competitors, the return journey was more comfortable than the outward trip, even though the temperature had fallen considerably.

The weather during the night portion of the trip was as fine as it had been during the day, but one or two incidents marred the return journey. C. Chawner (Coulson) was dazzled by the head lights of an oncoming car and was thrown, breaking his leg. The night non-stop section covered the same district as that traversed in the morning, but somewhat shorter. Here, J. T. A. Temple (3½ Norton) left the road and collided with a competing car on regaining it. Gwynn (Grigg) missed his way, and lost his non-stop here.

### Hill-climbing in the Dark.

It was approximately 6.45 p.m. when the watchers on Kop Hill, in the homeward non-stop section, saw the gleaming head lamps of the competitors creeping along the road in the valley below. In accordance with the meteorological forecasts, visibility was good, and a crescent moon was setting according to programme.

The sinuous nature of the non-stop section made schedule riding difficult, especially for the solo men.

Well on time the two 6 h.p. Martinsyde sidecars, driven by G. Baxter and R. Hart, came up the hill together, closely followed by S. R. Axford (8 Brough Superior sc.).

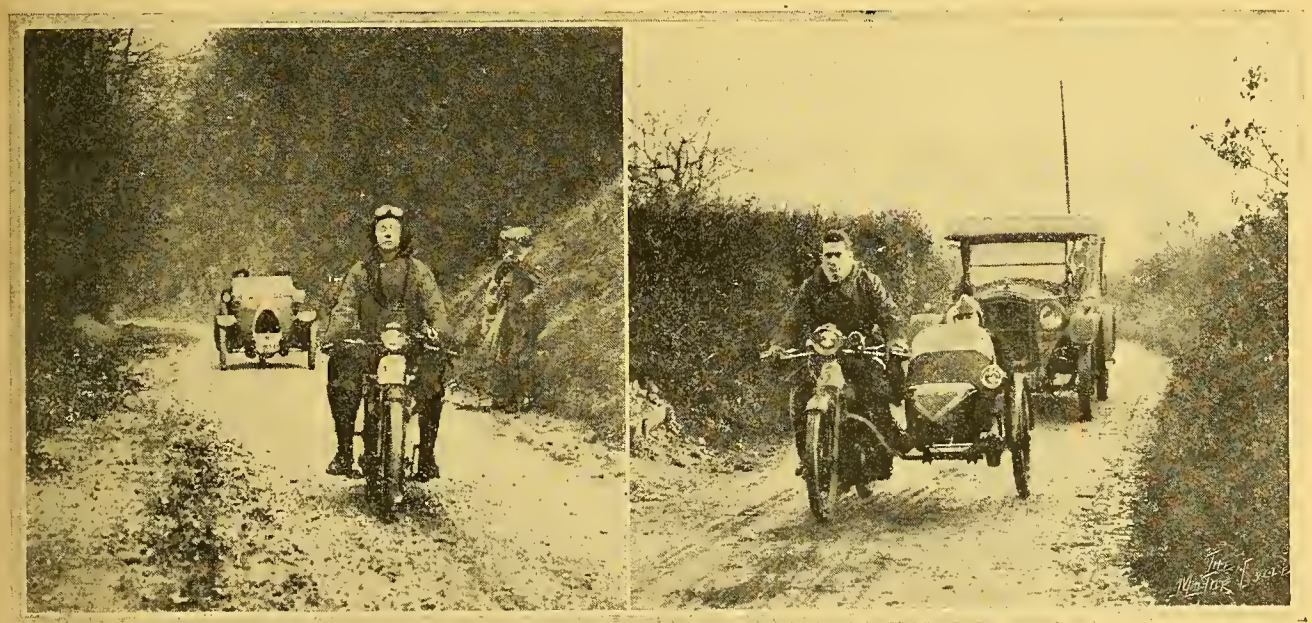
Although Kop Hill is not very severe, its rather loose surface and the darkness combined to make things difficult, and several failed. Excellent climbs were made by N. V. Young (4¼ Sunbeam sc.), L. Welch (4¼ B.S.A. sc.), J. W. Troughton (4¼ X.L.), N. Hall (2¾ O.K. sc.), L. Nicholson (2¾ Omega), Mrs. G. M. Janson (2¼ Ner-a-car), Mr. H. Hardee (8 Matchless), G. W. Shepherd (8 L.S.D.), S. A. McCarthy (8 Morgan), H. W. Holmes (10 Morgan), and Le Vack and D. H. Davidson (7-9 Indian scs.). D. J. Stone (2¾ Orbit sc.) was late, but climbed well.

Most of the solo riders had no difficulty, and in many cases it was impossible to see their numbers, so that several good ascents go unrecorded.

Of the unfortunates, R. A. Bull (8 Matchless sc.) was late and failed unaccountably; J. C. Lowe (4¼ James sc.), W. G. Crabb (2¾ Cleveland), and Miss Padgett (8 T.B.) all needed help. F. G. Morgan's (2¾ Cotton) belt broke when he was going well, and his team mate, W. Brooke, was all over the road with legs trailing, as though he had a flat tyre. W. R. Gray (2¾ Coventry Eagle) stopped near the top observer, thinking he had reached the check, and had difficulty in restarting. V. Gayford (3½ Norton sc.), and J. A. Peacock (8 Matchless sc.) both climbed, but with their passenger on the carriers—surely unnecessary.

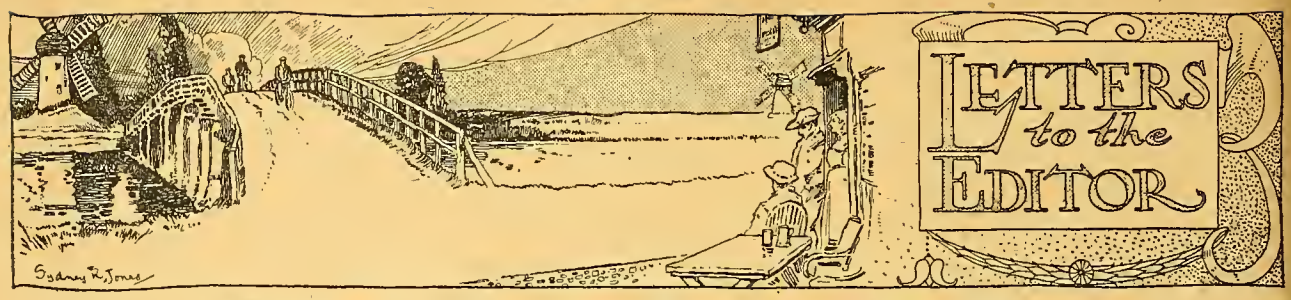
### Lighting Equipment

On the hill the lighting equipment on the majority of the machines functioned well, but C. C. Labin (3½ Zenith-Bradshaw) came up with no lights at all, and stopped ultimately. G. E. Cuffe's (2½ Metro-Tyler) Fallolite head lamp only emitted a dull blue glimmer like a glow worm in a bottle, while E. W. Howard (3½ N.U.T.), despite two head lamps, only had a spot of light about one length ahead. Electric lighting was used on most of the sidecars. Arrowing throughout the non-stop section was good, but the route was tricky. After the descent to the Whyteleaf check, where many were late, easy roads were followed to the finish, where approximately seventy checked in.



COMPETITORS ON THE MORNING NON-STOP SECTION.

C. Barham, on a 2¾ h.p. Warnes, with Barr and Stroud engine. C. L. Sprosen (3½ Connaught sidecar) climbing Dunsmore Hill




The Editor does not hold himself responsible for the opinions of his correspondents.

**All letters must be addressed to the Editor, "The Motor Cycle," Hertford Street, Coventry, and must be accompanied by the writer's name and address.**

### *TWO-STROKE FAILINGS.*

Sir,—Perhaps the "Satisfied Rider" of your issue of December 15th may like to know that I, too, possess a Sun-Vitesse (269 c.c.) that *does* burn its top piston ring.

Slough. E.D.

### *WHICH IS THE MOST ECONOMICAL DUAL-PURPOSE MACHINE?*

Sir,—If you will allow me, I should like to start a discussion on the "most economical dual-purpose motor cycle."

The machine in question should be preferably a 4 h.p. single-cylinder, though other types are not excluded. Economy should include *all* expenses which are ordinarily incurred by the average motor cyclist.

I have no opinion on the subject, but should be interested to know some views of other motor cyclists.

J. C. BARLOW.

### *TYRE FITTING AIDS.*

Sir,—Please allow me to endorse "Ixion's" remarks *re* the Ewart tyre fixer; it is absolutely "the goods."

I am employed in a large garage as vulcaniser and tyre fitter, and we recently had the aforementioned gadget installed, and since then it has been quite a pleasure fitting tyres. A few days ago, with its assistance, I was able to remove a cover and tube off a Sunbeam wheel, fit a new Michelin Cablé cover and tube (820×120 mm.), and pump up to the required pressure in twelve minutes, so that speaks for itself. HF 3807.

Nottingham.

### *OBSTINATE VALVE CAPS.*

Sir,—I notice in "Occasional Comments" "Ixion" is in search of an anti-binding compound. I can recommend that used by all steam turbine builders, namely, graphite and boiled oil. This is applied to the bolts, subjected to the heat of superheated steam, and I can vouch for it being "the goods." It can be bought ready mixed in tins from any engineers' stores. S. HENDERSON.

Sir,—I note in your valuable journal that "Ixion" is in trouble with immovable valve caps.

I find the best and most sure way of removing these obstinate parts is to dope them well with turpentine, then obtain about 4ft. of large diameter gas pipe, and slip the end of the spanner into one end of the pipe. Now heave as much weight as possible on the other end of the pipe, and I guarantee something will go—either the valve cap will give in, or he will tear the engine clean out of the frame.

C. H. WAINWRIGHT.

### *T.T. OR LONDON-EDINBURGH.*

Sir,—If the T.T. clashes with the London-Edinburgh, drop the London-Edinburgh, an event only retained for sentimental reasons, and serving no useful purpose, either for the improvement or demonstration of the modern motor cycle. When a baby two-stroke takes a sidecar up Porlock and Lynton (to say nothing of the Scottish Six Days hills). the presentation of a gold medal to the driver of any mechanically-propelled vehicle for a run to Edinburgh in the summer is farcical in the extreme. Members of the Motor Cycling Club can well take their club runs in smaller bodies, and the trade confine their entries to the really severe competitions. What about the rights of other road users? Just fancy meeting a fifty-mile string of competitors on a dusty road. Send these gold medal hunters to the Welsh mountains and limit the entries. A. V. SMITH.

### *MOTOR CYCLISTS IN DREAMS.*

Sir,—"A Motor Cyclist in Dreams" will no doubt find Miss or Mrs. Maude Stansfeld's advice rather tedious to follow, but I can assure him that if he will turn his money and carefully say "Hey presto, abracadabra!" three times every time he hears the clock strike thirteen, he will find this equally effective. EDWARD DUNNE.

### *SUPERLATIVE ELEVATIONS.*

Sir,—Having due regard for the claims of your Aberdeen correspondents on this matter, I should like to point out where there is a road in Perthshire that takes some beating as a claimant for the title of "Highest Road in Scotland." This is not a public road, but leads to the shooting lodge of Felar on the Duke of Atholl's estate, and branches off the Pitlochry-Kirkmichael road at a point near the village of Straloch. It rises to a height of about 2,300 feet, which is 100 feet higher than the Cairnwell, and is kept in perfect condition. I have been over this road and the Cairnwell many times, both with car and motor cycle, and have also made acquaintance with Kenmore and Amulree hills, but I consider any of those mere child's play compared with the Straloch-Felar road. T. ROBERTSON.

### *POSITIVE PRESSURE LUBRICATION PUMPS.*

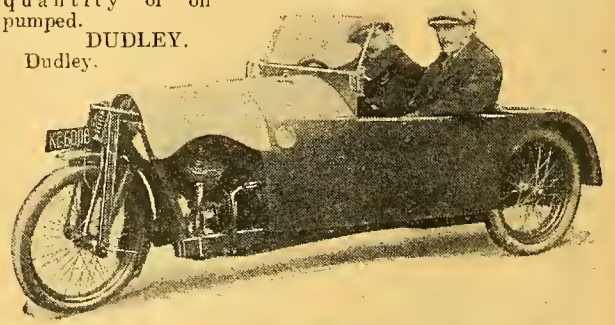
Sir,—As a motor cyclist who is a believer in automatic lubrication of motor cycle engines, I have read with interest Mr. Cochrane's reply to your criticism of the Showell rotary pump. I cannot understand how pressure can be produced by an arrangement of this description; and, for lubrication to be reliable, pressure is essential.

Another point which does not quite inspire confidence in my mind is that the oil is controlled by a needle valve, which means a restricted passage. In cold weather this must be far from reliable, owing to the congealing of the oil and necessitating, as it would, continual adjustment. Past experience of others, as well as myself, with a well-known type of spring-loaded pump with a drip feed has demonstrated that it is not reliable in cold weather, and that frequent adjustments have to be made.

To my mind, for satisfactory lubrication, a positive pressure is essential, and must be fitted with a device for varying the quantity of oil pumped.

DUDLEY.

Dudley.



The Gillies Comcar, a three-wheeler with front wheel steering and engine in front of the chassis. The drive is by propeller shaft through bevel gears on the back axle, a three-speed and reverse gear being fitted. The machine, which is made by Gillies Brothers, Bexley, Kent, is equipped with windscreen and hood, and has wheel steering, a dry plate clutch and a kick-starter.

### ELIMINATING VALVE CLATTER.

Sir,—In the issue of December 15th "Multi" suggests a method of silencing Rudge valves.

I quite agree with "Multi" that the clatter does not come from the overhead gear, but from the timing wheels, but hardly think that blocking up the holes between the timing case and crank case is practicable without providing some other crank case compression release.

I should be interested to know how "Multi's" engine behaves, and whether he has noticed any "oil slinging."

Pimlico, S.W.1. RULTI.

Sir,—We have noted with great interest the various "gadgets" suggested to allay the noise emanating from the Rudge overhead inlet valve gear.

But surely the most efficient device, and certainly the most mechanical, has not been mentioned, viz., the makers' own eccentric rocker adjuster.

In our experience, if this is set to give no clearance when hot (it can be adjusted from the saddle), the Rudge engine is no more noisy than the average highly efficient unit.

Certainly the overlap cam in the racing machine sometimes causes a pronounced "ring," but, of course, speed settings, with their quick valve lifts and drop, must always provoke more noise than standard, more especially with valves of the diameter used in the Rudge engine.

The perfect quietness of the Multi gear and belt drive, and the efficient silencing arrangements, both serve to accentuate any engine noise, which perhaps would not be apparent with a chain drive or gear box.

Even with a Rudge, which has not received the attention it deserves, one can pardon slight noise whilst experiencing the delightful sensation of 40 m.p.h. with the engine just ticking over on a 3½ to 1 gear. CLEARE AND CO.

Woolwich, S.E.18.

### TWO-SEATED SIDECARS IN TRAFFIC.

Sir,—At the risk of a crushing reply, may I, as a consistent and experienced roadman, raise a point overlooked in your comprehensive Show report and criticism numbers?

Be the driver ever so careful, a heavy sidecar outfit, even after long acquaintance, lends itself to miscalculation when subjected to close clearances in traffic, etc. From three personal experiences, I have learnt to give the man "cutting in" ample room, despite personal precedent claim to right of way. Only in the first case could I reasonably decry reckless driving. As a mere cyclist, these encounters have been greatly to the detriment of my front wheel, and it is therefore with considerable trepidation that I, for one, view the advent of vehicles of the taxi-sidecar and O.E.C. production class. From a study of some of these monsters, it would seem that the driver must lose sight of the overtaken well before the rear of the latter is parallel with the front of the former. Thereafter the position and safety of the near side vehicle is a matter of mere conjecture.

I shall no doubt be informed that the minimum clearance being known, trouble is avoidable. Military experience of visual measurement even is a sufficient answer. In any case, the liability, under normal circumstances, rests with the overtaker until the rear of his vehicle is clear of a parallel line based on the front wheel of the overtaken.

F. C. PEACOCK.

### GERMANY—AS SEEN BY A BRITISH MOTOR CYCLIST

Sir,—As a reader of your paper from 1903 up to the present time, I am sending you a few notes on the pastime from the point of view of a Britisher who is living abroad.

Conditions as regards motor cycling out here are very different from those at home. Until quite recently, petrol and oil were almost unobtainable, except in the larger towns, and there the supply was uncertain, consequently long journeys entailed the carrying of supplies with one. Things are now better, however, and petrol and oil are obtainable at cheaper prices than at home, petrol costing somewhere about 2s. per gallon and oil about 4s. 6d., in small quantities.

Repairs are a vexed question. Spare parts for English machines are, of course, out of the question, except direct from home, while spares for German machines are to be had immediately from the agents, also certain American machines, notably Indian and Harley-Davidson. The Indian was the first machine to be represented here, a Cologne firm having secured the agency somewhere about the date of the ratification of peace. German mechanics, as far as repairs to motor cycles go, are hopeless. Some of the examples one sees here of sidecars off Douglas machines fitted to Triumph machines by German mechanics are enough to make one weep. The usual German idea seems to smother the whole affair with brightly coloured paint and cheap nickel-plating. The mechanical side of the question is ignored, and anything which has to be made specially is a hopeless bodge.

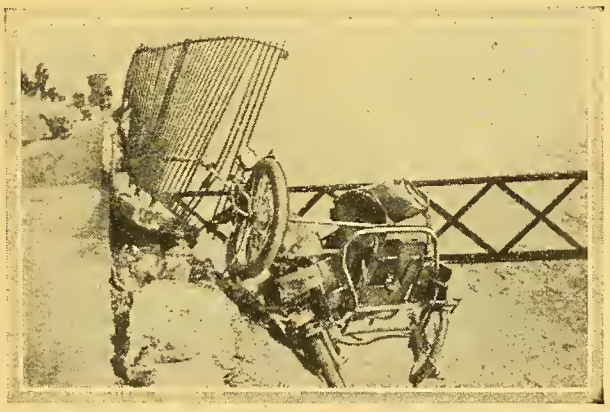
Mostly, the machines out here are Triumphs (solo and sidecar) and 4 h.p. Douglas sidecars—all ex-Army machines, and, consequently, most of them in hardly the best of condition. The writer uses a Victory model Matchless, 8 h.p. J.A.P., with additions. This turnout causes immense attraction wherever it stops, and the various Germans seem quite astonished to find a British machine that is not a Douglas or Triumph.

The roads here are fairly good, but are deteriorating. Those near the towns are bad, while those in the country, for instance, the Eifel district, are very fine; but, on the whole they are not good. The need for a properly sprung frame is very apparent; also large tyres. The N.S.U. machine is an example of a simple and efficient spring frame machine, without any gadgets, and as it has a 700×80 mm. back wheel (for a 4 h.p. model), it is a very comfortable machine to ride, and is capable of maintaining a high speed over atrocious roads without discomfort. However, for really bad roads, one must go to Belgium. The writer has twice travelled from Cologne to Brussels, and can say, without reserve, that he has never seen such awful roads before. The bad parts start some miles before Liège, and continue for a considerable distance past that place, the surface being *pavé*. Another stretch is that through Louvain into Brussels—about thirty miles—where it is positively dangerous to travel more than 10 m.p.h., owing to the danger of the front forks collapsing or the frame breaking.

Tyre trouble is very common, owing to the roads being mostly *pavé*, on which the various puncturing agents, nails, etc., rest, and do not get pushed into the road material, as they would if it were dirt or some such substance. It is no common occurrence to get four punctures on a short journey; while, a short time ago, the writer had no fewer than nine on a journey of 239 miles. Some sort of nail catcher is absolutely necessary.

Plenty of power is needed out here, if one would travel far afield and see the best scenery. Hills of four and five miles long are common, some of them needing second gear for a mile or two, and others are worse. For instance, two hills on the road from Trier (Trèves) to Mayen, near Andernach, on the road to Coblenz, where the writer recently came down for about 200 yards with the back wheel locked, and was totally unable to pull up—this with a studded Dunlop Magnum on the back wheel. These hills have several hairpin corners also. This is a main road, not a byroad. The road from Heimbach over the hills to the Gemünder Talsperre may also be instanced.—a sort of miniature Alpine pass, with about six or seven hairpin corners, mostly a second gear hill, and about five miles long altogether. C. E. CLARK.

Cologne.



When rectifying a defect in his lighting set, the Dublin owner of what remains of this Matchless sidecar outfit had the machine literally swept out of his hands by a runaway char-a-banc. Moral: keep out of the way of chars-a-bancs when attending to your lamps.

### WASTED SPEEDOMETER DIAL.

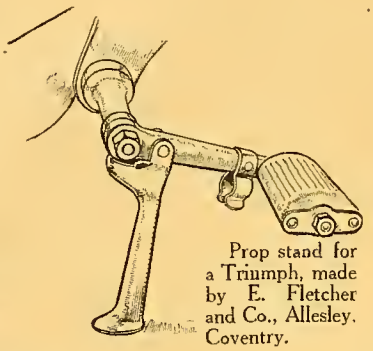
Sir,—What is the good of putting a speedometer which reads from 10 m.p.h. to 80 m.p.h. on a standard baby touring machine? Most seem to miss out the first five, and pack the next five into a quarter of an inch, ten to twenty in half an inch, and the rest of the figures spread out so that you can tell if you are going at 59¾ or 60. The only two that I have noted which start at 0 are the Bonniksen and the Stewart, but the latter goes up to 75, and 40 is enough for most people. X.Y.Z.

Birmingham.

### A PROP STAND.

Sir,—Herewith a prop stand which deserves no patent rights, it is so simple. I have fitted it on a Triumph, and it answers perfectly.

F. W. H. HARRIS,
E. FLETCHER AND CO.



Prop stand for a Triumph, made by E. Fletcher and Co., Allesley, Coventry.

### CLUTCHES FOR SINGLE-GEARED LIGHTWEIGHTS.

Sir,—In a recent issue you detailed the new Villiers engine-shaft clutch. I fitted this clutch to my 2½ h.p. two-stroke a few weeks ago, and have great pleasure in stating that it acts perfectly, and I consider it has greatly enhanced the value of my machine. There is now no need for a running mount: one can sit in the saddle, let in the clutch, and glide away. In traffic it makes all the difference in the world, allowing the rider to stop without stopping his engine, and to start again immediately the road is clear. The usual disclaimer. (REV.) H. MUDIE DRAPER.

### UTTERLY AMAZING SPEEDS.

Sir,—At not infrequent intervals correspondents to your eagerly read periodical, whilst writing of other subjects, throw in a casual reference to the utterly amazing speeds it is the daily habit for them to perform on their ordinary touring machines. In some instances their inherent modesty impels them to claims of noviceship in the self-same breath proclaiming their Brooklandian speeds. The temerity even to whisper of some of the mad meteoric speeds boldly claimed by them is beyond such a timid nature as mine, but I do dare refer to one of the more modest, to wit, a standard Triumph, which, with an avowed novice as driver, will "do 60."

Super-abundant and concentrated bitterness only has attended my efforts to persuade similar "ordinary standards" to attain such a delirious bustle as a mile a minute.

Would the illustrious omniscient ones impart of their wisdom, and thus show the lowly of intelligence how it is done? ENFIN.

Bromley.

### UNDER-INFLATION OF TYRES—AND THE EFFECT.

Sir,—I have just read with interest your correspondent "Ixion's" remarks on the subject of stone cuts. The reason for their prevalence is, I am convinced, the fact that, owing to the present shocking state of the roads, 90% of riders go about with their tyres under-inflated—at any rate, according to pre-war standards—because they prefer to let their tyres suffer, rather than their comfort.

I always drive my 6 h.p. sidecar with the tyres as hard as I can get them, and in the course of 8,000 miles covered in about a year, including a certain amount of competition riding, I have suffered no bursts and only three punctures (two of them on good main roads).

A short while ago I went down to Devonshire, and covered over four hundred miles in three days. I quite forgot I had pneumatic tyres on the machine, both on account of freedom from trouble and of soreness that persisted for days after my return!

Until the roads are improved, there would appear to be no way out; either tyres or bones must suffer. Personally, I prefer the latter, as it costs nothing, and is only temporary in its effects. OLIVER H. CLARK.

### LUCK.

Sir.—It is not often that one strikes such luck as I did a short while ago. The back tyre of my motor cycle punctured—a two inch gash—on a very stony byroad in hilly country; I had been very foolish in venturing alone there. To my dismay I discovered that I was without a repair outfit, and, according to the map, it was four or five miles to a village of any size. The prospect was far from pleasant: there was a long wearisome push in front of me.

I was contemplating the hills I would have to get up, when, at that very moment, a big motor spirit lorry appeared round the corner. It was practically empty! Before long, the machine and I were "on board" making for a garage in the next village, five miles distant. H. S. PRATT.

### WOOLLY THROTTLES.

Sir,—Thinking your readers might be interested, I venture to relate a little experience that befell me the other evening when returning from a run.

After slowing up near Hammersmith to allow passengers to board a tramcar, I engaged gears, and was preparing to accelerate when my machine gave a roar and stopped. On checking over, I found everything in apparent good order—plenty of petrol, valves O.K., gears properly home, etc. Mystified I put the machine on the stand, and was walking round to the near side to inspect the magneto when I felt a tug at my neck.

The "mystery" was solved. The day being cold I was wearing a very long scarf of fine wool, which I allow to hang almost to my knees. It had worked free from underneath me, and one end had been sucked through the long air pipe fitted to Amac carburetter on the Sports Sunbeam, and was firmly wedged in the slides. S. F. SEYFRIED.

[Instances of this kind spoiling a non-stop run in a trial have been recorded.—ED.]

### AFTER PROLONGED USE.

Sir,—I have thought for some time if riders who have used a motor cycle for a long period, say, 15,000 miles and over, would detail a list of replacements used during this period it would be interesting to see if readers could indicate the make of machine used. If they can do so with reasonable certainty, surely manufacturers would gain as much knowledge of notorious weak parts as any trial could supply.

I have just completed 17,000 miles since June, 1919, using my machine daily winter and summer, and the following is a list of new parts required: One new fork spring, two pairs of tappets and guides, one new exhaust valve and three springs, three new bearings for the pulley side of S.A. gear box, one new rear spindle and two sets of cones, one new set of head races complete, six new Bowden controls for the clutch, and one new gudgeon pin and bush.

The main engine races, big end timing bushes, etc., show no appreciable wear. The machine, a 4 h.p. Triumph, was purchased from W. H. Else and Co., June, 1919.

CHARLES L. WILLCOX (Major).


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
New Edition. Just Published. Price net, 2/- By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/- By post, 2/3.

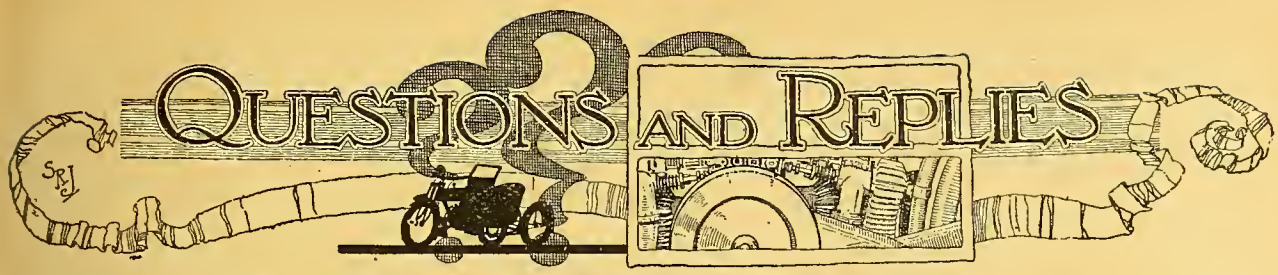
**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/- By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Price net, 5/- By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
Set of Three Maps—England and Wales, Scotland, London. Set of three, complete in case. Price net, 5/6. Post post, 5/10. Set of Two Maps—England and Wales, London. Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 5/- By post, 5/4

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle, Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### MAGNETO FOR 90° TWIN.

Will a 180° twin magneto be suitable for a 90° twin engine if run at twice crankshaft speed? —F.E.E.

A 180° twin-cylinder magneto running at twice crankshaft speed would be quite unsuitable for use with a 90° engine, as there would be a spark at the bottom of the induction stroke while the inlet valve was still open, and there would be in consequence every possibility of the carburetter being set on fire.

### REDUCING GEAR FOR SIDECAR WORK.

A sidecar recently having been fitted to my three-speed 4 h.p. Coulson B, I find it desirable to reduce the gear ratios. The engine-shaft sprocket has fifteen teeth, and is therefore quite small enough already; the countershaft sprocket has thirty teeth. (1.) How much larger should the countershaft sprocket be to give satisfaction? (2.) Where would you recommend me to get such a sprocket?—W.B.R.

(1.) The countershaft sprocket would need to be larger by three or four teeth. (2.) We do not know of anyone who would supply you with a new sprocket, as the makers only produce those with thirty teeth, and the sprocket is part of the clutch. It would be an easier matter to fit a smaller belt pulley, say one about 7in., in place of the 8in. pulley as fitted to the gear box. A number of firms specialise in the making of pulleys.

### NO SPEED.

Some little time ago I purchased a Sun motor cycle with a Villiers two-stroke engine of 1918 manufacture, single-speed model. The utmost speed I can get is about 20 m.p.h. Surely, this is very low? I decarbonised the engine a short time ago and fitted one new ring and a new gudgeon pin. I am using a 27 Amac jet, and with this can open full air quite easily; but after opening the petrol lever half-way no more speed is perceptible. The engine does seem to be fairly powerful, because it will pull up a hill just as fast as it travels on the level.—C.W.C.M.

Presumably the trouble is due to the ignition being permanently late. Time so that the spark occurs on top dead centre with the magneto control fully retarded; also make quite sure that the belt is not slipping, as this may account for a good deal of your trouble.

## Important Dates.

**Fri., Jan. 27th, to Sat., Feb 4th—Scottish Car and Motor Cycle Show.**

**Sun., Mar 5th — Argenteuil Hill-climb (France).**

**Mon., Mar. 6th — La Turbie Hill-climb (Nice).**

**Wed., Mar 15th—A.C.U. One-day Trial for Stock Machines.**

**Thurs., Mar. 23rd—East Midland Centre A.C.U. Open Reliability Trial.**

**Sat., April 1st—Western Centre A.C.U.—Open Hill-climb.**

**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**

**Fri., April 14th, and Sat., April 15th—M.C.C. London-Land's End Run.**

**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**

**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**

**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials**

**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial**

**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**

**Tues., May 30th—Junior Tourist Trophy Race.**

**Thurs., June 1st—Senior Tourist Trophy Race**

### DISADVANTAGES OF SIDE-BY-SIDE TWIN CYLINDER ARRANGEMENTS.

Can you tell me why on one occasion when describing certain French machines you referred to side-by-side twin four-strokes as being probably the most unsuitable engines for motor cycles? Is it in connection with firing periods or balance, or do both cylinders fire at the same time? I should like to say I admire the appearance of machines using this type of engine.—A.A.

The great objection to side-by-side twin-cylinder engines is that, if the crank is arranged so that the firing intervals are equally spaced, the balance is no better than that of a single-cylinder engine; whereas if good balance is obtained, the firing intervals (in a four-stroke engine) are uneven, and the torque is bad. Moreover, in the latter case (when the cranks are set at 180°) there is an objectionable "couple" caused by the off-setting of the two throws of the crank, which tends to set up an excessive amount of vibration, especially if the distance between the axes of the cylinders is very great. This vibration is very noticeable when the engine is set across the frame.

### CHARGING FROM A LIGHTING CIRCUIT.

I purpose fixing up a resistance for charging accumulators without using lamps or at most two lamps. Kindly tell me what I shall require to pass 2-2½ amps. on a circuit of 230 volts.—W.J.H.

It is certainly possible to charge accumulators from a 230 volt circuit, provided the current is continuous and not alternating. This method of charging is not at all economical, and is not really to be recommended for occasional work. You would obtain fuller information on the subject in any of the popular handbooks dealing with small electrical apparatus.

### CHANGING OILS.

In a recent article it was stated that it was injurious to the engine to change lubricating oils. I have a 1920 8 h.p. Sunbeam outfit, and have frequently changed oils when the particular recommended brand was unobtainable. I have always made sure that it was a good oil I used (known maker and sealed tins, etc.), and I would be glad of your assurance that I have not been wrong in doing this.—W.J.T.

It is not absolutely injurious to the engine to change lubricating oils, provided that the new oil is of the same base—that is, if a mineral oil has been used, the change to another mineral oil of different brand will do no harm, provided it is suitable for the engine in other respects. With your machine any good brand of air-cooled oil in sealed tins should be satisfactory.

### LIGHTING NUMBER PLATES.

Recently I was pulled up by a policeman, who said: "Why haven't you one of your number plates illuminated?" I told him the rear one was. He said: "It is, but not sufficiently; one (the front or the rear) must be illuminated so that it can be read at a distance of forty yards away." I am not quite sure whether a number plate need be illuminated on a solo motor cycle. My rear lamp is an ordinary one with a small lens in the side.—L.W.R.

It is necessary that one number plate shall be clearly illuminated even on a solo machine. If the front numbers are illuminated by the head lamp, there is no need to illuminate the rear number plate. They must be easily read, of course. At the present time it is not necessary to carry a rear light on a solo machine

## READER'S REPLY.

### CHOOSING A COMMERCIAL TRAVELLER'S MACHINE.

I notice "S.L.S.," a commercial traveller, asking for advice in choosing a suitable mount. Having in daily use for business and pleasure an 8 h.p. Matchless-M.A.G., I should strongly advise him to get a similar machine, which will give him excellent results, and, in my opinion, is the finest business proposition in motor cycles—a machine built to "stand up to it." I know that I am not alone in this opinion. Of course, I fully understand that "S.L.S." asked about a lightweight, and also that he says his means are very limited. Still, notwithstanding this, I would strongly advise him to make it a Matchless. The spring frame is greatly appreciated on the present-day road surfaces.—W.R.C.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be sent to the Editor, "The Motor Cycle," Hertford Street, Coventry, when they will be forwarded direct to the querists concerned.*

"R.E.K-P." (Deal).—Speed, silence, comfort, and economy of the 5 h.p. N.U.T. and 5-6 h.p. Raleigh.

"A.B.C." (Shrewsbury).—Tube protectors and other puncture-proof devices.

"C.C.L." (Harringay, N.).—Any kind of puncture-proof band for inserting between the cover and tube of driving wheel of sidecar outfit, slowing effect, chafing of inner tube, etc.

"W.W.L." (Woldingham). — Degory and Mills carburetters on 2¾ h.p. Douglas.

"T.G." (Harrow).—Best carburetter and adjustment for 1916 5-6 h.p. Clyno sidecar, with extra passenger.

"H.R." (Motherwell). — Will this reader please forward his address?

"J.W.B." (Birmingham). — Tuning hints for speed with 4 h.p. Douglas (solo and sidecar), W.S.R. or similar variable jet adapters.

"J.F." (Scarborough). — Ner-a-car: Consumption, wear on friction drive, climbing, reliability, and comfort.

"W.H.E." (Ormskirk).—4 h.p. 1921 Blackburne, solo or sidecar: Reliability, consumption, and general hints.

### Lighting from the Magneto.

An electric lighting equipment which derives its current from the magneto will shortly be marketed by F.R.S. Lamps, Vere Street, Birmingham. It is only suitable for single-cylinder machines.

### A Satisfactory Liquid Soap.

Some time ago we received a sample of Horto liquid soap. Unfortunately, the makers' name and address is not on the tin so we are unable to give credit where it is due. This soap, which is particularly effective in removing dirt and grease, lathers well even in the hardest water.

### Scooter Price Reductions.

A general reduction in price has been made on the Autoglider machines, which are now made by the National Manufacturing Co., of 19-20, Charlotte Street, Birmingham. The 1922 figures now range from £30 to £45, with £3 10s. extra for a handle-bar clutch. Spare parts for the machines made by Autogliders, Ltd., are available from stock.

### Chain-driven 6 h.p. Ariel Retained.

At the Olympia Show it was projected that the 6-7 h.p. Ariel would be sold with belt final drive only, the all-chain model being equipped with an 8 h.p. engine. It has now been decided to continue the 6-7 h.p. all-chain model as well, its price being £117 or £152 10s. with sidecar.

### Running Hints for Morgan Drivers.

Some useful wrinkles concerning the maintenance of the Morgan Runabout are embodied in a booklet recently issued by the Morgan Motor Co., Ltd., of Malvern. The instructions are rendered clear by excellent sketches and photographs, and special information is given regarding lubrication. A list of spares is also given.

### An Unlimited Guarantee against Valve Breakage.

In a catalogue just received from G.R.I. Motors, Ltd., of 79, West Regent Street, Glasgow, particular attention is drawn to the fact that the poppet valve of the 350 and 500 c.c. Gri engine is guaranteed for an indefinite period. It will be recollected that in this engine use is made of a combined rotary distribution valve and a single poppet valve, which controls the exhaust opening and inlet closing, remaining off its seating throughout the whole of this period. These valves are situated in the cylinder head and driven by roller chain.

### Catalogues Received.

Saxelbys, Ltd., St. George's Works, Coventry: Under the general name of Saxessories are described in a twelve-page list pillion seats, auxiliary seats for children and adults (suitable for use in sidecars, cycle cars, or cars), and a variety of chain rivet extractors for cycle and motor cycle chains.

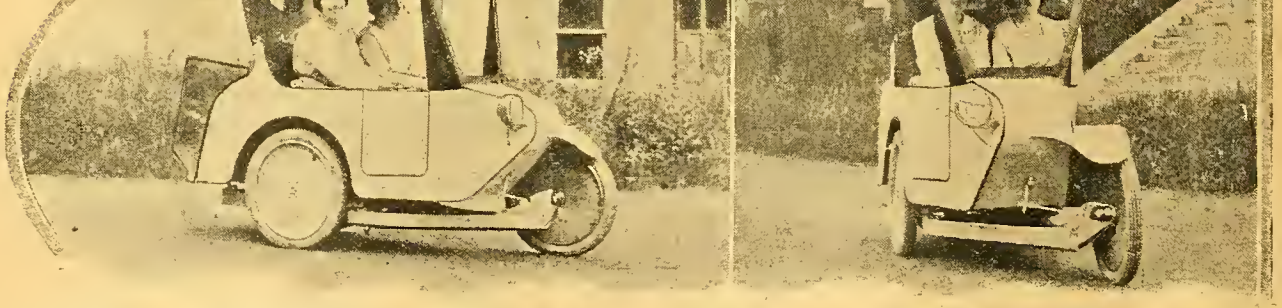
Moss Gear Co., Ltd., Crown Works, Aston Manor, Birmingham: A complete description of the Moss three-speed lightweight gear. Useful hints on the care and adjustment of the box are carefully described and clearly illustrated, and a spare parts list is included.

J. B. Brooks and Co., Ltd., Great Charles Street, Birmingham: Leaflet describing the Brooks cantilever saddle and showing method of attachment to the motor cycle carrier.

New Imperial Cycles, Ltd., Princip Street, Birmingham: A leaflet giving particulars and prices of New Imperial solo and sidecar machines, including the 250 c.c. model, which won *The Motor Cycle* Cup in the lightweight class of the Junior T.T.

W. and F. Wills, Ltd., Bridgwater: Price list of cylinder grinding, including cost of fitting new pistons.

A. E. Radnall and Co., Vauxhall Works, Dartmouth Street, Birmingham: Leaflets concerning the 1922 Radco motor cycles and sidecars, dealing with the 2½ h.p. sidecar outfit and four other two-stroke models, amongst which a lady's model with drop frame, two-speed gear, clutch, and kick-starter may be mentioned.



In following the general idea of the Scott Sociable, the Martin Rocking Fifth Wheel Co., of Springfield, Mass., U.S.A., has aimed at extreme simplicity. This company's machine, known as the Scootamobile, is said to be capable of 30 m.p.h. on a petrol consumption at the rate of 75 m.p.g.

# Logic

When you find certain machines which year after year put up good performances in Reliability Trials, and compete with success in the great race in the Isle of Man—you can be sure they will give you good service on the road.

When you find a firm of Agents—keen riders with a long record of successes on both road and track, who have enjoyed for 12 years the confidence of Motor Cyclists—then you can be equally sure of the best of service, and can rely on their advice in the selection of a new machine to suit your special needs.

GODFREY'S have the finest selection of new 1922 Models, and cordially invite you to visit their Showrooms. Full lists and any catalogue sent on request.

**FOR CREDIT TERMS WE CHARGE ONLY 4%** Except in those cases where higher rates are fixed by the Manufacturers.

First deposit one quarter of the amount, and the balance in twelve equal monthly instalments.

If you desire us to take your present machine in part exchange send full particulars.

*A few examples selected from our full stock of New Models.*

## NEW 1922 MODELS.

### SOLO.

| | |
|---|---|
| **A.J.S.**, 2¾ h.p., Sports Model B1 .... | £85 0 |
| **B.S.A.**, 4¼ h.p., Model H2 ..... | £110 0 |
| **B.S.A.**, 6 h.p., Model E..... | £132 0 |
| **COVENTRY EAGLE**, 4¼ h.p., 3-sp... | £110 0 |
| **EXCELSIOR**, 2½ h p. ..... | £39 18 |
| **INDIAN** Scout, 4 h.p. ..... | £112 0 |
| **INDIAN** Scout, elec. equipment .... | £130 0 |
| **INDIAN** Standard, 7 h.p., spr'g frame | £122 0 |
| **INDIAN** Chief, electrical equipment | £160 0 |
| **LEVIS** Popular ..... ..... | £48 0 |

### SOLO.

| | |
|---|---|
| **LEVIS** Model S, 2-speed gear ..... | £58 0 |
| **LEVIS**, Model S, 2-speed gear, with kick-starter..... | £60 0 |
| **MASSEY-ARRAN**, 2¾ h.p., Sports .. | £83 10 |
| **RUDGE**, 3½ h.p., 3-speed, k-s. .... | £100 0 |
| **SCOTT**, 3¾ h.p., Standard ..... | £110 0 |
| **SCOTT** Squirrel, 3½ h.p. ..... | £105 0 |
| **TRIUMPH**, 4 h.p., Model H ..... | £105 0 |
| **TRIUMPH**, 4 h.p., Model SD ..... | £115 0 |

### COMBINATIONS.

| | |
|---|---|
| **A.J.S.**, 7 h.p., Standard ..... | £175 0 |
| **B.S.A.**, 6 h.p., No. 3 B.S.A. Sidecar | £164 0 |
| **INDIAN** Scout, Sports Sidecar .... | £142 0 |
| **INDIAN** Standard Combination .... | £157 0 |
| **MATCHLESS**, Model H Combination | £170 0 |
| **MORGAN**, Popular Model ..... | £150 0 |
| **QUADRANT**, 4½ h.p., all-chain .... | £105 0 |
| **SCOTT**, 3¾ h.p., Scott Sidecar .... | £145 0 |
| **SCOTT** Squirrel, Sports Sidecar.... | £135 0 |
| **TRIUMPH**, Type H, Gloria Sidecar | £145 0 |
| **TRIUMPH**, Type SD, Gloria Sidecar | £160 0 |

### LIGHT CARS.

| | |
|---|---|
| **A.B.C.**, 12 h.p., 2-seater, 4-speeds, Sporting Model ..... | £295 0 |
| **A.B.C.** 2-seater, 4-speeds, Standard Model ..... | £325 0 |
| **BAYLISS-THOMAS**, 10 h.p., 4-cyl., water-cooled engine, full equipment, including Lucas elec. set | £315 0 |
| **G.N.**, 8 h.p., 2-seater, 3-speeds, full equipment, including dynamo lighting and spare wheel ..... | £225 0 |
| **ROVER**, 8 h.p., 2-seater, dynamo lighting, hood, screen, spare wheel, painted buff ..... | £220 0 |

For Special Bargains in Shop-soiled 1921 Models (Brand New and Unused) and sound and fully guaranteed Second-hand Motor Cycles, write for full list.

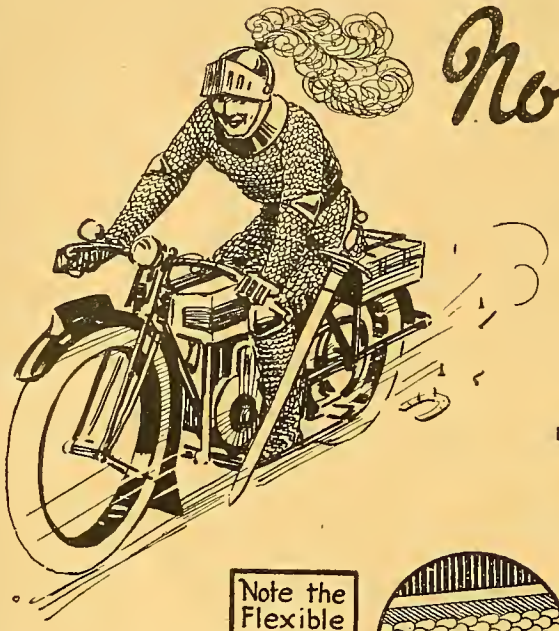
Spare Parts for B.S.A., INDIAN, LEVIS, SCOTT, always obtainable at Godfrey's

# GODFREY'S LTD.,

## 208, Gt. PORTLAND St.,

## LONDON, W.1.

'Phone: Langham 1300. (2 Lines).



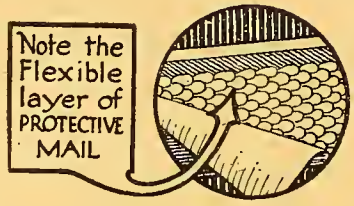
# No More Punctures!

You will never again be stranded with a punctured tyre—never again dread bits of glass, flint, and nails, if you fit the **TUBE PROTECTOR.**

The Tube Protector is a flexible layer of thin pieces of hard metal (arranged as in a coat of mail) enclosed in canvas, and fits between the outer cover and the inner tube of your tyre. No matter what sharp matter pierces the outer cover, it cannot penetrate the Tube Protector—cannot possibly pass through to the inner tube.

The Tube Protector is easy to fit, is light in weight, and causes no friction. It allows you to wear down the outer cover to almost nothing Think of the saving in time, money, labour, and patience.

Ask your dealer to fit TUBE PROTECTORS to your motor cycle tyres




## Tube Protector

**Liberal terms to factors and retailers.**

**PROTECTORS for MOTOR CYCLES 17/11 each.**

Sole Agents:

**A. Stuart Morris & Co.,**

**Head Office : 101, Leadenhall St., E.C.3**

# An Offer!

**We will buy your present magneto.**

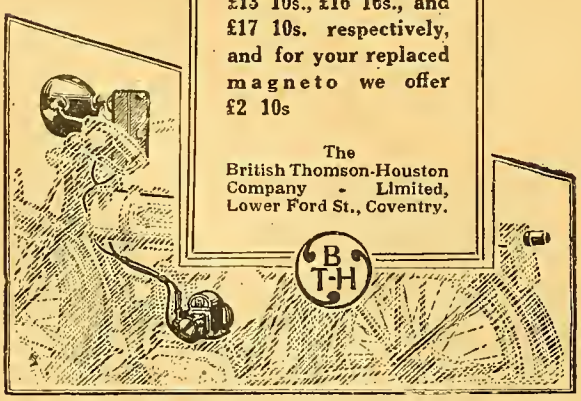
should you desire to replace it with a B.T.H. "Sparklight" combined ignition and lighting set.

"Sparklight" Sets can now be supplied in three types, for two-stroke and four-stroke single solos; and four-stroke single combinations, **complete at £13 10s., £16 16s., and £17 10s. respectively, and for your replaced magneto we offer £2 10s**

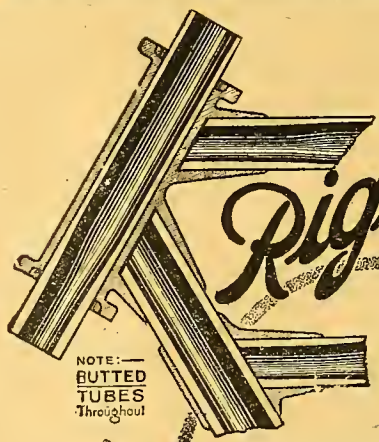
*Write for particulars of the B.T.H. "Sparklight." Quote CM2212*

**The British Thomson-Houston Company - Limited, Lower Ford St., Coventry.**

B T-H



# Rigidity




Rigidity in the frame means greater strength in the machine and greater safety for the Rider.

## REYNOLDS' BUTTED TUBES

mean *maximum* rigidity, and thus ensure that desirable "greater strength and greater safety." Specify and *insist* on REYNOLDS' Tubing in your 1922 mount.

The Patent Butted Tube Co., Ltd., Hay Hall Works, Tyseley, B'ham.

B 115

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

**ADVERTISEMENTS** in these columns –First 12 words 3/–, and 3d. for every ad–itional word. Paragraphs of under 8 words re charged double rate. Each paragraph is harged separately. Name and address must e counted. Series discounts, conditions, and pecial terms to regular trade advertisers will e quoted on application.

Postal Orders and Cheques sent in payment for dvertisements should be made payable ____ & Co. ) ILIFFE & SONS Ltd., and crossed ____ reasury Notes, being untraceable if lost in ransit, should not be sent as remittances.

All advertisements in this section should be ccompanied with remittance, and be addressed ) the offices of "The Motor Cycle," Dorset louse, Tudor Street, London, E.C.4, or 19, lertford Street, Coventry. To ensure insertion etters should be posted in time to reach the ffices of "The Motor Cycle," by the first post n Friday morning previous to the day of issue. dvertisements that arrive too late for a par-ular issue or that are crowded out will auto-natically be inserted in the following issue unless ccompanied by instructions to the contrary.

All letters relating to advertisements should uote the number which is printed at the end of ach advertisement, and the date of the issue which it appeared.

The proprietors are not responsible for clerical printers' errors, although every care is taken avoid mistakes.

## NUMBERED ADDRESSES.

For the convenience of advertisers, letters may be dressed to numbers at "The Motor Cycle" Office. hen this is desired, the sum of 6d. to defray the cost of gistration and to cover postage on replies must be added the advertisement charge, which must include the rds Box 000, c/o "The Motor Cycle." Only the number ll appear in the advertisement. All replies should be dressed No. 000, c/o "The Motor Cycle," Dorset Honse, idor Street, London, E.C.4. *Readers who reply to Box No. vertisements are warned against sending remittance through e post except in registered envelopes; in all such cases the e of the Deposit System is recommended, and the envelope ould be clearly marked "Deposit Department."*

In the case of motor cycles offered for sale under a box mber, as it is unusual for these to be sold without first ing inspected by the intending purchaser, advertisers will cilitate business by embodying in their advertisements me mention of the district in which the machine fered may be seen and tried.

## ☞ DEPOSIT SYSTEM.

Persons who hesitate to send money to unknown persons ay deal in perfect safety by availing themselves of our posit System. If the money be deposited with "The otor Cycle," both parties are advised of this receipt. The time allowed for a decision after receipt of the ods is three days, and if a sale is effected we remit the ount to the seller, but, if not, we return the amount the depositor. Carriage is to be paid by the buyer, but the event of no sale each party pays carriage one way. ie seller takes the risk of damage in transit. For all ansactions up to £10, a deposit fee of 1/- is charged; on nsactions over £10 and under £50, the fee is 2/6; over o and under £75, 5/-; over £75 and under £100, 7/6; d on all transactions over £100, 1%. All deposit atters are dealt with at Dorset House, Tudor Street, ondon, E.C.4, and cheques and money orders should be ade payable to Iliffe & Sons Limited. The letter "D" at the end of an advertisement is an lication that the advertiser is willing to avail himself of e Deposit System. Other advertisers may be equally sirous, but have not advised us to that effect.

## SPECIAL NOTE.

Readers who reply to advertisements and receive no swer to their enquiries are requested to regard the ance as an indication that the goods advertised have eady been disposed of. Advertisers often receive so any enquiries that it is quite impossible to reply to ch one by post.

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C., 1921, new condition; £75.—Clark, 7 Exhibition Rd., S.W.7. [2941

Sole London and District Distributing Agents for A.J.S., Excelsior, and Dunelt Motor Cycles.

THERE is far more satisfaction and much greater security in buying a good machine from a reliable Agent than in picking it up anywhere—you know what we mean. Taylors have 12 years of honest trading at the back of them, and a reputation second to none amongst Motor Cycle dealers. There is a reason!! Taylors have always made it their business to take just as much interest in their customers as in their prospective customers; in other words—Taylors give real service.

**SOME TYPICAL EXAMPLES OF MOTOR CYCLE VALUE**

**A.J.S.** 7 h.p. Comb. **£175**
**A.J.S.** 2¾ h.p, Sports **£85**
**Excelsior** 6 h.p. Comb. **£133**
**Excelsior** 2½ h.p. **£39-18**
**Dunelt** 4½ h.p. Comb. **£113-8**
**Quadrant** 4½ h.p. Comb. **£105**
**Morgan** - **£150**

Send for detailed specifications of any of the above machines, or ask for Catalogue descriptive of any other make of machine required—we can supply promptly. Any Motor Cycle can be purchased on our Extended Payment System. Application form sent on receipt of postcard.

**SPECIAL.**

We have an excellent stock of High-class Shop-soiled and Second-hand Motor Cycles and Combinations to offer at very attractive prices for cash or purchase out of income. Please write for detailed list.

**H. TAYLOR & CO., LTD.,**

Showrooms—
Motor Cycles and Cars,
**52-53, Sussex Place, South Kensington.**
Accessories, Spare Parts, and Repairs,
**21a, Store Street, Tottenham Court Road, W.C.1**
Wholesale—
**33, ALFRED PLACE, W.C.1.**
Garage: Tottenham Court Road, W.1.
'Phones: Accessories and Repairs, Museum 1240.
Motor Cycles and Cars, Kensington 7260.
Telegrams: "Dynametro, Westcent, London."

## MOTOR CYCLES FOR SALE.

### A.B.C.

1921 A.B.C., speedometer, Cowey horn, tax paid, specially tuned engine, absolutely as new; £65; exchanges or deferred payment.—Edwards, 50, Harrington Rd., South Kensington. [3203

A.B.C., 1920, mileage 900, fully equipped, speedometer, etc., absolutely as new, very fast; £65 for quick sale; owner bought car.—A., 143, Ravensbury Rd., Earlsfield, S.W.18. [3653

A.B.C., latest, as new, kick starter, Lucas dynamo lighting, Lucas electric and Cowey mechanical horns, Watford trip speedometer, mascot, magneto cut-out, twin copper exhausts, handle-bar muffs, 2 pannier bags, sundry spares, fast, a real 60 m.p.h., 1,300 miles only, insured May; only reason selling, bought car; exceptionally smart 'bus; offers.—Box 7,971, c/o *The Motor Cycle.* [3319

### Ace.

1921 Ace, standard or electric, brand new, but shop-soiled, at very low prices.—14, Gt. Marlborough St., W.1. [1855

### Acme.

ACME 8h.p. 1921 Combination, 3-seater sidecar with taxi chassis, screens, speedometer, lamps, spare wheel, low mileage; also sectional garage, 16ft.×10ft.; £170 lot.—Woolard, 53, Stanmore Rd., Stevenage. [3508

### A.E.L.

SHOP-SOILED A.E.L. 2¼h.p., 2-stroke, 2 speeds, kick starter, used for one or two demonstrations only; list price £37, accept £48.—Dunwell's Garage, Wigan. Tel.: 328. [0766

### A.J.S.

CROSS is agent for A.J.S. for Rotherham and district; 1922 models in stock. [X4445

A.J.S.—Quickest deliveries all models.—Merrick's Stores, Listerhills Rd., Bradford. Tel.: 2439. [1163

LEEDS.—6h.p. A.J.S., Henderson sidecar, 3-speed gear box; £58; exchanges.—89, Spencer Place, Leeds. [3457

1920 6h.p. A.J.S., Lucas dynamo lighting set, complete, and tax paid; £135.—Cross, Agent, Rotherham. [X4517

1922 A.J.S., the elite of motor cycles, all models.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3799

A.J.S. 1916 Combination, hood, screen, lamps, horn, speedometer, insured, 3-speed; £80.—S7, Mayfield Rd., Sanderstead, Croydon. [3275

A.J.S. 2¾h.p. Model B, £85; early delivery; combination likewise. May we discuss your exchange.—Bunting's, Wealdstone. [3740

1920 (October) A.J.S. Combination, dynamo, speedometer, spare wheel, as new; £130.—Levitt, 80, Streatham High Rd. 'Phone: 2701. [3798

F.O.C.H. for A.J.S.; cash, exchange, or deferred payments. Sound second-hand machines in stock.—5, Heath St., Hampstead. (Near tube.) [3372

1920 A.J.S. 6h.p. Combination, C.A.V., Watford speedometer, spare wheel and tyre, all tools, perfect condition; best offer above £130.—Nicholson, 26, Budge Row, Cannon St., E.C.4. [3411

1922 A.J.S. Lightweights, 2¾h.p. All models can be supplied from stock. Book your orders now and save disappointment. Official agents for this famous lightweight.—F. E. Wootten, Ltd., High St., Oxford. 'Phone: 308. [1967

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3608

A.J.S. Spares; prompt delivery.—Cyril Williams, Chapel Ash Depot, Wolverhampton. T.A.: Parts. [7901

### Alldays.

LATE 1917 Alldays Allon, 2-speed, fully equipped; £36, nearest.—Bergholt, High St., Harpenden. [3410

1918 Alldays Allon, just overhauled, lamps, etc.; £27/10.—Goad, 122, Maida Vale (Private House Garage). Phone: Hampstead 1353. [3602

ALLDAYS Allon 1921 3-speed Combination, kick starter, clutch, equipped, speedometer, mudshields, insured; £70; deferred payments.—Parker's, Bradshawgate, Bolton; also 245, Deansgate, Manchester. [X4489

### American X.

1921 American X.—One or two brand new but shop-soiled for sale at bargain prices.—14, Gt. Marlborough St., W. [1854

### Antoine.

2¾h.p. Antoine, good tyres, lamps, horn, M-L mag., B. and B.; trial; £12/10.—C. Houlston, 22, Land's End Lane, Fulham. [3589

### Arden.

£22/10.—Arden-Villiers, tax paid 1922, late model, 2-speed countershaft, accessories; bargain.—8, High St., Wandsworth. [3796

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue. B17
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Ariel.

ARIEL.—All models, cash or gradual payments. Spares supplied from stock.—West Central Agency, Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0704

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—6-7h.p. Ariel combination, 1921, shop-soiled only; reduced to £139; no extra charge for easy terms. [3691

ARIEL 3½h.p. 1919, and Millford sidecar, wind screen, speedometer, etc., in good all-round condition; £70.—62, Belgrave Rd., Corstorphine, Edinburgh. (D) [3316

ARIEL Motor Cycles are the last word in reliability. We have always in stock the reliable motor cycles; trade supplied.—Jones' Garage, Muswell Hill, and Woodside Parade, N. Finchley. [0378

1921 Ariel Combination, 4½h.p., 3-speed, all-chain, wind screen, Klaxon, indistinguishable from new, mileage under 100; £85; exchanges or deferred payments.—Edwards, 50, Harrington Rd., South Kensington. [3769

*Spare Parts:*

ARIEL Spares for all models, post free.—Ariel Service Depot, Jones' Garage, Broadway, Muswell Hill, N.10. [0742

### Bat.

BAT, 1914, 6h.p. J.A.P., 3 speeds, clutch, kick starter, tyres good lamps; 45 gns.—50, High St., Langholm, N.B. [3388

1912 Bat-Jap 6h.p. Twin, 2-speed countershaft gear box, kick start, all chain, hood and screen, C.B. sidecar; offers over £40.—Clapp, Adam St., Burnham-on-Sea. [3566

### Beardmore.

1921 Beardmore-Precision 2½h.p., 2-speed, all chain drive, spring frame, mileage 1,000; genuine bargain, £47/10. — Dean, Brent Valley Golf Club, Church Rd., Hanwell, W. [3434

### Blackburne

1920 Blackburne 4h.p. Combination, 3-speed, clutch and K.S., Lucas dynamo, fully equipped, excellent condition; £100; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [1673

BLACKBURNE 1920 4h.p. Combination, £82; also 1920 8h.p. combination, with Henderson Elite sidecar, £108; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3634

### Bown.

1921 2½h.p. Bown-Villiers, 2 speeds, excellent condition; £35.—Dosser, Sliegsby, Malton. [3265

### Bradbury.

BRADBURY 4h.p., 2 speeds, clutch, good tyres, running order; 26 gns.—30, Normanton Av., Wimbledon Park. [3494

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—2¾h.p. Bradbury, new 1921, £70; and 6h.p. Bradbury combination, new 1921, £135; no extra charge for easy terms. [3692

£50.—4¼h.p. Bradbury coachbuilt combination, 2-speed, large underslung sidecar, plating and enamel all in perfect condition; seen by appointment.—Bryant, 51, Barrett's Grove, Stoke Newington. [3292

### Brough Superior

BRAND New Brough Superior Combination, lavishly equipped, 8h.p. o.h.v. J.A.P.; cost £214, accept £135.—24, Balliol Rd., North Kensington. [3441

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½, o.h.v., 3-speed, clutch, and kick starter, £150; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450 [0733

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with pleasure.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4420

1915 B.S.A. 4¼h.p. Countershaft Combination, good condition guaranteed, new lamps, etc.; £58/10.—Below.

1914 B.S.A., discs, lamps, long exhaust, sporting mount, fine condition; bargain, £30.—Goad, 122, Maida Vale (Private House Garage). 'Phone: Hampstead 1353. [3601

F.O.C.H. for B.S.A.'s; cash, exchange, or deferred payments. Sound second-hand machines in stock.—5, Heath St., Hampstead. (Near tube.) [3370

83 GNS., exchange.—1920 B.S.A. 4¼h.p., clutch, kick start, luxurious 2-seater sidecar, hood, screen, new condition; any examination, trial.—Below.

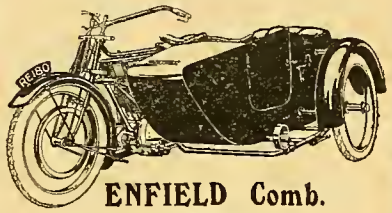
32 GNS., bargain.—1913 B.S.A. 3½h.p., 2 speeds, chain drive, kick start, footboards, Canoelet coach sidecar.—Seabridge, Hansler Rd., East Dulwich, Sydenham 2452. [3667


***Most well-known makes in stock.***

**ROVER**

**£220,** or

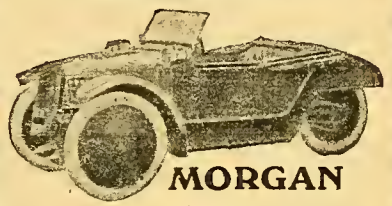
**£55 down, and balance in 11 instalments of £16 2 6**



**ENFIELD Comb.**

**£140** (Dynamo, £18 extra), or

**£35 down, and balance in 11 instalments of £10 5 3**



**MORGAN**

**£150,** or

**£37 10 0 down, and balance in 11 instalments of £11 0 0**

**O.K.-Junior.**

**38 gns.,** or

**£9 19 6 down, and balance in 11 instalments of £2 18 6**

**COVENTRY PREMIER**

**£250,** or

**£62 5 0 down, and balance in 11 instalments of £18 7 0**

Gradual Payments, 4% of the total sum, or 7½% on the balance.

**LAMB'S LTD.,**

**50, High Road, Wood Green, London, N.22.**
'Phone: Hornsey 1956.

**151, High Street, Walthamstow, London, E.17.**
'Phone: Walthamstow 169 (2 lines).

**387, Euston Rd., London, N.W.1.**
'Phone: Museum 4978.


## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A., 1922, Model K2, just delivered, chain dri etc.; £110.—Elce, Ltd., 15-16, Bishopsgate A Camomile St., E.C.3. 'Phone: Avenue 5548. [0(

B.S.A., 1922 models, for immediate delivery; ca exchange, deferred payments.—Newnham Mo Co., 223, Hammersmith Rd., W.6. 'Phone: Hamm smith 80. [36

1920 4¼h.p. B.S.A. Combination, 3 speeds, elect horn, etc., good tyres, and only done small m age; price £65, or near offer.—Dunwell's Gara Wigan. Tel.: 328. [07

B.S.A.—Being official agents we have them alwa in stock, and immediate delivery can always given.—Jones' Garage, Muswell Hill, and Woodsi Parade, N. Finchley. [03

B.S.A. 1920 Henderson Elite Combination, speed meter, lamps, horn, discs, exceptionally sma £92; Canoelet combination, electric lighting, £82. Clark, 7, Exhibition Rd., S.W.7. [21

B.S.A. 1921 4¼h.p. All-chain Drive Combinatic H2 sidecar, wind screen, Cowey, spring se pillar, Lucas Magdyno lamps and horn; £150.—Co Linslade Nurseries, Leighton Buzzard. [24

B.S.A. 4¼h.p., all chain, De Luxe sidecar, brai new, carries makers' guarantee; £115.—Vivi Hardie and Lane, Ltd., 23-34, Wodstock St. (off Ble heim St.), New Bond St., W.1. 'Phone: Mayfair 655 [35

B.S.A. 1921 6-7h.p. Combination, Lucas dynam lighting, spare wheel, speedometer, fully equippe small mileage, £155; also several 4¼h.p. combination exchanges.—Newnham Motor Co., 223, Hammersmit Rd., W.6. 'Phone: Hammersmith 80. [364

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kaye, 8, Bea St., Ealing. [360

B.S.A. Specialists.—All spares by return.—County Cycl and Motor Co., Broad St., Birmingham. [332

B.S.A. Spares can be had by return, post free, fro Jones' Garage, Broadway, Muswell Hill, N.10. [074

HERBERT ROBINSON, Ltd., Green St., Cam bridge.—B.S.A. spares by return; no waiting Trade supplied. [367

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all B.S.A. spare part always in stock. Write for free spare part list. [075(

### Calcott.

1915 Calcott 2½h.p. 4-stroke, nearly new tyre, belt aluminium footboards, copper exhaust, snip; £18/10.—76, Cromwell Rd., Luton. [354(

### Calthorpe.

2¼h.p. Calthorpe, 2-stroke, 2 speeds, overhauled, per fect; £20.—Dosser, Sliegsby, Malton. [3264

WAUCHOPE'S, 9, Shoe Lane, London, E.C.4.—2¾h.p. Calthorpe-Jap, 1920, 2 speeds; £30; no extra charge for easy terms. [3687

CALTHORPE Junior Lightweight, 2-speed, good order; £16, snip.—28, Woodford Rd., Forest Gate, E.7. 'Phone: Stratford 2598. [3553

CALTHORPE 1921 Combination, actually in stock for immediate delivery; cash or deferred terms; place your orders with the Calthorpe specialists.—Burlington Motors, Ltd., Clapham Common, S.W.4. 'Phone: Brixton 2417. [0509

### Chater-Lea.

CHATER-LEA 1922 8h.p. Combination in stock; £147.—Tuck Bros., 154, Blackhorse Rd., Walthamstow. [2820

### Chater-Lea-Fafnir.

CHATER-LEA-FAFNIR 3½h.p. Combination, 2 speeds, complete, good order; £22.—Reeves, Three Bridges, Sussex. [3492

### Chater-Lea-Jap.

CHATER-LEA, 6h.p. J.A.P., 3-speed, chain-driven, splendid condition; £48.—Barr, Walton-on-Naze. [3331

### Cleveland.

CLEVELAND 1920 3h.p., 2-speed, clutch, kick starter, equipped, as new; £48; deferred payments. —Parker's, Bradshawgate, Bolton; also 245, Deansgate, Manchester. [X4486

### Clyno.

CLYNO Combination, 2-speed, kick start, spares, etc.; 38 gns.—15, Notte St., Plymouth. [3506

CLYNO 1920 2-stroke, 2-speed, clutch, condition absolutely perfect; £37/10.—15, Grange Rd., Ealing. [3216

CLYNO 1917 5-6h.p. Combination, in excellent condition, a real bargain; £48.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. [3791

1915 Clyno Combination, 5-6h.p., 3 speeds, just thoroughly overhauled and fitted bulbous back sidecar; £48/10.—Goad, 122, Maida Vale (Private House Garage). 'Phone: Hampstead 1353. [3605

MISS DOOLEY.—5-6h.p. 3-speed K.S. 1915-16-17 Clynos, all renovated and thoroughly overhauled engines and gear boxes; seen any time by appointment; prices from £55 to £65 each.—Please apply to Miss E. Dooley, 33, Killyon Rd., Clapham, S.W.8. [3395

## MOTOR CYCLES FOR SALE.

### Humber.

HUMBER 1922 4½h.p., sports model, specially tuned engine, fast and reliable, admitted best value obtainable in sporting machines; £100; in stock; illustrated pamphlets, etc., from Cambridge Agents. — Herbert Robinson, Ltd., Green St., Cambridge [3683

### Indian.

7-9h.p. Clutch Model Indian; £35.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [3574

7-9h.p. 1915 Clutch Model Indian, overhauled; details post; exchange lightweight, Douglas preferred.—Branch, Circle, Tredegar. [3313

1916 7-9h.p. Powerplus Indian Combination, splendid order; £48.—28, Woodford Rd., Forest Gate, E.7. 'Phone: Stratford 2598. [3551

1919 GNS.—Super sports Indian, countershaft gear box, discs, fully guaranteed; wire to secure.—Ramsden's, Mayhell Av., Blackpool. [3333

£65.—1918 Indian 7-9h.p., tax paid 1922, power-plus, coach combination, 3-speeds, clutch, kick starter; bargain.—8, High St., Wandsworth. [3793

INDIAN 7-9h.p. Combination, in very fine condition; £85; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3635

INDIAN Powerplus Sprung-frame Combination, 1916, not W.D., side-by-side valves, discs, accessories, excellent order; £55.—Cranleigh, College Slip, Bromley, Kent. (P) [3509

POWERPLUS Indian Combination, 1918 7-9h.p., 3 speeds, clutch, kick starter, Millford touring sidecar, accessories, splendid condition; bargain, £65.—63, Solon Rd., Brixton. [3581

1920 Indian 7-9h.p., 3-speed, unscratched; exchange 16H Norton, Indian Scout, etc., or sell; machine too heavy for owner; cash either way.—Dawson, Drummond Rd., Ilkeston. [3586

INDIAN, 1919, 7-9h.p., spring frame, Powerplus, lamps, horn, etc., splendid condition; £57/10.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0072

1917 7-9h.p. Indian Combination, spring frame, 3-speed, kick start, overhauled, Millford red sidecar, as new, very fast, good order; cash wanted, 48 gns.—Ogden, 11, Thomas St., King's Lynn. [3715

1920 Powerplus Indian Outfit, sporting sidecar, electric lamps and Lucas acetylene lamps, 2 sprockets, large exhaust pipe and silencer; must be cleared; best offer over £65 the lot.—Box 259, c/o *The Motor Cycle*. [X4414

INDIAN 1919 7-9h.p. Combination, Powerplus model, electric lighting throughout, electric horn, discs, etc.; £72/10.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0072

1919 Powerplus Indian, perfect condition, C.S. 3-speed, K.S., dual clutch, lamps, horn, pump; £70, or close offer; trial.—R. W. Smith and Co., Automobile Engineers, High St., Eltham. 'Phone: 230 Lee Green. [3567

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3614

INDIAN.—New and second-hand spares in stock for all models.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [3517

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Indian spare parts always in stock. Write for free spare part list. [0752

INDIAN.—The Dennis Accessories Stores, 89, Brixton Rd. ('Phone Brixton 3129), can supply all 7-9h.p. parts from stock, new, including all types of forks. They also specialise in Indian repairs. [1594

### Ivy.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, wholesale Ivy agents, have all models in stock, including lady's model, price £69; get list. [0710

### Ixion.

IXION-VILLIERS, 2¾h.p., 2-speed, lamps, insured; seen by appointment; £27.—Withers, 14, East Hill, Wandsworth, S.W.18. [3526

### James.

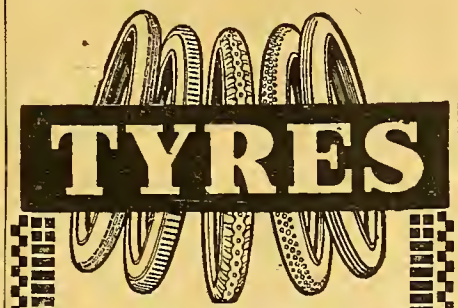
1916 James, 3½h.p., clutch, K.S., needs attention; nearest to £40.—Hodges, Station Rd., Hartlebury. [3566

JAMES 6h.p. 1920 (July) Twin Combination, excellent condition, complete; £125.—A. J. Hooper, Bnilder, High Rd., East Finchley, N. [3505

JAMES Lightweight (Dec., 1920), fully equipped, 2 speeds, fast, guaranteed perfect, any trial; £35; exchanges.—7, Cowdrey Rd., Wimbledon. [3403

JAMES 1916 3½h.p. Twin Sports, equipped, indistinguishable from new; £70; deferred payments.—Parker's, Bradshawgate, Bolton; also 245, Deansgate, Manchester. [X4491

JAMES, 1920, 5-6h.p., with Lucas dynamo lighting, £110, exchauges; also another at £115; also two 4½h.p. combinations at low prices.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3632


SAFETY FIRST!

We lead the way to Tyre Bargains.

| Size. | Make. | Our Price | List Price |
|---|---|---|---|
| 24×2 | Palme. Ribbed | 21/- | 34/ |
| 24×2¼ | Clincher de Luxe Heavy | 25/- | — |
| 26×2 | Englebert Passenger | 19/6 | 53/ |
| " | Englebert Touring | 15/- | 46/- |
| 26×2¼ | Bates Special Heavy | 31/- | 54/- |
| " | Palmer Cord | 29/- | 53/6 |
| " | S. Moulton Extra Heavy | 27/9 | 68/ |
| " | Clincher de Luxe Heavy | 25/- | 54/6 |
| " | Hutchinson T.T. | 23/- | 56/6 |
| " | Englebert Touring | 16/6 | 49/- |
| " | Wood Milne Special | 13/6 | 53/9 |
| 26×2⅜ | Palmer Cord Heavy | 30/- | 62/- |
| " | Hutchinson T.T. Rub. S. | 27/6 | 59/9 |
| " | Clincher de Luxe Ex. Hy. | 25/- | 68/6 |
| 26×2½ | Goodrich Safety Tread | 45/- | 52/6 |
| " | Bates Special Heavy | 35/- | 68/6 |
| " | Clincher de Luxe Heavy | 27/6 | 58/9 |
| " | Wood Milne Ex. Heavy | 16/6 | 72/3 |
| " | Wood Milne Special | 13/6 | 63/9 |
| 28×3 | Goodrich Safety Tread | 48/- | 100/- |
| " | Englebert Racing | 39/6 | 100/9 |
| 650×65 | Goodrich Safety Tread | 40/- | 67/6 |
| " | Best French R. Non-skid | 25/- | 70/- |
| " | Wood Milne Special | 13/6 | 64/9 |
| 700×80 | Beldam Bulldog | 61/- | — |
| " | Firestone R. Non-skid | 58/- | 87/8 |

TUBES NEW AND FULLY GUARANTEED.

| | Our Price. | List Price | | Our Price. | List Price |
|---|---|---|---|---|---|
| 24×2 | 4/6 | 9/- | 26×2½ / ×2¾ | 8/9 | 13/3 |
| 26×2 | 4/9 | 10/- | 26×2½ | 8/9 | 12/9 |
| 26×2¼ | 7/- | 10/3 | 28×3 | 7/6 | — |
| 26×2⅜ | 7/9 | 11/3 | | | |
| 700×80 .. | 10/- .. | 15/9 | | | |

BELTS IN STANDARD LENGTHS.

| | ⅜in. | ½in. | ⅝in. | 1in. | 1¼in. |
|---|---|---|---|---|---|
| Bates, Lycett, etc. Per foot. | 1/6 | 1/7 | 1/10 | 2/2 | 2/8 |

These Special Clearance Lines are sent Carriage Paid on 7 Days' Approval against remittance. Trade supplied. Write to-day.

ORDER THE ELITE RUBBER CO LTD
The Name — The Firm
Tyre Specialists
WAY
LONDON'S LEADING TYRE HOUSE
264-266, VAUXHALL BRIDGE Rd., VICTORIA, S.W.1
98, VICTORIA STREET, LONDON, S.W.1. & AT
44, SURBITON ROAD, KINGSTON-ON-THAMES
Please address all post orders to Vauxhall Bridge Road.
TELEPHONE: VICTORIA 6553 & 6554
OUR AGENT IS THE PILLAR-BOX


## MOTOR CYCLES FOR SALE.

### James.

JAMES Combination (1919), 5-6h.p., Eastlug, Millers lamps, speedometer, leg guards, spring saddle pillar, excellent tyres; £100.—52, Derby Rd., Ipswich. [3213

### J.E.S.

J.E.S. 1h.p. Motorcyclette, running order, dynamo lighting; £15, or near offer.—G. Robinson, 186, The Rye, S.E.22. [3519

### Kerry.

SNIP.—3½h.p. Kerry motor cycle, complete, less mag., mechanically sound; £4/10.—7, Cowdrey Rd., Wimbledon. [3405

### Kingsbury.

NEW 1921 Kingsbury 2¾h.p., 2-speed; cash wanted, £38.—365, King St., Hammersmith. [3619

### Levis.

PREMIER Motor Co. for 1922 Levis.

LATEST Improved Models for immediate delivery at 1922 reduced prices.

POPULAR 2¼h.p. Single-gear Levis, £48; Model S 2¼h.p., 2-speed, clutch, £58, or with kick starter £60; easy payments only 4% extra; carriage paid to any address. Buy your machine direct from the Levis specialists.—The Premier Motor Co., Aston Rd., Birmingham. [0741

LEVIS 2¼h.p. Single, excellent condition, all on; first £22.—17, Heaton Rd., Mitcham. [3431

2¾h.p. Levis; £24/10; splendid order throughout.—Speechley, 86, Churchfield Rd., Acton, W.3. [3244

LEVIS 1917 2¼h.p., perfect order, engine just renewed; £30; week-end only.—18, Gloucester Rd., Teddington. [1395

SPECIAL Offer of a few slightly showroom soiled 250 c.c. T.T. model Levis motor cycles; list price £65, reduced to £55; makers' speed guarantee of 50 m.p.h. with each machine; easy payments only 4% extra; carriage paid to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0740

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Complete Levis illustrated list, post free. [3677

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Levis spare parts always in stock. Write for free spare part list. [0753

### Martinsyde.

D. & S. Autocar Co. are agents for Martinsyde. Early deliveries all models.—33, The Parade, Golders Green. [3672

1920 Martinsyde Combination, all-chain drive, lavishly equipped; any trial; £75.—24, Balliol Rd., North Kensington. [3445

1920 6h.p. Martinsyde Combination, complete with accessories, and in very good condition; price £80.—Dunwell's Garage, Wigan. Tel.: 328. [0763

1920 Martinsyde 6h.p. Combination, 3-speed, clutch, K.S., fully equipped, hood and screen; £103; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [1675

MARTINSYDE 1922 Sports and Touring Solos and and Combiuations; for immediatte delivery; cash, exchange, deferred payments.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3625

MARTINSYDE 6h.p. Combination, late 1920, 1921 frame, Lucas dynamo lighting, Cameo screen, Stewart speedometer, Cowey horn, splendid condition, just overhauled, licensed 1922; owner going abroad; £140, or near offer; examiuntion by appointment, Acton, W.—Box 7,985, c/o *The Motor Cycle*. [3383

### Matchless.

AUTHORISED Service Depot.

ALL Matchless Models in stock; best stock of spares in London.—Knight Traction Co., Ltd., Upper Tooting Rd., S.W.17. 'Phone: Streatham 2390. Trade supplied. [0759

CROSS, Rotherham, for Matchless; new models in stock; £170. [X4446

TASSELL, 1a, Bloomfield Rd., Plumstead, for anything Matchless. Deferred payments. Spare parts. [6144

1920 Matchless Magdyno Combination, speedometer, etc.; £110.—Rackham, Charlton House, Old Charlton. [3354

MATCHLESS Brand New 1921 Combination, spare wheel, screen, one only left; £150.—7, Exhibition Rd., S.W.7. [2197

MATCHLESS 1920 Magdyno Combination, just overhauled; bargain, £108.—Clark, 7, Exhibition Rd., S.W.7. [2942

1921 Matchless Combination, Magdyno lighting, brand new, unused; £158; owner must sell.—41, Madrid Rd., Barnes, S.W. [1676

MATCHLESS Combination, M.A.G. engine, single Amac, 3-speed, hood and wind screen; sacrifice £68; evenings.—67, Fernlea Rd., Balham. [3730

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue. B21
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Matchless.

F.O.C.H. for Matchless; cash, exchange, or deferred payments. Sound second-hand machines in stock.—5, Heath St., Hampstead. (Near tube.) [3371

MATCHLESS 1922 Models from stock; exchanges or easy payments; trial run any time.—Agents, R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [2198

1922 Matchless Models; immediate deliveries at list prices; deferred payment and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [2376

SHEFFIELD Agent for Matchless. All models in stock. Sporting models £130, standard models £170.—A. J. Stacey, 12, Ecclesall Rd., Sheffield. [0574

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—8h.p. Matchless combination, sports model, new 1921; reduced to £149; easy terms no extra charge. [3695

MATCHLESS 1914 8h.p. Combination, countershaft gear, chain drive, kick start; £45.—28, Woodford Rd., Forest Gate, E.7. 'Phone: Stratford 2598. [3550

1922 Sports Matchless, solo, mileage 200, indistinguishable from new; 108 gns., or with new sidecar 138 gns.—Edwards, 50, Harrington Rd., South Kensington. [2377

MATCHLESS, 1922 models, for immediate delivery; cash, exchange, deferred payments.—Newnham Motor Co., 225, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3624

2¾h.p. Overhead Valve Matchless-Jap, special T.T. model, condition, appearance, brand new, new spare races, new tyres; £32.—Malvern Rd. Garage, Thornton Heath, Surrey. [3542

'PHONE: Greenwich 751. — Matchless: All 1922 models.—Sam E. Clapham, the agent with a reputation second to none. Make it a Matchless for 1922. The machine of no regrets.

SEND Your Order along now to Sam E. Clapham, and secure satisfaction. Unlimited Matchless service. Personal attention to every detail. Cash, exchange, easy terms. Sam E. Clapham's compliments to old and new clients for 1922 season.—Note address: Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3149

MATCHLESS Sports Combination, 1921, new, 3 speeds, clutch, kick starter, etc., shop-soiled; £150.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0067

MATCHLESS Combinations.—Book your orders with Ross, 86, High Rd., Lee, S.E., or 'Phone Lee Green 744 for immediate delivery of 1922 models. Exchanges and gradual payments arranged. [2163

MATCHLESS Combination, late 1920, 8h.p. J.A.P., spring frame, detachable wheels, hood, screen, lamps, in excellent condition; £90.—Kinsey and Co., 352, Lower Addiscombe Rd., Croydon. 'Phone: 1129. [3587

MATCHLESS Model H., late 1920, Lucas acetylene lamps, speedometer, hood, screen, spare wheel, tyres nearly new, front band brake, plenty spares and accessories; £140, or near offer.—49, Wyndham Rd., Salisbury. [3343

1921 Matchless Combination, D.A. front light (2 D.A. cylinders), electric sidecar and rear light, spare wheel, Easting screen, hood, Klaxon, speedometer, engine perfect, all in good condition, including Autocar insurance covering all risks (premium £10 paid November); a bargain at £130.—Write N. Ross Alderson, Cumberland Lodge, Farnborough, Kent. [3652

MATCHLESS.—We are the recognised North London agents for the delightfully sprung and practically designed Matchless combination; the Rolls-Royce on three wheels; immediate delivery from stock, for cash, deferred payments, or exchange; trade supplied; all spares in stock.—Jones' Garage, Muswell Hill, N.10, and at Woodside Parade, North Finchley. [0381

*Spare Parts:*

MATCHLESS Spare Parts for J.A.P. or M.A.G can be had by return, post free, from Jones' Garage, Service Depot, Broadway, Muswell Hill, N.10 [074·

### M.M.C.

2¾h.p. M.M.C. a.i.v. E.I.C. Magneto, B. and B. carburetter, first-class condition; £8, carriage paid.—Kerswell, Lawrence Hill, Bristol. [3398

### Motosacoche.

2h.p. Motosacoche, good order, mag.; £12.—Binks, Sadberge, Darlington. [3458

### Ner-a-Car.

NER-A-CAR, Aug., 1921, mileage 1,200, condition perfect; £50; no exchanges.—Hallas, St. Elmo, London Rd., Hitchin. [3488

### New Hudson.

6h.p. Twin New Hudson, 3-speed, clutch, completely equipped; £37/10.—4, Station Buildings, Woodside, S.E.25. [3471

£22.—New Hudson, J.A.P. 2¾h.p., 3 speeds, clutch, Bosch watertight, front, rear stands, 2 brakes, lamps, horn, beautiful condition, absolutely sound; trial.—89, East Hill, Wandsworth. [3710

### New Imperial.

£28.—2¾h.p. New Imperial, 2-speed, in splendid running order.—King, Egrove Farm, Oxford. [X4509

*a welcome innovation.*

# NEW 1922 MODELS

**A.J.S.** 2¾ H.P. STANDARD ..... £85
„ 2¾ H.P. SPORTS ..... £85
„ 7 H.P. COMBINATION ..... £175

**ENFIELD** 2¼ H.P. STANDARD ..... £55
„ 8 H.P. COMBINATION ... £140
(DYNAMO LIGHTING £18 EXTRA)

**DOUGLAS** 2¾ H.P. 2-SPEED ..... £75
„ 3½ H.P. SPORTS ..... £130
„ 4 H.P. COMBINATION .. £135
„ 6 H.P. COMBINATION .. £165
(PRICE INCLUDES ACCESSORIES)

**MATCHLESS** 8 H.P. SPORTS. ..... £130
„ 8 H.P. COMBINATION £170

ALSO **B.S.A., ARIEL,** AND **ZENITH-BRADSHAW** MOTOR CYCLES

**ANY MAKE SUPPLIED.**

## Startling Reductions.

1921 2¾ H.P. DOUGLAS ..... £60
1921 2½ H.P. FEDERAL ..... £40
1920 2¼ H.P. LEVIS ..... £29
1921 8 H.P. ACME COMBINATION .... £120
1920 8 H.P. SUNBEAM COMBINATION £130

SEVERAL MORE.

## IT WILL PAY YOU TO WRITE US.

## DO IT NOW!

## Deferred Payments

## R. BAMBER & Co., Ltd.

**2, EASTBANK STREET, SOUTHPORT.**

'Phone: 607.

## MOTOR CYCLES FOR SALE.

### New Imperial.

NEW IMPERIAL 3-speed 350 c.c. Super Sports, J.A.P., scarcely used; £68.—Clark, 7, Exhibition Rd., S.W.7. [2195

SMART Outfit, New Imperial 1920 8h.p., roomy sidecar, Easting screen, electric lamps; £90 cash.—Bunting's Exchange, Wealdstone. [3738

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—2¾h.p. New Imperial, 2-speed only, £63; also 2-speed clutch and kick start model, £69; easy terms arranged. [3696

NEW IMPERIAL, 1922, 2¾h.p., Model No. 1, 3 speed; in stock for immediate delivery; £63.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

### Norton.

PREMIER Motor Co. for 1922 Nortons:

NO. 9, 3½h.p., belt drive, £80; 16H 3-speed T.T., £115; Big 4, 3-speed, £120; easy payments 4% extra.—Immediate delivery from the Norton Specialists: The Premier Motor Co., Aston Rd., Birmingham. [0625

16H Norton, 1920, fully equipped, long plated exhaust, excellent; 80 gns.

1921 Norton 4h.p. Sports, long plated exhaust, footrests, as new; 82 gns; exchanges.—Kent's, 417, Lord St., Southport. [3384

NORTON 1921 Models.—Sole district agents, Wessex Motors, Ltd., 60, Catherine Street, Salisbury. 'Phone: 72. [0717

NORTON 3½h.p. Combination and cash, for late Big 4 or Sunbeam 8h.p., or sell £73.—Waterhouse, 1, Fairhaven Rd., Bolton. [X4358

1921 Norton 3½h.p., chain drive, mileage 2,800, dynamo lighting, B.R.S. engine, 2 pairs handlebars; cost £170; offers.—Quirk, Keswick. [X4497

BIG 4 Norton Combination, chain drive, Lucas lamps, horn, leg shields, speedometer, wind screen, first-class condition; £72.—Warwick, Hinckley Rd., Leicester. [X4494

NORTON 16H, specially built frame, exceptionally low, I.O.M., built for chain belt 1920, foot gears, Cowey horn, Tan-Sad, 2 generators; £80.—Dewar, Allington, Northwood. [3293

SPORTS Norton, 16H, 1921, fully equipped, low mileage, Ricardo piston, close ratios, mechanically perfect; nearest £95, or lightweight part exchange; Norfolk.—Box 7,944, c/o *The Motor Cycle.* [3237

1921 4¼h.p. Norton Family Combination, Sturmey-Archer, all-chain drive, Lucas Magdyno, Bonniksen, 700×80 tyres, 2-seater sidecar, mileage under 5,000; £135.—Rothwell and Milbourne, Cowleigh Garage, Malvern. [3317

NORTON, 1921, Model 16H, 3½h.p., mileage 2,000, complete, lamps, speedometer, all accessories, Tan-Sad, copper exhaust, Bosch mag., fast machine; any trial; £110.—Colonial Motors, 104a, Finchley Rd., Hampstead 7822. [3768

SPECIAL Competition Nortons, winners of numerous awards for speed during past season: 3½h.p. B.R.S., single gear, like new, £50; 3½h.p. 1921 B.R.S., 3-speed, close ratio gears, sprockets 13 to 20 teeth, numerous spares, racing sidecar if required, no reasonable offer refused; 6 months' guarantee with each machine—Caldwell, 60, Horsemarket, Warrington. [X4524

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Norton parts by return. List free. [3678

### N.U.T.

1920 Magdyno N.U.T. Combination, all accessories; best offer over £90; new condition.—79, Judd St., King's Cross. [3254

NUT 1920 3½h.p., with Lucas dynamo lighting; £85; exchanges. — Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3629

### O.K.

£22/10.—O.K.-J.A.P. (tax paid 1922) 2¾h.p., 2-speed countershaft, all accessories.—8, High St., Wandsworth. [3795

1921 2-speed O.K.-Villiers, lavishly equipped, absolutely unscratched; £39; evenings.—67, Fernlea Rd., Balham. [3782

WAUCHOPE'S, 9, Shoe Lane, London, E.C.4.—2¼h.p. O.K. Junior, 2 speeds, 1917; £30; easy terms no extra charge. [3686

O.K., 1920-21, 2½h.p., single-speed, accessories, very good condition; £27.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3633

1916 O.K. Junior, 2¾h.p., 2 speeds, cylinder reground and fitted new pistons, etc., nearly new tyres and belt, equipped, real snip; £25.—76, Cromwell Rd., Luton. [3549

### Omega.

OMEGA 1922 Model.—For earliest deliveries write to London Motors, 61, Holborn Viaduct London, E.C.1, sole distributing agents for the following counties: Bedfordshire, Berkshire, Northamptonshire, Suffolk, Cambridgeshire, Hampshire, Oxfordshire, Sussex, Huntingdonshire, Norfolk, Rutland, Kent, Hertfordshire, Surrey, Essex, and Buckinghamshire, with the exception of a 20 mile radius of London. [2417

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue.
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Triumph.

IUMPHS.—A fine assortment of all models in stock at prices to suit all.—Ross, 86, High Rd.. [4485

p. 3-speed Triumph, fully equipped, splendid condition; 35 gns., offers.—19, Streatley Rd., Brondes [3478

).C.H., the Triumph agents; cash, exchanges, or deferred payments.—5, Heath St., Hampstead. r tube.) [3369

IUMPH Junior, good condition; £33, or exchange.—Forfield Motors, Forfield Place, Leamn Spa. [X4573

12 Triumph, clutch, Bosch, recently overhauled, good running order; offers solicited.—Baker, Wang- Suffolk. [3392

IUMPH and Gloria Model H Combination, all accessories, late model; £72/10.—365, King St., mmersmith. [2934

IUMPH, 1920, Gloria coachbuilt sidecar, recently overhauled by Triumph Co.—Jones, Rectory, Newton s, Tamworth. [X4579

IUMPH Coachbuilt Combination; £48; splendid order throughout.—Speechley, 86, Churchfield Acton, W.3. [3240

IUMPH 1920 Countershaft, £70; a snip; another older but running splendidly, £40.—Bunting's nange, Wealdstone. [3739

13-14 3-speed Triumph, long exhaust, latest frame and tank, fully equipped; £34.—116. ing Rd., Guildford. [3555

18 Countershaft Triumph, £48; perfect; ditto 1920 combination, as new, £80.—24, Balliol North Kensington. [3444

'AUCHOPE'S, 9, Shoe Lane, London, E.C.— Triumphs, all 1922 models supplied promptly esy terms or exchange. [3698

22 Triumph, all models, at list prices; deferred payment or exchanges.—Edwards, 50, Harring- Rd., South Kensington. [1678

20 Triumph, 4h.p., in good condition, Lucas lamp, has only been ridden solo; £80.—Lt. Back, R.N., .S. "Mackay," c/o G.P.O. [3325

21 Triumph, chain drive, equipped, mechanically perfect, unscratched, done less than 50 miles; 0.—108, Lyford Rd., S.W.18. [3287

RIUMPH 1919 4h.p. Combination, Easting wind screen, lamps, etc., good condition; seen any time; .—Snow, Laurel St., Dalston, E.8. [3260

HIS Week's Bargain.—1914 Triumph 4h.p. 3-speed C.B. combination, all on, new Dunlops, guaranteed ect; £45.—1, Priory Rd., Kew Green. [3482

20 Baby Triumph, just overhauled, in excellent condition, many accessories; £40, or nearest.— s, 20, Kendall Av., Sanderstead, Surrey. [3545

RIUMPH Combination, 1914, Grado gear, fully equipped, and perfect; £32/10.—Clapham Motors, h St., Clapham. 'Phone: Latchmere 4290. [3279

'AUCHOPE'S, 9, Shoe Lane, London, E.C.— 2¼h.p. Triumph Junior, 1921, tax paid, fully ired, all accessories; £50; easy terms arranged. [3699

BSOLUTELY Latest S.D. Model Triumph, Cowey speedometer, Lucas lamps, nearly brand new, guaeed; £85.—Archibald, Selly Oak, Birmingham. [3215

RIUMPH 1920 2¼h.p. Junior, Lucas lamps, first- class condition; £42.—Newnham Motor Co., 223, nmersmith Rd., W.6. 'Phone: Hammersmith 80. [3637

20 Triumph-Gloria Combination, speedometer, leg shields, Cameo, in perfect order, fully equipped; 5; after 7.—45a, Duntshill Rd., Earlsfield, S.W.18. [3785

RIUMPH 4h.p., 1918, 3-speed, fully equipped, spares; £49, nearest, or part exchange 7-9h.p. combination. ennell, 4, Foulis Terrace, South Kensington (2542). [3318

13 Triumph 3½h.p., 3-speed, clutch, excellent condition, tyres good, plating, enamel unscratched, ed during war; send photo; £50.—R.M., 27, The ll, Swindon. [X4516

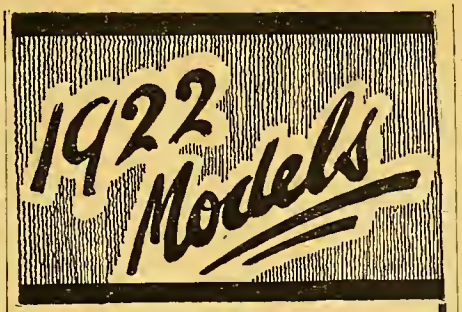
½h.p. Triumph, N.S.U. gear, good tyre and all ac- 2 cessories; £24/10.—26, Tulse Hill, Brixton (1-minute from Brixton Skating Rink). 'Phone: kton 1292. [3728

RIUMPH, 1922 models, for immediate delivery; cash, exchange, deferred payments.—Newnham tor Co., 223, Hammersmith Rd., W.6. 'Phone: nmersmith 80. [3626

RIUMPH 1913 3½h.p., 3 speeds, clutch, coachbuilt sidecar, equipped, good condition; £53; deferred ments.—Parker's, Bradshawgate, Bolton; also 245, ansgate, Manchester. [X4485

RIUMPHS.—We are the North London agents, and can deliver from stock for cash, deferred payits, or exchange.—Jones' Garage, Muswell Hill, and odside Parade, N. Finchley. [0382

RIUMPH H. Combination, October, 1920, luxurious Sandum sidecar, screen, hood, grid, Lucas lamps, n, speedometer, spares, perfect; 95 gns.; exchange. eath, 168, Wellington Rd. South, Hounslow, Middle- [3274




# WHICH IS YOURS?

## 1922 LIGHT CARS.

| | |
|---|---|
| AIREDALE 11.9 h.p. 4-seater .... | £475 |
| CALTHORPE 10 h.p. 2-seater.... | £355 |
| CALTHORPE 10 h.p. 4-seater.... | £375 |
| CALTHORPE de Luxe 2-seater .. | £410 |
| CALTHORPE de Luxe 4-seater .. | £435 |
| COVENTRY PREMIER 4-wheeler | £250 |
| L.S.D. 3-wheeler, All on ..... | £165 |
| LAGONDA (Coupe or 4-seater) .. | £395 |
| STANDARD 8 h.p. (2 or 4-seater) | £325 |
| STANDARD 11 h.p. 2-seater .... | £515 |
| STANDARD 11 h.p. 4-seater .... | £525 |

## 1922 MOTOR CYCLES.

| | |
|---|---|
| B.S.A. 4¼ h.p. Chain-Belt..... | £107 |
| B.S.A. 4¼ h.p. All-Chain ..... | £110 |
| B.S.A. 6 h.p. Light Comb ..... | £164 |
| B.S.A. 8 h.p. Comb. ..... | £185 |
| BRADBURY 4 h.p., 3-sp., All-Chain | £92 |
| BRADBURY 6 h.p. Comb. ..... | £146 |
| DOUGLAS 2¾ h.p. 2-speed, All on | £75 |
| DOUGLAS 2¾ h.p. 3-speed, All on | £90 |
| DOUGLAS 3½ h.p. 3-speed Sporting | £130 |
| EDMUND-BLACKBURNE 2¾ h.p. 2-speed, spring frame..... | £85 |
| ENFIELD 8 h.p Combination.... | £140 |
| ENFIELD 2¼ h.p. 2-speed..... | £55 |
| LEVIS Popular 2¼ h.p. ..... | £48 |
| LEVIS 2¼ h.p. 2-speed ..... | £58 |
| LEVIS 2¼ h.p. 2-speed, kick-start | £60 |
| MARTINSYDE 6 h.p. Combination | £160 |
| NEW IMPERIAL 2¾ h.p. 3-speed 60 Gns. | |
| NEW IMPERIAL 2¾ h.p., All-Chain | £73 |
| NEW IMPERIAL 8 h.p. Comb. .. | £145 |
| NORTON Big Four Combination | £149 10 |
| NORTON 3½ h.p. 3-speed..... | £115 |
| NORTON Big Four ..... | £120 |
| REX-ACME 2½ h.p 2-speed..... | £50 |
| REX-BLACKBURNE 2¾ h.p..... | £69 15 |
| REX-ACME 8 h.p. Combination.. | £150 |
| ROYAL RUBY 2¾ h.p. 2-speed.... | £70 |
| SCOTT-SQUIRREL 3½ h.p. 2-speed | £105 |
| SCOTT 3¾ h.p. 2-speed Comb. .. | £145 |
| SUNBEAM 3½ h.p. (New Type) | 120 Gns. |
| SUNBEAM 4¼ h.p. (New Type) | 135 Gns. |
| SUNBEAM 3½ h.p. Combination | 162 Gns. |
| SUNBEAM 8 h.p. Combination.. | £217 7 |
| TRIUMPH 4 h.p. Chain-Belt .... | £105 |
| TRIUMPH 4 h.p. All-Chain..... | £115 |
| TRIUMPH JUNIOR 2¼ h.p. ..... | £65 |

*EXCHANGES AND DEFERRED PAYMENTS QUOTED*

**Second-hand Machines in great variety from £25. Send for latest list.**

**The Halifax Motor Exchange,**
**25, Horton Street, Halifax.**
'Phone: 1400. 'Grams: Perfection.

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH 4h.p. Solo, 3-speed Sturmey-Archer countershaft gear box, lamps, excellent order; £55.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3636

TRIUMPH, 4h.p., 1918, with Millford sidecar, speedometer, lamps, and horn, discs; £75; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3631

TRIUMPH 1910 3½h.p. T.T., Philipson pulley, dropped frame, equipped, speedometer, good condition; £30; deferred payments.—Parker's, Bradshawgate, Bolton; also 245, Deansgate, Manchester. [X4484

TRIUMPH 1919 Countershaft, 3 speeds, clutch, kick starter, beautifully polished gear box and crank case, enamel and plating as new, a most magnificent machine; gift, 79 gns; exchange entertained.—53, Swaffield Rd., Wandsworth. [3510

TRIUMPH 4h.p. Combination, complete equipment, very carefully looked after, splendid condition; £75, or close offer.—Vivian Hardie and Lane, Ltd., 23-24, Woodstock St. (off Blenheim St.), New Bond St., W.1. 'Phone: Mayfair 6559. [3365

1920 Triumph Combination, countershaft, 4 electric lamps, 2 accumulators, Bonniksen speedometer, new tyres, belt, special sporting Canoelet, aluminium dash, Avro wind screen, switchboard, clock; £90.—23, Tivoli Rd., Crouch End. Hornsey 792. [3707

1920 Renovated Triumph (makers' guarantee), Dunhill sidecar with hood, wind screen, and luggage grid, trip speedometer, lamps, horn, many spares, insured, superb condition, very fast; £85.—Owen Roberts, 2, St. Mark's Sq., London, N.W.1. 'Phone: Hampstead 4108. [3070

1921 Triumph Combination, issued new October, 1921, 4h.p. (Model H.), Montgomery sidecar, equipped with 3 lamps and horn, mileage only 300, condition and appearance as new, end of term bargain, and quite unrepeatable at £107/10 cash.—The Layton Garages, 90, High St., Oxford. [3655

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

HERBERT ROBINSON, Ltd., Green St., Cambridge, the Triumph specialists. Every part in stock. [3681

TRIUMPH Spare Parts for all models, also Sturmey-Archer gear parts from stock, post free. Gear overhauls by specialist.—Jones' Garage, Broadway, Muswell Hill, N.10. [0746

TRIUMPH Parts, 1904 to 1921.—Every part, any year, in stock, new or second-hand, guaranteed serviceable. Enclose stamp for reply. Why not second-hand goods in place of new while prices are so high? Half the price; satisfaction guaranteed.—Forfield Motors, 11, Forfield Place, Leamington Spa. [X4539

### Trump.

WAUCHOPE'S, 9, Shoe Lane, London, E.C.— 2¾h.p. Trump-Jap, 2-speed model, new 1922; £60; easy terms arranged. [3700

### Velocette.

LATE 1920 Velocette, 2 speeds, all on, perfect; £45.—Kay, Ambergate, Derbyshire. [3527

VELOCETTE, 2-speed, 1915, chain driven, excellent condition, new tyres; £25.—Colonial Motor Co., 104a, Finchley Rd., N.W.3. [3339

### Verus.

VERUS 2-stroke, 1920, mag., carburetter, silencer, perfect condition, £10 lowest, car generator, 10/-. —3, Hampton St., Birmingham. [X4456

1921 Verus, 4h.p. Blackburne engine, 3-speed, clutch, K.S., perfect condition throughout; £78; deferred payment and exchanges.—Edwards, 50, Harrington Rd., South Kensington [1672

1920 Verus 2¼h.p., single speed, good as new, electric light outfit, good accessories, suit overalls (5ft. 6in.), tax paid, insurance; lot cost over £75; best offer over £45 accepted; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [3178

### Williamson.

WILLIAMSON 8h.p. w.c. Combination, 3 speeds, clutch, kick starter, all-chain, fully equipped, and perfect; £49/10.—Clapham Motors, High St., Clapham. 'Phone: Latchmere 4290. [3278

### Wolf.

£18/10.—Wolf-Jap (tax paid 1922) 2¾h.p., single-speed, good going order; bargain.—8, High St., Wandsworth. [3797

WOLF 2¾h.p., 2-speed, new T.B. mag., appearance as new, engine recently overhauled; £35, or nearest.—Hughes, Freelands, Gronant, Prestatyn. [3218

WOLF 2¾h.p., 2-speed and clutch; £26; very good order; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3630

### Wooler.

T.T. Wooler, 9-speed, clutch, o.h.v., long copper exhausts, fast, condition as new; £55.—S. Blackwell, Greenhill House, Ripley, Derby. [3353

## MOTOR CYCLES FOR SALE.

### Wooler.

WOOLER, 1920, 140 m.p.g., excellent condition, lamps, horn, etc.; £43, offer.—7, Birkbeck Mansions, Birkbeck Rd., Hornsey, N.8. [3417

SPECIAL Bargain.—2¾h.p. Wooler, new, shop-soiled, 1920 model, complete with lamps and horn, variable gear; reserve price £70; first offer above secures; an opportunity not to be missed.—Mebes, 156, Gt. Portland St., W.1. 'Phone: Langham 2230. [3364

### Zenith.

ALLAN GRUZELIER, Specialist in Zenith motor cycles.

1921 8h.p. Clutch Model, shop-soiled, £112.

1921 8h.p. Sports, shop-soiled, £95.

1920 8h.p. Clutch Model, £100

1920 8h.p. Sports, £90.

1921 3½h.p. Bradshaw, only ridden once, £105.

1921 6h.p. Special, 750 c.c., as new, £75.

1920 8h.p. Clutch Model, as new, £90

1921 5h.p. Sports, £60.

AN Opportunity! Don't miss it.—1922 3-speed chain drive Zenith-Bradshaw for immediate delivery, £119.

I CAN Give You Immediate Delivery of any 1922 model, and can supply within 24 hours all spare parts. Complete overhauls and tuning a speciality.—Allan Gruzelier, Ulster Chambers, 168, Regent St., W. Regent 205. [3085

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—3½h.p. Zenith-Bradshaw; new price £105; easy terms arranged. [3701

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, for immediate delivery from stock of Zenith-Bradshaw; price £118. [0711

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—8h.p. Zenith and sidecar, 1920, excellent condition, fully equipped; £97/10. [3702

STOP.—Zenith 1919 5h.p. Sports, equipped, stored nearly 2 years, guaranteed perfect; 100 miles trial; £60.—486, Radcliffe Rd., Bolton. [3217

WAUCHOPE'S, 9, Shoe Lane, London, E.C.4.—8h.p. Zenith and limousine, 1920, fully equipped; £97/10; easy terms no extra charge. [3690

1921 Sports Zenith, special 750 c.c. J.A.P. engine, small mileage, condition as new; £85.—Weyside Engineering Works, Ltd., Guildford. [3706

F.O.C.H., the Zenith agents; cash, exchanges, or deferred payments; sound second-hand machines in stock.—5, Heath St., Hampstead. (Near tube.) [3368

£55.—Zenith 5-6h.p., tax paid 1922, countershaft, clutch, kick starter, coach sidecar, hood, screen, all accessories, speedometer.—8, High St., Wandsworth. [3794

1921 Zenith, 90 bore, o.h.v., J.A.P. engine, has exceeded 82 m.p.h. in open speed trial, absolutely perfect; £97/10.—W. J. Bladder, 52, Sidbury, Worcester. [X4496

1921 5h.p. Sports Zenith, as new, all on, tax paid, insured, £70; or exchange N.U.T. same date, or Sunbeam and £10.—Turner, Hirwain, Ladbroke Rd., Redhill. [3352

8h.p. Zenith, countershaft, clutch, believed 1916-17, engineer owned, perfect condition, £62; Douglas sidecar for same, new Easting, £10.—Smith, 59, Park Rd., Forest Hill, S.E.23. [3459

ZENITH-BRADSHAW Models, for immediate delivery; cash, exchange, deferred payments.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3627

ZENITH 5-6h.p. Sports, new May last, negligible mileage, fitted many accessories, including acetylene and electric lamp sets; owner selling through illness; price £95.—J. Green, "Glovers," Bexhill. [3255

ZENITH 1920 6h.p. Sports, speedometer, horn, lamps, insured, new condition, £72; 1920 8h.p. countershaft combination, Lucas electric lighting, £106.—Clark, 7, Exhibition Rd., S.W.7. [2200

1922 Zeniths, all models.—5h.p. J.A.P., countershaft, £118; with sidecar, £147; immediate delivery; actual Show model in stock. Order early.—South Eastern Garage, Herne Hill, S.E.24. [3598

ZENITH, 1921, 8h.p., countershaft model, with Swan sporting sidecar, Lucas lamps, practically new condition; £110; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3638

SPECIAL 8h.p. Sports Zenith, Dec., 1920, fitted with T.T. bars, racing pulley, F.E.W. valve attachments, adjustable jet, lamps, horn, knee-grips and spares, machine in perfect and unscratched condition; owner going abroad; £100.—Harris, 11, Brecknock Rd., N.19. [3359

# THIS WEEK WE REPEAT LAST WEEK'S OFFER. AT TIME OF GOING TO PRESS, SOME OF THESE ARE STILL LEFT, WHILE SOME OF THEM ARE SOLD, AND BY THE TIME THIS APPEARS IN PRINT, OTHERS MAY HAVE GONE. STILL WE SHOULD BE PLEASED IF YOU WILL DROP US A NOTE IF ANY OF THE FOLLOWING MODELS INTEREST YOU.

| List Price. | | | Sale Price. |
|---|---|---|---|
| £160 | 0—1921 8 h.p. | **ENFIELD** Combination. Never such value offered | £123 0 |
| £182 | 0—1921 8 h.p. | **ENFIELD** Combination, fitted with Lucas Magdyno electric lighting. Ready for the road at a record value price | £140 0 |
| £155 | 0—1921 6 h.p. | **MARTINSYDE** Combination, 3-speed, clutch, and kick-starter. Compare value with elsewhere | £129 0 |
| £209 | 12—1921 8 h.p. | **REX** Combination, Blackburne engine, all-chain drive. A Rolls-Royce outfit at the price of a cheap motor cycle | £140 0 |
| £165 | 0—1921 7-9 h.p. | **AMERICAN X,** 3-speed, clutch, and kick-starter. An unapproachable value | £98 0 |
| £112 | 0—1921 3½ h.p. | **COVENTRY-EAGLE,** 3-speed, clutch, and kick-starter. Just the price of a lightweight | £79 10 |
| £135 | 0—1921 4 h.p. | **ARMIS,** twin M.A.G. engine, 2-speed, clutch, and kick-starter. Speed going cheap. Don't miss this chance | £72 0 |
| £120 | 0—1921 4 h.p. | **B.A.T.,** twin J.A.P., 3-speed, clutch, and kick-starter. 50% reduction, a chance which won't occur again | £80 0 |
| £65 | 0—1921 2½ h.p. | **LEVIS,** T.T. model, guaranteed 50 m.p.h. This opportunity should be snapped at once.. | £49 0 |
| £80 | 15—1921 2¾ h.p. | **INVICTA-J.A.P.,** 2-sp., clutch, and kick-starter. The last one left. Grab it! | £61 0 |
| £105 | 0—1921 2¾ h.p. | **DOUGLAS,** 3-speed, clutch, and kick-starter. Only one left. Startling value | £78 0 |
| £120 | 0—1921 2¾ h.p. | **WILKIN,** sports model, 3-speed, all-chain drive. Absolutely giving away, this splendid machine | £82 0 |
| £99 | 15—1921 2¾ h.p. | **MASSEY-ARRAN,** 2-sp., discs. Compare our prices with others | £72 0 |
| £110 | 0—1921 4¼ h.p. | **B.S.A.,** Model H2, 3-speed, clutch, and kick-starter. Value which you cannot fail to appreciate | £88 0 |
| £210 | 0—1921 10 h.p. | **ACE,** 4-cylinder, 3-speed, clutch, and kick-starter. This magnificent 4-cylinder machine going at almost half-price | £120 0 |
| £184 | 9—1921 6-7 h.p. | **B.S.A.** Twin Combination, spare wheel, and sidecar, windscreen. Wonderful value.... | £160 0 |

***How is it done?***

***Where is the Profit? you will ask.***

**We can assure you there is no profit, but a very considerable loss on our own cost on every one of those machines—but we sell such large numbers during the season that we can afford to lose on what are left over at the end of the year.**

## OUR LOSS IS YOUR GAIN IF YOU NOW SEIZE THE OPPORTUNITY.

# ALEXANDER'S

**113-115, Lothian Rd., EDINBURGH.**

**272-274, Gt. Western Rd., GLASGOW**

## MOTOR CYCLES FOR SALE.

### Zenith.

1922 Zenith-Bradshaw in stock for immediate delivery; £118; cash, exchange, or extended payments.—Allen-Bennett Motor Co., Ltd., 9-10-11, Roya Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0735

8h.p. Countershaft Zenith Montgomery Sports Combination, brand new 10/10/21, done 300, electric lighting, Cowey speedometer, fully insured, splendid sporting outfit; £113, or near.—105, Wentworth Rd., Golders Green. [3051

ZENITH Combination, 5-6h.p., late model, countershaft, clutch, kick starter, Binks, Millford touring sidecar, luggage grid, hood and cover, wind screen, lamps, Klaxon, accessories, condition as new; bargain, £60.—63, Solon Rd., Brixton. [3582

ZENITH Standard 5h.p., perfect condition internally and externally, extra fittings, polished copper tank, drip feed, Senspray, pre-war Bosch, horn, lamps, tools, spare valves, plugs, belt, tube, tyre (new Dunlop), Amac carburetter; £50.—13, Westmoreland Rd., Barnes. [3436

ZENITH, 1921-22, with 1921 Gloria sidecar, 8h.p. twin J.A.P., countershaft model, with clutch and kick start, complete lighting set, horn, Cameo wind screen, side shield, luggage carrier, etc., in new condition throughout; sacrifice, £118.—Teeth, 769, Romford Rd., Manor Park, London, E. [3522

### Ladies' Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

### Miscellaneous

MINIATURE Motor Cycle, splendid order; £18.—57, Kenbury St., Camberwell, London. [3560

6h.p. Combination, £20; Morgan type 3-wheeler, modern, £40.—H. R. Hall, Hutton Grove, North Finchley, London. [3356

ALLBER Garage, Thornsett Rd., Earlsfield, London, S.W. (opposite Earlsfield Station, L.S.W. Ry.). 'Phone: Latchmere 4388. We supply for cash, exchange, or easy terms, giving delivery on deposit. Some New Year bargains below:

ALLBER.—1921 A.B.C., complete with lamps, Cowey horn and speedometer, in new condition, perfect, tax paid; £75.

ALLBER.—1921 Mars-Jap, special 350 c.c. engine, Burman 2 speeds, clutch, kick starter, disc wheels, beautiful machine as new, tax paid; £53, complete.

ALLBER.—James 1919 2-stroke, 2 speeds, all accessories, tax paid, in good order; £35.

ALLBER.—Sun-Villiers, 1916, 2¾h.p., 2-stroke, all accessories, in good order, tax paid; £25.

ALLBER.—Douglas, 1917, 2¾h.p., 2 speeds, all accessories, tax paid, in splendid condition; £38.

ALLBER.—1919 4h.p. Douglas, 3 speeds, clutch, kick starter, new tyres, all accessories, tax paid; £58; in new condition.

ALLBER.—1918 P. and M., 2 speeds, kick starter, all accessories, in good order, tax paid; £37/10.

ALLBER.—1916 Calthorpe-Jap, Enfield 2-speed gear, all accessories, tax paid, in good order; £28.

ALLBER.—1914 B.S.A., 2 speeds, good tyres, tax paid, in splendid condition, all accessories; £32.

ALLBER.—1917 light sporting Douglas combination, 2¾h.p., 2 speeds, all accessories, tax paid, in splendid condition; £42.

ALLBER.—1914 Humber coachbuilt combination, 4h.p., 3 speeds, clutch, kick starter, new tyre, all accessories, tax paid, in new condition; £42.

ALLBER.—1915 Scott combination, with 1920 improvements, sidecar fitted, hood and screen, good tyres, tax paid, in first-class order, electric lighting, etc.; £48/10.

ALLBER.—1921 Quadrant combination, 3 speeds, clutch, kick starter, all-chain model, all accessories, speedometer, wind screen, tax paid, in splendid order; £65. [3446

B.S.A. 2-speeds, splendid order, £35; Triumph with S.A. countershaft, £40; 3½h.p. Humber combination, £30; many others.—Bunting's Exchange, Wealdstone. [3741

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [9650

F.O.C.H. for second-hand cycles, combinations, and runabouts at bargain prices; exchanges arranged. Any new cycle, combination, or car supplied; cash or easy payments.—Fair Offer Car House, 5, Heath St., Hampstead (near Tube). 'Phone: Hampstead 3752. Hours: 9-7, including Saturdays. [3374

2¾h.p. Levis 2-stroke, running order, bargain, £22/10; 3½h.p. Ariel combination, 3-speed, kick start, C.B. sidecar, running order, £32/10; 1918 Clyno combination, 3 speeds, kick start, lamps, horn, etc., good running order; £77/10.—Scotia Motor Works, 80, Upper Tooting Rd., London, S.W.17. 'Phone: Streatham 2707. [3665

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue.
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Miscellaneous

WANDSWORTH Motor Exchange.—Great bargains. 100 motor cycles, combinations, to choose from. —Below.

WANDSWORTH.—Buy your motor cycle off the old-established firm, backed by 24 years' experience. Satisfaction guaranteed.—Below.

WANDSWORTH.—Easy terms. Easy terms. First deposit secures immediate delivery any machine. —Below.

WANDSWORTH.—Torpedo 3½h.p., mag., Grade gear, kick starter, runs splendidly; 23 gns.—Below.

WANDSWORTH.—Vindec with sidecar, 3½h.p., 2-speed box, kick, lamps; 26 gns.—Below.

WANDSWORTH.—Sun lightweight, 2½h.p., mag., nice little runabout machine; only 19 gns.—Below.

WANDSWORTH.—Rudge, 3½h.p., clutch model, mag., fine running machine; cheap, 29 gns.—Below.

WANDSWORTH.—Singer 2½h.p. lightweight, 3 speeds, clutch, lamps; little beauty; 32 gns.—Below.

WANDSWORTH.—Rex, with coachbuilt sidecar, 5h.p. twin, Grade gear; sacrifice, 29 gns.—Below.

WANDSWORTH.—Minerva 7h.p. twin, mag., 2 speeds, drive away; 24 gns.— Below.

WANDSWORTH.—Bradbury 4h.p., mag., 2 speeds, runs well; cheap, 25 gns.—Below.

WANDSWORTH.—1920 T.D.C. de luxe 2¼h.p., Palmer tyres, very fast; gift, 29 gns.—Below.

WANDSWORTH. — Douglas, almost new, unscratched, 2¾h.p., 3 speeds; who wants, 68 gns.? —Below.

WANDSWORTH.—Triumph coachbuilt combination, 4h.p., 3 speeds, lamp; nice outfit; 55 gns.—Below.

WANDSWORTH.—Triumph, 3½h.p., 3 speeds, clutch, smart machine; only 46 gns.—Below.

WANDSWORTH.—Scott, reconstructed, twin, water-cooled, very nice machine, extra fast; 39 gns. —Below.

WANDSWORTH.—Indian beautiful coachbuilt combination, 7h.p. twin, 2 speeds, lamps; 58 gns. —Below.

WANDSWORTH.—Indian, fine machine, 7h.p. twin, 2 speeds, lamps; 49 gns.—Below.

WANDSWORTH.—Bat-Jap coachbuilt combination, 8h.p. twin, 3 speeds, lamps; 55 gns.—Below.

WANDSWORTH.—Matchless coachbuilt combination, 7h.p. twin M.A.G., 3 speeds, lamps; 75 gns.—Below.

WANDSWORTH.—F.N. fine coachbuilt combination, 5-6h.p., 3 speeds, speedometer, lamps; 55 gns.—Below

WANDSWORTH. — Alldays-Matchless coachbuilt combination, 4½h.p., 3 speeds, screen, lamps; 55 gns.—Below.

WANDSWORTH.—Indian fine Powerplus combination, 7-9h.p., 3 speeds, lamps; gift, 75 gns.—Below.

WANDSWORTH.—Scott, almost new, ridden about 500, coachbuilt combination; cheap; offers.—Below.

WANDSWORTH.—1921 Bradbury coachbuilt combination, 4h.p., 3 speeds, as new; 89 gns.—Below.

WANDSWORTH.—1920 Bradbury coachbuilt combination, 4h.p., 3 speeds, everything fitted; 79 gns.—Below.

WANDSWORTH.—1921 Triumph coachbuilt combination, 4h.p., 3 speeds, everything fitted; 96 gns.—Below.

WANDSWORTH.—1920 B.S.A. coachbuilt combination, 4¼h.p., 3 speeds, everything fitted; 79 gns.—Below.

WANDSWORTH.—1920 Sun-Viteese, 2¼h.p., 2 speeds nearly new; beauty; 39 gns.—Below.

WANDSWORTH.—Zenith 4h.p. J.A.P., clutch, kick starter, lamps, splendid machine; 49 gns.—Below.

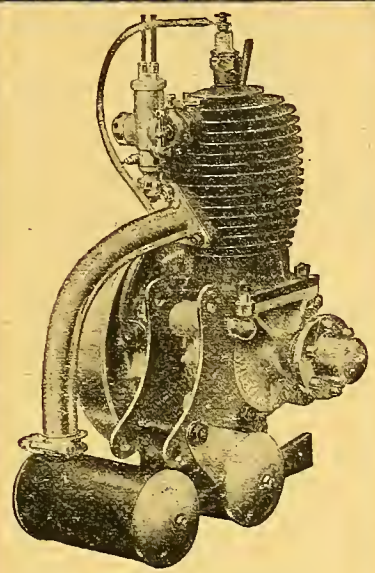
WANDSWORTH.—T.D.C. lightweight, 2¾h.p., mag., good tyres, drive away; 19 gns.—Below.

WANDSWORTH.—Peugeot 5h.p. twin, wants overhauling, 15 gns; Matchless-Jap, wants overhauling, 16 gns.—Below.

WANDSWORTH.—Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth Town Station). 'Phone? Latchmere 4686. [3743

NEW Year's Gifts.—1921 Endurance, 2-speed, £32; 1920 Omega-Jap, 2-speed, £35; 1919 Overstone-Villiers, 2-speed; 1919 Diamond, £23; 1920 Hoskinson, 2-speed, kick start, hand clutch, £39; Calcott, £16; New Hudson-Jap, 3-speed, £20; Connaught, £23; 3½h.p. Premier 3-speed countershaft combination, £39; 1920 3½h.p. James twin De Luxe, 2-speed, hand clutch, £32/10; 1920 7h.p. water-cooled light car, 6 detachable wheels, dickey seat, electric lighting, £79. All machines fully equipped and guaranteed.—Willetts, Rookery, Lanesfield, Ettingshall, Wolverhampton. [X4526


VILLIERS
TWO-STROKE
ENGINE



WE DO NOT MAKE
FREAK ENGINES
NOR DO WE EMPLOY
PROFESSIONAL RIDERS—
VILLIERS
ENGINES
WIN
Gold Medals
ON THEIR OWN MERIT
*New Illustrated Booklet Free*

THE VILLIERS ENGINEERING Co LTD
SUNBEAM STREET
WOLVERHAMPTON


## MOTOR CYCLES FOR SALE.

### Miscellaneous.

BARGAINS.—New O.K.'s, Ariels, Harleys, Omegas, Quadrants; exchanges entertained. — Booths' Motories, Halifax.

BARGAINS.—1920 Matchless combination, detachable wheels, £130/10/6; 6h.p. Zenith combination, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6.—Booths' Motories.

BOOTHS' Bargains. — Free engine Triumph, £22/10/6; 4-cyl. F.N., 2 speeds, £29/10/6.

BOOTHS' Bargains.—1920 Williamson 6h.p. combination, £95/10/6; another, dynamo lighting, £115/10/6.

BOOTHS' Bargains.—Harley-Davidson combination, mileage 300, £139/10/6; 3h.p. Humber, £10/10/6.

BOOTHS' Bargains.—1915 B.S.A. combination, £55/19/6; 1920 Wooler, £49/19/6; 3h.p. 2-speed Enfield, £29/10/6.

BOOTHS' Bargains.—8h.p. Premier combination, £49/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—1917 4h.p. Douglas, £59/19/6; 1919 4h.p. Douglas combination, £89/10/6; another, electric lighting, £95/10/6.

BOOTHS' Bargains.—1916 Douglas, £47/10/6; 1920 Morgan de luxe, M.A.G. engine, speedometer, £165/10/6; 1920 3½h.p. Ariel combination, £85/19/6; G.W.K. light car, £139/10/6; 1922 new 4½h.p. Quadrant combination, £100.—Booths' Motories, Halifax. [2311

BUTTERWORTH'S. Butterworth's. Butterworth's. —Sunbeam combination, 1919, £75; Sunbeam solo, 1914, £52/10; Premier 1914 countershaft, 3-speed, kick starter, Canoelet sidecar, £45; Enfield 3h.p. twin, 1915, 2-speed, kick start, £34; Enfield twin, 2¾h.p., 2-speed, 1912, good order, £27/10; J.A.P. solo, 3½h.p., o.v., in good order, £16/10; Douglas, 1914, T.T., 2¾h.p., 2-speed, £38; J.E.S. lightweight, handy machine, £15; Minerva, 2h.p., m.o.v., splendid order, £9; Auto-wheel, with gent.'s cycle attached, dynamo lighting, £18, or separate; Victor 1915 cycle car, 2 speeds, reverse, 2-seater, £85; Peugeot 25h.p. chassis, less engine, £12; Indian spares, N.S.U. spares, J.A.P. spares, second-hand tyres—in fact, we have got something of everything; any reasonable offer accepted. —Butterworths' Garage, 64, Mill Lane, Brixton Hill. 'Phone: Streatham 2813. [3495

## MOTOR CYCLES WANTED.

CASH

WAITING

FOR Motor Cycles,

COMBINATION or Solo, any quantity, any make, any condition. Exchanges a speciality.—T. and B Motor Co., Ltd., 372, Euston Rd., N.W.1. Museum 0581. [5564

CASH.

IF You Wish

TO Sell your motor cycle for cash,

WE are buyers for motor cycle and combination. We give full market price, and pay cash on spot.—Write, 'phone, or call, Percy and Co., 314 and 316, Euston Rd., N.W.1. 'Phone: Museum 1337. [3472

W. T. DUNN, Ltd., always buy.

FULL Market Value given for modern solos, combinations, and cycle cars. Call, write, or 'Phone Museum 5391.—W. T. Dunn, Ltd., 326, Euston Rd., London. [0332

DOUGLAS or Triumph, cheap for cash.—Thompson, 32, Clarence Rd., Kentish Town. [3327

WANTED, 2¾h.p. Douglas, not earlier 1913, cheap for cash.—King, Egrove, Oxford. [X4513

SCOTT Combination, with touring body.—Cross, 2, Southwood Lane, Highgate, N.6. [3481

COMBINATION, good, give to £70; also solo.—W. B. Walton, Turnlee Rd., Glossop [X4408

WANTED, good solo or combination for cash.—C.S., 14, Swaton Rd., Bow, E.3. Tel.: E3155. [3776

WANTED, B.S.A. combination or solo, must be modern.—King, Egrove Farm, Oxford. [X4512

100 Big Twins wanted, spot cash.—Wandsworth Motor Exchange, Ebner St., Wandsworth. [3744

100 Indians, Harley-Davidsons; spot cash.—Wandsworth Motor Exchange, Ebner St., Wandsworth. [3745

WANTED, 1919-20-21 8h.p. Sunbeam combination; cheap for cash.—Parry, Chapel Lane, Chester. [3462

WANTED, motor cycle, m.o.v., condition immaterial; cheap for cash.—51, Melgmed Rd., Highbury. [3450

## MOTOR CYCLES WANTED.

PALMER'S Garage, Tooting.—The pre-eminent place for the disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted, machine can be included in auction sale, held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling commission 7½%, not chargeable unless machine is sold. If no sale a nominal auction fee is charged: For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogues free. Tel.: 208 Streatham. T.A.: Palmer's Garage, Tooting. [3663

MATCHLESS Family Model; best bargain offered for lowest spot cash.—Box 7,914, c/o *The Motor Cycle*. [3028

WANTED, combination, solo, reasonable; cash waiting.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [3428

100 4-cyl F.N.'s, Hendersons; spot cash.—Wandsworth Moto Exchange, Ebner St., Wandsworth (Town Station). [3746

WANTED, motor cycle, in exchange for 3-speed gent's cycle and £10, or sell £8/10.—194, Plaistow Rd., West Ham. [3285

HARLEY-DAVIDSON or Martinsyde Combination, 1919 or later, cheap for cash.—Box 7,970, c/o *The Motor Cycle*. [3310

WANTED, Connaught or Omega 2-stroke combination, late date; must be cheap.—Ashe, Athlone, Ashford, Middlesex. [3272

WANTED, modern lightweights and combinations, cheap for cash.—Patterson, 12, The Quadrant, Winchmore Hill, N.21. [9502

WANTED, 1921 Sunbeam or Triumph, guaranteed condition. State full particulars and price.—Box 7,943, c/o *The Motor Cycle*. (D) [3236

MATCHLESS 2-seater, M.A.G., Magdyno, good condition essential; cash waiting for best offer.—Full particulars, 114, Bishop Rd., Bishopston, Bristol. [3438

CASH Waiting; solo and combinations, good prices given.—Write, 'phone, or call, Edwards, 50, Harrington Rd., South Kensington. 'Phone: Ken. 3709. [0604

WANTED Urgently for Cash, modern Triumph, also modern lightweights, must be good condition and cheap.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [3607

WANTED, 8h.p. Enfield or Matchless combination (twin sidecar), must be cheap; write full particulars, including age.—32a, Barnard Rd., Clapham Junction, S.W. [3784

CASH on Sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address: Palmer's Garage, Tooting. [3660

## TAXI-COMBINATIONS AND CABS.

EXCELSIOR 8h.p. Blackburne, Burman gear, Lucas Magdyno, Watsonian cab with roof light, Pyrene extinguisher, spare wheel, complete with meter and insurance until May; 200 gns.; only used 6 weeks.—Watsonian, Conybere St., Birmingham. [3733

## TRICARS FOR SALE.

A.C. Sociables, by the A.C. Co., dependable runabouts, take 2 persons anywhere, good condition and appearance, fully equipped; from £50 to £85; trial.—29, Allsop St., Upper Baker St., London, N.W. [3533

## MOTOR ATTACHMENTS.

1921 Young's Cycle Attachment, practically new; £12.—37, Arlington Rd., Surbiton. [3253

WALL Auto-Wheel, perfect condition, clips for tricycle or cycle; £18.—Day, 2, Bond St., Nuneaton. [X4411

# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

# Philipson's Latest!

## GOVERNOR PULLEY AND VARIABLE GEAR COMBINED WITH FLY WHEEL for all two-stroke engines.

**The Lightest, Speediest, and Simplest Gear on the market for direct belt-driven 2-stroke and 4-stroke engines.**

ONLY adds 2 lb. (approx.) to the weight of a 2-stroke machine, and 6 lb. (approx.) to the weight of a 4-stroke machine.

**During the past week we have fitted the following machines:**

| 2-stroke. | 4-stroke. |
|---|---|
| LEVIS, | TRIUMPH, |
| O.K., | NORTON, |
| CALTHORPE, | ROVER, |
| VILLIERS, | SINGER, |
| etc. | COULSON-BLACKBURNE |

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

Our Flywheel Governor converts a single-speed 2-stroke into a speed model —*the lightest speed model on the market!*

**THE ONLY GEAR WITH NO END THRUST.**

**IMMEDIATE DELIVERY.**

*Send for Illustrated Booklet*

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

***What is your make? Write us***

REDUCED PRICE **£7 7 0** Carriage Paid.

## Philipson & Co., Ltd.,

**Astley Bridge, BOLTON, Lancs.**

**(Established over 50 years.)**

Grams: 'Safety, Bolton. Phone: 147 Eagle

## MOTOR SCOOTERS.

KINGSBURY Scooters and Spare Parts.—3, Kendall's Mews, George St., W.1. [5334

BRAND New Autoped Scooter, dynamo lighting, 1½h.p., single-speed; £15.—Percy and Co., 314, Euston Rd., N.W.1. [3473

## HOODS, WIND SCREENS, ETC.

HOODS, double texture twill, brass or nickel fittings, to fit any sidecar, from £2.—Below.

WIND Screens, adjustable, with apron, 30/- and 35/-. Hoods re-covered, new celluloid fitted to wind screens.—Collins and Son, rear of 84, High St., Putney, S.W. [3735

EASTING Wind Screen and Apron, splendid condition; 55/-.—King, Egrove Farm, Oxford. [X4514

HERCULES Hoods and Aprons. Write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [3230

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3772

ROBINI Mfg. Co.—The Bower adjustable wind screen, made of celluloid and thick twill, all enamel fittings, complete with Coverall apron; 35/-, carriage paid. Money returned if not satisfied.—'Phone: Brixton 1685.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [3723

## BODIES.

RENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

TRADESMAN'S Sidecar, box body, good order, cheap, £3; good undershung Henderson chassis, 4 fitting, good order, £3/10.—11, Thomas St., King's Lynn. [3716

ROYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [0336

LOOK.—New Sports Sidecar Bodies, handsome streamline type, for £2/12/6, un-upholstered, unpainted; completely finished ready for chassis, £3/15; all carriage paid. State colour required. Can be fitted to any chassis.—Carlton Sidecars, 18, Midland Rd., Carlton, Nottingham. [3315

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—20, Tudor St., London, E.C.4. [0004

ROBINI Manufacturing Co.—Wonderful bargains in coachbuilt bodies of many different types, sports, etc., complete with coverall aprons, £8; 2-seaters, £10/10. Catalogue on request. A few shop-soiled bodies at £6/15. 2-seater Millford body on Millford chassis, complete with tyre and tube and all fittings, suitable for any machine, slightly used, £11/10, a bargain. Carriage extra. See Sidecar column.—'Phone: Brixton 1585.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [3725

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

FREE, Free, Free.

AS An Advertisement for one month only, to each purchaser of every sidecar we are giving a wind screen value 30/- free.—Below.

COACHBUILT Bulbous Back Models, complete with wind screen, from £6; polished aluminium, from £7. Bodies can be painted and upholstered to customers' requirements. Bodies in stock to suit all makes.

WE Specialise in Repairs, repainting, and reupholstering.—Below.

CHASSIS, undershung models, from £7/7. We specialise in frame repairs of all kinds.

ALSO Few Second-hand Chassis for Sale.—Collins and Sons, rear of 84, High St., Putney, S.W. [3736

RUDGE Sidecar, in perfect order; £6/15.—77, Acre Lane, S.W.2. [3465

## SIDECAR ATTACHMENTS.

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor-cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not dash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [1331

LIGHT Watsonian, complete, as new, £7/10; Gloria, 4 cff Triumph, £7.—17, Heaton Rd., Mitcham. [3432

ZENITH Super Sporting Sidecar, all fittings, apron, 4 tyre; £10.—Barnes, 83c, Trinity Rd., Tooting, S.W.17. [3540

SIDECARS.—Several very cheap, room wanted, also Douglas chassis.—57, Kenbury St., Camberwell, London. [3561

SIDECAR, Canoelet chassis, handsome, new coach body; first £7.—637, Seven Sisters Rd., Tottenham, N.15. [3718

HARLEY R.H. Sidecar, 1918, offers; Philipson pulley, £5/5.—Larter, Twyford, Bishop's Stortford, Herts [3435

SPORTING Float Sidecar, complete, unused, smart, painted royal blue; £15.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [3766

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of side car; repainting and renpholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

RUDGE Coachbuilt Sidecar, 26×2½ heavy Dunlop, to suit any machine, first-class condition, no rubbish; £10, carriage paid.—Kerswell, Lawrence Hill, Bristol. [3397

BARGAINS.—Gloria cane sidecar, £6/19/6; Ruby coach sidecar, £9/10/6; Hercules coach, £9/10/6; large Bowser seat child, £12/10/6.—Booths' Motories, Halifax.

BARGAINS.—Shop-soiled £27/10 sidecar, suit Triumph, B.S.A., £18/15/6.—Booths' Motories, Halifax.

BARGAINS.—New large size coach bodies, locker under seat, £6/19/9; featherweight sidecar, 12/10/6; cane sidecar, £6/10/6.—Booths' Motories, Portland Place, Halifax. [2312

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 9h.p. Can be changed from pleasure to commercial a few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

BASTONES for Sidecars. You cannot do better. —Sidecars, complete, slightly soiled, from 13/17/6; bodies from £4; also a few Montgomery No. 1 and sporting models, slightly soiled, to be cleared cheap.—228, Pentonville Rd., King's Cross, London, N.1. Tel.: 2481 North. [3000

# Our Programme for 1922 . . .

ARIEL, B.S.A., DIAMOND, DOUGLAS, EDMUND, ENFIELD, HUMBER, INDIAN, MASSEY-ARRAN, MATCHLESS, NORTON, RUDGE, SCOTT, SUNBEAM, TRIUMPH, AND VELOCETTE MOTOR CYCLES,

Also

BELSIZE - BRADSHAW, CROUCH, WOLSELEY, LIGHT CARS.

THIS list of motor cycles and light cars we are offering for 1922 has been chosen with exceptional care, and it embodies our unique experience of what is best and soundest in both. Whatever your requirements, there is one machine or car in this list that will meet them as well as they possibly can be met. Let it be your guide, and you will not go wrong — but you can make assurance doubly sure by writing to us, and enlisting our help in making a choice. This service is always freely at your disposal.

¶ Ask also for our list of 1921 and other slightly-used models; all in the finest running order, sold with our guarantee — MACHINES YOU CAN DEPEND UPON AT NO HIGHER COST THAN ORDINARY "SECOND-HANDS."

# Layton Garages

**J. W. TOLLADY,**
General Manager.
**90, High Street, OXFORD,**
**and London Road, BICESTER.**
'Phone: 581 & 784, Oxford.
Phone: 35, Bicester.
Grams: "Integrity," Oxford and Bicester.

H.G.T

## SIDECAR ATTACHMENTS.

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. 0335

1921 Indian Millford Sidecar, complete with fittings for attachment to left-hand kick starter model Indians; cost over £32, our price £16.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [3376

£5 for a complete renovated Douglas underslung chassis, all springs and arms, wheel, etc., suitable for any make of machine to order.—Old Man Hep, 19, Wilcox Rd., South Lambeth, London, S.W.8. [3532

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

ROBINI Mfg. Co.—End of season's bargains. Underslung chassis, complete with new tyre and tube, and body, complete with Coverall apron, £14; Millford chassis, complete tyre and tube, etc., new bulbous back body, complete with adjustable wind screen and apron, £12/15, wonderful offer; underslung chassis, all replated and enamelled, as new, with new tyre and tube, £7; Millford chassis, complete with new tyre and tube, all fittings, £5/10; shop-soiled underslung chassis, with tyre and tube, £9; carriage extra. See Body column.—'Phone: 1585 Brixton.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [3721

## RUNABOUTS AND CYCLE CARS.

A. P. REY, 378-384, Euston Rd., N.W.1.—Call and inspect.

MORGANS, all models; also second-hand De Luxe and Grand Prix's, in good condition.

COVENTRY PREMIER, 1922, 4-wheeler model, £250; one, shop-soiled only, £227/10.

ROVER 8h.p. Model, £220; one second-hand, good condition, £160.

G.N., all models; also 1920, with dynamo, very good order, £132/10.

EXCHANGES or deferred payments arranged.—'Phone: Museum 6436. [3591

BEDELIA.—The new 1922 model 8-10h.p., with air-cooled or water-cooled engine.

BEDELIA.—Air-cooled model, £185; water-cooled model, £195; immediate deliveries; trial runs free.

BEDELIA.—Catalogues free from L. N. Palmer, sole concessionnaire for the British Empire.—Palmer's Garage, Tooting. [3658

MORGANS, second-hand, several in stock.—A. P. Rey, 378-384, Euston Rd. 'Phone: Museum 6436. [3592

HALIFAX.—Morgan 8h.p., £105; another, with hood and screen; £95.—Halifax Motor Exchange, Horton St., Halifax. [3360

10 h.p. Light Car Chassis, water-cooled J.A.P. engine; £55.—59, Paltrey Place, Dorset Rd., Clapham Rd., S.W.8. [3576

BLERIOT-WHIPPET, 1920; exchange for good combination and cash.—59, Paltrey Place, Dorset Rd., Clapham Rd., S.W.8. [3578

CARDEN Monocar, 1919, very little used, as new; accept £58 to clear.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. [3790

T.B. 8h.p. Blackburne, best 3-wheeler extant, not driven 600, Lucas Magdyno, like new; £170.—Buntiog's Exchange, Wealdstone. [3742

BROUGH Engined Runabout, thoroughly overhauled and repainted, smart, seen by appointment; £68.—Russell, Burpham, Guildford. [3416

MORGAN 1920 De Luxe, w.c., all accessories, as new; any trial; £110; combination part.—C.S., 14, Swaton Rd., Bow, E.3. Tel.: E. 3155. [3778

TAMPLIN, 1920, used 3 months, new tyres, spare belt, engine perfect, 75 miles to gallon, very fast; £65.—Major Sharp, Broomfield Lodge, Chelmsford. [3357

SUPER Premier 3-wheeler, like new, dynamo lighting, spare wheel, all accessories; £200, bargain; exchanges entertained.—Symes, Bishops Waltham, Hants. [3270

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—G.N. cycle car, touring model, saxe blue finish, all-weather model; price £215; easy terms arranged. [3703

A.C. 2-seater, wheel steering, hood, screen, lamps, overhauled, newly painted, any trial; 58 gns; exchange motor cycle.—1, Ebner St., York Rd., Wandsworth. [3621

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co., 292, High Holborn, W.C.1. [0673

98 GNS.—1921 Carden 2-seater de luxe, electric lighting, detachable wheels, hood, screen, cost £155, about 500 miles, indistinguishable from new.—Below.

89 GNS.—1914 Crouch 2-3-seater, 8-10h.p. twin water-cooled, detachable wheels, equipped, smart. —Seabridge, Hansler Rd., East Dulwich. Sydenham 2452. Exchanges a speciality [3669

## RUNABOUTS AND CYCLE CARS.

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0736

MORGANS, 1922 models in stock. Immediate delivery to any specification. Official agents and trade distributers. Spares for all models. Exchanges, extended terms.—Below.

ROVER Light Car, new 1922 model, 8h.p.; immediate delivery; electric lighting, etc.; £220; authorised agents.—Below.

G.N., 1922 model, with dynamo lighting, dickey seat, and door; in stock at the moment; £225.—Below.

CARDEN Cycle Car, 1921, complete with electric lighting and usual equipment; £72/10.—Below.

MORGAN Aero, 1920, J.A.P., w.c., lamps, horn, etc., splendid condition throughout; £135.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0075

MORGAN, 1919, G.P., w.c. J.A.P. engine, just repainted, new hood cover, complete with 4 lamps, spare cover, tools, etc.; £120.—Hardy, 45, Beauchamp Av., Leamington. [X4403

1921 Bleriot-Whippet, hand starter, electric lighting, spare wheel, condition as new; 85 gns.; exchanges or deferred payment.—Edwards, 50, Harrington Rd., South Kensington. [3205

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—New 1922 Morgan Grand Prix, Show model, special Show finish, fully equipped; price £180, plus cost of extras; cash or easy terms. [3704

CARDEN 1921 De Luxe Model, dynamo lighting, clock, speedometer, ampmeter, electric horn, lots of spares, condition as new, cost over £200; £105.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [3765

## CARS FOR SALE.

RENAULT 20h.p. Landaulet, perfect; £95. — 77, Acre Lane, S.W.2. [3468

R.C.H. 1915 Tourer, 15h.p., smart, reliable; £110; combination part.—83, Clarendon Rd., Putney. [X4554

SCRIPPS-BOOTH 1916-17 2-seater, all improvements; £145.—Miss Patmoor, 106, Acre Lane, Brixton. S.W.. [3466

TRUMBULL 2-seater, 1917, 10h.p., 5 wheels; any trial; combination part.—Terrace Garage, Chiswick. [X4551

8h.p. Rover 2-seater, running order, Bosch, Binks, good gears; £15.—Hedges, 21, Chichester St., Paddington. [3709

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

DAIMLER 15h.p. 7-seater Tourer, C.A.V., perfect; £160, or part exchange.—8, Crowhurst Rd., Brixton, S.W.9. [3469

1919 Ford Tourer, electric lights, perfect, R.H.; exchange solo or combination; sell cheap.—19, Valney St., Tooting. [3301

PEUGEOT, 10h.p., with dickey, 4 speeds, 5 rims, really good, smart; £145; combination part.—Terrace Garage, Chiswick. [X4553

BAYARD 1914 2-seater, dynamo lighting and starting, whole outfit as new; combination part; sell £175.—Terrace Garage, Chiswick. [X4552

BARGAIN.—10h.p. 2-cyl. De Dion, 2-seater, Bosch, Zenith, lamps, hood and screen; £46/10, or offer.—Bonner, 1, Bridgeway, Wembley. [3257

ROVER Cars.—The famous 1922 8h.p. models in stock for immediate delivery; £220.—Eagles and Co., 275, High St., Acton, London. [0761

COVENTRY PREMIER, 1922, 4-wheel model; £250; immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

SHEFFIELD-SIMPLEX 30h.p., 1914, interior drive saloon, C.A.V., 6 detachable wheels; £285.—10, Thornbury Rd., Clapham Park, S.W.4. [3467

LANDAULET, 16-20h.p. Dennis, leather upholstery, gate change, splendid condition, private property; £80.—Scrase, 381, Battersea Park Rd., S.W. [3214

HUMBERETTE 8h.p., air-cooled, in excellent condition, new hood, tools, etc.; accept £68.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. [3789

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

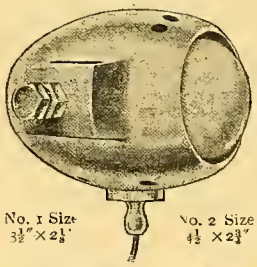
HALIFAX.—Jowett 2-seater, Sept., 1920, moderate mileage, many extras, £245; 1920 8h.p. Richardson, dickey seat, £140.—Halifax Motor Exchange, Horton St., Halifax. [3361

EXCHANGES a Speciality.—Good modern 2 and 4 seaters always in stock at bargain prices. Your motor cycle taken in part exchange.—Seabridge Motors Hansler Rd., East Dulwich. Sydenham 2452. [3670

1919 Chevrolet Touring Car, dynamo lighting, self-starter, 5 detachable wheels, repainted as new, any trial given; bargain, £160, or exchange motor cycle or combination with cash.—5, Norwood Rd., Herne Hill, S.E.14. [3599

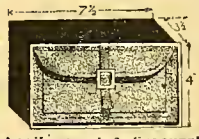

# ACCESSORIES
## TO SUIT YOUR POCKET

**ADAPTERS**
To convert bayonet to screw in bulb.
Single or Double Pole, **2/-** each. Post free.



No. 1 Size 3½"×2½" No. 2 Size 4½ ×2¾"

**STADIUM SIDECAR LAMPS**
Cast Aluminium. Highly polished. Manufactured in two sizes.
No. 1 Size **3/9** Carriage Paid. No. 2 Size **4/6**




**METAL CASED TOOL BAGS**
Leather front. 2 clips supplied with each bag. Best value obtainable.
CARR. **5/9** PAID

**Turner's Stores**
The MOTOR CYCLISTS' ACCESSORY HOUSE

180-1-2,
Railway Approach,
SHEPHERD'S BUSH,
W.12 'Phone Western 6177


## CARS FOR SALE.

WEST NORWOOD!—Christmas bargains, all ready for the new tax quarter. Open Monday 10-4.

WEST NORWOOD! — Advertised dates guaranteed accurate. Many cars really exceptional condition. Exchanges entertained.

WEST NORWOOD!— 6h.p. Rover 2-seater, mag., Zenith carburetter, £35; 1915¼ Warrick Autocarrier, £45.

WEST NORWOOD!—20-28h.p. Darracq chassis, £50; Alldays van, £60; 10h.p. Adams 4-seater, £65.

WEST NORWOOD!—10h.p. Sizaire Sporting 2-seater, £75; Indian combination, £75; White steam, £85.

WEST NORWOOD!—12h.p. Duhanot three-seater, dickey, monobloc, £85; 3-ton 1913 worm drive De Dion, £85.

WEST NORWOOD!—12-14h.p. Unic van, detachables, sump, £95; 3-ton L.G.O.C. lorry, good, £100.

WEST NORWOOD! — 13.9h.p. Darracq 2-seater, dickey, 4-cyl. monobloc, enclosed valves, gate, repainted, £125.

WEST NORWOOD!—1913 coupe light car, 8-10h.p., smart, £125; 30-cwt. Gobron-Brillie lorry, solids, £125.

WEST NORWOOD!—10h.p. 1915 Whiting-Grent light car, 4-cyl., monobloc, £125; G.W.K. 2-seater, exceptional, £135.

WEST NORWOOD!—15-20h.p. Mitchell semi-sporting 2-seater, £135; 1-ton Ford, solids, mag., roomy, £135.

WEST NORWOOD!—12-15h.p. Gladiator, torpedo, £135; 4-cyl. Sizaire-Naudin torpedo 2-seater, dickey, smart, £135.

WEST NORWOOD!—18h.p. 6-cyl. streamline tourer, £150; 16h.p. Bell landaulet, enclosed valves, £150.

WEST NORWOOD!—10h.p. 4-cyl Swift light car, enclosed valves, £150; 16-22h.p. Napier ex-ambulance, £165.

WEST NORWOOD!—Smart 12-14h.p. Fiat landaulet, 4-speed monobloc, £165; 10h.p. Singer light car, £175.

WEST NORWOOD!—15.9h.p. Arrol-Johnston streamline 4-seater, detachable wheels, enclosed valves, repainted, nice, £185.

WEST NORWOOD!—2-ton 1915 Palladium, worm drive, £185; 3-ton Kelly-Springfield, exceptionally good one, £185.

WEST NORWOOD!—Smart 10h.p. Brennabor streamline 4-seater, steel wheels, 4-cyl. monobloc, smart; £185.

WEST NORWOOD!—Exceptionally fine Iris landaulet, £185; 15-20h.p. Studebaker coupe, starter, dynamo, £185.

WEST NORWOOD!—15.9h.p. Gregoire streamline 4-seater, Michelin wheels, 80×160 engine, enclosed valves; £245.

WEST NORWOOD!—15.9h.p. Fiat ¾ landaulet, enclosed valves, smart, cloth interior; nice bargain, £245.

WEST NORWOOD!—3-ton Vinot, £250; 3-ton Belsize, £285; 2-ton Leyland, worm drive, enclosed valves, £285.

WEST NORWOOD! — Minerva, 6-cyl., streamline, £285; 4-ton Scout, £235; 22.4h.p. Fiat ¾ landaulet, enclosed valves, £285.

WEST NORWOOD!—Exceptional 1918 Calthorpe coupe self-starter, dynamo, £325; interior drive 6-cyl. double cabriolet, £350.

WEST NORWOOD!—20-seater Hallford carriers, char-a-banc lorry, 4-speed, enclosed, fine condition; offers, nearest £350.

WEST NORWOOD!—Interior drive Darracq saloon, £385; 25h.p. Sheffield-Simplex bulbous-back 4-seater, dynamo start, £385.

WEST NORWOOD!—Exceptionally smart 1913 Darracq, interior drive saloon, Clegg type radiator, detachable wheels; £450.

WEST NORWOOD!—Austro-Daimler 20-27h.p. interior drive all-weather saloon, dynamo, exceptionally smart; bargain, £450.

WEST NORWOOD!—19.6h.p. Napier sporting 4-seater, barrel-side coachwork, bull-nosed radiator, cantilevers, worm drive; £550

WEST NORWOOD!—16-20h.p. Wolseley interior-drive saloon, self-starter, dynamo lighting Rudge-Whitworth detachables, worm drive; £650.

WEST NORWOOD!—Unique Sunbeam 16h.p. superlandaulet, magnificent coachwork, mother-o'-pearl fittings, particularly smart; £750.

DOUGLAS S. COX, the Absolutely Straight Motor Man, 6, Lansdowne Hill, West Norwood. (Established 1902.) [7206

## MOTOR TRANSPORT VEHICLES.

DELIVERY Van, Decauville, sell £100. Wanted, car, combination, runabout.—4a, Maple Rd., Surbiton. [3380

## MOTOR TRANSPORT VEHICLES.

12.5h.p. Loco 30-cwt. Lorry, perfect, any examination, new tyres; bargain, £40.—Malvern Rd. Garage, Thornton Heath, Surrey. [3543

WAUCHOPE'S, 9, Shoe Lane, London, E.C.4.—1922 2¾h.p. New Comet, 3-speed Sturmey-Archer, with tradesman's carrier attached, roomy, suitable fishmonger, grocer, baker, etc.; £91/7. [3705

ROBINI Manfc. Co.—Commercial box carrier bodies, 3 doors opening on chains, top and each end, very roomy; £7/10, wonderful offer; carriage extra.—Phone: 1585 Brixton.—Robini Manfc. Co., 1 and 3, Palace Hill, Brixton, S.W. [3722

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. [6428

WANTED, someone to finance deferred payments on motor cycle deals.—Box 270, c/o *The Motor Cycle*. [X4515

SECOND-HAND Models at special rates. Send your requirements.—Halifax Motor Exchange, Horton St., Halifax. [3363

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1. [0672

## ENGINES.

1918 Harley Engine, complete, and like new; £26/10.—7, St. Mark's Mansions, N.4. [3226

4h.p. Douglas Engine, complete with magneto; £12.—Snow, Laurel St., Dalston, E.8. [3261

M.A.G. Engine, 3½h.p. twin, overhead valves, brand new; £16/10.—West, 50, Maldon Rd., Acton, W.3. [3569

3h.p. J.A.P. Engine, Oct., 1919, excellent condition, complete; nearest £40.—22, Brookfield Rd., Chiswick. [3082

1920 M.A.G. 8h.p., A.C., Thomson-Bennett, no pipes, splendid condition; £20, or near offer.—Railway Hotel, Yarm-on-Tees. [3571

2¾h.p. 2-stroke Engine, 1922, brand new, eminent make, complete, less magneto and carburetter; 8.—M. Supply, 1, Gosta Green, Birmingham. [3230

MOTO-REVE Latest 4h.p. Twin, o.h.v.'s, Bosch, very fast, perfect; £14; exchange good late ½h.p. single and mag.—87, Lordsmill St., Chesterfield. [X4523

2¾h.p. (1922) Brand New C.A.V.-Mag., B.B. carburetter, guaranteed perfect, approval willingly; 12/10, bargain.—Grant, 1, Gosta Green, Birmingham. [3490

2¾h.p. Villiers Type Engines. A few at £5/15. Engines bought, sold, or exchanged. We are experts in engine repairs. Write requirements.—Auto Eng. Co., Edgwick Mill, Coventry. [X4541

HEPPELTHWAITE'S.—6h.p. De Dion and M.M.C., both w.c., £8 each; 8h.p. A.C. J.A.P. V twin, 1916; 5-6h.p. Rex, a.i.v., almost new, £7/10; another ess piston, £4/10; 3½h.p. Alldays (beauty) £4/15; late requirement. 'Phone: 1953 Brixton.—19, Wilbrox Rd., South Lambeth, London, S.W.8. [3531

BRAND New Precision Engines, 3½h.p., 2-stroke, complete with magneto, large exhaust box and extension pipe, £15; Clyno 6h.p. engines, fitted new parts, £3/10; P. and M. engines, £6; B.S.A. 3½h.p., in new condition, with belt pulleys, £8.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Paddington 789. [2967

## IGNITION, LIGHTING, ETC.

H.B.I.

H.B. Ignition Co. carry large stocks of new and second-hand magnetos. Thomson-Bennett 42, 45, 50, 55, and 180°, single and twin.

H.B. Specialise in T.B. for fixing on Triumph, P.M., B.S.A., J.A.P., Douglas, etc., £2/10, postage 1/6; C.A.V. clock twin, for 2¾h.p. Douglas, etc., £2/15.

H.B. will take your old magneto in payment.

H.B. sends all magnetos on approval against cash. Every magneto dispatched carry H.B. 12 months' guarantee.

H.B. Ignition Co. ('Phone: Brixton 610), 78, New Park Rd., Brixton Hill, London. [0694

MAGNETOS 50% Below List.

APPLY Vale Engineering Syndicate, 9 and 10, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 877. [0698

C.A.V. Magneto, suitable 2¾h.p. Douglas, guaranteed; £2.—Bernard, Queda, Shepherdswell, Dover. [3296

BOSCH and M-L. Singles, variable ignition; 30/-, guaranteed.—84, Greenside Rd., Croydon. [3544

FLAT Twin, C.A.V. mag., practically new; bargain, £4.—Thomas, Tywcross, Tenby, Pembrokeshire. [3330

M-L Magnetos, new, list £8/10; our price £6.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [3767

K.L.G. W.D. Sparking Plugs, wonderful value, 4 for 5/-, post free.—Thompson, 59, Queen St., Wolverhampton. [794(

# A RESOLUTION

### which it will pay you to keep.

Make a resolution to get your 1922 mount from the Service Co. and keep it, for it will pay you in the end. Firstly, you are certain that the price will be a rock bottom figure consistent with thorough reliability, in the machine you buy. Secondly, you will know that the cycle has been completely overhauled in our own workshops by experts. And, lastly, you will have a three months' guarantee given with your purchase.

***Here's a fine Selection of Second-hand Machines.***

1916 **Douglas**, 2¾ h.p., 2-sp., accessories, £45

1921 **O.K.-Junior**, Villiers engine, 2-sp., £42 10

1920 **New Imperial-Jap**, 2¾ h.p., 2-speed, accessories .. .. £47 10

1918 **P. & M.**, 3½ h.p., 2-speeds, etc. £55

1917-18 **Clyno**, 5-6 h.p., 3-speed combination, renovated as new £90

1918 **New Imperial**, 8 h.p. J.A.P. 3-sp. combination, overhauled as new, £97 10

1920-21 **B.S.A.**, and Grindlay de Luxe sidecar, hood, screen, Tan-sad, speedometer and numerous spares, £.37 10

1916 **3½ h.p. Sunbeam Combination.** £87 10

1919-20 **Douglas Combination**, 4 h.p. all accessories .. .. £87 10

1920 **Francis-Barnett**, 2¾ h.p. J.A.P., 2-speed, clutch, speedometer and accessories .. .. .. £55

1918 **Triumph**, 4 h.p., 3-speed, countershaft .. .. .. .. £60

1919 **Enfield**, 3 h.p., twin, all accessories £50

1916 **Douglas**, 2¾ h.p., 2-speed, renovated as new, lamps, horn, etc. .. £55

Etc., Etc.

***If the machine you fancy is not listed, write for full list post free.***

Extended Payments, deposit one-fifth or more, and the balance plus 7½% in 12 monthly payments.

Bonus for regular payment

---

We have a few brand new 1921 machines which we are offering at greatly reduced prices including.

2¾ h.p. **Enfield** lightweight, 2-sp. £50

5-6 h.p. **Brough** flat twin combination, hood, screen, all lamps and screen £150

8 h.p. **Clyno** spring-frame combination, spare wheel and tyre, screen £150

6-7 h.p. **B.S.A.** combination, 3-speed, detachable wheels .. £147 10

8 h.p. **Zenith**, clutch Model H. .. £115

3½ h.p. **P. & M.** 2-sp., hand brake £95 10

4½ h.p. **Ariel**, 3-speed, all-chain.. £95

## EXTENDED PAYMENTS

**The Service Company Ltd.** (LONDON)

**289-293, High Holborn, London.**

*Telephone* Holborn 6430. *Telegrams* "Admittedly, London.

## IGNITION, LIGHTING, ETC.

GOVERNMENT Surplus Magnetos (unused).

HAVING Purchased the entire stock of the following makes of magnetos, we are able to offer them at huge discounts.—Below.

BOSCH Single, clock or anti, £3; Thomson-Bennett single or twin, clock or anti, 42, 45, 50, 55, and 180 degrees, £2/15; C.A.V. single or twin, clock or anti, £2/10; special long driving spindle for Rudge, fitted to any of the above magnetos, 10/- extra. Postage on the above 1/6 extra.

THESE Magnetos are fitted with variable ignition and leads, and are fitted with baseplates ready to be immediately fitted on. Please state make of engine when ordering.

GOVERNMENT Surplus.—New plugs in boxes: A.C. (Titan), 1/6 each; K.L.G., types F8, F6, F5, and R3, 1/8 each; Lodge, types R and R3, 1/8 each. Postage on orders of one plug 3d., four or more post free.

HIGH-TENSION Wire, new, unperished: 9mm., 5d. per yard, 25 yard coil 8/6, postage on coil 1/-; 7 mm., 4d. per yard, 25 yard coil 6/-, postage on coil 9d.; 3 mm., 2d. per yard, 25 yard coil 2/6, postage on coil 6d. All goods on approval per return post on receipt of cash. Money refunded if not satisfied.

COUNTY of London Engineering Works, Ltd., 51a, New Park Rd., Brixton Hill, London, S.W. Tel.: Streatham 2898. T.A.: Ignitionac. Brixstret, London. [2472

BOSCH 1-cyl., weatherproof, and as new, variable ignition; 57/6 delivered.

THOMSON-BENNETT and M-L.'s, of Coventry, 1-cyl. A.D.S. or P.L.R. types, 37/6 delivered, suitable for stationary engines; if variable ignition, 10/- extra.

C.A.V., as new, suitable for 2 or 1-cyl. lightweight motor bicycles, height 4½in., breadth 2⅝in., depth 4½in., variable ignition and short-circuiting terminal, guaranteed platinum points, and workmanship of the finest; 2-cyl. fires at 180°; all working parts are interchangeable with C.A.V.'s, types KU1 and 2; 50/- delivered.

THOMSON-BENNETT, types A.M. 1 and 2, as new, variable ignition and short-circuiting terminal; A.M. 2 fires at 180°; 52/6 delivered.

THOMSON-BENNETT 4-cyl., variable ignition; £5/5 delivered.

N.B.—Any of the above magnetos supplied, clock or anti-clock. When ordering state which when looking at driving end, and whether 1, 2, or 4-cyl.

C.A.V. 2-cyl. Clockwise Aeroplane Starting Magnetos, platinum points, workmanship of the finest, and all working parts are interchangeable with C.A.V.'s, type KU2, perfect for plug testing; one carriage paid, 25/-; lots of 6, rail forward, 22/6 each; of 20 at 21/6 each; of 100 at 20/-.

MAGNETOS Leave our Works in perfect condition.

GUARANTEE.—Will replace within one month, or refund cash if unsatisfactory.

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 977. [0698

MAGNETO Sprocket Manufacturers; 7-tooth to 24-tooth from stock.—Ridington, Southampton St., Camberwell. [3002

18 TWIN Magnetos, suit Douglas, use as singles, new, at £2/19/6, variable, real snips.—Aeros, Littleover, Derby [X4170

THOMSON-BENNETT New Magnetos, single, anti-clock, fixed ignition, complete, 27/6, plus carriage 1/6.—Dowell, Pyrford, Surrey. [3732

DYNAMOS. Dynamos.—Lucas E3 6 v. 5 amp., specially made for motor cycles, new, £5/15; others, £5.—Jenner, 165, Church Rd., Mitcham. [5703

DASH Switchboards, 4-way, with ammeter, 20/-; with ammeter and voltmeter, 35/- each net.—Leslie Dixon and Co. (Dept. H.1.), 9, Colonial Av., Minories, E.1. [0760

CHELTENHAM.—Repairs to magnetos, self-starters, lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham. 'Phone: 1256. [0758

THOMSON-BENNETT Magnetos, new, guaranteed perfect, slightly soiled, single or 180° twin, variable ignition, switch terminal, clock or anti; £2; postage 1/6.—Brockbank, 58, Lord St., Southport. [0756

CONTINENTAL Ignition Repair Co.—We repair Continental magnetos only. By specialising on Bosch, U.H., Eisemann, Mea, Splitdorf, Dixie, and Berling magnetos, we can naturally give you better service.

PRICE: Rewinding 18/-, condensers 10/-, platinum screws (Bosch standard) 6/-, remagnetising 2/6, slip rings 6/6, H.T. terminals 4/6. Our price for overhauling a motor cycle magneto ranges between 20/- and 35/-, and never exceeds the latter figure. Guaranteed for 12 months, and redespatched to you in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardwick Rd., Chiswick, London. [3758

## IGNITION, LIGHTING, ETC.

RELIANCE Magneto Repairing Co. for repairs and new magnetos.—See below.

RELIANCE guarantee to return your magneto within 3 days, and if necessary 24 hours, with a written guarantee for 12 months.

RELIANCE test every magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE manufacture and stock spares for Thomson-Bennett, E.I.C., Splitdorf, U.H., Bosch, Dixie, etc.; special line genuine platinum sciews for every make, 12/- per pair

RELIANCE will be pleased to give advice free of charge upon any question concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy that we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., E.C.1, for new and second-hand magnetos.—See below.

THOMSON-BENNETT Magnetos, new and unused, single-cyl., clock and anti, suit any machine, price 55/-; twins, 45, 48, 50, 55, 60, 180 degrees, for J.A.P., Clyno, Douglas, etc., price 55/-. See our guarantee.—Below.

C.A.V. Magnetos, new, single-cyl. and 180° twins, clock or anti, ideal for Douglas, Levis, Calthorpe, O.K., or any lightweight; these magnetos are of the finest workmanship throughout; price 55/-. See our guarantee.—Below.

BOSCH D.A.L. Magnetos, soiled only, otherwise as new, single cyl., suitable for any stationary engine or big single, £3/15; twins, any degree, ready to drop on Indian, Harley, or any big twin, £4/5; a powerful spark at low speed, ensuring easy starting. All the above magnetos are variable ignition and fitted short-circuiting switch. See our guarantee.—Below.

GUARANTEE. — Every magneto that leaves our works, no matter what the price or make, carries a written guarantee. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee every machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE Magneto Repairing Co. hold one of the largest stocks in London, and can be depended upon for a straight deal at the right price. When buying it pays to deal with a firm of repute.

RELIANCE cordially invite customers to their works to see any of the above on test. Magneto list giving full particulars sent upon application.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1. [6616

C.A.V. Magnetos: Extraordinary Bargains.—Brand new 180° twin or single-cyl., 39/6, carriage free. Every magneto thoroughly tested before dispatch; approval against cash.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [3514

MAGNETOS.—Surplus 400, new, with sets of spares, Bosch, C.A.V., B.E. Co., Dixie, E.I.C., Eisemann, Ericsson, G. and A., Hill, Morris Lister, Simms, Splitdorf, Thomson-Bennett; inspection in London.—Full particulars from Honeywill Bros., Machinery Department, 79, Mark Lane, London, E.C.3. [3759

SURPLUS Magnetos (with written guarantee one year). —M-L single, 35/-; B.L.I.C. ditto, advance-retard, 42/-; Bosch ditto, 45/-; Thomson-Bennett and C.A.V. singles and twins, 50/-; spares for all makes; magneto repairs of every description.—Whitdale Magneto Service, Cherry Orchard, Croydon. 'Phone: Croydon 1625. [2585

**30/-** Each.—Not the price of a small repair job. Splitdorf magnetos, single, anti, variable ignition, and guaranteed. These are the real thing, not converted starter magnetos (the only fault is, we sell them too cheap); 30/- each.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd. 789. [2965

THE Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government, and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can mostly return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock, all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1. 'Phone: Museum 1158. T.A.: Kumagnelec, Eusroad, London. [2445

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repairs and spares. All repairs are tested on an approved A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock; charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034. T.A.: Magdyno, Eusroad, London [0263


THE MOTOR CYCLE

*Insurance Policy*

# Testimony

THIS space will be occupied each week with copies of letters from Policy holders who have made claims. Original letters may be inspected.

*Dear Sirs,*

*I beg to acknowledge receipt of cheque . . . in settlement of claim, and wish to thank you for the prompt attention and extreme courtesy you have shown in this transaction. Assuring you of my future support.*

*Yours faithfully,*

***The only Safe Test of Insurance is Claims. We settle Claims promptly.***

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED**

*(Incorporating The Autocar Insurance Department, Established 1904).*

Head Office:

**77, Cheapside, London, E.C.2.**

*Telephone: City 9831 and 9832.*
*Telegrams: "Autoinsure, Cent, London."*


## TYRES.

MISS DOOLEY.—28×3 Dunlop butt-ended tubes and Palmer endless at 5/- each.

MISS DOOLEY.—26×3 Dunlop butted at 6/- each.

MISS DOOLEY.—26×3×2½ Moseley at 5/- each.

MISS DOOLEY.—Please apply for above to Miss E. Dooley, 33, Killyon Rd., Clapham. [3396

NEW Retreads, 26×2¼ 18/- each, 700×80 18/- each.—17, Heaton Rd., Mitcham. [3433

MOTOR Cycle Tyres on Easy Terms, standard makes; list post free.—J. G. Graves, Ltd., Sheffield. [0589

TYRES, Bates heavy 26×2¼, shop-soiled only, 35/- each, post free; not clearance.—Whyman and Gray, Stanley Rd., Gallane, N.B [3299

THE Difference between a good retread and a bad one is its mileage. Try us. Watch results.—Melton Rubber Works, Melton Mowbray. [0636

ECONOMIC Tyre Co.—Great reduction in covers and tubes. All goods sent on 7 days' approval, carriage paid, against remittance.

ECONOMIC.—24½2¼ (oversize 2in. rims) Clincher de Luxe heavy, 25/-, listed £2.

ECONOMIC.—26×2¼ Dunlop heavy, 37/3; Bates W.D., 30/-; Palmer W.D., 33/-; special heavy tubes, 6/-.

ECONOMIC.—26×2⅜ Bates special heavy W.D., 30/-; Hutchinson T.T., 29/-; special heavy tubes, 6/6.

ECONOMIC.—26×2½×2¼ Goodyear clearance, 42/6; Avon rubber stud extra heavy, 30/-; Clincher de Luxe. 30/-.

ECONOMIC.—650×65 Goodyear clearance, 30/-; 700×80 Goodyear clearance, 50/-; tubes, W.D., 6/-.

ECONOMIC.—Fully guaranteed Dunlop rubber stud, 24×2 22/6, 24×2¼ 24/9, 26×2 24/6, 26×2¼ 25/9.

ECONOMIC Tyre Co., 314, New Cross Rd., S.E.14 (near Town Hall). 'Phone: New Cross 1393. [1978

TRY Our 3,000 Mile Retread.—Repairs of every description. High-class workmanship guaranteed. Return carriage paid.—Baxton Vulcanising Co., Buxton, Derbyshire. [4255

BURST Motor Cycle Tyres, chafed beads, remoulded, made perfect, tube vulcanising, butt-ends fitted, tetreading; send for list.—Melton Mowbray Rubber Works, Melton Mowbray. [0347

STARTLING Offer.—New Beldam covers, 26×2 or 2¼ 20/- each, 26×2½ 30/-, 28×3 35/-, 650×65 40/-, 700×80 45/- each; new Avon or Michelin steel studded covers, W.D., 700×65 35/- each.—The Homerton Rubber Works, Brookeby's Walk, Homerton, E.9. [0331

HERBERT ROBINSON, Ltd., Green St., Cambridge. —Bargain covers, 26×2¼ Pedley, 15/-; 26×2½ Wood-Milne, 15/-; 26×2⅜ Dunlop, 27/6; 28×3 heavy Avon, 35/-; 650×65 Avon, heavy, 35/-; clearance tubes, all sizes, 4/6; best make 6/6. All guaranteed and sent on 7 days' approval. [3685

HARVEY'S Garage.—All guaranteed and sent on approval: 26×2¼ Beldam steel-stud 24/6, Wood-Milne 13/-, Avon Stonehenge 22/-, 26×2½×2¼ Avon rubber-stud 24/6, 26×2½ Wood-Milne 13/6, 650×65 Wood-Milne 13/6, Goodyear 25/-, Dunlop grooved 39/-, Avon 3-rib 32/6, 700×80 Wood-Milne 13/6, Avon 3-rib 34/6, brand new Dunlop tubes 5/3; postage 1/-.—47, South Lambeth Rd., S.W. [3399

## TANKS.

TANKS for B.S.A., new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [3267

TANKS for Triumph, new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [3268

COVENTRY Tankers, Ltd., makers to the principal manufacturers; petrol tanks for any style supplied extra capacity.—Hearsall Works, Coventry. [3265

TANKS Made or Repaired, re-enamelled, lined, transferred; handle-bars, etc., plated. Established 30 years.—Attwood's, 86, Rosebery Av., London, E.C.1. [6997

TANKS Re-enamelled to Pattern. High-class work only.—D. Jenkins and Sons, 6, Richard St., Atkinson St., Deansgate, Manchester. Established 25 years [3601

TANKS Re-enamelled, makers colours, design and transfer, first-class work; prompt return.—Donalds Enamellers to the Leading Manufacturers, 138, Glove St., Deritend, Birmingham. [X4404

TANKS Repaired, re-enamelled, makers' latest colours designs, and transfers guaranteed. Dents obliterated, seam, fastening, partition repairs, etc. Quick service.—Park Works, 1a, Paradise Rd., Highbury, London N.5. [3137

BRAND New Clyno Tanks with all fittings, including Best and Lloyd lubricator, 50/-; without fittings, second-hand, in perfect condition, 18/-.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2 'Phone: Padd. 789. [2966

TANKS of every description replaced, repaired, and re-enamelled at our own works; all kinds of fittings stocked; quick service and reasonable charges Illustrated list free.—A. Green, Water St., Chapel St Salford, Manchester. Tel.: 2191 Central. [025

## BELTS.

NEW Clipper Belts.—8ft.×¾in. 11/6, 8ft. 6in.×¾in. 13/-, 8ft. 6in.×⅞in. 14/-, 8ft. 6in.×1in. 16/9.

W.D. Belts, 6ft. 6in.×⅞in., 10/-; new Pedley belts, clearance, 6ft. 6in.×¾in., 10/-; clearance belts, 6ft.×1in., 8/6.

H. EMANUEL and Co., Tyre Factors, 27, Belgrade Rd., Stoke Newington, N.16. Stores: 37a, Balls Pond Rd., Dalston, London, N. Tel.: Dalston 3161. [0726

## CARBIDE.

FINEST Carbide, cwt. lots 22/6, f.o.r., c.w.o.; packed in lb. tins, gross or half gross lots, 5/9 per dozen. —Sports Depot, Denby Dale, Huddersfield. [2443

CARBIDE, highest quality, 22/- cwt., 15/- ½ cwt., 9/6 28 lb., 5/6 14 lb., carriage forward, drums free.—Kemp's Garage, Importers, Louth, Lincs. [X4483

BEST Quality Carbide, 24/- per cwt., 28 lb. 8/6, drums free. Any quantity supplied from ½ lb. tins to 2 cwt. drums. Only the best brands stocked. Trade enquiries invited.—Dargue, 57, Grey St., Newcastle-on-Tyne. [6900

CARBIDE, guaranteed maximum gas yield, British Acetylene Association standard, 21/6 cwt., drums free, all meshes; stock at 22 depots; immediate delivery.—Elloc Cycle Works, Importers, Gedney Drove End, Wisbech. [3590

CARBIDE, finest quality, giving 100 per cent. pure gas yield, all sizes, cwt. 26/6, ½-cwt. 16/3, 28 lb. 9/6, drums free; support the old firm; established over 30 years; satisfaction guaranteed.—Young, Importers, Misterton, Somerset. [9557

CARBIDE.—Immediate delivery of all sizes in 1 lb., 2 lb., 4 lb., and 7 lb. lever lid tins, and 2 cwt. drums, labelled or plain for retailers' own labels, quality guaranteed, and all standard sizes supplied by the cheapest firm in the trade.—The Premier Lamp and Engineering Co., Ltd., Moorfield Works, Armley, Leeds. [3286

CARBIDE, finest quality obtainable, brilliant, lasting, 25/- cwt., drum free, cash with order, free on rail, Aberdeen, Bristol, Cardiff, Edinburgh, Glasgow, Gloucester, Grimsby, Hull, Leeds, London, Lowestoft, Liverpool, Lincoln, Manchester, Newcastle, Preston, Port Talbot, Runcorn, Sharpness, Swansea, Yarmouth.—E. C. Maddock, Wareham, Dorset. [3761

## PATENT AGENTS.

CONSULTING Patent Agency, 253, Gray's Inn Rd. London.—Aero and aircraft engines. [2416

J. E. S. LOCKWOOD, 3, New Street, Birmingham. 'Phone: 5816 C. Patents guide free. [9057

PATENTS Advice, handbook free.—King, Registered Patent Agent, 146a, Queen Victoria St., E.C. 35 years' references. [0129

W. BRYSON, B.Sc., Assoc.M.Inst.C.E., Chartered Patent Agent, 29, Southampton Buildings, London, W.C.2. 'Phone: Museum 3651. [9242

## AGENCIES.

THE Mohawk Cycle Co., Ltd., require sole agents for their celebrated motor cycles in districts where they are not already represented. Trade only.—Write for lists and terms to the Mohawk Cycle Co., Ltd., 248, Alexandra Rd., Hornsey, N.8. [6245

CONTINENTAL Traveller (English) for Belgium, Holland, Denmark, Norway, Sweden, wishes to represent a good English house for low priced lightweight. All connections.—Rolfe, Box 7,999, c/o *The Motor Cycle*. [3753

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at competitive rates.—Ernest Bass, 40, Chancery Lane, W.C.2. 'Phone: Museum 2234. [0005

ROYS, Ltd., Insurance Brokers.—Agents for all companies and Lloyd's. Insurance of every description effected. Enquiries invited.—170, Gt. Portland St., London. [0055

£4/5/6 secures Full Policy for Cycle Cars, Morgans and the like up to £175 value; £3/5/6 covers 4h.p. combinations; £4 covers 6h.p. combinations. Prompt settlement. Immediate cover.—John Clements and Co., Insurance Brokers, 65a, Holborn Viaduct, E.C.1. [3408

"THE Motor Cycle" Insurance Policy is the policy authorised by "The Motor Cycle," and covers motor cycles or cycles and sidecars used for private purposes. Complete comprehensive cover. Maximum benefits, minimum rates. Full particulars and prospectuses on application.—The Autocar Fire and Accident Insurance Co., Ltd., 77, Cheapside, London, E.C.2. [0007

## TUITION.

HOUSE and Estate Agency, Auctioneering, etc.—Train by post for this paying profession. Start business of your own. Prospectus free.—Agricultural Correspondence College (Dept. T), Ripon. [0389

## CONSULTING ENGINEERS.

EXPERT on Works Efficiency, production, costs, development of inventions and experimental work. —W. H. Sumner, A.M.I.Mech.E., M.I.A.E., 28 and 30, Victoria St., Westminster, S.W.1. 'Phone: Victoria 573 and 1702. [9301

# FOR YEARS!

manufacturers have been striving to evolve a steel that would stand up indefinitely to the high and heavy duty required in valves of high speed engines. At last it has been solved.

I am now in a position to supply a limited number of valves for 4 h.p. and 2¾ h.p. Douglas Engines that are **unbreakable**, and to prove my word every valve that I sell will carry my mark and number, and will be guaranteed for 12 months from the date of delivery. If, during that time, despite how many thousands of miles you have covered in that period, one of these valves break, return it and the invoice, and get your money back. In addition to being

**UNBREAKABLE**

**It does not**
**PIT**
**It does not**
**SCALE**
**It does not**
**BURN**
**It rarely needs**
**Grinding In;**
**It, therefore,**
**Saves the Seating**
**and prevents**
**Air Leaks**
**as the stem is very hard and does not wear in the guides.**

Obviously, the valve is expensive, and is likely to be until the steel can be produced in extremely large quantities, but I know of manufacturers who, to-day consider the value of an unbreakable valve almost priceless. Rumour in last season's T.T. Race told us of wonderful valves which cost £5 each, yet I doubt whether they were unbreakable as mine are. Considering the quality, 9/- for 2¾ h.p., and 10/- for 4 h.p., are quite reasonable, Orders will be executed in strict rotation.

**Trade Enquiries Invited.**

Valves for any other make of engine or car made to order in single sets 14 days from date of order.

Prices on submitting samples.

*W. G. Coram*

*Official Douglas Agent,*
**140, Victoria Street, BRISTOL.**
Telephone 3792.

## SITUATIONS WANTED.

T.T. Races, 1922.—Advertiser, experienced motor cyclist, used to all makes, and capable of doing own tuning, seeks engagement for Senior or Junior race. Large fee or salary not required.—Box 7,998, c/o *The Motor Cycle*. [3752

## SITUATIONS VACANT.

WANTED, keen motor cyclists, London and district, with a few spare hours weekly, evenings or week-ends; interesting proposition, no canvassing; 30/- to £3 earned weekly.—Box 7,997, c/o *The Motor Cycle*. [3749

SHEET Metal Work.—Traveller wanted on commission for sale of all kinds tinplate and sheet metal goods; must have sound connection amongst motor cycle manufacturers and hardware factors.—Write, Box 894, Willings, 30, King St., Covent Garden, W.C.2. [3312

REQUIRED, Foreman to take charge of motor cycle and cycle assembly and repair departments by large works in North of England; must be conversant with all modern methods, and have held similar position previously.—Apply in confidence, stating age, salary, and experience, Box 260, c/o *The Motor Cycle*. [X4444

WANTED (London suburb), thoroughly competent working mechanic with extensive repairing experience; proficient in turning, screw-cutting, brazing, wheel building, engine and gear overhauls; good driver and demonstrator; exceptional opportunity for sound reliable mechanic desirous of securing permanent lucrative position by conscientious honest work; co-partnership terms with minimum weekly drawings, no capital required; Fidelity Society guarantee; only absolutely competent mechanics need apply; write fully.—Box 7,980, c/o *The Motor Cycle*. [3377

## BUSINESSES AND PROPERTY FOR SALE, TO BE LET, OR WANTED.

MOTOR Cycle, old-established, main road Surrey; well stocked. About £800; part remain. Active partner willing take half share considered.—Box 7,982, c/o *The Motor Cycle*. [3379

CYCLE, Motor Cycle, and Electrical Business for sale in Kent; turnover £4,000 year; position in High Street; good clean stock; sell or lease premises. Above is an excellent lot; best reasons for selling.—Box 7,969, c/o *The Motor Cycle*. [3309

## FINANCIAL.—PARTNERSHIPS.

ACTIVE Partnership Required in motor cycle or car repair business. Capital available. Midlands preferred, but not essential.—Reply in confidence, Box 7,983, c/o *The Motor Cycle*. [3381

YOUNG Man, with £250 and all-round knowledge of motor cycle repairs, required as working partner in private limited company, salary and share of profits.—829, Fulham Rd., S.W.6. [3407

THE Inventor of a Carburetter, who, judging by the reports received from motor cycle manufacturers and others, has struck a real good thing, is desirous of meeting someone with capital with a view to a partnership. A keen motorist preferred.—Write to F.M., c/o The Manager, London County and Westminster Bank, Farnham, Surrey. [3324

## PATENTS.

WE Buy, Sell, and Finance Inventions and Patents, and advise on their marketing.—Send postcard for full particulars to Dept. C, Inventors' Sales Agency, 22-24, Spencer Av., Coventry. [3717

## GARAGES.

PRIVATE Garage to let in Douglas for 12 cycles for coming races. Workshops.—Apply, Tremissary Lodge, Isle-of-Man. [3224

## GENERAL TRADE.

AUCTION Sales.—Palmer's Garage, Tooting, the oldest solely motor auction rooms in London. Terms 7½%, not chargeable if machine unsold. Motor cycles and cars bought and sold for cash. Nearest goods stations, Falcon Lane, L. and N.W.R.; Wimbledon, L. and S.W.R. and G.W.R.—Sole address; Palmer's Garage, Tooting. [3661

## WANTED.

SCOTT Front Forks or other parts; state price and condition.—79, Berkley St., Liverpool. [3281

N.S.U. Gear, fit Triumph, any condition, cheap.—280, New John St. W., Birmingham. [X4405

WANTED, Morgan, exchange countershaft Zenith and cash.—Sapsford, High St., Cheshunt, Herts. [3390

SIXTY Cars for Exchange; postcard procures list. Call.—Douglas S. Cox, Motors, West Norwood. [1043

LIGHTWEIGHT Frame, complete, late pattern, suit Villiers.—R.S., 42, Standen St., Tunbridge Wells. [3500

SPORTING Sidecar wanted, for Triumph, must be cheap; cash waiting.—G. A. Warren, Hindon, Wilts. [3507

WANTED, Triumph, B.S.A., and Douglas spares, 1912-21; cheap.—23, Jupiter Terrace, Well Hall, S.E.9. [3455

SIDECAR, Henderson spring frame or B model, or Hopley folding, for Triumph.—8, Chesham Villas, Pinner. [3294

## WANTED.

WANTED, 3-wheeler, chassis or complete, any condition; must be cheap.—Bunting, Flowerdown, Winchester. [3539

WANTED, large or 2-seater sidecar with enclosed wheel; state age and condition.—25, Wallwood Rd., Leytonstone. [X4503

WANTED, Harley-Davidson parts, sidecar chassis for same; repairs not objected to.—2, Fortunegate Rd., Harlesden, N.W. [3588

WANTED, steel balls, any quantity, 3-16in., ¼in., and 5-16in.—Cromwell Engineering Co., 327, Putney Bridge Rd., S.W.15. [3308

WANTED, good up-to-date second-hand motor cycle accessories; state particulars and price.—Service Co., 292, High Holborn, W.C.1. [0671

WANTED, second-hand Morgans, Rovers, and G.N.'s, in good condition.—A. P. Rex, 378-384, Euston Rd. 'Phone: Museum 6436. [3593

£12 Offered for Heavyweight Gear, 1921 Sturmey, Juckes, Jardine, or good offer any other approved type, date.—Haydock, Park Rd., Coppull, Chorley. [X4521

WANTED, Triumph countershaft crank cases, flywheels, S.A. gear boxes, parts, or empty cases; any quantity purchased.—Hole, 129, Park Lane, Carshalton. [9767

WANTED to Purchase Outright for cash, bankrupt stocks. W.D. spares, miscellaneous spares. Send full particulars.—McNeille and Platt, 57, Gt. George St., Liverpool. 'Phone: 1092 Royal. [2489

WANTED, cheap, water-cooled engines, about 8h.p. V twin or flat twin preferred, condition immaterial. Also 3-speed and reverse all-chain gear boxes, well-known makes desirable.—Particulars and lowest to Blackler, 66, Union St., Torquay. [3734

FOR 1913 2¾h.p. Sunbeam, frame centre only (i.e., without fork or rear wheel brackets, engine plates, etc.), in thoroughly sound condition; broken and brazed article not wanted; also leakless tank and rear stand for same machine; moderate prices.—Write, Iyangar, c/o Godfreys, 208, Gt. Portland St., W.1. [3321

## EXCHANGE.

JAZZ Drums, etc., value £20, for sidecar.—29, Kingswood Rd., Goodmayes. [3391

DOUGLAS 4h.p. for Triumph 4h.p., or offer.—8, Graemesdyke Av., Mortlake. [3504

1919¾ P. and M. Combination, and cash, for higher h.p.—4a, Wyfold Rd., Fulham. [3502

SOPWITH Pup Fuselage, 80h.p. Le Rhone, for motor cycle.—44, Denman Drive, N.W.4. [3358

EXCHANGE Scott Combination, perfect order, for solo and cash; sell £45.—58, Harringay Rd., N.15. [3221

BUICK 4-seater, 15h.p., Warland rims; exchange combination; £75.—Hillrise, Surbiton Hill Rd., S.W. [X4544

EXCHANGE 3½h.p. P.M. combination, perfect, and cash, for higher power.—29, Kilmaine Rd., Fulham. [3351

£5 and 2¾h.p. Singer, 1914, for single 3½h.p., Triumph preferred.—19, Pym St., Walton, Liverpool. [3513

1920 A.B.C.; exchange combination, cash either way. —59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [3577

1921 2-speed O.K.-Villiers, exchange higher power solo, late model; evenings.—67, Fernlea Rd., Balham. [3783

3½h.p. Singer Combination and cash, for good 1920 8h.p. combination.—Bruce, 122b, Chase Side, Enfield. [3423

REX 6h.p. Coachbuilt Combination, tax paid 1922, all on; exchange for solo and cash.—23, Barratt Av., N.22. [3449

EXCHANGE Special Sporting 6-8h.p. Rex, 2-speed, starter, perfect, for lower power.—27, Corinne Rd., N.19. [3557

UNIC Taxicab, 12h.p., 2-cyl., overhauled, new parts, body as new; any exchange considered.—63, Solon Rd., Brixton. [3584

POWERPLUS Combination, perfect condition; exchange with cash for Morgan.—26, Lower Park Rd., Peckham. [3440

MORRIS-COWLEY 1917 4-seater, perfect, smart, dynamo; £225; combination and cash.—54, Coval Rd., Mortlake. [X4547

1912 Darracq Van, 4-cyl., overhead valves, gate, smart body; exchange.—South Western Garage, New Malden, Surrey. [3452

BUICK 1918 Ton Chassis, dynamo, 5 rims, whole as new; combination part; reasonable.—Yellow Garage, Surbiton. [X4545

MARTINSYDE 1921 Combination, perfect, with cash, for Morgan or Rover; appointment.—268, Kew Rd., Kew. [3491

1921 3½h.p. N.U.T., Lucas Magdyno lighting, for Morgan or lightweight.—102, Westwood Rd., Earlsden, Coventry. [X4575

HUMBERETTE 2-seater, 1914, fast, reliable, equipped; £60; combination. — Springhurst, Fassett Rd., Kingston. [X4543

# BASTONES

**Established 16 Years.**

***No Better or cheaper House.***

**NEW CLEARANCE LINES, APPROVAL AGAINST CASH. CARRIAGE PAID.**

### WOOD-MILNE Key Grip COVERS

| | |
|---|---|
| 26×2¼ 3-ply .. .. .. | 13/6 |
| 26×2¼, 26×2½ 4-ply Extra Heavy .. | 16/6 |

### GOODYEAR All-Weather Tread COVERS. Extra Heavy.

| | |
|---|---|
| 26×2¼ Diamond Pattern .. | 26/- |

### GOODRICH Safety-Tread COVERS Extra Heavy.

| | |
|---|---|
| 26×2¼ .. .. .. .. | 28/- |
| 26×2½×2¼ .. .. .. | 36/- |
| 26×2½ .. .. .. .. | 35/- |
| 650×65 .. .. .. .. | 40/- |
| 26×3 for 650×65 rim .. | 48/- |
| 28×3 .. .. .. .. | 48/- |

### CLINCHER Rubber Non-Skid COVERS.

| | |
|---|---|
| 24×2¼ De Luxe Heavy .. | 23/6 |
| 26×2 .. .. .. .. | 23/6 |
| 26×2½ .. .. .. .. | 25/- |
| 26×2⅝ Extra Heavy .. .. | 27/- |
| 26×2½×2¼ Heavy .. .. | 30/- |
| 650×65 Dreadnought 3-ribbed | 39/- |
| 700×80 to fit 650×65 De Luxe Extra Heavy | 47/- |

### MISCELLANEOUS COVERS.

| | |
|---|---|
| 26×1¾ Best British Make .. | 14/- |
| 26×2 Englebert Passenger .. | 19/6 |
| 26×2¼ Hutchinson T.T. .. | 23/- |
| 26×2½ .. .. .. .. | 27/- |
| 28×3 to fit 28×2½ Best British Make .. | 45/- |
| 26×3 Englebert Rubber Stud .. | 25/- |
| 26×2½ Michelin Fine Ribbed .. | 21/- |
| 26×2½ Englebert (wired edge) .. | 25/- |

**Distributing Agents for the Famous**

## MONTGOMERY SIDECARS

**New 1922 Models in Stock.**

**Montgomery Bo-Peep Sidecar Screen,** easily fitted to any Sidecar .. **£3 10 0**

**Easting Screens** .. .. .. .. **£3 18 0**

**Sidecar Bodies** (various models) from **£4 0 0**

### TUBES.

**Goodrich, Clincher, and Hutchinson.**

| | |
|---|---|
| 26×2¼ and 26×2½ .. | each 6/3 |
| 650×65, 700×80, 28×3 .. .. .. | each 7/6 |

**Hours of Business—**
**9 till 6; Saturdays, 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

'Phone: 2481 North. 'Grams: 'Bastones, London'

## EXCHANGE.

2-SEATER G.W.K., perfect throughout; exchange solo or combination, or sell cheap.—Jones, c/o Eton Garage, Balham. [3300

PERRY 1914 Twin 8h.p. 2-seater, 5 wheels, equipped, new tyres; £110; combination part.—Hillrise, Surbiton Hill Rd., S.W. [X4542

RUDGE Multi, 1920½, hot stuff, for big twin, solo, or combination.—Southouse, c/o James Kane, Ltd., Kyrwicks Lane, Birmingham. [3210

1914 Mathis 2-seater, 10h.p., 5 wheels, electric, fast, nice order, repainted; £150; combination part. —Morlands Garage, Mortlake. [X4546

HALIFAX.—50 second-hand machines and combinations; keen exchanges. Get list.—Halifax Motor Exchange, Norton St., Halifax. [3362

EXCHANGE Morgan 1915 De Luxe, good tyres, nice order; £75; exchange valve combination and cash.—54, Coval Rd., Mortlake. [X4550

CLYNO Combination, 2-speed, kick start, splendid condition; £58; take lower power part.—57, Kenbury St., Camberwell, London. [3559

1921 Scott, for all-chain Triumph, Sunbeam, or similar; would consider N.U.T. and little cash.—Box 7,946, c/o *The Motor Cycle*. [3239

EXCHANGE 1821 A.V. for combination or solo.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3647

1921 Scott Squirrel, perfect condition, fully equipped, 1or 1920 Henderson or Ace solo; sell £90 offers. —Box 7,996, c/o *The Motor Cycle*. [3748

EXCHANGE, 1920 G.N., dynamo lighting, splendid condition, for Morgan or combination and cash, or sell.—24, Geraldine Rd., Chiswick. [3460

EXCHANGE 1914 3½h.p. Precision, excellent order, for 1910-12 Scott, other 2-stroke considered, sell £28.—Box 7,981, c/o *The Motor Cycle*. [3378

GOOD Second-hand Motor Cycle or Combination taken in part exchange for new, any make.—Percy and Co., 314, Euston Rd., N.W.1. [3474

EXCHANGE 1920 G.N., splendid condition, for combination and cash, or sell £120.—C.S., 14, Swaton Rd., Bow, E.3. Tel.: E. 3155. [3779

ALLDAYS 12h.p. 4-seater, modern body, unscratched, remarkably good condition; value £150; any exchange considered.—63, Solon Rd., Brixton. [3585

EXCHANGE Beautiful 1916 Overland 15.9h.p. Coupe, starter and lighting, for combination or G.N. and cash.—24, Geraldine Rd., Chiswick. [3461

STUDEBAKER 1913 2-seater, 15h.p., £60 reconditioning bill just paid, now nice; £130; combination part.—Morlands Garage, Mortlake. [X4548

EXCHANGE 3-4h.p. National Gas Engine, mag. ignition, complete, and perfect, as new, for combination or solo.—1, Priory Rd., Kew Green. [3483

4½h.p. B.S.A. Combination and 2¾h.p. Enfield; exchange for higher power combination, Enfield preferred.—Townsend, Applegate St., Leicester. [X4493

ENFIELD Combination, perfect condition, fully equipped, for w.c. Morgan de Luxe, cash adjustment.—Lonsdale, 28, Salisbury Rd., Bexley, Kent. [3486

1919 Indian Combination, speedometer, Easting, D.A. lighting, £80; exchange A.B.C.—21, Whiteheads Grove, Chelsea. 'Phone: Ken. 146. [3427

4h.p. Regal o.h.v., 4-speed Jardine, C.S., K.S., never been on the road; in for higher power or Ford chassis, any condition.—Box 7,995, c/o *The Motor Cycle*. [3747

EXCHANGE 1922 Coventry Premier, brand new, for combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3650

EXCHANGE Twin 2-speed Motor Cycle, Bosch mag., good tyres, good solo or sidecar machine, for good 2-speed lightweight.—Box 265, c/o *The Motor Cycle*. [X4480

EXCHANGE Rover, 8h.p. 1922, brand new, for combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3645

LEVIS 2¼h.p. Sports Model, perfect, smart appearance, and about £8 for countershaft machine suitable sidecar work. Triumph preferred.—35, Bective Rd., Putney. [3271

HUMBERETTE, 1914, thoroughly overhauled and repainted last month, fully equipped; exchange combination or sell £75.—17, Sussex Rd., New Maldea, Surrey. [3426

1919 Countershaft Triumph, lamps, horn, new tyres and tubes, for 1921 5-6h.p. countershaft Zenith, cash adjustment.—F. Knott, 35, Southampton St., Reading. [3342

EXCHANGE Your Present Machine for a new car or motor cycle through the Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3651

EXCHANGE Good Typewriter, gramophone, and records, gent.'s cycle, new gold albert, and cash, for motor cycle or combination.—Box 267, c/o *The Motor Cycle* [X4482

EXCHANGE 1920 G.N., with dynamo lighting, good condition, for combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3649

## EXCHANGE.

LATHE, Capstan, 6½in. centre, nearly new, 2 3-jaw chucks, 20 collets, countershaft wire feed; offers: exchange motor cycle.—5, Addison Av., Holland Park, W.11. Park 2071. [3657

EXCHANGE 1920 Invicta, 2¾h.p. J.A.P. engine, 2-speed, legshields, lamps, practically new, and about £20, for an A.B.C., Triumph, N.U.T.—37, Arlington Rd., Surbiton. [3252

F.O.C.H. are noted for fair exchanges.—Fair Offer Car House, 5, Heath St., Hampstead. (Near tube.) 'Phone: Hampstead 3752. Hours: 9-7, including Saturdays. [3373

5½IN. Columbia Screw-cutting Lathe, new condition, complete with chuck, face plate, change wheels, overhead gears; exchange.—Ward, South Western Garage, New Malden, Surrey. [3453

1920-21 A.V. Monocar, 8h.p., 2-speed (2 seats), original tyres, lighting set, Klaxon, screen, petrol carrier, absolutely unscratched, guaranteed; sell £70; exchange.—89, East Hill, Wandsworth. [3713

EXCHANGE 1914 Arden 2-seater for combination, or sell £45; would pay cash difference up to £100.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3648

1919 Carden-Tamplin 2-seater, 8h.p. J.A.P., Sturmey-Archer 3 speeds, electric lamps, horn, quartet's tax; £70, or exchange sporty motor cycle.—Gordon, 120, Ridley Rd., Forest Gate, Essex. [3346

MATCHLESS Combination, 3-speed, tandem sidecar, lamps, horn, hood, screen, speedometer, overhauled (receipts shown), for family Morgan or similar.—Write, 21, Heath Drive, Potters Bar. [3348

EXCHANGE 1918 Singer 2-seater, with dickey, dynamo lighting, self-starter, new condition, for combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3646

EXCHANGES a Speciality.—Motor cycles taken in part exchange for small and large 2 and 4-seaters; bargain prices.—Seabridge, Hansler Rd., East Dulwich. Hours 10-5.30, or appointment (not Sundays). Sydenham 2452. [3671

G.N., 1921, 7-8h.p., electric lights, hood and screen, mileage 1,000, unscratched, any trial, £150, cost over £200; exchange for Morgan or 1920 combination and cash.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [3375

ALLDAYS 2-seater, 8h.p., 3-speed and reverse, worm drive, 5 Riley detachable wheels, hood, side curtains, in perfect condition, exchange for lightweight and cash, or sell £105.—Watson, 6, Cavendish Parade, Clapham, S.W.4. [3464

ENFIELD-ALLDAYS 2-seater, 8h.p., 3 speeds, reverse, under-worm drive, 5 interchangeable wheels, 5 lamps, horn, speedometer, perfect little car, for motor cycle, sell £90 cash either way.—The Mews, Victoria Rd., Clapham. 'Phone: Latchmere 4290. [3534

EXCHANGE the following for combination and cash adjustment either way.—1919 10h.p. Singer 2-seater car, dynamo lighting, also 1914 G.W.K., in grand order, electric lighting, both fully equipped.—28, Woodford Rd., Forest Gate, E.7. 'Phone: Stratford 2598. [3554

## REPAIRERS.

ANY

ARMSTRONG or Sturmey-Archer Gears Repaired promptly and efficiently.—County Engineering Co., Hounslow. [0517

WHITTALL for Welding. Aluminium experts Prompt delivery.

WHITTALL.—Pistons complete for Triumph, Premier, J.A.P., Bradbury, B.S.A., Douglas, Sunbeams, etc.; 14/- to 24/-, on approval, exact to pattern.

WHITTALL.—Cylinders reground and new complete pistons fitted from £2, perfection guaranteed. Twelve years' first-class reputation. Pistons to pattern or sketch.—Whittall Machinists Co., Whittall St., Birmingham. [0017

C. R. FOSTER, of Leeds, is the original cylinder grinding specialist.

CYLINDER Grinding by Foster, of Leeds, has no equal. Price, complete with piston, from £2.

£1,000 is the value of the machine and equipment that will grind your cylinder at our works.—Foster, of Leeds, 170, Cardigan Rd. [0003

ARMSTRONG and Sturmey-Archer Gear Specialists. Repairs while you wait.—Tavistock (below).

ARMSTRONG and Sturmey-Archer Gears completely assembled for 6/- in 2 hours.—Tavistock (below).

ARMSTRONG and Sturmey-Archer Parts at cut prices by return of post.—Tavistock (below).

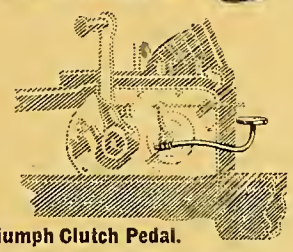
GEARS, shafts, valves, etc., for car or cycle, made promptly.—Tavistock (below).

GEARS.—Send all gear repairs and replacements to Tavistock Engineering Co., 254a, Portobello Rd., North Kensington, London. 'Phone: Park 643. [3719

CYLINDERS Reground, new pistons fitted with rings and gudgeons, from 22/6.—Below.

ENGINES Overhauled in 5-6 days. Specialities: Triumph and Premier. Spare parts supplied (see Parts and Accessories also).—W. R. S. Fiddian, Bush Lane House, Bush Lane, E.C.4. [3414

TO TRIUMPH RIDERS



**Triumph Clutch Pedal.**

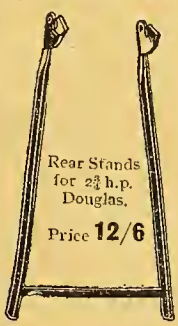
Convert your clutch to foot, as well as hand control. Simple to fit by any amateur in a few minutes. Price **4/-**

Rubbers for Triumph Footrests. Price **2/6**

To DOUGLAS RIDERS.

Semi-T T. Handlebars for 2¾ h.p. Douglas. Price, per pair **15/-**

Ditto for 4 h.p. Douglas. Per pair **£1**



Rear Stands for 2¾ h.p. Douglas. Price **12/6**

Sidecar Wheel Stand Price **12/6**

Sidecar Lamp Bracket for Douglas Sidecars. Price **2/-**

Trade Supplied. Carriage and postage extra.

**BURLINGTON MOTOR CYCLE CO. LTD.,**
**7, South Side, Clapham Common, S.W.4**
*'Phone: Brix'on 2417. Wire.: Burlington Motors, Clapham.*
Just by Clapham Common Underground Station.

## REPAIRERS.

ENGINE Overhauls, quality work only, cylinders reground, pistons, valves, bushes, etc.—Below.

PISTONS for every standard motor cycle in stock from 14/- each.—Below.

CYLINDER Grinding, our speciality 2¾h.p. Douglas reground, fitted with new piston, rings, and gudgeon, 25/- each.—Below.

TRIUMPH, J.A.P., Bradbury, and all 3½h.p., 4h.p., cylinders reground and fitted new piston, rings, and gudgeon, 35/-; returned in 48 hours.—Below.

QUALITY and Satisfaction is our motto. Entrust your work to specialists and get a guaranteed repair.—C.M.D. Engineering Co., Leamington Spa. 'Phone: 768. [9659

HUB Gears.—Great reductions in prices of replacements for Sturmey-Archer and Armstrong gears.

HUB Gears.—Wheels repaired and returned within the week; send for latest price lists.

HUB Gears.—Why pay an extortionate price for fitting a few new parts to an old gear?

HUB Gears.—We undertake to supply the complete new internal portion of the gear mechanism less main driver for £5.

HUB Gears.—A. F. Lewis, Charlestown, Weymouth. Look out for the Lewis patent 2-speed countershaft gear and clutch [0747

DOUGLAS Overhauls.—We specialise in overhauling and repairing Douglas machines.—Tavistock (below).

DOUGLAS Overhauls.—Send your Douglas to us for reliable, efficient, and cheap repairs.—Tavistock (below).

DOUGLAS Overhauls.—Don't have your machine spoilt by amateur mechanics.—Tavistock Engineering Co., 254, Portobello Rd., North Kensington, London. 'Phone: Park 643 [3720

WELDING Aluminium Crank Cases, gear boxes by experts; immediate attention; seasonable prices.—Below.

WELDING Broken Cylinders, flanges, combustion experts of 11 years' experience.—Below.

CYLINDER Grinding on latest machinery, installed since hostilities ceased; accuracy guaranteed; new pistons fitted.—Sadgrove and Co., 140, Conybere St., Birmingham. [4769

STOVE Enamelling.—Frames, 10/-; wheels, 9/-; tanks, makers' colours; plating.—De la Cour, 298, Kennington Rd., S.E. [3708

FOR Expert Engine Overhauls, cylinder grinding, new pistons, and spares, Hedley and Co., Forth St., Newcastle-on-Tyne. [1333

FRAME, chassis, and tank repairs, enamelling and painting by experts; prompt deliveries.—Langham Co., Fitzroy St., Leicester. [6097

INDIAN Owners.—If you have trouble with your machine, send to Indian repair specialists, Dennis, 89, Brixton Rd., London. [1853

ENGINES Rebushed, overhauled, rings fitted, compression guaranteed; singles 30/-, twins 40/-; returned 3 days.—Below.

VALVE Seats, rebuilt from 10/- valves 5/-, valve guides 4/-, valve cups 4/-, piston rings 1/6.—Below.

CYLINDERS Rebored, fitted with new piston, from 30/- to 40/-.—Turner Bros., Engineers, Summerseat, Manchester. [2298

J.A.P. and Blackburne Engine Experts; reasonable and reliable.—Kingsbury Garage, Edgware Rd., Hendon. 'Phone: Kingsbury 134. [4209

WELDING.—Broken cylinders, crank cases, etc., made like new; work guaranteed; quick return.—Tonge Welding Co., Morton St., Middleton, Manchester. [6302

CYLINDERS Reground, new pistons complete, fitted from 25/-, work guaranteed, good deliveries.—Shortridge, 18, Boughton Rd., Brownsover, Rugby. [X4507

ALL Manner of Repairs, rebuilds, etc., to any pattern First-class enamelling. Reasonable charges and quick delivery.—Day, 27, St. Luke's Rd., Birmingham. [3393

ENAMELLING, Plating.—Tanks enamelled as before handle-bars, etc., plated.—Send to Murray's Plating Works, Union St., Coventry. Platers and enamellers to the trade. [0024

CYLINDER Grinding, new pistons, etc.; accurate and highly finished work; prompt delivery; price list on application.—W. and F. Wills, Ltd., Engineers, Bridgwater. [0728

FRAMES.—Repairs and alterations; special frame and tanks built, any design; enamelling and plating.—A. Pilkington and Co., 390, Lichfield Rd., Birmingham. [8466

FRAME Repair Specialists.—New tubes, forks, stays, cut-downs, etc.; enamelling and plating at lowest prices; quick despatch.—A. E. and F. Brittain, Bentley Lane, Walsall. [2622

CYLINDER Grinding, new pistons, rings, and gudgeons, 85 mm. J.A.P.'s, etc., 29/6; other sizes on request. Aluminium pistons if desired.—Vulcan Engineering Works, Walsden. [9642

## REPAIRERS.

WELDING.—Broken flanges, aluminium crank cases, cracked water jackets, valve seatings, welded and machined complete; scored bores filled in and ground to existing pistons.—Below.

CYLINDERS Reground, new pistons fitted complete, in cast iron or aluminium.—West London Welding Co., Essex Place, Chiswick. 'Phone: Chiswick 536. [0415

COULSON Repair Specialists. Spares for all models stocked. Trade inquiries invited. Tube bending, welding, brazing, and enamelling.—H.W.H. Engineering Co., 40, Old Town, Clapham, S.W.4. [2537

SEND Your Engine to me to be thoroughly overhauled and rebushed; singles 40/-, twins 60/-; other repairs quoted for.—Terry, 16, Grove Parade, East Finchley. 'Phone: Finchley 2261. [2951

HARLEY-DAVIDSON Repairs and Overhauls.—We are now able to put work in hand without delay; skilled staff under careful supervision.—Harley-Davidson Motor Co., Ltd., 74, Newman St., London, W.1. [0045

WE can bring your machine up-to-date and make it into a countershaft model by fitting a new back, with Sturmey-Archer gear box; any machine converted.—A. Pilkington and Co., 390, Lichfield Rd., Birmingham. [3673

CYLINDER Grinding and new pistons at cut prices. We specialise in high-class work and quick deliveries for all classes of engines. Discounts to traders.—Kellett and Collinson, Ltd., Havelock Works, Great Horton, Bradford. [8629

CYLINDERS Reground, accurate finish, compression guaranteed: Triumph, Rover, Premier, etc., 27/-; all 2¾h.p. single, 33/-; twins, 2¾h.p. Douglas, 55/-; J.A.P., Indian, James, 60/-; complete with pistons and rings.

PISTONS.—Every pattern, standard or oversize, in stock; low price.

PISTON Rings, high grade; none better; thousands of testimonials; oversize or step cut 2/-, standard 1/6 each; return post.—Patent Rings, 30, Wigan Rd., Atherton. [5191

V.S. Motor Cycle Agency.—Supplying spares and overhauling V.S. 2-speed gears, which are also fitted to Matchless machines, etc. New and second-hand V.S. 2-speed gears in stock.—Geiger, 24, Mansfield Rd., Gospel Oak, London, N.W.3. [3760

PACK All Your Troubles in a sound box and forward immediately to Bishop, Engineer, Cotham Rd., Bristol. Unobtainable parts for all makes in two days. Every description of machine work undertaken, and every job guaranteed. [3297

WELDING, Welding, Welding.—Welding done by experts; cylinders, crank cases, gear boxes, pistons, cranks, flanges, etc.; aluminium a speciality. No cure no pay, and all work returned in 6 days.—H. Heap, 105, Bissell St., Birmingham. [0023

BEACH Engineering Co., 42, Earl St., Coventry.—Engines rebushed, cylinders reground, aluminium or C.I. pistons fitted from £2; connecting rods rebushed, valves 5/-, guides 3/6; pistons complete from 25/-, rings 2/-; valve caps 4/6; other repairs quoted for. [0593

CYLINDERS, Humber, Rex, Triumph, Premier, few 2½h.p. Singers, and 4½h.p. with chipped fins: Coventry's best productions; guaranteed genuine, not imitations. Cylinders ground on our new Heald grinder. Old cylinders made new.—Crown Motor Works, Vecqueray St., Coventry. [X4577

N.S.U. Gears. N.S.U. Gears. N.S.U. Gears.—Butterworth's Garage can undertake the repair of these gears at short notice. Good stock of replacements always available. Send gear along to us.—Butterworth's Garage, 64, Mill Lane, Brixton Hill. 'Phone: Streatham 2813. [3496

HUB-GEARED Machines Converted to Countershaft, or conversion sets supplied to suit all makes; gear boxes and spare parts for same in stock; recommended by the leading motor cycle manufacturers. — Sheldon Engineering Co., Bayley Lane, Coventry. 'Phone: 634. [3594

BLACKBURNE Spares.—Send to us the manufacturers, for all spare parts; prompt service, reasonable prices. Repairs and complete overhauls to Blackburne or any make of machine; enamelling (tanks a speciality), nickel plating, etc.—Oshorn Engineering Co., Gosport, Hants. [0652

FRAME and Chassis Repair Specialists. Cut-downs, new forks, back stays, chain stays; fixed and hub gear machines converted; tube bending and machinery of every description; obsolete parts made to order; urgent jobs returned in 12 hours.—The Enfield Engineering Co., 31, Silver St., Enfield. [5049

DOUGLAS Specialists.—We have built over 100 Douglas machines this past season. Send us your repairs. All parts in stock. Complete overhauls, including enamelling and plating, in ten days. We pay carriage one way.—The Winstan Henney Motor Co., 63, South End, Croydon. 'Phone: 2431. [2890

SPEEDOMETER Repairs.—Caution!—We beg to advise owners of Stewart speedometers that repairs can only be satisfactorily carried out by the makers, who alone possess the proper facilities for repair and subsequent necessary calibration of their instrument. We accept no responsibility for the working of instruments sent elsewhere which nullifies our guarantee.—The Cooper-Stwart Engineering Co., Ltd., 11, Broad St., Bloomsbury, London, W.C.2. [2950

**Sturmey-Archer and Armstrong Gears. Immediate Repairs. All parts for all types in stock.**

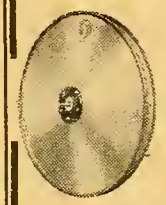
Quotations despatched same day as gear is received. STURMEY-ARCHER COUNTERSHAFT GEARS, full range of 2 and 3-speed parts in stock. Any type of gear replacement made to pattern for motor cycles and cars. Instruction sheets and price lists by return of post; send stamps. (We do not repair push cycle gears.) Use our Gear Oil, specially prepared for Hub and Countershaft Gears in quart tins, 3/-, pt tin, post free 3/6. Sturmey Countershaft Gear Boxes in stock, wholesale and retail—2-speed £11, 3-speed £17.

**CROMWELL ENGINEERING CO., 327, PUTNEY BRIDGE ROAD, S.W.15.**

Telegrams and Telephone—Putney 1601.
*Send Repairs to Putney Station (L. & S.W.R.)*

For the convenience of customers we have altered our business hours as follows:—Weekdays, including Saturdays, 8 a.m. to 7 p.m.

**Start the New Year by fitting**



**ACE** (PATENT)

**SUPER DISCS**

Their Central fixing plates make fitting a simple matter, and, besides the hours of wheel cleaning they will save you, they will add a touch of refinement to your machine or combination.

**BLACK. Price 27/6 per wheel. Polished.**

*Write for our New Illustrated List.*

**CORNERCROFT, LTD., Ace Works, COVENTRY.**

**STURMEY-ARCHER and ARMSTRONG**

**Hub or Countershaft Gears repaired while you wait.**

Actually in Stock—New Sturmey-Archer Countershaft Gear and Boxes spare parts. Send for illustrated list. Trade supplied. Send wheels, Hounslow L.S.W. Railway.

**COUNTY ENGINEERING CO., 64 Staines Road, HOUNSLOW.**

Wires: 'Three-speed, Hounslow.' 'Phone: Houns'ow 322

**AFTER THAT DIRTY JOB**

**SNOWHYTE**

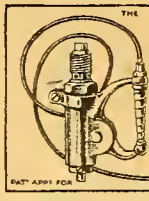
**will clean the hands with or without water and leave them soft and supple.**

*NO SAND OR GRIT IN SNOWHYTE.*

In tins, Car size, 1/- Cycle size, 6d.

From Garages, Cycle Stores, Ironmongers, etc.

**SNOWHYTE Co., 1-3, Pocock St., LONDON, S.E.1.**



THE **S.P.J.** SAVE PETROL JET — HANDLEBAR CONTROLLED

Reds. No. 683411.

**Variable Jet Attachment** gives increased m.p.g., power, and easy starting. Can be fitted to most carburetters. State make, date, and type of carburetter length of jet, including plug. **35/-.**—Sutton Pocklington & Co., 111, Clerkenwell Rd. E.C.1 *Write for Leaflet.*

PAT. APPD. FOR

## REPAIRERS.

GODFREY'S, Ltd., 203, Gt. Portland St., London, W.1, specialists in motor cycle repairs of all descriptions. Completely equipped workshops at 14, Miller St., Camden Town, N.W. ('Phone: Museum 2434), which afford exceptional facilities for overhauls and repairs at moderate prices. Estimates given. [0639

ACETYLENE and Electric Welding.—Broken flanges, cracked water jackets, scored bores, worn bearings built up; aluminium gear boxes, crank cases, any broken motor part welded and machined up and returned in 7 days; 14 years' experience.—Lincoln Jeffries, Jun., Gun and Motor Maker, 120, Steelhouse Lane, Birmingham. 'Phone: Central 729. [2818

WHITE and Watson, motor cycle repair specialists. Another reduction in reboring prices. Douglas riders, now is your opportunity. 2¾h.p. and 4h.p. Douglas cylinders reground and fitted with 2 new pistons complete, 35/- and 45/- per pair. Other cylinders at the following rates: Up to 65 mm. 22/6; 70 mm., 27/6; 80 mm. 32/-; 85 mm. 35/6; and over, 37/6; 2-strokes extra; aluminium pistons, Brico rings only fitted to our rebores; engines rebushed, rebalanced, and overhauled. Gear boxes overhauled and replacements machined.—White and Watson, 80, Belvedere Rd., S.E.1. [3400

IF Only the Best will satisfy you, then the Tennant Engineering Co., 238, Bristol St., Birmingham, alone can please you. Super-critical you may be, but their work will pass your inspection down to the last detail. No firm has more experience, no firm has keener workmen, no firm has greater or better facilities for turning out perfect work, and no firm will strive more to give you satisfaction. Cylinders rebored and fitted new pistons. Rebushing of every description. Engines completely overhauled and returned full of vigour and vim. Frames altered and repaired. Everything fully guaranteed and at competitive prices. Official repairers to A.C.U. and R.A.C.—'Phone: Mid. 1928. [0047

## PARTS AND ACCESSORIES.

*NOTE: In addition to advertisements under this heading, advertisements of Spare Parts for individual makes of motor cycles will be found at the end of the advertisements of such makes in the classified pages of "Motor Cycles for Sale."*

COUNTY of London Engineering Works, Ltd.

AUSTER Wind Screens, Triplex glass, adjustable aluminium fittings, 13×6½in., 10/-, post free.

ELECTRIC Inspection Lamp, to fit over speedometer, complete with bulb and cable, 2/6 each.

EXHAUST Boxes, Douglas 2¾h.p., 15/-; Douglas 4h.p. clutch races, 2/6; screwdrivers, 6in., 8in., 10in., 10d., 1/-, and 1/2 each.

HIGH-TENSION Wire, 9 mm. 5d. per yard, 25 yard coil 8/6; 7 mm., 4d. per yard, 25 yard coil 6/-; 5 mm., 3d. per yard, 25 yard coil 4/-; 3 mm., 2d. per yard, 25 yard coil 2/-; postage on coils, 5 mm. and upwards 1/-, 3 mm. 9d.

ALL Goods on approval per return post on receipt of cash; money refunded if not satisfied.

COUNTY of London Engineering Works, Ltd., 51a, New Park Rd., Brixton Hill, London, S.W. Tel.: Streatham 2893. T.A.: Igmitionac, Brixstret, London. [2473

P.M.—Gears £3, engines £8, chain sets 25/-, tail pieces 4/6, valve caps 2/9.

P.M.—Sidecar chassis, stoved enamelled, plated fittings, tyre and tube, £4/10; toolbags, 4/6.

P.M.—Every part P.M., less chain cases.—Welding Co., 55, St. James's Rd., Bermondsey. [3786

PRIDE and Clarke for ex-W.D. lamp sets at bargain prices.—Below.

**27/6** Buys largest size P. and H. No. 127 lamp set; medium size set P. and H. No. 125, 25/6; lamps alone, 10/6.—Below.

**25/6** Buys medium size ebony finish Miller 31H lamp set; lamps alone, 9/-; Lucas No. 462 lamps, 12/6; P. and H. generators, 14/-; good second-hand generators, 6/-; rear lamps, 3/7; postage on lamps, 1/6.—Below.

DOUGLAS 2¾h.p. New Cylinders, 25/-; crankshafts, 2¾ and 4h.p., 25/-; connecting rods, 15/6; pistons, 6/6; rings, 1/-; gudgeon pins, bushes, tappet guides, 1/6 each; chain wheels, 5/-; Renolds chains, 7/-; genuine Douglas tool rolls, 16/-.—Below.

PRIDE and Clarke.—All spares for 2¾h.p. Douglas in stock. Postage extra; stamp reply.—Pride and Clarke, 156, Stockwell Rd., Brixton, S.W.9. Tel.: 898 Brixton. Entrance to garage, Garden Row. [3714

INDIAN Front Forks, gear boxes, and engines, and all parts for same.—Below.

INDIAN Intake Domes, carburetters, magnetos, clutches, kick starters.—Below.

INDIAN Carriers, chains, and guards, springs, sprockets; in fact, everything for 7-9h.p.; all parts absolutely new.—Dennis Accessories Stores, 89, Brixton Rd., London. Specialists in Indian Repairs. 'Phone: Brixton 3129. [1195

## PARTS AND ACCESSORIES.

LYNO.

LYNO 5-6 and 8h.p. Spares, enormous stock, undoubtedly we hold the largest stock in England. genuine Clyno parts, brand new.

[ARBLE Arch Motor Exchange.—No ridiculous prices. Trade supplied. Liberal discounts on antities. Send stamp for our Clyno list and com-e prices.

LYNO Centre Frame, 6 or 8h.p., 50/-; rear portions, 35/-; tanks complete with all fittings, inding Best and Lloyd lubricator, 50/-; front stands, 5; rear stands, 8/6; Brampton spring forks, £3/10; lex, £3/15; wheels, 26in. or 28in., 38/-; mudguards, mpton, front 12/-, rear 10/-; handle-bars, 8/-; tal tool boxes, to fit on top tube, 5/-; sidecar shions, 7/6; sidecar C springs, 17/6 pair; aluminium tboards, 10/- pair; hundreds of other parts, all and new.

LYNO 6h.p. Gear Boxes, 3-speed, K.S., foot-controlled clutch, as new, £8; brand new, £12.

OMPLETE Set as follows: Clyno 8h.p. frame, complete, fitted with spring seat pillar, latest Bramp-Biflex forks, 2 gallon tank, complete with all tings, including Best and Lloyd lubricator, 2 interangeable wheels, 26in. or 28in., back driving sprocket, ted with internal expanding Ferodo-lined brake, 3-eed gear box, kick start, hand-controlled clutch, ndle-bars, front and rear stands, front and rear udguards, carrier, wheel spindles; what a gift for 25; list price over £60.

EMEMBER the Above are all brand new and perfect Clyno parts, and would be ideal for the ting of 8h.p. J.A.P. or similar engines. (Please te we have only 11 more of these sets left out of total of 73.)

.A.P. 8h.p. Spares.—Cylinders, rear only, 35/-; new crank cases, 35/- each; double cam gear wheels, 6; crank pins, driving side shafts, and timing side afts, 3/- each; mainshaft timing wheels, 2/- each; ston rings, 9d. each; valves, 3/6 each; gudgeon pin ishes, 1/6 each; all brand new.

h.p. Douglas Water-cooled Cylinders, brand new, 45/- each; new pistons, 12/- each; new crankafts, 35/- each.

OVENTRY Chain, 5ft. 2in. lengths, ⅝×¼, brand new, 17/6; a gift.

ERY Special Offer to clear a real bargain.

00 LEATHER Helmets, soft tan, leather-lined chamois, 4/- each; a real bargain.

OXES of 50, prepared patches; 3/- each; real bargain.

ELT Rims, brand new, 19in. outside diameter, 2¼in. wide, for ¾ or ⅞ belt, 5/- each. The ove are 2¾h.p. Douglas size; various other sizes in ock, new and second-hand.

RIUMPH Toolbags, leatheries, Empire de luxe, fitted N.P. lock and key; 6/6 each.

UCAS Major Girder Wrenches, 7½in. genuine, listed 13/6; our price 7/-.

AGNETOS.—Splitdorf single, anti. variable, guaranteed perfect, 30/-. Please note, these are not nverted starter magnetos. They are the real thing.

NGINES.—Brand new 1921 Precision 3½h.p. 2-stroke, detachable cylinder head, complete with ag., exhaust box, and long extension pipe, £15; lyno 5-6h.p. new parts fitted, £8/10.

EAR Luggage Carriers for Sidecar; 8/- each; a bargain.

RAMPTON Biflex Latest Type Heavyweight Spring Forks, £3/15 pair, list price over £10.

.S.A. Frame Centres, 35/-; carriers, 10/-; rear mudguards, 8/-; valves, complete spring, cup, and otter, 5/- each; fork springs, large 2/-, small 1/-.

00 CLYNO Metal Tool Boxes, to fit on top tube, very special price to clear; 5/- each; listed 7/6.

EW IMPERIAL 8h.p. Spindles, complete with nuts, cones, and dustcaps, back and front; 4/- air.

COTT Rear Carriers, brand new; 10/- each, to clear.

50 CLYNO Metal Cases, for carrying spare tube; 1/9 each to clear; listed 4/6.

00 TERRY'S Spring Fork Links, suitable for Druid and other forks, listed 15/-; our price o clear, 5/- pair.

RAND New 28×3 Butt-ended Tubes, in boxes; 5/- each.

00 PAIRS Sidecar C Springs, Clyno (Terry), 4-leaf, bushed, very special offer; 17/6 pair.

50 SIDECAR Cushions, well sprung and padded, to clear; 7/6 each; pillion seats 7/-; real argain.

E.I.C. Contact Breakers, brand new; 10/- each to clear.

00 PAIR B.S.A. Footrests, cranked and adjustable, suit any machine, listed 21/-; our price /- pair.

50 AUTOKRAT Mechanical Horns (these are really a first-class article), listed 27/6; our rice to clear, 9/6 each.

*(This advertisement continued in third column.)*

# "QUICKLIT"

**Incandescent Petrol Gas Lamp.**

**300 Candle-power at a cost of ½d. per hour for fuel.**

**USES ONE LARGE DURABLE MANTLE.**

**HAS AUTOMATIC BURNER CLEANER**

Send for List showing all designs for outdoor and indoor lighting.

**Goods sent by return of post.**
*All models in Stock.*

**LIGHTS with MATCHES**
(No methylated spirits required).

**Prices:** Table Lamp (as illus.) .. **£3**
Storm Lantern **£3**
Real Silk Shades in beautiful colours and patterns .. **32/-**
Table Lamps to burn paraffin, **7/6** extra.

**THE QUICKLIT LAMP CO.,**
Proprietors: (Frank Dunderdale, Ltd.),
**61, Lower Mosley Street, MANCHESTER.**
*'Phone: Cent.* 1336.

# REYS

**173, Gt. Portland Street.**
*Telephone—Langham 1257.*

# HIRE

Motor Cycles and Combinations.
Any period from one day
**A GOOD SELECTION OF 1922**

# MODELS IN STOCK

*Easy payments taken on new machines, and exchanges entertained.*

## SECOND-HAND MACHINES.

| | | |
|---|---|---|
| 1920 | **JAMES,** 2-stroke, 2-speed ..... | £45 |
| 1919 | **ZENITH,** sports, 6-h.p. ..... | £95 |
| 1915 | 4 h.p. **TRIUMPH** and Sidecar..... | £60 |
| 1920 | **LEA-FRANCIS** and Sidecar, all access. | £110 |
| 1918 | **HARLEY-DAVIDSON** ..... | £85 |
| 1919 | 2¾ h.p. **NEW IMPERIAL** 2-speed, clutch, and kick-starter ..... | £50 |
| 1919 | **TRIUMPH,** all accessories ..... | £80 |
| 1921 | **MARTINSYDE** Combination, all access. | £120 |
| 1921 | 6 h.p. **NEW IMPERIAL** Combination, all accessories..... | £115 |
| 1920 | **TRIUMPH,** all accessories ..... | £80 |
| 1920 | 8 h.p. **NEW IMPERIAL** Combination, all accessories..... | £125 |
| 1921 | 1¾ h.p. **COULSON,** all accessories .... | £68 |
| 1920 | 4-speed, **A.B.C.,** as new, all accessories | £75 |

**G.N'S, COVENTRY PREMIERS, MORGANS, ROVERS, IN STOCK**

**REPAIRS.**

**Good Machines taken in for Sale on Commission**

*New Imperial Spare Parts Stockists.*

## PARTS AND ACCESSORIES.

BULB Horns, nickel or black, exceptional value, to clear; 10/- each; half usual price.

P. and M. Spares.—New Renolds gear chains, 10/- each; handle-bars, 10/-; rear brake, complete with drum to screw on rear hub, 30/-; tool bags, 8/- each; valves, 3/-; cylinder, 1909-1913, 40/-; all above brand new.

CARRIAGE on All Above Extra. Large stocks of other interesting parts. Cheques and P.O.'s should be made payable to Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd. 789. 'Grams: Archmotex, Edge, London. [3738

CLYNO.—All parts at quarter list prices; write requirements.—Llanage.

BOWDEN Inner Wire, 1d. ft.; outer, 4d. ft; new; Triumph connecting rods, complete, 2/6; postage extra. — Llanage, 79, Waverley Rd., Redland, Bristol. [3323

TOOL Rolls, strong leather, with strap and pockets, 7×18in., 3/-; other sizes made.—Below.

LEATHER Knee Grips with oval pads, 5/6 pair, carriage paid; cash refunded not approved.—Below.

LEATHER Leggings to measure; illustrated list and instructions free from makers.—County Legging Co., Franchise St., Perry Barr, Birmingham. [3355

BINKS Carburetters.—Large stock ready for immediate delivery.—Booths Motories, Halifax.

BINKS Carburetters.—We specialise in these; all models supplied.—Booths Motories, Halifax.

BINKS Carburetters.—We take your old carburetter in exchange.—Booths Motories, Halifax.

BINKS Carburetters for Douglas, Scott, Indians, Harley-Davidsons, Triumphs. — Booths Motories, Halifax.

BINKS Carburetters enable your engine to tick over; try one.—Booths Motories, Halifax.

BINKS Carburetters save petrol and give more power.—Booths Motories, Halifax.

BINKS Carburetters.—Let us take your old carburetter in exchange.—Booths Motories, Halifax.

NEW Sidecar Wheels 19/9, hubs 10/6, rims 5/9, sidecar blades with valance 8/9, with stays and lug 19/9, springs 12/6, 2¼ or 2½ tyres 17/6.—Booths Motories, Halifax.

MAGNETOS, Bosch and C.A.V., weatherproof, cheap; magneto for Douglas, 45/-. — Booths Motories, Halifax.

150 CARBURETTERS.—Nearly new 1920 carburetters; B.S.A., 38/6; Brown and Barlow pilot jet, 45/-; double lever Amac, 45/-; automatic Amac, 32/6; Capac for Douglas, 32/6; 1921 models Capac, 38/6; Flexi and S.U. for Douglases, 30/-; good Brown and Barlows and Amacs, 22/6; 1920 Binks, 50/-; carriage 1/3 extra.—Booths Motories, Portland Place, Halifax. [2313

COPPER Exhaust Pipe, polished, all sizes stocked, straight, from 2/3 foot; bending a speciality.—Evans.

TRIUMPH Pipes, special offer, complete with clip; long copper 14/6, steel 13/-, plated 18/-.—Evans.

DOUGLAS, 2¾h.p.; copper 12/6 pair, steel 10/-, plated 17/6.—Evans.

RUDGE, Sunbeam, Rover, Norton, copper 20/-, steel 16/-; New Imperial, Omega, Levis, etc., copper 14/-, steel 10/6; all T.T. bends.—Evans.

MUFFLER Ends (Norton pattern), detachable, fish-tailed, to suit above, various sizes stocked, from 2/6.—Evans.

FOOTBOARDS, solid aluminium, upcurved front and heel piece, with adjustable clips, 15/- pair; with fittings for Douglas, 15/-; for Triumph, 16/-.—Evans.

WHEELS from 42/- pair; specials built to order; any parts supplied.—Evans.

TOOL Boxes, armoured, suit Triumph, etc., 10/9 pair; with locks, 13/- pair.—Evans.

HANDLE-BARS, plated, Triumph pattern, W.D. or D.R., ⅞in. 14/-, 1in. 15/-.—Evans.

LEGSHIELDS, suit all machines, enamelled and gold lined, complete, 13/6 pair; aluminium, 15/- pair. —Evans.

BELT Rims, any size to order, 16/6; spring forks from 60/-.—Evans.

TAN-SAD Pillion Seats brand new, to clear, 29/6 each.

CARRIAGE Free, cash with order, discount to trade. —Evans Bros., Brougham St., Hockley, Birmingham. [X4525

STURMEY-ARCHER Gear Boxes, brand new; in stock.—County Engineering Co., Hounslow. [0518

GEAR Box, 3-speed and clutch, latest type; price £12/10.—Sinclair, 32, Charing Cross, London. [2595

N.S.U. Gears, fit Bradbury, N.S.U., Rex, Rover, etc.; £5/10.—Box 8,002, c/o *The Motor Cycle.* [3756

1911 Douglas 1910 Replacement Parts; cash approval anywhere.—35, Clifford St., Manchester, S.E. [3220

## PARTS AND ACCESSORIES.

DOUGLAS 2¾h.p. Cylinders, new, fins chipped, 20/-; Douglas semi-T.T. bars, 12/-.

P. and M. Sidecar Springs, new, 15/- pair; P. and M. luggage carriers, fix on sidecar, 10/-; P. and M. handle-bars, 12/-.

50 PREPARED Patches in tin, 3/- each; Terry pillion seat springs, 2/- doz.

CLYNO Parts.—Quantity of Clyno parts to be cleared, separate or in one lot.

CLYNO, complete sets (less engine).—It will pay you to get our prices.

ALL above carriage extra; stamp for reply; approval against cash.—W.J.C. Motor Co., 5, Addison Av., Holland Park, W.11. Park 2071. [3656

DOUGLAS 2¾h.p. Unused W.D. Spares; bargain prices; illustrated lists free.—McNeille and Platt.

DOUGLAS 3½h.p. 1914 Unused W.D. Spares; bargain prices; lists free.—McNeille and Platt.

DOUGLAS 4h.p. Unused W.D. Spares; bargain prices; illustrated lists free.—McNeille and Platt.

RUDGE, Scott, B.S.A., unused W.D spares; bargain prices; illustrated lists free.—McNeille and Platt.

ZENITH 3½-4h.p. Unused W.D. Spares; bargain prices; illustrated lists free.—McNeille and Platt.

STURMEY-ARCHER 3-speed Gear Boxes, complete, brand new; £13/10.—McNeille and Platt.

CARRIAGE Extra. Cash returned if not satisfied. All spares sent per return.—McNeille and Platt, 57, Great George St., Liverpool. 'Phone: 1092 Royal. [3078

N.S.U. Gear, new, less controls, Bradbury, £5/15; Philipson, 90/-.—Box 8,000, c/o *The Motor Cycle*. [3754

MEDIUM Weight Druids £3, lightweight forks £2, clutch wheel and control £2/10.—17, Ashover Rd., Leicester. [3563

P. and M.—Incomplete machines, £17/10; 1918 machines, renovated as new, £50, guaranteed.—Below.

P. and M.—Engines, £7/10; gears, £5; forks, 70/-; tanks, 15/-; wheels, 35/- pair.—Below.

P. and M.—All new. Magnetos, 45/-; chain case, 5/6; chain case sets, 32/6; saddles, 25/-; valves, 5/-; piston rings, 1/-; bushes, 1/-; drip feeds, 10/6; frames, 25/-; footrest rubbers, 2/- pair; valve caps, 4/6.—Below.

P. and M.—New tyres, 17/6. All spares stocked. Immediate delivery. Enquiries, stamp, please.—Below.

P. and M.—The Specialist and Agent, Lewis M. Inman, Durham Rd., Seaforth, Liverpool. 'Phone: Waterloo 296. [3595

TRIUMPH and Premier Spares, new and second-hand, most varied assortment in the kingdom.—Forfield (below).

TRIUMPH Frame Centres, 1908-13, 32/-; cylinders, 1905-21, new, £3/15.—Forfield Motors (below).

TRIUMPH Tanks complete, 1908-13, 32/-; pistons, new, 1905-21, 21/6.—Forfield (below).

TRIUMPH Countershaft Carburetters, 36/6; front guards, wide bottom type, 16/6.—Forfield Motors (below).

TRIUMPH Type Extra Wide Tanks, complete, new, 2½ gallons, 60/-.—Forfield (below).

TRIUMPH Driving Sprockets, 8/-; chains, 6/-; chain covers, new, 18/-.—Forfield (below).

TRIUMPH Parts for any year's model, new or second-hand, quoted on request.—Forfield (below).

PREMIER.—All parts in stock: Flywheels, cylinders, pistons, valves, valve caps, connecting rods, crank cases, cams, frames, forks, wheels, etc., new or second-hand.—Forfield (below).

J.A.P., Douglas, B.S.A., Singer, Rex, P. and M., and other spares; all replies per return.—Forfield Motors, Forfield Place, Leamington Spa. [X4535

GRADO Gears, suit 4h.p., 60/-; wanted, N.S.U., any condition, cheap.—Box 8,001, c/o *The Motor Cycle*. [3755

EXHAUST Lifters, etc.; Bowden controls, complete with adjusters, 5/-, 52/- doz.—61, Clarence Rd., Teddington. [3344

SEND for our Helmet and Tyre Price List.—Emanuel and Co., Tyre Factors, 37a, Balls Pond Rd., Dalston, N.1. [0738

2¾h.p. Douglas.—Frames, sound, enamelled, £3/10; front forks for same, complete and sound, 30/-.—Dowell (below).

2¾h.p. Douglas.—Front cylinders, new, 25/-; main ball races, new, 13/6 pair; gear box ball races, 3/- each.—Dowell (below).

P. and H. Lamp Sets, largest size, new, with Miller generator, 27/6.—Dowell (below).

2¾h.p. Douglas Spares.—Full range of new and second-hand parts always in stock; stamp for reply, please; carriage extra.—Dowell, Pyrford, Surrey. [3731

BINKS Carburetters, all models; liberal exchanges; used Amac, B. and B., from 8/6.—Lockhart, East Markham, Newark. [3349

# HERBERT ROBINSON
## GREEN STREET, CAMBRIDGE. LTD

### MUDGUARDS.

New wide pattern, as illustrated, suitable for Triumph and B.S.A., **25/6**; Triumph new wide back, **16/6**; Triumph pattern complete with stays, **12/6**; Douglas T.T. **10/6**, touring **25/-**.

### Aluminium Valve Caps

as used in T.T. races, suitable for Douglas, Triumph, Sunbeam, Norton, J.A.P., etc., **5/-** each.

### HANDLE-BARS.

suitable for Triumph W.D., Douglas T.T., complete with grips, **17/6**; also shop-soiled T.T. and touring, tin. stem, 1in. top, **10/-** pair.

### LEATHER HELMETS.

The Brooklands leather and fleece-lined, **7/6** and **10/6**. R.A.F. Pattern, trimmed fur and fleece, **21/-**; fur and chamois lined, **25/-**; lined throughout fur, **30/-**. Long R.A.F. Winter Pattern, half fur-lined, **27/6**; fur and chamois, **32/6**.

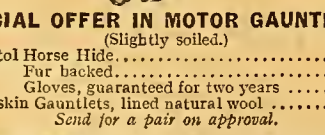
### 2¾ DOUGLAS SPARES.

SOILED.

Ex Government Stock. All guaranteed. Driving Chains, **8/-**; Front Brakes, **12/6**; Pulleys, **7/6**; Sprockets, **4/6**; Chain Wheels, **7/6**; Valve Guides, **1/6**; Valves, **3/-**; Amac Caps, **2/-**; Rocker Arms, **4/9**; Petrol Pipes with union nuts, **1/6**; Hubs, **18/6**; Piston Rings, **1/-**; Front Forks only, **30/-**; Fork Links, **1/-**; Magneto Studs, **2d.**; Frames, **£4**; Front Stands, **3/6**; Undershields, **7/6**; Cylinders, **25/-**; Chain Covers, **3/6**

### EXHAUST PIPES.

Straight through, direct from engine. No back pressure. Heavy nickel-plated. Douglas 2¾h.p., **21/-** pair. Triumph, Rudge, Rover, Sunbeam, complete with removable fish tails, **21/-**; Copper, **27/6**. All in stock. No waiting. Illustrations post free.



### SPECIAL OFFER IN MOTOR GAUNTLETS.

| (Slightly soiled.) | Pair |
|---|---|
| Asbestol Horse Hide | 8/- |
| ,, Fur backed | 8/- |
| ,, Gloves, guaranteed for two years | 8/- |
| Sheepskin Gauntlets, lined natural wool | 8/- |

*Send for a pair on approval.*

**Douglas, Triumph, J.A.P., Norton, Levis, B.S.A., Enfield, Villiers, Rudge, and Sturmey-Archer.** All Parts in Stock. Complete Illustrated Lists, post free.

## PARTS AND ACCESSORIES.

THE Effra Motor Works.—A few more machines, Clyno combinations, due order and condition, ride away; £55.—Below.

CLYNO Ammunition Carrier, new, less gear box, £40; also some complete; few P. and M. machines and sidecars.—59-63, High St., Clapham, S.W.1. [3234

ROBINI Manufacturing Co.—Triumph. Special offer. Back stands, 11/6; silencers, 12/6; long exhaust pipes, 14/6.—Below.

DOUGLAS 4h.p.—Silencers, 11/6; valanced mudguards, complete, 25/6 pair; frames, as new, £4/5.—Below.

DOUGLAS 2¾h.p.—Silencers, 10/6; frames, as new, £4; back stands, 9/6; carriage extra.—Below.

LEATHER Driving Gauntlets, fleecy lined, 6/6 pair; wonderful offer; carriage extra.—'Phone: Brixton 1585.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [3724

LUCAS Acetylene Lamps for combination, equal new, headlight King Road; 75/-.—Manley, 40, Innerbrook Rd., Torquay. [3225

CLYNO Spares for parts, 5/6; 8h.p. and 2-stroke.—Write, Claridge's, Clyno Specialists, 8, Chandos Rd., Redland, Bristol. [3326

150 SCREWS, nuts, washers, set screws, 3/-; 144 bright steel bolts, 2/6; 72 bright hexagon nuts, 2/6.—See below.

72 BEST Spring Washers, 3-16in. to ½in., 1/9; 36 castle nuts, ¼in. to ½in., 1/9.—See below.

144 Coppered Bifurcated Rivets. 8d.; 12 8in. hacksaw blades, 1/6; any of the above carriage paid.—Wood, Tithebarn St., Preston. [X4268

BASTONES.—Blackburne 4h.p. engine, with Amac carburetter and Thomson-Bennett magneto and control; real bargain, £23.

BASTONES.—Blackburne 8h.p. twin engine, with carburetter; £30.

BASTONES.—Grado Multi pulley, with kick starter, less control handle and bracket; £3/10.

BASTONES.—Set of 4 wheels, 26×2¼×2½, wheels with front and back axle for cycle car; £5.

BASTONES.—Bowden front brakes, complete, 11/- and 15/-; Bowden magneto control, 11/-.—228, Pentonville Rd., King's Cross, London, N.1. Tel.: 2481 North. [3770

P. and M. Frame, forks, wheels, tank, engine, carburetter, magneto, all in good condition; £14.—Box 273, c/o *The Motor Cycle*. [3338

STAINLESS Steel Valves banish all valve trouble; any pattern; 10/- each, post free.—Capacity Eng. Co., Broseley, Shropshire. [5036

FOOTBOARDS aluminium, for P. and M.'s and Triumph; 10/6 pair; postage 1/-; any type made; trade supplied.—Below.

P. and M.'s Aluminium Chain Covers, with loose caps and back guard; 29/- set; postage 1/3.—Below.

NUMBER Plates, aluminium, polished letters and border; cycle 10/6 pair, car size 15/-.—Towler, 22, Thorn St., Burnley. [3307

STURMEY J.S. Hub, complete, all controls, pedalling gear, Triumph adjustable pulley; first £5.—Denny Bottom P.O., Tunbridge Wells. [3276

TRIUMPH Cylinders, second-hand and new, all models in stock; also all parts, second-hand and new; enquiries invited.—Below.

ALBION 2-speed Gear Boxes, also clutch kick-start models, in stock; second-hand plain 2-speed, £3/10; Roc ditto, £3/5; Sturmey 3-speed heavyweight, £11/15; also new ones; exchanges entertained.—Below.

BRAMPTON Spring Forks, heavyweight, new, £3/10; lightweight ditto, £3; Arden lightweight spring forks, £2; Druid heavyweight, £3/5.—Below.

WILLIAMSON, Singer, Premier, Rex, and Ardeu parts, new and second-hand Let me quote you.—Alf. Holland, Hearsall Lane Corner, Coventry. 'Phone: 1945. [X4578

DOUGLAS Patent Leather Mudshields, no-rattle attachments, complete, 5/-, postage 1/-.—Baskerville, School Rd., Hale, Cheshire. [3273

GENUINE Douglas Patent Leather Mudshields, with attachments, noiseless; 5/-; postage 1/-.—Baskerville School Rd., Hale, Cheshire. [3572

ARMSTRONG 3-speed Wheel, guaranteed as new, controls, back stays, £9; Rex frame, complete, £1.—Brownlow Cottage, Pleasington, Blackburn. [X4413

LAMPS.—P. and H. and Miller, all sizes, reconditioned, guaranteed complete and good working order, 7/6 each; Lucas, 10/-; post 1/-.

GENERATORS.—All full size, overhauled, and tested; 7/6; post 1/-.

REFLECTORS.—P. and H., large Mangin mirrors, 5/-; smaller sizes for Miller and Lucas, 4/-; post 9d.

SMALL Parts.—Burner holders, reflector studs, wing nuts, etc., at reasonable prices; old lamps, generators, or other accessories needing repairs taken in part payment for new or reconditioned accessories in stock.

ALL Goods sent on approval on receipt of cash.—Snodgrass, Ambleside Rd., Lightwater, Bagshot, Surrey. [3329

THE MOTOR CYCLE

ESTABLISHED IN 1903

FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2848 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## The Dates of the T.T.

IN the last two or three issues of *The Motor Cycle* we have discussed the suitability of the dates chosen for this year's Tourist Trophy races. The view has been expressed in many quarters that the Tuesday and Thursday of the week preceding Whitsuntide cannot be regarded as the most suitable to ensure a representative entry from the trade, since the week prior to this Bank Holiday is quite the busiest of the manufacturers' year. In view of the opinions which were published in *The Motor Cycle* from the different manufacturers and riders on the subject of the dates, we are informed by the secretary, Mr. T. W. Loughborough, that the Auto-Cycle Union Management Committee met and considered the matter afresh, and it must be confessed that, after careful reinvestigation, an easy solution of the difficulty is not clearly apparent.

The Isle of Man authorities have been consulted with regard to other dates, and have agreed to Tuesday, May 23rd, and Thursday, May 25th, being available if the A.C.U. decide to hold the races a week earlier. The only objections raised against this course are the slightly reduced daylight available for practising, and the fact that only a single daily service of small steamers could be relied upon. If the Isle of Man Steam Packet Co. could be prevailed upon to extend the facilities they have offered for a double daily service one week earlier, the air would be cleared.

The A.C.U. has further considered the advisability of anticipating the present date by one day, *i.e.*, holding the event on the Monday and Wednesday, but then difficulty arises as to the examination of the machines, which, it is apparently thought, must take place the day prior to the race.

Of the different alternatives discussed, and knowing as we do the feeling of an important section of the trade and T.T. following affected, a decision to hold the events on Tuesday, May 23rd, and Thursday, May 25th, would be calculated to give the greatest satisfaction.

In urging this course we should like to make it quite clear here that our sole interest in the question of the dates is to see that the greatest number is satisfied, and we fully appreciate the quandary in which the A.C.U. is placed. The Tourist Trophy race is regarded as the blue riband event of the motor cycling world. Any factor which is likely to detract from the importance of the race is to be deprecated.

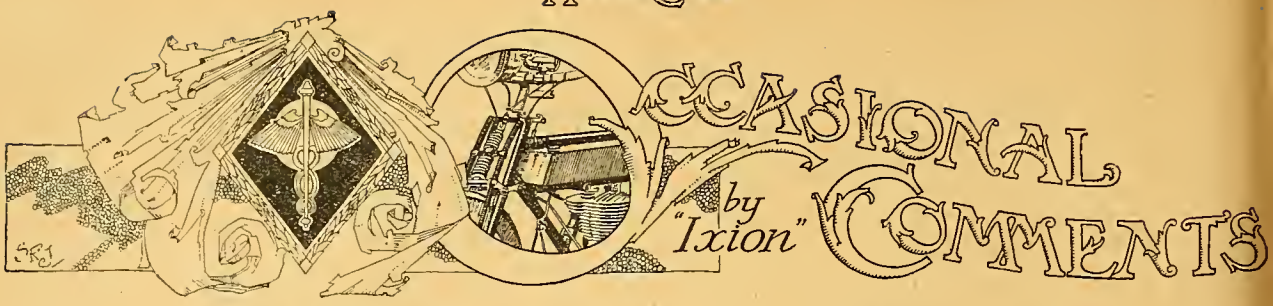
We understand that the position at present is that the A.C.U. has laid the facts before the Manufacturers' Union, whose representatives will no doubt consider the matter further and find a way out of the present *impasse*. In brief the makers of the Norton, Sun, New Comet, Velocette, Levis, New Imperial, Ivy, Omega, Scott, N.U.T., Hobart, and Indian, have given it as their opinion that the date a week preceding the Whitsun Holidays is unfortunate from the manufacturers' point of view, quite apart from the expressed opinion of the leading agents and riders, and, in view of this evidence, the subject cannot lightly be dismissed.

## An Amateur T.T.

SEVERAL correspondents have proposed an amateur T.T. race—an excellent suggestion, but one not so easy to follow as it would at first seem. The whole question depends upon the definition of an amateur. In the early days of cycling the National Cyclists' Union attempted to define an amateur and failed hopelessly. Since its foundation nineteen years ago the A.C.U. has often discussed the same matter, but has likewise failed, and the problem seems to be insolvable.

At the present moment a private owner is perfectly at liberty to enter for the T.T., but unless he is a super-man on a super-machine he has little chance of getting placed, to say nothing of winning. Nevertheless, private owners do enter every year, and we greatly admire their sportsmanship.

An index to the advertisements in this issue will be found on the page facing the back cover.




### Territorial D.R.'s

READERS "who belong" tell me that a territorial D.R. section makes a delightful motor cycle coterie. This being so, it is rather surprising that some of the signal companies are far below establishment so far as D.R.'s are concerned. For example, I hear of one London signal company which is over threequarter strength, and yet has so far attracted but one solitary D.R. in lieu of the twenty-first figuring on establishment. Any readers interested in such openings should enquire at the nearest territorial headquarters.

### Another Puzzle.

A READER forwards another brain-tester for motor cyclists on winter evenings. Bramco, Ltd., of Coventry, advertise stationary engines to run on fuel oil or paraffin, and their folder states:

NO { carburetter. vaporiser. hot bulb. magneto. battery. spark plugs. coil. wiring.

He enquires, "How does the beastly thing go?"—and enquires for a motor cycle engine of similar simplicity.

### Jekyll and Hyde.

SUDDEN discoveries that our friends lead double lives are very painful. To think that I have known that sound motor cyclist, H. Mortimer Batten, all these years without suspecting that the motor cycle was not his only love. Scanning the Christmas volumes last month, what did I find but an opulent publication entitled "Habits and Characters of British Wild Animals" from his pen. Priced at a guinea, too. Judging from the press reviews, Batten is a man of parts. When he sees a sparrow seated on a bough with its head on one side, he knows exactly what it is thinking about, just as he knows what is the matter when his engine back-fires through the carburetter. Some years ago, I entered into the *vie intime* of another famous motor cyclist. His den, instead of being adorned with buckled connecting rods and hill-climb medals as I had anticipated, bristled with chessboards, and his daily post consisted mainly of postcards bearing such legends as "Kt to KB6" in twenty different languages. His books, instead of dealing with the internal combustion engine, were philosophical, and tackled such brain-twisting subjects as whether we actually exist, or merely fancy that we do. What a miserable one idea sort of a chap I am, compared to these stalwarts. I must take up Esperanto or vegetarianism!

### Belt-drive on the Peters.

A GOOD many visitors to Olympia, in company with no small section of the technical press, struck me as quite failing to recognise the significance of belt drive on the new Peters motor bicycle. For years past we have all prattled of the great yearning in the public breast for a "Ford" motor bicycle. Considering that the Peters specification includes a fully-sprung frame and electric lighting at a price of fifty-five guineas, it may rank as the nearest approach to the Ford two-wheeler which we have yet seen. Let us grant by all means that belt drive is obsolescent in that stratum of the motor cycle world where cups and speed and medals are the only things that really count. On the other hand, belt-drive is the cheapest transmission going from a production standpoint. It is the lightest drive available from the standpoint of a weak and lazy driver. It is the simplest and cheapest drive from the standpoint of a man who wants to keep repairs down to the minimum. From a road point of view it is—in conjunction with such an infinitely variable gear as the Peters, Rudge, or Zenith—far, far pleasanter than a two-speed gear and chain drive (the only known alternative on a "Ford" bicycle). *Reliability up steep hills in bad weather* is its one and only crab; and even this crab only becomes serious if a sidecar is attached. Now the Peters is a 350 c.c. two-stroke—obviously a solo mount, pure and simple. Moreover, 90% of the potential buyers of a "Ford" bicycle live in flattish districts. So don't you agree that the Peters man knew what he was doing when he laid out a belt drive?

### Belts at their Best.

SINCE the autumn of 1920 I have personally run a small two-stroke with combined drive as a utility runabout, and in the whole of the period I have never had to touch either the belt or its fastener. It is true that the machine has not done a colossal amount of steep hill work, but it has often been out in rain, and frequently clambers up half a mile which brings practically all cars down to their bottom ratio. The record struck me as unusual, and I asked in this column for similar experiences. I received quite a lot. My conviction is in solo work over ordinary roads with a light load and a front pulley of decent diameter a good, modern ⅞in. or 1in. belt will run tremendous distances without causing its owner any trouble at all. Heavy loads (especially sidecars), engines with a jerky torque, undersized belts (1in. behind 8 h.p.), stunt driving, and worn pulleys are to blame for most of the belt exasperation which one remembers. The average ratio on which the belt of such a machine as the Peters will run is

**Occasional Comments.—**

probably over 5 to 1; and under such conditions a belt should give excellent service. To my mind, it would have been rank bad policy to put a gear box and a chain on the Peters.

### Yet Another Argument.

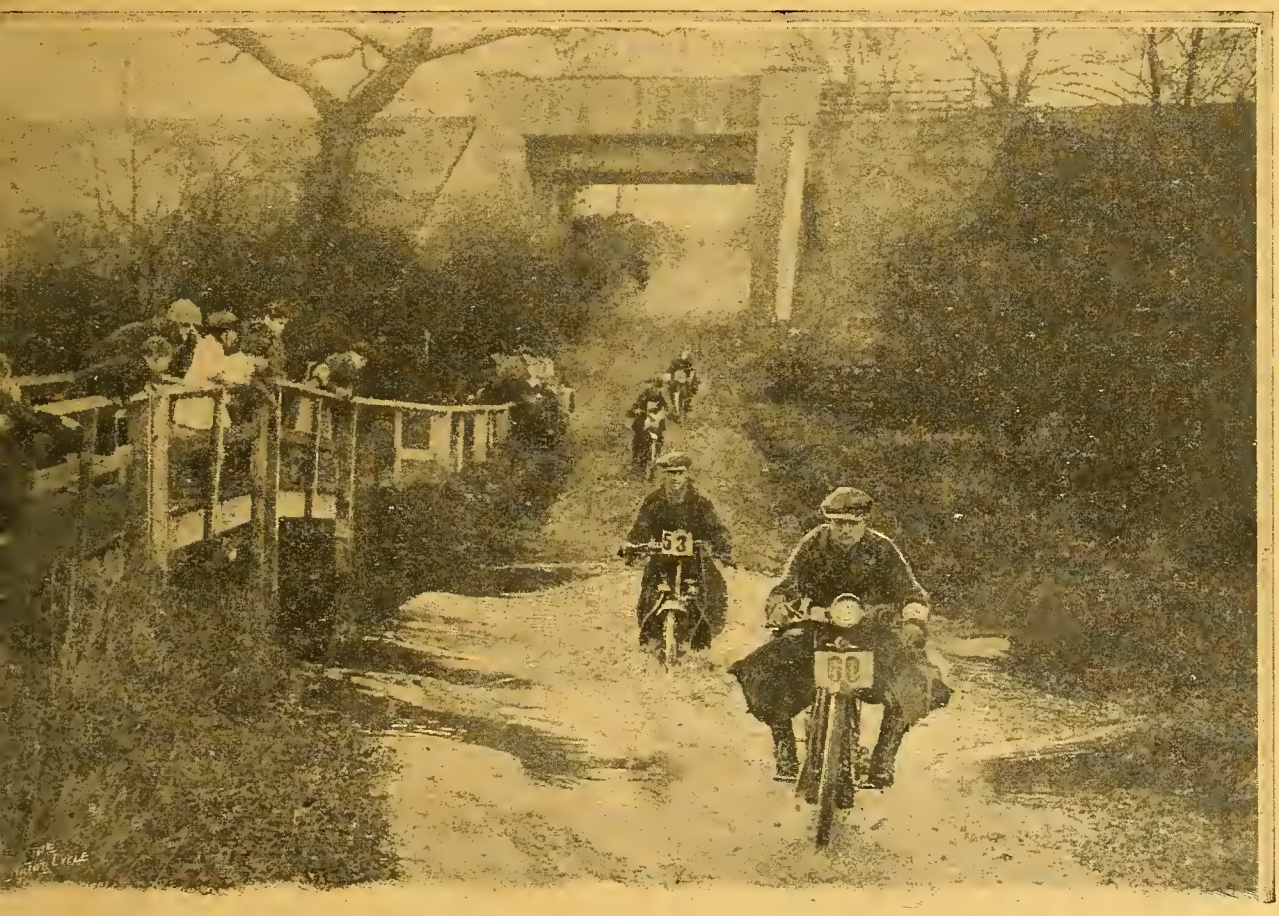
ANY rider who has comparative experience of lightweights with two and three-speed gear boxes respectively will plump for a three speeder every time. The lack of a middle ratio tends to inspire a top which is too low, and a bottom which is too high. On the road these faults imply engine fuss when hogging, and anxiety on encountering a really bad hill. Most makers of chain-drive layouts quote for a three-speed box as an option, and the extra charge is round about £5. If the variable belt drive is genuinely applicable to lightweight propositions, as the Peters proclaims, you get about a dozen gear ratios; and instead of paying extra for them, you actually save money on them. It is unquestionably a great pity that our big trials, as heretofore organised and run, definitely penalise such a layout as applied to the machines which logic equips with this drive. As a journalist, I would not attempt to report a modern Six Days on a belt driver. Few professional competition riders would voluntarily compete on such a drive. The conditions of a Six Days inflict the utmost penalty on such shortcomings as the drive possesses, and withhold from it every atom of credit which it can justifiably claim. In 1921 the A.C.U. broke new ground by taking note of oil and petrol consumption. Perhaps in 1922 they will see their way to recognise low weight and small cost.

### Flywheel Lighting Dynamo.

AT the Show many visitors to the gallery stared at the brilliant light flung abroad from the Villiers flywheel, and on their return to lower levels they gazed at the large outside flywheels on some of the big four-stroke engines. Then they fell to wondering when four-strokes would enjoy the benefits of flywheel lighting, and whether such installations would cost as much as the separate dynamos do!

### 350 c.c. to the Fore.

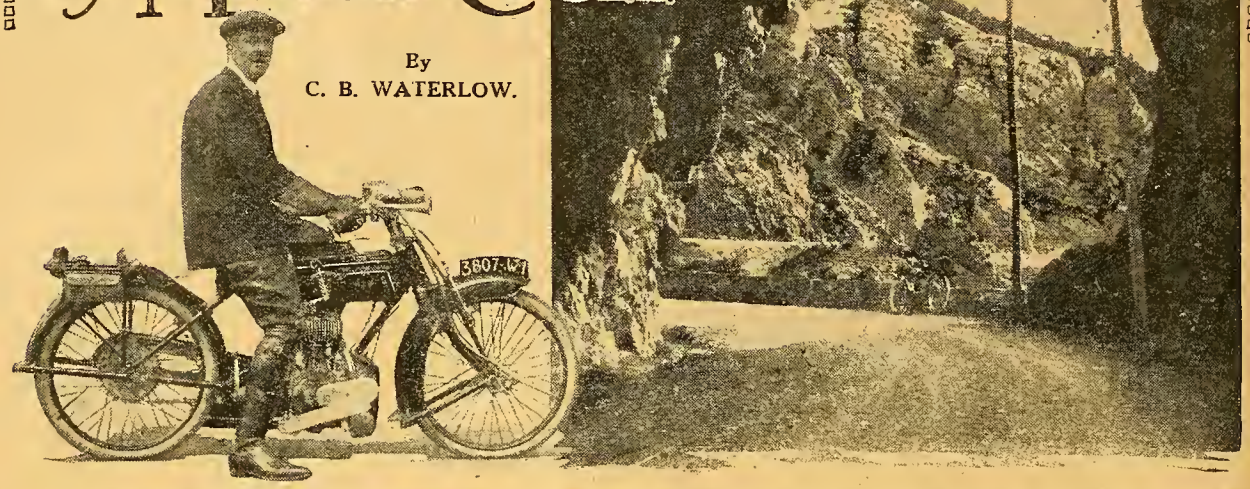
ADVANCE in design is nowhere more impressively demonstrated than in such programmes as the Raleigh and A.J.S. Both firms deliberately ignore the 500 c.c. engine which has dominated our touring market for so many years. Each firm selects a biggish twin for sidecar work, and specialises in a light, high-efficiency $2\frac{3}{4}$ h.p. for the solo man. It is only a few years ago that the thought of unrestricted touring on a $2\frac{3}{4}$ h.p. machine seemed like a Christmas nightmare. To-day many hardy spirits attach sidecars to machines of even less than 350 c.c., and manage to go almost anywhere with them.




WINTER OR SUMMER, RAIN OR FAIR, TRIAL ENTHUSIASM IS AS KEEN AS EVER IT WAS.
A scene in the Birmingham M.C.C. Christmas trial. The foremost riders are Brandish (Triumph), Randle (Scott), and Walford (Triumph).

# To the Riviera by Motor Cycle

By C. B. WATERLOW.



The writer and the A.J.S., on which he accomplished his ride to the South of France.

Just before reaching Castellane a minor Alpine pass has to be ascended. It presents some of the grandest and most rugged scenery of the whole route.

## A Motor Cyclist's Trip to the South of France.

TO thread the streets of Paris on a solo machine requires skill, enterprise, confidence, and a cool head; therefore, those motor cyclists who undertake the winter journey to the South of France, and the vastly greater number who make such a trip the subject of their contemplations, may avoid the heart of the capital by skirting round the fortifications, as the writer has often done.

Travellers landing at Dieppe or Havre, and avoiding Paris by passing through Rouen, Evreux, Dreux, and Chartres, can conveniently join the routes here described at Auxerre, which is also a good stopping place for the night.

Those who work out their own routes through France with the aid of Taride maps should note that the roads marked as being the largest and most important, generally along river valleys, almost always make far worse going than the smaller roads, because they are subject to heavy industrial traffic, and road repairs in France are not at present able to keep pace with the wear and tear of the great *routes nationales*.

Though familiar with the whole road from the Porte d'Italie, by which one leaves Paris, to the Côte d'Azure, the writer had not until recently accomplished this journey on a motor cycle. A $2\frac{3}{4}$ h.p. A.J.S., however, the first of its kind to find a permanent home in France, has now reeled off the kilometres of this long trail and made its *début* upon the Riviera.

More than six miles of *pavé* have to be negotiated after leaving the gates of Paris, and, though painful enough, it is not nearly so bad or so long as on certain other exits from the city, notably the main road to the battlefields round Verdun through Meaux and Château-Thierry, which has twenty miles of appalling *pavé*. Once through Juvisy the road to Fontainebleau is magnificent—a tarred surface, broad and straight, that makes one wonder why 40 m.p.h. seems so very slow.

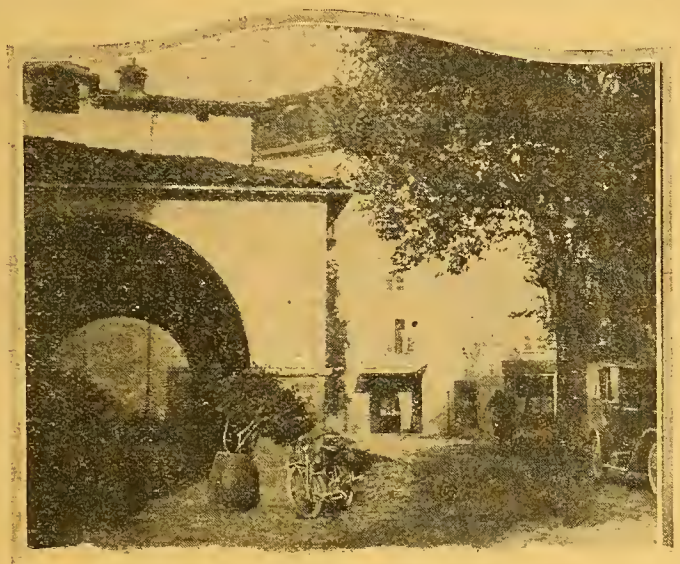
The Elephant Rock near Barbizon in the forest of Fontainebleau.

The forest of Fontainebleau, in autumn especially, is truly regal. There is also much that should be seen there if the wayfarer has time to spare. The whole region is a chaos of rocks and sand incapable of ordinary cultivation, and some of the rocks take fantastic shapes; there is one near the delightful village of Barbizon that is an excellent imitation of an elephant, and others take the form of gigantic stone mushrooms. The palace of Fontainebleau is a

**To the Riviera by Motor Cycle—**

museum of departed splendour and luxury, full of art treasures of great beauty, the nature and history of which are explained by a loud-voiced French guide.

Onwards to Sens, Villeneuve-sur-Yonne, Joigny, and Auxerre the road is generally in fair condition, and any of these towns can be recommended as a stopping place for the first night out from Paris; but Auxerre, 161 kilometres (about a hundred miles) from the capital, is particularly convenient and good as regards the accommodation obtainable.



Outside the Hotel du Levant in picturesque Castellane.

With the exception of the forest of Fontainebleau and a little of the valley of the Yonne at Joigny, the route so far is not remarkably picturesque; but, proceeding southwards from Auxerre to Avallon, this river valley is most lovely, especially in the mornings and evenings of still autumn days. Avallon is a delightful old country town with a very ancient cathedral, ramparts, and a wonderful panoramic view over the river valley, here deepened almost to a gorge. It is a convenient stopping place for lunch on the second day from Paris.

### Roads Not so Bad as Reported.

Southwards through Saulieu and Arnay-le-Duc to Chagny, the road is for the most part good, but the stretch that follows to Châlon-sur-Saône is notoriously bad, and must be taken slowly. Having traversed this road half-a-dozen times with different vehicles without breaking anything, I cannot agree with the articles on foreign touring published last spring in a certain important British daily, in which it was held that fractures are inevitable on this section of the route. One can, however, make a détour which will not cost much in distance by passing through the famous old town of Beaune, where the real vintages of Burgundy can be sampled in their native purity, and where the old *Hôtel de la Poste* has an excellent and well deserved reputation.

Châlon-sur-Saône is rather a tiresome town to get through, but one cannot go wrong by following closely the right bank of the river Saône, along which lies the main road to Mâcon and Lyon. It is best to avoid both these cities because of the state of the roads and the traffic and *pavé* of Lyon, and because the road further to the east is far more beautiful and also shorter than the Saône-Rhône valley route. Turning to the left, therefore, at Tournus, we make for Bourg-en-Bresse, which is a convenient stopping place for the second night, 248 kilometres (155 miles) from Auxerre, a distance usually quite sufficient for one day's run. For the last thirty kilometres into Bourg the road is almost perfectly straight, making one long for racing speeds.

### Amongst the Mountains.

From Bourg to Ambérieu the route follows the valley of the Ain, but after the latter town there comes a wonderful change in the scenery, and the traveller experiences fresh sensations. Bearing to the left the road plunges straight into the heart of the Jura mountains, the foothills of which will have been observed running parallel with the route all the way from Bourg. It is a fine piece of scenery, this passage of the Jura, and it is very remarkable that one reaches the Rhône valley on the other side of this range at Culoz without any serious climbing. The Jura mountains are full of clefts and defiles of this kind.

## PARIS TO THE RIVIERA.—Tabulated Itinerary with Hotels.

| | Distance. Kilometres. | Total. Kilometres. | Hotels. |
|---|---|---|---|
| Paris (Porte d'Italie) | | | |
| Fontainebleau .. | 55 | — | Numerous; Hotel de France et d'Angleterre (opp. Palace) is principal. |
| Sens ..... | 54 | 109 | Hotel de Paris, Rue de la République. |
| Villeneuve-sur-Yonne ..... | 13 | 122 | Hotel du Dauphin, Rue Carnot. |
| Joigny ..... | 16 | 138 | Moderne Hotel, Route d'Auxerre. |
| Auxerre ..... | 24 | 162 | Hotel de l'Epée, Rue du Temple. |
| Avallon ..... | 51 | 213 | Hotel du Chapeau Rouge, Rue de Lyon. |
| Saulieu ..... | 38 | 251 | Hotel de la Poste, Rue Grillot. |
| Chagny ..... | 57 | 308 | —— |
| Châlon-sur-Saône | 30 | 338 | Hotel Moderne, Boulevarde de la République |
| Tournus ..... | 28 | 366 | Hotel du Sauvage, Rue de la République. |
| Bourg-en-Bresse . | 44 | 410 | Hotel de l'Europe, Place Grenette. |
| Ambérieu ..... | 31 | 441 | —— |
| Culoz ..... | 55 | 496 | —— |
| Aix-les-Bains ... | 24 | 520 | Numerous, but mostly shut in winter: Hotel Dauphinois, Av. de Tresserve. |
| Chambéry ..... | 14 | 534 | Hotel de France, Quai Nezin . |
| Grenoble ..... | 56 | 580 | Grand Hotel, Rue de la République. |
| Pont de Claix .. | 8 | 588 | —— |
| Monestier de Clermont ..... | 26 | 614 | —— |
| Col du Fau ..... | 3 | 617 | —— |
| Col de la Croix Haute ..... | 32 | 649 | Touring Hotel at Lus-la-Croix Haute. |
| Sisteron ..... | 73 | 722 | Hotel des Acacias. |
| Digne ..... | 42 | 764 | Hotel Boyer-Mistre, Boulevarde Gassendi |
| Castellane ..... | 54 | 818 | Hotel du Levant, Place de la Grave. |
| St. Vallier ..... | 52 | 870 | —— |
| Grasse ..... | 12 | 882 | Hotel Victoria, Av. Riou-Blanquet. |
| Cannes ..... | 18 | 900 | Innumerable hotels and "pensions." |

NOTE.—About 20 kilometres can be saved by taking the direct route from Bourg to Grenoble instead of passing through Aix-les-Bains and Chambéry. NOTE: One kilometre equals five-eighths of a mile approximately.)

**To the Riviera by Motor Cycle—**

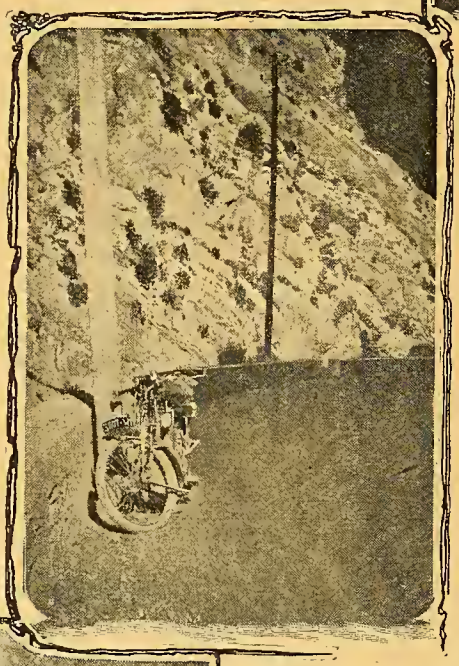
Having crossed the Rhône, we are in the French Alps and the Department of Savoie. Everyone has a special preference—very deep-rooted in the case of primitive peoples—for some particular part of this earth, natal soil in the majority of cases; but for me Savoie is the loveliest land in all the world. When autumn turns the vines to brilliant yellow and purple, and tall, slender poplars shine in the sun like pillars of gold against blue mountain backgrounds; or when snow leaves the heights in spring, and gentians and narcissus appear; then this country is a scene of living beauty, and the rich fertility and peace of the land are like the fulfilments of all one's desires.

### Lake and Mountain Scenery.

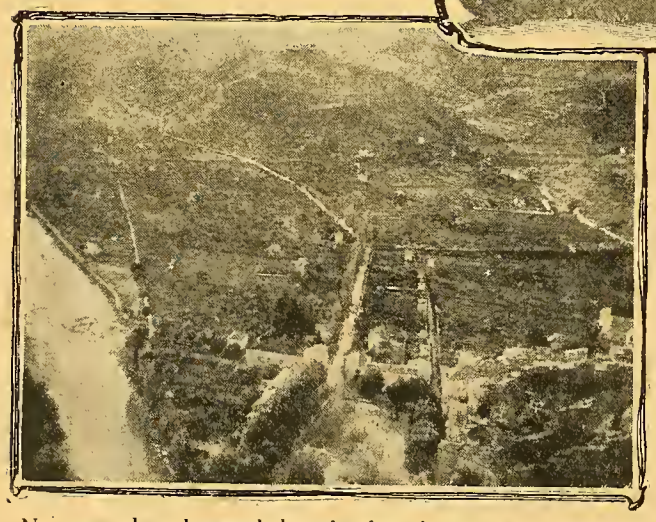
The Lac du Bourget, close along the east bank of which the road passes to Aix-les-Bains, is the largest lake in France, and Aix-les-Bains is undoubtedly one of the finest touring centres that can be found. The route through Chambéry to Grenoble down the right bank of the Isère is now in good condition, and includes no hills worth mentioning. Although the route here described has now traversed nearly 150 kilometres of mountain country through the Jura and the Alps, no long ascents have yet been met with, the climbing beginning in earnest only after Grenoble. From Bourg to Grenoble it may be noted that there is a shorter route available *via* Lagnieu, St. Genix, Les Echelles, and St. Laurent du Pont at the foot of the mountains of the Grande Chartreuse; but the route *via* Aix-les-Bains and Chambéry is recommended as being the better and more picturesque road, and either of these two towns are good places at which to stop for lunch.

If this journey is undertaken in mid-winter it is wise when passing Grenoble to inquire at the Syndicat d'Initiative, 2, rue Montorge, if the road is likely to be blocked by snow. The route followed and about to be described is kept open throughout the winter in so far as is possible, being only blocked for short periods after exceptional snowfalls. The highest pass, the Col de la Croix Haute, is less than 4,000ft. If, however, on arrival at Grenoble it is found that the road further on is impassable, there is nothing for it but to return to the Rhône valley at Valence and pursue the journey *via* Orange, Avignon, Salon, and Aix-en-Provence, a route that is about 100 kilometres longer and a hundred per cent. worse as regards road surfaces.

The bridge across the Durance at Sisteron, showing the remarkable vertical stratification of the walls of rock between which the river flows.



Between Digne and Barrème the road to the Riviera passes through a deep ravine.



Not an aeroplane photograph, but taken from the rock above Castellane on which stands the chapel of Notre Dame de la Roche.

Assuming that the mountain road is clear, we leave Grenoble by the fine avenue of the Route de Pont de Claix and bear to the right at this place, passing through Vif and Monestier de Clermont to the Col du Fau (2,925ft.), a long, well-graded rise through glorious scenery; but it is on passing the top of the Col du Fau that the most splendid view is seen on a clear day. The high Alps of Dauphiné lie to the left, the peaks of Mont Pelvoux and La Meije dazzling in everlasting snow, with a great tumble of lesser mountains and ravines in the middle distance.

### On the Heights

The winding, undulating road from the Col du Fau to the Col de la Croix Haute about thirty kilometres further on has all the beauties with which nature could endow it. Spinning along on my sturdy little A.J.S., it was hard to keep the attention fixed, and close attention is needed for this road. There were maple trees and other bright autumn foliage, shining after recent

the Riviera by Motor Cycle—

ins with every hue of warm colour against dark
id velvety pines and fantastic rocks towering into the
y on the right, and all the way on the left the
onderful view of the high snow mountains patched
ith sunshine and cloud.

The Col de la Croix Haute brought my second speed to use for the first time for any considerable distance, but the admirable little engine showed no signs excessive heating. The top of this pass is cold and mewhat forbidding, and the southern side is far more eak and less picturesque than the northern slope, as very often the case on Alpine ranges; but the road the southern side affords very good going, as it scends gradually and in long, straight stretches instead of the usual hairpin bends. One can always ake up time on this section of the route if desired.

### Wonderful Rock Formation.

This valley of the little river Beuch is one of the ast attractive of Alpine glens, and it is not until steron is reached that anything very remarkable is en. Sisteron is a wonderfully picturesque place built the confluence of the Beuch with the Durance. here the river passes through a natural gateway of pendous rocks. The town has but one very narrow reet, from which radiate upwards and downwards, right and to left, strange, dark, sinister-looking irways with sombre arches and unpleasing odours. he place is overshadowed by a mediæval fortress rched on the rock overhanging the right bank of the er. Travellers will find this town both interesting d hospitable.

From Sisteron to Digne the aspect of the country less rugged, and one begins to feel for the first time at this is really the South. There is an extra illiance in the light and a gentle, genial feeling in e air that comes as a surprise and a delight to the anger from the North. Twice during last autumn had occasion to pass this way, and the second time, ding my 2¾ h.p. A.J.S., the atmosphere was marllously clear and bright, and free from dust and flies. On the next section of the road, between Digne and Castellane, where there is some of the grandest scenery of the whole route, the setting of autumn sunshine and brilliant colour was splendid and beyond all description.

A minor pass has to be ascended before dropping down into Castellane. It is minor in that it does not rise above 3,000ft., but it is fairly steep, with many bends, and has been known to be blocked with snow when the Col de la Croix Haute, a hundred miles further north, has been clear. Near the top there is a piece of utterly wild and fantastic scenery of the kind that must have inspired Doré for his illustrations of Dante's "Inferno." The road passes through an arch in a spur of the mountain and skirts round a stupendous "devil's punch bowl," the walls of which are solid rock with scarcely a vestige of vegetation.

The descent into Castellane is distinctly dangerous for the unwary solo rider. The bends are deceptive, as is also the gradient, and if one fails to get round a hairpin there is nothing to prevent a plunge into the void, which would probably be the end, so far as earthly affairs are concerned. Castellane itself is a sleepy little place nestling in a fertile oasis in the heart of most wild and rugged mountains, under the shadow of a rock that rises vertically about 500ft. above the town, with a little chapel and a large statue of the Virgin Mary on top of it. The walk up to this little chapel of Notre Dame de la Roche is well worth the half hour that it takes.

### A Lonely and Dangerous Road.

Those who wish to go direct to Nice without touching Cannes would not pass through Castellane, but would turn to the left at Barrème and proceed through St. André, Puget-Théniers, and the valley of the Var, which route involves no climbing. The last stage of the journey from Castellane to Cannes *via* St. Vallier and Grasse is the wildest and most desolate part of the whole route. To be seriously *en panne* midway between Castellane and St. Vallier would be a most unpleasant predicament. Part of the road is hewn out

Above St. Vallier, the cold bleak summit of the last pass before dropping down into the Riviera.

**To the Riviera by Motor Cycle—**

of an almost vertical precipice, and the remarks already made about the desirability of avoiding a plunge into the void are equally applicable to this section of the route. About fifteen kilometres before St. Vallier the first glimpse of the Mediterranean may be seen on a clear day, just where the far distant Esterel Mountains jut out into its amazing blue; but from the top of the last ascent above St. Vallier one comes suddenly upon "the Riviera" spread out 3,000ft. below, a wealth of luxuriance washed by the wonderful Mediterranean blue. The contrast is great: one is cold, perhaps chilled to the marrow, and, descending, the scent of flowers comes up to meet one with ever-increasing warmth in the air.

The journey is nearly over now, and I have barely spoken of the behaviour of the sturdy little machine that carried me with bag and baggage. The object of these notes, however, is not to praise a good machine, but, instead of painting the lily, to sketch this long route in all its principal features. The qualities I sought in taking the machine were reliability, durability, ability to climb anything, and the minimum of labour in upkeep, speed being a secondary consideration. I did not believe that any French machine could fill the bill, even after seeing the last autumn Salon in Paris, and in my little A.J.S. I have all the qualities postulated and a fine turn of speed as well.

Descending through Grasse, the centre of the perfumery industry of France and a very pretty place as well, upon the Riviera at Cannes is like entering another world—palm trees and roses after stunted bushes and rugged rocks. My journey ended at the little village of La Napoule, at the foot of the Esterels.

# HINTS ON TRIALS RIDING.

## The Important Question of Riding Position, Tuning, and Clothing.

WITH the approach of spring many riders, who, during 1921, passed through their novitiate stage, will be thinking of entering some of the big competitions to make a bid for fame. To such the following brief hints may serve to reduce the likelihood of trouble or annoyance on the road. The great thing on a strenuous reliability trial is to keep fit and avoid over-fatigue in every way possible. "No trouble" is the best assurance against weariness, for it is surprising how quite a small hitch in the smooth working of things, such as some unimportant item on the machine constantly working loose and requiring readjustment, takes the stuffing out of one on a difficult day's riding.

Riding position is all important, and the least tiring position is calculated to be the one to which you are most used. Do not make the mistake, then, of altering the height of your handle-bars or monkeying with the position of your saddle during the final tuning. An alternative position for the feet affords relief, and the riding position should be such that the saddle can be relieved of all weight by the rider standing on the rests without having to pull on the bars in a backward direction.

### Detail Care and Kit.

Do not carry any superfluous kit. The keys belonging to the machine, a large shifting spanner, screwdriver, valve cap key, insulation tape, pliers, tyre levers, copper wire, etc., occupy the right-hand carrier-bag, while the other is left at liberty for the repair outfit, which should be very complete, spare plugs, tightly packed chain links, and spare nuts and bolts, and so on, this lot being tightly jammed with dusters in the hope that you may not have to disturb them. Carry a small shifting spanner and a small screwdriver in your overall pocket—or better still in a compartment of your haversack, which can also contain a duster and minute repair outfit. Roll your spare tube neatly in American cloth and strap it securely to some clean part of your machine, possibly in the rear wheel fork under your saddle. This is a thing you may want quickly, so do not use string, which you are sure to cut when the time comes, leaving yourself without the necessary means for attaching the discarded tube. String is best eschewed for all purposes, as straps give a better grip and are easily undone. If you carry a spare outer cover, therefore, strap it *under* the flapper bracket, using three or four short straps.

Do not postpone your final tuning till the day before the event. Fit your new tyres several days beforehand, and likewise make all other adjustments, attach all accessories—in fact, have the machine all ready just as you intend to ride in the competition fully a week before the event, so that you will have tested everything and given things time to settle before the trial takes place. If there are any nuts or bolts that insist on working loose, clean the threads thoroughly with petrol, thus removing all grease, and if after this they still work loose a little seccotine smeared on the thread will doubtless give the desired hold. Seccotine and insulation tape are good friends to every competition rider.

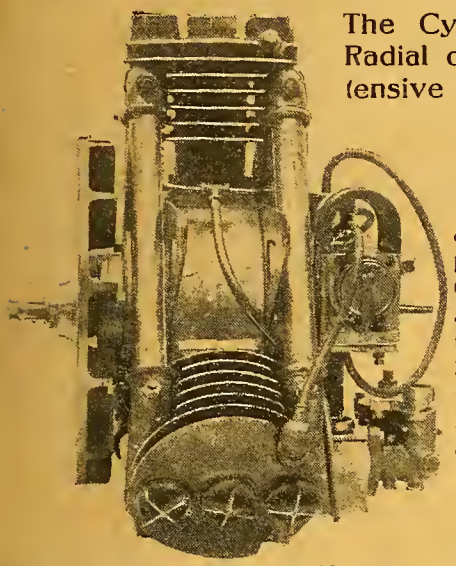
### Wheel and Head Bearings.

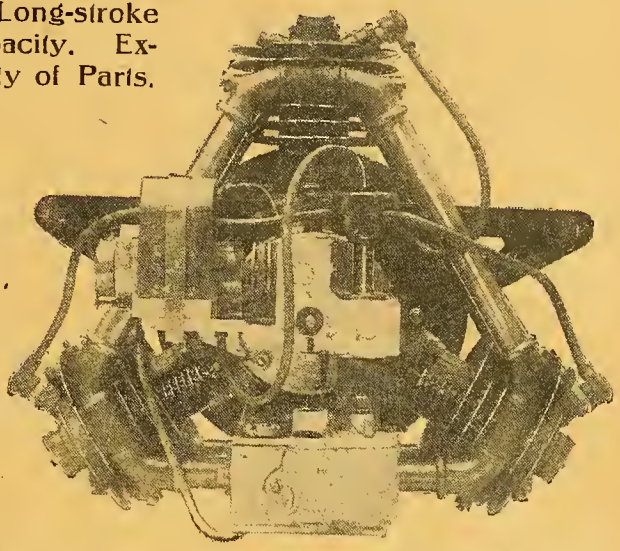
The present-day reliability trial generally affords a good deal of rough riding, and this year the roads are as rough as ever; therefore, look to your wheel bearings and particularly the steering head—slackness in the latter will affect the steering adversely, and may lead to frame breakages.

A variety of weather is always encountered during events of any length, and clothing is a problem. Generally it is intensely hot with bitterly cold storms on the hills, or baking one day and wet and chilly the next. To be over-clothed during the hot spells is almost as bad as being under-clothed during the cold spells, and the best plan is to carry a thoroughly warm waistcoat which can be stowed in a haversack when not wanted. One pair of hob-nailed boots and an alternative pair of gum boots make sure of one's feet, and a good soft woollen muffler is, of course, essential. It is a mistake to encase one's legs in cumbersome overalls, as over-clothing of this kind means that failure on a hill leads to violent perspiring, succeeded by chill during the open riding later. In my opinion, it is more dangerous to over-clothe for these really strenuous events than it is to err in the opposite direction, and one certainly need not clothe more heavily than for ordinary touring. CHINOOK.

# A THREE-CYLINDER ENGINE FOR CYCLE CARS.

## The Cyclone Unit, a Long-stroke Radial of 963 c.c. Capacity. Extensive Interchangeability of Parts.





Two views showing the clean and straightforward lines of the 7.5 h.p. Cyclone engine. It is about 22in. across the two lower cylinders and 20in. high. The end view shows that the width is no greater than that of a single or twin.

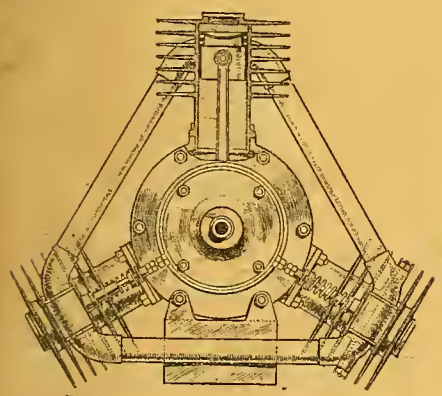
MANY claims for favourable consideration from designers and manufacturers are evinced by the radial type of engine—a fact more than once mentioned at some length in past issues of *The Motor Cycle*.

Up to the present only one designer has tackled the problem of evolving a commercially possible radial for motor cycle use, which, as a lightweight engine, was fully described in our pages. The same designer has now evolved a much more ambitious engine (still adhering to the three-cylinder layout), which, named the Cyclone, is being manufactured by the S.Y.S. Engineering Co., Ltd., Cyclone Works, Cardigan Road, Leeds.

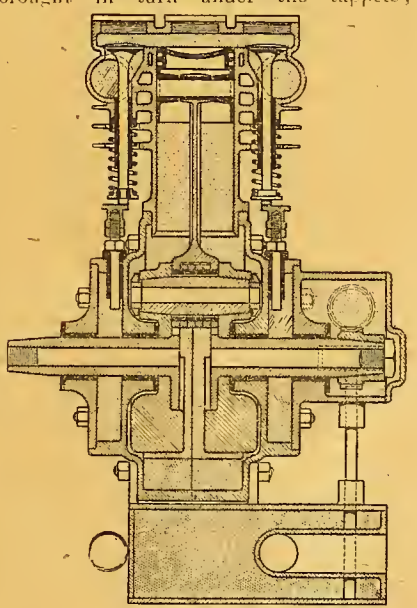
### Advantages of Radial "Threes."

Briefly to recapitulate the well-known points of the three-cylinder radial engine: It is compact, fairly light for a given capacity, and may be rendered very simple in construction. In a motor cycle frame it is easier to house than a flat twin; in a cycle car it is no more cumbersome than a V twin. In smoothness and continuity of torque it approaches the four-cylinder very closely, and in consequence enables a light transmission to be used with safety.

Turning now to the unit under review, the crank case, of aluminium, is in two symmetrical halves, and the cast iron cylinders (63.5×101.6 mm.) are held down on studs in the usual way. The combustion heads are of the T-shaped variety, and the cast iron pistons have deeply concave tops. Access to the valves is gained by means of valve caps, which are provided with cooling flanges, and a similar cap is arranged in the centre of each cylinder head. Cast integrally with the crank case sections are extensions which house the timing gears; these gears consist of a stationary internally toothed ring, a toothed wheel carrying four cams, and an eccentric mounted on the crankshaft. In its oscillations the eccentric causes the wheel to roll round the ring, and the cams are brought in turn under the tappets; obviously as there are four cams on the one wheel, this must revolve only once to eight revolutions of the engine crankshaft.



Section and general arrangement drawing of the Cyclone three-cylinder radial engine; the simplification of parts and the symmetrical arrangement on each side of the central line are noteworthy

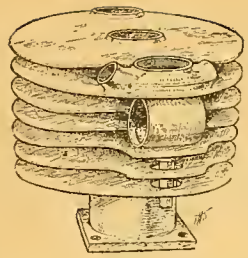


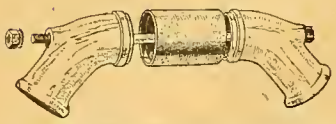
Each timing case is enclosed by a cover, and the crankshaft runs on plain bearings, four in all, pressed into these covers and into the crank case itself. Symmetry of parts on either side of the centre line of the engine is followed in the crankshaft, which is a massive assembly. The shafts are secured by flanges and studs to heavy discs, which incorporate the balance weights. One plain floating bush is used common to the three big ends, two of which are forked. Lubrication is effected by a gear pump in a separate sump, oil being delivered by a branched lead to both timing gears, from which it works along the main bushes to the crank webs, where it is collected in annular recesses and passes through holes which open on to the cheeks of the big end.

### Accessibility of External Fittings.

The tappets, which are adjustable, pass out of the timing case by way of bronze guides, and the same material is also used for the valve guides. Split collars in recesses on the valve stems are used to retain the spring cups. Although the appearance of radial engines is often marred by masses of external pipe work, the exhaust and inlet connections of the Cyclone engine are particularly neat. Here again all the pipe work is symmetrical on both sides. Projecting slightly from each valve pocket is a transverse tubular portion of the cylinder casting. Pulled into this by a single central bolt are two angle lugs into which the pipes are secured.

One timing cover has an extension, housing a worm-driven transverse shaft which drives the magneto at threequarters engine speed; incidentally, the magneto is of the single-cylinder type with two contact breaker cams, sparking twice per revolution. From the transverse shaft is also driven by worm a vertical shaft at half engine speed. On the top of this is the high-tension distributer, and below, in the sump, the oil pump.





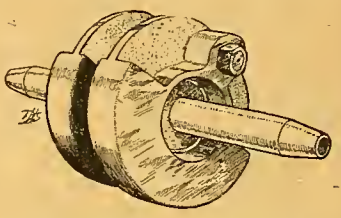
The cylinder has seven cooling flanges of enormous area in relation to the bore. Below is shown the method of securing the induction and exhaust pipework.

A noticeable feature of the engine is the remarkably cool running, due both to the vaned flywheel and to the enormous cooling area of the seven ribs on the cylinder; the valve chests are also well separated from the cylinder barrels. Such a wide stroke-bore ratio as that found in the Cyclone engine is unusual in motor cycle engine practice, 1 : 1.26 being an extreme in so-called long stroke engines, yet the ratio in the Cyclone is 1 : 1.6.

### Ample Speed and Power.

On the test bench we observed an engine working, and noticed that its range of smooth running varied between about 600 and something well over 3,000 r.p.m. (the rev. counter did not register beyond the latter figure); while on the road in a light cycle car we found that the speed obtainable was extremely high. No speedometer was fitted, but the speeds attained were certainly as high as those with which we are familiar on a certain make of cycle car noted for high touring speeds.

Very simple holding-down arrangements only are needed to secure the unit, a pair of triangular plates being held at each side by two of the crank case bolts, and the engine can thus be housed in a cycle car chassis or motor cycle frame with ease.



Showing the simple and sturdy construction of the crankshaft assembly and balance weights of the Cyclone unit.

# AN AVERAGE SPEED INDICATOR.

## The Possibility of Constructing an Instrument for Direct Indication of Average Speed.

THE speedometer is a very fascinating instrument. It advises the rider at a glance of the speed at which he is travelling and the mileage he has covered. But I feel sure many will agree that, if the instrument indicated the average speed instead of purely a velocity, we should not only find it more useful, but should derive from it a pleasure of much more permanent character.

For instance, it would give us great satisfaction to know the average speed at the end of a day's run. Or, in a reliability trial, anyone armed with this instrument could not fail to come in within the scheduled time.

### Is it Possible?

Having broadly indicated its sphere of utility, we will investigate the possibility of constructing such an instrument.

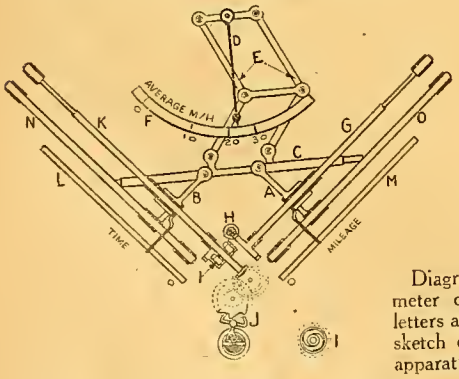
Bearing in mind that the average speed is equal to the ratio of total mileage to total time, the question merely resolves itself into either one of two things—a simple type of dividing machine or subtracting machine on the logarithmic proportion. However, the former type of machine seems to lend itself for this particular application.

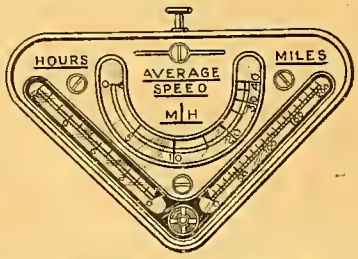
It is well known that in a right-angle triangle the height divided by the base is numerically equal to the tangent of included angle between the base and the hypotenuse; then, if the base represents mileage and perpendicular time, the average speed is equal to the ratio between the two factors. Therefore, it follows that the average speed is directly proportional to the tangent of the included angle.

An instrument so constructed is shown diagrammatically in the accompanying drawing, and the sketch represents the probable appearance of the finished article produced commercially.

### The Device Described.

Referring to the drawing, it will be observed that a direct application of the principle previously described is made. So that if the arm A progresses according to the mileage covered, and the arm B advances at a constant speed, we are able to reproduce a condition comparable to that of a height and base in a right-angle triangle. Further, by introducing the sliding beam C connected to both arms, we get the effect of having the remaining component, namely, the hypotenuse. Since it was found that the slope of hypotenuse with respect to its base is directly proportional to the average speed, we proceed to transmit the movement of the beam C to the pointer D by means of a series of links E, which are so arranged as to produce a parallel motion, and an addition of a suitable scale F enables a direct reading of average speed in miles per hour to be made.




Diagrammatic arrangement of the average speed meter described in the accompanying article; the letters are referred to in the text. An imaginative sketch of the external appearance of the proposed apparatus is also shown above.

### Mechanical Features.

It will be seen that the arm A is propelled by the action of a screw thread G, which is driven by a worm H, and the same method of propulsion is applied to the arm B. But, in order to obtain a constant rate of progression, a friction drive I and an escapement mechanism J, similar to that of a watch, are interposed between the worm drive H and the screw thread K.

The pointers attached to the arms A and B indicate, in conjunction with the respective scales L and M, the magnitude of both time and mileage independently of the average speed.

The letters N and O in the drawing signify arm-supporting members.

NOALL.

[An average speed meter, the invention of Dr. A. M. Low, was about to be produced commercially in 1914 immediately prior to the war.—ED.]

## BIRMINGHAM CLUB'S SPORTING TRIAL.

RESULTS of the Birmingham M.C.C. sporting half-day trial, described last week, are now to hand, and are as follows:

SILVER CUPS FOR BEST PERFORMANCES.—Solo: B. H. Riley (2¾ A.J.S.). Sidecar: H. S. Perry (6 B.S.A. sc.).

GOLD MEDALS.—G. F. Barrett (2¾ T.B.), A. Thrush (3½ Sunbeam), D. Brandish (4 Triumph), G. Butcher (3½ Sunbeam), A. Watson (3½ Sunbeam sc.), T. H. Walker (6 B.S.A. sc.), and H. V. Collins (3½ Norton sc.).

SILVER MEDALS.—B. Kershaw (2¾ New Imperial), T. Wooley (2¼ Sun-Vitesse), G. C. Jenkins (4¼ B.S.A. sc.), and B. L. Bird (6 B.S.A. sc.).

BRONZE MEDAL.—K. G. Uzzel (8 New Imperial sc.).

# WELDLESS STEEL TUBING.

## The Use of High Carbon Steel and Tapered Lugs.

IN the last issue of *The Motor Cycle* we referred briefly to a paper read before the Institution of Automobile Engineers by Mr. W. W. Hackett. So interesting and important were its contents that we make no apologies for reprinting extracts which should be of the greatest value to manufacturers.

The author referred to a series of failures caused by unsuitable lugs. The chief fault of some of those used in the earlier days of the motor cycle industry was that the outlets were too strong, and case after case of tube failure occurred, tubes often breaking off so cleanly as to give the appearance of having been cut through. As the broken tubes could be flattened, it was provable that they were in a ductile, and not brittle, condition, and a series of tests was carried out in order to prove that the fault lay in the excessive strength of the lug outlets. A lug having strong outlets was taken, and one outlet only was tapered off. A piece of tubing of usual size and quality was brazed into the lug, the lug then being firmly secured to a plate. The ends of the tube were then moved by an eccentric and connecting rods, giving a half-inch movement to each end at a speed of about 400 r.p.m. Each time the experiment was tried the tube broke off cleanly close to the thick outlet, whereas it was always intact at the tapered outlet.

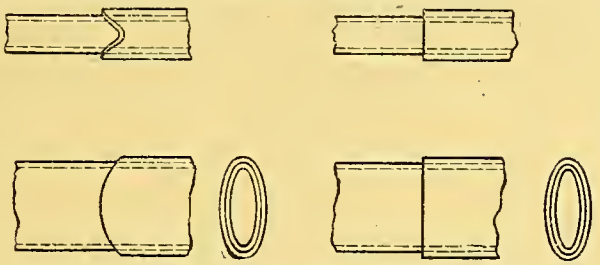
In another test, two tubes brazed into lugs with a thick and the other with a tapered outlet were held rigidly by the lugs, and similar weights were applied at the ends. The tube brazed into the lug with tapered outlet bent with an easy curve, but that brazed into the lug with a strong outlet bent abruptly close to the lug.

Alternating stress tests were also carried out on a number of tubes held in grips, half of which had tapered outlets and the others strong outlets. When the taper grip was used the average number of revolutions before breakage occurred was 248,371, but when the strong outlet was used, breakage occurred after only 120,545 revolutions, or less than half the number experienced in the case of tapered outlets. Another interesting feature of the same test was the spiral form of the break of the tubes held in taper grips, which seems to prove that the fatigue is shared over a large area, as this form of break never occurred when the tube was held in grips with strong outlets, the fractures being distinctly localised.

### Strength by Tapering.

Quite a number of running tests on front forks of various tapers were carried out, reducing to what may be thought to be ridiculously small diameters at the bottom of the fork, but the life of the fork increased as the size at the bottom diminished. In many cases weight can be saved and increased strength can be given by a tapering of the tube in diameter or in the gauge.

On motor cycle frames it is possible to decrease the weight of the tubes greatly by a proper distribution of the strength. The motor cycle manufacturer knows at which part of the frame breakage occurs. In many instances the front down tube has been the vital part, and the break has occurred close to the top lug. It is much better to put in a taper gauge tube to prevent the trouble than merely to increase the gauge. If a 12 gauge down tube has previously been used, a tube of the same weight, but tapered from 10 to 14 gauge in its entire length, will, no doubt, remedy the defect. The tube is stronger because of its added thickness at the critical point, and also because the tapered gauge enables the fatigue to be carried away from the lug. A 12 to 15 gauge or a 12 to 14 tapered gauge would be stronger than the 12 gauge plain tube.



The curved outlets on the left are suggested as being stronger and more suitable than the usual square type.

The lugs should be kept as light as possible at the outlets, and a lug with a curved shape at the outlet is better than one with the square cut outlet generally used.

### High Carbon Steels.

From experiments carried out during the war period on aeroplane tubing, it was found that excellent results could be obtained by using 0.5% carbon steel tubing, giving in the bright or blued state a yield of 40 to 45 tons per sq. in., and an ultimate stress of 45 to 50 tons per sq. in. When annealed, the steel should give 23 tons per sq. in. yield, and 35 tons per sq. in. ultimate. The author found, however, that in the motor trade there was no inclination to use these high carbon steel tubes, and opinions were expressed that the tubing from this steel would of necessity be brittle. Whilst it is recommended that care should be taken with the heat-treatment, the whole of the author's testing has been carried out on joints brazed in his shops in a commercial manner, with no more care taken than in ordinary production. Although hundreds of tests have been carried out, he has not had a contradictory result; 0.3% carbon tubing has always been better than 0.15%, and 0.5% always superior to 0.3%; 1in.×20g. high carbon steel is much stronger than the 1in.×18g. medium carbon steel. Again the 1in.×20g. high carbon steel is as strong as the 1in.×17g. medium carbon steel, and much stronger than the 1in.×17g. low carbon steel; 1in.×18g. carbon steel is as strong as the 1in.×16g. medium carbon steel, and 1in.×20g. high carbon steel is much stronger than the 1in.×16g. low carbon steel. Also, it has been found that the 1in.×20g. high carbon steel is as strong as 1in.×15g. low carbon steel.

Other tests have been carried out on this question of the value of steels containing varying percentages of carbon when brazed, and all the results have proved unquestionably that by using a 0.5% carbon steel a greater strength can be obtained with a less weight than by using a low carbon steel.

### Greater Elastic Limits.

High carbon steel tubing of 1in.×20g. is practically as strong as 1in.×15g. low carbon steel, yet it is only one-half as thick. This, of course, is owing to the fact that after undergoing the brazing process the elastic limit of a 0.5% carbon steel is about twice as high as that of a 0.15% carbon steel at the brazed joint, and consequently the high carbon steel is able to stand much more stress than a low carbon steel.

The author has found in the past great opposition to the use of high carbon steel tubing, and it has been urged that such tubing must of necessity be brittle. This is not so; in the bright state almost as good flattening results can be obtained as with the low carbon steel.

It is not suggested that only high carbon steel be used, as where the low carbon tube has proved satisfactory, there is no need to go to the added expense of the higher quality material, but if motor cycle designers will look back a few years, recall the increasing weight of the machine caused by substituting tubes of a heavier gauge for those that have failed, and try a higher carbon steel instead, a lighter, stronger, and more resilient machine will be the result.

There is one other point. It is always possible for steel supplies to be received in a mixed condition. The tube maker may get some wrong billet from the steel maker, or mistakes may occur in transit or in the tube works. There is also a chance that the motor cycle maker may mix qualities in his stores. If any test is to be made to check the carbon contents on commercial lines, that test must be a cheap one. The "spark test" for carbon is a quick method, and, in the hands of a capable and properly trained man, the percentage of carbon in the steel can be determined to within 0.25%. The author is indebted to Messrs. Hans Renold, Ltd., for his knowledge of this.

When a piece of steel is pressed against a grinding wheel, a shower of sparks is produced, and this shower may be called the "spark-sheaf." The spark-sheaf consists of spark rays, or lines of light produced by the flight of the sparks, and spark pictures, which are small explosions appearing along the spark rays. It is from the spark pictures that the percentage is estimated, since the brighter and more numerous the spark pictures the higher the carbon content.

BI

# A Motor Cycle Holiday in London

As at St. Mark's, Venice, the pigeons at St. Paul's are so tame that they will feed out of the hands of the stranger.

## The Metropolis as seen by a Provincial Motor Cyclist.

IT is a trite saying that the average Londoner knows less about London than most provincial visitors, but it is probably true that the majority of London motor cyclists know and appreciate its many charms. Nevertheless, it is the visitor to the Metropolis on a sight-seeing expedition who learns more of the world's largest city than most of those who are daily within sound of Bow Bells, for one seldom appreciates that which is near at hand.

Hundreds of provincial motor cyclists annually visit London, but even after many visits, they seldom know more of London than is bounded by Olympia and the West End, while those who have to cross London *en route* from one part of the country to another usually consult maps and guides as to the most convenient way of avoiding the heart of it, always having in mind a dread of London traffic which is immediately dissipated once the streets have been negotiated.

### Imaginary Terrors of Traffic Driving.

Ask almost any provincial motor cyclist his opinion of a motor cycle holiday in London, and one receives an exclamation of surprise, if not of derision; yet to drive in London streets is far easier than in many a country market town. Given a modern machine with a tractable engine and a smooth hand-operated clutch, no provincial motor cyclist need hesitate about spending a holiday awheel in the heart of the British Empire.

True, such a holiday will be entirely different from a tour or a stay at a seaside resort; it will not be so restful perhaps, but for the energetic sightseer London has no compeer. It abounds in interesting show-places, which form the key to history and to the development of our great country.

The business man visiting the Metropolis who, with an evening to spare, takes a trip on the top of a 'bus may think that he is seeing London, but he is only obtaining a superficial glance, and, while the Fleet Street journalist who takes a short cut through the Temple may "feel" the atmosphere of this quaint and peaceful corner of a hurly-burly world, he rarely troubles to investigate the fund of interest there is within a yard or so on either hand. No, one cannot obtain a proper idea of London, its beauty, its romance, and its interest by hurrying on as a passer-by, neither are all the places which are worth visiting on the lists of amusements or museums, nor are they depicted on picture postcards or otherwise advertised.

Having spent fourteen whole days exploring the Metropolis with a motor cycle and a further fourteen evenings afoot, the writer—a provincial motor cyclist—has decided that a month is barely sufficient to exhaust the recognised show places alone.

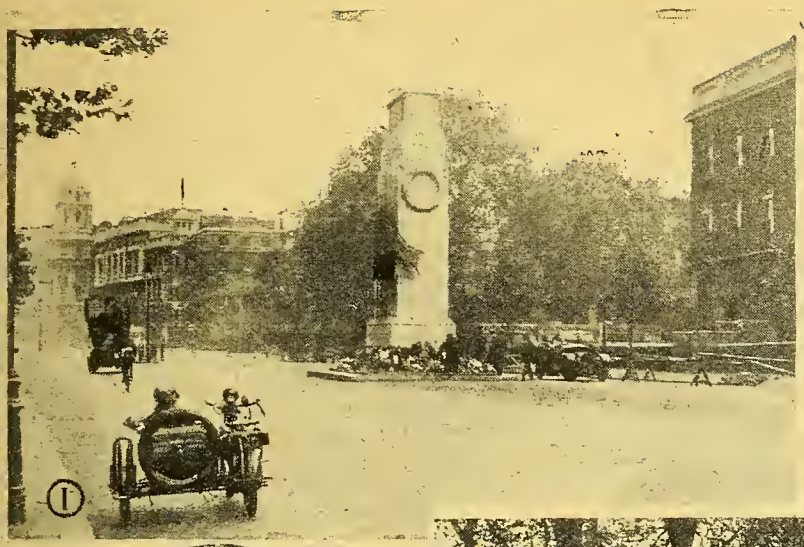
### All London Available.

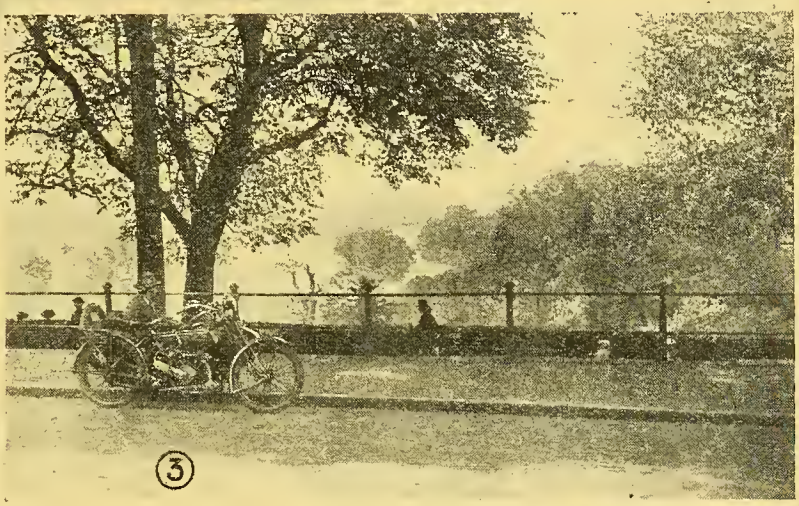
But it is not everyone who wishes to explore museums and the tombs of our famous dead. Nevertheless, any motor cyclist holidaying in London owes it to himself to see Westminster Abbey, St. Paul's, and the Tower of London; the rest may be missed, if desired, for a half-day in the Abbey alone will be sufficient to convince him that London deserves the honour paid to it by the whole world.

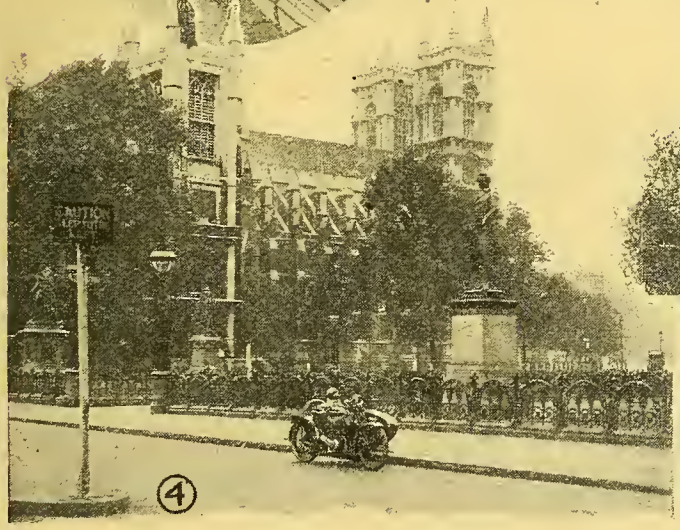
During the holiday referred to, a sidecar outfit was used every day. Accommodation was found in West Kensington, and the machine was garaged at a mews at the end of Russell Road, which is opposite the Addison Road entrance to Olympia, with the railway in between.

# PHOTOGRAPHIC REMINISCENCES OF A MOTOR CYCLE HOLIDAY IN LONDON.

All the metropolis is not a seething mass of traffic, as is usually supposed by the provincial. It is within the City of London itself that the streets are most crowded, but in the City of Westminster there is room for the motor cyclist sightseer. It is this part of London that contains the show places so beloved by the visitor.







(1) The Cenotaph in Whitehall, where many Government buildings are situated.

(2 and 3) On the Terrace at Richmond—one of the beauty spots of Greater London, but where the police are not sympathetic to sightseers on wheels, and do not allow the motor cyclist to stand for long in order to admire the view.

(4) Westminster Abbey, often overlooked by the passing motor cyclist, whose eyes are attracted by the imposing Houses of Parliament on the other side of the street.

(5) Sunday morning on the Embankment; on week days this fine road is a taxi drivers' "T.T." course. Cleopatra's Needle is seen on the left

**A Motor Cycle Holiday in London—**

This is about as near to the most interesting parts of London as it is possible to obtain garage accommodation—for the garaging difficulty is very acute, and any stranger arriving at, say, the Marble Arch, Piccadilly Circus, or Trafalgar Square would find it difficult to find lodging for his machine. But for this, an hotel near the Embankment or in the Russell Square district would have been preferred. However, West Kensington was found to be quite convenient as a centre not only for London itself, but for the surrounding suburbs which were explored in turn—and, in many cases, with disappointment. Golder's Green, for example, so Continental at first sight, seemed but a community of dolls' houses, and most other suburbs known by name to the provincial disproved the popular fallacy that London is a superior place in every way.

### Greater London.

London stretches out its suburban lines of railways and tubes, and almost any suburb within these areas compares unfavourably with the residential districts of most large cities. There are exceptions, of course, Richmond, for instance, would be exceptionally nice if it were not for the trippers who reduce it to a somewhat cheap resort on Saturdays and Sundays. Notwithstanding, it is well worth a visit—on any other day—for the view from the Terrace across the twining Thames is superb. Taken on the whole, however, London has not much to offer to the provincial in the way of scenery, especially if the visitor be from such beautiful counties as Warwickshire or Gloucestershire, and the lack of hills worries those from further North.

Southward of Croydon, in the Weybridge district or on the Surrey Downs, there is much to interest the motor cyclist in search of beauty, but it is in London itself that the greatest charm lies, and after these trips to the outside this fact was borne upon the writer every time.

A motorist since the beginning of motoring, the writer on this holiday discovered the most uninteresting route he has ever traversed. This was from the Metropolis to Southend-on-Sea *via* Ilford. If it is possible to find a more dull forty miles then it is from Southend-on-Sea to London *via* Grays.

The journey was undertaken on a Sunday, when life on the Commercial Road could be studied at its best. Anyone undertaking the trip should first read "Limehouse Nights," and, on his trip through Whitechapel, he will see all the characters Thomas Burke has sketched in his stories.

### Open Spaces—Within and Without.

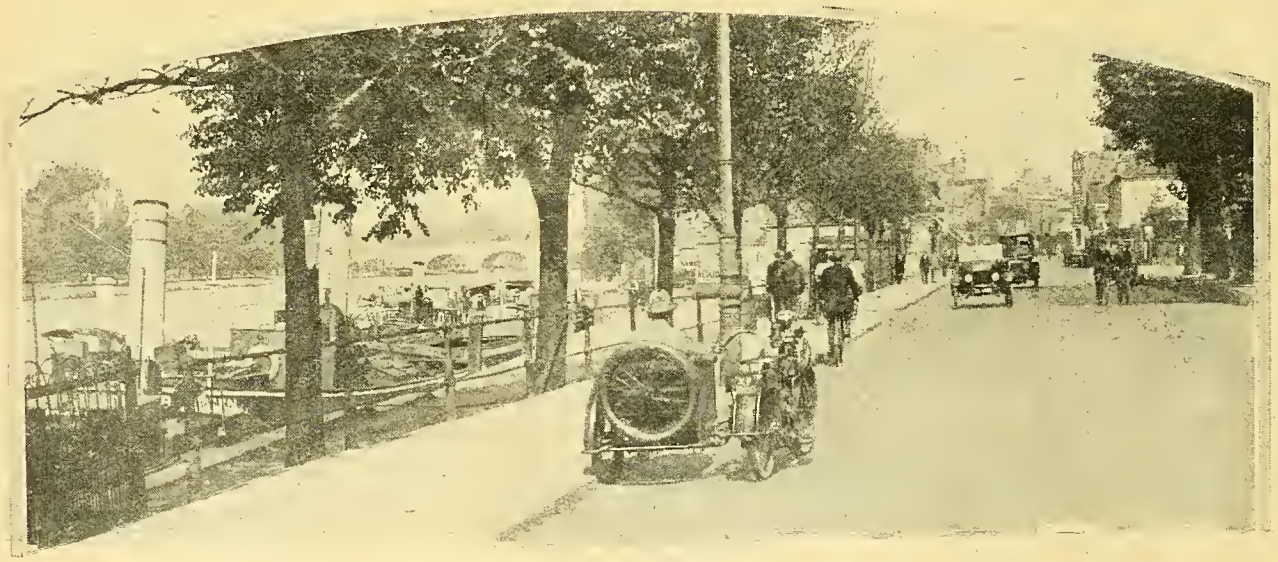
These outside trips may not be so interesting as the exploration of Hyde Park, the Green Park, Kensington Gardens, The Mall, or the Embankment, but it is impossible to grasp fully the atmosphere of London without knowing to what it forms the centre.

Advantage was taken of an opportunity of seeing Brooklands, with the result that all preconceived ideas of the track were changed. The provincial motor cyclist who has never visited the famous racecourse at Brooklands should make a point of doing so.

Altogether, it was a most interesting holiday, and one which helped each member of the party better to appreciate why London cannot be compared with any other city in the kingdom.

Not least among the interests for the driver was the negotiation of London traffic. First impressions are that all vehicles are driven too fast, but so well regulated is the stream, and so well understood the rules of the road, that speeds which would be most dangerous in provincial cities are quite safe. One thing is certain, if every motorist spent a week every year in London with his machine, he would be a better driver when in the provinces, for there the policeman must be obeyed, and it is inviting police action, with probably severe results, to deviate from the cast iron rule that all traffic passes to the left of the "refuges" in the centre of the roads

The same sentiment applies also to policemen, for it is certain that if the police of the provinces served an apprenticeship in the Metropolis, traffic regulation would be greatly improved. As for London policemen themselves, there is not a more courteous and patient body of men in any sphere of life.



Alongside the Thames at Kingston—one of the several interesting resorts to be visited during a motor cycle holiday in London

# LETTERS to the EDITOR.

The Editor does not hold himself responsible for the opinions of his correspondents.
Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor St., E.C.4, and must be accompanied by the writer's name and address

### *MAXIMUM SPEEDS OF TWO-STROKES.*

Sir,—I have a Revere-Villiers, and can do 40-45 m.p.h. on a 5½ to 1 gear, 25 jet, Shell spirit, and Speedwell oil. Recently I came from Coventry to Leicester, *via* Bedworth and Sharnford, nearly thirty miles, in one hour, and the engine was as cool at the finish as at the start. I may say that my machine is a 1915-16 model. AY 4417.
Leicester.

Sir,—I was interested in "Kelly's" letter in *The Motor Cycle* of December 15th, 1921. Something must have been wrong with his Velocette if it would not do more than 38 m.p.h. and 120 m.p.g. I have a 1920 Velocette two-stroke, and I can do 45 m.p.h. and 140 m.p.g.

If 38 m.p.h. gets on his nerves, I should like him to do about thirty miles on my Velocette with it wide open. No, it would not overheat, although 2¼ h.p. two-strokes may be called 2⅛ h.p. Tink-a-Ponks. I get there every time. I shall be tuning it again soon, and hope to attain 50 m.p.h. by Cowey speedometer.

Could anyone put forth the proper pronunciation of Velocette? I have heard four different ways.
Banbury. WE TWO.

Sir,—I am rather interested in the letter of one of your corespondents ("AR 8414"), who says that the maximum speed of his Villiers-engined Revere is not more than 38 m.p.h. I have one of these machines, a 1920 model with Amac carburetter (jet 24) and a Sturmey-Archer two-speed gear, and have obtained just over 40 m.p.h. on the level. If the machine belonging to your correspondent has a Sturmey-Archer, I think he may find that his clutch is slipping, as this trouble has occurred with mine. To remedy this, take off the cover held by three small nuts, and then it may be found that the large nut inside has worked loose.
Nottingham. C.W.B.

### *GEAR CHANGE DIFFICULTIES WITH A SLIDING PINION BOX.*

Sir,—It would be interesting to know whether any riders of 3½ h.p. three-speed Rover motor cycles have experienced difficulty in the gear and clutch control of their machines.

I ride a 1920 model solo, with standard gears, and find it quite awkward to change up when starting, as it is quite easy to miss the second gear position.

Changing down is also rather awkward, and the engine seems to race wildly, although the throttle is greatly reduced. It seems that there is too much of a drop in the ratio.

The clutch control being by foot is, of course, rather awkward for solo work, but is otherwise well up to its work.
S. TOURRER.

### *THE WORLD'S BEST ROADS.*

Sir,—For some months the continual grumble anent our roads has raised my ire (I know to grouse is the greatest joy of every Englishman, but if only he realised that this continual belittling of his country is taken for the truth abroad he might cease; why not a little American "world's best"?), and "Overseas Triumph" puts the lid on it. I should like to inform him that from the many enquiries I have made, I have drawn the correct conclusion, I think, that England has easily the world's best roads, and, above all, how beautifully Tarmacced are all, practically speaking, of our small roads.

With regard to the last part of his letter, may I put one question? What happens when it rains? Having lived in France now for two years, and done some 8,000 miles there, I should like to say that the answer to the above question, coupled with ever such a small amount of traffic, gives a result absolutely unknown in England for "appallingness."

In conclusion, I am compelled to make what may seem rather a sweeping statement, but in four months spent in England last summer, and every minute possible in the saddle, I never saw a bad road, and never either hit or saw a single pot-hole worthy of the name. (This applies only to the country south of Norfolk, as I did not go further North.)
H. BEACON.

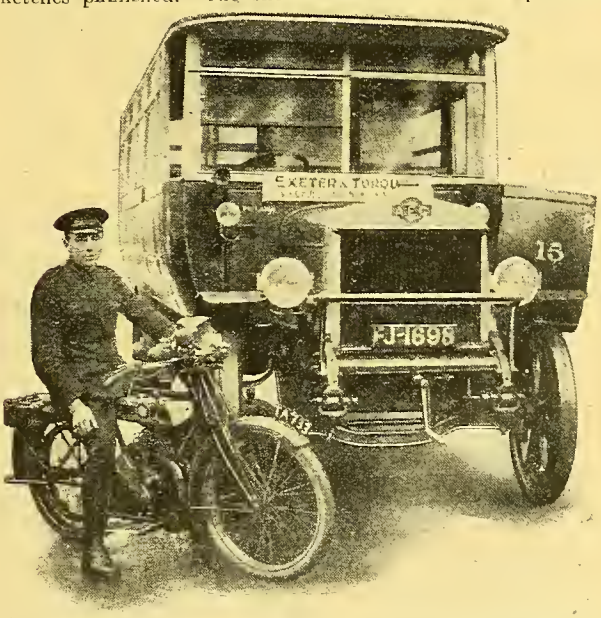
### *HEAD LAMP DIMMING.*

Sir,—I would like to take the opportunity of replying to your corrrespondent Mr. Ernest Wm. Troughton in your issue of December 29th in order to defend the "Inter-departmental Lights on Vehicles Committee."

I am not in any way connected with the committee, but, nevertheless, one feels that your correspondent's letter, in spite of its inaccuracies, is liable to give motor cyclists and others the erroneous impression that the Americans have really produced an efficient anti-dazzle lamp which does not reduce the intensity of the light beam whereas our committee has failed.

This, however, is most decidedly not the case; and, furthermore, the statement of the English committee is essentially correct at this date, namely, that "it is not possible to eliminate dazzle (in motor car lights) and at the same time leave an adequate driving light."

I would first of all like to draw your attention to the sketches published. The one on the left shows the parallel




An inspector employed by the Devon General Omnibus and Touring Co., Ltd., for checking passengers' tickets on 'bus routes, and generally acting as despatch rider for the company's manager. The work is strenuous, as it means being out every day all the year round on South Devon roads and much cross-country work when cutting across from one route to another. The machine is a P. and S. two-stroke, and during the first month on service the inspector covered 1,400 miles, in the second the monthly mileage went up to 1,600, and the third to 1,800.

beam emerging from the prism in a manner and direction which is utterly impossible for it to achieve. This point is unimportant, except that it shows the inventor to be insufficiently acquainted with his subject. The sketch upon the right hand is even in a worse condition. If the front prism is composed of a number of lenticular cylindrical strips, then the parallel beam from inside the lamp would be thrown to a series of foci parallel to, about 2in. or so in front of, the lamp, in which case the beam is no longer parallel (as shown), but divergent in a horizontal plane and weakened in intensity inversely as the square of the distance from the lamp.

Secondly, I would suggest that if the only function of the prism is to deflect the rays on to the ground, why have it at all? Why not tilt the lamp downwards?

Thirdly, your correspondent's statement that this device (or any other device) can "give, without loss of light, wide depression and no glare" is incorrect, and in contradiction to the most elementary laws of optics.

Fourthly, if your correspondent is correct when he states that "this lamp gives a beam 50ft. wide at 100ft. distance from the lamp, and of sufficient intensity to make riding possible," then the candle-power of the head light must be enormous; because one must remember that without this device, and using a 6in. diameter lamp with an electric filament $\frac{1}{8}$in. long and about $\frac{1}{100}$in. in thickness and parabolic reflector about 1in. focus, the size of the projected filament, when the rays are parallel, will be about 13ft. high and 1ft. broad at a distance of 100ft. from the lamp, and now, if one places the device in position, this patch of light (13ft. × 1ft.) is drawn out 50ft. in a horizontal plane, so that the intensity of the patch has now been reduced to one-fiftieth of its original value! Surely this is a reduction in intensity.

The elimination of glare without loss of light cannot depend upon deflections, deviations, dispersions, or diffusion, and it is surprising that people have endeavoured, and are still endeavouring, to solve the problem upon these lines and through these agencies. ROVER.

London, N.19.

### *SUPER SPORTS MODELS ON THE ROAD.*

Sir,—I was intensely interested in your report of your road test of the four-valve Triumph in the issue of *The Motor Cycle* for December 29th, 1921, more especially as I am the proud owner of a rival 1922 sports model—to wit, the long-stroke T.T. Sunbeam. My machine is one of the two Show models, and, although a side-valve engine is used, this is, of course, super-efficient; and, after reading your remarks on the road performance of the Triumph, it is easy to see that my engine has many features in common with this. For instance, my engine is also very sensitive to ignition variations, and here, again, the top gear is high—4.1 to 1—and consequently one potters through busy thoroughfares on the second gear of 6 to 1, and should accelerate to at least 30 m.p.h. before changing up!—that is, if the engine is to be humoured as such a fine specimen thoroughly deserves to be.

The "slap" of the aluminium piston is very apparent unless the revs. be kept up, more so than in the case of the 85×88 mm. sports Sunbeam engine which I owned last summer. The extra resonance of the deeply finned cylinder and the hefty punch behind the 5.9 to 1 compression ratio are probably chiefly accountable for this increased noise. The acceleration of this engine, however, can only be described as *extraordinary*, and, worst of all, there is no carrier to fall back on to if the throttle be opened too suddenly!

Amersham. HARMONY.

### *72 M.P.H. ON A PRE-WAR SINGLE.*

Sir,—With reference to "Old 'Un's" claim to do 72 m.p.h. on a pre-war Triumph. I do not claim to do anything like this speed, but, being a sportsman and a good loser, I am prepared to take him on. If he wins, I will make him a present of my machine, which is a 1920 8 h.p. sporting Zenith, fully equipped. L. MAYNARD.

### *WHICH IS THE WORLD'S CLEANEST MOTOR CYCLE?*

Sir,—I have read with very much interest in recent issues of your paper the correspondence in connection with the query as to which is the "world's best motor cycle," and, although this raised some very interesting points, in my opinion there is still another point to be considered in this connection, and I should like to know from your readers which they consider to be "the world's cleanest motor cycle" to ride.

After many years of considerable experience in riding different makes of machines, for the past twelve months I have been riding a Matchless Model H2 sidecar outfit, and, without fear of contradiction, I consider this to be absolutely *the* machine for cleanliness.

It may interest you to know that, day in and day out, I ride this machine up to business and home every day, wet or fine, without the use of any overalls whatsoever, and I still have to learn of another machine which will permit this.

I can only conclude by giving a slogan: "Matchless is matchless for cleanliness." W. PRATT.

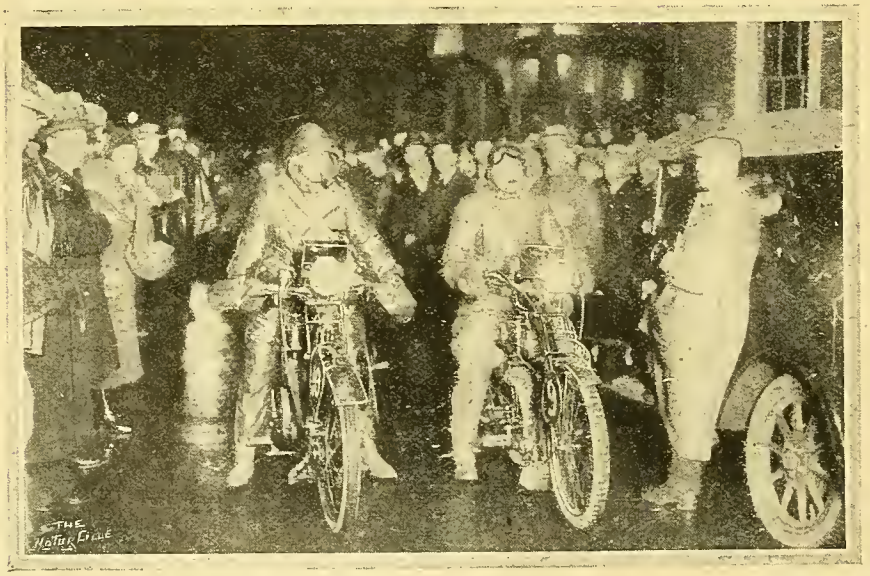
### *WATER POWER FOR LUCAS DYNAMO.*

Sir,—"H.M.B." seeks information *re* house lighting from a Lucas dynamo. It should be quite feasible to drive this dynamo by means of a water motor. The ideal arrangement would be to direct-couple the turbine to the dynamo by means of a flexible coupling.

DATA.—Assuming dynamo has an output of 100 watts. 100 watts = 0.134 electrical horse-power (e.h.p.). At an efficiency of 60% dynamo would require at coupling 0.223 h.p. Turbine, therefore, has to develop 0.223 brake-horse-power (b.h.p.). Assuming efficiency of turbine to be 50%, then h.p. applied to turbine impeller has to be 0.446 = 14,718 ft.-lb. Quantity of water required to develop 14,718 ft.-lb. at a head of, say, 100 feet = 147 lb. per minute = say fifteen gallons per minute. If a battery were arranged to "float" across dynamo, governing mechanism could be dispensed with on the turbine, as the battery would keep the load on dynamo approximately constant.

CANDLE-POWER AVAILABLE.—Using "gas-filled" lamps, the dynamo (if 100 watt) would be good for approximately 140 c.p. By, however, suitably grading the capacity of battery, the lighting capacity of plant could be considerably increased by taking energy from dynamo and battery simultaneously, and running generating set "overtime" to recharge battery. HYDRO-ELECTRIC.

Garnant.




Are English riders becoming "soft" through the easy road conditions in this country? The English correspondent to an American journal says they are, forgetting the hundreds who compete in such events as the annual "London-Exeter." The above illustration depicts how the enthusiasts start off in rain, gale, and darkness on the 320 miles run of 24 hours duration.

### PRONUNCIATION OF "MAGNETO."

Sir,—With reference to the above in *The Motor Cycle* of December 15th, the following extracts may be of interest to "Puzzled," although I am afraid he will still be puzzled:

*Nuttall's Standard Dictionary*

Magnetize—Mag'-ne-tize.
Magneto-electric—Mag-ne'-to-e-lek-trik.
Magnetograph—Mag-net'-o-graf.

*Murray's Oxford New English Dictionary.*

Magnetize—Mæ-gnêt-eiz.
Magneto—Mæ-gni-to.
Magne-to-electric.

*Webster's Dictionary*

Magnetize—Măg'-nĕt-īz.
Magneto—Măg'-nĕt-ō.
Magnetograph—Măg'-nĕt-ō-grăf

Southfields, London, S.W 1 E.J.B.

[The lesser known accents used are illustrated in the various dictionaries mentioned as follows

"ė" as in "added"
"i̇" as in "thief."
"a̓" as in "am"
"e̓" as in "end." "recent."
"o̓" as in "obey" —ED.]

### SIDECAR FUEL CONSUMPTION RECORDS.

Sir,—During the Christmas holidays I made the following experiment. I put *one* gallon of petrol in the tank, and set off on a jaunt over give and take roads.

My average speed worked out to just under 45 m.p.h., and after running 190 miles I ascertained the amount of petrol left in the tank. Much to my astonishment, there was *one gallon and a half* of the precious juice!

My mount is a 1918 3½ h.p. Conkout, fitted with a Spitfire carburetter with six jets. Sidecar, home-made, consisting of a Ford body mounted on ordinary chassis. I travelled with five up. MUTT.
New Malden.

Sir,—Recent correspondence has called forth some remarkable statements from Triumph riders. There were two which particularly interested me. The first was that of "Top-hole." One hundred and forty miles per gallon is indeed good, and so is 64 m.p.h any time (with a sidecar!). Generally, when speeds such as these are indicated, I take it to be time for a speedometer overhaul. On one occasion my own speedometer registered 72 m.p.h. as I was wheeling the machine from a garage. NON SEMPER MENDAX.
St. Ives.

Sir,—The touring of a loaded pantechnicon across a couple of thousand miles of level going, using only Woodbine smoke as fuel, would no doubt be quite a simple matter to "Top-hole." SCOTT.
Leicester.

Sir,—With a machine in good condition, coupled with good driving, one ought to obtain at least 80 m.p.g. on a 4 h.p. outfit. May I give a few reasons for high consumption, *i.e.*, under-oiling, carburetter float badly functioning, spark too advanced or *vice-versa*, too high gear, insufficient attention to the air lever, improperly overlapped valves, and, the most common of all, a large jet. An engine must be oiled in proportion to its work, and not a pumpful of oil every so many miles, which is usually the idea of a learner.
JAS. REECE.

Sir,—The appreciative letters of Triumph machine riders who do umpteen miles per gallon have set me wondering again what is the matter with mine. As regards power and reliability I have nothing but praise, and have done tours of weeks' duration with sidecar passenger and luggage and nothing happen to the engine. I have never got more than 50 m.p.g. running with empty sidecar. A.C.M.
London, N.16.

Sir,—Dozens of riders of my acquaintance would never claim more than 65 m.p.g. with the old 3½ h.p. Triumph and coach sidecar. I cannot understand how it is possible to get more than twice that figure with a 4 h.p. outfit, as "Top-hole" states.

Can a meet be arranged for Triumph sidecar outfits some Saturday afternoon so that a test may be made? Each competitor to have a measured pint of petrol, and see how far he can go on the allowance. I would be pleased to organise the meet. Will correspondents please send particulars as follows: (1.) Year of machine. (2.) Type and make of sidecar. (3.) Type of screen. (4.) Weight of outfit. (5.) Carburetter and jet number. (6.) Gear ratios. (7.) Oil used and mileage per pumpful. (8.) Other particulars of interest.
Esher (on the Portsmouth Road) may be a convenient meeting place. H. B. BOOTH.

Sir,—If it were possible to complain of the Triumph sidecar owners' admirably furnished m.p.g. statistics, it would be on the score of modesty. "Top-hole" made a more skilful stab at Truth than his different *confrères;* but even he lamentably falls into modest ways during the course of his peroration by claiming a trifling speed of 64 m.p.h. with his trusty outfit *and* spares. ONION.
Shortlands.

Sir,—A correspondent signing himself "Top-hole" claims 120 to 140 m.p.g. and 64 m.p.h. with a 1917 Triumph *and sidecar* (with passengers).

I fail to see what good the making of such ridiculous statements does to the motor cycle movement. What chance would a professional stand against a machine of this type, either in a petrol consumption test or a speed trial, if the claims made were true? Give some people a lowish gear, a noisy exhaust, and a flying helmet, and Brooklands looks small.

Another correspondent, signing himself "Old 'Un," claims to have covered the mile (on the road) in 50s. (equal to 72 m.p.h.) on a pre-war single-gear Triumph. "Old 'Un" made a mistake in the timing: he should have said 1m. 50s. I am thinking of the fact that Dan Bradbury was the first man to exceed 70 m.p.h. on a 500 c.c., and that on a Norton in 1911. L. W. E. HARTLEY.

Sir,—I purchased a 1921 Triumph machine and light sidecar last May, and my average is only fifty-eight miles per gallon according to a Stewart trip speedometer, this district (near March) being quite flat.

Up to the present I have only done 1,724 miles, and have had the machine decarbonised once.

I note the secret mentioned by "Entirely Satisfied"; my gear is 5 to 1 top, every attention is given to valves and oiling engine, but I cannot obtain this big mileage, and there are several more in this district. A. E. FISHER.

[From the mass of letters we have received on this subject, of which the above is a representative selection, it is evident that many readers did not take "Top-hole's" claim of 140 m.p.g. and 64 m.p.h. in the spirit it was written. Mr. A. E. Fisher, whose letter appears above, also forwards us a reply which he received from the Triumph Cycle Co. on the question of fuel consumption. According to the makers, approximately 70 m.p.g. should be obtained with a 4 h.p. Triumph fitted with a light sidecar.—ED.]

### ELIMINATING MECHANICAL NOISE.

Sir,—I wish to thank all those readers who have so kindly replied to my query regarding the silencing of the Rudge valve gear. I am rather at a loss to know which gadget to try first!

While my query was meant to apply to the inlet valve gear, I would like to point out that the majority of the noise comes from the *inside* of the timing case, not from the mechanism outside it. The noise from the overhead rocker is merely a slight but annoying clatter, while the timing wheel noise is a decided "clank." It appears to me that this is unavoidable, due to the long train of wheels employed, thus exaggerating the backlash. One of your correspondents suggests filling the timing case with vaseline after closing up all holes from the crank case. I would like to ask him two questions. What happened when the engine was hot? I should be inclined to think that as soon as the grease melted the noise would be in evidence again. Secondly, how many "horse-power" did it take to turn the engine over to start on a really cold morning? Even as it is, my engine requires priming to free the piston and gears when the weather is at all on the cold side. But the timing case full of solid vaseline—ugh! MULTI-GEAR.
South Norwood.

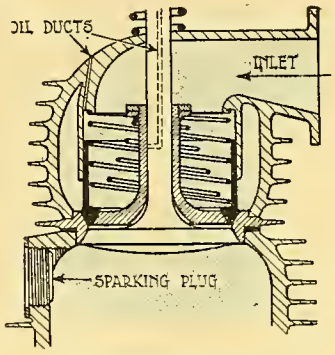
### REVIVING THE AUTOMATIC INLET VALVE.

Sir,—Is "H. Le Fe" seriously suggesting that an engine of the size which he suggests fitted with an a.i.v. would have the same or better power curve than with m.o.i.v.? Does he suggest that a 2½ h.p. (250 c.c.) J.A.P. engine, if it were converted to a.i.v., would rev. at 10,000 per minute, or would have a peak at about 7,000? Let us have suggestions, but let them have a basis on reason. After all, with present fuel, the only way to get more power from an engine is to raise the peak of the power by increased r.p.m. This considered, a.i.v. is a retrograde step.

L. W. E. HARTLEY.

Sir,—I enclose a sketch (not strictly to scale) of a valve gear idea which has occurred to me, and which might prove of interest to you or your readers, especially at present, when there seems to be a revival of interest in automatic inlet valves.

Its action will, I think, be fairly obvious, and is similar, I imagine, to that of the G.R.I. engine. It would appear to have the advantage over the latter of entraining a very small percentage of exhaust gases with the mixture and of expelling very little mixture with the exhaust—only the volume V between valves.



Concentric automatic inlet and exhaust valves suggested by "W.K."

The advantage of the very large central valve, open over two strokes and cooled by the incoming mixture, is obvious. The concentric automatic inlet and exhaust valves, working under comparatively cool conditions, could be made of duralumin, ensuring greater rapidity of action. The main valve seating would be renewable, and could be made of stainless steel, or something equally suitable. A detachable cylinder head would hardly seem necessary. The valve chamber could be held down and secured by long (external) vertical bolts and cross pieces.

If the automatic valves are still objected to, it might be worth while to secure the other advantages of the valve gear. In this case the concentric inlet and exhaust valves could be mechanically operated. For instance, the tubular stem of the inlet valve could be carried up through the top wall, like the main valve stem, and operated by a rocking lever from a groove cam on a vertical half-time shaft. This would cause the inlet valve to be alternately pushed down and raised up from its closed position, carrying the exhaust valve with it on the lift movement.

The main valve would in this case, of course, be also operated directly from the half-time shaft, like the Reyre Newson and some other make whose name I have forgotten.

Stafford. W.K.

[It is hardly correct to liken this design to the G.R.I., which has a single poppet valve and a rotary distributing valve. —ED.]

Sir,—Without wishing to raise a heated controversy in relation to a.i.v. *v.* m.o.i.v., I should like to point out to "H. Le Fe" that he would not get the same results from a 2 h.p. M.A.G. twin by replacing m.o.i.v. with a.i.v.'s.

I have been experimenting with a 2 h.p. four-stroke Moto-Rêve twin (which is out of the same stable), 1912 model, a.i.v. over exhausts. I purchased another Moto-Rêve (1911) for the sake of a new magneto and for spare parts; in fact, the exhaust valves of this latter engine are now the m.o.i.v. of the former. Both these machines ran well, but after full throttle for three or four miles would dry up. I drilled holes in the crank case tops, which improved them, and made them go farther before this happened. However, I made one decent machine out of two; I dropped the straight top tube considerably, lowered the engine in the frame, and also the saddle position. I fitted a spring frame, T.T. bars, a 2¾ h.p. Douglas two-speed gear box, and a new magneto and carburetter. I rode this machine for several months, and by going steadily and using bottom gear for hills could travel long distances; but to take a hill on top or all out on level would soon pull it up and stop. I fitted the machine with m.o.i.v. Without altering anything else except inlets and operating mechanism, I find that the result is quite a revelation in the starting and running. I have quite one-third more power, take all decent hills on top, and reel off mile after mile with no attempt at drying up, and the engine does not require priming and the carburetter flooding. I have a slightly higher petrol consumption. In reference to "H. Le Fe's" last remark that the M.A.G.'s power is derived from "large inlet valves" and modern construction, all V twins and horizontal twins, even the very old type, could rev. owing to an impulse every revolution, and the modern twin more so from overlap given to the valves. Therefore by reintroducing a.i.v. to this engine he would lose the advantage of overlap and a full cooling charge, the old fault of heating up and falling off of power resulting.

Hampton-in-Arden. L'ABEILLE.

### NO ENGINE AND FRAME NUMBERS—NO LICENCE!

Sir,—I wonder if many of your readers have had as much trouble as I have to renew my licence for 1922! According to my registration book, the renewal form R.F.1a is obtainable from a money order post office, but I tried five on Saturday, December 31st, without success, amongst them the General Post Office in this city. Of course, the local registration office was closed for the half-day. Eventually in disgust I left it until January 2nd, though I must confess I derived some amusement from the various excuses offered for having no forms.

The most amusing part, however, occurred when I visited the local registration office. Here I was refused a renewal of my licence because I did not know the engine number and frame number of my machine. In vain I offered to let the clerk come outside and find the vanished numbers, and I explained that two motor engineers in the city had already made a fruitless search for them. The clerk was adamant—"no numbers, no licence." I was told and I was even threatened with a fine for not having supplied earlier numbers which apparently do not exist!

I was thereupon ordered to have numbers put on if I wanted a licence—"any number would do." Now I know the law is supposed to be "an ass," but surely it is not such an ass as to insist on entirely fictitious numbers being placed on one's machine. Perhaps one of your readers can enlighten me on this point. It seems to me if I do as I am ordered (and I can see no alternative if what I am told is true), and I subsequently sell my machine as a "1917" model, a purchaser might later return and accuse me of fraud, as the engine number of the 'bus showed that it left the works in 1910!

Perhaps any other readers who have experienced the same difficulties and wasted the same time will voice a complaint, with a view to ending these continual and annoying "pin-pricks" by the authorities.

Norwich. ALLON.

**Books & Maps for Motor Cyclists.**

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
New Edition. Just Published. Price net, 2/- By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/- By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/- By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle*.
Price net, 5/- By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
Set of Three Maps—England and Wales, Scotland, London. Set of three, complete in case. Price net, 5/6. Book post, 5/10. Set of Two Maps—England and Wales, London. Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 5/-. By post, 5/4.
Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# DIRT TRACK RACING in the U.S.A.

## The Risk of Riding Big Capacity High Speed Machines on Half-mile to the Lap Dust Tracks.

By E. B. HOLTON.

MOST of the popularity motor cycle racing has gained in the United States is due to competition on half-mile dirt-surfaced tracks. Originally constructed for trotting and pacing races for horses, these ovals dot the map from Maine to California. For a time during the ascendency of the automobile the tracks lay idle, the stands and fences decayed, while the tracks themselves were grass-grown and neglected. Then the motor cycle was rolled out upon the neglected surfaces, and like a prairie fire the idea of competition between machines swept through the country.

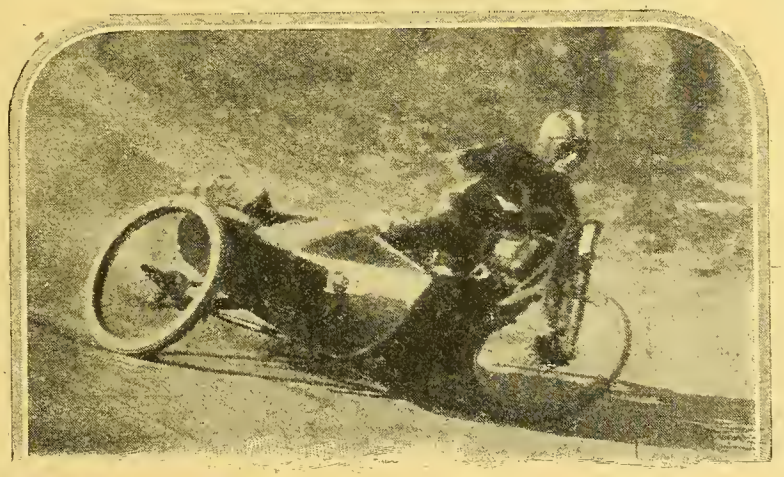
While many of the tracks are one mile to the lap, the majority are of the shorter distance. Through Ohio and Indiana, especially, the races are the real sport of motor cyclists. As many as three meets within a radius of eighty miles have been held in the State of Ohio on the same day, and all drew paying crowds.

### Fences, Poles and Dust.

Wise rules restricting the size of engines permitted upon half-mile tracks have tended to cut down the accidents that go with speed competitions, but there are two evils over which the M. and A.T.A. (the governing body) has no control, and they serve to cause a fatality now and then. These are dusty tracks and fences that surround the oval, either on the pole or the outer edge.

With three men fighting for the lead, a heavy plume of dust hangs over the track, and in spite of precautions such as calcium chloride or light oil spread on the surface, a haze is raised that is difficult to penetrate with the eye. Fences should be torn down. They claimed as a victim one of the best competition men in the United States, when Albert Burns crashed into a pole on the Toledo track in August last. Because the track owners do not wish to have their fences removed, motor cycle promoters and riders are willing to "take a chance" that no one will be hurt during the meet.

For a time during the past racing reason it looked as though sentiment favoured barring sixty-one cubic inch engines (1,000 c.c.) from competition, except on speedways of more than one mile to the lap. Something should be done regarding the restriction of sizes in competition, but so long as the trade dominates the M. and A.T.A. Competition Committee, nothing will happen.



Rounding a corner at 60 m.p.h. on a dirt track in America. Note the sidecar wheel leaning over at the same angle as the bicycle wheels.

### Big Capacities Favoured.

At Chicago an attempt was made to put on a 37in. (600 c.c.) class, which would develop racing between the various sport models. The factories put "thumbs down" on the proposals, however, asserting that they did not care to develop another size of racing eigine. With the rank and file of the M. and A.T.A. supine, the trade will "get away" with their dictatorial methods.

That 61in. motors have developed beyond the bounds of safety is proved by a glance at the M. and A.T.A. records made last season in competition and against time.

Fred Ludlow (Harley-Davidson), on the one mile dirt track at Syracuse, N.Y., won six short distance M. and A.T.A. championships, averaging over 80 m.p.h. in the races under ten miles and crowding 78 m.p.h. in the twenty-five and fifty miles'

**Dirt Track Racing in the U.S.A.—**

events. That was in competition with seven others. Gene Walker (Indian), on a one-mile track at Maxwellton, St. Louis, Mo., on November 8th, created a new set of "against time" marks from one to ten miles. The mile was ridden in 42.3s., approximately 85 m.p.h. The five miles now stands at 3m. 38s., averaging 43.6s., or 83 m.p.h., while the ten miles mark is 7m. 23.6s., or about 80 m.p.h. In the sidecar races, too, high speeds for one mile tracks are again apparent. Floyd Dreyer, with an Indian-Flexi outfit, set up a row of new figures at Toledo, Ohio, the day Burns was killed. Dreyer's time of 51⅖s. for one mile hovers around 70 m.p.h., and from that distance on up to twenty-five miles he circled the track averaging 65 m.p.h. for the ride.

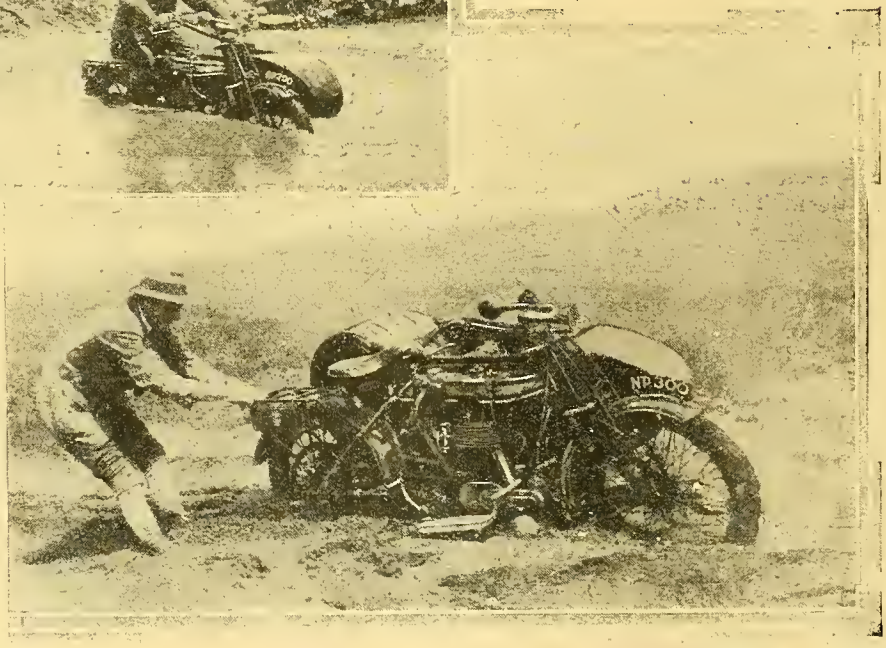
# OVERSEAS CONDITIONS: Gaining First-hand Information.

FROM time to time we have been able to give a few notes with regard to Mr. J. L. Norton's overseas tour. It will be remembered that the trip was undertaken partly with the idea of obtaining first-hand information of the conditions under which British motor cycles have to operate in other lands.

The illustrations which we are now able to publish by the courtesy of Norton Motors, Ltd., show Mr. Norton's Big Four sidecar outfit under various "road" conditions in South Africa. The photographs were taken by Mr. Norton and his companion on a trip between Durban and Johannesburg, and show the state of the "main road."

FROM DURBAN TO JO-BURG

(Top) This picture provides a good example of the conditions encountered on the best road between Ladysmith and Newcastle.




(Centre) "One of seven fords and by no means the deepest." Mr. Norton, who is seen in the saddle, states that he crossed more than thirty-five spruits on this trip. (Bottom) The outfit sunk in mud and sand almost to the axles; good clearance between tyre and guard is obviously a necessity.

### Lessons Learned.

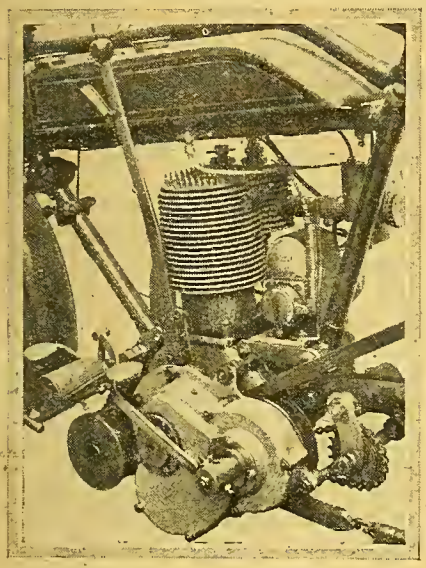
Two of the photographs emphasise the need of good ground clearance, stout wheels and spokes, and wide mudguard clearance, while another shows the necessity for waterproof ignition appliances. Conditions such as this would delight the hearts of the organisers of the Scott trial, but would daunt some of the fair weather riders in this country.

Odd photographs of bad roads often reach us, but it is seldom that they convey such a clear impression of the actual conditions encountered in a long-distance trip over main roads.

# AN ENGINE SHAFT THREE-SPEED.

## "Machine Tool" Type of Rocking Pinion Gear for Motor Cycles.

THOUGH there are a number of new countershaft gear boxes on the market, there are but few engine-shaft gears of modern design. This is rather curious, since a smaller and lighter box might be employed if run at engine speed. Such engine-shaft gears as are marketed are of the epicyclic type, and consequently the three-speed gear which has been evolved by W. Doleman, of 44, King Edward Road, Coventry, is of considerable interest.



Doleman's engine shaft three-speed gear. All ratios are indirect, and engagement is effected by a rocking motion of the intermediate gear shaft.

In this gear a single pinion is mounted on the engine-shaft, and three pinions are keyed to the pulley, in which is placed the clutch. The connection between these shafts is by means of three gears mounted intermediately and rocked into engagement as required. There is no sliding motion. The gear which we inspected was attached to a 6 h.p. single-cylinder Condor engine, and has, we are told, been in use for seven years, so that it may fairly be claimed to have been tested out.

### Not Unduly Clumsy.

Even in its rough state, the experimental box is not unduly clumsy, though it will be considerably neater and lighter in its marketable form. One of the attractions claimed by the inventor is that almost any existing single-geared or hub-geared machine can be converted without any structural alterations. The gears are shifted by a lever extending upwards from the box to the side of the tank; and, though the clutch in its present form is pedal-operated, it would be easy to provide a handle-bar control. Experimentally, a kick starter is connected to the pulley shaft through a short chain.

# FOOT GEAR CONTROL.

## Suggested Single Pedal Operation for Three-speed Gear Boxes.

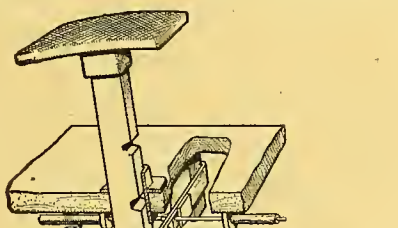
THAT a great many riders prefer foot gear control is very evident by the way in which D.R.'s and others almost invariably adapted the earlier Sturmey levers to a "pedal change," but a simple and sure foot-operated system for a three-speed gear box has yet to appear on the market. Many difficulties confront the would-be designer. Considerable interest, therefore, attaches to this suggestion of a reader (Mr. G. F. Godfrey, 45, Charles Street, Great Berkhamsted, Herts.).

Briefly, a vertical pedal works in guides in the footboard, and is linked at its lower extremity to a long pivoted lever (one end only shown), which in turn is linked to the gear actuating arm on the gear box. Pressure on the pedal, of course, extends the tension spring. When only one horizontal pivoted lever is used, the design is only applicable to gear boxes in which the gear actuating arm *moves upward to change up;* it should not be difficult, however, to arrange it for use with the more common type of box, where the arm is down in top gear.

### Semi-automatic Operation.

In action, the pedal is pressed down to change up, the action of the spring being sufficient to change down. Now comes the ingenious point of the idea. A spring catch engaging in slots in the pedal is released by a wedge soldered on to a bared portion of the clutch wire. As soon as the clutch is sufficiently released, the wedge clears the projection on the catch, which then flies back, thus engaging the next slot and locating the next gear position. Gear changing, therefore, amounts to lifting the clutch lever and pressing the pedal to change up, and simply lifting the clutch lever to change down.

Although there is a considerable amount of "timed mechanism" in this design that would have to be kept in constantly correct adjustment, there appears to be no inherent objection to the general principle. And it would be very convenient!



How Mr. G. F. Godfrey's scheme for foot-gear change might be adapted is illustrated by this drawing. The inset shows the action of the clutch-wire-operated spring catch.

# SIMPLIFYING FORK SPRINGING.

## Workmanlike Simplicity a Feature of the Flexifork.

ALTHOUGH spring fork designs are almost too numerous to mention, the latest example of a design which was first exhibited at the 1920 Olympia Show contains several details worthy of comment and praise.

Known as the Flexifork, and manufactured by the Flexifork Manufacturing Co., Ltd., of Tyseley, Birmingham, the springing device under review combines both vertical and horizontal motions with the simplest possible construction. Only one rocking link is employed, and the only exposed springs are of the leaf type.

A spring fork of simple design employing leaf and coil springs—the Flexifork.

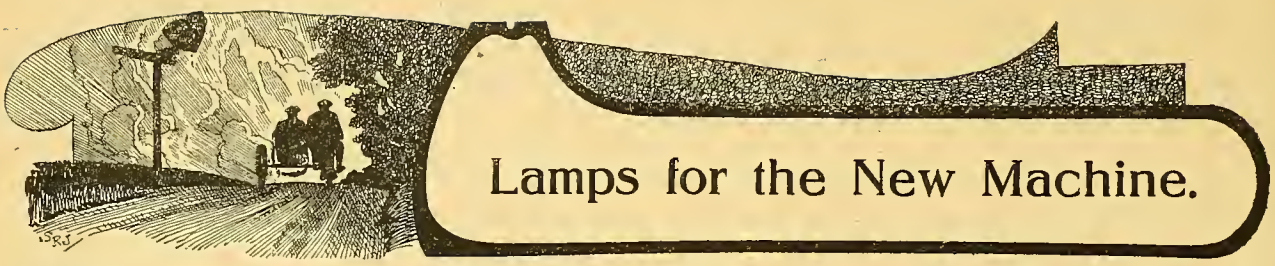
Briefly, the fork consists of two trussed vertical tubes swinging from the steering column crown on a one-piece stamped shackle. Inside the tubes are compression springs, which support plungers connected together by a bridge piece, and the crown is connected to the bridge by an upright laminated spring. The distance between bridge and crown being inextensible in a vertical direction, an upward displacement of the wheel results in the internal coil springs being compressed against the plungers as the shackle swings upwards. In addition to vertical motion, the force of the front wheel striking obstacles is converted to a horizontal swinging of the fork about its front shackle spindle, and this movement is checked by the leaf-spring, which is curved forward slightly. Altogether, the fork is a most workmanlike design, and the simplicity of its construction, allied with the range of its movement, should ensure its acceptance in the front rank of proprietary components.

---

# EXHIBITORS AT THE BELGIAN MOTOR CYCLE SHOW.

ALTHOUGH motor cycles were shown at the last Belgian Automobile Show, there is to be a second motor cycle show in Brussels. It will be held from February 25th to March 5th in the Palais Degmont, and the following machines will be represented: James, Norton, Henderson, Rudge, P. and M., Triumph, A.J.S., Sunbeam, Dunelt, Radco, B.S.A., Harley-Davidson, A.B.C., Gnôme-Rhône, Janoir Rally, Ace, Evans, Indian, Gillet, Blériot, Saroléa, Arco (sidecars), American X, Griffon, Rush, Hinstin, Peugeot, and Salmson cycle cars.

A large number of tyres and accessory firms will also have stands at the Palais.



# Lamps for the New Machine.

## Wise Hints on the Selection of Lighting Equipment. Some Particular Instances Discussed.

AT this time of the year a great many riders are anxiously considering what lighting installation they shall adopt on the machines on which they will take the air of 1922.

The points which concern us are weight, cost, convenience, reliability, light, and—in a few cases—horse-power. The following principles may be laid down quite dogmatically, as governing all selection:

(1.) An acetylene generator set is still the cheapest system available, and must be adopted where economy really matters. A small set of the "bobby-dodger" variety can be obtained as low as 30s. complete.

(2.) Tail lamps are no longer legally compulsory on solo machines. The wise rider will still use one, as they make for safety in heavy traffic, and whenever the machine is stationary on the road after dark. Dry battery tail lamps are very cheap to maintain.

(3.) Electric installations which utilise the surplus current generated by the magneto to charge an accumulator give just enough light for a medium-powered machine, and no more.

(4.) Dry battery head lamps are quite as expensive as outfits which give a really long ray, and cannot afford sufficient light for a fast machine. They are to be recommended for intermittent pottering after dark, when convenience is of more account than light or speed or economy.

(5.) Most powerful sidecars demand the equivalent of two good head lamps; the toy side lamps often fitted are no real use to hard riders.

(6.) Electric head lamps, fed from accumulators of which the discharge rate is not artificially limited, give a far better light than any rival system; and should certainly be used by riders whose vision is below par.

(7.) Dissolved acetylene is heavy; not too cheap; handicapped by the awkward size of the gas cylinder. Its ray is steady, and its reliability absolute. As an illuminant, it is quite the most efficient for the hard rider who cannot afford a dynamo, and who possesses good facilities for charging accumulators.

(8.) Fast machines should not have heavy outfits permanently fixed to their handle-bars; a big 20 a.h. accumulator is quite out of place on a T.T. bar. A light gas lamp, removable by unscrewing two nuts, is the only fitting equipment for a sports 'bus.

(9.) Dynamo outfits absorb at least $\frac{1}{20}$ h.p., and are therefore out of place on a machine which is expensive because it is designed to furnish the maximum b.h.p. with a minimum weight.

(10.) The dynamo outfit is without a rival on the *de luxe* heavy touring machine.

These principles may now be applied to a few individual cases, by way of illustration.

Miss Ruth Jones is district commissioner for the Girl Guides, and papa is buying her a baby two-stroke. Papa supplied the Allies with gas masks during the war, and need not look twice at a Fisher.

RECOMMENDED.—Such a set as the B.T.H. Sparklight, supposing the lady's choice does not possess a flywheel magneto.

Major Vere de Clare (retired); lives in four country cottages, which he has converted into a bijou residence. 2½ miles from the club and golf links. Pension—not too extensive. His transport is a rather aged 2¾ h.p. Douglas. He is elderly, and never rides fast; doesn't keep a man; hates messing round with the machine.

RECOMMENDED.—Dry battery head and tail lamp, such as Hunt, Ward and Goldstone, Siemens, etc. Fair light, no trouble, not expensive, quite reliable.

Doctor John Brown (late R.A.M.C.) has bought a small rural practice with his gratuity. Has also recently married. Funds not too ample. Rides an ex-W.D. Triumph, and has to look at every shilling. Goes out every night, and several times a night.

RECOMMENDED.—Should touch his favourite aunt for a Maglita or Magdyno. Otherwise, dissolved acetylene or a first-class generator set, with dry battery tail lamp in each case.

Eric Smithers; jeweller in a small town; courting a damsel five miles away. Rides a 5-6 h.p. sidecar. Saving up to buy furniture. Wears pince-nez, and frequents twisty lanes, when he is rather exalted after a long evening with his fiancée.

RECOMMENDED.—See advice offered to Dr. J. Brown, above; but should fit *two* head lamps.

George Sparks; one of the boys. Rides a Brooklands Special Norton rather well. Races on it in the season. Money no object.

RECOMMENDED.—Dry battery tail lamp (easily unstrapped). Lamp-cum-generator set on double handle-bar bracket, of the type secured by two nuts, and unscrewed in a moment.

Abraham Steadyman; draper in urban district. Just moderately prosperous. Eschews night driving when possible. Aged 32. Has a brother-in-law who runs a garage. Rides a B.S.A. solo.

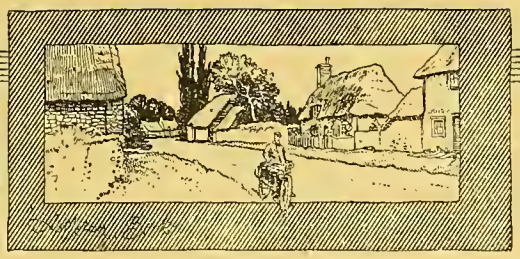
RECOMMENDED.—Handle-bar set with accumulator, minus dynamo; £5-£8 being quite enough to pay for occasional use, and recharging (in the family) being a simple matter.

Percy Fitzcash; age 19. Has an honorary post in papa's business, pending a directorship on his 21st birthday. Rides a new machine every six months. Seldom to bed the same day on which he got up.

RECOMMENDED.—Full dynamo equipment, and hang the expense.

ROAD RIDER.

# CURRENT CHAT



## Special Features.

TO THE RIVIERA BY MOTOR CYCLE
DIRT TRACK RACING.
LAMPS FOR THE NEW MACHINE.

### Times to Light Lamps.

| | | | |
|---|---|---|---|
| Jan. | 12th | ... ... | 5.13 p.m. |
| ,, | 14th | ... ... | 5.16 ,, |
| ,, | 16th | ... ... | 5.19 ,, |
| ,, | 18th | ... ... | 5.22 ,, |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### The Scottish Motor Show.

230 firms will exhibit at the Scottish Show, which opens on the 27th inst. at Kelvin Hall, Glasgow.

### Popular Trial in Early Spring.

Saturday, March 18th, has been fixed as the date of the Birmingham M.C.C. Victory Cup Trial, which, although not officially "open," generally attracts a big entry from all over the country.

### An R.A.F. Reunion.

Under the chairmanship of Brig.-Gen. Bagnall-Wild, C.M.G., C.B.E., the second annual reunion dinner for officers attached to Martlesham Heath Experimental Station will be held at the Café Royal, Regent Street, London, W. The date fixed is Friday, January 20th, at 7 p.m. Old members should communicate with Capt. P. G. Robinson, Room A 139, Air Ministry, Kingsway, W.C.2.

### The T.T. Dates.

In addition to the many opinions concerning the unsuitability of the pre-Whitsun week for the T.T. races, we have received a cablegram from Mr. W. H. Wells, of the Indian firm, reading as follows: "Consider holding Tourist Trophy races just preceding Whitsun holidays detrimental to traders and manufacturers' interests. Suggest September most suitable."

In testing the opinion of those who entered last year, we did not receive any which did not support our view, and action is now being taken to consider an amendment of the suggested dates. We deal with this subject in the leading article of this issue.

### Information Wanted Regarding Trials Accident.

We regret to have to announce that C. Chawner (a Coulson rider) was rather seriously injured in the recent London-Gloucester trial. While near Wheatley he was dazzled by the head lights of an approaching car, which suddenly turned down a side turning without warning, with the result that he collided with it. Mr. C. H. Alcock, London Motors, Ltd., 61, Holborn Viaduct, London, E.C.1, will be very grateful if anyone who witnessed the accident will communicate with him.

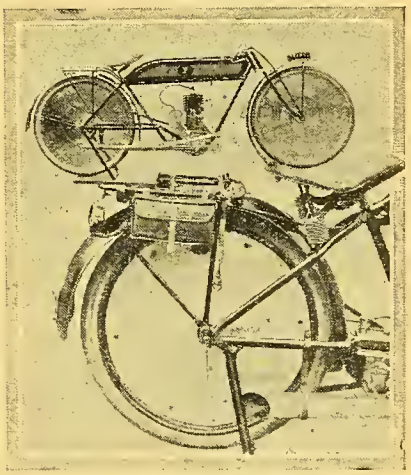
### The Car T.T.

Three each—Sunbeams, Vauxhalls, and Bentleys—have been entered for the big car race in June next. For the 1,500 c.c. class three Sunbeams, one A.C., three Aston-Martins, three Crossley-Bugattis, one Hillman, three Talbot-Darracqs, and one Alvis are entered.

### "The Motor Cycle" Film in the North.

To-day the Colne and District M.C.C. is showing *The Motor Cycle* film, and on Saturday the Leeds and District M.C. is arranging an exhibition. On Monday it goes to Widnes, where it will be shown at the Co-operative Hall by the local Motor Cycle Club; on Tuesday at the Engineering Lecture Theatre of the Liverpool University; and on the following day at the Kinema Exchange, Bold Street, Liverpool, on behalf of the Liverpool Motor Club. Appreciations of the film continue to reach us from wherever it is exhibited.

THE FIRST MOTOR RACE ON ICE. On Thursday of last week, two Harper runabouts, driven by Mr. R. O. Harper, the designer, and Capt. Armstrong Graham respectively, competed in a race at the Manchester Ice Palace. The rink measures 150 × 105ft., yet an average speed of 23 m.p.h. was attained by the first mentioned driver, who won this extremely novel and interesting event by fifty yards.



A MODEL MOTOR CYCLE.

This interesting model is being exhibited at the Model Engineers' Exhibition during the present week. It is fitted with a ¼ h.p. two-stroke petrol engine and carburetter, and is an actual working model. The engine works perfectly well with coil and accumulator ignition, no magneto being made sufficiently small for use with this "miniature."

### Reunion Dinner.

It is proposed to hold a reunion dinner of officers of the late No. 1 Aeroplane Supply Depot (St. Omer, Marquise, and Cologne), to take place at the Hotel Cecil on Saturday, the 28th inst., at 7 p.m. All those interested are asked to communicate with Capt. J. F. Bargman at Inglefield, Osborne Road, South Farnborough.

# PRICES OF SECOND-HAND MOTOR CYCLES.

## The Cost of Year-old Machines Compared To-day with a Year Ago.

IT cannot be considered surprising that second-hand machines may be bought much more cheaply to-day than was the case a year ago. Prices of new mounts have fallen greatly in the interval—a state of affairs that tends to cause chaos in the second-hand market. Now, however, things are calmer, for it is generally realised that 1922 prices have been stabilised for some time to come, and it is thus possible to form fair averages for the majority of the second-hand models being offered to the public.

### To-day and Twelve Months Ago.

Taking some typical prices of year-old machines this and last year, it will be found that the solo A.B.C. has dropped from £118 to £70, A.J.S. sidecar outfits from £202 to £180, the 2¾ h.p. Douglas from £89 to £62, 7-9 h.p. Harley-Davidson sidecars from £199 to £150, 8 h.p. Matchless sidecars from £191 to £140, 3½ h.p. Norton from £112 to £102, 3½ h.p. Rudge from £95 to £72, 3½ h.p. Sunbeam from £140 to £106, and 4 h p. Triumph sidecars from £148 to £107 10s.

It should be appreciated, however, that the present is usually the period when prices are at their lowest, and also that the above averages are governed by conditions external to what might be the actual state of affairs were there a larger number of machines offered on which to base average figures.

The table below gives the average prices, where possible, of the 1919, 1920, and 1921 models advertised in the classified miscellaneous advertisements in the current issues of *The Motor Cycle*.

| | 1919. | 1920. | 1921. |
|---|---|---|---|
| 3 h.p. A.B.C. | — | £60 | £70 |
| 10 h.p. Ace | — | — | £148 |
| 8 h.p. Acme sc. | — | — | £170 |
| 6 h.p. and 7 h.p. A.J.S. sc. | £115 | £140 | £180 |
| Allon | £30 | — | — |
| Allon sc. | — | — | £70 |
| American X sc. | — | — | £122 |
| 6-7 h.p. Ariel sc. | — | — | £139 |
| 3½ h.p. Ariel sc. | £70 | — | — |
| 4½ h.p. Ariel sc. | — | — | £85 |
| Beardmore-Precision | — | — | £47/10 |
| 4 h.p. Blackburne sc. | — | £83 | — |
| 8 h.p. Blackburne sc. | — | £115 | £155 |
| Bown-Villiers | — | — | £30/10 |
| 2¾ h.p. Bradbury | — | — | £70 |
| 3½ h.p. Brough | — | — | £80 |
| 8 h.p. Brough Superior | — | — | £118 |
| 4½ h.p. B.S.A. sc. | £75 | £87 | £137/10 |
| 6-7 h.p. B.S.A. sc. | — | — | £147/10 |
| 2½ h.p. Calthorpe | — | £30 | — |
| Cleveland | — | £48 | — |
| 2¾ h.p. Clyno | — | £37/10 | — |
| 2½ h.p. Connaught | — | £28/10 | — |
| 4 h.p. Coulson-B sc. | — | £60 | — |
| 2 h.p. Coulson-B | — | — | £68 |
| 2¾ h.p. Douglas | £47 | £46/10 | £62 |
| 4 h.p. Douglas sc. | £72/10 | £95 | — |
| 3½ h.p. Douglas | — | — | £80 |
| 4 h.p. Dunelt sc. | — | — | £100 |
| 2¾ h.p. Enfield | — | £34 | £42 |
| 8 h.p. Enfield sc. | — | £105 | — |
| 2¾ h.p. Francis-Barnett | — | £56 | — |
| 7-9 h.p. Harley-Davidson sc. | — | £110 | £150 |
| 4 h.p. Harley-Davidson | — | £112 | £120 |
| 10 h.p. Henderson sc. | — | £126 | — |
| 2¾ h.p. Henley | — | — | £50 |
| 4 h.p. Hoskison | — | — | £110 |
| 7-9 h.p. Indian sc. | £71/15 | £65 | — |
| 6 h.p. James sc. | £100 | £117 | — |
| 2¼ h.p. James | — | £35 | — |
| 2½ h.p. Kingsbury | — | £38 | — |
| 6 h.p. Martinsyde sc. | — | £86 | £140 |
| 8 h.p. Matchless sc. | — | £115 | £140 |
| Ner-a-car | — | — | £50 |
| 8 h.p. New Imperial sc. | — | £90 | — |
| 3½ h.p. Norton | — | £82 | £102/10 |
| 4 h.p. Norton sc. | — | — | £135 |
| 3½ h.p. N.U.T. | — | £87/10 | — |
| 2½ h.p. O.K. | — | — | £39 |
| 3½ h.p. P. & M. sc. | £47/10 | — | £112 |
| 5-6 h.p. Raleigh sc. | — | — | £142/10 |
| 8-10 h.p. Reading-Standard sc. | — | £105 | — |
| 3½ h.p. Rover sc. | — | £85 | £135 |
| 5-6 h.p. Rover sc. | £72/10 | — | — |
| 8 h.p. Royal Ruby sc. | — | — | £155 |
| 3½ h.p. Rudge | £37 | £65 | £72 |
| 3½ h.p. Rudge sc. | — | £76 | — |
| 3¾ h.p. Scott | £50 | — | £95 |
| 3¾ h.p. Scott sc. | — | £65 | £115 |
| 2¾ h.p. Sun-Vitesse | £33/10 | — | — |
| 3½ h.p. Sunbeam sports | — | — | £106 |
| 3½ h.p. Sunbeam sc. | £111 | — | £125 |
| 8 h.p. Sunbeam sc. | £120 | £147/10 | — |
| 4 h.p. Triumph chain-belt. | £83 | £75 | — |
| 4 h.p. Triumph „ sc. | £85 | £90 | £107/10 |
| 4 h.p. Triumph chain | — | — | £85 |
| 2¾ h.p. Triumph | — | £41 | £50 |
| 2¼ h.p. Velocette | £45 | — | — |
| 4 h.p. Verus | — | £78 | — |
| 2¼ h.p. Verus | — | £45 | — |
| 2¾ h.p. Wooler | — | £52/10 | — |
| 8 h.p. Zenith | — | £90/10 | £97/10 |
| 8 h.p. Zenith sc. | — | £100 | £114 |

# CLUB NEWS.

### Coventry and Warwickshire M.C.

This well-known Midland club is holding a ball on the 20th inst. Mr. Eric Barnett, of Francis and Barnett, Lower Ford Street, is organising secretary.

### Sutton Coldfield and N. Birmingham A.C.

The ninth annual dinner and prize distribution of this club will be held at the Royal Hotel, Sutton Coldfield, on the 20th inst.

### Midland Cycling and Athletic Club.

The annual prize distribution of the club took place last Friday evening at the White Horse Hotel, Congreve Street, Birmingham, and was attended by many prominent members of the cycle and motor cycle world. The President, Mr. Chas. F. Dawes, took the chair, and made the presentations midway between a very enjoyable concert.

In addition to the trophies, there were thirty gold medals, seventeen gold-centre medals, and twenty-eight silver medals presented.

### Cumberland County M.C.C.

Mr. T. W. Loughborough, A.M.I.A.E., secretary of the Auto Cycle Union, will occupy the chair at a lecture to be given to the club by Mr. W. Theodore Carr, M.P., on Saturday, January 14th. The club will meet at the Crown and Mitre Hotel, Carlisle, at 8 p.m.; and Mr. Carr's lecture, which will be illuminated by some interesting lantern slides, will be entitled "Motoring: Ancient and Modern." All motor cyclists and motorists are cordially invited to attend.

cs

### Herts M.C. and L.C.C.

A most interesting paper-chase was held recently in the Puckeridge district, and some fifteen competitors ploughed their way over a fifty miles course, many false trails being laid. A silver medal was awarded to T. D. Chapman (8 Zenith sc.), and a bronze medal to G. Chaplin (3¾ Scott).

### Public Schools M.C.C.

Col. F. Lindsay Lloyd, C.M.G., occupied the chair at the annual dinner, which was held at the Public Schools Club, 61, Curzon Street, London, W.1, at 7.30 p.m. on Thursday last. Immediately after the dinner the prizes gained during the season were presented. The challenge cup for the highest aggregate of marks during the season was earned by the secretary, Mr. H. B. Browning, who resigned this in favour of Capt. R. C. Charlesworth. The prizes were unique, and consisted largely of neat, artistic miniature silver cups. L. Yeowell, who won the Brooklands race, was presented with a tobacco jar and a set of Dunhill pipes. No medals are presented by the Public Schools M.C.C.

After the prize-giving, the annual general meeting of the club took place. It was agreed that the subscription for the year 1922 should be one guinea, while a further sum of 10s. 6d. would cover the entry for all competitions. Col. Lloyd offered to present the club with a cup and also the use of Brooklands track on a Saturday afternoon (when not engaged) for an impromptu race meeting. The secretary's address is 14, Hogarth Road, London, S.W.5.

### Essex M.C.

One of the oldest clubs in the king dom, the Essex Motor Club, was favoured with the company of many distinguished pioneers of the sport on the occasion of its sixteenth annual banquet at the Holborn Restaurant, London, on Saturday last. Mr. Sidney G. Cummings was in the chair. An excellent dinner was pro vided, whilst the many musical items de manded no less appreciation. The pro ceedings were confined solely to speeches, since it had been decided to exclude the prize distribution—usually a somewhat laborious business. Following the Chairman's toast of "The King," Mr. Duncan Watson, proposing the toast of "The Club," paid a strong tribute to Mr. Geo. Reynolds, the founder, and to the untiring efforts of Mr. Ernest J. Bass, the hon. secretary. The club had achieved much in the past, and had acquired a high reputation, and as for the future there was little doubt that the Royal Brooklands meeting, fixed for May 20th, would attract a record number of competitors and spectators, and create for the club the popularity it deserved.

Mr. Geo. Reynolds, in reply, said that the past year had been an unusually successful one, in which no fewer than £400 had been expended on awards, and the annual turnover exceeded £3,000. The outing for crippled children had given much pleasure to many little ones, whose lot was a very hard one, and the support given by the members was most encouraging. It was hoped that the same support would be given to the Brooklands race meeting and carnival on May 20th, when

**Club News—**

H.R.H. the Duke of York had graciously promised to be present, and the proceeds, exclusive of expenses, would be given to charities nominated by His Royal Highness.

### Avon M.C.C. (Bristol).

A club has been formed as above with headquarters at the Bush Hotel, Totterdown. It will deal mostly for the touring motor cyclist with social runs and an occasional sporting event. The club flag is pennant shape, 9×5in., colours being dark blue and yellow (vertically), blue to flagstaff. The hon. secretary is Mr. Conrad Alien, to whom all communications should be addressed at headquarters.

### Birmingham M.C.C.

Only nine competitors qualified for gold medals in the very sporting Boxing Day trial described last week. Full results were :

SILVER CUP FOR BEST SOLO PERFORMANCE.—B. H. Riley (2¾ A.J.S.).
SILVER CUP FOR BEST SIDECAR PERFORMANCE.—H. S. Perry (6 B.S.A. sc.).
GOLD MEDALS.—G. J. Francis (2¾ Francis-Barnett), A. Thrush (3½ Sunbeam), D. Brandish (4 Triumph), G. Butcher (3½ Sunbeam), T. Watson (3½ Sunbeam sc.), T. H. Walker (6 B.S.A. sc.), and H. V. Collins (3½ Norton sc.).
SILVER MEDALS.—Bert Kershaw (2¾ New Imperial), T. Wooley (2½ Sun-Vitesse), G. C. Jenkins (4¼ B.S.A. sc.), and B. L. Bird (6 B.S.A. sc.).

### Cork and District M.C.C.

The results of the St. Stephen's Day trial are as follows :

SOLO CLASS.—1, C. W. Manley (3½ Triumph); 2, R. S. Russell (3½ Scott); 3, E. Manley (3½ Triumph). Novices' Prize: J. J. Ahearne.
SIDECAR CLASS.—1, E. B. Russell (5 Brough); 2, J. Gibbings (6 A.J.S.); 3, C. S. Harford (8 Blackburne).

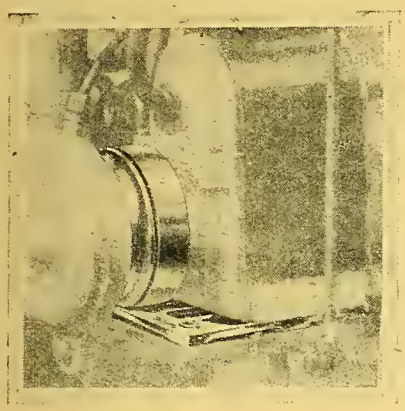
# A Magneto Attachment for Easy Starting.

## The S.A. Impulse Starter.

## A Device to Minimise the Physical Effort of Starting the Engine.

IN the car world the type of delay action magneto coupling known as an "impulse starter" has already achieved some popularity, but hitherto the use of these devices has not been largely applied to motor cycle engines.

The term "impulse starter" is a misnomer, as the apparatus is merely an aid to starting by the ordinary methods of rotating the engine. Briefly, all these fitments follow the same general plan, wherein the driving element of the magneto transmission is connected to the armature by a spring-loaded device



The complete assembly mounted on a Triumph machine by means of the special extension base plate.

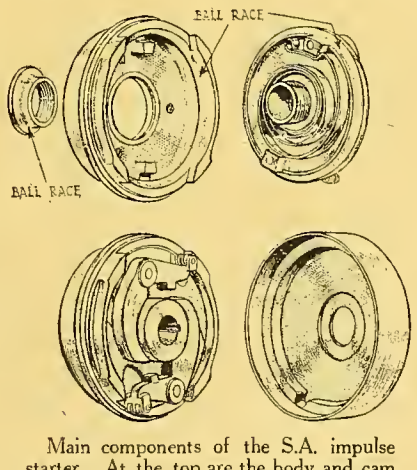
which operates at very low speeds only. The armature is not rotated at low speeds throughout a portion of the engine's cycle of rotation, the magneto drive meanwhile winding up a "clock" spring; when the engine has just passed its normal firing point, the wound-up spring is released by a cam action, and the magneto armature is flicked rapidly over its maximum position by the freed power stored in the coiled spring, and an intense spark is given by a magneto speed which bears no relation to the speed of the engine. As soon as the engine fires and runs at a reasonable speed, the impulse device is automatically cut out, and the magneto coupling runs solid, giving an ordinary drive.

### Construction Details.

Following the general lines above described, the S.A. impulse starter, made by S.A. Impulse Starter, Ltd., of 77, St. Mary Street, Cardiff, is a typical example of its kind, and appears to have been thought out with due regard to the mechanical conditions under which it must work.

In fitting the S.A. starter to a motor cycle magneto, there are two parts which must be permanently secured to the magneto. The first is an extension base plate, which places the magneto on its platform in correct relation to the driving sprocket, allowing for the width of the additional parts; and, secondly, the back plate of the starter itself, which is fitted to the end of the magneto, and through which the armature spindle projects. This back plate contains an annular ridge, which has a small depression at one point.

Mounted on the spindle is the body of the starter, which carries on its back a rocking lever—two for a twin-cylinder machine—carrying two rollers at one end and a heavy mass of metal at the other. On the front of the body are cast two blocks, diametrically opposed, and the centre provides an anchorage for the "clock" spring. Running on this portion on ball bearings is the driving element on which the sprocket is mounted. This piece has also two blocks corresponding to those on the main body, and also has a cam (or cams) which projects as far as, and runs beside, the annular ridge in the back plate. The free end

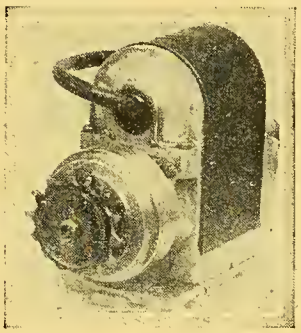



Main components of the S.A. impulse starter. At the top are the body and cam plate; below, the two are assembled ready for insertion within the stationary back plate.

of the coiled spring is formed with a loop, and engages one of the blocks on the cam plate.

### The Device in Action.

In operation the engine is slowly rotated, the two blocks on the cam plate and body of the starter respectively being held together by the peculiarly shaped depression in the coiled spring. The magneto armature is rotated until the piston approaches the top of the compression stroke. At this moment the roller



S.A. impulse-starter fitted to an M-L magneto.

end of the lever on the body drops into the recess of the annular ring on the fixed back plate, so locking the body and with it the armature. The sprocket and cam ring travel on (with the rotation of the engine), the block on the latter pulling on the spring, which is thus wound up until the piston has just passed top dead centre. At this moment the cam comes into engagement with one of the rollers on the rocking lever, releases it from its engagement with the back plate recess, and allows the spring to flick over the armature, so that it catches up the sprocket, at the same time producing a spark of good intensity, for, obviously, the ignition control is not retarded, although the spark occurs after top dead centre.

As soon as the engine speed exceeds about 80 r.p.m., the heavy mass at the end of the rocking lever throws out by centrifugal force, and the device then runs as a solid coupling by virtue of the fact that two blocks—one on the cam ring and one on the body—are locked together by the previously mentioned depression in the end of the spring.

# NEW YEAR TRIAL IN SCOTLAND.

## Point to Point Run to Perth of the Western M.C.C. (Glasgow).

BRIGHT weather and good roads made the Glasgow Western M.C.C. New Year "point to point" run to Perth a most enjoyable outing.

The run was the same as previous years—to Perth and back, with checks at Stirling both ways.

Amongst the competing machines there were several new models, some of which had not been seen in competition on the northern side of the Border before.

R. Watson was riding a 1922 Martinsyde sidecar outfit, and G. Templeton was riding a 3½ h.p. of the same make. The Royal Scot, ridden by J. Donaldson, did credit to itself on this its first appearance in competition work.

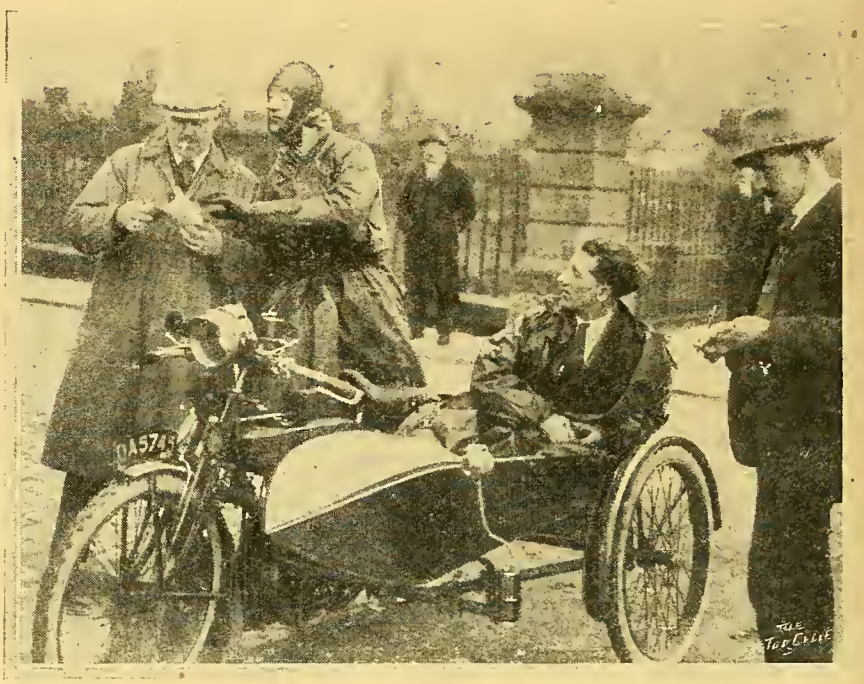
### Youthful Enthusiasts.

J. Bell (7 A.J.S. sc.), who is only fourteen, and his passenger who is rather less, had difficulty in holding their youthful spirits in check. They confided to our representative on the return journey that they thought these trials tame affairs.

Of the thirty-five starters twenty-two finished. The large number of first-class awards is a striking contrast to last year's results, when, with a larger entry, only seven competitors finished. This is accounted for by the exceptionally fine weather. Results :

FIRST-CLASS AWARDS.—F. J. Manning (6 A.J.S. sc.), J. McFadyen (8 Sunbeam sc.), G. T. Templeton (6 Martinsyde), J. Parker (3½ Rudge), J. Lloyd (3½ Norton), G. Gordon (2¾ New Imperial), J. Bell (7 A.J.S. sc.), G. Mann (6 A.J.S. sc.), A. Neilson (7 A.J.S. sc.), R. Watson (6 Martinsyde sc.), D. Skeoch (7-9 Harley sc.), W. Kennedy (2½ Clyno), T. McCreadie (3½ Sunbeam), J. Donaldson (2¾ Royal Scott sc.), G. Hope Wilson (2¾ Barr and Stroud sc.), G. Kelly (2¾ A.J.S. sc.), R. D. Robertson (8 Matchless sc.), F. M. Batxer (G.N.), A. Hunter (6 Ariel sc.), H. G. Deas (2¾ Royal Ruby sc.), A. Robertson (8 Enfield sc.), and B. Gold (8 Blackburne sc.).

PRIVATE OWNERS' SPECIAL PRIZE, for smallest power sidecar outfit (five gallon drum of oil, presented by British oil and Turpentine Co., Ltd.).—H. Gordon Deas (2¾ Royal Ruby sc.).



Geo. Kelly (2¾ A.J.S. sidecar) checking in at Perth during the point to point run of the Glasgow Western M.C.C.

# LONDON-GLOUCESTER-LONDON TRIAL RESULTS.

## Only Five Competitors Retain absolutely Clean Sheets. N.W. London M.C.C. wins Team Prize.

RESULTS, subject to A.C.U. confirmation, have now been issued for the London-Gloucester-London open trial of the North-West London M.C.C.

Five competitors only lost no marks—W. H. Hardman (7-9 Matchless sc.), J. K. Flemons (7-9 Harley- Davidson), S. R. Axford (8 Brough Superior sc.), H. James (3½ Norton), and H. W. Deacon (3½ Norton). The special awards were therefore decided on total time errors at the various checks as follows :

GENERAL CUP.—W. H. Hardman (8 Matchless sc.).

NOVICE CUP.—J. K. Flemons (7-9 Harley-Davidson).

EXPERT CUP.—J. A. Newman (3½ Douglas).

LADIES' CUP.—Mrs. M. Hardee (8 Matchless sc.).

Silver cups for having obtained over 95% of the marks each way were awarded to the following :

G. Baxter (6 Martinsyde sc.), R. Harte (6 Martinsyde sc.), D. F. G. Fitzgerald (3½ Norton), H. James (3½ Norton), H. W. Deacon (3½ Norton), S. R. Axford (8 Brough Superior sc.), E. W. T. Howard (3½ N.U.T.), T. W. White (8 Sunbeam), J. A. Newman (3½ Douglas), R. B. Clarke (8 Matchless sc.), F. W. Stevenson (5 Brough sc.), L. Welch (4¼ B.S.A.), H. W. Holmes (10 Morgan), J. W. Troughton (4¼ X.L.), W. H. Hardman (7-9 Matchless sc.), W. L. Handley (2¾ O.K. Junior), L. P. Walter (4 Triumph), W. E. Line (8-10 New Hudson cycle car), W. Brandish, Jun. (4½ Humber), B. L. Bird (6 B.S.A. sc.), J. S. Walker (6 B.S.A. sc.), J. A. Peacock (8 Matchless sc.), H. Beart (10 Morgan), V. Gayford (3½ Norton sc.), J. K. Flemons (7-9 Harley-Davidson), E. S. Burnett (5-6 Raleigh), W. G. Harding (4 Triumph), R. Pugh (4 Triumph sc.), L. Nicholson (2¾ Omega), Mrs. Hardee (7-9 Matchless sc.), J. C. Mebes (8 T.B .cycle car), A. H. Rowe (10 Morgan), S. S. Barker (3½ Sunbeam), H. Le Vack (7-9 Indian sc.), D. H. Davidson (7-9 Indian sc.), and E. Pond (4 Triumph).

As S. E. Longman (3½ Zenith-Bradshaw) stopped to assist Temple, it is expected that the time he lost would qualify him for a silver cup.

The following were awarded silver spoons for having obtained 90% of marks each way :

J. C. Lowe (4¼ James sc.), S. A. McCarthy (8 Morgan), W. F. Winslow (4¼ X.L. sc.), N. V. Young (4¼ Sunbeam sc.), E. J. Cross (7-9 Harley-Davidson sc.), L. V. Freeman (8 Sunbeam sc.), J. Wallis (7-9 Reading-Standard sc.), F. G. Morgan (2¾ Cotton), C. W. Ramstedt (2¾ Cotton), W. G. Crabb (2¾ Cleveland), G. W. Sheppard (8 L.S.D.), and O. B. Smyth (3½ Sunbeam).

Certificates for finishing the double journey within thirty minutes of the scheduled finish were awarded to the following :

H. D. Cuddeford (5-6 A.J.S. sc.), A. H. S. Love (3½ Norton), J. L. Johnson (4 Triumph), M. R. Gray (3 Coventry-Eagle), A. B. Bourne (2¼ New Imperial), T. Clutterbuck (4 Triumph), R. A. Bull (8 Matchless sc.), D. A. Griffiths (3½ Norton), E. F. Shildon (5-6 Raleigh), M. Pearson (4 Triumph), D. J. Stone (2¾ Orbit sc.), G. E. Cuffe (2½ Metro-Tyler), C. C. Labin (3½ Zenith-Bradshaw), R. P. Purnell (1¾ J.E.S.), and W. Brooke (2¾ Cotton).

### The Winning Team.

The Service Challenge Cup, presented by the Service Co., Ltd., for the best performance of a club team, was awarded to the North-West M.C.C. team consisting of D. F. G. Fitzgerald (3½ Norton), H. James (3½ Norton), H. W. Deacon (3½ Norton), H. D. Cuddeford (5-6 A.J.S. sc.), S. R. Axford (8 Brough Superior sc.), and H. E. K. Sawtell (10 Morgan). The Oxford M.C.C. team was second and the North London M.C.C. third.

### "THE MOTOR CYCLE" IN FRANCE.

Several of our readers in France have drawn our attention to the fact that they are being overcharged for their copies of *The Motor Cycle*. In cases where more than one franc sixty centimes is charged, will readers please send to the publishers, Iliffe and Sons Ltd., Dorset House, Tudor Street, London, E.C.4, particulars of the name and address of the newsagent?

# The London-Exeter Results Summarised.

## Analysis of Official List of Awards. Only 15% Retirements Despite Severe Conditions.

OF the 275 intrepid riders who competed in the 1921 London-Exeter London twenty-four hours run, over 56% secured gold medals over 23% silver medals. A little over 15% retired, and the difference is made up by those who finished but failed to qualify for any award and those who were disqualified (usually through being *ahead of time* at the secret check).

### Percentages of Retirements.

Taking the various classes of vehicles separately, the cars head the list with only 7.8% retirements, three-wheelers come next with 13.3%, sidecars 17.7%, and solo machines 23.4. At first sight the last mentioned figure appears unduly high, but it must be remembered that conditions were very much against the single track machine.

From the point of view of reliability, the majority of those who were disqualified should be considered in a favourable light, as in most cases disqualification was due to their being too early at the secret check, while in a few cases lamp troubles caused loss of awards. In one case only was disqualification due to any point in connection with replacement of a broken part in a control.

### Popular Trials Machines.

As regards the performance of different makes of machines of which more than three were entered, the following figures are of great interest :

| No. of machines which started. | Gold medals. | Silver medals. | Also finished. |
|---|---|---|---|
| 23 Matchless .. | 20 | 2 | 0 |
| 13 Triumph .. .. | 5 | 7 | 0 |
| 11 Morgan .. .. | 5 | 5 | 0 |
| 9 Sunbeam .. .. | 3 | 2 | 0 |
| 8 A.J.S. .. .. | 4 | 3 | 0 |
| 7 Harley-Davidson | 6 | 0 | 0 |
| 7 Zenith .. .. | 5 | 1 | 0 |
| 7 Brough Superior | 5 | 0 | 2 |
| 7 Douglas .. .. | 1 | 2 | 2 |
| 6 Martinsyde .. | 5 | 0 | 0 |
| 6 Norton .. .. | 4 | 1 | 0 |
| 5 A.B.C. .. .. | 1 | 3 | 0 |
| 4 Indian .. .. | 3 | 0 | 0 |
| 4 Rudge .. .. | 2 | 1 | 0 |
| 4 Scott .. .. | 2 | 1 | 0 |
| 4 Quadrant .. | 0 | 1 | 1 |

As will be seen from the following percentage tables, the cars also gained the highest percentage of gold medals, sidecars were next, and the solo machines just led the three-wheelers. However, only fifteen three-wheeled cycle cars started.

### THE RESULTS AT A GLANCE.

297 entries.
275 started.
155 gold medals (56.36%).
64 silver medals (23.2%).
3 no awards.
10 disqualified
43 retired (15.6%).

### How the Solo Riders Fared.

72 entries.
64 started.
26 gold medals (40.6%).
20 silver medals (31.2%).
3 disqualified.
15 retired (23.4%).

### The Sidecars.

110 entries.
107 starters.
56 gold medals (52.3%).
26 silver medals (24 3%).
1 no awards.
5 disqualified.
19 retired (17.7%).

### Three-wheeled Cycle Cars.

18 entries.
15 started.
6 gold medals (40%).
6 silver medals (40%)
1 no awards.
2 retired (13.3%).

### Cars.

97 entries.
89 started.
67 gold medals (75.2%)
12 silver medals (13.4%)
1 no award.
2 disqualified.
7 retired (7.8%).

## The Competitors' Machines Alphabetically Arranged—How They Fared.

**A.B.C.**
A. Milward. *Gold medal.*
A. S. Pinchbeck. *Silver medal.*
F. R. Cotgrove. *Silver medal.*
A. S. Guthrie (sc.). *Silver medal.*
T. P. Manifold. *Retired.*

**ACE.**
S. Farley (sc.). *Retired.*

**A.J.S.**
E. V. Cox (6 sc.). *Gold medal.*
F. W. Giles (7 sc.). *Gold medal.*
W. C. Hemy (2¾ sc.). *Gold medal.*
S. Julian (7 sc.). *Gold medal.*
E. S. Powell (6 sc.). *Silver medal.*
A. J. Agg (7 sc.). *Silver medal.*
H. B. Browning (2¾). *Silver medal.*
K. Campbell Cullen (6 sc.). *Retired.*

**ALECTO.**
R. L. Richardson. *Silver medal.*

**AMERICAN X.**
B. E. Belfield (sc.). *Retired.*

**ARIEL.**
E. Atkins (3½ sc.). *Gold medal.*

**BEARDMORE-PRECISION.**
Eli Clark, Jun. (4¼ sc.). *Retired.*

**BAT.**
B. J. Sims (8 sc.). *Silver medal.*

**B.S.A.**
R. J. Andrews (4¼ sc.). *Gold medal.*
L. Welch (4¼ sc.). *Silver medal.*
F. V. Edwards (4¼). *Retired.*

**BLACKBURNE.**
W. A. Fell-Smith (8 sc.). *Gold medal.*

**BROUGH.**
F. W. Stevenson (5 sc.). *Gold medal.*

**BROUGH SUPERIOR.**
G. Brough. *Gold medal.*
R. G. Spikins. *Gold medal.*
H. Karslake (sc.). *Gold medal.*
J. D. Marvin (sc.). *Gold medal.*
J. A. Watson Bourne (sc.). *Gold medal.*
S. C. Tait (sc.). *No award.*
H. Clennell (sc.). *Disqualified.**

**CAMPION.**
S. S. Dehenham (10 sc.). *Gold medal.*

**CASTLE THREE.**
W. E. Cornwall. *Gold medal.*

**CEDOS.**
A. G. Wall. *Silver medal.*

**CHATER-LEA.**
W. Hill (8 sc.). *Silver medal.*

**CONNAUGHT.**
Ivan F. Anderson. *Silver medal.*
G. F. Mason (sc.). *Silver medal.*
G. S. Wright. *Retired.*

**COULSON.**
B. Cold (2¾). *Gold medal.*

**DE DION BOUTON.**
B. F. C. Fellowes. *Silver medal.*

**DOUGLAS.**
C. G. Pullin (6 sc.). *Gold medal.*
T. L. Daniels (3½). *Silver medal.*
P. W. Moffatt (6 sc.). *Silver medal.*
G. Kuhn (4 sc.). *Disqualified.†*
L. Heller (4 sc.). *Disqualified.**
P. R. Copland (2¾). *Retired.*
R. Newitt (3½ sc.). *Retired.*

**DUNELT.**
O. S. Bridcutt (sc.). *Gold medal.*
P. Pehrson (sc.). *Silver medal.*
C. W. Vallings (sc.). *Silver medal.*

**EDMUND.**
O. P. C. Collier (2¾). *Gold medal.*

**EXCELSIOR.**
V. F. Long (8 sc.). *Gold medal.*

**FRANCIS-BARNETT.**
H. Gold (2¾). *Disqualified.*

**HARLEY-DAVIDSON.**
R. V. Saltmarsh (4). *Gold medal.*
W. King (7-9 sc.). *Gold medal.*
J. A. Masters (7-9 sc.). *Gold medal.*
H. R. Harveyson (7-9 sc.). *Gold medal.*
C. F. Temple (7-9 sc.). *Gold medal.*
E. J. L. Strong (7-9 sc.). *Gold medal.*
J. R. G. Haill (7-9 sc.). *Retired.*

**HUMBER.**
C. Lintott (4½). *Disqualified.†*

**INDIAN.**
D. H. Davidson (4). *Gold medal.*
E. M. Chudley (4). *Gold medal.*
A. M. Krill (4). *Gold medal.*
J. McBirnie (7-9 sc.). *Retired.*

**IVY.**
P. A. Hopkins (3 sc.). *Gold medal.*
W. J. Thomas (3). *Disqualified.**

**JAMES.**
H. H. Saddington (5-6 sc.). *Retired.*

**LEA-FRANCIS.**
H. R. Hancock (3½). *Silver medal.*

**LEVIS.**
P. Pike (2¼). *Retired.*

**L.S.D.**
F. A. Longman. *No award.*
G. W. Shepherd. *Retired.*

**MARTINSYDE.**
E. H. Gifford (3½). *Gold medal.*
A. A. Symes (3½). *Gold medal.*
H. Woollen (6 sc.). *Gold medal.*
J. T. Bashall (6 sc.). *Gold medal.*
W. H. Bashall (6 sc.). *Gold medal.*
W. Veasey (3½). *Retired.*

**MATCHLESS.**
T. J. Ross (sc.). *Gold medal.*
R. C. Boxer (sc.). *Gold medal.*
D. S. Parsons (sc.). *Gold medal.*
G. Nott (sc.). *Gold medal.*
W. F. Guiver (sc.). *Gold medal.*
R. B. Clark (sc.). *Gold medal.*
T. E. Ranger (sc.). *Gold medal.*
F. J. Ellis (sc.). *Gold medal.*
G. D. Hardee (sc.) *Gold medal.*
C. R. Collier (sc.). *Gold medal.*
A. H. Ilsley (sc.). *Gold medal.*
F. Macdonald (sc.). *Gold medal.*
J. Graham (sc.). *Gold medal.*
F. W. Neill (sc.). *Gold medal.*
W. L. Gard (sc.). *Gold medal.*
W. Julian (sc.). *Gold medal.*
B. S. Alan (sc.). *Gold medal.*
W. Bucknell (sc.). *Gold medal.*
G. Packman (sc.). *Gold medal.*
J. A. Peacock (sc.). *Gold medal.*
H. L. Miserez (sc.). *Silver medal.*
Cecil Nott (sc.). *Silver medal.*
L. Arnold (sc.). *Retired.*

**METRO-TYLER.**
G. E. Cuffe (2½). *Gold medal.*
J. A. W. Armstrong (2½). *Retired.*

**MORGAN.**
W. H. Elce. *Gold medal.*
J. Richardson. *Gold medal.*
C. E. Bennett. *Gold medal.*
H. W. Holmes. *Gold medal.*
H. E. K. Sawtell. *Gold medal.*
W. Joyce. *Silver medal.*
A. J. Sproston. *Silver medal.*
H. Beart. *Silver medal.*
W. G. Boyer. *Silver medal.*
S. A. McCarthy. *Silver Medal.*
F. H. Douglass. *Retired.*

**NER-A-CAR.**
F. K. Parsons (2¼). *Silver medal.*
R. W. Learned (2¼). *Silver medal.*
C. L'Estrange (2¼). *Retired.*

**NEW HUDSON (THREE-WHEELER).**
W. E. Line. *Silver medal.*

**NEW IMPERIAL.**
J. G. Hann (8 sc.). *Retired.*

**NEW SCALE.**
H. J. Scale (2¾). *Gold medal.*

**NORTON.**
H. F. Fellowes (3½). *Gold medal.*
H. W. Deacon (3½). *Gold medal.*
J. G. Biss (4 sc.). *Gold medal.*
J. G. Goodenough (4 sc.). *Gold medal.*
R. H. Attwood (4 sc.). *Silver medal.*
E. H. Fielden (4). *Retired.*

**N.U.T.**
W. Henry Wells (5). *Gold medal.*
M. O'Reilly (5). *Retired.*

**O.K. JUNIOR.**
Neville Hall (2¾ sc.). *Disqualified.**

**ORBIT.**
D. J. Stone (2¾ sc.). *Retired.*

**P. AND M.**
P. Cunningham (3½ sc.). *Silver medal.*

**POWELL.**
H. W. Glendinning (4 sc.). *Silver medal.*

**QUADRANT.**
A. A. Attwood (4½ sc.). *Silver medal.*
C. Wilson (4½ sc.). *Disqualified.**
C. W. E. Gaulder (4½ sc.). *Retired.*
G. A. Pidgeon (4½ sc.). *Retired.*

**READING-STANDARD.**
J. Wallis (sc.). *Silver medal.*

**RALEIGH.**
G. Richardson (2¾). *Gold medal.*
E. Foster (5-6). *Silver medal.*

**ROVER.**
J. A. Hilger (5 sc.). *Silver medal.*
J. C. Sanford (5 sc.). *Retired.*
C. N. Green (5 sc.). *Retired.*

**ROYAL ENFIELD.**
A. F. Pulling (8 sc.). *Gold medal.*
G. J. Chambers (8 sc.). *Retired.*

**ROYAL RUBY.**
F. Pownall (8 sc.). *Silver medal.*

**RUDGE.**
W. L. Danskin (7-9 sc.). *Gold medal.*
F. T. Sibley (7-9 sc.). *Gold medal.*
E. J. Kehoe (3½). *Silver medal.*
P. L. B. Wills (3½). *Retired.*

**SCOTT.**
J. A. Hoult (3¾). *Gold medal.*
J. J. Boyd-Harvey (3½). *Gold medal.*
E. J. Pittock (3¾ sc.). *Silver medal.*
C. J. Wheeler (3¾). *Retired.*

**SIRRAH.**
W. G. Churchill (2¾). *Silver medal.*

**SUNBEAM.**
P. W. White (8 sc.). *Gold medal.*
Reg. Brown (3 sc.). *Gold medal.*
E. A. Wright (3½ sc.). *Gold medal.*
W. Milligan (3½). *Silver medal.*
N. C. Dear (8 sc.). *Silver medal.*
P. Sneet (3½). *Retired.*
W. Bray (3½). *Retired.*
C. F. Plowman (3½ sc.). *Retired.*
A. F. Scroggs (3½ sc.). *Retired.*

**TRIUMPH.**
A. C. Rhodes (3½). *Gold medal.*
R. C. Staunton (4). *Gold medal.*
A. H. Nelson (4 sc.). *Gold medal.*
G. R. Claridge (4 sc.). *Gold medal.*
A. P. McGowran (4 sc.). *Gold medal.*
L. N. Stannah (4). *Silver medal.*
H. C. Nias (4). *Silver medal.*
E. S. Burnett (4 sc.). *Silver medal.*
D. D. Tilt (4 sc.). *Silver medal.*
A. C. Ward (4 sc.). *Silver medal.*
W. W. E. Clarke (2¼). *Silver medal.*
E. J. Hardwick (4 sc.). *Silver medal.*
W. P. Brandon (4 sc.). *Retired.*

**TRUMP-JAP.**
L. Pulham (2¾). *Silver medal.*

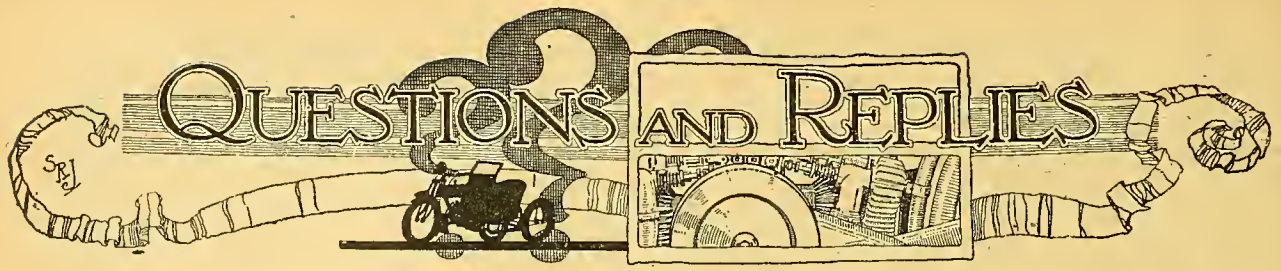
**VERUS.**
H. W. Harrington (2¾). *Retired.*

**WOOLER.**
H. H. Robinson (2¾). *Gold medal.*

**ZENITH.**
V. Gayford (3½). *Gold medal.*
F. E. Salter (2¾). *Gold medal.*
R. Charlesworth (8 sc.). *Gold medal.*
H. D. Steer (8 sc.). *Retired.*

**ZENITH-BRADSHAW.**
F. C. Townshend (3½). *Gold medal.*
C. C. Labin (3½). *Gold medal.*
W. D. Pugh (3½). *Silver medal.*

* Too early at secret check. † No lights.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### BELT DRIVE FOR A STATIONARY MACHINE.

I require a good, strong belt, ⅝in. groove, speed about 750 feet per minute, load 1 h.p. at most. This is for commercial use, running eight hours per day. Are there any makers of belts for motor cycles likely to be satisfactory for my purpose, and will the grooved pulleys require to be specially made?—J.H.

Either the Whittle or Forward makes of combined leather and steel link belting should answer your purpose. It is necessary to use grooved pulleys with an included angle of 28°.

### SWIVELLING AND TILTING HEAD LAMPS.

Why does the law require motor cycle head lamps to be so constructed, fitted, and attached as to prevent vertical movement, or use as a searchlight, of the light exhibited by the lamp, and does the same apply to motor car head lights?—H.S.

There is no law such as you outline. You are apparently referring to one of the Defence of the Realm regulations, which was only enforced during the war. So far as cars are concerned, head lamps must be fixed rigidly. They are not permitted to be swivelled with the steering, etc.

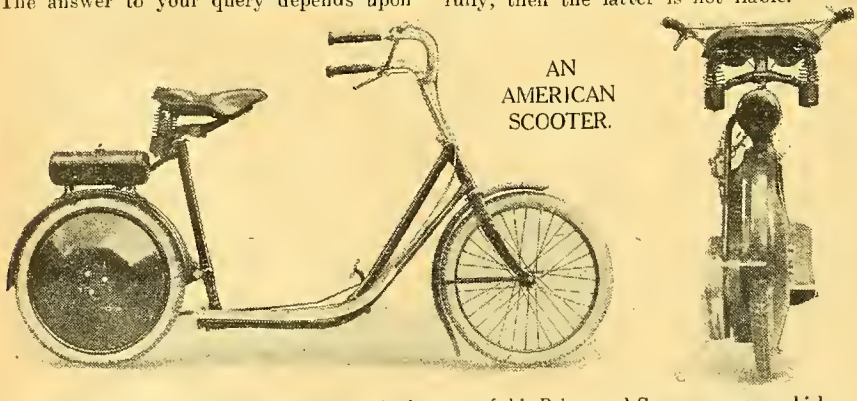
### THE RIGHTS OF THE DOG.

Will you kindly inform me if a motor cyclist is liable at law for killing a dog (or even injuring it) with his machine on the public highway?—F.S.T.

The answer to your query depends upon whether there is negligence on the part of the motor cyclist or not. A dog has a perfect right to be on the highway, and a motor cyclist must proceed sufficiently carefully to prevent any injury to it; but if the dog rushes across the road suddenly while the motor cyclist is riding carefully, then the latter is not liable.

## Important Dates.

**Fri., Jan. 27th, to Sat., Feb 4th—Scottish Car and Motor Cycle Show.**
**Sun., Mar 5th—Argenteuil Hill-climb (France).**
**Mon., Mar. 6th—La Turbie Hill-climb (Nice).**
**Wed., Mar. 15th—A.C.U. One-day Trial for Stock Machines.**
**Thurs., Mar. 23rd—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., April 1st—Western Centre A.C.U.—Open Hill-climb.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**



AN AMERICAN SCOOTER.

Simplicity and cleanliness of design is the keynote of this Briggs and Stratton scooter, which is fitted with a 2 h.p. four-stroke engine. It is claimed that 100 m.p.g. can be obtained with the machine which, fully equipped, weighs but 110 lb.

### ENCLOSING A CHAIN.

I am making a chain case (oil bath) for the engine chain of my 4 h.p. Blackburne motor cycle, with Sturmey-Archer gear box. Will it be necessary to put oil channels on the top half where the flywheel leaves and the gear box shaft enters the gear box to stop the oil being thrown about? If so, can you suggest a suitable way of making them, as there is very little room?—C.B.

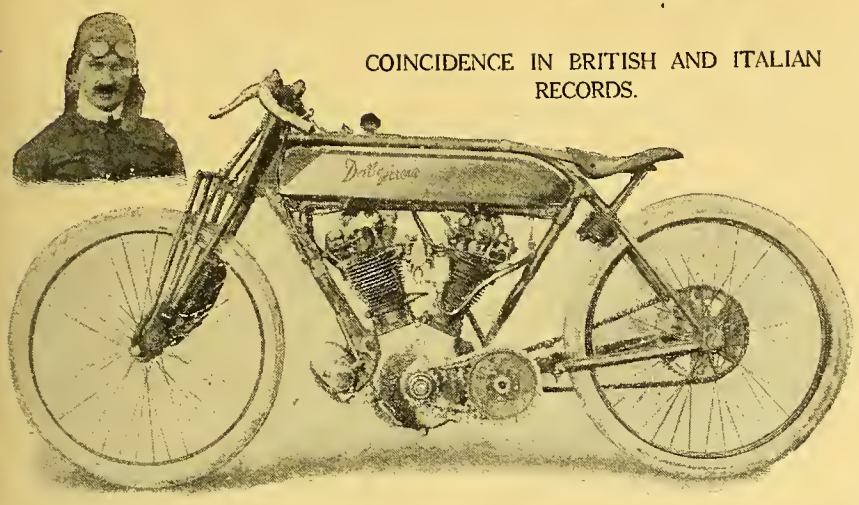
We are not quite clear as to your query, and imagine that you are embarking upon a very difficult undertaking in endeavouring to make an oil bath chain case for use in conjunction with the Blackburne engine and Sturmey-Archer gear box. Neither of these units lends itself to oil bath protection of the primary chain, especially if the final transmission is by belt; the clutch, moreover, is not intended to run in oil.

### CHANGING A CYLINDER.

Would you kindly answer a few questions concerning fitting a Triumph cylinder to (I believe) a 1914 Premier motor cycle? The one I have on at present is, of course, a Premier cylinder with auxiliary exhaust valve. I have experienced trouble with the exhaust valve seating. It has cracked twice, and each time I have had it welded, but it has cracked again for the third time. (1.) The h.p. is 3½; the bore and stroke are 85×88 mm. Could I fit a 1913 Triumph cylinder with a bore and stroke of 85×88 mm.? (2.) Would the valve stems come in line with the tappet rods? (3.) Would the stud holes at the foot of the cylinder come in line with the studs on the crank case? (4.) Should I have to fit a new piston?—T.V.D.

(1.) We believe that with a little ingenuity you could fit a 1913 Triumph cylinder to your 1914 Premier engine. (2.) We cannot give you any detailed information regarding the conversion, but if the valve stems do not come in line there will be no objection to fitting tappets with very large heads. (3.) The studs might require some adjustment, but we do not think there will be any great difficulty. (4.) If possible, it would be advisable to fit a Triumph piston for use with the Triumph cylinder, but you should take care that it is the same weight as the piston which is removed. If the Premier piston is the same height above the gudgeon pin as a Triumph piston, there would possibly be no need to change, as the compression ratio would approximately be the same.

## COINCIDENCE IN BRITISH AND ITALIAN RECORDS.



By a curious coincidence, Frederico Della Ferrera (inset), on the above o.h.v. twin bearing his name, recently set up an Italian mean speed record for the flying kilometre in the 500 c.c. class in exactly the same time as R. N. Judd's Brooklands record on a Norton. The two Italian times were 26·2 sec. and 25·6 sec. = 25·9 sec. mean speed = 86·37 m.p.h.

### GEAR RATIO FOR SPEED EVENT.

Are the following figures correct to give a 3 to 1 top gear: Size of belt drum, 17½in.; size of belt pulley, 7in.; number of teeth on the driving sprocket, 40; and number of teeth on the engine sprocket, 34? Will this be a suitable gear for a 2¾ h.p. two-stroke with the engine tuned up for a speed test on the level? If not, please give your opinion as to the most suitable gear ratio to be used.—J.W.

The dimensions which you give are correct for a gear ratio of 3 to 1. This ratio would be most unsuitable, and we do not recommend you to gear higher than 5 to 1. On this gear the engine, if in perfect condition, should give up to 50 m.p.h.

### ACCUMULATOR LIGHTING.

Thinking of changing over from acetylene to electric lighting (accumulators), I should like to know: (1.) How do accumulators stand up on a 4¼ h.p. solo machine as regards length of service. (2.) What capacity would be required? I do from half to one hour daily after dark, and desire a light equal to that obtainable from the best acetylene lamps.—T A 250.

(1.) Any good accumulator should stand up quite well on a 4¼ h.p. solo machine, but we do not recommend that you carry it on the handle-bars. It is best firmly clamped to the saddle tube of the frame. (2.) In order to get a light approaching what you require, the head lamp should have a 6-volt 3 amp. bulb (for the tail lamp 6 volt .2 amp. would be sufficient), and to maintain these bulbs it would be necessary to use a 6 volt 20 amp. (lighting) accumulator. This size would be fairly bulky and heavy, and the maximum duration of lighting from one charge would be approximately six hours (probably rather less). It would therefore be advisable to use a dynamo so that the size of the battery might be cut down somewhat.

### FITTING OVERSIZE TYRES.

Being anxious to fit oversize tyres (3in. if possible) to my 1919 4 h.p. Douglas, I wrote to two or three tyre companies and asked their advice. I said that, as supplied, the machine had 26 × 2⅜in. tyres on 26 × 2⅜in. rims. But I was assured by two tyre companies that, in reality, the rims were 26 × 2¼in. D2. Which is right, and what does the D2 stand for? I also notice in the lists rims whose sizes are shown as D1, D2, D3, CC1, CC2, C1, C2, OS, C3, B7, B8, and so forth. Will you be so kind as to explain these terms? Also, what is the approximate size, in inches, of the 650×65 mm. tyre?—G.B.

The rims fitted to the 4 h.p. Douglas machines are the British standard size D2, and will take 26 × 2¼in., 26 × 2⅜in., and 26 × 2½ × 2¼in. tyres. All these sizes are made for the B.S.D2 rim; but you will also find that it is possible to fit the majority of 28×3in. covers on the same rim, as many riders have described in our pages. You will find a full list of standardised rim dimensions in "Motor Cycles and How to Manage Them." The 650×65 mm. size equals 26×2½in.

### AN OLD TWO-SPEED HUB

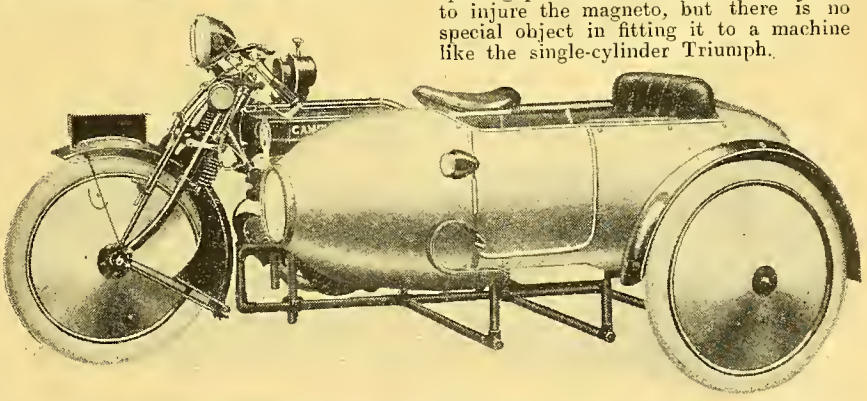
I have recently become possessed of a rather old type of Matchless twin, fitted with a Roc two-speed gear, pedal start. The engine runs very well indeed, but the Roc two-speed is a little bit uncertain, and the wheel itself wobbles quite a lot. Can you tell me where I can procure a booklet or any information on the working of this gear which will help me in making it efficient?—NOVICE.

It is now almost impossible to get a booklet dealing with the Roc two-speed gear. We should imagine, however, that the gear fitted to your machine is not a Roc, but a Vindec, which was standard with early Matchless machines. You can easily tell whether this is so by the controls. The Roc is controlled entirely by pedals—one for the high gear, one for the low gear, and one for the brake—and has a live axle with projecting dog for handle starter. The Vindec is controlled by a large hand lever working in a long notched quadrant at the side of the tank; it has a free-wheel for starting by means of pedalling gear.

### HIGH SPEED FROM A TOURING MACHINE WANTED.

(1.) What would be the best timing for the valves of a 1918 4 h.p. Triumph for speed? (2.) What is the best sort of cam to use—quick opening and closing, quick opening and slow closing, or slow opening and quick closing? (3.) Would it be advisable to advance the spark further than standard? (4.) Would these alterations greatly inconvenience running in traffic? (5.) Is it advisable to fit a spark intensifier consisting of a spark gap in series with the high-tension terminal? Is it likely to injure the magneto?—R.C.H.K.

(1, 2, and 3.) Your questions involve a great deal of experimenting, and it is impossible to lay down any hard and fast rules for obtaining speed. In any case, your machine is not of a type primarily designed for speed work, and it is very doubtful whether you can attain your object without going to considerable expense. Carefully tuned, and using standard parts only, 55 to 58 m.p.h. might be attained. (4.) The running of the machine might not be nearly so pleasing in traffic, etc. (5.) A spark gap, if not too wide, is not likely to injure the magneto, but there is no special object in fitting it to a machine like the single-cylinder Triumph.



A streamline sidecar embodying an electric lamp at the nose. This smart aluminium body was made by Mr. C. E. Norris, Trent Bridge, Nottingham.

### CHOOSING A HILL FOR A SPEED CLIMB

It is our intention to hold a climb in the near future for a few (approximately thirty) of the local would-be speedmen. This climb is, of course, not in connection with any club, but merely a sporting run for some sporting machines, over which the owners have occasional hot words. The information we require especially is under the following headings: (1.) What is a suitable hill as regards gradient, surface, and length? (2.) What police regulations are there, and what are the means of obtaining police permission, if necessary? (3.) What is a good but simple method of timing? (4.) Over what distance are competitors usually timed? (5.) What distance is usually allowed for a flying start? Our district is purely agricultural, and therefore we think there should not be many difficulties in our way.—M.D.S.

(1.) *(a)* Gradient is a matter for choice—the steeper the better; *(b)* the surface should be as smooth as possible; *(c)* half a mile or one kilometre. (2.) Actually any competition which involves speeds above the legal limit of 20 m.p.h. is illegal if held on a public road. The best thing to do is to obtain police permission from the Chief Constable of your district. (3.) The simplest method of timing (presuming that you cannot use a portable telephone between the starting and finishing of points) is to have the timekeeper at the finishing line, in such a position that he can keep the starter in sight. If the starter uses a flag, the timekeeper can start his watch at the fall of the flag, and stop it as the competitor crosses at the finishing line. (4.) The distance depends upon the hill—usually half a mile or one kilometre; sometimes it may be one mile, or even more. (5.) About two hundred yards.

### CONVERTING TWIN MAGNETO TO SINGLE.

I have an ex-W.D. twin-cylinder Thomson-Bennett magneto which I am converting for use with a two-stroke single-cylinder engine. I have already removed one carbon brush and both cams, and I am fitting a new cam of 200°. (1.) In what position should this cam be fitted in relation to contact breaker? (2.) Should the contact points open the same time as the carbon brush enters on to the brass segment on slip ring, and remain open until the brush has passed over the whole length of this segment, which you will note only circuits about half of slip ring? In other words, should the period of open points be at the same time as the period of brush passing over brass on slip ring?—A.G.

(1.) Your best plan is to fit the new cam so that its leading edge coincides with the position previously occupied by the leading end of one of the cams which you have removed. (2.) The brass segment of the slip ring should be under the fibre brush when the contact points open, but there is otherwise no exact position for duration of this period, as its only function is to provide a path to the carbon brush when the current flows.

## READER'S REPLY.

### BLACKING CYLINDERS.

*Re* "J.H.R.'s" query on blacking cylinders, which occurs on the "Questions and Replies" page of your issue of December 29th. May I be allowed to state that a white surface is a good reflector, both of heat and light, but a very bad radiator, a black surface being by far superior as regards radiation. Good absorbers are also good radiators.—WELLERSSET.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o the Editor, when they will be forwarded direct to the querists concerned.*

"Beginner" (Merton).—2¾ h.p. Douglas, 1921-22: Speed, running costs, and reliability on long journeys.

"A.D.P." (Baldonnel).—1921 A.B.C.: Reliability when modified, modifications and improvements recommended, valve gear noise, and largest tyres that can be fitted.

"E.B." (Manchester).—Best mechanical pump on 4 h.p. Triumph, m.p.g., oil consumption, and best setting of adjustment.

"L.G.J." (Herne Hill).—4¼ h.p. B.S.A. sidecar, chain drive, compared with Carden, A.V., or Tamplin cycle car; is B.S.A. sidecar preferable to other proprietary make?

"G.A.H." (Birmingham).—1921 8 h.p. Enfield (Vickers engine): Consumption, speed, climbing, control of gear in traffic, lubrication, and cooling.

"C.P." (Clapham, S.W.).—7 h.p. four-cylinder F.N.: Reliability, accessibility for tyre and mechanical repairs, consumption (solo), liability to skidding compared with other solo machines.

IN THE LONDON-EXETER RUN

A Norton rider, H. F. Fellowes, above Lyme Regis.

## SPARKLETS

### Calendars for 1922.

We have to thank the following firms for sending us their very artistic calendars: The British Piston Ring Co., Ltd., Abdulla and Co., Ltd., Brown Brothers, Ltd., Shell-Mex, Ltd., Philipson and Co., Ltd. (Bolton), and Henderson Sidecars (Sheffield).

### Carriage Paid.

Most motor cycle manufacturers are now sending out their machines carriage paid to any part of England, Wales, or Scotland. Humphries and Dawes, Ltd., of Hall Green, Birmingham, advise us that O.K. machines will be delivered free of all carriage charges to any part of Great Britain.

### Melbourne-Sydney Record.

The road record from Melbourne to Sydney, which stood at 23h. 41m., was broken by H. R. Hodgson, of Sydney, just before Christmas. Riding a 7-9 h.p. Harley-Davidson with Dunlop tyres, he accomplished the journey in 18h. 11m., averaging 31 m.p.h.

### Fixing 1922 Prices.

In order to stabilise the market as far as possible, there will be no change during 1922 in the prices of the electrical equipment and accessories manufactured by A. H. Hunt, Ltd., of Croydon. An announcement to this effect was made at the recent Olympia Show.

### Catalogues Received.

Coventry Eagle Cycle and Motor Co., Coventry: A catalogue of thirty-two pages, well illustrated, and showing the complete range of Coventry Eagle motor cycles.

Stanford Sidecar Co., Sampson Road North, Birmingham: Giving essential details of the Stanford sidecars and the Universal windscreen.

County Cycle and Motor Co., Broad Street, Birmingham: Folder describing the County B.S.A.-Canoelet taxi-sidecar outfit, giving prices, estimated running costs, and similar figures of use to those contemplating establishing a sidecar-taxi business.

James Grose, Ltd., 4, Old Jewry, Cheapside, London, E.C.2: A very comprehensive accessories catalogue containing practically everything for the motor cycle, and incorporating several new lines. A supplementary sheet has been issued, which shows great reductions in prices, and anyone already possessing the catalogue may have one on request.

Hazlewoods, Ltd., Albion Mills, Coventry: Folders describing and illustrating the various Hazlewood machines. For 1922 new prices are announced, the 2¾ h.p. J.A.P.-engined model being offered at £67, and the 6 h.p. sidecar outfit at £118, the latter being a surprisingly low figure in view of the excellent specification.

# LONDON—EXETER

## and back again.

# A Jardine FOUR-SPEED GEAR

**was fitted to S. S. Debenham's 10 h.p. Campion Sidecar outfit, which completed the double journey without trouble and gained a**

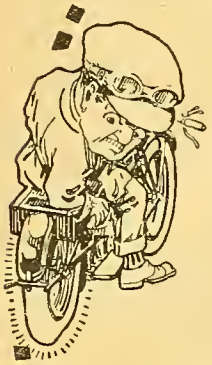
# Gold Medal.

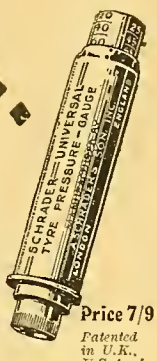
***YOU can depend on equal reliability when YOUR machine is fitted with a Jardine Four-Speed Gear.***

*Catalogues and Particulars from—*

**JOHN JARDINE, Ltd., Deering St., NOTTINGHAM.** 'Phone: Nottingham 3295, 3296.

# Keep Your Tyres in Tune —






PNEUMATIC tyres (and tubes) are made to give the greatest efficiency for a given weight and pressure. Unless you ensure and maintain the *known* pressure, your tyres will not give the mileage and efficiency for which they are designed.

"Schrader Universal" Tyre Pressure Gauge enables you to test the air pressure in your tyre quickly, and assures you an appreciable difference in the "tune" and running costs of your motor cycle.

Table of Correct Air Pressures for all well-known makes of tyre will be sent post free on application.

**Price 7/9**

*Patented in U.K., U.S.A., & Foreign Countries*

A. SCHRADER'S SON, INC.
British Factory:
Victoria Rd., Willesden Junct., London, N.W.10
Manufacturers of the "Schrader Universal" Tyre Valve.

British Made
**Schrader Universal**
**TYRE PRESSURE GAUGE**

# Speed on Hills

One of the joys of motoring in the

## L.S.D.

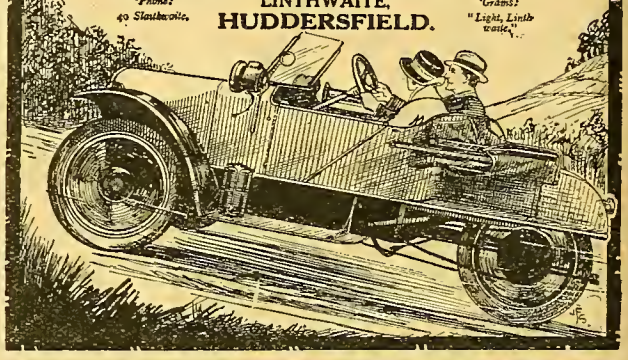
Is its ability to climb practically all main road hills on *top*.

It also saves time and money.

Have you had that experience yet?

*Write us for Demonstration.*

**SYKES & SUGDEN, Ltd.,**
'Phone: 40 Slaithwaite. LINTHWAITE, HUDDERSFIELD. 'Grams: "Light, Linthwaite."



## SIMPLY A MATTER OF PRESSING THE BUTTON—

THE RUNBAKEN Spark AMPLIFIER AND TESTER ! !
(Patd. 13980)

This highly finished accessory is quickly fitted to any type of plug, and with its aid, besides giving the generally recognised advantages of an extra spark gap in the high tension current, has also the following advantages :

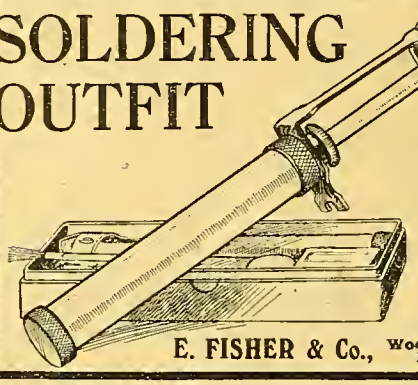
1. Confirms Magneto and High Tension Wire O.K.
2. Definitely enables you to see a spark take place at Plug Points.
3. Whether sparking regular or not.
4. Whether points sooted or insulator cracked.
5. Indicates "shorted" Plug.
6. Will cut out cylinder for testing purposes.
7. Acts as thief-proof device.
8. Never necessary to take out Plugs except when faulty.

NO MORE PERPLEXITY
8/6 each. Post Free.
*Write for leaflet A/E.*

**THE RUNBAKEN MAGNETO CO., LTD.,**
**WORKS: DERBY ST., CHEETHAM, MANCHESTER.**
'Phone: City 8266 (3 lines).

| | |
|---|---|
| MANCHESTER : 288, Deansgate | 'Phone: Central 7342 |
| LONDON : 142, Gt. Portland St. W.1 | 'Phone: Museum 3905 |
| LEEDS : 94, Albion Street | 'Phone: 27219 |
| LIVERPOOL : 65, Renshaw Street | 'Phone: 605 Royal |
| BIRMINGHAM : 192, Corporation St. | 'Phone: Central 2059 |
| BRISTOL : 14, Colston Street | 'Phone 3728 |
| SCOTLAND : F. W. Murray, 34-36, Bath Street, Glasgow | 'Phone: Douglas 1784 |
| PARIS : 40, Rue Brunel | 'Phone: Roquette 1442 |

## THE "EVER-READY" SOLDERING OUTFIT



**Price 7/6**
Postage 6d. extra.

Heated by Spirit.

READY IN 2 MINUTES.

TRADE SUPPLIED.

E. FISHER & Co., Wood Lane Harborne, BIRMINGHAM.

# SPEEDON MOTOR OILS

HIGH GRADE AND UNEXCELLED FOR CYCLES.

John S. Morris & Son (Oils), Ltd., Cross Lane Oil Works, Manchester

# Rendezvous

WHEREVER THE MEETING PLACE the enthusiastic popularity gained by the incomparable EASTING WINDSCREENS is an outstanding feature.

Underneath its handsome streamline qualities are many simple perfected mechanical refinements, providing adjustments to any position, enabling pronounced ease of entry or exit, and the well balanced design has occasioned favourable comment wherever it is seen.

It is the one efficient means of realising perfect protection from any weather conditions. Wind, rain, dust, and cold, it streamlines the sidecar, increases the speed of the combination, and no glass to break in case of accident.

Fitted and recommended by many eminent motor cycle and sidecar manufacturers.

**REDUCED PRICES**

ROYAL - - £5 0 0
STANDARD - £3 18 0
BABY - - - £3 0 0

*SPECIAL NOTE—Complete sets of Royal fittings for converting "Standard" models to "Royal," giving simplified adjustment to any position—and quick, easy entry or exit, price* 45/-

*New Celluloids can be fitted and returned in three days, Royal and Standard* 20/-, *Baby* 16/-.

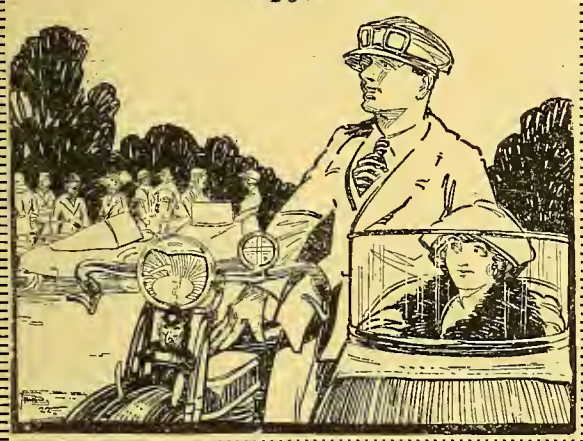
**EASTING WINDSCREENS LTD.,**
**132, STEELHOUSE LANE, BIRMINGHAM.**

*London Office & Service Depot:*
**24, FINSBURY SQUARE, LONDON, W.C.**
*Telephone* *Clerkenwell* 1904.

WHOLESALE STOCKISTS: AUSTRALIA—J. J. Wilkins & Sons, 586, George St., Sydney. IRELAND—C. E. Jacob, 18, Great Brunswick St., Dublin. SCOTLAND—Of all factors.

Sole Manufacturing Rights in U.S.A.: Messrs. Shillan, Peck & Co., Inc., 68-72, East 131st. St., New York.

EASTING



# BENETFINKS

## January Tyre Offers

### PRICES FURTHER REDUCED

The following Surplus and Clearance Covers are offered subject to being unsold. Order immediately to prevent disappointment.

| Size. | Make. | Price. |
|---|---|---|
| 26× 2 | Avon Rubber Studded .. .. .. .. | 15/- |
| 26× 2 | Englebert, Heavy Passenger .. .. .. | 19/- |
| 26× 2¼ | Wood-Milne, 3-ply new .. .. .. | 12/9 |
| 26× 2¼ | Avon Rubber Studded .. .. .. .. | 15/- |
| 26× 2¼ | Wood-Milne Extra Heavy Comb. W.D. .. | 20/- |
| 26× 2⅜ | Clincher Extra Heavy de Luxe W.D. .. | 23/9 |
| 26× 2¼ to fit 2¼ | Extra Heavy Rubber Studded New .. | 25/- |
| 26× 2½ | Wood-Milne 4-ply Extra Strong New .. | 16/- |
| to fit 2½ | Wood-Milne 3-ply Special, New .. | 12/9 |
| 650× 65 | „ „ „ „ „ .. | 12/9 |
| 26× 3 | Englebert Heavy Touring .. .. .. | 20/- |
| 28× 2½ | Wood-Milne Extra Strong, 4-ply .. | 15/- |

CARRIAGE PAID.

### INNER TUBES.

Endless. Guaranteed fresh and perfect.

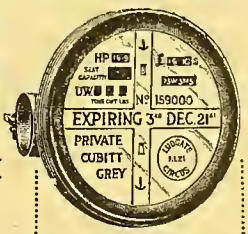
Sizes: 26×2, 26×2¼, 26×2⅜, 26×2½, 26×3, 28×3, 650×65, 700×80 **6/6**

Post Free.

### VALUE IN ACCESSORIES

**LICENCE CARD HOLDERS.**

Is yours satisfactory? If not, change it when fitting a new licence. The holder illustrated is of Aluminium, with only two nuts and bolts. Fits any bar, and is absolutely waterproof. Price **2/6** *post free.*




**OTHER TYPES.**

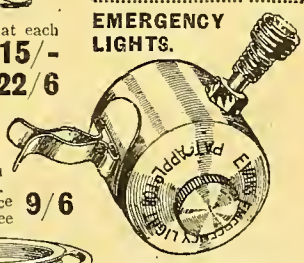
For Number Plate .. .. .. Price 2/-
Ditto, in finest nickel.. „ 5/-
For Handle-bar, Brass, Nickel-plated „ 5/-
All post free.

**Buy all you need at BENETFINKS.**
*All Post Orders are despatched same day.*

**MOTOR CYCLE WATER-PROOF COVERS.**

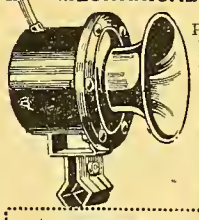
Made from Government Proofed Cambric eyeletted at each corner. Light and compact. Absolutely waterproof. Solo size, 9′×6′. Post free. **15/-**
Combination size, 9′×9′, or 12′×6′ „ **22/6**

**EMERGENCY LIGHTS.**

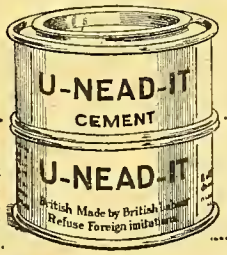



Just fill up with petrol, clip on to burner, and it will give a good light for two hours. Our price, post free **2/3**

**"HAYMARKET" MECHANICAL HORNS.**



Push down action Top tube fitting. Black finish. Price post free **9/6**




**"U-NEAD-IT" TYRE CEMENT.**

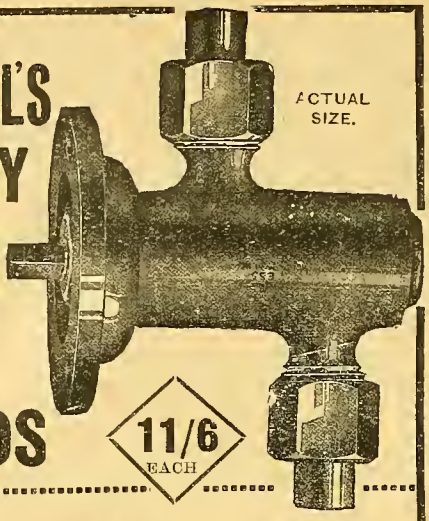
The finest tyre cement sold. Repairs tyres cut in a few minutes, and tyre can be used immediately after.

**"U-NEAD IT" REPAIR OUTFIT.**

**Motor Cycle Outfit** Solution and Cement in special combinations tins Price, post free **3/-**

**CHEAPSIDE, LONDON, E.C.2**

FIT
SHOWELL'S
ROTARY
PUMP
AND
SAVE
POUNDS




11/6
EACH

ECONOMICAL
SIMPLE
SAFE
AUTOMATIC LUBRICATION

CAN BE SUPPLIED TO WORK IN CONJUNCTION
WITH YOUR EXISTING SPRING
LOADED HAND PUMP
FOR 15/6 THE SET.

SEND FOR BOOKLET.

E. SHOWELL & SONS LTD., Works:
Trade Mark: 14, NEW ST., Sirchley,
"E.S.S." BIRMINGHAM. Birmingham.

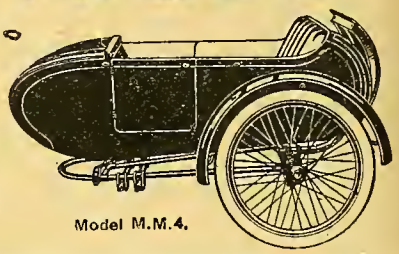
MONEY
CAN BUY
NO MORE

than the perfection of any Canoelet model. All that is known about Sidecars, gathered in the years of our specialised experience, is embodied in every Canoelet model, which is recognised as the quintessence of comfort and durability,—whichever one you choose. We have plain and luxurious models to suit all needs, but anything more expensive than can be found in our catalogue is money wasted

Choose a Canoelet, money can buy no more

MEAD & DEAKIN, Tyseley, BIRMINGHAM.

CANOELET



Model M.M.4.

London-Exeter
on
SNOWDRIFT

DECEMBER, 26-27, 1921.

C. C. LABIN, riding a 3½ h.p. OIL-COOLED Zenith-Bradshaw, GOLD MEDAL.

OLIVER CLARK, driving an AIR-COOLED G.N., GOLD MEDAL.

TWO ENTRIES—TWO GOLDS.

Snowdon Sons & Co., Ltd., are proud of this 100% success. The type of engines concerned (admittedly the most exacting on lubricants) is most fortunate; there is no need whatever to pay fancy prices to obtain the best oils.

*Ask at your garage for "Snowdrift" lubricants.*

Know your Speed & Mileage!

Model 42 (*as illustrated*)—Black finish. Nickel-plated bezel. Indicates speeds to 60 miles per hour. Total mileage counter to 10,000 and repeats. Quickly reset trip-counter.
Price £6 5 0 (or without trip, model 40) £5 15 0
Back wheel drive for Triumph, 5s. extra. Back wheel drive for Indian or Harley-Davidson, 10s. extra.
*Manufactured by*
NORTH & SONS, Ltd., WATFORD, & 14, Soho Sq., London, W.1

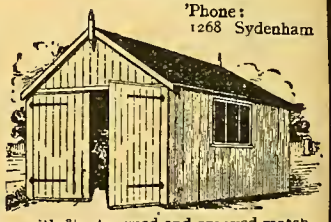
NORTH'S BRITISH MADE Watford

SPEEDOMETERS for Motor Cycles

A. TURRELL & SONS, PORTABLE BUILDING WORKS, FOREST HILL, S.E.23.
'Phone: 1268 Sydenham

| Feet | Feet | £ | s. | d. |
|---|---|---|---|---|
| 7 × 5 | .. .. | 7 | 5 | 0 |
| 8 × 6 | .. .. | 9 | 0 | 0 |
| 9 × 7 | .. .. | 11 | 7 | 0 |
| 10 × 8 | .. .. | 12 | 19 | 0 |
| 12 × 8 | .. .. | 17 | 5 | 0 |
| 14 × 8 | .. .. | 21 | 0 | 0 |
| 16 × 9 | .. .. | 26 | 0 | 0 |
| 18 × 9 | .. .. | 31 | 0 | 0 |
| 20 × 10 | .. .. | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ¾in. tongued and grooved matchboards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed: 21oz. glass. Flooring: strong joists, one inch tongued and grooved boards. All bolts supplied for erecting house.

# THE PIONEERS *of* Deferred Payment Terms for Motor Cycles.

# WHITELEYS

——are still the Leading Store for——

## MACHINES and TERMS

We ourselves finance each transaction. You will appreciate the advantage of dealing throughout with a firm of the highest standing. The name "WHITELEY" has become a household word signifying good value and straight dealing.

### Machines in Stock include:—

#### 1922 MODELS—SOLO.

| | | | | | |
|---|---|---|---|---|---|
| **LEVIS,** 2½ h.p., single-speed | £48 | 0 | **B.S.A.,** 4½ h.p., Model K2 | £107 | 0 |
| **LEVIS,** 2½ h.p., 2-speed, with clutch and S.S. | £60 | 0 | **B.S.A.,** 4½ h.p., Model H2 | £110 | 0 |
| **DOUGLAS,** 2¾ h.p., 2-speed, fully equipped | £75 | 0 | **JAMES,** 3 h.p., twin, Model 7 | £105 | 0 |
| **DOUGLAS,** 3-speed, C/K.S. | £90 | 0 | **JAMES,** 4½ h.p., Model 6 | £105 | 0 |
| **NEW IMPERIAL,** 2¾ h.p., 3-speed, C/K.S. | £69 | 0 | **NEW HUDSON,** 2½ h.p., 2-speed, all-chain model | £63 | 0 |
| **NEW IMPERIAL,** all-chain | £73 | 0 | **MARTINSYDE,** 3½ h.p., sports model | £110 | 0 |
| **ENFIELD,** 2½ h.p., 2-speed, 2-stroke | £55 | 0 | **JAMES,** No. 8, 2½ h.p., 2-speed | £55 | 0 |
| **ENFIELD,** 2½ h.p., 2-speed, C/K.S. | £67 | 0 | **JAMES,** No. 8a, 2½ h.p., 2-speed, 2-stroke, C/K.S. | £60 | 0 |
| **RUDGE,** 3½ h.p., 3-speed, all-chain, C/K.S. | £100 | 0 | **SUN,** 2½ h.p., 2-speed, C/K.S. | £57 | 15 |
| **TRIUMPH,** 4 h.p., Model H | £105 | 0 | 3½ h.p. **ZENITH-BRADSHAW,** variable gear | £113 | 0 |
| **TRIUMPH,** 4 h.p., Model SD | £115 | 0 | | | |

#### 1922 COMBINATIONS.

| | | | | | |
|---|---|---|---|---|---|
| **TRIUMPH,** 4 h.p, Model SDC, cochbuilt Sidecar, petrol tin carrier, etc. | £155 | 0 | **ENFIELD,** 8 h.p., coachbuilt Sidecar | £140 | 0 |
| **TRIUMPH,** 4 h.p., Model HC | £145 | 0 | **MATCHLESS,** 8 h.p., Model H2, coachbuilt S'car, luggage car. | £170 | 0 |
| **B.S.A.,** 4½ h.p., Model K2, with No. 3 Sidecar | £139 | 0 | **A.J.S.,** 7 h.p., coachbuilt Sidecar, complete with windscreen.. | £175 | 0 |
| **B.S.A.,** 4½ h.p., Model H2, with No. 3 Sidecar | £142 | 0 | **BLACKBURNE,** 8 h.p., 3-speed, C/K.S., coachbuilt Sidecar.. | £131 | 5 |
| **P. & M.,** 4½ h.p., 4-speed, C/K.S., coachbuilt Sidecar | £150 | 0 | **HAZLEWOOD,** 5-6 h.p., 3-speed, C/K.S., coachbuilt Sidecar | £118 | 0 |
| **JAMES,** 4½ h.p., Model 6, with coachbuilt Sidecar | £135 | 0 | **B.S.A.,** 6 h.p., with No. 3 Sidecar | £164 | 0 |
| **DOUGLAS,** 4 h.p., coachbuilt Sidecar | £135 | 0 | **MARTINSYDE,** 6 h.p., 3-speed, C/K.S., coachbuilt Sidecar.. | £160 | 0 |
| **QUADRANT,** 4½ h.p., 3-speed, C/K.S., coachbuilt Sidecar .. | £100 | 0 | **NEW HUDSON,** 4½ h.p., 3-speed, C/K.S., coachbuilt Sidecar.. | £125 | 0 |
| **JAMES,** 7 h.p., Model 10, coachbuilt de luxe Sidecar | £160 | 0 | **RUDGE,** 3½ h.p., all-chain, coachbuilt Sidecar | £120 | 0 |

#### 1921 SHOP-SOILED SOLO MACHINES.

| | | | | | |
|---|---|---|---|---|---|
| **TRIUMPH,** 2½ h.p., 2-stroke, 2-speed | £59 | 0 | **CALTHORPE,** 3 h.p., 2-speed, 2-stroke, C/K.S. | £45 | 0 |
| **ROYAL RUBY,** 2¾ h.p., 2-speed, C/K.S. | £62 | 0 | **NEW HUDSON,** 2½ h.p., 2-stroke, single-speed | £45 | 0 |
| **CALTHORPE,** 3 h.p. 2-speed, 2-stroke | £42 | 10 | **COULSON-B,** 2¾ h.p., 2-speed, C/K.S. | £69 | 0 |

#### 1921 SHOP-SOILED COMBINATIONS.

| | | | | | |
|---|---|---|---|---|---|
| **P. & M.,** 3½ h.p., coachbuilt Sidecar | £125 | 0 | **ENFIELD,** 8 h.p., coachbuilt Sidecar, Lucas electric dynamo lighting, luggage carrier | £149 | 0 |
| **QUADRANT,** 5 h.p., 3-speed, C/K.S., coachbuilt S'car, screen | £99 | 0 | **READING STANDARD,** 3-speed, C/K.S., Plus One single or | | |
| **ROYAL RUBY,** 8 h.p., coachbuilt Sidecar, luggage carrier, Lucas lighting, windscreen, spare wheel, spring frame .. | £185 | 0 | double Sidecar, electric lighting, etc. | £182 | 10 |

#### SECOND-HAND SOLO MACHINES.

| | | | | | |
|---|---|---|---|---|---|
| **NEW IMPERIAL,** 2¾ h.p., 2-speed, J.A.P., practically new .. | £60 | 0 | **DOUGLAS,** 1921, 2¾ h.p., 3-speed, C/K.S. | £67 | 10 |
| **IXION,** 1920, 2½ h.p., 2-speed, C/K.S. | £39 | 10 | **READING STANDARD,** 1921, 10 h.p., 3-speed, C/K.S., electric lighting | £100 | 0 |
| **O.K. Junior,** 1920, fully equipped | £35 | 0 | | | |
| **DOUGLAS,** 1921, 2¾ h.p., 3-speed, C/K.S. | £75 | 0 | | | |

#### SECOND-HAND COMBINATIONS.

| | | | | | |
|---|---|---|---|---|---|
| **MARTINSYDE,** 1921, 6 h.p., fully equipped, mileage under 1,800, as new | £139 | 10 | **P. & M.,** 1921, 3½ h.p., coachbuilt Sidecar, fully equipped .. | £110 | 0 |
| **NEW IMPERIAL,** 6 h.p., 1920, fully equipped, Tan-Sad saddle, 4 months' use only | £110 | 0 | **TRIUMPH,** 4 h.p., 3-speed, C/K.S., coachbuilt Sidecar, lamps, horn, apron, etc. | £75 | 0 |
| **MARTINSYDE,** 1921, 6 h.p., with lamps, horn, licence-holder, as new | £110 | 0 | **DOUGLAS,** 4 h.p., renovated model, fully equipped, and Easting windscreen | £55 | 0 |

**EXAMPLE.**

**NER-A-CAR**—a unique all-weather utility machine for lady's or gent's use—easy to handle, non-skidding, efficient, and reliable ..... **66 Guineas.**
or **£14-10-0** deposit and 12 monthly payments of **£4-16-0** (4% extra for 12 months' credit accommodation).

***Any make of machine on similar terms.***

## Wm. WHITELEY, LTD., Queen's Road, W.2.

Telegrams—"Whiteley, London." Telephone—Park, One.

# CASH AND CREDIT PRICES OF 1922 MODELS. IMMEDIATE DELIVERY.

## MOTOR CYCLES

B.S.A., 4¼ h.p., Model H2, all-chain **£110 0 0**
or £28 12 0 down and 12 instalments of £7 3 0
B.S.A. 4¼ h.p. Model H2 Combinat'n **£142 0 0**
or £36 18 7 down and 12 instalments of £9 4 7
B.S.A., 4¼ h.p., Model K2, chain-cum-belt ..... **£107 0 0**
or £27 16 7 down and 12 instalments of £6 19 1
B.S.A. 6 h.p. Model E Combination. **£164 0 0**
or £42 12 2 down and 12 instalments of £10 13 3
B.S.A. 6 h.p. Model E Combination, with dynamo lighting ..... **£184 6 0**
or £47 18 5 down and 12 instalments of £11 19 7
HAWKER 4 h.p. Model D Combn. **£110 0 0**
or £28 12 0 down and 12 instalments of £7 3 0
LEVIS, 2¾ h.p., Popular model ... **£48 0 0**
or £12 9 4 down and 12 instalments of £3 2 5
LEVIS, 2¾ h.p., Model S, 2-sp., cl. **£58 0 0**
or £15 1 4 down and 12 instalments of £3 15 5
LEVIS, 2¾ h.p., Model G1, single-sp. **£56 0 0**
or £14 11 9 down and 12 instalments of £3 12 9
LEVIS, 2¾ h.p., Model G2, 2-sp., cl. **£66 0 0**
or £17 3 9 down and 12 instalments of £4 5 9
MATCHLESS 8 h.p. Model H Com. **£170 0 0**
or £44 4 0 down and 12 instalments of £11 1 0
MATCHLESS 8 h.p. Model H Combination with Magdyno lighting **£190 0 0**
or £49 8 0 down and 12 instalments of £12 7 0
MATCHLESS, 8 h.p., Model H, 2-seater ..... **£175 10 0**
or £45 12 5 down and 12 instalments of £11 8 2
MATCHLESS, 8 h.p., Model H, 2-seater, with Magdyno lighting **£195 10 0**
or £50 16 5 down and 12 instalments of £12 14 2
MATCHLESS 8 h.p. Model J sports Combination ..... **£160 0 0**
or £41 12 0 down and 12 instalments of £10 8 0
MATCHLESS 8 h.p. Model J sports Com. with Magdyno lighting .. **£180 0 0**
or £46 16 0 down and 12 instalments of £11 14 0
MATCHLESS, 8 h.p., Model J, solo **£130 0 0**
or £33 16 0 down and 12 instalments of £8 9 0
MARTINSYDE 6 h.p. Combination **£160 0 0**
or £41 12 0 down and 12 instalments of £10 8 0
A.J.S. 7 h.p. Combination ..... **£175 0 0**
or £43 15 10 down and 12 instalm'ts of £11 15 1
A.J.S. 7 h.p. Combination with Magdyno lighting ..... **£195 0 0**
or £48 15 4 down and 12 instalments of £13 2 0
A.J.S., 2¾ h.p., Models B, B1, B2.. **£85 0 0**
or £21 5 7 down and 12 instalments of £5 14 2
N.U.T., 3½ h.p., standard, Model M **£100 0 0**
or £26 0 0 down and 12 instalments of £6 10 0
N.U.T., 3½ h.p., Model P, with Magdyno lighting, and electric horn **£120 0 0**
or £31 4 0 down and 12 instalments of £7 16 0
N.U.T., 5 h.p., Model M ..... **£110 0 0**
or £28 12 0 down and 12 instalments of £7 3 0
N.U.T., 5 h.p., Model V, with Magdyno lighting and electric horn **£130 0 0**
or £33 16 0 down and 12 instalments of £8 9 0
NEW IMPERIAL 8 h.p. Combinat'n **£145 0 0**
or £37 14 0 down and 12 instalments of £9 8 6
NEW IMPERIAL, 2¾ h.p., 3 speeds, all-chain ..... **£73 0 0**
or £18 19 5 down and 12 instalments of £4 14 11
QUADRANT 4½ h.p. Combination, chain-cum-belt ..... **£100 0 0**
or £26 0 0 down and 12 instalments of £6 10 0
QUADRANT 4½ h.p. Combination, all-chain ..... **£105 0 0**
or £27 6 0 down and 12 instalments of £6 16 6
ROYAL ENFIELD, 2¾ h.p., Model 200 ..... **£55 0 0**
or £14 6 0 down and 12 instalments of £3 11 6
ROYAL ENFIELD, 2¾ h.p., Model 201, with kick-starter ..... **£57 0 0**
or £14 16 7 down and 12 instalments of £3 14 1
ROYAL ENFIELD 8 h.p. Combn. **£140 0 0**
or £36 8 0 down and 12 instalments of £9 2 0
ROYAL ENFIELD 8 h.p. Combination, with Magdyno lighting .. **£158 0 0**
or £41 1 5 down and 12 instalments of £10 5 5
RALEIGH, 2¾ h.p. model ..... **£68 0 0**
or £17 13 5 down and 12 instalments of £4 8 5
RUDGE Multi, 3½ h.p., I.O.M. mod. **£85 0 0**
or £22 2 0 down and 12 instalments of £5 10 6
RUDGE Multi, 3½ h.p., touring model, with pedal starter..... **£85 0 0**
or £22 2 0 down and 12 instalments of £5 10 6
TRIUMPH, 4 h.p., Model H, chain-cum-belt ..... **£105 0 0**
or £27 6 0 down and 12 instalments of £6 16 6
TRIUMPH, 4 h.p., Model S.D., all-chain ..... **£115 0 0**
or £29 18 0 down and 12 instalments of £7 9 6
TRIUMPH 4 h.p. Model S.D. Com. **£155 0 0**
or £40 6 0 down and 12 instalments of £10 1 6
TRIUMPH, 2¾ h.p., Junior model.. **£65 0 0**
or £16 18 0 down and 12 instalments of £4 4 6
ZENITH - BRADSHAW, 3½ h.p., Model A, Gradua gear ..... **£113 0 0**
or £29 7 5 down and 12 instalments of £7 6 11
ZENITH - BRADSHAW, 3½ h.p., Model B, 3 speeds, all-chain .. **£119 0 0**
or £30 18 2 down and 12 instalments of £7 14 9

BAYLISS-THOMAS 10 h.p. Light Car ..... **£315 0 0**
or £81 18 0 down and 12 instalments of ..... £20 9 6
ROVER 8 h.p. Light Car ..... **£220 0 0**
or £57 4 0 down and 12 instalments of ..... £14 6 0

## EXCHANGES ARRANGED.

***A List of first-class second-hand motor cycles will be sent upon request, any machine can be purchased under our credit system at a charge of 4% only.***

# THE EASTERN GARAGE CO'Y.

**(Official Repairers to R.A.C, A.C.U., A.A. and M.U.)**

## 418, ROMFORD ROAD, FOREST GATE, E.7

**Telephone : 490 East Ham.** **Telegrams : "Egaraco, London."**

B20 *In answering this advertisement it is desirable to mention "The Motor Cycle."*

## MOTOR CYCLES FOR SALE.

### B.S.A.

1920 3½h.p. T.T. B.S.A., excellent condition, lamps, etc.; £45.—J. L. Smith, Christ's College, Cambridge. [3961

B.S.A. Combination, all-chain drive, Swan sports sidecar, fully equipped; bargain, £120.—63, South End, Croydon. [4361

B.S.A. 1914 3½h.p., all-chain, electric lighting, very fast; any trial; bargain, £45.—22, Graham Rd., West Green. [4071

B.S.A. 1919 4¼h.p., just overhauled, running well, accessories; £65, or offers.—Cole, 76, Croydon Rd., Beckenham. [3811

1922 B.S.A. Light 6h.p. Combination in stock; exchanges. — Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [X4825

B.S.A., K.2, 1921, fully equipped and sidecar as new, mileage negligible; £105.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [4278

B.S.A. 6-7h.p. Twin Combination, special sidecar, interchangeable wheels, Lucas lighting, Easting wind screen.—143, Peckham Rye, S.E. [4038

F.O.C.H. for B.S.A.'s; cash, exchange, or deferred payments. Sound second-hand machines in stock. —5, Heath St., Hampstead. (Near tube.) [3370

B.S.A. Combination, 1917, Easting, lamps, horn, spares, only used week-ends, exceptionally fine condition; £75.—17, Chaldon Rd., Caterham. [4350

B.S.A., 1922, Model H2, just delivered, chain drive, etc.; £110.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0065

1921 B.S.A., Model K, equipped, in excellent condition; 75 gns.; deferred payment or exchanges. —Edwards, 50, Harrington Rd., South Kensington. [4464

1920 Model K B.S.A., luggage grid, Easting, Tan-Sad lamps, for Matchless 2-seater M.A.G., cash adjustment.—Saunder, Ivy Cottage, Bierton Hill, Aylesbury. [3823

B.S.A., 1922 models, for immediate delivery; cash, exchange, deferred payments.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3623

1921 B.S.A. 6-7h.p., with plus one single-double seater body, hood, screen, all lamps, speedometer, mileage 1,700; £160.—Coppen, Allan and Co., 89, Gt. Portland St., W.1. [4027

1920 4¼h.p. B.S.A. Combination, 3 speeds, electric horn, etc., good tyres, and only done small mileage; price £65, or near offer.—Dunwell's Garage, Wigan. Tel.: 328. [0765

B.S.A.—Being official agents we have them always in stock, and immediate delivery can always be given.—Jones' Garage, Muswell Hill, and Woodside Parade, N. Finchley. [0379

1921 B.S.A. H2 Combination, Magdyno electric horn, Cowey, discs, Royal Easting, insurance July, absolutely as new; nearest offer to £150.—88, Durham Rd., East Finchley. [4183

B.S.A. 1920 Henderson Elite Combination, speedometer, lamps, horn, discs, exceptionally smart, £92; Canoelet combination, electric lighting, £82.—Clark, 7, Exhibition Rd., S.W.7. [2193

1915 4¼h.p. B.S.A. Combination, completely renovated and overhauled as new, lamps, etc., guaranteed perfect; £58/10.—Goad, 122, Maida Vale (private house Garage). 'Phone: Hampstead 1353. [4265

83 GNS., exchange.—1920 B.S.A. 4¼h.p., 3 speeds, clutch, kick start, luxurious 2-seater sidecar, hood, screen, new condition, any examination, trial.—Seabridge, Hansler Rd., East Dulwich. Sydenham 2452. [4433

4¼h.p. B.S.A. 1917 Combination, 3-speed, K.S., clutch, coachbuilt sidecar, recently overhanled; £40 cash secures.—S. and B. Motors, 16, King's College Rd., Hampstead (5 mins. Swiss Cottage, M.E.T.). [4478

B.S.A. 1921 6-7h.p. Combination, Lucas dynamo lighting, spare wheel, speedometer, fully equipped, small mileage, £155; also several 4¼h.p. combinations; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3642

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—B.S.A., 1922 models, K.2, chain and belt transmission, £107; with No. 3 sidecar, £139. Model H2, all-chain drive, £110; fitted with B.S.A. sidecar, £142. B.S.A. 6h.p. twin motor cycle £132, fitted with B.S.A. sidecar £164; B.S.A. 8h.p. twin combination, £185. Easy terms and exchange. Box carrier combinations from £139.—'Phone: Holborn 5777. [4416

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3609

B.S.A. Specialists.—All spares by return.—County Cycle and Motor Co., Broad St., Birmingham. [3322

B.S.A. Spares can be had by return, post free, from Jones' Garage, Broadway, Muswell Hill, N.10. [0743

HERBERT ROBINSON, Ltd., Green St., Cambridge.—B.S.A. spares by return; no waiting. Trade supplied. [3674

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all B.S.A. spare parts always in stock. Write for free spare part list. [0750


# THE "OPPORTUNIST"

is the person who takes advantage of the good things that present themselves, and, by alertness, turns his shrewd judgment to profitable account. He takes advantage of—

**Our Bargains,**
**Our Perfected Payment Policy,**
**Our Service System.**

***A few of this Week's Bargains:***

**TRIUMPH,** 1910, 3½ h.p., T.T., latest dropped frame, Philipson pulley, fully equipped, speedometer .. .. **£30**

**TRIUMPH** 1913 3½ h.p. coachbuilt Combination, 3-speed, clutch, k.-s., fully equipped, new tyres. Excellent condition .. **£53**

**SCOTT,** 1914, 3¾ h.p., 2-speeds, k.-s., Lucas accessories, speedometer, Binks carburetter .. **£45**

**CLEVELAND,** 1920, 3 h.p., 2-speeds, clutch and k.-s., fully equipped. Indistinguishable from new .. .. .. .. **£48**

**ALLDAYS-ALLON** 1921 Combination, 3-speeds, clutch, k.-s., mudshields, speedometer, fully equipped. As new .. **£70**

**P. & M.,** 1920, 3½ h.p., 2-speeds, clutch, R.S. ratchet brake, fully equipped, speedometer. New condition .. .. **£75**

**NEW HUDSON,** 1921, 2¾ h.p., 2-speeds, fully equipped. Absolutely as new .. .. .. **£47 : 10**

**DOUGLAS** 1914 2¾ h.p. Combination, 2-speeds, fitted with Grosvenor Sporting Sidecar, fully equipped. Good condition .. .. **£47 : 10**

**JAMES** 1917-18 3½ h.p. twin Sports Model, 3-speed, clutch, k.-s., fully equipped. Very fast, and as new. Insured .. .. **£70**

**ENFIELD** 1912 6 h.p. coachbuilt Combination, fully equipped. Good condition .. **£55**

**TRIUMPH,** 4 h.p., renovated model, 3-speed, k.-s., clutch, fully equipped. Excellent condition .. .. .. **£75**

***IMMEDIATE DELIVERY of 1922 Models by all the :: Leading Manufacturers. ::***

# PARKER'S

**DEPOTS:**

**MANCHESTER:** 245, Deansgate. Telephone—Cen. 864.

**BOLTON:** Bradshawgate. Telephone—1348.


## MOTOR CYCLES FOR SALE.

### Calthorpe.

CALTHORPE, latest 1922, 2½h.p. 2-stroke; only £36; excellent value; stock.—Moss, Wem. [X4857

CALTHORPE-J.A.P., Enfield gear, complete with lamps, etc., perfect order; £22/10.—S. E. Porter, Whitchurch, Salop. [3866

CALTHORPE 1921 Combination, actually in stock for immediate delivery; cash or deferred terms; place your orders with the Calthorpe specialists.—Burlington Motors, Ltd., Clapham Common, S.W.4. 'Phone: Brixton 2417. [0509

### Campion.

£20.—Campion-Jap 2¾h.p., 2 speeds, accessories, tax paid 1922, good right through.—8, High St., Wandsworth. [4221

£22/10.—Campion-Jap 2¾h.p., 2 speeds, accessories, beauty, tax paid 1922.—8, High St., Wandsworth. [4220

### Chater-Lea.

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Chater-Lea, agents all models, supplied on easy terms or exchange. [4403

### Clyno.

CLYNO Combination (late), little used; accept £50.—59, High St., Clapham. [4010

CLYNO 1920 2-speed 2-stroke, clutch, perfect condition; bargain, £34.—Gray's Garage, Watford. [4198

CLYNO Combination, 6h.p., 3-speed, lamps, horn, toolbox, carrier, like new; exceptional bargain, £58; trial.—Locke, Draper, Penge. [3972

CLYNO Combination, 2-speed, kick start, splendid condition; £58; take lower power part.—57, Kenbury St., Camberwell, London. [4185

£55.—Clyno 5-6h.p., 3 speeds, kick starter, spare wheel, accessories, speedometer, tax paid 1922; great bargain.—8, High St., Wandsworth. [4217

1915 Clyno 5-6h.p. Combination, smart bulbous sidecar, 3 speeds, just overhauled and renovated as new; £48/10.—Goad, 122, Maida Vale (private house garage). 'Phone: Hampstead 1353. [4267

MISS DOOLEY.—5-6h.p. 3-speed K.S. 1915-16-17 Clynos, all renovated and thoroughly overhauled engines and gear boxes; seen any time by appointment; prices from £55 to £65 each.—Please apply to Miss E. Dooley, 33, Killyon Rd., Clapham, S.W.8. [3395

*Spare Parts:*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3610

CLYNO Spares, supplied from stock; immediate delivery.—De Cort and Flynn, 39, Essex Rd., London, N.1. [4366

### Connaught.

SHREWSBURY Agent for Connaught; 1922 models from stock.—J. C. Pickering. [X4867

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Connaughts on easy terms and exchange. [4404

£22/10.—2¾h.p. Connaught, 1916, sports lightweight, lamps, Klaxon, long exhaust, excellent condition; offers.—Barnes, 83c, Trinity Rd., Tooting, S.W.17. [4454

### Corah.

3½h.p. Corah-Jap, splendid order, lamps, licensed, guarantee; £28; exchange Triumph.—17, Ashover Rd., Leicester. [3923

### Coulson.

COULSON B. Combination, 1920, 4h.p., 3-speed Sturmey, perfect, trial; nearest £60; sacrifice —32, The Borough, Farnham. [3341

COULSON Spares and Repairs Co., 15, Woodstock St., Bond St., have practically all spare parts for Coulson machines. Write for price list. [4490

1920 Coulson B, 2¾h.p. Blackburne engine, 2-speed, fully equipped, speedometer; £40.—Hillier (side bell), 9, Wallingford Av., North Kensington. [4244

COULSON 2¾h.p., J.A.P., countershaft, brand new, £65; 2¾h.p. Blackburne, brand new, £70.—Goad, 122, Maida Vale (private house garage). 'Phone: Hampstead 1353. [4270

### Coventry Eagle.

1919 Coventry-Eagle-Jap 2¾h.p., 2-speed, lamps, speedometer, horn, pillion seat, spare tube, excellent condition; £60.—Mash, 46, Cicada Rd., Wandsworth. [3804

### Coventry Victor.

COVENTRY VICTOR.—The perfect flat twin engine. Before deciding on your new mount, get our list for 1922, showing Coventry Victor motor cycles fitted with this famous 5-7h.p. engine. Also our special offer of demonstration machine. The last word in motor cycle design and construction. — The Coventry Victor Motor Co., Ltd., Coventry. [0520

### Dalm.

DALM 2¾h.p. 2-stroke, mechanically perfect, enamel dull; £18.—12, Priory Rd., Hornsey. [4134

### De Luxe.

LATE De Luxe 2-stroke, accessories, splendid condition; £26/10.—11, Station Rd., Manor Park. [4178

## MOTOR CYCLES FOR SALE.

### Diamond.

SHREWSBURY Agent for Diamond; 1922 model's in stock.—J. C. Pickering. [X4868

DIAMOND-J.A.P. 2¾h.p., 1921, little used, 3 speeds, clutch, kick starter; a beauty; £45.—Bunting's Exchange, Wealdstone. [4373

### Douglas.

HERBERT ROBINSON, Ltd., Green St., Cambridge.

DOUGLAS 1922 3½h.p. Sports Model, Olympia Show machine, special improvements, and latest finish, large tool box, Amac carburetter, and all accessories; £130; in stock.—Herbert Robinson, Ltd., Green St., Cambridge.

DOUGLAS 1922 2¾h.p., 2-speed model, £75; 3-speed, clutch, and kick starter, £90; best quality lamps, horn, licence holder; in stock; exchanges and payment terms by arrangement.—Herbert Robinson, Ltd., Green St., Cambridge.

DOUGLAS 1922 4h.p. Combination, lamps, horn, licence holder, wonderful value; £135; in stock; exchanges and payment terms arranged. — Herbert Robinson, Ltd., Green St., Cambridge. [4504

DOUGLAS at Brixton.—All models for early delivery.—Below.

1917 2¾h.p. Douglas, just renovated as new, discs, etc., £44; many others from £25.—Arthur T. Daw, 114, Brixton Hill. [4436

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—2¾h.p. 1910 Douglas; £30. [4422

DOUGLAS Combination, 1918, smart, lamps, apron, etc.; £55.—59, High St., Clapham. [4012

DOUGLAS, 1920, 3-speed, all on, ride away; £55, or near offer.—45, Tranquil Vale, S.E.3. [4157

1920 4h.p. Douglas Combination, lavishly equipped; £75.—24, Balliol Rd., North Kensington. [4250

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—2¾h.p. 1921 Douglas 3 speeds, clutch; £75. [4424

DOUGLAS 2¾h.p., fully equipped, a bargain; £50.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [4281

OFFICER under orders for India has 1918 Douglas combination for sale.—16, Lebanon Park, Twickenham. [4081

2¾h.p. Douglas, single speed, 1913, splendid condition, tax paid; £26.—Naish, Church Rd., Wheatley, Oxon. [3951

DOUGLAS 2¾h.p., 1920, 3-speed, fully equipped; £55.—Dentist, 216, Portobello Rd., North Kensington. [4193

DOUGLAS 1920 4h.p. Combination, new condition, equipped; any trial; £92.—Clark, 7, Exhibition Rd., S.W.7. [2194

1919 2¾h.p. Douglas, lamps, horn, and tools, splendid running order; £50.—Avery, Deverill, Warminster. [4202

DOUGLAS Combination, 1919, 4h.p., 3-speed, good condition; £80.—Clayson, 16, Wilton Grove, Merton Park. [3855

2¾h.p. Douglas, ridden 1 month only, new, perfect, all accessories; price £68.—Empson, Farmer, Gransden, Sandy. [4113

DOUGLAS 1920 4h.p. Combination, pretty blue sidecar, beautiful lot; £90; take half down.—Bunting's, Wealdstone. [4372

LATE 1920 Douglas Combination, beautifully equipped; £75.—Dawe, 216, Portobello Rd., North Kensington. [4194

LATE 1921 4h.p. Douglas Combination, run 500 miles, condition as new; bargain, 95 gns.—Victoria Garage, Surbiton. [3938

1915 Douglas, excellent condition; £32, or exchange with cash for Triumph or Sunbeam solo. —C. F. Wood, Steyning. [4236

4h.p. Douglas Combination, 3-speed, kick start; ridiculous price, £48; seen any time.—Snow, Laurel St., Dalston E.8. [4484

1919 4h.p. Douglas Combination, equipped, exceptionally good condition; bargain, 59 gns.—4, Elm Gardens, Hammersmith. [4074

£38.—2¾h.p. Douglas, uncrated 1919, 2-speed, electric lighting, Klaxon, splendid condition.—37, Canterbury Rd., Dalston, N.1. [4475

1919 2¾h.p. Douglas, fully equipped, unscratched, new tyres; £42.—Hillier, (side bell) 9, Wallingford Av., North Kensington. [4246

1915-16 2¾h.p. Douglas, 2-speed, overhauled recently, new tyres, good running order, equipped; £34, or near.—17, Redfern Rd., N.W.10. [3891

1921 2¾h.p. Douglas, 3 speeds, lighting, horn, undershield, footboards, etc., splendid condition; £60.—42, Twisden Rd., Highgate, N.W.5. [4310

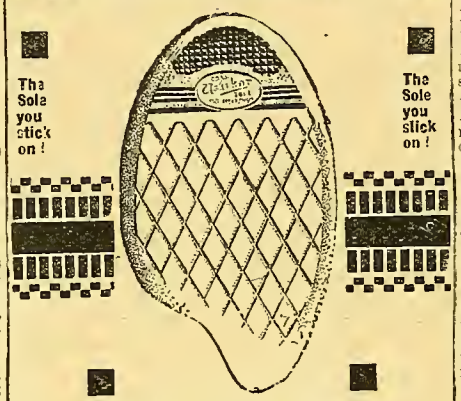
25 GNS.—Douglas 1914 2¾h.p., new tyre and gear box parts, equipped.—30, Sterndale Rd., Shepherd's Bush Rd., Hammersmith. [4258

DOUGLAS, 2¾h.p., 3-speed, 1915, excellent condition, all accessories; Putney district; £33.—Box 8,021, c/o *The Motor Cycle*. [3836


START 1922 WITH A PAIR OF DAVIS' Ustikon PATENT SOLES & HEELS

19 MINUTES FOR FITTING 19

22 WEEKS WEAR AT LEAST GUARANTEED 22




USTIKON DIAMOND PATTERN SOLE.

These soles can be fitted quickly by anyone, and more easily than any other rubber sole on the market. Made from highest grade jet black rubber they are absolutely waterproof and invisible in wear.

SATISFACTION GUARANTEED TO EVERY PURCHASER OR MONEY REFUNDED.

GENTS', ALL SIZES - 3/9 PER PAIR
LADIES', ALL SIZES - 2/9 PAIR

Complete with Sol-fix and full directions

USTIKON HEELS

PER PAIR
GENTS'..1/9
LADIES' 1/-
ALL SIZES.

*Ask your local agent for them, if he cannot supply we will deliver post free on receipt of remittance and size required.*

ELITE RUBBER CO., LTD.,
98 VICTORIA STREET,
LONDON——————S.W.1

Agents Wanted


## MOTOR CYCLES FOR SALE.

### Douglas.

DOUGLAS 1921 2¾h.p., 2-speed, fully equipped, practically unused, excellent condition throughout; £60.—377, Barking Rd., East Ham. [4284

2¾h.p. Douglas, late 1915, licensed, fully equipped, new valves and guides throughout, fast, reliable; £37; after 5.—32, Redgrave Rd., Putney. [4110

DOUGLAS 1921 2¾h.p., 2-speed, "all on" model, shop-soiled; £72/10.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0066

1921 2¾h.p. Douglas, 3-speed, kick start and clutch, lamps, horn, licensed; bargain, £60; exchanges. —Bambers, Ltd., 2, Eastbank St., Southport. Tel.: 607. [X4803

DOUGLAS, 1916, 2-speed and neutral, just renovated at cost of £10, lamps, and horn, excellent condition, and reliable; £40, or near.—R., Min-y-Mor, Kingsdown, Deal. [4204

ELI CLARK can give you good service both in new machines and spares; try me. I may be useful to you. The pioneer agent for Douglas motors.—196, Cheltenham Rd., Bristol. [0016

DOUGLAS 1917 2¾h.p., 3 speeds, clutch, kick starter, fully equipped, excellent condition; 48 gns., or exchange Douglas 4h.p. solo with cash adjustment.—Hunt, 29, Regent Rd., Lowestoft. [3970

1920 2¾h.p. Douglas, 3-speed, fitted with lamps, mirror, horn, spare belt, licensed, mileage about 1,500, as new; £55; exchanges.—Bambers, Ltd., 2, Eastbank St., Southport. 'Phone: 607. [X4802

DOUGLAS 1920 and 1919 Solos and Combinations at low prices; also several earlier models; list on request; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3641

1920 2¾h.p. Douglas, 3-speed, new C.A.V. mag., Klaxon, Cowey speedometer, Binks, run 5,000 miles, just decarbonised, excellent condition; bought combination; £60, offers.—Clarke, 80, North St., Ripon. [3666

3½h.p. Sports Douglas, privately owned machine, very carefully ridden, wonderfully fast, done 72 m.p.h. in competition, appearance as new; any trial by appointment; consider exchange; little used; £115.—O. Clark, 75, Panton St., Cambridge. [4503

1920 Douglas 2¾h.p., 3-speed, clutch, kick start, P. and H. lighting set, horn, Cowey speedometer, Tan-Sad, mirror, etc., as new throughout, mileage 1,600; exceptionally cheap. £65.—Motorist, 769, Romford Rd., Manor Park, London, E [4299

DOUGLAS 1920 4h.p. Combination, perfect condition, 5 tyres (1 unused), lamps, trip speedometer, horn, very large supply spares and tools, licensed 1922, carefully ridden since new, airman's leather coat; seen Colchester; trial by arrangement; 99 gns.—Box 8,053, c/o *The Motor Cycle*. [3901

1921 4h.p. Douglas Combination, just been overhauled, and in splendid condition, complete with Maglita electric lighting set, electric horn, mechanical horn, speedometer, watch and mirror, full range of running spares, including spare belt, toolkit, etc., oversize tyres in good condition.—Offers to Hulbert, 49, Lyndhurst Rd., Bowes Park, N.22. [4355

THE Effra Motor Works have for disposal a limited number of semi-renovated 2¾h.p. Douglases, ready for the road, from £27/10; or completely renovated "all on" models at £47/10, finished as new; easy payments if desired, £9/9 deposit and 12 payments of £3/3; 75% new parts.—59-61, High St., Clapham. 'Phone: 1115 Brixton. 'Grams: Efframota, Clapcom. [4275

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 New Douglas 2-speed, £75; 2¾h.p. 3-speed model, £90; 4h.p. solo Douglas, £110; 4h.p. sidecar combination, £135; 3½h.p. sports model, £130; 6h.p. light sidecar combination, £165; accessories included; easy terms of payment arranged, and your old machine taken in part payment 'Phone: Holborn 5777. Booklet on application. [4405

*Spare Parts:*

DOUGLAS Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3611

DOUGLAS Spares.—We hold a complete stock for all models, post free.—Jones' Garage, Broadway, Muswell Hill, N.10. [0744

HERBERT ROBINSON, Ltd., Green St., Cambridge, the Douglas specialists. Complete illustrated lists post free. [3675

### Dunelt.

DUNELT Combination, brand new, just delivered, Magdyno lighting, 4 detachable wheels shod 28×3 tyres, fully equipped, various spares; £140.—Porritt, Arden Croft, Ilkley. [4215

DUNELT 4½h.p., with coachbuilt sidecar, spare wheel, 2 spare tyres, spare belt and chain, M-L Maglita lighting and ignition, Brooks B600 saddle, in good condition; £90.—Teage, Whitehouse, Kenilworth. [X2270

### Duzmo.

DUZMO 3½h.p., 3-speed, chain drive, lamps, special demonstration machine, little used, excellent condition; £85.—243, Hertford Rd., Enfield Highway, Middlesex. [3845

### Enfield.

ENFIELD Combination, 6h.p., in good condition; price £45.—63, South End, Croydon. [4360

## MOTOR CYCLES FOR SALE.

### P. and M.

P. and M. Combination, 1918, all as new, complete, bargain, £65, or near offer; also 1918 solo, renovated, £40; also numerous new sidecar bodies.—George Turtenshaw and Sons, West St., Reigate. [3915

P. and M Combination, Millford sidecar, apron, Cameo screen, Cowey speedometer, 3 Lucas lamps, luggage grid, tyres as new, purchased from Phelon and Moore 12 months ago, and in beautiful condition; £57. Hall, 91, St. Peter's St., St. Albans. [3945

P. and M. Motor Cycles (ex R.A.F.), rebuilt and renovated as new, fitted with many new parts, including mag., B. and B. carburetter, chains, tyres, etc., £45; combination £60; equipped £5 extra. Sidecars reupholstered, painted, and new tyre.—S. E. Porter, Whitchurch, Salop. 'Phone: 74. [3059

*Spare Parts:*

P. and M. Spares Stockist.—Every part in stock, cheap.—Inman, Durham Rd., Seaforth, Liverpool. [3596

P. and M.—All spares in stock; stamp requirements; P. and M. spares specialist.—H. Beardwood, 147, Islington St., Liverpool. [9986

### Precision.

PRECISION 4h.p., 3-speed, K.S., equipped, perfect; £26.—17, Heaton Rd., Mitcham. [4138

### Premier.

PREMIER 3½h.p., 3-speed, in good running order; 28 gns.—Longman Bros., Bond St., Ealing. [4295

£15/10.—Premier 3½h.p., White and Poppe engine, accessories, tax paid 1922, new tyres, good order. 8, High St., Wandsworth. [4219

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge, can supply most Premier parts from stock. [3680

PREMIER Spares and Repairs.—We are the most competent advertisers of these, as we served in the Premier works Any part quoted per return.—Forfield Motors, Forfield Place, Leamington Spa. [X4880

### Quadrant

QUADRANT 4h.p., 3-speed, and sidecar; £30, or exchange.—Johnson, 172, Avenue Rd., Acton. [3941

QUADRANT £100 4½h.p. Combination, delivery from stock.—Frank Whitworth, Ltd., Distributers, 39, New St., Birmingham. [0767

QUADRANT New 1922 Models in stock; immediate delivery.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0069

CLIFFORD WILSON Mfg. Co., sole distributers for Quadrant motor cycles. All models in stock. Exchange or deferred payments.—177, Westminster Bridge Rd., S.E.1 Tel.: Hop. 210. [1636

VAUCHOPE'S, 9, Shoe Lane, London, E.C.—1922 Quadrant motor cycles, all chain, solo, £35; sidecar combination, £105; easy payments and exchange; list on applicatica.—'Phone: Holborn 5777. [4410

### Radco.

3½h.p. Radco, 1922, single speed, from stock; 34 gns.—Jones Garage, Muswell Hill, N.10. [4167

### Raleigh.

PREMIER Motor Co. for 1922 Raleighs.

IMMEDIATE Delivery of 5-6h.p., spring frame, detachable wheels, £130; standard sidecar, £35; De Luxe sidecar, £42; early delivery of the new Raleigh lightweight, £68; easy payments 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0626

SHREWSBURY Agent, Raleigh; early delivery all models.—J. C. Pickering. [X4871

1922 Raleigh, all models, at list prices; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [1679

RALEIGH 5-6h.p., with Grindlay's Model de Luxe sidecar, complete with lamps and horn, only run 100 miles; price £143.—Lloyd, Cilhaul, Newtown, Montgomeryshire. [3922

RALEIGH 1921 Combination, with Lucas dynamo lighting, speedometer, insurance, horn, mileage under 1,500; exchanges; £155.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith [3639

1921-22 Raleigh Combination throughout, 5-6h.p., 3-speed, clutch, kick start, most elegant machine, brand new and unregistered, must sell; £125.—Surgery, 769, Romford Rd., Manor Park, London, E. [4297

RALEIGH, 2¾h.p. and 5-6h.p. models, for earliest delivery; cash, exchange, deferred payments; place your order with the Raleigh specialists.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. Demonstration 2¾h.p. model in stock. [3622

### Reading-Standard.

READING-STANDARD, 1920, dynamo lighting, sound mechanically; £95.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [4457


GET IT AT

# TAYLORS

Sole London & District Distributing Agents for A.J.S., British Excelsior & Dunelt Motor Cycles.

## This customer's problem may be yours!

A Prospective customer in writing to us for advice on the purchase of a motor cycle, makes this statement:

*"I am afraid to advertise for fear of having some awful dud unloaded on me, as I am not an expert."*

This customer's problem may be yours, and if so, solve it in the same sensible way that he has done—write to us for advice concerning the best type of Motor Cycle, Combination, or Light Car to suit your particular needs.

Remember, a firm like Taylors, with a 12-year reputation for honest trading to maintain, can't afford to jeopardise it for some small immediate gain.

Our stock is one of the most comprehensive in the country, and includes all the new-comers that are good as well as the old favourites of established reputation.

Here are some examples.—

### 1922 MODELS.

| | |
|---|---|
| **A.J.S.,** 7 h.p. Combination | £175 0 |
| **A.J.S.,** 2¾ h.p. Combination | £110 0 |
| **A.J.S.,** 2¾ h.p. Sports or Touring | £88 0 |

*Sole Distributing Agents for London and District.*

| | |
|---|---|
| **EXCELSIOR,** 6 h.p. Combination | £133 0 |
| **EXCELSIOR,** 2¾ h.p., Blackburne | £75 0 |
| **EXCELSIOR,** 2½ h.p. Sports Model | £39 18 |

*Sole Distributing Agents for London and District.*

| | |
|---|---|
| **MATCHLESS,** 8 h.p. Sports Combination | £160 0 |
| **MATCHLESS,** 8 h.p. Standard Combination | £170 0 |
| **DUNELT,** 4½ h.p. Combination, 2-stroke, spare wheel and tyre | £113 8 |

*Distributors for London and District.*

| | |
|---|---|
| **QUADRANT,** 4½ h.p. Comb., all-chain drive | £105 0 |

## RIDE while you PAY

Our terms for "Purchase out of income" are only 4% on the purchase price, except where otherwise stipulated by the makers.

High-class second-hand machines in great variety are now available at bargain prices.

*Write for detailed list.*

**H. TAYLOR & CO., LTD.,**

Showrooms—
Motor Cycles and Cars.
**52-53, Sussex Place, South Kensington.**
Accessories, Spare Parts and Repairs.
**21a, Store Street, Tottenham Court Road, W.C.1**
Wholesale—
**38. ALFRED PLACE, W.C.1**
Garage: Tottenham Court Road, W.1
Telephones: Accessories and Repairs, Museum 1240. Motor Cycles and Cars, Kensington 7250.
Telegrams "Dynametro, Westcent, London."


## MOTOR CYCLES FOR SALE.

### Reading-Standard.

1921 Reading-Standard 8-10h.p., with M.P. sidecar, dynamo lighting, screen, in splendid running order; £98.—Coppen, Allan and Co., 89, Gt. Portland St., W.1. [4025

### Ready.

1922 Ready, 2¾h.p. J.A.P., 2-speed, clutch, kick starter, Olympia Show model; £61.—Coppen, Allan and Co., 89, Gt. Portland St., W.1. [4026

### Rex

BARGAIN.—3½h.p. T.T. Rex, ride away; £18, or offer.—42, Norkiton Av., Kingston. [3921

REX 3½h.p., 2-speed clutch, mag., B. and B., lamps, drive away; 22 gns.—53, Swaffield Rd., Wandsworth. [4321

### Rex-Jap.

1913 Rex-Jap Combination, Roc clutch, electric horn, etc., good tyres and in splendid running order; price £35, or near offer.—Dunwell's Garage, Wigan. Tel.: 328. [0764

### Rover.

5-6h.p. Rover, brand new solo; £110.—Jones Garage, Muswell Hill, N.10. [4168

1921 3½h.p. Rover, countershaft, only used few miles, all on; bargain, £80.—Boyd, Tullochgribbon, Carrbridge. [3864

3½h.p. Rover Combination, absolutely as new, not a scratch on it, not done 500 miles; £100.—Jones Garage, Muswell Hill, N.10. [4169

1919 3½h.p. T.T. Rover, Philipson racing carburetter, as new, a beauty; sacrifice, 49 gns.—Ramsdens, Maybell Av., Blackpool. [4239

1913 Rover 3½h.p., fast, reliable, economical, adjustable pulley, clutch, perfect condition, new back tyre; £25.—Roseworthy, Harrow Rd., Wembley. [3992

ROVER 1921 5-6h.p. Combination, absolutely as new; bargain for quick disposal; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [4444

ROVER 1920 3½h.p. Combination, accessories, splendid condition and appearance; £85; exchanges.—Newnham Motor Co., 223, Hammeresmith Rd., W.6. 'Phone: Hammersmith 80. [3643

ROVER 1920 3½h.p., K.S., all-chain model, 2 lamps, Cowey horn, speedometer, mirror, tools, first-class condition, owner buying car, examination by appointment; £70, or near offer.—Lloyd, 12a, St. Leonard's Rd., Bexhill-on-Sea. [3222

### Royal Ruby.

ROYAL RUBY, 2¾h.p. Villiers, dropped frame, good tyres, runs splendidly; 18 gns.—53, Swaffield Rd., Wandsworth. [4320

RUBY-VILLIERS, 2-speed, thoroughly renovated, oversize Dunlops, footboards, Amac, W.S.R., many extras; £33.—McKie, Lodge, 143, Preston Rd., Brighton. (P) [4094

### Rudge.

RUDGE, 3½h.p., I.O.M., 1920, fully equipped; £56.—40, Fauconberg Rd., Chiswick. [3825

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—3½h.p. I.O.M. Rudge, 1920; £60. [4418

1921 Rudge Multi Combination, 6h.p.; best offer over £120.—Shuttleworth's, Motor, Keighley. [3288

1920 Rudge Multi, T.T., good condition; best offer over £50.—Seen, E. Foster, Cheetham Hill, Manchester. [3952

RUDGE; £25; 3½h.p. clutch model; any trial or examination.—Speechley, 86, Churchfield Rd., Acton, W.3. [4003

1914 Rudge, clutch, excellent condition; bargain, £25.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [4268

3½h.p. Rudge Multi, fully equipped, taxed, variable jet, tyres, belt new; nearest £40.—Riley, Elkstone, Buxton, Staffs. [4304

RUDGE Multi, 1921 I.O.M. model, new; 70 gns.; cash, exchange, or deferred payments.—Longman Bros., Bond St., Ealing. Tel.: 689. [4289

1919 (late) Rudge Multi and sidecar, good condition, electric light, tools, spares, tax paid; £70, or best offer.—1, Footham Terrace, York. [X4836

1920 Rudge 3½h.p. Sports, straight through nickel exhaust, exceptionally fast, all on, spares, guaranteed; £65, or nearest.—Lake, Soham, Cambs. [4318

3½h.p. Rudge Multi, delivered July, 1921, and light sidecar, Cameo wind screen, lamps, generator, Klaxon; £85.—Hy. Tucker, Pangbourne, Berks. [4093

RUDGE Multi 1919 3½h.p. Touring Model, pedal start, lamps, horn, etc.; £40, bargain.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. [0072

1920 3½h.p. Rudge and 35 gn. sidecar, lamps, horn, screen, spare tyre and belt, condition perfect; £76; deferred payments and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [2373

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—1922 3½h.p. Rudge, sloping tank, I.O.M., £85; any model supplied. Write for list; easy terms arranged; second-hand machines taken in exchange. [4411

## MOTOR CYCLES FOR SALE.

### Rudge.

RUDGE Multi, Isle of Man models.—We have several of these 1920 and 1921 machines, shop-soiled or slightly used, at low prices; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3640

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Rudge parts in stock. Illustrated list free. [3679

### Scott.

1922 Scott Models in stock, complete; £110; delivered free.—Millard's, Scott Agents, Chesterfield. [4276

SCOTT, 1920, fully equipped, oversize tyres, mileage 2,000; £75.—Ratcliffe Bros., 200, Gt. Portland St., W. [4495

LATE 1920 Scott Combination, quick sale, perfect condition, as new, everything on, little used; £100, or offer.—Brown, Grocer, March. [3256

1915 Scott Combination, just overhauled, plated and enamelled at £25, new Easting, lamps, etc.; £70.—97, Woodchurch Rd., Birkenhead. [3853

33h.p. Scott and Turner C.B. sidecar, in splendid running order, lamps new, tyres in new condition; bargain, £45.—113, Blenheim Gardens, Wallington. [3924

SCOTT 1915, not used during war, just overhauled, in splendid condition, with horn, speedometer, lamps; £45.—Connolly, 101, Chalton St., Euston Rd., N.W. [3850

SCOTT Combination, special sports, all accessories, insurance, aluminium discs, Binks carburetter, tyres as new, perfect condition throughout, wind screen, lot cost £250, cash wanted; sacrifice £100 for quick sale; seen by appointment, or photo sent.—11L, Kramer Mews, West Brompton. [3899

*Spare Parts:*

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list. [0751

SCOTT Riders.—We keep huge stock new and S.H. Scott parts. Any part on approval against cash.—Ward Motors, Ltd., The Scott Specialists, 32, Hustler St., Bradford. [0739

### Silver Prince.

SILVER PRINCE, new 1922 combination, Canoelet sidecar and screen, Stuumey box, Brampton forks, etc.; 85 gns.—Chinery, 1, Hammersmith Rd., Kensington. 'Phone: Western 4140. [4307

### Singer

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—2½h.p. Singer, 2-speed gear; £25. [4419

£17.—2¾h.p. Singer, enclosed Bosch, B. and B., footboards, splendid order.—King, Egrove Farm, Oxford. [X4851

SINGER Lightweight, splendid order; £22; take push cycle part.—57, Kenbury St., Camberwell, London. [4187

£22/10.—Singer 2½h.p. 2 speeds, countershaft, very cheap lot, tax paid 1922.—8, High St., Wandsworth. [4223

### Stanger.

THE Machine of the moment is the Stanger V twin, 5h.p. 2-stroke. This machine is really a first-class mount with wonderful power, and excellent smooth running, fitted with the neatest rear springing yet seen; price £112/10. Send for particulars.—Jones' Garage, Muswell Hill, London, N.10. [0731

### Sun.

32 GNS., exchange.—1919 Sun-V.T.S., 2-stroke, 2-speed, footboards.—Seabridge, Hansler Rd., East Dulwich. Sydenham 2452. [3668

1922 Sun-Jap 2¾h.p., 2-speed, kick start, h.b.c. clutch, a very nice little machine; £63; trade supplied.—North London agents, Jones Garage, Muswell Hill, N.10. [4171

1922 Sun-Vitesse 2½h.p. 2-stroke, from stock; £44/2 cash; deferred payments or exchanges; trade supplied.—North London Agents, Jones Garage, Muswell Hill, N.10. [4170

### Sunbeam.

CROSS, Effingham Square, is agent for Sunbeams in Rotherham. 4¼h.p. in stock. [X4834

SUNBEAM, latest 1922, 3½h.p. light sporting and 4¼h.p. models; stock.—Moss, Wem. [X4858

SUNBEAM 3½h.p., 1921, 2 months ridden; best offer secures.—Riverside, London Rd., Retford. [3807

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—3½h.p. 1917 Sunbeam; £80. [4427

SUNBEAM 1922 Models.—Immediate delivery from Cambridge Agents, Herbert Robinson, Ltd., Green St., Cambridge.

SUNBEAM 1919 3½h.p. Combination, legshields, Binks carburetter, Lucas horn, P. and H. lamps, Cameo screen, luggage grid, licensed, engine and gear box just overhauled; £117/10.—Herbert Robinson, Ltd., Green St., Cambridge. [4506

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—Sunbeam 1922 models. Any model supplied on easy terms. [4399


# IMMEDIATE DELIVERY OF 1922 MODELS

**Douglas** **Royal Enfield**
**Norton** **Matchless**
**Indian** **N.U.T.**
**B.S.A.** **P. & M.**
**Levis** **Zenith**
**Velocette** **O.K.**
**New Imperial** **Diamond**
**Sheffield Henderson**
and
**Morgan Runabouts, etc.**

MEET US AT THE

## SCOTTISH MOTOR SHOW

KELVIN HALL, GLASGOW, January 27th to February 4th. Our Representatives will be at the following Stands:

**ALEXANDER'S - Stand No. 178**
**DOUGLAS - - " " 179**
**ENFIELD - - " " 182**
**INDIAN - - - " " 180**
**NORTON- - - " " 181**
**MATCHLESS - " " 196**
**MORGAN RUNABOUT - " " 231**

*ALL THE LATEST MODELS BEING EXHIBITED.*

# ALEXANDER'S

**113-115, Lothian Rd., EDINBURGH.**
**272-274, Gt. Western Rd., GLASGOW**


## MOTOR CYCLES FOR SALE.

### Sunbeam.

SUNBEAM Touring, 3½h.p., fully equipped, first-class condition, perfect, guaranteed; £85.—Dosser, Slingsby, Malton. [4327

SUNBEAM 2¾h.p., complete with lamps, engine overhauled, 2 speeds, kick start; £35.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [4458

SUNBEAM 1918 3½h.p. Combination, Millford sidecar with Easting wind screen and carrier; £85.—Boulton, Shirley Holmes, Lymington. [4210

1921 3½h.p. Sunbeam Combination, fully equipped, small mileage, guaranteed as new; £125.—C.S., 14, Swaton Rd., Bow, E.3. Tel.: E. 3155. [4124

1920 (late) Sunbeam 3½h.p. Combination, all on, Cowey, Easting, spares, excellent condition, little used, wants seeing; tax paid and insurance; £125.—15, Jacksons Lane, Highgate, N.6. [3984

8h.p. Sunbeam Combination, late 1921, Lucas Magdyno, electric horn, Cowey speedometer and horn, spare wheel, sidecar fitted hood, wind screen, watch, ammeter, and electric lamp on dashboard, in new condition; £200.—Griffin, 154, Warwick St., S.W.1. [3948

1921 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual spares, cast aluminium plates, new in April last, and in exceptionally good condition, tyres unpunctured; nearest offer to £115.—Geoffrey Smith, *The Motor Cycle*, Coventry. [X4265

### T.D.C.

£16.—De Luxe T.D.C., 2-stroke; bargain, near offer. —181, Newton Rd., Burton-on-Trent. [4207

T.D.C. 2¾h.p. Lightweight, drop frame, Druid spring forks, pan saddle, good condition; £15, bargain. —Box 296, c/o *The Motor Cycle*. [X4762

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £105; Type SD, chain drive, £115; Type LW, lightweight £65; sidecars from £20 to £50; easy payments 4% extra. —Buy direct from the leading Triumph agents: The Premier Motor Co., Aston Rd., Birmingham. [0627

TRIUMPH at Brixton.—All models for early delivery.—Below.

1921 Triumph Gloria Outfit, absolutely indistinguishable from new; £115.—Arthur T. Daw, Triumph Agent, 114, Brixton Hill. [4439

1918 Countershaft Triumph, perfect; £48.—24, Balliol Rd., North Kensington. [4252

TRIUMPH, Type S.D., £115; easy payment or exchange.—Bunting's, Wealdstone. [4374

CROSS, Agent for the trusty Triumph for Rotherham district; new models from stock. [X4833

TRIUMPH, 1914, 2¼h.p., 2-speed, splendid condition; £38.—Tippen, Marden, Kent. [4083

TRIUMPH, 1919, 3 speeds, clutch, kick; gift, 75 gns.—53, Swaffield Rd., Wandsworth. [4322

TRIUMPH, latest 1922, types H and R, fast roadster; immediate delivery.—Moss, Wem. [X4859

TRIUMPH, 3-speed, fully equipped, 1914; £38.—Ratcliffe Bros., 200, Gt. Portland St., W. [4492

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—4h.p. countershaft Triumph, W.D. model; £55. [4417

TRIUMPHS.—A fine assortment of all models in stock at prices to suit all.—Ross, 86, High Rd., Lee. [4485

1920 Triumph 4h.p. Combination, as new; £80.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [4271

1921 Triumph Combination, accessories, guaranteed perfect; £110.—Hurst, 1, Endsleigh Gardens, Ilford. [3816

1918 Triumph 4h.p., 3-speed countershaft, perfect; bargain, £70.—Butcher, Mislingford, Wickham, Hants. [4325

£18.—3½h.p. Triumph, Bosch, B. and B., footboards, splendid running order.—King, Egrove Farm, Oxford. [X4852

TRIUMPH, modern frame, tank, etc., fitted 3½h.p. engine; £29/10.—Simpson, Orchard, Sunbury-on-Thames. [4121

F.O.C.H., the Triumph agents; cash, exchanges, or deferred payments.—5, Heath St., Hampstead. (Near tube.) [3369

TRIUMPH 4h.p. Combination, 1919, Easting screen, nice condition; £75.—Snow, Laurel St., Dalston, E.8. [4485

TRIUMPH 1921 3-speed Model, chain drive, mileage 800, perfect; £90.—Lawrence, 19, Ashleigh Rd., Leicester. [3954

£15/10.—Triumph, 1914, fixed engine, T.T. model, splendid order.—Speechley, 86, Churchfield Rd., Acton, W.3. [4004

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—1920-21 Triumph and sidecar; £95; cash or easy terms. [4412

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH 1922 Models.—Immediate delivery from Cambridge Agents, Herbert Robinson, Ltd., Green , Cambridge. [4507

1914¾ Triumph, 3-speed, clutch, beautiful condition; £40; exchange.—Fairhurst, 68b, Standishte, Wigan [4098

TRIUMPH 3½h.p., clutch, kick start, unused 5 years, new condition, fully equipped; £33.—121, Acton ne, Chiswick, W.4. [4342

TRIUMPH 3½h.p., very powerful, take 2 anywhere; £28; take lightweight part.—57, Kenbury St., mberwell, London. [4189

1919 Triumph Combination, 4h.p., engine, gear box, just overhauled; £85, or nearest offer.—nall Dean, Wendover. [3815

1919 Triumph, fully equipped, insured, beautiful condition and appearance; £67/10. — 4, Elm rdens, Hammersmith. [4073

1922 Triumph, all models, at list prices; deferred paymeot or exchanges.—Edwards, 50, Harrington Rd., South Kensiogton. [1678

25.—Triumph 3½h.p., clutch model, lamps, horn, etc., fine running order.—Smith's, 86, Chalk Farm L, opposite Chalk Farm Tube Station. [4430

TRIUMPH Combination, 1918, guaranteed perfect, speedometer, wind screen, 2 horns, lamps, new res; £95.—191, Amhurst Rd., Hackney. [3805

1922 4h.p. Model H Triumphs, with T.T. and touring bars, in stock; exchanges.—Walbro Motor cle Co., Saffron Walden. 'Phone: 45. [4826

TRIUMPHS.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. District agents. Immediate dery; cash, exchange, or deferred payments. [4286

1913 Triumph, 3-speed, clutch, recent overhaul, mechanically perfect, Bosch, Lucas set; £30.—anch, O'Kelly and Co., 27, Long Acre, W.C. [4063

RACING Countershaft Triumph, 3 speeds, aluminium piston, engine and gears perfect, fully equipped id spares; £55.—King, Egrove Farm, Oxford. [X4853

1919 Triumph-Gloria Combination, all accessories, perfect order; £65, including insurance; owner oing abroad.—Cleeve, High St., Old Southgate, N.14. [3814

BABY Triumph, 1920, splendid, Brooks cantilever, Binks, 120 m.p.g., accessories, fully insured, ensed; £49/10.—Miles, 136, Silvermere Rd., Catford. [4089

TRIUMPH 1920 2¼h.p. Junior, Lucas lamps, first-class condition; £42.—Newnham Motor Co., 223, ammersmith Rd., W.6. 'Phone: Hammersmith 80. [3637

SUSSEX. — 1920 Triumph-Montgomery, lavishly equipped, cost £190, equal new; any trial; exchange Morgan, or sell £110.—Hales, Rowlands Rd., Worthing. [3842

TRIUMPH, 1922 models, for immediate delivery; cash, exchange, deferred payments.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3626

1921 Triumph, Model H, semi T.T. bars, 2 sprockets, many spares, like new, all on, tax paid, new Dunlops; seen private; £80.—Attwood, 50a, Beulah Rd., Thornton Heath (32 'bus). [4228

TRIUMPHS.—We are the North London agents, and can deliver from stock for cash, deferred payments, or exchange.—Jones' Garage, Muswell Hill, and Woodside Parade, N. Finchley. [0382 [3070

TRIUMPH 4h.p. Solo, 3-speed Sturmey-Archer countershaft gear box, lamps, excellent order; £55.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3636

TRIUMPH, 4h.p., 1918, with Millford sidecar, speedometer, lamps, and horn, discs; £75; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3631

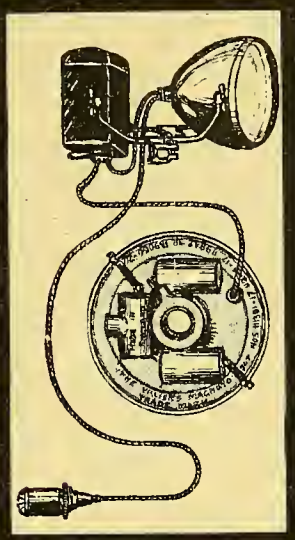
1919 GNS. — 1919 Triumph-Gloria Combination, dynamo lighting, electric horn, speedometer, wind screen, etc., beautiful turnout, in excellent condition.—4, Elm Gardens, Hammersmith. [4072

LATE 1920 Triumph Combination, 3-speed, K.S., clutch, sports sidecar, mechanical lubrication, Lucas lamps, new condition; £85.—S. and B. Motors, 6, King's College Rd., Hampstead (5 mins. Swiss Cottage, M.E.T.). [4479

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.— 1922 Triumphs, 4h.p., all chain models, 3 speeds, £115; 4h.p. chain and belt, £105; 2¼h.p. 2-stroke model, £65; 4h.p. combination, £145. Easy terms and exchange.—'Phone: Holborn 5777. [4400

1921 Triumph Combination, issued new October, 1921, 4h.p. (Model H.), Montgomery sidecar, equipped with 3 lamps and horn, mileage only 300, condition and appearance as new, end of term bargain, and quite unrepeatable at £107/10 cash.—The Layton Garages, 90, High St., Oxford. [3655

THREE Months' Guarantee with every machine purchased from us. We have several countershaft Triumphs, fitted with 75% brand new parts, including engines, gear boxes, etc., fully equipped, lamps, etc.; £77. Extendd payments. Come and inspect our stock. Also any brand new model supplied. Let us book your order.—The Triumph Specialists, The Hackford Eng. Co., 33, Hackford Rd., Brixton. [4034

£4:10:0
IS THE ONLY EXTRA (NOT FITTED) TO EQUIP YOUR NEW MACHINE WITH POWERFUL ELECTRIC LIGHTS IF ITS A
VILLIERS TWO-STROKE
WORKS:-
SUNBEAM STREET. WOLVERHAMPTON


## MOTOR CYCLES FOR SALE.

### Triumph.

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

HERBERT ROBINSON, Ltd., Green St., Cambridge, the Triumph specialists. Every part in stock. [3681

TRIUMPH Spare Parts for all models, also Sturmey-Archer gear parts from stock, post free. Gear overhauls by specialist.—Jones' Garage, Broadway, Muswell Hill, N.10. [0746

TRIUMPH Parts, 1904 to 1921.—Every part, any year, in stock, new or second-hand, guaranteed serviceable. Enclose stamp for reply. Why not second-hand goods in place of new while prices are so high? Half the price; satisfaction guaranteed.—Forfield Motors. 11, Forfield Place, Leamington Spa. [X4879

### Trump

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.— 1922 Trump-Japs, 2¾h.p. engine; £60; easy terms and exchange. [4401

### Velocette.

1922 Velocette.—Immediate delivery of any model from Premier Motor Co., Aston Rd., Birmingham. [X4842

VELOCETTE 2-stroke, believed 1916-17, in perfect mechanical condition, new tyres and lots spares; £25.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [4459

NEW Velocette, 1921 model, with internal expanding brakes to both wheels, and other latest improvements at enormous reductions, 2-speed £55, 3-speed £62, lady's open frame £55; carry makers' full guarantee; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [X4843

### Verus.

£29.—1921 Verus, 2-stroke, as new, fully equipped, perfect.—Ewers, Newton Rd., Burton-on-Trent. [4208

1921 Verus, 4h.p. Blackburne engine, 3-speed, clutch, K.S., perfect condition throughout; £78; deferred payment and exchanges.—Edwards, 50, Harrington Rd., South Kensington [1672

1920 Verus 2¼h.p., single speed, good as new, electric light ontfit, good accessories, suit overalls (5ft. 6in.), insurance; lot cost over £75; £45; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [3178

### Victoria

3¾h.p. Victoria-Precision Combination, 3-speed, clutch; trial; tax paid; £31.—Ward, Red Bank, Chorley. [X4845

### Williamson.

8h.p. Williamson Combination, fully equipped, spares, wind screen, speedometer, carrier seat, excellent outfit; 49 gns.—4, Elm Gardens, Hammersmith. [4075

### Win.

3½h.p. Win-Precision, excellent condition, thoroughly overhauled; £35.—Baxter, Newton, Folkingham, Lincs. [3830

### Wolf.

WOLF 2¾h.p., 2-speed and clutch; £26; very good order; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3630

### Wooler.

WOOLER 1921 2¾h.p., all-chain model, lamps, horn, £70, very nice machine, 3-speed gear box; also 1920 belt drive model, £55; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [4445

### Zenith.

ALLAN GRUZELIER, Specialist in Zenith motor cycles.

1922 Show Model Chain Drive Bradshaw; £119.

1922 8h.p. Sports Engined Countershaft Combination, every accessory; £160.

1922 5h.p. Sports, shop-soiled; £95.

1921 8h.p. Countershaft Model, new, soiled; £112.

1921 3½h.p. Bradshaw, soiled; £95.

1920. 8h.p. Clutch Model, soiled; £90.

I Can Give Immediate Delivery of any of the above and all 1922 models.

DEFERRED Payments Arranged Without Delay.

DEAL with the man who specialises, for satisfaction. —Allan Gruzelier, Ulster Chambers, 168, Regent St., W. Regent 205. [3989

SHREWSBURY Agent, Zenith; early delivery all models.—J. C. Pickering. [X4872

4h.p. Zenith-Jap, £50, or £30 and another machine; offers.—27, Lower Grove, Wandsworth. [4214

ZENITH 1919 6h.p. Sports, fully equipped; £78.— Ratcliffe Bros., 200, Gt. Portland St., W. [4493

## MOTOR CYCLES FOR SALE.

### Zenith.

**1921** (Oct.), 5h.p. Zenith, fully equipped, new condition; nearest £80.—Rolfe, Kirk Bramwith, Doncaster. [3829

ZENITH Combination, 6h.p., recently overhauled; any trial; speedometer, etc.; £50.—7, Staines Rd., Twickenham. [3974

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—New 1922 Zenith-Bradshaw; £113; easy terms and exchange. [4402

ZENITH.—Last week of sale at Barnes. Exchange Henderson, A.B.C., Ner-a-Car, A.V.—2, Madrid Rd., Barnes, S.W.13. [4513

£22/10.—Zenith 3½h.p., J.A.P. engine, Gradua gear, accessories, tax paid 1922; real snip.—8, High St., Wandsworth. [4218

ZENITH 1921, 90 bore, o.h.v., as new, easy starter and mechanically perfect: offers.—Petersen, Turner's Hill, Sussex. [3863

ZENITH Motor Cycles.—Special offer of new and competition machines.—Write Zenith Motors, Ltd., Hampton Court. [3821

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, for immediate delivery from stock of Zenith-Bradshaw; price £118. [0711

PHENOMENAL Bargain.—1920 8h.p. countershaft Zenith combination, new tyres, spares, owner driven; £95.—Collbran, 12, Sumner Place, S.W.7. [3963

**1920** 8h.p. Countershaft Zenith Combination, well fitted, property of motor journalist, and carefully used; £105.—17, Garden Av., Mitcham, S.W. [4103

ZENITH, 1919, 3½h.p., single-cyl., standard model, just overhauled, splendid condition, lamps, and horn; £58, or nearest.—Tippen, Marden, Kent. [4084

ZENITH 1920 8h.p. Sports, Cox-Atmos, Boniksen, large head lamp, excellent order; £80, or offers.—Kermode, 5, Blundell Av., Birkdale, Southport. [4129

F.O.C.H., the Zenith agents; cash, exchanges, or deferred payments; sound second-hand machines in stock.—5, Heath St., Hampstead. (Near tube.) [3368

**1921** Zenith 8h.p. Countershaft Combination, perfect condition, fully equipped, many spares; £105.—James, 91, Abingdon Rd., Kensington, W.8. After five. [4237

ZENITH-BRADSHAW Models, for immediate delivery; cash, exchange, deferred payments.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3627

**1921** Zenith Sports 5h.p., lamps, Klaxon, small mileage, in excellent condition throughout; £65; deferred payments or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [4461

**1922** Zeniths, all models.—5h.p. J.A.P., countershaft, £118; with sidecar, £147; immediate delivery; actual Show model in stock. Order early.—South Eastern Garage, Herne Hill, S.E.24. [3598

**1922** Zenith-Bradshaw in stock for immediate delivery; £118; cash, exchange, or extended payments.—Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0734

SPECIAL 8h.p. Sports Zenith, Dec., 1920, fitted with T.T. bars, racing pulley, F.E.W. valve attachments, adjustable jet, lamps, horn, knee-grips and spares, machine in perfect and unscratched condition; owner going abroad; £100.—Harris, 11, Brecknock Rd., N.19. [3359

**90** Bore o.h.v. 8-10h.p. Zenith, late 1921 model, cost £150, nickel plated tank, 2 nickel plated exhaust pipes to end of back mudguard, one on either side of back wheel, in perfect running order, will dust anything, smartest and sportiest bike on the road; open to reasonable offer.—Apply, Castle, 2e, Portman Mansions, Baker St. 'Phone: Langham 1843, or East 747. [4037

### Ladies' Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

### Miscellaneous.

**1921** Matchless, Magdyno, Easting, mileage 1,200, as new, offers; also 1911 2½h.p. Ariel, good order, £12.—Kay, Norbury, Sutton-on-Sea. [4036

COMBINATION, J.A.P. twin, with clutch, good order, £19; also Bradbury 3½h.p. solo, £11, good order.—H. R. Hall, Hutton Grove, North Finchley, London. [3817

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [9650

BRAND New 1922 B.S.A., Triumph, Levis, O.K. Junior, A.J.S., Matchless, Douglas, Enfield lightweight, Unibus, and 8h.p. Rover in stock; your used machine in part exchange; try us.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [X4821


# ASTRA

## DYNAMO LIGHTING SETS for Cars and Motor Cycles.

***SOLO MOTOR CYCLE SET WITH ALL FITTINGS FOR MOST TYPES OF MACHINES INCLUDING :—***

4 volt, 3-4 amp. direct current charging dynamo.

Automatic cut-out and junction box with clip for attachment to frame.

Accumulator in strong metal case with clips and switches.

5½″ best quality black and nickel head lamp with bulb and brackets.

Tail lamp with bulb.

Wiring.

Special dynamo fittings and drive

**£12 - 0 - 6 Complete**

NO EXTRAS.

Full particulars of sidecar sets, 6 volt sets and Light Car sets.

also

Lamps and Accessories from :

**The ASTRA DYNAMO Co.,**

**110, Victoria Street, S.W.1.**

Telephone : Victoria 7545.


## MOTOR CYCLES FOR SALE.

### Miscellaneous.

JONES Garage.—Late 1921 Alldays Allon, not done 500 miles, absolutely as new, unscratched, fitted with all accessories and speedometer; £55.

JONES Garage.—Late 1920 4h.p. Douglas combination, absolutely as new, seeing means buying; £105.

JONES Garage.—1920 2¾h.p. Douglas, 3-speed, kick start, h.b.c. clutch, absolutely perfect; £68.

JONES Garage.—1920 Henderson 10h.p. combination, not used since March, 1921, speedometer, all accessories, new tyres, extra large Canoelet sidecar, would make real good 2-seater, a real bargain, guaranteed; £135.

JONES Garage.—1920 7-9h.p. electric model Powerplus Indian combination, all accessories, including Easting wind screen, like new, guaranteed perfect; £120.

JONES Garage.—1920 4½h.p. Quadrant combination, unscratched, all lamps and Easting wind screen; £82/10.

JONES Garage.—1919 7-9h.p. Harley combination, electric model, all on, guaranteed perfect; £110.

JONES Garage.—Late 1919 3½h.p. P. and M. combination, as new and in showroom condition, not W.D., fully equipped; £80.

JONES Garage.—Late 1919 3½h.p. Sunbeam, as new, a real good first-class mount, fully equipped with Lucas accessories. This only wants seeing; £90.

JONES Garage.—1919 Spur-Villiers, 2-speed, not used since March, 1920, absolutely perfect and as new; £40.

JONES Garage.—1920 4h.p. Model H Triumph and sidecar, fully equipped, not used at all in 1921, a real good bargain; £105.

JONES Garage.—1918 James 2¾h.p. 2-stroke, 2-speed, fully equipped, in excellent order; £35.

JONES Garage.—1917 2¾h.p. 2-speed Douglas, fully equipped, thoroughly overhauled and guaranteed perfect; £42/10.

JONES Garage.—1914 7-9h.p. 2-speed Indian, 2 almost new tyres, thoroughly overhauled and guaranteed perfect; £40.

JONES Garage.—All the above and any second-hand motor cycle is sold with a 3 months' guarantee; deferred payments if desired.

JONES Garage.—Full particulars of any of the above machines will be sent you with the greatest of pleasure.—Jones Garage, Muswell Hill, London, N.10. [4172

F.O.C.H. for second-hand cycles, combinations, and runabouts at bargain prices; exchanges arranged. Any new cycle, combination, or car supplied; cash or easy payments.—Fair Offer Car House, 5, Heath St., Hampstead (near Tube). 'Phone: Hampstead 3752. Hours: 9-7, including Saturdays. [3374

BARGAINS.—New O.K.'s, Ariels, Harleys, Omegas, Quadrants; exchanges entertained. — Booths' Motories, Halifax.

BARGAINS.—1920 Matchless combination, detachable wheels, £130/10/6; 6h.p. Zenith combination, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6.—Booths' Motories.

BOOTHS' Bargains. — Free engine Triumph, £22/10/6; 4-cyl. F.N., 2 speeds, £29/10/6.

BOOTHS' Bargains.—1920 Williamson 6h.p. combination, £95/10/6; another, dynamo lighting, £115/10/6.

BOOTHS' Bargains.—Harley-Davidson combination, mileage 300, £139/10/6; 3h.p. Humber, £10/10/6.

BOOTHS' Bargains.—1915 B.S.A. combination, £55/19/6; 1920 Wooler, £49/19/6; 3h.p. 2-speed Enfield, £29/10/6.

BOOTHS' Bargains.—8h.p. Premier combination, £49/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—1917 4h.p. Douglas, £59/19/6; 1919 4h.p. Douglas combination, £89/10/6; another, electric lighting, £95/10/6.

BOOTHS' Bargains.—1916 Douglas, £47/10/6; 1920 Morgan de luxe, M.A.G. engine, speedometer, £165/10/6; 1920 3½h.p. Ariel combination, £85/19/6; G.W.K. light car, £139/10/6; 1922 new 4½h.p. Quadrant combination, £100.—Booths' Motories, Halifax. [2311

WALBRO Bargains in Sound Used Machines.—1921 6h.p. B.S.A. combination, spare wheel, all Lucas best equipment, been 500 miles only, and as new, £145; 1918 4h.p. Douglas, all on, £60; 1913 3½h.p. clutch Triumph, very good, all on, £35; 1916 5-6h.p. Zenith, clutch model, all on, as new, £55; 1919 2¾h.p. Omega-Jap, 2 speeds, all on, £38; 1919 2½h.p. Clyno, all on, as new, £40; 1922 2¾h.p. 3-speed clutch Douglas, slightly soiled only, £80; 1921 4½h.p. B.S.A., all chain, shop-soiled only, £90; 1921 2¾h.p. Diamond-Jap, 2 speeds, all on, equal new, £45; 1921 4h.p. Model H Triumph, shop-soiled only, £95; 1912 3½h.p. Rover, 3 speeds and clutch, in rice order, all on, £35; 1920 3½h.p. Ariel combination, little used, all on, £85; 1912 2¾h.p. Douglas, 2 speeds, all on, Degory carburetter, £25; exchanges; satisfaction guaranteed.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [X4822

## MOTOR CYCLES WANTED.

CASH.

IF You Wish

TO Sell your motor cycle for cash,

WE are buyers for motor cycle and combination. We give full market price, and pay cash on spot.—Write, 'phone, or call, Percy and Co., 314 and 316, Euston Rd., N.W.1. 'Phone: Museum 1337. [3472

WE

ALWAYS Buy

SOLOS, combinations. cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391. [0332

CASH

WAITING

FOR Motor Cycles,

COMBINATION or Solo, any quantity, any make, any condition. Exchanges a speciality.—T. and B. Motor Co., Ltd., 372, Euston Rd., N.W.1. Museum 6581. [5564

W. T. DUNN, Ltd., always buy.

FULL Market Value given for modern solos, combinations, and cycle cars. Call, write, or 'Phone Museum 5391.—W. T. Dunn, Ltd., 326, Euston Rd., London. [0332

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted, machine can be included in auction sale, held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling commission 7½%, not chargeable unless machine is sold. If no sale a nominal auction fee is charged: For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogues free. Tel.: 208 Streatham. T.A.: Palmer's Garage, Tooting. [4471

WANTED, motor cycle or combination.—64, Church St., Edgware Rd., London. [4483

2¾h.p. Douglas Motor Cycle, not older 1914.—Box 8,094, c/o *The Motor Cycle.* [4510

SCOTT Cycle, 1921, solo.—Major Morris, Zephyr Lodge, Little Common Rd., Bexhill. [3988

1920 Diamond-Villiers, single speed; deposit system, —35, Grosvenor St., Longton, Staffs. [X4798

WANTED, motor cycle, any condition; cheap for cash.—61, Grand Parade, Harringay, N. [4115

£30 Offered for good 4h.p. Douglas.—Hull, 131, George Lane, South Woodford, London. [3892

P. and M., also spares, incomplete machine considered. —Kemp, 68, Belsize Park, London. (D) [3878

WANTED, 2¾h.p. Douglas, not earlier 1918.—2, Howard Rd., Morpeth, Northumberland. [3840

2¾h.p. Lightweight, cheap; no dealers; Douglas preferred.—6, Eridge Rd., Bedford Park, W. [3935

WANTED, 6h.p. 1921 combination; particulars and lowest price.—Rawlings, Burlington Place, Bath. [3881

WANTED, late solo or combination, for cash.—C.S., 14, Swaton Rd., Bow, E.3. Tel.: E. 3155. [4125

WANTED, Triumph, countershaft, not earlier 1918, cheap, reliable.—33, Watney Rd., Mortlake. [4343

WANTED, 3½h.p. sloping tank Rudge; write price, date, etc.—A. Cox, 161, Rye Lane, London, S.E.15. [3969

GOOD Solo or Combination wanted for cash, late models only.—37, Canterbury Rd., Dalston, N.1. [4476

**Both completed the course Together!**

**1 Brand New 4 h.p. Douglas, No. 175, ridden by Mr. Gus. Kuhn.**

**1 Burlington Re-conditioned 4 h.p. Douglas, ridden by Mr. L. Heller.**

***This forms convincing proof of the complete reliability of Burlington Douglases, both New and Re-conditioned.***

**Immediate Delivery can be given of either.**

**CASH OR DEFERRED PAYMENTS.**

**Ask for full particulars of these machines and our Free Insurance Scheme.**

The prices of our Re-conditioned Models are as follows:

2¾ h.p., fully equipped with Lamps, Horn, and Licence Holder, fitted with "Vici" Single Lever Carburetter ... ... ... **55 gns.**

4 h.p., Solo, 3-speed, kick start, all on ... ... ... **75 gns.**

4 h.p. Combination, fully equipped with Lamps, Horns, Licence Holder, and with new Burlington No. 2 Touring Model Sidecar Body, complete with Storm Apron ... ... **93 gns.**

**Burlington MOTOR CYCLE CO. LTD**

**7, South Side, Clapham Common, S.W.4**

'Phone: Brixton 2417.
Wire: Burlington, Motors, Clapham.

**Just by Clapham Common Underground Station.**

## MOTOR CYCLES WANTED.

COMBINATION Wanted, Matchless, A.J.S., Blackburne, Sunbeam, spot cash.—253, Munster Rd., Fulham. [4136

A.B.C., Harley, or Scott wanted (London district).—Full particulars to Box 8,061, c/o *The Motor Cycle.* [3936

TRIUMPH, P. and M., Zenith; give £35 and £10 camera.—Leath, 5, Villas-on-the-Heath, Hampstead. [4041

WANTED, combination, solo, reasonable; cash waiting.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [3428

WANTED, motor cycle or combination, about 5h.p.; state lowest; damaged not objected.—29, Russell Rd., Tottenham. [3968

LATE Douglas or Triumph Combination; state lowest cash; no dealers.—H.S.G., 33, Graham Rd., Wimbledon. [4254

WANTED, Indian, Harley-Davidson, or American X, single geared, clutch model.—Box 8,020, c/o *The Motor Cycle.* [3835

INDIAN 1915-18 Combination wanted. 3½h.p. Singer combination, £40, part exchange, cash adjustment. —78, Maury Rd., N.16. [4061

WANTED, 4h.p. solo or combination, about 1920, cheap and good condition, any good make.—Smith, 107, Lothair Rd., Leicester. [X4797

CASH Waiting; solo and combinations, good prices given.—Write, 'phone, or call, Edwards, 50, Harrington Rd., South Kensington. 'Phone: Ken. 3709. [0604

WANTED Urgently, for spot cash, Triumphs and modern lightweights.—Goad, 122, Maida Vale (private house garage). 'Phone: Hampstead 1353. [4272

WANTED, Connaught or Velocette, 1921, 2 speeds, clutch, kick, all on, perfect, about £35.—Fullest particulars, Hollicot, Mere Green, Birmingham. (P) [4283

WANTED, modern motor cycle, combination, or 3-wheel runabout; state full particulars and lowest cash price.—Osborne, Draper, 33, Jubilee Rd., Doncaster. [4092

CASH on Sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

WANTED, 4h.p. Douglas or Enfield combination, complete, 1920-21, must be guaranteed perfect order, subject satisfactory trial run, and delivered; cash waiting; letters first, lowest price, etc.; no dealers.—G.W., 32, Chester Rd., Kidderminster. [X4749

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address: Palmer's Garage, Tooting. [4468

## TRICARS FOR SALE.

A.C. Sociables, by the A.C. Co., dependable runabouts, take 2 persons anywhere, good condition and appearance, fully equipped; from £50 to £85; trial.—29, Allsop St., Upper Baker St., London, N.W. [3533

## MOTOR ATTACHMENTS.

ECONOMIC Motor Attachment, brand new; £12, cost £26.—106a, Gt. Moor St., Bolton. [4331

WALL Auto-Wheel, fine condition; price £8.—Foord, 72, Portland Terrace, Southampton. [4333

J.E.S. Motor Attachment, for push cycle, perfect order: £10.—Woodward, Aldwick, Sunnydene Rd., Purley, Surrey. [4212

WALL Auto-Wheel, 1919, very little used, perfect condition; £12; call any time.—284, Goldhawk Rd., Shepherd's Bush, W.12. [4340

AUTO-WHEEL, B.S.A. de Luxe and bicycle, good running order, complete; £10, or separate.—Critten, 19, Sealescombe Rd., Fulham. [4120

CONVERSION Set, ready to clip in frame of push-bike, 2h.p. engine, carburetter, Bosch mag., tank, belt, etc., complete; £6.—MacEwen, Ravenstone, Whithorn, Wigtownshire. [X4767

## MOTOR SCOOTERS.

KINGSBURY Scooters and Spare Parts.—3, Kendall's Mews, George St., W.1. [5334

BRAND New Autoped Scooter, dynamo lighting, 1½h.p., single-speed; £15.—Percy and Co., 314, Euston Rd., N.W.1. [3473

## HOODS, WIND SCREENS, ETC.

HOODS, double texture twill, brass or nickel fittings, to fit any sidecar, from £2.—Below.

EASTING Wind Screen, new, celluloid panel, and as new, 50/-.—Below.

WIND Screens, adjustable, with apron, 30/- and 35/-. Hoods re-covered, new celluloid fitted to wind screens.—Collins and Son, rear of 84, High St., Putney, S.W. [4515

## HOODS, WIND SCREENS, ETC.

HERCULES Hoods and Aprons. Write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [3230

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3772

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

ROBINI Mfg. Co.—The Bower adjustable wind screen, made of celluloid and thick twill, all enamel fittings, complete with Coverall apron; 35/-, carriage paid. Money returned if not satisfied.—'Phone: Brixton 1585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [4378

## BODIES.

RENNOC Sidecar Bodies, actual manufacturers. 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

VENUS Step Bodies, for old type chassis, 15 models in stock; catalogues ready.—Venus Sidecar Co., 694, Seven Sisters Rd., Tottenham. [4520

ROYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [0336

TOURING, sporting, bulbous back, 2-seater, stepped bodies; hoods, screens (all makes), aprons, mats; repairs, repaints.—T. Williams, Manufacturer, 9, Lower Chatham St., Oxford Rd., Manchester. [X4875

COBB Speedman Sidecar Bodies, new 1922 models, handsomely streamlined type; unpainted, unupholstered £3; superbly finished any colour desired, and comfortably upholstered, £4/5; all carriage paid; can be fitted to any chassis.—Carlton Sidecars, 18, Midland Rd., Carlton, Nottingham. [4082

BODIES to suit everybody. Light touring model £6/10, Brooklands model £7/10, De Luxe touring model £8/10. Write or call for particulars of free insurance.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton. (Half minute from Brixton Skating Rink.) Tel.: Brixton 1292. [4386

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—20, Tudor St., London, E.C.4. [0004

ROBINI Manfc. Co.—Wonderful bargains in brand new coachbuilt bodies of many different types, sports, etc., complete with Coverall aprons, £8; 2-seaters, £10/10; catalogue on request; a few shop-soiled bodies at £6/15; 2-seater Millford body on Millford chassis, complete with tyre and tube and all fittings, suitable for any machine, slightly used, £11/10, a bargain; carriage extra. See Sidecar Attach. column.—'Phone: 1585 Brixton.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [4376

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

FREE, Free, Free.

AS An Advertisement for one month only, to each purchaser of every sidecar we are giving a wind screen value 30/- free.—Below.

COACHBUILT Bulbous Back Models, complete with wind screen, from £6; polished aluminium, from £7. Bodies can be painted and upholstered to customers' requirements. Bodies in stock to suit all makes.

WE Specialise in Repairs, repainting, and reupholstering.—Below.

CHASSIS, underslung models, from £7/7. We specialise in frame repairs of all kinds.

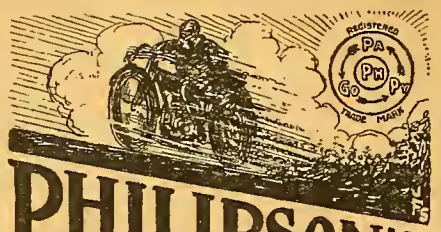
ALSO Few Second-hand Chassis for Sale.—Collins and Sons, rear of 84, High St., Putney, S.W. [4516

CANE Sidecar for sale; £4.—R. Carter, 190, Lowfield St., Dartford, Kent. [4256

RACING Sidecar, very light; accept £6/10.—24, Geraldine Rd., Chiswick. [4354

LIGHT Sidecar, complete, lamp; £5.—28, St. Margaret's Rd., Brockley, S.E. [3808

LIGHT WATSONIAN, as new, £7; medium Gloria, £7.—17, Heaton Rd., Mitcham. [4142




# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

# Philipson's Latest!

## GOVERNOR PULLEY AND VARIABLE GEAR COMBINED WITH FLY WHEEL for all two-stroke engines.

**The Lightest, Speediest, and Simplest Gear on the market for direct belt-driven 2-stroke and 4-stroke engines.**

ONLY adds 2 lb. (approx.) to the weight of a 2-stroke machine, and 6 lb. (approx.) to the weight of a 4-stroke machine.

During the past week we have fitted the following machines:

| 2-stroke. | 4-stroke. |
|---|---|
| LEVIS, | TRIUMPH, |
| O.K., | NORTON, |
| CALTHORPE, | ROVER, |
| VILLIERS, | SINGER, |
| etc. | COULSON-BLACKBURNE |

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

Our Flywheel Governor converts a single-speed 2-stroke into a speed model —*the lightest speed model on the market!*

THE ONLY GEAR WITH NO END THRUST.

IMMEDIATE DELIVERY.

*Send for Illustrated Booklet:*

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

*What is your make? Write us*

REDUCED PRICE **£7 7 0** Carriage Paid.

## Philipson & Co., Ltd.,

Astley Bridge, BOLTON, Lancs.

(Established over 50 years.)

'Grams: "Safety, Bolton." 'Phone: 147 Eagley

## SIDECAR ATTACHMENTS.

SIDECARS! Sidecars!

SEVERAL Second-hand Coachbuilt Sidecars from £7/10.—Below.

BRAND New Coachbuilt Sidecars with bulbous backs and complete with aprons; a first-class job; not cheap and nasty; £17/10.—Below.

BRAND New Sidecars, coachbuilt, from £16. These are really wonderful value.—Below.

WE Have two Langford spring wheel sidecars, 5-point attachments, large bulbous backs with Picnic cases, completely fitted with all utensils, most elaborately finished, complete £35.—Jones Garage, Muswell Hill, London, N.10. [4159

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

P. and M. Sidecar Chassis; £4, complete.—1, Springfield Park Crescent, Catford, S.E.6. [4312

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. Phone: 5. [1331

MILLS-FULFORD Indian Sidecar, good condition, new tyre; £15.—Tinker, Knowle Rd., Mirfield. [3960

SIDECAR, underslung chassis, handsome new coach roomy body; £8.—637, Seven Sisters Rd., Tottenham. [4109

LIGHT Sporting Sidecar, done 200 miles, electric lighting, cover; 9 gns.—Treacher, 65, Pimlico Rd., S.W.1. [4263

LUXURIOUS Bulbous-back Sidecar, as new; sacrifice £9; take gramophone part.—Highman, Bimport, Shaftesbury. [3832

1921 Watsonian Monarch, enclosed child's seat at rear, Eastings; £25.—Melbury, 138, Bingham Rd., Croydon. [4069

SIDECAR, complete, all fittings for 7-9h.p. Indian, left-hand kick starter; £15.—Foote, 10, Knatchbull Rd., Camberwell. [3930

SPUR Sporting Sidecar. £6; Sandum sporting, £8; Sandum touring, £10; Montgomery touring, £20.—Arthur T. Daw, 114, Brixton Hill. [4440

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10b.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

## SIDECAR ATTACHMENTS.

SIDECARS by all the Leading Makers, shop-soiled only, at special clearance prices from £15.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [4282

BARGAINS.—Gloria cane sidecar, £6/19/6; Ruby coach sidecar, £9/10/6; Hercules coach, £9/10/6; large Bowser seat child, £12/10/6.—Booths' Motories, Halifax.

BARGAINS.—Shop-soiled £27/10 sidecar, suit Triumph, B.S.A., £18/15/6.—Booths' Motories, Halifax.

BARGAINS.—New large size coach bodies, locker under seat, £6/19/9; featherweight sidecar, £12/10/6; cane sidecar, £6/10/6.—Booths' Motories, Portland Place, Halifax. [2312

PLUS One Sidecar, in red and black, excellent condition, £30; C. and M. De Luxe sidecar, in Harley colours, shop-soiled, £50.—Coppen, Allan and Co., 89, Gt. Portland St., London, W.1. [4033

CLYNO Reconditioned Chassis, with wheel, new leg guards, C springs and leaf spring, £5; also complete stock of spares for the 5-6h.p. model.—D. and F., 39, Essex Rd., London, N.1. [4365

SEVERAL Sidecars, very cheap, room wanted; also Douglas chassis, N.S.U. 2-speed gear almost new, £6/15; sidecar wheel, 15/-, new; 26×2¼ covers, cheap.—57, Kenbury St., Camberwell, London. [4188

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. 0335

£5 for a complete renovated Douglas underslung chassis, all springs and arms, wheel, etc., suitable for any make of machine to order.—Old Man Hep, 19, Wilcox Rd., South Lambeth, London, S.W.8. [4176

INDIAN.—Swan sports sidecar, for spring frame model, perfect condition, screen, lamp; also Mills-Fulford touring model, practically as new, luggage grid, lamp; approval against cash; £12/10 each.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [4145

BASTONES for Sidecars. You cannot do better. —Sidecars, complete, slightly soiled, from £13/17/6; bodies from £4; also a few Montgomery No. 1 and sporting models, slightly soiled, to be cleared cheap.—228, Pentonville Rd., King's Cross, London, N.1. Tel.: 2481 North. [3000

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

ROBINI Mfg. Co.—End of season's bargains. Underslung chassis, complete with new tyre and tube, and body, complete with Coverall apron, £14; Millford chassis, complete tyre and tube, etc., new bulbous back body, complete with adjustable wind screen and apron, £12/15, wonderful offer; underslung chassis, all replated and enamelled, as new, with new tyre and tube, £7; Millford chassis, complete with new tyre and tube, all fittings, £5/10;.—Below.

BARGAIN.—For P. and M., Mills-Fulford body, fine condition, on Mills-Fulford chassis, complete with all fittings, tyre, and tube, ready to fit, 4th point, with adjustable wind screen, and apron; £11, carriage extra. See Body column.—'Phone: 1585 Brixton.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [4377

## RUNABOUTS AND CYCLE CARS.

A. P. REY, 378-384, Euston Rd., N.W.1.—Call and inspect.

MORGANS, all models; also second-hand De Luxe and Grand Prix's, in good condition.

COVENTRY PREMIER, 1922, 4-wheeler model, £250; one, shop-soiled only, £227/10.

ROVER 8h.p. Model, £220; one second-hand, good condition, £160.

G.N., all models; also 1920, with dynamo, very good order, £132/10.

EXCHANGES or deferred payments arranged.—'Phone: Museum 6436. [3591

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—5-6h.p. Carden monocar; £50. [4420

BEDELIA.—The new 1922 model 8-10h.p., with air-cooled or water-cooled engine.

BEDELIA.—Air-cooled model, £185; water-cooled model, £195; immediate deliveries; trial runs free.

BEDELIA.—Catalogues free from L. N. Palmer, sole concessionnaire for the British Empire.—Palmer's Garage, Tooting. [4466

1916 Sporting Morgan, perfect; trial; snip, £80; must sell.—Preston, see Exchange. [X4863a

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—A.V. monocar, 6h.p., 1920; £65. [4423

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 G.N.'s; easy terms and exchange. [4394

MORGANS, second-hand, several in stock.—A. P. Rey, 378-384, Euston Rd. 'Phone: Museum 6436. [3592

1921 Morgan de Luxe, W.C., lavishly equipped; £135.—Hillier (side bell), 9, Wallingford Av., North Kensington. [4243

# COPPEN, ALLAN & Co.

# NEW HUDSON

| | |
|---|---|
| 2½ h.p., "Popular" Model, 2-speed .. | £50 |
| 2¾ h.p., "De Luxe" Model, 2-speed, kick-starter, clutch .. .. | £60 |
| "Four-point-five" Model Solo .. | £100 |
| "Four-point-five" Model Combination | £125 |

**And the famous three-wheel Light Car, £230**

Including M.A.G. water-cooled engine, dynamo lighting, hood, screen, interchangeable wheels, with spare tyre, also permanent jack, and REVERSE.

THE

# READING-STANDARD

## AGAIN LEADS THE WAY!

In the strenuous LONDON-EXETER Trial a READING-STANDARD with PLUS-ONE sidecar, carrying, in addition to the driver, TWO ADULT PASSENGERS, finished dead on time, gaining SILVER MEDAL (subject to confirmation).

THINK THIS OVER! THREE adults carried with perfect safety and ease over the entire distance, notwithstanding the dreadful weather encountered. Is there anything that the ordinary rider, under average conditions, can ask of his machine comparable to this? We believe that this is the first time in motor cycling history that such a feat has ever been attempted! Let your 1922 mount be a READING-STANDARD, you will then know what motor cycling joy really is.

**(1) SOLO** Complete with dyoamo lighting, electric horn, all lamps, pump, tools, 3 months' guarantee .. .. .. **£135**

**(2) COMBINATION** Complete, as above, and including cantilever sprung M.P. sidecar, cover-all apron, sidecar lamp and bracket, stand .. .. **£175**

**(3) COMBINATION** Complete as No. 1 and including the wonderful "PLUS ONE" single or double seater at will, fitted with sidecar lamp and bracket, step plate, stand, and cover-all apron .. .. **£188 10**

*Above prices include Dynamo Lighting (not combined with magneto), all Electric Lamps, Electric Horn, Shock Absorber, Cover-all Apron, etc.*

# "PLUS ONE"

## A Single or Double-seater Sidecar at will.

Complete with self-locking wheel stand, lamp bracket, apron, two step plates .. **£52 10**
Bodies only .. .. .. .. **£27 0**

**NOTE.**—Sidecars and bodies are supplied in six colours suitable for attachment to any motor cycle.

The bodies are eminently suitable for A.J.S., B.S.A., New Imperial, Royal Ruby, and Indian.

# A.J.S.

| | |
|---|---|
| 7 h.p. Combination .. .. .. | £175 0 |
| 7 h.p. Solo .. .. .. .. | 134 10 |
| 7 h.p. "Plus One" Combination .. | £184 0 |
| 2¾ h.p. Model B, B1 or B2 .. | 85 0 |
| 2¾ Model Sidecar .. .. .. | 25 0 |

**ALSO AGENTS FOR B.S.A., TRIUMPH, DUNELT, NEW IMPERIAL, ACE, ENFIELD.**

# 89, Great Portland St., London.

Telephone: Langham 1601.

## RUNABOUTS AND CYCLE CARS.

MORGAN Grand Prix, 1914, carefully used, repainted, smart appearance; £105; exchange, or on terms.—Bunting's, Wealdstone. [4371

G.N., beautifully finished in dark green, belt drive, in splendid condition; £70; take half down.—Bunting's Exchange, Wealdstone. [4370

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—Morgan Grand Prix, 1921 model, fully equipped, yellow finish; £137/10. [4428

A.V. 2-seaters.—A few second-hand and demonstration models for sale at very low prices.—Ward and Avey, Ltd., Teddington, Middlesex. [3934

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—Rover light cars; £220; fully equipped; easy terms or exchange; list on application. [4393

MORGANS, 1922 models, delivery from stock; £150 upwards; spares for all models; exchanges, extended terms. Official agents.—Below.

MORGAN, Aero 1920 w.c. J.A.P., lamps, horn, wind screen, hood, etc., splendid condition; £135.—Below.

MORGAN Grand Prix, 1921, M.A.G., with 1922 fittings, electric lighting, mechanical horn, discs, watch, hood and screen, mileage only 400; cost over £200, now offered at £180.—Below.

ROVER Light Car, new 1922 8h.p. model, delivery from stock; £220.—Below.

G.N., standard 1922 model, dynamo lighting, dickey seat; £225; in stock.—Below.

CARDEN Cycle Car, 1921, complete with electric lighting, horn, tools, etc.; £72/10.—Elce Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0073

CARDEN, 1921, new September, hood, screen, electric lighting, splendid order; £75.—Coppen, Allan and Co., 89, Gt. Portland St., London, W.1. [4032

1913 Premier 3-wheeler, 5-6h.p., 2-speed, water-cooled, good running order; accept £35, or highest offer; must sell.—Wingfield, King St., Wokingham. [4070

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Morgans supplied on easy terms or exchange. 'Phone: Holborn 5777. List on application. [4395

FAMILY Morgan, complete, late 1921, policy, £185, or exchange for recent tandem combination and cash.—Berwyn, Grecian Crescent, Upper Norwood. [3995

LIGHT Chassis, complete, also 8-10h.p. J.A.P. engine, w.c., magneto, unused; bargain, lot £35, forced sale.—Box 88,097, c/o *The Motor Cycle*. [4519

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co., 292, High Holborn, W.C.1. [0673

48 GNS.—Humberette 8-10h.p., A.C., hood, screen, speedometer, lamps, good order, exchange considered; after 5.—20, Treen Av., Hoggers Corner, Barnes. [4231

HALIFAX.—8h.p. Morgans, £95, £105, £110; 1919 A.V. Monocar, £57/10; 8h.p. 1920 Tamplin-Jap, £99/10.—Halifax motor Exchange, Horton St., Halifax. [4018

A.C. Sociable, 6h.p. 2-seater, hood, screen, nearly new tyres, lamps, Bosch, B. and B., mechanical condition perfect; £40.—Raisen, Norns Terrace, Furnham Rd., Chard. [3885

CLEMENT 2-seater, 4½h.p., 3-speed, reverse, new tyres, hood, screen, lamps, etc., good condition; bargain, £39; allow tax.—Roberts, Clifton Rd., Elworth, Sandbach. [3837

CARDEN 1921 de Luxe, dynamo, clock, speedometer, electric horn, lots of spares, condition as new; £105.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [4456

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0736

A.V. Bicar, 8h.p., 1921, screen, hood, jack, accessories, lamps; £95 cash; exchange for any good 1921 solo or Douglas 2¾h.p. 3-speed and cash.—Esau, 18, Rhyswg, Abercarn. [3860

1921 Bleriot Whippet, reverse, electric lighting, speedometer, spare wheel, hood, tax paid, in absolutely new condition; 103 gns.; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [4462

MORGAN Grand Prix, late model, 8-10h.p. J.A.P., water-cooled, discs, aluminium dash, hood, wind screen, lamps, excellent condition; £100; exchanges.—63, Solon Rd., Brixton. [4052

1921 Carden 2-seater, dynamo lighting, oversize tyres, fully equipped, mileage 300, absolutely as new, cost £157; price 89 gns.—Edwards, 50, Harrington Rd., South Kensington. [4465

BRAND New G.N., 1921, Legere model, aluminium throughout, dynamo lighting, speedometer, 6 detachable wheels; cost £317, accept £150.—Dentist, 216, Portobello Rd., North Kensington. [4192

G.N. 1921 2-seater Standard Touring, dynamo lighting, mileage under 500, tax paid to end 1922, privately owned; seen Surrey, 12 miles out London; £200.—Box 8,092, c/o *The Motor Cycle*. [4508

## RUNABOUTS AND CYCLE CARS.

**19**19 Carden Monocar, 8h.p. J.A.P. engine, Sturmey-Archer 3-speed gear box, splendid order; £75, or exchange combination.—Speechley, 86, Churchfield Rd., Acton, W.3. 'Phone: Chiswick 1902. [4005

**19**22 New Hudson 3-wheeler, dynamo lighting, hood, screen, spare wheel and tyre, all wheels interchangeable; £230.—Coppen, Allan and Co., 89, Gt. Port-St., W.1. London agents for New Hudson. [4030

**19**14 Argo Cycle Car, 9h.p., 4-cyl. engine, 2-seater and dickey, tyres unpunctured, excellent condition, any trial or examination; £75, or exchange Triumph combination.—C. F. Wood, Steyning. [4235

MORGAN Grand Prix Aero, new, specially finished in dull black, with nickel radiator and fittings, aluminium dashboard, very smart model, immediate delivery; £192.—Hall, 91, St. Peter's St., St. Albans. [3946

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—Coventry Premier, new 1922, 4-wheelers, immediate delivery from stock, dynamo lighting; exchanges and easy terms arranged; price £250. 'Phone or call, Holborn 5777. [4392

**19**22 Morgans in stock, water-cooled de luxe, fully equipped, £186; Grand Prix, water-cooled, M.A.G. engine, Lucas dynamo lighting, £201; motor cycles part exchange.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [X4818

MORGAN, J.A.P. engine, completely overhauled throughout and guaranteed in perfect condition, body newly painted blue, wings black, new hood and wind screen, flat aluminium top tail, toolbox on step with aluminium top, electric lighting, all new lamps, ready for long journey; bargain, £130.—6, Warwick St., Regent St., W. Regent 554. [4017

*Spare Parts:*

MORGAN Spares.—Apply, Maudes' Motor Mart, 100, Gt. Portland St., W.1. [4529

ACE Wheel Discs.—G.N. owners send for 1922 illustrated list (reduced prices). Enhance the appearance of your car and save spoke cleaning. Supplied by all agents.

ACE Wheel Discs.—Morgan owners fit these popular discs to your runabout and add 50% to its appearance. They are made of stout gauge seamless aluminium, and the quality is the best.—Cornercroft, Ltd., Ace Works, Coventry. [X4909

## CARS FOR SALE.

WEST NORWOOD!—The place for straight deals, good value and selection; list free.

WEST NORWOOD!—Fifty-five cars actually in stock on the premises; all types stocked.

WEST NORWOOD!—Absolute bargains obtainable, good running 2-seaters from £35; tourers from £85.

WEST NORWOOD!—Call any old time. Hours 8.30 to 6, Saturday 4; no business Sundays.

WEST NORWOOD!—All marked plain figures; call, no obligation; postcard procures printed list.

WEST NORWOOD!—Douglas S. Cox, the absolutely straight motor man, 6c, Landsdowne Hill, West Norwood, S.E. [4460

SIZAIRE 9h.p. (single), sporty 2-seater, hood and screen; £35.—1, Bellingham Terrace, Catford. [4335

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

85 GNS. Exchanges a speciality.—1913 Bayard 3-seater 8h.p., 4 cyls., hood, screen, smart, economical.—Below.

62 GNS. Exchanges a speciality.—1915 Trumbull 2-seater, 4 cyls., hood, screen, electric lamps.—Below.

55 GNS. Exchanges a speciality.—Alldays 4-5-seater, 12 h.p. twin, hood, screen, lamps.—Below.

119 GNS. Exchanges a speciality.—1914 Lagonda 4-seater 11h.p., 4 cyls., detachable wheels.—Below.

125 GNS. Exchanges a speciality.—1912-13 R.S.A. Daimler 5-seater 13.9h.p., detachable wheels.—Below.

89 GNS Exchanges a speciality.—1914 Crouch 3-seater 8-10h.p., detachable wheels; wonderful little car.—Below.

MY Prices are Right. Many other bargains.—Senbridge, 35 Hansler Rd., East Dulwich, Sydenham 2452. [4435

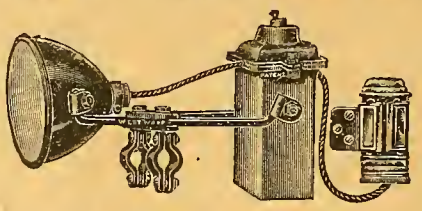
SCRIPPS-BOOTH 13h.p. 2-seater, dynamo lighting and starting, 1916-17 model; £145.—Miss Patmoor, 106, Acre Lane, S.W.2. [4363

15.9h.p. Aster Racing Car, 2-seater; exchange for combination or 3-wheeler, or sell £100.—27, Oliver Rd., Walthamstow, Essex. [3894

ROVER Cars.—The famous 1922 8h.p. models in stock for immediate delivery; £220.—Eagles and Co., 275, High St., Acton, London. [0761

COVENTRY PREMIER, 1922, 4-wheel model; £250; immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

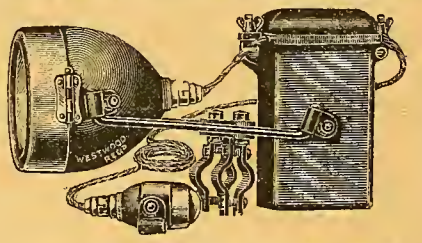
## "DAYBEAM" ELECTRIC SETS.



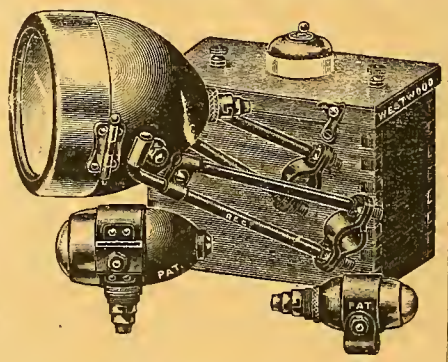
**For Lightweight Machines.**

**List No. 30/5 complete Outfit £3 3-0**

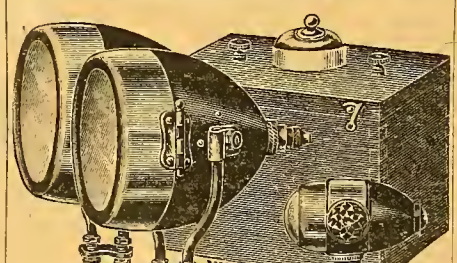
**List No 30/6 Combination Outfit £3-15-0**



**No 30 1 complete Solo Outfit £5-5-0**



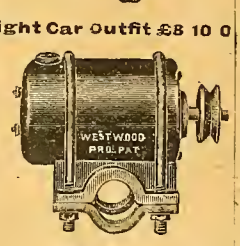

**No. 30/2 complete Comb. Outfit. £7 7-0**




**No. 30/3 complete Light Car Outfit £8 10 0**

**"WESTWOOD DYNAMOS"**

**MOTOR CYCLE**
**MARK 1, £6 0 0**
**LIGHT CAR**
**MARK 2, £7 0 0**
**SWITCH BOX 30/-**




*WRITE FOR ILLUSTRATED LISTS*

TRADE MARK
**WESTWOOD**
RIM & PATENTS LTD
LAWDEN RD BORDESLEY BIRMINGHAM.

## CARS FOR SALE.

PALMER'S Garage, Tooting.—The pre-eminent place for purchasing. Auction every Thursday.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £5 secures superh Napier 5-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7 secures splendid Belsize 5-seater.

PALMER'S Garage, Tooting.—£60 down and 12 monthly payments £8 secures 10h.p. Singer 2-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £5 secures live axle Panhard 12-seater waggonette.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £6 secures Overland 5-seater, dynamo lighting, self-starter.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures splendid Sheffield-Simplex landaulet.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8/10 secures magnificent Oakland 7-seater, dynamo lighting, self-starter.

PALMER'S Garage, Tooting.—£60 down and 12 monthly payments £8 secures excellent Renault 12-seater waggonette.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7/10 secures reliable Renault ¾ landaulet.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable Napier chassis.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £4 secures modern Ford touring car.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8 secures Delaunay-Belleville limousine, 17h.p.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 18h.p. Maxwell sporting 2-seater.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £5 secures Belsize cab-landaulet.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures Studebaker landaulet, dynamo lighting, self-starter

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £7 secures 16h.p. Minerva touring car, monobloc engine.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £7/10 secures splendid La Buire ¾ landaulet.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable S.C.A.T. 10-12-seater waggonette.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7/10 secures 12-14h.p. Fiat light landaulet.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £5 secures excellent 12-14h.p. Fiat chassis.

PALMER'S Garage, Tooting.—All above cars are in good running order. For cash down price deduct 10% from above totals.—Palmer's Garage, Tooting. [4472

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

6h.p. De Dion 2-seater, single-cyl., dickey, modernised, 3 speeds, reverse, overhauled, economical, insured, excellent running order; £45, or offer.—Box 8,037, c/o *The Motor Cycle*. [3859

13.9h.p. B.S.A. Silent Knight Coupe, 3-seater, dynamo lighting, 5 detachable wheels, every equipment; bargain, £150, or smaller car or combination and cash.—436, Whitehorse Rd., Thornton Heath, S.E. [4157

LATE 1921 8h.p. Rover Car, fitted with speedometer, extra air, clock, etc., many spares, in excellent condition and perfect running order, fully insured; £200, or nearest; a bargain.—Lea, 6, East Park Parade, Northampton. [3929

1919 Chevrolet Touring Car, dynamo lighting, self-starter, 5 detachable wheels, repainted as new, any trial given; bargain, £160, or exchange motor cycle or combination with cash.—5, Norwood Rd., Herne Hill, S.E.14. [3599

FIFTY Renault 8h.p. Chassis for Disposal, guaranteed rebuilt with all new parts, viz., pistons, carburetters, valves, gears, brake drums, back axles, etc., expert inspection; £60 each. 2-seater 15-cwt. van and landaulet bodies, suitable for above supplied.—H. Hughes, B.M.C.C., 1 and 3, Brixton Rd., S.W.9. [4480

SPORTS Hillman, special 11.9h.p. engine fitted Dec., 1920, Lucas 20h.p. dynamo lighting and self-starter set fitted, 6 disc wheels and tyres, clock, speedometer, hood with side curtains completely enclosing car, fast and in sound order; £375; motor cycle part exchange.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [X4820

## CARS FOR SALE.

1920 9.5h.p. Standard Long Chassis, dynamo lighting and starter, exceptionally good engine, paint and upholstery unscratched, new condition throughout, very pretty little car, and guaranteed sound; £325; motor cycles part exchange.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [X4819

## TAXI-COMBINATIONS AND CABS.

TAXI -SIDECAR Outfit, B.S.A., late 1920, dynamo lighting, detachable wheels and spare, many accessories, practically new, ready for the road; cost 255 gns., accept £185; terms and exchanges arranged.—Midland Garage, 7, Broad St., Birmingham. [3898

## MOTOR TRANSPORT VEHICLES.

FORD Uncovered Van, overhauled, good order; bargain, £45.—1, Bellingham Terrace, Catford. [4336

ROBINI Manfc. Co.—Commercial box carrier bodies, 3 doors opening on chains, top and each end, very roomy; £7/10, wonderful offer; carriage extra.—'Phone: 1585 Brixton.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [4378a

STAR 1916 2-ton Lorries (6), 4 speeds, live axle, Zenith carburetters, £225 each; Straker-Squire 30-cwt. lorry, steel wheels, overhead worm drive, open body, £185; Garfords 30-cwt. lorries, smart 9ft. bodies and coachbuilt cabins, £200; all with lamps, horn, all repainted, retyred, and in first-class condition.—See below.

AN exceptional bargain to clear the last 2 Willys-Overland 30-cwt. lorries, 1916, £130 each, with lamps, horn, and new tyres.—Shard Garage, Shard's Sq., Peckham Park Rd., Old Kent Rd., London. [4489

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. [6428

SECOND-HAND Models at Special Rates; send your requirements.—Halifax Motor Exchange, Horton St., Halifax. [4020

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1. [0672

## ENGINES.

1914 Triumph 4h.p., in splendid order; £12.—Below.

1921 Triumph Engine, complete with M-L mag. and Triumph carburetter, all brand new, and perfect; £32, near offers considered.—Below.

1914 Triumph Cylinder, new, £4. Triumph parts supplied new and genuine. — Dalby, Triumph Specialist, Baker St., Sparkhill, Birmingham. [4432

BRAND New 8h.p. J.A.P. Twin, 1921, with carburetter; £26.—114, Brixton Hill. [4441

A.I.V. Engine, good condition; offers. Evenings.—Nunn, 107, London St., Reading. [3882

1920 5-6h.p. J.A.P., Amac, mag., perfect condition; £25.—Melbury, 138, Bingham Rd., Croydon. [4068

P. and M. Engine, complete, good condition, wants assembling; £7/10.—147, Burlington St., Liverpool. [4382

2-CYL. Renault Engine, 10h.p., excellent condition, Smith's carburetter; £7/10.—86, St. James's Rd., Holloway. [3884

4-CYL 10h.p. Water-cooled Engine, flywheel, clutch, £18/10; gear box for same, £10.—T., 52, Brodrick Rd., S.W.17. [3818

1920 3½h.p. Norton Engine, complete with mag., carburetter, controls; 16 gns.—198, King St., Hammersmith. [4065

REYNE-NEWSON Special Racing Engine, 248 c.c., capable of 70 m.p.h.; £28.—Brosse, 120, Cranley Gardens, London, N.10. [4477

4h.p. White and Poppe, water-cooled, radiator, Capac, C.A.V., condition guaranteed; £12.—24, King Edward Rd., Walthamstow. [3985

2¾h.p. M.M.C. a.i.v. E.I.C. Magneto, B. and B. carburetter, first-class condition; £8, carriage paid.—Kerswell, Lawrence Hill, Bristol. [3398

3½h.p. Premier Engine, Bosch mag., carburetter, silencer, etc., rebushed, new cylinder, complete unit; £14.—51, High St., Chatteris. [4348

HUMBERETTE 6h.p. Engine, water-cooled, complete in every detail; £12; stamp, particulars; genuine bargain, offers.—Hey, Orange St., Halifax. [3883

3½h.p. Genuine Minerva, perfect condition, a very fine engine, mechanical valves; £4, worth double.—R., 15, Milverton Terrace, Whetstone, N.20. [3964

2¾h.p. Liberty 2-stroke, silencer, plates, mag., 1921, £10; Roc gear box, 1921, £4, little used.—Wiltshire, Garage, Barcote, Faringdon, Berks [X4794

ENGINES Bought, sold, or exchanged, or taken part payment for new 2-stroke. We are specialists at engine repairs.—Auto Eng. Co., Edgwick Mill, Coventry. [X4898

PRECISION Engine and 2-speed Gear Box, in one with mag. and carburetter, needs slight attention; £10, or offer.—39, Essex Rd., London, N.1. [4368


# YOU GET EASE of MIND and BODY

*when riding a Coulson because of its four virtues.*

Coulson

FOR COMFORT

RELIABILITY

SAFETY

SPEED

**Your MIND is at rest—**

1. Because you know that the frame and fittings, made by A. W. Wall, Ltd., of Tyseley, Birmingham, the firm with the *longest* experience in the motor cycle industry, have a reputation for rock-like durability.
2. Because you know that your power unit is a Blackburne—the engine with the classic reputation, both for reliability and speed, *and* for ease of control.
3. Because your Coulson is fitted with TWO Webb internal expanding hub brakes, which having demonstrated their efficiency throughout three seasons A.C.U. Six-day Trials, etc., are proof against *any* emergency,

and

**Your BODY is at rest—**

1. Because you have real "comfort in the saddle," due to the unique Coulson *leaf-springing* over the back wheel, which gives complete insulation from all road shock.
2. Because you have "leaf-springing" in the front forks giving equal comfort in the arms and shoulders.
3. Because the above unique springings are in their action assisted by the most comfortable of saddles and the most resilient of tyres.

You have only to run a Coulson on a *really bad* road to realise its surpreme superiority over all other makes. It is undoubtedly the most comfortable motor cycle in the world.

*Send for particulars to the Sole Concessionnaires.*

**LONDON MOTORS**

**61, Holborn Viaduct, London ——— E.C.2.**

*'Phone: City 4230.*


## ENGINES.

P. and M. Engine and Gear, 1918, £9; twin N.S.U. engine, 6h.p., £6; P. and M. engine less cylinder, £3/15.—1, Springfield Park Cres., Catford, S.E.6. [4311

75×90 a.i.v. Twin J.A.P., with carburetter, adjustable pulley, mag. sprocket, and chain case, in perfect condition; £7.—Attwater, 185, Queen's Park Rd., Brighton. [4 90

JACK LUCAS for Engines.—Unemployment has forced sales of really good stuff. Its a pity 'tis true, but its the keen buyers' opportunity. Seize it through Jack.

DOUGLAS 1920 2¾h.p., complete unit, C.A.V. mag., new Zenith carburetter, no wear whatever; £12.

RILEY 10h.p. Water-cooled Twin, new Lucas mag., Zenith carburetter, pump, clutch; £17/10.

SCOTT, with mag. and carburetter, really fine condition; £14.

TWO-STROKES.—Several complete units, leading makes, with waterproof mags. and carburetters, all new; from £7/10.

STATIONARIES and Power Plants, old automatics and mechanicals from 30/-, air and water-cooled; magnetos to suit from £1; carburetters from 7/6; stamp reply.—Jack Lucas (cross remittances Lloyds' Bank), 110, Willows Rd. (37 car), Birmingham. [X4900

NEW Year's Resolution.—Fit a Broler 3½h.p. 2-stroke and have the best year's motoring you ever had. Write for particulars.—Brooks, Tasler, and Cox, Narborough, near Leicester. [X4876

200h.p. Clerget Engine, 8 cyls., V, water-cooled, complete with magneto, etc., quite new, ideal for boat or racing car; £50, cost over £1,000.—Captain Jackson, c/o 77, Acre Lane, S.W.2. [4362

2¾h.p. a.i.v. Unit, perfect running order, powerful, U.H. mag., B. and B., with all controls and fittings, new rings, £5/5; 4-cyl. Humber engine, less few parts, £7.—Wingfield, Stanley Rd., Bromley, Kent. [4056

BLUMFIELD V Twin Water-cooled Engine, 86×88, forced lubrication by gear-driven pump, Bosch mag., Cox carburetter, as new, never in a chassis; price £25; send on approval against cash.—Underhill, 12, Mervyn Rd., Bishopston, Bristol. [4326

NEW 2h.p. Turner 2-stroke Engine, £5/10; new 10 h.p. twin Precision cycle car engine, £30; new 8h.p. J.A.P. water-cooled twin, complete with magneto, £30; 8h.p. Bloomfield twin, second-hand, £8/10.—Murray's, 37a, Charles St., Hatton Garden, Holborn. [X4796

CYCLE Car Unit or stationary plant: 6h.p. w.c., M-L B.B., cone clutch, chain sprocket, £8; solid copper radiator, all fittings, £4; 2-speed gear box, controls and sprockets, £5; above complete, £12; or cycle car (3-wheel), Morgan type, complete, Dunlop tyres, running order, £18 to clear.—Gunny, Fen Ditton, Cambs. [3976

DOUGLAS 8h.p. Water-cooled, C.W. radiator, petrol tank, silencer, bedplate, starting handle, induction pipe, good condition, £10/10; thoroughly overhauled, new mag., carburetter, guaranteed running order, £19/10, carriage forward; make splendid light car engines; large selection; stamp reply.—Derrington, Grafton Rd., New Malden. [4154

HEPPELTHWAITE'S.—8h.p. J.A.P., £16; 6h.p. J.A.P., £14; 3½h.p. Humber units, £12/10; 3½h.p. Premier unit, £12/10; Rex 5-6h.p., a.i.v., as new, £7/10; 3½h.p. Alldays, £4/15; 3h.p. m.o.v. Minerva, £3/10; also J.A.P., Rover, Matchless, and New Imperial spares, having purchased entire stock of H. Hawkins, York Rd.—Write, 17-19, Wilcox Rd., South Lambeth, London, S.W.8. 'Phone: 1958 Brixton [4177

## IGNITION, LIGHTING, ETC.

H.B.I.

H.B. Ignition Co. carry large stocks of new and second-hand magnetos. Thomson-Bennett 42, 45, 50, 55, and 180°, single and twin.

H.B. Specialise in T.B. for fixing on Triumph, P.M., B.S.A., J.A.P., Douglas, etc., £2/10, postage 1/6; C.A.V. clock twin, for 2¾h.p. Douglas, etc., £2/15.

H.B. will take your old magneto in payment.

H.B. sends all magnetos on approval against cash. Every magneto dispatched carry H.B. 12 months' guarantee.

H.B. Ignition Co. ('Phone: Brixton 610), 78, New Park Rd., Brixton Hill, London. [0694

MAGNETOS 50% Below List.

APPLY Vale Engineering Syndicate, 9 and 10, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 877. [0698

REMY Magdyno, off Harley, fat sparks; £7.—Wingfield, Stanley Rd., Bromley, Kent. [4057

BOSCH and M-L Singles, variable ignition; 30/-; guaranteed.—84, Greenside Rd., Croydon. [4062

APPARATUS charging accumulators from household electricity; £3.—Walker, 19, Mexbro' Drive, Leeds. [3947

K.L.G. W.10 Sparking Plugs, wonderful value, 4 for 5/-, post free.—Thompson, 59, Queen St., Wolverhampton. [7944

## IGNITION, LIGHTING, ETC.

GOVERNMENT Surplus Magnetos (unused).

HAVING Purchased the entire stock of the following makes of magnetos, we are able to offer them at huge discounts.—Below.

BOSCH Single, clock or anti, £3; Thomson-Bennett single or twin, clock or anti, 42, 45, 50, 55, and 180 degrees, £2/15; C.A.V. single or twin, clock or anti, £2/10; special long driving spindle for Rudge, fitted to any of the above magnetos, 10/- extra. Postage on the above 1/6 extra.

THESE Magnetos are fitted with variable ignition and leads, and are fitted with baseplates ready to be immediately fitted on. Please state make of engine when ordering.

GOVERNMENT Surplus.—New plugs in boxes: A.C. (Titan), 1/6 each; K.L.G., types F8, F6, F5, and R3, 1/8 each; Lodge, types R and R3, 1/8 each. Postage on orders of one plug 3d., four or more post free

HIGH-TENSION Wire, new, unperished: 9mm., 5d. per yard, 25 yard coil 8/6, postage on coil 1/-; 7 mm., 4d. per yard, 25 yard coil 6/-, postage on coil 9d.; 3 mm., 2d. per yard, 25 yard coil 2/6, postage on coil 6d. All goods on approval per return post on receipt of cash. Money refunded if not satisfied.

COUNTY of London Engineering Works, Ltd., 51a, New Park Rd., Brixton Hill, London, S.W. Tel.: Streatham 2898. T.A.: Ignitionac, Brixstret, London. [2472

RELIANCE Magneto Repairing Co. for repairs and new magnetos.—See below.

RELIANCE guarantee to return your magneto within 3 days, and if necessary 24 hours, with a written guarantee for 12 months.

RELIANCE test every magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE manufacture and stock spares for Thomson-Bennett, E.I.C., Splitdorf, U.H., Bosch, Dixie, etc.; special line genuine platinum screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice free of charge upon any qestion concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy that we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., E.C.1, for new and second-hand magnetos.—See below.

THOMSON-BENNETT Magnetos, new and unused, single-cyl., clock and anti, suit any machine, price 55/-; twins, 45, 48, 50, 55, 60, 180 degrees, for J.A.P., Clyno, Douglas, etc., price 55/-. See our guarantee.—Below.

C.A.V. Magnetos, new, single-cyl. and 180° twins, clock or anti, ideal for Douglas, Levis, Calthorpe, O.K., or any lightweight; these magnetos are of the finest workmanship throughout; price 55/-. See our guarantee.—Below.

BOSCH D.A.L. Magnetos, soiled only, otherwise as new, single cyl., suitable for any stationary engine or big single, £3/15; twins, any degree, ready to drop on Indian, Harley, or any big twin, £4/5; a powerful spark at low speed, ensuring easy starting. All the above magnetos are variable ignition and fitted short-circuiting switch. See our guarantee.—Below.

GUARANTEE.—Every magneto that leaves our works, no matter what the price or make, carries a written guarantee. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee every machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE Magneto Repairing Co. hold one of the largest stocks in London, and can be depended upon for a straight deal at the right price. When buying it pays to deal with a firm of repute.

RELIANCE cordially invite customers to their works to see any of the above on test. Magneto list giving full particulars sent upon application.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1. [6616

MAGNETO Sprocket Manufacturers; 7-tooth to 24-tooth from stock.—Ridington, Southampton St., Camberwell. [3002

DIXIE Magneto for Indian; Corbin-Brown speedometer, recently overhauled, rear drive; £2/5 each.—16, Deer Barn Rd. Guildford. [3231

DYNAMOS. Dynamos.—Lucas E3 6 v. 5 amp., specially made for motor cycles, new, £5/15; others, £5.—Jenner, 165, Church Rd., Mitcham. [5703

50° Dixie Magnetos, perfect spark, 50/- each; Splitdorf singles, 40/-; T.B. twins, from 45/-; others in stock.—D. and F., 39, Essex Rd., London, N.1. [4369

DASH Switchboards, 4-way, with ammeter, 20/-; with ammeter and voltmeter, 35/- each nett.—Leslie Dixon and Co. (Dept. H.1.), 9, Colonial Av., Minories, E.1. [0760

# BASTONES

Established 16 Years.

*No Better or cheaper House.*

**NEW CLEARANCE LINES, APPROVAL AGAINST CASH. CARRIAGE PAID.**

**WOOD-MILNE Key Grip COVERS**

26×2¼ } 3-ply Extra Heavy .. 16/6
26×2½ }

**GOODYEAR All-Weather Tread COVERS. Extra Heavy.**

26×2¼ Diamond Pattern .. 26/-

**GOODRICH Safety-Tread COVERS Extra Heavy.**

| | |
|---|---|
| 26×2¼ .. .. .. .. | 28/- |
| 26×2⅛×2¼ .. .. .. | 36/- |
| 26×2½ .. .. .. .. | 35/- |
| 650×65 .. .. .. .. | 40/- |
| 26×3 for 650×65 rim .. .. | 48/- |
| 28×3 .. .. .. .. | 48/- |

**CLINCHER Rubber Non-Skid COVERS.**

| | |
|---|---|
| 24×2¼ De Luxe Heavy .. | 23/6 |
| 26×2 .. .. .. .. | 23/6 |
| 26×2⅜ .. .. .. .. | 25/- |
| 26×2⅜ Extra Heavy .. .. | 27/- |
| 26×2½×2¼ Heavy .. .. | 30/- |
| 650×65 Dreadnought 3-ribbed | 39/- |
| 700×80 to fit 650×65 } De Luxe Extra Heavy | 47/- |

**MISCELLANEOUS COVERS.**

| | |
|---|---|
| 26×1¾ Best British Make .. | 14/- |
| 26×2 Englebert Passenger .. | 19/6 |
| 26×2¼ Hutchinson T.T. .. | 23/- |
| 26×2⅜ .. .. .. .. | 27/- |
| 28×3 to fit 28×2¼ } Best British Make .. | 45/- |
| 26×3 Englebert Rubber Stud .. | 25/- |
| 26×2⅛ Michelin Fine Ribbed .. | 21/- |
| 26×2½ Englebert (wired edge) .. | 25/- |

**Distributing Agents for the Famous MONTGOMERY SIDECARS**

**New 1922 Models in Stock.**

Montgomery Bo-Peep Sidecar Screen, easily fitted to any Sidecar .. £3 10 0
Easting Screens.. .. .. .. £3 18 0

Sidecar Bodies (various models) from £4 0 0

**TUBES.**

**Goodrich, Clincher, and Hutchinson.**

| | |
|---|---|
| 26×2¼ and 26×2½ .. | each 6/3 |
| 650×65 700×80 28×3 } .. .. .. | each 7/6 |

**Hours of Business—**
**9 till 6; Saturdays, 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

'Phone: 2481 North. 'Grams: 'Bastones, London'

## IGNITION, LIGHTING, ETC.

CHELTENHAM.—Repairs to magnetos, self-starters, lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham. 'Phone: 1256. [0758

LUCAS Dynamo Lighting Set, complete with all lamps and switch, 6 volt., ready to fit combination; £10.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [X4823

LUCAS Magdyno Set, complete, single £18/10, twin £20; Lucas E3 dynamo set, solo £12, combination £13/10; any part supplied separately.—Dalby, Baker St., Sparkhill, Birmingham. [4431

NORWICH.—Magneto repairs by London experts and despatched within 48 hours, with 12 months' guarantee; price rarely exceeds 35/-.—F. Chipperfield, 57, Prince of Wales Rd., Norwich. [4104

JEBRON, registered 291298, greatly superior to platinum, for blades, screws, etc., cures misfiring; Jebron screws, fit Bosch mags., 10/6 pair; old screws, any make, Jebronised, 4/9 each return post.

JEBRON, the pioneer motor contact, registered March, 1907, and March, 1921; hundreds of unsolicited testimonials.—Jebron, 38, Herbert Rd., Woolwich, S.E.18. [0001

ELECTRIC Light Bulbs for motor cycles and cars, one watt and half watt types stocked.—W. T. Clarke and Co., Ltd., Electrical Engineers, Silver St., New Oxford St., W.C.1. Price lists free. [2358

THOMSON-BENNETT Magnetos, new, guaranteed perfect, slightly soiled, single or 180° twin, variable ignition, switch terminal, clock or anti; £2; postage 1/6.—Brockbank, 58, Lord St., Southport. [0756

CONTINENTAL Ignition Repair Co.—We repair Continental magnetos only. By specialising on Bosch, U.H., Eisemann, Mea, Splitdorf, Dixie, and Berling magnetos, we can naturally give you better service.

PRICE: Rewinding 18/-, condensers 10/-, platinum screws (Bosch standard) 6/-, remagnetising 2/6, slip rings 6/6, H.T. terminals 4/6. Our price for overhauling a motor cycle magneto ranges between 20/- and 35/-, and never exceeds the latter figure. Guaranteed for 12 months, and redespatched to you in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardwick Rd., Chiswick, London. [3758

C.A.V. Magnetos: Extraordinary Bargains.—Brand new 180° twin or single-cyl., 39/6, carriage free. Every magneto thoroughly tested before dispatch; approval against cash.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [4149

U.H. Magneto Repairs.—We specialise in these magnetos, and can be relied upon to give you good service. A1, B1, AO, KB1, KB2V, KZ2V type spares stocked; prices moderate; 12 months' written guarantee.—Charles Parker and Co., Churchfield Rd., Acton, London. [4455

LIGHTING Dynamos, contained in Government surplus mine exploders, will light seven 10 volt lamps, all as new, 17/6 each; three days' approval against cash; 22/- each carriage paid pass. train; stamp, particulars.—Galpin, 35, Milton Court Rd., New Cross, London, S.E.14. [4040

MAGNETOS.—Surplus 400, new, with sets of spares, Bosch, C.A.V., B.E. Co., Dixie, E.I.C., Eisemann, Ericsson, G. and A., Hill, Morris Lister, Simms, Splitdorf, Thomson-Bennett; inspection in London.—Full particulars from Honeywill Bros., Machinery Department, 79, Mark Lane, London, E.C.3. [3759

SURPLUS Magnetos, with written guarantee one year: M-L single, 35/-; B.L.I.C. ditto, 42/-; Bosch ditto, 45/-; Thomson-Bennett and C.A.V. singles and twins, 50/-. We specialise in repairs and spares for all makes. Lists with pleasure. Deal with experts and avoid certain disappointment.—Whitdale Magneto Service, Cherry Orchard, Croydon. 'Phone: Croydon 1625. [3986

EX-GOVERNMENT Surplus Unused Magnetos: Thomson-Bennett single and twin, £2/12/6; C.A.V. single and twin, £2/12/6; Bosch singles, £3; Bosch sparking plugs, in boxes, 2/3; K.L.G., in boxes, 1/10; Eisemann, in boxes, 2/3; Bosch motor cycle dynamos, £6/10; magnetos for all makes. Name your cycle or cycle car when ordering.—The Central Ignition Works, 14a, Loughborough Rd., Brixton, London, S.W. [3868

THE Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government, and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can mostly return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock, all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1. 'Phone: Museum 1158. T.A.: Kumagnelec, Eusroad, London. [2445

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repairs and spares. All repairs are tested on an approved A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock; charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034. T.A.: Magdyno, Eusroad, London. [0263

## TYRES.

**5/6** is the cost of repairing your damaged covers; returned in 2 days.—Below.

DON'T Throw Your Old Tyres Away. We can fit a new tread, rubber studded, light 10/6, medium 12/6, heavy 17/6, extra heavy 20/-.—Below.

POST Your Tyre to-day to Phœnix Tyre Repairing Co., 224, Sherlock St., Birmingham. [X4815

MISS DOOLEY.—28×3 Dunlop butt-ended tubes and Palmer endless at 5/- each.

MISS DOOLEY.—26×3 Dunlop butted at 6/- each.

MISS DOOLEY.—26×3×2½ Moseley at 5/-. each.

MISS DOOLEY.—Please apply for above to Miss E. Dooley, 33, Killyon Rd., Clapham. [3396

NEW Retreads, 26×2½ 10/-, 26×3 12/6; stamp. —17, Heaton Rd., Mitcham. [4141

TYRES, all makes; cut quotation by return. It will pay you to write us.—17, Goldhawk Rd., Shepherd's Bush, London. [3978

CENTRAL Garage.—Covers, 26×2½ Dunlop 37/3, Goodyear E.H. 27/6, Palmer cord 25/-, Bates 31/6.—Below.

**26**×2⅝ Dunlop W.D., E.H., 40/-, Palmer E.H. 33/-, Clincher 27/6, Hutchinson 29/-.—Below.

**26**×2½×2¼ Dunlop 46/-, Clincher E.H. 30/-, Avon E.H. 30/-, Hutchinson T.T. 35/-, Wood-Milne heavy 30/-.—Below.

**28**×3 Wood-Milne E.H. 30/-, Clincher plain ribbed at 40/-; tubes, all sizes, 6/6; all covers sent on approval against cash, plus 1/6 postage.—Central Garage, 302, London Rd., Thornton Heath. [4274

**24**×2¼ Clearance Covers and Tubes, 22/-; Bates 26×2¼, special heavy, 30/-; carriage paid.—Davies, 20, Union St., Wednesbury. [4452

ECONOMIC Tyre Co.—Great reduction in covers and tubes. All goods sent on 7 days' approval, carriage paid, against remittance.

ECONOMIC.—24½2¼ (oversize 2in. rims) Clincher de Luxe heavy, 25/-, listed £2.

ECONOMIC.—26×2¼ Dunlop heavy, 37/3; Bates W.D., 30/-; Palmer W.D., 33/-; special heavy tubes, 6/-.

ECONOMIC.—26×2⅝ Bates special heavy W.D., 30/-; Hutchinson T.T., 29/-; special heavy tubes, 6/6.

ECONOMIC.—26×2½×2¼ Goodyear clearance, 42/6 Avon rubber stud extra heavy, 30/-; Clincher de Luxe, 30/-.

ECONOMIC.—650×65 Goodyear clearance, 30/-; 700×80 Goodyear clearance, 50/-; tubes, W.D., 6/-.

ECONOMIC.—Fully guaranteed Dunlop rubber stud, 24×2 22/6, 24×2¼ 24/9, 26×2 24/6, 26×2¼ 25/9.

ECONOMIC Tyre Co., 314, New Cross Rd., S.E.14 (near Town Hall). 'Phone: New Cross 1393. [1978

THE Difference between a good retread and a bad one is its mileage. Try us. Watch results.—Melton Rubber Works, Melton Mowbray. [0636

SCOTTISH Readers will find it advantageous to purchase their tyres from McArthur, Hill and Co., 47, Church St., Glasgow. Lists post free. [3940

MOTOR Cyclists.—Send your covers for retreading. 3,000 miles guaranteed. Repairs of every description; carriage paid.—Buxton Vulcanising Co., Buxton, Derbys. [4357

NEW Kempshalls, not W.D., 26×2½×2¼, 30/-.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton. (Half minute from Brixton Skating Rink.) [4387

BURST Motor Cycle Tyres, chafed beads, remoulded, made perfect, tube vulcanising, butt-ends fitted. retreading; send for list.—Melton Mowbray Rubber Works, Melton Mowbray. [0347

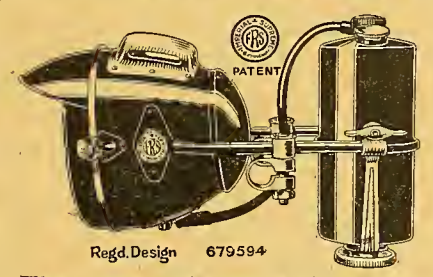
SPECIAL Line of Clincher Rubber Non-skid Covers, new, not W.D., 26×2½ (for 2¼ rims), 25/-; also 26×2¼, 16/-, including postage.—Mandes', 100, Gt. Portland St., W.1; Walsall and Exeter. [4527

TYRE Repair Specialists.—H.F. process throughout, including retreading burst covers. Every kind of repair to tyres and tubes in 24 hours, retreads in 4 days.—The Motor Tyre Co., 66, High St., West Bromwich. [3852

STARTLING Offer.—New Beldam covers, 26×2 or 2¼ 20/- each, 26×2½ 30/-, 28×3 35/-, 650×65 40/-, 700×80 45/- each; new Avon or Michelin steel studded covers, W.D., 700×65 35/- each.—The Homerton Rubber Works, Brooksby's Walk, Homerton, E.9. [0331

HERBERT ROBINSON, Ltd., Green St., Cambridge, Special Manufacturers.—Clearance bargains, 26×2¼ Pedley and Matchless, 15/-; 26×2½ Wood-Milne 15/-, Kempshall 30/-, Dunlop 32/6, Bates 32/6; 26×2⅝ Bates 32/6, Dunlop 32/6, John Bull 42/-, 28×3 Avon heavy 32/6, Cuthbe 47/6; 650×65 John Bull 45/-; Avon heavy 32/6, Bates heavy 47/6; 700×80 Bates 47/6, Cuthbe 55/-, John Bull 50/-. Best make inner tubes, all guaranteed, 5/6, all sizes; covers sent on approval with pleasure. [4502


# Complete Equipment for "1922" mounts

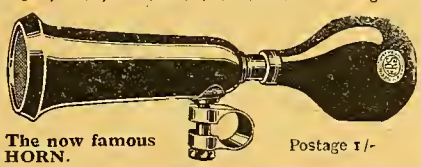



Regd. Design 679594

## The New STREAMLINE Set

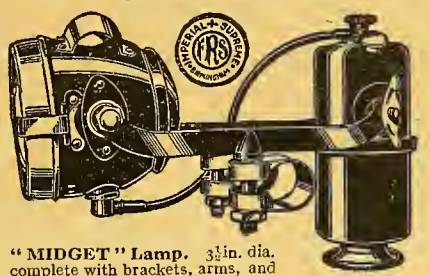
THIS was the finest lamp shown at OLYMPIA, and caused enormous comment—there was nothing offered at anything like the value. All sets are fitted with the wonderful, powerful, and record-beam F.R.S. Lens

5in., 45/-; 6in., 63/-; 7in., 99/- Postage 2/-

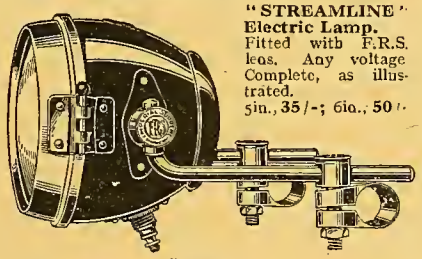


**The now famous HORN.** Postage 1/-

13in., 10/6; 15in., 18/6.

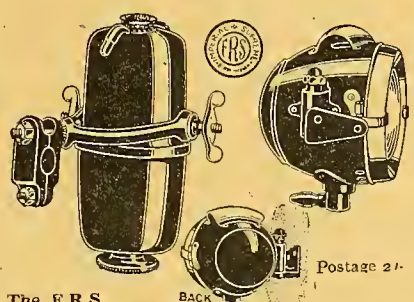


**"MIDGET" Lamp.** 3½in. dia. complete with brackets, arms, and clips. **21/9.** Postage 1/-



**"STREAMLINE" Electric Lamp.** Fitted with F.R.S. lens. Any voltage Complete, as illustrated. 5in., 35/-; 6in., 50/-

Postage 2/-



**The F.R.S. Sidecar Set, 25 -** BACK VIEW Postage 2/-

**F.R.S LICENCE HOLDER.**

All Brass. Any finish. Adjustable to any position. Patent One Nut attachment. 5/-. Postage 6d.

**F.R.S. LAMPS, Vere St., Birmingham**


## TANKS.

TANKS for B.S.A., new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [3267

TANKS for Triumph, new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [3268

TANKS Renovated, makers' designs, transfers; 13/6. —Whitworth's, Motor Engineers, 7, Jamaica Row, Birmingham. [4107

COVENTRY Tankers, Ltd., makers to the principal manufacturers; petrol tanks for any style supplied, extra capacity.—Hearsall Works, Coventry. [3269

DOUGLAS 4h.p. Tanks, latest type (rounded edge), enamelled makers' colours, brand new; £2/18.—Park Works, 1a, Paradise Rd., Highbury, N.5. [4111

TANKS Made or Repaired, re-enamelled, lined, transferred; handle-bars, etc., plated. Established 30 years.—Attwood's, 86, Rosebery Av., London, E.C.1. [6997

TANKS Re-enamelled to Pattern. High-class work only.—D. Jenkins and Sons, 6, Richard St., Atkinson St., Deansgate, Manchester. Established 25 years. [3601

**48** NEW Tanks, latest pattern, Best and Lloyd fittings and pump, 1¾ gal. petrol, ½ gal. oil; 40/- each.—Nesma Motors, 429b, King's Rd., Chelsea, S.W.10. [4118

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Tanks repaired, re-enamelled in makers' colours from 21/-; returned as new. New tanks, any make, from stock. [4499

TANKS Re-enamelled, makers colours, design and transfer, first-class work; prompt return.—Donalds, Enamellers to the Leading Manufacturers, 138, Glover St., Deritend, Birmingham. [X4404

DOUGLAS Riders.—Latest tapered (rounded edge) 2¾h.p. tanks, complete with drip feed, enamelled makers' colours, brand new; £3/19; will fit any model. —Park Works, 1a, Paradise Rd., Highbury, N.5. [4112

TANKS Repaired, re-enamelled, makers' latest colours, designs, and transfers guaranteed. Dents obliterated, seam, fastening, partition repairs, etc. Quick service.—Park Works, 1a, Paradise Rd., Highbury, London, N.5. [313]

TANKS of every description replaced, repaired, and re-enamelled at our own works; all kinds of fittings stocked; quick service and reasonable charges. Illustrated list free.—A. Green, Water St., Chapel St., Salford, Manchester. Tel.: 2191 Central. [0256

AVERY'S Stock Tanks for Douglas, Hazlewood, B.S.A., Triumph, Omega, enamelled makers' colours, plated fittings, 40/-, complete; other design or shape to order. 12 months' guarantee with every tank.—Gordon Street Tank Works, Coventry. 'Phone: 1774. [X4897

## BELTS.

NEW Clipper Belts.—8ft.×¾in. 11/6, 8ft. 6in.×¾in. 13/-, 8ft. 6in.×⅞in. 14/-, 8ft. 6in.×1in. 16/9.

W.D. Belts, 6ft. 6in.×⅞in., 10/-; new Pedley belts, clearance, 6ft. 6in.×¾in., 10/-; clearance belts, 6ft.×1in., 8/6.

H. EMANUEL and Co., Tyre Factors, 27, Belgrade Rd., Stoke Newington, N.16. Stores: 37a, Balls Pond Rd., Dalston, London, N. Tel.: Dalston 3161. [0726

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Dunlop belt, round top, ¾in. 1/10ft., ⅞in. 2/2ft., 1in. 2/8ft., 1¼in. 3/2ft.; John Bull ¾in. 1/11ft., ⅞in. 2/3ft., 1in. 2/8ft., 1¼in. 3/2ft.; any length cut. Pedley 6ft. 6in.×¾in., 10/-. [4493

## CARBIDE.

CARBIDE, 20/- per cwt., on rail Bristol.—Hine. Carbide Dealer, Hemyock, Devon. [X4719

FINEST Carbide, cwt. lots 22/6, f.o.r., c.w.o.; packed in lb. tins, gross or half gross lots, 5/9 per dozen. —Sports Depot, Denby Dale, Huddersfield. [2443

CARBIDE, highest quality, 22/- cwt., 15/- ½ cwt., 9/6 28 lb., 5/6 14 lb., carriage forward, drums free.—Kemp's Garage, Importers, Louth, Lincs. [X4789

BEST Quality Carbide, 24/- per cwt., 28 lb. 8/6, drums free. Any quantity supplied from ½ lb. tins to 2 cwt. drums. Only the best brands stocked. Trade enquiries invited.—Dargue, 57, Grey St., Newcastle-on-Tyne. [6900

CARBIDE, guaranteed maximum gas yield, British Acetylene Association standard, 21/6 cwt., drums free, all meshes; stock at 22 depots; immediate delivery.—Elloc Cycle Works, Importers, Gedney Drove End, Wisbech. [3590

CARBIDE, finest quality, giving 100 per cent. pure gas yield, all sizes, cwt. 26/6, ½-cwt. 16/3, 28 lb. 9/6, drums free; support the old firm; established over 30 years; satisfaction guaranteed.—Young, Importers, Misterton, Somerset. [9557

CARBIDE.—Immediate delivery of all sizes in 1 lb., 2 lb., 4 lb., and 7 lb. lever lid tins, and 2 cwt. drums, labelled or plain for retailers' own labels, quality guaranteed, and all standard sizes supplied by the cheapest firm in the trade.—The Premier Lamp and Engineering Co., Ltd., Moorfield Works, Armley, Leeds. [3286

CARBIDE, finest quality obtainable, brilliant, lasting, 25/- cwt., drum free, cash with order, free on rail, Aberdeen, Bristol, Cardiff, Edinburgh, Glasgow, Gloucester, Grimsby, Hull, Leeds, London, Lowestoft, Liverpool, Lincoln, Manchester, Newcastle, Preston, Port Talbot, Runcorn, Sharpness, Swansea, Yarmouth.—E. C. Maddock, Wareham, Dorset. [3761

## PATENTS.

WE Buy, Sell, and Finance Inventions and Patents, and advise on their marketing.—Send postcard for full particulars to Dept. C, Inventors' Sales Agency, 22-24, Spencer Av., Coventry. [3717

## PATENT AGENTS.

CONSULTING Patent Agency, 253, Oray's Inn Rd., London.—Aero and aircraft engines. [2416

J. E. S. LOCKWOOD, 3, New Street, Birmingham. 'Phone: 5816 C. Patents guide free. [9057

PATENTS Advice, handbook free.—King, Registered Patent Agent, 146a, Queen Victoria St., E.C. 35 years' references. [0129

W. BRYSON, B.Sc., Assoc.M.Inst.C.E., Chartered Patent Agent, 29, Southampton Buildings, London, W.C.2. 'Phone: Museum 3651. [9242

H. N. & W. S. SKERRETT (H. N. Skerrett, Fellow of the Chartered Institute of Patent Agents, A.I.Mech.E., A.I.A.E., Associate I.E.E., etc.; W. S. Skerrett, A.I.E.E., Registered Patent Agent).—Patents, designs, and trade marks.—24, Temple Row, Birmingham. Tel.: Central 1038. T.A.: Skerrett, Birmingham. [1534

## AGENCIES.

THE Mohawk Cycle Co., Ltd., require sole agents for their celebrated motor cycles in districts where they are not already represented. Trade only.—Write for lists and terms to the Mohawk Cycle Co., Ltd., 248, Alexandra Rd., Hornsey, N.8. [6245

SLADE-J.A.P. Motor Cycles, £55. Sole agents required in districts where not already represented. These machines will take the market by storm. Specification—2¾h.p. J.A.P., 2-speed kick start, B. and B. carburetter, drip feed, etc.; sell at £55 retail.—Terms from Whittles Motors, Longsight, Manchester. [4621

## CONSULTING ENGINEERS.

MACHINES Purchased for Clients in any part of U.K.; expert examination.—Tonge, Holmsfield, Sheffield. [3997

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at competitive rates.—Ernest Bass, 40, Chancery Lane, W.C.2. 'Phone: Museum 2234. [0005

ROYS, Ltd., Insurance Brokers.—Agents for all companies and Lloyd's. Insurance of every description effected. Enquiries invited.—170, Gt. Portland St., London. [0055

£4/5/6 secures Full Policy for Cycle Cars, Morgans and the like up to £175 value; £3/5/6 covers 4h.p. combinations; £4 covers 6h.p. combinations. Prompt settlement. Immediate cover.—John Clements and Co., Insurance Brokers, 65a, Holborn Viaduct, E.C.1. [4473

"THE Motor Cycle" Insurance Policy is the policy authorised by "The Motor Cycle," and covers motor cycles or cycles and sidecars used for private purposes. Complete comprehensive cover. Maximum benefits, minimum rates. Full particulars and prospectuses on application.—The Autocar Fire and Accident Insurance Co., Ltd., 77, Cheapside, London, E.C.2. [0007

## BUSINESSES AND PROPERTY FOR SALE, TO BE LET, OR WANTED.

FOR Sale, small motor cycle repair business, suit ex-Service man with little capital, genuine, good reasons for disposal; Earl's Court district; full particulars stamp.—Box 8,052, c/o *The Motor Cycle.* [3900

CYCLE, motor, and engineering business (small), stock includes cycles, motor cycle, motor lorry, accessories, screw-cutting lathe, tools, forge vices, immediate possession; situated North London; all at £325.—Box 8,093, c/o *The Motor Cycle.* [4509

MOTOR and Cycle Agency and Repairing Depot for sale; cycle, motor cycle, and Ford parts stocked; car for hire. Price, including stock, goodwill, fixtures, also 22h.p. Darracq landaulet, £800. Situated main road 10 miles North London.—Box 8,075, c/o *The Motor Cycle.* [4014

## FINANCIAL.—PARTNERSHIPS.

ACTIVE Partnership Required in motor cycle or car repair business. Capital available. Midlands preferred, but not essential.—Reply in confidence, Box 7,983, c/o *The Motor Cycle.* [3381

## SITUATIONS VACANT.

TRAVELLERS Wanted, commission basis; connection necessary with garages.—Collyer, Manufacturer, 78, Snell's Park, Edmonton. [4328

## PERSONAL.

WOULD the Mr. Comyn who purchased a 4h.p. Triumph motor cycle from the Marble Arch Motor Exchange, 135, Edgware Rd., W.2, on 14/11/21, communicate with the advertisers? [4517

## GENERAL TRADE.

AUCTION Sales.—Palmer's Garage, Tooting, the oldest solely motor auction rooms in London. Terms 7½%, not chargeable if machine unsold. Motor cycles and cars bought and sold for cash. Nearest goods stations, Falcon Lane, L. and N.W.R.; Wimbledon, L. and S.W.R. and G.W.R.—Sole address: Palmer's Garage, Tooting, London. [4469


THE MOTOR CYCLE

*Insurance Policy*

# Testimony

THIS space will be occupied each week with copies of letters from Policy holders who have made claims. Original letters may be inspected.

*Dear Sirs,*

*I have to-day received your cheque for . . . in settlement of account for repair to my car. Please accept my best thanks for your prompt and courteous handling of the matter.*

*Yours faithfully,*

***The only Safe Test of Insurance is Claims. We settle Claims promptly.***

The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED

*(Incorporating The Autocar Insurance Department, Established 1904).*

Head Office:

**77, Cheapside, London, E.C.2.**

*Telephone: City 9831 and 9832.*
*Telegrams: "Autoinsure, Cent, London."*


## WANTED.

P. and M. Spares.—See advt. Motor Cycles Wanted.—Kemp. [3879

4-CYL. F.N. Engine, automatic inlet.—Grant, 1, Ainsworth Rd., Croydon. [4108

650×80 mm. Cover, new or second-hand.—Burnett, Hounsdown, Totton, Hants. [4512

WANTED, coach sidecar, suit 3½h.p., cheap.—Thornley, Boreham Wood, Herts. [X4747

ENGINE, about 2½h.p., 4-stroke, perfect.—207, Railton Rd., Herne Hill, London. [4301

BACK Axle and 8h.p. Motor Wanted for Cycle Car.—Motor, 1, Auburn Rd., Bristol. [4240

WANTED, Albion gear, 2-speed, clutch, K. starter.—279, Sandycombe Rd., Richmond. [3987

MORGAN, water-cooled, condition immaterial.—A., 143, Ravensbury Rd., Earlsfield, S.W.18. [4389

WANTED, C.B. sidecar, complete, or body, good condition; cash waiting.—Gold, Ramsgate. [3887

WANTED, a second-hand D.A. cylinder and clips.—State price, Box 8,076, c/o *The Motor Cycle.* [4015

WANTED, American X back wheel, complete.—Uyffeuler, 2, Woburn Place, London, W.C.1. [3854

£5 Offered for Sturmey-Archer 3-speed gear box.—Brown, 18, Hazel Grove, Hucknall, Nottingham. [4050

WANTED, coachbuilt sidecar or body; also 26×2 tyre.—Forrester, 13, Hunter St., Shrewsbury. [4181

SIDECAR, Harley 2-seater, hood, screen; or exchange torpedo and cash.—Lomas, 194, Harold Rd., Hastings. [4042

WANTED, genuine B.S.A. sidecar, in good order, complete with wind screen.—Deely, Horton Hospital, Epsom. [3903

WANTED, folding sidecar, Hopley or Paragon, Hopley preferred; also Tan-Sad.—50, Alverstone Rd., Portsmouth. [3926

WANTED, Low acetylene generator, light car size, in working order, for combination.—Steggall, Scorton, Yorkshire. [3982

WANTED, 5-6h.p. twin engine, m.o.v., also Bowden gear box; cheap for cash.—Day, Hills Place, Rusper, Sussex. [3927

WANTED, silencer and magneto timing cover for 1914 4¼h.p. Precision.—Warwick, 36, Radnor St., Peckham. [4087

3½h.p. or 4h.p. Single J.A.P. Engine, overhead valves preferred; must be perfect.—J. L. Smith, Christ's College, Cambridge. [3962

WANTED, Harley-Davidson parts, sidecar chassis for same; repairs not objected to.—2, Fortunegate Rd., Harlesden, N.W. [3588

MAGNETOS and Spare Parts, platinum screws, etc., wanted, any condition.—Charles Parker and Co., Churchfield Rd., Acton. [4135

STURMEY-ARCHER Gear Cases, ⅝×¼ chains, ¾in. ×7-16in.—R. G. Gamble and Co., 13, Somers Mews, Edgware Rd., W.2. [4201

WANTED, steel balls, any quantity, 3-16in., ¼in., and 5-16in.—Cromwell Engineering Co., 327, Putney Bridge Rd., S.W.15. [3308

HARLEY-DAVIDSON Parts, in single lots, quantity; crashed or incomplete machines—670, High Rd., Tottenham, N.17. [3977

STURMEY 3-speed K.S. Gear Box, perfect order, to fit Triumph; also back stays, etc.—Clarke, 262, Callais Rd., Burton-on-Trent. [3843

STURMEY-ARCHER J.S. or Armstrong VII. wheel, 26×2½ rim, perfect, all controls.—Cox, 5, Staff Quarters, West End, Aldershot. [3928

WANTED, good up-to-date second-hand motor cycle accessories; state particulars and price.—Service Co., 292, High Holborn, W.C.1. [0671

WANTED, sidecar body, good condition, C.B. preferred, suitable underslung chassis, cheap.—W. Appleton, 5, Castle St., Sligo. [4241

WANTED, 4h.p. Douglas, 1918 forks, 1920 clutch, gear box, bottom crank case, induction pipe.—Osbourn, Campbell Rd., Bedford. [3959

WANTED, second-hand Morgans, Rovers, and G.N.'s, in good condition.—A. P. Rey, 378-384, Euston Rd. 'Phone: Museum 6436. [3593

WANTED, bankrupt stocks, W.D. spares, incomplete P. and M.'s or parts.—Inman, Durham Rd., Seaforth, Liverpool. 'Phone: Waterloo 296. [3597

WANTED, countershaft Triumph parts; also Sturmey-Archer gear box parts, any condition.—Ward and Co., 51, Upper Richmond Rd., Putney. 'Phone: 2754 Putney. [4474

P. and M. Parts wanted: Chains, exhaust pipes, filler caps, gear operating chains, kick starts, and chain, valve caps, front brakes; second-hand preferred.—S. E. Porter, Whitchurch, Salop. [3865

WANTED, De Luxe Morgan, w.c. M.A.G., 1921 or new, in exchange for 1920 Douglas combination, new condition and appearance, full equipment, value £100, cash adjustment.—Woodside, Robinhood Lane, Sutton, Surrey. [3880

## WANTED.

WANTED, for countershaft Triumph, timing side of crank case, or complete crank case; also Sturmey gear box case, or complete gear box if cheap.—Hole, 129, Park Lane, Carshalton. [4247

WANTED to Purchase Outright for cash, bankrupt stocks. W.D. spares, miscellaneous spares. Send full particulars.—McNeille and Platt, 57, Gt. George St., Liverpool. 'Phone: 1092 Royal. [2489

FOR 1913 2¾h.p. Sunbeam, frame centre only (i.e., without fork or rear wheel brackets, engine plates, etc.), in thoroughly sound condition; broken and brazed article not wanted; also leakless tank and rear stand for same machine; moderate prices.—Write, Iyangar, c/o Godfreys, 208, Gt. Portland St., W.1. [3321

ENGINES Wanted.—We are in the market for a number of air-cooled engines for stationary work, about 80mm. bore by 80mm. stroke, 4-cycle, fitted with governor if possible; no magneto or carburetter. Prepared to pay round about £12 each.—Send full particulars to Box 8,078, c/o *The Motor Cycle*. [4023

## EXCHANGE.

INDIAN 5-6h.p., 3-speed; lower power and cash.—T., 52, Brodrick Rd., S.W.17. [3819

HEAVY Power Lathe, 8ft. bed; exchange for Levis. 14, Phœnix St., Euston, N.W.1. [4060

2¾h.p. Douglas Combination, perfect, for good 3½h.p. solo, or sell £45.—56, Ormeley Rd., Balham. [3896

MORGAN; exchange solo and cash. See Runabouts. —Preston, Lambton St., Monton, Eccles. [X4863

1916 6h.p. Zenith-Jap Combination; £65, or exchange for Rudge Multi.—Horner, Tolney Lane, Newark. [3893

6h.p. Clyno Coachbuilt Combination for good lightweight, or sell £35.—164, Leeds Rd., Shipley. [X4862

DYNAMO, house lighting, 110 volt, for lightweight, good make.—Chandler, 1, Lansdowne Rd., Chatham. [3913

LATHE, ⅞in. turret, complete, for modern lightweight cycle.—82, Caledonian Rd., London, N.1. [4085

BRADBURY 4h.p., 1914, 2-speed, kick start; accept £10 and another.—Box 8,096, c/o *The Motor Cycle*. [4518

SIXTY Cars for Exchange; postcard procures list. Call.—Douglas S. Cox, Motors, West Norwood. [4451

A.V. Monocar for post-war Triumph, or similar combination; sell £70.—Rumney, Whitley, Warrington. [3827

12 BORE Hammerless Ejector; £21; exchange motor cycle; approval.—10, Mount St., Walsall. [4156

3¾h.p Scott, perfect, fast, equipped, for lightweight.—Clark, Long Sutton, Langport, Somerset. [4131

EXCHANGE cycle and motor cycle accessories, for violin, how, and case.—Box 294, c/o *The Motor Cycle*. [X4760

CLOSING.—£50 cycle stock; exchange combination, cash adjustment.—Jeavons, Draper, Lye, Stourbridge. [X4829

2¾h.p. Douglas, 2-speed, uncrated 1919, accessories, 2¼ unscratched; exchanges invited.—63, Solon Rd., Brixton. [4054

EXCHANGE 1915 Water-cooled Humberette, fully equipped, for combination.—24, Geraldine Rd., Chiswick. [4353

EXCHANGE 1921 2¾h.p., 2-speed, 2-stroke, perfect, for combination; sell £46.—Kemp, 27, Westmorland Rd., S.E.17. [3908

MORGAN, a.c., 1915 sporting, smart; exchange for combination, or solo and cash.—143, Ravensbury Rd., Earlsfield, S.W.18. [4391

3½h.p. 1913 Hub Gear, Triumph, for higher power, cash adjustment; sell £30; new tyres, tubes, etc. —24, Bathurst Rd., Norwich. [3912

EXCHANGE twin 2-speed coachbuilt combination and 2¾h.p. lightweight (lot), for good Ford van.—Box 295, c/o *The Motor Cycle*. [X4761

ALLDAYS 12h.p. 4-seater, modern body, unscratched, remarkably good condition; any exchange considered.—63, Solon Rd., Brixton. [4053

EXCHANGE 1914 2¾h.p. Douglas, perfect order, and cash for countershaft Triumph, not earlier than 1917.—Barlow, Ramsey, Hunts. [4205

EXCHANGE 1921 A.V. for combination or solo.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3647

DOUGLAS 2¾h.p., 1917, excellent condition, fully equipped, licensed; exchange higher power.—17, Sussex Rd., New Malden, Surrey. [4086

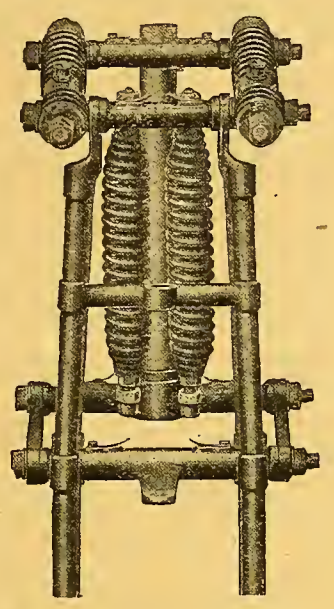
SPORTING Monocar, 3-wheeler, discs, absolutely reliable, good tyres; trial; exchange motor cycle; sell £39.—3, Addiscombe Grove, Croydon. [4388

HALIFAX.—50 second-hand machines and combinations; keen exchanges; get list.—Halifax Motor Exchange, Horton St., Halifax. [4019

RUDGE Multi, I.O.M., 1920, unpunctured, speedometer, tax paid, and cash, for A.B.C., Scott, 3-speed Douglas.—A., 6, Essex Grove Walthamstow, E.17. [4095

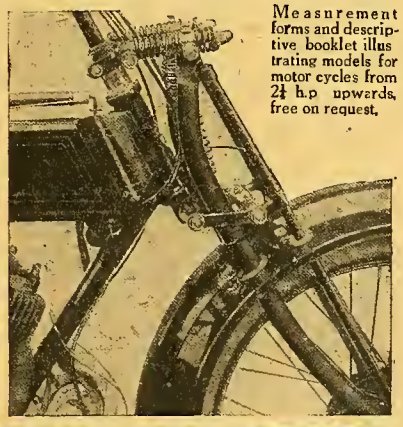

The BRAMPTON

Bi-Flex SPRING FORK



SINCE a spring Fork can only absorb vibration and shocks effectively in the direction in which it is capable of movement, the liberal margin of movement in both the horizontal and vertical planes which the exclusive design of the Brampton Bi-Flex facilitates, will be readily appreciated. The Brampton Bi-Flex Spring Fork is instantly responsive to, and completely absorbs within itself, all vibration and shocks from every angle at which resistance is encountered, rendering the rider immune from discomforts which are otherwise impossible to entirely eliminate.

BRAMPTON BROS., Ltd.,
Oliver Street,
BIRMINGHAM.



Measurement forms and descriptive booklet illustrating models for motor cycles from 2¼ h.p upwards, free on request.


## EXCHANGE.

1920 7-9h.p. Indian Solo, perfect condition, for 8h.p. sports Zenith or single (Blackburne engined).—B. P. Jackson, 2, East View, Preston. [3856

RUDGE Multi, 1920, scarcely used, complete with all accessories; exchange lightweight and cash, or sell £65.—198, King St., Hammersmith. [4067

CARDEN, 1919, 8h.p. J.A.P., Sturmey 3-speed, excellent condition, taxed; £55; exchange combination.—Particulars, Holmes, Slinfold, Sussex. [3895

NEW HUDSON 2-stroke, 2-speed, June, 1920, as new; exchange for machioe capable of taking sidecar.—Lee, Drewitts Farm, Amberley, Sussex. [3911

EXCHANGE Flanders delivery van, smart, fine order, for recent solo or combination; sell £80.—Lewis, 44, Grosvenor St., Ladywood, Birmingham. [X4873

EXCHANGE 2 Manual Reed Organ, 14 stops, etc., with cash, for late combination or Morgan; letters.—Page, Roseneath, Whyteleafe, Surrey. [4047

EXCHANGE Leather Flying Coat and Easting Screen for good gent's, cycle, or sell cheap.—Spurling, 8, Courthope Rd., Hampstead, N.W.3. [4045

ARGYLL 15.9h.p., good running order, touring and brake bodies, dual ignition; £70; exchange solo or combination, cash adjustment.—53, Bridge St., Taunton [4128

ITALA 14.7h.p. 4-seater, starting and lighting, all on, good condition, accept solo or combination part exchange, or sell £250.—Barton, Sussex Rd., Erith. [3838

EXCHANGE Rover, 8h.p., 1922, brand new, for combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3645

EXCHANGE 1922 Coventry Premier, brand new for combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3650

EXCHANGE 1918 2½h.p. Monopole, beautiful condition, and 3 good magnetos, for Scott combination, 1914 or 1915, any condition.—Smith, 20, Park Crescent, York. [3877

BROUGH 1920 6h.p. Combination, almost new, climb anywhere; cost £200; exchange A.B.C. solo and cash.—Write Skidmore, 18, Chatsworth Gardens, Acton, W.3. [3874

YOUR Motor Cycle taken in part exchange for any car in stock. Good selection.—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391. Easy payments. [4523

EXCHANGE 3½h.p. Rover combination, splendid condition, fully equipped, for R.A.F. P. and M., or twin, or sell £45; genuine.—18a, High St., Putney, S.W.15. [4196

ADVERTISER requires Triumph in exchange for 1919 Metro-Tyler and 7-9h.p. T.T. Indian, cash adjustments; particulars.—Borrow, Cowplain, Cosham, Hants. [3813

A.C. 10h.p. Car, 1915, clover body, first-class condition, insured; exchange combination and cash. Enfield or Zenith.—9, Thanet House, Upper Park St., N.1. [4347

EXCHANGE Your Present Machine for a new car or motor cycle through the Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3651

MUSIC Hall Artiste wishes to exchange his Star landaulet for a good combination or small 2-seater. No dealers entertained.—14a, Loughborough Rd., Brixton, London, S.W. [3867

F.O.C.H. are noted for fair exchanges.—Fair Offer Car House, 5, Heath St., Hampstead. (Near tube.) 'Phone: Hampstead 3752. Hours: 9-7, including Saturdays. [3373

EXCHANGE S.H. 2¾h.p. Douglas crankshaft, connecting rods, piston, timing pinions, two 26×2¼ covers, Lambert typewriter, for anything useful.—Stinchcombe, Berkeley, Glos. [4199

EXCHANGE, higher power, 3½h.p. Premier black and gold combination, countershaft, wide tank, B. and L., lavishly equipped, valued £78.—17, Worthington St., Leicester [3956

1920 4¼h.p. B.S.A. Combinationf or sale, perfect condition; £90; old Morgan taken in part exchange or similar cycle car; condition immaterial.—Wynn, Widney, Solihull. [4105

5-6h.p. Sporting Indian Combination, also similar T.T. solo, for Morgan, higher powered combination or sell; private owner; full particulars.—Crombie, 86, Southgate Rd., Sheffield. [3833

1920-21 8h.p. A.V. Monocar (2-seater), original tyres, lighting set, Klaxon, hardly used, guaranteed perfect, for Harley combination, or good solo and cash; sell £85.—89, East Hill, Wandsworth. [4078

EXCHANGE 1918 6-8h.p. Campion-Jap, Sturmey 3-speed, K.S., new Swan sporting sidecar, fine all-red sporting combination; lighter machine and cash.—29, Pembroke St., Cowley Rd., Oxford. [4132

BROUGH 3½h.p., 3-speed, 1916, ridden one season; exchange lightweight and cash, sell £70; new sheet metal sidecar, £15 extra; evenings 6-7.—120, Marlborough Flats, Walton St., Chelsea, S.W.3. [X4874

1919 Special T.T. Model B.S.A., competition winner, very little used, and in excellent condition throughout, in exchange for any good lightweight machine, 1919-20.—Showell, Hadlow, Bridle Rd., Purley. [3990

## EXCHANGE.

HOBART, 2¾h.p. J.A.P., K.S., countershaft, practically new, under 1,000 miles; for higher power late model countershaft, N.U.T., Triumph, Norton preferred.—Ridgway, Navigation Rd., Northwich. [X4764

EXCHANGE 1918 Singer 2-seater, with dickey, dynamo lighting, self-starter, new condition, for combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3646

INDIAN Frame, with wheels complete, good tyres, tank drip feed, Bosch magneto, less contact breaker, Harvey-Frost vulcaniser, with tools, etc.; £20; exchange 2-stroke, cash adjustment.—2, Greenbrook Terrace, Taunton. [4127

EXCHANGE Flanders small 4-seater, appearance as new, 5 lamps, horn, front and rear wind screens, Stepney, tyres as new, tax paid; sell £95, or combination and cash. — 6, Albert Rd., Peckham, S.E.5. [4051

MOTOR Tuition.—Correspondence school for disposal. 500 complete courses, prospectuses, etc. A sound investment. Exchange for Douglas 2¾h.p., 2-speed, or good 2-stroke, or sell for cash.—Full particulars, Laird, Tavistock. [3910

EXCHANGES a Speciality.—Motor cycles taken in part exchange for small and large 2 and 4-seaters; bargain prices.—Seabridge, Hansler Rd., East Dulwich. Hours 10-5.30, or appointment (not Sundays). Sydenham 2452. [3671

EXCHANGE.—Salvage from fire, 1916 Henderson 4-cyl. (barring 1-cyl., induction pipe, inlet port, mag., and tank injured, all the rest very good), for late model coach sidecar to suit chain Triumph.—Richardson, Fareham, Hants. [3841

EXCHANGE Sturmey-Archer 3-speed and clutch and neutral gear and wheel complete, off 1913 Bat, all in perfect condition, for Philipson pulley; must be perfect. for 6h.p. J.A.P., or sell.—Apply, Seven Dials Motor Cycle Depot, Brighton. [3909

WANTED, good combination, or solo and cash, for late Bleriot Whippet 2-seater, hood, screen, dynamo lighting, outside starter, sporting body, electric horn, perfect condition; inspection any time; value £95 (cost £250).—Parwood, 89, East Hill, Wandsworth. [4077

EXCHANGE Calthorpe Coupe, 10h.p., dynamo lighting and starter, repainted, speedometer, most exceptional condition, for first-class motor cycle or combination and cash; would sell £190.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [4447

## REPAIRERS.

ANY

ARMSTRONG or Sturmey-Archer Gears Repaired promptly and efficiently.—County Engineering Co., Hounslow. [0517

WHITTALL for Welding. Aluminium experts. Prompt delivery.

WHITTALL.—Pistons complete for Triumph, Premier, J.A.P., Bradbury, B.S.A., Douglas, Sunbeams, etc.; 14/- to 24/-, on approval, exact to pattern.

WHITTALL.—Cylinders reground and new complete pistons fitted from £2, perfection guaranteed. Twelve years' first-class reputation. Pistons to pattern or sketch.—Whittall Machinists Co., Whittall St., Birmingham. [0017

C. R. FOSTER, of Leeds, is the original cylinder grinding specialist.

CYLINDER Grinding by Foster, of Leeds, has no equal. Price, complete with piston, from £2.

£1,000 is the value of the machine and equipment that will grind your cylinder at our works.—Foster, of Leeds, 170, Cardigan Rd. [0003

PISTONS, new, complete with rings and pin, J.A.P., Triumph, etc.; 19/-.—Below.

CYLINDERS Ground, work guaranteed, 17 years' grinding experience. Support the firm who brought the prices down. Brico rings fitted. Write for copy testimonials and prices.—Kendall and Co., Engineers, Stoney Stanton Rd., Coventry. [X4816

ARMSTRONG and Sturmey-Archer Gear Specialists. Repairs while you wait.—Tavistock (below).

ARMSTRONG and Sturmey-Archer Gears completely assembled for 6/- in 2 hours.—Tavistock (below).

ARMSTRONG and Sturmey-Archer Parts at cut prices by return of post.—Tavistock (below).

GEARS, shafts, valves, etc., for car or cycle, made promptly.—Tavistock (below).

GEARS.—Send all gear repairs and replacements to Tavistock Engineering Co., 254a, Portobello Rd., North Kensington, London. 'Phone: Park 643. [3719

ENGINE Overhauls, quality work only, cylinders reground, pistons, valves, bushes, etc.—Below.

PISTONS for every standard motor cycle in stock from 14/- each.—Below.

CYLINDER Grinding, our speciality 2¾h.p. Douglas reground, fitted with new piston, rings, and gudgeon, 25/- each.—Below.

TRIUMPH, J.A.P., Bradbury, and all 3½h.p., 4h.p., cylinders reground and fitted new piston, rings, and gudgeon, 35/-; returned in 48 hours.—Below.

QUALITY and Satisfaction is our motto. Entrust your work to specialists and get a guaranteed repair. — C.M.D. Engineering Co., Leamington Spa. 'Phone: 768. [9659

# The Utmost Economy . . .

*Whatever the amount you may have to spend upon a motor cycle or light car we can show you how to get the best possible value for your outlay, both at the time of your purchase—and afterwards.*

*Write us, and let us advise you as to the machine or car best suited to your needs. Let us also explain to you how our unique methods of business make for "the utmost economy" for our customer in every sense of the word; and, if you want to cut your initial expense to a minimum, ask for our list of special bargain machines—all in the finest running order, carefully tested and tuned by us, and sold with our guarantee.*

*We can supply to any part of the country, on cash, or most favourable extended payments or exchange basis. Immediate delivery of following 1922 models.*

***ARIEL, B.S.A., DIAMOND, DOUGLAS, EDMUND, ENFIELD, HUMBER, INDIAN, MASSEY-ARRAN, MATCHLESS, NORTON, RUDGE, SCOTT, SUNBEAM, TRIUMPH and VELOCETTE Motor Cycles —also BELSIZE-BRADSHAW, CROUCH, ROVER, WOLSELEY Light Cars.***

# Layton Garages

**J. W. TOLLADY,**
General Manager.
**90, High Street, OXFORD,**
**and London Road, BICESTER.**
'Phone: 581 & 784, Oxford.
Phone: 35, Bicester.
'Grams: "Integrity," Oxford and Bicester.

## REPAIRERS.

HUB Gears.—Great reductions in prices of replacements for Sturmey-Archer and Armstrong gears.

HUB Gears.—Wheels repaired and returned within the week; send for latest price lists.

HUB Gears.—Why pay an extortionate price for fitting a few new parts to an old gear?

HUB Gears.—We undertake to supply the complete new internal portion of the gear mechanism less main driver for £5.

HUB Gears.—A. F. Lewis, Charlestown, Weymouth. Look out for the Lewis patent 2-speed countershaft gear and clutch [0747

WELDING Aluminium Crank Cases, gear boxes by experts; immediate attention; seasonable prices.—Below.

WELDING Broken Cylinders, flanges, combustion experts of 11 years' experience.—Below.

CYLINDER Grinding on latest machinery, installed since hostilities ceased; accuracy guaranteed; new pistons fitted.—Sadgrove and Co., 140, Conybere St., Birmingham. [4769

DOUGLAS Overhauls.—We specialise in overhauling and repairing Douglas machines.—Tavistock (below).

DOUGLAS Overhauls.—Send your Douglas to us for reliable, efficient, and cheap repairs.—Tavistock (below).

DOUGLAS Overhauls.—Don't have your machine spoilt by amateur mechanics.—Tavistock Engineering Co., 254, Portobello Rd., North Kensington, London. 'Phone: Park 643 [3720

PRECISION Engines.—A. Bickley, late foreman engine shop, undertakes any repairs.—59, Richmond Rd., Leicester. [4064

STOVE Enamelling, frames 9/-, wheels 9/-; tanks makers' colours, plating.—De La Cour, 298, Kennington Rd., S.E. [4117

ENGINES Rebushed, overhauled, rings fitted, compression guaranteed; singles 30/-, twins 40/-; returned 3 days.—Below.

CYLINDERS Rebored, fitted with new pistons, from 30/- to 40/-.—Turner Bros., Motor Engineers, Summerseat, Manchester. [4143

FOR Expert Engine Overhauls, cylinder grinding, new pistons, and spares, Hedley and Co., Forth St., Newcastle-on-Tyne. [1333

FRAME, chassis, and tank repairs, enamelling and painting by experts; prompt deliveries.—Langham Co., Fitzroy St., Leicester. [6097

INDIAN Owners.—If you have trouble with your machine, send to Indian repair specialists, Dennis, 89, Brixton Rd., London. [1853

J.A.P. and Blackburne Engine Experts; reasonable and reliable.—Kingsbury Garage, Edgware Rd., Hendon. 'Phone: Kingsbury 134. [4209

P. and M. Gear Specialists. Any 1911 to 1921 P. and M. gear repaired promptly and efficiently.—A. S. Phillipson, Engineer, 18, Hilda St., Grimsby. [3849

WELDING.—Broken cylinders, crank cases, etc., made like new; work guaranteed; quick return.—Tonge Welding Co., Morton St., Middleton, Manchester. [6302

ALL Manner of Repairs, rebuilds, etc., to any pattern First-class enamelling. Reasonable charges and quick delivery.—Day, 27, St. Luke's Rd., Birmingham. [3393

ENAMELLING, Plating.—Tanks enamelled as before; handle-bars, etc., plated.—Send to Murray's Plating Works, Union St., Coventry. Platers and enamellers to the trade. [0024

CYLINDER Grinding, new pistons, etc.; accurate and highly finished work; prompt delivery; price list on application.—W. and F. Wills, Ltd., Engineers, Bridgwater. [0728

SPEEDOMETER Experts.—Repairs to all makes; Stewart repairs a speciality. New and second-hand sets in stock.—London Speedometer Co., Kramer Mews, Earl's Court. [4043

FRAMES.—Repairs and alterations; special frames and tanks built, any design; enamelling and plating.—A. Pilkington and Co., 390, Lichfield Rd., Birmingham. [8466

ALUMINALLOY Pistons. — Our pistons signalise efficiency for 20,000 miles. Cylinders ground, pistons fitted. Trade supplied.—Commercial Engineering, South St., Keighley. [3937

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Cylinders reground and fitted with new piston, complete with rings and gudgeon pin, from 25/-; returned in 3 days. [4500

CYLINDER Grinding, new pistons, rings, and gudgeons, 85 mm. J.A.P.'s, etc., 29/6; other sizes on request. Aluminium pistons if desired. — Vulcan Engineering Works, Walsden. [9642

WELDING.—Broken flanges, aluminium crank cases, cracked water jackets, valve seatings, welded and machined complete; scored bores filled in and ground to existing pistons.—Below.

CYLINDERS Reground, new pistons fitted complete, in cast iron or aluminium.—West London Welding Co., Essex Place, Chiswick. 'Phone: Chiswick 556. [0415

THE MOTOR CYCLE

ESTABLISHED IN 1903

FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2848 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* Autopress, Birmingham. *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## A Lightweight T.T.

WE congratulate the Auto-Cycle Union upon its decision to recognise officially the 250 c.c. lightweight as deserving a Tourist Trophy of its own. Our interest in this type of machine is well known. Before the war we urged that the smaller type of motor bicycle was capable of great development as a solo mount, and that improvements in design had paved the way for a general reduction in engine size. For example, a few years ago the single-cylinder motor cycle of 500 c.c. was regarded purely as a solo mount, yet in a very short time it became the most popular sidecar type. It is not unreasonable to suppose that any machine capable of propelling a sidecar at average speeds in excess of the legal limit has a reserve of power, when used for solo riding, considerably in excess of the average rider's demands. The advent of the 350 c.c. brought into existence a very popular type of solo mount, which, in turn, has been proved capable of sidecar work. Hence the introduction of smaller machines for solo riding was desirable, but to be developed properly they needed encouragement.

Such encouragement was given by this journal at a time, too, when the governing body was endeavouring to exploit the scooter. *The Motor Cycle* Cups, first offered in 1914 and presented for the 1920 and 1921 T.T. races, focussed attention upon the 250 c.c. lightweight, and assisted materially in fostering their development. In 1921 the tiny four-stroke lightweight which won the cup was 6½ m.p.h. faster than the winner of the previous year's 250 c.c. trophy—a two-stroke incidentally.

In a leading article early in 1919 we said: "In this type of machine (the 250 c.c. mount) we see the motor cycle for the million." In repeating our offer for a trophy for 250 c.c. machines, we stated that "there are no better means of developing the small engine and light machine than the conditions imposed during a long run at speed over a T.T. course.

"Because the small lightweight *is* the most suitable and most promising machine for 'the million,' a tertius class T.T. has a strong claim upon the governing body, and we appeal for the inclusion of this suggested class in the next T.T."

The new trophy will mean that each type of solo machine (250 c.c., 350 c.c., and 500 c.c.) has now a Tourist Trophy, and that the true lightweight, last year designated by the A.C.U. as the "flyweight," will receive the same honours for its victories as the larger machines, being treated independently instead of as a subsidiary class in the Junior race.

## The Outlook.

REPORTS reach us from many quarters of a general improvement in trade. So far as the motor cycle industry is concerned, undoubtedly there are signs of increased activity, which, of course, is to be expected at this time of the year. The stabilisation of prices and the very apparent interest in motor cycles, at no time greater than at present, augurs well for the increased demand for motor cycles during this year. The easing of the political situation, too, tends to improve matters.

The motor cycle has now reached a stage where the general public is no longer sceptical regarding its reliability, while its economy is now so well known that on this score alone it is being taken up by those who have hitherto spent a great deal of money in railway travelling.

For light delivery, also, is the economical motor cycle being appreciated by tradesmen who now realise that the possibility of being able to deliver their customers' orders promptly is a valuable business asset.

With the advent of dry roads and the irresistible call of spring, demand is likely to gain impetus as the weeks roll by. At the moment prompt delivery can be effected in most cases, but these conditions will not obtain under an improved and sustained demand.

An index to the advertisements in this issue will be found on the page facing the back cover.

# OCCASIONAL COMMENTS

BY "IXION"

## Help!

WHEN I was a boy at school one of the forms of torture inflicted upon me was termed a "general knowledge paper," which made its annual appearance the week before Christmas break-up. It contained such questions as "How many legs has a centipede, an armadillo, a stevedore, a caterpillar?" etc., etc. I have just sent the headmaster a letter which will inspire a teaser for his next stunt in this line. The question will run, "What kind of engineer handles on the same working day railway communication cords, sparking plugs, corset springs, golf ball moulds, motor 'bus manifolds, carburetter needles, airship control valves, metal boot trees, and railway signal rods?" There is only one right answer—a *rustproofer*. Easy when you know the answer, isn't it?

## Assembled Machines.

ONE or two readers have completely misunderstood my remarks of December 22nd on "assembled" machines, doubtless because I flung them against a background of motor cycling opinion, which apparently does not exist as universally as I supposed. The background in this case consisted of a criticism widely passed on the last Olympia Show by many *cognoscenti*, to the effect that "there were far too many assembled machines!" I accepted the fact underlying this criticism, viz., the multiplication of motor cycles sharing proprietary engines, gear boxes, forks, and the like; and proceeded to analyse it in the spirit of the advocate who defends a burglar. I noticed that the assembled machine is usually *cheaper* than a special design of similar rating; that it is often easier to obtain spares for it locally; and that it is easier for a fussy purchaser to get his personal fads incorporated in it. All of which is true. I did not think it needful to stick up for the superior merits of the special design, supposing that a buyer can afford to pay for one. Apparently, I ought to have put in a word for the householder as well. I do so; gracefully, if tardily. Please note that I did *not* say that the assembled 'bus is better than the special design, or that it can ever be quite so good.

## Gratitude and History.

THE Triumph Co. consider that the special design offers the buyer the three advantages which I claimed for the assembled machine. If it is a machine with output and service on the Triumph scale, it meets my second point, though I cannot agree that it is generally so low-priced, or that its specification is so readily varied—if I tried to get the Triumph people to sell me a Ricardo model with a Jardine four-speed gear, I expect I should get a frozen stare. Nor do I wholly agree with them on the "employment of brains" business—some of the big assemblers utilise a greater sum total of brain-power than any single factory can employ, for they tap the cerebella of half a dozen concerns. I should phrase the superior claims of the special design quite differently from the letter which appears elsewhere in this issue. I should begin by heartily endorsing the view that the older special design factories are the Mons Star men of the motor cycle industry, and, as such, have an imperishable claim on the gratitude of motor cyclists, whereas the assemblers are late 1918 conscripts by comparison, who came in when all risk was ended. But the main charm of the special design in my eyes is not mentioned in the Triumph defence of it.

## Something Different.

SPEAKING as a not untypical motor cyclist, whenever my purse permits it I plump for "something different." Something different from what I rode in 1921, 1920, 1919, 1914, etc. Something different from what my neighbours and fellow clubmen ride. In addition, funds consenting, I like the best in each class. Some of the proprietary engines, gear boxes, etc., are of the very first quality. But, even if one felt neither gratitude for the firms which kept the industry alive in its darkest days, nor interest in the epoch-making innovations which occasionally appear—Douglas, Scott, A.B.C., Barr and Stroud, etc.—the mere zest for variety would link all well-to-do motor cyclists to one or another of the special designs. To sum up, the rider who likes top quality plus variety buys a special design, and changes his make most seasons. The man who likes top quality but cannot afford variety usually buys a special design, and sticks to it. The man who cannot afford either of these ideals usually goes over the list of "assembled" machines with a fine toothed comb, and gets something very good, but not quite so interesting, at a correspondingly lower price.

## Mr. Norton in South Africa.

SOME interesting snapshots just to hand remind me that Mr. J. L. Norton is at present on a business ride through South Africa, and I was much interested to inspect the prints of this wise veteran surrounded by ostriches and cannibals and other tropical fauna. He has already cabled home to the works for various modifications to be introduced into the export model Nortons, and there is no doubt that his policy is excellent. If the big noise from all our factories were personally to sample overseas conditions and collogue with overseas riders, we would annex a far larger slice of the colonial trade. Mr. Norton belongs to the tough old breed whom we don't raise nowadays. He has been a greybeard ever since I have known him (I don't care to add up how long that is), and it is vastly to his credit that at his age he should tackle so exhausting a trip.

## About Spares.

OCCASIONALLY we receive a peevish letter from some reader who considers that he has been overcharged for a spare part. As a rule his grievance peters down into sheer ignorance of the "overhead" expenses, which augment the cost of spare part service—the locked up capital, the staff, rates, and repairs of the stores, and the like. But of late I have noticed a novel technical element which tends to increase the price of spares. Cheap production is the parrot cry of the day. A few years ago many component items of a motor cycle were, so to speak, bent up in the shops, or otherwise demanded a large amount of skilled labour. To-day labour, being a costly item, is cut down to the minimum; there is a marked tendency to employ dies and to stamp or press as many parts as possible. Dies are expensive, and the production expert tries to make one die do the work of two. So we get such items as a combined sprocket and brake drum. The system undoubtedly cheapens production, but it often adds to the cost of maintenance. To quote actual examples, a friend of mine found at his winter overhaul that his rear sprocket teeth were too badly worn for further use. He ordered a spare. Thanks to its being combined with the brake drum, it cost him £3, instead of the 25s. which he had estimated; this although his old brake drum was still fit for an unlimited mileage.

## Designing for Cheap Maintenance.

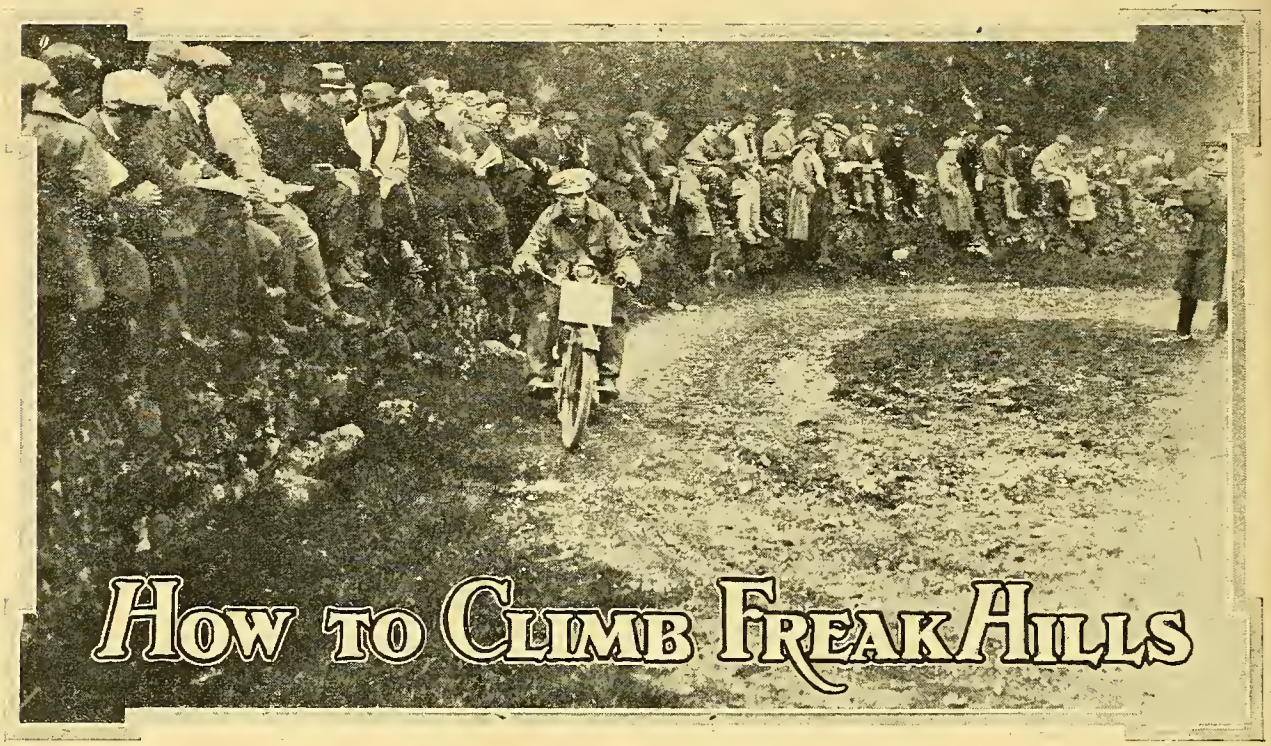
IN these days a first-class motor cycle is capable of almost indefinite use. Of two equally roadworthy machines of different makes, the machine which is the cheaper to buy will be the first to achieve a vogue. In course of time the machine which is *cheaper to maintain* will establish itself as the best seller; and such spare part prices as I instanced in the last paragraph will ultimately destroy the popularity of any mount. There are, as yet, few machines on the road which have been definitely designed with the deliberate aim of securing cheap maintenance over a long term of years. Perhaps the frame of the Scott Sociable is the best illustration of my point. A friend of mine rammed a taxi with his Sociable not long ago, and practically destroyed its snout. With an ordinary tubular frame the resultant repair job would have been a factory job, occupying many hours and costing many pounds. With the Scott patented construction, consisting of short, interchangeable tubes bolted together, the machine was on the road again within a few hours, and the bill was trifling. This idea is capable of application to many small parts of the motor bicycle, *e.g.*, the rear sprocket and the chain case.

## Buying for Keeps.

IT is, moreover, essential alike to the prosperity of factories and to the pockets of riders that this idea shall be put in the very forefront of design. Motor cycles are going to pursue the path which the pedal cycle has already travelled. As recently as 1900 most keen cyclists were buying at least one new pedal cycle every year, as design made forward strides. To-day the average cyclist buys a cycle as he buys a fountain pen—for keeps; he knows it is capable of infinite wear, and that design has become crystallised. We are possibly approaching a similar period in the design of motor cycles, and each summer sees more motor cyclists selecting a mount with the intention of running it to destruction—a process which, with reasonable luck, already represents twenty years. At the moment neither traders nor users have tumbled to the importance of replacements which are cheap to buy, and can be fitted by unskilled hands. At the moment saving in first cost appeals to us all most emphatically. A few experiences, such as those I detail above, will open the eyes of buyers. Economy in maintenance will then emerge into its proper eminence. I can see the day when a visitor to Olympia will brush aside the salesman's impassioned panegyrics with the brief request, "show me your spare parts list, please."

THE CALL OF THE ROAD IN WINTER.

Few motor cyclists nowadays store their machines during the short days of December and January. Half the pleasure of owning a machine is lost if one hesitates to get abroad on the brilliant days with which we are often favoured during those months.



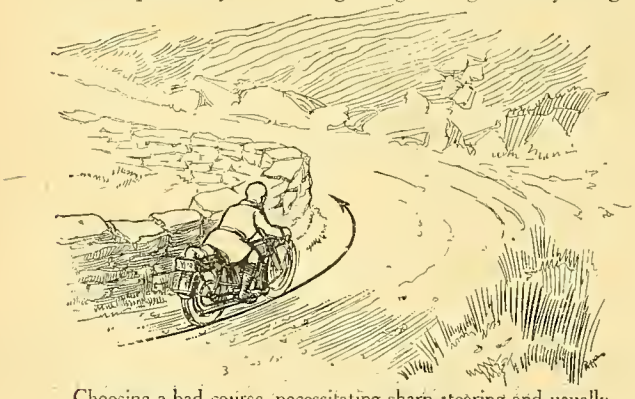
# How to Climb Freak Hills

## Some Deductions and Instructions based on Observation of Various Methods.

By ROAD RIDER.

THE exhibitions which a pressman witnesses at every trial show that many amateurs (and some trade riders) with ambition to shine in competition work have not acquired any grasp on the proper methods of climbing a freak hill. These notes are written for the sake of such comparative novices, and may perhaps provoke a little criticism from experts, whose systems occasionally vary.

The first essential is a good riding position, which involves adjustment of handle-bar, saddle and foot-rests. A very tall man cannot obtain perfect position on a very cobby frame. Most of the cracks are medium-sized men, and several are positive bantams. It is impossible to lay down the law about riding position. Speaking for myself, I try various positions of saddle and bar until I feel comfortable; and comfort probably involves getting enough of my weight on the front wheel to pin it down to a desired track, without, on the other hand, making my wrists carry so much of me that the bucking of the front wheel jolts me about. It is equally important to get the footrests right; if they are so near the saddle or so high up that the legs hang slackly, the body cannot be braced into a system of girders to hold the machine straight on rough going. The legs cannot be straight; but they should be at an angle which makes it possible to get their muscles tense, when required.



Choosing a bad course, necessitating sharp steering and usually the taking of the worst gradient.

How a good rider endeavours to take a hill if the surface does not actually drive him to the centre of the road.

Some amateurs compete on freak hills with standard solo ratios. This is a blunder which trade riders seldom commit. As will be emphasised below, a low road speed is often only the passport to a clean ascent. In these days of chain drive a change of sprocket will easily effect the desired change. 15 to 1 is low

**How to Climb Freak Hills.—**

enough for a good rider, but some men use bottom gears of much lower ratio.

A big jet is always desirable. On some freak hairpins a perfect climb may involve bringing the machine to an almost complete stop at the point of the kink in

A left-hand bend may often be negotiated in this way, swinging wide to get a good view and avoiding the worst gradient, finishing the corner on the proper side of the road.

the road; a 36 jet helps the machine to get away. With a very low gear and a big jet you can generally dodge a baulk; and it is best to do so, as officials are not always genial in the face of a protest.

If the hill is excessively long, or if baulks or picking up from a practical standstill is possible, run out all the hot oil from the crank case at the foot of the hill, and put in four charges of fresh oil. They will often prevent an anvil chorus if the engine has to pick up in a tight place.

Next comes the question of speed. Probably the surest way of keeping a fine course on knobbly going is to rush it at speed. This method requires wrists like steel wire, and considerable audacity. Few men can adopt it successfully, and fewer hills lend themselves to it. In ninety-nine cases out of a hundred it is wiser to go as slowly as possible, *i.e.*, on bottom gear with the throttle in the slow running position. The merit of this cautious ascent is threefold, viz.:

(1.) It obviates wheel slip.

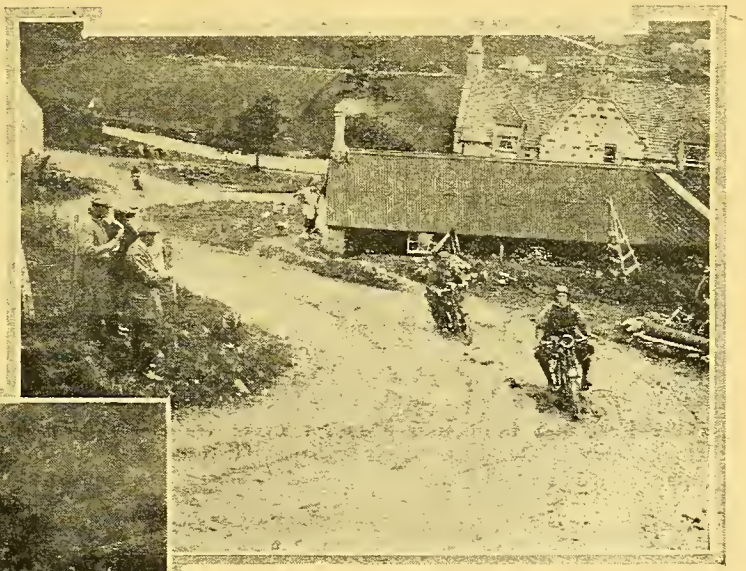
(2.) It gives you the maximum time to pick a path; and on freak hills a clean ascent is often impossible unless the right path is picked.

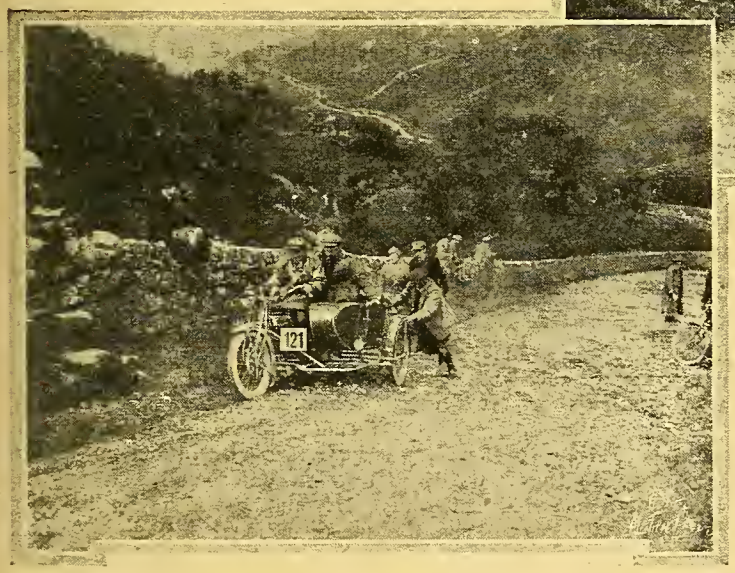
(3.) If it allows small obstacles to deflect your front wheel, it also reduces the violence of such deflections as must inevitably occur.

In every trial many hill failures occur because the men *will* come up much too fast. A 15 to 1 gear with the throttle in slow running position will climb almost any freak hill if the rider be a good man.

### "Footing" to be Avoided.

The feet should next be considered. It is a common fallacy that footing helps. The man who habitually foots will never ride. Steering on a rough surface is a matter of balance, and waving your legs wildly spoils balance rather than improves it. It is arguable whether on a vile surface one sharp dig with a foot may not sometimes prevent an upset; but to keep the feet out all the way up shows that the rider is a funk or has never learnt to balance. *Make it a matter of pride to keep your feet on the rests and you will find that you ride much better.* You know how the steering is spoilt on a good road if you "touch a footrest" or accidentally touch the road with your foot. How much more does a series of clumsy digs with the feet upset the steering on the rough? Find a bit of bad going near home—even if it is dead flat—and take it at various speeds till you can make sure of crossing it with your feet on the rests.





(Left) Where wheel spin, due to the loose surface of the road, has frustrated the driver's best efforts. A scene on Park Rash.

(Right) These two riders illustrate the dictum laid down by the writer of the article by taking the left outside of the road just before rounding a right-hand bend on Cockbridge Ladder.

Wheel-spin ought to be unknown on a solo machine; it always indicates too much throttle. On a sidecar it can be minimised by bouncing,

**How to Climb Freak Hills.—**

by a tread with heavy cross bars, and by the passenger using his weight (if the rules so allow). It is seldom a real nuisance on a sidecar if the gear and engine speed are low.

Path-picking involves three separate items. The first point concerns the few yards of road immediately ahead—you must not get into a rut, or strike a really big stone or reef, or go unnecessarily into deep sand or mud. Secondly, when the next few yards have been passed as all clear, glance swiftly ahead, and plan your general course up as much of the hill as you can see. These two items are not difficult, especially if a little home practice has made you disdainful of the thin layer of small stones which frighten so many duffers. Thirdly—and this is most important—path-picking entails a correct line round corners. The golden rule about hairpins is to take them *dead slow and wide out.* "Dead slow," because you cannot steer sharply without skidding. "Wide out" for three reasons—in the first place the grade is always stiffest on the elbow of a hairpin; secondly, because in 99 cases out of 100 the best going and the hardest track is on the outside; and, thirdly, because a curve of wide radius is easier to steer round than a curve of narrow radius. There are a very few famous hairpins which are best "cut" on the inside; but they are only the exceptions which prove the rule.

# REJUVENATING AN ANCIENT ENGINE.

## A Private Owner's Modernisation of Some Old Components. Competition Successes with the Resulting Machine.

MUCH interest has been shown in an ancient 2¾ h.p. De Dion-engined motor cycle on which B. F. C. Fellowes won a gold medal in the M.C.C. London-Edinburgh runs both in 1920 and 1921, as well as a silver medal in the 1921 London-Exeter Trial last month. The engine of this machine is slightly older than the rider himself, who has supplied us with the following notes:

"Many could, I fell sure, get results which would greatly surprise them with similar and other such experiments as here described. One often sees very old machines in odd corners, sometimes with the now obsolete coil and accumulator ignition and high and weird frames; these can be bought for a song. If the discovery happens to be a De Dion or Ariel tricycle or quad, a Phœnix or Excelsior tandem, so much the better. One may be assured that there is some grand material and fine workmanship to play with.

"The most noticeable failings about these old engines are, of course, the automatic inlet valve, the (usually) very low compression ratio, the small amount of lift to the exhaust valves, and the very restricted exhaust outlet area.

"The engine in possession of the writer was taken out of an old French tricycle (fitted with a surface carburetter) and built into a motor cycle frame—a rather heavy Chater-Lea, which had previously housed an early Minerva engine.

### Increasing Capacity and Compression.

"The first experiment was to raise the compression and get more power by lengthening the stroke. This was done by driving out the crank pin and filling up the holes in the flywheels, reboring and setting the crank pin half-an-inch further out of the centre. This allowed the piston to travel a further inch on the stroke. The piston now could not pass the top of the crank case, so three-eighths of an inch was cut off the skirt to allow it to clear. The piston also came right to the top of the head (which, by the way, is detachable), giving too high a compression, so a quarter-inch ring was placed in the spigot of the crank case, thereby raising the cylinder by that amount.

"The next thing to claim attention was the exhaust outlet. This was originally only five eighths of an inch diameter, with a dead right-angle bend in the exhaust pipe, which is placed at the back of the engine, so it was bored out to one and one-eighth inch, and a flexible pipe was fitted with an easy flow for the burnt charge. As a further relief, an additional outlet was bored into the combustion chamber at the front and a one-inch pipe fitted.

"Still not getting the desired result, a greater lift to the exhaust valve was decided upon. The cam and timing wheel were, therefore, softened, and a strip of one-eighth-inch steel made to fit the cam contour; this was pegged and brazed and again hardened, when the difference in power was most noticeable.

### The Automatic Inlet Valve.

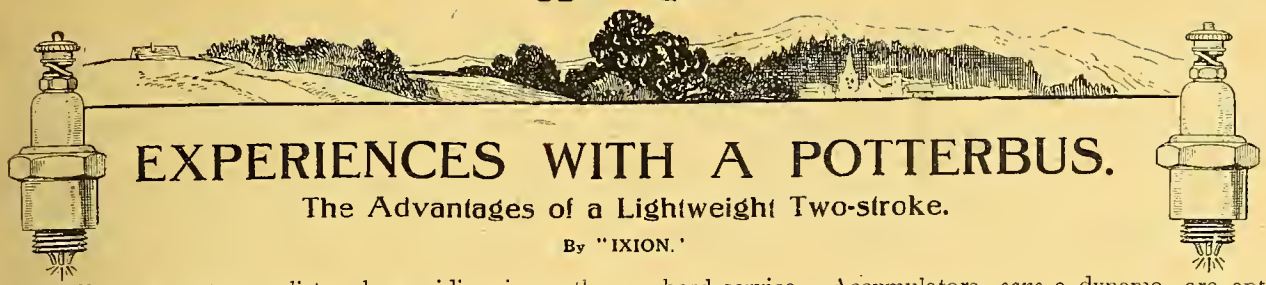
"The old pet subject for argument in days gone by—the automatic inlet valve (which, by the way, is still retained)—is perhaps the most troublesome thing about the machine. However, the best and cheapest method of getting the correct tension spring is to take out the spring from a roller blind. Begin with about ten coils, adding half a coil at a time, and testing until the desired strength of spring is obtained. These are usually of good temper and will stand up to the work for quite a large mileage.

"The lift to the inlet valve will be found to be most efficient at three-sixteenths of an inch.

"With such alterations as the above it is possible to climb hills in company with modern machines. It should be borne in mind that though these experiments may not stand the expert's criticism, they have, nevertheless, proved highly successful, and are the results of many pleasant hours of an amateur's tinkering. The machine described is now fitted with a Phelon and Moore gear, praise of which would be superfluous, and it is a very reliable and trustworthy old barrow."

## THE 1922 PARIS-NICE TRIAL.

This year the Paris-Nice trial will be organised by the Moto-Club de Nice and run between March 1st and 15th. The first stage will be to Dijon *via* Sens and Auxerre; the second through Nantua and Bourg to Lyon; the third through Valence to Avignon, and the final stage *via* Aix and the Esterels to Nice. There will be the usual optional hill-climb (at La Turbie), speed trial, and starting and brake tests.



# EXPERIENCES WITH A POTTERBUS.

## The Advantages of a Lightweight Two-stroke.

By "IXION."

LIKE most motor cyclists whose riding is partly a matter of business, I find that a 2 cwt. or 3 cwt. machine is hardly ideal for short-distance work of a multi-stop character. Laziness probably lies at the root of the utility rider's eternal yearning for two distinct solo machines. But there is a certain logic in many forms of laziness. Using a 7-9 h.p. twin for calling at a dozen factories in Coventry resembles picking one's teeth with a service bayonet. Similarly, anybody who lives in a hilly rural area, and occasionally visits isolated farms in the course of shoots—opening gates, clambering up keepers' paths in copses, and the like—can justify the inertia which makes a powerful machine quite distasteful for such jobs. So during 1921 my touring-cum-competition 'bus has been supplemented by what some contemptuous spirits would term an "auntie model"; to wit, a 190 lb. baby two-stroke. To pile on the horror, this machine has actually possessed a clutch, a kick-starter, legshields, and electric lighting.

### Ease of Handling.

The main merit of such a mount for such work is its extreme lightness. Off-hand, it would not seem to matter much whether a machine scales 190 lb. or 260 lb. In actual practice, unless one is an international rugger forward with a leg-of-mutton forearm compounded of closely stranded fencing wire, that 70 lb. is decisive. I can hold up the baby with one hand whilst I open a gate with the other. I can fling the baby about easily and comfortably when I pause at a factory office. Add 70 lb. to it, and handling becomes a pulley-hauley sort of business for a man of average strength. Rightly or wrongly, I consider that, as soon as 200 lb. is exceeded, we approach a weight which begins to tax people of ordinary physique. They can manage 2½ cwt., yes, even 3 cwt.; but the extra weight converts an easy task into an ordeal.

Easy starting is the next merit of the potterbus. Any sturdy youngster can, of course, start a 500 c.c., or even a 1,000 c.c., without distressing himself; but even when the little engine is slightly below par, no real effort is involved in kicking it into life. When engine-starting is necessary every quarter of a mile, you will love the machine in proportion to the mildness of the effort it involves.

Economy does not really enter into the matter if two machines are kept, for the double depreciation quite wipes out the substantial saving involved in using a small 'bus for local riding.

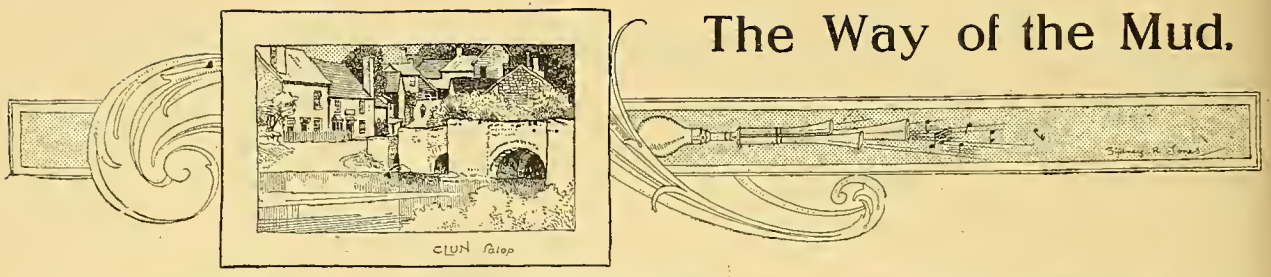
Electric lighting, plus a dynamo of some sort, ought to be regarded as indispensable on a potterbus. The machine is taken out almost every night in the year. Acetylene is seen at its worst in short rides and in daily use. Dry batteries are expensive in hard service. Accumulators, *sans* a dynamo, are apt to be tiresome when they are worked hard. So I regard the dynamo in the same light as the engine—it is indispensable. I have used a B.T.H. Sparklight all the year with absolute satisfaction. It was originally delivered with one of the first experimental battery cases, so designed that the fitting of the cells was a long job, and extremely liable to culminate in two or three short-circuits. The makers supplied me with their later model in due course, and I have never had to open it. But for this equipment, I should have walked, trammed, taxied, or pushbiked many miles.

Full anti-mud equipment is another *sine qua non* on such mounts. I dislike lavish mudguarding on a touring machine. If you add legshields, an under-screen, a big front wheel-splasher, and other protections, you slow the machine; you increase the number of costly accessories liable to damage in the toss which you will inevitably take before the season is over; and who minds "dressing up" for a fast 200 mile run? But oftentimes the potterbus is merely going five miles. The streets are aswim with black soup. Or the wind is keen. Or a light drizzle is falling. Given proper anti-mud equipment, you need only don a British warm; so you motor cycle to your destination, with the minimum of preparation at the start, and the minimum of undressing on arrival.

I have been merrily chaffed all through the summer for using a kick-starter, a clutch, and a prop stand on such a tiny mount. They certainly look ridiculous in the city. But on scores of occasions this year they have been invaluable to a rider who thinks nothing of pushing off a Brooklands single-geared twin on the Portsmouth Road.

### For Longer Distances.

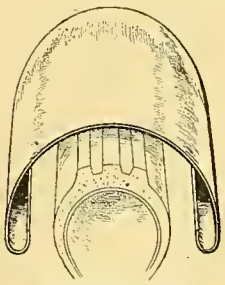
In one respect a subtle change is coming over the potterbuses. I have owned many of them in the past, but I never before owned one which did not prove fatiguing on a long run. They used to be rather dithery. My 1921 model was quite exceptionally comfortable, though its frame was rigid, the saddle small, and so on. Moreover, it could easily do 45 m.p.h. without any excessive fuss. If circumstances pointed that way, I occasionally made quite long runs on it. Indeed, when cold weather or dangerous roads put speed out of the question, I would just as soon take it from London to Coventry as put it to bed and get out a pukka sports machine, with one exception. The exception was that it had a two-speed gear with a very low bottom ratio, so that, when a hill forced me off top, I was reduced to the most humiliating creep. My next potterbus will have a three-speed gear; and I foresee that during the winter months it will not infrequently be converted into a tourist machine for the nonce.




# The Way of the Mud.

## Mudguarding and Weather-prooling Problems approached from a New Angle. The Results of Several Years' Experiment.

TO enlarge upon the fact that in this year of grace we are still far from a solution of the mudguarding problem would simply be to repeat the conclusions drawn in countless articles which have appeared in *The Motor Cycle*. Perhaps the bare fact is worth repeating, however, to give it one more chance of catching the manufacturer's eye.

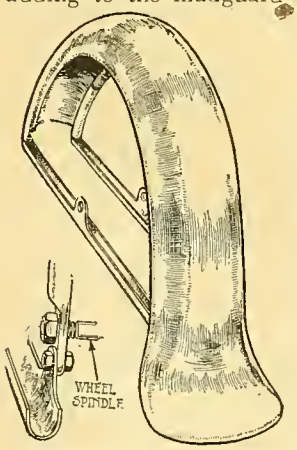


Plain domed and channelled guard

One should call it, rather, the weather-proofing problem, for not until the machine alone but the rider also has been protected as far as possible from mud as well as rain, will thousands of potential motor cyclists enter the ranks. Newcomers to the pastime should be able to count on almost the same standard of comfort as on a car without hood or screen. There is little reason why they should not have it. So, since poor mudguarding is militating against the motor cycle being used by the million, it is a problem of the first magnitude, and therefore worthy of close study.

### Past Efforts.

It has hitherto been "solved" year after year by adding to the mudguard extra width and valances—and weight. To our credit be it said that the arrangements for securing this additional weight and size against rattle show wonderful improvement. But the mud still gets there—to the continued satisfaction of overall and thigh boot manufacturers. The fallacy seems to lie in an idea that mud is thrown directly on to rider and machine. These notes—the result of some years' study and experiment — should show that, except in one inconsiderable case, the mud is simply *thrown into the air and overtaken.*




Channelled stays for use in conjunction with the guard section shown in previous illustration. Inset is the method of stay fixing where wheel spindle is not of the withdrawable variety.

Light liquid such as mud is extremely amenable to the force of wind. One has only to try to fill an oil tank with a minute orifice from a height of several inches in a cross breeze to be convinced of this. It loses its upward or forward velocity very quickly, and begins to fall, slowly at first. When it is remembered that a speed of 15 m.p.h. means covering twenty-two feet in one second—one-third of a cricket pitch—the rider will realise how easy it is to overtake any drops of mud thrown into the air hardly a yard in front of him.

### How the Mud is Thrown.

A wheel running over liquid mud produces two sprays:

1. A tangential spray thrown off the periphery (*e.g.*, tyre tread) by centrifugal force.
2. A lateral spray, sideways from the point of impact at the ground.

The problem is how to prevent, as much as possible, the mud from being thrown into the air, and how to protect the rider and mechanism from the rest.

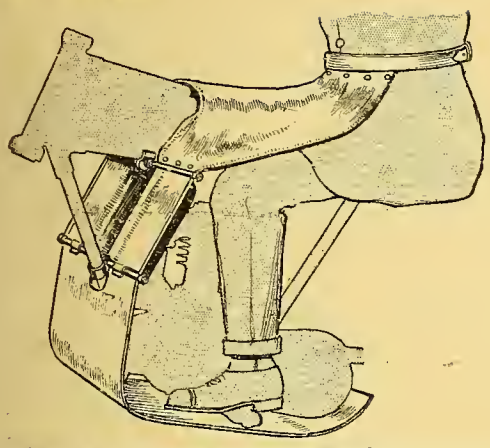
Completely valanced and channelled front mudguard without stays.

Take the front wheel—the mischief-maker. The circular spray is trapped over part of the circumference by even the narrowest T.T. mudguard without valances. But there are two serious loopholes of escape with even the best mudguard existing to-day:

*(a)* The remaining part of the circumference in front of where the present design of mudguard ends. Spray is not thrown high enough to be overtaken by the rider, but reaches the front wheel spokes. It can only be cured by fitting the mudguard front extension still further forward. To prove cause, effect, and remedy, I made a special extension and tried it with a clean front wheel (and legs) over a quiet stretch of muddy road used for most of these experiments. In practice this need not be produced further than nearly level with the hub, I found, and this does not look unsightly. It is this spray, then, which partly dirties the front wheel and forks.

Given a reasonably wide mudguard, the only possible mud that can be said to be thrown towards the engine or rider is the little which escapes between the

**The Way of the Mud.—**



Complete weather-proofing equipment specially recommended for sidecar drivers.

bottom of this mudguard and the ground, easily coped with by means of a small extension (*e.g.*, as on the Triumph), or the undershield to be mentioned later.

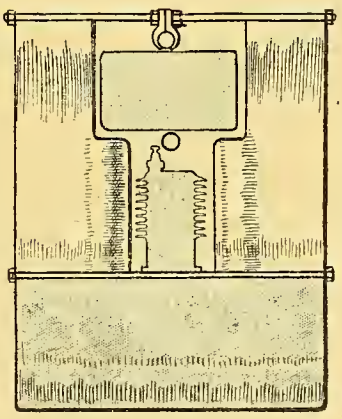
*(b)* The second dribble of mud into the air is off the edge of the usual front guard, with or without valances, anywhere from the forks forward. The mud is thrown on to the guard inside and flows down it to the edge. Long before it can flow along the too gentle slope to each end of the guard, it is either shaken or blown off in big blobs. Even if it does reach the end of the front extension, so much the bigger the blob. These drops leave the edge with practically no speed except forward, and they may land anywhere. I have watched them being held up by a gust and overtaken by my knees. In many cases they will drip or be blown into the spokes, thus completing the ration of mud delivered to the front wheel and forks.

### Preliminary Attempts.

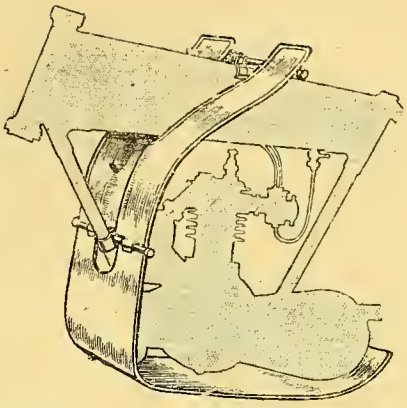
Even if no attempt were made to cure it or the centrifugal spray, there is no reason why either should be allowed to reach the rider and mechanism behind. The obvious remedy for *(b)* is to fit gutters to each side of a wide domed mudguard; the simplest and cheapest method would be to turn in the edge. This suggests a handsome shape which could be beautifully finished and easily kept clean without scratching. But even then, the flow to the front must be led away to reach the ground harmlessly. This is best done by making the mudguard stays of U section. My device for joining these up to the mudguard gutters was crude, and cannot be detailed here. Sufficient that it was successful, and could be improved for ease of manufacture. This led the mud to the extreme bottom of the front mudguard, and on my next run I was delighted to watch cascades of mud pouring from the latter position.

Throughout these notes I am dealing with liquid mud, not half-dry sticky stuff, or the clay which clogs up mudguards. This, not containing enough liquid to "run," does not dirty a reasonably guarded machine, and would not drip into the gutters.

Another idea to incorporate these gutters is a completely valanced guard, as shown in the third sketch, and this is the only excuse for any valances, flaps, wings, or other fancy steel sheeting so usually fitted on or round the front wheel.



Leg-guards turned in to minimise wind resistance and to deflect a stream of air directly on to the cylinder.



Semi-permanent undershield, with quickly detachable leg-guards, for use on light solo machines. The undershield may also be detachable.

### Lateral Spray.

Far from being thrown back at the rider, the lateral spray moves forward at an angle of about 45°, as witness a tramcar on a flooded line. Yet so comparatively low is its velocity that it is easily overtaken in mid-air by any side projections on the machine, which is moving at least ten times as fast. And, as on a non-mudshielded machine the rider's feet are the principal side projections, *this is how the feet get their soaking*. The two alternatives are either to trap the lateral spray *at its source*, or to erect a protective shield *further back* on the overtaking portion of the machine, *i.e.*, just in front of the rider's feet.

From heavier vehicles, such as lorries and 'buses, the lateral spray has proved such a nuisance to other road users, including pedestrians, that every possible effort has been made to trap it. Readers will remember a competition promoted by the L.G.O. Co., which invited the best brains of the world to solve the problem. The Ministry of Transport has also taken up the matter. No appreciable advance has been achieved, however. It was found impossible completely to trap lateral spray. If this is the case with heavy vehicles, where weight and wind resistance are of no account and expense is not a great consideration, how much more so with the motor cycle?

There is no solution, therefore, but the other alternative—the mudshield further back on the machine.

A bottom extension to the front mudguard keeps spray off the crank case; but this is not enough.

There is an outside source of mud which affects all parts of the machine within about a foot of the ground. I shall call it "reactionary splash." Everyone recognises how a drop of mud or rain seems to bounce up again off a wet road. On a rainy day, in addition to the fall of mud from the front wheel, rain drops are also helping to create this reactionary splash, and the centre of the machine catches it at about its highest point. An undershield is necessary to prevent this.

**The Way of the Mud.—**

In addition to an undershield and a main mudshield for the legs, it is time some protection was offered the rider himself against rain and the bitter cold which seems to reach his knees and thighs through even the thickest overalls. The biggest existing mudshield, reaching up to the level of the tank top, does not do this. The remedy seems to be an apron clipped on to the main shield, of patent leather, oilskin, or American cloth, with a strap to go round the rider's waist, and a quick-release buckle behind him. Such an apron is marketed by the College mudshield people for attachment to their excellent shields. It should be supplied by each *maker* either as standard or as a special accessory similar to the special lamp sets often recommended and supplied as extras.

### What is Needed.

The mechanism and rider should therefore be protected by the following fittings in their immediate vicinity:

(1.) An undershield either firmly attached by nuts and bolts if it incorporates the footboards, or made quickly detachable by strong spring clips if footrests are used. It should be a whole length affair, stretching from level with the bottom of the cylinder fins in front to behind the countershaft gear box. This is the absolute minimum of protection, even for sporting machines, on which it could always be made quickly detachable.

(2.) Either *(a)* a sloping clip-on addition. This would minimise wind resistance (the main objection to perpendicular mudshields), and could be made to clear all the tank top fittings. The material could be aluminium to save weight; or *(b)* an almost perpendicular shield attached by clips to the undershield stay and to the tube under the tank by the usual cross member, to which in turn the light apron mentioned above could be attached by a row of push-buttons.

This apron is specially suitable for tanks on which the fittings (oil pump, filler caps, and gear lever) are fairly well forward, as on the Douglas. It would be cut out to clear these. One of the greatest points about this type of apron is that it would afford such excellent protection to the whole machine when left standing in rain.

### The Last Detail.

The final protection suggested for the rider is a couple of side plates fitted at the extreme edge and just in front of the usual position of his feet, and reaching about six inches above their level. In manufacture these could be stamped out in one with the undershield and turned up at right angles afterwards.

With the long wide-skirted trench coat, which I have found to be the only special clothing needed with this system of mudguarding, they would serve both to protect his feet and ankles from the lateral spray thrown by passing vehicles and "distance" props outside which his skirt is arranged to fall, so that, even the flow of rain water down the skirt sides is led clear of his feet. Alternatively, a wide valance could be incorporated in the main shield, but the objection to this is that it prevents the leg being shot out sideways in an emergency, such as a skid on a solo machine. On a sidecar machine the valance would have no disadvantage except perhaps its appearance.

It should be added that each of these suggestions has been personally carried out and tested. What is advocated is a "weather shield," such as would cope as far as possible with *all* the conditions which at present make it necessary to wear special clothing, *i.e.*, cold and rain, as well as merely mud. The system of front shield and apron has several minor disadvantages, the most serious of which is wind resistance; the least, appearance. The disadvantages would disappear once the manufacturer tackled the job and made a shield as part of the machine. Lightweights could have the undershield only as permanent, the other parts for attachment in winter. All sidecar outfits should have the full system.

### Wind Resistance.

With regard to wind resistance, the bugbear of all mudshielding, I have found that this is more than neutralised if the edges of the shield are turned in along the height of the cylinder to deflect wind into it. That is to say, the cylinder gets more wind by this deflection under any condition except a following gale—when it gets no air in any case.

### The Back Wheel.

Considered in the cold light of logic, the back wheel is really very harmless to the rider. Provided tyre and chain or belt are reasonably guarded, no mud can reach the rider from this source. To save the wheel itself, however, from its own mud—if it is to be kept clean—the mudguard should have the same type of gutters as suggested for the front guard. To protect it as far as possible from the torrent of reactionary splash due to droppings from the front wheel and the rest of the machine, it should be carried to within six inches of the ground in front, ending in a wide extension much like the Triumph front shield reversed.

E. M. WRIGHT.

## ENGINES AND THEIR POSITION IN THE FRAME.

CONSIDERING the large number of manufacturers interested in the motor cycle movement, it is, at first sight, somewhat surprising that engine design has settled down into four main types: (1) four-stroke single, (2) two-stroke single, (3) four-stroke flat twin, and (4) the V type four-stroke twin.

There are, of course, isolated additions to this list. The four-cylinder is represented by America and Belgium, but is not produced by a British firm. There is also the V twin two-stroke Stanger, and the three-cylinder radial, but, in the long list of engine types suitable for motor cycles, there are several blanks.

For example, one is constrained to wonder why the four-stroke side-by-side twin, so popular in France, is not favoured by British manufacturers.

Then there is the "flat four" (*i.e.*, two flat twins side by side), the three-cylinder-in-line engine, the side-by-side twin two-stroke, represented only by the Scott, and the flat twin two-stroke, of which the Economic is the sole example. Then, the majority of designers seem to consider the upright position ideal, yet the P. and M., Powell, Dunelt, and Sun are successful machines with engines in an inclined position.

VEDETTE.

# The Single Track Carette

## Many Designers have Given this Type of Machine their Special Favour

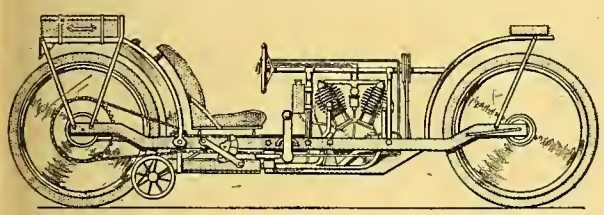
### Some Suggestions Reviewed.

The single track two-seater designed by Mr. C. F. Beauvais, and referred to in the latter part of the article.

DESPITE the fact that very few heavy-weight motor cycles are used as solo mounts, owing to their unwieldy size and weight, the single-track car never fails to interest designers.

Since the early days of the motor cycle movement attempts have been made to evolve a motor bicycle on car lines, but very few have reached the production stage until this year, when, at the Berlin Show, a motor cycle with an enclosed body was exhibited, and created a certain amount of attention.

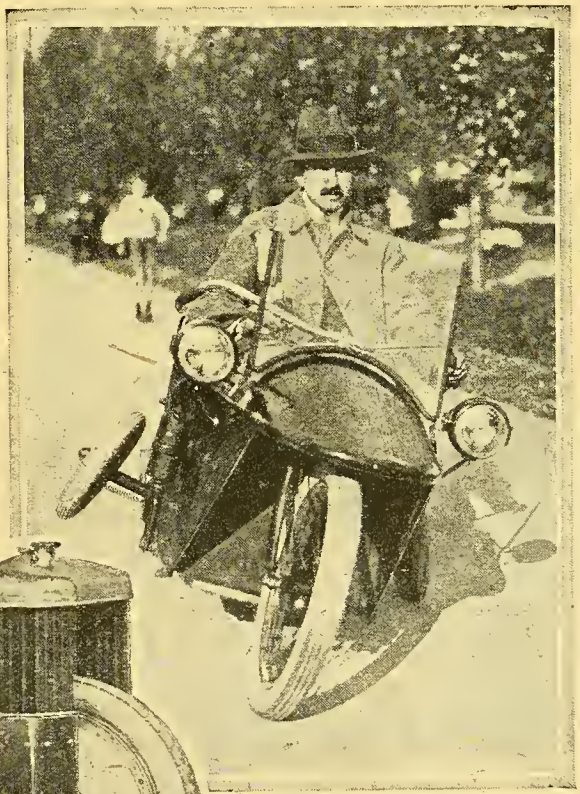
In the car world, however, the idea has been carried further, and, so far back as 1913, a monster single-track car was illustrated in these pages. Known as the Biautogo, it had an eight-cylinder V engine with cylinders of 82 × 127 mm. bore and stroke (5,368 c.c.), and at speeds above 20 m.p.h. it was balanced like a bicycle; at lower speeds small side wheels were brought into contact with the road. In 1914 a Russian designer went a little further, and induced the Wolseley Co. to make him a seven-seated single-track car equipped with gyroscopes to maintain equilibrium.



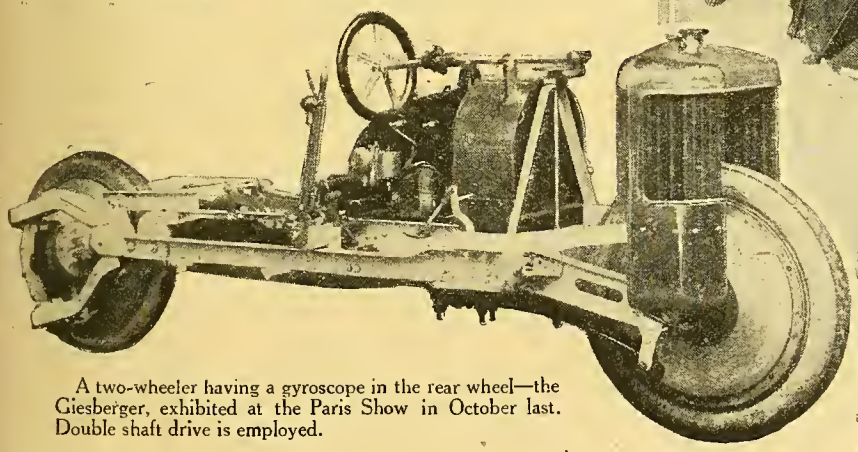
A design embodying a pressed steel frame, V twin engine, and wheel steering, by a reader, Mr. F. C. Dee.

At the last Paris Salon a gyroscope-balanced light car was exhibited as a commercial proposition. It was driven by shafts on each side of the rear wheel, which contained the gyroscopes.

From time to time we have illustrated in these pages the many attempts to design or produce a single-track



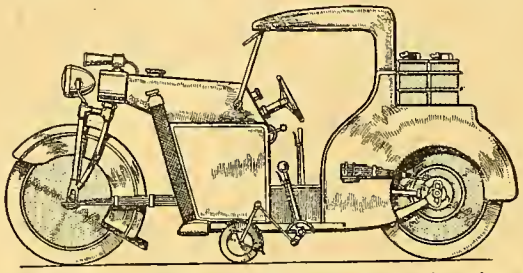
A single track runabout of German origin—the Mauser. When standing or running, the side axle may be hinged downwards, allowing the wheels to come in contact with the road. When running at speed the axle is raised.



A two-wheeler having a gyroscope in the rear wheel—the Giesberger, exhibited at the Paris Show in October last. Double shaft drive is employed.

**The Single Track Carette.—**

carette, and quite recently we published details of a Douglas motor cycle converted by Messrs. Brown and Roper, of Salisbury. Like the majority of such designs, steadying wheels were incorporated. Now Harold Todd, a thirteen-year-old reader of Preston, Lancs., sends us a suggested design which reveals a promising designer in embryo. Details are lacking, but from the drawing it is clear that a water-cooled

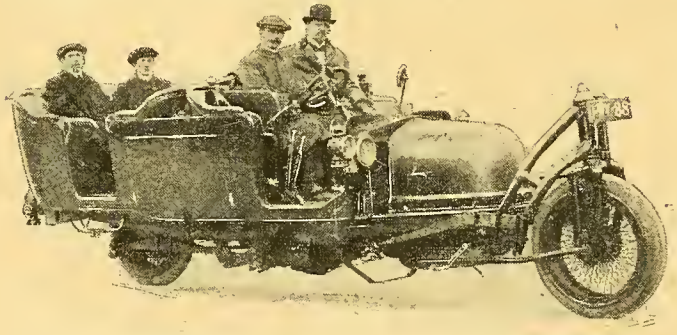


Inspired by various remarks on weather protection of motor cycles, Master Harold Todd, of Preston, a schoolboy of thirteen years, evolved the above commendable little carette, the weaknesses of which he will no doubt appreciate in a few years' time, as his knowledge of mechanics increases.

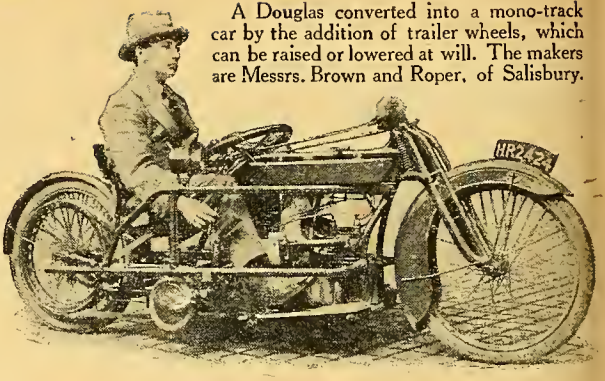
engine and shaft drive are intended. Another reader, Mr. F. C. Dee, also submits a design which suggests the Ner-a-car as the source of inspiration; but the most interesting of all is the design by Mr. C. F. Beauvais, of 9, Bavent Road, Camberwell, S.E.5.

The idea occurred to him through driving a sidecar outfit at an angle with the sidecar wheel off the ground.

The Beauvais single-track two-seater is the outcome of Mr. Beauvais's experiments with a sidecar, and he has given careful consideration to weight distribution, general construction, and proper balance. Such



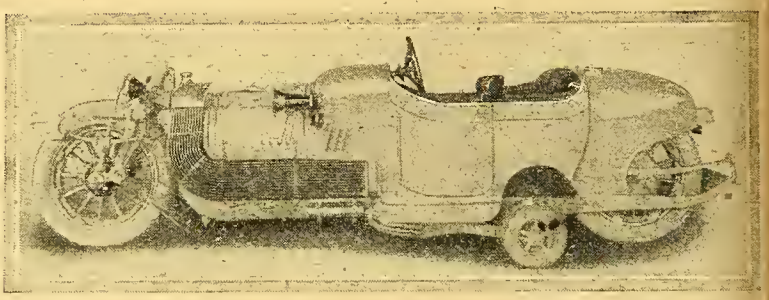
A gigantic gyroscopic mono-track car capable of seating seven passengers. This vehicle was made by the Wolseley Motors, Ltd., many years ago to the order of a Russian enthusiast.



A Douglas converted into a mono-track car by the addition of trailer wheels, which can be raised or lowered at will. The makers are Messrs. Brown and Roper, of Salisbury.

a vehicle, he claims, will enable fast travel with low cost, full protection and comfort, and, in a word, "a car on two wheels" at the cost of a heavyweight motor cycle.

The heaviest parts, namely the frame and engine, are placed practically below the axle line, and the engine is situated as close to the front wheel as it is possible to get it. The passenger's and driver's weight are in line with the axle, and no part overhangs the



The Biautogo, a 1913 single-track car of American design, embodying an eight-cylinder 35 h.p. engine.

rear wheel. The motive power suggested is an air-cooled flat twin driving by means of a shaft, and a gear box incorporating three speeds and clutch, driving thence by chain to the rear wheel. This arrangement allows of a central change speed lever.

Mr. Beauvais has also considered the fitting of a pair of small wheels held by springs and made to be hinged on to a cross tube, which latter is rotated by a hand lever so that the wheels can be lowered or raised at will. These would serve to keep the car upright when stationary or when crawling in traffic, and might be employed to counteract side-slip. It is estimated that the weight of the machine complete would be approximately 5 cwt.

## ENGINE STARTING IN WINTRY WEATHER.

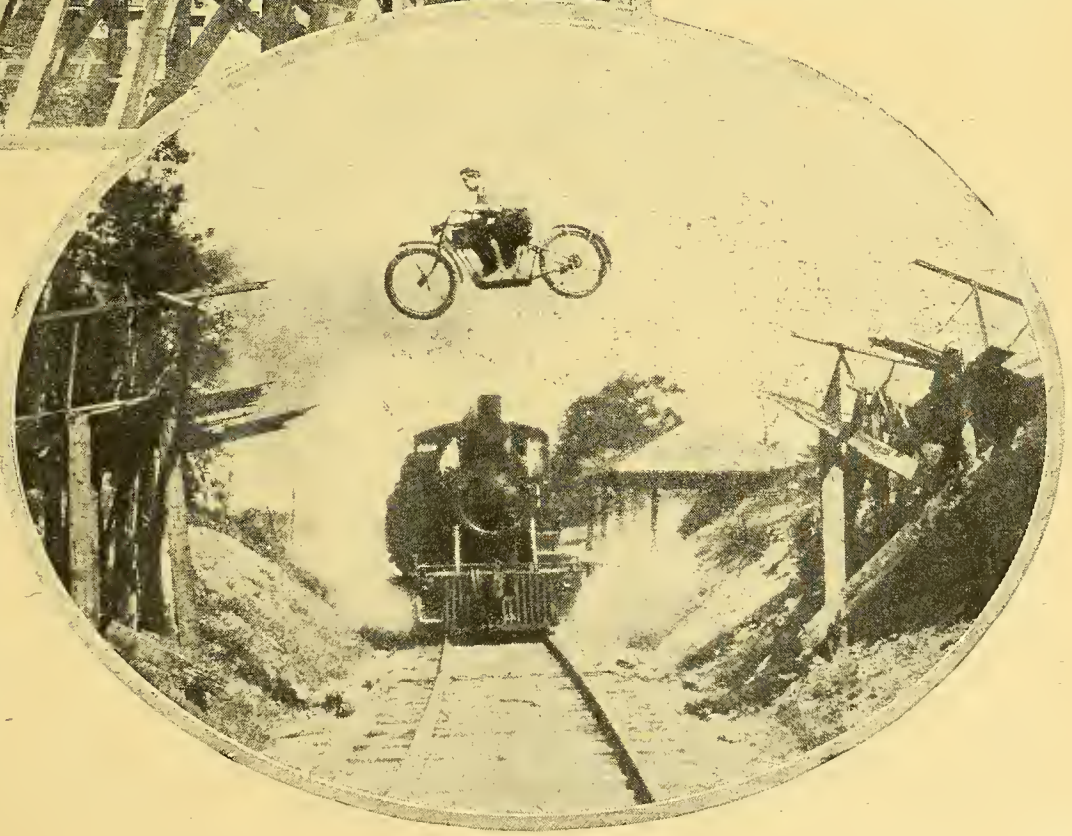
WINTER brings with it the difficulties of persuading a cold engine to start. There are few things so aggravating, especially to those who use their motor cycle for travelling to and from their work each day. Every minute is precious, when wanting to get off in a hurry. Much time is wasted in investigating likely sources of disorder. Yet in nine cases out of ten, the only trouble really existing is a gummy engine, or too weak a mixture. To overcome this trouble, the rider should make sure first of all that he is not using too thick an oil. Injecting a very small quantity of paraffin into the cylinder overnight, or a few minutes before starting, will be of great assistance in such cases. All extra air should be shut off and a rough and-ready way of closing the air passage holes in car buretter should be found. A piece of thick rag tightly tied is quite sufficient. M.G.E.

# THE MOTOR CYCLE AND THE CINEMA.

## Daring Exploits of a Motor Cyclist Film Star.

IT is not surprising that film producers have found good use for the motor cycle. In the serial films which nightly draw regular crowds there is ample scope to introduce the speedy two-wheeler, provided a suitable rider can be found to play the hero. A serial called "Hurricane Hutch," which is being handled in this country by Pathé Frères, is full of exciting episodes introducing a motor cycle. Charles Hutchison, who plays the lead, has some remarkable adventures, as will be realised from the accompanying illustrations. The film is not yet released, but we understand that the story concerns a race against time—and also against the train, which is likewise in a hurry. His leap across a gap left by a broken bridge, we are assured by Messrs. Pathé, is absolutely genuine, there being no "faking" whatsoever.

Charles Hutchison recently stated to a cinema journal that, in making a leap of this character, it is essential that a very high speed be attained, and a certain elevation reached from which to leap away; once out into space, it is necessary to switch off the engine, otherwise the machine would become unmanageable on landing. We are told that the machine upon which this leap was made is still good to repeat it.



A MOTOR CYCLIST CINEMA STAR.

Charles Hutchison, who plays the lead in a sensational film serial, entitled "Hurricane Hutch"; he introduces many thrilling episodes in which his motor cycle plays an important part. Pathé Frères, who handle the film in this country, affirm that the scenes depicted are not faked, but are genuine achievements in every way.

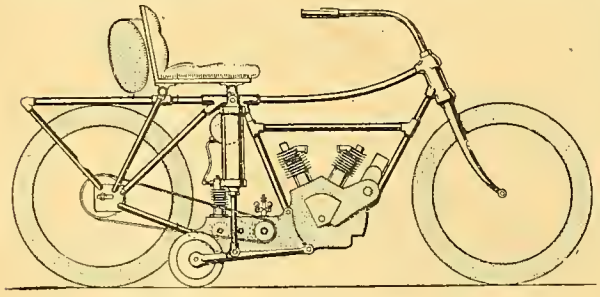
# RECENT PATENTS

Reviewed by B. H. DAVIES

## Automatic Trailing Wheels.

IF the two-wheeled car type of motor bicycle, always a favourite topic, ever comes along, a device on the lines of Mr. Purdy's invention will be essential to it. Many inventors have proposed to equip motor bicycles with a trailing pair of steadying wheels, designed to support the machine at low speeds or when it is stationary. Mr. Hayes actually marketed such a device with some success for several years. But, to the best of my memory, all previous devices of the kind have been hand-controlled, whereas Mr. Purdy's equipment functions automatically. The wheel carriers are hinged at the base of the crank case, and the control rods are coupled to pistons working in small cylinders on both sides of the saddle-pillar. As shown, the trailing wheels are just in advance of the rear wheel.

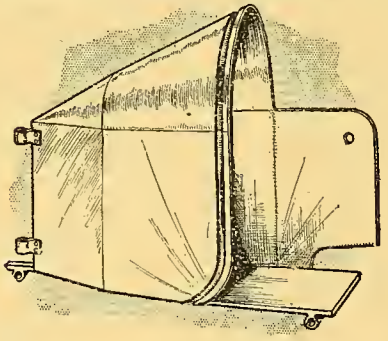
A small air pump may be clutched to the engine by a hand lever as long and as often as is needed to charge a storage tank with compressed air. A centrifugal governor, varying in speed with the engine, operates a slide valve, which admits compressed air from the storage tank to the upper or underside of the pistons which control the rise and fall of the trailing wheels. At high engine speeds the governor passes air to the underside of the pistons, and lifts the wheels; at low engine speeds, or when the engine is stopped, the governor passes air to the upper side of the pistons, and forces the wheels downwards. An automatic and pneumatic control of the trailing wheels is thus provided. The apparatus will plainly weigh quite a lot, and be fairly expensive to manufacture; but neither of these objections is very important where a two-wheeled car is concerned. At any rate, the notion is to be welcomed as what the horticulturists would call a "new break."



Purdy's safety supports. No. 144,846 7/5/19

## Leg Shields.

Twin scuttle dashes, one for each leg, represent Mr. G. R. Slater's ideal of motor cycle comfort in bad weather. Between the scuttle dashes there is a neat tunnel down which air can flow on to the cylinder. The fittings will undoubtedly keep the rider's legs warm and dry. My one criticism would be that perhaps nobody but George Dance would have the pluck to ride with his legs enclosed in these traps. Imagine yourself, gentle reader, skidding with great suddenness and violence. Could you kick

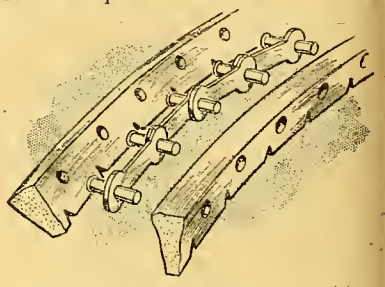


Slater's leg screen. No. 161,689 14/4/21.

your legs clear? I trow not. On the other hand, if you were to chop off the rear 9in. or so of each scuttle, the protection would hardly exceed that provided by the common or garden type of leg-shield. Which probably explains why existing patterns do not come so far back.

## The Belt Problem Re-attacked.

Ulysses did not know more about men and places than I know about belts. As a greyheaded survivor from the earliest days of the motor era, my sufferings with belts constitute an Odyssey. I would not for the world dash the spirits of Mr. F. H. Baker, who still dreams, as others have done before him, of an unbreakable and unstretchable belt. The sketch makes his ideas clear. The chain embedded within a built-up belt is to take all the end pull, and the leather, or rubbered canvas, sides are to bear no burden beyond that of frictional contact with the pulley groove. If Mr. Baker studies the Forward and Whittle belts, he will admit the possibility that their designers, too, have conceived notions like his own. That they do not market them is due to the fact that just as oil and water do not mix, so leather and steel never quite hit it off in too intimate

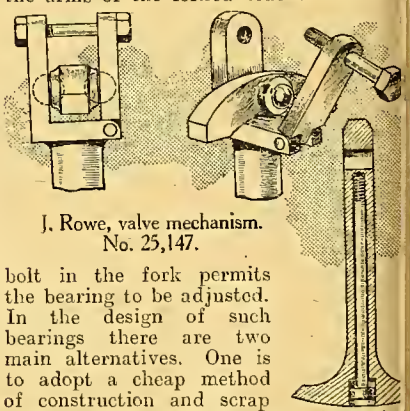


Baker's rubber and canvas belt. No. 161,908. 21/4/21.

a companionship. I would speculate that his belt *will* stretch despite his fondest hopes; that, when it stretches, the holes in it fall out of register with the steel pins which they are supposed to accommodate; and that things will shortly begin to happen.

## Simple o.h.v. Rocker Bearings.

Mr. J. Rowe propounds a cheap rocker bearing for o.h.v., which reminds me of the Finch "non-stick" bearing for a magneto contact breaker rocker. Two balls are interposed between hemispherical recesses in the sides of the rocker and in the arms of the forked bracket. A cross



J. Rowe, valve mechanism. No. 25,147.

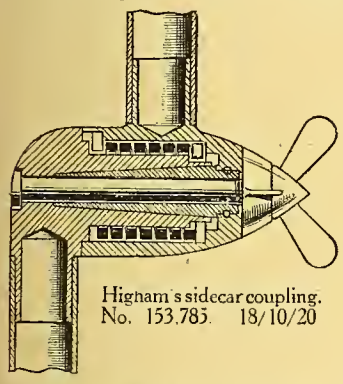
bolt in the fork permits the bearing to be adjusted. In the design of such bearings there are two main alternatives. One is to adopt a cheap method of construction and scrap the parts when they wear; the other is to fit very expensive bearings in the hope of long life. Mr. Rowe's gadget is very cheap, and should be fairly

**Recent Patents.—**

durable. He further protects a safety type of o.h.v., reminiscent in principle of the Buckingham safety valve, though different in form. A guardian screw is inserted in the valve to prevent the valve head from dropping into the cylinder if the neck snaps. I may be wrong, but I should fancy that it would be cheaper to use an unbreakable steel than to adopt Mr. Rowe's mode of construction with a cheaper metal. Steels are now available which will stand all ordinary stresses.

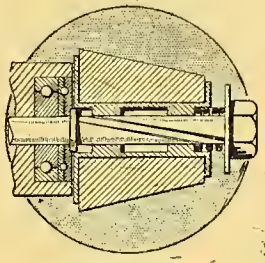
### Flexible Sidecar Connections.

Lieut. W. H. M. Higham has been struck—like most observers—with the number of fractured sidecar frames which disfigure every big trial. The average designer attempts to solve the implied problem by increasing the gauge of his tubing, piling on struts, etc., till some sidecar chassis begin to remind us of the "kolossal" petrol tractors utilised by the Hun to haul his siege artillery. Lieut. Higham follows a more attractive line in aiming at flexible connections. He does not go so far as one famous



Higham's sidecar coupling. No. 153,785. 18/10/20

inventor of sidecars, who evolved connections so elastic that the outfit could not stand up by itself, and sometimes nipped the driver's leg severely when the bicycle leant "in" and the sidecar leant "out" on a corner. The sketch depicts the Higham connection, which consists of inner and outed cones with a sharp taper, and a spring to take up clearance. The inventor claims that the construction allows a limited vibratory movement of the sidecar chassis in relation to the cycle, and further permits of relative rotation between the two aforementioned cones. I am not quite sure that the limited vibratory movement is of value. It reminds me of an imaginary car fitted with J.M. shock absorbers, but devoid of chassis springs; in other words, is it not the *big* jars which smash up the sidecars? The other aspect of the device would do something to relieve the connections of twisting strains, provided the "clutches" do not jam up solidly.



Mepstead's shaft transmission. No. 161,305. 13/4/21.

### Wheel Disc for Friction Drive.

Wheel discs are familiar. So is the "flowerpot" type of friction drive. Mr. G. S. Mepstead has hit upon the notion of combining these two items into a new transmission. He uses a universally jointed shaft between the engine and the flowerpot. The flowerpot makes frictional contact with a rear wheel disc of similar angle. A variety of ratios are obtained by sliding the flowerpot fore and aft in a special carrier affixed to the chain stays. The drive would not, of course, be particularly light. Rather heavy springs might be needed to secure plenty of pressure between the flowerpot and the disc. But the chief snag which I foresee has reference to the filthy condition of the wheel disc over softish roads in really bad weather. The flowerpot would be thoroughly dowsed in gritty mire; and one wonders how often its compo facing would need renewal.

### Protecting the Complexion

In olden days the fan added charm to young women, as the lorgnette added terror to the patronising hauteur of their elders. Mr. Cedric Chivers was presumably remembering these aids to personal magnetism when he patented his motorists' hand windscreen. As it is probably impossible to-day to buy a car which is not fitted with a full-sized windscreen, Mr. Chivers must have had motor cyclists specially in mind. There may be a sale for such a gadget. I can imagine that a lady of extreme beauty but aloof temperament might find the screen useful in repelling the optical advances of ardent males. But, for sheer unalloyed comfort, I fancy an Easting would still hold the field on the average sidecar.

Chivers's hand windscreen. No.161,705. 19/4/21

# MOISTENING THE MIXTURE.

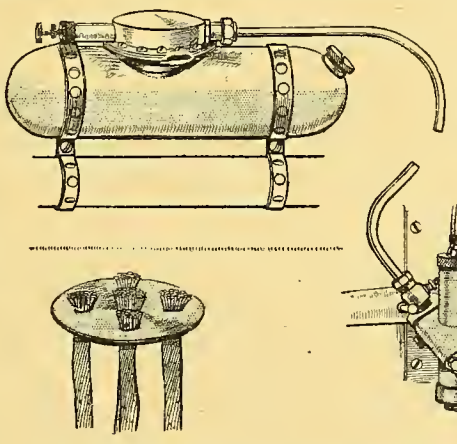
## The Link Humidifier for Admitting Moistened Extra Air to the Engine.

IT is generally admitted that motor vehicles run better under conditions which usually prevail at night. This, it is thought, is due to the fact that in the evening and early morning there is more moisture in the atmosphere, which enriches the hydrocarbons with hydrogen, and at the same time releases oxygen, which, in conjunction with the hydrogen in the air, tends to aid combustion.

Before the war we made several interesting experiments to introduce water into the combustion head, and, although the nature of the device prevented any certainty of result, there were times when remarkably smooth running was obtained.

Now Mr. Link has come along with a device to humidify the mixture artificially, and this he has succeeded in doing in an ingenious manner. There is a small water tank containing what may be described as a wick carburetter, so arranged that the gas drawn into the cylinder is thoroughly impregnated with moisture. The air is taken in through an extra air inlet situated on the top of the device, which consists of an automatic air valve which may be regulated at will.

The humidifier (which is sold by Link Humidifiers, 10-18, Miller's Avenue, Hackney, E.8) has been on the market for some time for cars and lorries, and a new model has been introduced for motor cycles. We have one of these under test at the present time, and at a later date we shall deal further with the matter.



The small water tank with regulator

(Left) Arrangement of the wicks. (Right) How the connecting pipe from the Link humidifier is fitted to the induction pipe.

# CURRENT CHAT

## Special Features

HOW TO CLIMB FREAK HILLS.
MUDGUARDING EXPERIMENTS.
THE SINGLE-TRACK CARETTE.

### Times to Light Lamps.

| | | |
|---|---|---|
| Jan. 19th | ... ... | 5.24 p.m. |
| ,, 21st | ... ... | 5.27 ,, |
| ,, 23rd | ... ... | 5.30 ,, |
| ,, 25th | ... ... | 5.34 ,, |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Next Week.

The next issue of *The Motor Cycle* will contain a review of the motor cycle exhibits at the Scottish Show.

### Motor Taxation in Italy.

No taxes are levied in Italy on small auxiliary motors not exceeding 3 h.p. which are fixed to bicycles.

### Preparedness.

Never go out for a run without a good coat and leggings. Winter weather is apt to be treacherous, and a drenching is uncomfortable, and may lead to a chill.

### A Warning.

Look to your tyres and lighting sets. A puncture during the long summer days is of little account, but a delay in winter weather is unpleasant, and may entail lighting up before reaching your destination.

### Under Difficulties.

T. G. Meeten's mount in the London-Gloucester trial was a 1912 Rudge Multi, deficient, as the result of a skid, of one handle-bar! He made a non-stop run, on time, until he lost his route card near the finish.

### The Next Big Trial.

Saturday, February 25th, has been decided upon as the date for the Colmore Cup trial by its organisers, the Sutton Coldfield and North Birmingham A.C. This old-established and popular event will be considerably stiffened up this year, without, however, including any freak watersplashes, etc.

### Plated Parts.

If you have not already done so, cover all plated parts with some transparent varnish or lacquer. Vaseline is a good substitute, but whatever you employ remember that the parts to be treated must be clean, bright, and dry before application

### Ex-Service Men in Motor Industry.

Over 3,500 ex-Service men have advised the committee for the employment of discharged soldiers connected with the motor and aircraft industries that they have obtained situations through their agency.

### Reunion of Scottish D.R.'s.

The Scottish ex-despatch riders' reunion and dinner will be held at Ferguson and Forrester's Restaurant, Glasgow, on Tuesday, January 31st, at 7 p.m. Last year's event was a great success, and was attended by nearly seventy ex-D.R.'s. The forthcoming function promises to be even better. An enjoyable evening can be depended upon, and an excellent programme of entertainment is being arranged. Tickets, price 10s. 6d. each, may be obtained from the D.R. Engineering Co., Ltd., Dunfermline, or from Mr. R. Watson, jun., 6, Cecil Place, Ibrox, Glasgow.

**MOTOR CYCLES at the SCOTTISH SHOW.**

**NEXT THURSDAY,**

**THE MOTOR CYCLE**

**will contain a guide to the motor cycle exhibits at the Scottish Automobile Show, which opens on the 27th inst. in the Kelvin Hall, Glasgow.**

### A T.T. Rider?

That excellent motor cycle sportsman, Capt. A. G. Miller, the donor of the £200 gold cup for the last year's 500 miles race, is competing in the car Tourist Trophy. Notwithstanding this fact, he is just as anxious to enter for the motor cycle T.T. races, and would like to hear from any manufacturer who is in need of a rider, as he has not yet definitely fixed up with anybody.

### At Kempton Park.

A large space opposite the Kempton Park racecourse has been secured by the R.A.C., and it is being suitably laid out for use as a motor enclosure in connection with future race meetings, and will be available for the National Hunt meeting on January 27th and 28th. The charge for motor cycles will be 1s. per day. R.A.C. guides will attend.

### The Scottish Show.

The Scottish Show, which this year, for the first time, includes exhibits of motor cycle manufacturers, opens on the 27th inst. at Kelvin Hall, Glasgow.

### Proposed Motor Cycle Clubs for Lee and King's Norton.

New clubs are being formed every week. Mr. D. L. Davis, of 110, Northfield Road, King's Norton, Birmingham, would like to get into communication with King's Norton and Northfield motor cyclists, with a view to organising a local club. The same thing applies at Lee, London, S.E.13, in the case of Mr. S. C. Pearce, 256, High Road, Lee, London, S.E.13.

### Touring in Spain.

The Royal Automobile Club learns that the R.A.C. of Spain has established an enquiry bureau at Behobia (on the Franco-Spanish frontier), where tourists may obtain gratuitous information regarding routes, mileages, hotels, garages, etc. Members and associates of the Royal Automobile Club showing their membership cards are assured of courteous attention.

### Ruining the Club Spirit.

Having paid his subscription and joined a certain South Wales motor cycle club, a reader fears that he is "inadvertently financing a secret society of the Klu Klux Klan brand." He reads reports of club activities, and has even witnessed a speed event and discovered that it was organised by his club. We publish this fully authenticated grouse as a reminder to the club concerned and any other club which do not keep their members fully posted of their future activities.

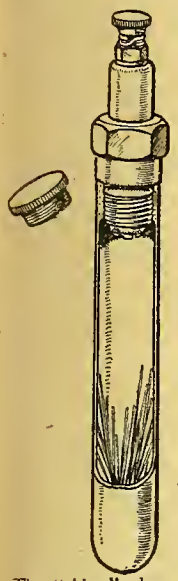
### Legal Sympathy.

Only a practical motor cyclist could have been responsible for the following extract from a review of "Law and the Lawyers," 1921, in a recent issue of the *Law Times*: "It is noticeable that this year has been marked by a somewhat over-zealous series of prosecutions in whist drives, and in the Guildford area the police have betrayed great activity in prosecutions of motor cyclists who had only one, instead of two, independent brakes on their machines. Here we find the law completely against the mature experience of riders who have learnt from bitter experience what a perilous adjunct a front wheel brake is, and manufacturers, realising this incontrovertible fact, have consequently omitted in some cases to add this brake, with serious results to riders. There is room here for a benevolent hint from headquarters."

# SOME NOTES ON SPARKING PLUGS.

## Tests of Discarded Plugs which served to Discover their Faults.

MOST motor cyclists have a few old plugs lying under suspicion in some odd corner of the garage. The owner has probably been troubled with misfiring or "nonstartitis" on some urgent occasion, has inserted a new plug, and put the culprit aside as C3. On a wet afternoon or dark evening a little profit or instruction may be obtained from testing these discarded plugs.

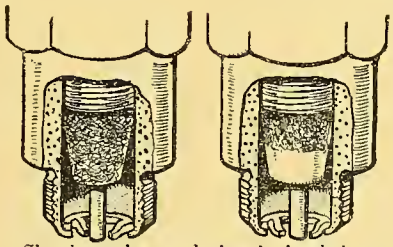


The "Ajax" plug cleaner.

Far and away the simplest method consists of utilising a small four-cylinder engine (your neighbour's light car?) or a flat twin motor cycle engine (your own Douglas?), with or without a "Radamax" spark tester as an auxiliary. A neighbour and myself recently spent a most interesting evening testing some three dozen old plugs with the aid of his Deemster car engine. We commenced operations after dark so that the sparks—if any—might show up to the best advantage. Rain and cold were excluded by almost closing the garage door. We placed the car with its exhaust pipe close against the open portion of the folding doors, to avoid asphyxiation. The Deemster engine was then equipped with three sound plugs, on which it will invariably start at a half turn of the handle or a slight pull of the mechanical lever; and the fourth cable was coupled to the particular "dud" plug under test, this being held in an enormous shifting spanner, securely fixed to the engine and so earthed.

### An Elusive Fault.

After the first few plugs had been tested, the chief defect of the modern plug was thrown into high relief, and some of the difficulties which users experience in "vetting" plugs were elucidated. About 80% of the tested plugs were very nearly perfect, but showed a slight tendency to spark deep inside their cupped heads, instead of across their lawful gap. A film of carbon had formed over the interior insulating surface, and at the narrowest diameter of the cupped portion this carbon—which is a conductor—was very close to the metal body of the plug. In several cases the plug sparked accurately at low engine speeds, and functioned well at higher speeds as a rule; but every now and then it would miss a spark altogether, and every now and then a number of sparks would jump deep up in the cup, instead of across the gap. With such a plug fitted to the engine, instead of exposed, the sparks inside the cup apparently failed to fire the charge, probably owing to dead gas being pocketed there.



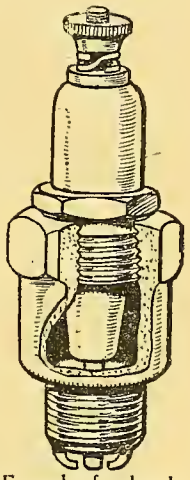
Showing carbon on the interior insulation, and (right) the base of the latter cleaned to prevent leakage of current.

My neighbour now began to curse his Radamax tester, which he considered had failed to identify these faulty plugs, when it was applied to them with the engine running. I pointed out that with the plug exposed and sparking in air, we had only spotted the fault by:

1. Running the engine at various speeds.
2. Extending the test over two or three minutes.

A brief test at low or moderate engine speeds would evince no fault either with the plug exposed or by the Radamax tester.

The next problem which arose was naturally the reconditioning of these plugs. None of them were really dirty. If the insulator was mica, they appeared quite clean to the eye; if the insulator was whitish, *e.g.*, steatite or porcelain, it was tinted pastry colour. We did not possess one of the "needles-in-a-bottle" cleaners, which might have met the case. Some of the plugs were of the "detachable" type, and these were readily rendered fit for service by unscrewing the insulator, gripping it in a vice, and brushing it with petrol. My neighbour watched this process with interest, and vowed he would never purchase another non-dismountable plug.



Example of a detachable plug.

### Cleaning Difficulties.

It was gratifying to notice that the gaskets of the detachable plugs had proved gastight in every instance, no stains of "blowing through" being discernible on the outside of their insulators. The cleansing of the plugs with cemented joints between butt and insulator was necessarily a more awkward process. Their business ends were first cleansed as far as possible with a stiff toothbrush dipped in petrol; after which the small blade of a penknife was used to scrape away the carbon from the cone of the insulator. Obviously, when such a plug sparks inside the cup instead of across the gap, the current is running down the cone from the central electrode; therefore, if a white ring can be created on the insulating surface all round the central electrode, the shorting will cease. On the other hand, it may not take long for a fresh film of carbon to form.

Only one plug appeared to have developed an internal short circuit clean through the insulator to the body. We could not find any crack in the insulator, but even when the plug was spotlessly clean, nothing would wring a visible spark from it.

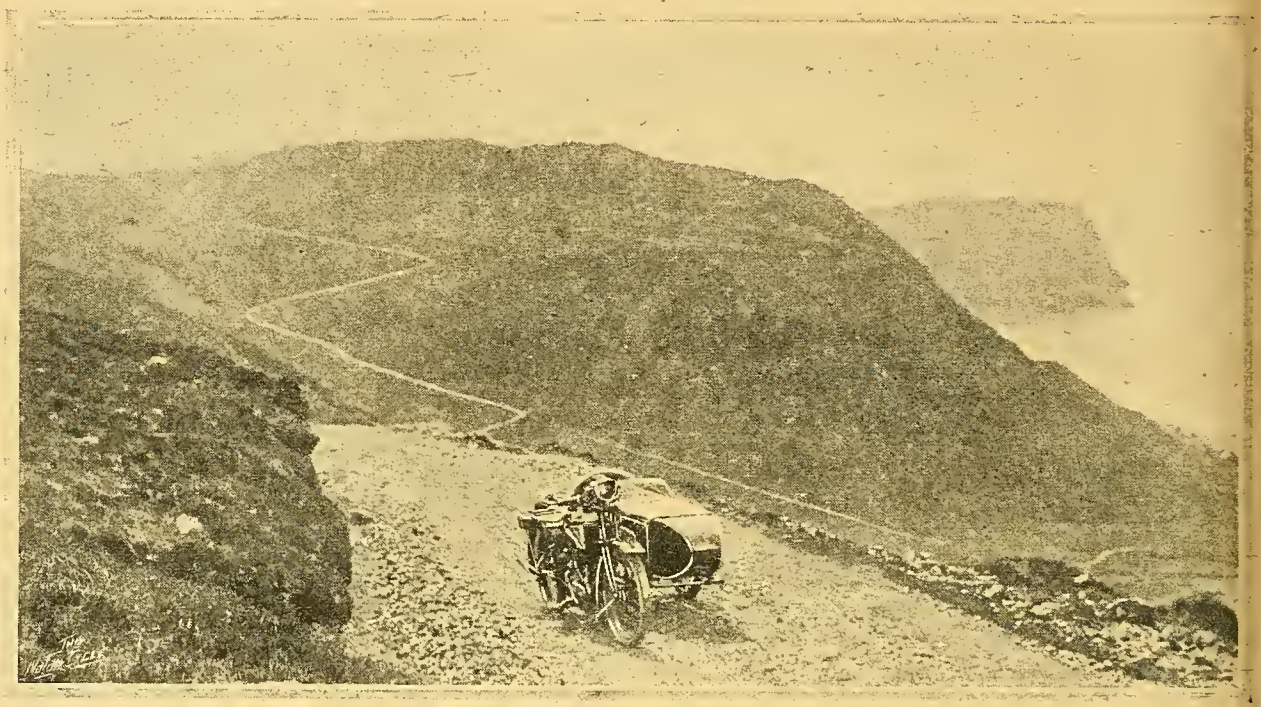
Several of the motor cycle plugs were heavily encrusted with burnt oil, as distinct from the ordinary film, which is so thin that nothing but its dark colour betrays its presence. In these cases the practical difficulties of cleansing naturally arose if the plug was of the non-dismountable type.

On the following evening two or three more enthusiasts came round with fresh batches of crippled plugs,

**Some Notes on Sparking Plugs.—**

and the results were similar to those of the first experiment. Another four dozen plugs were tested, and approximately 80% were suffering from a tendency to spark inside the cup, especially at medium and high engine speeds. The owner of a baby two-stroke brought in four plugs which he had discarded as past praying for. In each case they functioned perfectly under all our tests. The inevitable conclusion was that his newish engine is not yet perfectly run in, and that it gets so hot as to render the plug points incandescent and stops the engine through pre-ignition. All of us agreed that wherever a careless rider or a crude oiling system or a bad carburetter adjustment tend to make an engine dirty, the detachable pattern of plug is a great boon to the owner, because it can be cleansed so much more efficiently and readily than the cemented joint type.

ROAD RIDER.



ON THE SUMMIT OF "THE RIVALS."

Visitors to Carnarvonshire during the coming summer should make a point of journeying to "The Rivals" (Yr Eifls), those two mountains which stand as outposts to the Snowdon range. There is a road to the summit of one of these hills from which, on a clear day, the coast of North Wales may be seen as on a map.

## ON BALLS AND ROLLERS.

A FRIEND who rides a Scott is able to do twenty-eight miles without oil in his sump. He has evidently been served with pistons on the slack side—slacker by a good deal than the standard type. His engine is undoubtedly a cool runner, but though roller bearings would easily stand such usage without suffering the least harm, there is, unhappily, no such thing as a roller bearing piston! I too am riding a machine having roller bearings throughout, but it will not do half of eight miles without oil, far less twenty-eight. The rollers would stand it and any amount more, but immediately the pistons become dry, terrific friction begins and gradually becomes worse until, apparently, the pistons are red hot, and pre-ignition brings the machine to a standstill with most appalling sensations for the rider. I have possessed several water-cooled Scotts, and though one or two would run without water, none would run without oil. I know that my friend's engine will run without oil, but I think the roller bearings alone are not responsible for it, and riders possessing engines of a similar type would not be well advised to attempt similar feats. Standard machines are fitted with pistons on the tight side, partly for the sake of silence and partly on the score of wear; and a favoured few, who are not so particular about silence and wear as they are anxious to obtain terrific revs, may be given pistons of a special fit: and quite rightly so, since the demands of the respective parties are different; and this, more than the engine bearings, probably accounts for the abstemious disposition of the engine concerned.

Since, however, it is abundantly proved that ball and roller bearings require no more lubrication at the most than is supplied by an oil fog, here is a solution to the elimination of the splash system, which is quite hopeless when the cylinders are set at a wider angle than 90°. By taking the oil feed direct to the cylinder walls, utilising, perhaps, a hollow gudgeon pin, then draining it straight away from the sump, one would be sure of two well lubricated pistons, which is all that matters when plain bearings are absent. Unequal oiling would not occur, and the piston might be so shaped that a constant supply of cold oil would be circulating past it to be used again and again if so desired—thus assisting materially in cooling. Any mechanical pump, fixed in the bottom of the sump would do the work of feeding the oil at pressure to the pistons.

CHINOOK.

# A LIGHTWEIGHT T.T.

**The Real Lightweight comes into its Own. 250 c.c. Class, fostered by "The Motor Cycle," with the Special Cups for this Type of Mount in the 1920 and 1921 Races, to Compete for a Tourist Trophy of its own.**

A SIGNIFICANT announcement is made by the Auto-Cycle Union. The 250 c.c. class in the T.T. races is to have a Tourist Trophy of its own, and will no longer be regarded as a subsidiary class in the Junior T.T. race. Our efforts to bring this about date back to pre-war days, when we offered a cup for a real lightweight section in the T.T. races, as we felt that insufficient attention was being paid to a type of machine which had great possibilities.

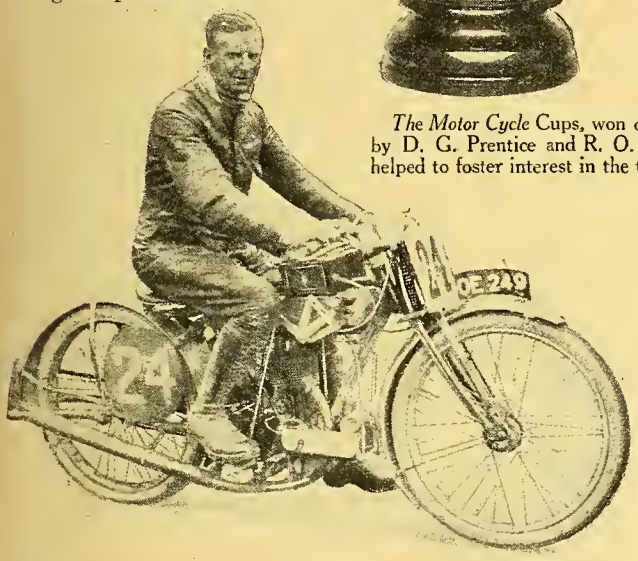
FORERUNNERS OF THE NEW TOURIST TROPHY.

*The Motor Cycle* Cups, won outright in 1921 and 1920 by D. G. Prentice and R. O. Clark respectively, which helped to foster interest in the true lightweight.

The seven entrants were:

R. O. Clark (2¼ Levis)
T. P. Lewis (2¼ Levis)
F. W. Applebee (2¼ Levis)
G. Kuhn (2¼ Levis)
B. Houlding (2¼ Diamond)
P. Pike (2¼ Diamond)
F. J. Price (2¼ Diamond)

It will be seen that the race was between two well-known lightweights of the two and four-stroke types respectively. The two-stroke won, R. O. Clark (Levis) finishing fourth in the event, and first in his class. His time was 4h. 55m. 37s. (38.31 m.p.h.) as compared to 4h. 37m. 57s. (40.74 m.p.h.), the time of the Junior Trophy winner.



D. G. Prentice, the winner of the 250 c.c. class in 1921, on a New Imperial four-stroke. Average speed, 44·8 m.p.h.

R. O Clark, on the Levis two-stroke, with which he won *The Motor Cycle* Cup in the 1920 Junior T.T. race. His average speed was 38·3 m.p.h.

When motor cycle competitions were revived after the conclusion of the great war, and at a time when the A.C.U. was interesting itself in the development of the scooter, we again urged better consideration for the small machine, and repeated our offer. As a result, the first post-war T.T. included a class for 250 c.c. machines, which competed for *The Motor Cycle* Cup, eventually won by R. O. Clark on a Levis.

### 250 c.c. Machines in the 1920 Race.

In this event (1920) seven machines not exceeding 250 c.c. capacity were entered, competing *(a)* against the larger motor cycles of 350 c.c. and *(b)* amongst themselves as a separate class for the cup presented by this journal. The interest manifested in the smaller machines and the speeds they attained confirmed our contentions that the genuine lightweight had a right to a "place in the sun."

### The 1921 Event.

For the 1921 Junior Tourist Trophy race, *The Motor Cycle* again presented a cup for the 250 c.c. machines, and this time no fewer than twenty-two entrants were received for this class out of the total of sixty-five. These entries were as follow:

D. G. Prentice (2¼ New Imperial).
B. Kershaw (2¼ New Imperial).
P. Pike (2¼ Levis).
G. Savage (2¼ Hobart).
N. Black (2¼ Omega).
A. Milner (2¼ Levis).
G. Kuhn (2½ Sun-Vitesse).
W. J. Lord (2¼ Hobart).
G. Denley (2¼ Velocette).
B. H. Morris (2½ Sun-Vitesse).
R. N. Judd (2¼ Velocette).
F. J. Price (2¼ Diamond).
F. W. Applebee (2¼ Levis).
J. S. Clayton (2¼ New Imperial).

**A Lightweight T.T.—**

S. A. Marks (2¼ Diamond).
R. E. Pugh (2¼ Levis).
C. H. Hopwood (2¼ Levis).
G. S. Davison ((2¼ Levis).
W. G. Harrison (2¼ Velocette).
H. Martin (2½ Martin).
R. Humphries (2¼ Velocette).
G. W. Jones (2¼ New Hudson).

The winner of our cup proved to be D. G. Prentice (2¼ New Imperial), who finished tenth after averaging no less than 44.8 m.p.h., 4 m.p.h. faster than the winner of the 1920 Junior T.T., thus proving that in twelve months great advance had been made in the development of the type.

Our purpose has been achieved. The Competitions Committee of the A.C.U. has decided that in future the 250 c.c. class is to be considered a separate race for a challenge trophy of its own, and we congratulate the Auto-Cycle Union upon its decision.

The race for this lightweight class will be run in conjunction with the existing Junior T.T. race, which is open to machines up to 350 c.c. engine capacity. Special scoring arrangements will be made in respect of the lightweight class, which will ensure that the performances of the lightweight machines throughout the T.T. race can be easily followed by the spectators, and that clearly defined results will be arrived at immediately after the contest. The new Tourist Trophy, to be held for one year by the winner, will be identical with the Senior and Junior trophies.

# THE TOUR DE FRANCE.

## A Trial of Nearly 2,500 Miles in Twelve Stages.

*(By "The Motor Cycle" Paris Correspondent.)*

A CHAT with M. Hamond, the energetic president of the Motocycle Club of France; cannot fail to give one the impression that everything necessary is being done to make the Tour de France motor cycle and cycle car reliability trials one of the outstanding features of the year. There is something in a Tour de France which appeals to every Frenchman, and, indeed, to every traveller in that country.

Before the days of railroads, every journeyman considered it a part of his education to make a tour round France on foot. With the bicycle period a Tour de France cycle race was organised, and is still continued. There have been several Tour de France car competitions, but this is the first occasion on which two-wheelers and cycle cars have been called upon to cover nearly 2,500 miles in twelve stages.

The President of the Motocycle Club de France believes that this event, which starts from Paris on March 25th and finishes in the same city on April 9th, will be the most strenuous motor cycle event ever held in France.

### Trying the Route.

Within a few days the President of the Club intends to go over the entire route on a six-cylinder Delage driven by the well-known race driver, Jean Chassagne, now with the Sunbeam Co., in order to arrange all organising details.

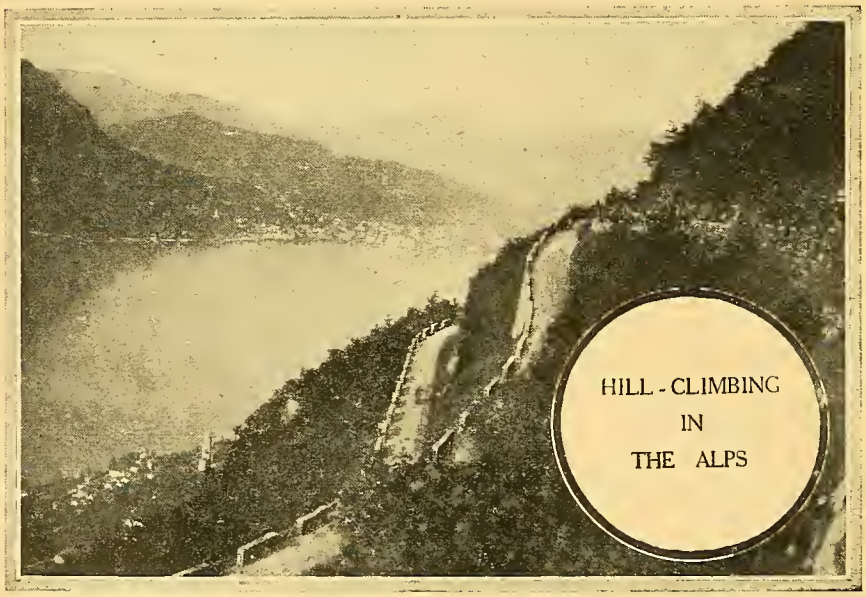
Starting from the capital on the morning of March 25th, the competitors will spend a night in the following towns: Caen, Nantes, Bordeaux, Toulouse, Avignon, Nice, Grenoble, Besançon, Strasburg, Rheims, and Lille. The average daily run will be 190 miles, but the longest stage will be the 233 miles from Nice to Grenoble through the French Alps. The road surface on this route is excellent throughout, but the climbs are such that any machine coming through without a loss of points will have given proof of real merit.

The object of a trial of this nature is not only to prove that a machine is sound and reliable, but also to bring that fact before the largest number of persons. It is on this account that exhibitions are being arranged at Bordeaux, Nice, Strasburg, Lille, and Paris, where the competitors will rest for one day. When not on the road, the machines will be under official control, and cannot be touched by either the competitors or the public. On this account, the firms taking part in the tour will be allowed to have on exhibition machines which are duplicates of those taking part in the competition.

### Varied Scheduled Speeds.

Classes provided for are motor cycles varying from 250 to 1,000 c.c., two classes of sidecar machines, and 1,100 c.c. cycle cars. Reliability will be the basis of the competition, with the loss of points for early or late arrival at controls. The average speed to be maintained will vary according to the class of machine, and also, to a certain extent, according to the route. The maximum will be 25 m.p.h. for the more powerful machines and 18½ m.p.h. for the lightweights, but it is practically certain, however, that this average will not be required for such a run as that from Nice to Grenoble. The decision to reserve the right to lower the average with only a few days' notice is really a wise one. It is quite possible, for instance, that the mountain roads may be in such a condition, by reason of snow or rain, that to maintain the maximum average would cause every competitor to lose a very large number of points.

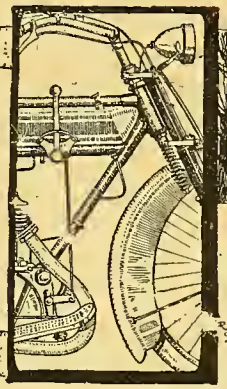
Although no official announcement has been made, it is understood that valuable cash prizes will be offered. The towns through which the competitors will pass are displaying considerable enthusiasm, and offers of money prizes are flowing in in a surprising manner. These cash prizes will, of course, be in addition to the club medals offered for the winner in each class. Entries at normal fees, 1,000 francs per machine, are received at the Motocycle Club headquarters, in Paris, until the last day of this month.




Magnificent views confront the tourist on the road above lovely Lake Lugano.

# MILES PER HOUR *v* GEAR RATIOS.

## A Plea for a more Comprehensive Statement of Capacity.



FOR a long time it has been the custom amongst motor cycle manufacturers to quote their gears in terms of the ratio of engine revolutions to turns of the driving wheel. This did not leave so much to the imagination in the case of pre-war motor cycles, as nearly all had 26in. wheels, whereas present-day machines differ in size from 24in. to 28in., nominal sizes, by the way, which are not always actual.

The method of stating the gear of a pedal cycle is certainly better, for account is taken of the size of the wheel as well as of its speed of revolution, and accurate comparison may be made between two different machines without having to look up further information.

Before going further I will admit that the length of the cranks will affect the foot pressure which the rider must exert to climb a given hill. Still, a gear of, say, 75 will always mean that one revolution of the crank bracket and pedals will propel the machine exactly the distance travelled by a wheel 75in. in diameter during one revolution.

### Pedal Cycle Gears applied to Motor Cycles.

Treating a motor cycle gear in the same way we find that the gears of a machine having 26in. wheels and being 5.2 to 1 on top, 8.6 to 1 on middle, and 13 to 1 on bottom gear, would, in push cycle parlance, be geared to 5, 3, and 2. In other words, a man can push a gear of 75, while the limit of a 2¾ h.p. engine is about 5, or one-fifteenth of the man's capacity.

There is, of course, another side to this question, for when the speed of the human and the petrol engine is compared the advantage is no longer with the former, but immeasurably in favour of the latter. Briefly, the petrol engine gets its power largely from its speed. Here I come to the second disadvantage of the method in common use.

### Normal R.P.M. should be Noted.

Although petrol engines as a whole are high-speed engines, some are able to turn over very much faster than others. For instance, the small flat twin has wonderful "revving" powers. Therefore, before a statement that the gear is 5 to 1 can convey any definite information we must ascertain two other facts, viz., the size of the driving wheels and the normal speed of the engine.

Some engines are made to "rev" at high speeds. "Revving" does them no harm, but slogging along on a high gear would pull them to pieces. Obviously such engines should have a much lower gear than the big single, not because they are less powerful, but because they exert their power in a different way.

### A Case in Point.

In these notes I do not wish to urge the virtues of any particular machine; but suppose an A.B.C.—a fairly heavy machine with a small engine—and a 4 h.p. Triumph of a somewhat similar weight (a difference in the weights of the riders may make the total weights identical), be ascending a steep hill side by side, obviously both engines will be exerting the same horse-power, but it is probable that the A.B.C. will be running on a lower gear than the Triumph. I have selected these two machines as an example because both are admittedly in the first class, but I do not intend to try to prove that one is better than the other.

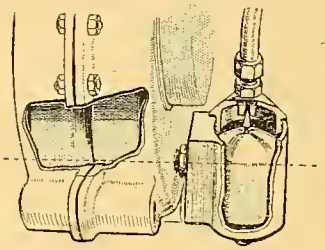
### M.P.H. the Best Basis of Comparison.

Generally speaking, what most concerns a rider is that he shall get good results in speed, power, and mileage from the petrol consumed, and it does not matter very much to him whether speed is the result of high revolutions per minute combined with a moderate gear, or is produced by a high gear and a powerful thrust. Horse-power is not a measure of any particular force, but simply a rate of doing work. One horse-power may be exercised in the lifting of 550 lb. 1ft. in one second, or 1 lb. 550ft. in the same time, or, again, 50 lb. 11ft., and so on.

Therefore I would urge the general adoption of stating the miles per hour obtained at normal engine revolutions when the various gears are engaged. This would give a satisfactory basis of comparison without further calculations. Thus two machines having the same figure for their top gear might be expected to be equal in performance.

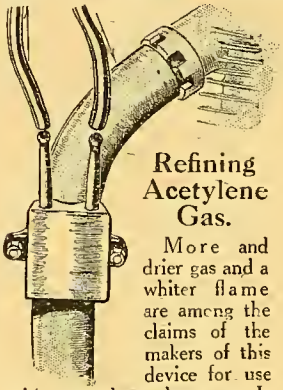
A figure of 30 might be obtained from an engine whose normal revolutions per minute were 1,750 geared 4½ to 1, or an engine having 2,150 as its normal r.p.m. with a gear of 5½. It would, however, be absurd for a rider to expect the same performance on hills from the latter engine with the gear of the former, as its figure would then be 39; and obviously a machine geared to run at 39 m.p.h. on the level at normal "revs" is more highly geared than one which is set to do 30 only.

It is, of course, only when the engine power is approximately the same in both cases that this figure can form a perfectly fair basis of comparison, and a low figure must not necessarily be taken as indicative of good performance on hills; it may be the result of a small engine suitably geared. AURIGA.



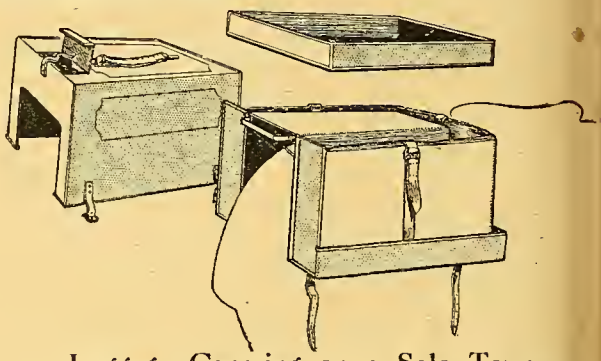
## Simple Automatic Lubrication.

Sight-feed, drip valve, and force pump, are all dispensed with on the Jebon gravity feed lubricator. Oil level in the crank case is maintained by a cork float and needle valve in an adjacent chamber, to which the oil is led by gravity from the tank (The Jebon Press Works, 2, Temple Sheen Road, East Sheen, London S.W.14.)



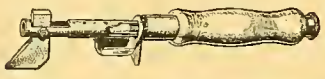
## Refining Acetylene Gas.

More and drier gas and a whiter flame are among the claims of the makers of this device for use with acetylene lamps. It simply consists of a chamber (clamped to the exhaust pipe) through which the gas passes. (The Star Equipment Co., 9, Baronsmere Road, E. Finchley, London, N.2.)



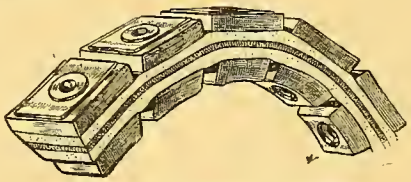
## Luggage Carrying on a Solo Tour.

The solo tourist's luggage problem has been carefully considered by T. Robini, 1, Tulse Hill, Effra Road, Brixton, London, S.W.2, with the above result. The lid (shown on the left) for this "pannier trunk" contains an accessible compartment for small tools.



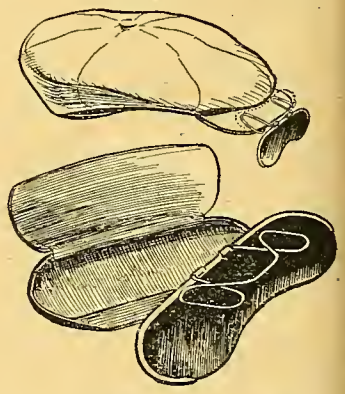
## Self-contained Soldering Iron and Blow Pipe.

This ingenious soldering iron uses methylated spirit inserted through the filler cap at the end. A priming trough is incorporated; if it is desired to use it as a blow lamp only, the copper bit may be removed. (Bancroftian Co., Ltd., 64, Bishopsgate, London, E.C.)



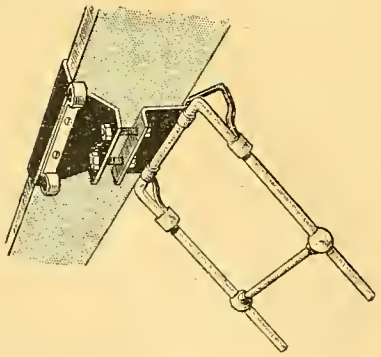
## Belting for Wet Weather.

For continuous riding in wet weather, a leather belt is much preferable to one of the rubber variety. An old established type brought up to date, the Service Super belt is composed of strips of chrome leather with tan hide blocks top and bottom, and is eyeletted for easy adjustment. (The Service Co., Ltd., 289, High Holborn, London, W.C.1.)



## Anti-dazzle Goggles.

Intended to clip on the peak of the cap, this blue glass screen may be pulled down to shield the eyes when meeting a dazzling pair of head lamps. (A. W. Gamage, Ltd., Holborn, London, E.C.1.)

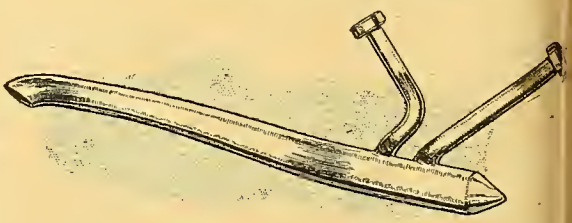


## Easily Fitted Prop Stand.

It is unnecessary to drill holes to fix this prop stand, since it simply clamps on to the footboard. When out of action it lies snugly underneath. (Mowbray, Bellairs and Co., 24, Little Chester Street, Belgrave Square, London, S.W.1.)

## Finding "Top Dead Centre."

Amateurs who desire to time or re-time their own engines will gain considerable assistance from this plug-locating device, designed to screw into the compression tap hole—provided that the tank rail does not come in the way. (P. S. Collyer, 78, Snell's Park, Upper Edmonton, London.)



## "Zoom! Zoom!!"

Thus happily has this very handsome copper exhaust system for 2¾ h.p. Douglases been named. No back pressure, a pleasing exhaust note, and an improved appearance to the machine at a moderate cost (30/-) are the claims of the maker—W. G. Coram 140, Victoria Street, Bristol.

# Club News

### Coventry Triangle M.C.

At 6 p.m. on Saturday next, at the Railway Hotel, the club will hold its first annual dinner.

### Yorkshire Centre A.C.U.

The first annual general meeting of the centre will be held at the Hotel Metropole, Leeds, at 7 p.m., on Monday, February 6th.

### Slough and District M.C. and L.C.C.

The first general meeting of the club will be held at the Old Crown Hotel, Slough, at eight o'clock to-night. All those interested are invited to attend.

### Bucks County M.C.C.

Mr. G. Burch, 108a, Oxford Road, High Wycombe, is now secretary of this club, which recently held an extremely successful dinner at the Red Lion Hotel, High Wycombe.

### Western M.C.C. (Glasgow).

The annual dinner and prize distribution will be held at the Athenæum Restaurant, Buchanan Street, on Friday, February 3rd; reception at 6.45 p.m., dinner at 7 p.m.

### Surbiton and District M.C.C.

Other London and south-country clubs are asked to note that the inter-club team trial for the Maudes Trophy has been fixed for April 22nd. It is hoped that this early notice will prevent any clashing of dates. The annual general meeting of the club will be held on Wednesday next.

### South Midland Centre A.C.U.

Some seventy members were present at the recent annual meeting at Bedford, when the following officials were re-elected: President, Mr. A. J. Salmon; chairman, Mr. H. J. Pooley; vice-chairmen, Mr. W. A. Mathews and Mr. S. R. Axford; treasurer, Mr. A. Humphriss; and auditors, Messrs. B. Staley and R. J. Pigott.

### Westmorland M.C.C.

When the club held its annual meeting at the County Hotel, Kendal, on Friday, January 6th, the room was overcrowded. The president, Captain R. Rainshaw Rothwell, was unable to be present, and Mr. Bryan Jefferys, the popular captain of the club, was called upon to take the chair. Mr. W. D. Stewart presented the secretary's report, which was of a very satisfactory nature. It also referred to the loss the club sustained by the death of Mr. Guy Jefferys, but struck a distinct note of cheerfulness for the coming season. Captain R. Rainshaw Rothwell was unanimously re-elected president of the club. Mr. Malley, who for the past year had been assisting the secretary, was appointed to that office. Mr. J. P. Johnson was appointed treasurer, and Mr. W. A. Carter trials secretary.

### North London M.C.C.

A very successful and enjoyable dance was held recently at Fairfax Hall, Harringay. It was very well supported, there being an attendance of nearly 300. The opening run for this year is being held on Saturday, February 25th.

### Surrey M.C.C.

At the annual general meeting, which took place at the White Horse Hotel, Guildford, on January 11th, the hon. secretary's report showed another successful season and a very satisfactory increase in membership; the balance-sheet disclosed an excellent financial position, as a result of which it was decided to reduce the subscription to 12s. 6d., including A.C.U. affiliation under Division A. It was also decided to change the name of the club to the Surrey Motor Cycle and Light Car Club. The annual dinner will take place at the Prince of Wales Hotel, Guildford, on January 21st. Tickets 6s.

## THE SCOTTISH SHOW.

**Next week's issue of *The Motor Cycle* will contain an Illustrated Guide to the Motor Cycle Exhibits at the forthcoming Scottish Automobile Show.**

### Harrow and District M.C.C.

Owing to the large number of enthusiastic local motor cyclists, a club has been formed as above, with headquarters at the Swan Hotel, Sudbury. Having Professor A. M. Low as president, it has made great strides since its formation, chiefly owing to that very enthusiastic gentleman. The annual subscription has been fixed at half a guinea, plus affiliation fee to the A.C.U. under Division A, thus making 12s. in all. A club meeting is held every Thursday at 8 p.m. in the club hall, in which many enjoyable evenings have been spent. Any motor cyclists or light car owners who would care to join are cordially invited to do so, and should write to the hon. secretary, Mr. P. W. Harris, 25, Copland Road, Wembley, N.W.

### Bury and District M.C.C.

A motor cycle club, now called the Bury and District M.C.C., has been restarted at Bury St. Edmund's. The subscription is 10s. 6d., and at the present time there are about sixty members. It is hoped to arrange some runs and competitions with other clubs in the neighbourhood. Those interested should communicate with the hon. secretary at the headquarters of the club, the Suffolk Hotel, Bury St. Edmund's.

### Westoe M.C.C.

Owing to the success of the club, it is proposed to alter the name to the South Shields and District Motor Cycle Club, and a cordial invitation is extended to all prospective members in the neighbourhood of South Shields.

The annual general meeting will be held in the Regent Hotel, Ocean Road, South Shields, at 7.30 p.m., on Tuesday next.

### Bohemian M.C.C. (Southampton).

This newly formed club held its opening event of the year on New Year's Day, when a very representative gathering assembled at West Dean Hill, a well-known test hill of the district. The results were as follows:

SOLO CLASS.—1, C. S. Broomfield (4 Blackburne); 2, A. H. Saunders (7-9 Harley); 3, R. Mines (4 Kynoch-Jap).

SIDECAR CLASS.—1, M. Angel (8 Enfield sc.); 2, E. F. Crabb (4¼ B.S.A. sc.); 3, P. G. Smith (4¼ B.S.A. sc.).

The next meeting is on February 5th to Whitchurch; members are requested to meet at the Cowherds at 10.45 a.m.

### Tiverton M.C. and L.C.C.

A highly satisfactory state of affairs was reported at the first annual meeting, held at the Palmerston Hotel, Tiverton, on Thursday evening, under the chairmanship of the president (Capt. J. H. Amory). The membership was stated to have reached 108, which, with the substantial balance in hand, was considered very gratifying in view of the fact that the club is only six months old. Humour and optimism characterised the speeches at the first annual dinner, which followed. Mr. A. Thorne took the chair, being supported, among others, by the Mayor (Mr. W. Barrows).

### Northern Centre A.C.U.

The annual meeting was held at the County Hotel, Kendal, on the 8th inst., when Mr. Rutherford, of Carlisle, presided over a large attendance. All the clubs in the Centre were represented, with the exception of Kirkby Stephen and Lancaster. Considerable discussion took place as to which club in the Centre should hold the only open event which was to be held in the district. It was stated that the only club which had sent an application to hold the fixture was the Cumberland County body, but several members expressed hope that the Cumberland club would be granted no privilege on account of applying first when the matter came up for consideration. Mr. Stalker thought that meeting should have power to say who was to hold the event, and deplored the fact that the Centre had no standing orders of its own on the matter. Mr. J. Hall and Mr. W. A. Carter both spoke on the claims of the Westmorland club, but the A.C.U. Consul for the county (Mr. W. D. Stewart) thought it would be far better to leave the matter with the new board.

# THE GREAT GAME.

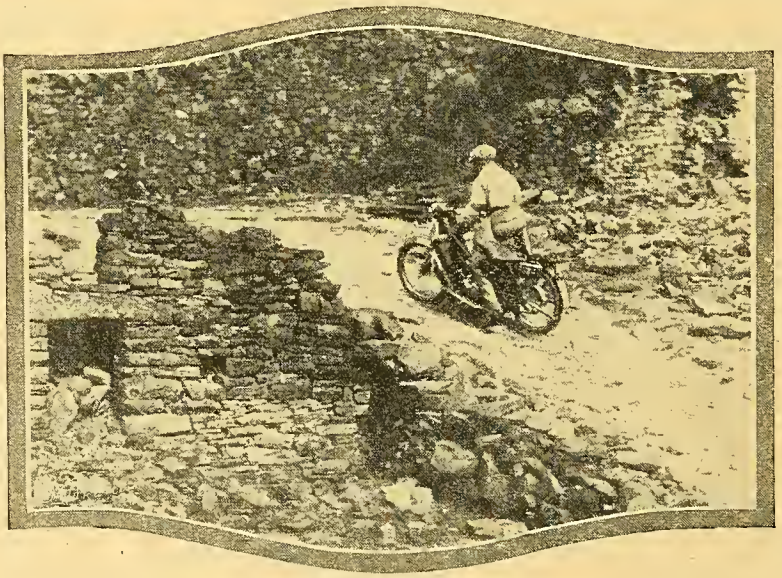
## Being a Plea for the Greater Support of Sporting Trials by Private Owners.

WHAT is the fascination of the freak trial? Comparatively so few private owners (and even trade riders) enter for such events that the question is a natural and recurring one. On behalf of the select few "mad-men" I will endeavour to frame a reply.

Perhaps this may best be done by comparing the sporting scramble with the other varieties of competitive events at present open to the motor cyclist.

### The "Slowness" of Speed Trials—

There is the speed event, which sounds exciting, but is not very. If it be important and "open," poor Mr. Private Owner stands little chance of being placed — even in the "experts barred" classes, for "experts" have a peculiar habit of mislaying their honourable designation after a short, very short, abstention from competition work, blossoming forth as very raw "novices" just when one least expects them. Then, "experts barred" usually refers to riders and not to machines; factory-tuned 'buses that arrive in a lorry usually mean business—and do it.



". . . For it is driving ability—and luck—that counts!"

### —and of Hill-climbs.

Very much the same thing, unfortunately, applies to the closed club event, if it be worthy of attention at all; and even if the meeting be confined to *bona fide* private owners on their own machines, there is not very much fun in streaking along a measured kilometre perhaps three-fifths of a second slower than the speediest man when one knows that the time-keeping may easily have a possible error of one second.

Nowadays, the average hill-climb is simply a speed event on a safe up grade. Hair-pins in hill-climbs are distinctly out of fashion. Therefore, all the foregoing objections may again be applied.

Of serious competitive events there only remains the reliability trial, of which, as the schoolboy's essay would say, there are two

**The Great Game.—**

An animated scene on Park Rash, where a clean climb is its own reward

kinds. One relies on split seconds timing and secret checks to place the winners; the other, on rough going.

Perhaps there is, indeed there must be, a class of motor cyclist which enjoys riding at a monotonous 20 m.p.h. over fair to good roads, with one eye on a watch and the other dangerously alternating between the road ahead, the route card, the speedometer, and the milestones (N.B.—The reference is somewhat exaggerated metaphor; actually one need not be cross-eyed.)

There remains the freak event—it varies greatly in severity, but it is always sporting—and having shown, I hope, why it persists so strongly, I will endeavour to disperse one or two illusions held by those who have only read or watched a *real* trial, in the hope that it will gain even greater popularity.

### Who Minds a Bruise or Two?

"Machine-smashing" is a favourite epithet of those who know not. Well, it depends on what is meant by the term. If kinked rims—and sometimes buckled wheels—twisted footrests, and missing mudguards singly or collectively entitle a machine to be called smashed, they are right. But it is only very rarely that a sturdy modern big single or twin gets damaged irreparably, even in the "Scott Scramble." Admittedly, the task of annexing "freak golds" on a lightweight is best left to the trade rider financed by the factory; for the majority of lightweights, excellent though they are, may crumble up some of their essentials at about the third crash. On the other hand, with a good hefty heavy or medium weight machine the inevitable spill does remarkably little mechanical damage. And who minds a bruise or two?

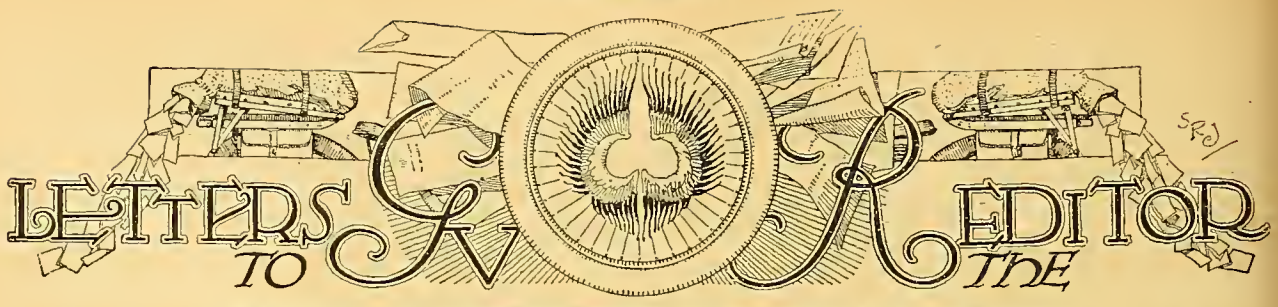
### Driving Ability—and Luck!

"Dangerous to the rider" is another common objection. Now while the spice of danger is perhaps what makes things really worth while, it is more illusory than actual. I doubt if it is any more dangerous than main road riding; boulder-strewn tracks, ruts, watersplashes, and greasy grades of 1 in 3 make high speeds impossible—and serious accidents, as a rule, only occur at high speeds.

Entered in the right spirit, the sporting trial provides much fun. For it is driving ability—and luck—that counts!

A. McL.

'. . . boulder-strewn tracks, ruts, watersplashes, and greasy grades of 1 in 3 make high speeds impossible.'




**The Editor does not hold himself responsible for the opinions of his correspondents.**

Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor St., E.C.4, and must be accompanied by the writer's name and address

### *WHO WOULD DECIDE?*

Sir,—Might I ask you to use the influence of your paper to secure that when the new Bill is introduced making rear lights again compulsory riders will *not* be punished when it can be shown that the rear light had merely "jolted" out?

Stafford. W.K.

### *"BUYING A PIG IN A POKE."*

Sir,—"Have you seen our new so-and-so model?"

The above phrase, so often coined by motor cycle manufacturers for insertion in their advertisements, seems to me to be somewhat out of place, and for this reason, that some of the firms never seem to trouble about supplying their agents with demonstration or Show models of any description. Why is this? OLD READER.

Leicester.

### *MOTOR CYCLISTS IN DREAMS.*

Sir,—Your correspondent Maude Stanfeld is perfectly right in her (or his) assertion that by concentrating and holding the image of our desire in mind with persistency, the thought will materialise, provided the desire is reasonable and good.

Your correspondent, however, makes one very serious omission. She should have qualified her statement with the condition that the thought should be backed by the consciousness of good in thought and deed. Otherwise, not a bolt or nut will materialise, much less a bicycle. This fact is again becoming common knowledge, and is a thousand years old (*vide* the Scriptures), and, of course, applies to all things in daily life. W.H.M.P.

London, E.11.

### *T.T. RACES FOR PRIVATE OWNERS.*

Sir,—The suggestion recently advocated by various readers of having a T.T. for private entrants is certainly an excellent proposal from the point of view of the large percentage of the sporting class of the great pastime. There are, however, some points that I would like to point out on this matter. First, could permission be got from the police to hold a race on the roads of, say, the North of England, a point accessible to both Scottish and English motor cyclists? If the necessary permission were granted, or some benevolent person owning an estate gave permission to use his park for the race, then different classes must be settled upon, a scale of which I lay out here:

CLASS 1. *(a)* Lightweights not exceeding 250 c.c.; *(b)* lightweights not exceeding 250 c.c., and of not later origin than 1917.

CLASS 2. *(a)* Mediumweights not exceeding 350 c.c.; *(b)* mediumweights not exceeding 350 c.c., and of not later origin than 1917.

CLASS 3. *(a)* Motor cycles not exceeding 500 c.c.; *(b)* motor cycles not exceeding 500 c.c., and of not later origin than 1917.

Of course, some other person more versed in matters of this description will no donbt be able to offer some other table for entrants, but I think that owners owning machines over five years old ought to be allowed for, as it would be unfair to compete with more modern 'buses.

It is certain that a large number of entries would be made, so that the scale of entrance fees would be correspondingly low. Perhaps a class could be arranged providing for the novice, such as myself, of, say, an age ranging between fourteen and eighteen.

This somewhat elaborate scale of the private entrants' T.T. will undoubtedly be met with some disapproval, but I hope that some definite arrangement may be come to.

REX W.DUNCAN.

Sir,—In your issue of December 22nd, 1921, I notice a letter from three private owners advocating a purely private owners' T.T. race. I must say this idea appeals to me very strongly, but how it is to be worked is another matter. Some great central body such as the A.C.U. would have to take the matter up, and be responsible for every item in connection with the race—that is, if the entrants are to be drawn from all parts of the United Kingdom, as in the Manx T.T.

Perhaps it would give the three gentlemen who advocate such a race some encouragement in their project, and also interest other of your English and Scottish readers, to know that inside the last three months we have held no fewer than four road races in Ulster. Three of these took place within ten miles of Belfast, and the other about twenty-five miles from the city.

Two of these races were held over a course twenty-five miles long and two over a course of fifty miles, the laps being about five to six miles. The races were run on the handicap principle, as a number of trade riders competed, and also because a number of 350 c.c. machines entered. I myself saw three of these races, and the interest taken by both the motoring and ordinary public was tremendous. The police and club officials kept the course clear in a highly praiseworthy fashion, and the spectators responded by co-operating with them, and gave the riders every chance.

The road approaching the dangerous corners was bannered, much after the fashion of the I.O.M., and all care was taken to minimise the chance of an accident. The use of crash helmets was not enforced, although several of the riders wore them. Of course, one would rather see this means of protection more universal, but it does not always pay to be too rigid, especially when 60% to 70% of the riders are private owners.

These races had the touch of the I.O.M., inasmuch as three of the 1921 T.T. entrants took part.

Belfast. SPORTSMAN.

### *MYSTERIOUS TEMPORARY SEIZURE.*

Sir,—In reply to the letter from the M.A.G. Engine Co., Ltd., published on the 22nd ult., I should like to mention two experiences which I had of temporary "seizing up" with a four-stroke single, which could hardly have been caused by pre-ignition.

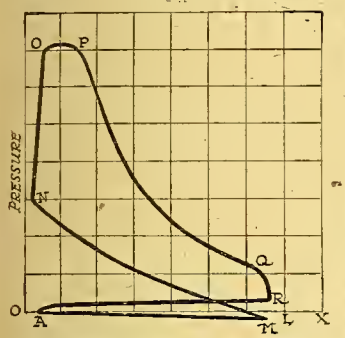
On the first occasion the machine had only been three weeks on the road, and all the adjustments were correct and lubrication liberal. I was not using a mica-insulated plug, and its only point was the stout electrode curved to form the gap with the outer portion. The engine seized up without warming after about two miles at 25-30 m.p.h., and although I raised the exhaust valve immediately, the machine came to rest with the back wheel immovable. On depressing the kick-starter I found the engine quite free, and rode on without delay.

Several weeks later, after decarbonising, I tried the machine "all out" on a lonely piece of straight road, using the same plug, and this time over-oiling considerably. The same thing happened, but at close on 50 m.p.h. (Bonniksen). Being prepared for a possible repetition, I had my hand ready on the exhaust lifter, and raised the valve simultaneously with the stoppage of the engine; but the cycle slid

along for a considerable distance with the rear wheel locked, and came to rest, fortunately still upright. Restarting was simplicity itself, the smoky exhaust testifying to the adequate oil supply. I fail to see how a premature explosion could continue in effect after the exhaust valve was raised, and I am not inclined to blame the plug, as another of the same type served very well in a far hotter engine than the one mentioned above. WALTER B. PENNY.

### *MISLEADING HORSE-POWER RATINGS*

Sir,—I think that "Speedwell" and others are unfair in their criticism on the above subject, and I will endeavour to give the reasons why. The i.h.p. of an internal combustion engine is shown roughly by the annexed figure, which is the indicator diagram of that type of engine. AL is a datum line showing atmospheric pressure, the curve AM is the charging stroke, MN is the compression stroke, NOPQR is the explosion stroke and expansion stroke, and RA is the exhaust stroke.



Indicator diagram for an internal combustion engine referred to by "South Wales."

In a perfect engine, the indicator diagram will have no round corners, as shown at O, P, and Q. Obviously, the bigger in area this diagram becomes, the more will be the work obtained from it. This is only possible by having the valves working perfectly—no sluggishness and rebound—and the compression must be good. Hence from this we see that it is quite possible to have two engines of the same capacity, and yet the diagram of work done in the cylinder will be totally different, and hence the i.h.p. will not be the same. The i.h.p. depends upon the mean effective pressure, and hence the wider is the section QR, and the further away is OP from AL the greater is the i.h.p. Again, if the i.h.p. were the same in both cases, a great deal depends on the weight of the piston, the balancing of the flywheels, and the resistance to motion due to friction in the bearings. Therefore the capacity of the engine is no indication of its b.h.p., and it is this which counts to the motorist, not the i.h.p. The h.p. can only be found practically by means of the brake test, which is described in any textbook on engines, and any formulæ which may be devised only give approximate values. SOUTH WALES.

Treorchy.

[We think that "South Wales" rather misses the point both of our article and previous correspondents' letters. The fact that two engines of the same capacity may give widely different i.h.p. is no reason why they should not have the same nominal ratings; the more efficient unit will automatically get its fair share of credit.—ED.]

### *FUEL ECONOMY ON A TWO-STROKE.*

Sir,—I ride a two-stroke from necessity rather than choice, and the letter in your issue of December 29th, 1921, from Mr. Raymond B. Porter caught my eye. He boasts of obtaining 140 m.p.g. as an average consumption on a two-speed O.K.-Villiers. My machine is a single-speed of the same make, bought July, 1921. I was able to check the consumption on a run from Norton Bridge (Staffs.) to Ramsgate during August. The distance is 240 miles, accomplished in thirteen hours, including going through London. I filled up, having started with full tanks, at Daventry, London, and at Canterbury, the amount being half a gallon each time. The last occasion exactly refilled the tank, *i.e.*, 205 miles on 1½ gallon=136 m.p.g. That is not quite so good as Mr. Raymond B. Porter can do, but that was when the engine was new: now, riding every day in all weathers, at no less than eighty miles per week (and generally much more), I can go as much as 426 miles on a two-gallon tin. I keep my records very carefully, and can vouch for this statement. 213 m.p.g. "How is it done?" some will say. I have stated that I am a two-stroke merchant from necessity rather than choice, and I will part with my "secret" for a Scott-Squirrel! WINKLE.

Burslem.

### *ASSEMBLED MACHINES.*

Sir,—We have read with interest the article on "Assembled Machines," by "Ixion" in his weekly contribution "Occasional Comments."

If we understand "Ixion's" meaning rightly, he recommends his readers to purchase assembled machines, pointing out the following advantages:

A. Cheapness.

B. Standardisation.

C. The embodiment into the construction of the machine of individual wishes.

Far be it from us to criticise adversely the productions of any competitor, be he "assembler" or manufacturer of a "special design." We must, however, take exception to a regular contributor of *The Motor Cycle* drawing comparisons between two classes of manufacturers, and arriving at a conclusion prejudicial to the large manufacturer, to whose efforts is due the establishment of the motor cycle industry, who gives employment to thousands of men, and has invested in his undertaking a large amount of capital.

The success of *The Motor Cycle* as a paper is not due to the assembler, but to the manufacturer, who took great risks when the successful establishment of the motor industry was despaired by most. There is not a single advantage enumerated by "Ixion" that the large manufacturer cannot give; but the greatest advantage he can give to the rider your contributor does not mention. It is the employment of men of brains who give their whole power and being to the continuous improvement of the article which they design and manufacture. TRIUMPH CYCLE CO., LTD.

EDWARD G. FIRKIN, Advertising Manager.

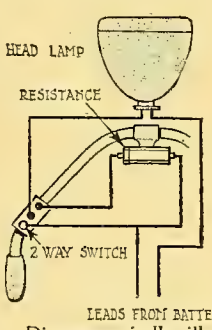
### *HEAD LAMP DIMMING ETIQUETTE.*

Sir,—I am sending details of a lamp dimming device I have had in use for about nine months, which anybody using electric lighting can make for next to nothing.

The device is a simple form of resistance composed of a few feet of "flower wire" (thin iron wire) as sold in penny coils.

The exact length is found in a minute with the accumulator on the bench, connected up with a bulb. A length of the iron wire is introduced into the circuit until the required amount of dimming is obtained and the length noted.

This length of wire is then wound round a piece of fibre or mica, taking care, of course, that the resistance is not short-circuited by the turns of wire touching at any part. This is covered each side with a piece of mica, and the whole wrapped round with asbestos string, so as to fit tightly into a metal shaving stick case, leaving the wire end, which must be carefully insulated, projecting through holes in the top and bottom of the tin. A little pram tyre cement makes a water-tight job of these holes, and the resistance can be clipped to any convenient part of the head, and enamelled to match the machine.



Diagrammatically illustrating Mr. A. Handford's home-made dimming arrangement. (See accompanying letter.)

A small two-way switch should be fitted to the handle-bar in such a way that it can be operated without shifting the grip, and the connections made as in the diagram, the leads being run through the handle-bar for neatness.

I got my switch from Messrs. Hunts, Tunstall Road, Croydon. It cost, I think, 2s., and is about the neatest thing of its kind, and has withstood some severe soakings.

Mr. Hunt (himself a Norton rider) recommended me to use a four-volt bulb on a six-volt accumulator, which I find completely successful. I have used several different kinds of bulbs, but have never had one burn out.

In my own set, on a Matchless sidecar outfit, I use a four-volt one ampère bulb with a six-volt sixty-hour accumulator, and find 30in. of wire correct for the resistance. Six-volt miniature screw bulbs are used for side and tail. Four-volt two ampères can be used in the head lamp, but they do not appear to give an appreciable amount of extra light, while they increase the load on the battery.

This fitting enables one, without effort, to observe the courtesy of the road. ARCHIE HANDFORD.

### QUALITIES OF THE SPARK GAP.

Sir,—Will you please permit me, one who knows just enough about electricity to press the button and hope for the best, to ask an anti-spark gap expert to explain why it is that the Amplos people have received a letter from the London County Council saying that since Amplos had been used on their lorries their petrol consumption had decreased by a definite percentage (I forget the figure)?

EDWARD DUNNE.

### TOLLS AND HOW TO AVOID THEM.

Sir,—With reference to "Ixion's" note, if his correspondent goes to Shoreham *via* Steyning, I can help him. He need not go over the Norfolk Bridge at all! When he turns to the left at the end of Steyning, and has the long straight slope down to Bramber Railway Station facing him, he turns immediately sharp to the right, past some villas on the left, and bearing right at the fork. He then follows a narrow winding lane, past Coombs and Botolphs, and comes out eventually on the upper Brighton-Worthing road at the Sussex Padd. There he turns right, and after 100 yards or so takes the road to the left over the old Aviation Ground, under the railway line, until he strikes Bungalow Town.

It is a charming five miles, easily deciphered on a good map, and the road surface, instead of being vile, is quite good.

Of course, if his way takes him through Brighton, there is nothing in it.

There is a right of way across the Aviation Ground, and he need not listen to any person who says otherwise.

By the by, has he ever tried to get from Shoreham to Southampton *via* Chichester? He will there find himself twice mulcted of 1s.—once over Burseldon Bridge and again over the ferry at Southampton.

The joke about the Norfolk Bridge is that, whilst your 6d. is taken for passing over, there is no guarantee that you will not break the bridge down in your attempt!

It is also worth while remembering that if it is convenient to you to use Old Shoreham Bridge instead of the Norfolk, the charge is only 4d. return.

CUTHBERT WILKINSON

### CONSTRUCTING A SUBTERRABRAINWAVEIUM!

Sir,—I have been much impressed by the kind attention to details that you give in answering what would appear to be, in many cases, difficult questions, and, though I feel it to be rather a selfish demand on your valuable time and space, I am in hopes that you might be able to help me in a little undertaking of mine. As there seems to be a vast amount of sewage space literally crying out for a fuller use, I intend to endeavour to construct a subterrabrain waveium, and the following are the points on which I solicit your kind advice:

(1.) Would a 1914 Auto-Wheel develop sufficient power to propel it?

(2.) Would you suggest fourteen or sixteen blades to the propeller or paddles?

(3.) Should they be forged steel or cast iron, as I propose to make them of material 4×4in. or 8×8in.?

(4.) Would you suggest a pilot jet or just an ordinary rudder for purpose of navigation?

(5.) Is duroleum preferable to linoleum or paper saturated with petroleum the best material with which to construct the watertight compartments?

(6.) How often would you propose I should take up the bearings, and, as there seems considerable controversy on the subject, I want to "get well down to it"?

(7.) Which, in your opinion, is the best dual-purpose contrivance on the market to serve as diving-bell and state cabin?

(8.) When ordering my rubber boots, have I to state the size of my feet or the size of the boots?

(9.) What would happen if I reversed the figures?

(10.) How much would the driving licence cost to one who is habitually sparing with the soda on principle?

(11.) Would it be necessary, absolutely, to have a tank when there are such excellent feeding bottles to be procured at a much smaller cost?

(12.) Could you descant on the value of its imperishability with relation to the nebular hypothesis?

(13.) As I propose to construct it to bend in order to negotiate sharp corners, could you advise me as to the most suitable hinge on the market?

(14.) As I also propose to make the frame of 12×12in. pitch pine, would you recommend adhesive tape or just ordinary tinned tacks for the joints—it is to be annealed in any case?

J. A. CHEEK.

### POSSIBILITIES OF AN ENGINE PATENT.

Sir,—I was greatly interested in your illustration of Messrs. Snarry and Bullows engine patent on page 883 of a recent issue of *The Motor Cycle*. It seems to suggest extraordinary possibilities, among others the following:

(1.) A flat, rounded, or concave piston head is for the first time rendered possible on a two-stroke engine.

(2.) The piston head could have sufficient weight of metal towards its outer circumference to allow of a very large diameter automatic inlet valve being employed. Such would ensure a cool piston without adding greatly to the weight.

(3.) Two exhaust ports of large area would be available, as the transfer port would not be required.

(4.) The use of two short simple slides to close the exhausts after the maximum amount of opening would effect a great economy in petrol consumption, and admit of a *greater volume* being compressed. A short sleeve could be used if more convenient. Either would be external to the cylinder bore. The crank case compression could be secured by covering the slots, and carrying the actuating spindles through gas-tight gland right down to the cams, which would be formed on the main shaft between the crank web and the main bearing. Flat springs rectangular to the crank could be used for the return. The usual sleeve crank would not be suitable for quick closing. Everything would be well oiled and relatively simple to manufacture.

(5.) And this is more conjectural. No. 4 would render possible, if so desired, the retention of sufficient burnt gas to damp the incoming charge. This with a view to the employment of a much higher compression ratio. Possibly such a charge would be slow burning, but such an engine should pull well and show great economy. In any case, the two-strokes extra explosion, coupled with the extra compression heat, would make high revs. undesirable. Of course, two-strokes as we know them need no damping, but better scavenging.

EMM TEE.

Glasgow.

### ENCOURAGING INVENTIVE GENIUS.

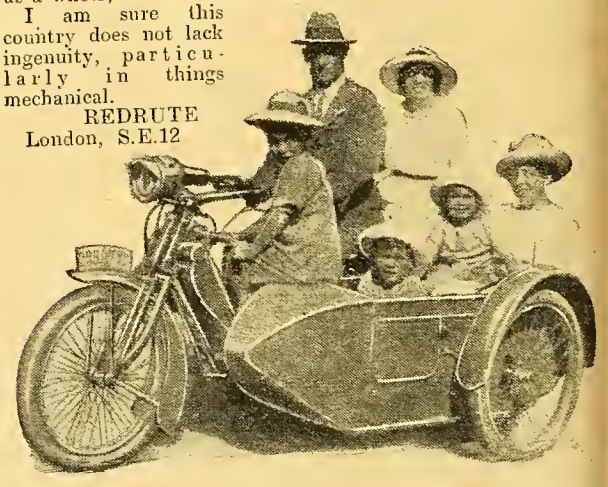
Sir,—As an enthusiastic motor cyclist with some original practical ideas, I am wondering if there are any firms in this country who are enterprising enough to help persons like myself.

I suppose there are many men who have really original and valuable ideas who have not the money or opportunity to work their inventions up into a practical form or even to protect them sufficiently to submit the drawings to manufacturers. There can be no doubt that if such a state of affairs could be brought about it would benefit the industry as a whole, as well as individuals.

I am sure this country does not lack ingenuity, particularly in things mechanical.

REDRUTE

London, S.E.12



Mr. R. Harley, of Alexandria, Egypt, who sends the above photograph, says his machine, which is a 1912 Scott, usually carries the load shown when conveying his family from the house to the bathing beach, a journey of several miles. The water-cooling of the engine is evidently a factor in this accomplishment

### LUMINOUS SPEEDOMETER DIALS.

Sir,—Seeing the letter by "X.Y.Z." in your most excellent paper, can any reader give me any experience with a luminous speedometer dial? I do dislike those little clip-on electric lamps. Surely if watches can be lighted by this method, it could equally well be applied to speedometers.

Nottingham. TRIARDO.

### WHERE IS IT?

Sir,—While reflecting during the winter months on the tour we had during the summer, we find that we cannot remember the name of a town, and this rather worries us.

There is a rather stiff straight hill in the centre of a town on the main road between either Hastings and Eastbourne or Eastbourne and Brighton. There is a gas lamp in the centre of the road at the summit of the hill, and a policeman stands some thirty yards from the bottom. There are shops up either side.

Can anybody enlighten us, and thus clear up one of the mysteries of our 1,147 miles tour? TOURIST.

Halifax.

### OBSTINATE VALVE CAPS.

Sir,—Mr. C. H. Wainwright's advice on this matter may be quite all right for some, but, personally, my pocket will not allow me to do as he suggests. I have had trouble of this nature before, and on employing the "spanner and gas pipe" stunt have only succeeded in shearing off the head of the valve cap. As he says, "something will go"; it does, but not the thing that is wanted to.

I, likewise, am looking for a preparation to overcome my difficulty, but in the meantime content myself by removing the valve caps pretty frequently, clearing the threads and smearing them with graphite. ZENITH-J.A.P.

Highgate, N.6.

Sir,—I think if "Ixion" used a 4 h.p. Blackburne engine, as I do, he would *not* have this trouble. Quite the contrary. It is, I find, a difficulty to get the caps on this engine to remain tight. Can any of your readers suggest a remedy? Perhaps many have the same difficulty. I have had to renew my caps twice during the last twelve months.

A. J. BREWIS.

### WHEN BORED WITH MAIN ROADS.

Sir,—I would like to call the attention of any of your readers, who may be bored with main roads, to three sporting climbs in the Chiltern area, perhaps unknown to them.

(1.) Starting from Chinnor (1in. Ordnance map, Sheet 106), about a mile towards Princes Risborough is a narrow lane on the right, which, beyond a level crossing, forks. The left-hand fork should be taken, and the track then bears to the right up Wain Hill. At the top the road is reached by the right-hand bend before a gate.

(2.) About two miles from Chinnor towards Watlington, in Crowell village, a lane goes sharp left over a level crossing to a white gash standing out in the hillside. This is Crowell Hill, and rather worse than the last!

(3.) As a third, take the Missenden Road from Wendover for a mile or so to a signpost to the left—"The Hale." Go straight along here until the road begins to rise rapidly, then turn sharp right and then sharp left. The main road is reached by bearing left through a gate at the top.

All these freaks are about half a mile long, have a gradient, in places, of about 1 in 4 or more, a surface of grass, loose chalk, and ruts, which are bad enough when dry, but are the very limit when wet, and are, without exception, thoroughly impossible for sidecar machines. They should, however, decidedly cheer any solo men in search of a little excitement. W. L. FINCHER.

Sir,—If any lover of freak ascents is beginning to find climbing too easy, I recommend to his attention a delightful quartette of hairpins near Buxton.

To get there take the road from Buxton to Bakewell. At the top of the mild ascent of Topley Pike a low wall on the outside of a right-hand corner overlooks a deep valley, up the far side of which a grass track may be seen ascending in zigzags. A rough road descends from the main highway a short distance further on down quite a respectable hill, ending in a loose and quite evil hairpin—this also can be seen from the main road above—to the bottom of the valley, where a river can only be crossed by a narrow foot bridge, which just passed the semi-T.T. bars on my 4¼ h.p. B.S.A.

Then, after proceeding to the right along the river bank for a short way, the climb begins in a steep pitch covered with loose stones leading up under a railway bridge to the first hairpin. No. 2 is worse, with an unprotected outside drop, and No. 3 worse than ever. I here had to "take the banking" for want of steering lock, but kept going. No. 4 is easier, but has a surface of rocky outcrop to discourage premature cheerfulness.

By Bartholomew the track eventually reaches a better road leading to Peak Forest Station.

I have climbed Alt-y-Bady, the Wrekin, and Litton Slack (only four miles away), but they are all easy by comparison.

Less dangerous and easier, but well worth visiting, is a good pair of hairpins at Grindon Halt, some ten miles east of Leek, on the Manifold Valley line, on the direct road between Grindon and Wetton villages.

G. E. MEADE.

### FLAKING OF MICA PLUGS.

Sir,—I read with interest in a recent issue a letter from Mr. H. de Lissa on mica plugs, and I should like to give my experiences with an 8 h.p. stationary engine (single-cylinder) and a 10 h.p. (four-cylinder) light car. With the former I found that no mica plug would run for more than one hour without chronic misfiring, but after replacing with a pre-war Bosch porcelain or an old Sphinx porcelain plug the engine would run consistently for hours. With the car engine, I found that misfiring at slow speeds—pronounced by various "experts" to be magneto trouble—was cured by replacing four new mica plugs with four Sphinx porcelain plugs. S. B. BASFORD.

### WHERE IS ENGLAND'S BEST SPEEDWAY?

Sir,—Referring to the possibility of a future T.T. race being contested over a course in this country, it would be interesting to learn what your readers consider to be the finest and speediest stretch of road of reasonable length between any two towns in the country.

So far as the south is concerned, I have not seen anything to equal the twenty-four miles from Royston to Newmarket on the Norwich road. As a rule, when touring, I do not expect or attempt to exceed an average of more than the legal limit, but recently on a Wooler, with luggage on the carrier, I easily did the distance in fifty minutes without ever opening to full throttle, although delayed for nearly five minutes at Six Mile Bottom level crossing. A good man on a fast machine could easily do it inside the half-hour. The surface is perfect, there are no corners, and not even a village on the road. Is there anything to equal this stretch in the North? What a T.T. course could be made of the triangle Royston-Godmanchester-Newmarket, if you could only get round the outside of Cambridge, or avoid it somehow. I congratulate the Cambridge C.C. on its roads. Other councils please copy. H. L. LEWIS


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post 2/10

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
New Edition. Just Published. Price net, 2/- By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/- By post 2/3.

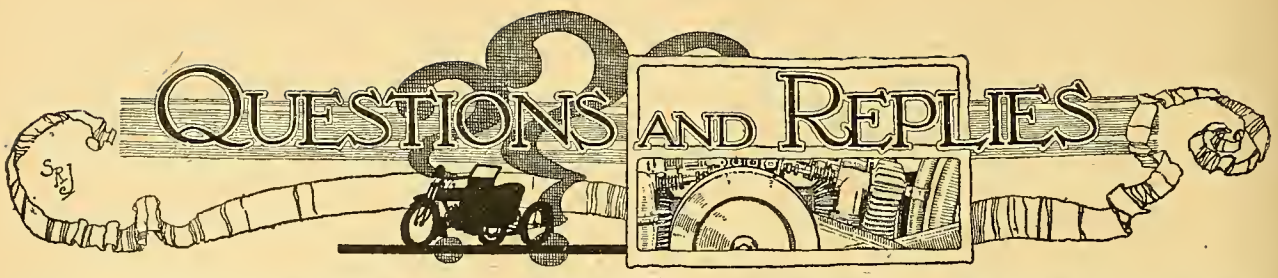
**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/- By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Price net, 5 - By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK**
With 32 pages of Road Maps. Price net, 5/. By post, 5/4.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### USING AERO PLUGS.

I have some aero plugs, and I am told they are of no use to fit into a water-cooled car or air-cooled motor cycle. Why is this?—W.G.H.

The best way to find out whether the aero plugs in your possession are suitable for use in a car or motor cycle is to try them. In most cases we have found that they give fairly satisfactory results.

### ENGINE-SHAFT GEARING.

I have a 3½ h.p. Triumph (old model) fitted with a Mabon multiple disc clutch. Do you think if I have a Philipson pulley fitted it would take a light sidecar? Should I be able to start off all right, not having a kick-starter?—F.B.

As the Philipson pulley fits upon the engine-shaft, you will be unable to retain the Mabon clutch. The Philipson will certainly make the machine more suitable for light sidecar work, but there is no starting device incorporated, nor is it possible to use it as a free engine.

### WEAK MIXTURE.

What is the reason of blowing back of the carburetter (B. and B. with 43 size jet and taper needle)? It is most marked when starting. The machine is a 3½ h.p. P. and M. Can I use a smaller jet without the needle to effect improvement, and how can I obtain slow running when riding in traffic, as I am unable to do so now? There appears to be slight knocking with the engine when running in high gear. Would too much petrol from the carburetter to the engine cause that?—T.D.

Blowing back through the carburetter is usually caused by the mixture being too weak, and the slight knocking to which you refer also indicates weak mixture. You would probably get better results if you used a larger jet. Try No. .045. This will give you better starting and slow running; also set the taper needle so that it projects 1 1/16in. from the base of the throttle.

### A 750 C.C. V TWIN.

My machine is a 5 h.p. two-speed Rex (hub gear with hand start), 77.5×80 mm., date about 1913. (1.) What is correct valve timing for both valves, both valves for each cylinder being on one spindle? (2.) What angle should there be between the inlet cam and exhaust cam? (3.) What is the capacity of this engine? (4.) Wishing to do away with the hub gear, what make of other rear stays would fit, or who would supply me?—W.A.G.

(1.) Time the valves so that the exhaust just closes and the inlet just commences to open as the piston reaches top dead centre. (2.) This question cannot be answered in such simple terms as you desire, and may be disregarded if you time the valves as above. (3.) 750 c.c. (4.) In all probability it would be necessary to have new rear stays built up; we do not know of any that would fit without alteration.

## Important Dates.

**Fri., Jan. 27th, to Sat., Feb. 4th—Scottish Car and Motor Cycle Show.**

**Sat., Feb. 25th to Sunday, Mar. 5 h—Belgian Motor Cycle Show. Palais Degmont, Brussels.**

**Sun., Mar 5th—Argenteuil Hill-climb (France).**

**Mon., Mar. 6th—La Turbie Hill-climb (Nice).**

**Wed., Mar. 15th—A.C.U. One-day Trial for Stock Machines.**

**Thurs., Mar. 23rd—East Midland Centre A.C.U. Open Reliability Trial.**

**Sat., April 1st—Western Centre A.C.U.—Open Hill-climb.**

**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**

**Fri., April 14th, and Sat., April 15th—M.C.C. London-Land's End Run.**

**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**

**Sat., April 29th—S. Midland Centre A.C.U Open Hill-climb.**

**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials**

**Sat., May 13th—Northern Centre A.C.U Open Reliability Trial**

**Sat., May 20th—S.-Western Centre A.C.U Open Reliability Trial.**

**Tues., May 30th—Junior Tourist Trophy Race**

**Thurs., June 1st—Senior Tourist Trophy Race.**

### MAKING TIMING WHEELS.

I think of converting an automatic inlet valve to mechanical operation, and should be greatly obliged if you could tell me if Bessemer steel is suitable for the timing wheels, etc.; if so, how are they case-hardened? I have tried case-hardening on several pieces, and they seem to go very brittle, and I fear the teeth would break off the wheels with the same process (I used potash). There is a brass plate on the crank case of the engine on which is the name Duffaux. Have you any recollection of it?—W.F.

The engine which you describe is apparently an old one of Swiss manufacture, and a forerunner of the present-day Moto-sacoche. The trouble you experience with the timing wheels is due to attempting to case-harden an unsuitable steel. Make them in mild steel, and harden with Kasenit, or similar hardening compound, following the instructions printed on the tin; case-hardening compounds may be obtained at any large ironmonger's or tool stores.

### MAGNETO FOR MOTO-REVE.

The magneto of a 2 h.p. (?) twin Moto-Rêve which I have is beyond repair, therefore I wish to fit a new one. The timing gear is rather confusing to me, as the wheels are eccentric. No doubt you know this little Swiss engine. What kind of magneto am I to purchase (as regards degrees)?—W.S.

The magneto which you need is one having equal firing angles, *i.e.*, 180°. The peculiarly arranged eccentric timing gear is used in order to compensate for the angularity between the cylinders, the magneto being alternately accelerated and decelerated, thus synchronising the timing point for both cylinders.

### PACING MACHINES.

On looking through some back numbers of *The Motor Cycle*, I saw an illustration of a 20 h.p. motor cycle used for cycle pacing on the track. Why are these machines always of such peculiar design and of such high power? You drew attention to the large pulley giving a ratio of 1¾ to 1. Why is such a high ratio needed for that work?—R.E.

The special requirements of a pacing machine are that it shall be capable of attaining fairly high speed, and at the same time shall offer the maximum amount of protection against wind resistance for the following cyclist. To render the latter possible, the driver of the pacing machine sits as far back as he can, almost directly over the back wheel, and he does not crouch down as would a racing motor cyclist. In consequence, the wind resistance to be overcome by the pacing machine is very great, and ample power is needed, hence the fitting of very large engines.

### HIGH OIL CONSUMPTION OF TWO-STROKE

If I run my two-stroke with petroil lubrication on the proportion of oil to petrol recommended by the makers (1 : 12), the engine dries up and overheats from this cause. If I oil from 1 : 10 to 1 : 8 the oil carbonises and sticks the top ring in its groove, harsh running and loss of power resulting. When hot from either of these causes, the engine develops, after about five to seven miles, according to gradient, a harsh grating noise, and will hardly climb any gradient. The magneto timing appears correct, as the engine functions well for the first few miles unless the piston ring is stuck. Mileage about 1,500 (in very short stages), and twice decarbonised. (1.) The top ring is a tight fit. Would it be advisable to rub it fairly loose, or would this result in the ring wearing the groove and more rattle? (2.) Would it be advisable to inject castor oil into the crank case occasionally? (I am running on a mineral oil normally, of course.)—NX 69.

(1.) It should not be necessary to use a greater proportion of oil than 1 : 12; it is just possible that an ignition fault or unsuitable sparking plug is a contributory cause of the trouble. An improvement would undoubtedly be effected by making the top ring a fairly loose fit in its groove. (2.) It is not advisable to mix the oil; stick to the one variety which you have been using. It is not advisable to inject oil in large quantities directly into the crank case of a two-stroke engine.

### BAD STARTING.

(1.) My machine is very refractory with regard to starting from cold. Injection of petrol has no effect. Can you suggest any cure? (2.) Should you think a different grade of oil would better things? The machine is a 5 h.p. 1920 Zenith, and I use benzole and B.B. oil. (3.) To my certain knowledge, the machine has run quite 2,000 miles, yet the running is still very good, although the engine has never been down. Should you think decarbonisation would improve the running? The machine certainly knocks slightly on top gear when accelerating on petrol.—G.C.W.W.

(1.) It is difficult to suggest why the engine will not start from cold if petrol injection has no effect. Starting difficulties, especially with twin-cylinder engines, are usually due to air leaks at the induction pipe joints or at the inlet valve guides. It is possible, however, that the trouble is caused by the contact breaker points having become worn, and, in consequence, they may have an excessive separation. The correct gap is $\frac{1}{64}$th. Also set the plug points to $\frac{1}{32}$in. (2.) Possibly a lighter grade of oil would be more suitable. (3.) The need for decarbonising should not cause the starting difficulty, and if the knocking on top gear is only very slight there is no actual need to take down the engine unless you require maximum efficiency.

### FOR A LEGLESS RIDER.

I am in search of a light runabout, three or four-wheeler, to suit a friend of mine who is unfortunate in having no use in his legs, and wonder if you, or any of your numerous readers, could put me in touch with one, or any one manufacturing such a car as will come up to my requirements. It must be a two-seater of ample power for Derbyshire hills, and entirely controlled by hand. Carburetter ignition and clutch controls on the steering wheel, change-speed lever and brakes by hand, and hand starter (preferably electric) from the seat. Also, I should like to know how the law would stand with regard to two independently operated brakes, both by hand, whether it is necessary to be able to apply both at once. If you could supply me with any information on the subject I will be greatly obliged.—LEGLESS.

There is no machine on the market which complies with your requirements, and, in consequence, you will have to convert some machine so that it is suitable for your particular use. In all probability, the Scott Sociable is the nearest approach to what you want, as it is a hand lever starter operated from the driving seat, and the only foot controls are the clutch and one brake, which could no doubt be readily converted to hand operation. Provided there are two independent brakes upon the machine, the law does not require that they shall be so arranged that both can be brought into action at the same time.

---

## READER'S REPLY.

### ACCUMULATOR CHARGING.

In your issue for the 5th inst. you reply to "W.J.H.," who wishes to charge a battery from 220 volts continuous current mains. It may be of interest to him to know that I have found it possible to do this satisfactorily, using a 100 ohm resistance mat (supplied for 2s. 2d. by F. W. Potter and Co., Phipp Street, Great Eastern Street, E.C.) in series with the battery. The mat should be fixed in a horizontal position, so that the ventilation may be as good as possible.—ARVON GLYNNE.

---

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"JAMES" (London, N.5.)—Wear of retreaded tyre on back wheel of sidecar outfit: Recommended retreading firms.

"POWERPLUS" (Consett).—Indian Powerplus, also Scout model: Spring forks, slow running, twist grip control, climbing, and general reliability (solo). Flexekas and Airtite sleeves on both models.

"C.D.W." (Walmer).—Ricardo piston for 4 h.p. Triumph (chain-cum-belt). Tuning hints for speed.

"S.W.L." (Croydon).—Dunelt with sidecar. Reliability, m.p.g. (oil and petrol), m.p.h., cooling, climbing, and general hints.

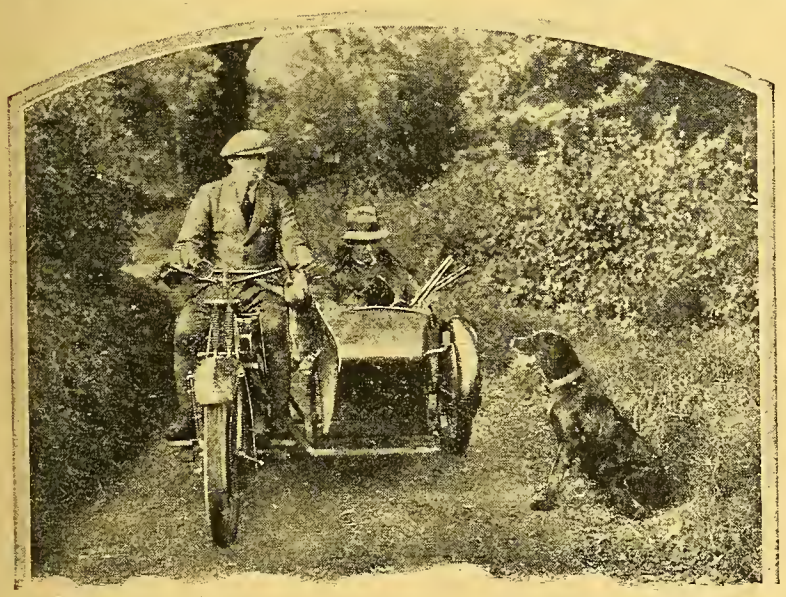
"A.F.T.L." (Bowdon). — $2\frac{3}{4}$ h.p. A.J.S., 1922 (standard sports): Economy, silence, and comfort.

"R.F.G." (Weymouth). — Coventry Premier three-wheeler: Economy, life of mechanism, brake efficiency, ease of steering and control, any disadvantages.

"E.C.B." (London, S.W.15).—5-6 h.p. Brough Superior (M.A.G. engine): Comfort, speed, and economy.

"W.A.M." (Coventry).—Binks carburetter, Flexekas air leak preventers, and Philipson pulley on 1913 single gear Triumph.

F.H.W. (Lee, S.E.13).—4 h.p. 1921 Blackburne, solo or sidecar: Reliability, consumption, and general hints.



One more of the series of "countryside" photographs which we have been publishing depicting the sidecar aiding sport with rod or gun. An Enfield outfit called into requisition to convey the guns and spaniel.

### A Removal.

The Birmingham Motor Accessories Co. have moved into larger premises at the old Quadrant Works, Sheepcote Street, Birmingham.

### A Hand Soap.

The address of the makers of the Horton liquid hand soap, upon which we commented favourably in a recent issue, is the Horton Manufacturing Co., Rickmansworth, Herts.

### Electric Hand Lamps.

An increase in the price of the Electro-Automate self-generating hand lamps was made in November last year, since when the cost has been 30s. for the type illustrated in our issue of December 22nd last.

### An American Lightweight.

Despite its heavy appearance due to the use of 3in. tyres, the Cleveland two-stroke weighs less than 200 lb. In our issue of December 8th last, the gross weight was given as 275 lb., this being the importers' figure, which included wooden case and packing for the machine.

### A Profit in Celluloid Ware.

Net profit of £18,557 for the year ending September 30th, 1921, is shown in the directors' ninth report of Bluemel Bros., Ltd., of Wolston, near Coventry. A dividend bringing up the total for the year to 15% on the ordinary shares is being paid.

### Tyres on Fire.

Recently a fire originated in the basement of the Shaftesbury Avenue premises of the Palmer Tyre, Ltd. It had obtained a good hold on tyre racks and tyres before it was discovered. The prompt use of chemical fire extinguishers by the housekeeper and his staff subdued the flames before the arrival of the fire brigade. The total damage is not serious, and will not affect the supply of tyres.

### American Machines in Italy.

Harley-Davidson motor bicycles were successful in winning no fewer than twenty-one of the leading events in Italy during the past season, among which may be mentioned the Circuit di Brescia, the Italian Tourist Trophy, in which Harley-Davidsons were first, third, fifth, sixth, and seventh; the Italian Grand Prix, in which they were first, second, and third; and the Aosta-Great St. Bernard hill-climb, in which they were first, fourth, and fifth.

### Correct Motor Cycle Lubrication.

A booklet on motor cycle lubrication, published by the Vacuum Oil Co., Ltd., Caxton House, Westminster, London, S.W.1, makes really interesting reading. It contains some lucid diagrams showing the path of the oil in the lubrication of various types of engines. Then follows a diagram of a gear box, with information concerning the lubrication of gears, while the book concludes with a lubrication chart showing the suitable grades of oil recommended for the leading makes of machines.

### Nortons in South Africa.

In the 600 c.c. solo class of the Rand M.C.C. annual speed championship, held on December 4th, near Johannesburg, over a distance of one mile from a standing start, the results were as follows: 1 (amateur), Dr. A. L. de Toit (3½ Norton); 2 (trade), Percy Flook (3½ Norton); 3 (amateur), C. A. Bulman (3½ Norton).

### A Scottish Machine.

A company has been formed to take over the manufacture of the Barr and Strond-engined Royal Scot motor cycle, described in *The Motor Cycle* of December 22nd, 1921. The trading name is Knightswood Motors, Ltd., with works situated at Strathcona Drive, Anniesland, Glasgow.

### Leather Coats.

One of our Manchester readers, Mr. E. R. Broughton, has written to us eulogistically about the quality and good value of a leather coat purchased from S. Lewis, 19a, Upper Charlton Street, Carburton Street, London, W.1. Incidentally, many readers wish to know how worn leather coats may be cleaned without damaging the colour. Advice on the point would be appreciated.

### Williamson Spare Parts.

A list of spare parts for the 8 h.p. Williamson has been issued by A. Moss, of 26, Moor Street, Earlsdon, Coventry. Mr. Moss, who was formerly works manager of the Williamson Motor Co., Ltd., undertakes the repair and overhaul of these machines.

### Carriage Paid.

New Imperial Cycles, Ltd., of Princip Street, Birmingham, have decided from now onwards to pay carriage by goods or passenger train on all their motor cycles sent to agents' depots in England, Scotland, Ireland, or Wales. If sent by goods train the machines will be packed in crates, and the crates will not be charged.

### In the London-Gloucester Trial.

In the official list of awards of the London-Gloucester-London trial, organised by the North-West London M.C.C., the name of H. S. Perrey (6 B.S.A.) was omitted. Since two other riders, B. L. Bird and J. S. Walker have reported that Perrey completed the trial satisfactorily, his case has been considered by the club, and he has been awarded a silver cup.

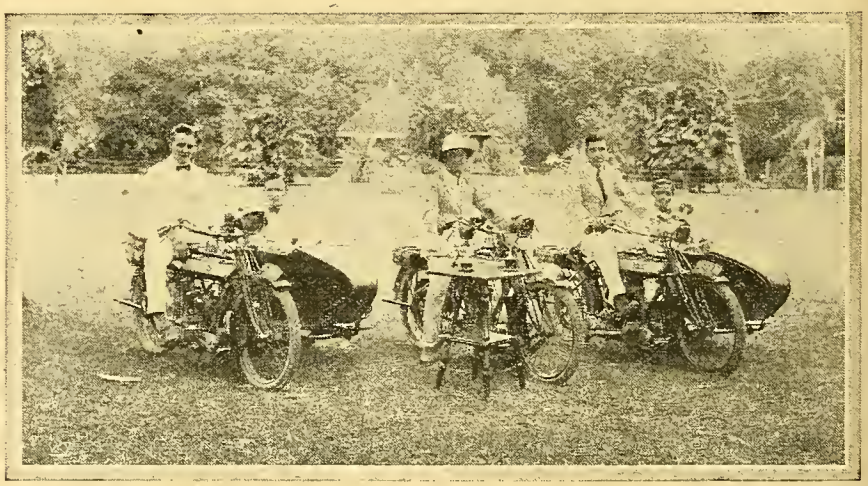
### Hard Riding on an Ultra-lightweight.

The J.E.S. miniature two-stroke which competed in the London-Gloucester-London reliability trial recently, and was standard in every respect, not only completed the course, but travelled 200 miles on the Wednesday and Thursday before the trial, was driven from Gloucester to London on the Friday previous to the trial, competed in the competition without any trouble, and was driven back to Gloucester on the following day. The whole journey occupied some 700 miles, and no mechanical difficulties of any sort were experienced. This is a remarkable performance taking into consideration the severity of part of the course, and the fact that the engine is only 169 c.c.

### Catalogues Received.

Barimar, Ltd., 10, Poland Street, London, W.1: "Straight Facts about Welding"—a folder published by this firm containing a few pertinent remarks by Mr. C. W. Brett.

Godiva Tool Co., George Street, Coventry: Tool-rolls, tool-kits, jacks, pumps, pliers, spanners, stocks and dies, etc., of interest specially to repairers, are listed in compact form.



MOTOR CYCLE CLUB LIFE IN CEYLON.

Three enthusiastic members of the Ceylon M.C.C., shown with the trophies won in reliability trials on their Ariel motor cycles

# GOVERNMENT SURPLUS STORES

**WE HAVE JUST SECURED A FURTHER CONTRACT WITH THE WAR OFFICE FOR ARMY CLOTHING. WE ARE NOW ABLE TO OFFER A VERY LARGE QUANTITY OF SURPLUS GOODS AT GREATLY REDUCED PRICES.**

500 NEW LEATHER COATS, TEDDY BEAR OR FLEECE-LINED. Double-breasted, with belt **£6 10s.** each

100 NEW OFFICERS' TRENCH COATS. Fleece-lined and oilskin interlined ..... **55/-** „

1,000 NEW WATERPROOF CYCLING LEGGINGS. Wool-lined. Sizes 1, 2, and 3. Fit up to 6ft. ..... **15/-** pair

250 NEW LEATHER HELMETS. Fur-lined .. **12/6** each

250 NEW LEATHER WAISTCOATS. (Without sleeves) ..... **21/-** „

150 NEW LEATHER WAISTCOATS. (With sleeves) ..... **45/-** „

125 BLACK LEATHER COATS. ¾ length. Suitable for motor cyclists. NEW ..... **75/-** „

500 NEW LEATHER JERKINS. Large sizes .. **8/6** „

5,000 PART WORN LEATHER JERKINS. (Repaired) ..... **5/-** „

500 SHEEPSKIN-LINED COATS. Suitable for drivers of motor transport, etc. Long and in good condition ..... **10/-** „

3,000 GROUND-SHEET CAPES. Part worn. Condition good. Worn as Ground-sheet or Ground-sheet Capes ..... **2/6** „

1,000 NEW GROUND-SHEET CAPES ..... **3/6** „

1,000 PAIRS NEW RUBBER THIGH BOOTS, best U.S.A. makes. Sizes from 8 to 12 ..... **15/-** pair

1,000 PAIRS NEW RUBBER KNEE BOOTS. U.S.A. best quality. Sizes 8 to 13 only ..... **12/6** „

1,000 SHEEPSKIN-LINED THIGH BOOTS. Suitable for motor cyclists ..... **12/6** „

1,000 PAIRS NEW BROWN AND BLACK OFFICERS' BOOTS. Medium weight. Guaranteed solid leather. Finest boots ever produced on the market. With toecap or without. Sizes 6 to 11. Suitable for shooting and good hard wear ..... **27/6** pair

500 PAIRS WILLOW CALF GRAIN TRENCH BOOTS. Lace to knee, with buckle ..... **37/6** „

2,000 KILTS, TARTAN, "BLACK WATCH." 7 yds. cloth for making up. All wool. Part worn. Condition good ..... **8/6** each

1,000 SIDCOT SUITS, NEW. Wallaby collar, imitation. Rubber under-lined. To clear at the greatly reduced price of ..... **35/-** „
Sizes 5ft. 6in., 5ft. 8in., 5ft. 10in.

WE HAVE ALSO A VERY SPECIAL LINE OF ALL-WOOL REAL WITNEY BLANKETS. WHITE. 70×90in. Weighs 8¾ lb. ..... **27/6** pair

1,000 PAIRS REAL ARMY BREECHES. Leather strappings. NEW. 5ft. 3in., 5ft. 5in., 5ft. 7in., and 6ft. ..... **15/-** „

1,000 BEDFORD CORD BREECHES. NEW. Leather strappings or self strappings. All sizes up to 44in. and 46in. in waist ..... **30/-** „

250 PAIRS KHAKI SERGE TROUSERS. NEW. All sizes up to 6ft. ..... **12/6** „

5,000 NEW BLUE DUNGAREE AMERICAN BIB AND BRACE OVERALLS. Sizes 34in., 36in., 38in. ..... **4/6** „

5,000 GROUND-SHEETS. 6×3ft. Part worn. Condition good. Nearly new ..... **2/6** each

1,000 PAIRS NEW BLACK OILSKIN LEGGINGS **2/-** pair

100 GOVERNMENT JEAN BOILER SUITS. Sizes 32in. to 46in. ..... **12/11** each

**WE HAVE ALSO A LARGE NUMBER OF OTHER LINES TOO NUMEROUS TO MENTION. BUT PLEASE MAKE ENQUIRIES.**
**ALL GOODS CARRIAGE PAID. MONEY RETURNED IF NOT THOROUGHLY SATISFIED.**

**J. M. MILLET & SONS, GOVERNMENT CONTRACTORS, SOUTHAMPTON.**



# MOTEX Generators

## Sidecar and Rear Lamp Models

MOTEX Generators for Dependability—better models at a lower cost! Call on nearest Agent and inspect them.

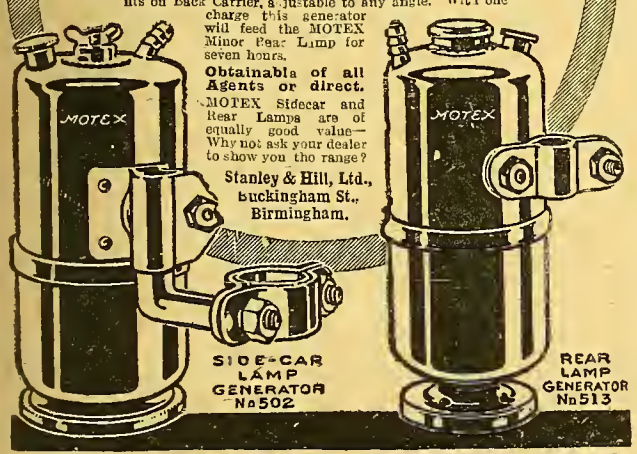
**No. 502, Sidecar Model. Reduced Price, 8/-**
strong and well-made and designed to fit on Sidecar Chassis by means of a bracket with universal movement.

**No. 513, Rear Lamp Model. Reduced Price, 6/-**
fits on Back Carrier, adjustable to any angle. With one charge this generator will feed the MOTEX Minor Rear Lamp for seven hours.

**Obtainable of all Agents or direct.**

MOTEX Sidecar and Rear Lamps are of equally good value—Why not ask your dealer to show you the range?

**Stanley & Hill, Ltd., Buckingham St., Birmingham.**



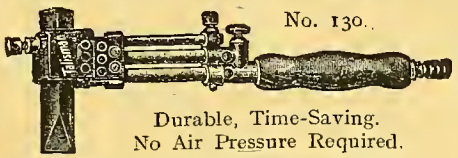

B.H.S.



**To convert into double or single Bunsen burner simply remove complete bit-holder.**

PRICE 30/6

# THE LAST WORD IN SOLDERING!



No. 130.

GAS-HEATED SOLDERING IRONS WITH RENEWABLE BITS

Durable, Time-Saving.
No Air Pressure Required.
*Flames do not touch the job.*

Nos. 128 and 129 with one Bunsen burner, Nos. 130 and 131 with two Bunsen burners. Highest heating power with minimum gas consumption.

| | No. 128 | No. 129 | No. 130 | No. 131 |
|---|---|---|---|---|
| Weight of Copper Bit | 2¼ ozs. | 6 oz. | 10 oz. | 16 oz. |
| Weight complete | 10 oz. | 1 lb. | 1½ lb. | 2 lb. |
| Ready for use .. | 1 min. | 2 mins. | 3 mins. | 3 mins. |
| Price .. .. | 5/6 | 7/9 | 10/6 | 13/6 |
| Extra for Postage of Single Sample Irons .. .. | 7d. | 9d. | 1/- | 1/- |
| | *British Colonies 2/- up to 2 lbs.* | | | |

Sample Irons sent on receipt of P.O. Money returned if not satisfied. Trade discounts on application.

AGENTS WANTED.

**BLOCK, DEROY & CO.** (Dept. J),
Carlton House, 11, Regent St., Waterloo Place, London, S.W.1.
'Phone: Gerrard 8090. Grams: "Tintype, Piccy, London."

Also petrol-heated Soldering Iron with pressure-pump and Automatic Nozzle Cleaner.

Points seldom have to be cleaned, filed or retinned, and last many times longer than points heated by direct flame.

# SURE & SOUND.

Here's a further list of Allen-Bennett second-hand machines. They are all steady machines, well overhauled, and fit for many a long day's work. Glance through and see which best meets your needs.

**SECOND-HAND MACHINES.**

| | |
|---|---|
| **IVY**, 1916-7, 2½ h.p., single-speed, re-enamelled red | £27 10 |
| **LEVIS**, 1916, 2½ h.p., single-speed, all lamps | 28 10 |
| **TRIUMPH**, 1913, 3½ h.p., Philipson pulley and clutch, T.T. or touring bars, all lamps, exceptional condition | 37 10 |
| **ENFIELD**, 1915, 3 h.p., twin, 2-speed, clutch | 35 0 |
| **ENFIELD**, 1915, 3 h.p., twin, 2-speed, clutch, T.T. model | 37 10 |
| **P. & M.**, 1917, 3½ h.p., 2-speed, clutch and kick-starter, re-enamelled | 42 10 |
| **P. & M.**, 1921, 3½ h.p. 2-speed, clutch, run under 500 miles, unscratched and indistinguishable from new | 77 10 |
| **ENFIELD**, 1914, 6 h.p. combination, 2-speed, windscreen, etc. | 60 0 |
| **THOR**, 1919, 7 h.p. twin combination | 65 0 |
| **ROVER**, 1913-14, 3-speed, clutch, perfect condition | 40 0 |
| **BRADBURY**, 1913-14, 4 h.p., 3-speed, combination, windscreen, etc. | 50 0 |
| **O.K.**, 1917, 2¾ h.p., 2-speed | 37 10 |
| **JAMES**, 1916, 4½ h.p., 3-speed, all chain combination | 67 10 |
| **ZENITH**, 1921, 5 h.p., sports, as new, all lamps, etc. | 75 0 |
| **DOUGLAS**, 1916-7, 2¾ h.p., 2-speed, as new | 50 0 |
| **MATCHLESS**, 1920, model H, dynamo lighting, hood, and screen | 135 0 |

We also carry an extensive stock of **HENDERSON, MILLFORD, SWAN SPORTS, and WATSONIAN SIDECARS.**

**EXTENDED PAYMENTS** ¼ down. Balance in twelve monthly instalments at 4%

**3 MONTHS' GUARANTEE.**

**Allen-Bennett**
Motor Company Limited

5, 10 11, Royal Parade W. Croydon

ALLEN BENNET-T CROYDON

*Phone: Croydon, 2450. Grams: Track, Croydon*

*Commercial Publicity*

# FERODO Regd.

## BRAKE BLOCKS for Motor Cycles

are shaped to replace the existing blocks without any alteration to the shoe.

They are designed and manufactured to carry the reputation of Ferodo Friction Linings for efficiency and durability into the motor cycle world. . . .

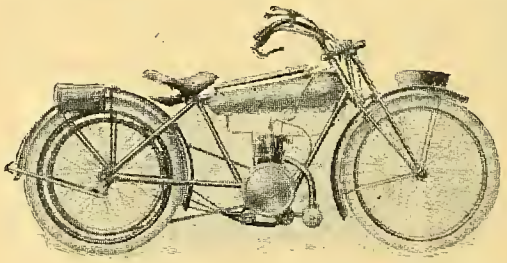
*Full particulars of models at present in stock will be sent on request. A postcard will do. Address—*

**FERODO LTD., CHAPEL-EN-LE-FRITH.**

# VICTORIA

*The "VALUE FOR MONEY" MOTOR CYCLE*

2½ h.p. 2-stroke lightweight model with Villiers engine (fixed gear) **38 gns.**



2-speed, countershaft gear .. **£45**

2-speed, countershaft gear, with clutch and kick-starter. **£50**

*Particulars of this and other models obtainable from*

**VICTORIA MOTOR & CYCLE CO., LTD.,**
Victoria Works, Dennistoun, GLASGOW.
'Phone: 514 Bridgeton. 'Grams: "Bicycle, Glasgow."

## MOTOR CYCLES FOR SALE.

### Brough Superior.

BROUGH Superior, 8h.p., July, 1921, Mark I. engine, o.h.v., Lucas Magdyno lighting, 80 m.p.h. speedometer, mirror, watch, all plated tank and unscratched, mileage 300 only; cost £210, sacrifice £150. —Parsons, 1, Acton Lane, Chiswick. [4887

### Brown.

BROWN, 3½h.p., B.B., mag., perfect, ride away; 12 gns.—179, York Rd., Camden Rd. [5058

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with pleasure.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

B.S.A., K2, shop-soiled; £85.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [5034

B.S.A., 1922, all models; carriage paid anywhere.—Clifford Motories, Eastwood, Notts. [5139

3½h.p. B.S.A., pre-war T.T., splendid condition; bargain, £28.—Lydford, Chilworth, Guildford. [X5164

1918 B.S.A. Combination, Mills sidecar, all accessories, perfect order; £75.—Baxter, Fakenham. [X5224

ORDER Your New B.S.A. from R. B. Clark and Co. Highest exchange prices given—7, Exhibition Rd., S.W.7. [5245

£65.—B.S.A. 4h.p. combination, 3 speeds, beautiful lot, accessories, tax paid 1922; any trial.—8, High St., Wandsworth. [4869

B.S.A.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607 [X5194

B.S.A., K.2, 1921, fully equipped and sidecar as new, mileage negligible; £105.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [5035

4½h.p. B.S.A. Combination, chain drive, lamps, horn, wind screen, and hood, first-class condition; £65. —Warwick, Hinckley Rd., Leicester. [X3186

B.S.A. 4¼h.p., Model K, shop-soiled, fully guaranteed, £68; B.S.A. sidecar to suit, £22.—P. J. Evans, John Bright St., Birmingham. [X5200

F.O.C.H. for B.S.A.'s; cash, exchange, or deferred payments. Sound second-hand machines in stock. —5, Heath St., Hampstead. (Near tube.) [4752

1913 3½h.p. B.S.A. and Sidecar, T.T. engine, good condition, Bowden 2-speed, new tyres; any trial; £45.—Coombs, Hawkeshury-Upton, Glos. [4636

4h.p. B.S.A.-engine Motor Cycle, condition, appearance, and running perfect, fixed gear; £25, or near offer.—12, Chalcroft Rd., Lee, S.E. [4828

B.S.A., 1922, Model H2, 4¼h.p., chain drive, etc.; £110.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St. E.C.3. 'Phone: Avenue 5548. [0065

1921 4¼h.p. B.S.A., sidecar, complete, pillion, hood, etc., 1,200 miles; £140 cash, or part instalments £150; excellent.—Hedgecock, The Avenue, Worcester. [4584

B.S.A., 1920, Henderson Elite sidecar, speedometer, lamps, horn, discs, fine outfit, £88; ditto cancelet sidecar, electric lamps, horn, £79.—Clark, 7, Exhibition Rd., S.W.7. [5244

1920 4¼h.p. B.S.A. Combination, 3 speeds, electric horn, etc., good tyres, and only done small mileage; price £65, or near offer.—Dunwell's Garage, Wigan. Tel.: 328. [0765

B.S.A.—Being official agents we have them always in stock, and immediate delivery can always be given.—Jones' Garage, Muswell Hill, and Woodside Parade, N. Finchley. [0379

1921 B.S.A. Model K, equipped, in excellent condition; 75 gns., or fitted new coachbuilt sidecar, 87 gns.; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [5240

EXCEPTIONAL Bargain.—B.S.A. Model H2 4¼h.p., with B.S.A. No. 3 sidecar, 1921 latest model combination, brand new but slightly shop-soiled; £125.—Wilkins, Simpson, opposite Olympia, London. [4999

83 GNS., exchange.—1920 B.S.A. 4¼h.p., 3 speeds, clutch, kick start, luxurious 2-seater sidecar, hood, screen, new condition, any examination, trial.—Seabridge, Hansler Rd., East Dulwich. Sydenham 2452. [4433

1921 B.S.A., Model K2, 4½h.p., and C.B. sidecar, unlicensed and unused, fully equipped with lamps and horn; original cost £135; offered at the bargain figure of £115.—The Layton Garages, 30, Holywell St., Oxford. [5185

FOR Sale, late 1920 model B.S.A. combination, 4¼h.p., chain-cum-belt, Lucas Magdyno electric lighting, Royal Easting wind screen, luggage grid, etc., not done 2,000 miles, condition, etc., as new; nearest offer to £130, a bargain.—E. T. Brown and Co., Ltd., Ironmongers, 18, Westgate, Rotherham. [5313

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—B.S.A. 1922 models, K.2, chain and belt transmission, £107; with No. 3 sidecar, £139. Model H2, all-chain drive, £110; fitted with B.S.A. sidecar, £142. B.S.A. 6h.p. twin motor cycle £132, fitted with B.S.A. sidecar £164; B.S.A. 8h.p. twin combination, £185. Easy terms and exchange. Box carrier combinations from £139.—'Phone: Holborn 5777. [4416


# THE "OPPORTUNIST"

is the person who takes advantage of the good things that present themselves, and, by alertness, turns his shrewd judgment to profitable account. He takes advantage of—

**Our Bargains,**
**Our Perfected Payment Policy,**
**Our Service System.**

***A few of this Week's Bargains:***

**TRIUMPH,** 1910, 3½ h.p., T.T., latest dropped frame, Philipson pulley, fully equipped, speedometer .. .. **£30**

**TRIUMPH** 1913 3½ h.p. coachbuilt Combination, 3-speed, clutch, k.-s., fully equipped, new tyres. Excellent condition .. **£53**

**SCOTT,** 1914, 3¾ h.p., 2-speeds, k.-s., Lucas accessories, speedometer, Binks carburetter .. **£45**

**CLEVELAND,** 1920, 3 h.p., 2-speeds, clutch and k.-s., fully equipped. Indistinguishable from new .. .. .. .. **£48**

**ALLDAYS-ALLON** 1921 Combination, 3-speeds, clutch, k.-s., mudshields, speedometer, fully equipped. As new .. **£70**

**P & M.,** 1920, 3½ h.p., 2-speeds, clutch, R.S. ratchet brake, fully equipped, speedometer. New condition .. .. **£75**

**NEW HUDSON,** 1921, 2¼ h.p., 2-speeds, fully equipped. Absolutely as new .. .. .. **£47 : 10**

**DOUGLAS** 1914 2¾ h.p. Combination, 2-speeds, fitted with Grosvenor Sporting Sidecar, fully equipped. Good condition .. .. **£47 : 10**

**JAMES** 1917-18 3½ h.p. twin Sports Model, 3-speed, clutch, k.-s., fully equipped. Very fast, and as new. Insured .. .. **£70**

**ENFIELD** 1912 6 h.p. coachbuilt Combination, fully equipped. Good condition .. **£55**

**JAMES** 1920 6 h.p. Combination, Lucas accessories, Easting screen, original tyres Absolutely indistinguishable from new.. .. **£117 : 10**

***IMMEDIATE DELIVERY of 1922 Models by all the :: Leading Manufacturers. ::***

# PARKER'S

DEPOTS:

**MANCHESTER:** 245, Deansgate. Telephone—Cen. 864.

**BOLTON:** Bradshawgate. Telephone—1348.


## MOTOR CYCLES FOR SALE.

### B.S.A.

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3609

B.S.A. Specialists.—All spares by return.—County Cycle and Motor Co., Broad St., Birmingham. [4677

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All B.S.A. parts in stock, no waiting. [5256

B.S.A. Spares can be had by return, post free, from Jones' Garage, Broadway, Muswell Hill, N.10. [0743

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all B.S.A. spare parts always in stock. Write for free spare part list. [0750

### Calcott.

1915 Calcott, 2¾h.p., overhauled, perfect, new Amac; genuine bargain, £15.—Baxter, Fakenham. [X5225

£24.—Calcott, 2¾h.p., all lamps, horn, good condition, runs splendid; sacrifice.—B., 143, Ravensbury Rd., Earlsfield, S.W.18. [5052

### Calthorpe.

2½h.p. Calthorpe, running order; £28, or nearest offer. —Apply, 10, Belvedere Rd., Taunton. [4578

CALTHORPE 2¾h.p., 2-stroke, 2-speed, 1919, perfect throughout; £38.—Notley, Rollesby, Great Yarmouth. [5060

CALTHORPE-J.A.P. 2¾h.p., Enfield gear, lamps, tools, tax 1922, speedometer; £30.—23, Barratt Av., Wood Green. [4947

CALTHORPE 1921 3h.p. Combination, fitted with M-L maglita set, shop-soiled only; bargain, £85. —P. J. Evans, John Bright St., Birmingham. [X5201

CALTHORPE 1921 Combination, actually in stock for immediate delivery; cash or deferred terms; place your orders with the Calthorpe specialists.—Burlington Motors, Ltd., Clapham Common, S.W.4. 'Phone: Brixton 2417 [0509

### Campion.

CAMPION 1919 8h.p. Combination, fully equipped; any examination and trial; £110.—C. Brittain, 10, High St., Grantham. [4593

### Chater-Lea.

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Chater-Lea, agents all models, supplied on easy terms or exchange. [4403

### Chater-Lea-White and Poppe

3½h.p. Chater-Lea, White and Poppe, mag., variable gear, drip feed, economical; first £10.—Groves, 75, Elgin Av., W.9. [4829

### Cleveland.

CLEVELAND, 2-speed, clutch, and kick start, 1920; £38.—Purkis, 120, Fielding Rd., Bedford Park. [4997

### Clyno.

1919 2¼h.p. Clyno, 2-speed, clutch, lamps, horn, splendid condition; £34.—12, Garfield St., Leicester. [X5187

1915 3-speed Clyno Combination, spare wheel; £55.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [5266

CLYNO Lightweight, speedometer, lamps, excellent condition, inspection and trial arranged; best offer. —60, Birkhall Rd., Catford, S.E.6. [4650

CLYNO Combination, 6h.p., 2-speed, kick start, splendid condition; £58; take lower power part.—57, Kenbury St., Camberwell, London. [4673

CLYNO 5-6h.p., spring drive, new tyres and tubes, re-enamelled and plated, overhauled, all on, tax paid.—Apply, R. Rampling, 13, Charles St., Barnes, S.W.13. [5120

CLYNO 5-6h.p. Combination, 1918, C.A.V. accumulator lighting, hood, screen, side curtains, sound condition, privately owned; £85.—Seen, Red House Garage, Peage, S.E. [4907

1915 Clyno 5-6h.p. Combination, smart bulbous sidecar, 3 speeds, just overhauled and renovated as new; £48/10.—Goad, 122, Maida Vale (private house garage). 'Phone: Hampstead 1353. [4267

CLYNO 5-6h.p. Combination, bulbous back sidecar, 3-speed, K.S., spare wheel, electric lighting, speedometer, horn, hood, screen, luggage, and petrol carriers tools, etc.; £55.—364, Lillie Rd., Fulham, London, S.W. [4744

*Spare Parts:*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3610

### Connaught.

1921 Connaught Combination, K.S., horn, lamps, etc.; £80.—7, Lowe St., Macclesfield. [5036

1919 Connaught 2-speed, fully equipped, splendid condition; £30.—37, Arlington Rd., Surbiton. [4843

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Connaughts on easy terms and exchange. [4404

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue. C45
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Connaught.

**19**20 Connaught, miniature model, guaranteed; £28/10.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [5152

### Coulson.

**19**21 Coulson-B 4h.p., like new, under 800 miles, lamps and all accessories; £115.—Stubbs' Garages, Ltd., Loughborough. [4675

**19**21 4h.p. Coulson Combination for sale, fully fitted, in excellent order; owner buying car; £95, or near offer.—Robins, 38, Cowgate, Peterborough. [4537

COULSON 2¾h.p., J.A.P., countershaft, brand new, £65; 2¾h.p. Blackburne, brand new, £70.—Goad, 122, Maida Vale (private house garage) 'Phone: Hampstead 1353. [4270

### Coventry Eagle.

COVENTRY EAGLE 1919 2-speed 2-stroke, electric lamps, Klaxon, perfect; 32 gns.—Box 8,202, c/o *The Motor Cycle.* [5218

### Coventry Victor.

COVENTRY VICTOR Engined Combination, 3 speeds, clutch, and kick starter, only used for demonstration purposes; £140.—W., 2, Sylvan Rd., Forest Gate, E.7. [4819

COVENTRY VICTOR.—The perfect flat twin engine. Before deciding on your new mount, get our list for 1922, showing Coventry Victor motor cycles fitted with this famous 5-7h.p. engine. Also our special offer of demonstration machine. The last word in motor cycle design and construction. — The Coventry Victor Motor Co., Ltd., Coventry. [0520

### Dayton.

DAYTON 2-stroke, all on, tax paid, excellent condition, requires new mag.; £24/10.—R. Cox, Blackenber Lodge, Sunningdale, Berks. [4532

### De Dion.

DE DION 3h.p., mag., good running order; £16; take push-cycle part.—57, Kenbury St., Camberwell, London. [4874

### Dot.

**19**20 Dot-Jap 2¾h.p., 2-speed, P. and H. lighting set, horn, Watford speedometer, etc., most exceptional condition throughout; only needs seeing; £40. —Motorist, 769, Romford Rd., Manor Park, London, E. [5006

### Douglas

WAUCHOPE'S, 9, Shoe Lane, London, E.C.— 2¾h.p. 1910 Douglas; £30. [4422

**19**20 Douglas Combination, all on; 68 gns.—The Bute Restaurant, Luton, Beds. [4746

**19**19 2¾h.p. 2-speed Douglas, well equipped; £42.— 24, Balliol Rd., North Kensington. [4938

**19**14 Douglas; £32; exchange 5in. lathe and cash. —81, Dundee Rd., South Norwood. [4956

**19**22 Douglas, all on, ridden a few miles only; £65. —Box 8,135, c/o *The Motor Cycle.* [4553

DOUGLAS 4h.p. Combination, accessories, good tyres; £45.—Mylam, 197, London Rd., Croydon. [4716

DOUGLAS 2¾h.p., fully equipped, a bargain; £50 —Ratcliffe Bros., 200, Gt. Portland St., W.1. [5037

WAUCHOPE'S, 9, Shoe Lane, London, E.C.— 2¾h.p. 1921 Douglas 3 speeds, clutch; £75 [4424

**19**19 2¾h.p. Douglas, lamps, accessories, splendid condition; £43.—71, Alexandra Rd., Aldershot. [X5165

DOUGLAS Combination, 1918, excellent condition, very fully equipped; £70.—4, Cedar Rd., Tottenham. [4794

DOUGLAS 2¾h.p., new, £70; wanted, combination, cash to value.—Roberts, 33, Torwood St., Torquay. [4568

IMPORTANT.—Substantial Reward.—Will the person having possession or acquainted with the whereabouts of:

2¾h.p. Douglas, 1916, engine 37421, frame 36325 (was XD9007).

2¾h.p. Douglas, 1917, engine 35626 (was XA7095).

4h.p. Douglas, 1918, engine 6512 (was XC541).

COMMUNICATE in strict confidence with Trulo, Windmill Rd., Clapham, London. [4625

**19**20 4h.p. Douglas Combination, well equipped, unscratched; £75.—24, Balliol Rd., North Kensington. [4942

2¾h.p. Douglas, 2-speed, almost new tyres and chain; £32/10.—66, Perry Vale, Forest Hill Station, S.E. [4857

2¾h.p. Douglas, single speed, 1913, splendid condition, tax paid; £26.—Naish, Church Rd., Wheatley, Oxon. [3951

**19**22 Douglas.—Send your order along now to Sam E. Clapham (Motors), 27, Stockwell St., Greenwich. [5160

# TYRES

## GREAT REDUCTIONS.

### SATISFACTION GUARANTEED.

**DUNLOP.**

| | | Our Price. |
|---|---|---|
| 26×2½ | Heavy | 30/- |
| 26×2¾ | Heavy | 35/- |
| " | Extra Heavy | 40/- |
| 650×65 | Ribbed | 40/- |
| 20×1¾ | Auto Wheel | 13/6 |
| 16×2½ | Scooter, Wired | 15/- |

**CLINCHER.**

| | | |
|---|---|---|
| 24×2½ | De Luxe, Heavy | 25/- |
| 26×2½ | De Luxe, Heavy | 25/- |
| 26×2· | De Luxe, Extra Heavy | 27/- |
| 26×2½ | De Luxe, Heavy | 27/6 |
| 28×3 | Ribbed | 40/- |

**ENGLEBERT.**

| | | |
|---|---|---|
| 26×2 | Touring Rubber Studded | 15/- |
| " | Passenger Rubber Studded | 19/6 |
| 26×2½ | Touring | 16/6 |
| 26×3 | Touring | 25/- |
| " | Passenger | 32/6 |
| 28×3 | Racing Extra Heavy | 39/6 |

**BATES.**

| | | |
|---|---|---|
| 26×2½ | Special Heavy | 29/6 |
| 26×2½ | Special Heavy | 32/6 |

**AVON.**

| | | |
|---|---|---|
| 24×2½ | Tricar Rubber Studded | 22/6 |
| 26×2½ | Tricar Rubber Studded | 22/6 |
| " | Tricar Combination | 22/6 |
| 26×2· | Tricar Rubber Studded | 24/6 |
| 26×2½ | Tricar Rubber Studded | 22/6 |
| 28×2½ | Tricar Rubber Studded | 27/6 |
| 650×65 | Sunstone | 39/6 |

These Special Clearance Lines are sent Carriage Paid on 7 Days' Approval against remittance. Trade supplied. Write to-day.

ORDER THE ELITE RUBBER CO. LTD. Tyre Specialists

The Name The Firm

WAY

LONDON'S LEADING TYRE HOUSE

264-266, VAUXHALL BRIDGE RD., VICTORIA, S.W.1

98, VICTORIA STREET, LONDON, S.W.1. & AT 44, SURBITON ROAD, KINGSTON-ON-THAMES

Please address all post orders to Vauxhall Bridge Road

TELEPHONE: VICTORIA 6553 & 6554

OUR AGENT IS THE PILLAR-BOX


## MOTOR CYCLES FOR SALE.

### Douglas.

DOUGLAS 1920 4h.p. Combination, fully equipped, new condition; £90.—Clark, 7, Exhibition Rd., S.W.7. [5246

DOUGLAS.—Several 1922 all-on models, slightly shop-soiled; £65.—Marston, 31, Bridge St., Chester. [5171

NEAT Little Douglas Motor Cycle, magneto stand, carrier; bargain, £8/19/6.—Aero Works, Littleover, Derby. [X5094

DOUGLAS 1921 2¾h.p., 3-speed, perfect, fully equipped; £58.—Ward, 51, Upper Richmond Rd., Putney. [4893

**19**16 Douglas, 2¾h.p., beautiful condition, buffer head, all accessories; offer.—Comfort, 31, West Park Rd., Kew. [4979

**19**20 4h.p. Douglas Combination, fully equipped; £75.—Hillier (side bell), 9, Wallingford Av., North Kensington. [4898

BEST Bargain this Week.—Douglas 2¾h.p., 1916, all on, guaranteed perfect; 33 gns.—1, Priory Rd., Kew Green. [5296

4h.p. Douglas Combination, 1917, 3 speeds and clutch; bargain, £48, no offers.—Snow, Laurel St., Dalston, E.8. [5280

**19**19-20 4h.p. Douglas Combination, fully equipped, conditon as brand new; £75.—37, Canterbury Rd., Dalston, N.I. [5293

BRADFORD.—Douglas agents and spares, immediate delivery.—Denham and Bottomley, 220, Manningham Lane, Bradford. [X5302

**19**18 Douglas 2¾h.p., 2-speed, fully equipped; £37/10.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [5267

DOUGLAS.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Easthank St., Southport. 'Phone: 607 [X5196

**19**18 4h.p. Douglas Combination, rebuilt as new, equipped, screen, discs, etc., tax paid 1922; £85, or near.— 47, West St., Marlow. [5122

£38.—2¾h.p. Douglas, 1918, in perfect condition, enamel and plating like new, very fast.—Watson, 6, Cavendish Parade, Clapham, S.W.4. [4935

4h.p. Douglas Combination, 3-speed, clutch, kick starter, good tyres, good running order; £48.— 66, Perry Vale, Forest Hill Station, S.E. [4858

DOUGLAS 1921 2¾h.p. 2-speed, all on, shop-soiled; £72/10.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0066

2¾h.p. Douglas overhauled, new cylinder, Dunlops fitted, nice order, believed 1916; 23 gns.; must realise, evenings.—67, Fernlea Rd., Balham. [5285

DOUGLAS 2¾h.p., 1914, good running order, fitted new mag., stand, carrier, chain, etc.; any trial; £28.—Dowell, Pyrford, Surrey (near Byfleet Station). [4985

4h.p. Douglas Combination, 1917, re-enamelled makers' colours and plated, thoroughly overhauled, new lamp set; any trial; £55.—406, Garratt Lane, Earlsfield, S.W.18. [5202

4h.p. Douglas Combination, guaranteed as new, new tyres, fully equipped, tax paid; £75.—R. G. Gamble and Co., 13, Somers Mews, Edgware Rd., W.2. Tel.: Padd. 899. [4975

ELI CLARK can give you good service both in new machines and spares; try me. I may be useful to you. The pioneer agent for Douglas motors.—196, Cheltenham Rd., Bristol. [0016

**19**16 Douglas 2¾h.p., 2-speed, lamps, horn, tools, knee grips, large exhaust pipe, perfect condition throughout; £35.—30, Belsize Park Gardens, Hampstead. 'Phone: 5590. [5252

**19**21 Douglas 2¾h.p., 3-speed, K.S. and clutch, fully equipped with electric lighting, horn, and speedometer; exceptional condition; £60.—The Layton Garages, 30, Holywell St., Oxford. [5191

4h.p. Douglas Combination, 1917-18, Douglas sidecar, 58 gns., would separate; also 1916 Douglas 2¾h.p., 2-speed, fully equipped, 33 gns.; exchanges considered. —Box 8,203, c/o *The Motor Cycle.* [5219

4h.p. Douglas Combination, 1918, C.A.V. lighting set, horn, £65; also 3½h.p. Rover combination, lamp, horn, speedometer, accessories, £65.—Tops Motor Works, 317, Old Kent Rd., S.E.1. [5297

OWN Competition 2¾h.p. Douglas, 3-speed, kick starter, clutch, fully equipped, spares, guaranteed better than new, winner of several cups and medals; £70; any trial.—Gibb, Douglas Specialist, Gloucester. [4787

**19**21 4h.p. Douglas Combination, just been overhauled, and in splendid condition, complete with Maglita electric lighting set, electric horn, mechanical horn speedometer, watch and mirror, full range of running spares, including spare belt, toolkit, etc., oversize tyres in good condition.—Offers to Hulbert, 49, Lyndhurst Rd., Bowes Park, N.22. [4355

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.— 1922 New Douglas 2-speed, £75; 2¾h.p. 3-speed model, £90; 4h.p. solo Douglas, £110; 4h.p. sidecar combination, £135; 3½h.p. sports model, £130; 6h.p. light sidecar combination, £165; accessories included; easy terms of payment arranged, and your old machine taken in part payment. 'Phone: Holborn 5777. Booklet on application. [4405

## MOTOR CYCLES FOR SALE.

### James.

1h.p. James Combination, 3-speed, countershaft, all 4 on; bargain £65 cash; exchanges and deferred yments.—Holliday Bros., 20, Queen St., Hammerith. 'Phone: 1944. [5232

### J.A.P.

.A.P., 1915, 3-speed, C.B. sidecar, clutch, good condition; £35.—1, Park Hill Rd., Ewell. [4614

1h.p. Sports Model J.A.P. and coachbuilt sidecar, 2 lamps and Klaxon; £25; would separate.—13, rnon Rd., East Sheen. [4881

.A.P. 4h.p. with coachbuilt sidecar, countershaft gear, all chain drive, complete with lamps and horn: 0.—Marston, 31, Bridge St., Chester. [5174

### J.E.S.

.E.S. 2h.p. 2-stroke, 1921, as new; cost £46, take best offer over £32.—Finch, Frogmore St., Tring. [4306

CHANCE you should not miss.—1921 J.E.S. 2 and 4-stroke motor cycles, from £28. Send for list real bargains.—J.E.S. Motor Works, Gloucester. [4384

### Jupp.

UPP 1922 Open Frame Motor Cycle, new, unable to use same; 60 gns.—B., 30, Cecil Mansions, Balm, S.W.17. [4684

### Lea-Francis.

EA-FRANCIS, 1922 model, 3½h.p., 3-speed, all-chain drive; £110; delivery from stock.—Marston, t, Bridge St., Chester. [5165

EA-FRANCIS, 1920, 3½h.p. M.A.G., 2-speed, and Middleton C.B sidecar, electric lighting; nearest 90.—14, Queen's Rd., Bowes Park, N.11. [4946

### Levis.

PREMIER Motor Co. for 1922 Levis.

LATEST Improved Models for immediate delivery at 1922 reduced prices.

POPULAR 2¼h.p. Single-gear Levis, £48; Model S 2¼h.p., 2-speed, clutch, £58, or with kick starter 60; easy payments only 4% extra; carriage paid to ny address. Buy your machine direct from the Levis pecialists.—The Premier Motor Co., Aston Rd., Birmingham. [0741

£24/10.—Levis 2-stroke; approval deposit.—Speechley, 86, Churchfield Rd., Acton, W.3. [4928

LEVIS Single, all lamps, sporting bars, nice order; price £25.—Welford, James St., Brighton. [4778

2¼h.p. Levis, completely overhauled, enamelled, new 4 tyres, all accessories; £28.—Baxter, Fakenham. [X5226

1922 Levis.—Immediate delivery of all models.—Premier Motor Co., Aston Rd., Birmingham. [X5235

£28.—Levis 2¼h.p., single, perfect condition, lamps, horn.—Bateman, Fairview Farm, Longford, Middlesex. [4991

LEVIS, standard Popular model, £48; 2-speed, K.S. model, £60; deliveries from stock.—Marston, 31, Bridge St., Chester. [5168

1921 Levis, 2-speed, all accessories, tax paid, perfect condition, cost £75; take £45.—18, Winterbrook Rd., Herne Hill, S.E.24. [4659

A FEW Slightly Soiled 1921 Levis models at greatly reduced prices from £42. Write for special clearance bargain list.—Premier Motor Co., Aston Rd., Birmingham. [X5236

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—New 1922 Levis 2-stroke, £48; 3-speed model, £58; kick start, £2 extra. Easy terms and exchange. List on application. [4396

1920 2¼h.p. Levis, perfect order, Miller lamps, speedometer, horn, new belt, tyres splendid condition, heavy Dunlop on back, overalls, and all accessories; £35 each; owner going abroad.—Apply, 56, Napier Rd., Tottenham, N.15. [4599

SPECIAL Offer of a few slightly showroom soiled 250 c.c. T.T. model Levis motor cycles; list price £65, reduced to £55; makers' speed guarantee of 50 m.p.h. with each machine; easy payments only 4% extra; carriage paid to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0740

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Levis parts in stock. Illustrated list free. [5258

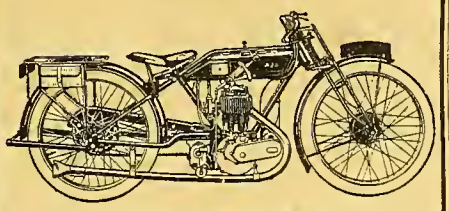
GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Levis spare parts always in stock. Write for free spare part list. [0753

### Liberty.

1921 Liberty Motor Cycle, 2-stroke, 2¾h.p., 2-speed, all on, Tan-Sad; £36.—Cook, 29, Park Rd., Harringay, N.15. [4633

### L.M.C.

L.M.C. 6-7h.p. Twin, new Millford sidecar, complete with 1922 licence, climb any hill in Derbyshire; £110.—Handford, 646, Abbeydale Rd., Sheffield. [4856



## Price £85

## GET YOUR NEXT MOUNT FROM

# WOOTTEN'S

## AND BE SURE OF SATISFACTION.

We hold the following agencies for 1922, and guarantee immediate delivery.

### MOTOR CYCLES.

| | |
|---|---|
| A.J.S. | SUNBEAM. |
| N.U.T. | NEW IMPERIAL. |
| ARIEL. | NEW HUDSON. |
| DUNELT. | HARLEY-DAVIDSON. |
| RALEIGH. | CALTHORPE. |
| | RADCO. |

### LIGHT CARS.

| | |
|---|---|
| MORGAN. | G.N. |
| A.B.C. | NEW HUDSON. |
| SWIFT. | BAYLISS THOMAS. |
| GREGOIRE. | B.S.A., etc. |

### A few of our special second-hand bargains.

| | |
|---|---|
| 1919 2¾ h.p. **DOUGLAS**, lamps, horn, leg-shields, etc. | £47 |
| 1921 (late) 2½ h.p. O.K. 2-speed, lamps, horn, etc., as new | £40 |
| 1921 Shop-soiled 2¾ h.p. **COULSON-B**, spring frame, kick start and clutch model; list price, 111 gns.; bargain | £90 |
| 1921 Shop-soiled 4 h.p. **HARLEY-DAVIDSON**, sports model; list price, £140 | £125 |
| 1921 9 h.p. **G.N.**, standard model, dynamo lighting, speedometer, spare wheel, etc. | £130 |
| 1920 (late) 2¾ h.p. **COULSON-B**, spring frame, lamps, horn, etc. | £70 |
| 1921 3½ h.p. **RUDGE** Multi, lamps, horn, etc., very little used | £60 |
| 1919 (late) 4½ h.p. **B.S.A.** Combination, lamps, horn, speedometer, etc. | £80 |
| 1918 3½ h.p. **SUNBEAM**, D.A. lamps, horn, speedometer | £75 |
| 1920 4 h.p. **HARLEY-DAVIDSON**, Swan sporting Sidecar, lamps, horn, speedometer, etc. | £145 |
| 1921 4 h.p. **BLACKBURNE** Combiantion, mileage under 200 | £130 |
| 1921 2½ h.p. **O.K.**, lamps, Klaxon horn, as new | £36 |
| 1920 8 h.p. **REX** Combination, electric lighting, horn, interchangeable wheels, spare wheel | £110 |
| 1920 4 h.p. **TRIUMPH** Combination, lamps, horn, etc. | £95 |
| 1919 6 h.p. **ZENITH**, flying Middleton Sidecar, lamps, horn, discs, good tyres | £80 |
| 1920 7 h.p. **HARLEY-DAVIDSON** Combination, lamps, horn, etc. | £85 |
| 1921 3½ h.p. **RUDGE** Multi (I.O.M. model), electric lamps, horn, etc. | £70 |

**Write us for our Full List of Bargains in Second-hand Motor Cycles and Light Cars.**

# F. E. WOOTTEN, LTD.,

SHOWROOMS:

## 55 & 56, HIGH ST., OXFORD.

WORKS & GARAGE:

## MERTON STREET, OXFORD.

'Phone: 308.

## MOTOR CYCLES FOR SALE.

### Martinsyde.

1920 6h.p. Martinsyde Combination, lavishly equipped; £75.—24, Balloil Rd., North Kensington. [4941

IN Stock, 3½h.p. semi-sporting Martinsyde, £110: cash or deferred.—Martinsyde agents, D. & S. Autocar Co., 33, The Parade, Golders Green. [4380

1920 6h.p. Martinsyde Combination, complete with accessories, and in very good condition; price £80.—Dunwell's Garage, Wigan. Tel.: 328. [0763

### Matchless

AUTHORISED Service Depot.

BRAND New Spring Frame Sports Combination, Lucas Magdyno, speedometer, horn, fully guaranteed; £175, tax paid; the last one.

ALL Matchless Models in stock; best stock of spares in London.—Knight Traction Co., Ltd., Upper Tooting Rd., S.W.17. 'Phone: Streatham 2390. Trade supplied. [0759

CROSS, Effingham Sq., is agent for Rotherham for Matchless. [X5255

MATCHLESS, Oct., 1920, Model H2, dynamo, every accessory; £125.—Mylam, 197, London Rd., Croydon. [4715

SPORTS Model Matchless Combination, 1921 brand, new, unused; £150.—Jones Garage, Muswell Hill, N.10. [4165

1922 Matchless, Magdyno lighting, licensed for 1922, mileage 250, absolutely new; £168.—41, Madrid Rd., Barnes, S.W. [5242

1922 Matchless Standard Combination, tax paid, mileage 300, absolutely as new: £150.—Edwards, 50, Harrington Rd., South Kensington. [5239

F.O.C.H. for Matchless; cash, exchange, or deferred payments. Sound second-hand machines in stock.—5, Heath St., Hampstead. (Near tube.) [4753

MATCHLESS.—Bambers are official agents; exchanges a speciality; deferred payments. — 2, Eastbank St., Southport. 'Phone: 607. [X5185

£45.—6h.p. Matchless-J.A.P., clutch, kick-starter, just overhauled, registered, licenced; only wants seeing.—Torrome, 10, Cathcart Hill, Tufnell Park. [4757

TASSELL, 1a, Bloomfield Rd., Plumstead, for anything Matchless. Deferred payments. Spare parts. [6144

1920 Matchless Magdyno Combination, speedometer, etc.; £110.—Rackham, Chorlton House, Old Charlton. [3354

MATCHLESS Spring Frame Combination, fully equipped, spare wheeel, new, unregistered; £125.—136, Lambeth Walk, S.E. [4653

MATCHLESS Combination, Vic. Model, excellent condition; £95.—9, Canterbury Terrace, Sutherland Av., Maida Vale. Hampstead 4899. [4572

MATCHLESS 1922 Models from stock; exchanges or easy payments; trial run any time.—Agents, R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [2198

MATCHLESS 4h.p. Single, round tank, low, sporty re-enamelled and plated, requires assembling; £16. Evenings.—78, Yerbury Rd., Holloway, N.19. [4590

1922 Matchless Models; immediate deliveries at list prices; deferred payment and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [2376

SHEFFIELD Agent for Matchless. All models in stock. Sporting models £130, standard models £170.—A. J. Stacey, 12, Ecclesall Rd., Sheffield. [0574

1922 Sports Model Matchless Solo, some speed mount this, from stock; £130; trade supplied. —North London Agents, Jones Carage, Muswell Hill, N.10. [4166

MATCHLESS Combination, electric light, etc., brand new, only used twice, owner ordered abroad; must sacrifice; offers.—Thompson, 20, St. George's Rd., Bedford. [4667

8h.p. Matchless Combination, Victory Model, spare wheel, good tyres, lamps, horn, nice sidecar, luggage grid; bargain, £80; no offers.—11, Standish Rd., Hammersmith. [4957

1921 Matchless, Model J, 8h.p. sports model, brand new and very slightly shop-soiled only; list price £130, offered at £110.—The Layton Garages, 30, Holywell St., Oxford. [5187

MATCHLESS Sports Combination, 1921, shop-soiled, 3 speeds, clutch, kick starter, etc.; £150.—Elce, Ltd., 15-16, Bishopsgate Av. Camomile St., E.C.3. 'Phone: Avenue 5543. [0069

MATCHLESS Combination, 1920, lavishly equipped; £115, or exchange with cash for double-seater Matchless, or A.J.S., Sunbeam, Blackburne.—Thompson, 253, Munster Rd., Fulham. [4586

VICTORY Model Matchless Combination, with spare wheel, lamps, horn, etc., re-enamelled, standard colour, all complete, nice condition; spot cash, £80. —Mason's Garage, Letchworth, Herts. [5109

MATCHLESS Combinations.—Book your orders with Ross, 86, High Rd., Lee, S.E., or 'Phone Lee Green 744 for immediate delivery of 1922 models. Exchanges and gradual payments arranged. [2163

## MOTOR CYCLES FOR SALE.

### Matchless.

MATCHLESS 8h.p. Combination, 1917, stored till 1919, carefully used, electric, speedometer, good tyres, M.A.G. engine, 1922 tax paid; £90; bought car. —Whytecotte, Petersham Av., Byfleet. [5018

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.— 1922 Matchless, all models: Sports twin solo, £130; sports sidecar combination, £160; spring frame model, £170; sidecar combination, 2-seater, £175/10; commercial carrier combination, £170. Easy terms and exchanges. Write for specifications. [4407

£165.—8h.p. Matchless motor cycle and sidecar, Model H2, new August, 1921, mileage 1,000, all carefully driven by owner, Lucas Magdyno, speedometer, hood, Easting screen, spare wheel, legshields, etc., all new condition; owner bought car.—Apply, Owner, 2, Clifton Gardens, Folkestone. [5045

MATCHLESS.—We are the recognised North Loudon agents for the delightfully sprung and practically designed Matchless combination; the Rolls-Royce on three wheels; immediate delivery from stock, for cash, deferred payments, or exchange; trade supplied; all spares in stock.—Jones' Garage, Muswell Hill, N.10, and at Woodside Parade, North Finchley. [0581

MATCHLESS Service Depot, Sam E. Clapham (Motors), Greenwich. 'Phone: 751. — 1922 Matchless, immediate delivery of these popular models; gold medal winners, see London to Exeter results. Make your selection a Matchless. Send order along, we guarantee satisfaction and a service second to none. Demonstration model sent along with pleasure. Cash, exchange, or easy terms; also trade supplied. Note: We are also agents for all leading makes of motor cycles and light cars. See displayed advert. in "Motor Cycling."—Note address, Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5157

*Spare Parts.*

MATCHLESS Spare Parts for J.A.P. or M.A.G. can be had by return, post free, from Jones Garage, Service Depot, Broadway, Muswell Hill, N.10. [074

### Metro.

METRO-TYLER 2-speed Sports, 1920, all red, discs, pillion; £45; exchange C.S. Triumph, any condition.—112, Clarence Av., Northampton. [4839

### Mohawk.

MOHAWK Cycles, new or second-hand, at lowest possible prices for cash or easy payments.—Mohawk Cycle Co., Ltd., Alexandra Rd., Hornsey. [4793

### Motosacoche.

£14.—Motosacoche lightweight, Bosch, B. and B., Druids, splendid running order.—King, Egrove Farm, Oxford. [X5264

### New Hudson.

NEW HUDSON 1921 2½h.p., 2-speed, sports model, mileage 2,000, tax paid; what offers?—Curson, Hilltop, Godalming. [4539

NEW HUDSON Lightweight, as new, 2-speed gear, lamps, horn, tools; any trial; £45.—Borlace, Walton-on-the-Hill, Surrey. [4885

NEW HUDSON 1920 2¼h.p., 2-speed, with lamps, horn, and aluminium footrests; 36 gns.—Maher, Handpost Farm, Bracknell, Berks. [4730

NEW HUDSON 1922 Models, 2¼h.p., Popular and De Luxe 2-speed lightweights, 4½h.p. solo and combination, 10h.p. light car, all models in stock, immediate delivery; send for lists; deferred payments arranged. All spares stocked.—New Hudson Dept., 45, Gray's Inn Rd., Holborn, W.C.2. [5150

### New Imperial.

£28.—2¾h.p. 1916 New Imperial, 2-speed, splendid condition; offers.—31, London Rd., Enfield. [4559

DEC., 1915.—New Imperial, 2-speed, Binks, fast, economical, 2 anywhere; £30.—4, Mitten Rd., Bexhill. [4544

NEW IMPERIAL 2¾h.p., 2-speed, good condition, fast; £28.—Brewer, 40, Tynemouth Rd., Tottenham. [5274

NEW IMPERIAL 3-speed 350 c.c. Super Sports J.A.P., scarcely used; £68.—Clark, 7, Exhibition Rd., S W 7 [2195

BARGAIN, practically new 2¾h.p. Imperial-Jap, 2-speed, clutch, lamps, horn, licensed 1922; £52.—40, Wellington Rd., N.W.8. [4804

1921 (July) New Imperial, 2-speed, all lamps, Lucas horn, mileage small, condition perfect; £50.— Welford, James St., Brighton. [4777

1920 New Imperial 8h.p. Combination, hood, screen, Lucas lamps; £85.—Hillier (side bell), 9, Wallingford Av., South Kensington. [4895

NEW IMPERIAL Lightweight, 2-speed, excellent condition, tyres, lamps, fully licensed; £25.— 6, Chumleigh St., Camberwell, S.E. [5290

1921 2¾h.p. New Imperial, 3-speed, clutch, horn, 2 new lamps, only done 250 miles, excellent condition.—Collins, West Hill, Rochdale. [4702

4h.p. New Imperial Coachbuilt Combination, 3-speed countershaft, K.S., clutch, in perfect order; sacrifice £65.—Sheldon, Wheatley, Oxford. [4536

# Cash and Credit Prices of Second-hand Machines

**In accordance with our usual practice, all the following have been most carefully overhauled, and can, therefore, be relied upon for efficient service.**

**The deferred payment prices are worked out upon the basis of an extra charge of only 4% for the accommodation.**

## *Delivery can be had Immediately.*

## SECOND-HAND MACHINES

**A.J.S.,** 1921, 7 h.p., combination, 3 speeds, clutch and kick-starter, Lucas Magdyno lighting, horn, speedometer, hood; as new ..... £165
Or £42 18s. down and 12 instalments of £10 14s. 6d.

**A.J.S.,** 1921, 7 h.p., combination, 3 speeds, clutch and kick-starter, Lucas Magdyno lighting, electric horn; as new ..... £160
Or £41 12s. down and 12 instalments of £10 8s.

**BLACKBURNE,** 1920, 4 h.p., 3 speeds, clutch and kick-starter, accessories ..... £72
Or £18 14s. 7d. down and 12 instalments of £4 13s. 7d.

**CALTHORPE,** 1914, 4 h.p., twin Precision engine, sports model ..... £25
Or £10 down and 6 instalments of £2 13s. 4d.

**DOUGLAS,** W.D., 4 h.p., combination, 3 speeds, clutch, and kick-starter; as new Or £23 8s. down and 12 instalmenrs of £5 17s. £90

**ENFIELD,** 1921, 2¾ h.p., 2-stroke, 2 speeds, clutch and kick-starter, accessories .... £47
Or £12 4s. 7d. down and 12 instalments of £3 1s. 1d.

**ENFIELD,** 1920, 8 h.p., combination, 2 speeds, clutch and starter, Lucas Magdyno lighting, electric horn, speedometer, screen ..... £105
Or £27 6s. down and 12 instalments of £6 16s. 6d.

**ENFIELD,** 1920, 8 h.p., combination, 2 speeds, clutch and starter, Lucas Magdyno lighting, speedometer, horn, bood, and screen ..... £110
Or £28 12s. down and 12 instalments of £7 3s.

**LEVIS,** 1920, 2¾ h.p., 2 speeds, lamps, horn Or £11 16s. 5d. down and 9 instalments of £3 2s. £38

**MATCHLESS,** 1920, 8 h.p., combination, 3 speeds, clutch and kick-starter, Lucas Magdyno lighting, horn, speedometer, spare wheel and tyre ..... £120
Or £31 4s. down and 12 instalments of £7 16s.

**MARTINSYDE,** 1921, 6 h.p., combination, 3 speeds, clutch and kick-starter, electric lighting, speedometer, horn, windscreen £115
Or £29 18s. down and 12 instalments of £7 9s. 6d.

**METRO-TYLER,** 1920, 2¾ h.p., 2-stroke, 2 speeds, lamps, horn ..... £45
Or £13 16s. down and 9 instalments of £3 13s. 4d.

**N.U.T.,** 1920, 3½ h.p. twin, 3 speeds, clutch and kick-starter, Lucas Magdyno lighting, Swan sporting Sidecar ..... £115
Or £29 18s. down and 12 instalments of £7 9s. 6d.

**P. & M.,** 1920, 3½ h.p., 2 speeds, clutch and kick-starter, lamps, horn, speedometer, and Hopley folding Sidecar ..... £90
Or £23 8s. down and 12 instalments of £5 17s.

**ROVER,** 1917, 3½ h.p., T.T. model, Philipson pulley, lamps, horn, speedometer ..... £40
Or £12 16s. down and 9 instalments of £3 4s.

## THE EASTERN GARAGE CO.

(Official repairers to R.A.C., A.C.U., A.A. & M.U.)

**418, ROMFORD ROAD, FOREST GATE, E.7.**

Telephone ..... 490 East Ham.
Telegrams ..... "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### New Imperial.

2¾h.p. New Imperial, 1916, 2-speed, K.S., clutch, accessories, running order; £35 nearest secures.— Letters, Peters, 71, St. Gorge's Rd., S.W.1. [4854

NEW IMPERIAL, 1922, 2¾h.p. J.A.P., Model 1, 3 speeds; £63; in stock.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

NEW IMPERIAL 1920 Twin Combination, Easting screen, electric lighting, very attractive turnout; £90 or terms.—Buntings' Motor Exchange, Wealdstone. [5029

NEW IMPERIAL 2¾h.p., 2-speed, new, only shop-soiled; to clear, £57/10; 2-speed clutch model ditto, £63/10; or machine taken in part payment.—Edwin Knight, High St., Reigate. [4629

1920 New Imperial, 2¾h.p., J.A.P., 2 speeds, clutch, kick start, fine condition; £48/10.— Goad (private house garage), 122, Maida Vale. 'Phone: Hampstead 1553. [5213

8h.p. New Imperial Combination, late 1919, electric light, speedometer, all on, splendid machine; £90 cash, or exchange 10h.p. Singer, cash either way; deferred payments.—Holliday Bros., 20, Queen St., Hammersmith. 'Phone: 1944. [5251

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.— 1922 New Imperial-Jap 3 speeds model, £63; 3-speed, kick start and clutch model, £69; 2¼h.p. I.O.M. sports model, all chain, 3 speeds, £80. Easy terms and exchange. Write for list. [4408

NEW IMPERIAL 8h.p. Combination, new Jan., 1921, exceptionally roomy sidecar, Easting screen, Tan-Sad, lamps, horn, only ridden 2,500 miles, all in perfect condition; bought car; must sell; £100. —Hunt, Llanwenarth, Abergavenny. [5102

### New Ryder.

NEW RYDER 2¾h.p., splendid condition; owner going abroad; must sell, tax paid, £22.—38, New River Crescent, Palmer's Green. [4831

### Norton.

PREMIER Motor Co. for 1922 Nortons:

NO. 9, 3½h.p., belt drive, £80; 16H 3-speed T.T., £115; Big 4, 3-speed, £120; easy payments 4% extra.—Immediate delivery from the Norton Specialists: The Premier Motor Co., Aston Rd., Birmingham. [0625

WAUCHOPE'S, 9, Shoe Lane, London, E.C.— Big Four Norton and sidecar; £75. [4421

NOV., 1920 B.R.S. Norton, 68 m.p.h.; £65.—Exchanges, Kent's, 417, Lord St., Southport. [5084

1920 6h.p. Norton, excellent appearance, very fast; 80 gns.—Exchanges, Kent's, 417, Lord St., Southport. [5083

NORTON 1921 Models.—Sole district agents, Wessex Motors, Ltd., 60, Catherine Street, Salisbury. 'Phone: 72. [0717

NORTONS, 1922, all models; write us before purchasing; carriage paid anywhere. — Clifford Motors, Eastwood, Notts. [5141

NORTON 1920 Big 4, all-chain, and sidecar, excellent order and condition, all accessories; £95.— Bartlett's, 93, Gt. Portland St. [5320

16H Norton, 1921, close ratio gears, condition as new; exchange Big Four, or sell £95; Keat.— Box 8,119, c/o *The Motor Cycle.* [4550

NORTON B.R.S., purchased Nov., 1920, lamps, horn, speedometer, etc., insured, perfect order; £65.— Porter, High St., Whitchurch, Salop. [3864

NORTON Big Four, 1921, Montgomery sidecar, electric lamps, mileage 2,500; £125.—98, Shakespeare Rd., Stoke Newington, N.16. [4698

1921 3½h.p. Norton 16H, very completely equipped, perfect order, cost over £150; bargain, £95.— Pratt, 1, Sandhill, Newcastle-on-Tyne. [5016

NORTON, latest 1922 Model 16H, delivery from stock, £115; also 3½h.p. T.T. model, very fast, £48.—Marston, 31, Bridge St., Chester. [5162

NORTON Big Four, new September, 1921, fully equipped, mileage 1,000, ride 30 miles; nearest 100 gns.—10, Natflatman St., Newmarket. [3812

NORTON 1921 Big Four, with special family sidecar, child's seat, and Triplex glass screen, list price £165/10, new machine, shop-soiled only; £138. —P. J. Evans, John Bright St., Birmingham. [X5209

WAUCHOPE'S, 9, Shoe Lane, London, E.C.— 1922 Big Four Norton, £120; 3½h.p. Sports model, £115; family sidecar combination, £154; list on application. Easy terms, and exchange arranged. [4409

MODEL 16H (Jan., 1921) Norton Combination, sidecar new, Easting wind screen, acetylene and electric lighting, full quipment, speedometer, enclosed rear chain case, tax paid 1922, in good condition £110.—Crawford, Barton House, Wroxham, Norwich. [4700

TUCKERS', Redcliffe Hill, Bristol.—Big Four Norton and family sidecar, £154; 16H sports model £115 (tuned for competition work); T.T. 3½h.p., £80 finest value in the trade; all machines delivered carriage paid from sotck to any address in England.—G. H. Tucker, Norton Rider Agent and Specialist 'Phone: 4042. [520

## MOTOR CYCLES FOR SALE.

### Scott

*Spare Parts:*

SCOTT Riders.—We keep huge stock new and S.H. Scott parts. Any part on approval against cash.—Ward Motors, Ltd., The Scott Specialists, 32, Hustler St.—Bradford. [0739

### Singer.

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—2½h.p. Singer, 2-speed gear; £25. [4419

£22/10.—Singer 2½h.p., 2-speed, very light machine, tax paid 1922.—8, High St., Wandsworth. [4871

1914 Singer Combination, 4½h.p., all-chain drive, 2-speed, clutch and K.S., Bramble sidecar, Binks carburetter, lamps, horn, speedometer, mirror, new tyres all round, superb condition throughout; 37 gns.—Edwards, 50, Harrington Rd., South Kensington. [5235

### Silver Prince.

SILVER PRINCE, new 1922 combination, Canoelet sidecar and screen, Stanney box, Brampton forks, etc.; 85 gns.—Chinery, 1, Hammersmith Rd., Kensington. 'Phone: Western 4140. [4305

### Sparkbrook

7-9h.p. Sparkbrook Combination, 1914, J.A.P. engine, excellent condition; £70, or near offer.—Booth, Currie Rd., Tunbridge Wells. [5002

SPARK 1922 Models in stock, Villiers engine, with flywheel mag., £39/18; also a few brand new 1921 Sparkbrook models at greatly reduced prices.—Eagles and Co., 275, High St., Acton, London. [5254

### Stanger.

THE Machine of the moment is the Stanger V twin. 5h.p. 2-stroke. This machine is really a first-class mount with wonderful power, and excellent smooth running, fitted with the neatest rear springing yet seen; price £112/10. Send for particulars.—Jones' Garage, Muswell Hill, London, N.10. [0731

### Stanley.

£12.—6h.p. Stanley twin, Bosch, clutch, kick starter, good running order.—King, Egrove Farm, Oxford. [X5267

### Sun.

1916 Sun-Villiers, 2-speed, just overhauled, any trial: £30.—Horn, Long Buckby, Rugby. [4933

32 GNS., exchange.—1919 Sun-V.T.S., 2-stroke, 2-speed, footboards.—Seabridge, Hansler Rd., East Dulwich. Sydenham 2452 [3668

1916 Sun-Vitesse 2¾h.p., single-speed, splendid order, complete lamps, horn; 18 gns.—Maynard, 161, Bowes Rd., Bowes Park, N.11. [5304

1922 Sun-Jap 2¾h.p., 2-speed, kick start, h.b.c. clutch, a very nice little machine; £63; trade supplied.—North London agents, Jones Garage, Muswell Hill, N.10. [4171

1922 Sun-Vitesse 2½h.p. 2-stroke, from stock; £44/2 cash; deferred payments or exchanges; trade supplied.—North London Agents, Jones Garage, Muswell Hill, N.10. [4170

### Sunbeam.

CROSS, Effingham Sq., is agent for Sunbeams for Rotherham and district. [X5258

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—3½h.p. 1917 Sunbeam; £80. [4427

1919 3½h.p. Sunbeam, all-chain, unscratched, perfect; £65.—24, Balliol Rd., North Kensington. [4940

1918 8h.p. Sunbeam and Sidecar, low mileage, perfect order; £150.—Box 8,161, c/o *The Motor Cycle.* [4620

1919 Sunbeam Combination, 3½h.p., Cowey speedometer, all lamps; £95.—Welford, James St., Brighton. [4776

A SUNBEAM Combination being Sacrificed; £90; £50 has just been spent on renovation.—164, St. John's Rd., N.1. [4803

1917 3½h.p. Sunbeam Combination, mechanically perfect, all accessories, Henderson sidecar; £80.—Baxter, Fakenham. [X5227

SUNBEAM 3½h.p. Model, 120 gns.; 8h.p., 160 gns.; terms to suit; early delivery.—Bunting's Exchange, Wealdstone. [5026

1914 Sunbeam 2¾h.p., 2 speeds, overhauled by makers, as new, wants seeing; £50, no offers.—365, King St., Hammersmith. [5126

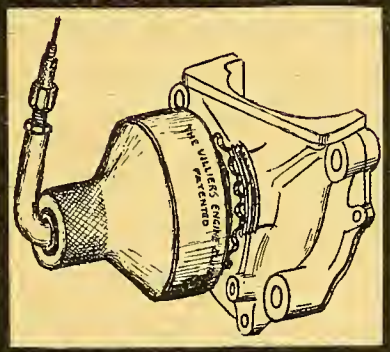
8h.p. Sunbeam Combination, perfect condition, hood screen, grid, spare wheel; £120, or exchange for Ford.—32, Westbourne Rd., Barnsbury, N.7. [4809

3½h.p. Sunbeam, legshields, horn, condition as new, licensed until Dec. 31st; accept £79.—Sudbury, Brownhills, Dennington Park Rd., West Hampstead, London. [5014

3½h.p. Sunbeam, 1918, tip-top condition, all on, little and carefully used, owner giving up motor cycling; price £80, or near offer.—G. M. Cooke, Norfolk Garage, Bognor. 'Phone: 37. [4548

SUNBEAM 1920 8h.p. Combination, detachable wheels, electric lighting, spare wheel, registered for first time last August, under 4,000 miles; £125, or near offer.—10, Sutherland Rd., West Ealing. [4888


STOP
INSTANTLY
IS
WHAT
YOU
CAN
DO
IF
YOUR
VILLIERS
ENGINE
IS FITTED
WITH A
VILLIERS
CLUTCH




PRICE 55/- EXTRA
WRITE FOR BOOKLET
WORKS:-
SUNBEAM ST
WOLVERHAMPTON.


## MOTOR CYCLES FOR SALE.

### Sunbeam.

SUNBEAM 1919 3½h.p. Combination, complete set lamps, tools, tubes, 2 horns, speedometer and pump, excellent condition, under 4,000 miles; bargain, £110, or offer; must sell.—Private, 126, High St., Croydon. [4545

1921 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual spares, cast aluminium plates, new in April last, and in exceptionally good condition, tyres unpunctured; nearest offer to £115.—Geoffrey Smith, *The Motor Cycle*, Coventry. [X4285

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Sunbeam parts in stock, no waiting. [5261

### Thor.

THOR, 7-9h.p., 1917, fully equipped, Magdyno, speedometer, £46; sidecar, £8.—17, Heaton Rd., Mitcham. [5054

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £105; Type SD, chain drive, £115; Type LW, lightweight, £65; sidecars from £20 to £50; easy payments 4% extra.—Buy direct from the leading Triumph agents: The Premier Motor Co., Aston Rd., Birmingham. [0627

1920 T.T. 4h.p. Triumph, new; £65.—Box 8,162, c/o *The Motor Cycle.* [4621

TRIUMPH, 1913, good order; £25.—Stonebam, N. Station Rd., Colchester [4597

CROSS, Effingham Sq., is agent for the trusty Triumph in Rotherham. [X5256

1918 Countershaft Triumph, perfect; £48.—24, Balliol Rd., North Kensington. [4939

RICARDO Triumph, o.h.v., delivery very shortly.—Box 8,177, c/o *The Motor Cycle.* [4683

TRIUMPH Baby, 1921, brand new, never used; £60.—Welford, James St., Brighton. [4780

TRIUMPH, 1914, 2¼h.p., 2-speed, splendid condition; £38.—Tippen, Marden, Kent. [4083

1920 Triumph-Gloria Combination, perfect, little used; £97.—Hay Hill House, Bath. [4704

1920 Triumph, countershaft, fully equipped, spares; £78.—27, Knight's Hill, West Norwood. [4818

TRIUMPH, 3-speed, fully equipped, 1914; £38.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [5039

3½h.p. Triumph, drop back frame, modern tank; £25; exchange.—143, Evington Rd., Leicester. [X5015

1918 Triumph Countershaft, all lamps, Lucas horn; £57/10.—Welford, James St., Brighton. [4782

1921 Triumph and Gloria, chain drive, complete, lamps; £135.—Cross, Agent, Rotherham. [X5257

1920 Triumph, lamps, horn, tools, new condition throughout; £75.—H. Wright, Arlesey, Beds. [4833

TRIUMPH, new models, H, SD, LW; early delivery; easy terms.—Bunting's Exchange, Wealdstone. [5027

TRIUMPH Countershaft Combination, 1918, mechanically perfect; £60.—C., 21, Oppidans Rd., N.W.3. [4574

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—4h.p. countershaft Triumph, W.D. model; £55. [4417

TRIUMPHS.—A fine assortment of all models in stock at prices to suit all.—Ross, 86, High Rd., Lee. [5020

TRIUMPH 2½h.p., 2-speed, 1921 shop-soiled model; £58.—P. J. Evans, John Bright St., Birmingham. [X5208

4h.p. Triumph, all on, aluminium discs, good speed 'bus; £32.—53, Southerton Rd., Hammersmith, W.6. [4697

TRIUMPH 3½h.p., fast, powerful; £32; take lightweight part.—57, Kenbury St., Camberwell, London. [4877

1920 Triumph 4h.p. Combination, as new; £80.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [4271

1919 Countershaft Triumph, excellent condition; £75.—Write, 61, Downhills Park Rd., West Green, N.15. [4630

1919 Triumph Combination, 4h.p., 3-speed countershaft, Dunhill sidecar; £80.—Knight's Garage, Reigate. [4610

1912 Triumph, clutch, lamps, horn, tools, etc., everything in good order; £38.—15, King's Rd., Hitchin. [4840

TRIUMPH 4h.p., 1919, all on, Tan-Sad, perfect condition; £72, no offers.—Tindell, High St., Missenden, Bucks. [4579

1921 Triumph Junior, indistinguishable from new, fully equipped; £45.—Fitt, Wear Pikes, Church St., Chelsea. [5292

TRIUMPH.—For 1922 models, try Croydon agents, Myiam and Co., 197, London Rd., Croydon. 'Phone: 2379 [4719

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue. C53
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH 3½h.p. Combination, fixed gear, in good condition; £30.—Cooper, 63, Avenue Rd., Camberwell, S.E.5. [5284

1917 4h.p. Countershaft Triumph Combination; £49.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [5265

TRIUMPH, countershaft 3-speed, clutch, kick starter, very good tyres; £40.—66, Perry Vale, Forest Hill Station, S.E. [4859

BRAND New 1921 H Triumph and new Montgomery £35 sidecar; to clear, £118.—365, King St., Hammersmith. [5127

1918 4h.p. Triumph; £55; Philipson, tools, lamps, etc., 5 gals. Vacuum B.B.—Summers, Beechcroft, Rustington, Sussex. [4556

TRIUMPH, brand new, unregistered, Model H; £92; delivery free 100 miles.—Ward, 51, Upper Richmond Rd., Putney. [4892

TRIUMPH 3½h.p., N.S.U. 2-speed, ready to go anywhere; bargain, £21.—26, Tulse Hill, Brixton 'Phone: Brixton 1292 [5151

£65.—Triumph 4h.p. combination, countershaft, engine No. 48,400, all on, tax paid 192; any trial.—8, High St., Wandsworth. [4868

F.O.C.H., the Triumph agents; 1922 models in stock; cash, exchange, or deferred payments.—5, Heath St., Hampstead. (Near tube.) [4751

TRIUMPH, 1919, 4h.p., 3-speed, countershaft, fully equipped; £70; exchange Douglas, cash.—82, Church Rd., Mitcham, S.W. [4973

TRIUMPH, 1919, coach sidecar, well equipped, going splendidly; £70, or terms.—Buntings' Motor Exchange, Wealdstone. [5028

TRIUMPH 3½h.p., splendid condition; absolute bargain, £25, or offer.—H. Humphrey, 104, Leigham Court Rd., Streatham, S.W.16. [4847

TRIUMPH 1910 3½h.p. Model, guaranteed absolutely sound running order; £20, genuine bargain.—Marston, 31, Bridge St., Chester. [5172

BABY Triumph, 1921, as new, done 1,000 miles, tyres perfect, fully insured, best lamp and horn; £47.—Gowing, Fincham, King's Lynn. [4533

1919 Triumph-Gloria Combination, dynamo lighting, speedometer, wind screen, condition as new; £85.—4, Elm Gardens, Hammersmith. [4903

1921 H Triumph Combination, accessories, machine practically unscratched, guaranteed perfect; £105.—Hurst, 1, Endsleigh Gardens, Ilford. [4980

TRIUMPH, Model H., countershaft, Gloria sidecar, screen, all accessories, perfect condition; cash wanted; £72/10.—365, King St., Hammersmith. [5123

CHAIN Drive Triumph, excellent condition, electrics, 2½ gallon tank, 28×3 tyres; £85, or exchange Morgan.—18, Canterbury St., Coventry. [X5308

25 GNS.—Triumph Combination, free engine, clutch model, heavy Dunlops, recently overhauled.—Faithfull, 29, Thornford Rd., Lewisham, S.E.13. [4531

1921 Triumph H, Lucas dynamo lighting; sacrifice, £105; exchange sports Sunbeam.—Heatherlea, Grappenhall Rd., Stockton Heath, Warrington. [X5272

TRIUMPH Gloria S.D. Combination, October, 1920, all-chain transmission, lamps, Klaxon, speedometer, necessary spares; £110.—R.M., 87, Mortimer Rd., London, N.1. [4540

TRIUMPH Combination, 1918, perfect condition throughout; any trial given; speedometer, 2 horns, lamps, new tyres; £85.—191, Amhurst Rd., Hackney. [5276

TRIUMPHS.—D Model £115, Model H £105, Model LW £65; deliveries from stock; also early deliveries of the Ricardo model.—Marston, 31, Bridge St., Chester. [5170

TRIUMPH 1913 3½h.p. Combination, good condition, equipped, coachbuilt sidecar, 3-speed, kick start; £48, or nearest offer.—O.M., 66, Orme Rd., Bangor, Wales. [4699

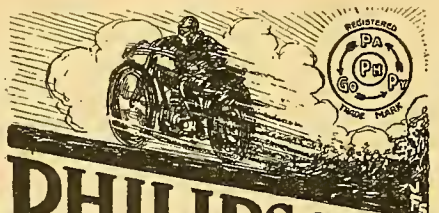
1918 Triumph Combination, 4h.p., speedometer, lamps, Bosch mag., disc wheels, very fast, insured; S.W. London; £80; no bait.—Apply, Box 8,196, c/o *The Motor Cycle*. [4771

TRIUMPHS.—We are the North London agents, and can deliver from stock for cash, deferred payments, or exchange.—Jones' Garage, Muswell Hill, and Woodside Parade, N. Finchley [0389

COUNTERSHAFT Triumph Combination, fully equipped, mechanically perfect and appearance; £65; would separate; stamp details; quarter's tax.—Wentworth, Chessington, nr. Surbiton. [4729

£70.—4h.p. Triumph combination, late 1918, just completely overhauled, condition guaranteed perfect throughout, all accessories, Easting.—Langford's, 37, Cricklewood Broadway, N.W.2. 'Phone: Hampstead 8616. [4861

£42.—Triumph C.B. combination, 1914, 3-speed, smart appearance, exceptionally good condition, fully equipped, Lucas lamps, Watford speedometer, etc., licensed; photo, stamp.—Bacon, Offington Lane, Worthing. [4976

PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

PULLEY

AND GEAR COMBINED.

Philipson's Latest!

GOVERNOR PULLEY AND VARIABLE GEAR COMBINED WITH FLY WHEEL for all two-stroke engines.

The Lightest, Speediest, and Simplest Gear on the market for direct belt-driven 2-stroke and 4-stroke engines.

ONLY adds 2 lb. (approx.) to the weight of a 2-stroke machine, and 6 lb. (approx.) to the weight of a 4-stroke machine.

During the past week we have fitted the following machines:

| 2-stroke. | 4-stroke. |
|---|---|
| LEVIS, | TRIUMPH, |
| O.K., | NORTON, |
| CALTHORPE, | ROVER, |
| VILLIERS, | SINGER, |
| etc. | COULSON-BLACKBURNE |

We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.

Our Flywheel Governor converts a single-speed 2-stroke into a speed model —*the lightest speed model on the market!*

THE ONLY GEAR WITH NO END THRUST.

IMMEDIATE DELIVERY.

*Send for Illustrated Booklet.*

No gear box friction.
No grinding noises.
No wheels or pinions to chew up.

*What is your make? Write us*

REDUCED PRICE £7 7 0 Carriage Paid.

Philipson & Co., Ltd.,

Astley Bridge, BOLTON, Lancs.

(Established over 50 years.)

Grams: 'Safety Bolton. Phone 147 Eagle


## MOTOR CYCLES FOR SALE.

### Triumph

1920 Triumph, Watsonian 50 gns. coupe sidecar, electric lighting, speedometer, Brooks cantilever spring saddle, excellent condition; 87 gns.; exchanges and deferred payments.—Edwards, 50, Harrington Rd., South Kensington. [5236

1918 4h.p. 3-speed Countershaft Triumph, gears and engine new, just enamelled, also 1913 3½h.p. F.E. Triumph, engine new; £90 the two; separate by arrangement.—Pawsey and Co., Motor Engineers, Ballast Quay, Wivenhoe. [5076

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Triumphs, 4h.p., all chain models, 3 speeds, £115; 4h.p. chain and belt, £105; 2¼h.p. 2-stroke model, £65; 4h.p. combination, £145. Easy terms and exchange.—'Phone: Holborn 5777. [4400

TRIUMPH 1922 Model H and special Layton C.B. sidecar; this outfit can only be equalled by similar outfits priced at £135; our price, fully equipped, £125 cash; particulars with pleasure; approval anywhere.—The Layton Garages, 30, Holywell St., Oxford. 'Phone: 581. [5186

1917 Triumph Combination, Millford sidecar, Bosch, new cylinder, piston, and bearings, overhauled and enamelled, plating good, complete, tools and spares, fully insured Nov., 1922, fast and reliable, any trial; £75, or near offer.—H. Brown, Section House, Paddenswick Rd., Hammersmith, W.6. [4908

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

HERBERT ROBINSON, Ltd., Green St., Cambridge, the Triumph experts.—Complete illustrated list post free. [5262

TRIUMPH Spare Parts for all models, also Sturmey-Archer gear parts from stock, post free. Gear overhauls by specialist.—Jones' Garage, Broadway, Muswell Hill, N.10. [0746

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [X5261

### Trump

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Trump-Japs, 2¾h.p. engine; £60; easy terms and exchange. [4401

### Velocette.

£22/10.—Velocette 2¼h.p., 2-speed, tax paid 1922.—8, High St., Wandsworth. [4872

1922 Velocette.—Immediate delivery of any model from Premier Motor Co., Aston Rd., Birmingham. [X5239

1921 Velocette, 2-speed, September, completely equipped, little used; sell £45; exchange A.B.C., cash.—49, St. Agnes Rd., Moseley, Birmingham. [X5253

VELOCETTE, 1921, fully equipped, issued new Nov., 1921, and not done 200 miles, indistinguishable from new; £50.—The Layton Garages, 30, Holywell St., Oxford. [5189

VELOCETTE 2-stroke believed 1916-17 in perfect mechanical condition, new tyres, and lots of spares; £25.—Colonial Motors, 104a, Finchley Rd., Hampstead 7822. [5306

VELOCETTE 1921 2¼h.p. 2-stroke, mechanical lubrication, brand new; the last of our stock of this model; list price £65; bargain at £52/10.—The Layton Garages, 30, Holywell St., Oxford. [5188

ORDER Your Velocette from G. H. Tucker, Redcliffe Hill, Bristol, carriage paid to any address in England; your mount taken in part payment for one of these wonderful machines.—'Phone: 4042 Bristol. [5204

NEW Velocette, 1921 model, with internal expanding brakes to both wheels, and other latest improvements at enormous reductions, 2-speed £55, 3-speed £62, lady's open frame £55; carry makers' full guarantee; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [X5240

### Verus.

1920 2-stroke Verus, 2-speed, kick start, fully equipped, ride away; £40.—80, Bispham Rd., Southport. [5072

1920 Verus 2¼h.p., single speed, good as new, electric light outfit, good accessories, suit overalls (5ft. 6in.), insurance; lot cost over £75; £45; tax paid; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [3178

1921 Verus, 4h.p. Blackburne engine, 3-speed, clutch and K.S., perfect condition throughout; £78, or fitted new coachbuilt sidecar, £90; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [5241

### Wilkin

BLACKBURNE-WILKIN 2¾h.p., 3-speed, K.S., all chain, practically new, very fast, licensed; £70 or with Magdyno £90.—Jackson, Grappenhall Rd., Stockton Heath, Warrington. [X6271

## MOTOR CYCLES WANTED.

WANTED, 2¾h.p. A.J.S., fast, perfect; deposit system.—24, South St., Newport, I.W. [4637

GOOD Triumph, Norton, Sunbeam, or N.U.T.; cash on sight.—4, Elm Gardens, Hammersmith. [4905

WANTED, motor cycle, any condition; cheap for cash.—61, Grand Parade, Harringay, N. [4115

WANTED, good solo or combination, for cash.—C.S., 14, Swaton Rd., Bow, E.3. Tel.: E. 3155. [5302

1916-17 Harley Electric Model, solo preferred, good condition.—153, Knolly's Rd., Streatham. [4748

£50 Cash Offered for late countershaft Triumph.—14, Sidney Rd., Woodford Halse, Northants. [X5188

2¾h.p. Douglas, New Imperial, etc., late model; immediate cash.—H., 63, Solon Rd., Brixton. [4965

WANTED, 1921 A.B.C., A.J.S., Sunbeam (Sports), Norton, or Velocette.—23, Hardwicke Rd., Reigate. [4994

WANTED, good solo, not earlier 1917; cheap for cash.—23, Jupiter Terrace, Well Hall, S.E.9. [5001

WANTED, combination, solo, reasonable; cash waiting.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [3428

WANTED, good combination, must be cheap for cash.—Write full particulars, Box 8,165, c/o *The Motor Cycle.* [4624

WANTED, twin combination, reliable, cheap, countershaft model.—11, Wheaton Rd., Boscombe East. [4598

WANTED, lightweight, late model, cheap.—Avery, Little York Cottage, Back Pantiles, Tunbridge Wells. [X5167

WANTED, Martinsyde combination, 1921; must be cheap and good.—70, Minet Av., Harlesden, N.W.10. [5003

WANTED, Indians, Harleys, Hendersons, Thors.—Hipperson, 17, Heaton Rd., Tooting Junction, Mitcham. [5056

WANTED, motor cycle combination, late model; must be reasonable.—Shepherd, 41, Elmwood Rd., W. Croydon. [4600

ZENITH 5h.p. Sports Model, 1920 or 1921; must be good condition.—Zenith, 93, Foxley Lane, Purley, Surrey. [4791

CASH Waiting for Countershaft Triumph or 2¾h.p. Douglas.—Call 26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [5154

WANTED, combination. A.J.S., Matchless, Sunbeam, equipped, guaranteed condition.—Write, 75, Gladstone St., Derby. [X5014

WANTED for Cash, Triumphs and modern lightweights.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [5215

WANTED, Matchless family combination, late model, dynamo, fully equipped.—Box 8,213, c/o *The Motor Cycle.* [5271

£100 Offered for 1921 Combination and accessories; first-class make only entertained.—Kelham, Nassington, Peterboro'. [4724

WANTED, combination, cheap for cash, P. and M. preferred, condition immaterial.—1a, Canning Crescent, Wood Green, N.22. [4889

WANTED, good combination or Morgan; exchange Studebaker motor van, or sell cheap.—Gribbin, Strand St., Douglas, I.O.M. [4588

OLD Motor Cycle required, any condition, must be cheap; send full particulars.—Douglas House, St. Maur Rd., Parson's Green. [4571

WANTED, good 1920-1921 solos or combinations; Highest prices paid; cash waiting.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [5250

WANTED, 1921 6-8h.p. 2-seater combination, B.S.A., Matchless, A.J.S., etc., good condition, and cheap.—Clarke, 8, Rock St., N.4. [5300

MOTOR Cycle or Combination, folding sidecar preferred, about 4h.p., not earlier than 1916; London district.—Box 8,209, c/o *The Motor Cycle.* [5226

WANTED, combination or good solo, about 4h.p., late model; lowest cash; full particulars.—Palmer, 180, Grangefield Rd., Eltham. [4978

MODERN Lightweight, countershaft, clutch and K.S.; spot cash for best value offered for good machine.—69, Lansdown Rd., Swindon. [4602

WANTED, late combination, fully equipped, cheap, or in exchange for 5' magnificent Sheraton bedroom suite (cost £110).—Write, H., 145, Sunderland Rd., Forest Hill, S.E.23. [4838

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchless, Bate, Scotts,—Bradburys, Rex's, Zeniths.—Wandsworth Motor Exchange, Ebner St., Wandsworth. (Town station.) 'Phone: Lutchmere 1686.

WANTED, 4-cyls. F.N.'s, Hendersons, T.A.C., T.M.C.'s.—Wandsworth Motor Exchange, Ebner St., Wandsworth.

WANTED, Red Indians, Harley-Davidsons.—Wandsworth Motor Exchange, Ebner St., Wandsworth. Town station.) [5023


# From GADGET to High powered COMBINATION

With better roads being made, lower prices of complete machines, accessories and supplies, and prospects of still further reductions, 1922 promises to be a bumper season for the motor cyclist. It will be a season of fuller enjoyment with greater economy, certainly the latter if you make a point of buying only standard and well-known goods. This is where our service will help you; we can supply you with everything you are likely to want, over the counter or promptly through the post (carriage is paid on orders over £1) and you know that whatever it is, it is the best your money can buy—and more important—the *most* your money can buy.

## SPARES AND TYRES

We can deliver ex stock any spare for all well-known machines, engines, gear boxes, as well as parts for Powell & Hanmer Lamps and Generators, whilst our tyre stock is large and comprehensive. Owing to arrangements with the manufacturers of Hutchinson & Michelin, all covers despatched are guaranteed *not* to have been in stock *more* than three months.

## MOSS GEAR BOXES

We are sole London fitting agents for these and other Moss Components. If you have a lightweight with a 2-speed box—no matter what make—let us fit the efficient Moss 3-speed Gear box to it—self-contained gate change clutch and kick starter. Your present 2-speed box will be taken in part payment. Balance deferred or cash. Fitted free at our workshops.

## WHERE YOU GAIN

Come to THE SERVICE CO.—no matter what you want. You'll get the lowest price and the best service,—from a staff of keen practical motorists, who know exactly what you want, and have unique facilities to ensure your entire satisfaction.

*ASK FOR OUR NEW 1922 CATALOGUE WRITE OR CALL FOR IT TO-DAY.*

The Service Company Ltd HOLBORN

289-293, High Holborn, London.


## MOTOR CYCLES WANTED.

CASH Waiting; solo and combinations, good prices given.—Write, 'phone, or call, Edwards, 50, Harrington Rd., South Kensington. 'Phone: Ken. 3709. [0604

WANTED, your motor cycle or combination. We are buyers. Full market price given and cash paid on the spot. Write, call, or 'phone Museum 5938.—J. Smith and Co., Motor Agents, Ltd., 52-54, Hampstead Rd., N.W.1. [0768

CASH on Sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station, Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address: Palmer's Garage, Tooting. [5179

## MOTOR CYCLES FOR HIRE.

4h.p. Douglas Motor Cycle with box carrier for hire with driver.—Write, 40, Blomfield Rd., Maida Vale, W.9. [4802

## TRICARS FOR SALE.

A.C. Sociables, by the A.C. Co., dependable runabouts, take 2 persons anywhere, good condition and appearance, fully equipped; from £50 to £85; trial.—29, Allsop St., Upper Baker St., London, N.W. [3533

## MOTOR SCOOTERS.

KINGSBURY Scooters and Spare Parts.—3, Kendall's Mews, George St., W.1. [5334

FOR Sale, Auto-Scooter, perfect condition; £14, or offer; exchange considered.—Box 8,174, c/o *The Motor Cycle.* [4679

AUTOGLIDER Scooter, nearly new, 2¾h.p., spare tyre, accessories, tools; £20.—Gillespie, West Africa House, Kingsway. [4644

BRAND New Autoped Scooter, dynamo lighting, 1½h.p., single-speed; £15.—Percy and Co., 314, Euston Rd., N.W.1. [3473

## MOTOR ATTACHMENTS.

J.E.S. Cycle Attachment; £8; perfect condition.—Cooper, 69, Station Rd., Hutnwaite, Notts. [5091

SIMPLEX Cycle Attachment, 1921, complete, good order; £12.—37, Arlington Rd., Surbiton. [4842

AUTO-WHEEL, attached B.S.A. cycle, guaranteed perfect; £15.—Arno, Crypto Cottage, Acton Lane, Harlesden. [4603

YOUNG Attachment, special cycle, nearly new, owner bought motor cycle; £24, or offer; any trial.—Hill, Wormley, Surrey. [4832

2h.p. Johnson Economic Motor Attachments, complete, with rear wheel and all fittings, magneto, carburetter, etc.; £12.—Mason's Garage, Letchworth, Herts. [5110

## HOODS, WIND SCREENS, ETC.

HOODS, double texture twill, brass or nickel fittings, to fit any sidecar, from £2.—Below.

EASTING Wind Screen, new, celluloid panel, and as new, 50/-.—Below.

WIND Screens, adjustable, with apron, 30/- and 35/-. Hoods re-covered, new celluloid fitted to wind screens.—Collins and Son, rear of 84, High St., Putney, S.W. [5022

HERCULES Hoods and Aprons. Write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [3230

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3772

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

ROBINI Manfc. Co.—The Bower adjustable wind screen. Owing to the large demands, and quick production, we are able to offer these, complete with all enamelled fittings, and coverall apron, 30/-, carriage paid; money returned if not satisfied.—'Phone: Brixton 1585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [5200

## BODIES.

RENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

HALIFAX.—New Perfection coachbuilt sidecar bodies; £5.—Halifax Motor Exchange, Horton St., Halifax. [4761

BAMCO Sidecar Bodies, want upholstering and painting, roomy; 57/6.—2, Fortune Gate Rd., Harlesden, N.W. [4370

## BODIES.

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5131

LOVELY 2-seater Sidecar Body, black gold, £12, cost £22; A.J.S. cylinders, 35/- each.—69, North St. Plaistow, Broadway, E.13. [4807

VENUS Step Bodies, for old type chassis, 15 models in stock; catalogues ready.—Venus Sidecar Co., 694, Seven Sisters Rd., Tottenham. [4520

ROYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [0356

COBB Speedman Sidecar Bodies, 1922 models, £3 (unpainted and unupholstered); superbly finished any colour and handsomely upholstered ready for fitting to any chassis, £4/5; all carriage paid.—Carlton Sidecars, 18, Midland Rd., Carlton, Nottingham. [4711

BODIES.—All models stocked at competitive prices. Light touring, £6/10; heavy touring, £7/10; de luxe, £8/10; Brooklands sporting, £8/10. All these bodies are complete with waterproof apron.—'Phone: Brixton 1292. Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton. [5155

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—20, Tudor St., London, E.C.4. [0004

ROBINI Manfg. Co.—Wonderful bargains in brand new coachbuilt bodies of many different types, complete with Coverall aprons, £8; sports, complete with wind screen, £8/15; 2-seater, £10/10; catalogue on request. Don't buy cheap and bad quality new bodies. Our shop-soiled bodies at £6/15 are wonderful value; 2-seater Millford body on Millford chassis, complete with tyre and tube, all fittings, suitable for any machine, slightly used, £11/10; carriage extras. See Sidecars column.—'Phone: Brixton 1585. Robini Manfg. Co., 1 and 3, Tulse Hill, Brixton, S.W. [5198

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM, the smartest sidecar specialists

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

FREE. Free. Free.

AS An Advertisement for one month only, to each purchaser of every sidecar we are giving a wind screen value 30/- free.—Below.

COACHBUILT Bulbous Back Models, complete with wind screen, from £6; polished aluminium, from £7. Bodies can be painted and upholstered to customers' requirements. Bodies in stock to suit all makes.

WE Specialise in Repairs, repainting, and reupholstering.—Below.

CHASSIS, underslung models, from £7/7. We specialise in frame repairs of all kinds.

ALSO Few Second-hand Chassis for Sale.—Collins and Sons, rear of 84, High St., Putney, S.W. [5021

SIDECARS! Sidecars!

SEVERAL Second-hand Coachbuilt Sidecars from £7/10.—Below.

BRAND New Coachbuilt Sidecars with bulbous backs and complete with aprons; a first-class job; not cheap and nasty; £17/10.—Below.

BRAND New Sidecars, coachbuilt, from £16. These are really wonderful value.—Below.

WE Have two Langford spring wheel sidecars, 5-point attachments, large bulbous backs with Picnic cases, completely fitted with all utensils, most elaborately finished, complete £35.—Jones Garage, Muswell Hill, London, N.10. [4159

CANOELET Sporting, excellent condition; £15.—80, Tyrwhitt Rd., S.E.4. [5299

WATSONIAN, all models from £17/10.—Bartlett's, 93, Gt. Portland St. [5321

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [1331


THE MOTOR CYCLE

*Insurance Policy*

# Testimony

THIS space will be occupied each week with copies of letters from Policy holders who have made claims. Original letters may be inspected.

*Gentlemen,*

*I beg to inform you that I have taken over my A.J.S. Combination, which looks little the worse for its adventure.*

*I must take this opportunity of saying that I am in every way more than satisfied with the manner in which you dealt with my claim, and can now quite understand how you are able to publish a fresh testimonial every week.*

*I am, Yours faithfully,*

***The only Safe Test of Insurance is Claims. We settle Claims promptly.***

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED**

*(Incorporating The Autocar Insurance Department, Established 1904).*

Head Office:

**77, Cheapside, London, E.C.2.**

*Telephone: City 9831 and 9832.*
*Telegrams: "Autoinsure, Cent. London."*


## SIDECAR ATTACHMENTS.

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

BASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £19/10, Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £28/10, Model de Luxe £34/10, tandem model £30.

BASTONES.—Whitley 1922 sports model in stock, £25.

BASTONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/-.—228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. 'Grams: Bastones, London. [5132

EDWARDES for Sidecars and Bodies; state your requirements.—277, Camberwell Rd., S.E. [5310

HALIFAX.—New Perfection coach sidecars: £12/10.—Motor Exchange, Horton St., Halifax. [4763

P. and M. Sidecar Chassis, complete; £4.—1, Springfield Park Crescent, Catford, S.E.6. [4912

TRIUMPH Sidecar Accessories, sporting, perfect; £45; after 6.—Chaffey, 19, Finsbury Sq., E.C. [4805

SPORTING Sunbeam Sidecar, new condition; cheap.—Leggett, 306, Fulham Rd., South Kensington. [5106

FLYING Middleton Sidecar, complete, off Triumph; £6/10.—34, Amwell St., Hoddesdon, Herts. [4879

ARIEL Sidecar, as new, £18; new Easting wind screen, £2/10; new Cameo wind screen, £2.—H. Wright, Arlesey, Beds. [4834

BOOTHS Bargains.—Coachbuilt chassisless sidecar, £7/10/6; Gloria cane, spring wheel, £6/19/6; Hercules coach, £9/10/6.

BOOTHS Bargains.—Shop-soiled £27/10 sidecar, suit Triumph, B.S.A., £18/15; cane sidecar, £5/10/6.

BOOTHS Motories.—Ruby coach sidecar, £9/10/6; new large size coach bodies, locker under seat, £6/19/6.—Booths Motories, Portland Place, Halifax. [5144

B.S.A. No. 3 Sidecars, brand new, slightly soiled, at greatly reduced prices.—Eagles and Co., 275, High St., Acton, London. [5255

LIGHTWEIGHT Sidecar, £12/10; large bulbous, £15 complete; bodies from £5; stock.—107, Coningham Rd., Shepherd's Bush, W. [5121

CANOELET Minor Sidecar, unused, ideal for lightweight motor cycle; £20, or nearest offer.—Hope, 36, Grove Rd., Chadewli Heath, Essex. [4785

SIDECARS by all the leading makers, shop-soiled only, at special clearance prices, from £15.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [5044

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

## SIDECAR ATTACHMENTS.

ROVER Sidecar, latest type, independent electric lamp, little used and in perfect condition; £23, worth £28.—Cantrill, 172, Cross Rd., Coventry. [X5145

SIDECARS, several cheap, room wanted; also Douglas chassis sidecar wheel, new, 15/-; N.S.U. gear, as new, £6/15; heavy body, £2/10.—57, Kenbury St., Camberwell, London. [4876

GROSVENOR Sidecars.—Our special sports model is very suitable for use with fast sporting bikes; distinctive design and quality; £15.—Grosvenor Motor Co., Bradford St., Bolton. [X5093

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

WATSONIAN Lightweight Sidecar, Model A, just delivered, brand new, polished aluminium, very sporty; £15 for quick sale, with apron complete.—H. West, 2, Brunswick Rd., Tottenham. [4601

MONTGOMERY Sidecar, with luggage and petrol can carrier, Bluemel's wind screen, only used last season, 28×3 wheel.—Write or call, Hale, 61, Dacre Rd., Upton Park. Suitable for 5 or 7h.p. Khaki. [4628

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

£5 for a complete renovated Douglas underslung chassis, all springs and arms, wheel, etc., suitable for any make of machine to order.—Old Man Hop, 19, Wilcox Rd., South Lambeth, London, S.W.8. [4176

REAL Carriage Works.—Bargains, soiled and second-hand bodies, chassis; from £610; we specialise in sporting sidecars to actual requirements, first-class work only, repairs undertaken, cycle car parts.—55, Kew Bridge Rd., Brentford. [4792

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

ROBINI Manfc. Co.—Underslung chassis, complete with new tyre and tube, and brand new body, with coverall apron, £14; Millford chassis, new tyre and tube, new bulbous back body, with adjustable wind screen and apron, £12/15, wonderful offer; underslung chassis, all replated and enamelled as new, with new tyre and tube, £7; Millford Chassis, complete with new tyre and tube, all fittings, £5/10.—Below.

OUR New Triangulated Lightweight Chassis, new tyre and tube, guaranteed, complete, £9/10; 4h.p. triangulated chassis, new tyre and tube, £12/10; carriage extra. See Body column.—'Phone: Brixton 1585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [5199

## RUNABOUTS AND CYCLE CARS.

A. P. REY, 378-384, Euston Rd., N.W.1.—Call and inspect.

MORGANS, all models; also second-hand De Luxe and Grand Prix's, in good condition.

COVENTRY PREMIER, 1922, 4-wheeler model, £250; one, shop-soiled only, £227/10.

ROVER 8h.p. Model, £220; one second-hand, good condition, £160.

G.N., all models; also 1920, with dynamo, very good order, £132/10.

EXCHANGES or deferred payments arranged.—'Phone: Museum 6436. [3591

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—5-6h.p Carden monocar; £50. [4420

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—A.V. monocar, 6h.p., 1920; £65. [4423

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 G.N.'s; easy terms and exchange. [4394

MORGANS, second-hand, several in stock.—A. P. Rey, 378-384, Euston Rd. 'Phone: Museum 6436. [3592

A.C. Sociable Runabout, good order; £45.—Foat, 173, Hainton Av., Grimsby. [4534

£28.—Riley 3-wheeler chassis, 8h.p. water-cooled.—215, Hampstead Way, Golders Green. [4606

CARDEN, 1914, perfect condition, Binks, lamps, speedometer; £40.—Halkes, Waddington, Lincoln. [X5251

LITTLE MIDLAND Cars In Stock; price £200; part exchange considered.—Welford, James St., Brighton. [4784

MORGAN-J.A.P., water-cooled, speedometer, clock, perfect, any trial; £85.—1, Othello St., Liverpool. [5095

7-9h.p. 2-seater Runabout; £55; exchange.—Staning, University Club, Edgbaston, Birmingham. [4846

**Bertie was three minutes ahead of time at a secret check in the London-Exeter—so he lost his medal. But he proved once again the complete Reliability of both the new Douglas and the Burlington - reconditioned Douglas. Both Bertie's machines completed the course.**

### NEW MACHINES IN STOCK.

| | |
|---|---|
| 1922 7 h.p., 4-cyl., 3-speed, Shaft Drive "F.N." | £95 |
| 1922 4½ h.p. JAMES combination, Model No. 6 | £135 |
| 1922 SUN-VITESSE, 2-stroke, Lady's Model, Sturmey-Archer 2-sp., clutch, and K.S. (Olympia Show Model) | 55 G s. |
| 1922 CALTHORPE, 3 h.p., 2-stroke, 2-speed gear. (Olympia Show Model) | £60 |
| 1922 2¾ h.p. WOLF Blackburne, Sturmey-Archer, 2-speed, Clutch and K.S. | £75 |
| 1922 TRIUMPH, Model H. | £105 |
| 1921 CALTHORPE, 3 h.p., 2-stroke, 2-speed and K.S. | £60 |
| 1921 SCOTT combination, with Burlington sidecar and fully equipped | £115 |
| 1921 CALTHORPE-J.A.P., 2¾ h.p., 2-speed, and K.S. | £60 |

### SECOND-HAND.

| | |
|---|---|
| 1921 RUDGE-MULTI, not done 200 miles, complete with electric lighting | £65 |
| 1920 PRIORY 2-stroke, 2-speed gear, just overhauled and re-enamelled | £35 |
| 1916 2¾ h.p. HOBART, 2-speed gear, all on | £30 |
| 2¾ h.p. WATSON-J.A.P., overhead valves, very fast | £30 |
| 1919 TRIUMPH, re-conditioned, as new, fully equipped | £75 |

The **DEFERRED PAYMENT** Terms for any of the above machines are—¼ purchase price down—balance over 12 monthly instalments with only 4 per cent. added.
For machines or spares, write, phone, or call—

**Burlington MOTOR CYCLE CO. LTD**

**7, South Side, Clapham Common, S.W.4**

'Phone: Brixton 2417.
Wire: Burlington, Motors, Clapham.

**Just by Clapham Common Underground Station.**

## RUNABOUTS AND CYCLE CARS.

MORGANS.—1922 models; immediate delivery; exchanges, extended terms. Official agents; spare parts.—Below.

MORGAN Grand Prix, 1921-22, M.A.G., electric lighting, mechanical horn, discs, watch, hood, and screen, mileage only 400, cost £215; now offered at a bargain figure.—Below.

MORGAN Aero Model W.C., J.A.P., lamps, horn, hood, wind screen, etc.; bargain, £135.—Below.

ROVER Light Car, 1922 model, 8h.p., in stock; £220.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0073

10h.p. Merrell-Brown 3-wheeler, unscratched; £160; exchange.—Fairhurst, Behind 68, Standishgate, Wigan. [5074

BRADFORD.—Morgan, New Hudson, Scott Sociable agents.—Denham and Bottomley, 220, Manningham Lane, Bradford. [X5304

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—Morgan Grand Prix, 1921 model, fully equipped, yellow finish; £137/10. [4428

1914 Morris-Oxford De Luxe 2-seater, splendid condition throughout, £9 tax; £165.—King, Egrove Farm, Oxford. [X5269

3-WHEELER, 2-speed gear and clutch, electric lighting, suit novice; offers; appointment.—59, Bedford Rd., East Finchley, N. [4741

T.B. 3-wheeler, 1921, complete with lamps and spare wheel, shop-soiled; to clear £185.—Allen and Binns, Ltd., Glossop Rd., Sheffield. [4558

TAMPLIN, 1921, electric lighting (dynamo), fully equipped, excellent condition; £125.—Coventry Garage, High Rd., Leyton. [4952

1920 Coventry Premier Runabout, clock, speedometer, tyres good, tax paid; £125.—Witcombe, Witcombe Court, Gloucester. [5073

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—Rover light cars; £220; fully equipped; easy terms or exchange; list on application. [4393

MORGAN 1918 de Luxe Model, electric light, spare tyre, etc., perfect mechanical order guaranteed; £90.—Martin 10, Herbraud St., W.C. [4569

ROVER 8h.p., 1921, dynamo lighting, hood, screen, spare wheel (unused), well equipped, little used; £155; exchanges.—63, Solon Rd., Brixton. [4964

A.V., special engine, dickey, luggage carrier, less mag., also workshop tools, lathe, bench; £38 lot.—32, Stanmore Rd., Leytonstone, E.11. [4899

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Morgans supplied on easy terms or exchange. 'Phone: Holborn 5777. List on application. [4395

MORGAN Spare Parts Depot.—Spares for all models in stock; list free.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548.

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co., 292, High Holborn, W.C.1. [0673

A.V. Monocar, 1920, 6h.p. J.A.P., good condition, lamps, Cowey horn, disc wheels, original tyres as new; £70, or nearest offer.—66, Coronation St., Blackpool. [5099

CARDEN 1921 de Luxe, dynamo, clock, speedometer, electric horn, lots of spares, condition as new; £105.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [5308

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0736

1919 A.V. Monocar, polished aluminium body, discs, electric, engine overhauled, tyres unpunctured, licensed 1922; bargain, £70.—76, Cromwell Rd., Luton. [4958

HALIFAX.—New 1922 Coventry Premier 4-wheeler with speedometer and insurance for 12 months; £250; liberal exchanges.—Halifax Motor Exchange, Horton St., Halifax. [4759

1919 Carden Cycle Car 2-seater, twin J.A.P. engine, 8h.p., Sturmey-Archer 3-speed gear box; £75; exchanges entertained. — Speechley, 86, Churchfield Rd., Acton, W.3. [4926

1921 Bleriot-Whippet, hand-starter, electric lighting, spare wheel, good condition; 88 gns.; deferred payments and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [5238

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220; in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [X5242

3-WHEELER A.C. Sociable, 2 speeds, new hood, screen Bosch mag., lamps and horn, 2 new tyres, fully insured, new appearance; 45 gns., or offer.—123, New King's Rd., Parson's Green. [4795

MORGAN, 1920 M.A.G., water-cooled, special aero body, hood, electric side, acetylene head lamps, speedometer, many extras, very special (cost over £300); £145.—Clark, 7, Exhibition Rd., S.W.7. [5249

## RUNABOUTS AND CYCLE CARS.

CROUCH 1921 8h.p. 2-3-seater Touring Model, completely equipped, and in very fine order; cost £275, offered at the bargain price of £165.—The Layton Garages, 30, Holywell St., Oxford. 'Phone: 581. [5192

MORGAN, latest 1922 standard popular model, £150: Coventry Premier 4-wheeler, water-cooled, speedometer, free insurance, £250, 1922 model; Rover 6h.p. latest 1922 model light car; imediate deliveries from stock.—Marston, 31, Bridge St., Chester. [5175

1921-22 Tamplin 2-seater, 8h.p. J.A.P., 3-speed, clutch, kick start, lighting set, horn, aluminium disc wheels, etc., very sporty and fast, condition as brand new throughout; exceptional bargain, £98.—Blackmore, 769, Romford Rd., Manor Park, London, E. 'Phone: Ilford 500. [5005

RICHARDSON 1921 8h.p., 4 speeds, reverse, Brolt electric lighting, 2-seater and dickey, semi-coupe hood, adjustable screen, etc., original tyres still on and in good condition, car is in perfect order throughout, 55 m.p.g., fast and smart; £110, bargain.—R. Watson, Victoria Rd., Aldburgh, Suffolk. [4850

1920 A.V. Monocar 8h.p. Single-seater, in new condition, electric lights on wings centre electric head light, electric tail, Lucas mechanical horn, speedometer, etc., painted primrose, brown wings, very fast and sporty; cash offers or exchange Triumph, Sunbeam, or Morgan, cash adjustment either way.—Stone, 280, Gloucester Rd., Morfield, Bristol. [5093

CROUCH, 1921, 8h.p., special Brooklands sports model, this car, which is quite new, was issued from the works only this week, it is modelled on Cocker's famous Brooklands winner, has a special 2-seater sports body, and is capable of a lap speed of 60 m.p.h.; full particulars with pleasnre; lowest possible price 250 gns.—The Layton Garages, 30, Holywell St., Oxford. 'Phone: 581. [5193

*Spare Parts:*

ACE Wheel Discs.—G.N. owners send for 1922 illustrated list (reduced prices). Enbance the appearance of your car and save spoke cleaning. Supplied by all agents.

ACE Wheel Discs.—Morgan owners fit these popular discs to your runabout and add 50% to its appearance. They are made of stout gauge seamless aluminium, and the quality is tbe best.—Cornercroft, Ltd., Ace Works, Coventry. [X4909

## CARS FOR SALE.

METZ 2-seater, 4-cyl., 15h.p., very fast; £45.—77, Acre Lane, London, S.W. [5049

BEDELIA.—The new 1922 model 8-10h.p., with air cooled or water-cooled engine.

BEDELIA.—Air-cooled model, £185; water-cooled model, £195; immediate deliveries; trial runs free.

BEDELIA.—Catalogues free from L. N. Palmer, sole concessionnaire for the British Empire.—Palmer's Garage, Tooting. [5177

WEST NORWOOD!—The place for straight deals, good value and selection; list free.

WEST NORWOOD!—Fifty-five cars actually in stock on the premises; all types stocked.

WEST NORWOOD!—Absolute bargains obtainable, good running 2-seaters from £35; tourers from £85.

WEST NORWOOD!—Call any old time. Hours 8.30 to 6, Saturday 4; no business Sundays.

WEST NORWOOD!—All marked plain figures; call, no obligation; postcard procures printed list.

WEST NORWOOD!—Douglas S. Cox, the absolutely straight motor man, 6c, Landsdowne Hill, West Norwood, S.E. [4450

85 GNS. Exchanges a speciality.—1913 Bayard 3-seater 8h.p., 4 cyls., hood, screen, smart, economical.—Below.

62 GNS. Exchanges a speciality.—1915 Trumbull 2-seater, 4 cyls., hood, screen, electric lamps.—Below.

55 GNS. Exchanges a speciality.—Alldays 4-5-seater, 12 h.p. twin, hood, screen, lamps.—Below.

119 GNS. Exchanges a speciality.—1914 Lagonda 4-seater 11h.p., 4 cyls., detachable wheels.—Below.

125 GNS. Exchanges a speciality.—1912-13 B.S.A.-Daimler 5-seater 13.9h.p., detachable wheels.—Below.

89 GNS Exchanges a speciality.—1914 Crouch 3-seater 8-10h.p., detachable wheels; wonderful little car.—Below.

MY Prices are Right. Many other bargains.—Seabridge, 35 Hansler Rd., East Dulwich. Sydenham 2452. [4435

DELAUNAY-BELLEVILLE Landaulet, 25h.p., 6 cyls., perfect; £95.—Chauffeur, 14, Glenelg Rd., S.W.2. [5048

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

¶ ¶ In purchasing a motor cycle you may be getting much or little for your money You may be getting a maximum of pleasure and service—or, on the other hand, you may have less of either than you have a right to expect. ¶ We wish to emphasise that such disappointment is readily avoidable. It is entirely a matter of a wise choice—of the machine itself, and the people from whom you buy it. Therefore, your first need is expert, impartial advice. ¶ This we gladly and freely offer you, leaving the question of placing the order afterwards for you to decide. You will be under no obligation to us, and we shall not worry you. ¶ At the same time, if we can have the pleasure of adding YOUR name to the thousands of those who have found by experience that we can serve them rather better than most people in the motor cycle and light car business we shall be more than glad

*1922 MODELS FOR EARLIEST DELIVERY include:*

**ARIEL, BROUGH SUPERIOR B.S.A., DIAMOND, DOUGLAS, EDMUND, ENFIELD, HUMBER, INDIAN, MASSEY-ARRAN, MATCHLESS, NORTON, RUDGE, SCOTT, SUNBEAM, TRIUMPH, and VELOCETTE Motor Cycles;**

**BELSIZE, BRADSHAW, CROUCH, ROVER, and WOLSELEY Light Cars.**

*Cash, Exchange, or any reasonable Deferred Terms.*

¶ Always an exceptional stock of used machines, at most attractive prices—sold with our guarantee.

# Layton Garages

**J. W. TOLLADY,**
General Manager.

**90, High Street, OXFORD,**
**and London Road, BICESTER.**

'Phone; 581 & 784, Oxford
'Phone: 35, Bicester.
Grams: "Integrity" Oxford and Bicester.
H.G.T.

## CARS FOR SALE.

PALMER'S Garage, Tooting.—The pre-eminent place for purchasing. Auction every Thursday.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £5 secures superb Napier 5-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7 secures splendid Belsize 5-seater.

PALMER'S Garage, Tooting.—£60 down and 12 monthly payments £8 secures 10h.p. Singer 2-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £5 secures 12-seater live axle Panhard waggonette.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures splendid Sheffield-Simplex landaulet.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8/10 secures magnificent Oakland touring car, self-starting.

PALMER'S Garage, Tooting.—£60 down and 12 monthly payments £8 secures Renault 12-seater waggonette.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7/10 secures reliable Renault ¾ landaulet.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable Napier chassis.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8 secures Delaunay-Belleville limousine, 17h.p.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 18h.p. Maxwell sporting 2-seater.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures excellent 15.9h.p. S.C.A.R. 2-seater.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures Studebaker landaulet, dynamo lighting, self-starter

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £7 secures 16h.p. Minerva touring car, monobloc engine.

PALMER'S Garage. Tooting.—£25 down and 12 monthly payments £4 secures reliable S.C.A.T. 12-seater waggonette.

PALMER'S Garage. Tooting.—£25 down and 12 monthly payments £5 secures excellent 12-14h.p. Fiat chassis.

PALMER'S Garage, Tooting.—All above cars are in good running order. For cash price deduct 10% from above totals.—Palmer's Garage, Tooting. [5162

SCRIPPS-BOOTH 13h.p. 1916-17 2-seater, D. lighting and starting; £145.—Miss Patmore, 106, Acre Lane, S.W.2. [5047

ROVER Cars.—The famous 1922 8h.p. models; early delivery; £220.—Eagles and Co., 275, High St., Acton, London. [0761

BAYLISS-THOMAS Cars In Stock; price, with double dickey, £320; part exchange if required.—Welford, James St., Brighton. [4783

COVENTRY PREMIER, 1922, 4-wheel model; £250; immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

DAIMLER 15h.p. Tourer, S.K., C.A.V., D. wheels, perfect; £160, or exchange cycle or combination.—J. Daniels, Jun., 8, Crowhurst Rd., Brixton, S.W.9. [5046

DARRACQ 15-20h.p. 4-seater, engine, gear box, and tyres, etc., in excellent condition, but differential smashed; £45; or exchange combination.—Millett, 11, Chatham Row, Bath. [4703

GENUINE Little 6h.p. De Dion Car, fitted with 2-seater sporting body, very smart, in excellent order; complete, £45; delivered 50 miles free; trial.—11a, Dafforne Rd, Upper Tooting. [4547

1920 Richardson Car, special Precision 10h.p. engine, very fast, in thorough good order; bargain, £130; exchange recent date motor cycle and cash.—Bowden, 230, North St., Hugglescote, Leicestershire. [4749

1921 Bleriot Whippet, reverse, electric lighting, speedometer, spare wheel, hood, tax paid, in absolutely new condition; 103 gns.; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [4462

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—Coventry Premier, new 1922, 4-wheelers, immediate delivery from stock, dynamo lighting; exchanges and easy terms arranged; price £250. 'Phone or call, Holborn 5777. [4392

1919 Chevrolet Touring Car, dynamo lighting, self-starter, 5 detachable wheels, repainted as new, any trial given; bargain, £160, or exchange motor cycle or combination with cash.—5, Norwood Rd., Herne Hill, S.E.14 [3599

## CARS FOR SALE.

MERCEDES Racing Car, 2-seater, fitted with brand new Berliet aero engine, nice to drive, and very fast; £150, or exchange combination.—5, Canning Place, Grove Lane, Camberwell, S.E.5. Nearest station Denmark Hill, from London Bridge or Victoria. 'Phone: Brixton 1566. [4566

## MOTOR TRANSPORT VEHICLES.

THORNYCROFT 3-ton Lorry, J. type, 1918, in good order, runs sweetly and pulls well; price £250, or exchange touring car.—5, Canning Place, Grove Lane, Camberwell, S.E. Nearest station Denmark Hill (12 mins. from Victoria or London Bridge. 'Phone: Brixton 1566. [4563

RENAULT 2-Ton Lorry, 1919, 20h.p., 4 speeds and reverse, underslung live axle, fast and economical, ideal body for coal carting; price £225, or exchange.—5, Canning Place, Grove Lane, Camberwell, S.E.5. Nearest station Denmark Hill, from Victoria or London Bridge. 'Phone: Brixton 1566. [4564

STAR 1916 2-ton Lorries (6), 4 speeds, live axle, Zenith carburetters, £225 each; Straker-Squire 30-cwt. lorry, steel wheels, overhead worm drive, open body, £185; Garfords 30-cwt. lorries, smart 9ft. bodies and coachbuilt cabins, £200; all with lamps, horn, All repainted, retyred, and in first-class condition.—See below.

AN exceptional bargain to clear the last 2 Willys-Overland 30-cwt. lorries, 1916, £130 each, with lamps, horn, and new tyres.—Shard Garage, Shard's Sq., Peckham Park Rd., Old Kent Rd., London. [4489

UNIC, believed 1918, 13-22h.p., 14-seater char-a-banc chassis, pointed radiator, 4 speeds, gate change, Michelin detachable steel wheels, and brand new tyres; price £275; exchange pleasure car.—5, Canning Place, Grove Lane, Camberwell, S.E.5. Nearest station Denmark Hill, from Victoria or London Bridge. 'Phone: Brixton 1566. [4565

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. [8428

SECOND-HAND Models at Special Rates; send your requirements.—Halifax Motor Exchange, Horton St., Halifax. [4762

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1. [0672

## ENGINES.

12-14h.p. 4-cyl. Engine, as new; £15.—31, Silver St., Enfield. [4821

ALLDAYS 4h.p., brand new, perfect; £8/10.—57, Northumberland Rd., Coventry. [X5152

DE DION Engine, 2¾h.p., with mag. and carburetter; £5/10.—Mylam, 197, London Rd., Croydon. [4717

P. and M. Engine, complete, good condition, wants assembling; £7/10.—147, Burlington St., Liverpool. [4382

5h.p. J.A.P. Air-cooled Engine, never been used; £18.—Ward and Avey, Ltd., Somerset Rd., Teddington. [4549

4h.p. Motor Cycle Engine, overhauled, Bosch, carburetter: bargain, £6/10.—Thomson, 47, Station Rd., Hitchin. [5063

4½h.p. Quadrant Engine, with carburetter, would make good stationary; £7.—Oliver, Swinton Grange, Malton. [4732

BASTONES.—Blackburne 8h.p. twin engine, with carburetter; £30.—228, Pentonville Rd., King's Cross, London, N.1. [5133

4-CYL F.N. Engine, mag., carburetter, complete, good condition; £12, or nearest offer.—Bird, 60, Childers St., Doncaster. [4712

BARGAIN, 5-6h.p. Rex Engine, less front cylinder and piston, Bosch mag., good order; £7.—Brown, Mansfield Rd., Warsop, Notts. [4686

VILLIERS Mark IV., complete, brand new, £10; 2-speed gear box to suit same, brand new, £3/10.—Box 8,120, c/o *The Motor Cycle*. [4551

4h.p. Levis Flat Twin, 2-stroke, carburetter and mag., perfect, £10; 6h.p. ditto, £12.—Cole, 457, Rathgar Rd., Loughborough Junction, S.W.9. [4924

VERUS 2-stroke Engine, 1920, mag., carburetter, silencer, perfect condition, £10 lowest, car generator, 10/-.—3, Hampton St., Birmingham. [X4456

2¾h.p. 2-stroke, 1922, eminent make, guaranteed perfect, on approval; £8; brand new.—Midland Supply, 1, Gosta Green, Birmingham. [5011

2¾h.p. Engine, o.h.v., reground, mag., carburetter, complete controls, silencer, etc.; nearest £10; also lubricator, saddle.—37, St. Lunke's Rd., Maidstone. [4689

3½h.p. Twin N.S.U. Engine, Bosch, Senspray, £6; Bradbury engine, Bosch, B. and B., £5; Kerry engine, less ignition, 18/-.—Particulars, 20, West St., East Grinstead. [4945

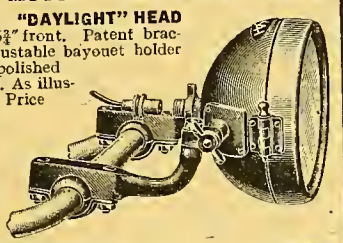
NEW Year's Resolution.—Fit a Broler 3½h.p. 2-stroke and have the best year's motoring you ever had. Write for particulars.—Brooks, Trasler, and Cox, Narborough, near Leicester. [X4876


REGISTERED HAH TRADE MARK — H.A.H. Complete Electric Lighting Sets. — REGISTERED HAH TRADE MARK

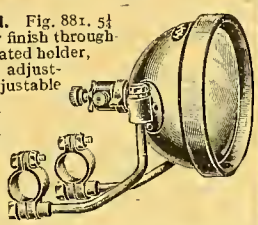
MANUFACTURERS OF
ACCESSORIES. PATENTS. SPECIALITIES.
POWERFUL LONG RANGE LAMPS
November 15th, 1921.
1922 PRICE GUARANTEED.
NO ALTERATION WILL BE MADE IN CURRENT LIST PRICES
FOR ONE YEAR FROM THIS DATE.

H.A.H. MOTOR CYCLE HEAD LAMPS.

Fig. 895. "DAYLIGHT" HEAD LAMP, 6¾" front. Patent brackets, adjustable bayonet holder. Highly polished reflector. As illustrated. Price Nickel 60/- ea. Black 65/- ea



Medium sized Model. Fig. 881. 5¼ front. Best quality finish throughout. Totally insulated holder, with switch and adjustable focus, adjustable brackets, dust and weather-proof front. As illustrated. 36/- ea. Nickel. 39/- ea. Black.



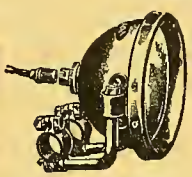


Fig. 878, 5¼" front. Similar to Fig. 895, but smaller and with special "pull on" front. Rubber ring casting for glass. New Price. Black-plated, 40/- each.

Fig. 880. Head Lamp, 5¼" front, with bulb switch, &c., 25/- each.

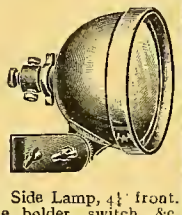
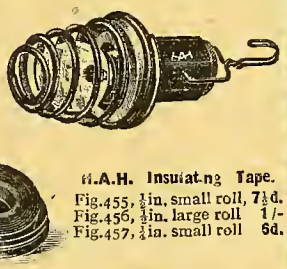
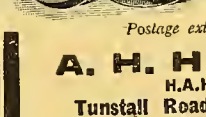


Fig. 886. Side Lamp, 4½" front. Adjustable holder, switch, &c. 20/- each.

Fig. 357. New model Inspection Lamp to take small Bayonet Bulb, as illustrated less bulb. Price 6/-





H.A.H. Insulating Tape.
Fig.455, ½in. small roll, 7½d.
Fig.456, ½in. large roll 1/-
Fig.457, ¼in. small roll 6d.

*Postage extra on the above*

A. H. HUNT, LTD.,
H.A.H. WORKS,
Tunstall Road, CROYDON, Eng.
Telephone— Croydon 2225, 2226.
Telegrams— Keyage, Croydon.


## ENGINES.

3½h.p. P. and M. Engine, 1916, W.D. model, excellent running order and condition, complete with practically new carburetter, just been overhauled; £9/15.—107, Fordwych Rd., Cricklewood, N.W.2. [4573

MR. READ'S Special 6h.p. J.A.P. Engine, used in Enfield machine, guaranteed same condition when at Kop Hill, Brooklands, and other events, without mag. or carburetter; what offers?—Springwell House, Springwell Rd., Hounslow. [4696

8h.p. Phanomobile Twin Air-cooled Engine, Bosch mag., Zenith carburetter, 2-speed epicyclic gear, 2 sets new wire wheels, axles, steering, belt rims, brake drums; sacrifice, £14, or exchange medium-weight sidecar.—31, Carlisle Terrace, Bradford. [5094

BARGAINS.—Three 2¾h.p. Douglas engines, 2 4h.p. ditto, several A.B.C., and Levis twins; large quantity spares various makes, also quantity tool kits, spanners, pliers, belt punches, hammers, petrol squirts, grease injectors, head lamps, and generators, etc. All to be sold at knock-out prices for immediate clearance. —Patmore's, 240, King St., Hammersmith, W.6. [4998

J.A.P. Engines. J.A.P. Engines. J.A.P. Engines.—I have the largest stock of J.A.P. engine parts in England; over 30 engines, all in stock, to select from; and the prices: 5hp. £15, and the 8h.p. at £20 and £17/10, and I have all parts for the 8h.p. (see accessories for parts). I have a big twin engine £12, a 4h.p. Douglas engine and mag. and carburetter £15, a small 2-stroke and mag. £10; stamp reply.—South Croydon Motor Exchange, 22, South End, Croydon. [4765

HEPPELTHWAITE'S.—8h.p. J.A.P., £16; 6h.p. J.A.P., £14; 3½h.p. Humber units, £12/10; 3½h.p. Premier unit, £12/10; Rex 5-6h.p., a.i.v., as new, £7/10; 3½h.p. Alldays, £4/15; 3h.p. m.o.v. Minerva, £3/10; also J.A.P., Rover, Matchless, and New Imperial spares, having purchased entire stock of W. Hawkins, York Rd.—Write, 17-19, Wilcox Rd., South Lambeth, London, S.W.8. 'Phone: 1958 Brixton [4177

## IGNITION, LIGHTING, ETC.

H.B.I.

H.B. Ignition Co. carry large stocks of new and second-hand magnetos. Thomson-Bennett 42, 45, 50, 55, and 180°, single and twin.

H.B. Specialise in T.B. for fixing on Triumph, P.M., B.S.A., J.A.P., Douglas, etc., £2/10, postage 1/6; C.A.V. clock twin, for 2¾h.p. Douglas, etc., £2/15.

H.B. will take your old magneto in payment.

H.B. sends all magnetos on approval against cash. Every magneto dispatched carry H.B. 12 months' guarantee.

H.B. Ignition Co. ('Phone: Brixton 610), 78, New Park Rd., Brixton Hill, London. [0694

GOVERNMENT Surplus Magnetos (unused).

HAVING Purchased the entire stock of the following makes of magnetos, we are able to offer them at huge discounts.—Below.

BOSCH Single, clock or anti, £3; Thomson-Bennett single or twin, clock or anti, 42, 45, 50, 55, and 180 degrees, £2/15; C.A.V. single or twin, clock or anti, £2/10; special long driving spindle for Rudge, fitted to any of the above magnetos, 10/- extra. Postage on the above 1/6 extra.

THESE Magnetos are fitted with variable ignition and leads, and are fitted with baseplates ready to be immediately fitted on. Please state make of engine when ordering.

GOVERNMENT Surplus.—New plugs in boxes: A.C. (Titan), 1/6 each; K.L.G., types F8, F6, F5, and R3, 1/8 each; Lodge, types R and R3, 1/8 each. Postage on orders of one plug 3d., four or more post free

HIGH-TENSION Wire, new, unperished: 9mm., 5d. per yard, 25 yard coil 8/6, postage on coil 1/-; 7 mm., 4d. per yard, 25 yard coil 6/-, postage on coil 9d.; 3 mm., 2d. per yard, 25 yard coil 2/6, postage on coil 6d. All goods on approval per return post on receipt of cash. Money refunded if not satisfied.

COUNTY of London Engineering Works, Ltd., 51a, New Park Rd., Brixton Hill, London, S.W. Tel.: Streatham 2898. T.A.: Ignitionac, Brixstrat, London. [2472

ERICSSON Magneto, 45° twin, with control; £3.—3, Queensberry Place, Richmond. [4743

MAGNETO, dixie, 50° twin, anti, perfect; 35/-.—Kennard, 78, Yerbury Rd., Holloway, N.19. [4591

BOSCH and M-L Singles, variable ignition, 30/-; guaranteed twins, 37/6.—84, Greenside Rd., Croydon. [4911

K.L.G. W.D. Sparking Plugs, wonderful value, 4 for 5/-, post free.—Thompson, 69, Queen St., Wolverhampton. [7944

MAGNETO Sprocket Manufacturers; 7-tooth to 24-tooth from stock.—Ridington, Southampton St., Camberwell. [3002

NEW Thomson-Bennett Magnetos, single, anti-clock, fixed ignition, complete; 27/6, carriage extra.—Dowell, Pyrford, Surrey. [4986

DYNAMOS. Dynamos.—Lucas E3 6 v. 5 amp., specially made for motor cycles, new, £5/15; others, £5.—Jenner, 165, Church Rd., Mitcham. [5705

## IGNITION, LIGHTING, ETC.

BOSCH 1-cyl., weatherproof, and as new, variable ignition; 57/6 delivered.

THOMSON-BENNETT and M-L's, of Coventry, 1-cyl. A.D.S. or P.L.R. types, 37/6 delivered, suitable for stationary engines; if variable ignition, 10/- extra.

C.A.V., as new, suitable for 2 or 1-cyl. lightweight motor bicycles, height 4½in., breadth 2⅝in., depth 4½in., variable ignition and short-circuiting terminal, guaranteed platinum points, and workmanship of the finest; 2-cyl. fires at 180°; all working parts are interchangeable with C.A.V.'s, types KU1 and 2; 50/- delivered.

THOMSON-BENNETT, types A.M. 1 and 2, as new, variable ignition and short-circuiting terminal; A.M. 2 fires at 180°; 52/6 delivered.

THOMSON-BENNETT 4-cyl., variable ignition; £5/5 delivered.

N.B.—Any of the above magnetos supplied, clock or anti-clock. When ordering state which when looking at driving end, and whether 1, 2, or 4-cyl.

C.A.V. 2-cyl. Clockwise Aeroplane Starting Magnetos, platinum points, workmanship of the finest, and all working parts are interchangeable with C.A.V.'s, type KU2, perfect for plug testing; one carriage paid, 25/-; lots of 6, rail forward, 22/6 each; of 20 at 21/6 each; of 100 at 20/-.

MAGNETOS Leave our Works in perfect condition.

GUARANTEE.—Will replace within one month, or refund cash if unsatisfactory.

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 977. [0698

RELIANCE Magneto Repairing Co. for repairs and new magnetos.—See below.

RELIANCE guarantee to return your magneto within 3 days, and if necessary 24 hours, with a written guarantee for 12 months.

RELIANCE test every magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE manufacture and stock spares for Thomson-Bennett, E.I.C., Splitdorf, U.H., Bosch, Dixie, etc.; special line genuine platinum screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice free of charge upon any question concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy that we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., E.C.1, for new and second-hand magnetos.—See below.

THOMSON-BENNETT Magnetos, new and unused, single-cyl., clock and anti, suit any machine, price 55/-; twins, 45, 48, 50, 55, 60, 180 degrees, for J.A.P., Clyno, Douglas, etc., price 55/-. See our guarantee.—Below.

C.A.V. Magnetos, new, single-cyl. and 180° twins, clock or anti, ideal for Douglas, Levis, Calthorpe, G.K., or any lightweight; these magnetos are of the finest workmanship throughout; price 55/-. See our guarantee.—Below.

BOSCH D.A.L. Magnetos, soiled only, otherwise as new, single cyl., suitable for any stationary engine or big single, £3/15; twins, any degree, ready to drop on Indian, Harley, or any big twin, £4/5; a powerful spark at low speed, ensuring easy starting. All the above magnetos are variable ignition and fitted short-circuiting switch. See our guarantee.—Below.

GUARANTEE.—Every magneto that leaves our works, no matter what the price or make, carries a written guarantee. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee every machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE Magneto Repairing Co. hold one of the largest stocks in London, and can be depended upon for a straight deal at the right price. When buying it pays to deal with a firm of repute.

RELIANCE cordially invite customers to their works to see any of the above on test. Magneto list giving full particulars sent upon application.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1. [6616

DASH Switchboards, 4-way, with ammeter, 20/-; with ammeter and voltmeter, 35/- each nett.—Leslie Dixon and Co. (Dept. H 1.), 9, Colonial Av., Minories, E.1 [0760

CHELTENHAM.—Repairs to magnetos, self-starters, lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham 'Phone: 1256. [0758

THOMSON-BENNETT Magnetos, new, guaranteed perfect, slightly soiled, single or 180° twin, variable ignition, switch terminal, clock or anti; £2; postage 1/6.—Brockbank, 58, Lord St., Southport. [0756

# COPPEN, ALLAN & CO.

THE

# READING-STANDARD

**(1) SOLO** Complete with dynamo lighting, electric horn, all lamps, pump, tools, 3 months' guarantee .. .. .. **£135**

**(2) COMBINATION** Complete, as above, and including cantilever sprung M.P. sidecar, cover-all apron, sidecar lamp and bracket, stand .. .. **£175**

**(3) COMBINATION** Complete as No. 1 and including the wonderful "PLUS ONE" single or double seater at will, fitted with sidecar lamp and bracket, step plate, stand and cover-all apron .. .. **£188 10**

*Above prices include Dynamo Lighting (not combined with magneto), all Electric Lamps, Electric Horn, Shock Absorber, Cover-all Apron, etc.*

In the strenuous LONDON-EXETER Trial a READING-STANDARD with PLUS-ONE sidecar, carrying, in addition to the driver, TWO ADULT PASSENGERS, finished dead on time, gaining SILVER MEDAL

**In the London—Gloucester and back Trial, the same machine secured Premier Award of SILVER CUP.**

NOTE—It was reported in error, that Second-class award was gained but this has now been officially corrected to first-class.

# "PLUS ONE"

**A Single or Double-seater Sidecar at will.**

Complete with self-locking wheel stand, lamp bracket, apron, two step plates .. **£52 10**
Bodies only .. .. .. .. **£27 0**

**NOTE.**—Sidecars and bodies are supplied in six colours suitable for attachment to any motor cycle.

The bodies are eminently suitable for A.J.S., B.S.A., New Imperial, Royal Ruby, and Indian.

# A.J.S.

7 h.p. Combination .. .. **£175 0**
7 h.p. Solo .. .. .. .. **134 10**
7 h.p. "Plus One" Combination .. **£184 0**
2¾ h.p. Model B, B1 or B2 .. **85 0**
2¾ Model Sidecar .. .. .. **25 0**

# NEW HUDSON

2¼ h.p. "Popular" Model, 2-speed .. **£50**
2¼ h.p., "De Luxe" Model, 2-speed kick-starter, clutch .. .. **£60**
"Four-point-five" Model Solo .. **£100**
"Four-point-five" Model Combination **£125**

**And the famous three-wheel Light Car, £230**

Including M.A.G. water-cooled engine, dynamo lighting, hood, screen, interchangeable wheels, with spare tyre, also permanent jack, and REVERSE.

**ALSO AGENTS FOR B.S.A., TRIUMPH, DUNELT, NEW IMPERIAL, ACE, ENFIELD.**

## 89, Great Portland St., London.

Telephone Langham 1601

## IGNITION, LIGHTING, ETC.

CONTINENTAL Ignition Repair Co.—We repair Continental magnetos only. By specialising on Bosch, U.H., Eisemann, Mea, Splitdorf, Dixie, and Berling magnetos, we can naturally give you better service.

PRICE: Rewinding 18/-, condensers 10/-, platinum screws (Bosch standard) 6/-, remagnetising 2/6, slip rings 6/6, H.T. terminals 4/6. Our price for overhauling a motor cycle magneto ranges between 20/- and 35/-, and never exceeds the latter figure. Guaranteed for 12 months, and redespatched to you in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardwick Rd., Chiswick, London. [3758

C.A.V. Magnetos: Extraordinary Bargains.—Brand new 180° twin or single-cyl., 38/6, carriage free. Every magneto thoroughly tested before dispatch; approval against cash.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [4863

U.H. Magneto Repairs.—We specialise in these magnetos, and can be relied upon to give you good service. A1, B1, AO, KB1, KB2V, KZ2V type spares stocked; prices moderate; 12 months' written guarantee.—Charles Parker and Co., Churchfield Rd., Acton, London. [4455

MAGNETOS.—Surplus 400, new, with sets of spares, Bosch, C.A.V., B.E. Co., Dixie, E.I.C., Eisemann, Ericsson, G. and A., Hill, Morris Lister, Simms, Splitdorf, Thomson-Bennett; inspection in London.—Full particulars from Honeywill Bros., Machinery Department, 79, Mark Lane, London, E.C.3. [3759

M-L Maglita, variable ignition, lighting set, latest lightweight pattern, suitable 2¾h.p. engine; spare accumulator, bulbs, driving chain, brushes, etc., nearly new, all wiring, absolutely complete and ready for fitting; off last year's mount, unsuitable for present; price £11/10.—Box 8,198, c/o *The Motor Cycle*. [4773

SURPLUS Magnetos, with written guarantee one year: M-L single, 35/-; B.L.I.C. ditto, 42/-; Bosch ditto, 45/-; Thomson-Bennett and C.A.V. singles and twins, 50/-. We specialise in repairs and spares for all makes. Lists with pleasure. Deal with experts and avoid certain disappointment.—Whitdale Magneto Service, Cherry Orchard, Croydon. 'Phone: Croydon 1625. [3986

THE Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government, and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can mostly return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock, all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1. 'Phone: Museum 1158. T.A.: Kumagnelec, Eusroad, London. [2445

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repairs and spares. All repairs are tested on an approved A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock; charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034. T.A.: Magdyno, Eusroad, London. [0263

## TYRES.

BRAND New Retread Covers, 26×2½, 26×3; 10/- each.—17, Heaton Rd., Mitcham. [5057

MOTOR Cycle Tyres on Easy Terms, standard makes; list post free.—J. G. Graves, Ltd., Sheffield. [0589

TYRES, Tyres, Tyres.—For special bargains, see Bancroftian Co.'s advertisement under Parts and Accessories. [0769

24×2¼ Clearance Covers and Tubes, 22/-; Bates 26×2¼, special heavy, 30/-; carriage paid.—Davies, 20, Union St., Wednesbury. [4452

CLEARANCE.—John Bull rib stud covers, 26×2½ for 2¼ rims, 48/-; 650×65, 45/-; 28×3, 55/-.—Sear, Balmoral Rd., Northampton. [4835

THE Difference between a good retread and a bad one is its mileage. Try us. Watch results.—Melton Rubber Works, Melton Mowbray. [0636

SCOTTISH Readers will find it advantageous to purchase their tyres from McArthur, Hill and Co., 47, Church St., Glasgow. Lists post free. [3940

MOTOR Cyclists.—Send your covers for retreading. 3,000 miles guaranteed. Repairs of every description; carriage paid.—Buxton Vulcanising Co., Buxton, Derbys. [4357

BURST Motor Cycle Tyres, chafed beads, remoulded, made perfect, tube vulcanising, bnut-ends fitted, retreading; send for list.—Melton Mowbray Rubber Works, Melton Mowbray. [0347

TYRE Repair Specialists.—H.F. process throughout, including retreading burst covers. Every kind of repair to tyres and tubes in 24 hours, retreads in 4 days.—The Motor Tyre Co., 66, High St., West Bromwich. [3852

## TYRES.

ECONOMIC Tyre Co.—Great reduction in covers and tubes. All goods sent on 7 days' approval, carriage paid, against remittance.

ECONOMIC.—24½×2¼ (oversize 2in. rims) Clincher de Luxe heavy, 26/-, listed £2.

ECONOMIC.—26×2¼ Dunlop heavy, 37/3; Bates W.D., 28/6; Palmer W.D., 29/-; special heavy tubes, 6/-.

ECONOMIC.—26×2⅜ Bates special heavy W.D., 30/-; Hutchinson T.T., 29/-; special heavy tubes, 6/6.

ECONOMIC.—26×2½×2¼ Goodyear diamond clearance, 42/6; Avon rubber stud extra heavy, 30/-; Clincher De Luxe, 30/-.

ECONOMIC.—650×65 Goodyear Diamond clearance, 30/-; 700×80 Goodyear diamond clearance, 50/-; tubes, W.D., 6/-.

ECONOMIC.—Fully guaranteed Dunlop rubber stud, 24×2 22/6, 24×2¼ 24/9, 26×2 24/6, 26×2¼ 25/9.

ECONOMIC Tyre Co., 314, New Cross Rd., S.E.14 (near Town Hall). 'Phone: New Cross 1393. [5314

5/6 We charge to repair your damaged tyre and guarantee a sound job or money refunded.—Post tyres for repair to Phœnix Tyre Repairing Co., 224, Sherlock St., Birmingham. [X5277

STARTLING Offer.—New Beldam covers, 26×2 or 2¼ 20/- each, 26×2½ 30/-, 28×3 35/-, 650×65 40/-, 700×80 45/- each; new Avon or Michelin steel studded covers, W.D., 700×65 35/- each.—The Homerton Rubber Works, Brookeby's Walk, Homerton, E.9. [0331

HERBERT ROBINSON, Ltd., Green St., Cambridge, Special Manufacturers.—Clearance bargains, 26×2¼ Pedley and Matchless, 15/-; 26×2½ Wood-Milne 15/-, Kempshall 30/-, Dunlop 32/6, Bates 32/6; 26×2⅜ Bates 32/6, Dunlop 32/6, John Bull 42/-, 28×3 Avon heavy 32/6, Cuthbe 47/6; 650×65 John Bull 45/-; Avon heavy 32/6, Bates heavy 47/6; 700×80 Bates 47/6, Cuthbe 55/-, John Bull 50/-. Best make inner tubes, all guaranteed, 5/6, all sizes; covers sent on approval with pleasure. [5261

## TANKS.

TANKS for B.S.A., new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [3267

TANKS for Triumph, new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [3268

COVENTRY Tankers, Ltd., makers to the principal manufacturers; petrol tanks for any style supplied, extra capacity.—Hearsall Works, Coventry. [3269

TANKS Made or Repaired, re-enamelled, lined, transferred; handle-bars, etc., plated. Established 30 years.—Attwood's, 86, Rosebery Av., London, E.C.1. [6997

TANKS Re-enamelled to Pattern. High-class work only.—D. Jenkins and Sons, 6, Richard St., Atkinson St., Deansgate, Manchester. Established 25 years. [3601

ALL Manner of Repairs, rebuilds, etc., to any pattern First-class enamelling. Reasonable charges and quick delivery.—Day, 27, St. Luke's Rd., Birmingham. [3392

TANKS Re-enamelled, makers colours, design and transfer, first-class work; prompt return.—Donalds, Enamellers to the Leading Manufacturers, 138, Glover St., Deritend, Birmingham. [X4404

TANKS of every description replaced, repaired, and re-enamelled at our own works; all kinds of fittings stocked; quick service and reasonable charges Illustrated list free.—A. Green, Water St., Chapel St. Salford, Manchester Tel.: 2191 Central. [0256

TANKS Repaired, reenamelled, dents removed, partition, seam, fastening leakage, etc., enamelling; we guarantee makers' transfers, lastest colours and designs; lowest prices; prompt return.—Park Works, 1a, Paradise Rd., Highbury, N.5. [4878

AVERY'S Stock Tanks for Douglas, Hazlewood, B.S.A., Triumph, Omega, enamelled makers' colours, plated fittings, 40/-, complete; other design or shape to order. 12 months' guarantee with every tank.—Gordon Street Tank Works, Coventry. 'Phone: 1774. [0770

## BELTS.

JOHN Bull Belts, 1in., 2/8; ⅞in., 1/11 ft.; any length cut.—Sear, Balmoral Rd., Northampton. [4835a

NEW Clipper Belts.—8ft.×¾in. 11/6, 8ft. 6in.×¾in. 13/-, 8ft. 6in.×⅞in. 14/-, 8ft. 6in.×1in. 16/9.

W.D. Belts, 6ft. 6in.×⅞in., 10/-; new Pedley belts, clearance. 6ft. 6in.×¾in., 10/-; clearance belts, 6ft.×1in., 8/6.

H. EMANUEL and Co., Tyre Factors, 27, Belgrade Rd., Stoke Newington, N.16. Stores: 37a, Balls Pond Rd., Dalston, Londoa, N. Tel.: Dalston 3161. [0726

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Dunlop belt, round top, ⅜in. 1/10ft., ⅞in. 2/2ft., 1in. 2/8ft., 1¼in. 3/2ft.; John Bull ¾in. 1/11ft., ⅞in. 2/3ft., 1in. 2/8ft., 1¼in. 3/2ft.; any length cut. Pedley 6ft. 6in.×¾in., 10/-. [5263

# Beat 'em All

in the AUSTRALIAN SIX DAYS TRIAL—and the only machine to go through the most strenuous gruelling under wretched weather and real colonial conditions without losing a point, and declared the absolute winner.

## 3½ h.p. SPORTS DOUGLAS

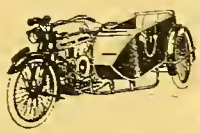
the bike that does 80 m.p.h.

I have only one demonstration model fully guaranteed and equipped with lamps, etc.

**£110** to first cheque.

## A VERY SPECIAL OFFER!

1922 Model. Fully insured. Fire, theft, third party, and all accidents, equipped with lamps, horn, licence holder, large coppered exhaust pipes, 2¾ h.p. 2-speed Douglas, not ridden 50 miles. Fully guaranteed. Taken in part exchange. **£75.** Free delivery.



## 4 h.p. DOUGLAS AND SIDECAR

Screen, leg shields, electric lighting, late 1921. A real bargain. Most elaborately fitted up and equipped. Price **£110.** Licence paid.

## ZOOM! ZOOM!!

The wonderful and most popular exhaust system for 2¾ h.p. Douglas. Beautifully made of heavy burnished coppered tubing of 2in. diameter. It gives a lovely "Zoom," inoffensive to the ear, yet it is entirely free from back pressure. Adds £10 to the value of any Douglas, yet only costs **30/-**, whilst a standard silencer costs **37 6.** Six months ago the labour alone on ZOOM! ZOOM!! would have been more than this. Burnished nickel-plated finish, **3/6** extra.

## HAVE YOU SEEN

my patent twin rings? They give more power, greater compression, longer life, better acceleration, and save oil; and yet cost the same. Do not have your engine overhauled without fitting these rings. I have many remarkable testimonials about them. "They are simply wonderful." 2¾ h.p. size, **1/6** each. 4 h.p. size, **1/8.**

**A.C.U.** Official Repairer. Any repair finished in one week. Any spare part by return of post.

**E.I.C.** Magneto Service Depot for West of England. All spare parts for any model by return.

*W. G. Coram*

*Official Douglas Agent,*

**140, Victoria Street, BRISTOL**

*Telephone: Bristol 3792.*

## CARBIDE.

CARBIDE, finest quality only, 1cwt. drums, 22/-, f.o.r., c.w.o.; stores all parts; also ½ to 7 lb. tins.—Hodge and Co., Warwick Rd., Bristol. [5101

FINEST Carbide, cwt. drums, 22/6, f.o.r.; 23 depots; prices packed in tins on application.—Sports Depot, Denby Dale, Huddersfield. [5068

CARBIDE, finest quality, giving brilliant light, economical, 22/- cwt., 12/6 ½ cwt., carriage forward, drums free.—Kemp's Garage, Importers, Louth, Lincs. [X5190

BEST Quality Carbide, 24/- per cwt., 28 lb. 8/6, drums free. Any quantity supplied from ½ lb. tins to 2 cwt. drums. Only the best brands stocked. Trade enquiries invited.—Dargue, 57, Grey St., Newcastle-on-Tyne. [6900

SEATH'S Carbide Supplies.—Finest Norwegian carbide, guaranteed British Acetylene Association standard; depots all parts U.K.: 24/- cwt., free on rail, cash with order.—260, Hessle Rd., Hull. [4734

CARBIDE, guaranteed maximum gas yield, British Acetylene Association standard, 21/6 cwt., drums free, all meshes; stock at 22 depots; immediate delivery.—Elloc Cycle Works, Importers, Gedney Drove End, Wisbech. [3590

CARBIDE, finest quality, giving 100 per cent. pure gas yield, all sizes, cwt. 26/6, ½-cwt. 16/3, 28 lb. 9/6, drums free; support the old firm; established over 30 years; satisfaction guaranteed.—Young, Importers, Misterton, Somerset. [9557

CARBIDE.—Immediate delivery of all sizes in 1 lb., 2 lb., 4 lb., and 7 lb. lever lid tins, and 2 cwt. drums, labelled or plain for retailers' own labels, quality guaranteed, and all standard sizes supplied by the cheapest firm in the trade.—The Premier Lamp and Engineering Co., Ltd., Moorfield Works, Armley, Leeds. [5286

CARBIDE, finest quality obtainable, brilliant, lasting, 21/- cwt., drum free, cash with order, free on rail, Aberdeen, Bristol, Cardiff, Edinburgh, Glasgow, Gloucester, Grimsby, Hull, Leeds, London, Lowestoft, Liverpool, Lincoln, Manchester, Newcastle, Preston, Port Talbot, Runcorn, Sharpness, Swansea, Yarmouth.—E. C. Maddock, Wareham, Dorset. [5111

## PATENTS.

WE Buy, Sell, and Finance Inventions and Patents, and advise on their marketing.—Send postcard for full particulars to Dept. C, Inventors' Sales Agency, 22-24, Spencer Av., Coventry. [5717

## PATENT AGENTS.

CONSULTING Patent Agency, 253, Gray's Inn Rd., London.—Aero and aircraft engines. [2416

J. E. S. LOCKWOOD, 3, New Street, Birmingham. 'Phone: 5816 C. Patents guide free. [9057

PATENTS Advice, handbook free.—King, Registered Patent Agent, 146a, Queen Victoria St., E.C. 35 years' references. [0129

W. BRYSON, B.Sc., Assoc.M.Inst.C.E., Chartered Patent Agent, 29, Southampton Buildings, London, W.C.2. 'Phone: Museum 3651. [9242

## TUITION.

HOUSE and Estate Agency, Auctioneering, etc.—Train by post for this paying profession. Start a business of your own. Prospectus free.—Agricultural Correspondence College (Dept. T), Ripon. [0389

## BUSINESSES AND PROPERTY FOR SALE, TO BE LET, OR WANTED.

HALF a Century Old Automobile, Electrical, and General Engineering Business, situate in popular South Coast resort, require £2,000 to £3,000 additional working capital for expansion, and is prepared to offer a suitable investor of this amount a salaried appointment and thorough training in all branches of the business.—Write with fullest particulars to Peck, Wale and Co., Accountants and Auditors, 3, Iddesleigh House, Caxton St., S.W.1. [X5091

## SITUATIONS VACANT.

WANTED, lad about 16 for motor cycle works, must have inclination for mechanics, good opportunity for right boy and good wages.—Heppelthwaite, 19, Wilcox Rd., South Lambeth, London, S.W.8. [5234

SMART Up-to-date Motor Cycle Salesman required; must be able to take charge if required; good correspondent, and able to estimate and cost repairs.—Full particulars of experience, wages required, and copies of references, to Box S,163, c/o *The Motor Cycle.* [4622

## SITUATIONS WANTED.

WELL-KNOWN Competition Rider (Centre Champion), winner open speed events, seeks engagement with motor cycle manufacturers for T.T., also other trials, competitions, etc.; expert rider and tuner.—Box 8,134, c/o *The Motor Cycle* [4552

## AGENCIES.

THE Mohawk Cycle Co., Ltd., require sole agents for their celebrated motor cycles in districts where they are not already represented. Trade only.—Write for lists and terms to the Mohawk Cycle Co., Ltd., 245, Alexandra Rd., Hornsey, N.8. [6245

SLADE-J.A.P. Motor Cycles, 55 gns. Sole agents required in districts where not already represented. These machines will take the market by storm. Specification—2¾h.p. J.A.P., 2-speed kick start, B. and B. carburetter, drip feed, etc.; sell at 55 gns. retail.—Terms from Whittles Motors, Longsight, Manchester. [4021

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at competitive rates.—Ernest Bass, 40, Chancery Lane, W.C.2. 'Phone: Museum 2234. [0005

ROYS, Ltd., Insurance Brokers.—Agents for all companies and Lloyd's. Insurance of every description effected. Enquiries invited.—170, Gt. Portland St., London. [0055

£4/5/6 secures Full Policy for Cycle Cars, Morgans and the like up to £175 value; £3/5/6 covers 4h.p. combinations; £4 covers 6h.p. combinations. Prompt settlement. Immediate cover.—John Clements and Co., Insurance Brokers, 65a, Holborn Viaduct, E.C.1. [4473

"THE Motor Cycle" Insurance Policy is the policy authorised by "The Motor Cycle," and covers motor cycles or cycles and sidecars used for private purposes. Complete comprehensive cover. Maximum benefits, minimum rates. Full particulars and prospectuses on application.—The Autocar Fire and Accident Insurance Co., Ltd., 77, Cheapside, London, E.C.2. [0007

## FINANCIAL.—PARTNERSHIPS.

£200-£300 will be invested by energetic and progressive young man for active interest in well-established motor business, in good locality; more capital later if proved desirable.—Box 8,204, c/o *The Motor Cycle.* [5220

## GENERAL TRADE.

AUCTION Sales.—Palmer's Garage, Tooting, the oldest solely motor auction rooms in London. Terms 7½%, not chargeable if machine unsold. Motor cycles and cars bought and sold for cash. Nearest goods stations, Falcon Lane, L. and N.W.R.; Wimbledon, L. and S.W.R. and G.W.R.—Sole address: Palmer's Garage, Tooting, London. [5180

## WANTED.

NORTON 4h.p. Engine or parts.—B., 7, Draper's Fields, Coventry. [X5279

LATE 1920 3½h.p. Touring Sunbeam Sidecar.—43, Carson Rd., S.E.21. [4646

WANTED, Ariel variable gear for cash.—Cooke, 45, Sankey St., Warrington. [4634

SUNBEAM Flywheels and Other Parts wanted.—Snow, Laurel St., Dalston, E.8. [5281

N.S.U. Gear, any condition, good Brooks B170.—250, New John St. W., Birmingham. [X5230

J.A.P. 8h.p. Engine, without cylinders and pistons.—Lindley, 11, Soho Av., Birmingham. [X5017

SPEEDOMETERS and Parts, Stewart and Watford preferred.—97, Latchmere Rd., Battersea. [4627

WANTED, dissolved acetylene cylinder.—Apply, stating price, Nicklin, Lichfield Rd., Walsall. [4575

WANTED, centre portion 1917-18 Ariel Frame.—Eller, Fore St., Kingskerswell, Devon. [4944

4h.p. J.A.P. Engine, o.h.v. preferred, good condition.—Read, 135, Waterloo St., Burton-on-Trent. [X5092

CLYNO Sidecar, complete, for 8h.p., or chassis only, new condition; cheap.—Hetherington, Moffat. [4919

WANTED, immediately, Morgan Runabout; no fancy prices.—Inman, 1, Othello St., Liverpool. [5098

ENGINE, 2¾h.p. 2-stroke, good condition; cheap for cash.—Richardson, 325, Bath Road, Hounslow. [4886

CLYNO Ammunition Carrier, complete, condition immaterial if sound.—R. Skipper, Gt. Ryburgh, Fakenham. [5062

WANTED, N.S.U. gear for 1913 Bradbury, good, but cheap.—Mortimer, Rushall, Marlborough, Wilts. [4609

WANTED, light sidecar, suitable 2¾h.p. A.J.S., known make; cheap.—30, Claremont Sq., Angel, Islington. [4883

FIVE Second-hand carburetters for A.B.C. flat twin 500 c.c. engines.—Leslie Dixon and Co., 9, Colonial Av., Minories, E.1. [5024

WANTED, lightweight sidecar, complete, fit spring frame Beardmore-Precision, all black.—Kelham, Nassington, Peterboro'. [4723

ENGINE, V twin, 5h.p. or under, J.A.P. preferred; also front cylinder for 1914 3½h.p. J.A.P.—Liddle, Springview, Bedlington. [X5223

WANTED, good up-to-date second-hand motor cycle accessories; state particulars and price.—Service Co., 292, High Holborn, W.C.1. [0671

# BASTONES

**Established 16 Years.**

***No Better or cheaper House.***

**NEW CLEARANCE LINES, APPROVAL AGAINST CASH. CARRIAGE PAID.**

**WOOD-MILNE Key Grip COVERS**

| | | |
|---|---|---|
| 26×2¼ / 650×65 | 3 ply .. .. .. | 13/6 |
| 26×2½ | 4-ply .. .. .. | 16/6 |

**GOODYEAR All-Weather Tread COVERS. Extra Heavy.**

| | |
|---|---|
| 26×2¼ Diamond Pattern .. | 25/- |

**GOODRICH Safety-Tread COVERS Extra Heavy.**

| | |
|---|---|
| 26×2¼ .. .. .. .. | 28/- |
| 26×2½×2¼ .. .. .. | 36/- |
| 26×2½ .. .. .. .. | 35/- |
| 650×65 .. .. .. .. | 40/- |
| 26×3 for 650×65 rim .. .. | 48/- |
| 28×3 .. .. .. .. | 48/- |

**CLINCHER Rubber Non-Skid COVERS.**

| | |
|---|---|
| 24×2 De Luxe Junior .. | 17/6 |
| 24×2¼ .. .. .. .. .. | 20/- |
| 26×2 De Luxe Heavy .. .. | 23/6 |
| 26×2¾ .. .. .. .. | 25/- |
| 26×2¾ Extra Heavy .. .. | 27/- |
| 26×2½×2¼ Heavy .. .. | 30/- |
| 650×65 Dreadnought 3-ribbed | 39/- |
| 700×80 to fit 650×65 De Luxe Extra Heavy | 47/- |
| 28×3 De Luxe Extra Heavy | 37/6 |

**Hours of Business— 9 till 6; Saturdays, 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

'Phone: 2468 North. 'Grams: 'Bastones, London.'

**Preserve your Cylinder.**

Withstands heat, petrol, and oil.

Tins 1/2 and 2 - post free

**OWEN BROS. & Co Ltd., HULL, England.**

Spare Parts for

***Indian*** Motor Cycles

**THE DENNIS ACCESSORIES STORES,**
89, Brixton Road London, S.W.
**Specialists in "Indian" Repairs and Overhauls.**
'Phone: Brixton 3129.

## WANTED.

WANTED, second-hand Morgans, Rovers, and G.N.'s, in good condition.—A. P. Rey, 378-384, Euston Rd. 'Phone: Museum 6436. [3593

WANTED, bankrupt stocks, W.D. spares, incomplete P. and M.'s or parts.—Inman, Durham Rd., Seaforth, Liverpool. 'Phone: Waterloo 296. [3597

STURMEY-ARCHER (J.S.) 3-speed Wheel and controls, in running order, 26×2¼in. rim; deposit approval.—Butler, 19, Kemys St., Griffithstown, Mon. [4631

WANTED, countershaft Triumph parts; also Sturmey-Archer gear box parts, any condition.—Ward and Co., 51, Upper Richmond Rd., Putney. 'Phone: 2754 Putney. [4474

P. and M. Parts wanted: Chains, exhaust pipes, filler caps, gear operating chains, kick starts, and chain, valve caps, front brakes; second-hand preferred.—S. E. Porter, Whitchurch, Salop. [3865

WANTED, De Luxe Morgan, w.c. M.A.G., 1921 or new, in exchange for 1920 Douglas combination, new condition and appearance, full equipment, value £100, cash adjustment.—Woodside, Robinhood Lane, Sutton, Surrey. [3880

WANTED, for countershaft Triumph, timing side of crank case, or complete crank case; also Sturmey gear box case, or complete gear box if cheap.—Hole, 129, Park Lane, Carshalton. [4247

WANTED to Purchase Outright for cash, bankrupt stocks. W.D. spares, miscellaneous spares. Send full particulars.—McNeille and Platt, 57, Gt. George St., Liverpool. 'Phone: 1092 Royal. [2489

## EXCHANGE.

LADY'S Cycle, £10, for good 2-stroke.—Box 8,176, c/o *The Motor Cycle.* [4681

8h.p. Sports Zenith, speedometer, Tan-Sad. for 4h.p. solo.—84, Ilex Rd., Willesden. [4733

1920 Douglas Combination for Solo and cash.—The Bute Restaurant, Luton, Beds. [4747

FURNITURE (£55); cycle or combination wanted.—Peronne, 56, Lamb's Conduit St., Holborn. [4567

CLEVELAND 2-stroke, 1920, for good 4-stroke.—Purkis, 120, Fielding Rd., Bedford Park. [4996

EXCHANGE, Auto-Scooter and cash for good lightweight.—Allston, 8, Etna Rd., St. Albans. [4682

EXCHANGE late 1921 semi-sports Sunbeam for 1921 sports Sunbeam.—17, Alexandra Rd., Ansdell. [4663

1916 T.T. Rudge Multi, clutch, kick starter; any exchange considered.—63, Solon Rd., Brixton. [4956

SIXTY Cars for Exchange; postcard procures list. Call.—Douglas S. Cox, Motors, West Norwood. [4451

NEW Microscope (complete) and cash, for B.S.A. or Triumph.—14, Royal Parade, Blackheath, London. [4728

DARRACQ Van, exchange motor cycle.—79a, Clapham Rd., S.W.8. 'Phone: Brixton 3037. [4920

£8 and Gent's Cycle secures excellent 2¾h.p. Brown motor cycle.—Box 8,197, c/o *The Motor Cycle.* [4772

EXCHANGE, Darracq Van, 10-cwt., 15h.p., for combination, P. and M. preferred.—56, Harringay Rd., N.15. [5069

EXCHANGE Combination and lightweight (the two) for good Humberette.—Box 316, c/o *The Motor Cycle.* [X5170

1912 Douglas 2-speed, higher power; Triumph carburetter, for saddle.—27, Flaxton Rd., Plumstead. [4735

EXCHANGE 1921 Amac Carburetter for B. and B. 2-stroke ditto.—W., 2, Sylvan Rd., Forest Gate, E.7. [4820

LIGHTWEIGHT Rex for Young's attachment and cash; sell £19.—23, St. Saviour's St., Talke, Staffs. [4894

DOUGLAS 2¾h.p. and cash for C.S. Triumph, condition immaterial.—187, King's Cross Rd., London. [4666

EXCHANGE 1914 Douglas 2¾h.p., K.S., clutch, for 2-stroke, K.S., clutch.—Jenkin, 137, Tredegar Rd., Bow, E.3. [4665

4-CYL. F.N. and Sidecar, recently overhauled, for lower power, or sell £35.—Middleton, 1st Depot, Tanks, Wool. [5079

2¾h.p. J.A.P.-Excelsior, 1920, hand clutch, etc., for late Triumph, cash adjustment.—7, Woodhurst Rd., Acton. [4917

1916 Rudge Multi, licensed, all on, and cash, for C.S. Triumph, 1916-17.—Mulberry House, New Romney, Kent. [4652

AMERICAN X 9h.p., 3-speed, 1917; £55; exchange Scott, Triumph, Rover.—27, Springfield Rd., King's Heath. [X5244

WILLIAMSON 8h.p. Combination, w.c.; exchange lower power.—79a, Clapham Rd., S.W.9. 'Phone: Brixton 3037. [4921

4h.p. Triumph Combination, 1919, fully equipped; exchange lightweight and cash.—Snow, Laurel St., Dalston, E.8. [5279

## EXCHANGE.

XCHANGE Cycle Car, value £50, for Ford van; combination exchanges entertained.—Mendham, rington, Norfolk. [4658

6h.p. Sunbeam Combination, as new; exchange for 4-seater car, any make, good condition.—Riley, by Rd., Belper. [4561

XCHANGE Milnes-Daimler 3-ton lorry, Bosch mag., good tyres, for good 2- or 5-seater car.—Box 315, *The Motor Cycle*. [X5169

XCHANGE 1920 N.U.T. or Zenith 5h.p. Sports, for sporting solo or A.V.; cash either way.—2, drid Rd., Barnes. [5090

TUDEBAKER 4-seater; exchange combination, Morgan, or G.W.K.—79a, Clapham Rd., S.W.8. one: Brixton 3037. [4922

EW HUDSON 2-stroke, 1917, stored 3 years, fully equipped; £30 part exchange piano, furniture.— . Lambeth Walk, S.E. [4654

XCHANGE 1920 (Oct.) A.V. Bicar with cash, for modern 2-seater or good combination.—Sephton, lehill, Fazeley, Tamworth. [X5243

ANTED, combination or light car; exchange piano, pianola, and 200 rolls music, and cash.— Corporation St., Stafford. [X5189

ICK Start Clutch Douglas for higher power or combination, cash adjustment.—10, Selbourne race, Fratton, Portsmouth. [4932

PRIGHT Iron Frame Piano, German action, fine tone, for good 4h.p., Trimph preferred.—11, riet Mews, Sloane St., S.W.1. [5017

)14 8h.p. o.h.v. Sporting Matchless, equipped, fast, reliable, for Beardmore-Precision or similar.— rrie, Copsfield, Ryde, I.O.W. [4668

30 Worth brand new electric motor bulbs for best van, car, cash, or combination offered.—2, Lyn- d Av., Patricroft, Manchester. [4708

CYL. Talbot Chassis, 3-speed reverse, wants mag., and slight attention; £25; exchange considered.— per, 63, Avenue Rd., Camberwell, S.E.5. [5282

)20½ Renovated Triumph Countershaft, new Watsonian R34 sidecar, fully equipped, for Morgan cycle car.—47, Kyrwicks Lane, Birmingham. [4758

)21½ Rudge Multi, 3½h.p., excellent condition, for lightweight, good make; cash adjustment.—Wilkin- Glenholme, Broomfield Grove, Rotherham. [4674

10h.p. Williamson Combination, fully equipped, speedometer, wind screen, for lower power solo or bination.—4, Elm Gardens, Hammersmith. [4904

XCHANGE 1920 P. and M. and Godiva sidecar, speedometer, lamps and horn, tax paid, for late el A.B.C.—44, Marine Parade, Southend-on-Sea. [4595

XCHANGE, 1918 P. and M. combination, perfect condition, for Morgan or lightweight; cash adjust- ts; sell £75.—Box 8,207, c/o *The Motor Cycle*. [5224

EATER De Dion 4-cyl., smart, reliable; £85; ex- change motor cycle.—W.J.C. Motor Co., 5, Addi- Av., Holland Park, W.11. 'Phone: Park 2071. [5078

)20 Model K B.S.A., luggage grid, Easting, Tan- Sad, lamps, for Matchless 2-seater M.A.G., cash stment.—Saunder, Ivy Cottage, Bierton Hill, Aylesb [3823

)15 2-ton Selden Motor Lorry, 12ft.×6ft. body, run- ning order: for good countershaft combination, sell; appointment.—70, Arthur's Bridge Rd., ting. [4671

UMBER 2-seater Car, overhauled, as new, very smart, for good combination, cash either way. n at Mosedale, 30, Canterbury Rd., Kilburn, .6. [4801

NTLEMAN will exchange Carden monocar, thorough condition, for 2-stroke motor cycle and or will sell for £60.—Moss, 284, Stratford Rd., lingham. [X5151

CHANGE 1920 3½h.p. Rudge Multi, Millford sidecar, Easting wind screen, spare tyre, for good weight and cash.—Gray, Hazel Bank, Wheathamp- Herts. [4555

CHANGE 1919 3½h.p. Rudge Multi, perfect con- dition, all accessories for Indian, early model if od condition.—Langford's, 37, Cricklewood Broad- N.W.2. [4862

ART Cycle Car, 8h.p. J.A.P., mag., Binks carbu- retter, variable speeds, electric lamps, hood, screen; nge for combination.—63, Walm Lane, Crickle- N.W.2. [X5275

YAL ENFIELD 8h.p. Solo, about 1918 (owner riding daily), and cash for best model H. Triumph Four Norton, late models.—Harrison, 70, Bal- Rd., Ilford. [4542

.O.H. are noted for fair exchanges.—Fair Offer Car House, 5, Heath St., Hampstead. (Near 'Phone: Hampstead 3752. Hours: 9-7, in- Saturdays. [4755

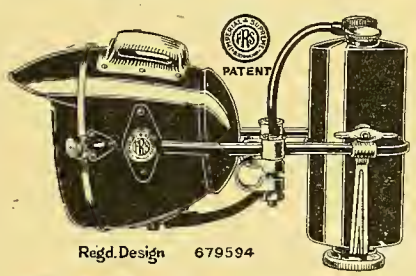
CHANGE 4in. Drummond Lathe, tools, chuck, foot motor, etc., for lightweight motor cycle, or £16/10; stamp reply.—Brown, 71, Twilley St., sworth, S.W.18. [4798

# 1,000 Licence Holders FREE!

Following on our progressive advertising scheme, we are, this week, offering to give, free of cost, a 5/- F.R.S. Licence Holder to the first 1,000 buyers of the now famous F.R.S. Streamline Lamp and Horn, as here illustrated.

**The F.R.S. Licence Holder** Usual Price **5/-** Postage 6d.

— is our standard model, made of BRASS throughout and supplied in any finish. It is adjustable to any angle and embodies the F.R.S. patent One Nut Clip. No ugly screws showing, nothing to rust or shake loose, absolutely waterproof.




Regd. Design 679594

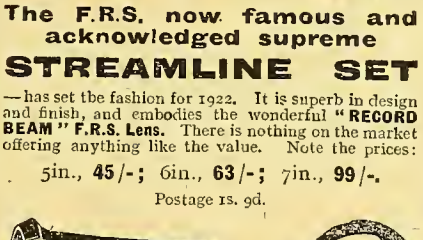
**The F.R.S. now famous and acknowledged supreme**

## STREAMLINE SET

—has set the fashion for 1922. It is superb in design and finish, and embodies the wonderful **"RECORD BEAM" F.R.S. Lens.** There is nothing on the market offering anything like the value. Note the prices:

5in., **45/-**; 6in., **63/-**; 7in., **99/-**.

Postage 1s. 9d.



## —and the HORN

—famous for its distinctive tone and clean cut, handsome appearance. Has special bulb with patent strengthened neck to ensure greater durability. Unequalled for VALUE.

13in., **10/6**; 15in., **18/6**.

Postage 1/-

SEND YOUR ORDER NOW—and take advantage of our special offer. With the two lines, the lamp and horn, either model, you get the Licence holder FREE.

**F.R.S. Lamps, Vere Street, Birmingham.**

**London:** Grape Street, (off Shaftesbury Av.)

**Glasgow:** H. R. Woodside, 65, West Regent St.

**Belfast:** Wm. J. Shields, 44, Upper Arthur Street

## EXCHANGE.

EXCHANGE 8h.p. twin J.A.P. 3-wheel cycle car, Bosch mag., 2 speeds and reverse, good tyres, excellent condition, for good combination.—Box 314, c/o *The Motor Cycle*. [X5168

STUDEBAKER 4-seater Car, repainted, new tyres, spare rim, fully equipped, excellent running order; £80, or exchange for combination or light car. —Bunting's, Wealdstone. [5031

£25 and 3½h.p. Singer countershaft (Sturmey-Archer) Watsonian combination, speedometer, lamps: for Norton, A.J.S., or other good combination.—Fletcher, 100, Exeter St., Bradford. [5104

MORGAN wanted, in good condition, and cash adjustment for almost new Coventry Premier light car, 5 Michelin wheels, dynamo lighting complete.—S. Hall, 91, St. Peter's St., St. Albans. [4618

MATCHLESS Combination, as new, fully equipped, for exchange with cash adjustment for 3½h.p. Sunbeam or 4h.p. Norton, solo or combination; sell £140.—27, Osborne St., Hull, Yorks. [4701

DOUGLAS Combination, electric light, speedometer, child's seat, side screen, etc., fine condition, and £20 for best Harley, Indian, or Matchless combination offered.—146, New Rd., Battersea. [4951

B.S.A., T.T., 1915, Philipson, Watsonian C.B. sidecar, engine, tyres, plating excellent order: for more powerful combination; cash adjustment up to £40.—116, Cemetery Rd., Ipswich. (D) [4713

1919 Special T.T. Model B.S.A., competition winner, very little used, and in excellent condition throughout, in exchange for any good lightweight machine, 1919-20.—Showell, Hadlow, Bridle Rd., Purley. [3990

RACING T.T. I.O.M. Rudge, 1921, Binks, hand clutch, etc., for single-speed Norton or sporting solo.—G. Catling, Haimer Green, Welwyn, Herts. [4995

CLYNO Combination, 1915-16, spare wheel, electric lighting, speedometer, many parts new, for Ford van or solo and cash, nothing earlier 1914, or sell £70.—S. Green, 1, Albert Place, Bellgrove, Welling, Kent. [4705

EXCHANGES a Speciality.—Motor cycles taken in part exchange for small and large 2 and 4-seaters; bargain prices.—Seabridge, Hansler Rd., East Dulwich. Hours 10-5.30, or appointment (not Sundays). Sydenham 2452. [3671

COMBINATION, Williamson, 8h.p., countershaft, w.c., new condition, with new Watsonian Monarch sidecar, fully equipped; £75; exchange Sunbeam, A.B.C., N.U.T., with cash.—T. H. Douds, 7, Thornton Place, Sunderland. [4860

EXCHANGES.—We will allow you highest market value for your present cycle in part exchange for either a new or second-hand machine; any make supplied.—R. Bamber and Co., Ltd., 2, Eastbank St., Southport. 'Phone: 607. [X5192

NEW IMPERIAL 8h.p. 1919 Combination, just overhauled, enamelled, and plated, 3-speed, hand clutch, enclosed chain drive, 2 sets lamps, horn, tools, etc., complete; good solo, with cash adjustment, wanted.—Wright, 35, Wharf St., Leicester. [4918

GRAY and Raynes have a practically new Bleriot Whippet cycle car, only done about 50 for demonstration purposes, and will accept £145; also 9.2h.p. Alldays 2-seater, fully equipped, recently overhauled, £120; cheaper cars or motor cycles and cash considered. Agents for the Bayliss-Thomas light car at 300 gns.—Please note change of address to 10, Cleveland St. (near Danum Hotel), Doncaster. 'Phone: 265. [5209

## REPAIRERS.

ANY

ARMSTRONG or Sturmey-Archer Gears Repaired promptly and efficiently.—County Engineering Co., Hounslow. [0517

TRIUMPH, Douglas, J.A.P. Repair Specialists.

OUR Works do nothing else but repair the above makes of machines. Cylinders rebored, new pistons fitted, engine and gear boxes overhauled. Enamelling, plating, all on the premises. Send your engines or gear boxes; bench test and road test before returning. No need to send complete machine. All spares in stock, and we are more prompt than the makers. Work guaranteed. We pay carriage one way. Discount to trade.—The Winstaa-Henny Motor Co., 63, South End, Croydon. 'Phone: 2431. [4764

WHITTALL for Welding. Aluminium experts. Prompt delivery.

WHITTALL.—Pistons complete for Triumph, Premier, J.A.P., Bradbury, B.S.A., Douglas, Sunbeams, etc.; 14/- to 24/-, on approval, exact to pattern.

WHITTALL.—Cylinders reground and new complete pistons fitted from £2, perfection guaranteed. Twelve years' first-class reputation. Pistons to pattern or sketch.—Whittall Machinists Co., Whittall St., Birmingham. [0017

C. R. FOSTER, of Leeds, is the original cylinder grinding specialist.

CYLINDER Grinding by Foster, of Leeds, has no equal. Price, complete with piston, from £2.

£1,000 is the value of the machine and equipment that will grind your cylinder at our works.—Foster, of Leeds, 170, Cardigan Rd. [0003

## REPAIRERS.

PISTONS, new, complete with Brico rings and pin, Triumph, J.A.P., etc.; 19/-.—Below.

CYLINDERS Ground, work guaranteed; 17 years' grinding experience. Support the firm who brought the prices down. Write for copy testimonials and prices.—Kendall and Co., Engineers, Stoney Stanton Rd., Coventry. [X5222

ARMSTRONG and Sturmey-Archer Gear Specialists. Repairs while you wait.—Tavistock (below).

ARMSTRONG and Sturmey-Archer Gears completely assembled for 6/- in 2 hours.—Tavistock (below).

ARMSTRONG and Sturmey-Archer Parts at cut prices by return of post.—Tavistock (below).

GEARS, shafts, valves, etc., for car or cycle, made promptly.—Tavistock (below).

GEARS.—Send all gear repairs and replacements to Tavistock Engineering Co., 254a, Portobello Rd., North Kensington, London. 'Phone: Park 643. [3719

ENGINE Overhauls, quality work only, cylinders reground, pistons, valves, bushes, etc.—Below.

PISTONS for every standard motor cycle in stock from 14/- each.—Below.

CYLINDER Grinding, our speciality 2¾h.p. Douglas reground, fitted with new piston, rings, and gudgeon, 25/- each.—Below.

TRIUMPH, J.A.P., Bradbury, and all 3½h.p., 4h.p., cylinders reground and fitted new piston, rings, and gudgeon, 35/-; returned in 48 hours.—Below.

QUALITY and Satisfaction is our motto. Entrust your work to specialists and get a guaranteed repair. — C.M.D Engineering Co., Leamington Spa. 'Phone: 768. [9659

FRAME and Chassis Repairs, alterations, etc.; expert workmanship; reasonable charges.—Below.

ENGINES Overhauled by Experts, singles 35/-, twins 45/-; spares, etc.; try us.—Henry V. Smith, Osmondthorpe Lane, Leeds. [4538

F.N. Repairs our Speciality. Cylinders rebored and light pistons fitted for increase of power.—Below.

F.N. Frames and Tanks Cut Down for lower seating position.—Below.

GEARS, 2-speed, for 4-cyl. F.N.'s.—Earls, Ltd., Athenæum Works, The Vale, Hampstead, N.W.3. [4582

HUB Gears.—Great reductions in prices of replacements for Sturmey-Archer and Armstrong gears.

HUB Gears.—Wheels repaired and returned within the week; send for latest price lists.

HUB Gears.—Why pay an extortionate price for fitting a few new parts to an old gear?

HUB Gears.—We undertake to supply the complete new internal portion of the gear mechanism less main driver for £5.

HUB Gears.—A. F. Lewis, Charlestown, Weymouth Look out for the Lewis patent 2-speed countershaft gear and clutch [0747

WHEELS Repaired, rebuilt; sidecar chassis repaired.—Pritchard, 7, All Saints Lane, Coventry. [X5307

WELDING Aluminium Crank Cases, gear boxes by experts; immediate attention; seasonable prices.—Below.

WELDING Broken Cylinders, flanges, combustion experts of 11 years' experience.—Below.

CYLINDER Grinding on latest machinery, installed since hostilities ceased; accuracy guaranteed; new pistons fitted.—Sadgrove and Co., 140, Conybere St., Birmingham. [4769

ENGINES Rebushed, overhauled, rings fitted, compression guaranteed; singles 30/-, twins 40/-; returned 3 days.—Below.

CYLINDERS Rebored, fitted with new pistons, from 30/- to 40/-.—Turner Bros., Motor Engineers, Summerseat, Manchester. [4143

FOR Expert Engine Overhauls, cylinder grinding new pistons, and spares, Hedley and Co., Forth St., Newcastle-on-Tyne. [1333

FRAME, chassis, and tank repairs, enamelling and painting by experts; prompt deliveries.—Langham Co., Fitzroy St., Leicester. [6097

INDIAN Owners.—If you have trouble with your machine, send to Indian repair specialists, Dennis, 89, Brixton Rd., London. [1853

CYLINDERS Reground, new pistons fitted, from 22/6; engines overhauled in 5-6 days. Speciality, Triumph and Premier.—Below.

WELDING, also brazing, by experienced workmen. Spare parts supplied.—W. R. S. Fiddian, Bush Lane House, Bush Lane, E.C.4. [4815

J.A.P. and Blackburne Engine Experts; reasonable and reliable.—Kingsbury Garage, Edgware Rd., Hendon. 'Phone: Kingsbury 134. [4209

WORN Pulleys Turned, 5/-; aluminium cooling fins fitted to valve caps, 3/6; prompt return free.—Peckett, 34, Cecil Av., Barking. [4916

P. and M. Gear Specialists. Any 1911 to 1921 P. and M. gear repaired promptly and efficiently.—A. S. Phillipson, Engineer, 1a, Hilda St., Grimsby. [3849

**RUBBER HIP BOOTS**

Made by North British Rubber Co., Ltd.

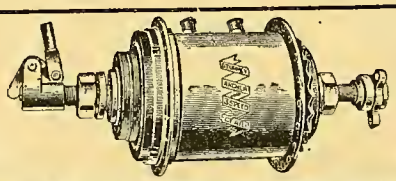
OUR PRICE **8/6** Postage 1/3

Quite New, and actually worth 45/- per pair.

**Despatched immediately and on approval against Cash.**

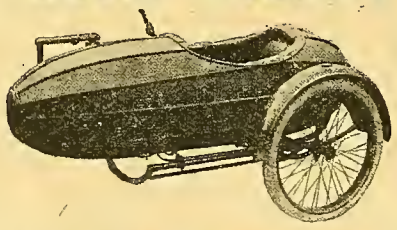
(Trade Supplied)

MAUDE RUBBER CO.,
52, PRAED STREET, LONDON, W.



**STURMEY-ARCHER AND ARMSTRONG**
**Hub and Countershaft Gears repaired immediately.**
Every part for all types actually in stock. No waiting. Price List and Instruction Sheet by return of post. Usual trade terms. Send repairs to Putney Station, L. & S.W Rly.
**CROMWELL ENGINEERING Co.**
327, PUTNEY BRIDGE ROAD S.W.15

**RENNOC SIDECARS**



**Model 36, 25 Gns. Immediate Delivery.**
*Send for Catalogue.*
24 Models to suit all makes of motor cycles.
**RENNOC MOTORS, LIMITED,**
**Progress Works, 155a, Marlborough Road,——Upper Holloway, N.19.**
'Phone: Hornsey 1589.

**STURMEY-ARCHER and ARMSTRONG**
**Hub or Countershaft Gears repaired while you wait.**
Actually in Stock—New Sturmey-Archer Countershaft Gear and Boxes spare parts. Send for illustrated list. Trade supplied. Send wheels, Hounslow L.S.W. Railway.
**COUNTY ENGINEERING CO.,**
**64 Staines Road, HOUNSLOW.**
Wires: 'Three-speed, Hounslow. 'Phone: Hounslow 322


## REPAIRERS.

WELDING.—Broken cylinders, crank cases, etc., mad like new; work guaranteed; quick return.—Tong Welding Co., Morton St., Middleton, Manchester. [630

ROC 2-speeds Overhauled. Humber, Rex, Matchless Vindec, Aldays, Millenium, Campion-Jap, Quadrar spares stocked.—Connolly, Carmelite Rd., Coventry. [X531

ENAMELLING, Plating.—Tanks enamelled as before handle-bars, etc., plated.—Send to Murray's Platin Works, Union St., Coventry. Platers and enamellers t the trade. [002

CYLINDER Grinding, new pistons, etc.; accura and highly finished work; prompt delivery; prit list on application.—W. and F. Wills, Ltd., Engineer Bridgwater. [072

SPEEDOMETER Experts.—Repairs to all makes Stewart repairs a speciality. New and second-har sets in stock.—London Speedometer Co., Kramer Mew Earl's Court. [404

FRAMES.—Repairs and alterations; special fram and tanks built, any design; enamelling an plating.—A. Pilkington and Co., 390, Lichfield Rd Birmingham. [846

FRAME Repair Specialists.—New tubes, forks, stay cut-downs, etc.; enamelling and plating at lowe prices; quick despatch.—A. E. and F. Brittain, Bentle Lane, Walsall. [262

ALUMINALLOY Pistons.—Our pistons signali efficiency for 20,000 miles. Cylinders groun pistons fitted. Trade supplied.—Commercial Engineerin South St., Keighley. [392

CYLINDER Grinding, new pistons, rings, an gudgeons, 85 mm. J.A.P.'s, etc., 29/6; other siz on request. Aluminium pistons if desired. — Vulc Engineering Works, Walsden. [964

WELDING.—Broken flanges, aluminium crank case cracked water jackets, valve seatings, weld and machined complete; scored bores filled in an ground to existing pistons.—Below.

CYLINDERS Reground, new pistons fitted complet in cast iron or aluminium.—West London Wel ing Co., Essex Place, Chiswick. 'Phone: Chiswi 536. [04

CYLINDERS Reground, accurate finish, compre sion guaranteed; Triumph, Rover, Premier, 35/ 2¾h.p. Douglas, 25/-; 70 mm. bores, 30/-; rings an gudgeons complete, twins low price.—Below.

PISTONS, all patterns, oversize specialists, lo price.—Below.

PISTON Rings, oversize or slip-cut, 2/-; standar 1/6; return post; none better. Thousands testimonials.—Patent Rings, 30, Wigan Rd., Atherto [51.

TRIUMPH Cylinders Reground and fitted with genui Triumph oversize pistons, complete with rings a gudgeon, 40/-; J.A.P., Rover, B.S.A., etc., same pri Compression and accuracy guaranteed.—Below.

WE Specialise in repairs, and guarantee same; co plete overhauls, machining; any part made to p tern or drawing. No waiting.—Harvey's, 47, Sou Lambeth Rd., S.W. (near Vauxhall Station). [42

HARLEY-DAVIDSON Repairs and Overhauls.—W are now able to put work in hand without d lay; skilled staff under careful supervision.—Harl Davidson Motor Co., Ltd., 74, Newman St., Lond W.1. [00

WE can bring your machine up-to-date and ma it into a countershaft model by fitting a n pack, with Sturmey-Archer gear box; any machine c verted.—A. Pilkington and Co., 390, Lichfield Rd., B mingham. [36

WELDING.—Cylinders, crank cases, cracked wa jackets, pistons, gear boxes, broken flanges, et aluminium a speciality: frames, etc., brazed.—The C Welding and Brazing Co., Richmond Rd., Carr Hi Nelson, Lancs. [38

CYLINDER Grinding and new pistons at cut pric We specialise in high-class work and quick liveries for all classes of engines. Discounts to trade Kellett and Collinson, Ltd., Havelock Works, Gr Horton, Bradford. [86

V.S. Motor Cycle Agency.—Supplying spares and ov hauling V.S. 2-speed gears, which are also fit 2-speed gears in stock. One sidecar, underslung, w torpedo body, £5.—Geiger, 24, Mansfield Rd., Gos Oak, London, N.W.3. [3

WELDING, Welding, Welding.—Welding done experts; cylinders, crank cases, gear box pistons, cranks, flanges, etc.; aluminium a special No cure no pay, and all work returned in 6 days.— Heap, 105, Bissell St., Birmingham. [0

PACK All Your Troubles in a good strong box, s forward immediately to Bishop, Engineer, Cotham Rd., Bristol. All parts promptly made pattern or sketch. Machining of every descripti Engines overhauled and rebushed from 30/-. Ev job guaranteed. [4

HUB-GEARED Machines Converted to Coun shaft, or conversion sets supplied to suit makes; gear boxes and spare parts for same in sto recommended by the leading motor cycle mann turers. — Sheldon Engineering Co., Bayley La Coventry. 'Phone: 634. [3

## REPAIRERS.

LACKBURNE Spares.—Send to us the manufacturers, for all spare parts; prompt service, sonable prices. Repairs and complete overhauls Blackburne or any make of machine; enamelling oks a speciality), nickel plating, etc.—Osborn Engeering Co., Gosport, Hants. [0652

RAME and Chassis Repair Specialists. Cut-downs, new forks, back stays, chain stays; fixed and hub r machines converted; tube bending and machinery every description; obsolete parts made to order; ent jobs returned in 12 hours.—The Enfield Engiring Co., 31, Silver St., Enfield. [8049

ODFREY'S, Ltd., 208, Gt. Portland St., London, W.1, specialists in motor cycle repairs of all criptions. Completely equipped workshops at 14, ler St., Camden Town, N.W. ('Phone: Museum 4), which afford exceptional facilities for overhauls repairs at moderate prices. Estimates given. [0639

CETYLENE and Electric Welding.—Broken flanges, cracked water jackets, scored bores, worn bearings lt up; aluminium gear boxes, crank cases, any ken motor part welded and machined up and rened in 7 days; 14 years' experience.—Lincoln Jeffries, ., Gun and Motor Maker, 120, Steelhouse Lane, miugham. 'Phone: Central 729. [2818

AVE Money and have your broken frames repaired by us. We specialise in this class of repair, and rantee all work. Enamelling and plating at trade es. Engines rebushed throughout, new valves and gs fitted, from £2. Let us quote you. Estimates e.—Fosters, 31, Clissold Rd., Clissold Park, London, 16. 'Phone: 2526 Dalston. [2605

WHY Throw That Old Saddle Away?—Saddles: Brooks, Lycett, in fact, any make of saddle reered within 7 days, absolutely better than new l guaranteed, 10/6, post paid; cash refunded if satisfied. Can we say more. Special quotations the trade for quantities.—Sulina Garage, New Park ., Brixton Hill. (See our advert, under Parts and ccessories.) [5195

WHITE and Watson, motor cycle repair specialists. Another redn ction in reboring prices. Douglas ers, now is your opportunity. 2¾h.p. and 4h.p. uglas cylinders reground and fitted with 2 new tons complete, 35/- and 45/- per pair. Other cylin's at the following rates: Up to 65 mm. 22/6: mm., 27/6; 80 mm. 32/-; 85 mm. 35/6; and over, /6; 2-strokes extra; aluminium pistons, Brico rings y fitted to our rebores; engines rebushed, reanced, and overhauled. Gear boxes overhauled l replacements machined.—White and Watson, 80, vedere Rd., S.E.1. [4841

Only the Best will satisfy you, then the Tennant Engineering Co., 238, Bristol St., Birmingham, ne can please you. Super-critical you may be, but ir work will pass your inspection down to the last ail. No firm has more experience, no firm has keener kmen, no firm has greater or better facilities for ning out perfect work, and no firm will strive more give you satisfaction. Cylinders rebored and fitted v pistons. Rebushing of every description. Engines pletely overhauled and returned full of vigour and . Frames altered and repaired. Everything ly guaranteed and at competitive prices. Official airers to A.C.U. and R.A.C.—'Phone: Mid. 1928. [0047

## PARTS AND ACCESSORIES.

**NOTE:** *In addition to advertisements under this heading, advertisements of Spare Parts for individual makes of motor cycles will be found at the end of the advertisements of such makes in the classified pages of "Motor Cycles for Sale."*

ANISTER and Botten.

h.p. Douglas. New Spares.—Induction pipes, 12/6; valves, 2/6; springs, 6d.; big ends, 2/-; small s, 1/6; gudgeons, 1/-; rings, 1/9; tappets, 3/3; ve caps, 2/-; pulleys, 15/-; hub cups, 1/-; lock gs, 1/-; back spindles, 2/6; hub shells, 4/-; carbuers, Vici, 40/-; all internal gear box parts, less f-price; reconditioned frame, £6; gear box bolts, nt 2/6, rear 6/-; K.S. pinions, 2/6; fork springs, ; steering columns, 6/6; bars, 12/6; hundreds re parts.—Below.

3h.p. Douglas.—New pulleys, 5/-; valves, 2/-; 4 cylinders, 30/-; chain wheels, 5/6; tappets, ; guides, 1/3; big ends, 2/-; gear box ball races, ll 3/6, large 4/-; buffer head castings, 2/6; —Below.

UDGE Multi 3½h.p. and 5-6h.p.—Cam wheels, 10/-; valves, 4/6; pulleys, fixed 9/-, sliding 12/-; in wheel for starting clutch, 10/-; rings, 2/-; anst rockers, 2/-; etc.—Below.

LYNO Frames, reconditioned, centres £2, backs £1; Douglas sidecar chassis, unconditioned, 30/-; body, shop-soiled, £5; Triumph carrier, 12/6; A., 10/-.—Below.

THOMSON-BENNETT New Magnetos, 40/-; 2¾h.p. and 4h.p. Douglas and singles. Write for our plete list, free. Will save you pounds. Cheapest in trade.—Banister and Botten, 341, Upper St., don, N.1. 2480 North. [5112

and M. Chain Cases, 25/- set; brake drums, 10/-; sprockets, 7/6.—Below.

and M. Spares, all parts, in stock.—Long Bros., 20, Sydney Mews, Chelsea. [4813

# LOVE & Co

**A Brief Selection, all fully equipped: and some with Speedometers.**

1913 4½ h.p. **B.S.A.** and Sidecar ..... **£50**
1920 2¾ h.p. DOUGLAS, Model W, 3 speeds, clutch, and kick-starter ..... **£65**
1914 2¾ h.p. **DOUGLAS** ..... **£35**
1919 2¾ h.p. **DIAMOND-J.A.P.**, 2-speed gear, clutch ..... **£50**
1918 7-9 h.p. **HARLEY-DAVIDSON**, with 1921 dynamo and lighting, 1921 hub to rear wheel, 70 m.p.h. guaranteed, new condition ..... **£95**
1919 7 h.p. **INDIAN** Powerplus ..... **£50**
1914 4 h.p. **TRIUMPH**, Sturmey-Archer hub gear ..... **£45**
1920 4 h.p. **TRIUMPH**, Type H, and Sidecar **£95**
1914 3½ h.p. **ZENITH-GRADUA** ..... **£35**
1920 6 h.p. **ZENITH**, Model E ..... **£70**

**TWO STROKE MOTOR CYCLES.**

1918 **ALLON**, 2-speed gear and clutch ..... **£35**
1919 **CLYNO**, 2-speed gear and clutch ..... **£30**
1914 **DALM** ..... **£22**
1920 **JAMES**, 2-speed gear ..... **£40**
1919 **METRO-TYLER** ..... **£25**
1919 **TRIUMPH** Junior ..... **£45**

Huge reductions in prices for New 1921 Outfits, and all the best 1922 motor cycles, etc., in stock to be sold for cash, extended payments, or by exchange.

*Hours 9 a.m. to 8 p.m.*
*Saturdays included.*

**J. L. LOVE & Co.** 21, PARK ROAD. BROMLEY, Kent.

'Phone: Bromley 664. 'Grams: "Love, Bromley, Kent."

**SOLE LONDON AGENTS**

# OMEGA

**MOTOR CYCLES.**

**3 h.p., Two-stroke, 348 c.c., 3-speed Gear, Clutch, Kick-starter, COMFORTABLE SIDECAR,**

# £83

**DUPLEX FRAME, SOLO MODEL, 66 Gns.**

**F.N. 7 h.p., 4-cylinders, £95**

**WATSONIAN SIDECARS.**

**EASY PAYMENTS.**

# BARTLETTS

**93, GREAT PORTLAND ST. LONDON, W.**

Phone: Langham 1271.

## PARTS AND ACCESSORIES.

DUNLOP! Dunlop! Dunlop!

BELTS! Belts! Belts!

ALL Sizes at a giving away price. Guaranteed brand new, slightly soiled. Sent on approval; cash returnd if not satisfied. ¾in. 1/6 per foot, 7/8in. 1/9 per foot, 1in. 2/2 per foot; 1⅛in. 2/7 per foot.—Below.

WE also have a quantity of John Bull belts, 7ft. 6in., ¾in.; 12/6; approval.—Below.

TOOL Rolls! Tool Rolls! Tool Rolls!

MARVELLOUS Value, complete with full kit of tools; usual price 17/6, to clear 7/6; approval. —Below.

TRADESMAN'S Sidecar Bodies, brand new, only want seeing, made in sheet metal, as strong as a house; £4 each; four only.—Below.

BROOKS B600 Cantilever Saddle, absolutely as new; £4/17/6.—Below.

BRAND New Perna Dynamo Lighting Set for combination, switch box, ammeter, etc.; real bargain, £12/10 complete; approval willingly.—Below.

A NUMBER of Second-hand P. and H. Head Lamp Sets, as new; from 25/-.—Below.

ALSO a Number of Druid Front Forks; girders only, from 25/-; a pair of Matchless fork girders, 1912 or 1913 type, 25/-; pair of Douglas fork girders, 25/-.—Below.

MUDGUARDS, front, rear, and sidecar, new and second-hand, from 7/6; countershaft Triumph rear guards, new, 16/-; front, second-hand, 12/6; front, new, 26/-; sidecar mudguards, Gloria, 30/-, new; one second-hand, 15/-; Mills-Fulford, complete with stays, 17/6; Douglas rear, new, 1914 to 1919, 9/6; new front mudguards, 1914 to 1919, touring pattern, 25/-.—Below.

FRONT Stands.—Trimmph, 3/6; Douglas ditto, 5/-. —Below.

REAR Carriers.—3h.p. Enfield, 15/-; Triumph ditto, 35/-; second-hand Douglas, 20/-.—Below.

PREMIER Valves, genuine, 6/6; a large amount of spares for 3½h.p.—Below.

SEVERAL Brand New 7-9h.p. M.A.G. Engines; £32/10.—Below.

2¾h.p. J.A.P. Crank Case, brand new, complete with bushes, £3/10; a pair of flywheels for same, new, 35/-; J.A.P. valves, all dates and h.p., 5/-; 6h.p. gudgeon pin bushes, 3/-; old pattern big end bushes for 6h.p. and 8h.p., 10/-; 6h.p. rear J.A.P. cylinder, perfect, 35/-; several 6h.p. pistons, perfect, 15/-.—Below.

J.A.P. Brand New 6h.p. or 8h.p. Cylinders, with a fin chipped, 50/- each; 8h.p. pistons, complete, 25/-; a few 2¾h.p. slightly chipped cylinders, £2; new 8h.p. cylinders, perfect, £4. Any part or parts from stock.—Below.

B.S.A. Spares of every description obtainable at Jones Garage, Muswell Hill, and Woodside Parade, N. Finchley.

DOUGLAS 4h.p. Pistons, complete, brand new, not W.D., 12/6; 4h.p. valves, new, 5/-; and cylinders, new, £3. All parts from stock.—Below.

2¾h.p. Douglas Pistons, complete, new, 11/-; valves, 3/3; cam wheels, 14/-. A number of second-hand parts, crank cases, crankshafts, etc., etc. Let us have your requirements.—Below.

1914 4h.p. Triumph Engine, complete, guaranteed perfect, approval with pleasure, £10; Sturmey-Archer 3-speed J.S. hub gear, complete with controls, £8/10, guaranteed perfect; 1914 4h.p. Trimmph motor cycle, requires assembling and a few small parts, £22; another, practically complete, £32/10. We have a large amount of second-hand Triumph parts. Let us know your wants.—Below.

IT is absolutely impossible for us to advertise all our stock of new and second-hand parts, so please advise us of your requirements. Please send a stamp for reply.—Jones Garage, Muswell Hill, London, N.10. [4522

COUNTY of London Engineering Works, Ltd.

AUSTER Wind Screens, Triplex glass, adjustable aluminium fittings, 13×6½in., 10/-, post free.

ELECTRIC Inspection Lamp, to fit over speedometer, complete with bulb and cable, 2/6 each.

EXHAUST Boxes, Douglas 2¾h.p., 15/-; Douglas 4h.p. clutch races, 2/6; screwdrivers, 6in., 8in., 10in., 10d., 1/-, and 1/2 each.

HIGH-TENSION Wire, 9 mm. 5d. per yard, 25 yard coil 8/6; 7 mm., 4d. per yard, 25 yard coil 6/-; 5 mm., 3d. per yard, 25 yard coil 4/-; 3 mm., 2d. per yard, 25 yard coil 2/-; postage on coils, 5 mm. and upwards 1/-, 3 mm. 9d.

ALL Goods on approval per return post on receipt of cash; money refunded if not satisfied.

COUNTY of London Engineering Works, Ltd., 51a, New Park Rd., Brixton Hill, London, S.W. Tel.: Streatham 2898. T.A.: Ignitionao, Brixstret, London. [2473

## PARTS AND ACCESSORIES.

CLYNO

CLYNO 5-6 and 8h.p. Spares, enormous stock, undoubtedly we hold the largest stock in England. All genuine Clyno parts, brand new.

MARBLE Arch Motor Exchange.—No ridiculous prices. Trade supplied. Liberal discounts on quantities. Send stamp for our Clyno list and compare prices.

CLYNO Centre Frame, 6 or 8h.p., 50/-; rear portions, 35/-; tanks complete with all fittings, including Best and Lloyd lubricator, 50/-; front stands, 7/6; rear stands, 8/6; Brampton spring forks, £3/10; Biflex, £3/15; wheels, 26in. or 28in., 38/-; mudguards, Brampton, front 12/-, rear 10/-; handle-bars, 8/-; metal tool boxes, to fit on top tube, 5/-; sidecar cushions, 7/6; sidecar C springs, 17/6 pair; aluminium footboards, 10/- pair; hundreds of other parts, all brand new.

CLYNO 6h.p. Gear Boxes, 3-speed, K.S., foot-controlled clutch, as new, £8; brand new, £12.

COMPLETE Set as follows: Clyno 8h.p. frame, complete, fitted with spring seat pillar, latest Brampton Biflex forks, 2 gallon tank, complete with all fittings, including Best and Lloyd lubricator, 2 interchangeable wheels, 26in. or 28in., back driving sprocket, fitted with internal expanding Ferodo-lined brake, 3-speed gear box, kick start, hand-controlled clutch, handle-bars, front and rear stands, front and rear mudguards, carrier, wheel spindles; what a gift for £25; list price over £60.

REMEMBER the Above are all brand new and perfect Clyno parts, and would be ideal for the fitting of 8h.p. J.A.P. or similar engines. (Please note we have only 3 more of these sets left out of a total of 73.)

J.A.P. 8h.p. Spares.—Cylinders, rear only, 35/-; new crank cases, 35/- each; double cam gear wheels, 7/6; crank pins, driving side shafts, and timing side shafts, 3/- each; mainshaft timing wheels, 2/- each; piston rings, 9d. each; valves, 3/6 each; gudgeon pin bushes, 1/6 each; all brand new.

8h.p. Douglas or Williamson Water-cooled Cylinders, brand new, 45/- each; new pistons, 12/- each; new crankshafts, 35/- each.

COVENTRY Chain, 5ft. 2in. lengths, ⅝×¼, brand new, 17/6; a gift.

VERY Special Offer to clear a real bargain.

**700** LEATHER Helmets, soft tan, leather-lined chamois, 4/- each; a real bargain.

BOXES of 50 Prepared Patches, 3/- each.

BELT Rims, brand new, 19in. outside diameter, 2¼in. wide, for ¾ or ⅞ belt, 5/- each. The above are 2¾h.p. Douglas size; various other sizes in stock, new and second-hand.

TRIUMPH Toolbags, leatheries, Empire de luxe, fitted N.P. lock and key; 6/6 each.

LUCAS Major Girder Wrenches, 7½in. genuine, listed 13/6; our price 7/-.

MAGNETOS.—Splitdorf single, anti, variable, guaranteed perfect, 30/-. Please note, these are not converted starter magnetos. They are the real thing.

P. and M. Handle-bars, brand new, 10/- pair; rear brake complete with brake band, 30/-.

ENGINES.—Brand new 1921 Precision 3½h.p. 2-stroke, detachable cylinder head, complete with mag., exhaust box, and long extension pipe, £14.

REAR Luggage Carriers for Sidecar; 8/- each; a bargain.

BRAMPTON Biflex Latest Type Heavyweight Spring Forks, £3/15 pair, list price over £10.

B.S.A. Frame Centres, 35/-; carriers, 10/-; rear mudguards, 8/-; valves, complete spring, cup, and cotter, 5/- each; fork springs, large 2/-, small 1/-.

**200** CLYNO Metal Tool Boxes, to fit on top tube, very special price to clear; 5/- each; listed 17/6, suit any machine.

NEW IMPERIAL 8h.p. Spindles, complete with nuts, cones, and dustcaps, back and front; 4/- pair.

SCOTT Rear Carriers, brand new; 10/- each, to clear.

**250** CLYNO Metal Cases, for carrying spare tube; 1/9 each to clear; listed 4/6.

**500** TERRY'S Spring Fork Links, suitable for Druid and other forks, listed 15/-; our price to clear, 5/- pair.

BRAND New 28×3 Butt-ended Tubes, in boxes; 5/- each.

**300** PAIRS Sidecar C Springs, Clyno (Terry), 4-leaf, bushed, very special offer; 17/6 pair.

**150** SIDECAR Cushions, well sprung and padded, to clear; 7/6 each; pillion seats 7/-; real bargain.

E.I.C. Contact Breakers, brand new; 10/- each to clear.

**200** PAIR B.S.A. Footrests, cranked and adjustable, suit any machine, listed 21/-; our price 6/- pair.

*(This advertisement continued in third column.)*

# HERBERT ROBINSON
## GREEN STREET, CAMBRIDGE. LTD.

25/6

### MUDGUARDS.

New wide pattern, as illustrated, suitable for Triumph, and B.S.A., **25/6**; Triumph pattern, **12/6**; Douglas T.T., **10/6**; Touring new wide backguard for Triumph **16/-**; Sidecar Mudguards, **12/6.**

## EXHAUST PIPES.

Straight through, direct from engine. No back pressure. Heavy nickel-plated. Douglas 2¾ h.p., **21/-** pair. Triumph, Rudge, Rover, Sunbeam, complete with removable fish tails, **21/-**; Copper, **27/6.** All in stock. No waiting. Illustrations post free.

### Aluminium Valve Caps

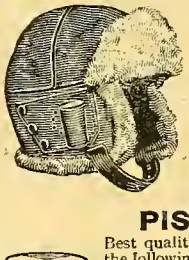
as used in T.T. races, suitable for Douglas, Triumph, Sunbeam Norton, J.A.P., B.S.A., Blackburne, Rover, **5/-** each. Other makes to order, **7/6.**

### HANDLE-BARS.

suitable for Triumph W.D., Douglas T.T., complete with grips, **21/-**; also shop-soiled T.T. and tonring rin. stem, rin. top, **10/-** pair.

## 2¾ DOUGLAS SPARES.
### SOILED.

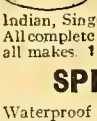
Ex Government Stock. All guaranteed. Driving Chains, **8/-**: Front Brakes, **12/6**; Pulleys, **7/6**: Sprockets, **4/6**: Chain Wheels, **7/6**; Valve Guides, **1/6**: Valves, **3/-**; Amac Caps, **2/-**; Rocker Arms, **4/9**: Petrol Pipes with union nuts, **1/6**; Hubs, **18/6**; Piston Rings, **1/-**; Front Forks only, **30/-**; Fork Links, **1/-**: Magneto Studs, **2d.**; Frames **24**: Front Stands, **3/6** Undershields, **7/6.** Tool Kits, **21/-.** Complete illustrated list **3d.** Douglas Handbook, your own repairs, **1/9.**



### LEATHER HELMETS.

The Brooklands leather and fleece-lined, **7/6** and **10/6** R.A.F. Pattern, trimmed fur and fleece, as illustrated, **21/-**; fur and chamois lined, **25/-**; lined throughout fur, **30/-.** Long R.A.F. Winter Pattern, half fur-lined, **27/6**; fur and chamois, **32/6.**

## PISTONS.



Best quality pattern Pistons, suitable for the following makes: 2¾ h.p. Premier, **25/-**; 3½ h.p. Premier, 25/-; 2¾ h.p., J.A.P. 21/-; 4 h.p., 6 h.p., and 8 h.p. J.A.P., **25/-**; Triumph, any year, **22/-**; 2¾ h.p. Douglas, **14/6**; 4 h.p. Douglas, **18/6**; B.S.A., **21/-**; New Hudson, Sunbeam, Harley-Davidson, Indian, Singer, 2¾ h.p. and 3½ h.p., **25/-**; Rudge, **27/6.** All complete with rings and gudgeon pin. Piston Rings all makes, **1/6** each.

## SPECIAL BARGAINS.

Waterproof Tweed Lined Suits **45/-**; Leather Knee Grips, **3/6**; Covers, **15/-**; Best make Tubes, **6/-**; Triumph W.D. Connecting Rods, **10/-**; Triumph Fork Studs, **10/-**; Sidecar Lamps, **7/6**; Rear Lamps, **4/-**; Douglas Chain Cases, **3/6**; French Bulb Horns **10/-**; Tool Rolls, **3/6**; ¾ x ⅜ Chains, 5ft., **15/-**; Asbestol Gloves, **8/-**; Sheep Skin, Gauntlets, lined throughout, natural wool, **10/6** and **8/6**; Triumph Value Caps, **2/6**; Filter Caps, **1/6**; T.T. Motor Cycle Suits, Fleece Lining, Fur Collar, **50/-**

Carriage paid on orders **10/-** upwards.

**Douglas, Triumph, J.A.P., Norton, Levis, B.S.A., Enfield, Villiers, Rudge, and Sturmey-Archer.** All Parts in Stock.

Complete Illustrated Lists, post free.

## PARTS AND ACCESSORIES.

**250** AUTOKRAT Mechanical Horns (these a really a first-class article), listed 27/6; o price to clear, 9/6 each.

BULB Horns, nickel or black, exceptional valu to clear; 10/- each; half usual price.

P. and M. Spares.—New Renolds gear chains, 10 each; handle-bars, 10/-; rear brake, comple with drum to screw on rear hub, 30/-; tool bags, 8 each; cylinders, 1909-1913, 40/-; all above brand ne

ZENITH Rear Wheels, complete with belt rim brand new, 30/-.

CARRIAGE on All Above Extra. Large stocks other interesting parts. Cheques and P.O. should be made payable to Marble Arch Motor E change, 135, Edgware Rd., W.2. 'Phone: Padd. 78 'Grams: Archmotex, Edge, London. [52

PLUGS.—Brand new Apollo 1/6, Lodge Aero 2/

LAMPS.—Special line of shop-soiled P. and H. lam sets, No. 120 25/-, No. 128 35/-, No. 127 67/ No. 131 (rear) 8/6, electric solo set 92/6, Lucas pa tern electric rear or wing lamp, 11/6, F.R.S. strea line No. 105 42/6, large generators 8/6.

PILLION Seats.—Tan-Sad 38/6, backrest 9/-, si footrest, 6/-, astride lootrests 5/-.

SPEEDOMETERS.—Cowey trip 130/-, non-tr 115/6; Watford trip 125/-, non-trip 115/6.

OVERCOATS.—Double-breasted, 3 pockets, and be 21/-.

GLOVES.—Gauntlet, all leather, 5/6.

GOGGLES.—R.A.F. Aero triplex 9/-, rubber patte 1/3.

TYRES.—26in×2½in., fit 2¼in. rim, Clincher hea cover, new goods, not W.D., 22/6.

DISCS.—Ace discs, 27/6 per wheel; patterns to s most machines in stock.

HORNS.—Mechanical 10/6 and 15/-, car type 17, Clayrite 22/6, Lucas 21/-.

CHAINS.—All sizes, Hans Renold and Coventry, reduced current prices.

SPARE Parts for Ivy, A.B.C., N.U.T., B.S.A., M gan, obtained on shortest notice.

ALL Goods Promptly Despatched by return of po

MAUDE'S Motor Mart, 100, Gt. Portland St., W [52

THE Effra Motor Works for Douglas brand r spares.

£9/9 Deposit and £3/3 monthly secures one of 2¾h.p. Douglases.

**75%** of new parts on each machine, and every finished as new—1921 Amac carburetter, U.A magneto, Goodyear tyres, stoved enamelled and plat makers' colours, etc.

THE Effra Motor Works.—All new 2¾h.p. Doug spares; Frames £4/10; forks, 16/6 (soiled); carri 15/6; stands, 10/-; engines, £10; tanks, 35/-; tap guides, 1/9; tappets complete, 2/3; connecting r 17/6; cylinders, 35/6; and all the useful odds ends.

EFFRA.—All new 4h.p. Douglas spares: Fran £6/10; 1921, £7/10; carriers (pattern) 15 connecting rods, 30/-; etc.; etc.

EFFRA.—Ex-W.D. sidecar bodies: Douglas, Sc etc., 30/-; miscellaneous sidecar parts, etc.

£25.—2¾h.p. Douglases, ride away, from £25; 2 early type Triumphs, £25 the two: P. M. and sidecar, only £35; all miscellaneous p for building machines, etc.—The Effra Motor Wo 59-63, High St., Clapham, S.W. 'Phone: 1115 B ton. 'Grams: Effamota, Clapcom. [5

INDIAN Front Forks, gear boxes, and engines, all parts for same.—Below.

INDIAN Intake Domes, carburetters, magn clutches, kick starters.—Below.

INDIAN Carriers, chains, and guards, spri sprockets; in fact, everything for 7-9h.p.; parts absolutely new.—Dennis Accessories Stores, Brixton Rd., London. Specialists in Indian Rep 'Phone: Brixton 3129. [1

JARDINE and Speed Gear Box, complete with f and back wheel, £15.—Below.

CALTHORPE 2-speed Gear Box, clutch and start, £4.—Below.

RUDGE Multi Expanding Back Wheel and pu clutch and back stays, £4/10.—Barnsley Ga Lichfield Rd., Birmingham. [

INDIAN.—New parts. Write us for spares fo models; dispatch by return.—Below.

INDIAN.—Second-hand parts for all models in at bargain prices; every part guaranteed per approval against cash; prompt attention to all quiries.—Below.

INDIAN.—We hold a large stock of accessories: cars, speedometers, magnetos, carburetters, Indian repairs and overhauls a speciality.—Longf 37, Cricklewood Broadway, London, N.W.2. [

## PARTS AND ACCESSORIES.

IDE and Clarke for ex-W.D. lamp sets at bargain prices.—Below.

/6.—Largest size P. and H. No. 127 lamp set; lamps alone, 10/6.—Below.

/6.—Miller No. 31 H medium size set, ebony finish; lamps alone, 9/-; Lucas No. 462, ; brackets, P. and H., for lamps only, 3/-; rator brackets, 1/-; Douglas sidecar brackets, 6d.; nd H. mangin mirrors, all sizes, 5/-; screw for ors, 1/-; generators, P. and H. and Miller, 14/-; S.H. generators, 7/6.—Below.

UGLAS 2¾h.p. Cylinders, new, 25/-; crankshafts, 2¾ and 4h.p., 25/-; connecting rods, 15/6; ns, 2¾h.p. 7/6, 4h.p. 9/-; S.H. pistons, 3/6; eon pins, bushes, valves, guides, tappet guides, each; sprockets, flywheel, 2¾h.p. 3/-, 4h.p. 3/6; eels, 15/-; Amac carburetter, S.H., 25/-.—Below.

IDE and Clarke.—All parts for 2¾h.p. Douglas in stock, postage extra, stamp for reply.—Pride Clarke, 156, Stockwell Rd., Brixton, S.W.9. Tel.: Brixton. Garage entrance Garden Row. [5113

..P. 6h.p. Cylinder, perfect, 50/-; piston, 10/-; valves, new, 5/6; 8h.p. cam wheel, 1920-21, 15/-; las 1911 crankshaft, 45/-; 1914-21 ditto, new, ; connecting rod complete, 17/6.—Below.

X and Premier Cylinders, pistons, connecting rods, ball races, gears, etc., in stock.—Below.

GER Cylinders, genuine, pistons, gears, starting sprockets, connecting rods, and all parts in stock. ow.

ILLIAMSON Cylinders, pistons, crankshafts, all gears, frames, forks, etc., in stock.—Below.

ARS.—Albion kick start, clutch, 2-speed gear boxes, in stock, exchanges arranged; Albion 2- , plain model, as new, £4/10; Roc ditto, £3/10; ney new gear box in stock, exchanges; 1919 ney gear box, perfect, £13/10; ditto, 1917 model, N.S.U. gear, Triumph, £5/5; Mabon variable tershaft gear, as new, £4/10; Grado variable start gear, £5; Roc, Sturmey, and Armstrong l and parts; send enquiries.—Below.

IUMPH Countershaft Cylinder, perfect, 50/-; pistons, 12/-; countershaft bottom stay, 65/-; er, 25/-; front wheel, 30/-; also new and second- parts for all models; send requirements.—Alf. ud, Hearsall Lane Corner, Coventry. 'Phone: [X5309

13 Enfield Chassis, wheel, tyre, etc.; £4.—81, Dundee Rd., South Norwood. [4955

.A. 2-speed Wheel, all complete, with controls; £6/10.—31, Silver St., Enfield. [4823

.C. 4h.p. Crankshafts and Other Spares; offers. —82, Caledonian Rd., London, N.1. [4884

CING N.U.T. 2¾h.p., 3-speed, requires new piston, otherwise perfect, £35.—Below.

ECTRIC Lighting Sets, £3; Douglas 2¾h.p. valves, 3/-; Amac carburetters, £2/17/6; write sts.—Blackburn, High St., Coatham, Redcar. [4726

OL Rolls, strong leather, with strap and pockets, 7×18in., 3/-; other sizes made.—Below.

ATHER Knee Grips with oval pads, 5/6 pair, carriage paid; cash refunded not approved.— ,

ATHER Leggings to measure; illustrated list and instructions free from makers.—County Legging Franchise St., Perry Barr, Birmingham. [3355

RGAINS.—Reliable mechanical horns, complete H.B. fittings, very loud, 8/6, postage 1/-.

OT Pumps, folding stirrup, long connection, 3/-, postage 9d; above brand new.—Wem Motor Co., , Salop. [4546

NKS Carburetters.—Large stock ready for immediate delivery.—Booths Motories, Halifax.

NKS Carburetters.—We specialise in these; all models supplied.—Booths Motories, Halifax.

NKS Carburetters.—We take your old carburetter in exchange.—Booths Motories, Halifax.

NKS Carburetters for Douglas, Scott, Indians, Harley-Davidsons, Triumphs. — Booths Motories, ax.

NKS Carburetters enable your engine to tick over; try one.—Booths Motories, Halifax.

NKS Carburetters save petrol and give more power.—Booths Motories, Halifax.

NKS Carburetters.—Let us take your old carburetter in exchange.—Booths Motories, Halifax.

W Sidecar Wheels 19/9, hubs 10/6, rims 5/9, sidecar blades with valance 8/9, with stays and 19/9, springs 12/6, 2¼ or 2½ tyres 17/6.— is Motories, Halifax.

AGNETOS, Bosch and C.A.V., weatherproof, cheap; magneto for Douglas, 45/-. — Booths ries, Halifax.

0 CARBURETTERS.—Nearly new 1920 carburetters; B.S.A., 38/6; Brown and Barlow jet, 45/-; double lever Amac, 45/-; automatic , 32/6; Capac for Douglas, 32/6; 1921 models c, 38/6; Flexi and S.U. for Douglases, 30/-; good n and Barlows and Amacs, 22/6; 1920 Binks, carriage 1/3 extra.—Booths Motories, Portland . Halifax. [5145

# LOOK

**We still lead the way to Tyre Bargains. WOOD-MILNE guaranteed Brand New. Not Clearance or Blemished.**

| | | |
|---|---|---|
| 26×2½<br>26×2½ o.s.<br>650×65 | Special Three Ply | 13/6 |
| 26×2½ | Extra Heavy Four Ply | 16/6 |
| 26×2½ to fit 2¼ rims | Grooved and Ribbed, best English make | 24/9 |
| 26×2½ | Moseley Heavy Ribbed (w.d.) | 19/6 |
| 26×2¾ | Dunlop Retreaded Grooved Covers on Dunlop Casings | 19/6 |
| 28×3 | Fisk (American) Four Ply Extra Heavy Rubber Non-Skid to fit Am'r'can Rims | 45/- |

**NEW TUBES** (in all sizes), 7/-.
1/- extra carriage paid, passenger train. Other Tyre bargains. Price List on application.
**MOTOR CYCLING HELMETS** (1922 Patterns). Illustrated List on application.
**NEW RUBBER THIGH BOOTS, 12/-.** Car. 1/- extra

**H. EMANUEL & CO.,**
(TYRE FACTORS),
**27, Belgrade Road,**
**STOKE NEWINGTON, N.16**
Stores: 37a, Balls Pond Road
DALSTON, LONDON, N
Telephone: Dalston 2161.

# HOMAC'S
MOTOR AGENTS

## SPECIAL OFFER.

1921 **A.J.S.,** 2¾ h.p., 3 speeds, clutch and kick-starter, brand new and unused; list price, £95 **£80 0**
1921 **RUDGE,** 3½ h.p., T.T. bars, brand new and unused; list price, £85; reduced to ..... **£75 0**

### SECOND-HAND (Guaranteed).

1920 **A.J.S.,** 6 h.p. Combination, Lucas dynamo, hood, screen, speedometer, spare wheel, mileage 1,300 ..... **£165 0**
1920 **DOUGLAS,** 2¾ h.p., 3 speeds, clutch and kick-starter, all on, under 500, as new ..... **£72 0**
1916 **DOUGLAS,** 2¾ h.p., 2 speeds, fully equipped, fine order ..... **£42 10**
1920 **NORTON,** 4 h.p., T.T. model, all lamps, speedometer, etc., mileage 500, guaranteed 70 m.p.h. ..... **£70 0**
**SINGER** Combination, 4½ h.p., 2 speeds, countershaft, starter, all-chain drive ..... **£50 0**
1920 **TRIUMPH** Combination, Lucas lamps, Cameo screen, guaranteed perfect ..... **£100 0**
1919 (Sept.) **TRIUMPH,** latest gear change, Lucas lamps, speedometer, discs, splendid order .... **£83 0**
1919 **TRIUMPH-GLORIA** Combination, fully equipped, all new tyres, guaranteed ..... **£90 0**
**ZENITH** Combination, 4 h.p. J.A.P., fully equipped, excellent order ..... **£65 0**

### CYCLE CARS.

190 **MORGAN G.P.,** Aero, special sports M.A.G., engine, fully equipped, guaranteed perfect ..**£150 0**
1919 **MORGAN G.P.,** Monocar, special 10 12 h.p., o.h.v. J.A.P., Aero body, speedometer, rev. counter, guaranteed 70 m.p.h. ..... **£150 0**
1914 **MORGAN G.P.,** equipped, excellent order .... **£90 0**
1915 **BABY PEUGEOT,** 3 speeds and reverse, large outside exhaust through bonnet, equipped, tyres as new ..... **£110 0**
1922 **MORGANS** ..... from **£150 to £200**

**Write for detailed List.**
**243, LOWER CLAPTON ROAD, N.E.**
'Phone: "Dalston 2408."

## PARTS AND ACCESSORIES.

GRADO Kick Start Gear, brand new; first £3/15 has it.—99, Sirdar Rd., Wood Green, N. [4608

BINKS, 1921, for 2¾h.p. Douglas, little used; 45/-. —Bowyer, 27, Lynn Rd., Ely, Cambs. [4687

LAMPS.—P. and H., Miller, and others, brand new, complete sets, at half-price.—Below.

SPEEDOMETERS.—Cowey trip and ordinary, new; £3/10 and £3.—Below.

MECHANICAL Horns.—Cowey, E.A., Klaxon, and many others, all new, and at half-price.—198, Gt. Portland St., W.1. [5156

BASTONES.—Grado Malti pulley, with kick starter, less control handle and bracket; £3/10.

BASTONES.—Set of 4 wheels, 26×2¼×2½, wheels with front and back axle for cycle car; £5.

BASTONES.—Bowden front brakes, complete, 11/- and 15/-; Bowden magneto control, 11/-.—228, Peatonville Rd., King's Cross, London, N.1. Tel.: 2481 North. [5134

PULLEY Gears.—N.S.U., fit Triumphs, £5; K.S. Grado, £4/10; Philipson, Rover, £4.—Below.

WOULD you like a modern 2 or 3-speed K.S. hox? If so, write for particulars of exchange. Prices are keen. Second-hand Sturmey, 3-speed, £11/15; Albion plain model, £4/10; Roc 2-speed, £3/5; Albion 2-speed, K.S., £7/10.—Below.

3-SPEED Hubs.—Armstrong Mark VII. £8, Mark VI. £7/10; 2-speed Roc, £4/10; J.S. Sturmey, £10; all guaranteed perfect and complete controls; every spare stocked.—Below.

PREMIER Spares.—cylinder and piston, £3/10, perfect; crank case, 3½h.p. £2/10, 2½h.p. £2; connecting rod, 17/6; cam wheels, unused, 12/6; pinions, 6/-; 3½h.p. frame, £4/10; Druids to suit, £3; every Premier 3½h.p. part stocked.—Below.

2½h.p. Clyno Spares.—Brand new 2-speed engine, with 2-speed combined, £12/10; connecting rods, 12/6; pistons, 15/-; sliding gears, 7/6; gear wheels, crankshafts, etc. Traders, write for prices.—Below.

REX Spares.—6h.p. cylinders, £2/5; m.o.i.v., £3; 3½h.p. cylinders, 55/-; flywheels, 30/- pair. Camwheels, tanks, frames, forks, connecting rods, etc. Practically every Rex part stocked.—Sydney Pearson, Gate House, Cheylesmore, Coventry. 'Phone: 1639. [X5313

INDIAN 7h.p. Clutch Sprockets, 10/6; back plates, 5/6.—Mylam, 197, London Rd., Croydon. [4718

F.R.S. Head Lamp and generator, brand new, 5in.: £2.—Gauntlett, Montpellier, Cheltenham. [4668

GRADO Gear, 60/-; small, 55/-; kick start, £5; exchanges.—Box 8,206, c/o *The Motor Cycle.* [5222

FIT New Wires to Your Carburetter: 50ft. 1/3, post free.—Edwards, 277, Camberwell Rd., S.E. [5309

GEAR Box, 3-speed and clutch, latest type; price £12/10.—Sinclair, 32, Charing Cross, London. [2595

DOUGLAS 2¾h.p. Unused W.D. Spares; bargain prices; illustrated lists free.—McNeille and Platt.

DOUGLAS 3½h.p. 1914 Unused W.D. Spares; bargain prices; lists free.—McNeille and Platt.

DOUGLAS 4h.p. Unused W.D. Spares; bargain prices; illustrated lists free.—McNeille and Platt.

RUDGE, Scott, B.S.A. new unused W.D. spares; bargain prices; illustrated lists free.—McNeille and Platt.

ZENITH 3½-4h.p. Unused W.D Spares; bargain prices; illustrated lists free.—McNeille and Platt.

CARRIAGE Extra. Cash returned if not satisfied. All spares sent per return.—McNeille and Platt, 57, Great George St., Liverpool. 'Phone: 1092 Royal. [4144

CENTRAL Garage.—All Douglas spares in stock; see our display advt.; your enquiries solicited.

WE Also Undertake Overhauls and Repairs (by experts). — Send your machine to us at 302, London Rd., Thornton Heath. [4767

STURMEY-ARCHER Gear Boxes, brand new; in stock.—County Engineering Co., Hounslow. [0518

CONNECTING Rods, brand new, for Fords, 7/- each, post free.—Edwardes, 277, Camberwell Rd., S.E.5. [5311

PHILIPSON Pulley, new Triumph, £5/10; saddle, 10/-; B.B., 20/-.—Box 8,205, c/o *The Motor Cycle.* [5221

2¾h.p. Douglas Crankshafts, guaranteed true and perfect; 25/-; approval.—Dowell, Pyrford, Surrey. [4987

PISTON Rings, best quality, all sizes; 2/-.—Denham and Bottomley, 220, Manningham Lane, Bradford. [X5303

BINKS 3-jet Carburetter, complete, Amac, 25/-; goatskin waistcoat, 10/-.—20, Skellbank, Ripon. [X5155

REMY Magdynamo, off Harley, £5; electric horn, 10/-.—2, Fortune Gate Rd., Harlesden, N.W. [4969

LIGHTWEIGHT Frame with 1921 T.D.C. engine; £17.—Hamilton, Woodside, Fourmarks, Hants. [4642

BINKS Carburetter, latest model, 1¼in. inlet, as new, spare jets; 50/-.—Hudson, 56, Gordon Rd., Ealing. [4611

## PARTS AND ACCESSORIES.

UNUSED Lamp Sets: Lucas lamps with Miller generator and brackets, 32/6; Miller sets, 24/6.—Below.

OLD Sidecar, rusty, less tyre, £1; 2¾h.p. Douglas frame, sound, £3; 1915 2¾h.p. Douglas engine, complete mag. carburetter, £12/10; Auto-Wheel complete, £6; Douglas, faulty, £8/10.—Below.

2¾h.p. Douglas Engine, gear, etc., unused, new Palmers, 1921 C.A.V.; £48.—Simpson, Orchard Rd., Sunbury-on-Thames. [4982

ALBION 2-speed Countershaft, complete with controls, £4/10; with clutch and kick-starter, £8/10.—Below.

STURMEY-ARCHER 3-speed Countershafts, good condition, £11/10; new, £16.—Below.

B. and B. Carburetters, lightweights, pilot, and taper, needle jet (new); 30/-.—Below.

CHAINS, new Renold, ½×¼in., 4/6 ft.; ⅝×¼, 5/- ft.; ⅝×⅜, 5/6 ft.; spring and cranked links, 1/- each.—Below.

HANDLE-BAR Mitts, black, waterproof, lined fleece; 8/6 pair.—Firth, Woodbridge Rd., Moseley, Birmingham. [X5278

P. and M.—Incomplete machines, £17/10; 1918 machines, renovated as new, £50, guaranteed.—Below.

P. and M.—Engines, £7/10; gears, £5; lerks, 70/-; tanks, 15/-; wheels, 35/- pair.—Below.

P. and M.—All new. Magnetos, 45/-; chain case, 5/6; chain case sets, 32/6; saddles, 25/-; valves, 5/-; piston rings, 1/-; bushes, 1/-; drip feeds, 10/6; frames, 25/-; footrest rubbers, 2/- pair; valve caps, 4/6.—Below.

P. and M.—New tyres, 17/6. All spares stocked. Immediate delivery. Enquiries, stamp, please.—Below.

P. and M.—The Specialist and Agent, Lewis M. Inman, Durham Rd., Seaforth, Liverpool. 'Phone: Waterloo 296. [3595

ROC 2-speed Wheel, with back half and all controls, suitable for Alldays, Quadrant, Campion-Jap, etc.—Below.

1912-13 Humber Roc 2-speed, Rex 1914-15 front fork stem, and shackle, all complete, all overhauled at orks, equal to new, guaranteed, write for prices.—Connolly, Carmelite Rd., Coventry. [X5312

CLYNO Gear Box, £5; Bransome sidecar, £7/10; new waterproof suit, 32/-.—79, Tottenhall Rd., Palmer's Green. [4953

BINKS Carburetter, 1921, suit Triumph, complete, perfect; approval; 55/-.—Stephen Cossham, Cirencester. [4707

TRIUMPH Brand New Pistons, complete, 18/6; cylinders with guides, 75/6; exhaust valves, 4/-.—Below.

BACK Carriers, 14/-; silencers, 12/6; back stands, 12/6; chain cases, 12/6.—Below.

BROOKS B150 and B170 Saddles, like new, 25/-; springs, 1/6; Triumph seat-pillars, 2/3.—Below.

SATISFACTION, or cash returned in full.—Harvey's Garage, 47, South Lambeth Rd., S.W.8 (near Vauxhall Station). [4853

4h.p. Douglas Spares, new ball races, gear box parts, clutch parts, all nuts, bolts, springs, washers, etc.—Below.

P. and M. Spares, every part in stock, cheap.—R. G. Gamble and Co., 13, Somers Mews, Cambridge Terrace, Edgware Rd., W.2. Tel.: Paddington 899. [4974

TRIUMPH and Premier Spares, new and second-hand, most varied assortment in the world.—Forfield (below)

TRIUMPH 1914 Tanks, complete with fittings and drip feed, 58/6.—Forfield (below).

TRIUMPH Forks, complete, 1908-14, £2/19/6; ditto, 1915-21, £3/19/6; girders, 18/6.—Forfield (below).

TRIUMPH Carburetters, 15/-, 20/-, 30/-, and 36/6; front guards, wide bottom, 16/-.—Forfield (below).

TRIUMPH Type Extra Wide Tanks, complete, new, 2½ gallons, 60/-.—Forfield (below).

TRIUMPH Driving Sprockets, 8/-; chains, 6/-; pistons, complete, new, 20/-.—Forfield (below).

TRIUMPH Parts for any year's model, new or second-hand, quoted on request.—Forfield (below).

TRIUMPH Riders.—We are supplying a special large 2½ gallon tank for this machine, old tank taken in part payment. Write for full particulars.—Forfield (below).

3-SPEED Armstrong Wheels and Controls, £4; ditto, Sturmey, £4; Premier forks complete, £3.—Forfield (below).

PREMIER.—Every part in stock, cheapest in the trade; lightning despatch. Write us your requirements, quotation by return.—Forfield (below).

PREMIER, J.A.P., Douglas, B.S.A., Singer, Rex, and P. and M. spares; Triumph and Premier repairs a speciality.—Tel.: 631.—Forfield Motors, Forfield Place, Leamington Spa. [X5260


# SO EASY TO FIT!

You can equip your machine with a

# 'WATTALITE'

LIGHTING AND GENERATING SET

Just as easily as you can fit a speedometer.

¶ It has the same flexible shaft drive direct from the wheel. It can, therefore, be quickly and easily adapted to *any* machine. ¶ This is only one of many advantages which the "Wattalite" possesses.

¶ Write for details to the Sole Concessionnaires, as below:

*Agency Proposals Cordially Invited.*

*London County and Export Agents for—*

"REX-ACME,"
"EDMUND,"
"NEW SCALE"
(BLACKBURNE).

*Manufacturers of—*

The "HOLROYD" SPORTS Model.

HOLROYD

(THE "BLACKBURNE" EXPERTS)

**Motors, 6, Warwick Street, Regent St., London, W 1**

Telephone - - - - - - Regent 554.

# Pistons and piston rings, gudgeon pins, etc.

## Cylinders reground

and fitted with new pistons from **30/-**

Pistons only from **15/-** ea.
Gudgeon Pins from **2/-** ea.
Piston Rings from **1/-** ea.

Special terms for quantities.
Trade enquiries invited.

Two of our many unsolicited testimonials received.

Melksham, Oct. 20th, 1921.

"I duly received my Cylinder, which you despatched in answer to my 'phone message. I have assembled same, and put it through a good test during the last week-end. I am pleased to inform you it is at least 25% better than before. I thank you for the care taken and the promptness with which you executed the order."—T.S.

Ruabon, Oct. 20, 1921.

"I have received new Piston, etc. I am quite pleased with the job. Thanking you for the prompt attention and good work"—R.M.R.

**WILLIAMS & JAMES,**
ENGINEERS AND MANUFACTURERS
Telephone. 808
**GLOUCESTER.**


## PARTS AND ACCESSORIES.

SEND for our Helmet and Tyre Price List.—Ema and Co., Tyre Factors, 37a, Balls Pond Dalston, N.1. [C

P. and M. Engine, frame, gear, tank, saddle, bar bars, late; £11 the lot.—1, Springfield Park C Catford. S.E.6. [4

STEWART Mechanical Horn, also Tan-Sad pil seat, brand new; what offers?—Box 8,199, *The Motor Cycle*. [4

BANCROFTIAN Co. have the following shop-s articles, which were in their windows be removal, to clear:

TYRES. Manufacturers' clearance stocks, not W although clearance they are new and perf Wood-Milne extra heavy 4-ply, 26×2¼ 25/-, 26: 27/6. 28×3 30/-, 700×80 30/-, 650×65 27/6, 26: combination 35/-, all clean and wrapped in orig packing; Pedley 26×2¼ 3-ribbed, 25/-; Hutchi extra heavy 3-ribbed, 700×75 for Indian, or 700 or 750×65 for Americel machines, 35/-; 650×65 s studded car type, 65/-, original £6/6; Firestone 2 Auto-wheel, 21/-, original 45/-; tube, 6/6; Palmer, 2 light 22/6, 650×65 cord 42/-, 26×2½ cord 42/-; O 650×65 ribbed square tread, heavy, in original pack 27/6, original 45/-; Clincher de Luxe, very he 28×2½ 35/-, 28×2, 32/6, 26×2¼ 37/6; 26×2 Ju de Luxe 22/6, 26×1¾ 17/6; Dreadnought Passe A Won, 28×3, 50/-; Hutchinson wired edge co 26×2½ and 26×2¼, 30/- each.

TUBES.—24×2¼ 4/6, 24×2 4/6, 26×2¼ 5/6, 26: 5/9, 28×3 extra heavy 7/6, 700×80 7/6.

BELTS.—Clincher clearance line, but unused, W.D., ¾in., 6ft. 6in. 8/6, 7ft. 6in. 9/10, 10/6; ⅞in., 7ft. 6in. 12/3, 8ft. 6in. 14/-; 1in., 7ft. 16/-, 8ft. 17/-; 1⅛in., 7ft. 18/-, 8ft. 20/6, 8ft. 21/6; Bates short lengths, ¾in., 5ft. 4/6, 5ft. 5/-; ⅞in., 4ft. 6in. 5/-, 5ft. 5/6, 5ft. 6in. 6/-; 4ft. 6in. 6/3, 5ft. 7/-, 5ft. 6in. 7/9; leather b ¾in., at 2/6 per ft.; belt fasteners, 9d. and postage 1/- extra.

SPEEDOMETERS.—Cowey with trip, £5; Ste with trip (£6/6 model), £5; Jones with £3/19/6; all unused and perfect. All speedometer placements in stock.

CARBURETTERS.—Amac and B. and B., 55/-, used. Replacement parts in stock.

SIDECAR Bodies, few left.—Conchbnit, best qu £6/17/6, original price £12/12.

TAN-SADS with back seat, 28/6, original price only limited quantity.

MIRRORS.—Concave 4in., 8/6, original 12/9; Bi made, and very best quality.

GOGGLES.—Genuine Triplex., 45/- model, 17/6; model, 13/6; they are new and perfect.

GLOVES.—Leather, wool-lined, to clear 4/11, worth 10/6; only limited quantity.

CHAINS.—Clearance Renolds, ¾×7-16in. 7/6, ⅝× 6/3, ⅜×¼in. 5/10, ½×¼in. 5/2, ½×⅜in. 4/7 foot.

WATERPROOF Suits.—Less than pre-war p Great purchase of manufacturers' stock, co ing of double-breasted coats with belts, storm and collars, and seatless trousers with gussets, p fasteners, and leather-bound seats. Finest quality heavy double texture waterproof material, dark i new and fresh, only been made recently, not perished W.D., our price £2/2 to clear, postage extra, could not be bought elsewhere under £4/10; greatest bargain ever offered. Order immediatel save disappointment. All stock sizes.

SOLDERING Apparatus.—A combined soldering and blow-lamp. The most marvellous inven Solid brass, 10in. long, not a toy, but a useful No motorist should be without one. Yo can do own soldering without any trouble—nipples to and other small repairs to motor cycles. You will time and expense. Only a limited quantity. now to save disappointment, as they can neve repeated again; 4/8, post free; original price 10

WE Can Supply Everything for the motor cycli competitive prices.—Bancroftian Co., 78, Bis gate, London. 'Grams: Chaikel, London. 'Ph London 9897. [

7-9h.p. Indian Senspray, £10; Armstrong Mark 3-speed gear, £4; Lucas dynamo, £5.—Fr College Av., Slough. [

REAR Portion of Rever T.T. Model, rear and wheels, fitted with Dunlop heavy tyres; 31, Silver St., Enfield. [

3½h.p. Rudge Horizontal Frames, centre and 32 30/-; back stands, 4/6; attachment plates, back carriers, 5/-.—Below.

4h.p. Douglas Spares: cylinders, front and rear, plete with valve guides, 22/-; crankshafts, pistons, 10/-; camshafts, 15/-; timing wheels, 5/-; e crank cases, top section, 30/-; middle, 25/-; bo 50/-; 1916 short fork spindles, 1/-; all are new carriage paid.—Burge, 36, Oak St., Southport. [X

SCOTT Spares.—New gears, £11; all gear p radiators from £2.—Cathedral Motor Works Gt. George St., Liverpool.

## PARTS AND ACCESSORIES.

LEC JACKSON for Nortons, Sunbeams, Ariels, Martinsydes, Massey-Arrans, Calthorpes, New erials, etc.

LEC JACKSON, Sturmey-Archer gear stockist Repairs while you wait.

LEC JACKSON for Norton Parts.

LEC JACKSON.—This week's specials for cash: 1920 (Aug.) 3¾h.p. Scott, in beautiful condition, £56; 1916 3½h.p. T.T. Norton, in beautiful con-n, any trial, £43/10; 1920 B.S.A., special T.T ipson pulley, as new throughout, very fast, £46/10

LEC JACKSON.—New Imperial gear box, new, 3-speed, £8/15/6; Binks carburetter, 1⅛in. inlet. 0; new Sturmey-Archer gear box, £14; Clyno piston, lightweight, 12/6; new Bowden wire, per 100ft. good sidecar chassis, complete, £1/18/6; 650×65 ar wheel and spindle, £1; Druid forks, less stem springs, for Norton 3½h.p., £1/9/6; leather driving es, lined lambswool, special, per pair 3/6; new large s foot pumps, 4/- each.

LEC JACKSON.—Norton parts: Rear wheel for No. 9, £1/10; rear stand, 10/-; footrests for No. 9, ; special 1916 guaranteed Brooklands special 3½h.p ton engine, with magneto, carburetter, and engine es, with sprocket or left pulley, £24; Norton front el, 26×2½, £1/5; Norton T.T. bars, 12/6; 1916 on frame, countershaft, chain-cum-belt, as new, £9; wheel for same, £2; 1921 16H tank, as new, £3; Sturmey-Archer gear box, 3-speed, £14; 1914 4h.p. ton frame, £4; pair T.T. mudguards, £1; pair 16H t forks, £3/2; rear carrier, 16H, 14/6; rear stand, ; Brooks racing saddle, as new, £2/5/6; Brooks saddle, £1/10; Norton exhaust pipe, 12/6. Write any Norton part you require. Carriage extra. Cash all orders.—Alec Jackson, Norton Specialist, East ade, Keighley. [4022

AINLESS Steel Valves banish all valve trouble; any pattern; 10/- each, post free.—Capacity Eng Broseley, Shropshire. [5036

MP Connections, new, 22in. long by ½in., braided and swivel end, 1/-, post free; bargain.—Edwardes, Camberwell Rd., S.E.5. [5312

YNO Parts: Frames, wheels, engine parts, to be cleared at very low prices.

RRY Spring Links, 5/- pair; aluminium foot-boards, 10/- pair; Brampton forks, 60/-. New s.

)/- MAGNETOS, Splitdorf, anti, single, as new; Bosch latest waterproof, single, anti, . All magnetos guaranteed.

ANDLE-BARS: Clyno, 7/6; P. and M., 10/-; Douglas semi-T.T., 11/-.

ONEY Returned if not satisfied. Carriage extra. Reduction for quantities.

.J.C. Motor Co., 5, Addison Av., Holland Park, W.11. Park 2071. [5077

ILLENNIUM Fit-all 2-speed Gear, good condition; £3, or best offer.—Harris, Kirkleigh, Minehead. [5092

PEED Armstroug Wheel, complete controls; £5/15, bargain.—11, Pretoria Av., Waltham- [5128

OYAL RUBY Frames; Ruby, Enfield, and Clyno spares.—Pugh Engineering Works, Shirley Rd., rdon. [5105

B.C. Crankshaft, 30/-; Enfield rear hubs, 15/-; Zenith rear mudguards, 15/-; pistons, every e, at 10/-.

HEELS, fronts 25/-, rears 40/-; P. and M. gears. 60/-; cylinder, 40/-; gear lever, 7/6. We have y part in stock, and at the lowest prices.

OTBOARDS, 10/- per pair; American X rear sprockets, 17/6; Pengeot cyls., 20/-; carburetter, ac, B. and B., 40/-, Claudel 50/-; 1912 Clyno wheel, 40/-; Rover silent chain and sprocket, ; F.N, 2¾ induction pipe, 15/-; tanks renovated akers' colours, Triumph, Douglas, B.S.A., Enfield, ; 2¾ Douglas gear box, £4/10; B.S.A. belt rim, . Stamped envelope reply. Closed at 1 p.m. on rsday.—Phone: Putney 1652.—Britnell Bros., 5, High St., Fulham. [5071

J.S. Gear Box, 3-speed, K.S., as new, £12/10; also 1921 frame, tank, drip-feed, back stays, £8.—23, att Av., Wood Green. [4948

p. Sturmey 3-speed Wheel, tyre, tube, £5; N.S.U. gears, parts missing, 30/-; offers. — Greenside, ghton Rd., Darlington. [4740

LYNO Spares, 50% below cost. Write requirements; stamp, please.—Claridge's, Clyno Specialists, 8, ndos Rd., Redland, Bristol [4694

NUSED Jukes 3-speed K.S. Gear Box, £10; front axle, wheel, frame, etc., for cycle car, £5.—St. Mary's Rd., Sheffield. X5185

and M. Aluminium Chain Covers, with caps and back guard, silver polished, 29/- set, postage 1/3; neto chain covers, 4/6.—Below.

OTBOARDS.—P. and M.'s and Triumph, 10/6 pair, postage 1/-; any type made.—Below.

MBER Plates, cast aluminium, silver polished letters and border, 10/6 pair; car size, 12/6 and —Towler, Thorn St., Burnley. [4691


# Leave it to the "Best"

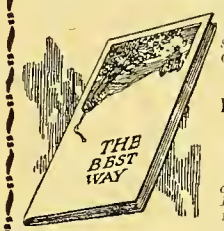
WHY not forget all about your lubrication and leave it to the

# BEST AUTOMATIC OIL PUMP

*Less Oil-Better Running*

One user says—"It is the cheapest and most useful accessory I have purchased in 15 years of motor cycling."

It costs only 25/6—plus cost of fitting. It cuts down oil bill 30% to 50% and provides perfect lubrication with its attendant advantages.




*The Patentees, Sole Makers, and Guarantors are—*

**BEST & LLOYD, Ltd.**
**Handsworth, Birmingham.**

*Let us send you a copy of his Free Booklet which tells you all about it*



# REYS

**173, Gt. Portland Street.**

*Telephone—Langham 1257*

## HIRE

Motor Cycles and Combinations.
Any period from one day
**A GOOD SELECTION OF 1922**

## MODELS IN STOCK

*Easy Payments taken on New Machines, and Exchanges Entertained.*

### SECOND-HAND MACHINES.

1919 **ZENITH,** sports, 6 h.p., with Sidecar and all accessories ..... **£85**
1920 **LEA-FRANCIS** and Sidecar, all acces. **£110**
1918 **HARLEY-DAVIDSON** ..... **£85**
1919 2¾ h.p. **NEW IMPERIAL,** 2-speed, clutch, and kick-starter..... **£50**
1919 **TRIUMPH,** all accessories ..... **£80**
1921 **MARTINSYDE** Combination, all acces. **£110**
1921 6 h.p. **NEW IMPERIAL** Combination, all accessories ..... **£105**
1921 8 h.p. **NEW IMPERIAL** Combination, all accessories ..... **£110**
1921 2¾ h.p. **COULSON,** all accessories.... **£68**
1920 4-speed **A.B.C.,** as new, all accessories **£75**
1920 **HENDERSON** and Sidecar, all acces. **£125**
1921 **ENFIELD,** 2-speed, 2-stroke, all accessories ..... **£32**

G N.'S, COVENTRY PREMIERS, MORGANS, and ROVERS IN STOCK.

**REPAIRS.**

**Good Machines taken in for Sale on Commission**

*New Imperial Spare Parts Stockists.*


## PARTS AND ACCESSORIES.

COPPER Exhaust Pipe (solid copper tubing), polished, all sizes stocked; straight, from 2/3 foot. Bending a speciality.—Evans.

TRIUMPH Pipes, special offer, complete with clip; long copper 14/6, steel 13/-, plated 18/-.—Evans.

DOUGLAS, 2¾h.p.; copper 12/6 pair, steel 10/-. —Evans.

RUDGE, Sunbeam, Rover, Norton, copper 20/-, steel 16/-; New Imperial, Omega, Levis, etc., copper 14/-, steel 10/6; all T.T. bends.—Evans.

MUFFLER Ends (Norton pattern), detachable, fish-tailed, various sizes stocked, from 2/6.—Evans.

FOOTBOARDS, solid aluminium, upcurved front and heel piece, with adjustable clips, 15/- pair; with fittings for Douglas, 15/-; for Triumph, 16/-.—Evans.

TOOL Boxes, armoured, suit Triumph, etc., 10/9 pair; with locks, 13/- pair.—Evans.

HANDLE-BARS, plated, Triumph pattern, W.D. or D.R., ⅞in. 14/-, 1in. 15/-.—Evans.

LEGSHIELDS, suit all machines, enamelled and gold lined, complete 13/6 pair; aluminium, 15/- pair. —Evans.

WHEELS from 42/- pair; to suit standard Triumph, rear 60/-, front 30/- complete; specials built to order; any parts supplied.—Evans.

BELT Rims.—Standard Triumph 10/6; any size to order 16/6; tyre rims, 10/6; spring forks from 50/-.—Evans

CARRIAGE Free, cash with order, discount to trade. —Evans Bros., Brougham St., Heckley, Birmingham. [X5280

P. and M. Engines, £6; gears, £2/15; frames, £1/10; mudguards, 12/-; carriers, 14/-; set 40 spokes and nipples, 6/-, new.—Below.

P. and M. Lubricators, 17/-; tank caps, 1/9 each; valve caps, 3/6; footrest rubbers, 2/- pair; brake pedals, 4/-; magneto chain covers, 4/6; handle-bars, 10/-.—Below.

P. and M. Chains, set of 3 £1/5; chain cases, good, £1/5 set, spring forks complete, £2/10 set, magneto with sprocket and chain, £2/5; carburetter, £1/15; toolbags, 5/6; sidecar mudguards, 10/-.—Below.

P. and M. 43-tooth Rear Sprockets, 12/6; legshields with fittings, 15/-; silencers with rear pipe similar to 1921 model, 17/-.—Below.

SILENCERS.—Harley-Davidson, with rear extension pipe, 17/6; cast aluminium silencers for large twin, 17/-; single, 15/-; 2-stroke and lightweight, 10/6; all rear pipes fitted.—Below.

CHAINS.—P. and M., set of 3, £1/5; Douglas 2¾h.p., 4/6; 4h.p., 5/6; Triumph, 5/6; others 2/- ft., good condition.—Below.

SADDLES.—P. and M., Douglas, Triumph, etc., 17/6. re-covered, good.—Below.

ACCUMULATORS, 4 volt 20 amps., new, in case, 14/-; 6 volt, £1.—Below.

DOUGLAS 2¾h.p. Frames, complete with front forks, £3/15; gear boxes, £4; cylinders, 10/-; wheels, rear £1/5, front £1; carburetters, £1/5; silencers, 12/6; handle-bars, 10/6.—Below.

CARBURETTERS.—Amac, B.B., Senspray, £1/10; Douglas, £1/5.—Below.

LEVERS.—Magneto, 4/-; carburetter, 5/6; clutch and brake, 5/6.—Below.

ELECTRIC Lighting Set, has 4 volt accumulator, new in case, 5in. aluminium head light, aluminium tail light, and wires, £1/15, complete. All cheques and M.O.'s should be crossed.—Motor Cycle Accessory Co., 868a, Old Kent Rd., London, S.E. [5295

85×70mm. Pistons, for J.A.P. engines, 9/- each.—Automotive Spares, Ltd., 178, King's Rd., Chelsea, S.W.3. Tel.: Kensington 255. [3851

GENUINE Douglas Patent Leather Mudshields with attachments, noiseless; 5/-; postage 1/-.—Baskerville, School Rd., Hale, Cheshire. [4930

ARIEL Engine and Frame, with De Dion engine complete, new mag. and bearings, drop frame; bargain, £20.—Gibbs, High St., Burnham, Bucks. [4613

BINKS, 1921, 1¼, perfect, spare jets, 57/6; A.O. dynamo, off Douglas, 22/6; Austin pillion seat, 8/6; Tan-Sad, £1.—25, East St., Taunton. [4664

BINKS Carburetter (1921) fits 2¾h.p Douglas, perfect, 55/-; 8 spare jets and tuning instructions.—Jennings, 100, High St., Tooting, S.W. [4909

FLEXIBLE Hot Air and Exhaust Tube; bend by hand, no heat required; list.—Ribbans, 6, Scotland Green Rd., Tonders End, Middlesex. [4541

CROWN Adjustable Pulleys: Triumphs, Humbers, Bradburys, Premiers, B.S.A.'s, Precisions, 17/6; J.A.P.s, 19/6; Douglases, 25/-.—Ridington.

MAGNETO Sprockets, 7-tooth to 24-tooth; engine, chain, and hub sprocket manufacturers.—Ridington.

LIGHTER Flints, 10d. doz., 3 doz. 1/9, 5/- gross. —Ridington, 202-4, Southampton St., Camberwell. [3311

# RATCLIFFE BROS.

**200, GT. PORTLAND ST., W**

'Phone—Langham 1704.

Any make of machine can be supplied on our Payment out of Income Scheme. Write for full particulars, and state machine you are interested in.

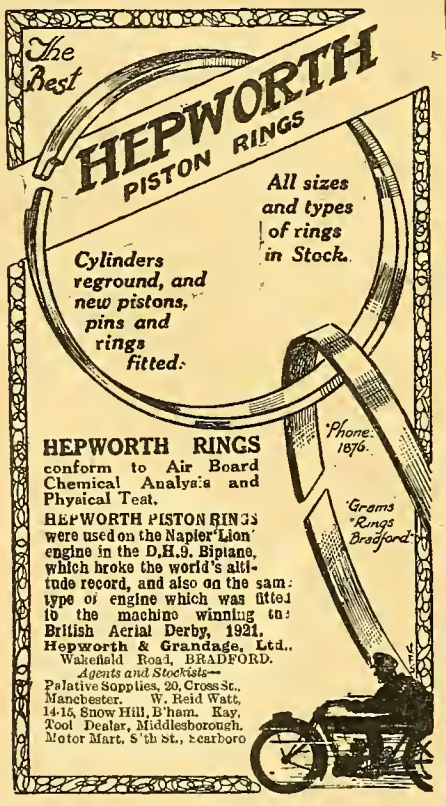
## 1922 MACHINES IN STOCK.

| | |
|---|---|
| B.S.A. 4¼ h.p. K.2., Solo ... .. .. | £107 |
| B.S.A. 4¼ h.p., H.2. „ .. .. .. | £110 |
| B.S.A. K.2., with box carrier .. | £139 |
| B.S.A. model "E" combination .. | £164 |
| DOUGLAS, 2-speed, fully equipped | £75 |
| DOUGLAS, 3-speed „ | £90 |
| DOUGLAS 4 h.p. Combination .. | £135 |
| ENFIELD model No. 200 .. .. | £155 |
| „ „ No. 190 .. .. | £158 |
| „ „ No. 180 .. .. | £140 |
| MATCHLESS combination .. .. | £170 |
| RALEIGH 5·6 h.p. Solo .. .. | £130 |
| RUDGE, I.O.M. .. .. .. .. | £85 |
| SUNBEAM 4¼ h.p. Solo .. | £141 15 |
| TRIUMPH model H. .. .. .. | £105 |
| TRIUMPH model S.D. .. .. | £115 |
| ZENITH BRADSHAW.. .. .. | £113 |

**MILLFORD, CANOELET, HENDERSON, SWAN and MONTGOMERY SIDECARS in Stock.**

TRADE SUPPLIED.






**HEPWORTH RINGS** conform to Air Board Chemical Analysis and Physical Test.

HEPWORTH PISTON RINGS were used on the Napier 'Lion' engine in the D.H.9. Biplane, which broke the world's altitude record, and also on the same type of engine which was fitted to the machine winning the British Aerial Derby, 1921.

**Hepworth & Grandage, Ltd.,**
Wakefield Road, BRADFORD.

*Agents and Stockists—*
Palative Supplies, 20, Cross St., Manchester. W. Reid Watt, 14-15, Snow Hill, B'ham. Kay, Tool Dealer, Middlesborough. Motor Mart, S'th st., Scarboro


## PARTS AND ACCESSORIES.

SPEEDOMETERS complete from 45/-, guaranteed; repairs executed.—J. W. Robins, Speedometer Specialist, 97, Latchmere Rd., Battersea. [3147

DASHBOARD Lamps, with bulbs and 2 yards flex. 1 sample carriage paid 1/6, 12 carriage paid 10/6, and 100 carriage paid 80/-.—Below.

ANGLE Valves to fit standing part of any standard sized M.B. or car valves, 2 carriage paid 2/- or 100 75/-.—Below.

STEERING Wheels, 12in. central bore, ¾in. aeroplane type, 3/- delivered, lots of 6 delivered 15/-.—Below.

WASHERS, engineer's bright steel, sample set 6d., one gross (mixed) 2/-, 10 lb. 11/6, carriage paid. Size of bore and weight per gross, i.e.:

1/8 IN.=2 oz., 3-16in.=3 oz., 7-32in.= 6 oz., ¼in.=7 oz.

5/16 IN.=15 oz., ⅜in.=22 oz., 7-16in.=26½ oz., ½in.=2 lb.

LOTS of 28 lb. at 20/-, 112 lb. lots at 60/-, rail forward.

N.B.—The same washers plated, 25% extra.

TERMS Nett Cash. Satisfaction or cash returned if requested within 21 days.

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 877. [0699

150 SCREWS, nuts, washers, set screws, 3/-; 144 bright steel bolts, 2/6; 72 bright hexagon nuts, 2/6.—See below.

72 BEST Spring Washers, 3-16in. to ½in., 1/9; 36 castle nuts, ¼in. to ½in., 1/9.—See below.

144 Coppered Bifurcated Rivets, 8d.; 12 8in. hacksaw blades, 1/6; any of the above carriage paid.—Wood, Tithebarn St., Preston. [X4769

GEAR Box, Sturmey 3-speed, clutch, kick starter, 1921, slightly used, guaranteed perfect; £14.—James, '46, Chaucer Rd., London, S.E.24. [X5247

ARIEL Twin Engine, 8h.p., Senspray, Bosch, frame, handle-bars, Druid forks, tank, 2 wheels; offers any part?—512, Lordship Lane, Dulwich, S.E. [4725

SPRING Frame, P.V., enamel and plating excellent, complete less engine; £12/10; particulars, stamp.—F. Crapper, 74, Albert Terrace Rd., Sheffield. [4710

P. and M. Mudguards, pair 25/-; tank, 15/-; frame, 35/-; timing covers, 20/-; inverted levers, 9/-; new front brakes, 27/6; stands, 12/6.—Below.

P. and M. Exhaust Cap and compression tap for priming, 5/-; complete inlet caps, 3/6.—Specialist, 147, Burlington St., Liverpool. [4383

P. and M. Gears, £3; engines and tool bags, 4/6; handle-bars, 7/6; tail pieces, 5/6; mudguards, 17/-; hacks, 7/6. I have every part P. and M.

P. and M. Sidecar Chassis, stoved, enamelled, plated fittings, £4/10; approval against cash.—Welding Co., 55, St. James Rd., Bermondsey. [5277

TYRES.—Wood-Milne special, regular stock, 26×2¼ and 26×2½, 13/6; tubes, endless, 26×2¼ 6/-, 26×2½ 6/9, 28×3 5/6. All above post free.—Below.

OILSKIN Combination Suits, Pegamoid brand, will not stick, new, surplus Government, complete with sou'-wester; 16/6, post 1/-.—Below.

AIRMEN'S Leather Flying Coats, ideal for motor cycling; 65/-, post free; state height when ordering.—Below.

PLUGS, W.D.—Lodge, K.L.G., and A.C. Titan; 1/9; all brand new, in makers' boxes; postage, one 4d., two 6d., twelve 1/3.—Below.

ELECTRIC Torches, new, as issued to officers, 11½in. long, nickel-plated fittings, hull's-eye lens; 3/9 complete, usual price 14/6, postage 9d.—Below.

WATCHES aeroplane 8-day, fully jewelled and compensated, £2, originally cost £8, post free; aluminium dashboard holders for above, 3/6, post free.—Below.

FOUNTAIN Pens, self-filling, lever type, screwed cap, 14-carat gold nib; 5/-, post free, wonderful value.—Below.

ALL above goods sent on receipt of cash; money returned in full if not approved.—The Woodside Motor Co., 4, Station Buildings, Wondside, S.E.25. [5033

LONG Exhaust Pipes, direct from engine, in copper or nickel-plated steel, for all make of machines; standard sets, with detachable muffles, from 21/-.—Below.

DISCS, in polished aluminium or light steel, from 15/- per wheel; leg shields, in polished aluminium or light steel, from 17/6 per wheel.—Mersey Disc Co., 34, Sutton St., Warrington. [1165

MAGNETO, off Rudge, £2; carburetter, Brown and Barlow, pilot jet, 25/-; Brown 3½h.p. engine, mechanical valves, 35/-.—Burdett, Cycle Depot, Market Harborough. [X5281

MORGAN.—Owners write for illustrated list describing the Hall "5 second jack." Designed for the Morgan. Quick, simple, efficient.—S. Hall, 91, St. Peter's St., St. Albans. [4617


# JULIAN'S OF READING

## UNIQUE RECORD.

**W. JULIAN**

is the ONLY COMPETITOR in the sidecar classes to gain

## GOLD MEDALS

in each of the last four long distance M.C.C. Reliability Trials.

As in Competition—so in Business.

## Absolute Reliability.

S. JULIAN also gained **GOLD MEDAL** in London-Exeter Trial.

**H. JULIAN,**
**84, Broad Street**
**READING.** 'Phon 1024.



*Are you interested in*

## *LIGHT CARS?*

Readers of "The Motor Cycle who are considering the purchase of a small car will find all the information they desire in the pages of

*The Autocar*

Every Friday. FOURPENCE.

"THE AUTOCAR" deals with *every* phase of motoring, and very fully covers the small car movement.

All the known makes of light cars are advertised in "THE AUTOCAR."

Bargains in second-hand light cars are more likely to be secured through "THE AUTOCAR" than any other medium

Because—

**More second-hand light cars are offered for sale in "THE AUTOCAR" than in any other motor journal.**

Published by
Iliffe & Sons Ltd., Dorset House, Tudor St., London, E.C.4.

THE MOTOR CYCLE

ESTABLISHED IN 1903

FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist Fleet, London." *Telephone.* City 2848 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* Autopress, Birmingham. *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Ilife, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.: Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## The Sidecar and the Small Car.

SPEAKING recently at a gathering where he was the guest of honour of keen motor cyclists, a prominent member of the motor car industry astonished his hosts by expressing the opinion that the sidecar is doomed. Everyone is, of course, entitled to his opinion, but there are times when its expression may be out of place, especially when it suggests exploitation of personal interests. The speaker in question, after stating that he could not imagine anyone riding in a sidecar if he could command a car, and suggesting that the time was near at hand when a small car would take the place of the sidecar outfit, made no secret of the fact that he was interested in a projected cheap small car.

Undoubtedly there is a big market for cheap and light four-wheelers, but those who would revolutionise economical motoring have a long way to go before it can be said that the end of the sidecar is in sight. Certain it is, very cheap cars will not appeal to those who hitherto have purchased the most elaborate type of sidecar, for such motor cyclists are in a class by themselves and may only be compared with those in the automobile world who buy the most elaborate car. If ever low-priced four-wheelers rob the motor cycle world of its purchasers, then their price and performance must approximate to those of certain sidecars which are sold on price.

The pride of possession factor is invariably overlooked by those who predict the doom of the sidecar, perhaps for the reason that it does not play the same part in the purchase of a car as is the case where a motor cycle is concerned. There are very few sidecars on the road to-day which are not owned by keen enthusiasts. On the other hand, a very large number of car owners are interested only in the ability of their vehicles to carry them from one place to another, ignoring the general efficiency of the machine.

Those who forecast the end of the sidecar are usually those who have had little experience with sidecars and regard them as uncomfortable and unmechanical machines tolerated by their owners only for want of a four-wheeler within range of their purses. Motor cyclists know this view to be erroneous. Nevertheless, the statements to which we have referred are not calculated to help the motor cycle industry, because the speaker was a public figure of sufficient importance for his remarks to be quoted *extenso* in the lay Press and read by many who may be tempted to defer purchasing a sidecar until the mystery vehicle appears.

## F.I.C.M. Weight Limits.

WE have several times urged that the various F.I.C.M. regulations—especially those referring to weight limits—be revised. Under the present arrangement motor cycles competing in such events as the Tourist Trophy Races and the A.C.U. Trials have to conform to these regulations, which include absurd weight limits. That weight limits may be necessary is agreed, but to impose *minimum* weights which exceed those of motor cycles sold to the public is futile, and it is not uncommon for machines to carry weight to bring them up to the F.I.C.M. limits.

A minimum weight limit may have been necessary on the Continent at a time when 1,000 c.c. machines weighed less than present-day 250 c.c. lightweights, but, in view of latter-day knowledge of metals, manufacturers are not likely to jeopardise their chances of success by building extremely light machines which are unsafe.

If there is a reasonable argument why a minimum weight limit is to be retained, then the same argument should apply to cycle cars, which, for international competitions, have to conform to a definition which includes a *maximum* weight limit.

An index to the advertisements in this issue will be found on the page facing the back cover.

## Club Propaganda.

THE Cardiff M.C.C. are propaganda experts, and amuse themselves during the winter by trying to attract new members. They issue a ragtime broadsheet which is published in the local papers, and is interesting because it does not contain one solitary morsel of fact; it is pure leg-pulling from start to finish, and is written to show outsiders what sort of company they may expect if they join up. Thus:

Lectures.—"Landmarks within 100 Miles." (Many little-known inns are shown off the beaten course where nourishment may be obtained at all hours. A list of Sunday openers is given gratis, with quickest routes thereto, and a list of passwords.)

Exchanges.—An allotment and a washstand for a Morgan or other cycle car.

A euphonium, five rose trees, and dress suit for good sidecar outfit.

1,000,003 Russian roubles and 500 local shipping shares for good lightweight.

He goat, harmonium, and case of stuffed birds for a small four-seater.

I must really go and lecture to this club on the velocity, composition, and consumption of mixture.

## Running a One-day Trial.

SOME weeks ago I appealed to the clubs to advertise their trials in the villages along the routes, as the locals love watching our struggles, and will be of great help as route marshals if they are informed of the date and hour. An official of that very live body, the Sheffield and Hallamshire Club, sends me a copy of the instructions issued to the staff for a one-day trial held in the summer, from which I see that plenty of advertisement was done along the route. With a shudder I cull the following paragraph:

"If the river is dry on Friday, get it dammed to one foot deep."

I call this simply pusillanimous for a Yorkshire club. Why not three feet?

## My New Role.

AFTER road trouble one day (broken crankshaft, I think), I dived into a train in motion, and, to my joy espied a magazine left on the seat by some departed passenger. My hopes of mental refreshment during an irksome non-stop were rebuffed when I found the journal was *Blue Bells* (or words to that effect) and its principal contributor a certain "Aunt Rosie," who advised fair readers what immediate action to apply if they spotted Bertie taking another maiden to the cinema. To-day I find myself compelled to play a similar rôle. The flapper who flaps on the bracket of a reader signing himself "Big Four" is tired of her parrot perch, and yearns for a 'bus of her own. "Big Four" promptly procured a sheaf of folders describing the best baby two-stroke. Not a bit of it. Miranda insists on a sports model of not less than 500 c.c. This time "Big Four" has come to the right man. I have *often* been there. There are two modes of action, the *suaviter in modo* (otherwise, the velvet glove) and the *fortiter in re* (otherwise, the iron hand). The iron hand policy consists simply and solely of getting another flapper. "Big Four" informs me in a lugubrious postscript that he has thought of this only to reject it (he has my sympathy, whether he is alluding to compromising letters, or to the fact that, like Little Willie in front of Verdun, he is too deeply engaged to withdraw). The velvet glove (cheer up, "Big Four"!) consists of borrowing . . . well, this almost needs a paragraph to itself.

## The Velvet Glove.

LET "Big Four" procure an extremely large 'bus—998 c.c., if possible. Let him carefully detune it so far as to make starting difficult. A wide plug gap. Air leaks at every joint in the induction pipe. No. 3 spirit in the tank. Seccotine in the oil tank. Let him then select a day on which the temperature is low and the sky overcast. Let the road then be taken. "Big Four" will start the lady's 'bus at the outset (a surreptitious injection of methyl ether is recommended). The lady must then be tempted to a scrap, and allowed to get the better of it. Within a mile or so "Big Four" must allow himself to be left, whereupon he will lay bare his rear tube, unscrew and remove the tyre valve therefrom. This will give him a strafe-proof excuse to push home. The lady will be left wrestling with the unstartable 7-9 h.p., scaling some 3 cwt. When she finally returns, she will be in an extremely chastened condition, and it will be found that, for the future, she prefers a Levis Popular to anything on wheels.

Personally, I do not commend such mean-spirited handling of a restive damosel. I believe in beginning as you mean to go on—in getting the girl properly to heel right at the outset. But as "Big Four" is clearly only about 0.35 of a man, he may prefer the latter of my two alternatives.

## Secret Switches.

ISN'T it courting trouble to fit motor cycles with any gadget which shrieks aloud "I am a switch"?

Not the least convenience of motor cycles, as compared with other motor vehicles, is that the bicycle occupies so little room that one can leave it anywhere. But if the top tube boasts a polished aluminium or mahogany instrument board adorned

**Occasional Comments.—**

with two or three tumbler switches, every urchin who comes along is sure to light the lamps and blow the horn; and if the machine is stored in a public garage, few mechanics can be trusted to refrain from utilising its lamps on occasion. It is quite easy to devise secret switches for both lamps and hooter; a rotatable lamp fitting will serve to turn on the light (Hunt's have already applied this dodge), and a twist-grip would make an admirable hooter switch. Of course, such ideas may get known even to the street arab in the course of time, but at the worst they would be a partial safeguard. Nothing is more demoralising than to sit down to a good lunch in a road house, and halfway through the soup to hear a continuous ear-piercing screech from one's hooter, when the battery is known to be rather on the low side. Failing secret switches, a removable plug such as figured on ancient ignition systems would be better than nothing.

### Diagnosed!

IN the old days when we depended on accumulators for ignition purposes, we all carried voltmeters or testing lamps. To-day, few of us own such gadgets, and electrical tests are correspondingly difficult. The other day, my accumulator lighting set chipped out miles from anywhere. Pitch darkness. No help available or to be expected. An unknown road. A fair, but futile, companion. I began to feel much as Ludendorff felt in October, 1918. (Electrical engineers should not read the following confession.) My accumulator was carried astern, and two wires ran forward from it to a switchboard. A limited supply of matches and sensitive fingers were my sole resources. I traced the battery wires to the switchboard, struck a match, seized a pocket knife, and used it to make two or three rapid "shorts" between the terminals of the battery wires. No spark. Then I hied me to the tail of the machine, and made a similar ruthless experiment across the terminals of the battery itself. No spark. Then I struck another match and closely inspected the permanent bridge between the two cells. One of its piers was cracked clean across. Felt in my pocket. Unearthed a piece of stout string. Lashed that fractured bridge hard down on its pier. Switched on. Brilliant light. Home rejoicing.

### Puzzling.

THE other day my new engine developed an intensive fit of the sulks. It had never been a good one, and at last I reluctantly took it down miles before treatment should have been necessary. The piston rings of both pistons were jammed in their grooves with the gaps closed right up. There was no carbon or dirt of any sort in the grooves or on the rings, and the inference was that the rings had originally been fitted so tight that they had never opened when the pistons were inserted into the cylinders. If the fit was originally correct, the cast iron pistons must have "grown." Funny, wasn't it, but pistons do grow, you know.

THE TOUCH OF WINTER.

A snapshot taken in "leafy" Warwickshire after the blizzard last week. Beautiful as was the effect, the thick snow was not appreciated by the motor cyclist who has to travel day by day and in all weathers.

# Famous Scottish Hills

THE INVERFARIGAIG CORKSCREW

## A Commentary on the best-known Hills in the Highlands

THE organisers of the Scottish Trials are singularly fortunate in that they can leave out plenty of the worst hills which they know, and yet confront their entry with a couple of climbs daily for a week, any one of which is perfectly capable of spoiling a clean sheet for a good rider. This is true if the weather chances to be fine; when the weather is atrocious the hills are naturally still more "chancy."

Pride of place goes unquestionably to the Pass of the Cattle, the five miles up and five miles down between Tornapress and Applecross, a mountain road which would be world-famous if it were not so remarkably inaccessible. If this hill and its surrounding scenery could be bodily translated to within fifty miles of Coventry or Birmingham, it would benefit the motor industry as profoundly as Brooklands track has already done; and it would be a place of resort for every tourist in Great Britain. Crags, lochs, eagles, and deer relieve a massive landscape which is almost overpowering in its splendour.

Technically the hill—especially the climb from the Jeantown side—ruthlessly searches out and punishes any weakness in an engine. Standard cars often spout boiling water like a Yellowstone Park geyser in their effort to surmount it, and may take years off the life of their brakes in the descent. Any motor cycle engine which has the least tendency to distort will hammer as if Thor's anvil were working on a rush job. To sum up the approach side tersely, you begin with four miles of collar work which can be done on top gear if you are a deft driver with a first-class engine under you, but which will demand lots of second gear from the ordinary touring duffer. The last mile includes lots of 1 in 5; has patches of the kind of surface which makes you bite the tip off your tongue; and contains three hairpins which cause cars to reverse, and are equal to un-

APPLECROSS. A hill that ruthlessly searches out and punishes any weakness in an engine.

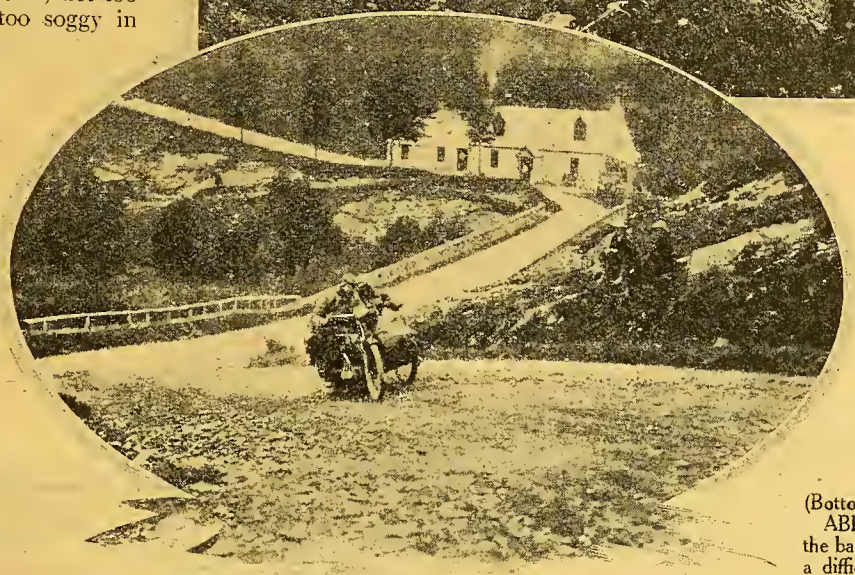
**Famous Scottish Hills—**

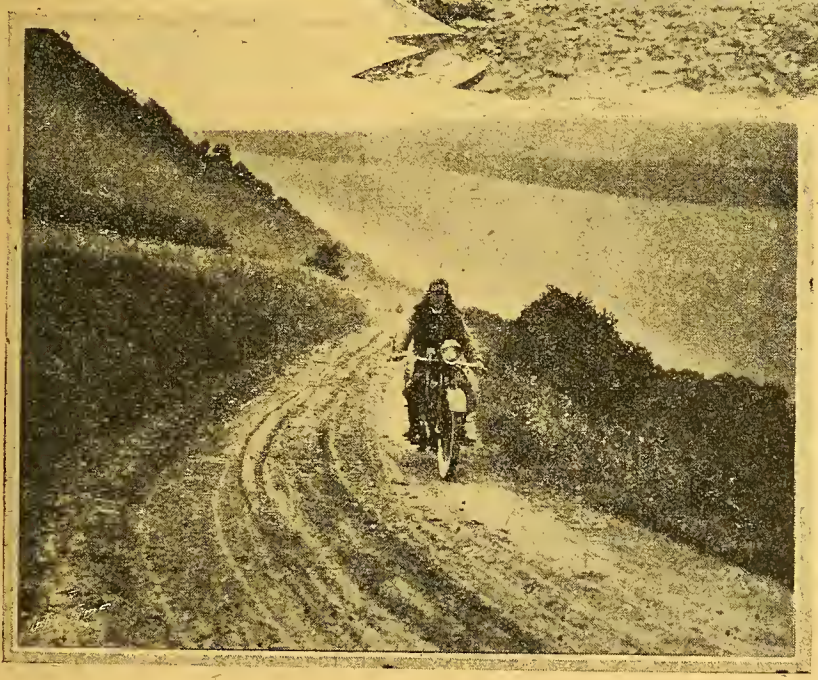
saddling a first-class solo rider if the Highland "haar" fills the air, and prevents you seeing in advance when and how the road intends to twist back on itself. The further side is a similar ascent of less severity. There is no climbing test in these islands which approaches the Pass of the Cattle.

For a trick hill, up which even a George Dance could hardly guarantee to make an absolutely clean climb at the first time of asking, or at any time of asking on a wet day, commend me to Inverfarigaig Corkscrew. A narrow road, barely wide enough for a Morgan, is scooped out of the sheer face of a pine wood, so steep that the loops mostly boast 1 in 5 hairpins; and there are seven or eight of them. At each side of the road is a narrow track of sandyish turf, not too firm on a dry day, not too soggy in rain. Up the centre is a trough, two or three feet wide and perhaps 9in. deep, of loose sand, which seldom becomes really muddy, but never hardens.

The problem is to cross the trough between each pair of hairpins, for they must all be negotiated on the outside if your knee is to clear your bar when the helm is put hard over. A few plunges and an anxious patch of wheelslip are the least you can escape with if you cross the central trough clumsily. If you take the hairpins fast, and you boggle your steering at the corners, a comical failure is your lot. Sidecars and cycle cars are very easily capsized on two of the bends, even by trials experts. It is emphatically a hill on which to be a spectator rather than a competitor, and if you can climb it with your feet firm on your rests all the way up, you know how to sit a machine.

Two good practice climbs for ambitious amateurs are to be found at Amulree. The climb from the Crieff side is dear to the Edinburgh Club, whose experts say they never feel quite sure of it. I do not rate it so highly as that myself. There is a lot of rough





(Top.) AMULREE. A difficult climb famous for its awkward and very acute S bend.

(Centre.) BRIG O' BROWN. Between Tomintoul and Carrbridge.

(Bottom.) ABRIACHAN. On the banks of Loch Ness, a difficult hill for sidecars in particular.

**Famous Scottish Hills.—**

collar work before you tackle the famous or infamous S bend, on which the surface is generally in process of decomposition. This makes you skid and wobble, and before you have time to resteady the bus, the second bend is upon you, and is extremely acute. Take it wide and slowly; then there remains half a mile of rough single figure gradient.

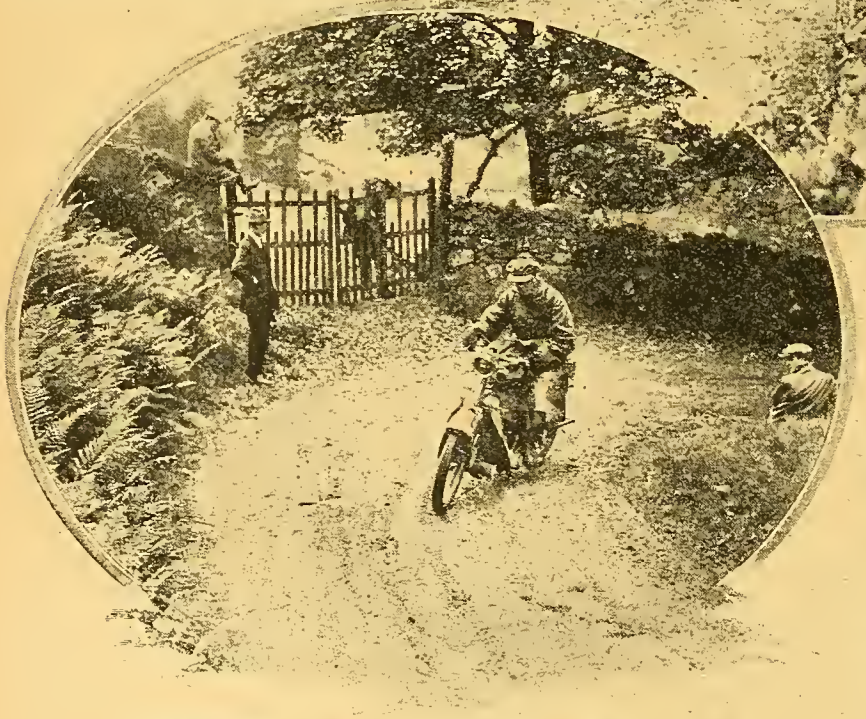
The Kenmore side is stiffer, and has one excessively awkward snag. Just above the worst corner, which is sharp enough in all conscience, a reef of naked rock crosses three-quarters of the road and projects appreciably above it. Your machine is crawling as you round the bend, and, unless you are very lucky, it is also buckjumping. You must regain sufficient control to dodge that reef; otherwise there will be a colossal plunge, and you can thank your stars if the climb does not terminate abruptly there and then. Once past this reef, the rest is plain sailing.

Cockbridge Ladder, between Balmoral and Tomintoul, is yet another hill for which the older brigade of Scottish Six Day men have an unfeigned respect. But I rather fancy that this reverence is more concerned with single gears than with the actual severity of the climb. The road is—or was—exceptionally narrow, and winds eternally with mild corners up the slope of an absolutely interminable moor. When the ground rises with the hill, gradient is always deceptive; and there is no downward peep into a dizzy gorge to convince one that the road rises one yard in every half-dozen, so that the engine seems to be seizing. This climb can be greasy in "saft" weather, especially towards the foot, an added terror from which most Scottish climbs are fairly free. I have seen good men and true conk out on this climb, or jolt clean off the road into the heather, or upset their sidecars. But an inner instinct assures me that it is not really very formidable on a modern machine.

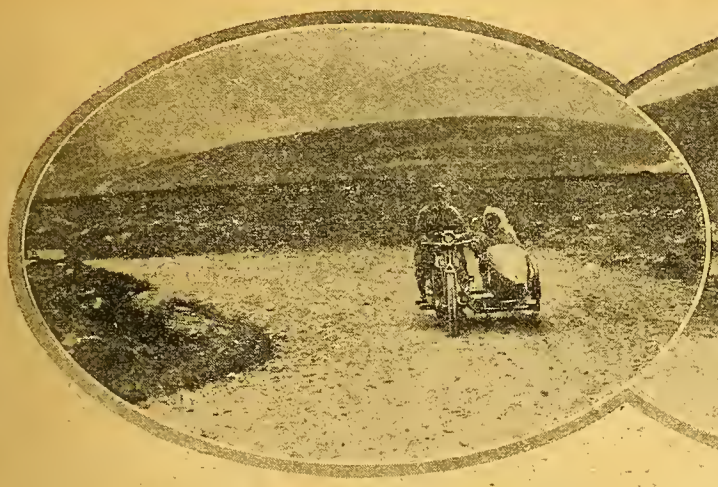
In either drizzle or downpour the Scottish clubs can readily list the sort of hill on which a stoppage robs you of your gold, for some of their hills boast very deep and lengthy patches of pale fawn-coloured powder, which looks like sand on a sunny day, but proves that it is only pulverised earth by relapsing into the stodgiest porridge when it is wet.

Abriachan is a good example. Last summer it was coated with seven or eight inches of browny-grey dust at its worst corner; I have known it be nearly hub deep in a filthy clinging slime, which absolutely nullified tyre grip on the rear wheel of a sidecar and robbed one of steering control on a solo mount. On Trinafour there is a deep corner of the same stuff, round which my bicycle once became absolutely unmanageable on a descent. The latter can be the very stickiest corner I know; but Abriachan is rather terrifying, as a plunge down a deep slope is the penalty of a generous skid.

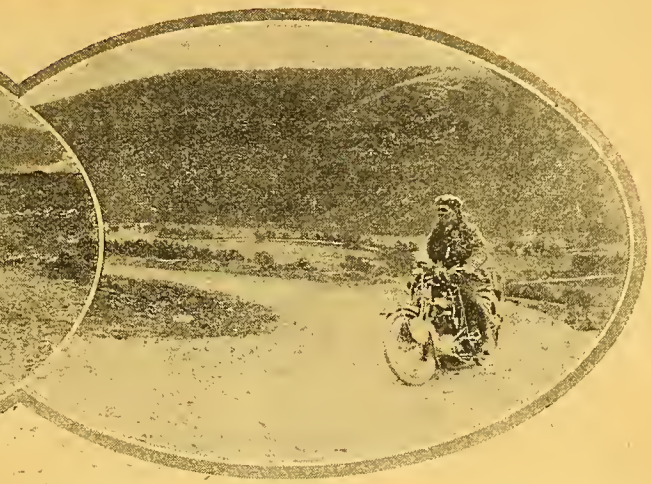
TALLA LINN. A hill, included in the 1920 Scottish Six Days Trials, which proved less formidable than was anticipated.



KENMORE. At the foot of Loch Tay, a rough and twisty hill.



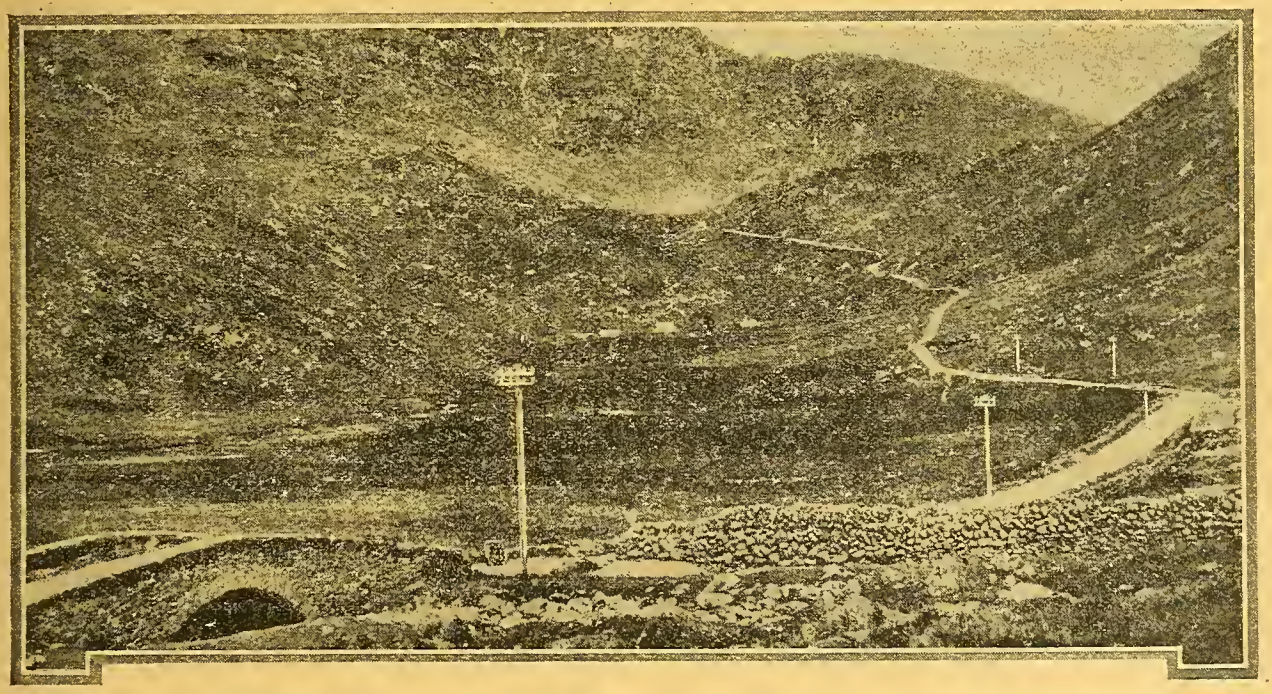
CAIRN-O'-MOUNT. Not a serious test for the modern machine.



TRINAFOUR. Once formidable, but now treated almost with contempt.

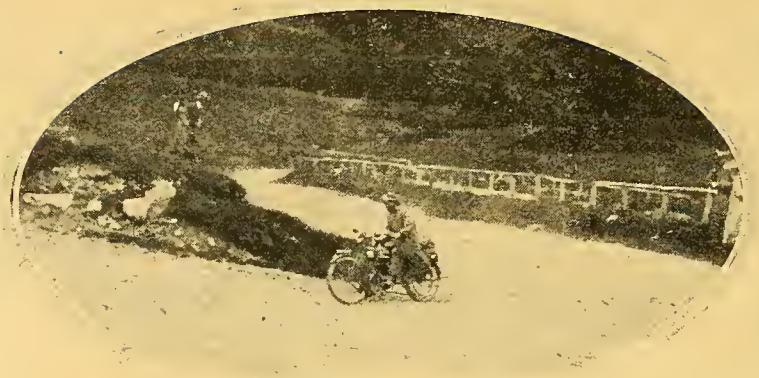
I had almost forgotten "Rest and Be Thankful." There is no excuse, for I once climbed it on a two-speeder with handlebar gear control. The "control" possessed no leverage, and the thrust of the engine was so urgent that the full power of one arm was required to keep low gear engaged. The road was far rougher than it is nowadays, and it is never easy to steer a plunging machine one-handed. Moreover, the sides of the road were littered with sidecars which had heated their cylinder bores egg-shaped. Moreover, the wind was astern, and I dared not stop to rest my aching fingers, for I knew it was touch and go whether my engine might seize before the summit. Nowadays the once invincible "Rest" is a duffer's climb. Some five miles separate the base from the apex, but the gradient is comparatively mild, and the solitary hairpin at the summit is so wide that a tank could take it at speed. But with a single gear and a following wind it used to be a teaser. Ask Allan Hay, who once carried a 2 h.p. lightweight up it at dead of night, with the aid of a Norton rider named Donaldson, and afterwards tramped back to the bottom to help in pushing up the Norton, which had a Brooklands pulley. They reached the night-stop just as the rest of the men were starting breakfast, and much to their credit they replenished with ham and eggs and clocked out on the tick with the rest of us.

Cairn-o'-Mount is seldom heard of nowadays, neither is the Spittal of Glenshee. The latter consists solely of an S bend, which looks most alarming, and lends



REST AND BE THANKFUL. A main road climb and probably more familiar by name than any other Scottish hill.

**Famous Scottish Hills**—itself admirably to the art of the stunt photographer, who can make it look simply frightful on the printed page. But honesty compels us to admit that it is a childish ascent nowadays, and I fear the same is true of Cairn-o'-Mount. But the latter has bitter memories for some of the old brigade who cannot bear to hear it lightly spoken of.



SPITTAL OF GLENSHEE. Known as the "Devil's Elbow"; it was included in the 1912 Scottish 6 Days Trial.

Many of us have climbed Cairn-o'-Mount on single gears. But time was when the moor sank for about 100 yards in the landing which separates the first flight from the upper steps. Local farmers choked up the subsidence with cartloads of rubbish, peat, boulders, turf, and what not. Then the Edinburgh Club put us at it. The aforesaid carts had ploughed two gigantic ruts through the soft litter which floated above the subsidence. Numbers One and Two steered joyfully down the twin ruts. The ruck followed anxiously Presently each rut narrowed, and the foot-rests of the leading men began to foul the high sides. We watched from the rear their increasing wobbles with fear and oaths. Ere long the entire trial was floundering in the litter, cursing as nobody ever cursed before or since. 'Twas not so bad for some of the men, who had two-speed gears. My own gear had seized up solid earlier in the day; and how could I re-start on a grade of 1 in 9? I did re-start — many, many times; but my wind gave out with frantic galloping alongside, and I pushed up the last mile, including the two corners where the grade is fair to middling. Moreover, I was on time at the next check. That is why I am grizzled and short-winded to-day. Cairn-o'-Mount is thus worthy of some respect.

Little Gruinard is a baby hill, only included as a practical joke in Six Day routes. The Edinburgh Club are fond of pleasantries. So year by year they dig out some new hill which not one motor cyclist in a million has ever seen. On the Sunday before the trial they excite the hapless Southron with their national beverage, and then proceed to stuff him up with appalling accounts of the new hills. The result is that he starts the Trials in a very windy condition, and corners like a badly balanced wheelbarrow. But in 1921 the joke was the other way round. The club pathfinders were sent to inspect a suggested hill on a "cauld, cauld neet."

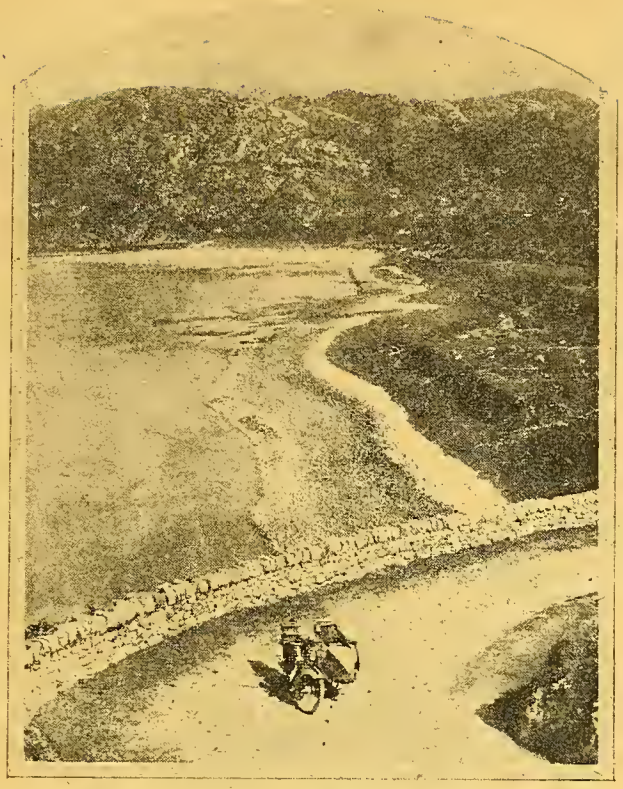
Scotland has a national recipe for averting frostbite and pneumonia. The pathfinders utilised this recipe. When they reached the hill it was dark. The above-mentioned prescription has a well-known effect on the optic nerve. The party screeched slowly up the hill on

GLENDOE. Near Fort Augustus—a scene on the lower and easier portion.

**Famous Scottish Hills—**

bottom gear, and averred to each other that the beam of their headlights was only a few degrees short of the vertical. They returned to Edinburgh genuinely scared about the hill, and recommended that it was really too steep for inclusion. The club treasurer, in view of the high price of gold medals, voted for the hill and orated in its favour. It went into the programme. Being nearly three miles long, some twelve members of the organising club were marooned on that lonely moor to observe the hill. No part of Scotland is technically Pussyfoot, but in practice some areas are remote from licensed premises. This was one. I believe two decrepit machines failed on the hill, but that was nothing to the good, as they could hardly have waddled home if the roads had been dead flat. Anyhow, twelve irate observers will cast a solid block of votes against that hill figuring in any future event that may be held.

This catalogue of terrors, exploded or eternal, may fitly wind up with the name of the first Scottish hill which earned a reputation south of Tweed. Way up north, some forty miles from the finish of the classic End to End record, lies a tiny hamlet in a dip between two mild acclivities. Berriedale is the name of the hamlet, and by Southrons the name is extended to the two slopes which conduct one south towards civilisation or north towards the abomination of desolation.



LITTLE GRUINARD. An easy hill midst magnificent scenery on the coast north of Gairloch.

The early End to End record men had crude engines, cruder transmissions, and single gears. By careful route selection they could dodge every respectable slope between Land's End and John o' Groats, save only Berriedale. On one or other of these slopes, according to the end from which they started, all record aspirants pedalled like mad, till their weary legs were flying round in an invisible blur. They kept up the good work for a mile coming south or half a mile going north. So they had reason to remember Berriedale. When they talked of it in Midland or metropolitan clubs it was eight miles long, and had an average grade of 1 in 3. Hence its ephemeral reputation. Then motors improved, Highland touring came into fashion, we all went up to doff our caps to Berriedale—and roared up on top on half throttle!

B. H. DAVIES.

## MODERN FRAME DESIGN.

ALTHOUGH one often hears the complaint from riders that the main essentials of the modern motor cycle are practically the same as in pre-war machines, there are many recent productions which show that frame design, at least, is changing.

Of the new designs, there are several which are of more than passing interest, and, incidentally, it may be mentioned here that what is accepted as conventional in 1922 was regarded as heterodox as recently as two years ago.

The Beardmore-Precision is an excellent example. When this machine was introduced, it was regarded by many critics as a "peculiar" design, merely because its design differed from the stereotyped form. Excepting for its distinctive mechanical and constructional features, the Beardmore-Precision does not depart from what are accepted as conventional designs. In fact, if the outline of any nicely proportioned machine is sketched upon a piece of tracing paper and laid over a similar sized photograph of the Beardmore, it will be found that they synchronise. Whether this was by accident or design is a moot point.

Another recent design, the Ner-a-Car, is an entirely different proposition. Here conventional motor cycle practice has been entirely ignored, or, perhaps, it is safe to say, avoided. An American design developed in this country, the Ner-a-Car strikes many new notes in motor cycle design. One of its chief characteristics is its remarkably easy steering and balance, the latter due to the low centre of gravity.

The Unibus is another design showing a marked advance on pre-war practice. Unfortunately, perhaps, the design has been confined to a scooter type of vehicle. Anyone who has examined the Unibus at the two Olympia shows where it has been exhibited must have been impressed by its mechanical excellence. Here, again, the outlines produced by evolution were ignored, and one could not say that it suffered on that account.

Among other new designs that are different, the A.B.C., Peters, and Hagg may be mentioned. There are others, and altogether there is every indication that frame design is not being allowed to stagnate.

VEDETTE.

# Club Life Across the Border

## Scottish Clubs and Scottish Riders.

THOUGH there are eleven provincial clubs affiliated to the Scottish Auto Cycle Union, and others which have not yet become affiliated, it cannot truly be said that minor club life in Scotland is such an active success as in the more thickly populated portions of England. There is a very evident reason for this, for Scotland is rich in sports to which the motor cycle forms a useful, indeed, an almost indispensable, adjunct, but which are outside the circle of club control. One finds that almost every motor cyclist north of the Tweed is, for example, a keen fisherman, and fishing can be had almost anywhere in the land of the heather, while the same, of course, applies to shooting. These interests claim a very large proportion of the motor cycle fraternity at times when, in districts less liberally endowed with outdoor interests, the sporting rider is happy to look to the social intercourse of his fellow riders.

### Famous Clubs and Important Events.

It is owing to Scotland's sporting resources that the provincial secretaries and club captains experience some difficulty in marshalling the unanimous interests of their flocks; but it is superfluous to add that there are in Scotland two or three clubs which are keenly alive, and already rightly famous for the excellence of their organisation and the keen interest displayed in their trials.

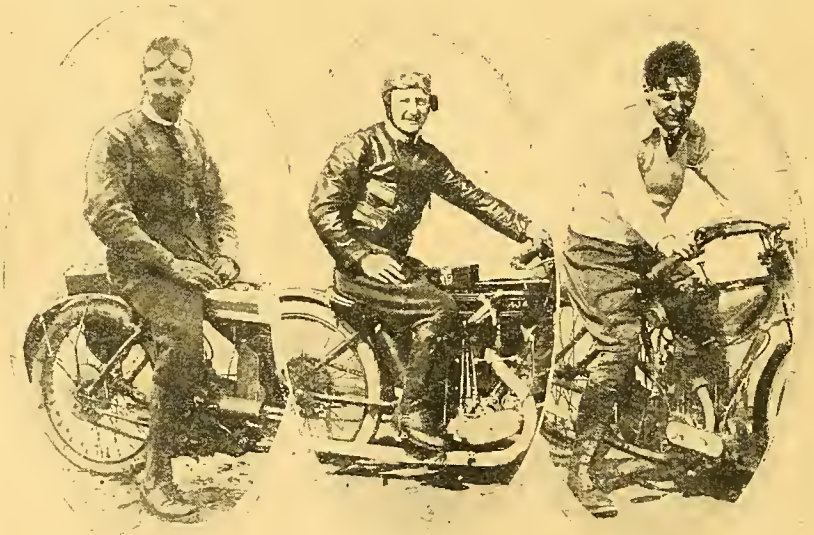
In this direction the Edinburgh and District Motor Club is the oldest and the best known. Campbell McGregor has for a long time stood out as a prominent figure in the organisation of Scottish Trials, and is still Secretary of the Club. As the result of long experience, the Edinburgh Club has found that it is detrimental to the interest displayed to hold events regularly every Saturday, and, accordingly, the Club has adopted the policy of organising fewer events and attaching to each a greater importance.

SCOTTISH SPEED CHAMPIONS FOR 1921.

Heavyweight Class: R. J. Braid (7-9 Indian).

The two most outstanding events of the year organised by Edinburgh are, of course, the Scottish Six Days and the Scottish Two Days. The arrangements for this year's Six Days are well in hand, and the preliminary regulations should be in order very shortly. The trial is to be held the first week in May, and since this early date entails some risk of bad weather, it may be found necessary to have in reserve an alternative and less mountainous course. If the weather is to be worse than we have known it during certain preceding "summer trials" in Scotland, we sincerely hope that the alternative course will not be too Alpine! This year, as last, the plan of doling out the awards on the last day of the trial is to be adhered to.

The Edinburgh Club is blessed in possessing many car members who are keenly interested in the motor cycle events, and whose generous help has everything to do with the success of the big trials.



Medium Weights: J. R. Alexander (3½ Douglas).

Lightweights: A. L. Downie (2⅝ A. J. S.).

"Featherweights": R. W. Wilson. (2¼ Hobart).

### Other Prosperous Clubs.

The Glasgow M.C.C., of which L. C. Hilyer is Secretary, is an old and honoured institution with many able riders among its members; while the Glasgow Western M.C.C. has obtruded itself upon

**Club Life—**

the notice of Northern motor cyclists during the last two or three years. Last year they held a number of important events, many of which were well patronised by English riders; their list was a very full and comprehensive one. Mr. J. Robinson, the secretary, and his host of able satellites, are to be congratulated upon their enterprise, and it is to be hoped that the coming season will see their efforts still further rewarded.

Some of the officials of the Edinburgh M.C., organisers of the Scottish Trials. Messrs. W. Fraser, W. M. Smellie, R. R. White, A. G. Ballantine, Campbell McGregor, R. Dixon, J. Benton and Donald McKay.

We append a list of the more important Scottish motor cycle clubs affiliated to the governing body, together with the names and addresses of their secretaries.

Beith and District M.C.C.
Sec., Robert Balfour, Craigvue, Beith.

Clackmannan County M.C.C.
Sec., John J. Christie, Rosegarth, Tullibody Road, Alloa.

Coatbridge, Airdrie and District M.C.C.
Sec., James Monteath, Kirkland House, Blairhill Road, Cambridge.

Dundee and District M.C.C.
Sec., J. Robertson, 12, Victoria Chambers, Dundee.

Edinburgh and District M.C., Ltd.
Sec, Campbell McGregor, 6, Castle Terrace, Edinburgh.

Falkirk and District M.C.C.
Sec., A. Neilson, Stewartfield, Falkirk.

Glasgow M.C.C.
Sec., L. C. Hilyer, 447, Sauchiehall Street, Glasgow.

Kelso and District M.C.C.
Secs., D. S. Anderson, Greenlea, Kelso; A. F Morse, Ramsay Lodge, Kelso.

Montrose and District M.C.C.
Sec., Arthur D. Jolly, 116, High Street, Montrose.

Western M.C.C., Glasgow.
Sec., J. Robinson, 1, Yarrow Gardens, Kelvinside, Glasgow.

West Fife, M.C.C.
Secs., T D. Gordon Watt, Douglas Street, Dunfermline; W. Joanes, Hospital Hill, Dunfermline.

Scottish riders who are not as yet members of their local organisation should bear in mind that by becoming members they will act not only directly to their own benefit, but will further the strengthening of motor cycle interest.

Frequent Competitors in Scottish Trials, Mrs. Bell (shown in inset) being quite as enthusiastic in trials riding as her husband, Duncan Bell, who is depicted negotiating Glendoe.

### The Scottish Speed Championship.

Passing commentary on Scottish events would not be complete without mention of the Scottish Speed Championship, organised by the S.A.C.U., and held annually at St. Andrews. This is a really excellent contest, and, though a perennial success, it has always been a matter of some disappointment to ourselves that it has received but indifferent support from riders south of the Border. The fact that Scotland has a sufficient number of speed men to make an independent success of the event does not reduce the demand for outside riders, particularly those able Yorkshiremen who are within a full day's journey, and who might add savour to the happenings by vieing with the hardy Scot.

### Scottish Riders.

Turning now to Scot-

**Club Life—**

tish riders, there are so many bright stars, and space permits the mention of so few, that the task is a difficult one. The following names, however, occur immediately to one's memory:—Graeme Black, the Alexander brothers, George Grinton, A. J. C. Lindsay, A. L. and A. F. Downie, Roger Macrae, Claude Duncan, D. S. Milne, R. J. Braid, H. E. Fairley, Duncan and Mrs. Bell, R. Carfrae, W. Deans, J. Steel, W. Morton, and our apologies to those who momentarily escape memory.

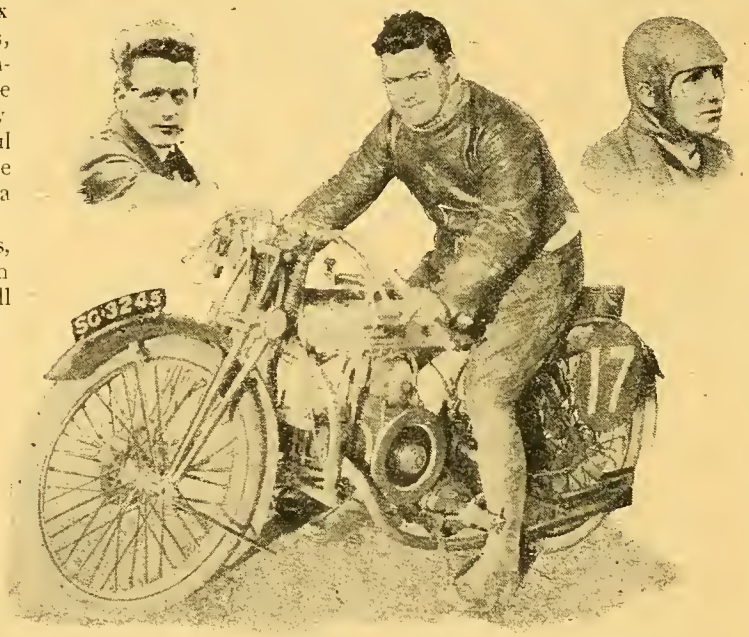
### Hard Riders.

Graeme Black is principally a speed man, and probably deserves the palm for Scotland, though he is very closely rivalled by the Alexander brothers, George Grinton and Alf. Lindsay. The last named sportsman confines himself mainly to reliability events in these days, but he has, of course, put up many excellent speed performances in the past. The same remarks apply to James Alexander, whose record is a most remarkable one, dating far back into pedal cycle days, and the popular James still manages to hold his own in a stiff scrap. A. H. Alexander is a superb speed rider, and "D.S." distinguished himself long ago by riding two laps of the T.T. without a saddle—an illustration of the hardiness of Scottish riders. Grinton generally manages to annex his share of the awards, whether in speed or reliability, north or south of the Border. He is certainly one of the most successful competition riders of the day, his mount being a Harley-Davidson.

The Downie brothers, generally mounted on A.J.S. machines, are all good riders, and have done consistently well in Scottish trials, while Roger Macrae is a dashing rider possessed of a very nice judgment. Claude Duncan has done well in speed and in reliability, and adds to the cheeriness of most Scottish trials, while D. S. Milne, though badly disabled in the war, deserves congratulation on his many successes.

R. J. Braid is an exponent of big twins, and has twice proved a St. Andrews victor; his brother O. C. Braid vies with him closely. Harry Fairley is young, as also is W. Morton, but both are full of promise. Duncan Bell is, of course, well known, and Mrs. Bell has ridden with astounding success in trials so severe that there were but one or two survivors, practically no clean sheets, and a pathetically small demand for premier awards. Among lady competition riders of Great Britain to-day Mrs. Bell holds a very high place.

R. Carfrae, apart from other distinctions, won his way to popular notice as being the sportsman who rode a single-geared Triumph through the Scottish Six Days two seasons back, dismounting at the foot of every observed precipice to cast off superfluous clothing and screw open his belt pulley. W. Deans is a distinguished reliability rider of the west, and J. Steel was a rider of inimitable style till a year or so ago he met with an unusually severe smash, which has since laid him more or less *hors de combat*. May this season see him back on the road again. James Alexander, of Corstorphine (unrelated to the brothers three), has also done well.




POPULAR PERSONALITIES IN SCOTTISH CLUB LIFE.

A. H. Alexander, a Douglas exponent who has an international reputation as a speedman. (Inset, left) D. S. Alexander, the youngest of the three brothers Alexander, a keen T.T. rider and also a trials rider often seen in English events. (Inset, right) George Grinton, a Harley-Davidson enthusiast known on both sides of the border.

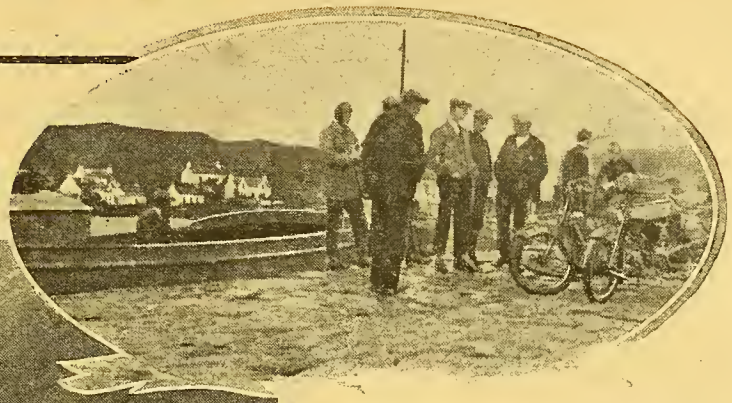
### Scottish Trials.

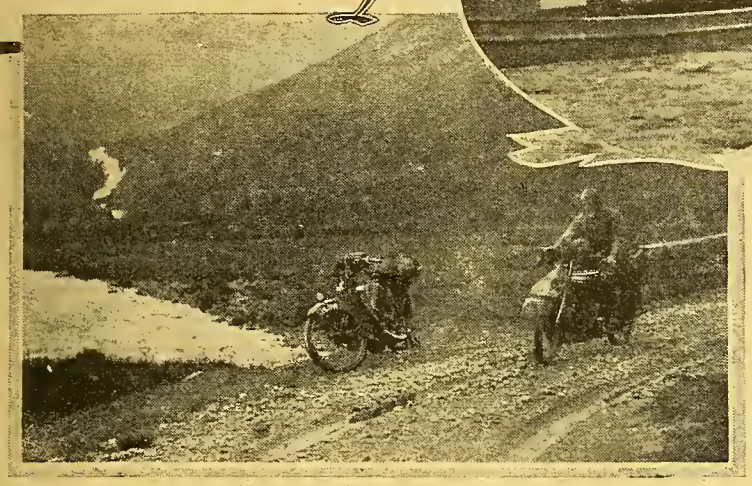
While Scottish trials are unrivalled for magnificence of scenery and a distinct novelty in the way of weather, it must not be thought that their severity is such that only a braw Scottish laddie who was born and nursed at the brink of a giddy precipice stands the faintest chance of survival. We have repeatedly known Englishmen who have never before ridden in any kind of competition to enter the Scottish Six Days in order to see the country, and actually to carry off a premier award. Such a visit at any rate enables one to make the intimate acquaintance of some of the best sportsmen and most generous "officials" in motor cycle circles, and we need only quote the official verdict in disputes, which has all but passed into an adage, "Gie the lad his medal!" H. M B

---

ENGLISH motor cyclists who project tours in Scotland often wonder how they will fare on account of the sparsity of hotels, especially in the Western Highlands. In the touring grounds of England almost every cottage and farm accommodates visitors, but in the Highlands one is practically entirely dependent on the hotels; so should they be full, one is likely to find an *impasse* on occasion. The Highland hotels, however, are commodious and the proprietors obliging.

# To the Isle of Skye





## A Trip on a Scott and a Norton to a Little-known Corner of the British Isles.

(Left) On the rough track near Sligachan.

(Right) About to embark on the ferry at Kyle Akin.

OF all the remote corners of Great Britain there is no spot with such a peculiar fascination of its own as the Isle of Skye. It is a land of waterfalls and peaks and loose soft roads, either grass-grown or cut with an amazing variety of ruts and channels.

"Ski" is a Scandinavian word meaning cloud, and the tourist is well advised to study the weather prevalent in the Western Highlands before setting out on his journey. June is the most reliable month, and the early autumn is preferable to August, for it is then that the heather in Skye seems to glow with a richer colour than elsewhere, striking a glorious contrast with the blue and black tones of the lochs and kyles. It is not a journey to make alone, as at some places one may be thirty miles from assistance or supplies of any description.

### Forebodings!

Our respective mounts were a Scott and a 4 h.p. Norton, and at the outset speculation was rife as to whether it would be the Scott that might have to tow the Norton or *vice versa*. However, no emergency called for the use of our four yards of rope.

Leaving the West Riding of Yorkshire by the Great North Road, from Scotch Corner we followed the valley of the Tees to Alston, the highest town in England, joining the main Carlisle-Stirling route a few miles north of the former place. This route to the north can be highly recommended. The road over Shap, on the west, is at present in bad condition, and on the Carter Fell route in the east there are six miles of absolute horror near Otterburn.

With the exception of Stirling and its environs, the surface was good the whole of the way to the Trossachs, and it was not until we had turned westwards at the summit of the Perth-Inverness railway, along the shore of Loch Laggan, that the roads began to deteriorate. At Spean Bridge the route along the Caledonian Canal was taken as far as Glen Garry and thence over a mountainous track to Cluanie Inn, a spot, according to Dr. Johnson, as remote from the haunts of man as it is possible to find in these islands.

### Primitive Road Repairing.

On this stretch we met two Highlanders repairing the road; one had a pick and the other followed a few yards behind with a rake . . . . From the solo rider's point of view the unrepaired road was far better than that which had been "treated." Fifteen miles further on we halted at the foot of the fearsome "Mam Ratachan," a hill negotiated in the 1920 Scottish Six Days Trials. Here the road winds its tortuous length up a shoulder of Ben Scrial, and a skid on the wet grass near the summit might mean a plunge down sheer one in nothing to the road several hundred feet below. Once over the top one can run free for about five miles down to the peaceful village of Glenelg, where there is a very excellent hotel.

The ferry at this point over Kyle Rhea to Skye was, years ago, the main crossing for all sheep and cattle passing over to the mainland; but now we found the old ferry boat rotting on the seashore and the jetty covered with seaweed and rushes. However, the proprietor of the hotel kindly agreed to take us over in his private motor launch, and after waiting for six hours for the tide to float the craft, we embarked from the seashore with the aid of two stout planks. The motor cycles were securely roped in, a precaution which we found to be quite necessary when we struck the wind driving up the Sound of Sleat.

### "Having Crossed the Rubicon."

In spite of the tide, which was running at a good fifteen miles an hour, an excellent landing was made, and the planks once again did great service in lever-

**To the Isle of Skye.—**

ing the machines over the side of the boat and down on to the jetty.

We bade good-bye to our muscular pilot, and, with the ferry boat a mere speck on the sea and a feeling of having crossed the Rubicon, we started to attack the very stiff gradient in front of us.

The road here very much resembles that at Altnaharrie, on Loch Broom, and commences straight from the water's edge with a gradient of about 1 in 4. In parts this mountain road has been washed away by waterfalls and the gulley filled in with boulders and shingle, but the surface improved somewhat after Glen Arroch as we neared Broadford, a peaceful fishing settlement, the second largest on the Island.

### Motoring and Walking in Skye.

Motorists may be well advised to take a supply of oil into these regions, as, although petrol is obtainable at several points, the only lubricant to be met with seemed to be "Ford oil." With vast panoramas of wild heath and towering peaks, rock-strewn coast and winding inlets, and stretches of placid blue sea, the next fifteen miles of road is remarkably fine.

The fine old inn at Sligachan, the haunt of climbers and anglers, nestling at the foot of Sgurr-na-Gillean (the Peak of the Young Men), the easternmost buttress of the famous Cuillin Hills was finally reached. Here before us lay some of the finest scenery of the whole tour, but it was quite inaccessible as far as a motor cycle was concerned, so we tucked our machines away in the hotel garage and set out on foot.

A word of warning here about garages in the Isle of Skye. 90% of the roofs leak badly, and the writer found, two days too late, that a good half inch of real Scotch rain had dripped on to his carburetter and found its way inside, as rain will.

The best walk from Sligachan is to Loch Coruisk, a sheet of water occupying the crater of an old volcano, a scene of utter desolation and awe, the scene of Bruce's landing in "The Lord of the Isles," and described with great force by many able pens.

At Sligachan the road forks, that to the left, leading to Dunvegan, being the more picturesque and having also the better surface. Midway between Sligachan and Dunvegan is the quaint Struan Inn, where a boat may be hired for the trip to Talisker Head, where the cliffs rise a sheer 1,000ft. from the sea.

### The Capital of the Island.

Dunvegan itself is rather disappointing, the main centre of interest being the Castle and the beautiful wood surrounding it. From Dunvegan the road passes by Loch Snizort to Portree, the capital of Skye. Here is oil and petrol in plenty, and a very useful and diligent blacksmith. After a glorious week of "pottering" about we returned to Kyle Akin and took the ferry across the Kyle of Lochalsh to the mainland, the charge being a modest 2s. 6d.

Ferry charges in Scotland are truly and wonderfully inconsistent, in one place a charge of a shilling or two will be made for quite a big crossing, in others one dare not reckon the ferry tolls in terms of cost per mile, for the result would make an appalling peak in the curve of one's running expenses.

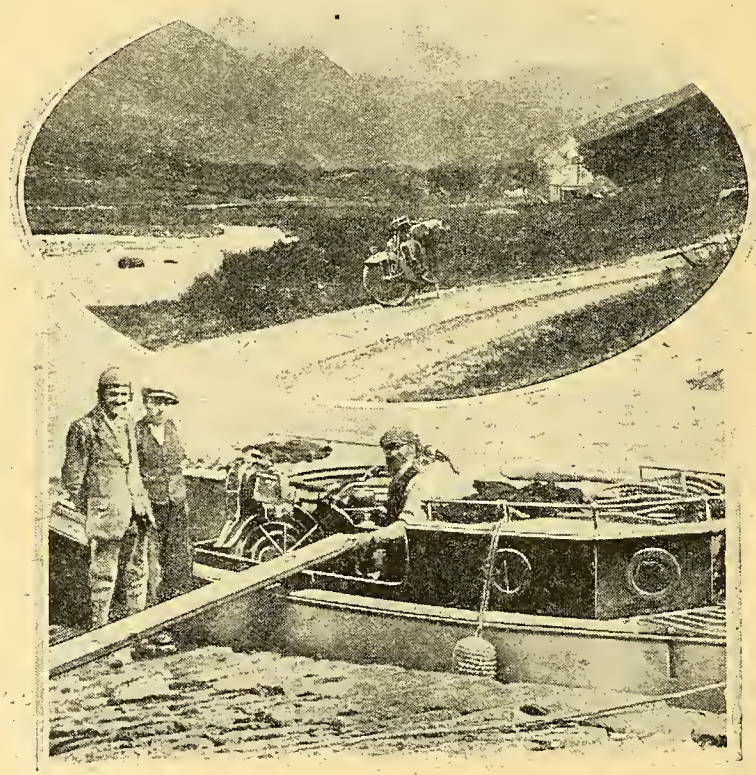
### Our Mounts.

Here a word of praise for our machines is not out of place. The Scott, of all cycles, is perhaps the best suited for holding the rough and loose roads of the North West, but the big Norton was also wonderfully steady on the atrocious surfaces. Neither stopped on a single hill, and our only casualties were one puncture and a stuck-up rocker arm in the contact breaker. The Norton with a Binks carburetter was doing 110 miles to the gallon, which was most satisfactory. The Scott, of course, could not be expected to approach such a figure, but the smooth running of the engine is compensation for a consumption in the neighbourhood of 65-70 m.p.g.

Leaving Loch Alsh another ferry had to be crossed at Dornie—we encountered five in all—and it was with a heavy heart that we sank below the crest of the hill on the road round Loch Duich. It was here that we caught our last glimpse of the Cuillin Hills and the misty Isle of Skye, knowing that we could not return for at least another twelve months to the land we had heard about in the fantastic tales of John Buchan and in "Mary Rose"—a land not only of rain and bogs, but also of sunshine and colour.

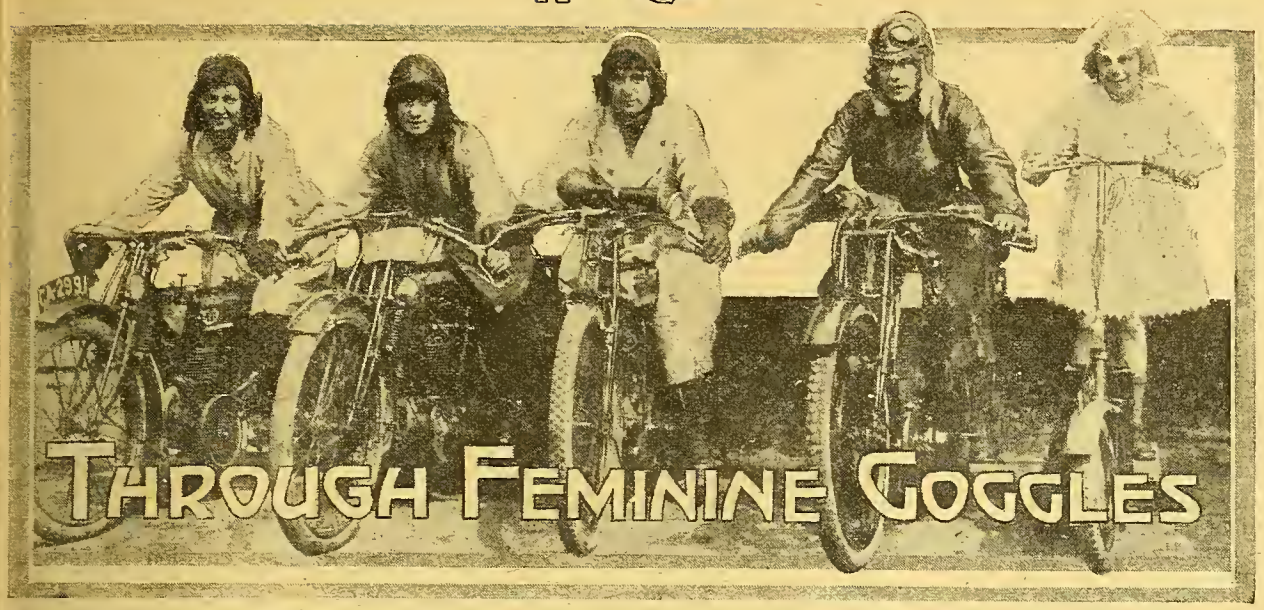
JOHN E. KILBURN.

(17-18)



(Top) The entrance to Glen Shiel, near Cluanie, Inverness-shire—an impressive and beautiful glen.

(Bottom) Disembarking, after the visit to the wild and rugged island



# THROUGH FEMININE GOGGLES

ENTHUSIASTIC CLUB MEMBERS.—A group of lady motor cyclists (members of the Manchester M.C.C.) who are not one whit less keen on competing in club trials than their brothers. Reading from left to right, Miss Storer (Levis), Miss M. Cowley (Dot), Miss E. Cowley (A.J.S.), Miss C. Cowley (Sunbeam), and Miss D. Cowley on her scooter.

## Notes on the Choice of a Machine suitable for a Lady.

WITH the approach of spring, many lady readers of *The Motor Cycle* will be considering whether they will be content with a seat in the sidecar or whether they will be independent of their husbands and brothers, or other people's brothers, and launch out and purchase a machine of their own. Probably many prospective lady motor cyclists are wavering in their decision mainly from a doubt in their own minds as to whether they are capable of running a machine any considerable distance without mechanical trouble.

### Reliability of Modern Mounts.

On this point their minds can at once be set at rest, as at the present time the number of light-weight motor cycles available by different makers which can be absolutely depended upon for reliability is exceedingly large. The lady purchaser need have no uneasiness in this respect if a selection is made from any maker whose products hold a good reputation. No machine would hold the market for any length of time if it failed to come up to the standard at present demanded by the public.

The question arises as to what type of light-weight motor cycle is suitable for a lady about to take up the pastime. Undoubtedly the two-stroke may be considered satisfactory, and at the present time these may be purchased new from £50, with two-speed gears, kick starters, and other refinements.

The single-geared belt-driven two-stroke, which can now be obtained for less than £40, may be quite a satisfactory proposition for a man, but certainly cannot be recommended as an all-purpose machine for a lady.

Most two-strokes when in reasonable tune are fairly easy starters, but the spectacle of a lady trying to paddle off a single-geared machine which is slightly sluggish in starting is, to say the least, rather undignified. It may be fairly easy on a down grade or on the level, but the convenient down grade is not always available, therefore I do not advocate the purchase of a single-geared machine. That a large amount of enjoyment can be obtained from such a mount is undoubted, but for all-round utility a two-speed model fitted with a clutch and kick starter is certainly advisable.

The objections to a machine fitted with a two-speed gear only, without the clutch and kick starter, are somewhat similar to the single-geared mount, as the same difficulties as regards starting apply. In the case of a man, with a single-geared or two-speed machine he has merely to walk alongside the machine, and as soon as the engine fires vault into the saddle. Such a method of starting is not possible for a lady in conventional attire, therefore a clutch is absolutely necessary.

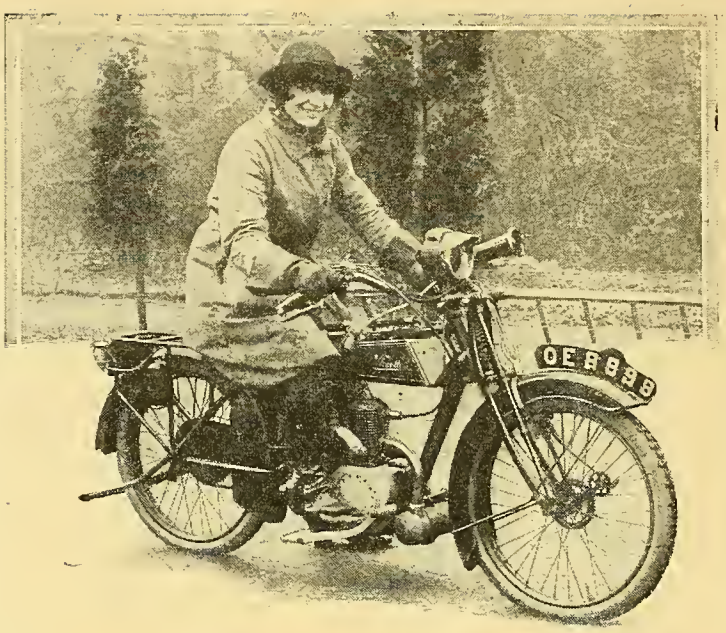
Where a clutch only is fitted in conjunction with a two-speed gear it is quite easy to walk alongside the machine till the engine fires, lift the clutch lever, and, bringing the machine to a standstill with the engine firing, take one's seat on the saddle, let the clutch in gently, and drive away on low gear; but having ridden many types of machines, I have come to the conclusion that the convenience and comfort of a motor cycle fitted with a clutch and kick starter are well worth the slight extra outlay.

### Four-Stroke v. Two-Stroke.

The four-stroke light-weight is still very popular, but to my mind there is not the smoothness in running for which the two-stroke is so noticeable. Another very great advantage of the latter type is the steadiness on greasy roads. There is not such a liability to skid, owing to the fact that there is an explosion to every revolution of the fly-wheel, instead of every two revolutions as in the four-stroke type. This steadiness in grease is a very great factor and should certainly be taken into consideration by the novice.

Two-stroke machines are not considered to be very fast, the highest speed which I have ever attained

**Through Feminine Goggles.**



A keen rider and club enthusiast on her Velocette—Mrs. H. G. Gale Hon. Sec. to the West Birmingham M.C.C.

on the six or seven machines I have ridden being in the neighbourhood of thirty-two or thirty-three miles per hour; and it was not advisable to drive them at this speed for any but a short distance, as excessive vibration, piston slap, and other petty annoyances began to be in evidence at a speed in excess of 30 miles per hour.

At speeds from twenty-two to twenty-eight miles per hour I usually found the running comfortable and smooth, some engines being better than others, of course, and at these speeds very long distances have at times been covered without trouble or over-heating.

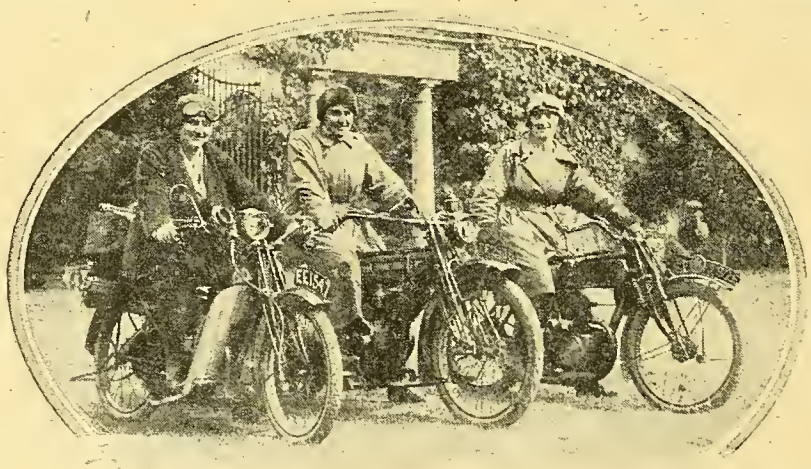
Several rides from 140 miles upwards were done last year without fatigue or discomfort, and on one occasion an actual average of 23 m.p.h. over a distance of 120 miles was obtained; but this was in the early morning on a midsummer's day, leaving the West of England soon after four o'clock. The good average was arrived at by settling down to a steady gait and making no stops whatever except one of five minutes to replenish the petrol tank. No high speeds were indulged in, but a regular steady pace maintained for the whole journey.

It may be suggested that long rides of this description on a light-weight machine would be fatiguing, but my experience is to the contrary, providing the riding position is properly adapted to the rider.

Very much depends upon the relative position of the handlebars, saddle, and foot-rests. The handlebars should not be too high and narrow, otherwise control of the steering is affected; at the same time, it is a mistake to go to the opposite extreme. A medium between the two is advocated, so that the handle grips are within comfortable reach without causing too much of a stooping position. A perfectly upright attitude does not give that secure feeling that one has when a slight amount of weight is thrown upon the handlebars. A large and comfortable saddle is most important, and many of the light-weight machines when originally turned out are fitted with a saddle much too small.

With regard to the question of whether foot-rests or foot-boards are advisable, personally I prefer the former, as the foot seems to have a better grip with these, with the consequent better control on greasy or bumpy roads. It is astonishing what a difference a few minor details such as these make to the comfort or otherwise of the machine. Many little alterations can be made to suit the personal tastes of the rider—for instance, the moving of the saddle backwards or forwards a matter of one inch will often mean the difference between an ideal riding position and discomfort; this equally applies to the handle-bars and foot-rests.

Several firms build open frame machines for the use of ladies, and it may be remarked that not many of these are seen on the road in comparison with the number of lady motor cyclists who are astride machines originally built for men. There are several reasons why the former are not more popular, and personally I have no hesitation in recommending the latter type. The open frame machines—at least those I have ridden—are much heavier, more awkward to handle, much more difficult to steer, and generally less comfortable to ride. Quite a number of machines of the light-weight type are fitted with 24in. wheels, which give a very low riding position suitable for a short girl.



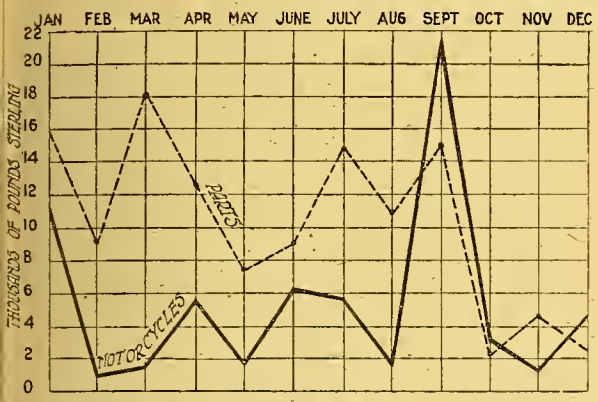
A trio of lady motor cyclists, all of whom have covered long distances in severe trials. The two outer mounts are Velocettes and the one in the centre a P. & M

D.M.

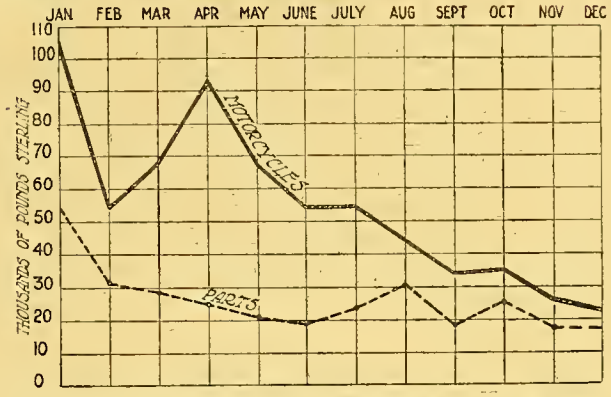
(19-20)

# IMPORTS AND EXPORTS.

## Dwindled Export Figures; Hopes of an Early Revival.




Showing the wide fluctuations in the value of motor cycle imports during 1921. The dotted line indicates the value of imported parts and accessories.




Denoting the continuous downward tendency of our motor cycle exports during the past year. The average of parts was fairly well maintained.

IT is common knowledge that 1921 has not been a prosperous year for British export trade; this applies to motor cycles as to everything else. Yet a glance at the complete returns for the year proves that the position is not really so bad as is imagined by some. When £979,684 worth of motor cycles and parts are exported in twelve months it cannot rightly be said that things have come to a standstill.

In 1920, however, as shown by the corrected "Trade and Navigation" returns the corresponding figure was £2,327,854, or considerably more than double.

The monthly fluctuations of the market may be followed on the accompanying chart for 1921. It will be observed that the tendency has been a gradual but sustained decrease since April. In 1920 the months of July to November inclusive showed the highest levels, but there was a pronounced drop in December. Indeed, the last month of the year has almost invariably been in the past one of the least satisfactory periods from the point of view of the motor cycle exporter. There is therefore no need to despair because December, 1921, has established another low level record. Everything points to an improvement in the near future.

### Last Year's Overseas Trade.

Reviewing the imports for the year, the most striking fact is that they, too, have fallen in almost exactly the same proportion as the exports. In 1920 £407,359 worth of motor cycle and parts were imported; in 1921 only £189,725.

Thus, the motor cycle exports for the year were still more than five times as great as the imports. This, in itself, is a source of some satisfaction, especially when it is recalled that the grand totals of all goods and merchandise entering and leaving the United Kingdom during 1921 show a ratio of 10 to 7 in favour of the exports.

As the first chart shows, the importation of motor cycles reached its zenith in September. Otherwise, there have been pronounced fluctuations from month to month, which cannot be attributed to any one definite cause. One curious fact, however, is worthy of note. Whereas £66,513 worth of "motor cycles" were imported, £123,212 worth of "parts" were received last year. Evidently a considerable number of machines are despatched in an unassembled state.

| 1921. | IMPORTS. Motor Cycles. No. | IMPORTS. Motor Cycles. Value £. | IMPORTS. Parts. Value £. | EXPORTS. Motor Cycles. No. | EXPORTS. Motor Cycles. Value £. | EXPORTS. Parts. Value £. |
|---|---|---|---|---|---|---|
| Jan. .. | 136 | 11,264 | 15,996 | 1,203 | 106,172 | 54,511 |
| Feb. .. | 23 | 1,304 | 9,180 | 663 | 55,004 | 31,066 |
| Mar. .. | 25 | 1,703 | 18,186 | 817 | 68,618 | 28,992 |
| April .. | 71 | 5,836 | 12,604 | 1,160 | 92,923 | 26,785 |
| May .. | 27 | 1,746 | 7,669 | 864 | 66,888 | 21,095 |
| June .. | 71 | 6,111 | 9,278 | 722 | 54,792 | 19,374 |
| July .. | 78 | 5,828 | 14,879 | 646 | 54,834 | 23,904 |
| Aug. .. | 35 | 1,823 | 10,933 | 539 | 44,366 | 30,848 |
| Sept. .. | 1,557 | 21,448 | 15,043 | 425 | 34,747 | 18,841 |
| Oct. .. | 39 | 3,344 | 2,253 | 430 | 35,034 | 26,620 |
| Nov. .. | 31 | 1,499 | 4,727 | 345 | 26,794 | 17,500 |
| Dec. .. | 78 | 4,607 | 2,564 | 289 | 22,554 | 17,412 |
| Total .. | 2,171 | 66,513 | 123,212 | 8,103 | 662,736 | 316,948 |

# THE A.C.U. ONE-DAY TRIAL.

## A Class for Stock Machines. Scooters and Motor-Assisted Bicycles Admitted.

THE Standard Stock Machine Trial which will be organised by the Auto-Cycle Union to run in conjunction with the One-day Trial on March 15th, is open to motor scooters, motor-assisted bicycles, motor bicycles, sidecar outfits and cycle cars. The last-mentioned vehicles may have three or four wheels, provided their unladen weight does not exceed 772 lb. and the engine capacity 1,100 c.c.

The trial should provide an excellent opportunity for a private owner to demonstrate the wisdom of his choice as a considerably reduced entry fee is charged to entrants who are not manufacturers or agents.

The start will be at the Ward End Works of Wolseley Motors, Ltd., Birmingham, and the conclusion at Brooklands Track, where a speed list will be carried out.

Entries close at midday on March 1st, and the fees are as follows:—Manufacturers or agents, £3 3s. per machine, or £7 7s. for a team of three riders; private entrants, £1 1s. each entry.

About 150 miles long, the course will be traversed at an average speed of 18 miles an hour. Arrival times will be taken only at the luncheon stops and at Brooklands.

Twelve laps (32.6 miles) will have to be covered at the following minimum rates of speed:—Class Z (motor-assisted bicycles), Class Y (scooters), and Class BS. (350 c.c. sidecar outfits), 20 m.p.h.; Class A (which has been extended for the purpose of this test up to 275 c.c.), 25 m.p.h.; Class F (600 c.c. sidecar outfits), 25 m.p.h.; all other classes, 35 m.p.h.

Certain hills, the position of which will not be published, will be observed, and a stop on any of these will entail a

**The A.C.U. One-Day Trial—**

loss of 5 marks. Stops will be recorded against competitors making use of extraneous aid in ascending hills (except in the case of motor-assisted bicycles), running alongside, kicking on the ground, or stoppage of the front wheel. No competitor who is baulked on a hill will be penalised if he restarts immediately.

No adjustments may be made throughout the trial, but oil, petrol, and water may be taken in at the luncheon stop, in the recognised controls or at Brooklands.

Every entrant completing the trial will be granted a first-class certificate, or in the case of stock machines a special certificate of merit.

The motor cycles entered are divided according to the international competition rules of the F.I.C.M. and must conform to F.I.C.M. requirements. The definition and equipment for motor-assisted cycles and scooters are given below :—

Class Z. A motor-assisted bicycle is defined as a vehicle having two or three wheels, provided that the third wheel, if any, should be for the purpose of propulsion only by mechanism actuated by the driver and/or a motor.

Class Y. A scooter is defined as a motor bicycle carrying between the wheels a platform, no part of which is more than 12 in. from the ground and of which the minimum length is 8 in. For both the above classes two efficient brakes must be fitted.

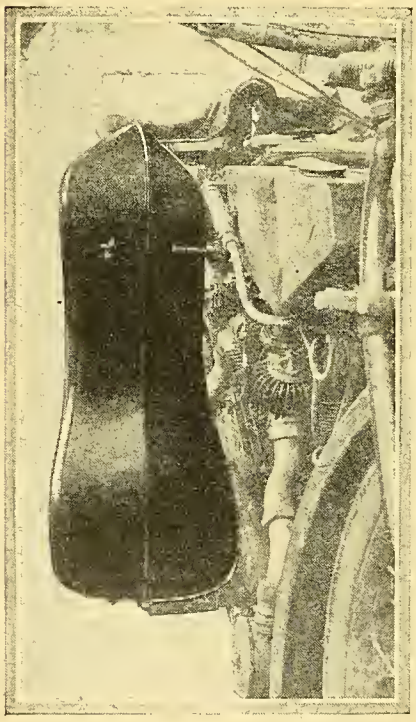
Manufacturers wishing to enter standard stock machines must notify the Union of their intention before February 15th, and at the same time authorise on the appropriate form the officials deputed by the Competitions Committee to select and seal the number of machines entered, which must then be dispatched to the Ward End Works of Wolseley Motors, Ltd., so as to arrive on Monday, March 13th, or Tuesday, March 14th. No selection will be made unless at least three times the number of machines entered are available for the purpose.

Half an hour will be allowed the riders of standard stock machines for making preparatory adjustments and trying the machines over a selected course prior to the start.

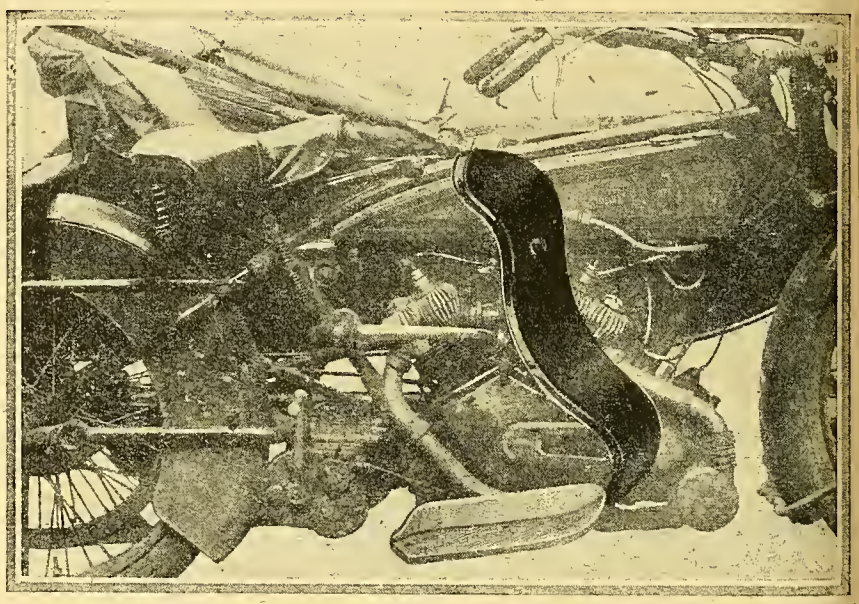
# LEG GUARDS ON TWIN MACHINES.

## Designing Mud Shields to Ensure Adequate Cooling of the Rear Cylinder.

LEG shields are now regarded by motor cyclists as essential equipment for winter riding. Several motor cycle manufacturers have come to realise this, and so equip their standard machines. A large number of owners of motor cycles not so fitted up avail themselves of the good services of those who specialise in the manufacture of leg shields. There are now quite a number of them on the market, ranging from sections of mudguards to one-piece devices of steel or aluminium. There is one which deserves the special attention of those who own twin-cylindered machines, for it does not follow that a shield efficient on a single will produce the same results on a twin.



Front view of the Speedwell leg guard, showing how the V section assists in directing a draught of air on to the rear cylinder of a big twin.

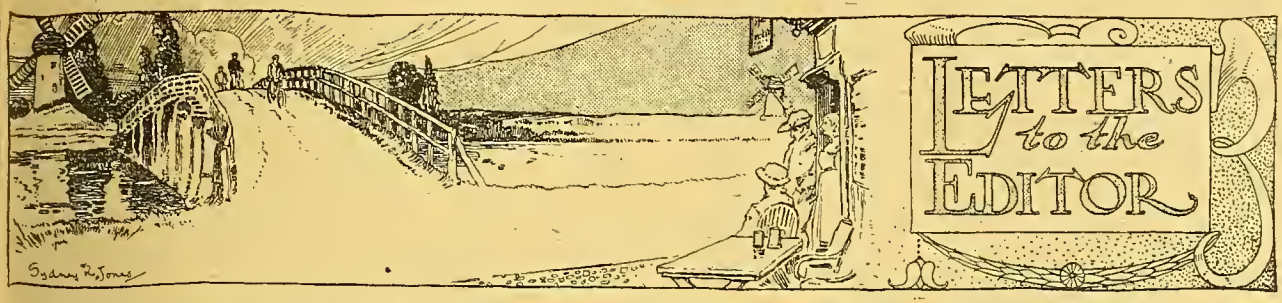


The peculiar shape of the Speedwell guard has a purpose which is apparent on reference to the other illustration.

A little consideration will show the reason for this. In most cases leg shields permit air to reach the cylinder of a single, but in the case of a twin the rear cylinder is "blanketed" by its fore companion.

Those of our readers who have seen the Speedwell curved leg guard may have wondered why the manufacturers have gone to such trouble in producing such an ornate design. The answer is immediately apparent upon glancing at one of the accompanying illustrations, from which it will be seen that, although the rider's legs are amply protected, the curved contour and the V section of the guards induces a current of air to the rear cylinder.

We have a pair of leg shields of this make in use at the present time and we find them all the makers claim for them. They are easily fitted and show no signs of rattling or drumming, so irritating with some shields. We have found that the rear cylinder keeps quite as cool as its fore companion; in fact, we are of the opinion that they would be beneficial in summer to ensure adequate cooling of the rear cylinder. The makers are The Speedwell Gear Case Co., Ltd., 276, Broad Street, Birmingham, a firm of many years' standing and well known to the "trade."




The Editor does not hold himself responsible for the opinions of his correspondents.

Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address

## *TOURIST TROPHY RACES FOR PRIVATE OWNERS.*

Sir,—I have read with some interest the correspondence which has been passing regarding an amateur T.T.

I think such an idea would be very popular, and while the expense of participation would naturally be heavy, it need not approach the amount spent by the entrants in the existing T.T. race. If the idea is to be followed out logically, every entrant would have to prepare his machine without trade assistance of any kind. His mechanic and assistant would probably be a friend out for a holiday.

I think under a suitable system of rules the event would receive an astonishing amount of support. I can think of half a dozen riders in my own club who would welcome the idea.

You write in your leader that the difficulty of a definition of an amateur cannot be framed satisfactorily. I admit the difficulties, but the club I have represented for some twelve years has not found it insuperable. I enclose for your inspection a copy of our rules to note. If these are faithfully observed, there should be no doubt as to any but a strict amateur competing.

H. J. POOLEY,
Hon. Secretary, N.W. London M.C.C.

[Appended are the rules referred to by Mr. Pooley :—

"The membership of the club shall be confined to amateurs only.

"No member shall be eligible for membership or shall remain a member who accepts or has accepted any monetary benefit or consideration or the equivalent from a person or firm trading in the manufacture of motors or accessories thereof, or who shall have secured possession of a motor vehicle or accessories from such trading person or persons at a price or on terms which may, in the judgment of the committee, represent the equivalent of such consideration. The committee is entitled to demand the production of receipt or other satisfactory evidence in demonstration of this qualification.

"Membership is prohibited to those who are engaged or employed in the manufacture, sale, exhibition or exploitation of motoring goods or accessories.

"No member shall willingly or knowingly permit his name to be used in connection with the advertisement of motoring goods or accessories.

"Members competing in competitions organised by this club shall use only machines and accessories which are their own bona fide property, or are similarly owned by another member of the club.

"No member shall accept any cash prize for any motoring achievement or service, whether in competition or otherwise. He may, however, accept from the donor a prize in kind in lieu of the cash prize should such alternative be proffered. No member shall during his membership convert into cash any prize gained in motor cycling competitions."—Ed.]

Sir,—I am pleased to see in *The Motor Cycle* that the question of an amateur's T.T. race has at last been taken up. I am sure an event of this nature would meet with a large measure of success. If a course could not be found in England, what is the matter with Brooklands for such an event; it would be better than no race at all. As to the difficulty of defining an amateur, could not special rules be made for this particular event?

An alternative proposition which I should like to make is that every London motor cycle club should enter an amateur team for such an event.

Other opinions on the subject would no doubt be of value.

London, W.2. COMPETITION RIDER.

Sir,—With reference to your leading article headed "An Amateur T.T.," I would like to direct the attention of aspiring T.T. riders to the 100 mile Welsh T.T. race held at Pendine Sands on Whit Monday each year. The course is known generally as the finest natural speedway in Great Britain, it being possible to get a five miles straight stretch with return bends either end of 10/15 yards, making a lap of 10 miles. It provides a good sporting course, which tests the rider and machine, and gives a chance to ordinary riders who do not own specially faked 'buses.

I extend a hearty invitation to any aspiring T.T. winner to participate in this now classic event. The necessary qualifications are :—The machine must be of the "same as you can buy" variety, be privately owned, and the competitors must be members of some club in the South-West Wales Centre. H. G. CHURCH.

Secretary, South-West Wales Centre, A.C.U.

Sir,—I read with considerable interest your Editorial on a T.T. race for amateurs, especially as the Southport Automobile Club proposes holding a 50 or 100 mile race for amateurs on their own private machines, to be held on the Southport beach some time in the spring. It is possible to lay out a course of about five miles to the lap.

Any suggestions or comments from your readers will be welcomed. H. F. BROCKBANK.

## *UTTERLY AMAZING SPEEDS.*

Sir,—Your columns have lately contained correspondence concerning the real or visionary speed attainments of many motor cyclists, but I venture to think that none have so far traded upon the credulity of your 120,000 readers to the extent that the author of the following extract from a 1922 American catalogue attempts to do.

This is what it says : "An impressive endurance demonstration of the *de luxe* model was staged by A for the B field police. A straightaway run from B to the mountains was selected, thirty-two miles, up a grade varying from 2% to 14%. The trial was made on the hottest day of the year, and the route was across the desert. *A covered the distance with ease at above 65 m.p.h. average*, and at the finish the B police examined his motor carefully, paying particular attention to the cylinders, *which could be touched without discomfort*. Indeed, cool running is a striking feature of this new mount, for, after B had made a ten-mile run on A speedway with wide-open throttle, the cylinders were comparatively cool, and *could be touched with the bare hand*."

One presumes that the bare hand was enclosed in an asbestos glove, and in the first little jaunt up the mountain that the machine (well known in this country) was attached to a balloon of some sort.

However, it is a wonderful story.

London, W.2. TOMASO DUBITANS.

Sir,—I read with interest "Old Un's" statement *re* covering the distance between two milestones in fifty seconds on his pre-war Triumph. In the course of a recent reliability run, I covered the distance between two milestones in about one second. Both milestones bore the same inscription, the distances being identical, and they were about fifteen yards apart, one having been set up at a much later date than the other. WELLERSSET.

Sheffield.

## *T.T. OR LONDON-EDINBURGH.*

Sir,—"A. V. Smith's" letter in your issue of January 5th having come to my notice, I cannot let it go unchallenged.

After all, the London-Edinburgh is a holiday event, and

if the T.T. cannot be postponed, why change the date of the London-Edinburgh, when the majority of the competitors are free from business that week-end? I think we can safely say that the T.T. is purely a trade event, and what matters if a few of the "pros" cannot return to town in time for the "Edinburgh"? Regarding his remarks about other road users, does not the same apply in the island, and in fact in any competition?

Huddersfield. W.5420.

### *LICENCE HUNTING ADVENTURES.*

Sir,—Your correspondent "Allon" is not the only one who is finding trouble to renew his licence. I called at G.P.O. in my town (Kidderminster) for a renewal of my licence. They informed me that they had no licences and would not have any for three days. They also informed me that I could not renew my licence there, as I should have to take a licence out in the town where the machine was registered. I have written three letters to the authorities where the machine is registered, a fortnight has elapsed, and have had no reply. E. GRIFFIN.

Sir,—When first taking out a licence I was told to take it out in the district where the machine was usually kept, this being Surrey. I took it out in that county, but when renewing it this year, and sending 30s. to Kingston, I am told to take it out in the district where I reside, so the 30s. goes to London County Hall. Back comes the licence, but registration book is not returned. Applying for it, I am told to send particulars of index number and letter, although of course name and address are on it. This was some time ago, but I have not heard any more, so of course I could not, if I wished, sell my bicycle, as I have no evidence that it is mine. F. PENNINGTON.

### *REVIVAL OF AUTOMATIC INLET VALVES.*

Sir,—*Re* "H. Le Fe's" rash suggestions, when a boy at school I read a funny story about a fox without a tail. If Mr. Le Fe is still impecuniously restricted to a.i.v. models of the year dot, I think he ought to try his propaganda on the local club novices first, and not rush into the columns of *The Motor Cycle*, where riding experts and keen technical students (to say nothing of the trade) lie in wait to tear him up.

I don't want to be unkind, and I don't criticise your sense of humour in publishing his letter, but only the lack of that sense on the part of those who took him seriously while *The Motor Cycle* smiled up its sleeve. C. W. F.

P.S.—Why not do away with inlet valves altogether? I have!

P.P.S.—I ride an O.K.-Villiers.

### *TOWING A CARAVAN.*

Sir,—I notice in *The Motor Cycle* that Mr. Weatherill made and towed behind accommodation for camping out. This looks more comfortable than anything else that I know of, but in his list of expenses no mention is made of extra taxation. In *The Autocar* I notice that a tax of £2 is named for towing a two-wheeler. ("Query and Reply," No. 6583.) JOHN HARRIS.

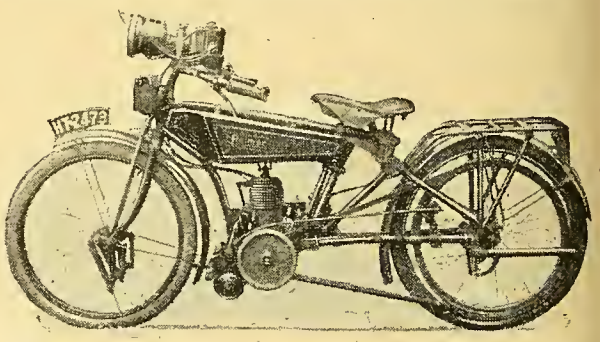
### *WHERE ARE THE SPRING FRAMES?*

Sir,—"Ixion," as well as others, is, I notice, still insisting upon the necessity for mechanically and experimentally efficient suspension for motor cycles. Apparently one particular make of spring frame is still unknown to these gentlemen, or they would be aware that the problem presented (and, confessedly, it *is* a problem when questions of additional weight, costliness, and really efficient service are all taken into account) has been successfully solved.

My machine (a 2¾ h.p. lightweight) has been *converted* to incorporate the Palmer patent rear suspension, and I can say with absolute truthfulness that no rider, young or old, of this type will have any cause whatever to complain of backache, even with roads in the condition they are to-day, or to take periodical rests upon long journeys to fortify physical powers of endurance against the shocks and sufferings of the next twenty-five miles or so.

The special points of interest to me about the Palmer type are that with it one gets *lateral rigidity* equal to that of a normal frame, quite ample spring movement to give the desired comfort whether on tolerably bad or very bad surfaces (this is absent from many types of spring frames), no unsightly or otherwise objectionably obtrusive parts, and practically nothing that can be disorganised by wear. The whole thing is simplicity itself, and I should think that the added manufacturing costs must be quite negligible, while the added extra weight of the complete machine is decidedly so.

Thinking it may be of interest to many of your readers to see how this type of suspension plans out in the *tout*



"Comfybus's" lightweight, which has been converted to a spring frame mount by means of the Palmer rear suspension set

*ensemble* of my converted mount, I enclose a photograph, from which it will, incidentally, be noticed that I do not derive much of my comfort from the front fork springing.

I have absolutely no connection with the patentee and maker of this frame, but think it only friendly towards brother motor cyclists to let them know that for one, at any rate, of the fraternity, back-aches are things of the past.

Radstock. COMFYBUS.

### *UNDER-SIZE TYRES AS PUNCTURE PREVENTERS!*

Sir,—I have often noticed remarks about fitting oversize tyres being a puncture preventative. I do not want to try and disprove these statements. I only want to know why, and should be very glad if some of your readers could explain how it is that a tyre which obviously covers a larger area of flints, etc., than a smaller one should be more unlikely to puncture than one which has a narrower track.

Once I am convinced, I shall fit these ideal covers.

Boston, Lincs. J. PONDERING.

[Since the oversize tyre usually has a proportionately *thicker* tread, it offers greater resistance to puncturing agents, and since it also has a *wider* contact area with the road the weight and strain of the machine are not concentrated on an unduly narrow strip.—ED.]

### *SENSITIVE SUPER SPORTING MOUNTS.*

Sir,—I was very interested in your report of the new four-valve Triumph, and "Harmony's" letter on his "super sports" Sunbeam. Might I add a word or two on behalf of what I consider the best super sporting solo mount in the world?

I refer, of course, to the 79×100 mm. T.T. Norton. I have had one of these models since April, and have covered a considerable mileage at high speed. I find that my engine is very sensitive to the ignition timing, but even more so to the mixture. My machine will start from cold in under ten yards, with a Philipson pulley top gear, 4⅝ to 1, with the air lever in a suitable position, but if the veriest shade more is given, the result is—no start!

There seems to be an idea among most motor cyclists that all multi-gears chew the belt up terribly. I am using a round-top Dunlop, which is splendid; the flat-topped belt supplied by the makers breaking at 800 miles. I carry it now as a spare.

I prefer the cast iron piston, as, owing to its being drilled considerably, it is very light and not so subject to variations of temperature as the aluminium model, which wears rather quickly compared with the cast iron one.

A. O. RUSSELL.

### EXPERIENCES WITH A SIMPLE FOUR-WHEELER.

Sir,—I have lately noticed several queries in your columns regarding the behaviour of the A.V. monocar, and thought that perhaps my experience with this very fine little 'bus, published in your journal, might be of interest and help to all concerned.

Last Autumn I completed a holiday tour from Manchester through Cornwall and Devon, having covered a shade under 1,300 miles in ten days' running, and that without a single involuntary stop, and for the majority of the time with a passenger on the dickey seat. We both travelled in comfort, and I could easily touch 40 m.p.h. on half throttle. One little jaunt from Penzance to Newquay, a distance of forty miles, and strange roads to me, was covered comfortably under an hour and a half, including a short stop to get on the right road again after missing the turn in Mitchell. I carefully checked my petrol consumption on the run down from Manchester to Penzance, and found it to be 57 m.p.g., during which run we climbed Porlock, Lynton, Barbrook, Parracombe, etc. Oil consumption I have not checked, for with that (Castrol C) I am generous. I have not yet been passed by anything on a main road, except when I was pottering along from choice. Its brakes are really excellent (though a bit jerky in application when new), and the tyres have stood up wonderfully well, and so far I have not used my pump on any of them. I do not know what overheating is, for, though the engine certainly gets hot, it does not in the least seem distressed, as my tour proves, all the hills mentioned being taken "on the run." The A.V. is always willing, and acceleration is one of its strong points. Driving is very simple, particularly if one will steer with the left hand and control with the right. The light steering makes this possible, even on bad roads, if a good "lock-grip" is used. Personally, my grip is as follows: Thumb under the spoke, first finger over the spoke, and the remaining three fingers round the rim, and this grip was used by me throughout the tour without the slightest inconvenience.

My machine is a 1921 model, fitted with the latest 8-10 h.p. J.A.P. engine, the only alterations from standard being the fitting of F.E.W. valve attachments, Bowden extra air inlet, spark intensifiers, and Molla air-cooled plugs. Referring to the two last-named fitments, I would like to say how well pleased I am with them. Since they were installed I have not experienced a single misfire, nor a sooted or oily plug, though I am always liberal with lubrication. Also, I am sure they have a lot to do with easy starting.

In conclusion, I have nothing but praise for the little A.V.—a top gear 'bus which gives luxury in a simple manner—and can honestly recommend it. I am nothing more than a delighted owner, but must, I suppose, add the usual disclaimer. J.H.G.

Manchester.

### SIDECAR FUEL CONSUMPTION RECORDS.

Sir,—After reading the correspondence under this heading, my result in the recent London-Exeter run pales into nothing. Riding an 8 h.p. spring frame outfit registered as weighing "under eight hundredweights," I averaged exactly twenty miles to the hour and a shade over forty-nine miles to the gallon. DONALD S. PARSONS.

### CANDID CRITICISM OF A BRITISH BIG TWIN SIDECAR.

Sir,—Perhaps the following criticism of a 1921 Enfield sidecar outfit would prove of interest. The mileage covered is 1,250, and I have endeavoured to be as fair as possible. Perhaps other private individuals would supply information of their new mounts for comparison. Usual disclaimer.

Tyres.—Very good. Three punctures, all nails.

Cycle Parts.—Very strong. No trouble whatever.

Mudguarding.—Front, excellent. The back guard splashes the rider's back in really wet weather.

Springing.—Good on the whole. Bad roads have broken ball in the steering head.

Silence.—All that can be desired. Talk comfortably to passenger up to 25 m.p.h. When ticking over in traffic the engine note is barely perceptible.

Speed.—With three up, 43 m.p.h. on the level with no wind; 30 m.p.h. in low gear with two up.

Oil Consumption.—On the heavy side, which makes the engine liable to smoke when hot and running dead slow.

Oil Pump.—Excellent. No trouble.

Petrol Consumption.—Averages 55 m.p.g. at 22 m.p.h. average. Have done 65 m.p.g., three up. I use a W.S.R. variable jet.

Engine.—Very powerful. Climbs practically anything on top with two up. Very seldom change with three up.

Gear.—Delightfully simple. Changed the cam face once, and replaced one peg.

Chains.—Front ones in perfect condition, and run in oil. The back is cleaned whenever wet or after each 250 miles.

Chain Adjustment.—Back very simple. The front untouched as yet.

General Accessibility.—The detachable rear mudguard and carrier makes punctures in the back wheel of no great importance. Mended in 15m. easily. The sidecar jack is simple and easy to operate. Accessibility of the rear chain is a great point.

Brakes.—The back is easily adjustable and powerful; stops machine dead with three up. The front brake will not adjust too easily, but is powerful.

Lucas Lighting Set.—Faultless. Have burnt out the dim filament of one head lamp bulb.

Apollo Electric Horn.—Fitted by myself. Very efficient; no trouble.

Sidecar.—Very comfortable; but does not adapt itself much to fitting proprietary windscreens. Bluemel fitted gives good results, but awkward getting in and out unless undone, when it folds back out of the way.

Luggage Grid.—Exactly holds two suit cases, which are perfectly secure and sprung with the body of the sidecar. I have carried a case of lemonade a short distance without breakage.

Sidecar Box.—Holds spare gallon of petrol and tools, and spare oil (one quart), which is very handy.

Petrol Tank.—Holds two gallons, but spills over the filler cup.

Handle Starter.—I prefer a kick; but it is all right once the knack has been learnt.

Plugs (Lodge Waterproof).—Cleaned the back one once. No misfires on the road.

Carburetter (Amac).—Does not give terrific acceleration, but is a good all-round fitment.

Transmission Shock Absorbers.—Faultless.

General Reliability.—One involuntary stop in 1,250 miles. The front chain came undone. Spring link replaced in half an hour. Otherwise the outfit runs like a train.

Edinburgh. 3485.

### SUMMARY OF CORRESPONDENCE.

Writing "as one of the old brigade," Mr. H. Siddall comments on the absence of the 5-6 h.p. Raleigh and sidecar from the important competitions of last year.

Referring to Mr. Maynard's recent letter offering to race "Old Un's" 72 m.p.h. Triumph, Mr. E. Wilkinson wishes to accept the Zenith owner's challenge with his 3½ h.p. Rudge.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
New Edition. Just Published. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 5/-. By post, 5/4.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# MOTOR CYCLES AT THE SCOTTISH SHOW.

## Machines on Exhibition at Kelvin Hall, Glasgow, arranged alphabetically. A Guide to Intending Visitors.

TO-MORROW (Friday, January 27th) the Scottish Motor Show opens at Kelvin Hall, Glasgow. Although this is not the first time motor cycles have been exhibited at a Scottish Show, it is the first Scottish Show officially recognised by motor cycle manufacturers. Hitherto, well-known Scottish agents have exhibited the products of the makers they represent, but on the present occasion this class of exhibitor is supported by no fewer than twenty exhibits staged by manufacturers themselves.

This is a wise decision, as so many Scottish riders are unable to undertake the long journey to Olympia in November, and, although the number of models on view is not much more than 50% of those exhibited at the big Show in London, it is sufficiently representative to enable Northern riders and buyers of motor cycles to obtain necessary information regarding modern design.

In the following pages we illustrate and describe the motor cycles represented at Kelvin Hall. They are arranged alphabetically for the convenience of those who intend to visit the Show.

**ALLON.** **Stand 198.**

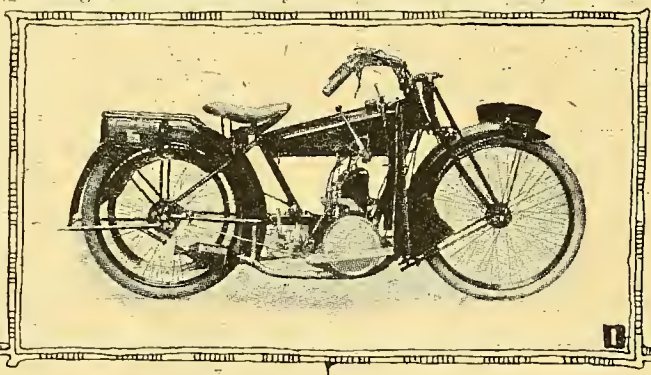
One example only of the Allon lightweight will be shown (on the stand of Rossleigh, Ltd., Edinburgh). Priced at £60, it is a standard conventional type two-speed chain-cum-belt lightweight with a 70×76 mm. (292 c.c.) two-stroke engine of Allon design. The cylinder is cast with the top half of the crankcase; a flywheel magneto is fitted. Perhaps the most distinctive feature at a first glance is the capacious saddle tank, which, however, does not appear in any way unwieldy or out of proportion. The primary chain is neatly enclosed and, of course, a clutch and kick-starter are incorporated. Leg shields have long been standard on this machine, and it may be taken for granted that the makers have so designed them that they do not interfere with the cooling. The mudguarding, too, is well carried out.

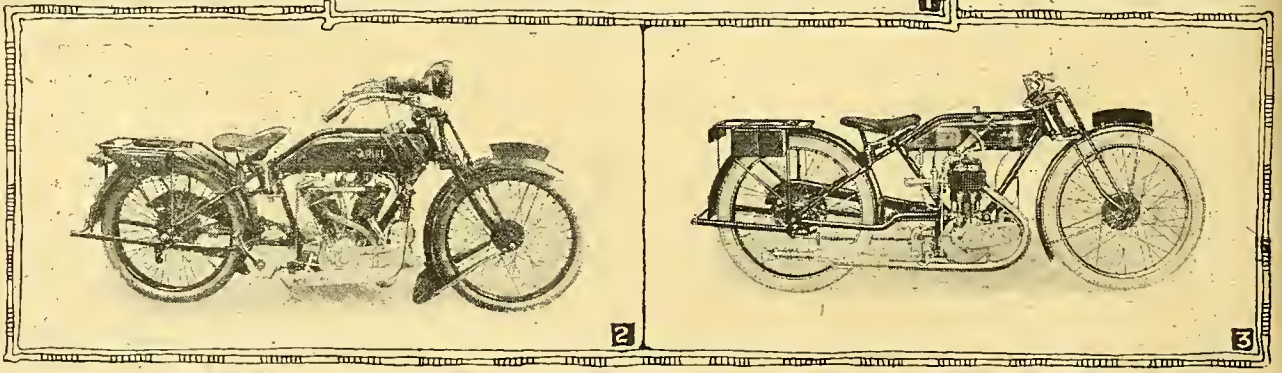
**ARIEL.** **Stand 197.**

Perhaps the most important new type of Ariel is the £87 10s. sports model, which is fitted with a 498 c.c. engine and a countershaft three-speed gear box, final drive being by belt. In order to allow a thoroughly reliable and well-finished machine to sell at this low figure several luxury fitments have been omitted, including the kick-starter and spring seat pillar. The more fully equipped touring model with the same size engine, nominally 3½ h.p., is also staged at £95. Three sidecar outfits will be on view: the 4½ h.p. (665 c.c.) single cylinder, £140; the 6-7 h.p. (796 c.c.) twin, £152 10s.; and the 8 h.p. (994 c.c. M.A.G.) twin, £183. All have chain drive, and the last mentioned is equipped with a Lucas Magdyno lighting set and a sidecar hood. 28×3in. tyres are standard on the sidecar machines. The Ariel is also exhibited by Andrew Downie, Ltd., of Edinburgh (Stand 199).

**A.J.S.** **Stand 208.**

In addition to its successes in international events—both T.T. races, etc.—the 2¾ h.p. A.J.S. has distinguished itself in Northern competitions, and there is no doubt that the three production solo models and the lightweight sidecar outfit will command much attention. These most attractive £85 models differ mainly in detail: the touring model has full mudguarding and footboards, the standard sporting has footrests, and the stripped sports machine, as the name implies, is minus touring equipment, includ-





(1) 2¾ h.p. two-stroke Allon. (2) 8 h.p. Ariel with M.A.G. engine. (3) 2¾ h.p. stripped sports Model A.J.S.

ing kick-starter. With a light sidecar the fully mudguarded model sells at £110. Fairly extensive chain guards are fitted in every case, except to the "stripped" type. Also shown will be two examples of the equally popular and successful 7 h.p. sidecar outfit, one with Magdyno, spare wheel, speedometer, and sidescreen, at £218 12s. 6d., the other *sans* these extras at £175. A.J.S. machines will also be found on the stands of Andrew Downie, Ltd. (199), Meldrums (204), Bell Bros. (207), and Chas. Middleton and Son, Ltd. (194).

**BEARDMORE—PRECISION.** **Stand 184.**

Scottish motor cyclists, and particularly those who reside in Glasgow, know and respect the name of Beardmore. Allied with another well-known Glasgow firm, Barr and Stroud, the resulting product will inevitably attract much attention. But the lightweight Beardmore with the sleeve valve Barr and Stroud engine is not the only exhibit of interest on this stand. The new 4¼ h.p. (600 c.c.) Beardmore-Precision with "semi-unit" engine and gear construction, will be staged. Its price solo is £105, and with sidecar £135 for the touring type and £130 for the sporting model. Finally, there will be solo and sidecar examples, at £75 and £105 respectively, of the 350 c.c. Beardmore-Precision two-stroke. In this case a two-speed gear box is fitted, and the final drive of the solo machine is by belt.

In addition to the exhibit of its makers, Messrs. F. E. Baker, Ltd., the Beardmore-Precision will be exhibited by no fewer than three other firms—Alexander's (178), James Robertson's (190), and Charles Middleton and Son (194).

**BRADBURY.** **Stand 210.**

Only one Bradbury model will be shown. V. Jennings and Co., Ltd., Glasgow, will stage a 4 h.p. machine, without sidecar (although this type is eminently suited to passenger work). This Oldham make has been on the market for a great many years now, but it has moved with the times, and although the old method of casting the crankcase integrally with the frame is retained, all-chain drive, a three-speed countershaft gear, and an internal expanding rear brake are included in the specification of the 1922 version. The single-cylinder engine is of 89×89 mm. (554 c.c.) and, excepting its cast iron crankcase follows fairly conventional and well-tried lines. Solo, the machine is priced at £92.

The Bradbury Co. has recently introduced a new 8 h.p. twin-cylindered sidecar outfit, which, with the well-known 6 h.p. twin and 2¾ h.p. solo model, makes the Bradbury range complete for almost every class of buyer.

**BROUGH.** **Stand 177.**

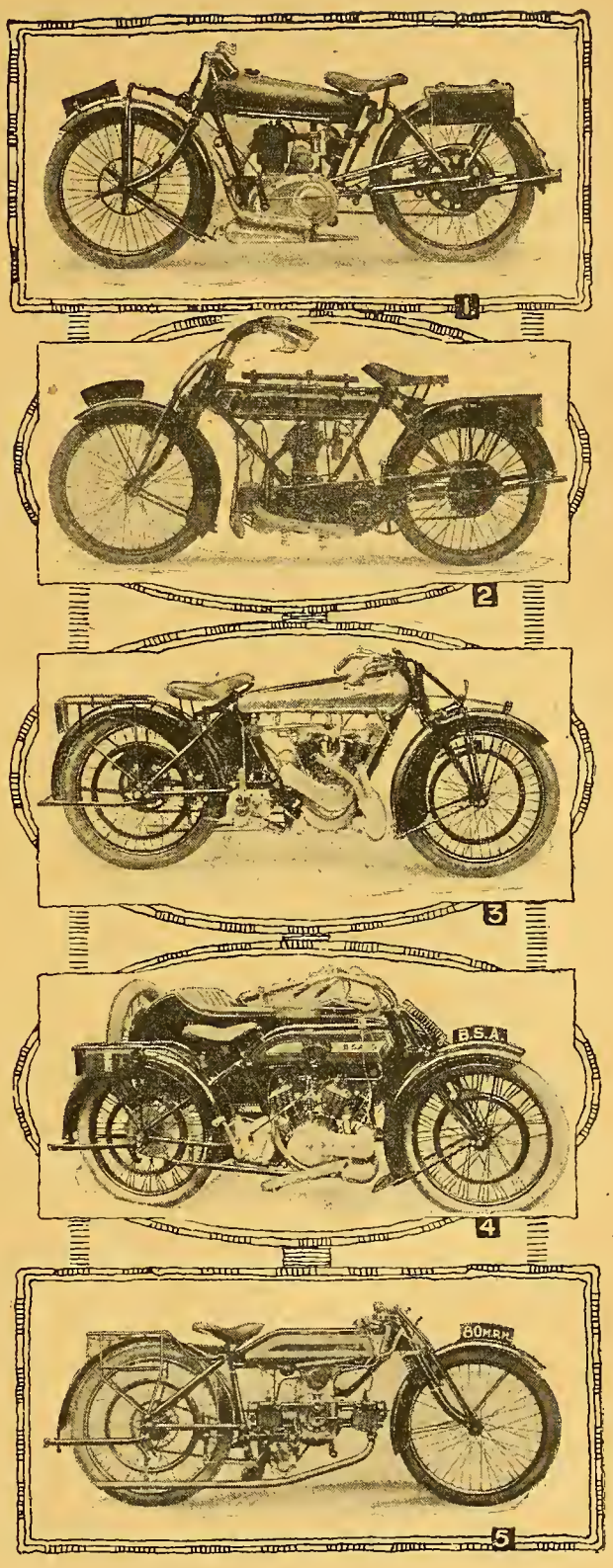
Because the Brough was an absentee from the last Olympia Show, its presence in the Kelvin Hall gains added interest. An old-established machine of Nottingham origin, it has achieved some noteworthy performances in past Scottish Trials, once completing the course single-geared. The introduction of an 80 m.p.h. speed model is the chief innovation for 1922. This is a flat twin with short wheelbase. Overhead valves are used and light reciprocating parts generally. Transmission is by chain throughout, a close ratio Sturmey-Archer gear box, less kick-starter, being fitted. A carrier is optional, and in its simplest form this model is remarkable for its exceptionally light overall weight. Its price is £115.

The larger 5 h.p. machine is intended mainly for sidecar haulage.

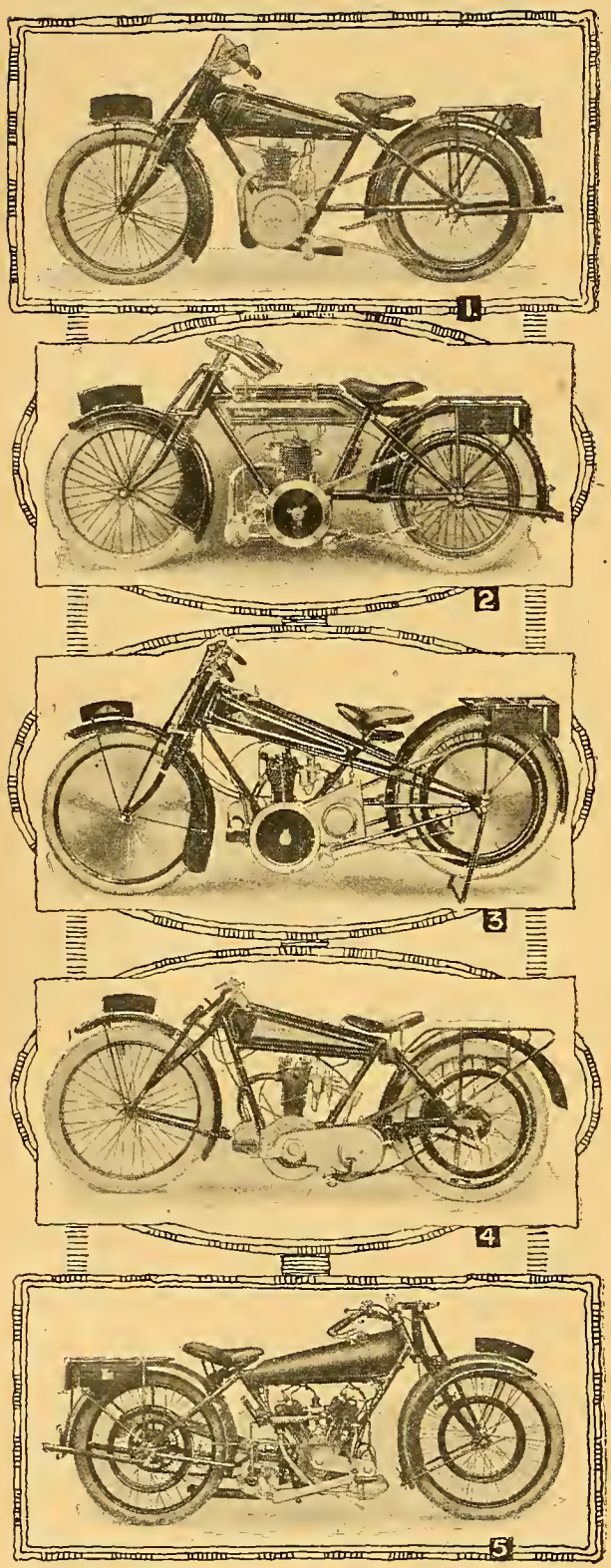
**BROUGH SUPERIOR.** **Stand 177.**

In a very short space of time the Brough Superior has climbed to a high position in the esteem of the motor cyclist who wants speed and luxury combined in the one machine. Recognising that only a big twin engine may reasonably be expected to propel a mount embodying these two qualities, the designer of the Brough Superior has aimed at controllability and handsome appearance more than reduction in weight.

Three types, differing mainly in power unit, are now available—one fitted with a 6-7 h.p. M.A.G. engine and the other two with 8 h.p. J.A.P.s with side-by-side and overhead valves respectively. Although first intended as a super solo machine, it is now marketed, in all three models, as a luxurious but sporting passenger outfit.




(1) 4¼ h.p. spring frame Beardmore-Precision. (2) 4 h.p. Bradbury. (3) 6-7 h.p. Brough Superior, with M.A.G. engine. (4) "Light Six" B.S.A. Outfit. (5) 3½ h.p. o.h.v. flat twin Brough.




(1) 2½ h.p. two-stroke Calthorpe. (2) 2½ h.p. Connaught Miniature which has 24 in. wheels and direct belt drive. (3) 2¾ h.p. Cotton-Blackburne. (4) 2¾ h.p. o.h.v. spring frame Coulson. (5) 5 h.p. Coventry Eagle.

## B.S.A. — Stands 198 and 207.

The B.S.A. is one of the three makes popularly reputed to be seen most often on the roads of Scotland, and it is not surprising that the green and grey tanks will be dotted all over the Kelvin Hall. Bell Bros., Glasgow, and Rossleigh, Ltd., Edinburgh, are two of the chief exhibitors. The range extends from a 4¼ h.p. single-cylinder sports model—a 1922 innovation with a kick-starter and enclosed chains—to the new 8 h.p. (985 c.c.) twin sidecar outfit. In between are the "light six" (770 c.c.) outfit and the 4¼ h.p. dual-purpose touring machine (belt or chain-driven). Prices extend from £107 to £185. B.S.A.'s are also staged by Alexander's (178), Middleton's (194), and Harry Gold (202).

## CALTHORPE. — Stand 192.

Two-stroke and four-stroke Calthorpes will be displayed by the North British Machine Co., Ltd., of Glasgow. Both are purely solo mounts with a simple and inexpensive specification, and the prices are moderate. Single-geared, the 247 c.c. two-stroke, which has 24in. wheels, is only £36; a two-speed box is £8 extra, £9 with clutch, and £11 with kick-starter in addition. Lubrication of the engine is carried out by leading the oil by way of sight drip feed to a groove encircling the cylinder walls.

A 292 c.c. J.A.P.-engined four-stroke with an Enfield two-speed gear is priced at £65, or with kick-starter at £70. 26×2in. tyres are standard on this model.

## CARLTON. — Stand 192.

Made and exhibited by the North British Machine Co., of Glasgow, this little lightweight will no doubt attract attention from those who favour "home productions." A neat mount selling at £39 18s., single-geared, it has a sloping top tube, 26×2¼in. tyres, and a Villiers two-stroke engine with flywheel magneto. With two-speed, clutch, and kick-starter the price is £53.

## CONNAUGHT. — Stand 212.

Among the pioneers of the lightweight two-stroke, the makers of the Connaught continue to specialise on this type. At the same time, sidecar successes in competition have encouraged them to market a slightly increased capacity model (82×70 mm., 370 c.c.) primarily intended as a lightweight passenger outfit. All chain drive and a three-speed gear box are appropriate items on the specification. Naturally, it makes a useful little solo mount of the go-anywhere type.

Also staged will be three 1922 examples of the original 2½ h.p. Connaught miniature, one with 24in. wheels and direct belt drive, another with 26in. wheels and a two-speed gear box, and a third the same but with clutch and kick-starter.

## COTTON. — Stand 202.

For some time obtainable only as a two-stroke machine, the triangulated frame Cotton blossomed out as a four-stroke at the last Olympia Show, when a 2¾ h.p. Blackburne-engined model made its debut. One of this new type will be staged by Harry Gold, Glasgow. It is an attractive machine in appearance, and, in addition to the theoretical advantages of its straight-tube frame construction, it possesses an unusually low centre of gravity. This latter feature, combined with the absence of whip of the frame and maintenance of wheel alignment, helps to eliminate any tendency towards skidding on the road. Chain and belt transmission is employed and a two-speed Sturmey-Archer gear box with clutch and kick-starter on the standard model, which sells at £65 2s.

## COVENTRY EAGLE. — Stand 214.

Six actual machines will be shown as representatives of a very wide range of models indeed. In every case the now familiar bull-nosed saddle tank lends a most attractive air of distinction to the Coventry Eagle machines, although proprietary engines are used throughout. The o.h.v. 250 c.c. "luxury" lightweight calls for special mention; this particular type of J.A.P. engine is at present made exclusively for this model, and finned exhaust manifolds are among its novel features of design. Transmission is by chain through a two-speed Sturmey gear box. Aluminium number plates, lamps, and even mascot are included in the price of £105.

Another model, of particular interest to the soloist, is the 500 c.c. J.A.P.-engined sports mount, which is fitted with aluminium pistons and the usual "competition machine" modifications. With a three-speed Sturmey gear box and final chain drive the price is £110.

Sidecarists are catered for by the 500 c.c. single and the 680 c.c. twin outfits at £135 and £150 respectively. 293 c.c. J.A.P. and 269 Villiers-engined lightweights with chain-cum-belt drive are listed at competitive prices, varying according to specification, and also a 350 c.c. J.A.P.-engined utility machine sold "all-on" at £88 10s.

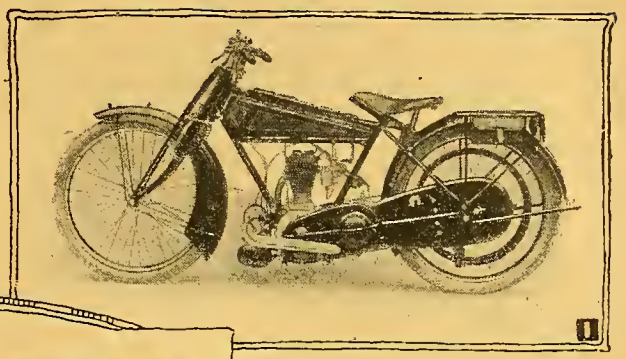
**COULSON.** **Stand 202.**

With an o.h.v. 2¾ h.p. Blackburne engine in a neat spring frame, the T. T. Coulson promises possibilities of speed and comfort cleverly combined in suitable proportions. All-chain drive through a close ratio Burman gear box, less clutch and kick starter, is employed, and the handlebars, footrest position, and such details are essentially those of a sporting machine. The price is £95, which is also the figure charged for the 4¼ h.p. side-valve Blackburne - engined touring A Sports sidecar attached to the latter costs £25 extra. Two and three-speed standard touring 2¾ h.p. machines are priced at £78 and £82 10s. respectively. Examples of these will be on the stand of Harry Gold, Glasgow.

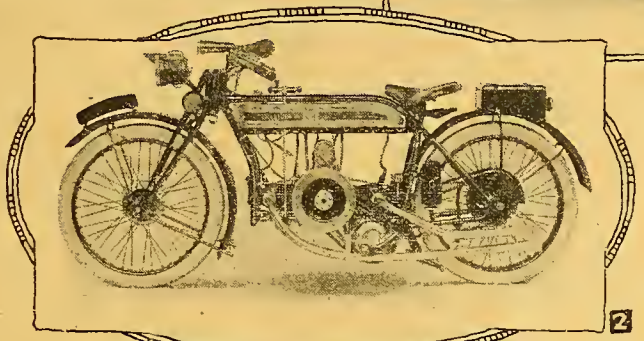
**DIAMOND.**
**Stands 178 and 201.**

The Diamond is a Wolverhampton production, and its quality in every way upholds the reputation of that town, which boasts of its splendid motor cycles. For many years specialists in lightweights, its makers, the D.F.M. Manufacturing Co., offer four models: A 70 × 70 mm. two stroke, 70 × 90 mm., 70 × 76 mm., and 64 × 76 mm. four strokes. The last mentioned is one of the type developed by the 250 c.c. class in the Junior T.T. race and, with two-speed gear, clutch, and kick-starter, all-chain drive, sells at £78 15s. A Duplex frame, with detachable lower tank rail, is a feature of Diamond machines, while steel stampings are used wherever possible. The three-speed all-chain driven model has entirely enclosed chains and a 350 c.c. J.A.P. engine.

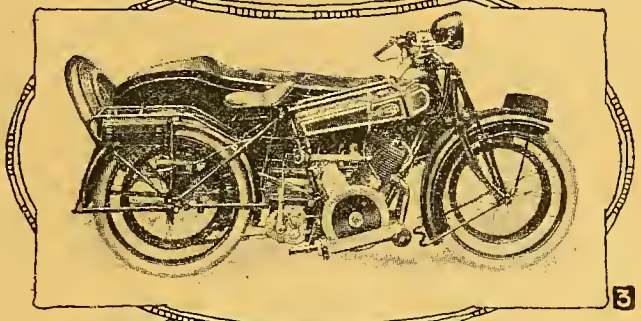
Examples of this range of machines are exhibited by Alexander's (178) and the D.R. Engineering Co., Dumfermline (201).



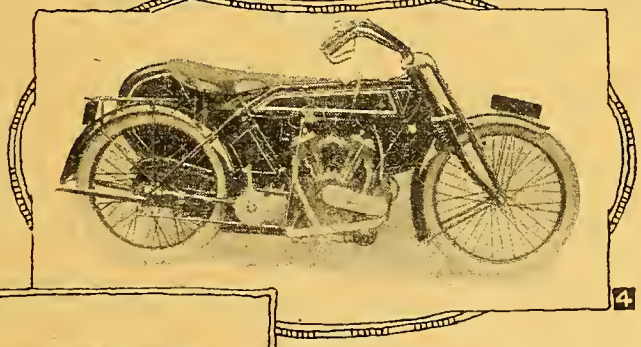
1



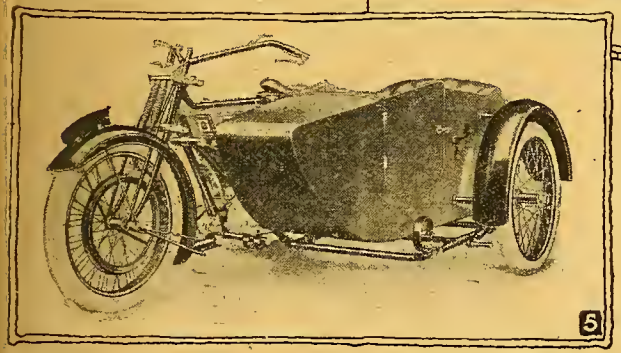
2



3



4



5

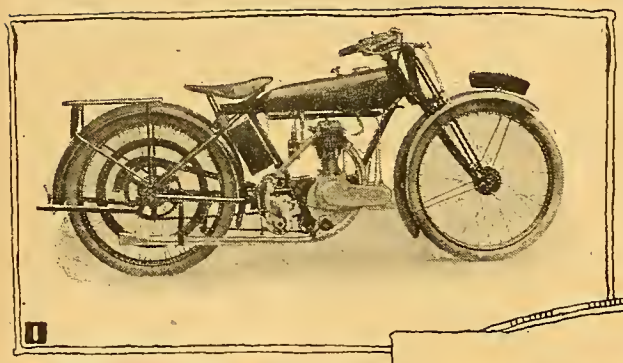
(1) 2¾ h.p. all-chain drive Diamond. (2) 3½ h.p. o.h.v. sports model Douglas. (3) 4 h.p. two-stroke Durelt outfit. (4) 6 h.p. Popular Model Excelsior sidecar. (5) 8 h.p. Enfield.

**DUNELT.** **Stand 186.**

As the only 500 c.c. air-cooled single-cylinder two-stroke, the Dunelt has been steadily gaining a reputation both for reliability and pulling capabilities since its introduction to the public about two years ago. Simplicity of design and concentration on one model allow the machine to be marketed at a very moderate price; the sidecar outfit with interchangeable (and spare) wheels is priced at £115 8s. A two-diameter piston and very flexible front forks are two of the Dunelt's outstanding features. Transmission is by chain and belt *via* a Sturmey Archer three-speed gear box, and 28 × 3in. tyres are standard. One solo, one tradesman's carrier, and two ordinary sidecar outfits will be displayed on this stand. An M.L. Maglita, speedometer and various like equipment is included in the specification of one of the latter exhibits. The makers, Dunford and Elliott (Sheffield), Ltd., are the exhibitors.

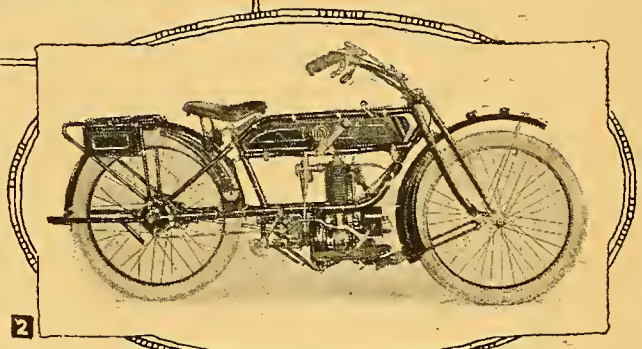
**DOUGLAS.** **Stand 179.**

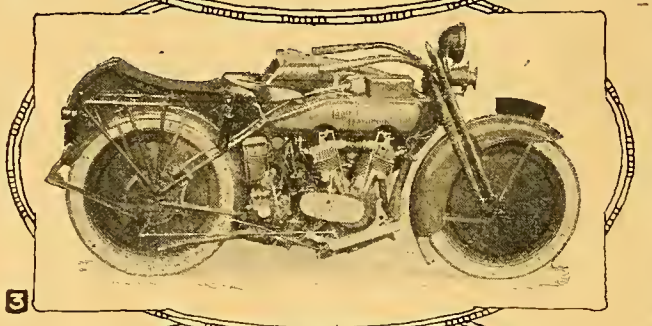
Although only five models of the Douglas will be exhibited by the Douglas firm, they represent a very varied range, catering for solo and sidecar tourist or speedman. Probably most attention will concentrate on the sidecar models: the re-designed edition of the war-tried "four" and the new o.h.v. 6 h.p. sports outfits, said to be capable of over 60 m.p.h. with a full-sized passenger in the comfortable sidecar. The former, of course, makes quite an appreciable appeal as a solo mount (£110), although it will have a difficult task to displace the extremely familiar 348 c.c. model in either its plain two-speed or three-speed clutch and kick-starter guises. The 2¾ h.p. types sell at £75 and £90 respectively and the 6 h.p. outfit at £165. Last, but not least, there is the record-holding and very successful 3½ h.p. o.h.v. sports model at £130. It seems superfluous to mention that all have flat twin engines of the type which the Douglas has done so much to popularise.

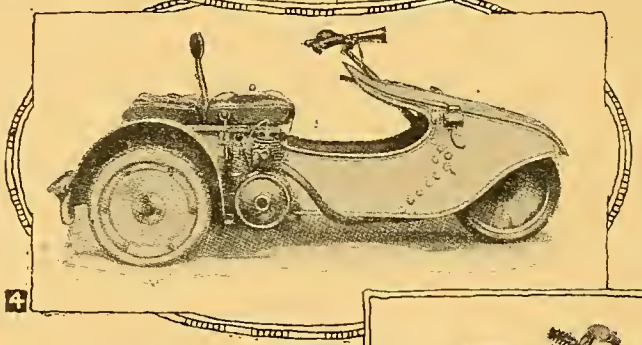


notable for excellent finish and neat appearance, differ considerably in purpose although the general specifications are not unlike. The smaller model is intended as a utility touring lightweight; it has final belt drive and, except when otherwise ordered, a two-speed gear box. A Maglita combined ignition and lighting set in this case increases the price from £73 to £88 9s.

Quite a different proposition is the 346 c.c. type, which has a Sturmey-Archer lightweight three-speed gear box and all chain drive. Several novel features are incorporated: for example the gear-lever quadrant is attached to a special bracket held by the gear box holding down the nuts; it thus moves with the gear box, the gear control needing no resetting when the primary chain is adjusted. £85 is the price; for an extra £5 it may be obtained specially tuned, with an aluminium piston, etc.







## ENFIELD. Stand 182.

The 8 h.p. Enfield sidecar outfit may be regarded as a very hardy survival of high power-weight ratio school of design; it depends for its hill climbing and flexibility in almost all normal running on the big engine's top gear pulliug capabilities. There being only two speeds, "low" must needs be an emergency gear. In practice the Enfield two-speed gear, which, of course, is of the expanding clutch type, is very simple and almost foolproof, and successes in important competitions prove that the machine is just as capable of freak hill-climbing as the majority of standard three-speed sidecar outfits. The engine is of Enfield design, but built by Vickers. Two examples will be exhibited by the Enfield Co., a standard outfit at £140 and the same model with a Magdyno set at £158. Sidecar hood and screen may be supplied at an extra charge of £8. Also a two-speed model, the Royal Enfield two-stroke, sells at £55, or £57 with kick-starter, which may be fitted at either side of the machine.

## EXCELSIOR. Stand 192.

Exhibited by the North British Machine Co., Glasgow, are two models of the Excelsior range—a solo and a sidecar machine. The first of these is a sporting mount fitted with a 2¾ h.p. Blackburne engine. It has a particularly neat frame, having a sloping top tube, and which provides a low riding position. With three-speed gear, clutch, and kick-starter, and very complete equipment, this machine is catalogued at £75.

The sidecar model is the smaller of the two twin outfits manufactured by the Excelsior firm. The engine fitted is a 6 h.p. J.A.P. (75×85 mm.=770 c.c.) and the machine throughout is of sturdy construction, having 28×3in. tyres, and an exceptionally large diameter steering head. The transmission is by chain throughout, and the equipment is in every way up to the work demanded from this type of passenger machine. With sidecar, the price is £133, Magdyno lighting being £22 10s. extra.

## FRANCIS-BARNETT. Stand 202.

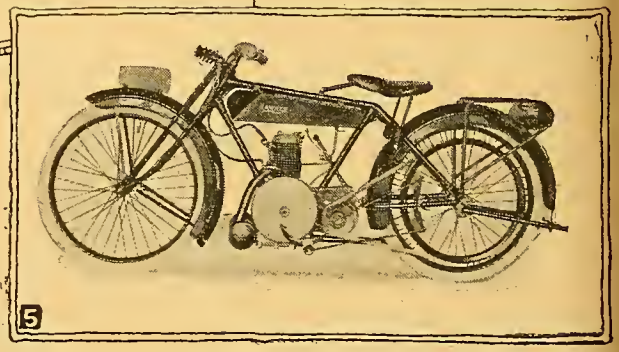
292 c.c. and 346 c.c. J.A.P.-engined Francis Barnett lightweights will be shown by Harry Gold. These machines, both

## F.N. Stand 213.

Dickens, Ltd., of Glasgow, are making an exclusive show of the Belgian-built F.N. machines, which as most motor cyclists know, are all shaft-driven and generally follow automobile practice to a greater extent than the average British design. This is particularly exemplified in the two four-cylinder models, rated at 7 and 8 h.p. respectively. The latter, a *de luxe* type, has overhead inlet valves centrally located in the cylinders, and is practically an entirely new design for 1922. Solo it costs £135; with sidecar £167. The prices of the 7 h.p. models are £95 solo and £127 sidecar. Two lightweights on the same lines—one with the new design of valve gear—are listed as 2½ h.p. and 3 h.p.. In this case two-speed gear boxes are used, but clutches and kick-starters are provided. Both weigh but 180lb., and are priced at £55 and £72 10s.

## HARLEY-DAVIDSON. Stand 209.

Harley-Davidsons will only be present (on the stand of the H.G. Motor Co., of Edin-



(1) 2¾ h.p. Francis Barnett. (2) 3 h.p. F.N. with shaft transmission. (3) 7-9 h.p. Harley-Davidson. (4) 2½ h.p. two-stroke Harper Runabout. (5) 2½ h.p. two-stroke Hawker with flywheel magneto.

# Like riding on air

**is the feeling you have when Moseley tyres are fitted to your machine. The outstanding characteristic of Moseley is supreme resiliency — Resiliency which absorbs the shocks of the road, lengthens the "life" of the machine, and gives unequalled comfort to the rider.**

**And the Moseley tread "bites" the skin of the surface—it does not merely slither over it—therefore no side slips.**

**In all sizes at lowest prices.**

**If you have not yet sent for your copy of the new season's price list, do so at once.**

# MOSELEY

***MILES BETTER—BETTER MILES.***

**DAVID MOSELEY & SONS, LTD.,**
**ARDWICK——MANCHESTER.**

*BRANCHES*—LONDON: 19-20, Holborn Viaduct, E.C. 1. BIRMINGHAM: 4, Lancaster St., Corporation St. MANCHESTER: 2, 4 & 6, New Brown St. LIVERPOOL: 9, Commutation Row. NEWCASTLE-ON-TYNE: 44-46, High Bridge. GLASGOW: 126, Ingram St. DUBLIN: 16, William St. AUSTRALIA—SYDNEY: 241-243, Castlereagh St. BRISBANE: Fitzroy Buildings.

**Stock the new Moseley speciality—the**

***"Float-on-Air" Saddle Cushion.***

**Perfect cushion comfort for every type of saddle and sidecar. Patent construction — guaranteed not to leak. Adds enormously to riding pleasure.**

**Send for list to-day.**

# The L.S.D. for Lightness, Speed & Distinction

Tax £4

"The little car that is proving its big worth."

THE three-wheeler that is making a name for itself in the Motor World. For economy and accessibility there is nothing in its class to touch it. It's a go-anywhere machine, and practically all on top. In traffic it is a pleasure to drive.

**Price £165**

Agents are requested to make early application for territory, as we shall soon be booked up.

SYKES & SUGDEN LTD

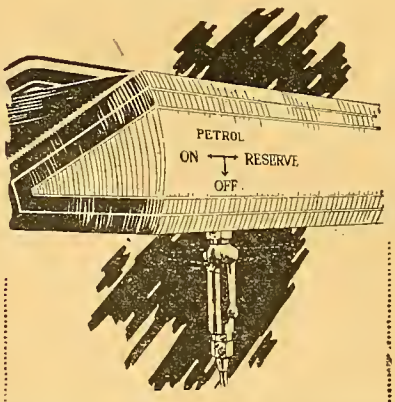
Phone: Slaithwaite LINTHWAITE, HUDDERSFIELD. Grams: Light, Linthwaite.

# The New Higher-Powered CONNAUGHT

**1922 Model Improvements.**

One of the many refinements on the 3½ h.p. model is a petrol warning device. In the event of running out of petrol the driver simply slings the tap over to the other position without leaving the saddle, and brings the reserve supply of petrol into operation.

*(See Illustration.)*




*Woodwright.*

Despite the popularity and wonderful efficiency of the now famous light-weight Connaught, we have succeeded in producing a higher powered model, more particularly for Combination work, which possesses all the best features of the light-weight, while developing more Horse Power.

## The 3½-H.P. 3-Speed All Chain Drive Connaught.

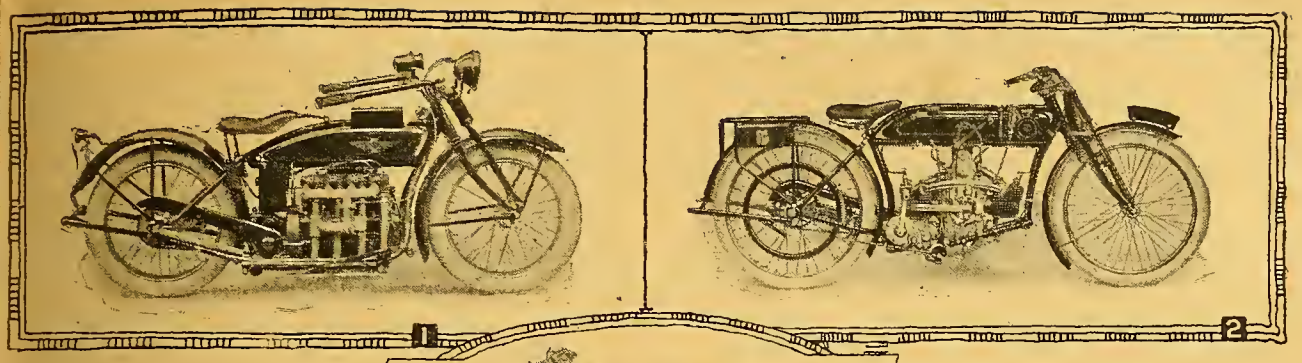
contains a number of mechanical improvements, and sells complete with luxurious side-car and apron for ... ... ... **£95**

Light-weight Solo models from **£45**

**THE BORDESLEY ENGINEERING CO., LTD., York Mills, Witton Lane, Aston, Birmingham.**

*London Showrooms :* **111, Great Portland Street, London, W.1.**

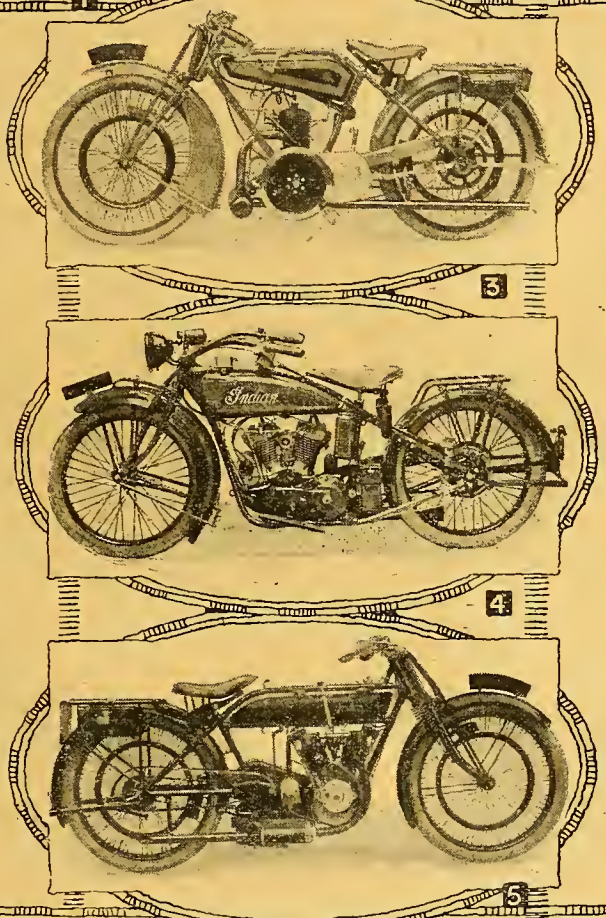
*(where demonstrations will be given without obligation.)*



burgh) in their big-twin form; the flat twin sports model will not be on view. Instead, there will be a very speedy looking example of the 7-9 h.p. twin as a road-racing solo machine. Two of the 1922 sidecar outfits (finished in the new dark green colour), one of a sporting and the other a touring type, and a third khaki-coloured outfit complete the exhibit. Capacious petrol tanks, large tyres, twist grip control, and such-like typically American but none the less admirable features are included in the specification. Taken all round, the Harley-Davidson combines serviceability with speed.

## HARPER RUNABOUT. Stand 230.

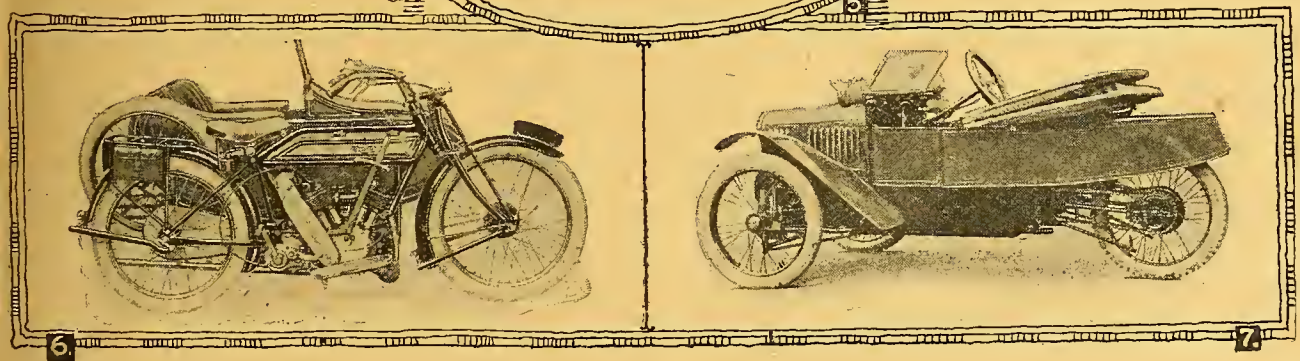
It is difficult to classify the Harper Runabout otherwise than by the name which its makers have given to it. The vehicle is a low-built three-wheeler, with the wheels arranged in the so-called tricycle fashion. Transmission from the modified Villiers two-stroke engine is by Renold's chains, and a simple type of gear gives three direct forward speeds, thus ensuring that no pushing will be necessary on all ordinary and some extraordinary hills.




Another point which should attract the elderly or lady motorist in particular is a hand starter; and, naturally, a clutch, of the single disc Ferodo-lined type is provided. The centre of gravity of the machine is extremely low; only direct comparison with a sidecar outfit really demonstrates this. 18×2¼in. straight-sided Dunlop Magnum tyres are mounted on detachable rims, and the pressed steel interchangeable wheels are also of Dunlop manufacture. Comfort and security are enhanced by quarter elliptic springing from the rear and two independent hand and foot operated brakes. Although a single seater, the Harper Runabout has proved capable of transporting an extra passenger on a special pillion seat. Three models are shown, all at £100.

## HAWKER. Stand 178.

The Hawker name was introduced to the motor-cycle world after the war, when it distinguished a simple two-stroke machine (equipped with a double-chain two-speed gear and a fly-wheel magneto) which at once commenced to give a good account of itself in competitions. At the last Olympia Show the Hawker range was extended by



(1) 10 h.p. four-cylinder Henderson. (2) 4½ h.p. flat twin Humber—a dual purpose mount. (3) 3 h.p. two-stroke Ivy. (4) 7-9 h.p. electrically equipped Indian Chief. (5) 5 h.p. Lea-Francis, fitted with o.h.i.v. M.A.G. engine. (6) 7 h.p. James sidecar. (7) 10 h.p. Sports Morgan, listed at a popular price.

models fitted with 2¾ h.p. and 4¼ h.p. Blackburne engines and three-speed gear boxes, with chain transmision. A 2¾ h.p. o.h.v. Blackburne engine is used in one type, the make-up of the machine being on particularly sporting lines. All the four-stroke models have internal expanding brakes on both wheels. The 2¾ h.p. o.h.v. machine costs £99 15s.; the 4¼ h.p. model is £89 5s.; and the 2¾ h.p. two-stroke is £52 10s.

## HENDERSON. Stand 177.

In the four-cylinder Henderson, Pioneer Motors, Ltd., of Edinburgh, probably stage the most elaborate machine in the building. A re-designed oversize engine in a modified frame tends to make this mount more than ever the ideal of the four-cylinder enthusiast, who is often content to ride it solo despite the inevitably great weight attendant on such a design. However, this latter objection is nullified by better controllability, more even torque, and remarkable flexibility. £175 is the price of the solo model. When used with a sidecar a reverse may be fitted. Quickly detachable wheels are now standard.

## HUMBER. Stand 176.

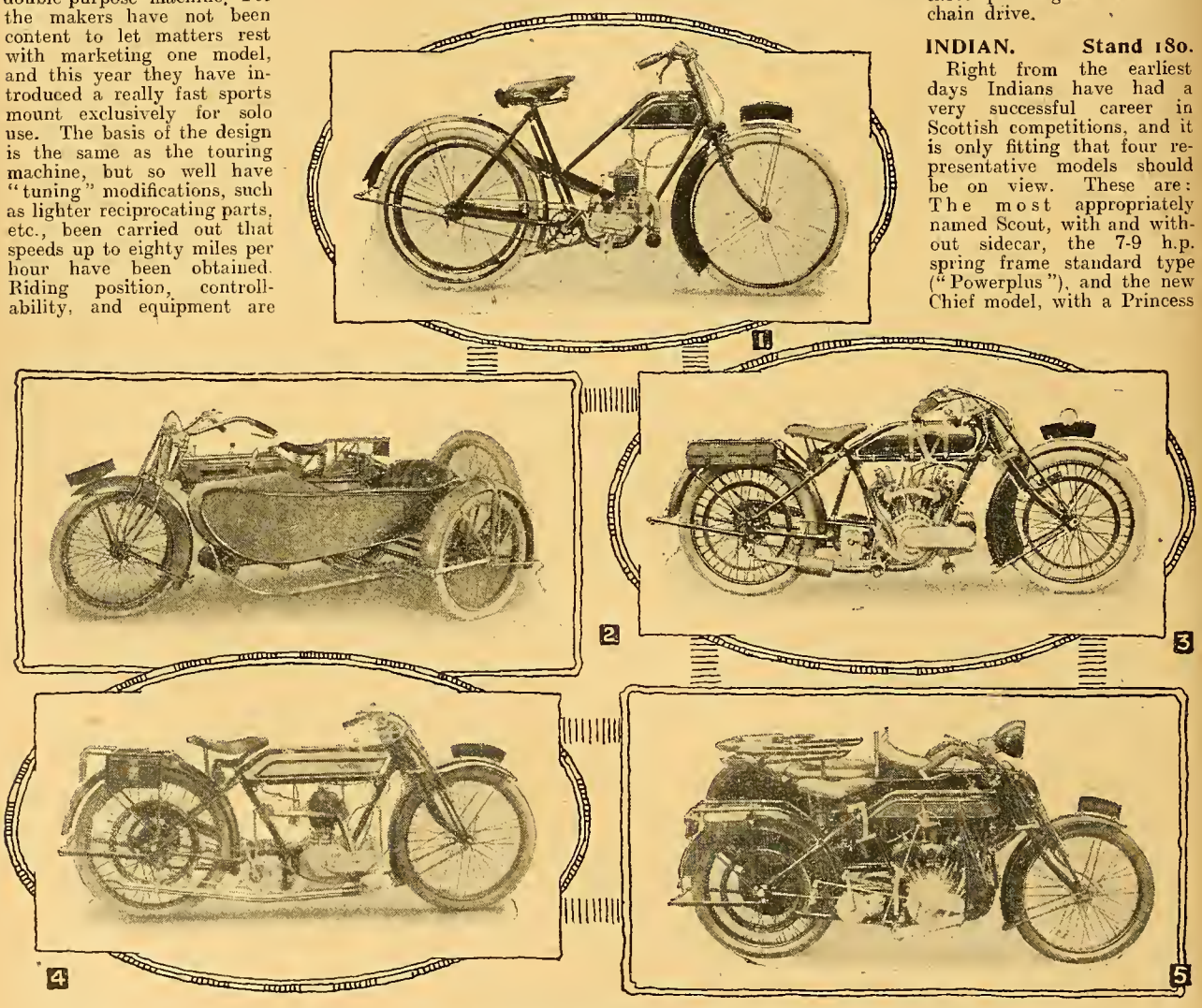
Although fitted with a comparatively large (600 c.c.) flat twin engine, the 4½ h.p. Humber is undoubtedly an excellent double-purpose machine. Yet the makers have not been content to let matters rest with marketing one model, and this year they have introduced a really fast sports mount exclusively for solo use. The basis of the design is the same as the touring machine, but so well have "tuning" modifications, such as lighter reciprocating parts, etc., been carried out that speeds up to eighty miles per hour have been obtained. Riding position, controllability, and equipment are such as to make a direct appeal to the clubman and his kind. The price is £100. The touring model, which enjoys an enviable reputation for silence and smooth running, is priced at £110 solo or £144 with a handsome Grindlay sidecar. Black predominates in the colour schemes of all the six Humbers on show, and one all-weather type is finished throughout in that colour. Lubrication is by combined sump, mechanical pump, and drip feed.

## IVY. Stand 198.

Having made a distinct reputation for themselves, the Ivy two-stroke models should command the attention of all who desire a powerful, go-anywhere solo lightweight, or an efficient light passenger machine. The Ivy "Three" was one of the pioneers of the 350 c.c. two-stroke class, and it has demonstrated its capability of taking a sidecar and passenger up much more severe hills than the ordinary user of this class of machine would care to climb. The cylinder of the 3 h.p. Ivy is a heavy and massive casting designed to prevent knocking or pre-ignition even when subjected to prolonged periods of full-throttle running. Tank design and the khaki and black finish combine to make the Ivy models distinctive, and variations between two or three speeds, all chain or chain and belt drive, are obtainable. The 3 h.p. model shown by Rossleigh, Ltd., costs £77 with three-speed gear and all chain drive.

## INDIAN. Stand 180.

Right from the earliest days Indians have had a very successful career in Scottish competitions, and it is only fitting that four representative models should be on view. These are: The most appropriately named Scout, with and without sidecar, the 7-9 h.p. spring frame standard type ("Powerplus"), and the new Chief model, with a Princess




(1) 1¼ h.p. 75 lb. McKenzie lightweight. (2) 7-9 h.p. sporting Matchless outfit. (3) 3½ h.p. sports model Martinsyde. (4) 3½ h.p. standard countershaft Norton. (5) 8 h.p. electrically equipped New Imperial sidecar.

**Motor Cycles at the Scottish Show.—**

sidecar attached. It will be recalled that the latter has a body of American design mounted on an English chassis. The Chief is an enlarged edition of the 4 h.p. Scout model, having skew gear primary drive, full electric equipment, and a re-designed engine of 997.6 c.c. Final drive on all the models is by guarded, but not wholly enclosed, chain, and naturally the Indian three-speed gear box is standard.

### JAMES. Stand 183.

Extending from a £55 two-speed two stroke lightweight to a £186 7s. electrically equipped big twin sidecar outfit, complete with spare wheel, one example of each of the various and varied James models will be shown. Interchangeable wheels and cast aluminium chain cases are amongst the most important modifications to the 7 h.p. sidecar outfit which, less lighting set and spare wheel, is listed at £160. Either with the standard or the carrier sidecar the 4½ h.p. model is £135, and the guaranteed 60 m.p.h. 3½ h.p. sports twin is £105. Both the lightweights have final belt drive, but the more expensive (£60) model has a conventional gear box with clutch and kick-starter in lieu of the twin chain and dog clutch two-speed device. Chain drive and James three-speed gear boxes with clutch and kick-starter are standard on the three larger models.

### LEA-FRANCIS. Stand 199.

One sample of the Lea-Francis productions, a 3½ h.p. M.A.G.-engined sports model, to wit, is exhibited by Andrew Downie, Ltd., of Edinburgh. Pioneers, as such, are often forgotten, so that it is well to recollect that in the pre-1914 era, Lea-Francis machines were equipped with quickly detachable wheels, dummy belt drum brakes on both wheels, and completely enclosed transmission. These details are now common practice, but even so the Lea-Francis machine does not lose its individuality. The price of this sports model is £110; it is to be regretted that no other Lea-Francis machines are on exhibition, as the touring types are characterised by silencing and mudguarding arrangements necessarily curtailed in the sporting specification.

### McKENZIE. Stand 178.

Despite its thoroughly Scottish name, the McKenzie is actually made in Coventry (at the Hobart Cycle Works). However, if the nationality of a machine is judged by that of its designer and producer, this ultra lightweight two-stroke may be ranked as a product of Scotland. Its purpose is to fill the gap that exists between the motor-assisted bicycle and the simplest lightweight motor cycle proper. Pedalling gear is fitted more to ensure a dignified start than as a means of propulsion; and the open frame is intended to attract the lady or the normally overcoated gentleman rider. The spring forks are worthy of special examination. At £26 5s. the little mount is almost in a class by itself. Alexanders are showing it.

### MARTINSYDE. Stand 195.

Three 6 h.p. machines—sporting and touring sidecars and a sporting solo—and a 3½ h.p. machine, which is essentially a solo sports model, comprise the Martinsyde exhibit. Overhead exhaust valves are incorporated in both the V-twin engines—a novel feature which presents undoubted practical and theoretical advantages. Proof is supplied by the many Martinsyde road and track competition successes during the past twelve months, which, for a comparatively new design, make a very creditable list. The important 750 c.c. class hour record, hitherto the prerogative of 500 c.c. machines, is perhaps the Woking production's most noteworthy achievement. £160 for the 6 h.p. touring outfit, £155 for the equivalent sporting type, and £110 for the small solo machine are the chief prices. Alexanders, Ltd., of Edinburgh (Stand 178), will also exhibit Martinsydes.

### MATCHLESS. Stand 196.

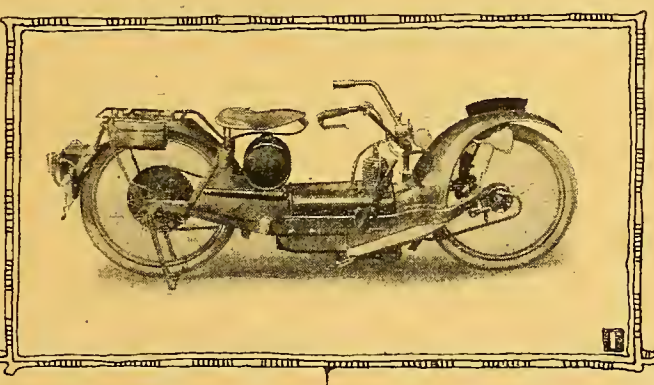
Four Matchless models are shown by the makers, and as this famous big-twin British spring-frame outfit is so well known both in private work and in the open competition world, detailed description or laudatory opinions are almost beside the point. To the rider who demands the utmost luxury that the designer can encompass in a sidecar outfit, the claims of the Matchless must bulk largely amidst the select few from which his choice must be made. Without the electric lighting equipment the Model H2 touring outfit costs £170, and for £5 10s. extra a two-seater sidecar can be supplied. The model J, a rigid framed sporting machine, having nevertheless the same general specification, is £130, and the same machine with a sporting sidecar costs £160.

### MORGAN. Stand 231.

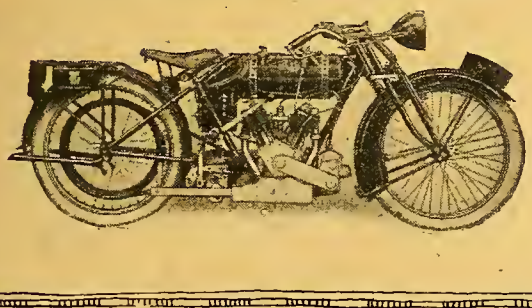
Standing on its three wheels and a solid reputation, the Morgan runabout calls for little eulogistic comment. It is a machine that has provided for itself a special niche in the Temple of Fame, and in no country should it be more successful than in Scotland, where the hills, long and gradual, rather than short and precipitous, might have been planned for a vehicle which owing to light weight and great power has an exceedingly high top-gear performance. Selling at £150 in its cheapest air-cooled form, the Morgan, with its full equipment, represents excellent value; there are more luxurious specifications, however, embodying special coachwork, water-cooling, electric equipment, and even four-speed gears, in which case the £200 mark is exceeded.

### NER-A-CAR. Stand o

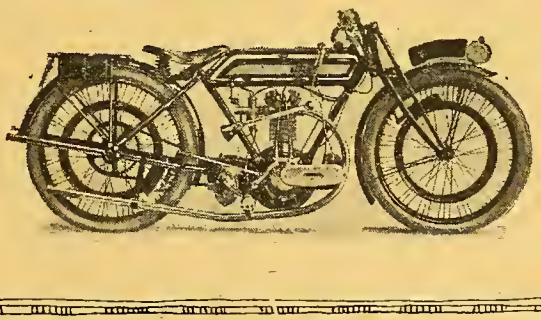
Although not described as a motor cycle by its sponsors



(1)

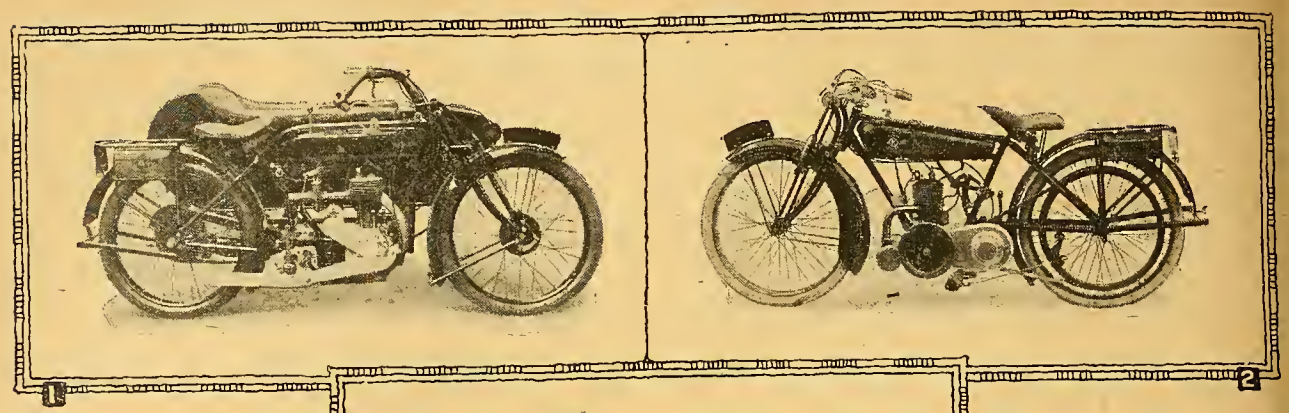


(2)



(3)

(1) 2½ h.p. Ner-a-car. (2) 3 h.p. dynamo model N.U.T. (3) 2¾ h.p. overhead valve New Scale.



(the Inter-Continental Engineering Co., Ltd., 20, Conduit Street, London, W.1), the Ner-a-car finds its way into motor cycle exhibitions and competitions. Motor cycle or not, the Ner-a-car is a machine decidedly interesting to motor cyclists, and it is well worth study. Thanks to its weight distribution and to its (presumably) ideal rake of the steering pivot, the machine is absolutely self-steering, and the most timid rider can travel "hands off" with confidence, while no special skill is required to do a variety of standing-up tricks quite impossible to ordinary riders on ordinary machines. The lay-out of the engine and friction drive in the chassis is workmanlike, and the mudguarding and stability render the machine specially suitable for ladies, business men, and other about-town riders. The price is £69 6s. with full equipment. It is shown also by George and Jobling, Bothwell Street, Glasgow; Stand 205.

(1) 4½ h.p. New Hudson sidecar outfit. (2) 2¾ h.p. two-stroke O.K. (3) 4 h.p. outside flywheel Powell. (4) 4 h.p. four-speed P. & M.

## NEW IMPERIAL. Stand 178.

Great success on the part of one model is apt to overshadow other and dissimilar productions by the same maker. This has been the case to some extent with New Imperial machines, for the 1921 achievements of the light solo models tended to obscure the fact that in the 8 h.p. New Imperial sidecar outfits is one of the most powerful and sturdily constructed machines on the British market. Alexander's of Lothian Road, Edinburgh, are the Scottish representatives, and it will be on their stand that New Imperials will be exhibited. The range produced by the makers covers 2¼ h.p. and 2¾ h.p. lightweights, with variations from chain-cum-belt to all-chain transmission; also the 8 h.p. outfit, with its massive roller bearing hubs and an 8 h.p. solo mount. J.A.P. engines are used throughout.

## N.U.T. Stand 204.

A Dundee agency, Meldrum's, shows the 3½ h.p. N.U.T., which is but one of a variety of machines produced by the Newcastle firm. The 3½ h.p. model staged has a V-twin engine of 64×76 mm. bore and stroke (496 c.c.), and, fitted with Sturmey-Archer gear box, chain and belt drive and Magdyno electric lamp and horn equipment, costs £120. A chain drive model is obtainable, while a sports model, stripped for speed work, and a 5 h.p. sidecar machine, are also made.

## NEW SCALE. Stand 201.

New Scale machines are a product of Manchester, and although built up from proprietary components, the old-established engineering concern responsible for them does not fail to stamp them with an individuality and an evidence of careful work and finish. The model shown on the stand of the D.R. Engineering Co., Ltd., of Dunfermline, is a speedy solo mount embodying an o.h.v. Blackburne engine of 248 c.c. capacity (2¾ h.p.), which transmits its power through chains by way of a Burman three-speed gear box. The price of the machine is £95.

## NORTON. Stand 181.

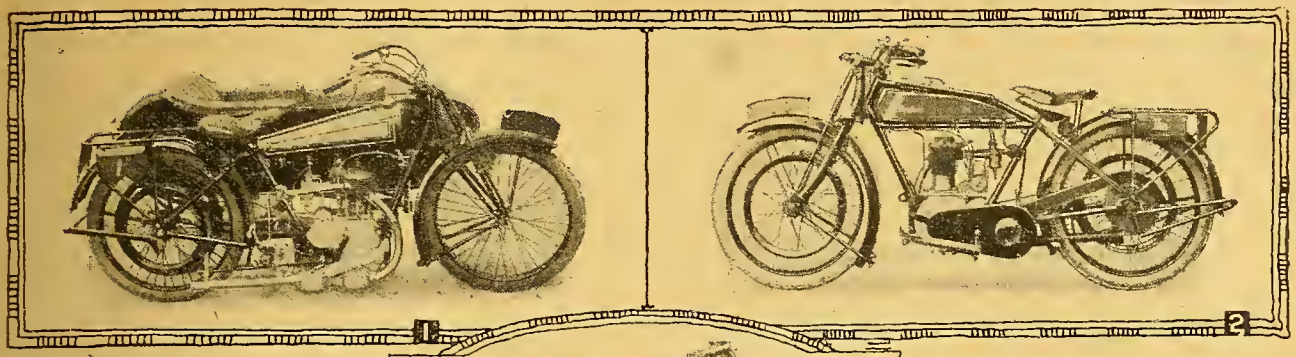
Known to the clubman and tourist alike, Norton machines require little explanatory comment. Their competition successes often in the hands of private owners are not confined to any one district, and thus the Scottish enthusiast is just as likely to be a Norton "fan" as the Brooklands *habitué*. Four representative models will be staged by Norton Motors, Ltd., in addition to machines on Stands 178 and 204. The "big four" (solo £120, with family sidecar £154); the "home" and "colonial" countershaft 3½ h.p. machines, and the still very popular belt-driven "3½" make up the exhibit. Prices of the gear box models are £117 and £115 respectively, and of the single-geared mount £80. A racing sidecar may be obtained at £24 10s.

## NEW HUDSON. Stand 192.

Examples of the 10 h.p. three-wheeler, "Four-point-five" sidecar outfit, and a two-stroke lightweight will be staged by the North British Machine Co., Ltd. Although rather extreme types all three have an enviable reputation for clean design and neat lay-out generally.

Water-cooling, a three-speed and reverse gear box and a pressed channel steel frame are items which give a key to the general characteristics of the runabout. A 1,093 c.c. V-twin M.A.G. engine supplies the power.

Making its *début*, or perhaps more correctly an *encore*, at the last Olympia Show, the 4½ h.p. single-cylinder sidecar outfit is remarkable for its sturdiness of build. 700×80 mm. tyres are used, and both front and rear brakes are of the internal expanding type. A Sturmey-Archer gear box and



chain drive are included. A chain-driven example of the two-stroke lightweight (£63) completes the exhibit.

**O.K. Stand 178.**

So often has the O.K. lightweight scored competition successes as a passenger outfit that one is apt to regard it as essentially a sidecar machine and so to judge it. This is a remarkable testimony to its qualities, but is perhaps a little unfair to the makers, for several of the O.K. models are intended purely as solo mounts. The direct belt-driven mount, for example, which sells at £39 18s.

Chain drive, a three-speed gear box and frame and fork modifications are features of the sidecar machine, which, incidentally, may be further modified to serve as a go-anywhere sporting solo mount.

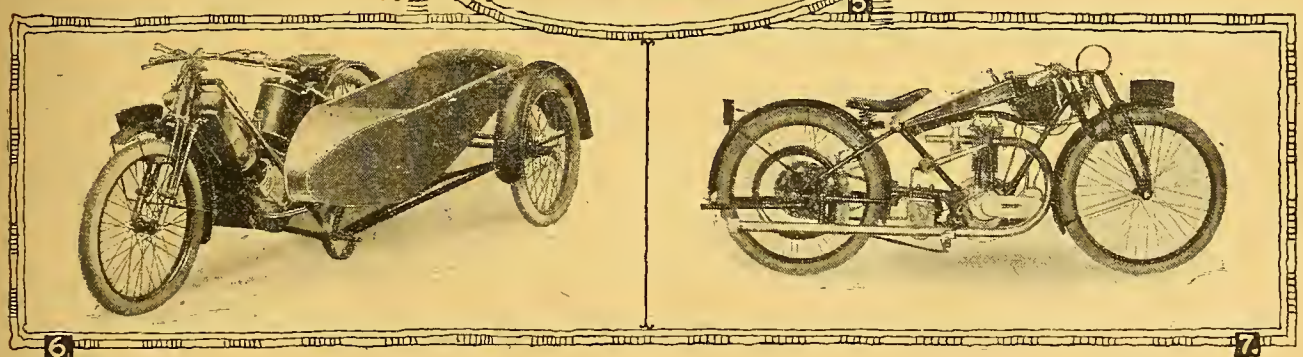
Representative O.K. types will be found among Alexanders' exhibit.

**POWELL. Stand 202.**

A machine which is not so well known as it deserves to be, the Powell is bound to attract the attention of visitors. It is fitted with a 4 h.p. outside flywheel single-cylinder engine, placed in a sloping position in the frame. The primary drive is taken from the outer side of the flywheel. Both as a solo and a sidecar mount, the Powell is sure to be seen in greater numbers on the road this year. It is a Wrexham product, and is exhibited by Harry Gold, of Glasgow.

**P. & M. Stand 178.**

A constant line of development has been followed in the P. and M. machines since their inception in 1903. As the first completely chain-driven motor cycle, and one of the earliest machines equipped with a speed gear, the P. and M. early secured a valuable reputation in the Scottish trials. The new four-speed gear, embodying a two-speed dog clutch box, working in conjunction with the selective clutch mechanism, and the ingenious control will be studied closely at Kelvin Hall, and those who have found the previous 499 c.c. engine just too small for top gear climbing of the long mountain passes with a sidecar will appreciate the 1922 engine of 555 c.c. capacity. Alexanders are showing it.



(1) 4¼ h.p. Quadrant sidecar outfit. (2) 2¾ h.p. Rex Acme. (3) 2⅞ h.p. Royal Scott, fitted with Barr & Stroud sleeve valve engine. (4) 4 h.p. three-speed Rover. (5) 2¾ h.p. Raleigh. (6) 3½ h.p. Scot Squirrel sporting passenger outfit. (7) 2¾ h.p. o.h.v. Sheffield Henderson speed model.

**Motor Cycles at the Scottish Show.—**

**QUADRANT.** **Stands 177 & 178.**

One of the cheapest machines, in price but not in quality, is the 4½ h.p. Quadrant which is exhibited by Alexanders, Ltd. (178) and Pioneer Motors Ltd. (177). At the Olympia Show the Quadrant was undoubtedly accorded a universal measure of praise as offering the maximum value possible to the would-be motor cyclist desiring ample sidecar power with a minimum capital expenditure.

**RALEIGH.** **Stands 199 & 210.**

The Raleigh entry, or re-entry it should be said, into the motor cycle market about two years ago was not made at a very auspicious moment, for when quantity deliveries of the luxurious spring-frame flat-twin machine were possible the public were demanding cheaper and more simple machines. Now a machine with the Raleigh name will meet that demand also; it is a single-cylinder with outside flywheel, the capacity being 350 c.c. in one model and slightly larger (400 c.c.) in another.

Andrew Downie, Ltd., Edinburgh, and V. Jennings and Co., Ltd., Glasgow, are the exhibitors.

**REX-ACME.** **Stand 210**

The Rex-Acme is one of the best finished machines produced in Coventry. Since the reconstruction of the motor industry following the war, Rex and Acme motor cycles have built up an enviable reputation for their makers, and now the two names are merged, and, as Rex-Acme, cover a very complete range of solo and sidecar machines. Several examples of Rex-Acme models are exhibited by V. Jennings and Co., Ltd., Glasgow.

**ROVER.** **Stand 189.**

Twin and single-cylinder models are made by the New Rover Cycle Co., Coventry. The first mentioned has a 5-6 h.p. J.A.P., and is equally popular as a solo mount and a sidecar machine. The 4 h.p. single has a reputation extending over a decade, and is well known on both sides of the border for its consistently good performance in reliability trials. Recent developments have resulted in a fast sports model of the single-cylinder type, and during 1922 it is expected that the Rover name will again be carried to the front rank in speed events. Rover machines will also be shown by the D.R. Engineering Co., Ltd. (210).

**ROYAL SCOT.** **Stand 228.**

Knightswood Motors, Ltd., 98, West George Street, Glasgow, have taken over the manufacture of the Royal Scot machine, which was described in detail in *The Motor Cycle* recently, and will show six examples of their product on Stand 228.

The main point of interest about the design is the inclusion of a Barr and Stroud single-sleeve valve engine and Montgomery front forks.

**SCOTT.** **Stand 198.**

By virtue of being the only water-cooled twin-cylinder two-stroke motor cycles on the British, or, indeed, the world's markets, Scott machines occupy a unique position.

With a guaranteed maximum speed of 60 m.p.h., the now year old 3½ h.p. Squirrel model has proved itself able to maintain as high an all-round average speed as almost any sporting machine in existence. Solo, it weighs less than 200 lb., or, as shown by Rossleigh Motors, Ltd., with an aluminium sidecar, not much more than 260 lb.

**SHEFFIELD HENDERSON.** **Stand 178.**

At Olympia the 2¾ h.p. racing model Sheffield Henderson was seldom without an interested crowd of spectators and, one might almost add, admirers. Its rakish appearance, accentuated by a small capacity competition tank, the complete absence of mudguards, and the presence of a pair of speed event number plates, gave an impression of wonderful speed capabilities.

**SUN.** **Stand 204**

Unfortunately the most interesting Sun model—a two-stroke with a rotary inlet valve in the crankcase—will not be on exhibition; but the 292 c.c. J.A.P.-engined machine on the stand of Meldrum's (Dundee) will serve to indicate the general standard of Sun quality and finish. With 2-speed gear, clutch, and kick-starter, the price is £63, and the weight 185 lb.

**SUNBEAM.** **Stand 210.**

It is difficult to say which of the new Sunbeam models is the more attractive. Their purpose is different; and, while the sidecarist who welcomes the 4¼ h.p. outfit as just what he has wished for may almost ignore the fleet-looking new long-stroke T.T. model, the ardent soloist, most probably, will look at things in an entirely reverse direction. This is as it should be; the dual-purpose machine is, after all, but a compromise.

V. Jennings and Co., Ltd., Glasgow (210), Pioneer Motors, Ltd., Edinburgh (177), and the D.R. Engineering Co., Dunfermline (201), all exhibit Sunbeams.

**TRIUMPH.** **Stand 193.**

Undoubtedly the new four-valve model will be the centre of interest on the Triumph stand, if not of all the motor cycle exhibits in the building. This model is not yet sufficiently common on the road to be familiar to every motor cyclist, but its clean design, its early successes in competition, and the reputation of the Triumph Company for a very high standard of detail, finish, and, consequently, reliability, combine to ensure that shortly it will become as popular as the other products of the firm. The 499 c.c. o.h.v. engine is of Ricardo design, and, while remarkably efficient, is neither complicated nor unduly noisy. Excepting Druid forks, 26×3in. tyres, and improved gear lever, handlebar and foot-rest locations, the "bicycle" portion of the machine follows the lines of the chain-driven "four." Our experience on the road proved that these exceptions made an entirely different machine of it—more "racy" in feel and more controllable generally. The price is £120.

Chain- and belt-driven standard models, with and without sidecars, and an example of the popular 2¼ h.p. two-stroke will also be staged, both on Stand 193 and on the near-by stands of Chas. Middleton and Son, Ltd., Glasgow (194), and Rossleigh, Ltd., Edinburgh (198).

**TRUMP-JAP.** **Stand 177.**

One example of the re-introduced Trump-Jap will be shown—a 292 c.c. lightweight on the stand of Pioneer Motors, Ltd., Edinburgh. Tastefully finished in black and gold, it possesses a certain air of distinction, despite the fact that very commonly used components are incorporated in the design. The Amac carburetter, M-L. magneto, and Hutchinson tyres are all well at the top of their classes; so fitted, and with a two-speed gear box, the 2¾ h.p. Trump is priced at £60.

**VELOCETTE.** **Stand 178.**

Only one stand (Alexanders') will bear an example of the Velocette lightweight; but this is no adverse index of the popularity of this high-class two-stroke in Scotland. The Velocette emphatically does not come into the large class of assembled machines, but various competition and freak hill-climbing successes, as well as its service in the hands of private owners, proves that it loses nothing by being distinctive. Two- and three-speed touring models, guaranteed 50 m.p.h. sporting machines, and a ladies' model are among the variations offered. There are also two sizes of slightly differing engines of nominally 2¼ h.p.

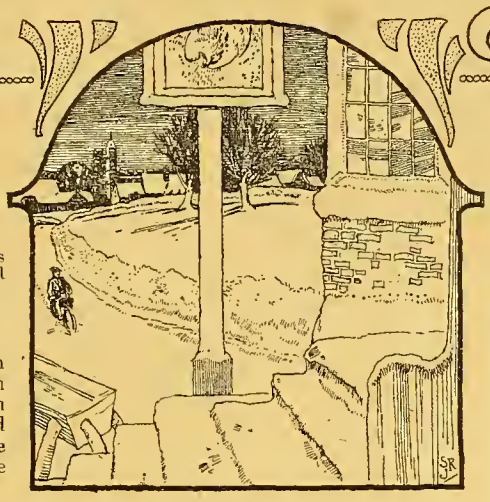
**VICTORIA.** **Stand 200.**

As befits a Glasgow production, the array of Victoria machines on Stand 200 is very complete, there being no fewer than eleven models, all more or less different. Perhaps the best examples of value are the 350 c.c. J.A.P.-engined three-speed sidecar outfit at £85, and the sports model with an o.h.v. Blackburne engine at £80. Other Victoria types include a £39 18s. Villiers-engined lightweight and a 550 c.c. J.A.P. three-speed sidecar outfit at £110, the models lying between these extremes being priced proportionately.

**ZENITH.** **Stand 178.**

Among the nineteen odd makes on Alexanders' stand there will be at least one Zenith or Zenith-Bradshaw. On account of its oil-cooled power unit the latter is perhaps most likely to arouse attention.

# CURRENT CHAT



## Times to Light Lamps.

| | | | |
|---|---|---|---|
| Jan. | 26th | ... ... | 5.36 p.m. |
| ,, | 28th | ... ... | 5.39 ,, |
| ,, | 30th | ... ... | 5.42 ,, |
| Feb. | 1st | ... ... | 5.47 ,, |

Number plates to be illuminated thirty minutes earlier. *vide* Road Vehicles Registration and Licensing Order (1921).

### Manufacturers at the Scottish Show.

Although this is not the first occasion on which a motor cycle show has been held in Scotland, the present exhibition is the first of its kind directly supported by manufacturers. Twenty stands are occupied by the actual makers of the machines which are staged thereon.

### Next Week's Dates for "The Motor Cycle Film."

Appreciations continue to flow in from each of the four clubs to whom, on the average, *The Motor Cycle* is shown weekly. To-night (Thursday), it will be exhibited at the Theatre Royal, Bradford on behalf of the enterprising Bradford M.C. and L.C.C.; to-morrow it goes to the Peterborough Palladium through the agency of the local motor cycle club, and on Monday it will be shown at the Tredegar Hall Picture House, Stow Hill, Newport, Mon. by arrangement with the Newport and County M.C.C. On Wednesday, February 1st, it returns to Yorkshire for an event organised by the Sheffield and Hallamshire M.C. and L.C.C.

### Where is it?

Last week we published a letter from a reader asking the location of a certain dimly remembered hill. From the scores of replies that have been reaching us daily since, there can be no doubt that the mystery grade is School Hill, situated practically in the centre of Lewes, Sussex.

### The Moto-Cycle Club de France.

The Moto-Cycle Club de France held its annual general meeting recently, when M. Hamon was re-elected President. M. Hamon has taken a great interest in motor cycle trials, and in those of an international character, in which he has held an official position, he has always meted out perfect justice to French and British competitors alike.

### Motor Thieves and Licensing System.

Speaking at the annual dinner of the Birmingham M.C.C., the Chief Constable, C. H. Rafter, mentioned the great service rendered both at home and abroad by motor cyclist "D. R.s."

Referring to the new system of licencing, he did not believe that any check had been put on the thefts of machines by this means.

During 1920, in Birmingham, 15 cars and 34 motor-cycles were stolen, and 8 cars and 18 cycles were recovered. In 1921, practically the figures were repeated, 11 cars and 36 motor cycles being stolen and 4 and 13, respectively, recovered.

### Prizes for Tour de France.

A sum of 30,000 fr. has been voted by the Municipality of Montargis towards prizes for the 1922 Tour de France. The last Tour de France in which an English competitor took part was in 1905, when the whole course was covered by J. Van Hooydonk, one of the oldest pioneers of the British motor cycle industry; he rode a Phœnix-Trimo.

### 230 Mile 12-hour Open Trial.

Instead of the hill-climb first announced as the April 1st open event of the Western Centre A.C.U., a twelve-hour reliability trial will be held over a route of about 230 miles, starting at Stourbridge and finishing at Worcester, the lunch stop being at Clevedon, Somerset. The trial will be on the lines of last year's very successful two-day event.

## Special Features.

FAMOUS SCOTTISH HILLS.
CLUB LIFE ACROSS THE BORDER.
MOTOR CYCLES AT THE SCOTTISH SHOW.

### A Twenty-four Hours' Trial in France.

The French Association of ex-military motor cyclists intends to organise a 24 hours' trial on May 28th for a gold cup. The competition will be open to motor cyclists and drivers of cycle cars, and will take place on a closed circuit close to Paris. The start will take place on the Saturday at 3 p.m. One clause in the rules limits the number of hours (probably 4) which will be allowed to each competitor for replenishment stops.

### Sidecar Fuel Consumption Records.

In *The Motor Cycle* of the 12th inst., there was published a letter from Mr. H. B. Booth suggesting a meet of Triumph sidecar owners for the purpose of getting to the bottom of the fuel consumption controversy. Those interested were invited to send the following particulars: (1.) Year of machine. (2.) Type and make of sidecar. (3.) Type of screen. (4.) Weight of outfit. (5.) Carburetter and jet number. (6.) Gear ratios. (7.) Oil used and mileage per pumpful. (8.) Other particulars of interest. Several correspondents have already written Mr. Booth expressing a desire to participate in the test; will others who are interested please write to the organiser direct at 285, Harrow Road, London, W.9.

BABY RUNABOUTS IN THE SNOW. These two little Harper three-wheelers, which are fitted with 2½ h.p. two-stroke engines, found no difficulty in negotiating Waneth Low hill, in Cheshire, during the recent snowy weather.

# ANNUAL GENERAL MEETING OF THE A.C.U.

THE annual general meeting of the Auto Cycle Union, which was held at 3 p.m. on Saturday afternoon last, was purely a formal affair, and lasted exactly half an hour. The chair was occupied by the Hon. Sir Arthur Stanley, G.B.E., M.V.O., C.B., president of the Auto-Cycle Union, who, having announced that the notice of the meeting had been mentioned in the papers three weeks previously in accordance with the rules, proceeded with the election of president and vice-presidents. As the exact number of candidates for which there were vacancies had been nominated, and they were the same gentlemen as were elected last year, they were on the proposal of Col. F. S. Burston, C.B.E., seconded by Mr. H. P. E. Harding, re-elected. The Hon. Sir Arthur Stanley was re-elected president of the A.C.U.

The last item on the agenda stated that as no recommendations for the advancement of motor cycling had been received, the business of the meeting was ended. But the chairman before closing the meeting asked the secretary to say a few words about the Union membership.

Mr. T. W. Loughborough, on rising, referred to the value of the work done by the local centres in propaganda; decentralisation of the headquarters work had been very valuable in this respect, and for a long time the Union had suffered from inability to blow its own trumpet. For many years the A.C.U. had been the only body looking solely after the interests of motor cyclists, but when he compared the number of A.C.U. members to the number of motor cyclists registered, he found these sadly disproportionate. The question of new legislation was coming up again when the antiquated motoring laws would be revised. Consequently the help of all motor cyclists was needed, and a new membership campaign should be begun at once.

Then followed the meeting of private members, which, in the space of a few minutes, elected the following members to fill the five vacancies of their representation on the general committee: S. L. Bailey, E. B. Ware, W. Cooper, D. H. Noble, and V. C. Hardy.

# CLUB NEWS.

### Featherstone and District M.C.

The annual meeting was held at headquarters, The Travellers' Hotel, Purston, on Thursday of last week, and runs for April were decided upon.

### Taunton and District M.C. and L.C.C.

The annual meeting of the Taunton and District Motor Cycle and Light Car Club was held at the Castle Hotel on Tuesday evening of last week, Mr. Stuart Goodman presiding. Officers for the ensuing year were appointed. Mr H. T. Kite, honorary secretary of the South-Western Centre, announced that the following dates would be fixed for Centre events: May 20th, open trial run by the South-Western Centre; June 3rd, Lands End trial run by the Yeovil Club; June 17th, reliability trial, Exeter; July 1st, reliability trial, Taunton; July 22nd, Weston-super-Mare Club; August 12th, hill-climb, Tiverton.

### Birmingham M.C.C.

Mr. E. R. Lycett presided at the annual dinner, which was held at the Midland Hotel on the 13th inst. After the toast of "The King" had been proposed by the President, Major R. V. C. Brook arose to toast "The Club." He stated that the Club was started in 1903 with as few as twenty members, and that to-day the membership stood at 380. It was the largest organisation of its kind outside London—a very proud fact for members to keep in mind.

### South Birmingham M.C.C.

On Saturday, the 14th inst., in spite of two inches of snow, members of the club made an attempt to climb a new hill which has been discovered by the club officials. Situated near Gay Hill, six miles from Birmingham, the approach is through a series of small streams of water, the surface of the hill being grass-covered. Not one machine succeeded in making a clean climb, although ropes were tied round the rear tyres.

The best attempts were made by H. Perrey on a 4¼ h.p. B.S.A. sidecar, and Bert Kershaw on a 2¾ h.p. New Imperial. In every case the driving wheel dug itself in up to the axle, and came to a standstill.

### North London M.C.C.

The second annual general meeting was held recently at the club's headquarters, "The Orange Tree," Friern Barnet, when the officers and committee for the ensuing season were elected.

### Essex M.C.

On a recent Friday the club gave a treat to the Piggott Street East Cripple School. The young guests had an excellent tea, followed by a splendid entertainment, and before being taken home each one had "a dip from a bran tub."

### Surrey M.C.C. and L.C.C.

The annual general meeting was held at Guildford on Wednesday, January 11th, last. The secretary presented his report, which was passed, and showed that the club was in a good position.

Amongst other business discussed at this meeting was the change of title of the club, which was carried. It is pointed out that the club, which was founded in 1907, covers a very wide area, and is therefore divided up into four centres, *i.e.*, London, Guildford, Dorking and Farnham, and Farnborough; each section has its own offices and representatives on the main committee.

The honorary secretaries for the different centres are: Dorking, Mr. S. T. G. Meeken, 41, South Street, Dorking; Guildford, Mr. H. Mitchell, "Viewfield," Woodland Road, Guildford; London, Capt. P. G. Robinson, "Evenley," Carshalton Road, Sutton, Surrey; and the Farnham centre, Mr. Mansell, "Pendenius," Church Circle, South Farnborough, Hants.

### South-Eastern Centre A.C.U.

It was decided at the last meeting of the centre to grant four permits only during 1922 for events open to the centre. In addition to the open reliability trial to be run by the centre itself on July 8th the programme as at present arranged will include the Ealing and District M.C.C. twenty-four hour reliability trial from London to Holyhead (April 28th-29th); Woolwich, Plumstead, and District M.C.C. team trial (May 13th); Brighton and Hove M.C.C. hill-climb (June 24th); and the Surbiton and District M.C.C. speed trial at Brooklands (September 2nd).

### Ilkley M.C. and L.C.C.

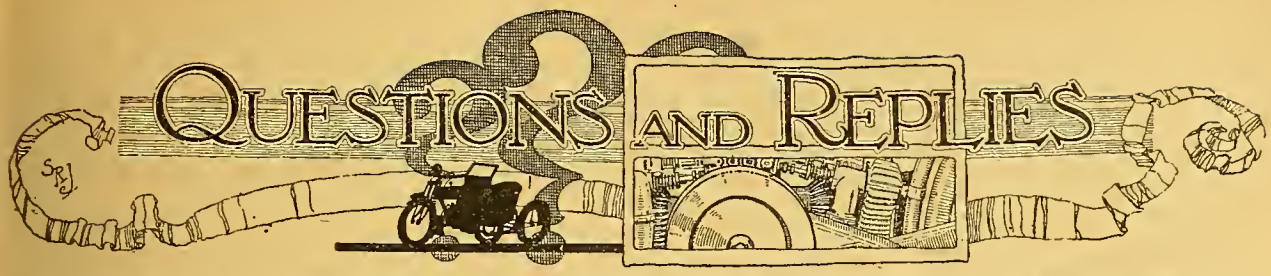
Dr. A. M. Low and Mr. Kaye Don were the principal guests at the annual dinner at the Lister's Arms Hotel, Ilkley, on the 20th inst., when Capt. J. N. Longfield, the president of the club, presided over a large attendance, which was well representative of the wide area covered by the club's operations. It was a thoroughly merry party from start to finish. Dr. Low, in proposing the toast of "The Club," commented upon the sense of fellowship which was to be seen amongst all the members.

Mr. H. W. Sellers, the honorary secretary, in responding, said the club commenced the year with 124 members, and they now had 180. The committee had come to the conclusion that trials as run at present were monotonous and boring, and they were going to launch next year a scheme to make motor cycles still more popular. Though the open trial allotted to the Ilkley Club last year was not financially successful, they had been informed that the report handed in by the A.C.U. steward was the only really satisfactory report handed in for any reliability trial held in the country.

### North-Eastern Centre A.C.U.

At the instigation of the Sunderland and District M.C., a meeting of Northern clubs was held in the Y.M.C.A., Sunderland, on January 12th, the object being to form a local centre of the A.C.U. Since the decision of the general meeting of the North-Eastern Automobile Association to wind up that organisation, a decision that was afterwards annulled by its General Committee, there has been a good deal of discussion in the area.

Mr. T. W. Loughborough, the secretary of the A.C.U., attended and explained the position of the A.C.U., and the benefits derived from affiliation with his Union. He suggested that an emergency committee be formed to get together the necessary six clubs to form a new centre, a suggestion that was adopted. The committee comprised two members from the Newcastle and District Club, two from the Sunderland and District, and two from the Annfield Plain Club, the convenor being Mr. W. Baxter (Newcastle).




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Corset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### DISMANTLING AND REBUSHING.

My machine is a reconstructed W.D. Triumph, and it is my intention to fit new bushes throughout. (1) What, briefly, is the best method of dismantling the engine? (2) Are the main bearings of this engine (about 1918) roller or plain? (3) I notice that connecting rod new bushes are frequently advertised. Are these articles usually bought in the rough or are they sent out ready for fitting?—J.L.

(1) It is impossible to describe fully the method of dismantling a Triumph engine. If you have the mechanical ability it is an absolutely straightforward job, as the taking apart of the crankcase, drawing the ball-bearings from the main shaft, and separating the flywheel is done by methods commonly used on all engines of this type. There are no left-hand threads, and all the shafts (where detachable) are fitted on tapers. (2) The main races are ball bearings, and the big end has roller bearing. (3) The connecting rod bushes which you mention are, no doubt, turned up ready for use, but it is quite likely that they will need "fitting" either externally or internally, or both, by scraping and reaming.

### LOCATING A BUSINESS VENTURE.

I am thinking of opening a country garage and tea-room, stocking petrol, oil, tyres, and a wide range of spares for all makes of motor cycles, and should like to have your opinion of where I could find a most suitable spot, with plenty of wayside traffic, etc.?—W.H.S.D.

We are afraid that the question you ask is beyond our scope. There must be literally hundreds of thousands of places such as you describe, and to name any one of them as being most suitable is quite impossible. Your best plan is to look out the possibilities of places in your own immediate neighbourhood.

### ENGINE SPROCKETS FOR ENFIELD GEAR.

Will you tell me how many teeth I shall require on my engine-shaft, as I have just purchased a new 2¾ h.p. two-stroke engine and I desire to use an Enfield two-speed gear which I possess; there are twenty-seven teeth on high gear drum and thirty-eight on low gear, the final drive is by 6in. belt pulley and 19½in. belt drum on 26in. wheel. I think if geared at 5½ to 1 high and 9½ low, it should be quite suitable.—J.H.C.

You would need a fifteen tooth sprocket for the high gear and a thirteen tooth for the low.

## Important Dates.

**Fri., Jan. 27th, to Sat., Feb. 4th—Scottish Car and Motor Cycle Show.**
**Sat., Feb. 25—Sutton Coldfield and North Birmingham A.C. Colmore Cup Trial.**
**Sat., Feb. 25th, to Sunday, Mar. 5th—Belgian Motor Cycle Show. Palais Degmont, Brussels.**
**Wed., Mar. 1st, to Sun., Mar. 5th—Paris—Nice Trial.**
**Sun., Mar. 5th—Argenteuil Hill-climb (France).**
**Mon., Mar. 6th—La Turbie Hill-climb (Nice).**
**Wed., Mar. 15th—A.C.U. One-day Trial for Stock Machines.**
**Sat., Mar. 18th—Birmingham M.C.C. Victory Cup Trial.**
**Thurs., Mar. 23rd—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs. June 1st—Senior Tourist Trophy Race.**

### DAMAGED BEARINGS.

Just recently I have had trouble with my 2¼ h.p. two-stroke, owing to using thin oil. I had the engine taken down, decarbonised, and new piston rings put in, but since so doing, I get a "chunk" in the engine as if piston is seized. Could you please tell me the reason, as it is a new machine only four months out of the factory?—H.C.

Without more complete information, it is impossible to tell you the cause of the noise in your engine, but we should imagine either that one of the bearings is badly worn or that the piston itself has been damaged by the use of the unsuitable oil which you mention. If the noise is due to a worn connecting rod bearing, you should be able to trace this by rocking the piston over top dead centre when the engine is warm, with the sparking plug removed. The play in the bearings will be felt at the flywheel as you swing the engine backwards and forwards.

### IT WOULD BE NICE!

I intend buying a 2¾ h.p. Blackburne engined machine. Could I fit to it an attachment or gear which would at will convert it into a two-stroke engine, and would such conversion give me an increase of power? Are there any such converting attachments on the market? If there are have they proved a success? If there are none, is the idea a feasible one?—BEGINNER.

There is no such device as that which you outline. We think your best plan would be to obtain a copy of "Motor Cycles and How to Manage Them." You will then appreciate why the scheme you suggest is impracticable.

### GEAR RATIOS, SPROCKET AND CHAIN SIZES.

(1) I have a 2½ h.p. two-stroke two-speed lightweight with 15 and 30 teeth by ½in. pitch on engine-shaft and countershaft sprockets respectively giving gears of 5 and 9 to 1, and as I am having a Villiers engine-shaft clutch fitted, and the smallest engine sprocket is 16 teeth, what would that make my top gear? (2.) As I am thinking of fitting a light sidecar, and, in any case normally carry a 6 st. passenger, would you advise reducing the gear to about 5¼ or 5½ to 1, and what countershaft sprocket should I require with a 15 tooth and 16 tooth engine sprocket respectively? (3.) Would there be any advantage in fitting ⅝in. sprockets and chain?—H.E.

(1.) The top gear would be 4.7 to 1. (2.) To use a light sidecar it would be advisable to lower the top gear to 5½ to 1. With 15 teeth and 16 teeth engine sprockets the countershaft sprocket would need to have 33 or 35 teeth respectively to give this ratio. (3.) There would be no advantage in fitting ⅝in. pitch chains and sprockets; ½in. × ¼in. should be ample.

### IRREGULAR FIRING.

"Missing" has been a frequent trouble with my 6 h.p. Bradbury sidecar, mainly, if not entirely, in the front cylinder. A local repairer diagnosed magneto trouble, and I have had the magneto tested and remagnetised. I then fell back on carburation. The carburetter is a B. and B. variable jet, and the standard jet and setting of the needle for my machine are .055 jet and needle $1\frac{29}{32}$in. I am now using a .043 jet, and the needle projects $2\frac{1}{8}$in. from the recessed face of the valve, so that when the throttle is closed the needle goes practically to the bottom of the jet. The engine does not now miss on top gear, except in slow running, but on second and low gear the missing is pronounced. I can scarcely use a smaller jet without losing power, as my best speed now is 35 m.p.h. Can you suggest a remedy or indicate some other cause of the trouble?—W.G.B.

Misfiring on one cylinder in the case of twin-cylinder engines is usually caused by air leaks in the induction system, either at the inlet pipe joints or inlet valve guides. In the case of the 6 h.p. Bradbury engine, of course, another possible location for air leaks is the jointing of the detachable heads, and these should be very carefully fitted. From your description, however, it is not clear that the misfiring is due to this cause, and it is just possible that an ignition fault is at the root of the trouble. It would be advisable to experiment with variations of sparking plug gaps, and also to make quite sure that the contact breaker points separate to an equal extent for both cylinders.

### CHOOSING A LIGHTING SET.

Will you give me your advice in the choice of a lighting set? I have just bought a 4 h.p. Triumph, and as I expect to do a considerable amount of night riding, the initial cost is only a secondary consideration. I wish to be able to keep up a high average speed. Perhaps you will place the following methods of lighting sets in order of merit: *(a)* Dynamo set; *(b)* magneto-dynamo combined equipment; *(c)* acetylene; and *(d)* Fallolite. What is the best way of fitting a dynamo to a W.D. Triumph? If otherwise satisfactory, I suppose *(b)* would be the easiest to fit.—F.W.W.

For convenience we should certainly recommend an electric lighting set, but unfortunately you might experience difficulty in fitting one of the regular dynamo outfits. The magneto-dynamo sets may be fitted with a minimum of difficulty, but the light in certain cases does not compare with that given by the six volt dynamo sets; at the same time we have found them very reliable, and if your machine is not used with a sidecar, it would be possible to run a slightly more powerful bulb in the head lamp than that supplied as standard. Acetylene is easily installed, but demands frequent attention. The Fallolite set gives a powerful light with a minimum of trouble, but the supply of dissolved acetylene refill cylinders is rather a problem in an out-of-the-way district.

### Found on the Road.

A magneto contact breaker was picked up by Mr. F. R. Weatherhead, of 13, Berridge Road, Upper Norwood, S.E.19, in Crystal Palace Park Road, S.E., on the 15th inst. The loser should forward a description and the time of his loss to the above reader.

### Petrol Pumps and State Supervision.

For some time the question of bringing self-measuring fuel supply pumps under the control of the weights and measures authorities has been considered by the Board of Trade. The petrol companies, who are the chief distributors of delivery pumps, have made continuous efforts with this end in view in the interests of the general public.

### Carriage Paid to any Station.

To the list of firms which are now offering to pay carriage on their goods to any station in Great Britain and which make no charge for crates, must be added the name of Watsonian Sidecars, Conybere Street, Birmingham.

### The A.C.U. Outdoor Representative.

It may not be generally known that the A.C.U. employs an outdoor representative for the purpose of visiting hotels and repairers to see if they are suitable for official appointment, to investigate cases of dispute and generally to look after the interests of the A.C.U. on the road. These duties have up to recently been ably carried out by Mr. P. A. Iles, who has now left the service of the Union to manage the Duke's Head Hotel, Addlestone, where he will specially look after those motor cyclists who are stopping in the vicinity of Brooklands Track. The new A.C.U. outdoor representative is Mr. E. W. Hodson.

### To Keep the Licence Clean.

An excellent device for keeping the licence card dry and clean is the Licenseal outfit. The card is held between two discs, one black and the other transparent, held together with a special solution. The result is that the licence card is kept absolutely free from moisture, it is impervious to water, oil, and spirit, and is, moreover, non-inflammable. In the case of the licence-holder glass being broken no damage to the licence can ensue.

### Without Preparation.

Owing to non-delivery of his 5 h.p. N.U.T., which he entered in the London-Exeter trial, W. Henry Wells, of Maudes' Motor Mart, used a $3\frac{1}{2}$ h.p. Sports Sunbeam in the run; it was taken over at the last moment and went through without trouble, and its rider gained a gold medal.

### To Help Club Secretaries.

A resident London and Home Counties representative has been appointed by the Birmingham Medal Co., a concern specialising in the manufacture of trophies, silverware, etc., suitable for competition awards. The representative appointed is Mr. Alan W. Day, of Claremont, Ballards Lane, Finchley, N.3.

### Catalogues Received.

Williams and James, Chequers Bridge, Gloucester: A catalogue of petrol engines and components. This firm specialise in the production of pistons of all sizes and types, gudgeon pins, piston rings, and aluminium air-cooled valve caps. These parts are made for all the best-known makes of motor cycles.

The Villiers Engineering Co., Ltd., Blakenhall, Wolverhampton: Lists for the season 1922, giving particulars of the latest type Villiers two-stroke engine and the flywheel magneto. Details are also given of the Villiers lighting set, which derives the current from the flywheel magneto, and of the Villiers engine shaft clutch. There is also a list of spare parts, which are named, numbered, and priced, while the book concludes with a list of twenty-two hints and tips for users of the engine.

The British Piston Ring Co., Ltd., Holbrook Lane, Coventry: The 1922 Brico catalogue and piston ring directory. A complete list of piston rings with full dimensions and particulars for practically every motor cycle engine on the market, also a list of gudgeon pins to suit all the best-known engines. The Company also deal in piston ring castings and the Bricometer, a steel tape for measuring pistons and piston rings.

---

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"F.F.P." (Botley).—$2\frac{1}{4}$ h.p. Triumph: Binks carburetter (jet sizes). Castrol as lubricant, general hints. Also $2\frac{1}{4}$ h.p. Velocette: Reliability and general advice.

"R.H." (Ludlow).—Tritube sidecars: Suitability for attachment to $3\frac{1}{2}$ h.p. Rudge Multi.

"J.F.D." (Cambridge).—Degory carburetter on Villiers two-stroke engine.

"J.W.E." (Neasden).—Grado gear, with or without kick starter on $3\frac{1}{2}$ h.p. sporting Abingdon; Range of gears, suitability for sidecar work, reliability, ease of control, any particular weakness.

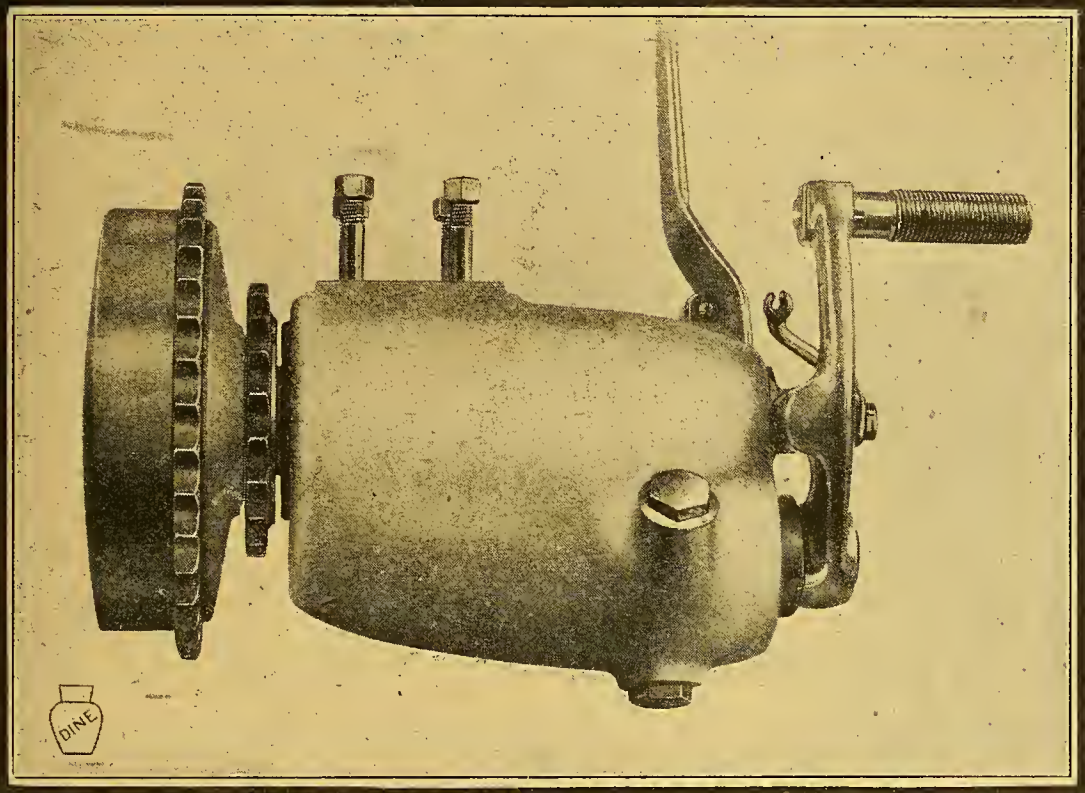
"E.C." (Bolton).—Carden cycle-car, general experiences.

"F.G.C." (New Cross).—Alldays Allon: Speed, consumption, general utility and reliability for light tourist purposes.

"A.C.T." (E. Dulwich).—Low acetylene generator.

"A.H.H." (Liverpool).—$3\frac{3}{4}$ h.p. Scott, solo: M.p.g. (fuel and oil and general efficiency).

# JARDINE FOUR SPEED




## The Gear for 1922

Mr. S. S. Debenham has entered his Jardine Four Speed Gear on **3** occasions in competitions.

**Results:—**

Winner of "James" Shield.
Sutton-in-Ashfield. Sept. 18.

Winner of "Bowden" Cup.
Leicester. Nov. 20.

Winner of Gold Medal.
London—Exeter. London. Dec. 26-27.

**100% Success**

**John Jardine, Ltd., Deering St., Nottingham.**

'Phones: 3295 3296 Nottm.

IT WILL BE YOUR LUCKY YEAR
IF YOU DECIDE ON A

# VERUS
OR
# SIRRAH

TROUBLE-FREE MOUNTS, WITH CHOICE OF VERUS, UNION, BLACKBURNE, OR J.A.P. ENGINE. PRICES FROM £38 TO £135.

—— GET OUR ILLUSTRATED CATALOGUES ——

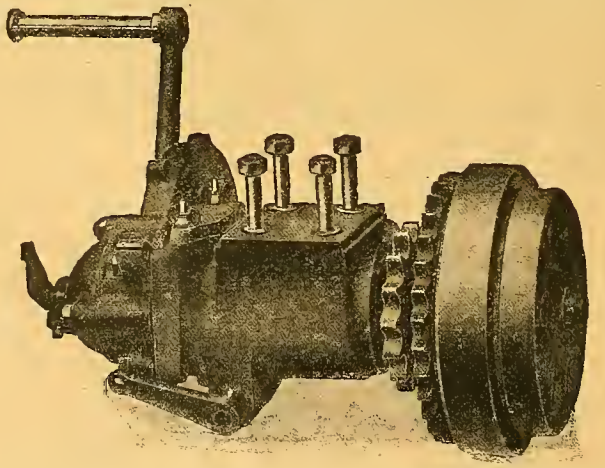
*In the London to Exeter run Mr. W. G. Churchill, on a 2¾ VERUS, was awarded a Silver Medal.*

ALFRED WISEMAN, LTD., Glover Street, BIRMINGHAM.

## FROM OLYMPIA TO SOUTH KENSINGTON
## A Compliment for the Burman Gear

We have been requested by the Board of Education to supply a Burman Three-speed Gear Box for exhibition at the Science Museum, South Kensington.
A typical example of the best modern British design in motor-cycle gears will thus be on view.

**The Gear with the Sweet Clutch.**



**Gear Positions locked positively inside Box.**

The opinion of the public at Olympia has been fully confirmed by the Scientific Experts at South Kensington.

BURMAN & SONS, LTD., "Leebank Works," BIRMINGHAM.

THERE IS NO NEED FOR

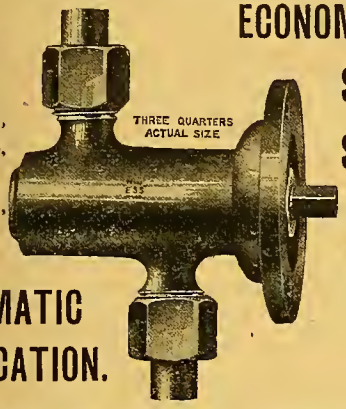
**ALL HANDS TO THE PUMP**

BECAUSE IT

**AUTOMATICALLY LUBRICATES YOUR ENGINE**

WHILE IT IS RUNNING.

Conversion Sets for A.J.S., TRIUMPH, DOUGLAS, B.S.A., G.N. CARS, Etc.




**ECONOMICAL**

**SIMPLE**

**SAFE.**

**11/6** EACH.

**AUTOMATIC LUBRICATION.**

Can be supplied to work in conjunction with your existing Spring Loaded Hand Pump from **15/6** per set

**WRITE FOR BOOKLET.**

**E. SHOWELL & SONS, LTD.,**

ESS FITTINGS. 14, NEW STREET, BIRMINGHAM. WORKS: STIRCHLEY, BIRMINGHAM.

**MAXALDING MOTORISTS**

*secure*

**STRENGTH, STAMINA & CONTROL**

**comparable to Mr. A. J. Bevan, whose picture appears herewith, and who was instructed BY MAIL in MAXALDING ! ! !**

***Write To-day*** for an explanatory booklet — Gratis and Post Free—which will tell you how MAXALDING **will prevent or eradicate** any nervous, digestive or other functional weakness due to lack of Stamina or Strength. MAXALDING has been called **"Economy and Efficiency in Exercise,"** and will just as easily render you immune from cold-catching as it will enable you to start up the heaviest motor

***Memorise the Address—and Write Now ! ! !***

**MAXALDING,**

, Cranbourne Chambers, Leicester Square, London, W.C. I

**COX "ATMOS" CARBURETTER**

**1921 SUCCESSES**

**13** WORLD'S RECORDS

**12** FASTEST TIME OF THE DAY

**40** SILVER CUPS

**90** FIRSTS

**250** GOLD MEDALS, etc., etc.

*GET RID OF YOUR FLAT SPOTS, ROUGH DRIVE, HOT ENGINE AND FREQUENT ACCUMULATIONS OF CARBON DEPOSIT BY FITTING A COX "ATMOS" SINGLE LEVER CARBURETTER. BY SO DOING, YOUR ENGINE WILL NOT ONLY RUN SMOOTHER, KEEP CLEAN AND COOL, THEREBY DEVELOPING FULL POWER ALWAYS, BUT THE LIFE OF ENGINE AND BEARINGS WILL BE INCREASED. THE COX "ATMOS" GIVES A PERFECT MIXTURE AND AT £4 10 0 IS A REALLY FINE INVESTMENT.*

*Send us particulars of your machine* ————

**COX CARBURETTERS, LTD.,**

**LOWER ESSEX ST., BIRMINGHAM.**

# OMEGA

## Buy the best, and—buy it now.

Any Omega Owner will convince you that his mount has no superior. The "Motor Cycle" has already told you that 1922 Omegas are

**"amazingly cheap,"**

therefore

**Buy an Omega—and buy the best and cheapest.**

Omega 2½ h.p. J.A.P. with 2 speed gear from gns. **57**

Omega 2¼ h.p. J.A.P racing model, 3 speed clutch, K.S. gns. **75**

Omega 3 h.p. two-stroke. Omega special frame, 2 speed chain drive gns. **66**

Omega 3 h.p two stroke belt drive, 2 speed gns. **53**

Omega 5/6 J.A.P. sports model, chain drive gns. **115**

W. J. GREEN LTD., Omega Works, COVENTRY

London: Bartlett's 93 Gt. Portland St., W.1.

Birmingham: Gough's, 183a Broad St.

99 MILES CHESTER

# Radco

THE KING OF LIGHTWEIGHTS.

## ACKNOWLEDGED BEST VALUE at OLYMPIA.

WRITE FOR BOOKLETS

No. 2 **34 Gns.**

9 events only entered during 1921 and were awarded
4 SILVER CUPS. 5 GOLD MEDALS.
3 SILVER MEDALS.
Only one machine entered in each event.

No. 1 **42 Gns.**

E. A. RADNALL & CO. - - - Dartmouth Street - - - BIRMINGHAM.

THE more correctly your tyres are inflated the more mileage you get out of them. Check the air pressures regularly with a "SCHRADER UNIVERSAL" TYRE PRESSURE GAUGE and you will *know* whether they are rightly inflated or not.

British Made

# Schrader Universal

## TYRE PRESSURE GAUGE

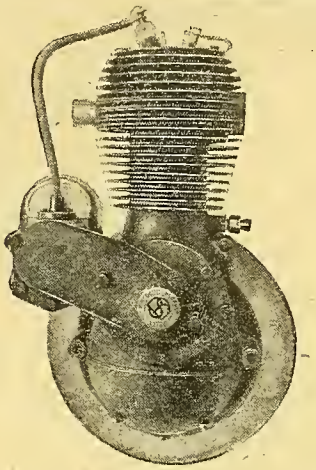
TABLE of Correct Air Pressures for all sizes of tyres sent post free. A "Schrader Universal" Tyre Pressure Gauge costs only **7/9**. It is a good investment. It fits in your waistcoat pocket.

*Patented in U.K. U.S.A. & Foreign Countries.*

**A. SCHRADER'S SON, Inc.**
British Factory:
Victoria Road, Willesden Junction, London, N.W.10.
Manufacturers of the "Schrader Universal" Tyre Valve.

**Be sure it's a "Schrader"—** ***—Look out for the name.***

# It's the ENGINE that Counts



SCOTTISH motor cyclists will have an opportunity of inspecting the many features of the Barr & Stroud Single Sleeve Valve Engine which we claim cannot be obtained in any other engine, either of the Two Stroke or Poppet Valve types, at **Stand No. 229,** Kelvin Hall, during the **Scottish Motor Show.**

*The makers of the following machines are prepared to fit the 350 c.c. Barr & Stroud Sleeve Valve Engine on request:*

**BEARDMORE-PRECISION; DIAMOND; EDMUND.**

*To the*

**ROYAL SCOT**

*it is fitted as standard.*

The Engine will also be seen installed in various types of frames to meet the requirements of all classes of rider.

Speed, 60 m.p.h.; Fuel, 140 m.p.g.; Oil, 2,500 m.p.g.

*Illustrated Booklet sent free.*

BARR & STROUD LIMITED,
Anniesland, Glasgow.
London Office: 15, Victoria St., Westminster, S.W.1.

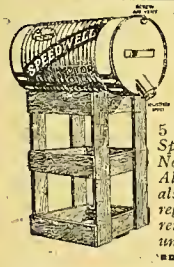
The BARR & STROUD SINGLE SLEEVE Four Stroke Engine

*It's the Engine that Counts*

# SPEEDWELL MOTOR OIL

## BOXING DAY PROVED A FIELD DAY FOR SPEEDWELL

**Scottish Show STAND No. 102**




*The 5-Gallon Oil Drum Cabinet and Stand combined, which is given free with 5 Gallons of Speedwell Oil. No waste, no mess. All our tins are also fitted with registered spout, rendering a funnel unnecessary.*

*Send for latest Chart giving correct Oils for every type of engine, also prices.*

**London-Exeter Trial.**

48 GOLD MEDALS including the Matchless Official Team and the only 2¾ h.p. Combination.

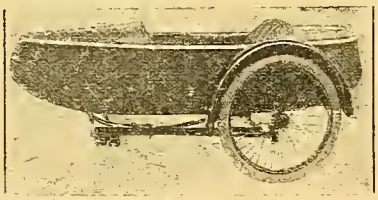
**Mansfield Club Hill Climb:** Frank Simon (Amateur) Norton, wins 7 **Firsts** and fastest time.

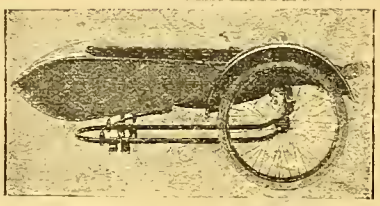
**Dublin Christmas Reliability Trial:** All the Gold Medals and 3 out of 4 Silver Medals.

**The BRITISH OIL & TURPENTINE CORPORATION, LTD.**
**55, CHANCERY LANE, LONDON, W.C.2.**

# CANOELET SIDECARS
## FOR 1922

*Model A4, Semi-Sporting,*
*PRICE*
**£25 15s.**





*Model K4, Sporting,*
*PRICE*
**£20 5s.**

Make your selection from the
## CANOELET RANGE
A sidecar for every purpose, and each model perfect in its class.

*Write for Catalogue To-day.*

## MEAD & DEAKIN
Tyseley - - - - BIRMINGHAM

*The cure for ignition troubles*
# E·I·C MAGNETOS
Fully guaranteed. Ask your agent for prices
E·I·C MAGNETOS Ltd.
Sampson Rd North, BIRMINGHAM.
*West of England Service Depot*
W. B. CORAM
140 Victoria St. Bristol

# ALBION LIGHTWEIGHT COUNTERSHAFT GEARS.
Three Speed with Clutch and Kick Starter.
Two Speed with Clutch and Kick Starter.
Two Speed, Plain Box.

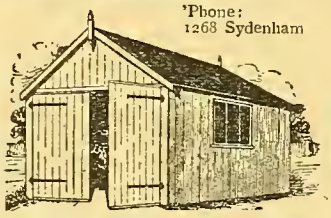
SPECIFY ON YOUR NEW MACHINE, OR IF YOU WISH TO CONVERT YOUR PRESENT ONE SEND FOR CATALOGUE.

## ALBION ENGINEERING CO., LTD.,
UPPER HIGHGATE STREET, BIRMINGHAM.

## A. TURRELL & SONS, PORTABLE BUILDING WORKS FOREST HILL, S.E.23.
'Phone: 1268 Sydenham

| Lgh. ft. | Wth. ft. | Height to Ridge ft in. | Height to Eaves ft. in. | £ | s | d |
|---|---|---|---|---|---|---|
| 7× | 5 .. | 7 0 .. | 5 0 | 7 | 5 | 0 |
| 8× | 6 .. | 7 6 .. | 5 3 | 9 | 0 | 0 |
| 9× | 7 .. | 8 0 .. | 5 6 | 11 | 7 | 0 |
| 10× | 8 .. | 8 4 .. | 5 9 | 12 | 19 | 0 |
| 12× | 8 .. | 8 4 .. | 6 0 | 17 | 5 | 0 |
| 14× | 8 .. | 8 7 .. | 6 3 | 21 | 0 | 0 |
| 16× | 9 .. | 8 9 .. | 6 4 | 26 | 0 | 0 |
| 18× | 9 .. | 8 9 .. | 6 4 | 31 | 0 | 0 |
| 20× | 10 .. | 9 0 .. | 6 6 | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ½in. tongued and grooved matchboards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed: 21oz. glass. Flooring: Strong joists, one inch boards. All bolts supplied for erecting house.

THE
# "COSY" HOOD
AND
# V SCREEN
for all Sidecars.
GET ONE and RIDE in COMFORT.

**£5 5 0 each Set.**
Coventry Equipments Ltd., Manufacturers, Empire Works, Coventry.

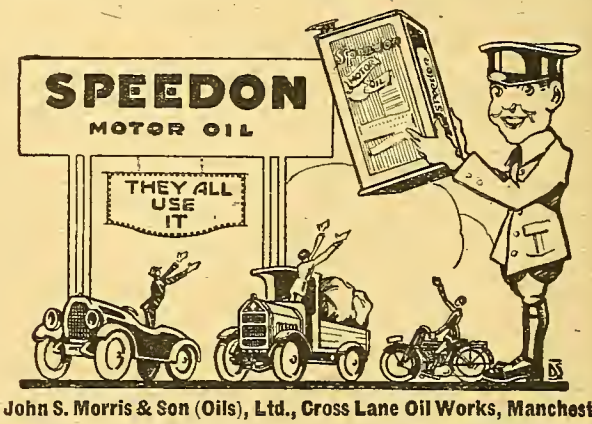
*Know your Speed & Mileage!*

**Model 42** *(as illustrated)*—Black finish Nickel-plated bezel. Indicates speeds to 60 miles per hour. Total mileage counter to 10,000 and repeats. Quickly reset trip-counter.
**Price £5 5 0** (or without trip, model 40) **£5 15 0**
Back wheel drive for Triumph, 5s. extra. Back wheel drive for Indian or Harley-Davidson, 10s. extra.
*Manufactured by*
**NORTH & SONS, Ltd., WATFORD,** & 14, Soho q., London, W.1

NORTH'S BRITISH MADE Watford
**SPEEDOMETERS** for Motor Cycles

H.G.

# SPEEDON
MOTOR OIL
THEY ALL USE IT



John S. Morris & Son (Oils), Ltd., Cross Lane Oil Works, Manchester

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

**ADVERTISEMENTS** in these columns —First 12 words 3/–, and 3d. for every additional word. Paragraphs of under 8 words are charged double rate. Each paragraph is charged separately. Name and address must be counted. Series discounts, conditions, and special terms to regular trade advertisers will be quoted on application.

Postal Orders and Cheques sent in payment for advertisements should be made payable & Co. to ILIFFE & SONS Ltd., and crossed Treasury Notes, being untraceable if lost in transit, should not be sent as remittances.

All advertisements in this section should be accompanied with remittance, and be addressed to the offices of "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. To ensure insertion letters should be posted in time to reach the offices of "The Motor Cycle," by the first post on Friday morning previous to the day of issue. Advertisements that arrive too late for a particular issue or that are crowded out will automatically be inserted in the following issue unless accompanied by instructions to the contrary.

All letters relating to advertisements should quote the number which is printed at the end of each advertisement, and the date of the issue in which it appeared.

The proprietors are not responsible for clerical or printers' errors, although every care is taken to avoid mistakes.

## NUMBERED ADDRESSES.

For the convenience of advertisers, letters may be addressed to numbers at "The Motor Cycle" Office. When this is desired, the sum of 6d. to defray the cost of registration and to cover postage on replies must be added to the advertisement charge, which must include the words Box 000, c/o "The Motor Cycle." Only the number will appear in the advertisement. All replies should be addressed No. 000, c/o "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. *Readers who reply to Box No. advertisements are warned against sending remittance through the post except in registered envelopes; in all such cases the use of the Deposit System is recommended, and the envelope should be clearly marked "Deposit Department."*

In the case of motor cycles offered for sale under a box number, as it is unusual for these to be sold without first being inspected by the intending purchaser, advertisers will facilitate business by embodying in their advertisements some mention of the district in which the machine offered may be seen and tried.

## DEPOSIT SYSTEM.

Persons who hesitate to send money to unknown persons may deal in perfect safety by availing themselves of our Deposit System. If the money be deposited with "The Motor Cycle," both parties are advised of this receipt.

The time allowed for a decision after receipt of the goods is three days, and if a sale is effected we remit the amount to the seller, but, if not, we return the amount to the depositor. Carriage is to be paid by the buyer, but in the event of no sale each party pays carriage one way. The seller takes the risk of damage in transit. For all transactions up to £10, a deposit fee of 1/- is charged; on transactions over £10 and under £50, the fee is 2/6; over £50 and under £75, 5/-; over £75 and under £100, 7/6 and on all transactions over £100, 1%. All deposit matters are dealt with at Dorset House, Tudor Street, London, E.C.4, and cheques and money orders should be made payable to Iliffe & Sons Limited.

The letter "D" at the end of an advertisement is an indication that the advertiser is willing to avail himself of the Deposit System. Other advertisers may be equally desirous, but have not advised us to that effect.

## SPECIAL NOTE.

Readers who reply to advertisements and receive no answer to their enquiries are requested to regard the silence as an indication that the goods advertised have already been disposed of. Advertisers often receive so many enquiries that it is quite impossible to reply to each one by post.

## MOTOR CYCLES FOR SALE.

### A.B.C.

**1920** A.B.C., Lucas dynamo lighting, speedometer, almost as new, recently overhauled by Sopwith's at cost of £22s, licensed, T.T. bars; £85.—Clarke, Lyno Rd., Ely, Cambs. [3904

---

# WHEN YOU REQUIRE SPARES . . .

# THINK OF GODFREY'S

# IT SAVES TIME . . .

For many years we have had a Special Department which deals exclusively with Spare Parts, and during that period the scope of their activities has consistently increased. To-day we are carrying complete stocks of Spare Parts for the following machines:—

## B.S.A. INDIAN SCOTT LEVIS

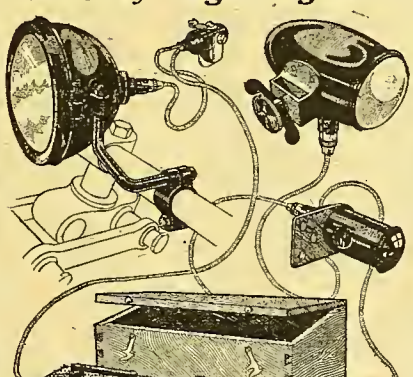
**and SENSPRAY CARBURETTOR and BURMAN GEARS**

OUR OBJECT has always been to make this Service a real one in the sense that whatever the requirement, whether it is for a complete Cylinder or only a small Washer, the part can be supplied immediately from our Spares Dept.

OUR MAIL ORDER DEPARTMENT deals intelligently with enquiries and orders received by post, and the Service Scheme we recently inaugurated ensures immediate despatch without the aggravating delay of pro-forma invoice.

**WHY NOT WRITE TO US FOR DETAILS OF OUR SPARES SERVICE SCHEME, AND WE CAN SEND YOU PRICED SPARE PART LIST FREE**

## *Godfrey Lighting Sets*



*Fitted with Dimmer Head Lamp.*

**Combination Set £6 15 0**

**Solo „ £4 17 6**

**WRITE for FULLY ILLUSTRATED FOLDER**

## GODFREY'S LIMITED

**208, GT. PORTLAND ST., LONDON, W.1.**

'Phone: Langham 1300 (2 Lines)

---

## MOTOR CYCLES FOR SALE.

### A.B.C.

**1920** A.B.C. 3h.p., fast machine, with special sporting cream sidecar, usual equipment; accept £85. Also A.B.C. scooter; £14. Exchanges.—Newbam Motors, 223, Hammersmith Rd., London. [5798

*Spare Parts:*

A.B.C.—Largest stock in London.—Maudes' Motor Mart, 100, Great Portland St., W.1. [6077

### A.E.L.

SHOP-SOILED A E L 2¼h.p., 2-stroke, 2 speeds, kick starter, used for one or two demonstrations only; list price £57, accept £48.—Dunwell's Garage, Wigan. Tel.: 328 [C766

### A.J.S.

A.J.S.—Quickest deliveries all models.—Merrick's Stores, Listerhills Rd., Bradford. Tel.: 2439 [1163

**1922** A.J.S.—Early delivery of any model from Premier Motor Co., Aston Rd., Birmingham. [XS232

**1919** A.J.S. Combination, equipped regardless, £85. —Hillier, 9, Wallingford Avenue, North Kensington. [5871

A.J.S. 2¾h.p., latest 1922, or combinations; no waiting; carriage paid anywhere.—Clifford Motories, Eastwood, Notts. [5138

CLIFFORD WILSON Mtg. Company have actually in stock 1922 2¾h.p. A.J.S. Model B.1.—177, Westminster Bridge Rd., S.E.1. [5990

A.J.S. Old Type 4¼ Single, Druids, 2-speed Gear, K.S., Mag. B. & B.; hefty bus. £15.—H., 105, Harvest Rd., Kilburn, N.W. [6055

F.O.C.H. for A.J.S. Cash, exchange, or deferred payments. Sound secondhand machines in stock. —5, Heath St., Hampstead. (Near Tube.) [5535

A.J.S.—Longman Bros., Bond St., Ealing. Telephone: 689. Sole official district agents.—All models. Cash, exchange, or deferred payments. [5790

**1920** A.J.S., 6h.p. Combination; spare wheel, all accessories, very low mileage, equal to new, £120 cash.—Allen, 10, Freshford St., Earlsfield, S.W.18. [5621

**1922** A.J.S., the motor cycle par excellence, immediate delivery 2¾h.p. Model B1.—Send your orders to Sam E. Clapham (Motors), 27, Stockwell St., Greenwich. [5158

**1920** A.J.S. Combination, mileage 5,000, condition perfect, spare wheel, speedometer, Tan Sad, all accessories; bargain, £130.—149, Mount Pleasant Rd., South Tottenham. [5385

WAUCHOPE'S, 9, Shoe Lane, London, E.C.— A.J.S. combination, latest 1922 model from stock, £175; also lightweight, 2¾h.p., £85; easy terms and exchange.—'Phone: Holborn 5777. [4413

**1922** A.J.S. Lightweights, 2¾h.p. All models can be supplied from stock. Book your orders now and save disappointment. Official agents for this famous lightweight.—F. E. Wootten, Ltd., High St., Oxford. 'Phone: 308. [1967

**1919-20** A.J.S. Combination, 1921 improvements, Brooks' leaf spring saddle, spare wheel, "Lucas" lamps and horn, speedometer, mirror, Tan-Sad, hood, luggage carrier, "Ace" discs; 98 gns. Exchanges.—Kent's, 417, Lord St., Southport. [5756

**1920** A.J.S. Combination, first-class condition, electric lighting, less accumulators, also acetylene head lamps and generator, mechanical and Lucas horns, Cowey trip speedometer, best mechanical pump, Terry saddle (new), spare wheel, luggage-grid with tool-box, licence paid 1922, £135.—Gibb, Northgate, Gloucester. [5923

**1921** A.J.S. 7h.p. Combination engine No. 14,614; Lucas dynamo lighting set, Lucas bulb horn, screen, hood with cover, and Cowey speedometer, all fitted by makers. Spare wheel with brand-new Dunlop Magnum. Licence paid 1922. This outfit is perfect in condition and running order; any trial by appointment. £180 or nearest offer.—R., 42, Frimley Rd., Camberley. (D) [5358

A.J.S. 1918 Combination 6h.p., 3-speed, hand clutch, kick starter, excellent condition, beautifully equipped, spare wheel, large Lucas bead lamp, acetylene tail and side lamps, Lucas horn, Easting wind screen, luggage grid, tools, licence paid, absolutely in perfect order and faultless; will personally deliver any reasonable distance and give trial before payment; great bargain, £115, or near offer.—Beare, Cherry Cross, Totnes. [5409

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3608

A.J.S. Spares; prompt delivery.—Cyril Williams, Chapel Ash Depot, Wolverhampton. T.A.: Parts. [7901

## MOTOR CYCLES FOR SALE.

### Alecto.

BRAND New 3½h.p. Alecto, unused, 2-speed, clutch and kick-starter, complete with lamps; £40: E. Anglia.—Box 8,212, c/o *The Motor Cycle.* [5230

### Alldays.

ALLDAYS' Matchless 4h.p. Combination, 3 speeds, in running order; £28.—A. Collyer, 26, Girley St., Bromley-by-Bow. [5432

4h.p. Alldays Matchless, Bosch, Senspray, clutch, fast and powerful, T.T. bars; £25.—Toshach, Thoro'fare, Woodbridge. [5343

ALLDAYS Allon 1920, 2-speed, kick start, leg shields, nicely equipped, unscratched, insured; £39. Evenings.—67, Fernlea Rd., Balham. [6029

ALLDAYS' Allon 1921, 2-speed, clutch, kick starter, mud shields, Lucas lighting, noscratched, bought July last; £55.—Gunary, South Hall, Rainham, Essex. [5589

ALLON 1921 2¾h.p., Lucas lamps, pillion, tax paid, insured; £50.—Forster, 2, Plais St., Tannton. [5708

ALLON 1920 2-stroke, 2-speed, clutch, K.S., excellent running order; £39; exchanges.—Newnham Motors, 223, Hammersmitb Rd., London. [5799

### American X.

AMERICAN X 7-9h.p. comb., fully equipped luxurious outfit, as new; £70 or near.—50, Roman Rd., Bow. [6047

BRAND New 1921 American X. solo and sidecar at reduced price. Write for special clearance bargain list.—Premier Motor Co., Aston Rd., Birmingham. [X5233

1921 American X 7-9h.p. Twin, 3 speeds, new but slightly shop-soiled, at a very low price to clear; an opportunity for the bargain hunter.—14, Gt. Marlborough St., W.1. [0769

AMERICAN EXCELSIOR 1920, 7-9h.p. combination, lamps, horn, Henderson sidecar; £67/10.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0071

1920 American X Combination, 7h.p., 3-speed, hand and foot clutch, dynamo lighting, Ride Easy sidecar, tax paid, completely equipped, mechanically perfect; £80, or near offer.—Pride, 156, Stockwell Rd., Brixton, S.W.9. [5114

### Ariel.

ARIEL, 1921, 3-speed touring, brand new, unregistered (list £95): £75.—Clark, 7, Exhibition Rd., South Kensington. [5243

1920 3½h.p. Ariel Coach Combination, take three anywhere; bargain, £70.—Griffiths, 12, Ashe: Rd., Newbridge, Mon. [5410

ARIEL Combination 3½h.p., 3-speed, lamps, horn, etc., good running order; £45.—Mitchell, 3, Clovelly Rd., Ealing, W.5. [5407

5-6h.p. Ariel and sidecar, 1916, hood, screen, speedometer, lamps, etc., first-class condition; £70; tax paid.—5, Sun St., Waltham Abbey. [5723

1921 Ariel Combination, with lamps and accessories. Tax paid. Condition equal to new. £100.—Smith, Ashboronghs, Burcot, Bromsgrove, Worcs. [5484

ARIEL.—All models, cash or gradual payments. Spares supplied from stock.—West Central Agency, Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0704

ARIELS.—We have several excellent second-hand machines at clearance prices. Special six days' trial machine; 82 gns.—Longman Bros., Bond St., Ealing. Telephone: 689. [5793

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—6-7h.p. Ariel combination, 1921, new, reduced to £139; 3½h.p. Ariel, 3 speeds, clutch, £87/10; no extra charge for easy terms. [4414

ARIEL Motor Cycles are the last word in reliability. We have always in stock the reliable motor cycles; trade supplied.—Jones' Garage, Muswell Hill, and Woodside Parade, N Finchley [0378

ARIELS.—Longman Bros., Bond St., Ealing. Telephone: 689.—All models obtainable from the Ariel experts. Specially tuned sports models, 3-speed, certified to have exceeded 65 m.p.h.; £92/10. Cash, exchange, or deferred payments. [5785

ARIELS, the most reliable machines on the road; all models from stock; spare parts sent anywhere; trade supplied.—F. Spearman, Ariel Expert, Ariel Garage, 7, Rochdale Rd., Harpurhey, Manchester. Tel.: 325 Cheetham Hill. [5135

*Spare Parts:*

ARIEL Spares for all models, post free.—Ariel Service Depot, Jones' Garage, Broadway, Muswell Hill, N.10. [0742

### Bat.

6h.p. Bat-Jap Combination, speeds; £30.—H. S., 33, St. Stephen's Rd., Bow. [5583

BAT-J.A.P. 4h.p. O.H.V., spring frame, good order, fast; £25, or offer.—H. W., 66, Woodside Gardens, Bruce Grove, Tottenham. [5348

### Beardmore.

BEARDMORE, spring frame, 1921, accessories, speedometer, spares; £55.—Collier, 6, Warwick St., W.1. [5398

## EXCHANGE WITH US.

**CARS.**

A.C.
ROVER
B.S.A.
MORGAN
NEW HUDSON
COVENTRY PREMIER
MORRIS COWLEY

P. & M.
A.J.S.
B.S.A.
ARIEL
JAMES
LEVIS
ROVER
RUDGE
TRIUMPH
ZENITH
NORTON
INDIAN
DOUGLAS
ENFIELD
RALEIGH
SUNBEAM
CONNAUGHT
QUADRANT
MATCHLESS
O.K. Junior
ALLDAYS
NEW HUDSON
NEW IMPERIAL
HARLEY-DAVIDSON

**NEW COMBINATIONS, SOILED.**

| | | | | |
|---|---|---|---|---|
| 1921 | **MATCHLESS** s/seater, Standard Model | £160 | 0 | 0 |
| 1921 | **ENFIELD** dyno. spring bars, hood and screen | 150 | 0 | 0 |
| 1921 | **ENFIELD** single seater, plain model | 130 | 0 | 0 |
| 1921 | **ARIEL** 6/7 h.p. Standard comb. | 137 | 10 | 0 |
| 1920 | **CLYNO** 8 h.p. combination, spare wheel | 135 | 0 | 0 |
| 1921 | **TRIUMPH** c.c.b. combination. | 130 | 0 | 0 |
| 1921 | **MORGAN** Family model, M.A.G. engine | 175 | 0 | 0 |
| 1920 | **P. & M.** 3½ h.p. comb. | 100 | 0 | 0 |
| 1920 | **JAMES** 4½ h.p. Standard combination | 120 | 0 | 0 |

**NEW SOLOS, SOILED.**

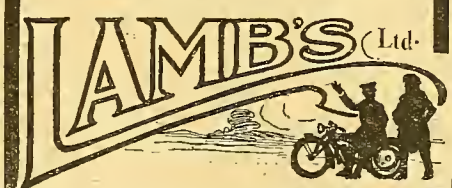
| | | | | |
|---|---|---|---|---|
| 1920 | **CALTHORPE** 2-stroke, 2-spd.. | £50 | 0 | 0 |

**NEW SIDECARS, SOILED.**

| | | | | |
|---|---|---|---|---|
| 1919 | **WATSONIAN,** arc cane (2) .. | £7 | 10 | 0 |
| 1921 | **PARAGON** Folding | 25 | 0 | 0 |
| 1918 | Body only, bulbous back .... | 7 | 10 | 0 |

**SECONDHAND COMBINATIONS.**

| | | | | |
|---|---|---|---|---|
| 1920 | **HARLEY-DAVIDSON,** special HD s/c, sports model, F.R.S. elec., discs, spdr. | £145 | 0 | 0 |
| 1920 | **HARLEY-DAVIDSON,** stan. HD s/c, discs, spdr., hood and screen | 130 | 0 | 0 |
| 1920 | **HARLEY-DAVIDSON** 7/9 comb. acetylene ltg. | 140 | 0 | 0 |
| 1921 | **MATCHLESS** dyno. ltg. Easting scr. spdr. 1,000 miles, nice order | 155 | 0 | 0 |
| 1920 | **ENFIELD** s/seater, dyno. hood and screen | 110 | 0 | 0 |
| 1921 | **ENFIELD** comb. dyno. 2-seater, screen, as new | 135 | 0 | 0 |
| 1915 | **ENFIELD** 6 b.p. comb. and access. | 75 | 0 | 0 |
| 1920 | **MORGAN** Family model and access. | 150 | 0 | 0 |
| 1921 | **A.J.S.** 2-seater, dyno. ltg. mileage approx. 1,000 | 175 | 0 | 0 |




EUSTON ROAD, N.W.
(Opp. Gt. Portland St. Station).
'Phone: Museum 4978.
WALTHAMSTOW, 151, High Street,
'Phone: Walthamstow 169 (2 Lines).
WOOD GREEN, 50, High Street,
'Phone: Hornsey 1956.

## MOTOR CYCLES FOR SALE.

### Beardmore.

BEARDMORE Precision, July, 1921, Standard spring frame, unscratched, unpunctured, done 200 miles, perfect condition, any examination, lamps, tools, etc.; £65.—The Bell, Peas Hill, Cambridge. [5650

### Blackburne.

BLACKBURNE, 4h.p., brand new, £85.—Goad, 122 Maida Vale. 'Phone: Hampstead 1353. (Private House Garage.) [5981

BLACKBURNE 4h.p. 1920, Sturmey gears, Binks, new Stepney rear, new accessories, watch, spares, tax paid, splendid condition; £67/10.—39, Frances St., York. [5600

BLACKBURNE 4h.p. 1921 Model, Cowey, Klaxon, lamps, leg shields, puncture proofed "Palmers," superb condition; 79 gns. Exchanges.—Kent's, 417, Lord St., Southport. [5758

1921 4h.p. Verus Blackburne, 3-speed, K.S., ace discs, mechanical oil pump equipped, condition excellent; 63 gns.—Edwards, 50, Harrington Rd., South Kensington. [6018

BLACKBURNE 8h.p., Grindlay sidecar, ideal combination, fully equipped, run 400, better than new, open to closest inspection and trial; £160.—A.D., 14, Sheldon Rd., Cricklewood, N.W. [4709

BLACKBURNE 1920 8h.p., 3-speed, clutch, K.S., very fast, with Henderson Elite sidecar, complete equipment; bargain, £109. Exchanges.—Newnham Motors, 223, Hammersmith Rd., London. [5800

1920 Blackburne 4h.p. Combination, 3-speed, clutch and K.S., Lucas dynamo, fully equipped, excellent condition; £100; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [1673

1920 Blackburne, July, 4h.p. Combination; Millford sidecar, screen, speedometer, Tan-sad, and fully equipped; only done 3,000 miles, and unscratched. Accept first offer £90.—Brookman, 22, Suffolk Parade, Cheltenham. [5512

### Bradbury.

£55.—1920 4h.p. Bradbury, all-on, light piston, 2in. exhaust, exceed 50.—Hall, Village Rd., Enfield. [5382

BRAND new 6h.p. Bradbury and Henderson Sidecar, windscreen; best offer secures.—J. Hebden and Sons, 71, Scotland Rd., Nelson. [5905

1920 4h.p. 3-speed Bradbury, like new, dynamo lighting, £47/10.—28, Woodford Rd., Forest Gate. 'Phone, Stratford 2598. [5940

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—2¾h.p. Bradbury, new 1921 model, reduced to £65; also 6h.p. Bradbury combination, new, 1921, reduced to £130; no extra charge for easy terms. [4415

### Brough.

£35.—6h.p. Brough and sidecar, 1913, Grado gear, kick starter.—177, Westminster Bridge Rd., S.E.1. [5993

1920½ Brough 5-6h.p., new touring sidecar, Royal Easting, electric lighting, horn, insurance, tax; cost £200; perfect; sell £95; exchange 1921 A.B.C., cash.—Write, 18, Chatsworth Gardens, Acton. (P) [5412

### Brough Superior.

BRAND New 8h.p. O.H.V. Brough Superior Comb., £135.—24, Balliol Rd., North Kensington. [5866

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½, o.h.v., 3-speed, clutch, and kick starter, £150; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £160. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon 'Phone: Croydon 2450. [0733

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with pleasure.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

B.S.A., 1922, all models; carriage paid anywhere.—Clifford Motories, Eastwood, Notts. [5139

1916 B.S.A. Countersbaft Combination, just overhanled; £62, offers.—Tegg, Dorchester, Wallingford. [5344

1915 B.S.A. 4½h.p., clutch, kick start, perfect condition; £45, or best offer.—55, Devonport Rd., W.12. [5663

B.S.A. 1919 4¼h.p., chain, overhauled, examination welcomed; £65.—James, 4, Eastborne Place, Merthyr, S. Wales. [5397

B.S.A. 3-speed Cycle and Simplex attachment, cost £60. Sacrifice, £17/10 the lot.—365, King St., Hammersmith. [5891

ORDER Your New B.S.A. from R. B. Clark and Co. Highest exchange prices given—7, Exhibition Rd., S.W.7. [5245

## MOTOR CYCLES FOR SALE.

DUNELT 4½h.p., with coachbuilt sidecar, spare wheel, 2 spare tyres, spare belt and chain, M-L Maglita lighting and ignition, Brooks B600 saddle, in good condition; £90.—Teage, Whitehouse, Kenilworth. [X2270

### Enfield.

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

1921 Enfield 2¼; 2 speeds, kick start; £42.—16, Elsden Rd., Tottenham. [5498

LOOK! 1919 Enfield Comb., as new and guaranteed, £85.—62, Princess Rd., Kilburn. [5770

3h.p. Enfield, late 1919, perfect condition; £50.—F. Claxton, East Harling, Norfolk. [5712

ROYAL ENFIELD 6h.p., splendid condition, horn, lamps, windscreen, hood, £90.—156, Browning Rd., East Ham. [5783

ENFIELD Combination 8 h.p. Colonial model, only run few miles, any trial; £68.—Clark, 7, Exhibition Rd., S.W.7. [6014

6h.p. Enfield Combination; lamps, horn, screen. Just overhauled. Beautiful condition, £70. Triumphs wanted.—Bunting's Exchange, Wealdstone. [5910

1919 3h.p. Enfield Twin, overhauled, fully equipped; £44.—Shepherd, Enfield Highway, Tel.: Waltham X 31. [0776

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—8h.p. 1917-18 Royal Enfield combination; £95. [4425

1918 Enfield Combination, 8h.p. Colonial model; a bargain, £85; like new.—Ross, 86, High Rd., Lee, S.E. [2162

ENFIELD, 8h.p. Combination, 1920, fully equipped, Binks, Easting, leg shields, etc., fast, £90.—Philpot, Motors, Canterbury. [5641

ENFIELD, 2-stroke, May, 1921, low mileage, all on, ins., tax paid, £40.—Wren, 29, Camden Mews, Camden Rd., N.W.1. [5876

1922 Enfield Combinations, lightweights; carriage paid; write us before purchasing elsewhere.—Clifford Motors, Eastwood, Notts. [5140

ENFIELD 2¼h.p., 2-stroke engine, overhauled, fully equipped, licence not renewed; £34.—Haynes, Garage, Highbury Hospital, Moseley, Birmingham. [5385

LONGMAN BROS., Bond St., Ealing. Telephone: 689. Sole official district agents.—All Royal Enfield models. Cash, exchange, or deferred payments. [5788

1920 2¼ Enfield, two-stroke, equipped, nice condition, £38/10.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. (Private House Garage.) [5979

ENFIELD, 1921 8h.p. Combination, hood, screen, electric lighting, excellent condition; £118. Exchanges.—Newnham Motors, 223, Hammersmith Rd., London. [5800

ENFIELD Lightweight, 1921, fully equipped, very small mileage and almost as new; originally cost £65; offered at £42/10.—The Layton Garages, 30, Holywell St., Oxford. [5196

1919 6h.p. Royal Enfield Combination, complete; accessories. Perfect condition. Tax paid and insured end March. Owner buying car.—Moffat, Graham St., Penrith. [5462

ENFIELD.—We are official agents, and can give immediate delivery of any model of this foolproof motor cycle.—Jones' Garage, Muswell Hill, and Woodside Parade, N. Finchley [038

NEW 1922 8h.p. Enfield Combination, Lucas magdyno lighting, £158; easy payments 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [6067

ENFIELD 1921 8h.p. Magdyno Combination, shop-soiled only; originally cost £182, now offered at the unrepeatable figure of £137/10 for cash.—The Layton Garages, 30, Holywell St., Oxford. 'Phone: 581. [5183

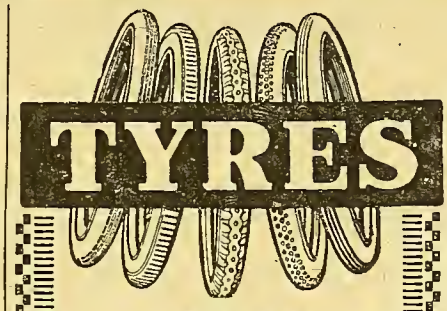
ROYAL ENFIELD Combination, 1921, Lucas mag. dynamo, spring bars, speedometer, hood, screen, luggage carrier, pillion seat, little used, equal to new, £145. Any trial.—Hall, 38, Chiddingstone St., Fulham, S.W. [5873

1921 Royal Enfield, 8h.p. Vickers engine, 2-speed, all-chain drive; coachbuilt sidecar. New condition. Only run 300 miles. Lucas lamps, horn, wind screen; including insurance, £120.—34, Manchester Rd., Swindon. [5464

1921 Enfield Combination, 8h.p. Vickers engine, Lucas magdyno, hood screen, Palmer cords, spares, tools, equal new, tax paid; £125, cost £197; trial.—Particulars, Ellingworth, 2, St. Aubyns Rd., Easthourne. [5734

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 2¼h.p. Royal Enfield 2-stroke, £55; 2¼ h.p. Royal Enfield with kick starter, £57; 8h.p. Royal Enfield sidecar combination, £140; dynamo lighting, £158; easy terms and exchange. Write, call, or 'phone. List forwarded return post. [4406

8h.p. Enfield Combination; November, 1915, 2-seater sidecar. Fully equipped. Thoroughly overhauled; small mileage, plenty spares, nothing to buy. Stored 2½ years. 1921 8h.p. cylinders fitted for more power. Reliable machine; £80 or offer. Owner buying Morgan.—Bran, 20, Farlton Rd., Earlsfield, S.W. After 6 o'clock. All day Sunday. [5515


GREAT REDUCTIONS
Satisfaction Guaranteed

**WOOD-MILNE.**

| | | Our Price |
|---|---|---|
| 26×2½ | Special Heavy | 13/6 |
| ,, | Combination | 22/6 |
| 20×2½ | Special Extra Heavy | 30/- |
| 26×2½ | Special Heavy | 13/6 |
| ,, | Special Extra Heavy | 16/6 |
| ,, | Combination | 30/- |
| 650×65 | Special Heavy | 13/6 |

Please note that, owing to the exceptional low price of these covers, we cannot guarantee them.

**MISCELLANEOUS.**

| | | |
|---|---|---|
| 26×2½ | Beldam Combination | 25/- |
| ,, | Goodyear A.W. Tread | 27/6 |
| 26×2½ ×2½ | Rubber Studded Extra Heavy | 27/6 |
| 650×65 | Goodyear A.W. Tread | 30/- |

**TUBES.** EX GOVERNMENT STOCK. ALL SIZES.

24in. and 26in. Endless 4/9 Butted, 5/9
28in. ,, 5/6 ,, 6/6
700×80 mm. ,, 6/9

BEST QUALITY GUARANTEED.

24×2, 4/6 | 26×2, 4/9 | 26×2½, 6/3
26×2¼, 7/6 | 26×2½ ×2½, 7/9 | 28×3, 8/9
26×2½, 7/9 | 700×80, 10/-

**BELTS.** IN STANDARD LENGTHS

| | ½in. | ¾in. | 1in. | 1¼in |
|---|---|---|---|---|
| Bates Avon etc., per foot | 1/- | 1/5 | 1/9 | 2/- 2/6 |

Motor Cycling HELMETS in soft tan leather, lined inside with chamois. Beautifully finished, with peak ear pieces and strap. Better than others advertised elsewhere, and cheaper. State size when ordering.

6/6

These Special Clearance Lines are sent Carriage Paid on 7 Days' Approval against remittance. Trade supplied. Write to-day.

ORDER THE ELITE RUBBER CO. LTD. Tyre Specialists
The Name The Firm
WAY
LONDON'S LEADING TYRE HOUSE
264-266, VAUXHALL BRIDGE Rd. VICTORIA, S.W.1
AND AT
44, SURBITON ROAD, KINGSTON-ON-THAMES
TELEPHONE: VICTORIA 6553 & 6554
OUR AGENT IS THE PILLAR BOX


## MOTOR CYCLES FOR SALE.

### Enfield.

*Spare Parts:*

ENFIELD Spares. — Immediate delivery. — Kays, 8, Bond St., Ealing. [3612

### Excelsior.

BRITISH Excelsior, as new; £37/10.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [5701

### F.N.

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—New 1922 F.N's: 7h.p. combination, £127; solo machine, 2½h.p., £55. Easy terms and exchange. [4397

*Spare Parts:*

F.N. Spares.—We can supply for all models from 1904. Prompt attention to all inquiries. Stamp please.—Langford's, 37, Cricklewood Broadway, N.W.2. [5854

### Francis Barnett.

1920 Francis-Barnett, 2¾h.p. J.A.P., 2-speed, clutch, K.S., fully equipped, condition as new; £56; deferred payment and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [1674

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; from £120. Stacey, 12, Ecclesall Rd. [0577

1919 Harley-Davidson Comb., as new, £85.—24, Balliol Rd., North Kensington. [5865

1919 7-9 Harley Combination, dynamo lighting, £85.—28, Woodford Rd., Forest Gate. 'Phone, Stratford 2598. [5941

1920 Harley - Davidson Combination, lavishly equipped, £95.—Hillier, 9, Wallingford Avenue, North Kensington. [5869

1920 Harley-Davidson 7-9h.p. Combination; electrically equipped, £125.—Speechley, 86, Churchfield Rd., Acton, W.3. [5507

7-9 Harley-Davidson, 1916. Mills-Fulford sidecar. Fine condition. Two new tyres. £70.—Passmore, Wood St., Swindon. [5363

1919 Harley-Davidson, 7.9h.p., 3-speed, coachbuilt combination, hood, screen, 1922 tax paid, perfect; 75 gns.; London.—Box 3303, c/o *The Motor Cycle.* [6010

HARLEY-DAVIDSON Combination, 7.9h.p., Sept., 1919, with lighting set taken in part payment for yacht; £95, no offers.—Rowland's Dockyards, Ltd., Bangor. [5751

HARLEY-DAVIDSON 1915, 7-9 h.p. electric model, horn, 3-speeds, etc.; £50.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0069

1922 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices; catalogue with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5988

HERE'S a bargain for you.—A Harley-Davidson Model 20 J, Dynamo lighting, cost £245 last April, Montgomery sidecar, condition throughout perfect, £125 or best offer.—Horswill, 42, Bridge St., Chester. [5542

85 GNS., exchange.—Exceptionally nice 1918 Harley-Davidson 7-9h.p., 3 speeds, clutch, kick start, special 3-seater bulbous back sidecar, new tyres, equipped, very smart.—Seabridge; Sydenham 2452 'phone (see Exchange).

1920 Harley-Davidson Combination; mechanical condition and appearance equal to new; luxurious sidecar with screen and apron, electric lighting; any trial, £98.—Langford's, 37, Cricklewood Broadway, N.W.2. [5853

HARLEY.—Longman Bros., Bond St., Ealing. Telephone: 689. Sole official district agent.—All models, immediate delivery. Cash, exchange, or deferred payments. Specially tuned machines certified to have exceeded 75 m.p.h., £5 extra. [5786

*Spare Parts*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3613

### Hazlewood.

1922 Hazlewood, all models, for early delivery. See the 6h.p. J.A.P. Twin Combination at £118; finest value for money to-day; catalogues with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5988

HAZLEWOOD 6h.p. Combination, 1920, dynamo lighting, electric horn, windscreen, new condition, £85.—Philpot, Motors, Canterbury. [5639

### H.B.

H.B. (Blackburne) 1922 Models, 2¾h.p. Blackburne engine, 2-speed Burman gear box, chain-belt, C. and K.S., £72; with 3-speed gear box, £75; 4h.p. with 3-speed gear box, £82; 4½h.p. with 3-speed gear box, £100.—Write, London Motors, 61, Holborn Viaduct, E.C.1. [3283

H.B. (Blackburne) 1922 Models for earliest deliveries.—Write, London Motors, 61, Holborn Viaduct, E.C.1, sole distributing agents for the following counties: Kent, Surrey, Sussex, Hants, Berks, Oxford, Bucks, Northants, Beds, Hunts, Cambridge, Norfolk, Suffolk, Essex, Herts (including London and Middlesex). [3282

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue B25
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Henderson.

**19**16 Henderson, 4 cyl., with sidecar chassis; £55; any trial.—56, High St., Tooting. [5762

HENDERSON Combination, fully equipped, cheap quick sale.—19, Askew Crescent, Shepherd's Bush. [5763

HENDERSON 10h.p. 4-cyl., overhauled, £75; lower power wanted.—42, Taplow St., City Rd., London, N.1. [5439

HENDERSON 1915 Combination, good running order; £55.—Newnham Motors, 223, Hammersmith Rd., London. [5804

**19**20 Henderson, with Mills-Fullford De Luxe sidecar, D.A. lighting, speedometer, first-class order and condition; spot cash, £100. — Mason's Garage, Letchworth, Herts. [5108

**19**20 Henderson de Luxe Combination; sporting; exceptionally fine throughout; well equipped, £135; exchanges.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. (Private House Garage.) [5976

**19**20 Henderson Combination, aluminium discs, electric lights, large sidecar with luggage carrier, photo. on request; £135 or nearest.—A. W. Dixon, Westmeads, Whitstable. [6070

**19**20 (Nov.), 10h.p. Henderson Swan Sporting Sidecar Combination, 3 speeds, clutch, complete with luggage carrier, oil lamps, dynamo, battery, electric and bulb horns, aluminium number plates, excellent mechanical order and touring condition, spare tube, etc., insured; £125.—Cookesmith, Joan Lane, Bamford, Derbyshire. [6073

### Hobart.

BEAUTIFUL Machine, late 1921 Hobart-Villiers, scarcely used, Mark IV., A.M.A.C., Best and Lloyd, all black, S.A. 2 speed, K.S. clutch, horn, tools, licensed; £60.—Wyatt, Bishopswood, Chard, Somerset. [5388

### Hockley.

HOCKLEY Smart Economical 3h.p. Lightweight, with substantial cash adjustment for 3-wheeler Coventry-Premier.—Newnham Motors, 223, Hammersmith Rd., London. [5805

### Humber.

£24/10.—Humber Coachbuilt Combination, 3½h.p. 2-speed; handle start; running order.—Speechley, 86, Churchfield Rd., Acton, London, W.3. [5504

**3½** Humber, thoroughly modernised, 2 speeds, clutch, kick start, countershaft, perfect order; genuine bargain, £29.—Argyle Lodge, Newton Rd., Burton-on-Trent. [5630

### Indian.

INDIAN Combination 7-9h.p., good running order, must sell quickly.—Locke, Somerton, Somerset. [5612

**19**16 Indian (Powerplus); dynamo lighting; new condition; bargain; £70.—Ross, 86, High Rd., Lee. [5490

7/9 Indian and sidecar, 1919, lamps, Easting, etc., good condition; £75.—5, Sun St., Waltham Abbey. [5724

INDIAN 7/9 Road Racing Model; many new parts. Going cheap. What offers?—Round House, Manniogs Heath, Horsham. [5496

INDIAN Scout, Sunbeam, Triumph, N.U.T., A.B.C., or other good solo; best offer secures; cash.—88, Lord St., Southport. [5755

**19**13 7-9 Indian Combination, good running order, 2-speed, free engine, £29.—28, Woodford Rd., Forest Gate. 'Phone, Stratford 2598. [5945

LOOK! £50 1918-19 3-speed Indian, clutch, K.S., lamps in perfect order throughout; would take lighter machine and cash.—14, Kildoran Rd., Brixton. [5438

**19**19-20 Powerplus Indian Combination, dynamo lighting, "Easting" windscreen, splendid condition; 80 gns. Exchange.—Kent's, 417, Lord St., Southport. [5760

INDIAN 7-9h.p. 1915, 2-speed, kick-starter, re-plated and enamelled; lamps, horn; 2in. copper exhaust. Perfect. £45. Allon wanted.—Brown, 25, Bower St., Maidstone. [5459

7/9 Sports Indian; late 1920; stove enamelled grey; overhauled; Headee's swan sidecar, accessories, spares, etc., T.T. handlebars; £100.—25, York St., W.1. Mayfair 575. [5495

INDIAN Powerplus 1919, dynamo lighting, ammeter, rear drive, speedometer, Indian sidecar, Cameo screen, excellent condition throughout; £95.—Dixon Bros., 172, Brownhill Rd., Catford. [5404

INDIAN 1919, 7-9h.p., spring frame, powerplus, lamps, horn, etc.; £57/10.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

INDIAN 1920, big valve powerplus model, combination, in exceptional mechanical condition, two windscreens, 2 sets handlebars, and lots of other spares; £100.—Colonial Motors, 104A, Finchley Rd. Hampstead 7822. [5961

INDIAN 1919 7-9h.p., Powerplus, spring frame, 3 speeds, new engine, T.T. handlebars, accessories, magnificent machine; £75. Triumph or lightweight part payment.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station), London. [5582

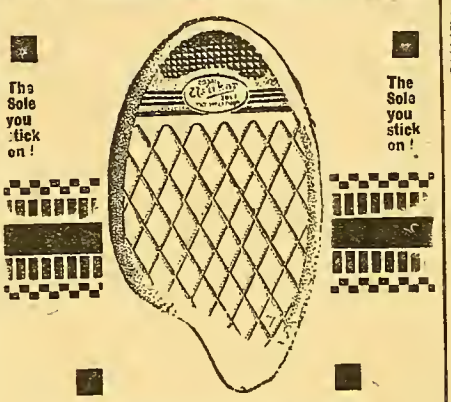

# 1922

FIT A PAIR OF

DAVIS Ustikon PATENT SOLES & HEELS

19 MINUTES FOR FITTING 19

22 WEEKS WEAR AT LEAST GUARANTEED 22




USTIKON DIAMOND PATTERN SOLE.

These soles can be fitted quickly by anyone, and more easily than any other rubber sole on the market. Made from highest grade jet black rubber they are absolutely waterproof and invisible in wear.

SATISFACTION GUARANTEED TO EVERY PURCHASER OR MONEY REFUNDED.

GENTS', ALL SIZES - 3/9 PER
LADIES', ALL SIZES - 2/9 PAIR

Complete with Sol-fix and full directions.

USTIKON HEELS

PER PAIR
GENTS'..1/9
LADIES' 1/-
ALL SIZES.

*Ask your local agent for them, if he cannot supply we will deliver post free on receipt of remittance and size required*

ELITE RUBBER CO., LTD.,
264-266, Vauxhall Bridge Rd.,
Victoria, S.W.1.
Telephone: Victoria 6553 and 6554
*AGENTS WANTED.*


## MOTOR CYCLES FOR SALE.

### Indian.

**65** Miles Per Hour Combination, 1920 Indian Powerplus, 7-9h.p. special racing engine, dynamo lighting, speedometer, Easting screen, etc., practically as new; £98.—Dental, 769, Romford Rd., Manor Park, London, E. 'Phone: Ilford 500. [5680

FOR Sale.—7/9h.p. 1919 "Powerplus Indian" Motor Cycle, in first-class condition. Just overhauled and re-enamelled. Complete with lamps, tools, spares, T.T. bars, new chains. Bargain; £65 for quick sale. Owner ordered to India.—Apply Lieut. Fedden, Colewort Barracks, Portsmouth. [5514

POWERPLUS Indian, Dynamo Lighting Model, 1920-21, fitted with leg shields, domed, speedometer, several extra fittings, handlebar ex valve lift, separate three-way switch, inspection lamp, small lamp to light up ampmeter and speedometer; cost February last £229; absolutely perfect condition throughout; £125 or best offer.

ANOTHER similar to above, but no leg shields or inspection lamp, but fitted as turned out by makers, bought in August, 1920, also in first-class condition; £105 or best offer.

ANOTHER 1918 model, spring frame, solo, not dynamo lighting and no speedometer, new tyres both wheels; this also is in extra good condition throughout; £70 or best offer.

ANOTHER 1917 spring frame model, combination, not Indian sidecar; £70 or best offer.

FOR the best value in the trade there is nothing to touch the 1922 Model Indians, whether Standard, Scout, or Indian Chief, which is the last word in luxury and comfort. Let me send you catalogue and prices.—Horswill, Indian Specialist, 42, Bridge-st., Chester. Phone: 943. [5541

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3614

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Indian spare parts always in stock. Write for free spare part list. [0752

INDIAN.—New and secondhand spares in stock for all models. Stamp please.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [5855

INDIAN.—The Denais Accessories Stores, 89, Brixton Rd., London ('Phone Brixton 3129), can supply all 7-9h.p. parts from stock, new, including all types of forks. They also specialise in Indian repairs. [1594

### Ivy.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, wholesale Ivy agents, have all models in stock, including lady's model, price £69; gat list. [0710

### Ixion.

IXION-VILLIERS, 2½h.p., 2-stroke, tax paid, £22. —26, Old Gloucester St., Queen Square, W.C.1. [5888

### James.

**19**20 James, 2-stroke, perfect, £30.—24, Balliol Rd., North Kensington. [5862

**3½** James Crankshaft; valve rockers for front cyl.—Jordan, High St., Norton-on-Tees. [5458

BRAND new 6h.p. James Combination; best offer secures.—J. Hebden and Sons, 71, Scotland Rd., Nelson. [5906

JAMES 3½h.p. Twin, 3-speeds, kick-starter, clutch, 1920, practically unused, £60.—Philpot, Motors, Canterbury. [5642

£45.—4½h.p. James, late model, countershaft, 3 speeds, kick starter, hand and foot clutch; exchanges.—63, Solon Rd., Brixton. [5671

**3½** h.p. Twin James, countershaft, Binks, tax paid for 1922, with sidecar and screen, any trial; £65.—Ashbey, 50, Rochester Row, Westminster. [5695

JAMES 1920 5-6h.p. Lucas Dynamo Lighting Standard Combination, complete accessories, £112; another with dynamo lighting, £107; another without lighting, £85. Exchanges.—Newnham Motors, 223, Hammersmith Rd., London. [5806

JAMES'S Combination 4¼h.p. 3-speed, clutch, kick start, speedometer, all Lucas lamps, and horn, Bink's carburettor, complete set of tools and several spares, Blueme! windscreen, smart appearance; trial given; £75.—10, Lynwood Rd., Tooting, S.W.17. [5389

### J.A.P.

**5**-6h.p. J.A.P., 2-speed, Cancelet sidecar; bargain, £29.—Shepherd, Enfield Highway. Tel.: Waltham X 31. [0777

COMBINATION J.A.P. twin in good order with clutch, £19.—H. R. Hall, Berrymans Yard, Whetstone, London. [5356

£35.—Imperial-Jap, 2¾, 1917; aluminium chaincase, 2 pairs footrests, equipped. Offers.—Hoovdonk, Oakengates, Letchworth. [5843

**19**21 Omega, 2¾h.p., J.A.P., 2-speed, kick start, hand clutch, Lucas lighting sets, original tyres unpunctured, fully equipped, everything equal to new; £44.—J. B., Mill House, Salter's Rd., King's Lynn. [5720

## MOTOR CYCLES FOR SALE.

### Premier.

£15/10.—Premier 3½h.p., White and Poppe engine, good tyres, ride away, lamps (tax paid 1922).—8, High St., Wandsworth. [5656

1916 Premier Combination, 3½h.p., 3-speed countershaft, kick starter, lamps; £42.—Walker, 59, Park Rd., Sittingbourne, Kent. [5749

£33 Snip, late 1914 3½h.p. Premier, new Philipson pulley, tyres, belt, lamps, Klaxon, tools, re-enamelled, large exhaust, new condition; any trial; expert examination; semi T.T. bars, starts walking; cash wanted.—1, The Nooks, Dorset Rd., Mottingham, Eltham. [5433

### Quadrant.

QUADRANT 4h.p., 3-speed, and sidecar, £30; exchanges.—Johnson, 172, Aveuue Rd., Acton. [5696

£90.—Brand new 1921 Quadrant Combination, all chain.—Clifford Wilson, 177, Westminster Bridge Rd., S.E.1. [5992

1920 Quadrant Combination; disc wheels, like new, £75. Also 1920 Combination, £70.—Ross, 86, High Rd., Lee. [5489

1921 4½h.p. Quadrant Combination, lamps, horn, etc, good condition; £80, or near offer.—Betts, 7, Caroline Place, W.C.1. [5337

QUADRANT £100 4½h.p. Combination, delivery from stock.—Frank Whitworth, Ltd., Distributers, 139, New St., Birmingham. [0767

£70.—1920-1 Quadrant 4½h.p. Combination, complete with all accessories, exceptionally fine order throughout.—Clifford Wilson, 177, Westminster Bridge Rd., S.E.1. [5991

QUADRANT 1922 Models in stock, immediate delivery, exchanges, extended terms.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0068

VERY late 4½h.p. Quadrant Combination, 3-speed Sturmey, kick start, wind screen, lavishly equipped, same as new; 65 gns. Evenings.—67, Fernlea Rd., Balham. [6028

1920 4¼h.p. all-chain Quadrant and Canoelet sidecar, complete with horn, electric lighting, screen, tax paid 1922; £68, perfect condition.—D. and S. Autocar Co., 33, The Parade, Golders Green. [6011

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—1922 Quadrant motor cycles, all chain, solo, £85; sidecar combination, £105; easy payments and exchange; list on application.—'Phone: Holborn 6777 [4410

1921 Quadrant Combination 4½h.p., perfect condition, chain drive, wind screen, W.S.R. jet, lamps, horn, speedometer, etc.; £75, no offers.—11, Cattell, 31a, Compton Rd., Wakeman Rd., N.W.10. [5611

QUADRANT 3½h.p., E.T.C. mag., running order, £14.—179, York Rd., Islington. [5822

CLIFFORD WILSON Mfg. Co., Quadrant works representatives and sole wholesale distributers for London, Middlesex, Surrey, Sussex, Kent, Essex, Buckinghamshire, Hertfordshire, Bedfordshire, Norfolk, Cambridgeshire, Suffolk, Huntingdonshire, Berkshire, etc. All models in stock; deferred payments, exchanges. Early delivery. Chain-cum-belt 4½h.p. solo £80, all-chain solo £85, chain-cum-belt combination £100, all-chain combination 100 gns., Lucas dynamo lighting sets £16 extra. Official repairers and spare part stockists. Day and night service.—177, Westminster Bridge Rd., London, S.E.1. Tel.: Hop 210. [5148

### Radco.

BRAND New Radco 1921 Lightweights at enormous reductions, single gear models from £30, 2-speed models from £44; all carry makers' full guarantee. Write for special clearance bargain list.—The Premier Motor Co., Aston Rd., Birmingham. [X5238

### Raleigh.

PREMIER Motor Co. for 1922 Raleighs

IMMEDIATE Delivery of 5-6h.p., spring frame, detachable wheels, £130; standard sidecar, £35; De Luxe sidecar, £42; early delivery of the new Raleigh lightweight, £68; easy payments 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0626

1922 Raleigh, all models, at list prices; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [1679

RALEIGH De Luxe Combination, late 1921, fully equipped, screen, new condition; £132.—Atkinson, Outwood Lane, Horsforth, Leeds. [5647

RALEIGH, 5/6 Flat Twin, only run 100 miles; perfect in every detail and as new; electric lamps, £110.—Lambert, Drumchapel, Glasgow. [5618

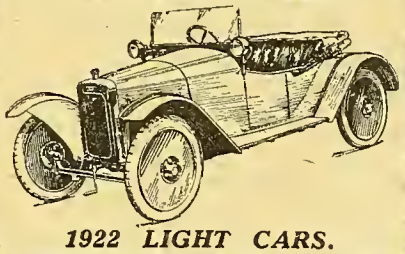
1922 Raleigh.—The agent, Sam E. Clapham. Book your order now, for cash exchange, or easy terms.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich. [5159

1921 5-6h.p. Raleigh Combination, complete, electric lighting, spares, special engine, winner competitions, small mileage, year's insurance, privately owned; sacrifice, £130.—Sheldon, Wheatley, Oxford. [5654

RALEIGH, exchanges, all new models supplied. Inspect the new 1922 lightweight, and De Luxe 5-6h.p. combination; both models actually in stock; and then exchange your present machine.—Newnham Motors, 223, Hammersmith Rd., London. [5812

# 1922 COVENTRY PREMIER

*8¼ h.p. W.C. 4-wheeler, dynamo lighting, spare wheel, hood, screen, speedometer and 12 months' insurance* - **£250**



## *1922 LIGHT CARS.*

**AIREDALE 11.9 h.p. 4-seater .... £475**
**CALTHORPE 10 h.p. 2-seater.... £355**
**CALTHORPE 10 h.p. 4-seater.... £375**
**CALTHORPE de Luxe 2-seater .. £410**
**CALTHORPE de Luxe 4-seater .. £435**
**L.S.D. 3-wheeler, All on ..... £165**
**LAGONDA (Coupé or 4-seater).. £395**

## *1922 MOTOR CYCLES.*

**B.S.A. 4¼ h.p. Chain-Belt..... £107**
**B.S.A. 4¼ h.p. Combination..... £139**
**B.S.A. 6 h.p. Light Comb. ..... £164**
**B.S.A. 8 h.p. Comb. ..... £185**
**BRADBURY 6 b.p. Comb. ..... £146**
**DOUGLAS 2¾ h.p. 2-speed, All on £75**
**DOUGLAS 2¾ h.p. 3-speed, All on £90**
**DOUGLAS 3½ h.p. 3-speed Sporting £130**
**EDMUND-BLACKBURNE 2¾ h.p. £85**
**ENFIELD 8 h.p. Combination.... £140**
**ENFIELD 2¼ h.p. 2-speed..... £55**
**LEVIS Popular 2¼ h.p. ..... £48**
**LEVIS 2¼ h.p. 2-speed ..... £58**
**LEVIS 2¼ h.p. 2-speed, kick-start £60**
**MARTINSYDE 6 h.p. Combination £160**
**NEW IMPERIAL 2¾ h.p. 3-speed 60 Gns.**
**NEW IMPERIAL 2¾ h.p., All-Chain £73**
**NEW IMPERIAL 8 h.p. Comb. .. £145**
**NORTON Big Four Combination £149 10**
**NORTON 3½ h.p. 3-speed..... £115**
**NORTON Big Four ..... £120**
**REX-ACME 2½ h.p. 2-speed..... £50**
**REX-BLACKBURNE 2¾ h.p..... £69 15**
**REX-ACME 8 h.p. Combination.. £150**
**ROYAL RUBY 2¾ h.p. 2-speed.... £70**
**SCOTT-SQUIRREL 3½ h.p. 2-speed £105**
**SCOTT 3¾ h.p. 2-speed Comb. .. £145**
**SUNBEAM 3½ h.p. (New Type) 120 Gns.**
**SUNBEAM 4¼ h.p. Comb. ....174 Gns.**
**SUNBEAM 8 h.p. Combination.. £217 7**
**TRIUMPH 4 h.p. Chain-Belt .... £105**
**TRIUMPH 4 h.p. All-Chain..... £115**

## *DEPENDABLE SECOND-HANDS*

| *Solos.* | £ | s. | *Combinations.* | £ | s. |
|---|---|---|---|---|---|
| A.B.C. 1921 - | 87 | 10 | A.J.S. 1919 | 125 | 0 |
| Ariel 1920 3½ | 75 | 0 | Ariel 1920 - | 87 | 10 |
| Alecto 1920 - | 52 | 10 | Alecto 1920 - | 69 | 10 |
| Bradbury 3½ | 35 | 0 | Bat Jap 8 - | 39 | 10 |
| Beardmore - | 59 | 10 | B.S.A. 4¼ - | 67 | 10 |
| Douglas 1920 | 69 | 10 | Chater-Lea - | 69 | 10 |
| Zenith 3½ - | 32 | 10 | Enfield - - | 85 | 0 |
| Excelsior '20 | 39 | 10 | Harley 1918 | 115 | 0 |
| New Imperial 35 | | 0 | Harley 1920 | 155 | 0 |
| O.K. 2-speed | 35 | 0 | Rex 6 h.p. - | 49 | 10 |
| Rudge 1920 - | 59 | 10 | Rudge 7 1920 | 105 | 0 |
| Wooler - - | 55 | 0 | Scott 1920 - | 95 | 0 |
| Triumph 3½ | 42 | 10 | Rex-Blackburne | 125 | 0 |

**Full List on Application.**

## The Halifax Motor Exchange, 25, Horton Street, Halifax.

'Phone: 1400. 'Grams: "Perfection."

## MOTOR CYCLES FOR SALE.

### Reading-Stanard.

READING-STANDARD 1920 Combination, dynamo lighting, sound mechanically; £95.—Colonial Motors, 104A, Finchley Rd. Hampstead 7822. [5959

### Rex.

3½h.p. Rex Combination, 2 speed, handle start, Bosch, Sensspray, lamps, licensed; £22/10.—Toshach, Thoroʻfare, Woodbridge. [5342

REX Combination 6-8h.p., overhauled, perfect, E.L., Bosch, Binks; £45. 7-9h.p. Indian parts wanted.—Howgegs, 74, Faircross Avenue, Barking. [5415

£38.—Rex Combination 5-6h.p., 2 speeds, Canoelet touring sidecar, electric lighting, splendid condition; exchanges.—63, Solon Rd., Brixton. [5672

1920 8h.p. Rex Combination, electric lighting, wind screen, handle-bar muffs, condition excellent; 76 gns.; deferred payments and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [5237

### Rex-Jap.

1913 Rex-Jap Combination, Roc clutch, electric horn, etc., good tyres and in splendid running order; price £35, or near offer.—Dunwell's Garage, Wigan. Tel.: 328. [0764

### Reynolds.

REYNOLDS Runabout, little used, 2-speed, kick-starter, £50.—Exors. of P. J. de Paravicini, Hillfield, Pangbourne. [5485

REYNOLDS (Runabout) open frame motor cycle, 2¾ h.p., 2-speed gear, clutch, kick start, seat for extra passenger, all accessories, fine mount, slight use for demonstration purposes; £55. ('Phone, Mayfair 4786.)—Griffin, 5, King St., Baker St., W. [5530

### Rover.

1920 3½h.p., countershaft Rover, lamps, etc., perfect, £60.—Lyons, Wets St., Blackpool. [5823

ROVER, 3½h.p. 1920, fully equipped; overhaul just completed, solo, £65.—Philpot, Motors, Canterbury. [5640

£32/10.—Rover 3½h.p., 3 speeds, clutch, lamps, horn (tax paid 1922), beautiful lot.—8, High St., Wandsworth. [5653

1913-14 3-speed Rover Combination, tax paid, lamps, speedometer, hood, rough appearance, but splendid running order; £40.—Also

1919 T.T. Rover, Philipson, perfect condition, fast, original tyres; what offers?—Write first, Webster, 198, Bethnal Green Rd., E.2. [5576

ROVER Combination 3½h.p., 3-speed, clutch, new tyres, wicker sidecar;.. £36.—Cooper, Victoria Garage, Charlotte Place, Margate. [5722

ROVER 1920 5-6h.p. Combination, usual equipment, £85; 1912 3½h.p., 3-speed, clutch, £25. Exchanges.—Newnham Motors, 223, Hammersmith Rd., London. [5810

ROVER 1920 5-6h.p. Combination, 3-speed, kick starter, lamps, horn, speedometer, wind-screen and Tan-Sad, in splendid running order, mileage 2,800; £115.—13, Merton Rd., W.8. [5424

### Royal Ruby.

ROYAL RUBY 2¼h.p. Villiers, 2-stroke, completely overhauled, new tyres and belt; bargain, £25.—Hamilton, Ellesmere, Salop. [5667

1922 Royal Ruby, spring frame, all on models, order now for early delivery; catalogues with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5967

OCT. (1921) Royal Ruby Combination, spring frame, Magdyno lighting, interchangeable wheels, etc.; cost £215, sell £145, or exchange cheaper machine and cash.—13, Normansmead, Brentfield Estate, Willesden, N.W. [5417

### Rudge

RUDGE, brand new I.O.M. model; 72 gns.—Longman Bros., Bond St., Ealing. [5794

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—3½h.p. I.O.M. Rudge, 1920; £60 [4418

RUDGE Multi 3½h.p., unrated, sacrifice; £69, or exchange.—14, Devonshire Rd., Forest Hill. [5400

£22/10.—Rudge 3½h.p. Clutch Model; fine machine, any examination or trial.—Speechley, 86, Churchfield Rd., Acton, W.3. [5506

1921 I.O.M. Rudge Multi, bought June, low mileage, best accessories, lovely condition; £65.—151, Globe Rd., Bethnal Green. [5547

£29.—3½ Rudge, 2 speeds, clutch, kick starter, horn, tool bags, sound; exchange Douglas; trial any time.—89, East Hill, Wandsworth. [5225

1921 Rudge Multi T.T., periect condition, only done 600 miles, all accessories, fast; £75.—Speucer, 113, High St., Merton, Surrey. [5426

1920 Rudge I.O.M., very good condition, good tyres, lamps, Bonniksen, etc., ride 50 miles to genuine purchaser; £55.—Swainson, 54, Sidney St., Cambridge. [5669

RUDGE-MULTI, exchanges, all new models supplied; also one 1920 second-hand, all accessories, excellent condition, £59. Exchanges.—Newnham Motors, 223, Hammersmith Rd., London. [5811

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue B29
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Rudge.

3½ Rudge-Multi Combination, splendid condition, any trial, £45. Seen by appointment.—G. P. C., 7, Florence Terrace, Ealing Common, W.5. [5773

RUDGE Multwin 7-9h.p., Watsonian R.34, dash, screen, accumulator lighting, excellent throughout; £95.—Smout, 73, Derby St., Moss Side, Manchester. [5558

£25, Bargain 3½ Rudge 2 speeds, clutch, kick starter, horn, good tyres, tool bags, Senspray, sound running order (exchange value £30).—89, East Hill, Wandsworth. [6006

RUDGE MULTI 1922, brand new Isle of Man; latest model; just delivered; £85.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0073

1921 Rudge Multi T.T. 3½h.p., Miller lamps, Stewart, spare tube, all accessories, tax paid, perfect condition; £70.—L. Noyce, Sycamores, Winchester Rd., Andover, Hants. [5653

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—1922 3½h.p. Rudge, sloping tank, I.O.M., £85; any model supplied. Write for list; easy terms arranged; second-hand machines taken in exchange. [4411

1920 3½h.p. Rudge and 35 gn. sidecar, lamps, horn, screen, spare tyre and belt condition perfect; 70 gns.; deferred payments and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [2373

RUDGE I.O.M. 1920 3½h.p. with Montgomery 1921 sidecar, in perfect condition, any trial, lamps, Klaxon, kit of tools, spare tube, belt, knee grips; a real bargain; offered for quick sale or nearest offer; owner buying a car only reason for selling; £78.—Fryer, Leominster. [5452

*Spare Parts:*

RUDGE Spares.—Large quantity of W.D. spares for disposal. See our advert. Parts and Accessories: it will pay you.—Marks and Baron, Ltd., Lancaster Rd., Preston. [X5172

### Scott.

1922 Scott Models in stock, complete; £110; delivered free.—Millard's, Scott Agents, Chesterfield. [4276

SCOTT (Oct.), 1920, 3¾h.p., fully equipped, condition as new; £80; exchanges.—G. H. Tucker, Redcliffe House, Bristol. 'Phone: 4042. [5206

SCOTT SQUIRREL in Stock; £105; the nifty sports 'bus; carriage paid.—G. H. Tucker, Scott Agent, Redcliff Hill, Bristol. 'Phone: 4042. [5205

SCOTT 1920 3¾h.p. combination; duplex frame, spring saddle, petrol tank under top tubes, surmounted by aluminium cover plate, lamps, horn, etc., Rennee R. 34 type sidecar, lockers at rear, windscreen. A real bargain, £75.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0074

*Spare Parts:*

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list. [0751

SCOTT Service Depôt.—Scott spares, new and second-hand.—Cathedral Motor Works, 99, Gt. George St., Liverpool. [5886

SCOTT Riders.—We keep huge stock new and [illegible] Scott parts. Any part on approval against cash.—Ward Motors, Ltd., The Scott Specialists, 32, Hustler St., Bradford. [0739

### Singer.

£22/10.—Singer 2½h.p., 2 speeds, countershaft (tax paid 1922), beauty.—8, High St., Wandsworth. [5657

£17.—Bargain, 2¾ Singer Sports; fast, low Bosch, B. and B., loog exhaust, smart, easy starter.—Ewers, Newton Rd., Burton-on-Trent. [5627

1914 Singer Combination, 4½h.p., all-chain drive, 2-speed, clutch and K.S., Bramble sidecar, Binks carburetter, lamps, horn, speedometer, mirror, new tyres all round, superb condition throughout; 37 gns.—Edwards, 50, Harrington Rd., South Kensington. [5235

### Stanger.

THE Machine of the moment is the Stanger V twin, 5h.p. 2-stroke. This machine is really a first-class mount with wonderful power, and excellent smooth running, fitted with the neatest rear springing yet seen; price £112/10. Send for particulars.—Jones' Garage, Muswell Hill, London, N.10. [0731

### Sun.

32 GNS., exchange.—1919 Sun-V.T.S., 2-stroke, 2-speed, footboards.—Seabridge, Hansler Rd., East Dulwich. Sydenham 2452 [3668

SUN VITESSE 1920, 2¾h.p., 2-speeds, 2-stroke, horn, clutch, kick starter; £32/10.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0072

### Sunbeam.

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—3½h.p. 1917 Sunbeam; £80. [4427

£35.—Sunbeam 3½h.p., 3-speed, kick start, requires assembling, few parts missing; seen any time.—Snow, Laurel St., Dalston, E.8. [6037


# THE BURNING QUESTION

Where shall you go for that Motorcycle or Combination? Where can you get at such low prices properly overhauled second-hand machines with a three months guarantee (the same as for a new one)? Where can you see, and get quickest deliveries of, all New 1922 models? Where can you get the easiest of easy terms? Where can you get the best genuine allowance for your present machine taken in part exchange?

The one and only answer is:—The firm who specialises in these things and the firm with the longest and highest reputation—that is The Service Co.

In addition — no matter what you buy or how you buy it, *your* satisfaction is our one consideration. Your enquiry, whether for an inexpensive second-hand lightweight or a 1922 Combination de Luxe, will be esteemed.

## PAYMENTS TO SUIT MOST POCKETS

The Service Company Ltd. (LONDON)

289-293, High Holborn, London.

*Telephone:* Holborn 6430. *Telegrams:* Admittedly, London.


## MOTOR CYCLES FOR SALE.

### Sunbeam.

1920 3½h.p. Sunbeam, all on, good condition; 90 gns.; stamp for particulars; licence paid.—Sherren, 59, Ashburnham Rd., Bedford. [5851

8h.p. "Sunbeam" and sidecar, shop-soiled, spare wheel and tyre; bargain, £185. Would entertain exchange good solo and cash.—Harris, 51, Upton Lane, Forest Gate, E.7. [5743

LATE 1920 3½ Sunbeam Combination; electric lighting, legshields, perfect condition; 1922 tax paid; any trial; £120, or exchange 1921 Matchless-Magdyno combination; cash either way.—"Nuthurst," Petersham Avenue, Byfleet. [5643

SUNBEAM 1919 8h.p. Combination, Lucas dynamo lighting, electric horn, spare wheel (unused), hood, side curtains, screen, Bonniksen trip speedometer, watch, spare valves, etc.; £160.—Morley, 50, Norton Rd., Letchworth. [5688

1920 3½h.p. Sunbeam, tip-top condition, Lucas lamps, horn, Watford speedometer, Tan-sad, straight through plated pipe, and standard silencer, foot-rests, and boards, spare sprockets, etc., tax paid, £100 or near offer.—C. Locke, 9, Royal Crescent, Cheltenham. [5930

2¾h.p. Sunbeam, 1914, mechanical condition perfect, straight through pipe, sporting bars, complete with Lucas lamps and horn, spare sprocket, etc., fast, climb anything, tax paid, only wants seeing. Bargain, £40.—H. Locke, 9, Royal Crescent, Cheltenham. [5927

1921 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual spares, cast aluminium plates, new in April last, and in exceptionally good condition, tyres unpunctured; nearest offer to £116.—Geoffrey Smith, *The Motor Cycle*, Coventry. [X4285

1920 3½ Sporting Sunbeam, 3-speed, clutch, and kick start; new Lucas lamps and horn, Stewart trip speedometer, knee grips, pillion seat, aluminium disc tools and spares. Tyres and engine in splendid order. Trial. Best offer secures.—D. Thomas, 9, Mostyn Crescent, Llandudno. [5468

77 m.p.h. 3½h.p. Sunbeam, 1921 model, winner, speed and reliability, special piston, con.-rod and flywheels, three pairs of cams, racing cams 10 m.p.h. faster than standard, six sprockets, rat-trap and Amac, Bonnikson T.T and standard gears, spare roller bearings and wheel spindles, two exhaust pipes, lamps, horn, tools, Best & Lloyd automatic lubricator, spare contact brakes, and £1 K.L.G., other spares; outfit cost over £200; highest bid over £100 secures.—Yates, junior, Grand Hotel, Morecambe. [5559

### T.D.C.

T.D.C. De Luxe 1919, good condition, good tyres, tax paid 1922, needs retiming, single or two speeds, spare mag.; owner no time to attend; best offer; all inquiries by post.—E. Soames, 34, Cyprus St., London, E.2. [5447

### Thor.

£55.—Thor, 7.9h.p., 1918, coachbuilt combination, fully equipped, dynamo lighting, absolutely perfect.—Clapham Motors, High St., Clapham. 'Phone, Latchmere 4290. [5716

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £105; Type SD, chain drive, £115; Type LW, lightweight, £65; sidecars from £20 to £50; easy payments 4% extra.—Buy direct from the leading Triumph agents: The Premier Motor Co., Aston Rd., Birmingham. [0627

1918 Countershaft Triumph, perfect, £48.—24, Balliol Rd., North Kensington. [5859

1914 4h.p. Triumph, hub, accessories, licensed, perfect; £42.—62, Clyde Rd., Croydon. [5549

TRIUMPH, 1919; splendid condition; all on; tax paid; £80.—555, Fulham Rd., S.W.6. [6024

1918 4h.p. Countershaft Triumph, £48.—Hillier, 9, Wallingford Avenue, North Kensington. [5867

TRIUMPH Countershaft Combination; £65.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [5699

TRIUMPHS.—A fine assortment of all models in stock at prices to suit all.—Ross, 86, High Rd., Lee. [5020

TRIUMPH 1919 4h.p., 3-speed countershaft, excellent condition; £68.—57, Eltisley Avenue, Cambridge. [5381

1914 Triumph Combination, equipped, excellent condition; £40; licensed.—47, Leigh Rd., East Ham. [6026

BABY Triumph, 1919, countershaft, healthy machine, equipped, £39.—7, Denzil Avenue, Southampton. [5838

1914 T.T. Triumph, Philipson speedometer, lamps, very fast. Bargain, £30.—Thomson, 47, Station Rd., Hitchin. [5829

4h.p. Triumph Combination, 1918, recently overhauled makers, excellent condition throughout, smart, fast, fully equipped, tax paid, any trial, £75.—Clean, 52, Claremont Rd., Surbiton. [5821

## MOTOR CYCLES FOR SALE.

### Triumph.

RICARDO Triumph, delivery early February; £3 under list price; E. Yorks.—Box 8307, c/o *The Motor Cycle*. [5998

TRIUMPH Junior "1921," brand new, slightly soiled; £58.—Eagles and Co., 275, High St., Acton, London. [6061

1916 Countershaft Triumph Combination. Tax paid 1922. £65 or near offer.—Sealey, 88, Prince's Avenue, Watford. [5875

£32 10.—Triumph 3¼h.p., 3 speeds, clutch, lamps, horn (tax paid 1922); honest bargain.—8, High St., Wandsworth. [5661

TRIUMPH Countershaft, perfect condition, fully equipped; £50. Extended payments.—33, Hackford Rd., Brixton. [5570

£75.—Triumph-Gloria Combination 1919, Easting wind screen, good lamps, carefully used.—Snow, Laurel St., Dalston, E.8. [6036

£65.—Triumph 4h.p. Combination, countershaft, gear, accessories (tax paid 1922), engine No. 48400.—8, High St., Wandsworth. [5655

3½h.p. Triumph Coach Combination, 2-speed, K.S., equipped, perfect; first 29 gns. secures.—Ramsden's, May Bell Avenue, Blackpool. [5589

1918 Triumph Combination (1920 Millford sidecar), fully equipped, in splendid condition; £65.—24, Colvin Rd., Thornton Heath. [5967

BABY Triumph, 1921, as new, done 1,000 miles, tyres perfect, fully insured, best lamp and horn; £47.—Gowing, Fincham, King's Lyon. [4533

1922 4h.p. model H Triumph, Semi T.T. handlebars, not done 100—miles, absolutely perfect condition; £96.—Tippen, Marden, Kent. [5746

F.O.C.H., the Triumph agents. 1922 models in stock. Cash, exchange, or deferred payments.—5, Heath St., Hampstead. (Near Tube.) [5532

1920 Triumph Combination, Montgomery sidecar, electric lighting, Klaxon, condition as new; £85.—14, Devonshire Rd., Forest Hill. [5599

1918 Triumph, good condition, all on, tyres good, only done 2,000 miles; £55, or near offer.—R. Marnham, 27, Green St., Cambridge. [5670

3½h.p. Triumph, recently overhauled, lamps, horn, speedometer, excellent condition; £28.—Edwards, Homestead, Lemsford Rd., St. Albans. [5577

LONGMAN BROS., Bond St., Ealing. Telephone: 689. Official district agents.—All Triumph models. Cash, exchange, or deferred payments. [5787

TRIUMPH-GLORIA 4h.p. Combination "1915," 3-speed, countershaft gear, thoroughly renovated; £75.—Eagles and Co., 275, High St., Acton, London. [6062

£30.—Triumph Combination, Grado gear, lamps, horn, pillion, absolutely perfect.—Clapham Motors, High St., Clapham. 'Phone, Latchmere 4290 [5718

1918 Triumph Combination, renovated by Triumph June, excellent condition; £65; or Morgan and adjustment.—The Haven, 120, Sutherland Rd., Croydon. [5546

TRIUMPH, exchanges; several 1917 4h.p. combinations at £69-£75. Also several lightweights. Exchanges.—Newnham Motors, 223, Hammersmith Rd., London. [5813

TRIUMPH Combination 1918, guaranteed perfect, any trial, 2 horns, lamps, speedometer, Easting screen; £85, or near offer.—191, Amhurst Rd., Hackney. [5573

£60.—Countershaft Triumph Combination, Sunbeam sidecar, excellent condition, accessories, spares, insured £100, tax paid.—15, Elsenham St., Southfields, S.W. [5602

TRIUMPH Model H. (1921 renovated by makers), lamps, horn, tools, T.T. bars, very smart machine, little used, cost £109. Bargain, £72/10.—365, King St., Hammersmith. [5889

TRIUMPH 1914¾ (4h.p.) 3-speed, hub gear, Montgomery sidecar, hood, screen, lamps, carrier, horn, spares. Tax paid; £65 or offer.—Seen, 26, Plumstead Rd., S.E.18. [5470

1913 Triumph with 3½ Precision engine, perfect condition, sound tyres, water-tight Magneto. Bargain, £15/10.—26, Tulse Hill, Brixton. Telephone: Brixton 1292. [5956

1921 4h.p. Triumph; chain drive. New in June. Light sidecar attached. Good accessories. New condition, £100. Take half down. Other good mounts wanted.—Bunting's, Wealdstone. [5911

TRIUMPH 1918 4h.p., 3-speed, not W.D., lamps, etc., excellent condition and appearance; 49 gns.; cash or exchange.—Longman Bros., Bond St., Ealing. Telephone: 689. [5791

1918-19 4h.p. Triumph Combination, practically brand new, R 34 sidecar, screen, lamps, beautiful condition; £69 10s., no offers.—37, Canterbury Rd., Dalston, London, N.1. [6051

TRIUMPHS.—We are the North London agents, and can deliver from stock for cash, deferred payments, or exchange.—Jones' Garage, Muswell Hill, and Woodside Parade, N. Finchley. [0382

TRIUMPH Comb., 4h.p. 1920; mechanical lubrication, Lucas lamps, sporting sidecar; perfect condition; £80.—S. & B. Motors, 16, King's College Rd., Hampstead; 3 min. Swiss Cottage, M.E.T. [6034


# Your Chance is To-day!

**TO-DAY you can secure a brand new 1921 INDIAN POWERPLUS Motor Cycle,** with full Electrical Equipment, straight from the factory and guaranteed by the makers, at

**UNDER COST PRICE.**

**Solo - - - - £110**

**Combination - £140**

DON'T HESITATE. The number is limited, and orders are arriving by every post.

*May we send you full particulars and specification?*

## 1922 MODELS

We doubt if it is possible anywhere in London to see a finer selection of 1922 Models than now exhibited at Godfrey's.

Our stock includes such well-known makes as

**A.J.S., B.S.A., Levis, Triumph, Indian, Scott, Scott Sociable, Matchless, New Imperial, Excelsior, Massey Arran, Hawker, Quadrant, Morgan Runabout, Coventry Eagle, Rudge, Zenith, &c., &c.**

WRITE FOR FULL LIST OF NEW 1921 MODELS AT GREATLY REDUCED PRICES, AND ALSO OUR SPECIAL LIST OF GUARANTEED

**SECONDHAND MACHINES**

which we have taken in part exchange and have thoroughly overhauled.

**CREDIT TERMS 4% only** except in those cases where manufacturers have fixed rates.

## LIGHT CARS.

**8 h.p. ROVER.**

**10 h.p. BAYLISS THOMAS.**

# GODFREY'S, Ltd.

**208, Great Portland Street, London, W.1**

*'Phone: Langham 1300 (2 lines).*

*Repairs Depot: 14 Miller St., N.W.*


## MOTOR CYCLES FOR SALE.

### Triumph.

1917 Triumph 4h.p. countershaft, in really nice condition, £52/10. 1919 Triumph Combination, fine condition, £75.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. (Private House Garage.) [5978

1920 Triumph, Watsonian 50 gns. coupe sidecar, electric lighting, speedometer, Brooks cantilever spring saddle, excellent condition; 87 gns.; exchanges and deferred payments.—Edwards, 50, Harrington Rd., South Kensington. [5236

TRIUMPH, 1921, renovated, 3-speed, kick starter, H.B. clutch, new type, front forks (Druid), Lucas lamps, Cowey horn, semi-T.T. bars, guaranteed new condition and mechanically sound, £70.—Gibb, Northgate, Gloucester. [5928

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Triumphs, 4h.p., all chain models, 3 speeds, £115; 4h.p. chain and belt, £105; 2¼h.p. 2-stroke model, £65; 4h.p. combination, £145. Easy terms and exchange.—'Phone: Holborn 5777. [4400

1921 Soiled Triumph Sports Combination, complete, tax Dec., 1922, fully insured, smartest lot in London, £120; 1920, perfect, as new, Gloria S/C, fully equipped, tax paid, insured 100 gns.—Knight, 126, Upper Tooting Rd. 'Phone: Streatham 2390. [0771

TRIUMPH, 1921 Model H, issued new November, 1921, complete with C.B. sidecar, and fitted with 3 lamps and horn; originally cost £137/10; very small mileage and indistinguishable from new; £110 cash.—The Layton Garages, 30, Holywell St., Oxford. Telegrams, "Integrity," Oxford. [6057

TRIUMPH-GLORIA Combination, type S.D., chain drive, new pattern, front mudguard, etc., Lucas electric lighting, Bonniksen speedometer, very completely equipped, condition as new, specially picked machine, Stirling leg shields, £150.—Premier Motor Co., Aston Rd., Birmingham. [6069

THREE Months' Guarantee with every machine purchased from us. We have several countershaft Triumphs, fitted with 75% brand new parts, including engines, gear boxes, etc., fully equipped, lamps, etc.; £77. Extended payments. Come and inspect our stock. Also any brand new model supplied. Let us book your order.—The Triumph Specialists, The Hackford Eng. Co., 33, Hackford Rd., Brixton. [5569

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

TRIUMPH Spare Parts for all models, also Sturmey-Archer gear parts from stock, post free. Gear overhauls by specialist.—Jones' Garage, Broadway, Muswell Hill, N.10. [0746

### Trump.

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Trump-Japs, 2¾h.p. engine; £60; easy terms and exchange. [4401

### Velocette.

1922 Velocette.—Immediate delivery of any model from Premier Motor Co., Aston Rd., Birmingham. [X5239

£22/10.—Velocette 2¼h.p., 2-stroke, 2 speeds, chain drive, wonderful lot (tax paid 1922).—8, High St., Wandsworth. [5658

£25 Cash.—Velocette, 2 speeds, all-chain drive, Klaxon, licensed 1922, leg shields, splendid outfit; genuine bargain.—89, East Hill, Wandsworth. [5324

VELOCETTE, 1921, fully equipped, issued new Nov., 1921, and not done 200 miles, indistinguishable from new; £50.—The Layton Garages, 30, Holywell St., Oxford. [5189

VELOCETTE 1921 2¼h.p. 2-stroke, mechanical lubrication, brand new; the last of our stock of this model; list price £65; bargain at £52/10.—The Layton Garages, 30, Holywell St., Oxford. [5188

ORDER Your Velocette from G. H. Tucker, Redcliffe Hill, Bristol, carriage paid to any address in England; your mount taken in part payment for one of these wonderful machines.—'Phone: 4042 Bristol. [5204

NEW Velocette, 1921 model, with internal expanding brakes to both wheels, and other latest improvements at enormous reductions, 2-speed £55, 3-speed £62, lady's open frame £55; carry makers' full guarantee; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [X5240

### Verus.

1921 Verus, 4h.p. Blackburne engine, 3-speed, clutch and K.S., perfect condition throughout; £78, or fitted new coachbuilt sidecar, £90; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [5241

### Verus-Blackburne.

1920 (October) 2¾ Verus-Blackburne, 2-speed, clutch, kick start; splendid order and appearance. Lamps, horn, pump, mirror, Cowey trip, knee grips, tools, spares. Tax paid 1922. Mileage, 2,000. £50; offers. Must sell. (Bedford.)—Box 8,289, c/o *The Motor Cycle*. [5524

### Villiers.

1919 GNS.—2¾ Sun-Villiers; topping condition; trial 2 up, fully equipped; perfect order.—181, Newton Rd., Burton-on-Trent. [5628

## MOTOR CYCLES FOR SALE.

### Villiers.

**1921** Carfield-Villiers; indistinguishable from new: 2-speed, clutch, kick start; 39 gns.—Ewers, Newton Rd., Burton-on-Trent. [5629

### Werner.

**4** h.p. Werner, perfect order, fast, smart; £12/10; stamp.—17, Heaton Rd., Mitcham. [5677

### Williamson.

**8** h.p. Air-cooled Williamson Combination, equipped, spares, speedometer, wind screen, beautiful outfit; 49 gns.—4, Elm Gardens, Hammersmith. [5592

**£49**.—Williamson 8h.p. W.C. combination, fully equipped, 3 speeds, clutch, kick start, exceptional bargain.—Clapham Motors, High St., Clapham: 'Phone, Latchmere 4290. [5711

### Wooler.

WOOLER, 1921, shop-soiled, complete with best P.H. head lamp and horn; to clear £70.—Allen and Binns, Ltd., Glossop Rd., Sheffield. [4557

THE Bargain of the Year, never to be repeated.—3 brand new shop-soiled 1921 2¾ Woolers, complete with lamps, generator, horn, tool kit, instruction book, etc., £55 each. First come first served.

HOLLIDAY Bros., 20, Queen St., Hammersmith, W.6. (opposite Hammersmith Post Office). 'Phone, 1944 Hammersmith. [5896

### Zenith.

ALLAN GRUZELIER, Specialist in Zenith motor-cycles.

COME and buy a Bradshaw, and be in the fashion!

WHAT they did in the Exeter, they will do for you!

**1922** Sports model Bradshaw, 70 m.p.h., £127.

**1922** Show Model, chain-drive Bradshaw, £119.

**1922** Gradua Gear Model, £113.

**1921** Gradua Gear Model, slightly soiled, £95.

SECONDHAND prices are down; follow the crowd and buy.

**1922** 8h.p. Sports engined countershaft combination; complete equipment, £160.

**1922** 5h.p. Sports, slightly soiled. Bargain price, £95.

**1920** 8h.p. Sports, as new; complete equipment, £75.

**1921** 8h.p. Countershaft model, new; £110.

DEFERRED payments if desired.

LONDON Office:—Ulster Chambers, 168, Regent St., W. Regent 205.

SHOWROOM and workshops:—Knight and Wheatley, 4, The Pavement, Coulsdon. Purley 1277. [5528

**1915-16** 5h.p. Zenith Combination; electric lighting; £64.—Ross, 86, High Rd., Lee. [5491

ZENITH, 1921, 5h.p., Sports model, well-equipped, like new, £70.—Sinclair, East Molesey. [5832

**1920** 8h.p. Zenith Combination, used very little, perfect condition, £100.—53, Brixton Rd., S.W.9. [5761

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—New 1922 Zenith-Bradshaw; £115; easy terms and exchange. [4402

**1919-20** Zenith 5h.p. Sports, speedometer, Klaxon, etc.; 56 gns. Exchanges.—Kent's, 417, Lord St., Southport. [5757

ZENITH Shop-soiled 8h.p. Sporting, clutch models and combination; bargain prices.—Mainstone, Union St., Ryde. [5339

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, for immediate delivery from stock of Zenith-Bradshaw; price £119. [0711

ZENITH 1920 6 h.p. Sports, lamps, speedometer, horn, taxed 1922, new condition; £70.—Clark, 7, Exhibition Rd., S.W.7. [6015

**8** h.p. Zenith Combination, hood and screen, speedometer, lamps, £45.—28, Woodford Rd., Forest Gate. 'Phone, Stratford 2598. [5943

**1919** 8h.p. Zenith and Swan sporting sc., lamps, speedometer, Klaxon, very good condition; 75 gns.—Edwards, 50, Harrington Rd., South Kensington. [6017

ZENITH, exchanges, all new models supplied. Exchanges. 1920 8h.p. sports combination, splendid condition, all accessories; £90.—Newnham Motors, 223, Hammersmith Rd., London. [5814

**1920** 8h.p. Zenith Combination, countershaft, Swan sidecar, all accessories, speedometer, perfect condition; £87/10.—4, Elm Gardens, Hammersmith. [5593

ZENITH 5-6h.p. Combination, lamps, horn, tools, pump, excellent condition; nearest £65. Exchange lower power.—Wadsworth, "Holmhurst," New Wanstead, E.11. [6697

# The pitfalls that await the unwary!

The intending purchaser of a motor-cycle avoids all risk if he places himself in the hands of a reputable agent. The transaction is not then a battle of wits, and the buyer does not need a profound knowledge of matters mechanical to ensure receiving value for his money.

¶ **THE EASTERN GARAGE CO.** confine their contracts for new motor-cycles to a comprehensive range of models produced only by the most reliable makers, and any machine they recommend can therefore be depended upon for good service.

¶ In the case of secondhand motor-cycles it is the inflexible rule of THE EASTERN GARAGE COMPANY to overhaul each one in detail and issue a full guarantee with it. In this way they accept responsibility for the condition of the machine and the purchaser is relieved of any concern as to its mechanical efficiency.

¶ If you will apply for catalogues of new mode's or a list of secondhand motor-cycles you are certain to obtain the machine that is most suited to your requirements, and any advice you may need will be given in a capable and courteous manner.

¶ Should you desire to extend payment over a period, the transaction would be confined sole'y to yourself and the Company, and the charge for this accommodation is only 4%, except in the case of one or two makes the manufacturers of which have fixed a higher rate for credit sales of their new models.

¶ The fact that THE EASTERN GARAGE COMPANY value above all else the good name they have earned, demands that their every effort be devoted to ensuring the satisfaction of each and every one of their customers.

**THE EASTERN GARAGE CO.**

(Official Repairers to R.A.C., A.C.U., A.A., & M.U.)

**418 ROMFORD ROAD, FOREST GATE, E.7.**

Telephone ..... 490 East Ham.
Telegrams ..... "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### Zenith

ZENITH 1920 combination, 8h.p. countershaft Zenith sidecar, mechanical condition perfect, tw tyres practically new, very fast, any trial; £95.— Colonial Motors, 104A, Finchley Rd. Hampstea 7822. [596

F.O.C.H., the Zenith agents. 1922 models in stock cash, exchange, or deferred payments. Soun secondhand machines in stock.—5, Heath St., Hamp stead. (Near Tube.) [553

**1920** Zenith 8h.p., clutch, Henderson Elite side car, beautiful outfit, new condition, used 80 miles; sacrifice, £105, near offer.—Elms, 433, Brix ton Rd. S.W. 'Phone: Brixton 704. [430

ZENITH 1921 Countershaft, new type 5-6h.p. engine wide tank, speedometer, horn, Lucas lamps, onl run few miles, £85.; 1920 8h.p. combination, equipped £105.—Clark, 7, Exhibition Rd., S.W.7. [524

**1921** Zenith Combination, 8h.p., countershaft, com plete with all accessories, only run a few miles sidecar special finish, the whole looks new, £125.— Harris, 14, Gt. Marlborough St., W.1 [607

**1922** Zeniths, all models.—5h.p J.A.P., counter shaft, £118; with sidecar, £147; immediat delivery;-actual Show model in stock. Order early— South Eastern Garage, Herne Hill, S.E.24. [584

BARGAIN! 6h.p. Countershaft Zenith, clutch, kic starter, lamps, horn, beautiful condition, guar anteed sound; £48 (with posh coach-built sidecar £56); exchange.—89, East Hill Wandsworth. [532

**1922** Zenith-Bradshaw in stock for immediate de livery; £118; cash, exchange, or extended pay ments.—Allen-Bennett Motor Co., Ltd., 9-10-11, Rova Parade, London Rd., West Croydon. 'Phone: Croydo 2450. [073

**1920** (Sept.), 6h.p. Sports Zenith-Binks, horn, le shields, mileage 6,500, 5-60 m.p.h., 80 m.p.g tyres, belt, and condition perfect, new spare tyre an tube, £95 or near offer.—Cooke, 7, Trumpington St Cambridge. [576

**90** Bore o.h.v. 8-10h.p. Zenith, late 1921 model, cos £150, nickel plated tank, 2 nickel plated exhaus pipes to end of back mudguard, one on either side o back wheel, in perfect running order, will dust anything smartest and sportiest bike on the road; open to reason able offer.—Apply, Castle, 2e, Portman Mansions, Bake St. 'Phone: Langham 1843, or East 747. [545

7-9 M.A.G.-ZENITH, 1921, specially built for racing engine, special with aluminium pistons, en larged ports, racing cam, latest mag., Ama 700×80 tyres, largest Lucas, Watford 80 m.p.h speedometer, lap Brooklands 66 m.p.h., with sidecar over 80 solo, with paddle off. In perfect conditio inside and out, the only machine of its kind in exis ence. £115 cash, or exchange 1922 close ratio Norto and cash.—186, London Rd., Twickenham. [590

### Lady Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., Bi mingham, distributing agents for the Lady's Ivy daintiest of all ladies' machines; £62. complete. Sen for list. [072

VELOCETTE 1922 Models are fitted with clutch an kick starter; write for particulars of the ne Model EL2 lady's open frame 2-speed, all-chain drive all-black weatherproof finish, £65; the ideal lady' mount.—The Premier Motor Co., Aston Rd., Birmin ham. [X524

### Miscellaneous.

BARGAINS.—New O.K.'s, Ariels, Harleys, Omega Quadrants; exchanges entertained. — Booth Motories, Halifax.

BARGAINS.—1920 Matchless combination, detach able wheels, £130/10/6; 6h.p. Zenith combina tion, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kic starter, lamps, speedometer, £42/10/6.—Booth Motories.

BOOTHS' Bargains.—1920 Sun, 2 speeds, clutch £39/10/6; 4-cyl. F.N., 2 speeds, £22/10/6.

BOOTHS' Bargains.—Harley-Davidson combinatio mileage 300, £139/10/6; free engine Triumph £22/10/6.

BOOTHS' Bargains.—1920 Wooler, £49/19/6; 3h.p 2-speed Enfield, £29/10/6.

BOOTHS' Bargains.—8h.p. Premier combinatio £49/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—Matchless combination, 3 speed, countershaft, £69/10/6; 1920 3½h.p Ariel, £69/10/6.

BOOTHS' Bargains.—4h.p. Douglas's, £55/10/6 another, £59/10/6; 1914 4h.p. Douglas com bination, electric, £85/19/6.

BOOTHS' Bargains.—1920 8h.p. Tamplin, £79/10/6 1920 Morgan De Luxe, £165/10/6, cos £250/10; nearly new Ariel combination, £85/10/6 new 3½h.p. 3-speed Ariel, £87/10/6; new 4½h.p Quadrant combination, £100; several others, cheap push cycles taken exchange.—Booths' Motories, Por land Place, Halifax. 'Phone: 1062. [514

10/6.—Goggles, Mask, R.A.F., Mark II, new, 10/6 Flying helmets, long, 26/6; short, 17/-.— Fleming Co., Redcar, Yorks. [592

BUNTING'S Buy, Sell, or Exchange any make o motor cycle. State your requirements. We unde take to do your business and give you satisfaction. Di tance immaterial.—Bunting's Motor Exchange, Wem stone [965

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

HEMSWORTH.—Send for catalogues and terms.

HEMSWORTH.—Late Feb. delivery guaranteed. Reconditioned W.D., Douglas, Clyno, P. and M., 45, others from £25. Hire purchase, 1/5th down.

HEMSWORTH.—Combinations from £50 upwards. Lists free

HEMSWORTH.—Exchanges a Speciality. Let us quote you.

HEMSWORTH.—New 1922 Models. Hire purchase, 1/5th down.

HEMSWORTH.—Sidecars Renovated any colour, £3 carriage paid home. Send that old sidecar, we ill return it like new.

HEMSWORTH.—We are still buying second-hand machines.

HEMSWORTH.—Ring up Hemsworth Exchange, they will put you straight through to us. Two w lines just installed.

HEMSWORTH Motor Works, Hemsworth, Nr. Wakefield. [6078

918 2-speed 2¾h.p. two-stroke Federation; £22, all on.—Clarkson, 5, Gibbeson St., Lincoln. [5440

VANDSWORTH Motor Exchange.—Finest selection motor cycles, combinations, to choose from in ndon.

VANDSWORTH.—Buy your motor cycle from the old-established firm. Backed by 24 years' ex- rience. Satisfaction guaranteed.

VANDSWORTH.—Easy terms. The only firm to give immediate delivery first deposit.

VANDSWORTH.—1920 Kenilworth 1¼h.p., lamps, looks just like new; sacrifice, 22 gns. Ex- anges.

VANDSWORTH.—Tourist T.T. 3½h.p., magneto, fine sporting type machine, fast; 25 gns. Ex- anges.

VANDSWORTH.—Motosacoche 2½h.p., magneto, variable gear, nice little running machine; 23 s. Exchanges.

VANDSWORTH.—Bradbury 4h.p., magneto, 2 speeds, fine powerful machine; cheap, 26 gns. changes.

VANDSWORTH.—Premier 3½h.p., magneto, Grado gear, just like new; bargain, 29 gns. Ex- anges.

VANDSWORTH.—Triumph 3½h.p., magneto, belt- drive, ready drive away 22 gns. Exchanges.

VANDSWORTH.—Singer Lightweight 2½h.p., magneto, 3 speeds, lamps, nice condition; 32 s. Exchanges.

VANDSWORTH.—Rudge 3½h.p., magneto, 2 speeds, kick, newly enamelled; only 36 gns. changes.

VANDSWORTH.—Triumph 3½h.p., magneto, 3 speeds, cluteh, very nice machine; 45 gns. changes.

VANDSWORTH.—Triumph, nice coach-built Com- bination 3½h.p., 3 speeds, lamps, special; 55 s. Exchanges.

VANDSWORTH.—Bat-Jap coach-built Combination 8h.p. Twin, 3 speeds, lamps; 55 gns. Ex- anges.

VANDSWORTH.—Premier coach-built Combina- tion 3½h.p., 3 speeds, lamps; very cheap, 39 s. Exchanges.

VANDSWORTH.—Zenith 3½h.p. J.A.P., Gradua gear, kick starter, nice condition; 49 gns. Ex- anges.

VANDSWORTH.—F.N. latest 7h.p., 4 cyl., 3 speeds, lamps, speedometer, beauty; 68 gns. changes.

VANDSWORTH.—Rudge coach-built Combination, 2 speeds, kick, lamps, newly enamelled; 45 gns. changes.

VANDSWORTH.—1920 Harley-Davidson coach- built Combination 7-9h.p., 3 speeds; gift, 95 s. Exchanges.

VANDSWORTH.—1920 Bradbury with Grindley, 3 speeds, lamps, nearly new; 79 gns. Exchanges.

VANDSWORTH.—1915 Indian Special T.T. 7h.p. Twin, clutch, very fast; 39 gns. Exchanges.

VANDSWORTH.—Minerva 7h.p. Twin, Bosch, 2 speeds, drive away; 22 gns. Exchanges.

VANDSWORTH.—Scott 3¾h.p. Twin, water-cooled, 2 speeds, drive away; cheap, 29 gns. Ex- anges.

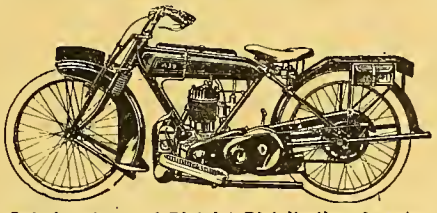
VANDSWORTH Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth. (Town tion.) 'Phone: Latchmere 4686. [5953

921 Lightweight Drop-Back Frame, complete 26×2¼ wheels, new tyres, tank, "Druids," dguards, carrier, saddle, T.T. bars, Albion 2-speed rbox, sacrifice £16. No rubbish.—56, Lawrence ll, Bristol. [5637

ONGMAN BROS., Bond St., Ealing. Telephone, 689. The cheapest house in London for guar- teed secondhand machines at prices below any hers offered. Every machine overhauled before sale. rite for list. [5784


GET IT AT

# TAYLORS



Sole London and District Distributing Agents for A.J.S., Excelsior, and Dunelt Motor Cycles.

THERE is far more satisfaction and much greater security in buying a good machine from a reliable Agent than in picking it up anywhere—you know what we mean. Taylors have 12 years of honest trading at the back of them and a reputation second to none amongst Motor Cycle dealers. There is a reason!! Taylors have always made it their business to take just as much interest in their customers as in their prospective customers; in other words—Taylors give real service.

## SOME TYPICAL EXAMPLES OF 1922 MOTOR CYCLE VALUE.

**Enfield** 8 h.p. Comb. **£140**
Dynamo Lighting, £18 extra.

**Matchless** 8 h.p. Comb. **£160**

**Ariel** Sports Model. 3½ h.p. Comb. **£125**

**P & M** 4½ h.p. Comb. **£130**

**Triumph** 4 h.p. Comb. **£145**

**B.S.A.** 4¼ h.p. Comb. **£139**

Send for detailed specifications of any of the above machines, or ask for Catalogue descriptive of any other make of machine required—we can supply promptly. Any Motor Cycle can be purchased on our Extended Payment System, and our terms are only 4 per cent. on the purchase price of the machine selected, except where stipulated otherwise by the manufacturers. Application form sent on receipt of postcard.

## SPECIAL.

We have an excellent stock of High-class Shop-soiled and Second hand Motor Cycles and Combinations to offer at very attractive prices for cash or purchase out of income. Please write for detailed list.

## H. TAYLOR & CO., LTD.

Showrooms—
Motor Cycles and Cars,
**52-53, Sussex Place, South Kensington,**
Accessories, Spare Parts and Repairs,
**21a, Store Street, Tottenham Court Road, W.C.1**
Wholesale—
**38, ALFRED PLACE, W.C.1.**
Garage: Tottenham Court Road, W.1.
'Phones: Accessories and Repairs, Museum 1240.
Motor Cycles and Cars, Kensington 7260.
Telegrams: "Dynametro, Westcent, London."


## MOTOR CYCLES FOR SALE.

### Miscellaneous.

JONES Garage.—1920 2¾h.p. Douglas, 3-speed, kick start, h.b.c. clutch, absolutely perfect; £68.

JONES Garage.—1920 4½h.p. Quadrant Combina- tion, unscratched, all lamps, and Easting wind- screen; £82/10.

JONES Garage.—Late 1919 3½h.p., P and M. Com- bination, as new and in showroom condition, not W.D., fully equipped; £80.

JONES Garage.—1919 Spur-Villiers, 2-speed, not used since March, 1920, absolutely perfect and as new; £40.

JONES Garage.—1918 James 2¾h.p. 2-stroke, 2- speed, fully equipped, in excellent order; £35.

JONES Garage.—1917 2¾h.p. 2-speed Douglas, fully equipped, thoroughly overhauled and guaranteed perfect; £42/10.

JONES Garage.—1914 7-9h.p. 2-speed Indian, 2 almost new tyres, thoroughly overhauled and guaranteed perfect; £40.

JONES.—1921 Matchless Combination, fully equipped, M.A.G. engine, absolutely as new and perfect. This week's special bargain, £130.

JONES.—1914 3½h.p. Humber Combination, fully equipped, recently done up, a trustworthy pre- war 'bus; £47/10.

JONES Garage.—Full particulars of any of the above machines will be sent you with the greatest of pleasure.—Jones Garage, Muswell Hill, London, N.10. [6001

1920 Clyno, £38; 1914 2¾h.p. Douglas, £40.— Box 8,300, c/o *The Motor Cycle*. [6002

## MOTOR CYCLES WANTED.

CASH
WAITING
FOR MOTOR CYCLES

COMBINATION or Solo, any quantity, any make. Spot cash.—Write, 'phone, or call T. & B. Motor Co., Ltd., 372, Euston Rd. Museum 6582 [5564

WE
ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.— W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391 [0332

WE ARE
ACTUAL BUYERS.

PLEASE offer us your Motor Cycle or Combination. We pay cash on sight. Write, 'phone, or call.— Percy & Co., 314-316, Euston Rd., N.W.1. Museum 1337. [5995

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not ac- cepted, machine can be included in Auction Sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling com- mission, 7½%, not chargeable unless machine is sold. If no sale, a nominal auction fee is charged: For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Tel.; 208 Streatham. Telegrams: Palmer's Garage, Tooting. [5882

LIGHTWEIGHT, must be cheap, for cash.—Syd., 10, Graham Road, Dalston, London. [5613

2¾h.p. Douglas or Triumph wanted, must be reasou- able.—67, Fernlea Rd., Balham. [6030

MODERN Combination wanted, about £45.—Write R. Davis, 4, Buller Road, N.W.10. [5601

4h.p. Combination, 1920, fully equipped, for £80.— J. W. Watts, Bethersden, Ashford, Kent. [5691

WANTED, Modern Solos; highest prices given; cash on sight.—4, Elm Gardens, Hammersmith. [5594

WANTED, motor cycle, any condition; cheap for cash.—61, Grand Parade, Harringay, N. [4115

## MOTOR CYCLES WANTED.

2¾h.p. Douglas, New Imperial, etc., late model, immediate cash.—H., 63, Solon Rd., Brixton. [5673

SUNBEAM Combination, 1919-20; write lowest; private buyer.—106, Sydney Rd., Raynes Park. [5767

TWO-STROKE Machine; condition immaterial; state lowest for cash.—97, Latchmere Rd., Battersea. [5777

WANTED, Motor Cycles for cash or exchange.—Longman Bros., Bond St., Ealing. Telephone: 689. [5797

WANTED, Late Combination or Solo, must be cheap.—Station Hotel, Bramley Rd.; Notting Hill, W.10. [5603

WANTED, Sporting 1920 21/22 Solo or with Canoelet.—Buckhurst, 13, Westmoorland Rd., Barnes. [5694

COMBINATION wanted; Matchless, A.J.S., or similar outfit.—Thompson, 253, Munster Road, Fulham. [5648

WANTED, late Model Solo or Combination; spot cash paid.—436, Whitehorse Rd., Thornton Heath. [5744

£50 cash waiting for best 1918 or later countershaft Triumph.—Particulars to Box 8271, c/o *The Motor Cycle*. [5423

LEVIS or Baby Triumph for cash or allowance in exchange.—Bunting's Motors, Wealdstone. Closed Sundays. [5914

FOUR-STROKE Solo, 1918, later; about £35.—Particulars, Knight, "Heathville," Powys Lane, Palmers Green. [5442

PRIVATE Buyer, single cylinder, solo or combination.—Particulars, lowest cash, Sayers, 40, Gt. Ormond St., W.C. [5416

WANTED, Douglas Combination, guaranteed perfect, not earlier 1919; lowest price.—Box 8,306, c/o *The Motor Cycle*. [5997

WANTED, Motor Cycles and Combinations; any condition; must be cheap for cash.—R. Watson, Victoria Rd., Aldeburgh, Suffolk. [5714

WANTED, good 1920-1921 solos or combinations; Highest prices paid; cash waiting.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [5250

WANTED.—Coachbuilt Combination, about £45; state year, condition, and lowest price.—40, Chetwode Rd., Upper Tooting, S.W. [5500

WANTED, countershaft Triumph or Norton and cash for new 1922 Coventry Premier 4-wheeler.—Holdsworth, 22, Clare Rd., Halifax. [5920

WANTED, Late Martinsyde Combination, or similar, in exchange for Baby Grand and piano-player.—47, Foulser Rd., Upper Tooting, S.W [5728

WANTED for cash or exchange, modern Lightweights and Triumphs.—Goad, 122, Maida Vale. Phone: Hampstead 1353. (Private House Garage.) [5984

1920 or 1921 Combination B.S.A. Trimph, or any good make, absolutely perfect, fully equipped, no dealers.—Bargate, 185, Fulwich Rd., Dartford. [5403

CASH Waiting; solo and combinations, good prices given.—Write, 'phone, or call, Edwards, 50, Harrington Rd., South Kensington. 'Phone: Ken. 3709. [0604

WANTED, good Combination; not over £100, or less; immediate cash.—Write or 'phone Ilford 500.—Motorist, 769, Romford Rd., Manor Park, London, E. [5844

SPECIAL cash buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchblesses, Bats, Scotts, Bradburys, Rexes, Zeniths.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone, Latchmere 4686.

WANTED.—4 cyls. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s.—Wandsworth Motor Exchange, Ebner St., Wandsworth.

WANTED.—Red-Indians, Harley-Davidsons.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [5950

WANTED, your motor cycle or combination. We are buyers. Full market price given and cash paid on the spot. Write, call, or 'phone Museum 5938.—J. Smith and Co., Motor Agents, Ltd., 52-54, Hampstead Rd., N.W.1. [0768

CASH on Sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

WANTED, WANTED, WANTED.—24, 26 and 28, Woodford Rd., Forest Gate, E.7.
Motor cycles and combinations, any condition, highest market prices paid. Call any time. Cash waiting.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [5946

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Blenheim St.), Bond St., W.1. 'Phone: Mayfair 6559. [0772


Only 5 days more!

JAN 31

For Bertie's Special Offer!

We wish to remind you of a special offer of a 12 months Insurance Policy given free with every Burlington reconditioned Douglas machine purchased for cash before the 31st of this month. NOW is the time to act—before it is too late.

**BURLINGTON RECONDITIONED DOUGLASES—**
are absolutely indistinguishable from new, and are covered with a 3 months guarantee, similar to that which makers give with a new machine.
It does not do justice to these machines to call them **Reconstructed** as they are mainly built of new parts.

**2¾ h.p., fully equipped with Lamps, Horn, and Licence Holder, fitted with "Vlcl" Single Lever Carburetter 55 gns.**

**4 h.p., Solo, 3-speed, kick start, all on - - - - 75 gns.**

**4 h.p. Combination, fully equipped with Lamps, Horn, Licence Holder, and with new Burlington No. 2 Touring Model Sidecar Body, complete with Storm Apron - - 93 gns.**

**BURLINGTON UNDERSHIELDS**
with Fittings for 2¾ h.p. and 4 h.p. Douglas.
**Price 5/- each.**

*Postage extra.*

*See Parts and Accessories Col. for list of Spares.*
*TRADE SUPPLIED.*

Burlington MOTOR CYCLE Co. Ltd

**7, South Side, Clapham Common, S.W.4**
Phone: Brixton 2417.
Wire Burlington, Motors, Clapham.
**Just by Clapham Common Underground Station.**


## MOTOR CYCLES WANTED.

SEND your motor cycle to Palmer's Garage Motor Auction Rooms, High St., Tooting. C offer telegraphed immediately on receipt. Near station, Wimbledon. We will collect from any Lond station. Machine can be included in auction sale desired.—Sole address, Palmer's Garage, Tooting. [58

## TRICARS FOR SALE.

A.C. Sociables, by the A.C. Co., dependable ru abouts, take 2 persons anywhere, good conditi and appearance, fully equipped; from £50 to £8 trial.—29, Allsop St., Upper Baker St., London, N.1 [35

## MOTOR SCOOTERS.

KINGSBURY Scooter and Spare Parts.—3, Kendal Mews, Blandford St., W.1. [54

BRAND new Autoped Scooter, dynamo lightin 1½h.p.; bargain, £12/10 each.—Percy and C 314-316, Euston Rd. [59

## MOTOR ATTACHMENTS.

1921 Young attachment and bicycle comple hardly used; £24.—D. and S. Autocar Co., The Parade, Golders Green. [60

YOUNG attachment on special cycle, lamps, star cyclometer, carrier, etc.; first £20.—Dingl Mews, 7, St. Martin's Place, W.C.2. [54

2h.p. Johnson Economic Motor Attachments, co plete, with rear wheel and all fittings, in eto, carburetter, etc.; £12.—Mason's Garage, Let worth, Herts. [5

MOTOR Attachment, slightly incomplete and wa attention; £5 or offer Also extra strong cyc complete spring forks and stand. Suitable for mo attachment. £6 or offer.—Carter, Ovington, nr. W chester. (D) [57

## HOODS, WIND SCREENS, ETC.

HERCULES Hoods and Aprons. Write for list Hercules Hood Co., 698, Seven Sisters Rd., Tott nam. [32

RENNOC Co.—We are actual manufacturers of hoo screens, and aprons. Send for list.—Renn Motors, Ltd., 155a, Marlborough Rd., Upper Hollow N.19. [23

BENT Hoops, hood fittings, straps, turnbutto twills, etc.; hardwood polished wind scree /6.—Henry Jones, 778, High Rd., Tottenham, L ton. [37

ROBINI Manufacturing Co.—The "Bower" adju able windscreen with coverall apron, 30/- C riage paid. 'Phone: Brixton 1585.—Robini Manuf turing Co., 1 and 3, Tulse Hill, Brixton, S.W. [59

HOODS.—Best quality, with window in rear, attachments, ready for fitting, 47/6; fold windscreens, 29/6.—Light Car and Motor Cycle I gineering Co., Ltd., 26, Tulse Hill, Brixton (½ min from Brixton Skating Rink.) Telephone: Brix 1292. [59

## BODIES.

NEW Millford Body, Corvette, with springs, £5.— Dalcham Mews, Hampstead, N.W. [58

NEW Body painted blue; £4/17/6, bargain.— wardes, 277 Camberwell Rd., S.E. [57

RENNOC Sidecar Bodies, actual manufacturers, models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, upholstering.—Rennoc Motors, Ltd., 155a, M orough Rd, Upper Holloway, N.19 [23

TWO-SEATER fitted with windscreen; £9/ bargain.—Edwardes, 277 Camberwell Rd., S.E [57

LARGE Cane Sidecar Body, ample room for ad and child, good condition, £3/10.—Bulbeck, 1 Kirkdale, Sydenham. [5

HALIFAX.—New Perfection coach-built side bodies, £5.—Halifax Motor Exchange, Horton Halifax. [59

BASTONES for Sidecar Bodies, all latest models stock from £4.—228, Pentonville Rd., Kin Cross, London, N.1. [5

VENUS Step Bodies, for old type chassis, 15 mod in stock; catalogues ready.—Venus Sidecar 694, Seven Sisters Rd., Tottenham. [4

ROYAL Leicester Sidecar Bodies fit any chassis, fi class finish; have a few coachbuilt bodies, cl ance lines from £5 each; extra good value — Willowbrook Motor Co Leicester [0

ROBINI Manufacturing Co.—Wonderful bargains brand new bodies. Shop soiled with apro £6/10. Write for catalogue. Large number of seco hand. We repaint and upholster bodies, low pri Carriage extra. See chassis column. [5

COBB Speedman Sidecar Bodies, handsomely stre lined 1922 models, unpainted from £2/12 superbly finished any colour and comfortably up stered from £3/15 fit any chassis; all carriage p —Carlton Sidecars, 18 Midland Rd., Carlton, N tingham. [5

SIDECAR Body Designs for the trade only. W ing, coloured pencil, or line drawings of origi designs, also working drawings, full-sized or to scal Cooper's Vehicle Journal, Ltd., established desig to the coach trade for over 80 years. Consult us w designing new ideas.—20, Tudor St., London, E.C.4 [000

## BODIES.

UR Bodies are designed to suit all requirements. Special offer for one week only Free windscreen any customer who can show where better value be obtained.—Below.

UR prices range from £5/5 to £12/12. All bodies are London built, and complete with windscreen waterproof apron. Can you beat it?—Light Car Motor Cycle Engineering Co., Ltd., 26 Tulse Hill, ixton (½ minute from Brixton Skating Rink). Tele- one: Brixton 1292. [5955

## SIDECAR ATTACHMENTS.

OR

ANDHAM, the smartest sidecar specialists.

ANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue

ANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

ANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold ; send further supply." Agents, get in touch with us

ANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

RITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

RITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

RITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

RITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth one: 5. [1331

IDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

IDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, w Imperials, Sunbeam, Blackburnes, etc.

NDIANS with kick starter on left present no diffi culty with Middleton's special model.

IDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks mptly corrected.

ECOND-HANDS of various makes for sale. You old sidecar taken in part exchange.

IDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on roads than rigids. They give to the bumps, not h into them.

IDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud en Rd., Finsbury Park (near Tube). 'Phone: Horn 1584. [0522

ENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers through c. Send for our catalogue, 32 pages, 80 illustrations

HŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

ENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can ver.

ENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock prices. Note: Write for special clearance list.

ENNOC Co. have the finest selection of complete sidecars in the trade.

ENNOC Co. undertake repairs to any make of side car; repainting and reupholstering a speciality

ENNOC Co. have in stock sidecars to fit all makes, English and American.

ENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any nufacturers.

ENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19 'Phone: Hornsey 1589. [2319

ROSVENOR Sidecars.—Our special sports model is very suitable for use with fast sporting bikes; tinctive design and quality; £15.—Grosvenor Motor , Bradford St., Bolton. [X5093

IDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor l go through passage 28in. Tandem and single lies fitted.—Hopley.

OLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to h.p. Can be changed from pleasure to commercial few seconds. Detachable wheels can be fitted. ted 7 years.—Hopley, Upper Highgate St., Birming- m [0152

ALIFAX.—New Perfection coach sidecars, £12/10. —Motor Exchange, Horton St., Halifax. [5919

ARGE Montgomery Sidecar of 7-9h.p., Thor; £8/10.—17, Heaton Rd., Mitcham. [5678

OUGLAS, fine condition, complete, £10. Chassis complete, £5.—Matthews, Ockley, Surrey. [5709

ILLS-FULLFORD 2-seater Sidecar, complete as new. What offers or exchanges?—181, Newton , Burton-on-Trent. [5635

# IMMEDIATE DELIVERY OF 1922 MODELS

**Douglas** **Royal Enfield**
**Norton** **Matchless**
**Indian** **N.U.T.**
**B.S.A.** **P. & M.**
**Levis** **Zenith**
**Velocette** **O.K.**
**New Imperial** **Diamond**
**Beardmore** **Quadrant**
**Sheffield Henderson**
**Hawker and**
**Morgan Runabouts, etc.**

MEET US AT THE

## SCOTTISH MOTOR SHOW

**KELVIN HALL, GLASGOW, January 27th to February 4th. Our Representatives will be at the following Stands:**

| | | | |
|---|---|---|---|
| **ALEXANDER'S** | - | Stand No. | **178** |
| **DOUGLAS** | - - | „ „ | **179** |
| **ENFIELD** | - - | „ „ | **182** |
| **INDIAN** | - - - | „ „ | **180** |
| **NORTON** | - - - | „ „ | **181** |
| **MATCHLESS** | - | „ „ | **196** |
| **MORGAN RUNABOUT** | - | „ „ | **231** |

*AGENTS—We have still some districts open for these valuable agencies. Application should be made at once.*

# ALEXANDER'S

**113-115, Lothian Rd., EDINBURGH. 272-274, Gt. Western Rd., GLASGOW**

## SIDECAR ATTACHMENTS.

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

BASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £19/10, Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £28/10, Model de Luxe £34/10, tandem model £30.

BASTONES.—Whitley 1922 sports model in stock, £25.

BASTONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/.—228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. 'Grams: Bastones, London. [5132

COACHBUILT Sidecar, with Easting screen, off Triumph, £10. Montgomery chassis, £4/10.—P. Pocock, Cold Ash, Newbury. [5835

UNUSED National Sidecar, semi-sporting, very roomy. Special for spring frame Indian, £18.—37, Daleham Mews, Hampstead, N.W. [5893

CHASSIS, Douglas and P. and M., complete with wheel and fittings, £4/5.—M.C.A. Co., 868a, Old Kent Rd., S.E. [6044

BOOTHS Bargains.—Coachbuilt chassisless sidecar, £7/10/6; Gloria cane, spring wheel, £6/19/6; Hercules coach, £9/10/6.

BOOTHS Bargains.—Shop-soiled £27/10 sidecar, suit Triumph, B.S.A., £18/15; cane sidecar, £5/10/6.

BOOTHS Motories.—Ruby coach sidecar, £9/10/6; new large size coach bodies, locker under seat, £6/19/6.—Booths Motories, Portland Place, Halifax. [5144

HALIFAX.—New Swan and Milford De Luxe sidecars for Harley and American X.—Motor Exchange, 25, Horton St., Halifax. [5922

LONGMAN BROS., Bond St., Ealing. Telephone: 689. West London sole agents for Montgomery sidecars. All models from stock. Several second-hand cheap. [5795

CLYNO Chassis, not ammunition, with new mudguard, cee springs, and leaf spring, and wheel, as new, £5/10.—De Cort and Flynn, 39, Essex Rd., London, N.1. [5894

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

£5 for a complete renovated Douglas underslung chassis, all springs and arms, wheel, etc., suitable for any make of machine to order.—Old Man Hep, 19, Wilcox Rd., South Lambeth, London, S.W.8. [4176

ROBINI Manufacturing Co.—Further reductions. Underslung chassis, complete with new tyre and tube, shop soiled body with coverall apron, £13/10. P. and M. chassis, new tyre and tube, new bulbous back body, complete, £12. [5933

1921 Indian Milford Sidecar with sporting body, suitable for W.D. model Indian, four points of attachment, perfect condition and complete; cost over £32; our price 14 guineas.—Smith's, 86, Chalk Farm Rd., opp. Chalk Farm Tube station. [5972

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

SIDECARS! Sidecars! Several Secondhand Coachbuilt Sidecars from £7/10. Brand New Coachbuilt Sidecars with bulbous backs and complete with aprons; a first-class job; not cheap and nasty; £17/10. Brand New Sidecars, coachbuilt, from £16. These are really wonderful value. We have two Langford spring wheel sidecars, 5-point attachments, large bulbous backs with Picnic cases, completely fitted with all utensils, most elaborately finished, complete £35.—Jones Garage, Muswell Hill, London, N.10. [6065

## RUNABOUTS AND CYCLE CARS.

A.C. Sociable Runabout, good order; £45.—Foat, 173, Hainton Av., Grimsby. [4534

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—5-6h.p Carden monocar; £50. [4420

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 G.N.'s; easy terms and exchange. [4394

1920 Tamplin 2-seater, hood, screen, licensed, equipped; £50.—47, Leigh Rd., East Ham. [6027

BRADFORD.—Morgan, New Hudson, Scott Sociable agents.—Denham and Bottomley, 220, Manningham Lane, Bradford. [X5304

MORGAN water-cooled Jap; hood, screen, lamps, tools; any trial, £80.—Inman, Durham Rd., Seaforth, Liverpool. [5762

FOR Sale, Cyclecar, 3-speed, chain drive, 2-seater; trial run; tax paid; £34.—176, St. Alban's Avenue, Bedford Park. [5610

## RUNABOUTS AND CYCLE CARS.

TEMPERINO, 1921, electric and acetylene lighting, spare wheel, tyre, hood, screen, £145.—Phelan, 24, Hanover St., Islington. [5614

T.B. 3-wheeler, 1921, complete with lamps and spare wheel, shop-soiled; to clear £185.—Allen and Binns, Ltd., Glossop Rd., Sheffield. [4558

HUMBERETTE, water-cooled; new Dunlops, lamps; splendid throughout, £75, or motor cycle and cash.—Pritchett, Allbrook, Eastleigh. [5827

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—Rover light cars; £220; fully equipped; easy terms or exchange; list on application. [4393

CROUCH 1921 2-seater. Very little used. Tax paid. £175. Exchange good combination.—Bunting's, Wealdstone. [5912

HUMBERETTE, water-cooled. Smart little car, excellent condition. £120. Several others.—Bunting's Exchange, Wealdstone. [5913

35 GNS.—Sporty 3 wheeler, 4 cyl., 10h.p. Zenith, Thomson-Bennett clutch, requires re-leathering; ridiculous price.—111, Swaby Rd., Earlsfield. [5425

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C.—1922 Morgans supplied on easy terms or exchange. 'Phone: Holborn 5777. List on application [4395

G.N. 1920 dynamo lighting model, little used, guaranteed; 129 gns.; cash or exchange.—Longman Bros., Bond St., Ealing. Telephone: 689. [5794

1921 Crouch 2/3-seater, 10h.p., 5 wheels, 6 tyres, unpunctured, electric and acetylene lighting, perfect, £180.—T. Clarke, 29, Southgate, Sleaford. [5616

ROVER 1922 8h.p. model; immediate delivery; authorised agents.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0075

1921 G.N. popular detachable wheels and spare; done 400 miles only. £150, bargain. Combination part exchange.—Storey, Petersham Rd., Richmond. [5837

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co., 292, High Holborn, W.C.1 [0673

1919 Carden Monocar, 6-8h.p. Twin Jap engine countershaft; 3-speed gearbox, 2-seater; £75. Exchanges.—Speechley, 86, Churchfield Rd., Acton, W.3. [5508

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St. London, W.1. [0735

MORGAN GRAND PRIX 1922; very slightly used, dynamo lighting, discs, horn, aluminium dash, watch; cost £215. Now offered at a bargain figure.—Below.

MORGAN'S 1922 models in stock. Prompt delivery. We are the largest contracting agents. Spares for all models.—Elce, Ltd., below.

MORGAN.—May we supply you with spares from stock?—Maudes' Motor Mart, 100, Great Portland St. [6076

CARDEN 1921 de luxe, dynamo, clock, speedometer, electric horn, lots of spares, condition as new; £105.—Colonial Motors, 104a, Finchley Rd., Hampstead, 7822. [5962

HALIFAX.—New 1922 Coventry Premier 4-wheeler with speedometer and insurance for 12 months; £250; liberal exchanges.—Halifax Motor Exchange, Horton St., Halifax. [5915

1921 Bleriot-Whippet, hand-starter, electric lighting, spare wheel, good condition; 88 gns.; deferred payments and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [5238

THE advantage of buying where you can see and try all leading makes side by side is that you can choose that particular make and model which best suits your purpose.

REY'S, of Euston Rd. (Nos. 378-384), have the following in stock:—

MORGANS, all models; also secondhand De Luxe and Grand Prixs in good condition.

COVENTRY Premier, 1922, 4-wheeler model, £250; one shop-soiled only, £227/10.

ROVER 8h.p. Model, £220; one secondhand, good condition, £160.

G.N.'s, all models; also 1920 with dynamo, very good order, £132/10.

EXCHANGES or deferred payments arranged. 'Phone: Museum 6436.

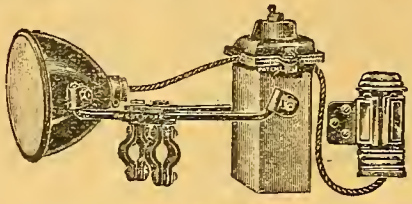
MORGANS, G.N.'s, and Rovers secondhand, several in stock.—Rey's, of Euston Rd. 'Phone: Museum 6436. [5778

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220; in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0773

SPECIAL cream coach-finished G.N., believed 1921 model; mileage 1,432; like new throughout; exchange considered; £140.—Pope, 49, Bedford St., Strand, W.C.2. Gerrard 4672. [6055

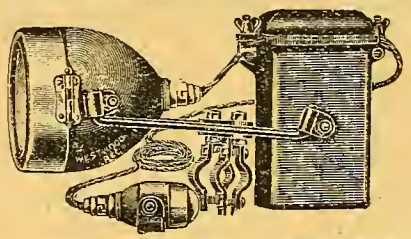
1914 Crouch, two-seater. Overhauled, new gears, magneto, carburetter, £90; exchanges considered. Particulars stamp.—Newman's Garage, Station Rd., Wealdstone, Middlesex. [5819


# "DAYBEAM" ELECTRIC SETS.

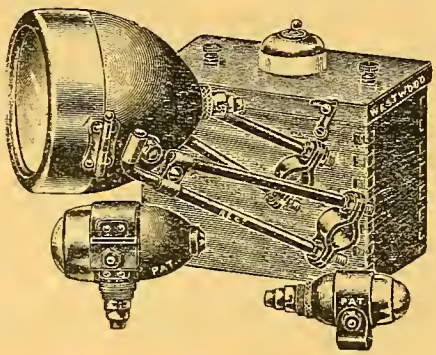


**For Lightweight Machines.**

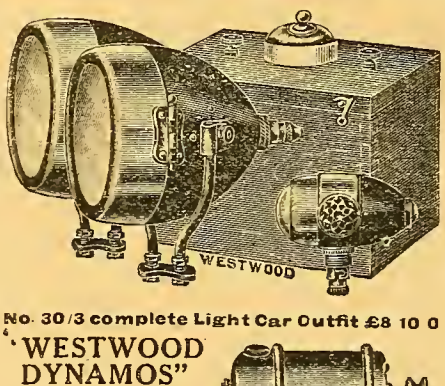
**List No. 30/5 complete Outfit £3 3.0**
**ist No 30/6 Combination Outfit £3-15-0**



**No. 30 1 complete Solo Outfit £5.5.0**



**No. 30/2 complete Comb. Outfit £7 7.0**



**No. 30/3 complete Light Car Outfit £8 10 0**

"WESTWOOD DYNAMOS"

MOTOR CYCLE
MARK 1 £6 0 0
LIGHT CAR
MARK 2 £7 0 0
SWITCH BOX 30/

*WRITE FOR ILLUSTRATED LISTS*

TRADE MARK
WESTWOOD
RIM & PATENTS LTD
LAWDEN RD BORDESLEY BIRMINGHAM.


## RUNABOUTS AND CYCLE CAR

1921 Morgan de Luxe, water-cooled M.A.G. e splendid puller, done small mileage; ba to clear, £150.—C. Moxham & Company, 32-33, wood St., Torquay. 'Phone 95.

DE MARCAY, 10h.p., 1921, 2-seater, pri owned and well looked after, dynamo ing, thoroughly sound, £140.—Telford Garage Streatham Hill, London, S.W.2.

BABY 1914, 2 seater, water-cooled, good cond smart appearance, tyres excellent, hood, s electric lamps, and Smith's mechanical horn; £ McIntosh, 68a, Delancey St., Camden Town, Lo

G.N., 8h.p., Standard Touring, dynamo ligh August, 1921; absolutely like new; not 200 miles; taking delivery of larger car, £200. Maur, Benhill Wood Rd. Sutton.

1921, new July, New Hudson, 10h.p., mag., cooled engine, not run 1,000 miles, unscrat unpunctured, perfect in all respects; Lucas magdy and spares. £175.—Morris Blackburn, Ston Spalding.

A.C. Sociable, 3-wheeler, latest model, with re hood, side curtains, lamps, horn, speedom reliable all-weather car, good condition, £60; w exchange Premier, New Hudson, L.S.D. 3-wheel Keable, 111, High St., Guildford.

TAMPLIN 1921 2-seater, 8 J.A.P., S.A. gea hood, screen, lighting set, Klaxon, mirror, Ste speedometer, tax paid, perfect, any trial. Except bargain, £95. Must sell; taking delivery machine.—43, The Avenue, Egham.

MORGAN, air cooled, standard model, date certain, recently repainted, engine just overhauled, new countershaft sprockets and accumulator and acetylene lighting, exceedingly liable machine, very easy starter; £85. Sun Saturday afternoons, or weekdays after 6.30; pr ably by appointment.—Smith, 25, Glebe Rd., Bro Kent

*Spare Parts:*

MORGAN Spare Part Depot.—Spares for models in stock. List free.—Elce, Ltd., 1 Bishopsgate Avenue, Camomile St., E.C.3. 'Pho Avenue 5548.

## TAXI-COMBINATIONS AND CABS

"COUNTY," B.S.A., Taxis, as licensed thro out the country.—Write for full part lars, County Cycle and Motor Co., "Originato 300, Broad St., Birmingham.

## CARS FOR SALE.

WEST NORWOOD!—The place for straight de good value and selection; list free

WEST NORWOOD! – Fifty-five cars actually stock on the premises; all types stocked.

WEST NORWOOD!—Absolute bargains obtaina good running 2-seaters from £35; tourers f £85.

WEST NORWOOD!—Call any old time. Hours 8 to 6, Saturday 4; no business Sundays.

WEST NORWOOD!—All marked plain figures; c no obligation; postcard procures printed list.

WEST NORWOOD!—Douglas S. Cox, the al lutely straight motor man, 6c, Landsdowne H West Norwood, S.E.

ROVER Cars.—1922 8h.p. model; price £220; e delivery.—Godfreys'. Ltd. 208, Gt. Portland London, W.1

SWIFT car, 9 h.p., 2-seater; for 2-speed lightwei late model and £25; sell £58.—Cooper, 23, Ea Rd., Margate.

ROVER Cars.—The famous 8h.p. model in sto £220; for immediate delivery.—Eagles and C 275, High St., Acton, London.

HURTU Car, late model, small 4-seater, 4 c gate, £175; exchange Cambs.—19A, Ando Place, Maida Vale, London.

COVENTRY PREMIER, 1922, 4-wheel model; £2 immediate delivery; cash or deferred payments Ratcliffe Bros., 200, Gt. Portland St., W.

ROVER 8h.p. Light Car, 1922 models, dyna lighting; £220 cash; deferred payments extra.—Ratcliffe Bros., 200, Gt Portland St., W.1

GENUINE Little 6h.p. De Dion Car, fitted with seater sporting body, very smart, in excell order; complete, £45; delivered 50 miles free; trial 11a, Dafforne Rd., Upper Tooting.

8-10 de Marcay Demonstration Model for sa Better than new. Fitted dynamo lighting, d tachable wheels, etc., £125. Also special Competiti model, £120.—A. H. Lakeman, Ltd., 26, Long Ac London, W.C.2.

WAUCHOPE'S, 9, Shoe Lane, Fleet St., E.C Coventry Premier, new 1922, 4-wheelers, imm diate delivery from stock, dynamo lighting; exchan and easy terms arranged; price £250. 'Phone or c Holborn 5777.

1919 Chevrolet Touring Car, dynamo lighting, se starter, 5 detachable wheels, repainted as ne any trial given; bargain, £160, or exchange mot cycle or combination with cash.—5, Norwood R Herne Hill, S.E.14.

## CARS FOR SALE.

EDELIA.—The new 1922 model 8.10h.p. with air-cooled or water-cooled engine.

EDELIA.—Air-cooled model, £185; water-cooled model, £195. Immediate deliveries. Trial runs ge.

EDELIA.—Catalogues free from L. N. Palmer, sole concessionaire for the British Empire.—Palmer's rage, Tooting. [5877

ALMER'S Garage, Tooting.—The pre-eminent place for purchasing. Auction every Thursday.

ALMER'S Garage, Tooting.—£35 down and 12 monthly payments £5 secures superb Napier 5-ter, dynamo lighting.

ALMER'S Garage, Tooting.—£60 down and 12 monthly payments £8 secures 10h.p. Singer eater, dynamo lighting.

ALMER'S Garage, Tooting.—£30 down and 12 monthly payments £5 secures live axle Panhard gonette.

ALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures splendid Sheffield aplex landaulet.

ALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8/10 secures magnificent gland touring car, self-starting, dynamo lighting.

ALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7/10 secures reliable Renault ee-quarter landaulet.

ALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable Napier ssis.

ALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8 secures Delaunay Belle-e limousine, 17h.p.

ALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 18h.p. Maxwell rting 2-seater.

ALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures excellent 15.9h.p. S.A.R. 2-seater.

ALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures Studebaker lan-dlet, self-starting, dynamo lighting.

ALMER'S Garage, Tooting.—£35 down and 12 monthly payments £7 secures 16h.p. Minerva ring car, monobloc, 4 speeds.

ALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable S.C.A.T. 12-ter wagonette.

ALMER'S Garage, Tooting.—£30 down and 12 monthly payments £5 secures excellent 12.14h.p. .A.T. chassis.

ALMER'S Garage, Tooting.—All above cars are in good running order. For cash price deduct per cent. from above totals.—Palmer's Garage, oting. [5883

160.—13.9h.p. Swift, 4-seater, 4-speed, 5 detachable wheels with tyres, 2 new others perfect, fully ipped, and perfect in every detail; ideal economical mily car; only requires to be seen and tried.—1, Wood Rd., Herne Hill, S.E.24. [5842

XCHANGES! Exchanges!! Exchanges!!! My prices are Right! Bayard, 1913, 3-seater, 80h.p., 4 cyls., smart, economical, 89 guineas; .A.-Daimler 5-seater, detachables, 125 guineas; All-s 4.5-seater, 49 guineas; Crouch, 1914, 3-seater, achables, equipped, 85 guineas; Calthorpe, 1915, ater, dynamo, detachables, 159 guineas; 1915 mbull 2-seater, electric lamps, 65 guineas; Dar-n, 1913, 5-seater, low, pretty, 13.9h.p., 4 speeds, achables, smart, 129 guineas; 1921 Bleriot Whip-, special body, dynamo, equipped, 99 guineas. ay others.—Seabridge, 35, Hapsler Rd., East wich. Telephone, Sydenham 2452. [5985

## MOTOR TRANSPORT VEHICLES.

35.—A.C. Warwick Autocarrier, 6-8h.p. Roomy box body. Good tyres. Seen at work. Exchange bination.—Speechley, 86, Churchfield Rd., Acton, 3. [5503

OLSELEY 15-cwt. Van, 4 cyl., smart lock-up van body, disc wheels, running order, but engine re-res little attention; exchange motor cycle.—Ward, th-Western Garage, New Malden, Surrey. [5608

## EXTENDED PAYMENTS.

RY Wanchope's, 9, Shoe Lane, London, E.C.4, for easy terms. [8428

ECOND-HAND models at special rates; send your requirements.—Halifax Motor Exchange, Horton S, Halifax. [5918

OR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or ond-hand, write Service Co., 292, High Holborn, .1. [0672

## ENGINES.

p. N.S.U. Twin Engine, perfect, £6.—1, Spring-field Park Crescent, Catford, S.E.6. [5965

ARLEY 1918 7/9h.p., complete as new, £26.—7, St. Mark's Mansions, N.4. [5522

and M. Engine, complete, good condition, wants assembling; £7/10.—147, Burlington St., Liver-pl. [4382

# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

# Philipson's Latest!

## GOVERNOR PULLEY AND VARIABLE GEAR COMBINED WITH FLY WHEEL for all two-stroke engines.

**The Lightest, Speediest, and Simplest Gear on the market for direct belt-driven 2-stroke and 4-stroke engines.**

ONLY adds 2 lb. (approx.) to the weight of a 2-stroke machine, and 6 lb. (approx.) to the weight of a 4-stroke machine.

**During the past week we have fitted the following machines**

| 2-stroke. | 4-stroke. |
|---|---|
| LEVIS, | TRIUMPH, |
| O.K., | NORTON, |
| CALTHORPE, | ROVER, |
| VILLIERS, | SINGER, |
| etc. | COULSON-BLACKBURNE |

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

Our Flywheel Governor converts a single-speed 2-stroke into a speed model *—the lightest speed model on the market!*

**THE ONLY GEAR WITH NO END THRUST.**

**IMMEDIATE DELIVERY.**

*Send for Illustrated Booklet.*

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

***What is your make? Write us***

**REDUCED PRICE** **£7 7 0** **Carriage Paid.**

## Philipson & Co., Ltd.,

**Astley Bridge, BOLTON, Lancs.**

**(Established over 50 years.)**

'Grams: 'Safety, Bolton. Phone: 147 Eagley.


## ENGINES.

5-6h.p. Rex Engine, m.o.h.i.v., Bosch mag., pulley, induction pipe. Offers.

5-6h.p. Rex Engine, a.i.v., £3/15.—Hines, Clinton Rd., Far Cotton, Northampton. [5483

2¾ J.A.P. Engine, complete unit, bargain £6.—Carr, 183, Kimberworth, Rotherham, Yorks. [5334

REX Twin, 5-6 W.C. Bosch, B. and B. front axle wheels, tyres, £10/10.—H. Robinson, Long-houghton, Lesbury. [5510

BASTONES.—Blackburne 8h.p. twin engine, with carburetter; £30.—228, Pentonville Rd., King's Cross, London, N.1. [5133

BLACKBURNE 1921 8h.p. twin, engine and mag. sprockets; brand new, £25.—60, Baker St., Sparkhill, Birmingham. (D) [5900

6-8h.p. Twin Peugeot, complete unit, Bosch, B. and B., good running order; bargain, £7/10.—Weavers, 6, Burras Lane, Otley, Yorkshire. [5481

4h.p. Levis Flat Twin, 2-stroke, carburetter and mag., perfect, £10; 6h.p. ditto, £12.—Cole, 457, Rathgar Rd., Loughborough Junction, S.W.9. [4924

SACRIFICE, 7-9 Indian engine with magneto, carburetter, clutch, and sundries, all in splendid condition, £18.—Hodges, 136, Glencoe Rd., Chatham, Kent. [5497

55/- to clear, two 3h.p. Minervas; also one badly damaged 2¾h.p. O.H.V. Precision, 15/-, Amac Carburettor, 10/-.—4, The Square, Boston, Lincs. [5335

J.A.P. Engines, perfect, rebuilt by makers, 2½h.p. £10; 2¾h.p. special, £12; 5h.p., £17; 6h.p., £20; 8h.p., £24, complete.—V. M., 13, Ashmount Rd., South Tottenham. [5377

80×100 o.h.v., Metric, single, unused, £12. 20h.p. 4 cyl. 92×110 side valves, mag., carb., clutch, £20. 3-speed and new gearbox to suit, £6.—Brown 4, Auckland Rd., Doncaster. [5885

2½h.p. Singer, perfect condition throughout; make excellent lightweight, unemployment bargain, practically new, £3/10. Stamp.—Hood, 15, Totteridge Lane, Whetstone, N.20. [5598

BARGAINS.—Three 2¾h.p. Douglas engines, 2 4h.p. ditto, several A.B.C., and Levis twins; large quantity spares various makes, also quantity tool kits, spanners, pliers, belt punches, hammers, petrol squirts, grease injectors, head lamps, and generators, etc. All to be sold at knock-out prices for immediate clearance. —Patmore's, 240, King St., Hammersmith, W.6. [4993

HEPPELTHWAITE'S.—8h.p. W.C. Single, £8, for Stationary work; 3½h.p. Humber units, £12/10; 3½h.p. Premier unit, £12/10; Rex 5-6h.p., a.i.v., as new, £7/10; 3½h.p. Alldays, £4/15; 3h.p. m.o.v. Minerva, £3/10; also J.A.P. Rover, Matchless, and New Imperial spares, having purchased entire stock of W. Hawkins, York Rd.—Write, 17-19, Wilcox Rd., South Lambeth, London, S.W.8. 'Phone: 1958 Brixton [4177

J.A.P. Engines. J.A.P. Engines. J.A.P. Engines.—I have the largest stock of J.A.P. engine parts in England; over 30 engines, all in stock, to select from; and the prices: 5hp. £15, and the 8h.p. at £20 and £17/10, and I have all parts for the 8h.p. (see accessories for parts). I have a big twin engine £12, a 4h.p. Douglas engine and mag. and carburetter £15, a small 2-stroke and mag. £10; stamp reply.—South Croydon Motor Exchange, 22, South End, Croydon. [4765

## IGNITION, LIGHTING, ETC.

MAGNETOS 50% Below List.

APPLY Vale Engineering Syndicate, 9 and 10, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 377. [0698

H.B.I.

H.B. Ignition Co. carry large stocks of new and second-hand magnetos. Thomson-Bennett 42, 45, 50, 55, and 180°, single and twin.

H.B. Specialise in T.B. for fixing on Triumph, P.M., B.S.A., J.A.P., Douglas, etc., £2/10, postage 1/6; C.A.V. clock twin, for 2¾h.p. Douglas, etc., £2/15.

H.B. will take your old magneto in payment.

H.B. sends all magnetos on approval against cash. Every magneto dispatched carry H.B. 12 months' guarantee.

H.B. Ignition Co. ('Phone: Brixton 610), 78, New Park Rd., Brixton Hill, London [0694

50/-.—Thomson-Bennett, A.M.1, brand new, single.—G. W. Fleming, Redcar, Yorks. [5926

THOMSON-BENNETT anti-clock, new condition, 45/-.—Featherstone Cliffe, Rochester. [5338

DYNAMOS!! Lucas E3, new, £5/15; others, £5 each.—Jenner, 165, Church St., Mitcham. [5401

BOSCH and M.L. Singles, variable ignition, guaranteed, 30/-.—84, Greenside Road, Croydon. [5686

K.L.G. W.D. Sparking Plugs, wonderful value, 4 for 5/-, post free.—Thompson, 59, Queen St., Wolverhampton. [7944

MAGNETO Sprocket Manufacturers; 7-tooth to 24-tooth from stock.—Ridington, Southampton St., Camberwell. [3002

## IGNITION, LIGHTING, ETC.

COUNTY of London Engineering Works, Ltd.

EXCEPTIONAL offer of Government surplus magnetos, new, unused, must be cleared to make room for fresh stock.

GUARANTEE.—We guarantee all our magnetos twelve months, and will willingly repair or replace any magneto that should prove defective within that period.

BOSCH single, clock, or anti, £3. Thomson-Bennett, single or twin, clock or anti, 42, 45, 50, 55, and 180 degrees, £2/10.

C.A.V. single or twin, clock or anti, £2/10; special long driving spindle for Rudge, fitted to any of the above magnetos, 10/- extra. Postage on magnetos, 1/6.

THESE magnetos are fitted with variable ignition and leads, and also baseplates ready to be immediately fitted on; please state make of engine when ordering.

GOVERNMENT surplus, new plugs in boxes, A.C. (Titan), 1/6 each; K.L.G. types, F.8, F.6, F.5, and R.3, 1/8 each; Lodge types, K. and K.2, 1/8 each. Postage on orders of one plug, 3d.; four or more, post free.

ALL goods on approval per return post on receipt of cash; money refunded if not satisfactory.

COUNTY of London Engineering Works, Ltd.—Note new address: 6, Garden Lane, Christchurch Rd., Streatham, London, S.W. Tel.: Streatham 2898. T.A.: Ignitionac, Brixstret, London. [5935

RELIANCE Magneto Repairing Co. for repairs and new magnetos.—See below.

RELIANCE guarantee to return your magneto within 5 days, and if necessary 24 hours, with a written guarantee for 12 months.

RELIANCE test every magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE manufacture and stock spares for Thomson-Bennett, E.I.C., Splitdorf, U.H., Bosch, Dixie, etc.; special line genuine platinum screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice free of charge upon any qestion concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy that we have always endeavoured to give.—Reliance Magneto Repairing Co., 285, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., E.C.1, for new and second-hand magnetos.—See below.

THOMSON-BENNETT Magnetos, new and unused, single-cyl., clock and anti, suit any machine, price 55/-; twins, 45, 48, 50, 55, 60, 180 degrees, for J.A.P., Clyno, Douglas, etc., price 55/-. See our guarantee.—Below.

C.A.V. Magnetos., new, single-cyl. and 180° twins, clock or anti, ideal for Douglas, Levis, Calthorpe, O.K., or any lightweight; these magnetos are of the finest workmanship throughout; price 55/-. See our guarantee.—Below.

BOSCH D.A.L Magnetos, soiled only, otherwise as new, single cyl., suitable for any stationary engine or big single, £3/15; twins, any degree, ready to drop on Indian, Harley, or any big twin, £4/5; a powerful spark at low speed, ensuring easy starting. All the above magnetos are variable ignition and fitted short-circuiting switch. See our guarantee.—Below.

GUARANTEE.—Every magneto that leaves our works, no matter what the price or make, carries a written guarantee. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee every machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE Magneto Repairing Co. hold one of the largest stocks in London, and can be depended upon for a straight deal at the right price. When buying it pays to deal with a firm of repute.

RELIANCE cordially invite customers to their works to see any of the above on test. Magneto list giving full particulars sent upon application.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1. [6616

DASH Switchboards, 4-way, with ammeter, 20/-; with ammeter and voltmeter, 35/- each nett.—Leslie Dixon and Co. (Dept. H.I.), 9, Colonial Av., Minories, E.1 [0760

CHELTENHAM.—Repairs to magnetos, self-starters, lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham 'Phone: 1256 [0758

JEBRON Contacts, used by Messrs. Collier Bros., platinum, for blades, screws, etc., cures misfiring; Jebron screws, fit Bosch mag., 10/6 pair; old screws, any make, Jebronised, 4/9 each, return post

JEBRON Contacts, used by Messrs. Collier Bros., Oliver, Martin, making world's records.—Jebron, 38, Herbert Rd., Woolwich, London, S.E.18. [0002


**EVERYONE A SATISFIED CUSTOMER**

WHO DEALS WITH

**F.E. Wootten LIMITED. OXFORD.**

**WHY NOT BE ONE OF THEM?**

We can offer you the cream of

**Motor-Cycles & Light Cars**

**New *or* Secondhand**

*Don't worry about your next mount. Write us and be sure of satisfaction.*

**We hold the following Agencies for 1922**

MOTOR-CYCLES

| | |
|---|---|
| A.J.S. | SUNBEAM |
| N.U.T. | NEW IMPERIAL |
| ARIEL | NEW HUDSON |
| DUNELT | HARLEY-DAVIDSON |
| RALEIGH | EXCELSIOR RADCO |

LIGHT CARS

| | |
|---|---|
| MORGAN | G.N. |
| A.B.C. | NEW HUDSON |
| SWIFT | BAYLISS THOMAS |
| GREGOIRE | B.S.A., etc. |

*A FEW OF OUR SPECIAL SECONDHAND BARGAINS.*

1919 2¾ h.p. **DOUGLAS,** lamps, horn, leg shields, etc., **£47**

1921 (late) 2½ h.p. **O.K.,** 2-speed, lamps, horn, etc., as new .. .. .. .. .. **£40**

1921 shop-soiled 2½ h.p. **COULSON B,** spring frame, kick start and clutch model. List price 111 gns. Bargain .. .. .. .. .. **£75**

1921 shop-soiled 4 h.p. **HARLEY-DAVIDSON,** sports model. List price £140 .. .. **£120**

1921 9 h.p. **G.N.,** standard model, dynamo lighting, speedometer, spare wheel, etc. .. .. **£130**

1920 (late) 2¾ h.p. **COULSON B,** spring frame, lamps, horn, etc. .. .. .. .. **£70**

1921 3½ h.p. **RUDGE Multi,** lamps, horn, etc. Very little used .. .. .. .. .. **£60**

1919 (late) 4½ h.p. **B.S.A. Combination,** lamps, horn, speedometer, etc .. .. .. **£75**

1918 3½ h.p. **SUNBEAM,** D.A. lamps, horn, speedometer .. .. .. .. .. **£75**

1920 4 h.p. **HARLEY-DAVIDSON,** Swan sporting sidecar, lamps, horn, speedometer, etc .. **£145**

1921 4 h.p. **BLACKBURNE Combination,** mileage under 200 .. .. .. .. .. **£125**

1921 2½ h.p. **O.K.,** lamps, Klaxon horn, as new **£36**

1920 8 h.p. **REX Combination,** electric lighting, horn, interchangeable wheels, spare wheel **£110**

1920 4 h.p. **TRIUMPH Combination,** lamps, horn, etc. .. .. .. .. .. **£95**

1919 6 h.p. **ZENITH,** Flying Middleton S/c, lamps, horn, discs, good tyres .. .. .. **£80**

1920 7 h.p. **HARLEY-DAVIDSON Combination,** lamps, horn, etc. .. .. .. .. **£85**

1921 3½ h.p. **RUDGE Multi** (I. O. M. Model), electric lamps, horn, etc. .. .. .. .. **£70**

1920 10 h.p. **DOUGLAS CAR,** C.A.V. dynamo lighting and starting, speedometer, Hoodaile shock absorbers, tyres nearly new, in excellent condition, fast and reliable .. .. .. **£285**

1920 7/9 h.p. **HARLEY-DAVIDSON,** dynamo lighting, electric horn, discs, speedometer, leg shields, tax paid, excellent condition .. .. **£150**

1921 9 h.p. **G. N. Car,** dynamo lighting, speedometer, spare wheel, etc. .. .. .. **£145**

1921 7 h.p. **A.J.S. Combination,** electric lighting, tan sad, spare wheel, unused sidescreen, small mileage .. .. .. .. .. **£180**

1919 10 h.p. **SINGER,** 2-seater, dynamo lighting, self-starter, speedometer, 2 spare wheels, perfect condition .. .. .. .. .. **£200**

1920 6 h.p. **A. J. S.,** spare wheel, side screen, lamps, horn, Binks tan sad, etc. .. .. **£140**

1914 10 h.p. **HILLMAN,** dynamo lighting, speedometer, mirror, etc., in good condition .. **£200**

**F. E. WOOTTEN, Ltd.**

*Showrooms:* **55 & 56, HIGH STREET, OXFORD**

*Works & Garage:* **MERTON STREET, OXFORD**

Phone: 308


## IGNITION, LIGHTING, ETC.

ELECTRIC Light Bulbs for motor cycles and c one watt and half watt types stocked.—W. Clarke and Co., Ltd., Electrical Engineers, Silver New Oxford St., W.C.1. Price lists free. [2

CONTINENTAL Ignition Repair Co.—We re Continental magnetos only. By specialising Bosch, U.H., Eisemann, Mea, Splitdorf, Dixie, Berling magnetos, we can naturally give you be service.

PRICE: Rewinding 18/-, condensers 10/-, platin screws (Bosch standard) 6/-, remagnetising 2 ship rings 6/6, H.T. terminals 4/6. Our price overhauling a motor cycle magneto ranges betw 20/- and 35/-, and never exceeds the latter fig Guaranteed for 12 months, and redespatched to in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardw Rd., Chiswick, London. [3

SPLITDORF Magnetos, single, anticlock, varia Please note these mags. are not reconstructed converted starter mags.; each mag. we guarantee fect; 38/- each.—Marble Arch Motor Exchange, Edgware Rd., W.2. [6

THOMSON-BENNETT Magnetos, unused, W. guaranteed perfect, single or 180° twin, varia ignition, switch terminal and leads, clock or an week's approval against cash.—Brockbank, 58, L St., Southport. [0

C.A.V. Magnetos. Extraordinary bargains. Br new 180° twin or single-cyl., 38/6, carriage f Every magneto thoroughly tested before dispatch, proval against cash. Bosch, Thomson-Bennett, Dixie also in stock at bargain prices.—Langford's, Cricklewood Broadway, London, N.W.2. [5

U.H. Magneto Repairs.—We specialise in these m netos, and can be relied upon to give you g service. A1, B1, AO, KB1, KB2V, KZ2V type spa stocked; prices moderate; 12 months' written guar tee.—Charles Parker and Co., Churchfield Rd., Act London. [4

BOSCH 1-cyl., waterproof, 70/-; open type, 55 D.A.L., 60/-; U.H., 55°, 70/-; Bosch, 50°, 70 Runbaken W.L.L., 32/6; Bosch pattern Z.A.2 (ne 50/-. All guaranteed as new and sent on appro and trial.—Magnetos, Bristol Mews, Paddington, W [5

SURPLUS Magnetos, with written guarantee one ye M-L single, 35/-; B.L.I.C. ditto, 42/-; Bosch di 45/-; Thomson-Bennett and C.A.V. singles and tw 50/-. We specialise in repairs and spares for makes. Lists with pleasure. Deal with experts avoid certain disappointment.—Whitdale Magneto vice, Cherry Orchard, Croydon. 'Phone: Croydon 16 [3

THE Magneto Repairing and Winding Co. (est lished 1912), contractors to H.M. Governme and officially appointed by the R.A.C. Magneto pairs of every description; all repairs at lowest sible prices, and strictly guaranteed. We can mos return them within 24 hours. We have several and second-hand single and 2-cyl. magnetos in sto all guaranteed.—The Magneto Repairing and Wind Co., 78, Hampstead Rd., Euston, London, N.W 'Phone: Museum 1158. T.A.: Komagnelec, Eusro London. [2

EUSTON Ignition Co.'s 24-hour repair serv Guaranteed repairs to all types of magnet Splitdorf and Dixie specialists; official Indian trical service station; Thomson-Bennett repairs spares. All repairs are tested on an approved A.1 test bench before despatch, and therefore carry guarantee for 12 months. We hold the largest st of guaranteed magnetos in London, twins all degre spare parts for all makes in stock; charged accu rators, all voltages, always ready in stock; plu cables, ½-watt and vacuum bulbs, all voltages. give you real live service always.—Euston Ignition 329, Euston Rd., London, N.W.1 'Phone: Mus 5034. T.A.: Magdyno, Eusroad, London. [0

## TYRES.

MISS DOOLEY.—28×3 Dunlop butt-ended tu and Palmer endless at 5/- each.

MISS DOOLEY.—26×3 Dunlop butted at 6/- ea

MISS DOOLEY.—26×3×2½ Moseley at 5/- each.

MISS DOOLEY.—Please apply for above to Miss Dooley, 33, Killyon Rd., Clapham. [5

TYRES. Tyres. Tyres.—For special bargains, see B crottian Co.'s advertisement under Parts and Ac sories. [0

24×2¼ Clearance Covers and Tubes, 22/-; Bates 2 2¼, special heavy, 30/-; carriage paid.—Davies, Union St., Wednesbury. [4

CLEARANCE.—John Bull rib stud covers, 26×2¼ 2¼ rims, 48/-; 650×65, 45/-; 26×3, 55/-.—Sc Balmoral Rd., Northampton. [4

BRAND new Clincher rubber-studded tyres, 26× 26×2½; 29s. 9d. each.—Wandsworth Motor change, Ebner St., Wandsworth. [5

THE Difference between a good retread and a one is its mileage. Try us. Watch results.—Mel Rubber Works, Meltoo Mowbray. [0

SCOTTISH Readers will find it advantageous to chase their tyres from McArthur, Hill and 47, Carrick St., Glasgow. Lists post free. [3

## TYRES.

CONOMIC Tyre Co.—Great reduction in covers and tubes. All goods sent on 7 days' approval, carriage paid, against remittance.

CONOMIC.—24½×2¼ (oversize 2in. rims) Clincher de Luxe heavy, 26/-, listed £2.

CONOMIC.—26×2¼ Dunlop heavy, 37/3; Bates W.D., 28/6; Palmer W.D., 29/-; special heavy tubes, 6/-.

CONOMIC.—26×2⅜ Bates special heavy W.D., 30/-; Hutchinson T.T., 29/-; special heavy tubes, 6/-.

CONOMIC.—26×2½×2¼ Goodyear diamond clearance, 42/6; Avon rubber stud extra heavy, 40/-; Clincher De Luxe, 30/-.

CONOMIC.—650×65 Goodyear Diamond clearance, 30/-; 700×80 Goodyear diamond clearance, 50/-; tubes, W.D., 6/-.

CONOMIC.—Fully guaranteed Dunlop rubber stud, 24×2 22/6, 24×2¼ 24/9, 26×2 24/6, 26×2¼ 29.

CONOMIC Tyre Co., 314, New Cross Rd., S.E.14 (near Town Hall). 'Phone: New Cross 1393. [5314

OTOR Cyclists.—Send your covers for retreading. 3,000 miles guaranteed. Repairs of every description; carriage paid.—Buxton Vulcanising Co., Buxton, Derbys. [4357

URST Motor Cycle Tyres, chafed beads, remoulded, made perfect, tube vulcanising, butt-ends fitted. Reading; send for list.—Melton Mowbray Rubber Works, Melton Mowbray. [0347

PECIAL line of Clincher rubber non-skid covers, new, not W.D., 26×2½ (for 2¼ rims), 25/-; also 2¼, 16/-, including postage.—Maudes', 100, Gt. Portland St., W.1; Walsall and Exeter. [6075

TYRE Repair Specialists.—H.F. process throughout, including retreading Durst covers. Every kind of repair to tyres and tubes in 24 hours, retreads in 4 days.—The Motor Tyre Co., 66, High St., West Bromwich. [3852

CARTLING Offer.—New Beldam covers, 26×2 or 2¼ 20/- each, 26×2½ 30/-, 28×3 35/-, 650×65 40/-, 700×80 45/- each; new Avon or Michelin steel studded covers, W.D., 700×65 35/- each.—The Homerton Rubber Works, Brooksby's Walk, Homerton, E.9. [0331

AUDE Rubber Co.—All tyres guaranteed and sent on seven days' approval against cash; postage 1/3. 26×2¼ Avon rubber stud, 24/6; ditto, Stonehenge, 25/-; Wood-Milne, 13/6; Goodyear Diamond, extra heavy, 25/-; Beldam Com., steel stud, 26/6.

6×2⅜ Dunlop rubber stud, extra heavy, 36/6; Bates 3-ribbed E.H., 27/6.

6×2½×2¼ Avon Stonehenge, heavy, 22/6; ditto, 3-ribbed, 30/-; 26×2½ Wood-Milne, 13/6; extra heavy, 16/6; Goodyear Diamond, 25/-; Avon tread, 22/6.

3×3 Wood-Milne, extra heavy, 28/-; Kempshall N.S., 30/-; new Dunlop tubes, 5/6, all above sizes.

50×65 Wood-Milne, 13/6; extra heavy, 18/6; Dunlop Voiturette E.H., 40/-; Goodyear Diamond tread, Kempshall N.S., or Avon 3-ribbed, 35/- each; Dunlop tubes, 6/6.

00×80 Avon 3-ribbed, extra heavy, 35/-; Wood-Milne, extra heavy, 20/-; tubes, 7/-. All orders dispatched within an hour of order received.—5 Praed St., W. [5710

EMPSHALL Heavy Non-skid clearance (only superficial blemishes); exceptional bargains. 2½×2¼, 32/6 each; 26×2⅜, 30/- each; 26×2¼, 25/- each; 650×65 tubes (new), motor cycle valves, 1/- each.—H. Vass, 1, Shaftesbury Rd., Walthamstow, E.17. [5372

## TANKS.

ANKS for B.S.A., new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [3267

ANKS for Triumph, new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [3268

OVENTRY Tankers, Ltd., makers to the principal manufacturers; petrol tanks for any style supplied, any capacity.—Hearsall Works, Coventry. [3269

ANKS Made or Repaired, re-enamelled, lined, transferred; handle-bars, etc., plated. Established 30 years.—Attwood's, 86, Rosebery Av., London, E.C.1. [6997

ANKS Re-enamelled to Pattern. High-class work only.—D. Jeokins and Sons, 6, Richard St., Atkin St., Deansgate, Manchester. Established 25 years. [3601

ALL Manner of Repairs, rebuilds, etc., to any pattern First-class enamelling. Reasonable charges quick delivery.—Day, 27, St. Luke's Rd., Birmingham. [3393

# MANUFACTURERS' SPECIAL OFFER.

## WATERPROOF MOTOR CYCLE SUIT (Fig. 1).

Fig. 1

**Jacket, Legging Overalls**

and

Fawn double texture material, interlined rubber, seams cemented and taped, wind cuffs, wind gusset in overalls, and clasp fasteners.

**SUIT COMPLETE 35/-**

**SUIT, with seatless trousers, 42/-**

Superior heavy stout twill, double texture, Motor Cycle Suit—very warm and perfectly waterproof.

**COMPLETE,** with all fittings as above, and seatless trousers, **50/-**

## WATERPROOF TRENCH COAT

(*Fig.* 2) Fawn material, rubber lined, guaranteed waterproof.

**25/-**

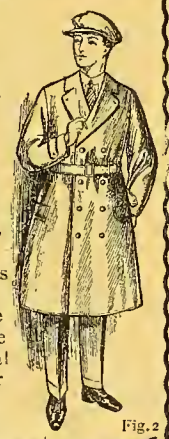


Fig. 2

**SEATLESS** trousers fawn, double texture material rubber interlined, wind gusset, & clasp fasteners. All sizes.

**18/-** per pair.

**WATERPROOF OVERALLS.**

Double texture material, clasp fasteners, perfectly waterproof.

per **15/-** pair.

*If you cannot call, send money with breast measurement and height.*

**Post your order early.** **All goods carriage paid.**

**Our Guarantee** Money Refunded in full if not thoroughly satisfied.

**Actual Manufacturers:**

**Martin Waterproof Company,**

**208, Oldham Road, New Cross, Manchester**

## TANKS.

ASHTON BROS'. Tanks. Price lists and order forms available through your dealer or direct from 14, Market Place, Manchester. All tanks guaranteed. [5706

TANKS of every description replaced, repaired, and re-enamelled at our own works; all kinds of fittings stocked; quick service and reasonable charges. Illustrated list free.—A. Green, Water St., Chapel St., Salford. Manchester Tel.: 2191 Central [0256

TANKS Repaired, reenamelled, dents removed, partition, seam, fastening leakage, etc., enamelling; we guarantee makers' transfers, lastest colours and designs; lowest prices; prompt return.—Park Works, 1a, Paradise Rd., Highbury, N.5. [4878

AVERY'S Stock Tanks for Douglas, Hazlewood, B.S.A., Triumph, Omega, enamelled makers' colours, plated fittings, 40/-, complete; other design or shape to order. 12 months' guarantee with every tank.—Gordon Street Tank Works, Coventry. 'Phone: 1774. [0770

## BELTS.

JOHN Bull Belts, 1in., 2/8; ¾in., 1/11 ft.; any length cut.—Sear, Balmoral Rd., Northampton. [4835a

NEW Clipper Belts.—8ft.×¾in. 11/6, 8ft. 6in.×¾in. 13/-, 8ft. 6in.×⅞in. 14/-, 8ft. 6in.×1in. 16/9.

W.D. Belts, 6ft. 6in.×⅞in., 10/-; new Pedley belts, clearance, 6ft. 6in.×¾in., 10/-; clearance belts, 6ft.×1in., 8/6.

H. EMANUEL and Co., Tyre Factors, 27, Belgrade Rd., Stoke Newington, N.16. Stores: 37a, Balls Pond Rd., Dalston, London, N. Tel.: Dalston 3161. [0726

## CARBIDE.

FINEST Carbide, cwt. drums, 22/6, f.o.r.; 23 depots; prices packed in tins on application.—Sports Depot, Denby Dale, Huddersfield. [5068

CARBIDE, finest quality only, 1cwt. drums, 22/-, f.o.r., c.w.o.; stores all parts; also ½ to 7 lb. tins.—Hodge and Co., Warwick Rd., Bristol. [5101

CARBIDE.—Finest quality, giving brilliant light, economical; 22/- cwt., 12/6 ½ cwt.; carriage forward, drums free.—Kemp's Garage, Importers, Louth, Lincs. [5555

BEST Quality Carbide, 24/- per cwt., 28 lb. 8/6, drums free. Any quantity supplied from ½ lb. tins to 2 cwt. drums. Only the best brands stocked. Trade enquiries invited.—Dargue, 57, Grey St., Newcastle-on-Tyne. [6900

CARBIDE, guaranteed maximum gas yield, British Acetylene Association standard, 21/6 cwt., drums free, all meshes; stock at 22 depots; immediate delivery.—Elloc Cycle Works, Importers, Gedney Drove End, Wisbech. [3590

CARBIDE, finest quality, giving 100 per cent. pure gas yield, all sizes, cwt. 26/6, ½-cwt. 16/3, 28 lb. 8/6, drums free; support the old firm; established over 30 years; satisfaction guaranteed.—Young, Importers, Misterton, Somerset. [9557

CARBIDE.—Immediate delivery of all sizes in 1 lb., 2 lb., 4 lb., and 7 lb. lever lid tins, and 2 cwt. drums, labelled or plain for retailers' own labels, quality guaranteed, and all standard sizes supplied by the cheapest firm in the trade.—The Premier Lamp and Engineering Co., Ltd., Moorfield Works, Armley, Leeds. [3286

## PATENT AGENTS.

CONSULTINO Patent Agency, 253, Gray's Inn Rd., London.—Aero and aircraft engines. [2416

J. E. S. LOCKWOOD, 3, New Street, Birmingham. 'Phone: 5816 C. Patents guide free. [9057

FREE, 100 Page Patent Guide, postage 3d.—The Consulting Patent Agency, 253m, Gray's Inn Rd., London. [2416

PATENTS Advice, handbook free.—King, Registered Patent Agent, 146a, Queen Victoria St., E.C. 35 years' references. [0129

W. BRYSON, B.Sc., Assoc.M.Inst.C.E., Chartered Patent Agent, 29, Southampton Buildings, London, W.C.2. 'Phone: Museum 3651 [9242

H. N. & W. S. SKERRETT (H. N. Skerrett, Fellow of the Chartered Institute of Patent Agents, A.I.Mech.E., A.I.A.E., Associate I.E.E., etc.; W. S. Skerrett, A.I.E.E., Registered Patent Agent).—Patents, designs, and trade marks.—24, Temple Row, Birmingham. Tel.: Central 1038. T.A.: Skerrett, Birmingham. [1554

## PATENTS.

WE Buy, Sell, and Finance Inventions and Patents, and advise on their marketing.—Send postcard for full particulars to Dept. C, Inventors' Sales Agency, 22-24, Spencer Av., Coventry. [3717

GENTLEMAN with Works wishes to purchase recipe for some good speciality for motor trade, and invites information on vulcanising cold process.—Box 8280, c/o *The Motor Cycle.* [5455

## AGENCIES.

SLADE-J.A.P. Motor Cycles, 55 gns. Sole agents required in districts where not already represented. These machines will take the market by storm. Specification—2¾h.p. J.A.P., 2-speed kick start, B. and B. carburetter, drip feed, etc.; sell at 55 gns. retail.—Terms from Whittles Motors, Longsight, Manchester. [4021

## AGENCIES.

THE Mohawk Cycle Co., Ltd., require sole agents for their celebrated motor cycles in districts where they are not already represented. Trade only.—Write for lists and terms to the Mohawk Cycle Co., Ltd., 248, Alexandra Rd., Hornsey, N.8. [6245

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at competitive rates.—Ernest Bass, 40, Chancery Lane, W.C.2. 'Phone: Museum 2234. [0005

ROYS, Ltd., Insurance Brokers.—Agents for all companies and Lloyd's. Insurance of every description effected. Enquiries invited.—170, Gt. Portland St., London. [0055

COMPREHENSIVE Policies for motor cycles, cycle cars, Morgans, etc., from £1/4/6; immediate cover; prompt settlement.—John Clements and Co., 65a, Holborn Viaduct, E.C.1. [5480

"THE Motor Cycle" Insurance Policy is the policy authorised by "The Motor Cycle," and covers motor cycles or cycles and sidecars used for private purposes. Complete comprehensive cover. Maximum benefits, minimum rates. Full particulars and prospectuses on application.—The Autocar Fire and Accident Insurance Co., Ltd., 77, Cheapside, London, E.C.2. [0007

## SITUATIONS VACANT.

MOTOR Cycle Traveller wanted for North of England; only first-class man need apply; must be able to ride.—State full particulars and wages required to Box 8279, c/o *The Motor Cycle*. [5454

## CONSULTING ENGINEERS.

MACHINES Purchased for Clients in any part of U.K.; expert examination.—Tonge, Holmsfield, Sheffield. [5750

## FINANCIAL.—PARTNERSHIPS.

ACTIVE Partner Required in small Company now manufacturing light runabout. Well received at Olympia and by Technical Press.—Box 8267, c/o *The Motor Cycle*. [5419

## BUSINESSES AND PROPERTY FOR SALE, TO BE LET, OR WANTED.

VULCANIZING Business, H.F. Plant, 3 Mandrels, 5 sets joiners' tools, benches, fittings. Humber van. Two-seater Rover. Sacrifice, £130.—Box 8,302, c/o *The Motor Cycle*. [6001

FOR Sale near Tunbridge Wells.—Motor cycle and cycle agency and repairing depot. Agencies Raleigh, Humber, Sunbeam, James. Main London road. Double-fronted shop, large garden, garage at rear. Splendid opportunity for live man. Immediate possession.—Apply, 74, Watling St., London, E.C. [5451

## GENERAL TRADE.

AUCTION Sales.—Palmer's Garage, Tooting, the oldest solely motor auction rooms in London. Terms 7½ per cent., not chargeable if machine unsold. Motor cycles and cars bought and sold for cash. Nearest goods stations, Falcon Lane, L. and N.W.R., Wimbledon, L. and S.W.R. and G.W.R.—Sole address, Palmer's Garage, Tooting, London. [5880

## WANTED.

P. and M. spares.—See Motor Cycles Wanted.—Kemp. [6043

WANTED, Sidecar suit Triumph; about £6.—2, Newcomen Rd., Finchley, N.3. [5617

JAMES 4¼ Combination, not earlier than 1919.—151, Globe Rd., Bethnal Green. [5360

MORGAN Runabout, must be cheap, Grand Prix preferred.—7, St. Mark's Mansions, N.4. [5520

OLD Morgan or Whippet wanted.—Price, particulars, R., 92, Romford Rd., Stratford. [5636

WANTED, Solos or Combinations.—D. and S. Autocar Co., 33, The Parade, Golders Green. [6013

SCOTT Front Forks or other spares.—79, Berkley St., Liverpool. [5887

C.B. Sidecar, must be strong chassis.—Glover, Hereford Villa, New Barnet, Herts. [5747

WANTED, secondhand Morgans, Rovers, and G.N.'s, in good condition.—Rey's, of Euston Rd. 'Phone: Museum 6436. [5779

DOUGLAS 2¾h.p. tank, complete; also tourist bars, cheap.—Spencer, Botolph's Corner, Sevenoaks. [6255

WANTED, late model solo or comb. for cash.—C. S., 14, Swaton Rd., Bow, E.3. Tel.: E 3155. [6048

WANTED, Frame for 1911 Quadrant; good condition.—46, Fere St., Brixham, Deven. [5368

P. and M., also spares; incomplete machine considered.—Price to K. Kemp, 68, Belsize Pk., London. [6042

DOUGLAS 2¾h.p. or 4h.p. wanted, in any condition; cash on sight.—302, London Rd. Thornton Heath. [5968

4h.p. 1918 Douglas Middle Section (crankcase), new ballraces (crankshaft).—Davidson, 7, Atlantic Terrace, Camborne. [5668

WANTED, an 8h.p. Engine, a M.A.G. preferred. State date, condition, and price.—Gardner, Gibson's Farm, Lancaster. [5509

£10 offered for good 3-speed gear box, S.A. or other approved type.—19, Wilcox Rd., South Lambeth, London. [5975


# ROSSLEIGH AT THE SHOW

WE EXTEND A HEARTY INVITATION TO SCOTTISH MOTOR CYCLISTS

## Stand No. 198

SCOTTISH MOTOR SHOW

KELVIN HALL, GLASGOW,

**Jan. 27th to Feb. 4th**

We shall Exhibit a Representative Selection of the following makes :

**TRIUMPH**
**HUMBER**
**ROVER**
**B.S.A.** **MARTINSYDE**
**SCOTT**
**IVY**
**ALLON**
**NER-A-CAR** **WHEELER**

Our Representatives will also be on the following Stands :

| | | |
|---|---|---|
| **TRIUMPH** | **STAND** | **193** |
| **ROVER** - | „ | **189** |
| **MARTINSYDE** | „ | **195** |
| **HUMBER** - | „ | **176** |
| **NER-A-CAR** | „ | **206** |

**ROSSLEIGH LIMITED**
MOTOR ENGINEERS
TO H.M. THE KING,
**EDINBURGH & GLASGOW.**


## WANTED.

WANTED, 1911 Triumph Cylinder and Pi good condition; cheap.—James Andrews, Farm, Dehy, Ross-shire. [

DOUGLAS, gear box, 2 speed, k.s., clutch.— and condition, Albert Motor Co., 21, Prince A St., Strathbungo, Glasgow. [

WANTED.—Secondhand Coachbuilt Sidecar 4h.p. Triumph. Write, stating make, price, —Kenwood, High St., Heniton. [

FRAME, wheels, tank, forks, bars, carrier, condition, suitable 6-8h.p. J.A.P., Sturmey belt, gear box.—Lornie, Alyth. [

WANTED, good up-to-date second-hand motor accessories; state particulars and price.—Se Co., 292, High Holborn, W.C.1. [

WANTED, Ball Bearings, any quantities, 1⅛in.×2 ×⅝in., and 20×47×14mm. Must be cheap cash.—Box 8,288, c/o *The Motor Cycle*. [

SIDECAR, Henderson spring frame, folding quickly detachable fittings, touring body, Triumph.—8, Chesham Villas, Pinner. [

WANTED, Easting Screen for Matchless, do seater; also Low Generator, light bar size.—C wick's Dining Rooms, Milnsbridge, Huddersfield. [

WANTED, bankrupt stocks, W.D. spares, in plete P. and M.'s or parts.—Inman, Dur Rd., Seaforth, Liverpool. 'Phone: Waterloo 29 [

P. and M. Parts wanted: Chains, exhaust pipes, caps, gear operating chains, kick starts, and c valve caps, front brakes; second-hand preferred.—S Porter, Whitchurch, Salop. [

WANTED, for countershaft Triumph, timing of crank case, or complete crank case; also S mey gear box case, or complete gear box if che Hole, 129, Park Lane, Carshalton. [

WANTED to Purchase Outright for cash, bank stocks. W.D. spares, miscellaneous spares. full particulars.—McNeille and Platt, 57, Gt. Ge St Liverpool 'Phone: 1092 Royal [

HUB Shell only, or complete; suit old pattern Enfield. Left-hand drive. Cylinder N.S.U. 3½, old pattern overhead valve.—Particu prices, etc., Marr, Bridge St., Ellon, Aberdeenshir [

## EXCHANGE.

YOUNG attach. with cycle (new) for motor c £22.—Bassett, Crowthorne, Berks. [

SINGER 3½h.p., 3-speed, clutch; exchange for lightweight, or sell £30.—Apps, Bracknell. [

8h.p. Bat-Jap Combination for 2-speed lightwei Douglas preferred.—285A, Edgware Rd., W. [

4-CYL. F.N., new pistons, etc., photo, particu for 3½h.p. single.—Bradley, Laynes, Newent. [

CYCLOTRACTEUR, new, cost £20; exchange c or motor stuff.—2[illegible], Camberwell Rd., S.E. [

HUMBER, 3½h.p., 2-speed, good condition, cash for 1915 Scott.—Marshall, H.M.S. P38, F land. [

CALTHORPE 2-stroke for Lightweight Combinat Cash adjustment.—Rev. Bull, Ramsey, Hunt [

HORSTMAN 2-seater for A.J.S. or Matchless c bination or G.P. Morgan.—56, High St., Toot [

"WOLSELEY" Light Delivery Van; exchange good combination.—3, Belgrave Rd., Mitcha [

SEE A.J.S., Blackburne, Zenith, Indian colun —Kent's, 417, Lord St., Southport. Tel.: 1 [

F.N. Gear Box, flywheel, clutch, etc., £6/10; change engine F.N.—Fond, 38, Bridge St., De [

3h.p. Enfield, late 1919, perfect condition, I.O.M. Rudge.—F. Claxton, East Harling, folk. [

3½h.p. Rex, complete, less mag., for sound 3-sp Sturmey gear box.—Bennett, Moira, Leices shire. [

2¾h.p. Douglas, 2-speed, uncrated 1919, accessor unscratched; exchanges invited.—63, Solon Brixton. [

A.B.C. 1921, dynamo, speedometer, etc., for Sunbeam or Norton; or sell.—82, Caledonian London, N. [

10h.p. Light Car Chassis; exchange combinati or sell.—59, Palfrey Place, Dorset Rd., Cl ham Rd., S.W.8. [

ZENITH, 1915, 6h.p. Sports, perfect condition, lower power, sell £58.—64, Summerfield Cresc Edgbaston, Birmingham. [

A.V. Monocar 6h.p. 1920, 2-speed, electric lighti accessories, licensed; exchange solo.—17, Sus Rd., New Malden, Surrey. [

EXCHANGE 3h.p. Humber, mag. B. and B., 2h.p. J.E.S. two-stroke, or sell £12.—A. M ston, Norwood, Nr. Otley. [

N.S.U. Gear, gate change perfect, exchange N.S.U. or other recessed for Jap; sell £4 —F., 7, Clarence St., Southall. [

## EXCHANGE.

EXCHANGE 3½ Rudge Multi, taxed, all on, excellent order, for Lightweight, or sell £40.—Tiley, Elkstone, Buxton, Staffs. [5502

DARRACQ Landaulette, 4-cylinder, live axle, splendid condition, £75. Exchange Combination.—136, Forest Rd., Walthamstow. [5692

ALLDAYS' 12h.p., 4-seater, modern body, unscratched, remarkably good condition; exchanges invited.—63, Solon Rd., Brixton. [5675

4h.p. 3-speed Hub-gear Combination; exchange Douglas and cash, or sell.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [5702

HALIFAX.—1922 New Coventry Premier Light Car for good combination and cash.—Motor Exchange, 25, Horton St., Halifax. [5921

MEDIA 2-seater Light Car, as new; exchange twin combination and little cash.—Spurling, 8, Courthope Villas, Hampstead, N.W.3. [5848

EXCHANGE 1915 4-seater Maxwell car for motor cycle and cash, or sell £95.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [5947

EXCHANGE 1915 W.C. Humberette, oversize tyres; 5 lamps, hood, screen, perfect order, for combination.—24, Geraldine Rd., Chiswick. [5948

3½ Rudge; clutch model, perfect, very fast. Exchange 2-stroke or Lightweight; cash either way.—181, Newton Rd., Burton-on-Trent. [5633

1 TON Ford Truck, W.D. body, 1920, left-hand drive, for good combination and cash adjustment. W. Cole, Blackmoor, East Liss, Hants. [5831

CINEMATOGRAPH Projector outfit, value £30, for lightweight, with speeds, or sell £25.—Anson, Hielam, Tongue, Sutherlandshire. [5370

COTTAGE Furniture, new, stored London, value £50, exchange for good modern solo; cash adjustment.—Box 8268, c/o *The Motor Cycle*. [5420

4h.p. Douglas Combination, perfect, lamps, horn, screen, spares, for Morgan W.C., G.P. preferred, cash adjustment.—10A, Norfolk St., Southsea. [5435

3h.p. Rovér, 2-seater, 3-speed, reverse, excellent order, sell £30; or exchange good combination.—Sales, Oakleigh Villas, New Rd., Ascot, Berks. [5782

OFFERS or exchange wanted for Henderson Semi-T.T. Handlebars, also 2 years' issue of *Motor Cycle* and *Motor Cycling*.—Pirie, Cranleigh. [5693

MORGAN 1919 Sporting air-cooled model, absolutely new condition, trial any time; exchange good combination and cash.—Snow.

TRIUMPH-GLORIA Combination 1919, fully equipped, good condition; exchange lightweight and cash.—Snow, Laurel St., Dalston, N.8. [6035

1920-21 A.V., 8h.p., original tyres, lighting set, absolutely as new (2 seats), guaranteed, for late Solo, or sell £85.—89, East Hill, Wandsworth. [6008

EXCHANGE 1920 Kingsbury 2-seater, dynamo lighting, 6 detachable wheels, for motor cycle and cash; sell £130.—49, Well St., Hackney, E.9. [5903

1919-20 Zenith 8h.p. Swan Combination C.S., K.S., clutch, complete, perfect order; small solo machine part exchange.—Gillingham, Springfield, Ilkley. [5445

EXCHANGE Lagonda coupé, 4-cyliuder, 5 wheels, detachable, electric light, splendid condition, tax paid, for good Combination and cash.—19, Valnay St., Tooting. [5645

Plate Photo Enlarger, ½-Plate Camera Houghton's Slide, 1/1 Plate Camera and accessories, for motor cycle or combination.—Box 8,237, c/o *The Motor Cycle*. [5352

EXCHANGES considered for the following:—Triumph, Premier, Singer, Velocette, Rover, Triumph, Matchless; see other adverts.—8, High St., Wandsworth. [5662

WANTED, good Combination or Solo and cash for Sporting Bleriot Whippet, hood, screen, Lucas dynamo lighting, any trial, value £95.—89, East Hill, Wandsworth. [6007

EXCHANGE A.V. Monocar 8h.p. J.A.P., 2-speed, 1920, 2 seats, exchange 5½ centre treadle lathe and cash, or sell £52.—Clarke, Town Hall, Wandsworth, S.W. [5623

NEW HUDSON 2¼h.p., 2 speed de luxe, all accessories, new condition throughout; £55; or exchange for small 2 seater equal value.—Box 8270, c/o *The Motor Cycle*. [5422

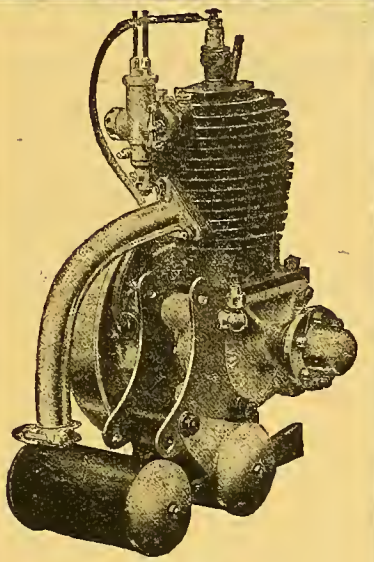
M.O.C.H. are noted for fair exchanges. Fair Offer Car House, 5, Heath St., Hampstead. (Near Tube.) 'Phone: Hampstead 3752. Hours: 9-7, including Saturdays. [5536

EXCHANGE handsome 3-piece Chesterfield Suite, value £55, for modern motor cycle or combination; cash adjustment either way.—10, Freshford St., Barlsfield, S.W.18. [5622

1915 Ford English Sporting Body, right-hand drive, perfect running order, for Morgan combination, or offers.—Wood Cottage, Wheeloch Heath, nr. Sandbach, Cheshire. [5506

INDIAN, 1918, 5h.p., 3-speed, K.S., excellent condition, tax. equipped, for 2¾ Douglas 3-speed or 7/9 A.J.S., 1916 type; cash adjustment.—Stuart, Central Beach, Blarkpool. [5565


VILLIERS
TWO-STROKE
ENGINE



THIS
MARK V.,
WITH ITS
FLYWHEEL
MAGNETO,
IS DIFFERENT TO ALL OTHERS.
IT FIRES EVENLY AT WALKING PACE; CONSEQUENTLY
IT CLIMBS BETTER.
*Read our new Booklet, which is sent post free.*
THE VILLIERS ENGINEERING CO. LTD
SUNBEAM STREET
WOLVERHAMPTON


## EXCHANGE.

NER-A-CAR wanted, first-class order, exchange 1921 Connaught, brand new condition, carefully run in, tax paid; 150m.p.g., Sturmey-Archer gear, 26in. wheels, speedometer.—9, West Bank, Scarborough. [5513

5-6h.p. Sporting Indian Combination, also similar T.T. solo, for Morgan, higher powered combination or sell; private owner; full particulars.—Crombie, 86, Southgrove Rd., Sheffield. [5855

1914 3½ T.T. Rover. Fast, sports machine. Mechanically perfect. Tax paid 1922. Cash offers or exchange Douglas.—Bealey, 88, Prince's Avenue, Watford. [5874

EXCHANGE 12h.p. Briton Van, 3 speeds, reverse, good running order, for Combination or Solo, kick start, speeds, not later than 1918, or sell £50.—1, Hampton Rd., Blackpool. [5690

1921 A.B.C., indistingnishable from new, fully equipped. Exchange Lightweight and cash, combination, or light car; cash either way.—Ewers, Newton Rd., Burton-on-Trent. [5634

EXCHANGE Triumph Combination (late 1918), lamps, accessories, tax paid, for late Morgan-Coventry Premier. Cash adjustment or sell, £75.—Carr, Park Cres., Llandrindod Wells. [5328

MARTINSYDE Combination, Sept., 1921; mileage, 300; Lucas lamps. Spares as new. Sale, £135. Exchange 1921 Big Twin Combination, with dynamo lighting.—60, Cowbridge Rd., Cardiff. [5336

EXCHANGE New 1922 Singers, Calthorpes, Rovers, G.N.s, and Coventry-Premiers, for motor cycles, runabouts, and cash. Write for catalogues.—Newnham Motors, 223, Hammersmith Rd., London. [5817

3½h.p. Ariel, new 1921, £87; 5-6h.p. Clyno combination, £43; exchange one or both for 4-seater; one requiring repainting, overhauling considered.—Cunnington, 339, Lincoln Rd., Peterboro. [5745

EXCHANGE Douglas 2¾h.p. £16 just paid for new parts for engine and gearbox. Lamps, horn. Tax paid 1922. Any test. For Rudge-Multi, or sell £45.—25, Clock House Rd., Beckenham, Kent. [5553

WANTED, B.S.A. about 1917, appearance immaterial, in exchange for Allon 2¾h.p. 1920, 2-speed, hand clutch, tax paid; cash adjustment to £15 for good machine.—48, Babbacombe Rd., Bromley, Kent. [5394

EXCHANGE 1917 Grand Prix Morgan, W.C. J.A.P., acetylene lighting, finished dark red with black lines, reliable and fast, £122; accept motor cycles.—Newnham Motors, 223, Hammersmith Rd., London. [5818

PRACTICALLY Brand New Clyno, 8h.p., latest J.A.P., 3 speed, hand clutch, kick start, Camber sidecar, electric lighting, original tyres unpunctured, beautiful outfit, for Morgan, £110.—89, East Hill, Wandsworth. [6009

EXCHANGES a Speciality.—Motor cycles taken in part exchange for small and large 2 and 4-seaters; bargain prices.—Seabridge, Hanslet Rd., East Dulwich. Hours 10-5.30, or appointment (not Sundays). Sydenham 2452. [3671

EXCHANGE 1921 Quarter-plate Ruby Reflex Camera, f/4.5 lens and accessories, for 3-speed gear box, 26in. discs, Magdyno, Binks carburetter, speedometer, or anything motorish; or sell £15.—Box 8269, c/o *The Motor Cycle*. [5421

1921 3½h.p. Rudge Multi, delivered June 2nd, lamps, speedometer, Tan-Sad, spare belt and tube, fast and splendid running order, tyres unpunctured, mileage 3,500; exchange with cash for good combination, or sell £75; London district.—Box 8299, c/o *The Motor Cycle*. [5580

DOUGLAS 2¾h.p. 1919, lamp, horn, special long exhaust, mud shields, tyres new, good running order, condition A 1; also beautiful piano, worth £60, by Erard, and cash, for first-class late combination not under 5-6h.p. or cycle car.—Huntly, Farway, Honiton, Devon. [5384

EXCHANGE 1913-14 Morgan 8h.p. Runabout; with cash, for recent 2-seater with dickey. Exchange A.V. Monocar, finished dark red with black wings and discs, electric lighting, very fast and sporty, for good motor cycle and cash. Exchanges.—Newnham Motors, 223, Hammersmith Rd., London. [5816

EXCHANGES.—The Newnham Motor Company, 223, Hammersmith Rd., London, specialise in exchanges of motor cycles, runabouts, and light cars. Send full particulars of your present machine, and mention your requirements. Post exchanges. Distance no object.—Newnham Motors, 223, Hammersmith Rd., London. [5815

ADVERTISER wishes to exchange combination, as specified, for 2 seater of recent date and approximately equal value, Bleriot or G.N. preferred; Harley and sidecar, 19 T. 3627 magneto, recently overhauled, invoices shown, 40 guinea sidecar, screen, etc., discs, copper exhausts, 29×3½ tyres, large brass P. and H. self-contained head lamp, electric side, tail, speedometer and spotlight, large 8-volt searchlight on sidecar, speedometer, air speed and ultimeter, condition better than new; value £160.—Parry, Borrowash, Derby. [5392

## REPAIRERS.

ANY

ARMSTRONG or Sturmey-Archer Gears Repaired promptly and efficiently.—County Engineering Co., Hounslow. [0517

TRIUMPH, Douglas, J.A.P. Repair Specialists.

OUR Works do nothing else but repair the above makes of machines. Cylinders rebored, new pistons fitted, engine and gear boxes overhauled. Enamelling, plating, all on the premises. Send your engines or gear boxes; bench test and road test before returning. No need to send complete machine. All spares in stock, and we are more prompt than the makers. Work guaranteed. We pay carriage one way. Discount to trade.—The Winstan-Henny Motor Co., 63, South End, Croydon. 'Phone: 2431. [4764

WHITTALL for Welding. Aluminium experts Prompt delivery.

WHITTALL.—Pistons complete for Triumph, Premier, J.A.P., Bradbury, B.S.A., Douglas, Sunbeams, etc.; 14/- to 24/-, on approval, exact to pattern.

WHITTALL.—Cylinders reground and new complete pistons fitted from £2, perfection guaranteed Twelve years' first-class reputation. Pistons to pattern or sketch.—Whittall Machinists Co., Whittall St., Birmingham. [0017

C. R. FOSTER, of Leeds, is the original cylinder grinding specialist.

CYLINDER Grinding by Foster, of Leeds, has no equal. Price, complete with piston, from £2.

£1,000 is the value of the machine and equipment that will grind your cylinder at our works.—Foster, of Leeds, 170, Cardigan Rd. [0003

ENGINE Overhauls, quality work only, cylinders reground, pistons, valves, bushes, etc.—Below.

PISTONS for every standard motor cycle in stock from 14/- each.—Below.

CYLINDER Grinding, our speciality 2¾h.p. Douglas reground, fitted with new piston, rings, and gudgeon. 25/- each.—Below.

TRIUMPH, J.A.P., Bradbury, and all 3½h.p., 4h.p., cylinders reground and fitted new piston, rings, and gudgeon, 35/-; returned in 48 hours.—Below.

QUALITY and Satisfaction is our motto. Entrust your work to specialists and get a guaranteed repair.—C.M.D. Engineering Co., Leamington Spa. 'Phone: 768. [9659

WHEELS Repaired, rebuilt; sidecar chassis repaired.—Pritchard, 7, All Saints Lane, Coventry. [X5307

WELDING Aluminium Crank Cases, gear boxes by experts; immediate attention; seasonable prices.—Below.

WELDING Broken Cylinders, flanges, combustion experts of 11 years' experience.—Below.

CYLINDER Grinding on latest machinery, installed since hostilities ceased; accuracy guaranteed; new pistons fitted.—Sadgrove and Co., 140, Conybere St. Birmingham. [4769

ENGINES Rebushed, overhauled, rings fitted, compression guaranteed; singles 30/-, twins 40/-; returned 3 days.—Below.

CYLINDERS Rebored, fitted with new pistons, from 30/- to 40/-.—Turner Bros., Motor Engineers, Summerseat, Manchester. [4143

FRAME, chassis, and tank repairs, enamelling and painting by experts; prompt deliveries.—Langham Co., Fitzroy St., Leicester. [6097

INDIAN Owners.—If you have trouble with your machine, send to Indian repair specialists, Dennis, 89 Brixton Rd London [1857

CYLINDERS Reground, new pistons fitted, from 22/6; engines overhauled in 5-6 days. Speciality, Triumph and Premier.—Below.

WELDING, also brazing, by experienced workmen. Spare parts supplied.—W. R. S. Fiddian, Bush Lane House, Bush Lane, E.C.4. [5575

J.A.P. and Blackburne Engine Experts; reasonable and reliable.—Kingsbury Garage, Edgware Rd., Hendon. 'Phone: Kingsbury 134. [4209

FOR Expert Engine Overhauls, cylinder grinding, new pistons, and spares, Hedley and Co., Forth St., Newcastle-on-Tyne. [1337

WORN Pulleys Turned, 5/-; aluminium cooling fins fitted to valve caps, 3/6; prompt return free.—Peckett, 34, Cecil Av., Barking. [4916

P. and M. Gear Specialists. Any 1911 to 1921 P. and M. gear repaired promptly and efficiently.—A. S. Phillipson, Engineer, 1a, Hildn St., Grimsby. [3849

WELDING.—Broken cylinders, crank cases, etc., made like new; work guaranteed; quick return.—Tonge Welding Co., Morton St., Middleton, Manchester [6302

ROC 2-speeds Overhauled. Humber, Rex, Matchless, Vindec, Aldays, Millenium, Campion-Jap, Quadrant spares stocked.—Connolly, Carmelite Rd., Coventry. [X5310

ENAMELLING, Plating.—Tanks enamelled as before handle-bars, etc., plated.—Send to Murray's Plating Works, Union St. Coventry. Platers and enamellers to the trade. [0024

CYLINDER Grinding, new pistons, etc.; accurate and highly finished work; prompt delivery; price list on application.—W. and F. Wills, Ltd., Engineers, Bridgwater. [0728

**Exit Racing!**

**Now to**

**BUSINESS!**

For years we have raced. with a fair splash of success, but as a friend reminds us, "every dog has his day," and this one must now scratch for a living. Racing is a fine game, it bucks up your ideas, keeps you young and full of energy and pep. It makes you study the job hard and provides you with invaluable experience. in fact the attributes of a successful racing man seem similar to those of any other kind of successful man.
Well, all that is for you now, we've settled down to business.

**WHAT CAN WE SELL YOU?**

We handle a very desirable string of Agencies. Do you want anything from this list:—

INDIAN, VELOCETTE, RALEIGH, NORTON, SCOTT MARTINSYDE, QUADRANT' LEVIS, G.N. and LAGONDA CARS?

We sell for CASH, EASY PAYMENTS, or will take your old machine —in EXCHANGE.—

**VICTOR HORSMAN, Ltd.**
**7, Mount Pleasant, LIVERPOOL.**


## REPAIRERS.

SPEEDOMETER Experts.—Repairs to all mak Stewart repairs a speciality. New and second-h sets in stock.—London Speedometer Co., Kramer Me Earl's Court. [4(

FRAMES.—Repairs and alterations; special fra and tanks built, any design; enamelling plating.—A. Pilkington and Co., 390, Lichfield Birmingham. [8

ALUMINALLOY Pistons.—Our pistons signa efficiency for 20,000 miles. Cylinders grou pistons fitted. Trade supplied.—Commercial Engineer South St., Keighley. [3

CYLINDER Grinding, new pistons, rings, gudgeons, 85 mm. J.A.P.'s, etc., 29/6; other si on request. Aluminium pistons if desired.—Vul Engineering Works, Walsdeo. [9

WELDING.—Broken flanges, aluminium crank cas cracked water jackets, valve seatings, welc and machined complete; scored bores filled in a ground to existing pistons.—Below.

CYLINDERS Reground, new pistons fitted comple in cast iron or aluminium.—West London We ing Co., Essex Place, Chiswick. 'Phone: Chisw 536. [04

CYLINDERS Reground, accurate finish, compr sion guaranteed; Triumph, Rover, Premier, 35 2¾h.p. Douglas, 25/-; 70 mm. bores, 30/-; rings a gudgeons complete, twins low price.—Below.

PISTONS, all patterns, oversize specialists, l price.—Below.

PISTON Rings, oversize or slip-cut, 2/-; standar 1/6; return post; none better. Thousands testimonials.—Patent Rings, 30, Wigan Rd., Atherto [51

TRIUMPH Cylinders Reground and fitted with genu Triumph oversize pistons, complete with rings a gudgeon, 40/-; J.A.P., Rover, B.S.A., etc., same pri Compression and accuracy guaranteed.—Below.

WE Specialise in repairs, and guarantee same; co plete overhauls, machining; any part made to p tern or drawing. No waiting.—Harvey's, 47, Son Lambeth Rd., S.W. (near Vauxhall Station). [42

ARMSTRONG and Sturmey-Archer Gear Specialis Repairs while you wait.—Tavistock (below).

ARMSTRONG and Sturmey-Archer Gears complete assembled for 6/- in 2 hours.—Tavistock (below)

ARMSTRONG and Sturmey-Archer Parts at c prices by return of post.—Tavistock (below).

GEARS, shafts, valves, etc., for car or cycle, mac promptly.—Tavistock (below).

GEARS.—Send all gear repairs and replacements Tavistock Engineering Co., 254a, Portobello Rd North Kensington, London 'Phone: Park 643. [37

F.N. Repairs our Speciality. Cylinders rebored a light pistons fitted for increase of power.—Below

F.N. Frames and Tanks Cut Down for lower seatin position.—Below

GEARS, 2-speed, for 4-cyl. F.N.'s.—Earls, Lt Athenæum Works, The Vale, Hampstead, N.W. [458

PISTON Rings, best quality, all makes, 2/-; valve 4/-, post free.—Denham and Bottomley, 22 Manningham Lane, Bradford. [530

YOUR Tank re-enamelled; makers' colours, correc designs, transfers, guaranteed; handlebars, etc plated; lists.—Park Works, 1a, Paradise Rd., Rig bury, N.5. [602

COULSON Repair Specialists. Spares for all model stocked. Trade inquiries invited. Tube bending welding, brazing, and enamelling.—H.W.H. Engineerin Co., 40, Old Town, Clapham, S.W.4. [253

HARLEY-DAVIDSON Repairs and Overhauls.—W are now able to put work in hand without d lay; skilled staff under carefnl supervision.—Harley Davidson Motor Co., Ltd., 74, Newman St., Londo W.1. [004

WE can bring your machine up-to-date and mak it into a countershaft model by fitting a ne jack, with Sturmey-Archer gear box; any machine co verted.—A. Pilkington and Co., 390, Lichfield Rd., Bi mingham. [367

WELDING.—Cylinders, crank cases, cracked wate jackets, pistons, gear boxes, broken flanges, etc. aluminium a speciality; frames, etc., brazed.—The Car Welding and Brazing Co., Richmond Rd., Carr Hal Nelson, Lancs. [386

PACK up all your troubles and forward to Bisho Engineer, 25, Cotham Rd., Bristol; parts mad to pattern or sketch; engines re-bushed from 30/- special terms to the trade; no order too small fo prompt attention. [546

CYLINDER Grinding and new pistons at cut prices We specialise in high-class work and quick de iveries for all classes of engines. Discounts to traders.— Kellett and Collinson, Ltd., Havelock Works, Gree Horton, Bradford [862

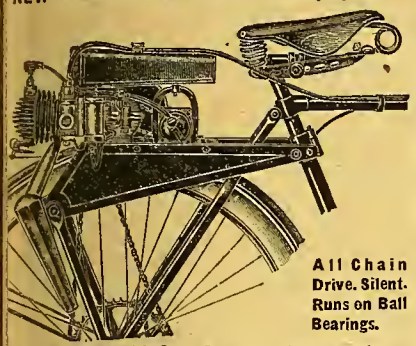
V.S. Motor Cycle Agency.—Supplying spares and over hauling V.S. 2-speed gears, which are also fitte to Matchless machines, etc. New and second-hand V.S 2-speed gears in stock.—Geiger, 24, Mansfield Rd., Gospe Oak, London, N.W.3. [553

WELDING, Welding, Welding.—Welding done by experts; cylinders, crank cases, gear boxes pistons, cranks, flanges, etc.; aluminium a speciality No cure no pay, and all work returned in 6 days.—H Heap, 105, Bissell St., Birmingham. [002

# WORLD'S CHEAPEST MOTOR

4 miles a penny, uphill and down dale.

THE NEW **SIMPLEX MOTOR** FOR PEDAL CYCLES
Fits any Cycle.

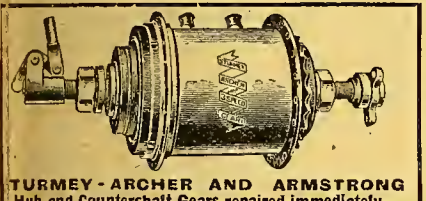


**All Chain Drive. Silent. Runs on Ball Bearings.**

Price £19 . 10 . 0 with Cycle Stand and Number Plates.

This Motor can also be fitted to Lawn Mowers, etc. Send for list and testimonials of this and MOTORPED CYCLES.

**WALL ENGINES, Ltd., 131, Coventry Rd., Birmingham**
London Agent: F. Hucklebridge, 133, Sloane Street, S.W. 1
(Road demonstrations given.)



**TURMEY-ARCHER AND ARMSTRONG**
**Hub and Countershaft Gears repaired immediately.**
Every part for all types actually in stock. No waiting. Price List and Instruction Sheet by return of post. Usual trade terms. Send repairs to Putney Station, L. & S.W Rly.
**CROMWELL ENGINEERING Co**
327, PUTNEY BRIDGE ROAD, S.W.15.

# HUB GEARS

**Armstrong and Sturmey Archer Replacements in Stock.**

**Wheels repaired and returned in three days.**
**Keep these prices for reference:**

Main Driver, **£1 12 0.** Axle, **£1 5 0.** Planet Cage, **£1 15 0.** Left Clutch, **7/6.** Compound Planet Wheel, **7/6.** Small Planet Wheels, **1/6.** Medium Sun Wheels, **8/-.** Clutch Cap and Nut, **8/-.** Complete Internal Gear Mechanism, less Main Driver, **£5 0 0.**

*Send for Price List.*

**. F. LEWIS, Charlestown, Weymouth.**

**STURMEY-ARCHER and ARMSTRONG**

**Hub or Countershaft Gears repaired while you wait.**

Actually in Stock—New Sturmey-Archer Countershaft Gear and Boxes spare parts. Send for illustrated list. Trade supplied. Send wheels, Hounslow L.S.W. Railway.

**COUNTY ENGINEERING CO.,**
**64 Staines Road, HOUNSLOW.**
Wires: 'Three-speed, Hounslow.' 'Phone: Houns'ow 322

**MOFFAT**

A.J.S. DOUGLAS LEVIS MATCHLESS NORTON NER-A-CAR TRIUMPH

Write or call re your new mount.

Exchanges arranged.

MORGAN 3-WHEELERS

G.N. LIGHT CARS

'Phone: 50.

**YEOVIL**


## REPAIRERS.

HUB-GEARED Machines Converted to Countershaft, or conversion sets supplied to suit all makes; gear boxes and spare parts for same in stock; recommended by the leading motor cycle manufacturers. — Sheldon Engineering Co., Bayley Lane, Coventry. Phone: 634. [3594

BLACKBURNE Spares.—Send to us the manufacturers, for all spare parts; prompt service, reasonable prices. Repairs and complete overhauls to Blackburne or any make of machine; enamelling (tanks a speciality), nickel plating, etc.—Osborn Engineering Co., Gosport, Hants. [0552

FRAME and Chassis Repair Specialists. Cut-downs, new forks, back stays, chain stays; fixed and hub gear machines converted; tube bending and machinery of every description; obsolete parts made to order; urgent jobs returned in 12 hours.—The Enfield Engineering Co., 31, Silver St., Enfield [6049

GODFREY'S, Ltd., 208, Gt. Portland St., London, W.1, specialists in motor cycle repairs of all descriptions. Completely equipped workshops at 14, Miller St., Camden Town, N.W. (Phone: Museum 2434), which afford exceptional facilities for overhauls and repairs at moderate prices. Estimates given. [0639

ACETYLENE and Electric Welding.—Broken flanges, cracked water jackets, scored bores, worn bearings built up; aluminium gear boxes, crank cases, any broken motor part welded and machined up and returned in 7 days; 14 years' experience.—Lincoln Jeffries, Jun., Gun and Motor Maker, 120, Steelhouse Lane, Birmingham. 'Phone: Central 729. [2818

WHY Throw That Old Saddle Away?—Saddles: Brooks, Lycett, in fact, any make of saddle recovered within 7 days, absolutely better than new and guaranteed, 10/6, post paid; cash refunded if not satisfied. Can we say more. Special quotations to the trade for quantities.—Sulina Garage, New Park Rd., Brixton Hill. (See our advert, under Parts and Accessories.) [5195

WE Specialise in repairs to N.S.U. engines and N.S.U. engine-shaft gears our enormous stock of N.S.U. spare parts (having acquired the company's entire stock-in-trade and patterns) enables us to supply to suit practically all N.S.U models, including the earlier types, fitted with Eisemann L.T. mag., also for the 2h.p. N.S.U engines fitted to 1913-14 O.K. machines. In ordering, it is important to submit old parts as pattern; trade enquiries invited.—Eagles and Co., Acton Hill Works, Spares Dept., 275, High St., Acton, London, [0555

IF Only the Best will satisfy you, then the Tennant Engineering Co., 238, Bristol St., Birmingham, alone can please you. Super-critical you may be, but their work will pass your inspection down to the last detail. No firm has more experience, no firm has keener workmen, no firm has greater or better facilities for turning out perfect work, and no firm will strive more to give you satisfaction. Cylinders rebored and fitted new pistons. Rebushing of every description. Engines completely overhauled and returned full of vigour and vim. Frames altered and repaired. Everything fully guaranteed and at competitive prices. Official repairers to A.C.U. and R.A.C.—'Phone: Mid. 19[illegible] [0047

WHITE and Watson, Motor Cycle Repair Specialists.—Another reduction in reboring prices. Douglas riders, now is your opportunity. 2¾h.p. and 4h.p. Douglas cylinders reground and fitted with 2 new pistons, complete, 35/- and 45/- per pair. Other cylinders at the following rates: Up to 65 mm. 22/6, 70 mm. 27/6, 80 mm. 32/-, 85 mm. 35/6, and over 37/6; 2-strokes extra. Price rings fitted to our rebores, aluminium pistons if required. Engines rebushed, rebalanced, and overhauled. Gear boxes overhauled and replacements machined. Standard pistons for 2¾h.p. and 4h.p. Douglases.—White and Watson, 80, Belvedere Rd., S.E.1 [5769

## CLUB ANNOUNCEMENTS.

*Space can always be obtained under this heading for announcements required by Clubs. Rate 3d. per word, minimum 3/-*

WEST Kent Motor Club Concert, 7.30 p.m. January 20th, Swan and Mitre, Bromley. All welcome. [5329

## PARTS AND ACCESSORIES.

NOTE: *In addition to advertisements under this heading, advertisements of Spare Parts for individual makes of motor cycles will be found at the end of the advertisements of such makes in the classified pages of "Motor Cycles for Sale."*

ALBION, 2-speed gear box; £3, no offers.—D. Finch, 47, Doods Rd., Reigate. [5408

INDIAN Spares, actual stockists, Dennis, 89, Brixton Rd., London. [5375

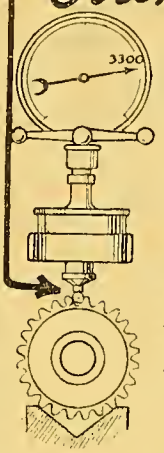
GRADO Valve Grinder, new, in perfect order, 22/-.—L. Newbigin, Alnwick, Northumberland. [5332

HIGH Efficiency Generators for steam cars, launches, etc.—R. H. Bolsover, Engineer, Eaglescliffe. [5413

3½ Humber, 2-speed, is to be disposed of in parts; offers invited.—D., 43, Rosset St., Liverpool. [5327

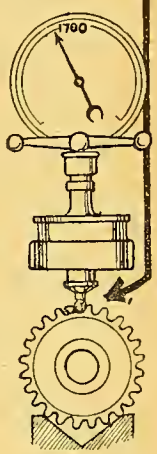
CLYNO Spares, 50% below cost, prompt delivery all parts.—Write requirements, stamp please, Claridge's, Clyno Specialities, 8, Chandos Rd., Redland, Bristol. [5501


# This is Twice as Strong as That




*Actual test showing new tooth fracturing at 3,300 kilograms — just 100% stronger than the Involute Tooth.*

To prove the thoroughness with which I tackle every repair or replacement or spare part that I undertake or sell, I illustrate a new tooth for the 2¾ H.P. Three-speed Douglas Gear-box. This is just 100% stronger, and yet is no larger than the ordinary type gear. It gives you a large factor of safety, so that if you wish you can add a sidecar to your little Douglas without fear of the extra load fracturing the gears. I have made arrangements to supply the two low gear-wheels at 9/- each; these are the wheels that have to take the greatest loads, and I recommend everyone to fit them. I can supply a complete set of six wheels for 54/-. This price does not include fitting which is 9/- per gear-box. Carriage extra.




*Actual fracture of involute tooth at 1,700 kilograms. This tooth is only half as strong as that shown on the left.*

The thoroughness with which I have solved this gear problem will give you some idea of the attention I give all Douglas Repairs. If you send me your repairs or overhauls you are sure to be satisfied, as I am not content to just replace a part, but want to see that the new part gives better service than the old one. I can entirely rebuild your Douglas, enamelling and plating, in seven days—most other repairs by return Any Douglas Spare Part guaranteed by return of post. Why not have your work carried out now in the slack time, and your bike ready for the Spring, rather than delay it till the busy time with its subsequent disappointments. Remember, I repair any Douglas or Williamson, and repair it honestly. I am an Official Repairer to the Auto Cycle Union. Official West of England Service Depot for E.I.C. Magnetos. Official Agent for Douglas Motor Cycles, and I was 10 years in their works. I am in a position to supply spare parts to any part of the world.

*This illustration shows the new-shaped tooth—black—is very much stronger at the root than the involute type which has a narrow neck like a bottle, making it unsuitable for heavy loads.*

**W. G. Coram**

OFFICIAL DOUGLAS AGENT.

**140, VICTORIA STREET, BRISTOL**

*(Late Douglas Motors, Ltd.)* *Tel. 3792.*

THE MOTOR CYCLE
*Insurance Policy*

# Testimony

THIS space will be occupied each week with copies of letters from Policy holders who have made claims. Original letters may be inspected.

*Dear Sirs,*

*I have to thank you for receipt of your cheque and wish to express my appreciation of your prompt acceptance and settlement of claim.*

*Thanking you for your attention,*

*Yours faithfully,*

***The only Safe Test of Insurance is Claims. We settle Claims promptly.***

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED**

*(Incorporating The Autocar Insurance Department. Established 1904).*

Head Office:
**77, Cheapside, London, E.C.2**
*Telephone: City 9831 and 9832.*
*Telegrams: "Autoinsure, Cent. London.*

## PARTS AND ACCESSORIES.

ROVER Gearbox, 3 speed, clutch, and K.S., £9.—6, Cecil St., East Stanley, Co. Durham. [5516

PRECISION complete, less unit, 2 speed, clutch, K.S., heavy Dunlop, drop frame, drip feed, new condition, suit single or twin, £16.—Taylor, 657, Seven Sisters Rd., Tottenham. [5494

BRAND new Brooks saddle, B.170; 39s. 6d.—Wandsworth Motor Exchange, Ebner St., Wandsworth. [5951

SUNBEAM parts, Gear, Engine, Forks. New secondhand wanted, 1914-15, 3½.—Motor Engineers, 138, London Rd., Dover. [5333

STURMEY-ARCHER 3-Speed Gear Box complete as new, £13/10.—Collins, 20a, James St., West Bath. [5326

1914 Clyno lightweight, complete less unit, £12. Genuine bargain.—Harris, 53, Regent St., Swindon. [5362

INDIAN Spares, vast stock, new and second-hand.—Dennis, the "Indian" Repair Specialists, 89, Brixton Rd., London. [5376

PALMER'S Motor Auction.—Every Thursday, 2 o'clock. Selling commission, 10 per cent. Send those parts and accessories.—Palmer's Garage, Tooting. [5881

TRIUMPH, less power unit, £7. Rex engine, frame, forks, wheels, £3 10s. Triumph engine, £4 10s. Offers. Exchange push cycles.—Tegg, Dorchester Wallingford. [5345

BOSCH Magneto, genuine heavyweight, watertight, like new, anti, £3. Stewart speedometer, complete, new, £2. Not Sundays.—Cheesman, Highfield Garage, Edenbridge, Kent. [5367

J.A.P. Spares, all types; quotations by return; also partly used cylinders, pistons, etc., aluminium valve caps, 7/6 each; inquiries invited.—V. M., 13, Ashmount Rd., South Tottenham. [5378

1921 Senspray Lightweight Carburettor, straight copper exhaust for Scott, 6-volt 40-amp. chloride accumulator, ancient low-tension magneto.—Particulars, Scott, Hillsboro', Westfield, Harpenden. [5387

MISS DOOLEY.—Clyno spares: Please note that I have a very large quantity of these in stock, and can supply cheaper than anyone else. They are all new, and prompt despatch of goods is assured. Try me for prices.—Below.

MISS DOOLEY.—Helmets, Helmets, Helmets. New soft leather lined chamois, with ear flaps and straps, 6/- each, postage free; reductions on quantities. Also new shop-soiled helmets, same style, 3/- each, post free.—Below.

MISS DOOLEY.—New Enfield mudguards, late pattern, front 15/-, rear (in two halves) 10/-, carriage extra.—Below.

MISS DOOLEY.—Patches. Tins of 50 prepared patches, 3/ per tin; reductions on quantities; postage 6d.—Below.

MISS DOOLEY.—Douglas 4h.p. withdrawal bolts, complete, 3/- each, or nut, cone, and washer, 1/- per set.—Below.

MISS DOOLEY.—A few khaki No. 127 P. and H lamp sets left, new, complete with brackets, 35/-; also a few Lucas rear lamps, new, enamelled black and N.P., 4/- each; postage extra.—Below.

MISS DOOLEY.—New Steel Cutters to cut up to ⅛in. Steel. Price 1/6 each. Postage 6d.
Please apply to Miss E. Dooley, 33, Killyon Rd Clapham, S.W.8. [5525

PAIR Triumph Wheels, 45/-; pair wheels 28×3 fitted ⅝×⅜ sprocket and expanding brake, new, 45/-; Brooks saddle, 30/-; Bosch magneto, 50° twin anti, 45/-, 1921 Amac, 1¼in. induction, 45/-; lightweight Amac, new, 42/6.—Kennard, 75, Yerbury Rd., Holloway, N.19. [5386

INDIAN Front Forks, gear boxes, and engines, and all parts for same.—Below.

INDIAN Intake Domes, carburetters, magnetos clutches, kick starters.—Below.

INDIAN Carriers, chains, and guards, springs sprockets; in fact, everything for 7-9h.p.; all parts absolutely new.—Dennis Accessories Stores, 89, Brixton Rd., London. Specialists in Indian Repairs 'Phone: Brixton 3129. [1195

BARGAINS.—Reliable mechanical horns, complete H.B. fittings, very loud, 8/6, postage 1/-.

FOOT Pumps, folding stirrup, long connection, 3/-, postage 9d; above brand new.—Wem Motor Co., Wem, Salop. [4546

GEAR Box, 3-speed and clutch, latest type; price £11/10.—Sinclair, Room 7, 32, Charing Cross, London. [2595

STURMEY-ARCHER Gear Boxes, brand new; in stock.—County Engineering Co., Hounslow [051[illegible]

TRIUMPH Brand New Pistons, complete, 18/6; cylinders with guides, 75/6; exhaust valves, 4/-.—Below.

BACK Carriers, 14/-; silencers, 12/6; back stands, 12/6; chain cases, 12/6.—Below.

BROOKS B150 and B170 Saddles, like new, 25/-; springs, 1/6; Triumph seat-pillars, 2/3.—Below.

SATISFACTION, or cash returned in full.—Harvey's Garage, 47, South Lambeth Rd., S.W.8 (near Vauxhall Station). [4853

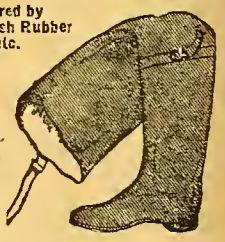
JUST THE THING FOR WINTER

LEATHER JERKINS

These leather jerkins are made from superior quality tan leather. Very soft and pliable, fleece lined and double stitched. They can be worn either over or under your overcoat. These goods could not be produced, even on the present slump prices, at less than 30/- each. Stock is not large, and when cleared cannot be repeated.

**10/- each**
**Postage 1s. extra.**

RUBBER HIP BOOTS
Manufactured by North British Rubber Co., Ltd., etc.



THESE GOODS ARE QUITE NEW AND NOT OLD SURPLUS STOCK

Sizes: 7, 8, 9, 10, 11, 12.

SENT ON 7 DAYS APPROVAL AGAINST REMITTANCE.

Per Pair **12/6** Carriage 1/- Extra.

"A BOON TO THE MOTOR CYCLIST"

ORDER THE
*The Name.* ELITE RUBBER Co. LTD Tyre Specialists *The Firm.*
WAY
LONDON'S LEADING TYRE HOUSE,
264-266, Vauxhall Bridge Rd.,
Victoria, S.W. 1.

Telephones:
Victoria 6553 and 6554.

THE MOTOR CYCLE

ESTABLISHED IN 1903

FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## A Straw in the Wind.

ONE feature of our pages which is quite an index of motor cyclists' requirements is the section devoted to "experiences wanted."

From the last few weeks it may be definitely deduced that there is a strongly reviving interest on the part of would-be purchasers. One month of the new year only has passed, and we find an increasing flow of requests for experiences of the various machines which our querists are weighing in the balance before making their choice for 1922.

It is to be assumed that practically all making use of this feature seek definite information relating to machines which they contemplate buying. A big increase in the number of such enquiries indicates unmistakably an increasing number of purchases. The inference is to be drawn, then, that demand, thanks to the approach of spring, is once more tending to get back to normal. This view is supported by reports received from prominent people in the motor cycle industry, and it is firmly believed that the tide of depression has indeed turned.

The new situation in Ireland is also tending to improve the outlook. Ireland has always been a great motor cycling country with live clubs and keen sportsmen, and a settlement of political differences will undoubtedly revive the motor cycle movement in that country. In pre-war days a large number of machines were sent across the St. George's Channel, and it is to be hoped that in the near future the Emerald Isle will regain its proper place among motor cycling nations. The youth of Ireland has always been associated with healthy sport, and with the renewed activity of the clubs the old brigade of motor cyclists will be augmented by a large number of recruits. The more satisfactory conditions now prevailing in Ireland are already having the effect of levelling up exchange.

## The Term "Service."

AN essential plank in the platform of every efficient works organisation desirous of building up a lasting business is good service to the buyer.

In the case of an intricate piece of mechanism such as a motor cycle, by nature complicated, highly stressed, and demanding intelligent management (comparatively speaking, be it understood), "service" necessarily becomes something more than a mere selling organisation. It is incumbent upon every works to take a maternal interest in the future welfare of its products, and, perhaps, extend its guardian spirit over many of its clients, if an estimable name in the world is to be regarded as an asset.

The man who buys a machine should have a justifiable belief in his right to expect its almost unfailing readiness to take and use the road; the factory should encourage that belief, and should make it a matter of pride that from its point of view no blame can be attached for any machine being off the road perforce.

If a rider needs an urgent spare part and his machine is unrideable until it arrives, that machine stands idle as a monument to its dependence on the parent factory; each day it is out of commission through delay in the spares service is an evidence of parental neglect. The moving spirit of works spare and repairs departments should be promptness, to keep machines on the road, not to hold them off it.

These things are not thoroughly recognised even to-day; complaints, sometimes of large firms and other times of smaller factories, still reach us, telling of machines held up for want of some small replacement or some minor repair.

In these days, when good service must be fostered, managers should recognise that every machine running on the road is a testimonial—every mount in dock an unnecessary time is a reflection upon the works organisation.

An Index to the advertisements in this issue will be found on the page facing the back cover.

### A Good Waterproof.

IF I had gone to Exeter this last Christmas I should have tried out an Aquamac suit which has resisted some frightful downpours of comparatively short duration in a fashion which inspires confidence. I have no financial interest in it, but feel a certain paternal fondness for it, as its designer took a tip from me and abolished instep straps.

Instep straps, as we all know, turn brittle after a few wettings, and presently come away from the gabardine stuff. So the Aquamac man has substituted chains, riveted to small metal attachment plates very securely fastened to the fabric. He has devised another cunning wheeze, consisting of a concealed rubber tube edging to both coat and trousers. I am not sure that I comprehend the why and wherefore of this dodge. Possibly it is planned to assure a good supply of tubing in the event of a broken petrol pipe or chafed electric cable. But I guess that he knows how in 1921 I paid an outside price for a waterproof suit with the pukka Savile Row cut. After a few weeks, with repair outfits, sandwiches, spanners, spare tubes, spare belts, and other impedimenta in the pockets, this suit looked like nothing on earth. I augur that this pneumatic edging is designed to preserve the shapeliness of the garment. At any rate, it has had such an effect up to date.

### A Novel Lamp Fitting.

THE rider whose only night work consists of occasional long-distance rides is often faithful to the gas lamp. Its chief defect is that in short distance work it occasions us the maximum amount of bother and expense. If I want to ride from Coventry to town, gas is as good as anything else, and cheaper; but if I want to ride five miles, returning some hours later, and I repeat the process several times a week, gas annoys me. There must be a practical motor-cyclist on the Siemens staff, for they have just brought out a novel gadget which exactly meets the case. A grubscrew locks an insulated bracket to the burner support of an acetylene lamp. To this bracket is pivoted a movable arm carrying an electric bulb. The arm has two positions, viz. :—

(1) Horizontal, level with the base of the burner support. In this position the electric circuit is automatically switched "off," and the parts are at a safe distance from the heat of the gas flame.

(2) Vertical, when the current is switched on, and the electric bulb is above the burner, and facing backwards towards the centre of the reflector.

With the aid of this cheap fitting, plus a dry battery in a leather strap-on case, a rider enjoys two options in lighting. He can use gas for his long-distance work, and when he wants to go and see his girl two or three miles away he can turn up the bulb holder and run on electricity.

### Siemens Dry Battery Lighting.

I HAVE been using the above firm's dry battery outfit of late, and in one important respect it represents a pleasant change from the last two electric installations which I have tried. Many outfits utilise bayonet bulbs (known in the trade as "S.B.C.") No bulb will stand up indefinitely on a motor cycle, and in really hard wear a winter's outlay on bulbs can rise to respectable dimensions when replacements cost 3s. or more apiece; the price of these tiny fittings is controlled by a trust. The Siemens sets employ the "M.S.C.", or "miniature screw-cap" type of bulb, familiar to all owners of pocket torches. These bulbs are made for a cheap, popular market, and cost 6d. or 8d. apiece, according to specification. They are correspondingly economical for motor cycle purposes. The Siemens people supply specially good samples in this line, and their dry batteries seem considerably more durable than the imported cells which I used prior to 1914.

### Another "Tramp" Motor Cyclist.

I ALWAYS wondered who bought the "junk" which figures so largely in our small advertisements of second-hand motor cycle bits, and my recent paragraph about riders who constructed or reconditioned machines for their own use out of old parts has brought a perfect avalanche of confessions from determined men who furnish themselves with usable machines for next to nothing. The latest is from a Durham reader, who procured a 1914 Humber of 3½ h.p., fitted it with a water-cooled cylinder off a Humberette cyclecar, mounted a Scott radiator between the bicycle and sidecar, and then proceeded to camp all over the North of England with a load of some 30 st. He thinks nothing of taking Kirkstone Pass in one piece, complete with tent and cookers on board.

### Down a Long Hill.

EVERY competitor in reliability trials is familiar with the anxiety of trying to prevent sparking plugs from oiling up during the descent of long, steep hills. For example, in the 1921 "Six Days," all the boys were worrying all the way down Countis-

**Occasional Comments.—**

bury as to whether their plugs would be foul at the foot, just before they commenced the climb out of Lynmouth. If experts have to study the point, one can guess that the average amateur often fouls a plug when he is touring in mountainous districts, especially when a heavy sidecar is concerned, and a low gear must possibly be used against compression to assist the brakes. The point is a small one, of course. It seldom worries me appreciably, as a solo man can keep his exhaust valve up, and so prevent oil being drawn up past the piston rings; but some of my sidecar friends complain rather loudly of plug-fouling down long precipices. A Surrey reader has patented a device for curing the trouble, and further claims that his gadget is an aid to cooling. It consists of a tiny automatic air valve, intended to screw into the exhaust valve-cap (which must be bored with sparking plug thread). The spring is adjusted so that it opens when the throttle is shut, but remains closed when the throttle is open.

### An o.h.v. Tool.

A FEW weeks ago I commented on the problem which the removal of overhead valves presents, especially when very strong springs are used. The paragraph was inspired by a friend, who had constructed a sort of wooden sugar loaf on to which he slipped his dismounted cylinder like a thimble on a finger. Even then he found my aid invaluable in compressing the spring sufficiently to allow the cotter to be extracted. *A fortiori*, to change a faulty spring or a dubious cotter without removing the cylinder is generally all but impossible. All that is going to be changed. At least one of the leading firms interested in o.h.v. engines has conceived a practical sympathy with amateur mechanics handling their engines, and is patenting a tool which will meet all emergencies.

### Two Engines on One 'Bus.

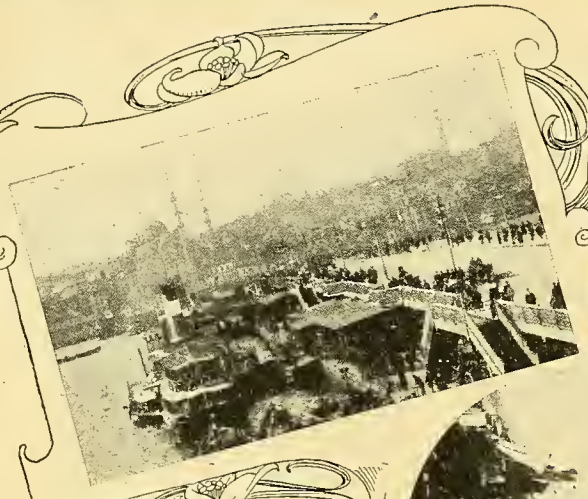
A READER of my "Reminiscences" revives the past by resurrecting in memory the original 5 h.p. Quadrant tricar, which had *two* 2½ h.p. single-cylinder engines, each driving by its separate belt its own rim affixed to opposite sides of the rear wheel. He bought this quaint beastie because his previous machine—a 2¾ h.p. quadricycle—had struck him as rather underpowered. But he found it difficult to induce the two engines of the tricar to synchronise. I should think so. My own experiences of the Quadrant tricar were confined to the first 1½ h.p. model, on which I once proceeded through Manchester hitched to the tail of a hansom cab by means of my own belt (twisted bootlace variety). I added greatly to the gaiety of a grey city on that day.

### What is a Slump?

TWO traders told me recently that they couldn't understand all this talk of a slump during the past year. One was an agent, living in a rural townlet of 2,000 inhabitants. Since last February he has sold twelve Morgans and twelve new Triumphs, besides a number of reconditioned W.D. 'buses and other second-hand stuff. The other was a small maker, whom I never suspected of building more than ten machines a week. He laid his hand on his heart and assured me that his output has averaged thirty.

A SCENE ON THE MAIN ROAD TO THE HIGHLANDS. It is rare to find a sidecar in this isolated district, near Carrbridge, when the snow lays thickly on the ground.

# In and Around Constantinople



The meeting of East and West—Galata Bridge across the Golden Horn

Looking down on the Bosphorus. The Asiatic shore in the distance.

A street in Stamboul.

"I was the daughter of Imperial Rome,
Crowned by her Empress of the Mystic East."
—*Selwyn Image.*

THERE are various semi-platitudinous sayings whose extreme truth one only realises by bitter experience. When I left England four months ago I disposed of my beloved machine and determined to do without a mount during my stay in Constantinople, but it was not long before I realised that "once a motor cyclist always a motor cyclist" is no idle saying.

### Irresistible Urgings.

At first it was not so bad, there was so much to be seen and done; then I took to stopping and looking round at every motor bicycle that passed me in the street, and, if I saw one leaning on the kerb, it was as much as I could do to restrain myself from leaping on it and driving away.

Then one day I saw "Harold."

"Harold" is really only a rather ancient Triumph, but his individuality is such that he simply had to be given a name of his own. He was standing in a dark corner of a garage near the Taxim Gardens, wedged tightly between a pre-pleistocene Wanderer and an Indian sidecar that had seen better days. He himself, I must confess, looked somewhat seedy. His front tyre was flat, dust coated his upper works, and his handle-bars drooped dejectedly. However, when cajoled into the full light of day, his shabbiness appeared to be due rather to dirt and environment than anything else, so, as I could find nothing drastically wrong mechanically, I arranged to have a trial run next day.

When I arrived at the garage, "Harold" stood forth resplendent—really, I should hardly have known him except for his somewhat quizzical air, due to a bent front mudguard. There were no numbers fitted at all. On enquiry about this I was informed that these were really quite unnecessary; certainly, a few more conscientious citizens painted on the first number that came into their heads, but the vast majority were content with none at all.

"Harold" started easily enough and we bumped away over the vile *pavé* towards Mashlak. At this period there were several broken balls in the steering head races, which made the steering somewhat stiff and difficult—in fact, just at first, before we got used to each other, I was none too happy. On the whole, however, I was very satisfied with the result of my trial, so "Harold" became my property to "have and to hold" for the sum of 220 lire, which, at the present rate of exchange, is about £33. As the machine is a 1917 model, in really capital condition except for one or two details, I consider this very moderate.

Motoring out here is a very different proposition from what it is in England. The roads are, almost without exception, atrocious, even those that pass as being very fair would be considered almost impassable at home. The streets of Constantinople and its suburbs are *pavé*, and anyone who has ridden in France knows what that means!

### Leaving the Road for Comfort.

In the country the main or military roads were, presumably, once properly made. I say "once" advisedly, as I should imagine that since their original

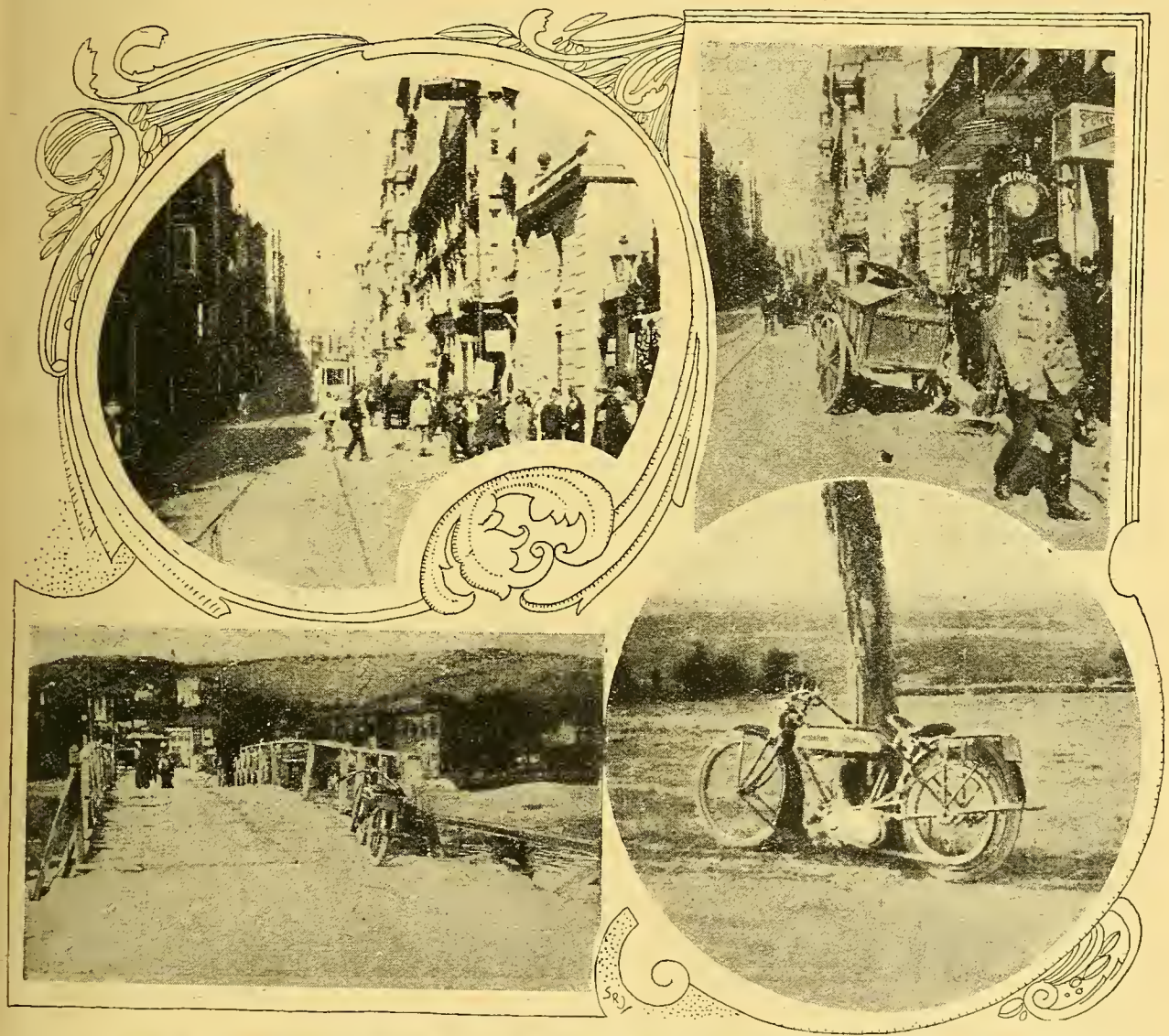
construction they have remained untouched, but, unfortunately, not undisturbed. In some cases the traffic has left the main road and rolled a track for itself alongside of it, these tracks being infinitely preferable to the road, for, whereas riding on the track may be compared to being in a small boat in a choppy sea, riding on the main road is what I should imagine it would be like in a square-wheeled unsprung lorry driven furiously long the Devil's Causeway. The country roads are, in winter, a sea of mud and impassable to motor traffic; during the summer they dry into a series of ridges, lumps, and ruts, and are only just rideable.

### British Machines on Bad Roads.

Considering the really bad condition of the roads, I think it is remarkable the way motor traffic of all kinds stands up to its work. I would like some of the numerous critics of the so-called "machine smashing trials" to see the way in which motor cycles are driven, every day and all day, over surfaces a great deal worse than those included in many of the more vigorous trials, such, for instance, as those run by the Ilkley Club. It is very gratifying for a Britisher to see that practically all the machines in use out here are British made—mostly Triumphs. Apart from Triumphs the only other makes I have seen are a couple of Rudges, a Douglas, two Indian sidecars, and three very primitive-looking Wanderers; doubtless there are others.

### Turkish Delight!

The Turk is not as yet much of a motor cyclist, but this is probably due to financial inability more than any lack of keenness on his part. On one large open space in the town one may hire a Triumph and "lap" the ground. The charge is twenty-five piastres a "lap," or about a shilling. This form of amusement is well patronised by the Turks, and suggests possi-



(Top) Scenes in the main street of Peva, the modern or European suburb of Stamboul. (Bottom) A Turkish village on the Bosphorus, and a typical view of moorland beyond Constantinople.

bilities for the amusement caterer in the seaside resorts in Great Britain. Of course, the "course" would have to be on private ground, otherwise the authorities would insist upon each rider taking out a licence. Scooters or de-tuned lightweights would fill the bill.

The difference between the riding of a British despatch rider from the G.H.Q. and a Turk is very pronounced. The Britisher slips quietly and quickly through the traffic and in half the time the Turk takes, although from the noise and expression of concentration of the latter, one might imagine him to be the faster of the two.

### Beautiful Country.

"Harold" and I have had some very pleasant times together, for, although riding itself is not much of a pleasure, owing to the state of the roads, the country round about is most beautiful. At the back of Constantinople there are miles and miles of moorland, strongly reminiscent of Scotland, and, in the autumn, purple with heather. After being bumped to a jelly for miles it is very pleasant to dismount and sit on the shoulder of some hill that overlooks the Bosphorus. Below, the heavily-wooded steep hillside runs to the edge of the blue water, and across, only just over a mile away, rises the Asiatic shore. Clinging to the hillsides and spreading up the valleys are the little brown and white villages, each with the slender white finger of its minaret pointing skywards.

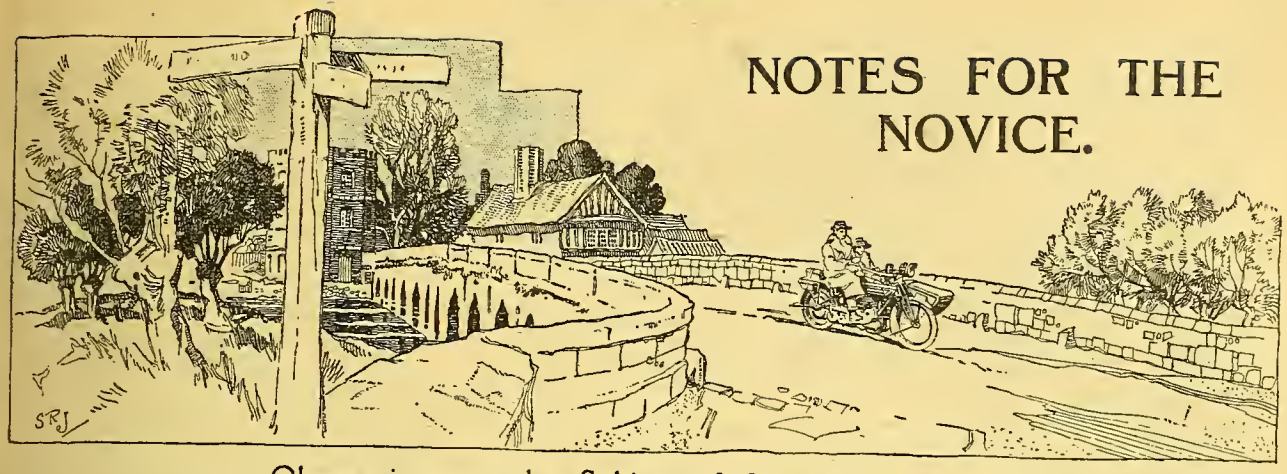
The atmosphere is so wonderfully clear that the greens, purples, and browns are almost radiant.

I have as yet done no motoring on the Asiatic side. I do not expect I shall either, as I hear that the roads are even worse than they are this side, and inland there are many large dogs that are unaccustomed, and consequent antipathetic, to strange forms of locomotion. There are also brigands.

### A Cosmopolitan Crowd.

Constantinople is a most interesting, romantic, and beautiful town, but it is not much of a place to ride in. It is probably the most cosmopolitan town in the world at present—Turks, Greeks, Armenians, Russians, British, French, Italians, Americans, and a score of other nationalities throng the streets. Unfortunately, they overflow the pavements and step under one's front wheel with the most nonchalant air in the world. The streets are very narrow and crowded with trams, gharries, motors of all sorts, ox carts, and even camels. The Turkish policemen on point duty, carry a miniature barber's pole about two feet long with which to threaten or cajole the traffic, which they really regulate very well. Petrol is of good quality and price about 2s. a gallon, oil 1s. a kilo. W.S.J.

MOTOR CYCLE SLEDGING IN AMERICA. This magnificent sheet of ice, Lake Hopatcong, N.J., has been utilised to the fullest extent by motor cycle enthusiasts. It will be observed that the machines are fitted on to the sledges minus the front wheel, the rear wheel being shod with spikes to propel the vehicle along.



# NOTES FOR THE NOVICE.

## Observations on the Subject of Sidecar Alignment.

IN the old "bath chair" days of the sidecar, just over a decade ago, there were some few excuses for the examples of faultily lined-up attachments which were to be seen.

The sidecar then was a simpler vehicle, but it had not the convenience of quickly detachable couplings, its attachments lacked rigidity, and there was not the high proportion of sold-as-a-unit outfits which are now obtainable; yet even to-day a trip on the road cannot be undertaken without encountering an occasional example of appallingly bad sidecar alignment.

### A Common Defect.

Machines leaning in upon the sidecar to an alarming degree are still to be seen on any road used by the ubiquitous sidecar—a degree which is real although it is not readily apparent to the eye of the passer-by; while complaints of uneven tyre wear indicate that many sidecars are wrongly fitted.

Yet there is nothing mysterious, nothing intricate, nothing problematical about the manner in which a sidecar should be attached, nor about the actual operation of attaching it in the first case. It is merely necessary to remember that:

*(a)* The motor cycle must be vertical or inclined outward slightly.

*(b)* The sidecar wheel must be vertical.

*(c)* The sidecar axle should be level with the rear wheel axle, or slightly in advance of it.

*(d)* The sidecar wheel should be parallel with the motor cycle.

There are riders who disagree with item *(d)* and prefer to have the side wheel pointing slightly inwards.

Whether the sidecar wheel should be level with, or slightly forward of the rear wheel, is a matter for the individual rider to decide for himself. In the forward position, there is a greater tendency to lift on left-hand turns (not noticeable, perhaps, on the heavier outfits, but worthy of consideration with the lighter types, to which these notes, intended for the man who fits his own attachment, must mainly refer). On right-hand bends, however, it gains in ease of steering.

Now, to turn from theory to practice, there are two essentials to easy and correct sidecar alignment while actually doing the job. One is a perfectly level floor, and the other is at least one assistant. Also, it is necessary to borrow two long straight-edges (over 6ft. long, if possible). A friendly village joiner might oblige. Also, borrow the family tape measure, and (if it is too short to cut in two!) another from next door. By means of drawing pins, attach a tape to each end of one of the laths, taking care that this is done uniformly. Finally, devise some sort of plumb-line—not a difficult task.

These preparations made, attach the lugs to the cycle frame, leaving the adjusting tubes just sliding loose in their sockets. Now prop the machine firmly (not on the stand) in a perfectly upright position; do the same, approximately, under the sidecar chassis.

The assistant may now start operations with the straight edge, holding it low down, but horizontally, and bearing at four points on the front and rear tyre walls. (Tyres should be board hard.)

With number two straight-edge against the sidecar wheel, the latter may be "wangled" so that the tape-measures complete a perfect rectangle. It may be worth while marking off the plain straight-edge to an equal length as the distance apart of the tapes on its fellow: but the eye can generally judge this. Check again for vertical movement, and gently tighten up.

### If the Thing is Worth Doing—

We might be even more detailed in our directions; but commonsense should fill in the blanks, and adapt them to varying conditions. But one word more before we leave the subject—if something slips (it often does) after half-an-hour of tortuous endeavour, or if a final test shows that it is not "just so," do not be content; try again. Perfect alignment is worth a lot of trouble.

In our remarks we have taken it for granted that the machine itself is in track, and that the wheel bearings are sound, for it must be remembered that these factors have a direct bearing on final results. Rigid frame machines and rigid sidecar wheels, also, are primarily referred to, for other considerations enter into the case when either of these wheels is independently sprung. For example, when the passenger enters on some makes of sidecars so constructed, one or other of the wheels immediately tends to lean inwards. The same thing often happens when the driver mounts a spring framed machine. But whether it is better to carry out alignment under load in such cases is a matter upon which it is advisable to consult the makers.

# WHAT I RODE IN 1921.

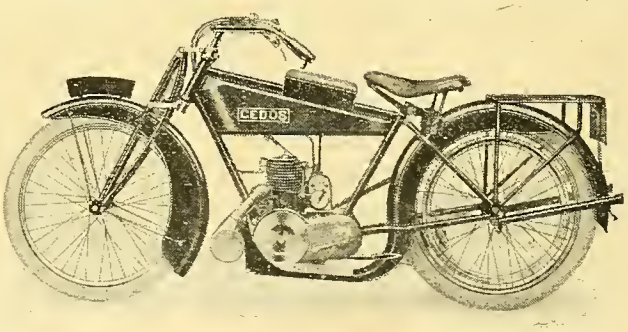
BY 'IXION'

## Experiences of Some Diverse Machines Told in Brief.

THE year 1921 was not a pleasant financial one for motor cyclists. We bought dear, and we sold—if, indeed, we were able to sell at all—quite abominably cheap. Consequently, like all wise men, I limited my purchases as far as possible, and depended, as far as possible, for new experiences on Press trials. The trade was producing plenty of new stuff, and was anxious for publicity; so my note-book reveals that I sampled the paces of some fifty different bicycles, sidecars, and cycle cars for periods of varying duration. I select for serious attention four machines which I either owned or used for over 2,000 miles apiece.

All my hackwork was performed on a baby two-stroke, a 2½ h.p. Cedos. There are so many machines of this type upon the road nowadays that I dare not acclaim my selection as the absolute best; but if there is a better machine in this class, I shall be very happy to make its acquaintance. Its reliability is absolute, no trouble of any sort or kind resulting from a full year of daily hard work, coupled with the most brutal neglect; an occasional sooted plug or choked jet were the sole blots on its faithful service, and these trivial items must rank as inevitable, whatever one owns.

Its power is quite up to the standard in this class, 45 m.p.h. being obtainable on top gear, whilst main road hills create no anxiety on bottom. Its two chief features are its extraordinary comfort and cleanliness. Devoid of oil leaks, thanks to perfect machining and fitting of all joints, it remains almost equally virgin of road stains, thanks to a light, substantial, and admirably designed underscreen, good mudguards, and efficient leg-shields. The under-shield on the Cedos is a forward extension of the rear mudguard.




A two-stroke that delighted our contributor—the 2½ h.p. Cedos.

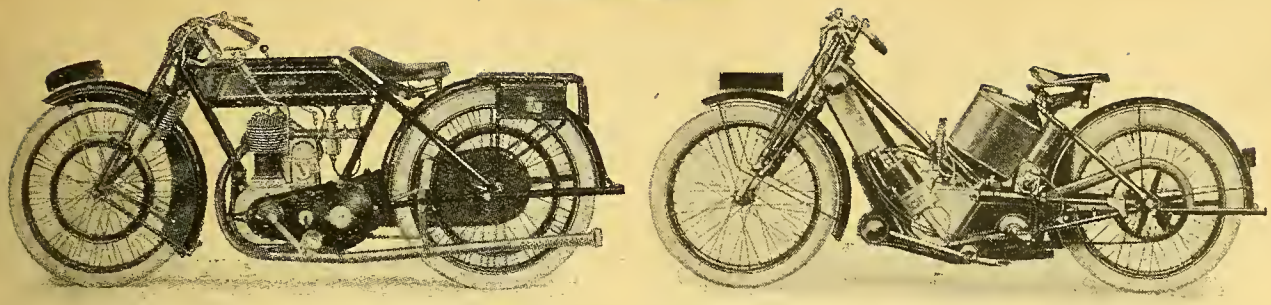
I frequently rode it in tennis flannels, in good tweeds, and even in black Sabbath garments—tests of which few motor cycles are worthy. Its comfort demands a more technical analysis than I have the knowledge to execute, and I have never owned a lightweight which I cared to hog over bad roads as I hogged this Cedos. The one and only criticism which I can pass upon it is that its carburetter was never worthy of it; the fuel consumption was too high—just under 60 m.p.g—and the response to the control levers was never the same on two consecutive days.

### A Sporting "3½."

Next in order of gratitude I must rank a sports Sunbeam, specially geared rather low to compensate for my clumsy driving in freak trials, and to permit of sure climbing when a neglected engine dropped a little tune. If this machine had ever stalled me by the road, I should have felt the same amazement as if the sun failed to rise one morning. It inspires the most supreme confidence, evincing a quite remarkable freedom from even the pettiest stoppages or sulkiness. Its middle gear would take a really clever rider anywhere, for the engine develops tremendous power, and, unlike some "revvers," it can pull uncommonly hard at quite low engine speeds.

A little bit inclined to be rough and coarse at its most hurried gaits, I did not press it in the way of speed, but at high touring speeds it ran very smoothly. Its main fault was the location of the gear quadrant, which had a sharp corner just where one's knee palpitated on bad going

The Sunbeam engine



3½ h.p. Sports Sunbeam and the Scott Squirrel, both of which gave good service last year in the hands of "Ixion."

still lacks a fitting which must some day become universal on roadster mounts—a variable jet, preferably equipped with handlebar control. I find that a sports 500 c.c. seldom averages more than 50 m.p.g. if it is driven hard on the single jet inserted by the factory tuner. It is absurd to fit a fixed 100 m.p.g. jet, which promptly robs the engine of all the vim and vigour constituting its special charm. But if a W.S.R. or Sutton & Pocklington device is incorporated, the mileage per gallon rises to 70 or 80 on the fastest runs, for the big jet opening is only needed uphill.

### A Two-Stroke Twin.

My pleasantest speed experiences occurred on a Scott Squirrel, which is one of the most refined mile-a-minute 'buses on the surface of the earth. Two factors contribute to the delight of its hurry. The first is the well-known Scott frame—not forgetting the fork. As all practised riders are aware, the glutinous qualities of the Scott chassis—whether in speed cornering or in mere tearaway dashes over moorland tracks or pot-holed tar—are the envy and the despair of nearly every rival designer. For comfort, steering, and safety, it is as nearly peerless as any competitive article can hope to be; and it is obviously useless to own a super-engine if the frame makes you nervous about opening the throttle except on those rare occasions when you find a perfect road in perfect condition. Secondly, the torque of a twin-cylinder two-stroke is so smooth that the Squirrel's speed does not set you wondering whether a crumpled connecting-rod is going to emerge sideways out of the crankcase at any moment; and the high gear ratio permits you to touch railway speeds without revving the engine up to its kicking point.

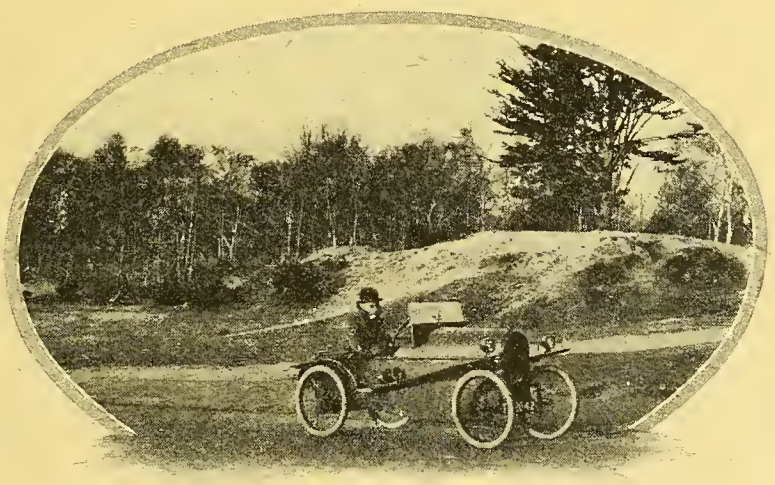
### On Four Wheels.

The last machine is in quite a different category, being a 7 h.p. Carden cycle car. This is the quaintest little beast. It really consists of an auto-axle and a forecarriage. All the power unit is balanced like a seesaw across the solid rear axle, and the rest of the chassis is a mere projection, carrying the passengers, front axle, and petrol tank.

But, my sainted aunt, how it goes! There can hardly be anything on four wheels which does so much work on top gear, and there are very few motor vehicles which run more sweetly at about 35 m.p.h. The whole outfit costs less than a good many motor bicycles, so that one does not expect roomy coachwork, or ample luggage capacity, or notable refinement of detail. On the other hand, nothing falls off. Nothing breaks. Nothing goes wrong. The little beetle-nosed projectile bobs about ordinary roads just as fast as anything else could do, and is quite as reliable. You only feel dissatisfied with her if you adventure into precipitous areas, where the low gear ratio may prove too high, or if you challenge more powerful projectiles along level straights. She is perfectly content to be treated like a door-scraper. Oil in the box above the engine and petrol in the tank under her snout is all she asks for. Give her those, and she will serve you loyally for a year and a day without complaint.

Extraordinary value for money must be my verdict upon her. I dare not say that there is very cosy accommodation inside her for two big people.

On these four machines the bulk of my 1921 mileage was accomplished. Of others which came into my hands for such beggarly distances as a few hundred miles there are several which I hope may figure twelve months hence in a page headed, "What I Rode in 1922."



A small four-wheeler used by "Ixion" as his passenger machine—the 7 h.p. Carden

In conclusion, I commend two gadgets to the observation of the faithful. One is the well-tried W.S.R. variable jet, which should nearly halve the petrol bill of any hard rider. The other is the B.T.H. Sparklight set, which gives no trouble, and furnishes ample illumination for a lightweight machine.

# LAKE VYRNWY

On the road round the south shore of Lake Vyrnwy.

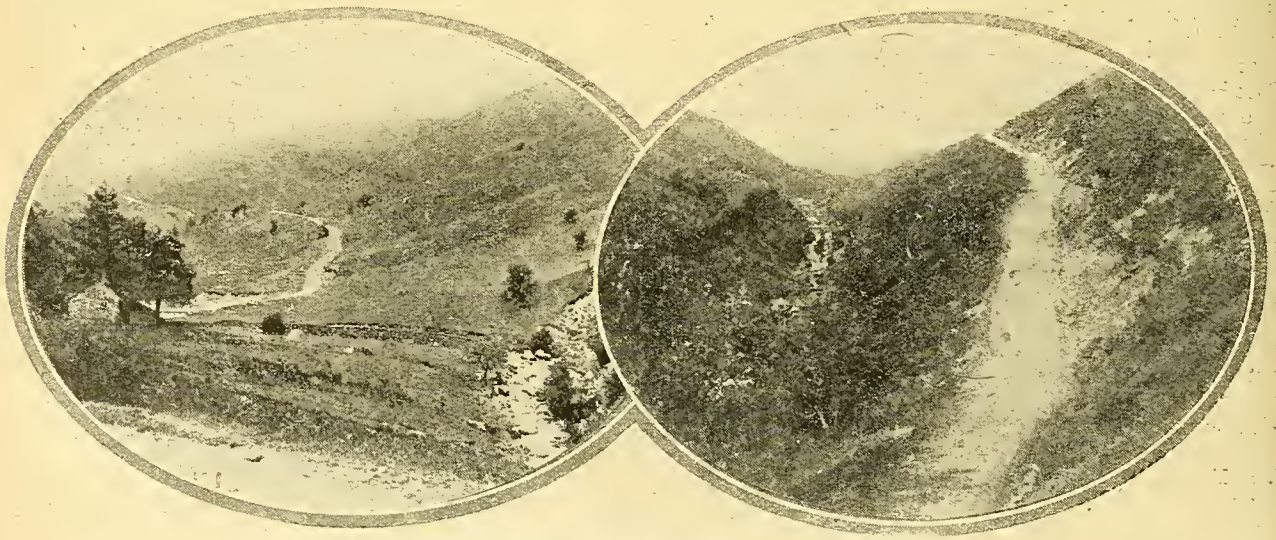
Lake Vyrnwy Hotel, situated in an ideal position overlooking the lake.

## An Unspoiled Beauty Spot in Central Wales.

IN the very heart of the Berwyn Hills of Central Wales there lies, concealed and secluded, a neglected lake. The word is used comparatively, for, while thousands of motor cyclists are familiar with North Wales, with its passes and lakes and peaks, very few have had any acquaintance with Lake Vyrnwy (pronounced *Vern wee*).

The difficulty of access is perhaps the main reason of this negligence, and Vyrnwy is never advertised. No one is ever urged to go or tempted by glowing descriptions and attractive posters. But those who penetrate to that quiet hollow of the mountains are made wonderfully welcome.

The easiest approach is from Llanfyllin, on the border of the great Shropshire Plain, and the road runs almost due west right into the hills. From Shrewsbury the Welshpool road is followed for some four miles, then a side road leads to Llanfyllin, but it is not till the neighbourhood of Llanymynoch is reached that the name of Vyrnwy appears on the signboards. At Llanfyllin the hills are touched, and the roadway thereafter winds about the valley and climbs the slopes of the hills with little more purpose than that of reaching Vyrnwy somehow and some time; but the scenery is magnificent if the going is somewhat rough. Gradually the way rises, steeply at times, till



TWO LITTLE-KNOWN OUTLETS FROM LAKE VYRNWY.

A portion of the Bala Pass which leaves the lake at its northern end, and entails heavy going.

The way from Vyrnwy to Dinas Mawddwy, emerging at the top of Bwlch-y-Groes.

Lake Vyrnwy.—

the highest point is gained, whence there is a grand vision of the wide hills, and far away westward the shimmering line of the lake under the guardian majesty of the Aran Heights.

From this point there is a long downhill run of a mile and a half, with a sharp bend near its centre; thereafter a slight rise to the lake.

### First Sight of the Lake.

Should the visit be made after days of heavy rain, or when a westerly gale is piling the waters against the dam, the roar of the plunging cataract will be heard long before the lake itself is reached, and the sight is a memorable and impressive one, as the torrent leaps down a sheer fall of a hundred feet to the valley.

A roadway crosses the dam and encircles the lake, a run of eleven miles. This circuit should be made at leisure, for the changing scenery as the western head of the lake is neared is very beautiful. On the return toward the east, the Lake Vyrnwy Hotel is seen high on the hills above the dam. This is the only hotel in the district, although some accommodation may be secured in the little village of Llanwddyn in the valley. The hotel is choicely situated, with a long gradual climb from the road at the lake side. Perhaps the finest view of the lake is that obtained from the terrace in front of the hotel.

While sunny weather adds immeasurably to the pleasure of a visit to Vyrnwy, stormy days reveal a beauty of grim and sombre majesty that repays the sacrifice that otherwise the storms demand, and full streams from the hillsides and down the western valleys carry with them their own reward.

From this mountain hollow there is a quite passable escape over the hills to Lake Bala. It is steep in parts, narrow, and far from straight, but with ordinary care may be safely negotiated. The rough surface and the water channels that intersect the path are the most adverse features. These channels are worse on the descent to Bala.

More southerly yet is another outgoing from the Vyrnwy valley to the summit of Bwlch-y-Groes, a wilder and more strenuous way and wisely regarded by most as impossible; but it is a way all the same, and some have had the temerity to take it, with varied results. This route was taken by competitors in the M.C. and A.C. trial of 1920, and was marked on the route card as Boydell's Playground.

To see Vyrnwy to the full one must linger there and be content to leave the road and make excursions on foot up the watercourse at its western end or over the hills to the east.

The building of the dam that created this lake is an instance of man's improvement over nature's work, or, rather, man's co-operation with nature in working improvement schemes, both to the advance of natural beauty and the utility of man. ALLAN PHILLIP.

IN THE HUNTING FIELD.

An animated scene at a recent Midland meet to which a big number of motor cyclists journeyed. Many of them afterwards followed the fortune of the field from the by-roads and lanes.

# MAP READING FOR MOTOR CYCLISTS.

## An Occupation for the Sidecar Passenger—Use of the Compass.

LOSING the way in foul weather and in a strange land is one of the most trying experiences that can fall to the lot of the motor cyclist. Asking the way is humiliating, to say the least of it, and in nine cases out of ten leads to further bewilderment. Official guides are useful folk, doubtless; but you do not find them at every signless road-crossing. Personally, I do not think I have come across a score of these gentlemen in the course of ten years' touring.

Touring without maps is almost as shiftless as navigating without charts. Plotting out a tour is, or should be, a preliminary pleasure; when actually on the road, the use of the map is a source of continual interest.

First, as to the choice of these necessary things.

For general purposes (*i.e.*, for merely getting about) one cannot do better than buy the Bartholomew "half-inch" and make free use of the scissors to cut up the sheets so that only those portions which cover the district in which one is immediately concerned are carried.

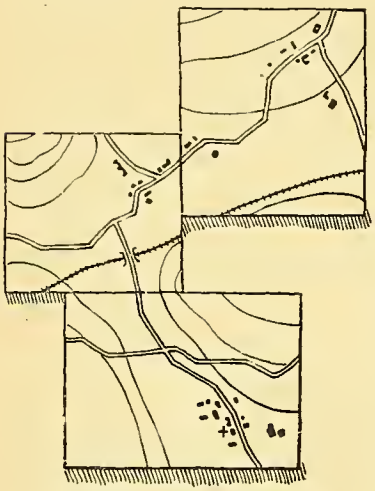


Fig. 1.—Map sections set to cover district under survey.

I find it convenient to mount these pieces on cardboard: they can be referred to in stormy weather without trouble, cannot be torn, and are readily placed side by side to get a continuous plan of the route (fig. 1). The "one-inch" Ordnance Survey, on cloth and in sections, is useful for short runs, but unmounted paper maps are quite uncontrollable.

### Maps in Sections.

Next, with regard to the use of maps on the road. The sections can be carried in a map-case of military pattern, slung round your shoulders; or, if on cards as suggested, in an ordinary satchel. (A set of useful road maps on cloth and in a case is published by the proprietors of *The Motor Cycle*.) Should a sidecar be used, with an intelligent passenger, the maps may be handed over to him (or her) to point out the route.

Finding one's position on the map is generally easy enough, except in fog or rain. The map should be "set"—that is, so placed that one is looking along the chart in the same direction as that in which the journey is being made. This is done either by means of a compass or by recognition of objects seen on the ground and on the map at the same time. Fig. 2 shows a village A, a wood B, and a hill C, as they appear to the observer; and fig. 3 gives the same objects on the map. In order to get the identical point of view, in this example, the map has to be reversed. The top of the hill and the village church give a rough alignment.

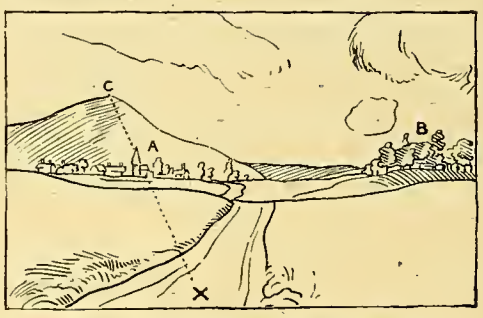



Fig. 2.—The motor cyclist's view of the section shown in fig. 3.

But in the case of a shut-in turning or cross-roads, not easy to identify on the map, a compass will be useful. We are bordering here on the more advanced stages of map reading, but the war has taught a vast number of people how to use this instrument, and the motorist will find it a valuable asset.

### Accurate Observation.

Generally speaking, a careful look-out should be kept, on map and road, for churches, bridges, rivers, railway lines and stations, canals, and post offices. The names of the towns and villages through which one intends to pass should be written down, with the distance between each. A card with this information clipped to the handle-bar is often very handy.

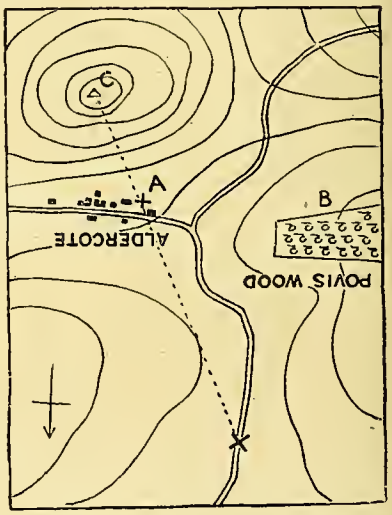



Fig. 3.—Depicts the perspective view, fig. 2 in plan form. The rider is travelling from north to south, hence the depicting of the map upside down.

For arranging a tour beforehand, the new "Popular" edition of the one-inch Survey is an excellent guide. The system of road-colouring is very clear, and the solid blue of the rivers is an improvement. Contour lines are at 50ft. intervals. These lines are somewhat faint, and it is a sound plan to mark them with red ink where they cross any of the roads you are examining. Fig. 4 shows the method in use. The road A is intersected by widely-spaced contours, and,

**Map Reading for Motor Cyclists.—** to drivers of under-powered machines, is, therefore, preferable to the road B, where the lines are close together, indicating a stiff slope.

If the tour is to cover a wide area, the coloured Bartholomew map is the best for getting general schemes and comparisons. The tinted levels give a pictorial impression of the country, thus enabling you to make a rapid choice of roads. Third-class roads, except for short distances, should be avoided, as should big towns in manufacturing districts.

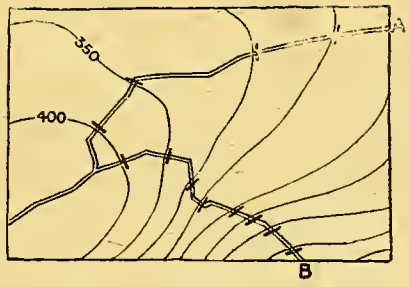



Fig. 4.—A contoured section, which reveals that road A has easier gradients than road B.

One should try to memorise maps—to get the general lie of the land, at least, in mind, together with the names of the principal villages and towns. Important turnings should be remembered.

These suggestions apply only to the use of maps as road guides. I would recommend to all motor cyclists the advanced study of the subject—a study of endless fascination and resource. Map reading is being popularised at the present day by means of several excellent handbooks. C.E.V.

# A GARAGE IN THE HOME.

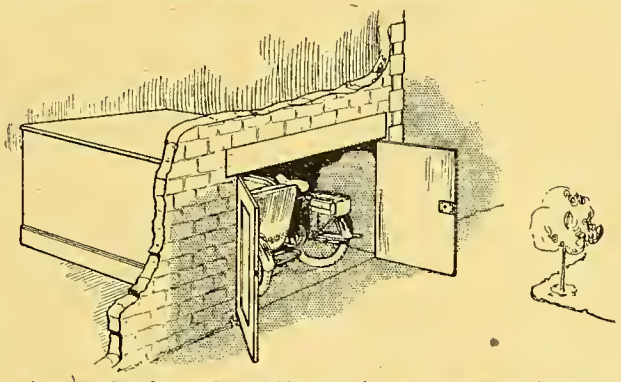
## An Unusual Solution of the Storage Problem—But What will the Housewife Say?

ONE of the greatest drawbacks to the passenger motor cycle is the difficulty of finding suitable housing for it. It is admitted that a machine which is kept a long distance from its owner's residence is not used so frequently as another which is "on the premises."

Especially is this the case in our large cities, where all kinds of expedients have to be resorted to in order to find stabling for one's steed, at home or otherwise.

The writer claims the following as a practical and inexpensive solution of this problem, suitable in many cases where an independent shed is out of the question.

Briefly, the idea is to form a cupboard in the house itself, with access from the outside only. In the first place, a lintel should be prepared. This should be 6ft. long, and may be either of wood, stone, or concrete. It should be the full thickness of the wall (which would probably be 9in.), and if of wood it may be in two lengths, each 4½in. wide.



A suggestion for storing a sidecar at home where space forbids a garage at the side or back of the house.

The brickwork should then be cut out to receive the lintel. This may, in most cases, be done without any props, providing the wall is fairly well built. It will be found most convenient to make the lintel about 7in. deep, and this will occupy the place of two courses of bricks. After this is once fixed and wedged up tight, the brickwork below may safely be taken out, but care must be taken to leave 4½in. under each end of the lintel.

### Practically an Amateur's Job.

The only part of the work which could not be readily done by any handy man is the door and frame. These should be prepared beforehand by a joiner, and should be 1½in. panel doors, fixed to a frame constructed of 3 × 3in. timber.

Having obtained these from a local joiner, the work of fixing them is very simple. In order to obtain as much room as possible, the frame should be fixed flush with the outside wall and well nailed to the brickwork. Hang the doors with 2½in. butt hinges and fasten one leaf of the door with a bolt down into the floor on the inside, and fix an ordinary door lock on the other half. This completes the outside work. It is perhaps unnecessary to remind the amateur builder that careful and good workmanship is very desirable, or that several coats of good paint is a necessity.

Inside the room the cupboard may be made to suit individual taste and the purpose to which it is proposed to be put. If expense is the chief consideration the work should be carried out in match boarding ½in. thick. The finished height above the floor being only 4ft., the top can be made to serve as a table, writing desk, or any useful article of furniture.

If something more ambitious than match boarding is required, the end and side might be formed of panels, as in the illustration.

Of course, many variations of this idea will occur to the reader. For instance, the cupboard might be made to stand partly inside and partly outside the wall, so as not to occupy so much space in the house. In that case the part projecting outside the wall would require felting to make it weatherproof, while inside it could form the lower half of a bookcase.

In other cases the recess formed by the fireplace may be used with advantage.

It will be found to be considerably cheaper than erecting an independent shed, but, of course, there is the property owner to consider. If the house belongs to the occupier there will be no worry on that score, and if the occupier is a tenant only, he should obtain permission from the owner before starting the work.

It would help to facilitate matters if the tenant gave an undertaking to build the front opening up if called upon to do so, and leave it exactly as in its original state.

# IDEAS: USEFUL AND INGENIOUS

A Selection of our Readers' Home-made Gadgets, with some Practical Hints on Work in the Garage, by "Wharfedale."

**Hints, Tips, and Descriptions of Home-made Fitments are invited for inclusion on this page. Rough sketches and brief notes only are needed, and payment will be made for all matter used. Letters should be addressed to the Editor, Dorset House, Tudor Street, London, E.C.4, and should be marked "Ideas."**

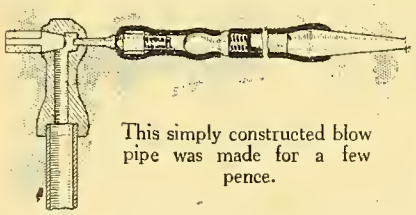
ALMOST every rider once a year makes some little gadget, originates some method of performing an operation, or discovers a new use for an everyday preparation which would be of interest to, or effect economies for, his fellow motor-cyclists.

As a case in point, I accidentally broke a cheap vulcanite adapter plug for an inspection lamp the other week. The spring contact plungers were laid bare, and the whole thing was "rocky." A twopenny stick of Prout's elastic glue from the saddler's shop provided the material for remoulding the part broken away. This preparation sticks most things together, is flexible, can be moulded with the fingers when warm, and is a non-conductor. Sealing wax might have done the trick, but it is brittle when set.

That reminds me of a repair once carried out to a Moto-Reve magneto (Gianoli) high tension brush which permitted the spark to leak through a minute cap. A sleeve, formed from a fountain pen cap, was pressed on to the brush holder and proved a great success.

## An Easily Made Blowlamp.

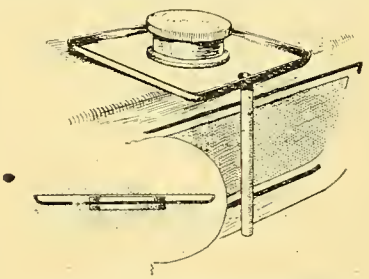
FOR many little repair jobs intense heat is often wanted. A self-blowing spirit lamp can be bought for about eighteenpence, and a petrol blowlamp may cost at least three half-crowns, but Mr. R. J. Freeman, of Coventry, sends his idea for an acetylene blowpipe made from oddments. The items in it are a pipe of $\frac{3}{8}$in. to which is screwed an elbow piece; in this elbow is screwed an old acetylene burner which has had the steatite removed and placed with a piece of iron drilled with a $\frac{1}{16}$in. hole. Opposite the burner is inserted a cycle valve plug with the blind end broken off. This is connected by rubber tube to a football adapter (a simple non-return valve obtainable at any cycle shop), this again being joined by rubber tube to a cigarette holder or pipe mouthpiece. A length of pipe connects the $\frac{3}{8}$in. pipe with an acetylene generator. Blowing down the mouthpiece, after the gas has been lit, produces the characteristic blue flame of the blowpipe, and the football adapter valve prevents gas reaching the operator's mouth.



This simply constructed blow pipe was made for a few pence.

## Protecting the Tank.

HERE is a device in the making of which the last-mentioned gadget will prove useful. It is suggested by a reader who does not embellish his notepaper with either name or address; this is needless modesty, for the gadget is quite good. It will be seen from the sketch that the device is to catch splashings of petrol from the region of the filler cap and convey them away; it consists of a 5in. square of tin with turned-up edges, which is fitted over the filler cap bush in the tank, and a rubber or leather washer fits snugly round the orifice. A piece of pipe runs away from the tray to below the level of the tank, and two blobs of solder under the opposite corners serve to tilt the tray outwardly a little. No doubt the device could be almost completely concealed by means of knee-grips.



A device for protecting the enamel of the tank from waste petrol.

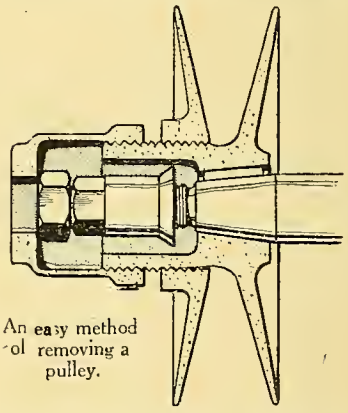
## Auxiliary Petrol Supply.

WHILE on the subject of tanks, here is another scheme, the authorship of which is wropt in mystery—except that it has apparently been evolved by a gentleman of the name of Mr. Mathew. Mr. Mathew has evidently been stalled for want of petrol on some occasion, and suggests a triangular tank inside the main petrol reservoir; this triangular affair to be pivoted in a state of unstable equilibrium. The filler cap with its gauze filter discharges into the auxiliary tank, which, when full, overflows into the main tank; thus the auxiliary supply is always replenished first. When the main tank runs dry, the filler cap filter is withdrawn, and, by pulling a knob, the auxiliary is tipped over, thus emptying its contents into the main tank and enabling the rider to carry on to the next garage.

Carrying a small auxiliary petrol supply inside the tank.

## Removing an Old Triumph Pulley.

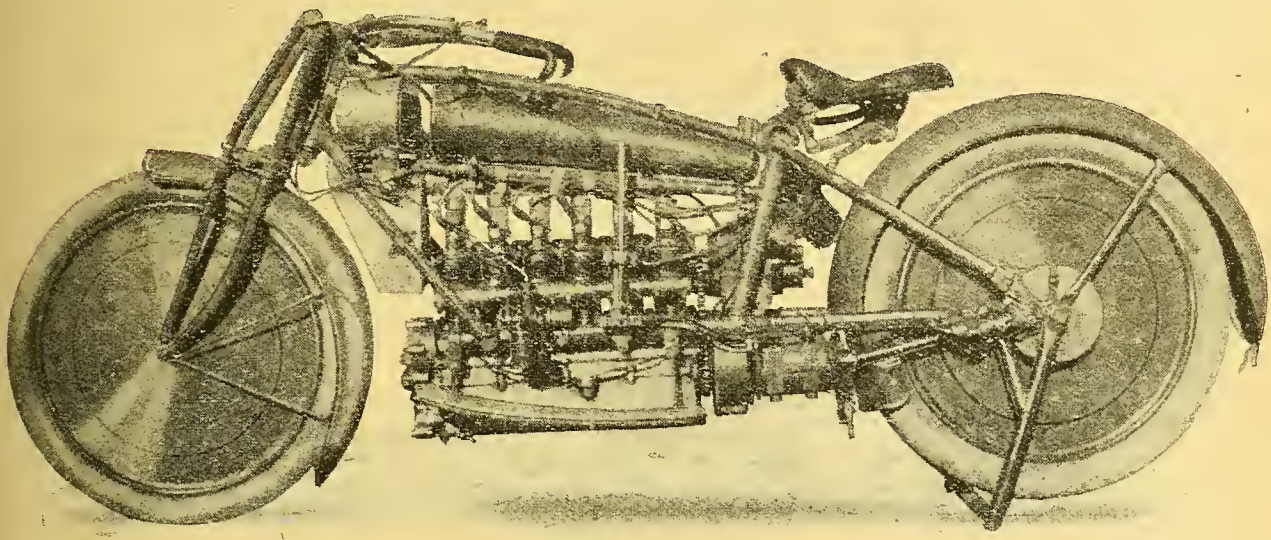
MR. L. BUCKLEY, of Stoke-on-Trent, rides a pre-war Triumph with engine-shaft pulley, and suggests this method of removing this unit when engine repairs become necessary. His scheme is to unscrew the adjusting flange nut cap, partly unscrew the mainshaft pulley nut, place a thick nut at the end of this, and screw on the cap nut again, jarring it with hammer and ring key until the pulley is drawn off the tapes of the shaft. This is quite useful, but Mr Buckley evidently does not know his Triumph. All one should do is to reverse the pulley nut, thus dispensing with the extra packing nut, etc.



An easy method of removing a pulley.

# A 6 CYLINDER MOTOR CYCLE.

## An Ambitious Machine Designed and Built by a Spanish Enthusiast.



Inlet valve side of the Spanish six cylinder motor cycle. Observe the neat layout of the transmission.

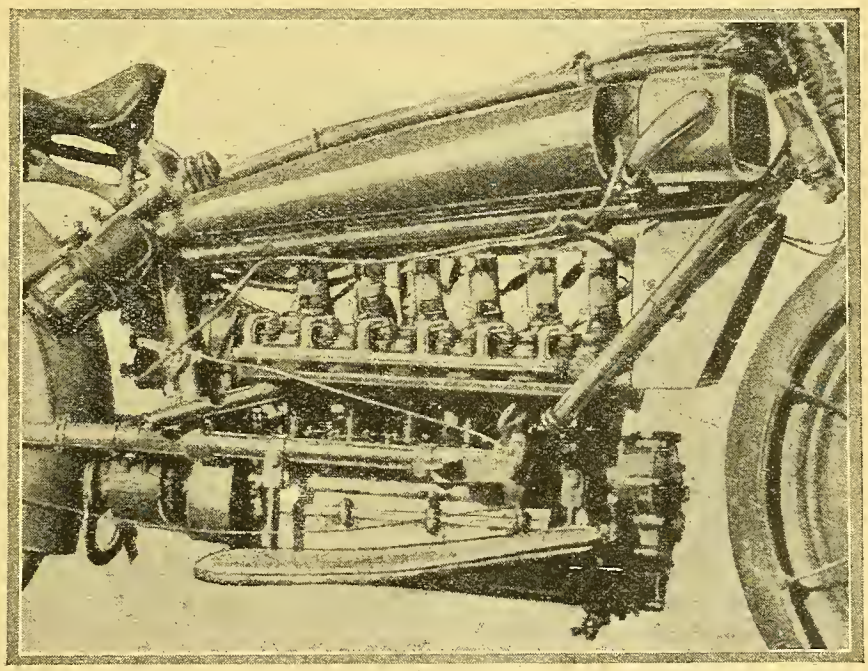
SIX-CYLINDER motor cycles are a rarity, although a few have been described in the columns of *The Motor Cycle*, the machine illustrated is interesting as being probably the most ambitious mount in the world of single trackers. The last six-cylinder motor cycle we described had a "twin-3" radial engine, which, besides being remarkably light—under 200lb., in fact—ran with a smoothness that could only be likened to an electric motor.

Designed and built by a Spanish enthusiast, the machine under review has six cylinders in line, is water cooled, has three speeds and reverse, and is shaft driven. The bore and stroke are 50 m.m. and 60 m.m. respectively, the total capacity being 708 c.c. As will be seen from the illustrations, the valves are on each side of the cylinders, the cylinder heads are therefore of T formation.

Though water cooled, this fact is not immediately apparent, as the radiator is neatly located in the fore end of the tank. The thermo syphon system is used.

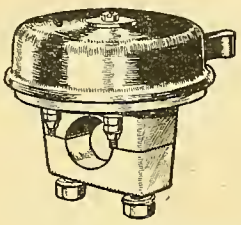
It will be observed that the engine, gear box and the various smaller units are neatly disposed, and that the machine has not the appearance of being unduly heavy or cumbersome.

The designer-builder-owner is in the fortunate position of being able to carry out his ideas of motor cycle design. He also owns and runs a Henderson, Harley, Clyno and a N.U.T. Hence his stud contains a six, a four and three twins of various sizes. Apparently our Spanish friend does not care for singles, but he certainly should have one in order that his stable be really complete



Exhaust valve side of the engine. The radiator does not detract from the general appearance of the machine.

# AMONG THE ACCESSORIES.



## Controlling Powerful Lamps.

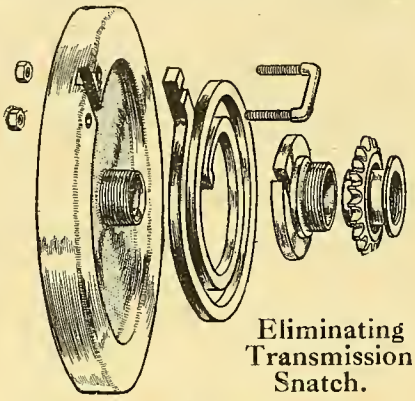
All systems of electric lighting may be controlled by the Dome handle-bar "dimmer," which will enable motor cyclists to return the courtesy hitherto more often possible to car owners only. The Dome Products Co., 292, Stratford Road, Manchester.)

## Protecting the Oil-can.

Mangled and crushed oil-cans have hitherto been the lot of the motor cyclist, who will welcome this new screw-supported type introduced by James Grose, Ltd., 4, Old Jewry, London, E.C.2. It is made usable by undoing one or both of the milled nuts.

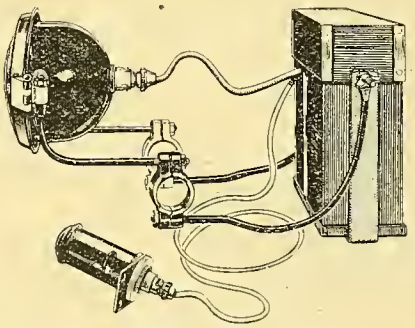
## For the Passenger's Comfort.

Made of beaver mohair and heavy wool tartan cloth, this useful sidecar rug is sold by Ramont, Ltd., Finsbury Pavement House, London, E.C.2.



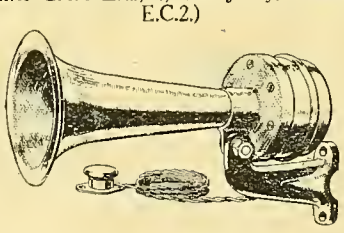
## Eliminating Transmission Snatch.

Designed for outside flywheel types of engine, the Gold shock absorber makes use of one very powerful "clock" spring. It is simple and apparently amply strong. (Harry Gold, 149, Elderslie Street, Glasgow).



## Inexpensive Electric Lighting.

Supplied at £3 3s., complete with tail lamp, this is quite a practical lighting set, complete with bracket, head lamp and battery carrier. (James Grose Ltd., 4, Old Jewry, London, E.C.2.)

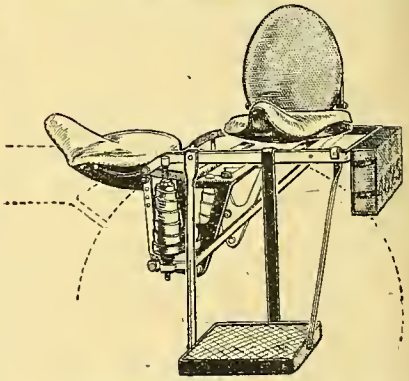


## A Powerful Electric Horn.

More suitable on account of its price (£3 10s.) and massive construction for the sidecar than the solo machine, the "Clear-Hooter" electric horn combines an exceedingly loud note with a current consumption of 18 watts. (Clear-Hooters, Ltd., Highgate Square, Birmingham.)

## Child's Folding Sidecar Seat.

Fitting into plates screwed on to the sidecar floor, this simple auxiliary seat is easily detached and folds up into a very small space. (Vivian Hardie and Lane, Ltd., 24, Woodstock Street, London, W.1.)



## Combined Pillion Seat and Saddle.

Saddle, luggage carrier, pillion-seat with a foot-rest, tool-box and tail-lamp are all suspended on one pair of volute springs on the X.L.-All "Combination" device, which is supported on the carrier proper of the machine. (John Leckie & Co., London Saddlery Works, Walsall.)

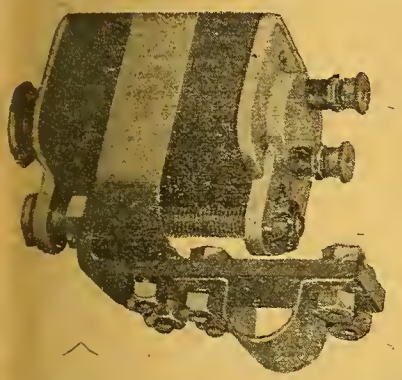
New and neat F.R.S. horn, which, possessing the well-known F.R.S. one-nut clip and no visible "twists," is distinguished by an appearance of neat solidity. It is finished in black, and in action it gives a pleasing sonorous note. F.R.S. Lamps, Vere Street, Birmingham, are the makers.

# A PERMANENT MAGNET LIGHTING DYNAMO.

## The E.H.C. Generator; Magneto Type Armature; Positive Cut-in Switch; and Automatic Tension Adjustment for Driving Belt.

ALTHOUGH the use of permanent magnetic fields and an H section armature may not offer the highest electrical efficiency, such a layout lends itself to an exceedingly simple and compact form of lighting generator quite suitable for motor cycle work.

There are many people who raise objections to this type of machine, however, on the score of the difficulty of obtaining sparkless commutation and the possibility of having back flows of current from the battery as the armature passes through its two zero positions in each revolution. To



Universal adjustable bracket and belt tensioning spring. The E.H.C. dynamo itself weighs only 5 lbs. and is 5in. long by about 3in. square.

avoid these troubles the usual procedure is to use a four-section commutator, two of the segments being dead, and of such dimensions that they pass under the brushes at the moment when the potential between generator and battery is approximately in balance.

This method of construction is employed in the neat square-shaped E.H.C. dynamo made by E. Hallowell and Co., of Lower Hanover Street, Leeds. The laminated armature is of magneto type, H section, and running on ball bearings carried in aluminium end plates, which are bolted to a tunnel made up of the iron pole shoes and their aluminium cover plates. End plates and tunnel thus form a waterproof assembly in which the armature revolves. Secured to the pole pieces by screws are the four U shaped tungsten steel magnets. One end of the armature is extended as a spindle for the driving pulley; the other end carries the disc commutator, on to which bear the two collecting brushes in the end plate.

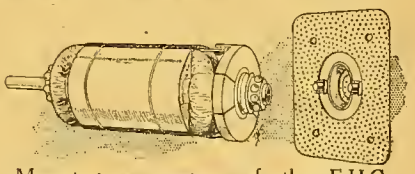
### Cut-out Without Wearing Parts.

One end of the armature winding is connected to one of the "live" sections of the commutator; the diametrically opposite section remains "dead" when the machine is at rest, but has a small projecting lug to which connection from the other end of the winding is made when a reasonable speed is attained. This connection is made centrifugally by means of a flat spring, weighted at the end, and projecting from the free end of the armature winding. When the armature ceases to revolve the spring breaks contact with the commutator lug, thus preventing a discharge of the battery through the dynamo winding.

An outpnt of about 3 amps. is given, and the dynamo may be used with either 4 volt or 6 volt accumulators, the latter being recommended; adequate lighting for a sidecar outfit is obtained.

### Driving Arrangements.

To suit motor cyclists who already have accumulator sets fitted on their machines is the special function of the E.H.C. dynamo, and with this end in view it is mounted on a special bracket capable of a wide range of adjustment. Mounted on a steel plate clipped to a frame tube is a long transverse screw, and the dynamo swings on this upon trunnion bearings carried in cast extensions of the end



Magneto-type armature of the E.H.C. dynamo, showing simple centrifugal cut-out, commutator and collector brushes in end-plate.

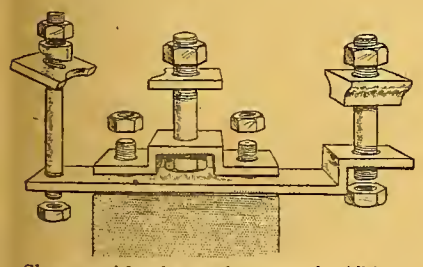
plates. The movement of the dynamo is limited by a large leaf spring bearing against the carcase of the machine and resisting the pull of the belt, thus the pressure of the spring takes up any slack in the transmission.

Lateral adjustment of the dynamo belt line is effected by means of the long screw above mentioned. The drive, preferably taken from the engine-shaft or clutch casing, is arranged for ¼in. round belt, and the armature must run at approximately three times engine speed. Complete with bracket and pulley, the E.H.C. dynamo sells at £5 15s., which is quite a moderate figure.

# COUNTERSHAFT GEAR ON AN OLD MACHINE.

## Bringing an Old Machine Up to Date.

ONE of our readers in Ireland, Mr. L. Hilton, of Dublin, inspired by a recent query regarding the fitting of a countershaft gear to an old clutch



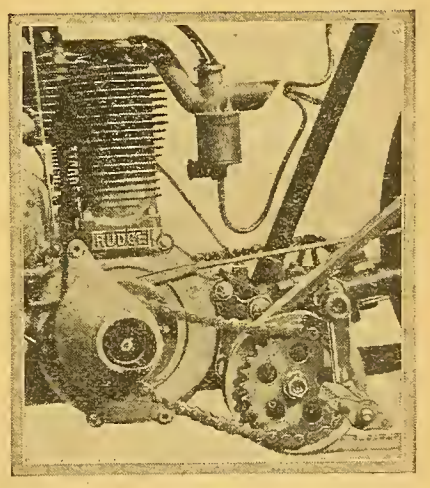
Sheet metal bracket used to carry the Albion gear box beneath the Rudge bottom bracket.

model 3½ h.p. Rudge, forwarded the accompanying photograph and details of a conversion which he carried out on his own machine, using an Albion lightweight two-speed box, which has functioned with complete success.

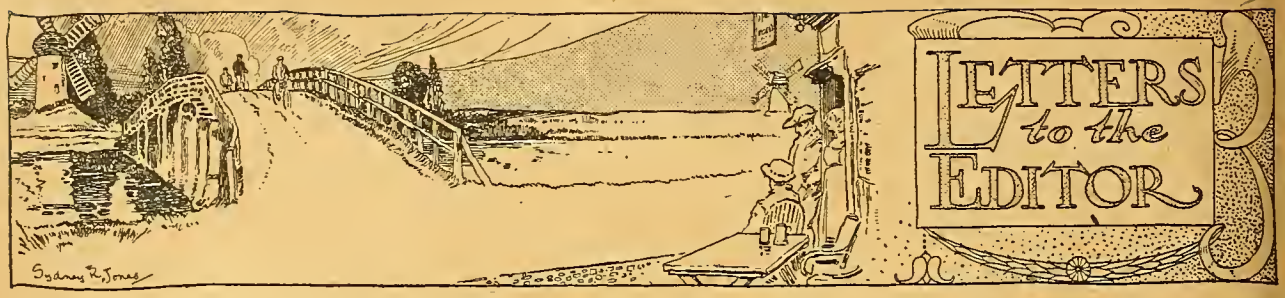
Carried beneath the pedalling bracket, the gear box is suspended from a sheet steel hanger ($\frac{3}{16}$in. material) clamped to the stays and engine lug by one $\frac{3}{8}$in, and two ¼in. bolts. Further explanation is almost unnecessary, for the sketch shows the shape and disposition of the various parts. The slope of the forward bridge piece is provided for by a shaped washer, and both it and the middle bridge need clearance for the saddle tube.

Thicker material is needed for the rearmost bridge, which is shaped to clamp the rear stays where they leave the bottom bracket. A wider pedal starting gear spindle is needed, of course, and the engine-shaft sprocket is screwed on beside the existing pulley, the clutch, of course, being still available.

Although the gear is only a lightweight model, our reader is perfectly satisfied with the results he has obtained.




An old clutch model Rudge fitted with a lightweight Albion two-speed gear by one of our readers.




The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address**

### *UTTERLY AMAZING SPEEDS.*

Sir,—I am constantly coming in contact with the 60 m.p.h. hero. He is always referred to "Motor Cycles and How to Manage Them." Under the section labelled "Useful Data" is a table of engine revolutions at different speeds per hour with different gear ratios. If the tale of the hero is true, and if the table is accurate, there are quite a lot of standard engines in existence that willingly turn over at speeds in excess of 7,000 r.p.m. While if clutch, belt and wheel slip are taken into account, the rate is even higher. As Mr. Euclid once said, "Which is absurd."

DONALD S. PARSONS.

### *AN "AGONY PAR."*

Sir,—May I appeal, through your columns, to some bright spark for a suitable method of carrying rubber solution in the tool bag without keeping it in a hermetically sealed cast-iron receptacle or wrapping it in vast quantities of cotton-wool? B.T. 6807.

Cambridge.

### *REAR-LAMPS FOR ALL.*

Sir,—I notice that your correspondent "W.K." thinks that he should be let off scot free if his rear light jolts out accidentally. Let him just reverse the positions and imagine that he has run into something like a timber waggon or a hay cart whose rear light has jolted out and see if his idea has altered. DOUGLAS.

London, S.W.18.

Sir,—I fear "W.K.'s" idea is not practicable. If a motor cyclist whose rear light had gone out were not to be fined, he would not care whether it were alight or not after once lighting it. A. O. RUSSELL.

### *AVERAGE SPEED INDICATORS.*

Sir,—I thoroughly agree with the opinion expressed by "Noall" as to the greater value of an average speed indicator than that of the usual speedometer in his article on the subject in the issue of *The Motor Cycle* for January 12th.

Comparing the two instruments in the case of a motor cycle, it must be remembered that one gets:

| *In Av. Speed Indicator.* | | *In Ordinary Speedometer.* |
|---|---|---|
| 1. Average speed | instead of | 1. Velocity. |
| 2. Mileage covered | | 2. Mileage covered. |

and 3. Clock (an essential feature).

*Three* items of information as opposed to *Two*.

In the case of a motor car a clock is more frequently part of the instrument equipment, so that its cost may with fairness, in such a comparison, be deducted from that of the average speed indicator. Bulk and weight being here of less importance, the cost of the clock could if desired be spent in adding a velocity indicator, which, I imagine, especially if worked on either the Jaeger or on the Bonniksen principle, could easily be included in the instrument.

But if it were a question of having either an average speed indicator or the present speedometer, I personally would plump for the former, as, I am sure, would many others were the several virtues of the two instruments placed fairly before them. CYRANO.

Davos-Platz.

### *MOTOR CYCLISTS IN DREAMS.*

Sir,—Does "Maude Stanfield" and "W.H.M.P." really want us to believe that, simply by concentrating and holding the image of our desire in mind with persistency, the thought will materialise? This is hardly a rational statement, and would suggest the thought *never* will materialise, but that, consciously or unconsciously, the thought energises other factors which may possibly contribute to ultimate success. As regards bringing the Scriptures to support such a "misfire," please let us apportion sacred things to their correct sphere. V.N.

London.

Sir,—In spite of Miss Maude Stanfield's and "W.H.M.P.'s" assertions to "motor cyclist in dreams," I fear the only way he will get a motor cycle is to buy it, as Aladdin and Co. have been seen off the stage for quite a long time. A.O.R.

Warrington.

### *LUMINOUS SPEEDOMETER DIALS.*

Sir,—It is possible to apply luminous paint to speedometer hands with most beneficial results. If the dial is white, it can be blacked over with Indian ink applied with a small brush; if already black, so much the better. Most watchmakers will be able to apply two coats of luminous paint for about 3s. 6d. My Bonniksen has been so treated and still shows up well after twelve months' use.

N. A. C. JONES.

Sir,—May I inform "Triardo" that luminous speedometers are of little use owing to their light being buried by the reflection of the road in the rider's eyes.

A. O. RUSSELL.

### *SIDECAR FUEL CONSUMPTION RECORDS.*

Sir,—Though my machine, an X.Y.Z., purchased from ex-W.D. stores after the Franco-Prussian war, is rather heavy on petrol, its average consumption being between 303 and 317 m.p.g, still I can claim what I consider quite a fair maximum speed, having, on the 29th of February last year, covered a measured mile in Grafton Street, Dublin, in 47.39393 seconds under the official observation of the combined forces of the I.R.A., D.M.P., R.I.C., B. and T.'s, Girl Guides, and Madame Marcievioj's Boy Scouts.

I would recommend to "Tophole's" notice the tip that, by adding one desert-spoonful of sodium chloride to the gallon, he will improve his consumption by at least 497%.

Dublin. QUITE SATISFIED.

Sir,—The claims made by "Tophole", regarding speed and petrol consumption are, in my estimation, quite feasible. Having read the ridicule he has received, I think it is high time to let you hear of the performances of my 1911 3½ h.p. Triumph with three-speed hub and C.B. sidecar. My friend and I make a weekly trip from Bolton to Ambleside, distance seventy-four miles, weight of passengers twenty-three stone. Under favourable conditions, we complete this run in one hour fifty minutes. Petrol consumption for both ways works out at $1\frac{1}{10}$ gallons, using no gadgets whatsoever. I must congratulate "Tophole" on his ability to tune a modern engine, as I always held the view that pre-war machines are better and more economical than modern makes. NORMAC.

Bolton.

### MYSTERIOUS TEMPORARY SEIZURES.

Sir,—Some time ago "Ixion" commented upon the fact that, though a chain may be in correct adjustment when at rest, under load it stretches enormously and lashes about in an alarming way. It can be easily observed that the slack side does not run smoothly in a single curve, but in a series of waves which advance or recede with changes of load or speed. It is reasonable to suppose that the jar of the machine on the road or a sudden change of load, such as occurs when the engine misfires, might fling those waves in the chain upon the sprocket in such a manner that the rollers would be caught up a pitch ahead and that the angle of the tooth face would prevent the chain slipping back to its proper place.

The chain in this position would in all probability lock the shafts and produce the symptoms which have been often described under the heading of "Mysterious Engine Seizures."

Declutching to kick-start would allow the tension in the chain to turn the engine or gearshaft backwards and so replace the chain.

I have had, with my P. and M., exactly the same experience as Mr. Penny under circumstances which ruled out a premature explosion being the cause. I therefore cannot blame the plug, but rather would congratulate the chain makers upon having evolved a chain which stood up to the enormous load which such a locking action would put upon it.

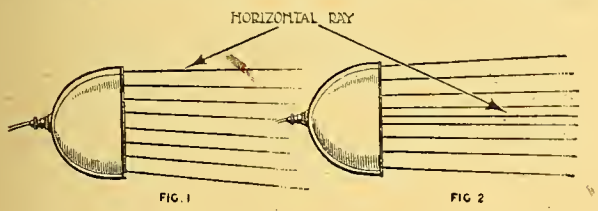
T. HALLIDAY TURNER.

### HEAD LAMP DIMMING.

Sir,—In reply to "Rover's" criticisms of my previous letter on anti-dazzle head lamps, I shall endeavour to answer his four criticisms with the aid of three more sketches.

(1a.) With a head lamp fitted with the American lens which I previously described, the beam of light emerges as in fig. 1, the top of the beam being horizontal. In an ordinary head-lamp the beam emerges as in fig. 2, the light shining into the eyes of persons approaching. (1b.) I quite agree with "Rover" that the beam is divergent in a horizontal plane and weakened in intensity inversely as the square of the distance from the lamp, but is not this so with every head lamp? If the beam was not divergent, the sides of the road would be in darkness.

(2.) The function of the lens is not to deflect the light rays on to the ground alone, but also ahead of the car, at the same



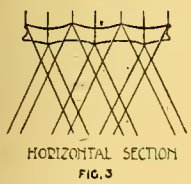




Diagram referred to in Mr. E. W. Troughton's letter on head lamp dimming.

time keeping the powerful rays below the eye level of approaching cyclists, etc., as in fig. 1.

(3.) I admit I was wrong in saying "without loss of light." What I intended to say was "with minimum loss of light." The lens does not obscure or diffuse the light rays, but directs them. As for "wide depression," I never mentioned it. What I said was "wide *dispersion* and no glare."

(4.) The candle-power necessary with this lens is the ordinary candle-power used in head lamps. In an ordinary head lamp the candle-power is not enormous. Why need it be with this lens? Does "Rover" know that there is a maximum legal candle-power of head lamps in many States of the U.S.A.? I do not understand him saying "In ordinary lamp, when rays are parallel, the projected filament will be 13ft. high and 1ft. wide at 100ft. from lamp." An ordinary head lamp does not send out parallel rays, but rays diverging equally in all directions, as in fig. 2. "Rover" keeps mentioning parallel rays outside the lamp. Is he thinking of searchlights? Surely "Rover" does not expect the light to be as powerful 100 ft. from the lamp as 1ft. away?

Fig. 3 shows a horizontal cross section of a portion of the lens, showing how the light is spread to illuminate the full width of the road. I think that it is generally understood that the danger of powerful head lights is caused by the powerful light rays shining into the eyes of persons approaching, and temporarily dazzling them, causing them to lose their sense of direction. This lens, which I previously described in your issue of December 29th, achieves its results by keeping the powerful light rays *always below eye level.*

Finally, this lens is designed, manufactured, and sold by the largest producers of high-grade lenses and optical instruments in the world, and they know their job. Usual disclaimer.

E. W. TROUGHTON.

### OBSTINATE VALVE CAPS.

Sir,—Referring to "Zenith-Jap's" letter, I would like him to try just a small quantity of (ordinary common garden) turpentine poured round the head of the valve caps and warmed by a small blow-lamp.

SIGNET.

London, S.E.3.

Sir,—May I offer a little advice to both "Zenith-Jap" and Mr. Brewis, afflicted in various ways with their valve caps. I had a similar trouble to the first-named with my Enfield, on which I twice had to have the caps drilled out to remove them.

On the last occasion, my man made the joints with a preparation called "Metalastene," which he also smeared over the threads. The caps have now been in use for some three months, and, on removing them last week, I found no difficulty whatever.

A. PORTEOUS.

### TOP GEAR STUNTING.

Sir,—I have been amusing myself lately with my machine by just seeing what it would do and how it would behave if I only used the top gear. After the kick-start, it makes one feel rather an ass to double away with the machine, but it certainly is more exciting when it comes to hill-climbing. It brought back the days when I rode a single-gear 1911 Triumph, and jolly well it went too.

Would it not be a good thing for the A.C.U. to organise a trial for modern machines minus the gear box, the manufacturers having the choice of the single-gear to be used? It would be extremely interesting to see how some of the modern highly efficient machines would get on without second and third gear to fall back on, and it would surely tend to make manufacturers search for still greater efficiency.

TRIARDO.

Nottingham.

### DIAGNOSING EXCESSIVE TYRE WEAR.

Sir,—I had much trouble with my last two front tyres, but found, after wearing two covers away in about 3,000 miles, that my wheel was oval (slightly, of course)—and consequently caused the wear.

E.H.

Longton, Staffs.

Sir,—On taking the rear wheel out of my G.P. Morgan, I find that one half of the circumference of the tyre is worn nearly smooth, while the other half is hardly worn at all. I can understand one side of the tyre wearing through the wheel leaning or a patch wearing here and there through fierce braking, but I do not see how I can put the brake on the same half of the wheel every time. I have examined the brake linings and drums and find them all right, and, unless it is caused through the axle being slightly bent, I confess I must put it down to faulty construction of tyre. Perhaps some of your readers may have had a similar experience.

J.A.S.

New Mills.

### WEIGHTS OF SIDECARS.

Sir,—I wonder if anyone else had the same difficulty I had of finding the weight of a touring sidecar. I had "umpteen" lists from the Show, and only one of them quoted the weight of the sidecar, the one exception being a Canoelet "Featherweight" at 80 lb.

F.C. 3888.

Oxford.

## PRESSURES OF MECHANICAL PUMPS.

Sir,—"Dudley" writes in a recent issue, referring to the Showell pump, that he "cannot understand how pressure can be produced by an arrangement of this description, and, for lubrication to be reliable, pressure is essential."

Fig. 1 shows two spindles which were tested in a brass barrel at 1,250 r.p.m. Each spindle had a diameter of 1¼in. and a screwed length of about 7in. The first, with a single semi-circular groove or thread of fine pitch, developed a pressure of 300 lb. on the square inch with a small volume of delivery—unfortunately, not measured, but probably of the order of a gallon an hour.

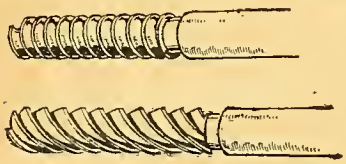


Fig. 1.

The second spindle, with seven grooves of triangular section and with a coarse pitch or lead (thread angle approximating to 40°) delivered thirty gallons per hour, adequate for a 30 h.p. car engine at a pressure of 10 lb. to 12 lb. per square inch, the oil in both cases being a thick standard engine oil. There is therefore no question but that the pump, as a type, is capable of delivering the very highest pressures, but your correspondent is in error in his broad statement, "For lubrication to be reliable pressure is essential." Probably he really means that for the delivery of oil to the place where lubrication is wanted pressure is essential to get it there. It is a fact that with properly designed journal or thrust bearings it is *only* necessary to deliver oil freely at the right spot when the running surfaces will do the rest and ensure conditions of absolutely perfect lubrication.

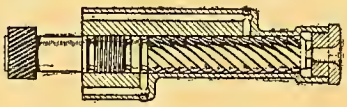


Fig. 2.

The objection to needle valve control fails when it is realised that with appropriate design and finish the working pressure may be high without raising the slip pressure to an excessive figure, for with entirely closed delivery the whole work of the screw pump is spent on "slip." The screw pump can, however, quite easily be made to supply half-a-dozen different feeds at different pressures at one and the same time, or the whole delivery can be taken off at any selected pressure, and in the facility for so doing this pump is, I think, unique.

The accompanying drawing, fig. 2 (patent 152,767, 1919), shows that all one has to do is to tap off the delivery at different points to get different pressures, and it indicates that the facility referred to arises from the fact that the pressure is raised gradually—with perfect regularity—all the way from suction end to delivery end. In the drawing, the reversed fine pitch thread on the spindle at the left of the barrel is for oil retention—a cheap and highly efficient gland substitute.

The screw pump was made in quantities for stock as an oil "elevator" forty years ago; it was used at one time on the Douglas motor cycle engine, but improvements by which volume, pressure, and practical efficiency are combined are of quite recent date.

W. L. SPENCE.

## COMPRESSION RATIOS OF RACING MACHINES.

Sir,—I read with much interest "Harmony's" brief description of his 1922 T.T. Sunbeam.

Of course, the beautiful workmanship and finish of these machines are known to all motor cyclists, and now that the T.T. engine is being sold to the public, no doubt its performance on the road in the hands of true amateurs will cause a great amount of interest. My chief object in writing this letter is to express surprise at "Harmony's" statement that his compression ratio is 5.9 to 1. Bearing in mind that the winning A.J.S. in last year's T.T., ridden by Howard Davies, had a compression ratio of 5.5 to 1, the Sunbeam ratio seems frightfully high for a production machine.

A discussion on this topic would no doubt interest a large number of readers.

E. F. G.

London, S.E.18.

## ASSEMBLED MACHINES.

Sir,—It is interesting to note that since his original article appeared "Ixion" has somewhat modified his views, but he still appears to have the impression that an assembled machine is always sold at a lower price than a "one factory" job, or, as he prefers to call it, a "special design." This is certainly incorrect, and we need only mention the following three machines, which, in their particular class, are cheaper than any assembled proposition with a comparative specification:

(1.) 2¼ h.p. Radco (single gear, two-stroke), £35 14s.

(2.) 2¾ h.p. Raleigh (350 c.c., four-stroke, two-speed, clutch, and kick-starter), £68.

(3.) 4¼ h.p. Quadrant (three-speed, coach-built sidecar), £105.

"Ixion" appears to lose sight of the fact that a really good engine and gear box are not all that is required. Every component part of the machine should be designed in harmony with other parts, and we would mention the Velocette lightweight as an ideal illustration of what we mean. The Radco frame fitted with a Velocette gear box and a Levis engine would be an atrocity, yet each of these three component parts taken separately is excellent.

On the point of standardisation and quick replacement of parts, the owner of an "assembled" machine is not in the happy position suggested by "Ixion."

As agents handling motor cycles in really large numbers, on many occasions when we have requested the makers of "assembled" machines to replace defective parts free of charge, we have been referred to the clause in their guarantee stating that they "are not responsible for the specialities embodied in their machines, the products of other manufacturers," and requesting us to take up the question of replacing with the manufacturer of the component part. On the other hand, the manufacturer of a "special design" machine is usually eager to satisfy both his agents and the riders, and does not quibble at replacing any defective part. Our experience has been that we can always obtain immediate delivery of spare parts for "special design" machines, and that these parts are a correct fit. We have not had this happy experience when requiring spare parts for "assembled" machines which have passed through our hands.

Another point which helps towards the undoubted superiority of the "special design" is that every feature embodied in such a machine is tested out on the road for months—in some cases to our knowledge, even years—before being embodied in a new model.

In conclusion, we need only point out the comparatively small depreciation on a "special design" machine at the end of twelve months' use compared with an "assembled" machine.

We have great admiration for "Ixion," and think that perhaps he would alter his views if he had any lengthy experience of "assembled" machines. We believe he always rides machines of the "special design" breed.

THE PREMIER MOTOR CO.,
G. R. MORGAN, Sales Manager.

Sir,—While I do not especially favour the assembled machine, I favour the assembler for one reason. He will do his utmost to fit his machines to suit the public demand, whereas the manufacturer will not.

I will quote two instances of the latter—Triumph fork springs and Rudge-Multi belt drive on sidecar machines.

Glasgow. A.O.F.

## THE GREAT GAME.

Sir,—As one who has always had a hankering for this kind of amusement, I should just like to remind "A.McL." that the only thing that prevents me participating in it *is* the fear of badly kinked rims and missing mudguards, etc.

Now, if the manufacturers were to come along and say, "We would like you, if you can arrange it, to ride in such and such a trial, and we will bear *all* the cost and any damage you or your 'bus might sustain," a very different tale might be told. I know of amateurs who ride in these trials on the most expensive machines, but do you see them on the road in the ordinary way? Well! sometimes—and often enough behind a big wheel of a posh car. A broken frame to these fellows is nothing; but, to some of us—well, what does anyone else say about it.

Cheshire. BROUGH SOLO.

(19–20)

### T.T. OR LONDON-EDINBURGH.

Sir,—"W 5420" has overlooked the fact that my letter was in answer to a suggestion that the T.T. date should be altered because it clashed with the London-Edinburgh. Also, "W 5420" will find that he has misread my letter. I did not suggest the postponement of the London-Edinburgh, but that it should be abandoned, because it does nothing to improve, or demonstrate the degree of perfection attained by the modern motor cycle. This event served a purpose ten years ago, but to-day it proves nothing. If it were possible to have a London-Edinburgh trial without the huge block of trade, semi-trade, and "shamateur" entries, I would agree that it might be quite an interesting holiday trip. Surely the Yorkshire clubs are organising something for Whitsun suitable for "W 5420." As regards inconvenience to others, "W 5420" must remember that the other easy competitions are organised by small clubs with limited memberships, and the stiff events organised by other large clubs attract only a comparatively small number of entries. A. V. SMITH.

### INACCESSIBLE ENGINE NUMBERS.

Sir,—Engine numbers have now to be declared in the licence registration book. Is there any sane reason why makers of engines should, in the case of two-strokes, stick this number on the flywheel side of the crank case? I have just had the pleasure of removing my engine flywheel to get at this information, and my engine is one of quite a well-known make.

Sheffield. COMMON SENSE.

### THE WORLD'S BEST ROADS.

Sir,—Mr. H. Beacon says he spent every minute possible in the saddle for four months, and never saw a bad road, and never hit or saw a single pot-hole. I wonder if he thought to turn his petrol on, for if he had, and came South as he says he did, he would have reached Essex.

C. W. BEALE.

Sir,—Your correspondent Mr. H. Beacon states he has never met a bad road in his travels in the South. Has he never traversed the road from Staines to Egham, or at Barnet, or near Hungerford in Wilts? However I agree that English roads on the whole are very fair.

Wimbledon, S.W.19. POTHOLE.

### WHY THE REAR PLUG SOOTS UP.

Sir,—I have, whilst laid up, been thinking over the causes of the rear cylinders of the majority of the twins sooting up the plug. (Mine does.) I fancy I have found the cause, and offer it here for what it is worth.

If you will allow me to take the new sporting Duzmo, as illustrated on page 375, as my example, you will notice that the front exhaust pipe is, from measurements of the print, exactly $3\frac{7}{8}$in., and the rear one is $1\frac{3}{4}$in.—that is, to all intents and purposes, twice as long. This means, in the first place, that the friction is twice as much; and the inertia of the gases in the tube twice also. I contend that this produces a greater suction or vacuum in the rear cylinder, and so draws the oil up. This is further helped by the direction of the splash.

This could all be easily tested by the placing of a small pressure gauge in each of the exhaust pipes as near the unions to the cylinders as possible, and also a gauge in each cylinder head. This is necessary so that allowances may be made for the difference of compressions. Again, this difference in the compressions would not give the explosive values of the two cylinders; for I contend that the rear cylinder gets a richer mixture than the front one, owing to the front one not clearing all the residual gases from the previous explosion due to the extra length, and therefore resistance plus inertia.

The only suggestions that I can give for overcoming this is that the resistance of the longer tube should not exceed that of the shorter. This can be easily worked out. The other way is to have the two inlet ports on the outsides and the exhaust ports on the insides; and I fancy that this would give the best results.

I have no connection with any motor firm, and only used the illustration given because it was in front of me.

FAVILLE C. POULTON.

### T.T. RACES FOR PRIVATE OWNERS.

Sir,—Undoubtedly the A.C.U. is the organisation that should take this matter up and "do something" for the "majority," *i.e.*, the private motor cyclists who furnish this body with their income, but who have little to say in these matters. The "pukka" T.T. races are admittedly the most sporting events of the year, but would not the average sporting motor cyclist take more interest in a race of their own than watching the results of a few "chosen" riders who have the financial support of the manufacturers? Suggested obstacles are continually being put in the way of a private T.T., but I maintain that the old proverb "Where there's a will there's a way" is as true to-day as ever.

I therefore challenge the A.C.U. to do something for the private man. Will the secretary of this body say whether his organisation will do anything? An answer of "Yes" or "No" is required, as excuses will not help.

Should the answer be "No," perhaps some of your enthusiastic readers will communicate with me, and we will attempt to promote such a race *this year*.

Also, I am sure we can rely on the hearty support of you and your excellent journal. THOS. L. M. GIBSON.

Sir,—The correspondence under the above heading is of great interest to speed merchants of West Kent, but the objection appears to be the time it would be necessary to devote to practice, and qualifying laps, over the actual course, with its attendant expense. Nevertheless, should the T.T. idea materialise, we are prepared to pawn our best lamp sets in order to take part.

A more convenient method of giving expression to the private owner's speed proclivities would be *via* the medium of speed records for private owners. At present, speed records are solely the sport of the professional rider complete with factory backing, and I venture to suggest that, not only would wild and woolly speeds cease to be claimed for machines owned by private riders, but the results would prove a better guide to the prospective purchaser of a speed 'bus than obtains under the present arrangement.

Bromley, Kent. "BEAM."

---

### SUMMARY OF CORRESPONDENCE.

Redrute's" letter on the general lack of appreciation accorded to inventive genius and the difficulty of placing an invention on the market has attracted several replies. The Service Co., Ltd. (London), 289-293, High Holborn, London, W.C., write that they are always willing to consider any practical suggestion put to them by inventors. "Vento" (Bury) recommends The Inventors' Sales Agency, 22-24, Spencer Avenue, Coventry.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
New Edition. Just Published. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 5/-. By post, 5/4.

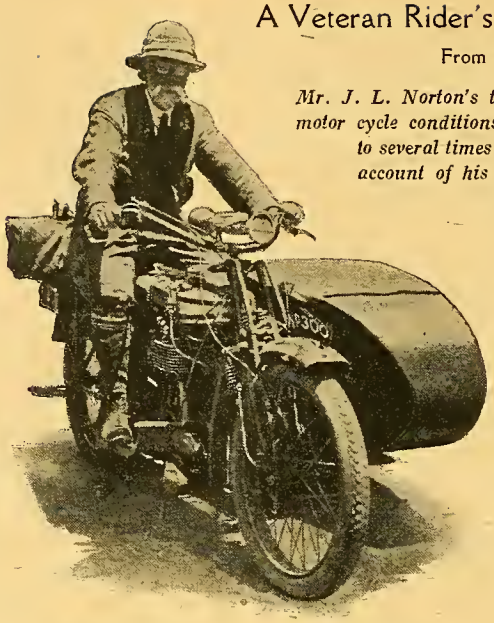
Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# THROUGH BUSH, FLOOD AND VELDT.

## A Veteran Rider's Experiences in South Africa.

From A Cape Correspondent.

*Mr. J. L. Norton's trip to South Africa, in order to study motor cycle conditions in that vast country, has been referred to several times in "The Motor Cycle"; the following account of his 3,000-mile tour cannot fail to interest.*



Mr. J. L. Norton, after finishing his 3,039 miles of rough riding in South Africa.

MR. NORTON, who is fifty-four years of age, was looking bronzed and well at the conclusion of his big tour, and in the course of an interview recounted his eventful story with a modesty and unassumption which is characteristic.

Landing in Durban in October, 1921, Mr. Norton journeyed on one of his own sidecar outfits from Durban to Maritzburg, and from there to Ladysmith and Newcastle. On this track he struck some of the worst roads in Natal.

### Through a Flooded Area.

On the Dundee road the bridges were washed away by the heavy floods, and the road itself was submerged at many points. The rider, as a result of this thoroughfare's condition, took the alternative road. Between Maritzburg and Johannesburg he went through no less than thirty-five rivers.

Arriving at Johannesburg he stayed for a week, and then travelled to Pretoria, returning later to Johannesburg. Kimberley was his next destination, but in this part of the journey he forced his machine through fifty miles of mud; water-logged land lay on every side, and the so-called roads were so deeply submerged that he had to ride through the bush itself, repeatedly lifting his machine out of the deep holes which studded his path.

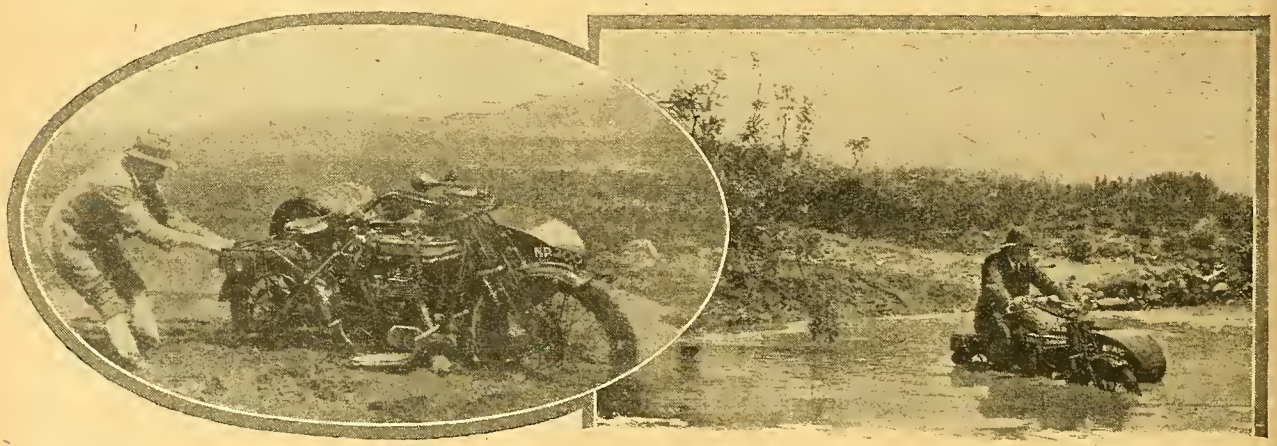
On the road between Kimberley and Bloemfontein the machine sank into the mud up to the axles a number of times, and thereabouts were to be seen many deserted waggons and motor cars, but a bicycle chain round his driving wheel helped the sidecarist considerably.

Earlier in his journey, before reaching Johannesburg, Mr. Norton struck a rock, with the result that the sidecar parted from the cycle with a report like the crack of a gun. Still undaunted, he fixed up the connection, and for 130 miles he travelled along with one front attachment only.

During this adventurous ride he sighted some wonderful specimens of birds. At one place he saw a black and white bird making a great fuss, flying three or four feet from the ground. He pulled up, and then saw the source of the disturbance, which was a cobra. Mr. Norton feigned to approach it from different angles, but upon each advance the snake made ready to strike. In the end he killed it with stones. Picking the snake up to examine it, the tail of the cobra wound itself round his fingers, and he dropped it like a live coal, feeling considerably scared.

### Magnificent Scenery.

The following morning the tourist returned *via* Stormberg, which provided magnificent scenery, and found that he had done over sixty miles unnecessarily. He was heavily handicapped by not being

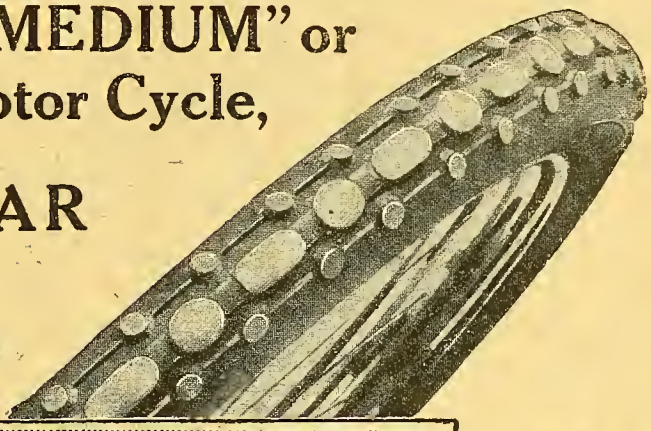


Some idea of the conditions encountered during the "tour" will be gathered from these scenes *en route*. On several occasions the machine was brought to a standstill in consequence of deep mud, and scores of deep watersplashes had to be negotiated.

# Whether it's

## a "LIGHT," "MEDIUM" or "HEAVY" Motor Cycle, or a CYCLE CAR

Specify and Insist on



SUPERSTUDDED

# HUTCHINSON

THE TYRE WITH NINE LIVES

Proved to be the Best in the world's greatest Test

Up to $2\frac{3}{4}$ h.p.
The "STRONG" Type

3 to 5 h.p. (with or without sidecars)
The "EXTRA STRONG" Type

5 to 10 h p. (with or without sidecars)
and Cycle Cars
The "SMALL CAR" Type

Stand No.
223
Scottish Show.

HUTCHINSON TYRES
70, Basinghall Street, London, E.C.2.
*Scottish Depot:*
60-62, West Regent Street, Glasgow.

*Tyre Manufacturers since 1877———Rubber Manufacturers since 1850*

*In answering this advertisement it is desirable to mention "The Motor Cycle."*

# GLASGOW MOTOR SHOW, Stand No. 180

## THE *Indian* EXHIBIT

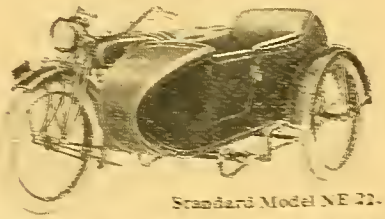
**is a centre of interest. A full range of models is shown, embodying many unique features.**

There are *no extras* on the fully equipped models which are delivered ready for the road.

*Send for fully Illustrated list.*

REPAIRS

We are now in a position to give early attention to repairs and overhauls to all models of INDIAN Motocycles.



Standard Model NE 22.

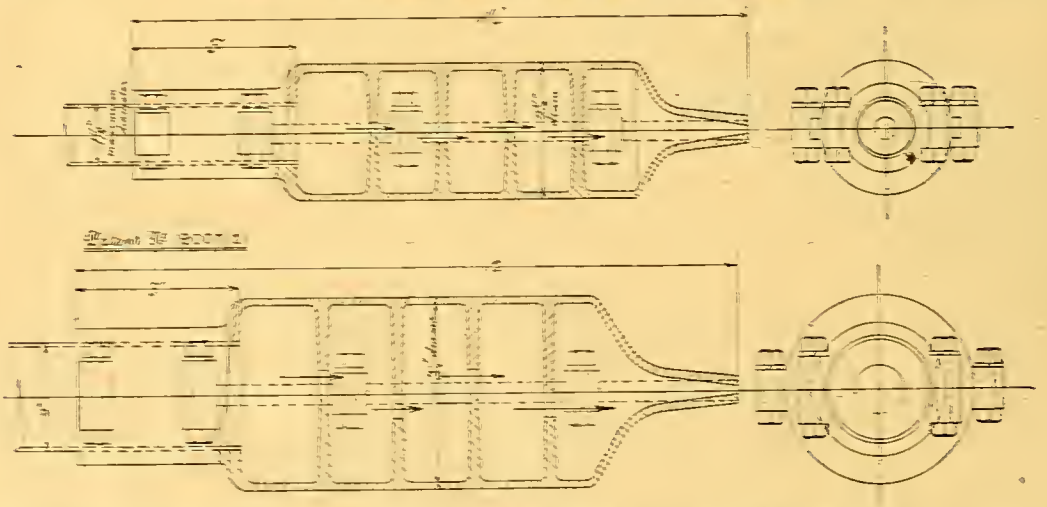
HENDEE MANUFACTURING CO.
"Indian House,"
366-368, Euston Road, London, N.W.
Telephone: Museum 1545.
Telegrams: "Hendian, Euroad, London."

AUSTRALIA—100-113, Russell St., Melbourne. AFRICA—Indian House, 2189, Commissioner St., Johannesburg; Indian House, 279, West St. Durban, Indian House, Strand St., Port Elizabeth.

We supply the Standard 7 h.p. Spring Frame Model with De Luxe Sidecar, electrically equipped with separate generator, ammeter, head, tail, and sidecar lamps, electric horn, and speedometer. PRICE, complete £175 Free delivery

# THE "ARGUS" SILENCER

## for open exhaust pipes.



It is adaptable to any H.P. Motor Cycle. The only information we require you to send us is the outside diameter of the exhaust pipe.

Price **15/-** Each.

The patent silencer is made of aluminium, on account of its lightness and heat dispersing qualities.
DELIVERIES can be made 7 days from receipt of order. We guarantee every article to be effective or money returned forthwith.

CROOKES, ROBERTS, RITCHIE & CO., LTD.
Owners **W. J. RITCHIE & CO.**
Freedom Works, John Street, SHEFFIELD.

**Through Bush, Flood and Veldt—**

able to obtain proper maps or a compass. His principal guide marks were the waggon ruts.

Passing over the Katsburg Mountains he almost wept to find that he had only two photographic films left. From wonderful points of vantage he saw great banks of cloud which looked like mighty seas. Once he was 6,000ft. high, where his amazed gaze fell upon clouds which resembled the billows of a great frozen sea. Far below he could see through a kloof a smiling valley, with a beautiful cottage set like a gem in its centre.

Wonderful natural life was seen on all sides, and included birds of brilliant plumage, as well as reitbok, springbok, and cranes.

### No Mechanical Trouble.

Throughout these adventures no mechanical trouble was experienced. In the way of spare parts a spare axle for the back wheel only, a valve, a few spokes, and a contact breaker were carried, and only a couple of the spokes were used. Just as he drew up at the garage at Maritzburg on the outward journey a puncture in the tube of the sidecar wheel occurred.

Travelling along the coast road Mr. Norton proceeded from Port Elizabeth to Graham's Town, and from there drove down to the Cape.

### Per Motor Cycle all the time.

During his sojourn in Africa he never rode in a train, and when he was interviewed two days before he embarked for England on January 6th he said he had no intention of so doing.

Mr. Norton feels sure that British manufacturers will yet obtain the South African motor trade, and if they will only make the ordinary provisions he prophesies that there is a big market for British motor cycles in the Union of South Africa.

# CLUB NEWS.

### Oxford M.C.

Particulars of this enterprising club, which has just announced a provisional programme of sporting and social events for 1922, may be obtained from the honorary secretary, Mr. H. Morton Bailey, 43, Cornmarket St., Oxford. The subscription of 25s. includes full affiliation with the A.C.U.

### Slough and District M.C. & L.C.C.

In spite of the inclement weather, the first annual general meeting held at headquarters (The Old Crown Hotel, Slough), on the 19th ult., was a great success. It was regretted that the president, Major E. R. Loder, was unable to be present. Mr. F. Robinson was in the chair, and the following officers were elected for the ensuing year: Captain, Mr. E. Finch; vice-captains, Messrs. A. Andrews, A. Gare, and W. J. Pond; hon. secretary, Capt. H. W. H. Dyke; hon. assistant secretary, Mr. F. J. Moore; hon. treasurer, Mr. T. H. Birch; hon. auditors, Messrs. E. B. Swayne and E. A. Tomlin.

### Bolton and District M.C.

The annual meeting was held on Monday evening of last week, when a large and representative gathering assembled. As a certain amount of apathy had been felt for some time among the members, it was decided that greater enthusiasm might be developed if the club were re-organised. Consequently, the whole thing was completely reconstructed and re-officered and many new members were admitted. Another general meeting was fixed later for Tuesday evening, February 7th, when the committee hoped to present a programme of summer runs and events for consideration. All motorists are cordially invited to attend this meeting. Communications may be addressed to the Rev. H. Headley, General Secretary, Raikes Hall, Bolton, or to the Trials Secretary, Mr. Crompton Guthrie, 50, Higher Bridge Street, Bolton. New members will receive a hearty welcome.

### Essex M.C.

As has been customary in the past, an early spring trial has been arranged, to take place this year, on Saturday, February 18th. Entries will be received by the honorary organiser, Mr. E. J. Bass, 40, Chancery Lane, London, W.C.2, up to the first post on Tuesday.

### South Shields and District M.C.

At the first annual meeting of the newly-formed Westoe Motor Cycle Club, which took place in the Regent Hotel, South Shields, on January 24th, the members decided to re-name the organisation as above. This step was made owing to the growth of the club during the past twelve months and the difficulty of locating it under its old title.

### Alnwick and District M.C.

Mr. J. W. Morrison presided over the first annual meeting, held at the Plough Hotel. Reference was made to the success which had attended the club's inauguration and first year's activities, whilst the financial position was considered very satisfactory, in view of the fact that there was a balance of £20 9s. 6½d. The meeting decided to hold a ball in aid of the Alnwick Infirmary, and to affiliate with the A.C.U.

### Sutton Coldfield and North Birmingham A.C.

Some hundred members and guests attended the ninth annual dinner at the Royal Hotel, Sutton Coldfield.

Mr. Gordon Owen presided, and after an excellent dinner Mr. Alec Ross proposed the toast of "The Club and President," mentioning, incidentally, an interesting piece of news, that Birmingham would this year give a T.T. Cup for the 250 c.c. class. We learned later that Mr. Ross had himself been responsible for collecting the money for this trophy.

In addition to the trophies, some 200 gold and silver medals were presented, and a very excellent concert completed a most enjoyable evening.

### North-West London M.C.C.

The annual dinner will take place at the Holborn Restaurant on Thursday next. The accommodation of the only room available is limited to 150, and members and friends desiring to attend should communicate at once with Mr. O. Hill, 5, Old Bond Street, London W.

### Northern M.C.

The club held its annual general meeting in the Crow's Nest Hotel, Barras Bridge, Newcastle-on-Tyne, on January 26th, the chair being taken by Mr. T. Dawson in the absence of Major W. Anderson, D.S.O., M.C.

A good report of the club's progress during 1921 was given by the secretary, Mr. O. L. Rutter, who said that the year had been in many ways a most difficult one for them, but had concluded in a very successful manner financially. They had an accumulated balance in hand of £40 7s. 8d., but there had been a lack of enthusiasm displayed by the members towards many of their competitions.

### Sheffield and Hallamshire M.C. & L.C.C.

There was a happy gathering of the members and friends at the Royal Victoria Hotel, Sheffield, when a party of over a hundred met on the 19th ult. for the annual dinner and prize distribution.

Mr. W. Hallam Pearson, the president, presided, and in front of him on the table was the massive silver cup, presented by *The Motor Cycle*, which was won by the club in the M.C.C. Team Trial for a second time last year. The Sheffielders are very desirous of again lifting the trophy in the coming season, for it then becomes their own property.

Prior to the distribution of the many prizes, Mr. W. Dovener, the hon. secretary of the Yorkshire Centre of the A.C.U. and of the Bradford Club, proposed the toast of "Our Club."

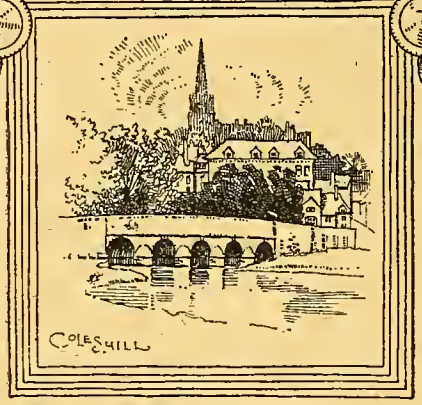
In responding Mr. S. Sawer remarked that 1921 was one of their most successful seasons, and they were hoping to make this year even more successful. He intimated that they were going to develop the social side as far as possible.

# CURRENT CHAT

## Time to Light Lamps

| | | | |
|---|---|---|---|
| Feb. | 2nd | .. .. | 5.49 p.m. |
| ,, | 4th | .. .. | 5.52 ,, |
| ,, | 6th | .. .. | 5.56 ,, |
| ,, | 8th | .. .. | 5.58 ,, |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).




## Special Features

IMPRESSIONS OF THE SCOTTISH SHOW.

IN AND AROUND CONSTANTINOPLE.

A SIX-CYLINDER MOTOR CYCLE.

### "Where Is It?"

An extraordinarily large total of letters have now been received locating "Tourist's" main street hill, approximately 98% agreeing that the spot which our correspondent visited last summer was School Hill, Lewes.

### Motor Cycles in Denmark.

The number of motor cycles registered in Denmark shows a remarkable increase since 1910, in which year there were 3,428. In 1921 there were 14,241. The total number of motor vehicles in Denmark amounts to one vehicle per eighty-three inhabitants.

### For the Workshop.

Almost every motor cyclist who does his own repair work inclines sooner or later to the purchase of a lathe, which provides a wonderful extension to the limits of his hobby. Hitherto such a tool has made a serious hole in £25, but the model engineering trade is now going strong on a wonderful variety of useful 2-2½in. centre lathes at prices mostly under £5.

### Policeman and Motor Cyclist.

Among our usual weekly batch of letters alleging police persecution, it is refreshing to find an occasional correspondent taking the side of that much-maligned body. Writing "as a motor cyclist and also a policeman," and emphasising the recently published appreciation of London-Exeter competitors, "X.Y.Z." considers that "'persecuted' riders should make sure that they and their machines comply with the Law, see that they have lamps which illuminate their number-plates, and that they do not drive through towns and villages, especially at night, with exhausts making a noise like a machine gun." We agree.

### Engine Lubrication.

An ordinary general meeting of the Institution of Automobile Engineers will be held on Wednesday next, at the Institution, Storey's Gate, St. James's Park, London, S.W.1, at 8 p.m., when Mr. E. L. Bass will read his paper entitled "Engine Lubrication." This paper is by a graduate and was awarded the Daimler Premium, one of the conditions of which provides that the successful paper shall be read. Cards of invitation for the use of visitors may be obtained on application to the Secretary of the Institution, 28, Victoria Street, London, S.W.1.

### A Belgian Six Days Trials.

A six days trial is to be organised by the Royal Moto-Club of Liége to be run on the lines of the Swiss Six Days event. Naturally, as it will be a long-distance trial, it will not be held entirely in Belgium, but will probably extend to Nice *via* Gap.

### Revs. and Speed.

Not many riders who speak glibly of the 60 m.p.h. speeds attained by their machines take the trouble to express the figure in terms of r.p.m. The average small two-stroke, for example, does not "rev." usefully much beyond 2,800 r.p.m., so that, on a 5½ to 1 gear, the speed will be 40 m.p.h. as a maximum.

### The Motor Cycle and Crime.

Motor cyclists are disgraced by three masked riders who entered a branch of the Royal Bank of Scotland, held up the staff, and stole about £2,000. Hitherto the motor cycle has not been used extensively as an accessory of crime. The machine was a Sunbeam.

### Motor Cycle Taxes in Italy.

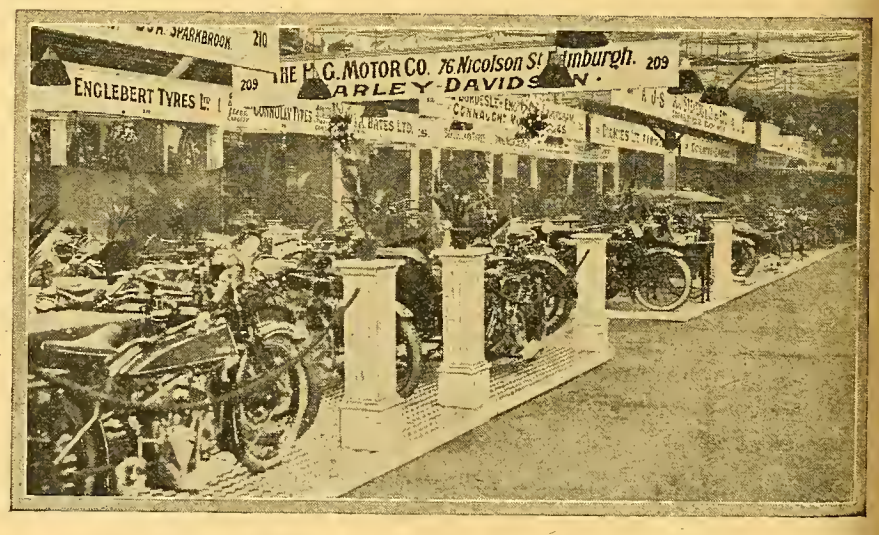
Motor cycle taxation is low in Italy. A 3½ h.p. machine is taxed 78 lire (15s.), or with a sidecar attached 110 lire (22s.), an 8 h.p. sports model is charged at 143 lire (28s. 6d.), and with a sidecar 201 lire (40s. 2d.). As at the moment of writing 97 lire go to the pound, the Italian motor cyclist gets off cheaply.

### This Year's Paris-Nice Trial.

Entries for the Paris-Nice Trial close the 10th inst. This year the event will be organised by the club at the Nice end of the run, but entries may be sent either to the President, Moto-Club de Nice, 11, Place Wilson, Nice; *Moto-revue*, 5, Rue Saint-Augustin, Paris; or *L'Auto*, 10, Faubourg-Montmartre, Paris.

### R.E. Signals Reunion Dinner.

The London Signals and associated companies (T.F.) are holding a private reunion dinner at 7 p.m. on Saturday next, the 4th, at the Florence Restaurant, Rupert Street, Leicester Square. Old members who have not received notification of this and are desirous of attending should join the gathering there, when tickets (11s. 6d. each) may be obtained from Mr. E. H. McCormack or Mr. H. Perkins. Capt. H. A. Crawford, R.E., will take the chair.




Some of the motor cycle exhibits at the Kelvin Hall, Glasgow, where the Scottish Motor Show is being held.

### An Irish Show?

A movement is afoot to organise a motor show in Dublin during the month of February, 1923.

### T.T. Helmets in International Speed Trials.

There is a rumour that T.T. helmets may be compulsory in all open speed trials held under international rules, and that the matter will be discussed at the next F.I.C.M. meeting at Geneva.

### Motor Cycle Racing Track for Italy.

The construction of a motor cycle racing track, which will be known as the Moto-Velodroma Partenopeo, is proposed at Naples. The track will be constructed of reinforced concrete, while the area which it encloses will be suitable for foot races and other sports.

### Drivers' Signals.

The chief constable of Bristol, writing to *The Western Daily Press*, remarks that some drivers of vehicles fail to give any signal as to their intentions. He gives the following hints and suggestions:

In some instances a wrong signal is given by those who wish to turn to the left, which is dangerous.

When approaching a point constable, the driver of a vehicle should never take his eye off the constable, until clear of him, and if his route be one of divergence from the traffic stream, he should make the direction he wishes to take quite clear to the constable, and in good time.

The importance of the use of signals has now been well tested and approved. They should, first, always be given from the right-hand side of the vehicle; and, secondly, in ample time to be of any use.

The code of signals for motor drivers is as follows:

Stop—Right forearm vertical.

Turning to Right—Right arm horizontal.

Turning to Left—Right arm horizontal, and then swept to the left.

Slow Down—Right arm horizontal, palm of hand downwards, and moved slowly up and down.

Pass—Right arm waved low down from rear to front, two or three times.

FOR HORSE DRIVERS.

Turning—Whip rotated above head.

Stop—Whip raised vertically.

GIVE SIGNALS IN TIME.

Too much importance cannot be attached to drivers of horse-drawn vehicles giving their signals well in advance of their contemplated action. The giving of a signal and putting it into operation immediately after is one cause of a great number of accidents, the fast-moving traffic coming behind not being given a chance to clear.

(15–16)

### Another Re-union Dinner.

It is proposed to hold a re-union dinner in London for the members of the 4th Motor Ambulance Convoy about the middle of February; all members interested should communicate at once with either Mr. Oliver Clark or Mr. B. Alan Hill, at 58, Great Portland Street, London, W.1.

### An Ally of the Public.

Speaking in Birmingham recently, Mr. F. E. Baker, of Precision engine fame, said that in the motor cycle Press the public had an indispensable ally. Criticism of any make of machine was always made without fear, and suggestions to the manufacturer as to the ways of improving his machines were frequently given. He was sure that everyone, including himself, looked forward to these comments, and, in many cases worked upon them.

### Motor Cycles in Italy.

Italy is one of the countries on the Continent where the motor cycle has been taken up with enthusiasm, and there are quite seventeen different native makes. While the good points of the leading British makes have been followed, the Italian designer has not omitted to give scope to his originality, and in most cases without producing anything which might be described as freakish in the slightest degree. The three-wheeler also has not been neglected.

A STUDY IN GREY AND WHITE. An A.J.S. owner who rightly appreciates the motor cycle in winter as well as in the summer.

### Touring in Spain.

*Apropos* our paragraph in the issue of January 19th regarding facilities at Behobia on the Franco-Spanish frontier, touring motor cyclists have reason to congratulate themselves because at all other Spanish frontier stations, apparently, owners of motor cars have to deposit a duty of £1,000 before being allowed to enter, owing to the recent excessive smuggling of motor cars. Motor cycle owners are only charged a duty which amounts to 1s. 2d. per lb. weight for a motor bicycle, and £1 19s. per cwt. for a sidecar outfit.

### A Prospective Visitor.

An Italian manufacturer, who has recently established a record on one of his own machines is anxious to place a few further records to his credit, and it is believed that his machine will shortly be sent to Brooklands, where its rider will make attempts to improve his own previous performance. Although our source of information does not mention the make of machine, it is to be surmised that it is Della Ferrara, whose record for the kilometre tied with that of Judd on the Norton, 25.9s., 138.99 k.p.h. (86.37 m.p.h.) in Class C (500 c.c.)

### Many Bargains.

After twelve months of high prices, the time appears to have returned when the motor cyclist can again buy some of his smaller necessities at genuine bargain prices. At the moment the shops and stores are filled with goggles, gloves, leather coats, boots, waterproof covers, tools, and heaps of other things, mostly surplus W.D., at tempting figures.

### An Enterprising Mayor.

A motoring daily in France is highly delighted because the mayor of a certain Commune in the Department de l'Oise has written to its editor informing him that up to the present he has taken no steps to regulate the motor traffic in his Commune, and would be very much obliged if the said editor would draw up a few practical regulations!

### "The Danger is Obvious."

Maj. Stenson Cook, the Secretary of the A.A. and M.U., writes: "May I appeal to every motorist, through your columns, when driving at night never to leave a motor vehicle standing with lights on on the off side of the road, even if it is necessary to turn it round in order to avoid doing so. When a car or motor cycle stands on the 'wrong' side of the road, with its head or side lights on, the natural tendency of the oncoming motorist is to drive to the left of those lights. The danger is obvious."

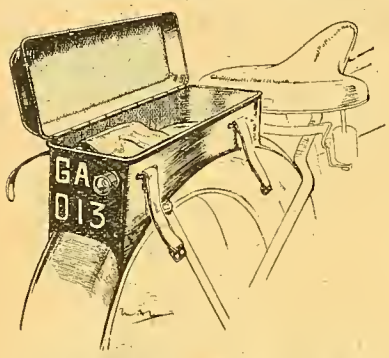
c 13

# IMPRESSIONS OF THE SCOTTISH SHOW.

## Several Scottish Productions. An Enthusiastically Attended Exhibition.

ON Friday last, at the Kelvin Hall, Glasgow, Lord Blythswood, with a few well-chosen words, opened the first Scottish Motor Show officially supported by the motor cycle manufacturers. In the past their representation has been left to the enterprise of the Scottish agents, who usually staged a few motor cycles with their car exhibits.

That this year's exhibition should have the practical support of "the trade" goes to show that the manufacturers are fully alive to the sales possibilities of their products across the Border; and we do not think they will regret their




Pressed steel tool locker on the rear mud guard of the Royal Scot. The back of the box forms the number plate and carries the tail lamp.

action in this matter, for the Scotsman is a great sportsman and has shown much keenness for motoring in all its branches. He possesses a country eminently suited for motor cycle touring; in fact, in some parts very badly served with railways, the motor cycle has proved itself as the best possible means of transport, and thus to the Scotsman it has become something more than a luxury.

### Scottish Opinions.

Opinions among the agents as to the desirability of a show in Glasgow were by no means unanimous; some expressed the view that the one national show at Olympia is all that is necessary; they

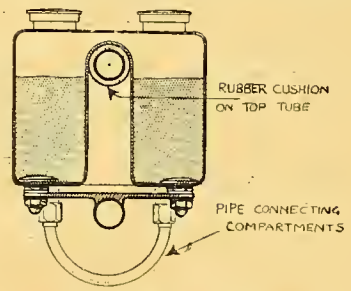
**The last issue of "The Motor Cycle" contained a comprehensive Guide to the Exhibits at the Kelvin Hall. The following impressions supplement our remarks last week, and refer generally to the Scottish productions on exhibition.**

contend that more than 50 per cent. of the Scottish motor cycle public attend the London Show, and they further argue that, after attending Olympia, the Scottish motor cyclist with his characteristic "canniness" says to himself, "A' weel, I'll wait and see what they have to show me at Glasgow," this attitude causing a stagnation of trade for the two months between the exhibitions. There may be something in this.

Opinion is also divided on the question of venue, which is only natural, for the Edinburgh man would obviously prefer the show in his own city. But his turn may come next year, for there is a scheme on foot to provide Edinburgh with a building suitable for such an exhibition.

### Scottish Exhibits.

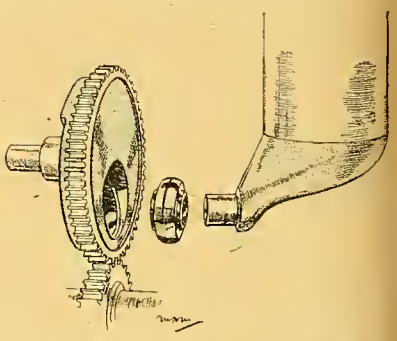
Interest is added to the show by the fact that some of the exhibits are of Scottish origin, three of them, the Carlton, the New Gerrard, and the Overdale, are not entirely national, for they went south for their power units. The Carlton is a Villiers-engined two-stroke machine made by the North British Machine Co., of Glasgow; it is quite a compact little mount and should receive much attention, as the single-geared machine is only £39 18s. Another model, with two-speed, clutch, and kick-starter, is priced at £53.




Section of the saddle-type petrol tank on the Royal Scot.

### A New Name.

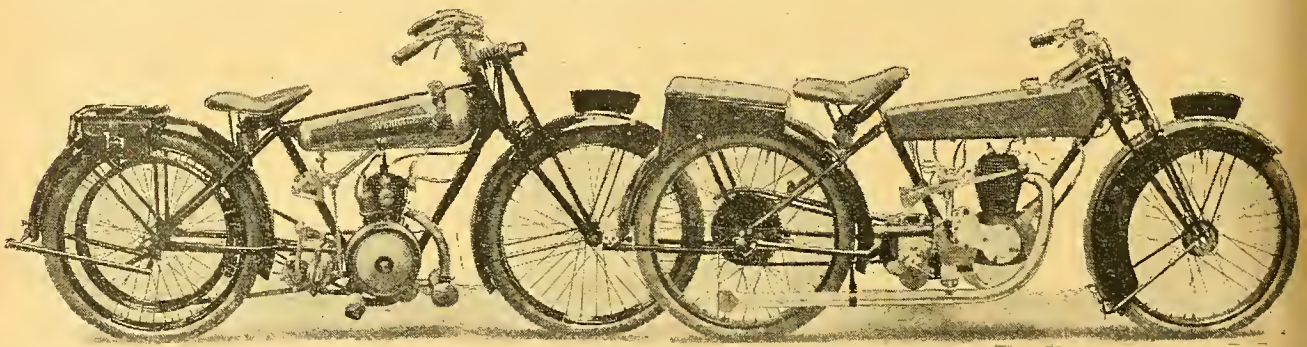
The New Gerrard Company is showing no less than six models: a 2½ h.p. machine with Villiers engine, chain-cum-belt drive, two-speed gear, etc., at £45; a 2¾ h.p. utility model, with 293 c.c. J.A.P. engine, Showell mechanical oil pump, and two-speed gear, at £59 10s.; and two other nominally 2¾ h.p. models,



New ball joint in the sleeve operation replacing the ball bearing hitherto used on the Barr and Stroud engine.

one with a 350 c.c. J.A.P. sports engine, all-chain drive, and a three-speed Burman box, at 79 guineas; the other, fitted with the 348 c.c. overhead valve Blackburne unit, at 93 guineas. Two larger machines are the 3½ h.p. sports and the 4 h.p. touring types, both J.A.P. engines, all-chain drive and mechanical lubrication. The latter has a light side-car fitted. Altogether, the makers, Porters Motors, of Edinburgh, have produced six well turned out and pleasing machines.

In the Overdale we again find a Villiers two-stroke engine in a machine of the runabout type, which should compete very well with others of its class.



Left: The Villiers-engined 2½ h.p. Overdale. Right: More than one interesting feature is incorporated in this model of the Royal Scot. Maplestone forks and the capacious tool-box-cum-carrier are worthy of note.

**Impressions of the Scottish Show.—**

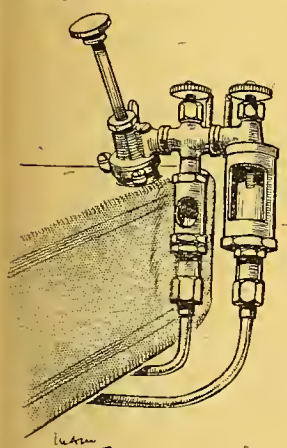
The Royal Scot and Gri can claim to be home productions; both are of considerable interest in that they are fitted with power units of unorthodox type. We have already described both these machines, although some recapitulation may be necessary in the case of the Gri, for it has not been much before the public eye lately. In place of the conventional type of valve mechanism the flow of gases is cotrolled by a rotary distribution valve working in conjunction with a single compression retaining poppet valve. Great simplicity is obtained by mounting the cam for the latter on the rotating valve, which is driven by a single enclosed chain. This chain also drives the magneto.

Perhaps the best known Scottish make is the Victoria, which is always on view at Olympia. A full range of models is exhibited at the Kelvin Hall, and, as is to be expected, attracts considerable attention.

On the whole, last week's issue of *The Motor Cycle* presented an admirable guide to the motor cycle exhibits, and last minute additions, either of fresh makes or models, were few.

Twenty of the well-known English manufacturers supported the show with exhibits of their own, these in some cases being well augmented by local agents. This duplication is no doubt a good thing for the makers, but to the buyer it is rather confusing. With one or two exceptions, all these firms were represented at the Olympia Show, and, except that their display is, of course, on a smaller scale, their machines remain as then, no important modifications in design being apparent.

Alexanders, Ltd., however, have an interesting machine in the new Diamond fitted with a sleeve valve Barr and Stroud engine. It would seem that this finely finished product of the Glasgow house will take a front rank position among proprietary engines, for quite a number



Twin drip feed lubricators on the Gri. The small one feeds the rotating valve in the cylinder head; the larger one leads to the crank case.

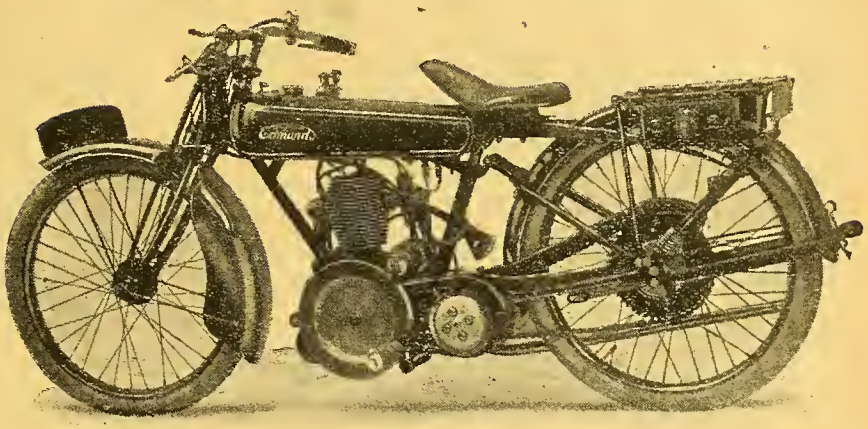
of makers are fitting it. Douglas Alexander was very enthusiastic about its possibilities, and is already talking of it as a possible mount for the next T.T.

The Zenith-Bradshaw models shown by Alexanders are also attracting great attention on a stand which has probably a bigger variety of machines than any other. Another much-visited make on this stand is the Levis.

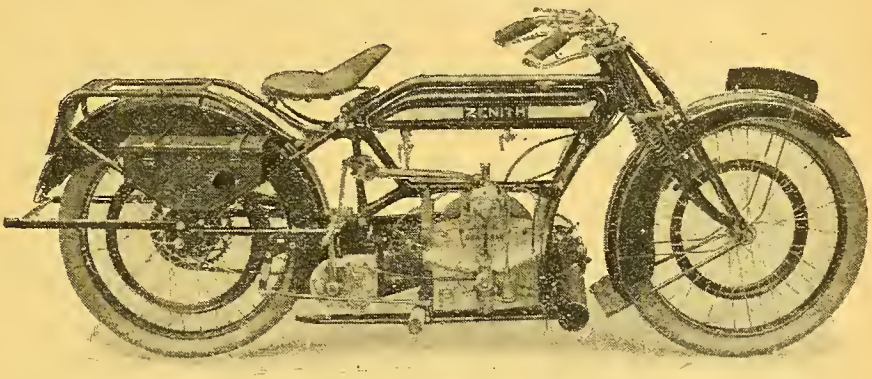
Douglas-Deans, Ltd., of Glasgow, are staging a varied display of well-known makes, including examples of the Sun-Vitesse model with rotary inlet valve in the crank case, and representative Ariel types, for which this firm holds the principle Scottish agency.

To sum up, this first-officially supported show, despite various little differences of opinion amongst the agents, may be judged a success, for it is being well attended daily.

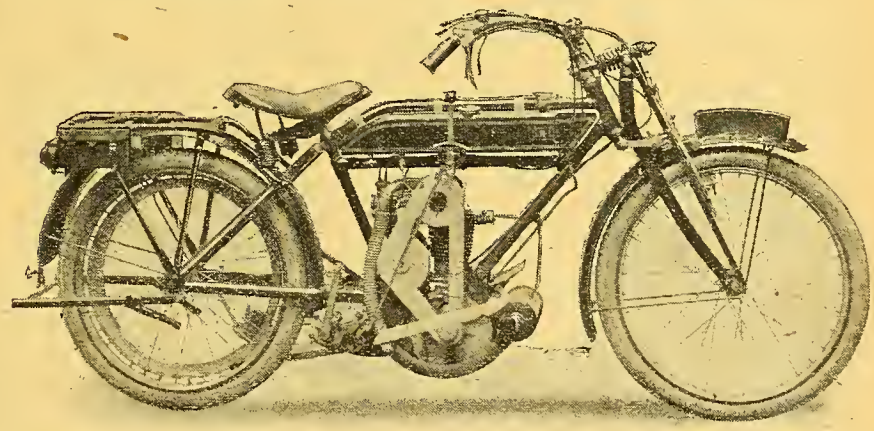
THREE UNCONVENTIONAL ENGINES AT THE SCOTTISH SHOW.




By reason of the design of the Edmund spring frame, it readily adapts itself to an attractive looking sporting mount, as is shown in this new Barr and Stroud engined model, which is used for demonstration purposes outside the Kelvin Hall.

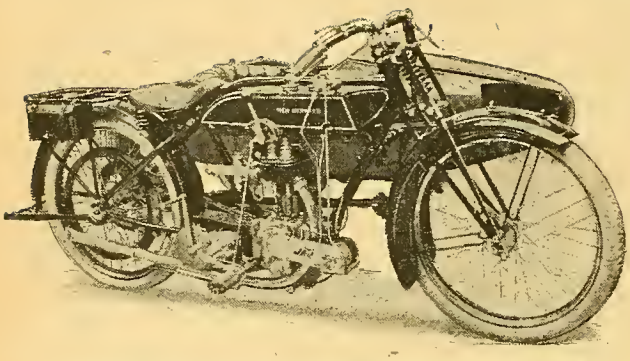



One of the attractions of the Scottish Show: the oil-cooled Zenith-Bradshaw.

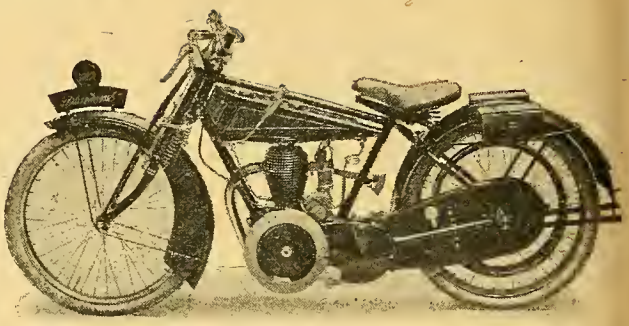


Combined overhead rotary and poppet valve gear, driven by roller chain, distinguishes the Gri engine, which is a Scottish production.

## AT THE SCOTTISH SHOW.



Distinctly sporting lines are followed in the New Gerrard lightweight sidecar outfit—a Scottish production.



So neatly have the chains been enclosed on the B. and S.-engined Diamond that the machine retains a true "sporting" effect.

## Cleaning Leather Coats.

SEVERAL of our readers have asked recently for a method of cleaning leather coats, and the following notes, submitted by a correspondent, who compresses much information into the following brief phrases, should, therefore, be of interest.

"Leather jackets can be cleaned with a lukewarm solution of soda water; this removes grease. A fairly strong solution of strong liquid ammonia with water added will also clean them perhaps better than the first-named recipe.

"After cleaning with either, let dry, then mix strong liquid ammonia and milk with a little water added so that ammonia is not too strong; this will put a nice face on the leather if applied when coat is dry. If a little Cherry Blossom or other good make of brown boot polish is brushed lightly on top of this, it will further improve the appearance. If a coat has black marks on, caused by ink, say, a medium strength solution of oxalic acid will take them out, while petrol or benzine will probably remove hard caked tar, etc., previously scraping or skimming with a warm thin knife. A badly discoloured brown coat will look better if dyed black; any kind of black dye sold by shoemakers will do. After washing, clean with soft soap and warm water, allow to dry and then wipe with soda water, before applying dye, finally brushing with boot polish (any colour will do) as the dye dries dull; brushing with boot polish will do good at intervals at any time, and help to keep wet from penetrating.

### Repairs.

"In the case of cuts or holes appearing, get some leather patching as near as possible the same colour as coat (this can be bought from most boot repairers), cut a patch the right size to cover the hole, skim the patch all round to a feather edge, and rough the coat where the patch has to be put with coarse sandpaper or a fine penknife, get some Necol patching solution from a bootmaker (a tube costs a shilling) and use according to instructions. I have tried all other kinds of gutta-percha and other solutions for patching leather and found all of them useless except this; patches applied with all others can be pulled off again. One cannot tear this off."

## Auto Cycle Union Notes.

IN his report concerning the North-West London M.C.C. open reliability trial to Gloucester, held on December 31st, Professor A. M. Low, who was the A.C.U. steward on that occasion, stated that, in his opinion, the average speed in trials held after dark should be seventeen miles an hour.

* * *

The Competitions Committee has considered correspondence with reference to the proposed dates of the T.T. races, and, after confirming the dates of May 30th and June 1st, instructed the secretary to proceed with the issue of the preliminary regulations.

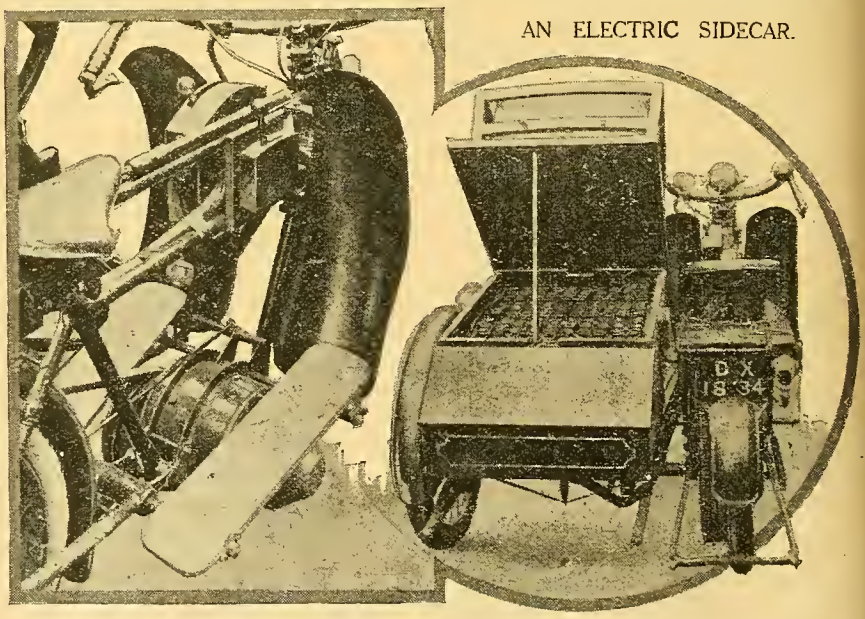
* * *

A silver cigarette box was recently presented to the Rev. E. P. Greenhill, late chairman of the Competitions Committee, by his fellow members of that Committee.

## 1922 500 Mile Race.

ONE of the most successful events held last year was the 500 miles race for the 200 guinea gold cup presented by Capt. A. G. Miller. This trophy was won outright by the Hendee Manufacturing Co., who handed it over to their brilliant rider, H. le Vack. We understand that the donor of the cup does not intend to offer another trophy this year and that certain agents in the motor cycle world are offering to put up a prize. We are asked for suggestions from our readers as to what form this prize should take, whether a single award for the fastest rider irrespective of class, or whether separate prizes for the winners of each of the five classes. We are given to understand that guarantees towards the cost, amounting to £240, have been received from members of the retail trade who appreciate the value of such a race to the motor cycle community.

## AN ELECTRIC SIDECAR.




A quaint vehicle used as a town runabout by the staff of Ransome, Sims & Jefferies, makers of the "Orwell" electric lorries. It can do 30 m.p.h., and runs 50 miles on one charge. It has been converted from an old-type Rudge.

## SUCCESS OF "THE MOTOR CYCLE" FILM.

**22 Applications; 28 clubs have already held Exhibitions; 45 further dates booked.**

*The Motor Cycle* film is proving a wonderful success. Up to last night it had been shown by twenty-eight different clubs—in several of the earlier dates for two or more days. It has been exhibited to approximately seventy-five audiences of, at a conservative estimate, an average of 900 people; and thus, including its week at the Polytechnic Cinema, London, it has been seen by about 70,000 spectators.

Forty-five clubs have yet to be visited, so that before it is withdrawn from circulation well over 200,000 should have seen and enjoyed this unique screen record of last year's important motor cycle competitions.

One hundred and twenty-two applications have been received in all, forty-nine of which we have had regretfully to refuse; for, although the film is already being duplicated, it cannot be expected to last such heavy service without showing some signs of wear towards the end. We have, therefore, decided to limit the number of dates we allot in accordance with the time which the films may be expected to remain in good condition.

Appreciations reach us from practically every club which shows it. For example, Mr. T. H. Sandland, the honorary secretary of the Widnes M.C., wrote recently: "On behalf of my club, I have much pleasure in thanking you for the loan of your wonderful film, which we had shown at the Co-operative Hall, Widnes, to a full house. It was greatly appreciated by all present, and all declare it was *par excellence* and could not be approached for thrilling incidents. And, although we had a heavy snowstorm the same night, we had several present who journeyed miles to see your inestimable film; they declared the journey was well worth it.

Each week we endeavour, as completely as the information passed on to us permits, to acquaint our readers of where the film may be seen during the following seven days. To-night the film will be shown at the Electric Theatre, Stocksbridge, on behalf of the local motor cycle club; to-morrow night the Sheffield University M.C.C. is arranging an exhibition in the Mappin Hall of the University; and on Saturday the Nottingham and District M.C. and L.C.C. will show it in Nottingham instead of the Derby club, which was unable to arrange a suitable hall.

---

## 40 MILES—30 OBSERVERS.

TO find the most skilful solo rider in the Coventry and Warwickshire Motor Club, a half-day "semi-freak" trial will be held on Saturday, the 11th inst., entries closing on Saturday the 4th inst. Only solo machines are eligible, and, indeed, it is understood that most of the course is impossible to any double track outfit. Some idea of the severity of the route may be gained by the fact that, although the course is only forty miles in length, no less than thirty checkers will be required to observe the competitors.

## THE MOTOR CYCLIST'S DIARY FOR 1922.

**A List of important Open Events. Reliability and Speed Trials organised by the different A.C.U. centres and those to be held by individual clubs are not included.**

| | |
|---|---|
| Sat., Feb. 25 | Colmore Cup Trial. |
| Sat., Feb. 25 to Mar. 5 | Brussels Show. |
| Wed., Mar. 1 to Mar. 5 | Paris-Nice Trial. |
| Sun., Mar. 5 | Argenteuil Hill Climb. |
| Mon., Mar. 6 | La Turbie Hill Climb. |
| Wed., Mar. 15 | A.C.U. 1 day Trial. |
| Sat., Mar. 18 | Victory Cup Trial. |
| Thurs., Mar. 23 | E. Mid. Centre Open Trial. |
| Sat., Mar. 25 to Apl. 9 | Tour de France. |
| Sat., Apl. 1 | Western Centre Open Trial (230 miles: 12 hours). |
| Sat., Apl. 8 | B.M.C.R.C. Meeting, Brooklands (members). |
| Fri., Apl. 14 | London — Lands End Run. |
| Sat., Apl. 22 | N.E. Centre Open Trial. |
| Sat., Apl. 29 | S. Midland Centre Open Hill Climb. |
| Sun., Apl. 30 to May 7 | Paris—Pyrenees Trial. |
| Mon., May 1 to 6 | Scottish 6 days' Trial. |
| Sat., May 13 | N. Centre Open Trial. |
| Sat., May 20 | S. Western Centre Open Trial. |
| Tues., May 30 | Junior T.T. Race. |
| Thurs., June 1 | Senior T.T. Race. |
| Fri., June 2 | M.C.C. London—Edinburgh Run. |
| Sat., June 10 | B.M.C.R.C. Meeting, Brooklands (open). |
| Sat., June 17 | Yorkshire Centre Open Trial. |
| Sat., June 24 | Mid. Centre Open Trial. |
| Sat., June 24 | M.C.C. Team Trial (provisional date). |
| Sat., July 1 | Eastern Centre Open Speed Trial. |
| Sat., July 8 | M.C.C. Brooklands Meeting. |
| Sat., July 15 | E.S. Wales Open Speed Trials. |
| Sat., July 15 | B.M.C.R.C. 500 miles Race. |
| Sun., July 16 | U.M.F. Grand Prix. |
| Sat., July 29 | N.W. Centre Open Speed Trials |
| Thurs., Aug. 3 to Tues., Aug. 8 | International 6 days' Trial in Switzerland. |
| Mon., Aug. 7 | August Bank Holiday. |
| Sat., Aug. 12 | B.M.C.R.C. Meeting, Brooklands (members). |
| Sat., Aug. 12 | N. Wales Open Trial. |
| Sat., Aug. 19 to Sat., Aug. 26 | A.C.U. 6 days' Trial |
| Sat., Sept. 9 | W.S. Wales Centre Open Speed Trials. |
| Sat., Sept. 23 | B.M.C.R.C. Meeting, Brooklands (members). |
| Sat., Oct. 21 | B.M.C.R.C. Meeting, Brooklands (championship meeting). |
| Anglo-Dutch Trial, date not yet decided. | |
| Arbuthnot Trophy, date not yet decided. | |

## PRICES OF SECOND-HAND MOTOR CYCLES.

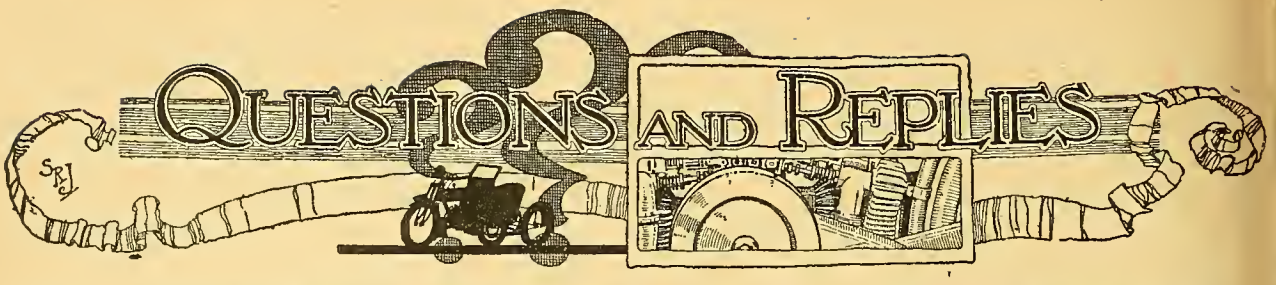
**MANY ATTRACTIVE BARGAINS.**

LIKE our weather conditions recently, the second-hand motor cycle market has been very unstable; it is quite impossible to observe any definite tendency of prices either to rise or fall since the last table of average figures published in *The Motor Cycle* of January 12th. Indeed, it seems likely that this is simply a case of cause and effect.

Consecutive cycles of snow, rain, frost, and mild sunshine are not calculated to make one think of the open road, and, although spring is drawing near, evidently the majority of potential buyers of motor cycles, new or second-hand, are delaying action until more settled weather conditions arrive. The unwisdom of this plan it is not our present intention to discuss, but it must be emphasised that, amongst the varied and in many cases anomalous prices quoted for machines in the classified advertisements in last week's issue of *The Motor Cycle* fully 40% are genuine bargains.

It is difficult at any time to arrive at a really fair average price for any particular model, and at present it is extremely so. In one case, for example, only two dated and priced machines of a certain make and model were advertised—one a 1920 solo machine at £80, the other a 1920 sidecar outfit at £75. In compiling the following table we have endeavoured to avoid such misleading figures.

| Machine and Model. | Average Price. £ |
|---|---|
| 3 h.p. A.B.C. (1920) | 87 |
| 7 h.p. A.J.S. sc. (1921) | 180 |
| 6 h.p. A.J.S. sc. (1920) | 129 |
| 2¾ h.p. Allon (1921) | 50 |
| 7-9 h.p. American X sc. (1920) | 80 |
| 3½ h.p. Ariel sc. (1920) | 70 |
| 3 h.p. Beardmore-Precision (1921) | 60 |
| 4 h.p. Blackburne (1921) | 75 |
| 4 h.p. Bradbury (1920) | 52 |
| 3½ h.p. Brough (1921) | 90 |
| 8 h.p. Brough Superior (1921) | 142 |
| 4¼ h.p. B.S.A. sc. (1921) | 112 |
| 4¼ h.p. B.S.A. sc. (1920) | 75 |
| 2½ h.p. Connaught sc. (1921) | 80 |
| 2¾ h.p. Douglas (1921) | 70 |
| 4 h.p. Douglas sc. (1920) | 80 |
| 8 h.p. Enfield sc. (1921) | 125 |
| 7-9 h.p. Harley-Davidson sc. (1920) | 105 |
| 10 h.p. Henderson sc. (1920) | 125 |
| 7-9 h.p. Indian sc. (1920) | 106 |
| 2¼ h.p. James (1920) | 33 |
| 7 h.p. James sc. (1921) | 145 |
| 6 h.p. Martinsyde sc. (1921) | 113 |
| 8 h.p. Matchless sc. (1921) | 140 |
| 8 h.p. New Imperial sc. (1920) | 90 |
| 3½ h.p. N.U.T. (1920) | 86 |
| 3½ h.p. Norton (1921) | 95 |
| 3½ h.p. P. and M. sc. (1921) | 112 |
| 4½ h.p. Quadrant sc. (1920) | 70 |
| 5-6 h.p. Raleigh sc. (1921) | 130 |
| 3½ h.p. Rover (1920) | 65 |
| 5-6 h.p. Rover sc. (1920) | 100 |
| 3½ h.p. Rudge-Multi (1921) | 73 |
| 3½ h.p. Sunbeam (1920) | 96 |
| 4 h.p. Triumph sc. (1921) | 110 |
| 4 h.p. Triumph sc. (1920) | 87 |
| 2¼ h.p. Velocette (1921) | 57 |
| 4 h.p. Verus (1921) | 78 |
| 6 h.p. Sports Zenith (1920) | 88 |




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### LAW MUST NOT BE EVADED.

Could you please furnish me with dates of *The Motor Cycle* wherein references to the disadvantages of front brakes occur. I have been summoned for absence of a front brake, and wish to quote from some authoritative source as to its superfluity?—A.H.A.

Although references to the disadvantages of certain types of front brakes have been made in our pages, it is not impossible to have a soundly designed fitment which is efficient. In any case, the disadvantages of any particular type is no excuse for disregarding the law which requires that a machine shall be equipped with two separate and independent brakes.

### SOME ROAD GRADIENTS.

As a reader of *The Motor Cycle*, I would be obliged if you could tell me what is the gradient (in the steepest part) of Blue Bank, which is between Pickering and Whitby, on the moorland road; also the gradient of Mamm Tor Hill, near Castleton, Derbyshire, and, finally, the gradient from Edale, over the moorland road, to Chapel-en-le-Frith, in Derbyshire?—W.N.

The gradients of Blue Bank (between Pickering and Whitby), are given in the Gall and Inglis Contour-book as 1 in 17, 14, 9, and 7. The gradients of Mam Tor, in Derbyshire, are given as varying between 1 in 17 and 1 in 11. We have been unable to trace any published gradient of the third hill you mention.

### BIG ENGINES AND HIGH GEARS.

Some time ago I saw a photograph of a 20 h.p. motor cycle with a gear ratio of 1¾ to 1. What are the difficulties in the way of going still further in this direction, and adopting the ordinary bicycle practice of over-gearing these machines, and having a gear ratio of 1 to 3, and so on, whereby much greater speeds might be attained?—H.S.

The gear ratios for any machine have to be selected in order to make use of the maximum power developed by the engine, this being dependent upon the most favourable rate of engine revolutions. Provided an engine of sufficiently large capacity was used, no doubt it would be possible to employ over gearing, but the engine would be of an extremely heavy and slow running type.

## Important Dates.

**Fri., Jan. 27th, to Sat., Feb. 4th—Scottish Car and Motor Cycle Show.**
**Sat., Feb. 25th—Colmore Cup Trial.**
**Sat., Feb. 25th, to Sunday, Mar. 5th—Brusseis Motor Cycle Show.**
**Wed., Mar. 1st, to Sun., Mar. 5th—Paris—Nice Trial.**
**Sun., Mar. 5th—Argenteuil Hill-climb (France).**
**Mon., Mar. 6th—La Turbie Hill-climb (Nice).**
**Wed., Mar. 15th—A.C.U. One-day Trial for Stock Machines.**
**Sat., Mar. 18th—Victory Cup Trial.**
**Thurs., Mar. 23rd—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs. June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**

### TUNING A RUDGE.

How can I improve the maximum speed of my 3½ h.p. Rudge-Multi, without making many internal alterations to the engine? (1) Would fitting a special carburetter do so? (2) Fitting an aluminium piston; would I have to rebalance the engine? (3) Boring holes in the connecting rod, thus lightening it? Can you suggest any other alterations?—J.K.D.C.

(1) No doubt a carburetter specially tuned for racing would give you some improvement. (2 and 3.) These matters are largely experimental, and it does not follow that the indiscriminate fitting of an aluminium piston and drilling the connecting rod will give you increased speed.

### THE GREEN PRECISION ENGINE.

Will you kindly let me know who are the makers of the "Regal-Green" engine, and if they are still in existence?—J.A.R.

Regal-Green machines are no longer made, but the Green-Precision water-cooled engine which was fitted was produced by F. E. Baker, Ltd., King's Norton, Birmingham.

### SOME MIXED FIGURES.

I wish to raise the top gear of my 500c.c. Coventry Eagle motor cycle. It appears to be about 8 to 1 at present (set for sidecar use). Engine sprocket, 12 teeth; gear sprocket, 35 teeth; countershaft belt pulley, 8in. diameter; wheel pulley or rim, 19in. diameter. What size of engine sprocket shall I get to make the top gear 4¼ or 4½ to 1, whichever suits the maker's sprockets.—N.S.B.

You do not give the date of your machine, but if it is a recent one, we are rather at a loss to understand the figures you give. Sturmey-Archer gear boxes have been the standard fitting on the Coventry Eagle for some time, and on these the clutch sprocket has 30 T. It is most unlikely that anyone would gear such a machine 8 to 1 on top, and, in any case, you have made some mistake in your measurements, as the sizes given represent a ratio of slightly higher than 7 to 1. Instructions on the determination of gear ratios and the number of teeth required on the various sprockets are to be found in the latest edition of "Motor Cycles and How to Manage Them."

### CHOOSING A MACHINE.

Will you please advise me about the purchase of a new machine to take a sidecar in a district with hills of about 1 in 11? Easy starting and freedom from trouble are essentials. Will 4 or 4½ h.p. be enough?—A.W.J. (Derby.)

Any first-class make of 4 to 4½ h.p. single-cylinder machine would propel a sidecar in your district with comparative ease. If you purchase a chain driven machine it would be advisable to get one fitted with an efficient shock absorber, otherwise a chain-cum-belt drive would be more satisfactory. Ease of starting is characteristic of almost all singles, especially those on which a decompresser is fitted.

### AN OLD LIGHTWEIGHT.

The engine of my single-geared machine is a rather old 2¾ h.p. four-stroke, which gets along all right on a level road. When it comes to a hill, however, it gradually slows down, and eventually stops in a very lazy and powerless sort of way, the opening of the throttle not appearing to increase the power at all. To test the compression, I placed the machine on the stand, and, revolving the wheel in the normal direction, found that the compression was rather weak. If, however, the wheel is revolved in the opposite direction, the compression is comparatively good, offering a springy resistance. Can you tell me the reason of this? There is, however, a distinct "click" each time a valve rises, or, more correctly, when it falls, especially the inlet valve, but when revolved in the ordinary direction no noise is heard. It appears to come from the cam raising the tappet rod. Is this a sign that the cams are worn? Also, can you tell me how often the crank case should be drained of oil, and how much oil must be placed in the crank case after this has been done? (Lubrication is by hand pump only.) Another thing which I do not understand is this. The magneto is driven by chain from the half-time shaft, both chain sprockets being the same size. The magneto, therefore, makes one revolution to two of the engine, *i.e.*, to one cycle. The contact points, however, make once and break once in each revolution, and therefore two sparks are produced while only one is needed. Does the second spark occur at the top of the exhaust stroke, and therefore produce no effect? If so, I should have thought it would be far better to reduce the magneto sprocket to half engine sprocket size, and thus produce only one spark.—A.C.S.

The resistance you observe when rotating the engine backwards may be due to the actual shape of the cams themselves, and not necessarily to them being worn. The crank case might be drained of oil about every 500 miles, and after this has been done three full charges of the hand pump should be given. If the magneto runs at half engine speed, and it has only one cam in the contact breaker casing, it will only give one spark per two revolutions of the engine. The spark only occurs when the points separate, not when they close again. Without further details we cannot make any suggestion with regard to the falling off in power of your engine when hill-climbing. You cannot, of course, expect abnormal performances from a small engine when only single-geared.

### KNOCKING WHEN STARTING.

My machine, a 1912 3½ h.p. Triumph, knocks when starting. I put it down to the sparking plug, but on fitting a new one I found very little improvement. The plug has recently been decarbonised and is in good order. Would you tell me my trouble?—A.J.

The information you give is not nearly sufficient to permit of a useful answer. The knocking may be due to the ignition being too far advanced, or it may be that the jet is rather small, and that the mixture is weak until the engine warms up.

### WHY SOME MEN ARE SPEED WIZARDS.

I was particularly interested in the two letters on "Which is the Fastest Norton Model," appearing in *The Motor Cycle* recently. Messrs. Norton Motors, Ltd., say their B.S and B.R.S. engines are specially tuned and built with one end in view—power development—without which speed is, of course, impossible. As an ordinary motor cyclist who takes a pride in trying to keep his machine in trim or tune, I take it that tuning means: (1.) The adjustment of valves with regard to opening and closing at certain periods of the cycle. (2.) The strength of the valve springs. (3.) Lift of valves. (4.) Size of jet or jets. (5) Compression ratio. The above-mentioned five points, I suppose, would require alterations for, say: (1.) Speed tests. (2.) Hill-climbing. (3.) Petrol consumption. (4) Slow running. I feel sure there are hundreds of motor cyclists who would welcome exhaustive information on this mystic subject of tuning.—CURIOUS.

The points you mention are certainly the most essential features of tuning an engine, but the questions of weight of reciprocating parts and balance also have some bearing on the matter; and, as you suppose, variations have to be made to suit special varieties of competition, such as hill-climbs, speed tests, or consumption trials, etc. Knowledge on the subject of tuning for really high speeds is almost entirely in the hands of a few experts, who employ their own particular methods, and guard them very jealously. It may be said, however, that there is no royal road to success in tuning for speed events, and the whole subject is a matter for continual experiment and adjustment, taking infinite care with every detail in the process. The impossibility of collating any complete information on the subject is also manifest, when certain methods will give good results on one machine, yet the same methods applied even to another machine similar in design prove to be quite hopeless.

### PETROL AND OIL CONSUMPTION OF A SINGLE.

(1.) What is the oil consumption of a 1921 4¼ h.p. B.S.A. ridden solo? (2.) What is the petrol consumption? (3.) What speed should be obtained from this engine? I use about one pint of oil for fifty miles on straightaway runs, and the petrol consumption is about 65 m.p.g. with the jet opened a half turn (threequarters for hills). The engine has ample power and does not smoke, only on full throttle when climbing on top gear.—H W B.

(1.) You should be able to do about 800 to 1,000 miles to the gallon of oil. (2.) From 65 to 85 m.p.g., although much better consumptions are by no means impossible. (3.) 45 to 55 m.p.h.

### ENGINE SHAFT GEAR FOR MACHINE WITH CLUTCH HUB.

Having just purchased a 3½ h.p. Triumph with hub clutch, which pulley do you recommend, a Philipson pulley or an N S U. two-speed pulley for light sidecar work?—H.C.

The Philipson pulley is quite a satisfactory arrangement, as is the Bradbury (N.S.U. pattern) two-speed gear also. It is impossible to recommend one in preference to the other, but you can get a slightly lower gear ratio with the latter. Its low gear, of course, is a positive reduction in ratio, whereas the Philipson is continually varying according to the load and speed. As you already have a clutch, however, the Philipson should serve your purpose, and if you order one with a touring governor no extra control is added to the machine.

IN PLACE OF THE "PAIR OF GREYS."

Though not by any means the first motor cycle wedding, it is rare to find all the guests being conveyed to church by motor cycle as well as the bride and bridegroom. The illustration depicts the sidecar outfits used at the wedding of Mr. and Mrs. F. Foster, of Thornton Heath.

### BRAKES AND THE LAW.

Is a 7-9 h.p. Indian, having internal and external brakes on the rear wheel, only within the law, or should each wheel be fitted with a brake? Is there a suitable front brake on the market?—J.W.M.

The law requires that a machine shall have two independent brakes, each one capable of locking the wheel; it does not specify that they shall be on separate wheels, therefore you are quite in order with the two brakes on the rear wheel only.

## READERS' REPLIES.

### HUB GEAR TO COUNTERSHAFT CONVERSION.

In *The Motor Cycle* of the 19th inst I note a query on page 90 re fitting back stays to a 5-6 h.p. Rex in place of the hub gear. I own a 1912 6 h.p. Rex with two-speed hub, and was thinking of this conversion myself, when a friend of mine recently called with a 3½ h.p. Ariel outfit (1919 model), and I found that the complete rear part of the Ariel would fit the Rex if the top back stays were lengthened about 2in. This conversion of course includes wheel, three-speed gear box, etc.—"REXBEAM."

### FOR A LEGLESS RIDER.

If your correspondent will get in touch with The Disabled Society, 48, Grosvenor Square, London, W.1., they will be able to give all the advice he requires concerning the alterations of a car to meet the needs of his unfortunate demands.—F. HARRIS.

In view of the query under the above title, we think you may be interested to know that we have in hand several Harper runabouts for cripples, two of whom have never previously seen a machine, which could be adapted to their particular requirements. In one instance the legless inquirer has decided to purchase a Harper runabout as soon as he can get delivery, and the only modification it will be necessary for him to make is the introduction on the handle-bar of a hand clutch lever and a hand brake lever. After these additions are made only three levers in all are fitted to the handle-bar, *i.e.*, throttle, clutch, and brakes. The engine is started by a convenient hand lever on the left-hand side of the machine, which lever passes through a gate automatically, upon the starting of the engine, and becomes a rachet side brake.—ARMSTRONG GRAHAM, R. H. Carlisle and Co., Ltd.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"H.T.F." (London, E.17).—7-9 h.p. three-speed Rudge, solo and with light sidecar: Speed; consumption; climbing; and general remarks.

"F.B. (Manchester).—1920 or 1921 3 h.p. A.B.C.: Reliability; durability (especially o.h.v. and timing gear); suitability for everyday use.

"H.S.D." (Yeovil).—Zenith - Bradshaw and A.B.C.: Stability on grease and with pillion passenger; speed; reliability; consumption.

"I." (Glasgow).—3 h.p. Ivy with sidecar: General reliability; speed; ease of starting from cold; detachability of sidecar; consumption; climbing; reliability of chain drive.

"J.W.B." (Bayswater).—Most efficient carburetter for 1 h.p. Auto-Wheel: Economy; power; reliability.

"H.S." (Heighington).—Family Morgan: Speed, comfort, climbing on 5 and 11 to 1 ratios; advisability of four-speed gear; stability and wear of rear tyre; consumption (oil and petrol) of 10 h.p. water-cooled M.A.G. engine.

"A.D." (Kelso).—2¾ h.p. Douglas: Climbing, speed, reliability on long journeys.

"J.R.W." (Hove).—New Imperial lightweight: Reliability, comfort on long tours, general experiences 1921 models.

"J.G.D." (North Tawton).—Binks's carburetter on 4 h.p. Norton; improved consumption; slow running and acceleration.

"Novice" (Lemington - on - Tyne).—Chemical decarbonisers and puncture-sealing tyre fillings.

"Multi" (Manchester).—Conversion of 3½ h.p. Rudge-Multi to three-speed countershaft; gear box used; ratios; transmission; vibration of engine on lower ratios; climbing and general running with sidecar.

"F.P." (Brighton).—1921 Enfield: Consumption, speed, climbing, gear control, lubrication, and cooling.

"J.H." (Newcastle-on-Tyne).—Simplex, Young, or similar attachment; general experiences.

"E.W.V.F." (Oundle).—Best mechanical pump on 1921 3½ h.p. Sunbeam: Consumption and economy obtained thereby.

"H.C." (Highgate).—Alldays Allon: M.p.g., speed, general reliability, possible improvements.

"C.H.L." (Brondesbury Park).—Coulson and Edmund springing systems; Blackburne engined sidecar outfits.

"D.W.R.S." (Teddington).—Flexekas fitments on valve stems of Douglas: Elimination of rattle.

"L.G." (West Bromwich).—Levis, single-speed: Climbing, average and maximum speeds; consumption, Showell pump as an advantage over drip feed.

"L.G." (West Bromwich).—Morgan: Advantage of *de luxe* over standard, hill-climbing, average and maximum speeds, oil and petrol consumption, air or water-cooling, life of tyres and chains; comfort with two adults and one child.

"Rover" (Bucks).—1917 3½ h.p. Rover with sidecar: Reliability, speed, climbing, consumption, etc.

"H.C." (Worcester Park).—3 h.p. Ivy and 2½ h.p. Levis: Speed, m.p.g., reliability, general upkeep (both solo).

"P.C." (Salisbury). — Rudge-Multi: Speed, climbing, belt slip, general reliability.

"D.A.B." (Streatham).—4 h.p. Blackburne: General experiences solo and sidecar.

"F.E.H." (Sheffield).—4½ h.p. Quadrant sidecar: Reliability, oil and petrol consumption, average speeds, cooling, climbing, brakes, and general criticisms.

### Running Spares.

Useful sets of spares and replacements for the various models of the New Imperial machines are being marketed by New Imperial Cycles, Ltd., of Princip Street, Birmingham. Each set contains the most likely things the rider will need on the road or in the garage in a year's riding.

### Cleaning Leather Coats.

Many of those who have enquired recently for a method of cleaning leather coats will be interested to learn that we have had a good report from a reader regarding Propert's saddle soap; we do not know the makers of this preparation, but it is obtainable from most saddlery dealers.

### Taxi-sidecars for Cardiff.

At a meeting of the Swansea Watch Committee on Tuesday, the receipt of letters from the County Cycle and Motor Co., Ltd., and the James Cycle Co., Ltd., both of Birmingham, asking for the views of the Committee on the question of motor cycle taxicabs was reported by the chief constable. After some discussion, it was agreed that the licensing of such motor vehicles be approved.

### Echoes of the Christmas Trials.

In justice to his Levis machine, P. Pike wishes it to be known that he retired at Exeter in the London-Exeter run on account of receiving news that his daughter was seriously ill and that his presence was needed in Plymouth.

In the London-Exeter, V. Gayford, riding a 3½ h.p. Zenith-Bradshaw, gained a gold medal, and not a silver as we reported, while in the London-Gloucester, J. Wallis (7-9 Reading-Standard), who figured on the original awards list as a second-class prize winner, ultimately received a silver cup.

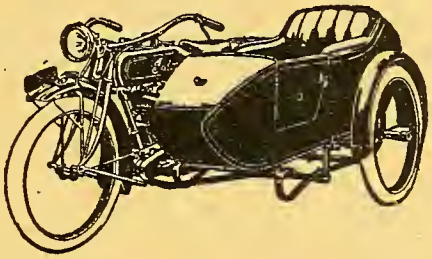
An amendment must also be made to the first published results of the London-Gloucester trial in that F. G. Morgan, riding a 2¾ h.p. Cotton, received a silver cup instead of the second class award with which he was previously credited.

### Catalogues Received.

Sparkbrook Manufacturing Co., Ltd., Coventry: Sparkbrook and Spark motor cycles and Sparkbrook pedal cycles are dealt with in one twenty-four page book. The motor cycles described are the 2½ h.p. two-stroke Sparkbrook, the 2¾ h.p. four-stroke Jap-engined semi-sports model, and the 2½ h.p. light two-stroke Spark, which is sold at a very competitive price.

Dunlop Rubber Co., Ltd., Aston Cross, Birmingham: A booklet containing some useful information regarding Dunlop cord tyres, which are made in the following sizes: 26×2½in. to fit the B.B. rim, 26×3in. to fit the C.C.1 rim, or 650×65 mm. rim, and the 700×80 mm. oversize, 28×3in. to fit the C.C.2 rim, and 28×3½in. to fit the 28 L.C. rim.

# ROCK BOTTOM PRICES at GODFREYS



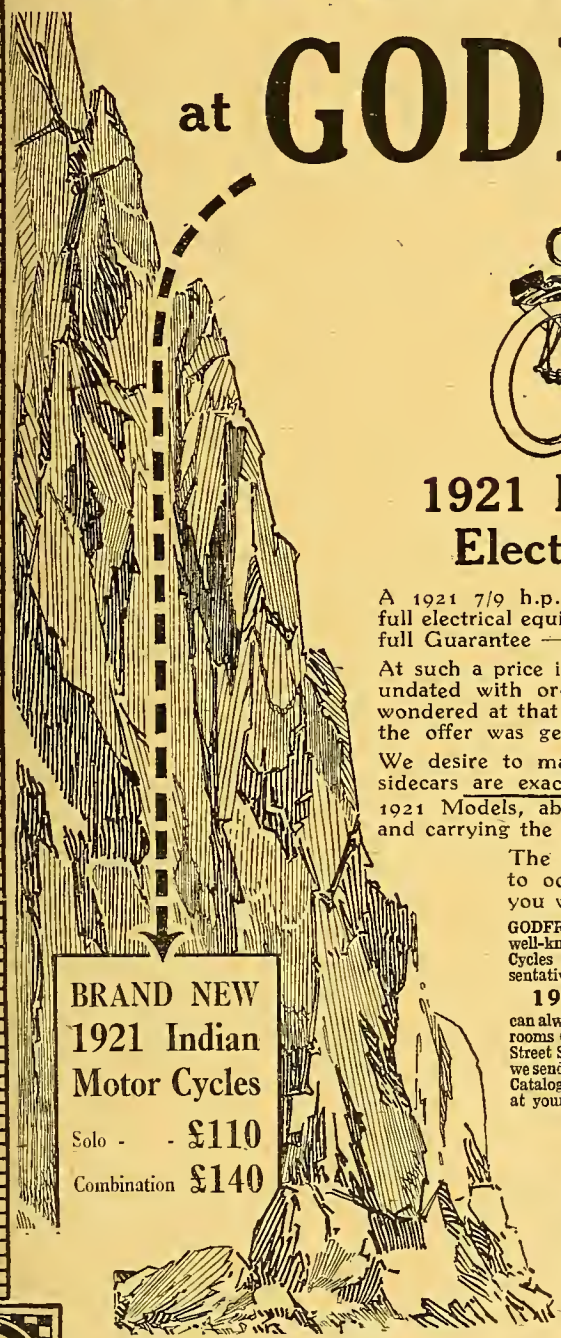
## 1921 Indians under cost. Electrically Equipped.

A 1921 7/9 h.p. INDIAN Powerplus Combination, with full electrical equipment, brand new and carrying the maker's full Guarantee ——————— For **£140 ! !**

At such a price it is not surprising that we have been inundated with orders and enquiries, nor is it greatly to be wondered at that certain cautious folk even doubted whether the offer was genuine until they actually saw the outfit.

We desire to make it quite clear that these machines and sidecars are exactly what we claim them to be, viz: late 1921 Models, absolutely new and unused, fully equipped, and carrying the maker's full guarantee.

The present offer is an opportunity not likely to occur again, and one which if you are wise you will profit by whilst you have the chance.



BRAND NEW
1921 Indian
Motor Cycles
Solo - - £110
Combination £140

GODFREYS are agents for all well-known makes of Motor Cycles and a large and representative stock of

**1922 MODELS**

can always be seen in their Showrooms (1 min. from Gt. Portland Street Station, Met. Rly.). May we send you our full Lists and any Catalogue you may wish to study at your leisure?

**CREDIT TERMS:**

We are always pleased to accommodate customers who do not wish to disturb Capital. Our charge is 4 per cent. (except in those cases where Manufacturers have fixed rates) and we deal direct and not through an agent.

## GODFREYS LTD.

208, GT. PORTLAND ST.,
LONDON, W.1.

*Telephone: LANGHAM 1300 (Two Lines).*

# That Old Cover

you were going to discard may yet, by careful retreading, be capable of many thousand extra miles. Send it to us and if the canvas is sound we will quote you the cost of retreading.

## BELDAM RETREADS

embody the same high quality of material and workmanship that goes to the making of the famous Beldam Tyres. Your covers are given a new, stout, well-built tread that is usually good for more than 5,000 miles.

We retread any make of tyre in the V-tread design. Here are a few prices :—

| | 26×2 ins. | 26×2½ ins. | 26×3 ins. |
|---|---|---|---|
| All Rubber: Extra Heavy Tread | 20/9 | 20/9 | 23/9 |
| „ „ Medium Tread | 17/9 | 17/9 | 20/9 |
| Steel-Studded | 39/- | 39/- | 42/- |

Re-lining, patches and bursts according to requirements. Full price list on application.

THE BELDAM TYRE CO., (1920) LTD., BRENTFORD, MIDDLESEX.
*Telephone Ealing* 125.

These are typical experiences.

*Bedford.*

*"Some two years ago you retreaded a 26×2½ tyre for me. This retread has now done over 8,000 miles and is still running. This tyre, an . . . . . , wore out in 2,118 miles and your retread is the finest I have ever had. I have another 26×2½ tyre which I want you to quote me for,"*

*F.S.B.*

*Lydford.*

*"We have dispatched to-day a Motor Cycle Cover. It belongs to client who says you retreaded a previous cover of his, which gave him a mileage of 8,000 before it wore out."*

*Bangor.*

*"I am pleased to say that the last two tyres I had retreaded with you have lasted longer than any new tyre I have had,"*

*J.P.*

**This is the Toffee Dad enjoys**

When he's out on a cycle run—and he doesn't forget we youngsters expect a share when he gets home.

**MACKINTOSH'S TOFFEE-DE-LUXE**

has the largest sale in the world.

Sold loose by weight at 8d. per ½-lb.; and in "Baby" Tins 1/3 each, "Tall" Tins 1/3 and 2/6 each, and 4-lb. "Family" Tins.

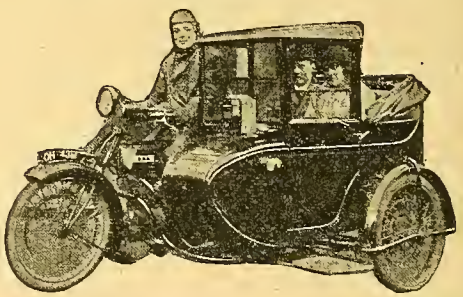
©C.I.



*The POPULAR*

## "COUNTY" B.S.A. TAXI COMBINATION

Complete with "County" Compensating Brakes
(PATENT APPLIED FOR)



*SPECIFICATION*: B.S.A. New 8-h.p. Special Taxi Model CANOELET Sidecar "Landaulette," accommodating two passengers. Magdyno Electric Lighting with Inside Roof Light. Interchangeable wheels, spare wheel and luggage carrier, "County" compensating brakes, and patent meter drive, as licensed throughout the country.

*Write for full particulars.*

**COUNTY CYCLE and MOTOR CO.,**
B.S.A. SPECIALISTS and
TAXICAR EXPERTS

**All New 1922 B.S.A. Listed Models Now In Stock.**
**B.S.A. Replacements dispatched by return of post.**

**300 & 301, Broad St., BIRMINGHAM**

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

VERTISEMENTS in these columns 12 words 3/–, and 3d. for every ad– l word. Paragraphs of under 8 words iarged double rate. Each paragraph is d separately. Name and address must nted. Series discounts, conditions, and terms to regular trade advertisers will ted on application.

al Orders and Cheques sent in payment for sements should be made payable & Co. FFE & SONS Ltd., and crossed ry Notes, being untraceable if lost in , should not be sent as remittances.

advertisements in this section should be panied with remittance, and be addressed offices of "The Motor Cycle," Dorset , Tudor Street, London, E.C.4. To insertion letters should be posted in o reach the offices of "The Motor Cycle," first post on Friday morning previous to y of issue. Advertisements that arrive ite for a particular issue or that are ed out will automatically be inserted in ollowing issue unless accompanied by ctions to the contrary.

letters relating to advertisements should the number which is printed at the end of dvertisement, and the date of the issue ch it appeared.

proprietors are not responsible for clerical iters' errors, although every care is taken d mistakes.

## NUMBERED ADDRESSES.

the convenience of advertisers, letters may be ed to numbers at "The Motor Cycle" Office. his is desired, the sum of 6d. to defray the cost of tion and to cover postage on replies must be added advertisement charge, which must include the ox 000, c/o "The Motor Cycle." Only the number pear in the advertisement. All replies should be ed No. 000, c/o "The Motor Cycle," Dorset House, Street, London, E.C.4. *Readers who rep'y to Box No. ements are warned against sending remittance through except in registered envelopes; in all such cases the e Deposit System is recommended, and the envelope e clearly marked "Deposit Department."*

case of motor cycles offered for sale under a box , as it is unusual for these to be sold without first spected by the intending purchaser, advertisers will e business by embodying in their advertisements ection of the district in which the machine may be seen and tried.

## DEPOSIT SYSTEM.

ons who hesitate to send money to unknown persons al in perfect safety by availing themselves of our System. If the money be deposited with "The Cycle," both parties are advised of this receipt. time allowed for a decision after receipt of the three days, and if a sale is effected we remit the to the seller, but, if not, we return the amount depositor. Carriage is to be paid by the buyer, but vent of no sale each party pays carriage one way. ller takes the risk of damage in transit. For all tions up to £10, a deposit fee of 1/- is charged; on tions over £10 and under £50, the fee is 2/6; over d under £75, 5/-; over £75 and under £100, 7/6 all transactions over £100, 1%. All deposit s are dealt with at Dorset House, Tudor Street, , E.C.4, and cheques and money orders should be payable to Iliffe & Sons Limited.

letter "D" at the end of an advertisement is an ion that the advertiser is willing to avail himself of posit System. Other advertisers may be equally s, but have not advised us to that effect.

## SPECIAL NOTE.

aders who reply to advertisements and receive no to their enquiries are requested to regard the as an indication that the goods advertised have been disposed of. Advertisers often receive so enquiries that it is quite impossible to reply to ne by post.

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C., kick starter, speedometer, all on, in splendid order; £75, or near offer.—Lambert, Rd., Stroud, Glos. [6712


# NEW SIDECARS

BY FIRST CLASS MAKERS

## AT ABOUT HALF PRICE

These sidecars are exactly as supplied by the manufacturers and have not been used. They are complete with tyre and can be supplied with couplings to suit all standard British motor-cycles.

A limited number only are available and they cannot be repeated at the prices quoted.

### CANOELET

Model D.4 . . . . . £20

### MILLFORD

Olympia Corvette . . . . . £20
Corvette . . . . . £16
Skiff . . . . . £15

### GLORIA

Special Model . . . . . £30
Model De Luxe . . . . . £38

# NEW and USED MOTOR-CYCLES

We have an exceptional selection of machines of all types in our stock and shall be pleased to send lists to enquirers.

Purchases can be made under

## OUR CREDIT SYSTEM

at a charge of

## ONLY 4% EXTRA

to the cash price.

We can accept your present Motor-cycle in part

## EXCHANGE

and allow you full value for it.

## THE EASTERN GARAGE CO.

(Official Repairers to R.A.C., A.C.U., A.A., & M.U.)

**418 ROMFORD ROAD, FOREST GATE, E.7.**

Telephone ..... 490 East Ham.
Telegrams ..... "Egaraco, London."


## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C., 1920, faultless condition throughout, insurance, tax, accessories; what offers?, part exchange considered.—184, Broadfield Rd., Catford. [6708

1921 A.B.C. Combination, kick start, Easting, tax paid, trip speedometer, all on, perfect; £90, or part exchange 8h.p. Rover.—Stanley, Kimberley Rd., Cambridge. [6481

*Spare Parts:*

A.B.C., largest stock in London.—Maudes' Motor Mart, 100, Great Portland St., W.1. [7044

### A.E.L.

SHOP-SOILED A.E.L. 2¼h.p., 2-stroke, 2 speeds, kick sterter, used for one or two demonstrations only; list price £57, accept £48.—Dunwell's Garage, Wigan. Tel.: 328. [0766

### A.J.S.

CROSS, Effingham Square, is agent for A.J.S.'s in Rotherham, new models from stock. [6204

A.J.S.—Quickest deliveries all models.—Merrick's Stores, Listerhills Rd., Bradford. Tel.: 2439 [1163

1922 A.J.S.—Early delivery of any model from Premier Motor Co., Aston Rd., Birmingham. [6922

A.J.S. 6h.p. 1920 Combination, dynamo, hood, screen, perfect; £155.—S. Culmer, Shaldon, Teignmouth. [6152

A.J.S. 2¾h.p., 3-speed, 1919, kick start, perfect condition; £40.—204 Ladbroke Grove, W.10. 'Phone: Park 5541. [6592

A.J.S.—Immediate delivery of 1922 models; exchange and easy payments.—P. J. Evans, John Bright St., Birmingham. [6403

1920 late A.J.S. Combination, Lucas dynamo, new tyres, tax paid, any trial; £175.—H. Greening, 6, Ashley Rd., Dorchester. [6148

1920 A.J.S. Combination, Lucas lamps, spare wheel, all accessories, splendid condition; £115.—Hopkins, New St., Ledbury. [6783

A.J.S. 1922 2¾h.p., just delivered, unused, owner buying car; £82/10, cash.—Windemer, 253, Lavender Hill, Clapham Junction. [6283

1921 A.J.S. 7h.p. Combination, spare wheel, Lucas outfit, Tan-Sad, triplex screen, tax paid; £165.—Taylor, 5, New Dover Rd., Canterbury. [6159

1920 A.J.S. Beautiful Combination, well appointed, mileage 3,000, tyres unpunctured; £125; taks half down.—Bunting's Exchange, Wealdstone. [6883

WAUCHOPE'S, 9, Shoe Lane, London.—A.J.S. Combination, latest 1922 model, from stock, £175; also lightweight 2¾h.p., £85. Easy terms and exchange. 'Phone: Holborn 5777. [6932

A.J.S. Combination, 1920 Aug., Lucas access., spare wheel, new tyres, speedo., hood, and screen; £120.—De'Ath, 10, Elaine Grove, N.W.5. Or exchange Morgan. [6579

A.J.S., 1914, 6h.p. Comb., Matchless colour, lamps, horn, speedometer, mirror, pillion seats, screen, tax, etc., insured, splendid condition; £90, nearest offer.—Alcock, 114, Bow Rd., E.3. [6671

A.J.S. 1921 Combination, new condition, electric lights, spares, aluminium disc, spare wheel, etc., tax paid; £170 or offer, or exchange late 2¼h.p. Enfield and cash.—Fox, St. Helens, Isle of Wight. [6367

A.J.S., latest 2¾h.p. Sporting Models, £85: Combination, £110; 7h.p. Combination, £175; also one 1920 6h.p. Combination, hood, screen, accessories, and all spares, £125.—Marston, 31, Bridge St., Chester. [6758

1922 A.J.S. 7h.p. Combination, beautifully equipped with Magdyno electric lighting, speedometer, watch, mileage under 800, guaranteed unscratched; cost over £213, great bargain 180 gns.—Julian, 84, Broad Street, Reading. 'Phone: 1024. [7041

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Keys, 8, Bond St., Ealing. [3608

A.J.S. Spares; prompt delivery.—Cyril Williams, Chapel Ash Depot, Wolverhampton. T.A.: Parts. [7901

### Alecto.

BRAND New 3½h.p. Alecto, unused, 2-speed, clutch and kick-starter, complete with lamps; £40; E. Anglia.—Box 8,212, c/o *The Motor Cycle.* [5230

### Allday's.

ALLON, 1918, 2¾h.p., 2-stroke, 2-speed, clutch, mechanically perfect, tax paid; £30.—Kellett, Oxenpark, Greenodd, Ulverston. [6302

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue C29
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Alldays.

ALLON, unused, 1922, Watford speedometer, fully equipped; £65.—Cringles, Thicket Rd., Sutton, Surrey. [6683

ALLDAYS Allon, 1920, 2-speed, kick start, leg shields, nicely equipped, unscratched; 34 gns. Evenings.—67, Fernlea Rd., Balham. [6946

ALLDAYS Allon 2¾h.p., 2-stroke, 2-speed, in new condition, fully equipped; £40 or exchange.—Brown, 71, Twilley St., Wandsworth, S.W.18. [6968

### American X.

1921 American X 7-9h.p. Twin, 3 speeds, new but slightly shop-soiled, at a very low price to clear; an opportunity for the bargain hunter.—14, Gt. Marlborough St., W.1. [0769

AMERICAN Excelsior 1920 7.9h.p. Combination, lamps, horn, Henderson Elite sidecar; £67/10.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone, Avenue 5548. [0069

BRAND New 1921 American "X," with Mills-Fulford Model-de-luxe sidecar; list price £213, reduced to £150; easy payments 4% extra. Write for special clearance bargain list.—Premier Motor Co., Aston Rd., Birmingham. [6923

SPECIAL American X Combination, Magdyno lighting, Bosch racing mag., Ricardo pistons, sprockets, and racing handlebars, aluminium streamline racing body; also coachbuilt torpedo, mechanically perfect, speed, 85 solo, 70 sidecar; £120.—64, Spellow Lane, Liverpool. [6664

### Ariel.

F.O.C.H. have 1920 3½h.p. Ariel Combination, fully equipped.—5, Heath St., Hampstead. (Near Tube.) [6413

ARIEL, 1921, 3-speed touring, brand new, unregistered (list £95); £75.—Clark, 7, Exhibition Rd., South Kensington. [5243

ARIEL.—All models, cash or gradual payments. Spares supplied from stock.—West Central Agency, Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0704

WAUCHOPE'S, 9, Shoe Lane, London.—6-7h.p. Ariel Combination 1921, new, reduced to £139; 3½h.p. Ariel, 3 speeds, clutch, £87/10. No extra charge for easy terms. [6983

ARIEL Motor Cycles are the last word in reliability. We have always in stock the reliable motor cycles; trade supplied.—Jones' Garage, Muswell Hill, and Woodside Parade, N. Finchley. [0378

LATE 1918, 6-7h.p. Ariel Combination, Gloria sidecar, 3-speed countershaft, kick start, fast, guaranteed perfect condition, cash wanted; 58 gns.—Green, Crown Yard, South Gates, King's Lynn. [6493

1921 6-7h.p. Ariel, all-chain, 3-speed, kick start, Lucas mag. dynamo, Lucas horn, etc., special machine, as new, unscratched; £105, near offer; exceptional bargain.—Stone, 116, Cheltenham Rd., Bristol. [6547

ARIELS.—Longman Bros., Bond St., Ealing. Telephone: 689.—All models obtainable from the Ariel experts. Specially tuned sports models, 3-speed, certified to have exceeded 65 m.p.h.; £92/10. Cash, exchange, or deferred payments. [5785

ARIELS, the most reliable machines on the road; all models from stock; spare parts sent anywhere; trade supplied.—F. Spearman, Ariel Expert, Ariel Garage, 7, Rochdale Rd., Harpurhey, Manchester. Tel.: 325 Cheetham Hill. [5135

ARIEL Twin, 1919, 5-6h.p., c.b. sidecar, electric lighting, Easting Cowey horn, and speedometer, mileage under 7,000, fast and reliable; exceptional bargain at £80; owner buying car.—Write, N. B., c/o J. W. Vickers and Co., Ltd., 5, Nicholas Lane, E.C.4. [6291

*Spare Parts:*

ARIEL Spares for all models, post free.—Ariel Service Depot, Jones' Garage, Broadway, Muswell Hill, N.10. [0742

### Bat.

BAT, spring frame, 3½h.p., Bosch magneto, automatic valves, running order; £14.—68, Gloucester Rd., Camden Town. [6696

BAT, 1922, 4h.p. twin, purchased Nov. last, makers' guarantee still good; sacrifice £95, going abroad.—J., 46, Chaucer Rd., S.E.24. [7022

B.A.T.-J.A.P. 5×6 Twin, Bosch magneto, 2 speeds, drop frame, spring forks, good tyres, good condition; £23, bargain.—Box 8319, c/o *The Motor Cycle*. [6194

### Beardmore.

STANDARD Spring Frame 3h.p. Beardmore, perfectly new, £72/10.—Stretton's Garage, Gloucester. [6554

### Blackburne.

BLACKBURNE, 4h.p., brand new, £85.—Goad, 122 Maida Vale. 'Phone: Hampstead 1353. (Private House Garage.) [5981

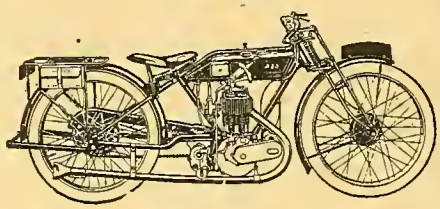
8h.p. 1921 Blackburne Combination, shock absorbers in flywheel and roller bearing, big ends; appointment.—Waterfield, 263, Hampstead Rd., N.W.1. [6242


GET IT AT

TAYLORS

Sole London and District Distributing Agents for A.J.S., Excelsior, and Dunelt Motor Cycles.

A·J·S



**The famous A.J.S.,** which is now almost a household word, is available in two models only for the 1922 season—the 7 h.p. Combination at £175 and the 2¾ h.p. Touring, semi-sports, or stripped sports model at £85. These prices include carriage to nearest railway station. Supplied on the "payment out of income system," ¼ down and balance spread over 12 monthly instalments. May we send you full particulars?

DUNELT

TWO-STROKE

**Efficiency, Simplicity and Economy** sum up the Dunelt, which is a combination designed specially for the motor cyclist who desires to keep costs low. The 4½ h.p. Dunelt 2-stroke makes light of hills, it is simple to drive and easy to keep in trim, it has few working parts—no valves to grind or valve springs to break. The fitments are 3-speed gear, hand clutch and kick-starter, detachable and interchangeable wheels, roomy coachbuilt sidecar with locker of ample size in rear. Supplied complete with spare wheel and tyre for £29 18s. 6d., deposit and balance in 12 monthly payments of £7 6s. 8d., or £113 8s. for cash. May we give you a trial run?

"Excelsior"

**The Excelsior range for 1922** is very comprehensive. Models are available to suit all purses and desires. The single sporting 2-stroke is priced at £39 18s. and the 8 h.p. de luxe combination costs only £155. Full particulars gladly sent on request, also deferred payment terms.

**SPECIAL**

High-class second-hand machines in great variety are now available at bargain prices.

*Write for detailed list.*

**H. TAYLOR & CO., LTD.**

Showrooms—
Motorcycles and Cars.
**52-53, Sussex Place, South Kensington.**
Accessories, Spare Parts and Repairs.
**21a, Store Street, Tottenham Court Road, W.C.1.**
Wholesale—
**38, ALFRED PLACE, W.C.1.**
Garage—Tottenham Court Road, W 1.
Telephones: Accessories and Repairs, Museum 1240
Motorcycles and Cars, Kensington 720
Telegrams .. .. "Dynametro, Westcent, London."


## MOTOR CYCLES FOR SALE

### Blackburne.

1921, New Scale, 2¾h.p. Blackburne Sports unused, shop soiled only. What British Generator Co., 481, Oxford Rd., Reac

BLACKBURNE-WILKIN 2¾h.p., 3-speed, chain, done 600, fast, licensed, Lucas M £90; without, £70.—Jackson, Grappenhall Rd. tonheath, Warrington.

BLACKBURNE 1920 8h.p., with Henderso sidecar, speedometer, lamps, screen, exc condition; bargain, £108; exchanges.—N Motors, 223, Hammersmith Rd., London.

1921 Scale 4h.p., Blackburne engine, S Archer gear, clutch and kick-starter mirror, tools, excellent condition, cost £110, £55.—King, 4, Willow Walk, Short St., Cambi

1920 4h.p. Blackburne Combination, 3-speed dynamo, speedometer, mirror, special absorbers, perfect condition throughout; 96 g ferred or exchanges.—Edwards, 50, Harriogto South Kensington.

WINNER "Smart Machine" competition CYCLING, October 12th. Blackburne 1921, with Volta sidecar-de-luxe. Probably th strikingly attractive combination on the ro mired everywhere, mileage 1,200 only, tyres tured, new Stepney roadgrip, electric lighting, sen, Ace discs, aluminium sidecar dash with ments, etc., tax paid 1922, insured. Really ultra-luxurious outfit. Extraordinary bargain, under half cost. Week-ends or appointment; sent.—F. V., 12, Grange Rd., Gunnersbury, W

### Bradbury.

1921 Bradbury Combination, 6h.p., A.J.S. lavishly equipped; £90; Grindley sidec Balliol Rd., North Kensington.

WAUCHOPE'S, 9, Shoe Lane, London.—Bradbury, new 1921 model, reduced t also 6h.p. Bradbury combination, new, 1921, to £130. No extra charge for easy terms.

### Brough.

BRAND new 1921 O.H.V. 8h.p. Brough, combination, lavishly equipped; £135.—24, Rd., North Kensington.

BROUGH 1921 5-6h.p. S.A., 3-speed, all largest lamps, discs, really efficient leg horn, condition perfect.—25, Wellington Rd., ton.

38 GNS.—Brough 3½h.p., late, Model H, clo 3-speed, very fast, terrific acceleratio change considered.—20, Treen Avenue, Hoggers Barnes.

### Brough Superior.

BROUGH SUPERIOR, 8h.p., July, 1921, engine, o.h.v., Lucas Magdyno lighting, 80 speedometer, mirror, watch, insurance, all plat and unscratched, mileage 700 only; cost £21( fice £135 or offer.—Parsons, I, Acton Lane, C

ALLEN-BENNETT Motor Co., Ltd., Service and sole London agents for the Brough S the sporting rider's ideal.—Immediate delivery models at reduced prices. Mark I., 90×77½, o speed, clutch, and kick starter, £160; Mark I., combination, step, mat, screen, etc., £180, special side valve J.A.P. engine, same price II. 6.5, mag., 72×90, 3-speed, clutch, and kick £126; sporting combination, step, mat, scree £150. Demonstration models in stock. Catalog post free on request.—The Allen-Bennett Mo Ltd., 9-10-11, Royal Parade, London Rd., We don. 'Phone: Croydon 2450.

### Brown.

5-6h.p. Twin Brown Combination, clutch N fine condition; £29.—Bush, North St., S Suffolk.

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with

B.S.A. Specialists.—County Cycle and Motor Co St., Birmingham.

B.S.A.'s, all models; exchanges.—Harry Nas King St., Hammersmith.

B.S.A. Combination, Model H2, with No. 3 slightly shop soiled; £125.—Stour Cycle Stourbridge.

ORDER Your New B.S.A. from R. B. Cl Co. Highest exchange prices given—7, tion Rd., S.W.7.

B.S.A., 1921, 7-8h.p. Combination, fully eq price and particulars apply J. Hull, Cro Sowerby, Thirsk.

BUY Your New B.S.A. from an agent w always give you good service; 1922 mo early delivery.—Below.

SHOP-SOILED 6-7h.p. Twin B.S.A. comb £132.—Arthur G. Daw, B.S.A. Agent, 11 ton Hill.

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Enfield.

NFIELDS, all models; exchanges.—Harry Nash, 365, King St., Hammersmith. [6854

NFIELD 3h.p. Twin, good running order; £24.—70, Baring Rd., Lee, Kent. [6817

HEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

)21 Enfield, Magdyno, Binks, windscreen, mileage 3,000; £135.—23, Hamilton Rd., Reading. [6486

)21 8h.p. Enfield, Vickers engine, Magdyno lighting, speedometer, hood, windscreen, all as new; gns.—Below.

)19 Enfield Combination, Easting, lamps, etc., insurance policy, licensed, as new; 82 gns.; deed payment or exchanges.—Edwards, 50, Harring- Rd., South Kensington. [6904

)18 Enfield Combination, 8h.p. Colonial model; a bargain, £85; like new.—Ross, 86, High Rd., Lee, [2162

9 gns., 1921 Enfield, 2-stroke, 2-speed, clutch, kick starter, accessories.—40, Aynhoe Rd., W.14. [6364

NFIELD Combination 6h.p., thoroughly overhauled, in fine condition; £49.—Rose's Garage, ridge. [6641

)17 3h.p. Enfield, beautiful order, £35.—28, Woodford Rd., Forest Gate. 'Phone: Strat- 2598. [6809

NFIELD Combination, 1921, 8h.p. Vickers engine; £110, no offers.—Cheverton, 13, Norman Rd., ubledon. [6951

)21 Enfield Lightweight, practically new, lamps, speedometer, tax paid for 1922; £46.—114, kton Hill. [6837

)19 3h.p. Enfield Twin, overhauled, fully equipped; £44.—Shepherd, Enfield Highway, ; Waltham X 31. [0776

)18 Enfield Combination, 6h.p., fully equipped, any trial; £55.—204, Ladbroke Grove, W.10. one: Park 5541. [6593

ACRIFICE, 1920, 3h.p., M.A.G. Enfield, Enfield gears, licensed, equipped, faultless; £43/10.—5, toria Avenue, Surbiton. [6552

EW 1922 8h.p. Enfield Combination, Lucas magdyno lighting; £158, easy payments 4% extra. he Premier Motor Co., Aston Rd., Birmingham. [6924

DNGMAN BROS., Bond St., Ealing. Telephone: 689. Sole official district agents.—All Royal eld models. Cash, exchange, or deferred payments. [5788

NFIELD Twin, 3h.p., 1915, 2 speeds free engine, perfect running order, £38.—Butterworth Garage, Lane, Brixton Hill. 'Phone: Streatham, 2813. [6575

)20 2¼ Enfield, two-stroke, equipped, nice condition, £38/10.—Goad, 122, Maida Vale. one: Hampstead 1353. (Private House Garage.) [5979

.p. (late) 1919 Royal Enfield, 2-speed, clutch, overhauled, good tyres, running order, tax paid; £45 or offer.—Sellman, Birmingham Rd., Stratford-on- n. [6701

NFIELD lightweight 1920, lamp, horn, pump, etc., new tyres and tubes, guaranteed good con- on; £36, bargain.—B. A. Boorman, Cromer, venage. [6244

NFIELD 8h.p. Combination, new 1921 model, £128; also one fitted with Lucas "Magdyno" ting set, bargain, £148.—P. J. Evans, John Bright Birmingham. [6406

NFIELD, 1920, 2¼h.p., lamps, horn, tools, one new tyre, in splendid condition, practically untched, tax paid, any trial; £40.—91, Grove Park, mark Hill, S.E.5. [6657

)19 6h.p. Royal Enfield Combination, complete; accessories. Perfect condition. Tax paid and red end March. Owner buying car.—Moffat, ham St., Penrith. [5462

NFIELD Twin 2¾h.p., speed, chain, modernised, £7 new parts, latest colours, private owner, unloyed, particulars; £28, offers.—35, Station Rd., ls Barton, Northants. [6273

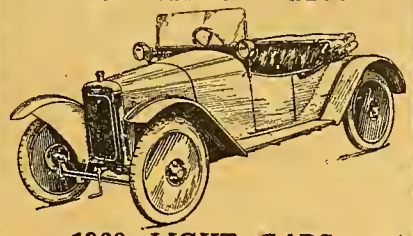
NFIELD.—We are official agents, and can give immediate delivery of any model of this foolproof or cycle.—Jones' Garage, Muswell Hill, and Wood- Parade, N. Finchley. [0380

)21 Enfield Lightweight, guaranteed as new, mileage 1,200, unpunctured, lamps, horn, dometer; genuine bargain, £45.—Newsey, Danes- ', Hadley Rd., New Barnet. [6156

'AUCHOPE'S, 9, Shoe Lane, London.—1922 2¼h.p. Royal Enfield, 2-stroke, £55; 2¼h.p. al Enfield with kick starter, £57; 8h.p. Royal eld sidecar combination, £140, dynamo lighting, 8; new 1921 shop-soiled 8h.p. combination, £125; ). 1917-18 combination, £95. Easy terms and ange. 'Phone: Holborn 5777. Trade supplied. [6979

# 1922 COVENTRY PREMIER

*8 h.p. W.C. 4-wheeler, dynamo lighting, spare wheel, hood, screen, speedometer and 12 months' insurance* - **£250**



## *1922 LIGHT CARS.*

**AIREDALE 11.9 h.p. 4-seater .... £475**
**CALTHORPE 10 h.p. 2-seater.... £355**
**CALTHORPE 10 h.p. 4-seater.... £375**
**CALTHORPE de Luxe 2-seater .. £410**
**CALTHORPE de Luxe 4-seater .. £435**
**L.S.D. 3-wheeler, All on ..... £165**
**LAGONDA (Coupé or 4-seater).. £395**

## *1922 MOTOR CYCLES.*

**B.S.A. 4¼ h.p. Chain-Belt..... £107**
**B.S.A. 4¼ h.p. Combination..... £139**
**B.S.A. 6 h.p. Light Comb. ..... £164**
**B.S.A. 8 h.p. Comb. ..... £185**
**BRADBURY 6 h.p. Comb. ..... £146**
**DOUGLAS 2¾ h.p. 2-speed, All on £75**
**DOUGLAS 2¾ h.p. 3-speed, All on £90**
**DOUGLAS 3½ h.p. 3-speed Sporting £130**
**EDMUND-BLACKBURNE 2¾ h.p. £85**
**ENFIELD 8 h.p. Combination.... £140**
**ENFIELD 2¼ h.p. 2-speed..... £55**
**LEVIS Popular 2¼ h.p. ..... £48**
**LEVIS 2¼ h.p. 2-speed ..... £58**
**LEVIS 2¼ h.p. 2-speed, kick-start £60**
**MARTINSYDE 6 h.p. Combination £160**
**NEW IMPERIAL 2¾ h.p. 3-speed 60 Gns.**
**NEW IMPERIAL 2¾ h.p., All-Chain £73**
**NEW IMPERIAL 8 h.p. Comb. .. £145**
**NORTON Big Four Combination £149 10**
**NORTON 3½ h.p. 3-speed..... £115**
**NORTON Big Four ..... £120**
**REX-ACME 2½ h.p. 2-speed..... £50**
**REX-BLACKBURNE 2¾ h.p..... £69 15**
**REX-ACME 8 h.p. Combination.. £150**
**ROYAL RUBY 2¾ h.p. 2-speed.... £70**
**SCOTT-SQUIRREL 3½ h.p. 2-speed £105**
**SCOTT 3¾ h.p. 2-speed Comb. .. £145**
**SUNBEAM 3½ h.p. (New Type) 120 Gns.**
**SUNBEAM 4¼ h.p. Comb. ....174 Gns.**
**SUNBEAM 8 h.p. Combination.. £217 7**
**TRIUMPH 4 h.p. Chain-Belt .... £105**
**TRIUMPH 4 h.p. All-Chain..... £115**

## *DEPENDABLE SECOND-HANDS*

| *Solos.* | £ | s. | *Combinations.* | £ | s. |
|---|---|---|---|---|---|
| A.B.C. 1921 - | 87 | 10 | A.J.S. 1919 | 125 | 0 |
| Ariel 1920 3½ | 75 | 0 | Ariel 1920 - | 87 | 10 |
| Alecto 1920 - | 52 | 10 | Alecto 1920 - | 69 | 10 |
| Bradbury 3½ | 35 | 0 | Bat Jap 8 - | 39 | 10 |
| Beardmore - | 59 | 10 | B.S.A. 4¼ - | 67 | 10 |
| Douglas 1920 | 69 | 10 | Chater-Lea - | 69 | 10 |
| Zenith 3½ - | 32 | 10 | Enfield - - | 85 | 0 |
| Excelsior '20 | 39 | 10 | Henderson- | 155 | 0 |
| New Imperial | 35 | 0 | Harley 1920 | 135 | 0 |
| O.K. 2-speed | 35 | 0 | Rex 6 h.p. - | 49 | 10 |
| Rudge 1920 - | 59 | 10 | Rudge 7 1920 | 105 | 0 |
| Wooler - - | 49 | 10 | Scott 1920 - | 95 | 0 |
| Triumph 3½ | 42 | 10 | Sunbeam 8 | 115 | 0 |
| Premier 2-sp. | 35 | 0 | Bat 8 h.p. - | 40 | 0 |

Full List on Application.

**The Halifax Motor Exchange, 25, Horton Street, Halifax**
'Phone: 1400. 'Grams: "Perfection."

## MOTOR CYCLES FOR SALE.

### Enfield.

19 21 Royal Enfield, 8h.p. Vickers engine, 2-speed, all-chain drive; coachbuilt sidecar. New condition. Only run 300 miles. Lucas lamps, horn, wind screen; including insurance, £120.—34, Manchester Rd., Swindon. [5484

ENFIELD New Parts, 6-8h.p., 1916 onwards: Frame, tank, handle-bars, footboards, foot brake, £10/10; spokes and nipples complete, 2/- dozen; 6-8h.p. J.A.P. crank cases, bushed, new, 45/- pair. Stamp, reply.—Evans, Factory, Blackwood, Mon. [6893

*Spare Parts:*

ENFIELD Spares. — Immediate delivery. — Kays, 8, Bond St., Ealing. [3612

### F.N.

F.N., 4-cyl., 2 speeds, discs, lamps, Klaxon, scarcely used; £45; exchange modern lightweight.—365, King St., Hammersmith. [6850

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 F.N.'s 7h.p. combination, £127; solo machine, 2½h.p., £55. Easy terms and exchange. [6987

*Spare Parts:*

F.N. Spares.—We can supply for all models from 1904. Prompt attention to all inquiries. Stamp please.—Langford's, 37, Cricklewood Broadway, N.W.2. [6565

F.N. Spares.—We can supply for all models from 1904. Prompt attention to inquiries. Please send frame number or old parts as pattern.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [6568

### Francis Barnett.

19 20 Francis-Barnett, 2¾h.p. J.A.P., 2-speed, clutch, K.S., fully equipped, condition as new; £56; deferred payment and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [1674

19 21 Special 2¾h.p. o.h.v. Francis-Barnett, 2-speed, clutch, kick start, all accessories, guaranteed perfect throughout, ideal fast light solo machine; £60.—McCalman, 7, Broadway, Coventry. [6327

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; from £120. Stacey, 12, Ecclesall Rd. [0577

19 19 Electric Harley Combination, extras; accept £90 quick sale.—Beall, 25, Sidney St., Cambridge. [6279

19 20 7-9 Harley Combination, almost as new, £99. —28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [6808

19 19 Harley de Luxe Combination, beautifully equipped, any trial; £85.—24, Balliol Rd., North Kensington. [6529

HARLEY-DAVIDSON Combination, perfect order; £100, or near offer; trial any time.—E. A. Cobb, High Rd., Potters Bar. [6465

19 19 Harley De Luxe Combination, electrically equipped, very fast; £85.—Hillier, 9, Wallingford Avenue, North Kensington. [6587

HARLEY-DAVIDSON flat twin, discs and complete equipment, gold medallist Scottish two days 1920-21.—James, Randolph Cres., Edinburgh. [6246

19 20 Harley-Davidson 7-9h.p. Combination, any trial or examination, £125; exchanges entertained.—Speechley, 86, Churchfield Rd., Acton, W.3. [6649

HARLEY-DAVIDSON, 7-9h.p., late 1918 coachbuilt sidecar, hood, lamps, 1922 tax paid; 75 gns.; very smart, any trial.—1, Aldersey Gardens, Barking. [6557

HARLEY-DAVIDSON 1915 7-9h.p. Combination, pillion seat, luggage carrier, lamps, horn, etc., in good order; for quick sale, £75 or nearest offer.—A. R. Hill, Cathedral St., Lincoln. [6360

19 22 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices; catalogue with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5986

79 GNS., Exchange.—Exceedingly nice 1918 Harley-Davidson, special 3-seater bulbous back sidecar, 2 screens, equipped, new tyres.—Seabridge, Hansler Rd., East Dulwich. (Sydenham 2452.) [6876

BARKER'S Motors can supply all Harley-Davidson models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6422

HARLEY.—Longman Bros., Bond St., Ealing. Telephone: 689. Sole official district agent.—All models, immediate delivery. Cash, exchange, or deferred payments. Specially tuned machines certified to have exceeded 75 m.p.h., £5 extra. [5786

BARGAIN.—1919-20 Harley Combination, electrically equipped, screen, speedometer, discs, searchlight, car tyres, mascots, altimeter, toolkit, spares, magnificent turnout (licensed), £110. (Exchange entertained, light 2-seater.)—69, East Hill, Wandsworth. [6738

## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

*Spare Parts:*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bood St., Ealing. [3613

### Hazlewood.

1922 Hazlewood, all models, for early delivery. See the 6h.p. J.A.P. Twin Combination at £118; finest value for money to-day; catalognes with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5988

### H.B.

H.B., 1922 Models, 2¾h.p. Blackburne engine, 2-speed Burman gear box, chain belt, C. and K.S., £72; with 3-speed gear box, £75; 4h.p., 3-speed, £82; 4½h.p., 2-speed gear box, £100; cash, deferred terms, or exchange.

H.B., 1922 Models for earliest deliveries.—Write London Motors, 61, Holborn Viaduct, E.C., sole distributing agents for the following counties:—Kent, Surrey, Sussex, Hants, Berks, Oxford, Bucks, Northants, Beds, Hunts, Cambridge, Norfolk, Suffolk, Essex, Herts, Middlesex (including London). [6944

### Henderson.

1922 Henderson Model de Luxe, dynamo lighting; £175; early delivery.—Premier Motor Co., Aston Rd., Birmingham. [6925

HENDERSON, exchanges; 7-9h.p. Combination, with accessories; £55.—Newnham Motors, 223, Hammersmith Rd., London. [6764

1920 10h.p. Henderson Combination (double-seater sidecar), excellent order, £95.—King, 4, Willow Walk, Short St., Cambridge. [6905

HENDERSON 1920 Combination, 4-cyl., electric model, Easting, exceptional condition, any trial; £115.—Crown Garage, Weybridge. [6655

1920 Henderson de Luxe Combination; sporting; exceptionally fine throughout; well equipped, £135; exchanges.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. (Private House Garage.) [5976

HENDERSON Combination 1921, Model K., 3-speed, reverse, dynamo lighting, Tan-Sad, Sandum 2-seater sidecar, spring wheel, V-shaped windscreen; best offer over £180.—Nyland, 37, Dunsmure Rd., Stamford Hill, N.16. [6266

BARKER'S Motors are agents for the luxurious 4-cyl. Hendersons; all new models at list prices supplied carry a free insurance policy against mechanical breakdown for 12 months. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6421

### Humber.

1914 2h.p. Humber, new frame and parts, unused 2 years; bargain, £18; offers.—Jarvis, Coates, Cirencester. [6395

3½h.p. Twin Humber Combination, 1919 model, accessories, in excellent condition; £65.—4, Rugby Mansions, Addison Bridge, W.14. [6368

HUMBER 1920 4½h.p., in new condition; price £70.—Timewell, 61, South Castle St., Liverpool. [6158

HUMBER Combination, water cooled, 4h.p., 3-speed, kick start; £48; take lightweight part.—57, Kenbury St., Camberwell, London. [6477

1920 (Late) 3½h.p. Twin Humber, Dnrhill sidecar, all accessories, acetylene and electric lighting, small mileage, perfect condition, as new; £95, near offer.—Pollett, Caterham Valley. [6618

HUMBER Agents.—1922 models in stock. 4½h.p. fast sporting model, £100; 4½h.p. combination, £144. Humber motor cycles are silent, vibrationless and faultless. In stock. Easy payment terms and exchanges arranged. Further particulars and trial.—Herbert Robinson, Ltd., Green St., Cambridge. [6778

### Indian.

1917 7-9h.p. Indian, spring frame, tyres as new, excellent condition; £48/10.—Rose's Garage, Uxbridge. [6642

1919 Indian Combination, Powerplus, spring frame, dash, windscreen, almost new; £90 or offers.—13, Elspeth Rd., Wembley, Middlesex. [6305

GIVEN away, 7-9h.p. Indian Coach Combination, countershaft, gear box, windscreen, etc.; first, 29 gns.—Ramsden's, May Bell Ave., Blackpool. [6389

INDIAN Combination 1920, big valve Powerplus, in exceptional mechanical condition, 2 windscreens, 2 sets handlebars, lots of other spares; £100.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [7007

1919 Powerplus Indian, spring frame, 7-9h.p. 3-speed, ridden 3,000 miles, perfect; 58 gns. London district.—Box 8,437, c/o *The Motor Cycle*. [7033

INDIAN-POWERPLUS, 7-9h.p., 1919 model, spring frame, 3 speeds, etc., in excellent condition and appearance; £56.—Davis, 26, Muswell Hill, N.10. [6949

1920 7-9h.p. Indian Powerplus Combination, dynamo lighting, speedometer, etc., extremely smart outfit; £115.—Arthur G. Daw, 114, Brixton Hill. [6840

# EXCHANGES

**MOST 1922 WELL KNOWN MAKES**
**:: NOW IN STOCK ::**

# NO REASONABLE OFFER REFUSED

**of deferred payments for any of these machines**

## New Combinations, Soiled

| | | | | |
|---|---|---|---|---|
| 1921 | **ENFIELD** dyno. spring bars, hood and screen | £150 | 0 | 0 |
| 1921 | **ENFIELD** s/seater, plain model .. | £130 | 0 | 0 |
| 1921 | **ARIEL** 6/7 h.p. Standard comb. .. | £137 | 10 | 0 |
| 1920 | **CLYNO** 8 h.p. comb., spare wheel. | £135 | 0 | 0 |
| 1921 | **TRIUMPH** c.c.b. comb. | £130 | 0 | 0 |
| 1921 | **MORGAN** Family model, M.A.G. engine | £175 | 0 | 0 |
| 1920 | P. & M. 3½ h.p., comb | £100 | 0 | 0 |
| 1920 | **JAMES** 4½ h.p. Standard comb. .. | £120 | 0 | 0 |

## New Solos, Soiled

| | | | | |
|---|---|---|---|---|
| 1920 | **CALTHORPE** 2-stroke 2-speed.... | £50 | 0 | 0 |
| | **AUTO-WHEEL & B.S.A. CYCLE**..... | £18 | 10 | 0 |

## New Sidecars, Soiled

| | | | | |
|---|---|---|---|---|
| 1919 | **WATSONION** art cane (2) ..... | £7 | 10 | 0 |
| 1921 | **PARAGON** Folding ..... | £25 | 0 | 0 |

## Secondhand Combinations

| | | | | |
|---|---|---|---|---|
| 1920 | **HARLEY DAVIDSON** special HD s/c, spts. mod. F.R.S. elec., discs, spdr. | £145 | 0 | 0 |
| 1920 | **HARLEY DAVIDSON** Standard, HD s/c, discs, spdr., hood and screen | £130 | 0 | 0 |
| 1920 | **HARLEY DAVIDSON** 7/9 h.p. comb., acetylene ltg. | £140 | 0 | 0 |
| 1920 | **ENFIELD** s/seater, dyno., hood and screen | £110 | 0 | 0 |
| 1921 | **ENFIELD** comb. dyno. 2-seater, screen, as new | £135 | 0 | 0 |
| 1915 | **ENFIELD** 6 h.p. comb. and access. | £75 | 0 | 0 |
| 1920 | **MORGAN** Family model and access. | £150 | 0 | 0 |
| 1921 | **A.J.S.** 2-seater, dyno. ltg., mileage approx. 1,000 | £175 | 0 | 0 |
| 1921 | **CONNAUGHT** and s/c 2½ h.p., 2-speed, clutch, kick-starter, all accessories | £59 | 10 | 0 |
| 1918 | **DOUGLAS** 4 h.p. comb., 2 lamps, horn | £69 | 10 | 0 |
| 1920 | **RUDGE** 7/9 h.p. and Canoelet sporting s/c | £85 | 0 | 0 |
| 1916 | **B.S.A.** all chain, new Watsonion s/c | £59 | 10 | 0 |
| 1920 | **AMERICAN EXCELSIOR** comb. 7/9 h.p. dyno. | £126 | 0 | 0 |

## Secondhand Solos

| | | | | |
|---|---|---|---|---|
| 1921 | **LEVIS** 2-speed, 2 lamps, horn, as new | £47 | 10 | 0 |
| 1921 | **LEVIS** s/spd. | £37 | 10 | 0 |
| 1916 | **DOUGLAS W.D.** (7) .... £45 and | £35 | 0 | 0 |

# LAMB'S *Ltd.*

**WALTHAMSTOW:** 151, High Street
*'Phone: Walthamstow 169 (2 Lines)*
**EUSTON ROAD, N.W.**
(Opp. Great Portland Street Station, MET.)
*'Phone: Museum 4978*
**WOOD GREEN:** 50, High Road
*'Phone: Hornsey 1955*

## MOTOR CYCLES FOR SALE.

### Indian.

POWERPLUS Indian, 1916-17, with Indian si 7-9h.p., 3-speed, hand and foot clutch, kick perfect order; 55 gns.; would separate.—10, Bel Rd., Hounslow.

A GIFT, 1919 Powerplus Indian Combination, discs, Easting screen, lamps, spares, etc., dition new, any trial; £80.—34, Litchfield Gar Willesden Green.

INDIAN 1919 7.9h.p., spring frame, Powe lamps, horn, tools, etc.; £57/10.—Elce, 15-16, Bishopsgate Ave., Camomile St., 1 'Phone, Avenue 5548.

INDIAN Powerplus 1919, dynamo lighting, meter, rear drive, speedometer, Indian si Cameo screen, excellent condition throughout; Dixon Bros., 172, Brownhill Rd., Catford.

INDIAN 7-9h.p. Combination, electric model, machine, shop soiled only; £140. Write for gain list.— Don't miss this opportunity to £ s. d.—P. J. Evans, John Bright St., Birmiog

1920 7-9h.p. Indian Powerplus Combin dynamo lighting, speedometer, 2 horns, screen, etc., perfect order, licence paid; £75 Friday, 2, Lee Terrace, Blackheath, S.E. Tel. Green 226.

INDIAN 1920, fitted 1921 £60 Volta sporting car, dynamo lighting, Binks, long exhausts, fect, order and very fast, insured and licensed, age 4,500; cost £250. Particulars and trial in First offer over £135.—Clifford, Thornhill, Stalyb

INDIAN Powerplus (1921), 7.9h.p., spring K.S. clutch, 3-speed, dynamo lighting, new tric horn, and speedometer, T.T. bars, all in p condition, 70 m.p.h. guaranteed, tax paid; ba £100.—Mitchell, The Lindens, Farnham.

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, St., Ealing.

GODFREYS', Ltd., 208, Great Portland St., Lo W.1.—Complete stock of all Indian spare always in stock. Write for free spare part list, s year of manufacture.

INDIAN.—The Dennis Accessories Stores, 89, B Rd., London ('Phone Brixton 3129), can s all 7-9h.p. parts from stock, new, including all of forks. They also specialise in Indian repairs.

### Ivy.

FRANK WHITWORTH, Ltd., 139, New St. mingham, wholesale Ivy agents, have all in stock, including lady's model, price £69; get

### Ixion.

£26/10, Ixion-Villiers Sports 1916 (makers' antee held), good tyres, lamps, Klaxon, copper exhaust, extraordinarily powerful and s many accessories, including spare tyre and clearing out garage; offers after 5.30.—Col, 4, ville Rd., Upper Tooting, S.W.17.

### James.

JAMES 4h.p. Combination, £35.—77, Acre S.W.2.

1920 James, 2-stroke, perfect; £30.—24, 1 Rd., North Kensington.

3½h.p. Twin James, 1920, perfect, new sports si £75.—Stretton's Garage, Gloucester.

JAMES 5-6h.p. Combination, 3-speed, kick st as new (any trial); £110.—31, Silver St., E

£35.—1920 James, 2-stroke, 2 speeds, fully equ as new.—A., 143, Ravensbury Rd., Ear S.W.18.

JAMES 1920 5-6h.p. Combination; bargain, exchanges.—Newnham Motors, 223, Hamme Rd., London.

1917 3½h.p. Twin James, 3-speed, clutch, starter, accessories, excellent throughout; —114, Brixton Hill.

JAMES 1921 7h.p. Combination, De Luxe s new machine, fully guaranteed; bargain, £ P.J. Evans, John Bright St., Birmingham.

1920 James Combination 6h.p., Lucas lamps, screen, luggage carrier, leg-shields, discs, first-class order, cost £220; accept £85.—Same inspected at 20, Sun St., Hitchin, Herts.

3½h.p. James Twin Motor Cycle, mileage per meter 336, special I.O.M. model, one batch built from which the James team for was selected, used as own demonstration m only; will take £100, or with full equipm speedometer and lamps, £105.—Ewbank and Pontefract. Tel.: 40.

### J.A.P.

£14/10, 2½h.p. J.A.P. Motor Cycle, splendid throughout, genuine bargain, any trial.—ley, 86, Churchfield Rd., Acton, W.3.

## MOTOR CYCLES FOR SALE.

### P. and M.

NOVATED P. and M., 2-speed, all chain, equipped, perfect; £37.—1, Othello St., Liver- [5096

and M. 3½h.p. 2-speed, K.S., tax paid, perfect, trial; £48. Week-end.—Station House, Datchet, s. [6269

18 P. and M. Combination, trial; £40.—Ascotts Drug Stores, 13, Prince of Wales Rd., Kentish l. [6957

and M. 1918, fully equipped, good condition, cheap; £36.—143, Ravensbury Rd., Earlsfield, 18. [6781

and M. 3½h.p., 2 speeds, Bosch, watertight, good tyres, good condition; £20.—Box 8321, c/o *The r Cycle.* [6196

and M. Combination, 1918, lamps, horn, perfect; £55; easy payment considered.—38, Sherriff Rd., Hampstead, N.W.6. [6667

and M., exchanges; several recent solos and combinations; £55-£75.—Newnham Motors, 223, Hammith Rd., London. [6766

and M. late 1918, enamelled, plated, new chains, sound mechanical condition, lamps, horn, etc.; —Horne, Vanteg, Pontypool. [6151

18 P. and M., luxurious coachbuilt sidecar, fully equipped, any trial; 56 gns. London district. ox 8.439, c/o *The Motor Cycle.* [7035

21 P. and M. Combination, 3½h.p., demonstration model, fully equipped, absolutely as new; £112: rred payment and exchanges.—Edwards, 50, Hnrton Rd., South Kensington. [1671

and M. Combination, late model, luggage grid, screen, all lamps, new tyres and chains, and overed at cost £18; bargain, £55; or exchange lightht.—365, King St., Hammersmith, [0848

and M. Motor Cycles (ex R.A.F.), rebuilt and renovated as new, fitted with many new parts, ding mag., B. and B. carburetter, chains, tyres, £45; combination £60; equipped £5 extra. Sidereupholstered, painted, and new tyre.—S. E. Porter, tchurch, Salop. 'Phone: 74. [3059

*pare Parts:*

and M. Spares stockist, every part in stock; cheap.—Tomas, Durham Rd., Seaforth, Liverpool. [6397

and M.—All spares in stock; stamp requirements: P. and M. spares specialist.—H. Beardwood, 147, ington St., Liverpool. [9986

### Paragon.

RAGON 2¾h.p., 2-stroke, 1921 model, spring frame, 2-speed, good condition; £35; seen atrtment.—5, Camden Mews, Camden Town. [6722

### Peugeot.

h.p. Peugeot, 2-speed, rebushed, requires adjustments, £20; sporting sidecar, £8.—P., 5, Crau- Drive, Maidenhead. [6602

### Premier.

5/10.—Premier, 3½h.p., single speed, accessories, tax paid 1922.—8, High St., Wandsworth. [6537

REMIER 3½h.p. 2-speed Combination, requires attention; £25.—Dixon Bros., 172, Brownhill Rd., ford. [5405

h.p. Premier, 2 speeds, guaranteed perfect running order; £20, or nearest.—6, Mitom Rd., s, Essex. [6258

*pare Parts:*

REMIER Spares and Repairs.—We are the most competent advertisers of these, and we served in Premier works. Any part quoted per return.—For- Motors, Forfield Place, Leamington Spa. [6431

### P.V.

21 P.V. (spring frame), Villiers, 2¾h.p., 2-speed, H.B. clutch, kick start, new condition, guaran- ; £55.—81, Greyswood St., Streatham, S.W. [6295

### Quadrant.

UADRANT, 4h.p., 3-speed, £25; sidecar, £4/10; exchanges.—Johnson, 172, Avenue Rd., Acton. [6584

UADRANT £100 4½h.p. Combination, delivery from stock.—Frank Whitworth, Ltd., Distributers, New St., Birmingham. [0767

20 4½h.p. Quadrant Combination, 3-speed Sturmey, kick start, windscreen, very smart, as ; 65 gns. Evenings.—67, Fernlea Rd., Balham. [6947

UADRANT 1922 models in stock, immediate delivery, exchanges, extended terms.—Elce, Ltd., 6, Bishopsgate Ave., Canonmile St., E.C.3. 'Phone, nue 5548. [0068

19 Quadrant 4½h.p. Combination, all chain accessories; £65 or nearest offer; splendid condition. rtholomew, 5, Baden Rd., Gillingham, Kent. [6252

AUCHOPE'S, 9, Shoe Lane, London.—New 1922 Quadrant motor cycles, all-chain, solo, £85; sidecombination, £105. Easy payments and exchange. on application. 'Phone: Holborn 5777, [6993

## GREAT REDUCTIONS

**Satisfaction Guaranteed**

### HUTCHINSON.

| | | Our Price. |
|---|---|---|
| 26×2¼ | Passenger | 27/6 |
| " | T.T. Rubber Studded | 23/- |
| 26×2¾ | Passenger | 30/- |
| " | T.T. Rubber Studded | 27/6 |

### DUNLOP.

| | | |
|---|---|---|
| 26×2¼ | Reavy | 30/- |
| 26×2¾ | Heavy | 35/- |
| " | Extra Heavy | 40/- |
| 650×65 | Ribbed | 40/- |
| 20×1¾ | Auto Wheel | 13/6 |
| 16×2¼ | Scooter, Wired on | 15/- |

### GOODRICH.

| | | |
|---|---|---|
| 26×2½ | Safety Tread | 40/- |
| 28×3 | Safety Tread | 46/- |
| 650×65 | Safety Tread | 40/- |

### CLINCHER.

| | | |
|---|---|---|
| 24×2¼ | De Luxe, Heavy | 25/- |
| 26×2¼ | De Luxe, Heavy | 25/- |
| 26×2¾ | De Luxe, Extra Heavy | 27/- |
| 26×2¼ | De Luxe, Heavy | 27/6 |
| 26×3 | Ribbed | 40/- |

### ENGLEBERT.

| | | |
|---|---|---|
| 26×2 | Touring Rubber Studded | 15/- |
| " | Passenger Rubber Studded | 19/6 |
| 26×2¼ | Touring | 16/6 |
| 26×3 | Touring | 25/- |
| " | Passenger | 32/6 |
| 28×3 | Racing Extra Heavy | 39/6 |

### BATES.

| | | |
|---|---|---|
| 26×2¼ | No. 1 Special Heavy, wired on | 30/- |
| " | No. 1 Special Heavy Beaded | 29/6 |
| 26×2¼ | No. 1 Special Heavy " | 32/6 |
| 26×2½ ×2¼ | No. 1 Special Heavy " | 39/6 |

### AVON.

| | | |
|---|---|---|
| 26×2¼ | Tricar Combination | 22/6 |
| 26×2¾ | Tricar Rubber Studded | 24/6 |
| 26×2¼ | Tricar Rubber Studded | 22/6 |
| 28×2½ | Tricar Rubber Studded | 27/6 |
| 650×65 | Sunstone | 39/6 |

**These Special Clearance Lines are sent Carriage Paid on 7 Days' Approval against remittance. Trade supplied. Write to-day**

ORDER THE

**ELITE**

RUBBER CO LTD

*The Name* *The Firm*

Tyre Specialists

WAY

LONDON'S LEADING TYRE HOUSE

264-266, VAUXHALL BRIDGE RD., VICTORIA, S.W.1

AND AT

44, SURBITON ROAD, KINGSTON-ON-THAMES

*Please address all post orders to Vauxhall Bridge Rd.*

TELEPHONE: VICTORIA 7553 & 7554

OUR AGENT IS THE PILLAR-BOX

## MOTOR CYCLES FOR SALE.

### Quadrant.

CLIFFORD WILSON Mfg. Co., Quadrant Works representatives and sole wholesale distributors for London, Middlesex, Surrey, Sussex, Kent, Essex, Buckinghamshire, Hertfordshire, Bedfordshire, Norfolk, Cambridgeshire, Suffolk, Huntingdonshire, Berkshire, etc. All models in stock. Early delivery. Deferred payments. Exchanges. Chain-cum-belt 4½h.p. solo, £80. All chain solo, £85. Chain-cum-belt combination, £100. All chain combination, 100gns. Lucas dynamo lighting sets 16gns extra. Official repairers and spare part stockists. Day and night service.—177, Westminster Bridge Rd., London, S.E.1. Tel.: Hop 210. [6633

### Radco.

RADCO, 1913, 2¼h.p., single speed, good condition; £26.—Batten, 53, Lyveden Rd., Tooting. [6659

BRAND New Radco 1921 Lightweights at enormous reductions, single gear models from £30, 2-speed models from £44; all carry makers' full guarantee. Write for special clearance bargain list.—The Premier Motor Co., Aston Rd., Birmingham. [6923

### Raleigh.

PREMIER Motor Co. for 1922 Raleighs.

IMMEDIATE Delivery of 5-6h.p., spring frame, detachable wheels, £130; standard sidecar, £35; De Luxe sidecar, £42; early delivery of the new Raleigh lightweight, £68; easy payments 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0626

RALEIGH De Luxe Combination, late 1921, fully equipped, screen, new condition; £132.—Atkinson, Outwood Lane, Horsforth, Leeds. [5647

1921 5-6h.p. Raleigh Combination, complete, electric lighting, spares, special engine, winner competitions, small mileage, year's insurance, privately owned; sacrifice, £130.—Sheldon, Wheatley, Oxford. [5654

RALEIGH, exchanges; all models supplied; latest 2¾h.p., 3h.p. (solos, combinations). Catalogue on request. The new 2¾h.p. sports model actually in stock.—Newnham Motors, 223, Hammersmith Rd., London. [6767

RALEIGH.—2¾h.p., 3h.p., and 5-6h.p. solos and combinations from £68. Cash or deferred payments; old machine taken in part payment.—London Motors, 61, Holborn Viaduct, E.C. 'Phone: City 4230. [6942

### Reading-Standard.

READING-STANDARD 1920 Combination, dynamo lighting, mechanically sound; £85.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [7005

READING Standard Combination, beautiful turnout, fitted Juckes 3-speed and reverse gear, gate change, twist grip control, aluminium footboards and number plates, all-chain drive, luxurious 2-seater sidecar, fitted Easting and Avro windscreens, specially made welded chassis, drop-out wheel, sprung on car-type leaf springs with stand; sidecar cost £50, and not ridden 100 miles, 3 lamps, spares, tax paid 1922. Exchange lower power and cash, or offers invited.—Ashman, 593, Foleshill Rd., Coventry. [6459

### Rex.

2¾h.p. Rex, Grado gear, Senspray, Dixie, low and smart, perfect order, taxed £15.—Middleton, 35, Millais St., Albany Rd., Camberwell, S.E.5. [6845

1920 8h.p. Rex Combination, electric lighting, wind screen, handle-bar muffs, condition excellent; 76 gns.; deferred payments and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [5237

NEW Model 55 B.D. Rex-Blackburne Combination, 8h.p., 3-speed, detachable wheels, spare wheel; reduced to £150, easy payments 4% extra. Write for special clearance list.—Premier Motor Co., Aston Rd., Birmingham. [6927

### Rex-Jap.

1913 Rex-Jap Combination, Roc clutch, electric horn, etc., good tyres and in splendid running order; price £35, or near offer.—Dunwell's Garage, Wigan. Tel.: 328. [0764

### Rover.

ROVER 5-6h.p. 1919 Combination; £70, or near offer.—Hearn, Liverpool Rd., Burscough. [6474

£16.—3½h.p. Rover, perfect, accessories, snip.—B. Talbot, 8, Darlington Rd., West Norwood. [6617

£12.—3h.p. Rover, M.O.V., new M.L. magneto, fine running order.—King, Egrove Farm, Oxford. [6207

£52/10.—Rover, 3½h.p., three speeds, clutch, accessories, tax paid 1922.—8, High St., Wandsworth. [6536

ROVER 3½h.p. T.T. Model, in thorough condition, only wants riding away; £27.—31, Silver St., Enfield. [6889

1920 3½h.p. T.T. Rover, with Philipson, lamps, horn, excellent condition; £58.—Sutton, 2, Petty Cury, Cambridge. [6263

£70.—1920 3½h.p. Rover, 3 speeds, countershaft, as new, and guaranteed perfect.—Tucker, 94, Redcliffe Hill, Bristol. (D) [6442

## MOTOR CYCLES FOR SALE.

### Rover.

ROVER 1914 3½h.p. Combination, 3 speeds, clutch, new sidecar, good condition; £50.—Batten, 53, Lyveden Rd., Tooting Junction. [6660

5-6h.p. Rover Combination, hood, cameo, windscreen, Tan-Sad, lamps, all accessories; trial run week-end; £95.—36, Cannon Hill Lane, Merton. [6578

1918 Rover Combination 6h.p., licensed for 1922, fully insured, good condition; what offers?—British Generator Co., 481, Oxford Rd., Reading. [6630

1918 3½h.p. Rover, 3-speed, countershaft, clutch, kick starter, Model T.T. bars; spot cash, bargain, £49.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [6912

ROVER 3½h.p. Touring 3-speed model, kick starter, as makers' specifications, shop-soiled 1920 model, otherwise brand new, special bargain; reserve price £80; first offer above secures.—Mebes, 144, Gt. Portland St., W.1. 'Phone, Langham 2230. [6326

### Royal Ruby.

2½h.p. Royal Ruby, only used for pleasure, believe 1917; £18.—26, Hamilton Rd., Reading. [6517

ROYAL Ruby Combination, 8h.p., hood, screen, fully equipped, 1918; £65.—204, Ladbroke Grove, W.10. [6594

### Rudge.

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. I.O.M. Rudge 1920; £50. [6994

RUDGE-MULTI, as new, I.O.M. model, tax paid 1922; £60.—Rose's Garage, Uxbridge. [6640

RUDGE, clutch model, tax paid 1922, recently fitted new piston; £27.—G. B., 65, Blinco Grove, Cambridge. [6801

RUDGE-MULTI, 3½h.p., excellent condition, all accessories; £35.—15, Rona Rd., Hampstead, N.W.3. [6710

7-9h.p. Rudge-Multwin Combination, any trial; £90 or exchange 3½h.p. Rudge.—3, Stanford Rd., Southill, Beds. [6245

RUDGE-MULTI, latest T.T. and touring models; immediate delivery from stock; £77.—Marston, 31, Bridge St., Chester. [6757

RUDGE-MULTI 3½h.p. Combination, 4 months old, horn, taxed, insured; £95 or nearest offer.—309, Roman Rd., Bow, E.3. [6573

5h.p. Rudge, lamps, etc., Rudge Sidecar, hood, sound running order, £47/10.—King, 4, Willow Walk, Short St., Cambridge. [6909

RUDGE-MULTI I.O.M., late 1921, with sporting Canoelet sidecar, lamps, tools, insured, absolutely as new; £85.—7, Thirlmere St., Leicester. [6731

5-6h.p. Rudge-Multi Combination, mechanically new, appearance excellent, 3 lamps, 3 generators, perfect; nearest £60.—100 High St., Worcester. [6188

RUDGE-MULTI, clutch, lamps, Klaxon, new cover, new spare belt, recently overhauled; bargain, £25.—W. Oliver, 5, Swiss St., School St., Castleford. [6277

RUDGE-MULTI 3½h.p. I.O.M., practically unscratched, £15 of accessories, magnificent turnout; first reasonable offer accepted.—Woodridings, Cumnor Rd., Sutton, Surrey. [6686

RUDGE-MULTI 1922 brand new Isle of Man, latest model at greatly reduced price; £77.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone, Avenue 5548. [0071

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 3½h.p. Rudge, sloping tank, I.O.M., £85; any model supplied. Write for list. Easy terms arranged; second-hand machines taken in exchange. [6995

DOWN AGAIN. Another reduction, 1922 3½h.p. T.T. Rudge, brand new, in stock, immediate delivery; latest reduced price, £77; secure now, cash or easy payments.—Wilkins Simpson, opposite Olympia, London. [6820

### Scott.

1921 Sports Scott, light sidecar, Lucas electrics, faultless; £100.—Gordon, Kingscote, Dorchester. [6703

1922 Scott Models in stock, complete; £110; delivered free.—Millard's, Scott Agents, Chesterfield. [4276

SCOTT, exchanges; 3¾h.p. Combination, equipped; bargain, £44.—Newnham Motors, 223, Hammersmith Rd., London. [6768

SCOTT with coach-built sidecar, 3 lamps, horn, tools; £70 or offer.—George Heath, Ltd., The Tything, Worcester. [6315

3¾h.p. Scott Combination, complete, splendid condition, any trial; bargain, £60.—15, Temple Rd., Hounslow, Middlesex. [6461

£45.—Scott 3¾h.p., good condition; or exchange late Rudge, cash adjustment; evenings or Sunday.—Watts, 417, Caledonian Rd., N.7. [6168

SCOTT SQUIRREL in Stock; £105; the nifty sports 'bus; carriage paid.—G. H. Tucker, Scott Agent, Redcliff Hill, Bristol. 'Phone: 4042. [5205

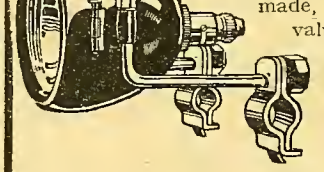

BOLSHEVIK BERTIE

MURDERS HIGH PRICES

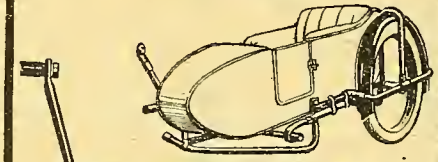
*—both of machines, spare parts and accessories. Here's a few of his latest victims,*

**HEADLAMP SET.**

Fully plated, British made, wonderful value,



**25/-**



**A SIDECAR BARGAIN.**

Rebuilt and re-enamelled Douglas chassis fitted with new springs, new mudguard, wheel and tyre, and Burlington No. 1 Touring Model Sidecar Body complete with apron ..... £15 10

**SUPPORT STAY**

For kick-starter bolt and top back stay bolt .... 4/- each, postage 6d.

**RUBBERS FOR TRIUMPH FOOTRESTS**

2/6 per pair.

Burlington MOTOR CYCLE CO. LTD

**7, South Side, Clapham Common, S.W.4**

'Phone: Brixton 2417.
Wire: Burlington, Motors, Clapham.
**Just by Clapham Common Underground Station.**


## MOTOR CYCLES FOR SAL

### Scott.

RACING Scott (T.T. winner), Bosch, De engine, for sale, whole or separate.— Box 8,413, c/o *The Motor Cycle.* (Yorkshire

SCOTT, 3¾h.p., just been thoroughly ov new mudguards, new Lucas lamps; £3 Ulceby, Alford, Lincolnshire.

1921 Scott-Squirrel, fast, with sporting finish mauve, fully equipped, combi new throughout; bargain, £90 or near offer.— 66, Shobnall St., Burton-on-Trent.

1920 Scott 3¾h.p. Combination, duple spring saddle, petrol tank under top t mounted by aluminium cover-plate, lamps, h Rennoc 60 gn. R.34 sidecar, windscreen; a gain, 75 gns.; exchanges or deferred paym wards, 50, Harrington Rd., South Kensington

*Spare Parts:*

SCOTT Service Depot.—Scott Spares, secondhand.—Cathedral Motor Works, George St., Liverpool.

GODFREYS', Ltd., 208, Great Portland St., W.1.—Complete stock of all Scott sp always in stock. Write for free spare part lis year of manufacture.

SCOTT Riders.—We keep huge stock new Scott parts. Any part on approval again Ward Motors, Ltd., The Scott Specialists, 32 St., Bradford.

### Singer.

3½h.p. Singer, coach-built sidecar, 3-speed, condition; £40, lightweight part.—17, Avenue, Mitcham, S.W.

£16.—Singer 2¾ T.T., 2-speed (new Albio tershaft, Bosch, sound running order, gain, spot cash.—89, East Hill, Wandsworth.

*Spare Parts:*

SINGER Spares.—We are known through Kingdom as "the promptest firm" for Forfield Motors, Leamington Spa.

SINGER.—Genuine cylinders and all parts prices moderate.—Alf. Holland, Hearsa Corner, Coventry. 'Phone: 1945.

### Spark.

SPARK 1922 Models in stock, Villiers engi flywheel mag., £39/18; also a few br 1921 Sparkbrook models at greatly reduced Eagles and Co., 275, High St., Acton, London.

### Stanger.

THE Machine of the moment is the Stanger 5h.p. 2-stroke. This machine is really a mount with wonderful power, and excellent em ning, fitted with the neatest rear springing price £112/10. Send for particulars.—Jones' Muswell Hill, London, N.10.

### Sun.

1918 Sun V.T.S., 2-speed, fully equipped: 37, Arlington Rd., Surbiton.

19 gns.—3¾h.p. Sun-Villiers, topping c trial 2 up, fully equipped, perfect ord Newton Rd., Burton-on-Trent.

29 GNS., Bargain.—1919 Sun-V.T.S., 2 footboards, smart, rebushed.—Seabridge, Rd., East Dulwich. (Sydenham 2452.)

### Sunbeam.

CROSS, Effingham Square, is agent for motor cycles for Rotherham.

3½h.p. brand new 3-speed Sports Sunbea delivered £120 cash.—Hallam, Rosedal Holes, Stockport.

WAUCHOPE'S, 9, Shoe Lane, London.—Ne Sunbeams, order now; also 3½h.p. 1917 £75. Easy terms and exchange.

SUNBEAM (new) 3½h.p., 3-speed, detachabl changeable wheels, leaf spring forks; £12 —Hallam, Rosedale, Dove Holes, Stockport.

1914 Sunbeam 3½h.p., thoroughly ove makers 1919, accessories, excellent co £50, or near offer.—Mozley, Haslemere, Surrey.

SUNBEAM Combination 8h.p. 1920 mode plete, dynamo lighting, as new; £125; exchanges.—Midland Garage, 7, Broad St., I ham.

1920-21 Sunbeam Semi-Sports, electric light accessories, fast, splendid condition ta 85 gns.; must sell; after six.—113, Camfield Hampstead.

SUNBEAM Combination, 8h.p., 1920, in order, just overhauled by Sunbeam at £60; price complete, £135.—The Bungalow, F Rd., Brighton.

1915 Sunbeam 3½h.p., and 1919 black a Rennoc sidecar, complete, carefully use anteed excellent condition; £80.—Roberts, St., Ulverston.

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Sunbeam.

20-21 Sunbeam, fully-equipped as new, interchangeable wheels, small mileage. Guaranteed ct every respect, £98.—Everald Sexty, Pool Farm, rton, Glos. [6859

19 Sunbeam 3½h.p., only run 4,500 miles, electric lighting, Bonniksen speedometer, leg guards luggage box, engine just overhauled; £85.—E. erham, 27, Spon St., Coventry. [6463

16 Sunbeam Combination or separately, 3½h.p., just overhanled, new gears, lamps, Bosch magthorough running order, licence paid; what ?—64, Somerset Rd., Knowle, Bristol. [6249

NBEAM Combination, 1914, all-chain drive, underslung chassis, good tyres, perfect mechanical con-, 3-speed, kick-starter; £70.—Butterworth Garage, ill Lane, Brixton Hill. 'Phone: Streatham 2813. [6574

14 3½h.p. Sunbeam and Sidecar, with lamps, speedometer, horn, pump, tools, apron, and wind-, complete foot and hand clutch, just overhauled, ylinder fitted, splendid mechanical order; nearest 30.—Sunbeam, 65, Park Walk, Chelsea, S.W.10. [6372

21 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual s, cast aluminium plates, new in April last, and in tionally good condition, tyres unpunctured; nearest to £115.—Geoffrey Smith, *The Motor Cycle*, ıtry. [X4285

NBEAM Agents.—1922 models in stock. 3½h.p., 3-speed, clutch and kick starter, £126; 3½h.p. sporting model, £136/10; shop-soiled 1921 3½h.p. l. £130; in stock. Easy payment terms and nges arranged.—Herbert Robinson, Ltd., Green Cambridge. [6777

21 Sunbeam T.T. Sports 3½h.p., Lucas lamps and generators, Cowey horn, knee grips, mileage delivered last October, condition excellent as new; expert examination invited.—Offers illiams, Pembridge Lodge, St. Owen St., Here- [6280

*are Parts:*

NBEAM 3½h.p. spares. Send stamp for list.—Snow, Lauiel St., Dalston, E.8. [6954

### Triumph.

EMIER Motor Co. for 1922 Triumphs.

IEDIATE Delivery of Type H 4h.p., 3-speed, £105; Type SD, chain drive, £115; Type LW, lightweight-sidecars from £20 to £50; easy paymeats 4% extra. direct from the leading Triumph agents: The ier Motor Co., Aston Rd., Birmingham. [0627

down secures C.S. Triumph, and 12 payments £3/2/8.—Below.

down secures C.S. Triumph, lamps, horn, discs, etc., and 12 payments £3/6/3.—Below.

down secures C.S. Triumph, 1918 renovated, and 12 payments £4/0/8.—Below.

down secures C.S. Triumph, 1918, renovated as new, and 12 payments £4/18/7.—Below.

down secures C.S. Triumph, fitted with 1921 new gear box, beautiful condition, and 12 pay-s £4/18/7.—Below.

secures 1921 C.S. Triumph, lamps, horn, etc., and 12 payments £5/2/2.—The Triumph Special-Hackford Engineering Co., 33, Hackford Rd., ou, S.W.9. [6963

OSS, Effingham Square, is agent for the Trusty Triumph in Rotherham. [6203

18 countershaft Triumph, perfect; £48.—24, Balliol Rd., North Kensington. [6525

IUMPHS, all models; exchanges.—Harry Nash, 365, King St., Hammersmith. [6851

h.p. Triumph, 1911, in good condition; £20.—Bush, North St., Sudbury, Suffolk. [6519

BY Triumph, splendid condition, 1920, 2 speeds; £45 complete.—Knox House, Tonbridge. [6316

.—3½h.p. Triumph, fine running order, lamps, horn.—King, Egrove Farm, Oxford. [6208

18 Triumph 4h.p., countershaft, in good condition; £50.—Gifford, Overton, Hants. [6373

TE 1921 brand new Model H, £97; exchanges; asy payments.—Forfield Motors, Leamington Spa. [6429

14 4h.p. Triumph and sidecar, complete, lamps, horn, etc.; £45.—Cross, Agent, Rotherham. [6205

IUMPH 1919 4h.p., all on, tax paid, new condition; £68.—53, Bedford Hill, Balham, S.W. [6178

14 T.T. 4h.p. Triumph, excellent order; £40.—Fairhurst, Behind 68, Standishgate, Wigan. [6488

IUMPHS.—A fine assortment of all models in stock at prices to suit all.—Ross, 86, High Rd.. [5020

8 Countershaft Triumph, lovely condition; £48.—Hillier, 9, Wallingford Avenue, North Ken-n. [6585

LEATHER JERKINS

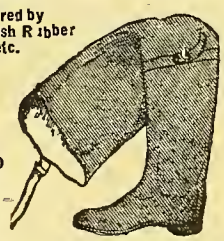
These leather jerkins are made from superior quality tan leather. Very soft and pliable, fleece lined and double stitched. They can be worn either over or under your overcoat. These goods could not be produced, even on the present slump prices, at less than 30/- each. Stock is not large, and when cleared cannot be repeated.

10/- each

Postage 1s. extra.

RUBBER HIP BOOTS

Manufactured by North British Rubber Co., Ltd., etc.



THESE GOODS ARE QUITE NEW AND NOT OLD SURPLUS STOCK.

Sizes: 7, 8, 9, 10, 11, 12.

SENT ON 7 DAYS APPROVAL AGAINST REMITTANCE.

Per Pair 12/6 Carriage 1/- Extra.

"A BOON TO THE MOTOR CYCLIST"

ORDER THE

*The Name.* ELITE RUBBER CO. LTD. Tyre Specialists *The Firm*

WAY

LONDON'S LEADING TYRE HOUSE, 264-266, Vauxhall Bridge Rd., Victoria, S.W. 1.

Telephones: Victoria 6553 and 6554.


## MOTOR CYCLES FOR SALE.

### Triumph.

1920 Countershaft Triumph, fully equipped, perfect condition; £65.—Fitt, near Pike's, Church St., Chelsea. [6966

1913 3½h.p. clutch model Triumph, tax paid, all on; £26, offer, exchanges.—187, Elm Rd., New Malden. [6748

TRIUMPH, Senspray, Mubon, new, watertight, Bosch, good order; £10.—76, Dalling Rd., Hammersmith. [6613

COUNTERSHAFT Triumphs from £45 to £80; guaranteed for 3 months.—33, Hackford Rd., Brixton. [6964

TRIUMPH 1914 4h.p., 3-speed Combination, £35.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [6805

F.O.C.H. have 1922 Triumph Model H, in stock, also 1918 Combination.—5, Heath St., Hampstead. (Near Tube.) [6411

1913 3-speed Triumph, splendid condition, £30; also 1913 clutch Triumph, £27.—185, Sheruhall St., Walthamstow. [6797

TRIUMPH Combination, December, 1920, privately owned, all on; £115. No dealers.—74, Baring Rd., Lee, S.E. [6256

TRIUMPH Junior "1921," brand new, slightly soiled; £58.—Eagles and Co., 275, High St., Acton, London. [6752

TRIUMPH, believed 1918, C.S., mechanically perfect, condition as new, tax paid; £49.—1, Priory Rd., Kew Green. [6614

1919 4h.p. Triumph Combination, 3-speed, K.S. fully equipped; £78; snip.—Ewers, Newton Rd. Burton-on-Trent. [6540

TRIUMPH and R.34 Sidecar, nearly new tyres, fully equipped, splendid condition; £80.—Paul, 167, Sidwell St., Exeter. [6603

TRIUMPH 1911 3½h.p., Bosch, mechanically perfect; must sell, £15. Letter first.—Collyer, Penrose, Twyford, Berks. [6382

1914 Triumph, clutch, Binks, lamps, horn, accessories, any trial; £37/10.—Geach, Kenilworth, Newburgh Rd., Acton. [6160

TRIUMPH Combination 1918, excellent order, hood, screen, all accessories; £65, genuine bargain.—70, Baring Rd., Lee, Kent. [6816

1914 4h.p. 3-speed Triumph, beautiful order, £32/10.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [6806

4h.p. Triumph 1914, T.T., 3-speed, clutch, splendid condition, all on; £37.—G. Rawkins, 16a, Victoria Rd., Clapham, S.W.4. [6285

TRIUMPH, 1913, clutch model, splendid engine; £40.—Butterworth Garage, 64, Mill Lane, Brixton Hill. Phone: Streatham 2813. [6577

BEST Bargain this week.—Triumph, 1914 sporting coach Combination, tax paid, guaranteed perfect; 43 gns.—1, Priory Rd., Kew Green. [6653

TRIUMPH 1920, renovation by Triumph Co., fitted sports sidecar, lamps and horn, excellent condition; 65 gns.—Below.

BABY Triumph 1921, Lucas lamps and horn, as new, 41 gns.; exchanges or deferred payment.—Edwards, 50, Harrington Rd., South Kensington. [6896

TRIUMPH, 1919, countershaft, perfect condition, fully equipped, every spare, low mileage, licensed; £65.—Chamberlain, High St., Epsom. [6502

LATE 1918 4h.p. countershaft Triumph, fully equipped, excellent condition; £52/10.—436, Whitehorse Rd., Thornton Heath, S.E. [6563

£65.—Triumph Combination, C.S. engine, No. 48,400, engine and gears just overhauled, accessories, tax paid 1922.—8, High St., Wandsworth. [6535

1919, Triumph, 4h.p., 3-speed Combination, speedometer, screen, small mileage; £75.—Hillier, 9, Wallingford Avenue, North Kensington. [6586

1922 4h.p. model H Triumph, Semi T.T. handlebars, not done 100 miles, absolutely perfect condition; £96.—Tippen, Marden, Kent. [5746

1920 Baby Triumph, just overhauled, in excellent condition, many accessories; £40, or nearest.—Rees, 20, Kendal Av., Sanderstead, Surrey. [6278

1920 Triumph-Gloria Combination, fully equipped and licensed, excellent condition, £95.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [6831

1919 (October) Triumph, 4h.p., coachbuilt Combination, fully equipped, excellent condition; 74 gns.—31, Nursery Row, Walworth, S.E.17. [6336

LONGMAN BROS., Bond St., Ealing. Telephone: 689. Official district agents.—All Triumph models. Cash, exchange, or deferred payments. [5787

TRIUMPH-GLORIA 4h.p. Combination, "1915," 3-speed countershaft gear, thoroughly renovated; £75.—Eagles and Co., 275, High St., Acton, London. [6753

1917 Triumph 4h.p. countershaft, in really nice condition, £52/10.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. (Private House Garage.) [5978

## MOTOR CYCLES FOR SALE.

### Triumph.

W.D. Triumph 4h.p., 3-speed Sturmey-Archer, from Triumph's July, 1920, engine perfect condition; exceptional, £68/10.—Stebbings, Attleborough, Norfolk. [6452

1921 Triumph "H," Lucas dynamo lighting, licensed; £103; exchange Sports Sunbeam.—"Heatherlea," Grappenhall Rd., Stocktonheath, Warrington. [6802

TRIUMPH 1919, delivered 1920, 4h.p., countershaft, footboards, touring bars, fully equipped, splendid condition; 70 gns.—30, Crystal Palace Park Rd., Sydenham. [6619

1918-19 4h.p. Triumph Combination, new R.34 sidecar, screen, lamps, beautiful condition, guaranteed; £69 lowest.—37, Canterbury Rd., Dalston, London, N.1. [6971

TRIUMPH 1914 4h.p. Combination, new sidecar and chassis, electric lamps, fully equipped, perfect order; 49 gns.—W. T. J., 4, Falmouth Rd., Borough, S.E. [6468

1920 Triumph Countershaft Sporting Combination, electric lamps, horn, speedometer, clock, new tyres, belt, tax paid; £87/10.—24, Weston Park, Crouch End, N.8. [6165

1913 Triumph 3½h.p., free engine clutch, very reliable, good condition, tax paid, ride away; £35, or nearest offer, secures.—W. A. Cronk, Bodecote, Banbury, Oxon. [6262

TRIUMPH 1914 4h.p., decompressor model, fitted with new cylinder, crank pin, gudgeon pin, and bushes; unused since; £14/10.—60, Baker St., Sparkhill, Birmingham. (D) [6822

TRIUMPH, Exchanges, all models supplied; also four good 1916-18 Combinations (will separate); £67-£75; all fully equipped.—Newnham Motors, 223, Hammersmith Rd., London. [6769

TRIUMPHS.—We are the North London agents, and can deliver from stock for cash, deferred payments, or exchange.—Jones' Garage, Muswell Hill, and Woodside Parade, N. Finchley [0382

1917 Triumph, new condition, recently overhauled and re-enamelled, costing £17, fully equipped; 48 gns. Would take good Douglas or 2¾h.p. J.A.P. part.—15, Summerhill Rd., Dartford. [6426

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Triumphs 4h.p., all-chain models, 3 speeds, £115; 4h.p. chain and belt, £105; 2¼h.p. 2-stroke model, £65; 4h.p. combination, £145. Easy terms and exchange. 'Phone: Holborn 5777. [6996

BARGAIN.—Countershaft Triumph Combination, Featherweight sidecar, storm cover, Cowey horn, all lamps, excellent condition, perfect order, £65. (Exchange Douglas and cash.)—89, East Hill, Wandsworth. [6739

BARKER'S Motors can supply all Triumph 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6420

£67 10s.—4h.p. Triumph Combination, late 1919, just completely overhauled, condition guaranteed perfect throughout, all accessories, Easting.—Langford's, 37, Cricklewood Broadway, N.W.2 'Phone: Hampstead 8616. [6564

1918 4h.p. 3-speed Triumph, very smart, over 50 m.p.h., expensive lamps, Cowey speedometer and horn, seen any time; £58, or exchange A.B.C.—Fred Leaphard, Bolton Hotel, 326, Earl's Court Rd., Kensington, S.W.5. [6355

1920-21 Triumph and £52 Langford sidecar, electric lighting throughout, speedometer, horn, mirror, screen, apron, mascots, etc., in practically brand new condition, most elegant combination, only needs seeing; £98.—Dental, 769, Romford Rd., Manor Park, London, E. [6550

1921 Triumph H., under 2,000 miles, unpunctured, special guards front and rear, Standard and Richardo pistons, Malita electric lighting, Lucas horn, Cowey sidecar and solo sprockets, sporting bars, licensed 1922, cost with accessories £150, any examination; £110.—Offers, Box 8394, *The Motor Cycle*. [6332

1921 Soiled Triumph Sports Combination, complete, tax Dec., 1922, fully insured, smartest lot in London, £120; 1920, perfect, as new, Gloria S/C., fully equipped, tax paid, insured 100 gns.—Knight, 126, Upper Tooting Rd. 'Phone: Streatham 2390. [0771

TRIUMPH Agents.—1922 models in stock. 4h.p. belt and chain drive, £105; 4h.p. all-chain drive, £115; 2¼h.p. 2-stroke, £65; 3½h.p. fast roadster, £120; in stock. Easy payment terms and exchanges arranged.—Catalogues and full particulars from Herbert Robinson, Ltd., Green St., Cambridge. [6776

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

TRIUMPH Spare Parts for all models, also Sturmey-Archer gear parts from stock, post free. Gear overhauls by specialist.—Jones' Garage, Broadway, Muswell Hill, N.10. [0746

Afraid we were going to miss you that time. This is to tell you that we can supply any make of motor cycle

**FOR CASH, ON EASY PAYMENTS, or EXCHANGE.**

In our showroom ready for despatch there are 1922 samples of the

**NORTON, RALEIGH, VELOCETTE, B.S.A., INDIAN, F.N., VICTORIA, SCOTT, LEVIS, MARTINSYDE, QUADRANT, MASSEY - ARRAN, G.N. CYCLECARS.**

***Used Machines for Disposal.***

| | | |
|---|---|---|
| 1919 | NORTON Big 4 and Millford Sidecar, Easting, lamps.. | £90 0 0 |
| 1921 | NORTON Big 4 and Norton de Luxe Sidecar, lamps.. | 120 0 0 |
| 1921 | NORTON 16 H. Solo. Done 300 miles .. .. .. | 106 0 0 |
| 1921 | NORTON 16 H. I.O.M. Racer .. .. .. | 90 0 0 |
| 1921 | NORTON Big 4 engine in 16 H. frame .. .. | 90 0 0 |
| 1921 | SUNBEAM 3½ Solo Sports Model. All on .. .. | 95 0 0 |
| 1920 | SUNBEAM 3½ Solo .. | 90 0 0 |
| 1914 | A.J.S. 6 H.P. Combination | 75 0 0 |
| 1920 | RUDGE 5 H.P. Combination | 70 0 0 |
| 1920 | WILKIN BLACKBURNE 4 H.P. Combination with magdyno lighting .. | 105 0 0 |
| 1918 | DOUGLAS Combination 4 H.P. .. .. .. | 85 0 0 |
| 1921 | VELOCETTE 2 speed .. | 47 0 0 |

**VICTOR HORSMAN LTD.**
**7 Mount Pleasant, Liverpool.**

## MOTOR CYCLES FOR SAL

### Triumph.

*Spare Parts:*

TRIUMPH Parts, 1904-21, every part in st or second-hand. Why not second-hand of new till prices drop? Half the price, sa guaranteed. Hundreds of testimonials., repairs and renovations a specialty, under supervision of our proprietor, late with Triu Premier cycle companies. Cylinder regri latest machinery.—Forfield Motors, Forfiel Leamington Spa.

### Trump.

WAUCHOPE'S, 9, Shoe Lane, Lond Trump-Jap, 2¾h.p. engine; £60. Ea and exchange.

TRUMP-J.A.P., 4h.p., 1913, 3-speed, clutch, sidecar, long copper exhaust, speedomete etc., condition good, fast, reliable, tax pa appointment.—Horner, 213, Oxford Gardens,

### Velocette.

1922 Velocette.—Immediate delivery of a from Premier Motor Co., Aston Rd., Bir

WAUCHOPE'S, 9, Shoe Lane, London.— Velocette models supplied on easy te exchange.

1921 2¼h.p. Velocette, 2-speed, free engin horn, tools, mileage 300, condition £47/10.—King, 4, Willow Walk, Short St., C

ORDER Your Velocette from G. H. Tucker, Hill, Bristol, carriage paid to any addres land; your mount taken in part payment f these wonderful machines.—'Phone: 4042 B

NEW Velocette, 1921 model, with internal e brakes to both wheels, and other latest ments at enormous reduction, 2-speed £55 £62, lady's open frame £55; carry makers' antee; easy payments only 4% extra.—Premi Co., Aston Rd., Birmingham.

### Verus.

1921 Ver us 4h.p. Blackburne engine, 3-sp fect condition throughout, £78; or fi coach-built sidecar, £90.—Below.

1921 Ver us 4h.p. Blackburne engine, 3-s discs, mechanical oil pump, equipped, excellent; 63 gns.; exchanges or deferred p Edwards, 50, Harrington Rd., South Kensi

### Wooler.

WOOLER, Exchanges; unused 2¾h.p., spo gain; £55.—Newnham Motors, 223, smith Rd., London.

1920 Wooler, just overhauled, wants tun offer over £48; exchange considered; R. Bartlett, Coleford, Glos.

WOOLER, 1920, chain drive, all accessorie condition; £65, or exchange Scout mod or 3½h.p. N.U.T.—Popplewell, 42, Lancas Stroud Green, N.

### Zenith.

ALLAN GRUZELIER, Specialist in Zenit cycles.

IMMEDIATE delivery of all 1922 Models.

SECONDHAND models at rock bottom pric

SHOP-SOILED models greatly reduced.

REPAIRS, overhauls, tuning, promptly exe my repair depot and showroom.—K Wheatley's Carage, 4, The Pavement, Purley 1277.

LONDON Office: Ulster Chambers, 168, Re Regent 205.

8h.p. Zenith Combination, new March, 1921 £120.—Joy, Buxted.

FRANK WHITWORTH, Ltd., 139, New mingham, for immediate delivery from Zenith-Bradshaw; price £119.

90-bore 1921 Zenith, good condition, fast tools; £95.—Smith, 45, Oxford Ro Wycombe.

WAUCHOPE'S, 9, Shoe Lane, London.—N Zenith-Bradshaw; £113. Easy terms change.

1920 8h.p. Zenith Combination, handsom fully equipped, £99.—28, Woodfo Forest Gate. 'Phone: Stratford 2598.

ZENITH 1920 6 h.p. Sports, lamps, spee horn, taxed 1922, new condition; £7 7, Exhibition Rd., S.W.7.

£26.—Zenith, 4h.p. single, Grado gear, enamelled and plated, stored 4 years, g gain.—61, Grand Parade, Harringay.

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Zenith.

20 Zenith 2¾h.p. Flat Twin, bought August, 1921, D.A. lighting, as new; £60.—Letters, ain, 14, York Grove, Peckham, S.E.15. [6346

.C.H. have 1922 Zenith-Bradshaw, 3-speed, all chain in stock, also 1918 8h.p. countershaft nation.—5, Heath St, Hampstead. (Near Tube.) [6412

NITH-BRADSHAW, Exchanges; all models sup-plied; slightly soiled belt, Bradshaw; £99.—ham Motors, 223, Hammersmith Rd., London. [6771

19 8h.p. Zenith and Swan sporting sc., lamps, speedometer, Klaxon, very good condition; 75 -Edwards, 50, Harrington Rd., South Kensington. [6017

NITH 1920 (late) 6h.p. Sports, electric and Fulla-lite lighting, mileage 3,000, speedometer, all s, perfect condition; £75.—Robertson, 26, Jesus Cambridge. [6742

19-20 5h.p. Zenith Combination, new Canoelet sidecar, Eastings, electric lighting, speedometer, clutch, T.T. bars, guaranteed perfect; £110.— , Sudbury, Suffolk. [6490

NITH, 5h.p., 1920 (late), and sporting Canoelet sidecar, appearance and mechanical condition t; £69, or exchange Harley Combination.—328, r Green Lane, Lewisham. [6546

NITH 1920 8h.p. countershaft, Zenith sidecar, mechanical condition perfect, 2 tyres practically very fast, any trial; £95.—Colonial Motors, 104A, ley Road. Hampstead 7822. [7006

NITH 1921 Countershaft, new type 5-6h.p. engine, wide tank, speedometer, horn, Lucas lamps, only w miles, £65.; 1920 8h.p. combination, equipped, —Clark, 7, Exhibition Rd., S.W.7. [5248

21 Zenith Combination, 8h.p., countershaft, com-plete with all accessories, only run a few miles, r special finish, the whole looks new, £125.— s, 14, Gt. Marlborough St., W.1. [6072

22 Zeniths, all models.—5h.p. J.A.P., counter-shaft, £118; with sidecar, £147; immediate ry; actual Show model in stock. Order early.— Eastern Garage, Herne Hill, S.E.24. [5841

21 8h.p. Zenith Combination, fully equipped and insurance policy, little used, excellent con-; £95.—James, 91, Abingdon Rd., Kensington St. (appointment). 'Phone, Western 1344. [6605

. countershaft Zenith Combination, Montgomery sports sidecar, purple, electric light, speedometer, accessory, mileage 500, unscratched, as new and t; 92 gns.—Edgeworth House, Arlesey, Hitchin, [6538

22 Zenith-Bradshaw in stock for immediate de-livery; £118; cash, exchange, or extended pay-.—Allen-Bennett Motor Co., Ltd., 9-10-11, Royal e, London Rd., West Croydon. 'Phone: Croydon [0734

NITH 8h.p. Clutch Model, just overhauled at cost of £25, latest colours, new tyres, belt, etc., nteed perfect; solo, £55; with Millford sidecar, w, £65.—S. E. Porter and Co., Whitchurch, [6403

RKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance against mechanical breakdown for 12 months Cash deferred or exchanges.—194, Balham High S.W.12. [0416

20 (Sept.), 6h.p. Sports Zenith-Binks, horn, leg shields, mileage 6,500, 5-60 m.p.h., 80 m.p.g., belt, and condition perfect, new spare tyre and £95 or near offer.—Cooke, 7, Trumpington St., ridge. [5766

NITH-GRADUA 1916 6h.p. Combination, coach-built sidecar, hood, screen, luggage grid, spare 3 lamps, car generator, mechanical horn, perfect 55 gns.—35, Shepherd's Bush Rd., Hammer-or 'phone Museum 7286. [6511

### Ladies' Motor Cycles.

ANK WHITWORTH, Ltd., 139, New St., Bir-mingham, distributing agents for the Lady's Ivy, est of all ladies' machines; £62, complete. Send et. [0724

OCETTE 1922 Models are fitted with clutch and ick starter; write for particulars of the new EL2 lady's open frame 2-speed, all-chain drive, ck weatherproof finish, £65; the ideal lady's .—The Premier Motor Co., Aston Rd., Birming-[6931

### Miscellaneous.

0 Clyno, £38; 1914 2¾h.p. Douglas, £40.— Box 8,300, c/o *The Motor Cycle.* [6002

OUNDING Bargains.—1921 350 c.c. Hobart-Jap, pring frame, 3-speed, special engine, £57. New Hobart-Villiers, saddle tank, Sturmey 2-speed, l, £50. New 2½ Hobart-Villiers, single gear, l, £40. 1915 7/9 Indian, clutch, very fast, £38.

1 8 Rex-Blackburne Combination, spare wheel, completely equipped, like new, 120 guineas. 3 Blackburne Sporting Combination, competition ne, accessories, spare wheel, 105 guineas.

5 3½ flat twin Brough, Sturmey 3-speed, Mont-gomery sidecar, £60.—Apply, Agent, 44, sbury Rd., Coventry. [6597


# MANUFACTURERS' SPECIAL OFFER.

## Extraordinary Bargains!

Fig. 1

### WATERPROOF MOTOR CYCLE SUIT (Fig. 1)

Fawn double texture material, interlined rubber, seams cemented and taped, wind cuffs, wind gusset in overalls, and clasp fasteners.

**SUIT COMPLETE**

**35/-**

### WATERPROOF TRENCH COAT

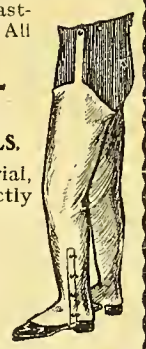
(Fig. 2) Fawn material, rubber lined, wind cuff, guaranteed waterproof

**25/-**

Fig. 2

**SEAT-LESS** trousers fawn, double texture material rubber interlined, wind gusset, & clasp fasteners All sizes.

**18/-** per pair.



### WATERPROOF OVERALLS.

Double texture material, clasp fasteners, perfectly waterproof.

per **15/-** pair.

*If you cannot call, send money with breast measurement and height.*

**Post your order early.** **All goods carriage paid.**

Our Guarantee
Money Refunded in full if not thoroughly satisfied.

Actual Manufacturers:
**Martin Waterproof Company,**
**208, Oldham Road, New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### Miscellaneous.

BEST Bargain this week.—2-stroke, 2¾h.p., new Dunlops, perfect; £15.—1, Priory Rd., Kew Green. [6652

WANDSWORTH Motor Exchange.—Great Bargains in Motor Cycles. Finest selection in London.—Below.

WANDSWORTH.—Buy your Motor Cycle from the old-established firm. Backed by 24 years' experience. Satisfactimn guaranteed.

WANDSWORTH.—Easy terms. The only firm to give immediate delivery first deposit.

WANDSWORTH.—Triumph, 3½h.p., magneto, 3 speeds, clutch, tax paid Dec. 31st, 1922. 35 gns. Exchanges.

WANDSWORTH.—Triumph, 3½h.p., magneto, spring forks, ready drive away. Cheap 22 gns. Exchanges.

WANDSWORTH.—Premier fine coachbnilt Combination, 3½h.p., 3 speeds, lamps, only 39 gns. Exchanges.

WANDSWORTH.—Minerva 7h.p. Twin, magnetn, 2 speeds, powerful sidecar machine, 22 gns. Exchanges.

WANDSWORTH.—Rex Coachbuilt Combination, 5h.p. twin, magneto, Grado-gear, sacrifice 29 gns. Exchanges.

WANDSWORTH.—Vindic Combination, 3½h.p. magneto, 2 speeds, countershaft, kick, lamps, 26 gns. Exchanges.

WANDSWORTH. — Charterlea T.T. sporting machine, 3½h.p. magneto, 2 speeds, countershaft, 25 gns. Exchanges.

WANDSWORTH.—P. and M. Combination, 3½h.p. magneto, 2 speeds, drive away, ynurs 39 gns. Exchanges.

WANDSWORTH.—Scott remodernised, twin, water-cooled, runs splendidly, very fast, 39 gns. Exchanges.

WANDSWORTH.—Rudge Coachbuilt Combination, 2 speeds, kick, lamps, newly enamelled, 45 gns. Exchanges.

WANDSWORTH.—F.N., magnificent machine, 5-6h.p., 3 speeds, clutch, overhauled, newly enamelled, plated, 59 gns. Exchanges.

WANDSWORTH.—Indian Coachbuilt Combination, 7h.p., twin, 3 speeds, spring frame, 59 gns. Exchanges.

WANDSWORTH.—Bat Coachbuilt Combination, 8h.p., 3 speeds, spring frame, lamps, 55 gns. Exchanges.

WANDSWORTH.—1918 Triumph Gloria Combination, 4h.p., 3 speeds, kick, lamps, 69 gns. Exchanges.

WANDSWORTH.—Triumph Coachbuilt Combination, 3½h.p., 3 speeds, lamps, very cheap, 49 gns. Exchanges.

WANDSWORTH.—Matchless Combination, 8h.p. twin, 2 speeds, lamps, first cheque, 45 gns. Exchanges.

WANDSWORTH.—F.N. fine Coachbnilt Combination, 5-6h.p., 2 speeds, kick, lamps, 49 gns. Exchanges.

WANDSWORTH.—Vindic Combination, 3½h.p., 2-speed gearbox, kick, lamps, 26 gns. Exchanges.

WANDSWORTH.—Ariel 3½h.p. magneto, good tyres, ready drive away, 19 gns. Exchanges.

WANDSWORTH.—Matchless-Jap, twin magneto, good tyres, runs splendidly, sacrifice, 23 gns. Exchanges.

WANDSWORTH Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686. [6623

YOU Want a Machine.—I can put you in touch with the one you want.—Tonge, Holmesfield, Sheffield. [6572

SMART lightweight, dropped frame, magneto, carburetter, wants engine only; £5.—King, Egrove Farm, Oxford. [6209

NEW Imperial, 1916, 2-speed, splendid condition, lamps, horn, etc., long exhaust, £28. Also Humber, 1914, 3-speed, recently overhauled, lamps, horn, etc. With tradesman's sidecar if required, £40. Solo, £30.—Hilder, Sackville Rd., Bexhill. [6677

F.O.C.H. for second-hand cycles, combinations, and runabouts at bargain prices. Exchanges arranged. Any new cycles, combination, or car supplied, cash or deferred payments.—Fair Offer Car House, 5, Heath St., Hampstead. (Near Tube.) 'Phone, Hampstead 3752. Hours 9-7, including Saturdays. [6415

TRIUMPH Combination, 1919; Burbery coach sidecar, Easting screen, fully equipped, tax paid, like new, £75. 3½ P. and M. Combination, 1919, in good condition, £60. 7-9 Harley Combination, in good running order, £65. Rudge-Multi 5-6 Combination, lamps, etc., in good running order, £45. Coventry-Premier 3-wheeler, dickey seat, dynamo lighting, hood, screen, done 1,100 miles, like new, £185.—Hoyle, Gratrix Lane, Sowerby Bridge. [6623

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

JONES Garage.—1920 2¾h.p. Douglas, 3-speed, kick start, h.b.c. clutch, absolutely perfect; £68.

JONES Garage.—1920 4½h.p. Quadrant Combination, unscratched, all lamps, and Easting windscreen; £82/10.

JONES Garage.—Late 1919 3½h.p., P. and M. Combination, as new and in showroom condition, not W.D., fully equipped; £80.

JONES Garage.—1919 Spur-Villiers, 2-speed, not used since March, 1920, absolutely perfect and as new; £40.

JONES Garage.—1918 James 2¾h.p. 2-stroke, 2 speed, fully equipped, in excellent order; £35.

JONES Garage.—1917 2¾h.p. 2-speed Douglas, fully equipped, thoroughly overhauled and guaranteed perfect; £42/10.

JONES Garage.—1914 7-9h.p. 2-speed Indian, 2 almost new tyres, thoroughly overhauled and guaranteed perfect; £40.

JONES.—1921 Matchless Combination, fully equipped, M.A.G. engine, absolutely as new and perfect. This week's special bargain, £130.

JONES.—1914 3½h.p. Humber Combination, fully equipped, recently done up, a trustworthy pre-war 'bus; £47/10.

JONES.—Triumph Combination, 3-speed, fully equipped, year's tax paid; £40. A remarkable offer to liven things up.

JONES Garage.—Full particulars of any of the above machines will be sent you with the greatest of pleasure.—Jones Garage, Muswell Hill, London, N.10 [6001

BARGAINS.—New O.K.'s, Ariels, Harleys, Omegas Quadrants; exchanges entertained. — Booths Motories, Halifax.

BARGAINS.—1920 Matchless combination, detachable wheels, £130/10/6; 6h.p. Zenith combination, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6.—Booths Motories.

BOOTHS' Bargains.—1920 Sun, 2 speeds, clutch, £39/10/6; 4-cyl. F.N., 2 speeds, £22/10/6.

BOOTHS' Bargains.—Harley-Davidson combination, mileage 300, £139/10/6; Iree engine Triumph, £22/10/6.

BOOTHS' Bargains.—1920 Wooler, £49/19/6; 3h.p 2-speed Enfield, £29/10/6.

BOOTHS' Bargains.—8h.p. Premier combination, £49/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—Matchless combination, 3-speed, countershaft, £69/10/6; 1920 3½h.p. Ariel, £69/10/6.

BOOTHS' Bargains.—4h.p. Douglas's, £55/10/6; another, £59/10/6; 1914 4h.p. Douglas combination, electric, £85/19/6.

BOOTHS' Bargains.—1920 8h.p. Tamplin, £79/10/6; 1920 Morgan De Luxe, £165/10/6, cost £250/10; nearly new Ariel combination, £85/10/6; new 3½h.p. 3-speed Ariel, £87/10/6; new 4½h.p. Quadrant combination, £100; several others, cheap; push cycles taken exchange.—Booths' Motories, Portland Place, Halifax. 'Phone: 1062. [5146

ALLBER Garage, Thornsett Rd., Earlsfield, London, S.W. (opposite Earlsfield Station, L.S.W. Ry.). 'Phone: Latchmere 4388. Easy terms, no extra charge where a fair amount is deposited; immediate delivery, no inquiries; satisfaction our motto.

ALLBER.—James 2-stroke, 1919, 2-speeds, all accessories, in good order, a bargain, £35.

ALLBER.—Sun-Villiers, 1916, 2¾h.p., all accessories, in good order, £25.

ALLBER.—1919 Douglas 4h.p., 3 speeds, clutch, kick-starter, new tyres, all accessories, in splendid condition, £58.

ALLBER.—1918 P. and M., 2 speeds, kick-starter, nearly new tyres, all accessories, in good order, £37/10.

ALLBER.—1916 Calthorpe-Jap, 2½h.p., 2 speeds, complete with lamps, etc., in good order, £28.

ALLBER.—1914 B.S.A., 3½h.p., 2 speeds, clutch, all accessories, in excellent condition, £32.

ALLBER.—Levis, 1916, 2¼h.p., 2 speeds, all accessories, good tyres, £32.

ALLBER.—1914 Humber Combination, 4h.p., 3 speeds, clutch, kick-starter, coach sidecar, all lamps, horn etc., in beautiful condition, new tyres, £42.

ALLBER.—1918 P. and M. Combination, 3½h.p., 2 speeds, clutch, kick-starter, coach sidecar, all accessories, complete, and in good condition, £48.

ALLBER.—1920 Henderson Combination, dynamo lighting, speedometer, 2 horns, Grindlay De Luxe spring-wheel sidecar, aluminium Iroot, adjustable wind screen, rear carrier box, storm apron and side curtain, kit of tools, etc., absolutely as a new outfit, £140, tax paid.

ALLBER.—1921 Martinsyde Combination, 6h.p., Screenlight electric lighting set, Stewart speedometer, horn, windscreen, apron, etc., little used, beautiful combination, in new condition, £105. [6635


REGISTERED H.A.H. TRADE MARK — H.A.H. Complete Electric Lighting Sets. — REGISTERED H.A.H. TRADE MARK

MANUFACTURERS OF ACCESSORIES. PATENTS. SPECIALITIES.

GENUINE HELLESEN DRY BATTERIES.

'VICTOR' 6 volt Battery. Price 16/8

'FLASH' 4½ volt Battery Price 14/7

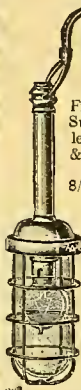


Fig. 359. Supplied less Bulb & Wire. Price 8/6 each

Fig. 778. Badge Clip as illustrated. Price 1/6 each.

Fig. 358. Supplied less Bulb & Wire. Price 7/6 each

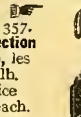


Fig. 357. Inspection Lamp, less Bulb. Price 6/- each.

H.A.H. Insulating Tape. Fig. 455, in. small roll, 7½d. Fig. 456, in. large roll, 1/- Fig. 457, ½in. small roll, 6d.

Gas Tyre Sheathed Cable. Fig. 226 Twin, 1/6 yd. Fig. 228 Single, 1/- yd.

Workshop Flex. Fig. 240 Twin, 6d. yd Fig. 241 Single, 4d. yd

H.A.H. Acute Card Holder.

Fig. 150. Price 9/6 each.

Fig. 395. Price 6/- each.

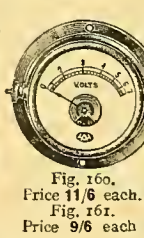


Fig. 160. Price 11/6 each. Fig. 161. Price 9/6 each

Postage extra on the above.

A. H. HUNT, LTD., H.A.H. WORKS, Tunstall Road, CROYDON, Eng.

Telephone— Croydon 2225.

Telegrams— 'Keyage, Croydon.'


## MOTOR CYCLES FOR SALE.

### Miscellaneous.

ZENITH Single Combination, Grado gear, £2 Douglas, good order, £17.—H. R Hall, Hutt Grove, North Finchley, London. [63

HALIFAX.—50 Second-hand Machines and Combinations; keen exchanges; get list.—Halif Motor Exchange, Horton St., Halifax. [69

BUNTING'S Buy, Sell, or Exchange any make motor cycle. State your requirements. We und take to do your business and give you satisfactio Distance immaterial.—Bunting's Motor Exchan Wealdstone. [69

## MOTOR CYCLES WANTED.

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, wri 'phone, or call. If country, send to Lond terminus. We collect free and send best cash offer. W. T. Dunn, Ltd., 326, Euston Rd., London. Muse 5391. [03

CASH.

WAITING

COMBINATION or Solo, any make, any quanti Best prices given.—Write, 'phone, or call, T. a B. Motor Co., Ltd., 372, Euston Rd. Museum 658 [55

WE ARE

ACTUAL BUYERS.

PLEASE offer us your Motor Cycle or Combinatio We pay cash on sight. Write, 'phone, or call.— Percy & Co., 314-316, Euston Rd., N.W.1. Mosen 1337. [59

PALMER'S Garage, Tooting.—The pre-eminent pla for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a ca offer at sight.

PALMER'S Garage, Tooting.—You will be sure of good cheque if you sell your machine at Palmer Garage.

PALMER'S Garage, Tooting.—Thousands of me have sold their machines here.

PALMER'S Garage, Tooting, make a speciality motor cycles in the weekly auction sale eve Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machin from any London railway station. The auctio sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not a cepted machine can be included in Auction Sa held every Thursday.

PALMER'S Garage, Tooting.—You fix the price a we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling co mission 7½% not chargeable unless machine sold. If no sale a nominal auction fee is charged for motor cars, 20/-; motor cycles under £50 valu 5/-; ditto over £50 value, 10/-. When we effect sale these charges are cancelled and commissio charged.

PALMER'S Garage, Tooting.—Catalogue free. Tel phone: 208 Streatham. Telegrams: Palmer Garage, Tooting. [64

A.B.C., Scott-James Solo, recent, cheap, cash.— 22, Millholme Terrace, Carlisle. [67

SOUND Douglas, modern; cheap for cash.— Jackson Rd., East Barnet, Herts. [70

WANTED, late model Combination, private Box 8395, c/o *The Motor Cycle*. [63

OLD Motor Cycle Wanted, cheap for cash.—C. Franklin, Swinford, Eynsham, Oxon. [65

WANTED, Enfield Combination, not earlier th 1916.—27, Dorset Place, Weymouth. [66

WANTED, Solo or Combination, cheap, late mod —Box 8412, c/o *The Motor Cycle*. [68

MOTOR Cycle and cash for 1916 4-cylinder 2-sea Bebe Peugeot.—1, Saxons, Weybridge. [56

WANTED, lightweight, cheap, cash waiting.— Albert Cottages, Marlborough Rd., S.E.1. [70

WANTED, Cheap Motor Bike, about £10, runni order.—Box 8411, c/o *The Motor Cycle*. [68

WANTED, two-stroke or Douglas 2¾ or 4h. cheap.—61, Grand Parade, Harringay. [66

WANTED, motor cycle, any condition; cheap cash.—61, Grand Parade, Harringay, N. [41

WANTED, Motor Cycles for cash or exchange Longman Bros., Bond St., Ealing. Telephor 689. [57

WANTED, Motor Cycles, Indians, repairs no ob tion.—Hipperson, 17, Heaton Rd., Mitcham [6

## MOTOR CYCLES WANTED.

1 2¾h.p. 3-speed Douglas wanted.—Particulars, 5, Cleeve Hill View, Swindon Rd., Cheltenham. [6185

NTED, good Solo or Combination, reasonable.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [6504

MIER, 2½h.p., 3-speed, good condition, cheap r cash.—Hudson, 56, Gordon Rd., Ealing. (D) [6318

NTED, W.D. Triumph or parts; cheap.—Write, Houchio, 14, York Grove, Peckham. S.E.15. [6349

NTED, 3½h.p. Sunbeam solo or combination, reasonable price.—King, Egrove Farm, Oxford. [6210

NTED, F.N. Lightweights, shaft drive, cash.—Vandsworth Motor Exchange, Ebner St., Wands-

NTED, Red Indians, Harley-Davidsons.—Wandsorth Motor Exchange, Ebner St., Wandsworth. Station.) [6624

Clyno, 1915, W.D. Model, condition immaterial sound.—R. Skipper, Great Ryburgh, Fakenham. [6687

NTED, Good Modern Solo for cash, must be cheap; after 4 p.m.—4, Elm Gardens, Hammer- [6661

)ERN Solos or Combinations for cash; highest prices paid.—Clark, 7, Exhibition Rd., [6913

NTED, good modern solo or combination; £40-£50, London district.—Box 8,440, c/o *The Cycle.* [7036

NTED, Henderson 4-cyl. with countershaft gear box, cheap for cash.—Robinson, Rectory Lane, d, Surrey. [6259

NTED, Second-hand 2¾h.p. A.J.S. or Coulson 3, cheap for cash.—W. R. T., 16, Thorpe-Lea eterborough. [6473

NTED, 1920 or 1921 Solo Motor Cycle, 2¾-h.p.—Particulars to Jeffries, 6, Kyverdale Rd., Newington, N. [6522

H on sight, Solos and Combinations, late odels; no fancy prices.—37, Canterbury Rd., n, London, N.1. [6973

NTED, 1921 6-8h.p. Combination, must be interchangeable, first-class make.—State lowest cash, is Co., Chorley, Lancs. [6192

NTED, Motor Cycles and Combinations; any condition; must be cheap for cash.—R. Watson, a Rd., Aldeburgh, Suffolk. [5714

NTED, Second-hand Morgans, Rovers, and G.N.'s, in good condition.—Rey's, of Euston Rd. 34). 'Phone, Museum 6436. [6745

/MPH Combination Wanted, not earlier 1917, od mechanical condition; state price.—Write, , Sunnyvale, Woodford Green. [6460

NTED, Triumph Sporting Model, 1920-21, sturmey-Archer 3-speed, 4h.p., good condition.—Vaeldie, Dyffryn, Merioneth, Wales. [6155

'ATE Owners.—£45 offered, Solo, 3 speeds essen-l, not earlier 1918; private purchaser.—Full ulars, Box 8410, c/o *The Motor Cycle.* [6865

NTED, good modern 2-speed lightweight, 2-stroke preferred; about £25. Cash waiting.—Adver-, Guildford Rd., Pendleton, Manchester. [7021

NTED.—Motor cycles, any condition. Cash paid on sight. Call, write, or 'phone.—28, Wood-d., Forest Gate. 'Phone: Stratford 2598. [6813

NTED, machines to sell on our commission basis. Call or write, we only charge 5 per No sale no charge.—Victory Garages, Denmark amberwell. [6357

H Waiting; solo and combinations, good prices ven.—Write, 'phone, or call, Edwards, 50, Har- Rd., South Keasington. 'Phone: Ken. 3709. [0604

NTED, good Combination; not over £100, or less; immediate cash.—Write or 'phone Ilford Motorist, 769, Romford Rd., Manor Park, , E. [5844

NTED, your motor cycle or combination. We are uyers. Full market price given and cash paid on ot. Write, call, or 'phone Museum 5938.—J. and Co., Motor Agents, Ltd., 52-54, Hampstead .W.1. [0768

NTED, Motor Cycles, any make, any condition, ot earlier than 1914; best prices paid; spot East Barnet Motor Repair Works, Cat Hill, arnet, Herts. [6627

NTED, 1919 or later T.T. Norton, direct belt drive, with Philipson, any distance, deposit, district preferred; reasonable price.—Bloom-9, Ashleigh Rd., Mortlake. [6843

I on Sight for new and second-hand motor cycles d combinations, any make or condition.—Call, r 'phone, Short and Glass, Ltd., 485-493, Upper nd Rd., East Sheen, S.W. 'Phone: Richmond ad 2363. [0372

# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

# Philipson's Latest!

## GOVERNOR PULLEY AND VARIABLE GEAR COMBINED WITH FLY WHEEL for all two-stroke engines.

**The Lightest, Speediest, and Simplest Gear on the market for direct belt-driven 2-stroke and 4-stroke engines.**

ONLY adds 2 lb. (approx.) to the weight of a 2-stroke machine, and 6 lb. (approx.) to the weight of a 4-stroke machine.

**During the past week we have fitted the following machines:**

| 2-stroke. | 4-stroke. |
|---|---|
| LEVIS, | TRIUMPH, |
| O.K., | NORTON, |
| CALTHORPE, | ROVER, |
| VILLIERS, | SINGER, |
| etc. | COULSON-BLACKBURNE |

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

Our Flywheel Governor converts a single-speed 2-stroke into a speed model *—the lightest speed model on the market!*

**THE ONLY GEAR WITH NO END THRUST.**

**IMMEDIATE DELIVERY.**

*Send for Illustrated Booklet.*

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

***What is your make? Write us***

**REDUCED PRICE** **£7 7 0** **Carriage Paid.**

## Philipson & Co., Ltd.,

**Astley Bridge, BOLTON, Lancs.**

**(Established over 50 years.)**

'Grams: "Safety, Bolton." 'Phone: 147 Eagley

## MOTOR CYCLES WANTED.

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Blenheim St.), Bond St., W.1. 'Phone: Mayfair 6559. [0772

SEND your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station, Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address, Palmer's Garage, Tooting. [6641

## MOTOR SCOOTERS.

KINGSBURY Scooter and Spare Parts.—3, Kendall's Mews, Blandford St., W.1. [5499

BRAND new Autoped Scooter, dynamo lighting, 1½h.p.; bargain, £12/10 each.—Percy and Co., 314-316, Euston Rd. [5996

## MOTOR ATTACHMENTS.

AUTO-WHEEL and gent.'s cycle; £12/10 or nearest. Good condition.—Nuttall's, 39, Colenso St., West Hartlepool. [6238

YOUNG attachment, new, ready for fixing to cycle; £14/10.—Write, Clarke, 10, Silver St., W.C.1. [6275

1921 Simplex Attachment, perfect mechanical condition; £10.—37, Arlington Rd., Surbiton. [6637A

YOUNG Attachment, special cycle, nearly new, good running order; £24 or nearest.—Edwd. Furlong, Stapleford Tawney, Romford, Essex. [6309

£18/10, Chater-Lea Tandem and Wall Auto Wheel, expert examination invited, 3-speed, lamps, etc.—Speechley, 86, Churchfield Rd., Acton, W.3. [6617

1921 Auto Wheel de Luxe, done 700 miles, absolutely spotless condition throughout, guaranteed perfect order, C.A.V. magneto; approval; £12.—Blockey, Shadwell, Leeds. [6337

1921 Young Motor Attachment and first-class Bicycle, as new, mileage under 10, fast and powerful; £24.—East Barnet Motor Repair Works, Cat Hill, East Barnet, Herts. [6626

AUTO Wheel.—Latest model de luxe, £12, or with gent's 22in. frame Lea Francis cycle, dynamo set all complete; £18.—Butterworth Garage, 64, Mill Lane, Brixton Hill. 'Phone: Streatham 2813. [6576

## HOODS, WIND SCREENS, ETC.

HERCULES Hoods and Aprons. Write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [3230

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

BENT Hoops, hood fittings, straps, turnabuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3772

ROBINI MANFC. CO.—The "Bower" adjustable windscreen with coverall apron; 30/-, carriage paid.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. 'Phone, Brixton 1585. [6829

## BODIES.

TWO-SEATER body, fitted with screen; £9/10.—Edwardes, 277, Camberwell Rd., S.E. [6679

RENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5131

HALIFAX.—New Perfection coach-built sidecar bodies; £5.—Halifax Motor Exchange, Horton St., Halifax. [6934

VENUS Step Bodies, for old type chassis, 15 models in stock; catalogues ready.—Venus Sidecar Co., 694, Seven Sisters Rd., Tottenham. [4520

ROYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [0336

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—20, Tudor St., London, E.C.4. [0004

WONDERFUL bargains in bodies, shop-soiled, with aprons, £6/10; write for catalogue. Large number of second-hand. Milford 2-seater body, £6/10; we re-paint, repair, and upholster bodies; low prices; carriage extra. See chassis column.—Robini Manfc. Co., 1 and 3 Tulse Hill, Brixton, S.W. 'Phone, Brixton 1585. [6827

## BODIES.

COBB-SPEEDMAN Sidecar Bodies will bear comparison with other makes at twice the price. They are more handsome, stronger, lighter, and more comfortable. Don't be persuaded into paying a big price when you can buy the best from £2/12/6, carriage paid.—Carlton Sidecars, 18, Midland Rd., Carlton, Nottingham. [6520

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM the smartest sidecar specialists

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

BASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £19/10, Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £28/10, Model de Luxe £34/10, tandem model £30.

BASTONES.—Whitley 1922 sports model in stock, £25.

BASTONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/-.—228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. 'Grams: Bastones, London. [5132

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [1331

SIDECAR.—Montegomery coach-built, off 7-9h.p. Thor; £8 10s.—17, Heaton Rd., Mitcham. [6559

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

SWAN Sidecar, complete, hardly used; £17/17.—Grimes' Garage, 18, Bruton Place, W.1. [6184

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

GLORIA coachbuilt Sidecar, off Triumph, complete; £7.—Steed, Bocking Church St., Braintree. [6515


An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

Insurance Policies

**IMPORTANT AGENCY EXTENSION**

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS.

Address—Agency Dept.,

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED**

Head Office:

**77, Cheapside, London, E.C.2.**

*Telephone: City 9831 and 9832.*

*Telegrams: "Autoinsure, Cent. London."*


## SIDECAR ATTACHMENTS.

BOOTHS Bargains.—Coachbuilt chassisless sid £7/10/6; Gloria cane, spring wheel, £6/1 Hercules coach, £9/10/6.

BOOTHS Bargains.—Shop-soiled £27/10 sidecar, Triumph, B.S.A., £18/15; cane sidecar, £5/1

BOOTHS Motories.—Ruby coach sidecar, £9/1 new large size coach bodies, locker under £6/19/6.—Booths Motories, Portland Place, Halif

SIDECAR chassis, good order, requires conne arms; 45/-.—1, Bellingham Terrace, Catford,

HALIFAX.—New Perfection Coach Side £12/10.—Motor Exchange, Horton St., Hal

FOLDING Sidecar, by Hopley, 1921 model, cond A1; £16.—418 Romford Rd., Forest Gate,

£5.—Watsonian, wicker, lightweight, comple Letters to Bartlett, 11, Albemarle, Becken Kent.

CANOELET 1920 Touring Sidecar, as new; offer over £20 secures.—' Rosslyn," Devon Cheam.

HALIFAX.—New Swan and Milford de Luxe Sid for Harley and American X.—Motor Exch Horton St., Halifax.

LIGHTWEIGHT Sidecars, £12/10; also a bodies at low prices.—Stock, 107, Conin Rd., Shepherd's Bush.

12 BEAUTIFUL Coach-built Sidecars; from 8 —Wandsworth Motor Exchange, Ebner Wandsworth. (Town Station.)

GROSVENOR Sidecars.—Our special sports mod very suitable for use with fast sporting b distinctive design and quality; £15.—Grosvenor Co., Bradford St., Bolton.

SIDECAR.—Have a Hopley folding sidecar. garage worry and expense. Attached to will go through passage 28in. Tandem and bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your specify a Hopley folder. Suits motors 10h.p. Can be changed from pleasure to comme in few seconds. Detachable wheels can be Tested 7 years.—Hopley, Upper Highgate St., Birn ham.

PROJECTILE-SHAPED sidecar, light and connections; £6.—King, Egrove Farm, Oxfo

RENNOC Chassis, 28×3 enclosed wheel, com springs, all connections, fit Harley; £6.—Ila 64, Fleet St., Swindon.

B.S.A. No. 2 Sidecars, brand new, slightly at greatly reduced prices.—Eagles and Co., High St., Acton, London.

NEW Sheet-metal Sidecar, mileage 50, listed £37 sell £15; evenings.—120, Marlborough Walton St., Chelsea, S.W.3.

A.B.C.-SWAN sports, painted aluminium, eh lamp, screen, apron, good condition; £ Apply, Baker, Ivydene, Bexley.

ZENITH-Milford chassis, enclosed wheel, com £7/10; Clyno chassis, and new fittings, £5; DeCort and Flynn, 39, Essex Rd., London, N.1.

£5 for a complete renovated Douglas under chassis, all springs and arms, wheel, etc., able for any make of machine to order.—Old Man 19, Wilcox Rd., South Lambeth, London, S.W

WILLOWBROOK Royal Leicester Sidecars, gn designs, first-class finish; prices from 17 Write for catalogue. Repairs undertaken, hoods, screens, etc.—The Willowbrook Motor Co., Leices

HENDERSON Sidecar, complete, in excellent dition, light type; £8/10. Many other bar come and see our stock.—Light Car and Motor Engineering Co., Ltd., 26, Tulse Hill, Brixto minute from Brixton Skating Rink). 'Phone: ton 1292.

FURTHER Reductions.—Underslung chassis plete, new tyre and tube, shop-soiled body, all apron, £13/10; P. and M. chassis, new tyr tube, new bulbous back body, complete; £12.—I Macic Co., 1 and 3, Tulse Hill, Brixton, 'Phone, Brixton 1585.

PARAGON (patent) Folding Sidecar saves st has 7 years to its credit, and has proved absolutely reliable. Fits any make of motor and, when folded, combination will pass thro 30in. doorway. Call and see it demonstrated.—Wi Co., Ltd., 236, High Holborn, W.C.1.

SIDECARS! Sidecars! Several Secondhand built Sidecars from £7/10. Brand New huilt Sidecars with bulbous backs and complete aprons; a first-class job; not cheap and £17/10. Brand New Sidecars, coachbuilt, from These are really wonderful value. We have two ford spring wheel sidecars, 5-point attachments, bulbous backs with Picnic cases, completely fitte all utensils, most elaborately finished, complete Jones Garage, Muswell Hill, London, N.10.

## RUNABOUTS AND CYCLE CARS.

EY'S, of Enston Rd. (Nos. 378-384) have the following in stock:—

ORGANS, all models; also second-hand de Luxe and Grand Prixs, in good condition.

OVENTRY-PREMIER, 1922, 4-wheeler model, £250; one shop-soiled only, £220.

OVER, 8h.p. Model, £220; one second-hand, good condition, £165.

.N.'s, all Models; also 1920, with dynamo, very good order, £132/10; one 1921, £147/10.

XCHANGES or deferred payments arranged. 'Phone, Museum 6436. [6743

IGHT Car, front axle, wheels, brakes, and springs; £3.—31, Silver St., Enfield. [6891

EDELIA.—The new 1922 model, 8-10h.p., with air-cooled or water-cooled engine.

EDELIA.—Air-cooled model, £185; water-cooled model, £195. Immediate deliveries. Trial runs

EDELIA.—Catalogues free from L. N. Palmer, sole concessionaire for the British Empire, Palmer's rage, Tooting. [6439

110.—Grand Prix Morgan, 1915, any trial.—166, Dunstable Rd, Luton, Beds. [6298

AUCHOPE'S, 9, Shoe Lane, London.—5-6h.p. Carden Monocar; £50. [6999

AUCHOPE'S, 9, Shoe Lane, London.—New 1922 G.N.'s. Easy terms and exchange. [7000

ORGAN W.C., fully equipped, speedometer, watch, any trial; £80.—1, Othello St., Liverpool. [6399

ARDEN 1921 2-seater, as new, equipped.—Particulars, offers, 40, Cornwallis Rd., Maidstone. [6282

ORGAN, air-cooled, fully equipped, any trial; £77/10.—Inman, Durham Rd., Seaforth, Liverpool. [6398

21, Morgan de luxe, M.A.G., W.C., as new; £140.—Hillier, 9, Wallingford Avenue, North sington. [6591

ORGAN water-cooled Jap; hood, screen, lamps, tools; any trial, £80.—Inman, Durham Rd., Seaforth, Liverpool. [5762

RAND Prize Morgan, like new, licence paid for year; £135; trial any time.—E. A. Cobb, High , Potters Bar. [6466

ORGAN.—The latest 1922 standard model, £150. Immediate delivery from stock.—Marston, 31, ige St., Chester. [6759

ORGANS, G.N.'s, and Rovers, second-hand, several in stock.—Rey's, of Euston Rd. (378-384). one, Museum 6436. [6744

20 2-seater Graham White Cyclecar, electric light, splendid order; £50.—Dunn's, 326, Euston Rd., V.1. 'Phone, Museum 5391. [7012

AUCHOPE'S, 9, Shoe Lane, London.—Rover light cars; £220; fully equipped. Easy terms or exnge. List on application. [7001

LERIOT-WHIPPET, 1920 (late), recently painted, splendid condition, lamps, horn, etc; bargain, .—Hilder, Sackville Rd., Bexhill. [6350

AMPLIN, 1920, run 6 months, new tyres and belt, licensed March, engineer owned, any trial; £80.—C., 26, Queen St., Ashford, Kent. [6299

OVER, 8h.p.—Your motor cycle taken in part exchange for new models.—Agents, R. B. Clark Co., 7, Exhibition Rd., S.W.7. [6914

ORGAN-DE-LUXE, 1920, Jap, little used, fully equipped, disc wheels, spare chains; £140.—d, Victoria Terrace, Leamington Spa. [6539

.N. 1920 dynamo lighting model, little used, guaranteed; 129 gns.; cash or exchange.—Longn Bros., Bond St., Ealing. Telephone: 689. [5794

LIFFORD WILSON Mfg. Co., have in stock, new 1922 Morgan Popular Model, £150.—177, Westster Bridge Rd., S.E.1. Tel: Hop 210. [6634

AUCHOPE'S, 9, Shoe Lane, London.—New 1922 Morgans supplied on easy terms or exchange. ne: Holborn 5777. List on application. [7002

ORGAN, recently overhauled, in perfect running order, fitted steps, tool boxes, etc., any trial; .—Martin, 91, Wightman Rd., Harringay, N. [6261

EW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy ments, or exchange.—Service Co., 292, High Holborn, .1. [0673

N., 8h.p., late 1921 Touring Model, dynamo lighting, very small mileage, tyres hardly worn, as ; £195.—Telford Garage, 47, Streatham Hill, don, S.W.2. [6887

ARDEN 1921 de Luxe, dynamo, clock, speedometer, electric horn, lots of spares, condition as new; —Colonial Motors, 104A, Finchley Rd. Hampd 7822. [7008

ALIFAX.—New 1922 Coventry-Premier 4-wheeler, with speedometer and insurance for 12 months; 0; liberal exchanges.—Halifax Motor Exchange, ton St., Halifax. [6932


"GOOD SERVICE"

## The right accessories at the right prices

No matter what accessories and fittings you want get them from The Service Co. We can supply you with everything you want from stock at the lowest London prices, either over the counter or through the post. Note these special lines:

**COMPLETE PROTECTION.**

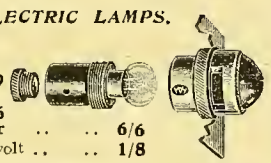
| | |
|---|---|
| Leather .. | 27 6 |
| Leather Cloth .. | 15 6 |
| Black Steel .. | 15 6 |
| Aluminium .. | 21 0 |

**GENUINE BOWDEN FRONT BRAKES.**

| | |
|---|---|
| Up to 2¾ h.p. | 13 9 |
| Over 2¾ h.p. | 32 6 |

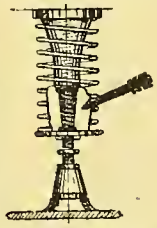
**HUNT'S ELECTRIC LAMPS.**

Rear—
For S.B.C. Bulbs .. 4/9
Do. with Bracket .. 6/6
Do. for Sidecar .. .. 6/6
Bulbs—4 or 6 volt .. .. 1/8



**"FLEXEKAS."**

Prevents air leaks. Lubricates valve-stems 2/6



**SERVICE WATCH**
Strong. Efficient.
19/6

All articles carefully packed and sent post paid.

**SERVICE LEATHER BELTING.**

Standard—
¾" 2" 1" 1⅛"
2/8 3/4 4/- 4/6
Super—
¾" 1" 1¼" 1½"
— 4/6 5/- 5/6

Prices are per foot —any length cut Two fasteners gratis with each belt.

*New descriptive leaflet of above and other grades of Service Belting post free by asking for it.*

The Service Company Ltd. (LONDON)

**289 - 293, High Holborn, W.C.1**


## RUNABOUTS AND CYCLE CARS.

1921 Bleriot-Whippet, hand-starter, electric lighting, spare wheel, good condition; 88 gns.; deferred payments and exchanges.—Edwards, 50, Harrington Rd., South Kensington. [5238

1921 "Morgan" de Luxe, 8h.p. Jap, W.C., in splendid condition throughout, finish purple, electric and acetylene lighting; £150.—Cheston, 66, Shobnall St., Burton-on-Trent. [6322

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0736

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220; in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0773

1921 Morgan de Luxe, water-cooled M.A.G. engine, splendid puller, done small mileage; bargain to clear, £150.—C. Moxham & Company, 32-33, Torwood St., Torquay. 'Phone 95. [0774

"A.V." 2-seaters. A few second-hand and demonstration models, in perfect order for sale by the manufacturers, at exceptionally low prices.—Ward and Avey, Ltd., Teddington, Middlesex. [6424

"A.V." 2-seater, Special Sporting model, fitted with powerful overhead valve J.A.P. engine, Acro type windscreens, hood, etc.; bargain price.—Ward and Avey, Ltd., Teddington, Middlesex. [6425

A.V. Monocar, late 1921 sports, fitted with special racing Jap engine, new Dunlop-Magnum tyres, speedometer, lighting set and horn, fast, mileage low; £85.—Haven, Portsmouth Rd., Esher, Surrey. [6970

£75, Carden Cyclecar, 6-8h.p., J.A.P. engine, 3-speed gear box, kick start, 2-seater, fully equipped, hood, screen, etc., splendid running order; exchanges entertained.—Speechley, 86, Churchfield Rd., Acton, W.3. [6650

WAUCHOPE'S, 9, Shoe Lane, London.—Coventry Premier, new 1922, 4-wheelers, immediate delivery from stock, dynamo lighting, exchange and easy terms arranged; price £250. 'Phone or call. Holborn 5777. [7003

3-WHEEL Cycle Car, A.C. watertight magneto, 2 speeds, clutch, coach-built body, side door, hood, windscreen, wheel steering, tyres first class, disc wheels, good order; £30, bargain.—Box 8322, c/o *The Motor Cycle.* [6197

BARKER'S Motors can supply all models of light cars at list prices and give a free insurance guarantee for 12 months against mechanical breakdown. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6423

A.C. Sociable, Palmer tyres, hood and screen, Bosch mag., Zenith carburetter, Klaxon speedometer, an exceptionally nice specimen, economical and reliable, suit traveller, only reason for selling faster machine required; first good offer accepted for quick sale.—Hoather, Bushey Heath, Watford. [6506

DE-DION, 5h.p., water-cooled smart little 2-seater car, £5 yearly tax, Zenith carburetter, magneto, economical, fast, splendid condition throughout, guaranteed, lamps, tools, trial any time, bargain; £40.—Tuner, 45, Charles St., Commercial Rd., Stepney. [6571

RICHARDSON, 1920, 2-seater and dickey, special Precision engine, very fast, in perfect order throughout, electric lighting, semi-coupé hood, adjustable screen, cost over £300 new; bargain, £120.—Bowden, 230, North St., Coalville. [6711

1922 8h.p. Coventry Premier, 2-3-seater, painted elephant grey, upholstered in real leather, spare wheel and tyre, horn, Rotex lighting set, speedometer, etc., very low petrol consumption, beautifully designed and mechanically perfect; £250 cash or £68 down and twelve monthly payments of £17, including comprehensive insurance policy for 12 months. Part exchange with modern combination arranged. Illustrated catalogue and further particulars post free.—Herbert Robinson, Limited, Regent St., Cambridge. [6253

*Spare Parts:*

WE can supply any Morgan spares from stock; write, call, or 'phone.—Maudes' Motor Mart, 100, Great Portland St., W.1. [7045

MORGAN Spart Part Depôt.—Spares for all models in stock, lists free.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone, Avenue 5548. [0074

## TAXI-COMBINATIONS AND CABS.

B.S.A. Taxi-sidecar late 1920, dynamo lighting, detachable wheels and spare, practically new, many accessories; £175; terms, exchanges.—Midland Garage, 7, Broad St., Birmingham. [6175

"COUNTY," B.S.A., Taxis, as licensed throughout the country.—Write for full particulars, County Cycle and Motor Co., "Originators," 300, Broad St., Birmingham. [5353

## CARS FOR SALE.

KRIT 15h.p. tourer, very fast, £95, or exchange.—15, Mervao Rd., London, S.W. [6792

## CARS FOR SALE.

RENAULT, 20h.p., Limousine, perfect; £85.—Chaulfeur, 14, Glenelg Rd., Brixton, S.W. [6791

8h.p. Sizaire 2-seater, hood, screen; £32, bargain.—1, Bellingham Terrace, Catford.

1910 Ford chassis, just overhauled, magneto ignition; £32.—1, Bellingham Terrace, Catford. [6724

PALMER'S Garage, Tooting.—The pre-eminent place for purchasing. Auction every Thursday.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £5 secures superb Napier 5-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£60 down and 12 monthly payments £8 secures 10h.p. Singer, two-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £5 secures 12-seater live axle Panhard wagoonette.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures splendid Sheffield Simplex landaulet.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8/10 secures magnificent Oakland touring car, self-starting.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7/10 secures reliable Renault ¾ landaulet.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable Napier chassis.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8 secures Delaunay Belleville limousine, 17h.p.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 18h.p. Maxwell sporting 2-seater.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures excellent 15.9h.p. S.C.A.R. 2-seater.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures Studebaker landaulet, dynamo lighting, self starting.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £7 secures 16h.p. Minerva touring car, monobloc engine.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable S.C.A.T. 12-seater wagonette.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £5 secures excellent 12.14h.p. F.I.A.T. chassis, monobloc.

PALMER'S Garage, Tooting.—All above cars are in good running order. For cash price deduct 10% from above totals.—Palmer's Garage, Tooting. [6444

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

AUSTIN 18-24h.p. Landaulet, D rims, C.A.V., perfect; £185.—Mrs. Moor, 106, Acre Lane, Brixton, London. [6789

MORRIS-OXFORD de Luxe, 2-seater dickey, beautiful condition, tax £9, bargain; £165.—Savory, Canal Wharf, Oxford. [6867

DAIMLER 15h.p. S.K. tourer, C.A.V. noiseless, £160, or part exchange good combination.—8, Crowhurst Rd., S.W.9. [6787

WEST Norwood!—Fifty bargains always stocked; postcard procures list.—Douglas S. Cox, Lansdowne Hill, West Norwood. [6611

ROVER Cars.—The famous 8h.p. model in stock, £220; for immediate delivery.—Eagles and Co., 275, High St., Acton, London. [0761

RACING Mercédès, Grand Prix model, 1st, 2nd, 3rd Brooklands, 1920. Offers or exchange.—Capt. Jackson, c/o 77, Acre Lane, S.W.2. [6786

COVENTRY PREMIER, 1922, 4-wheel model; £250; immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

G.N. (Touring), a magnificent specimen, bought new 30/9/20, cost in all £350, and still like new; great bargain; £140.—Buntiug's Exchange, Wealdstone. [6885

EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hansler Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452. [6878

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

BARGAIN, £38, 10h.p., 2-seater Car, hood, screen, Bosch, Zenith, etc., body needs little fitting; or exchange good motor cycle.—Bonner, 1, Bridgeway, Wembley. [6858

FORD, 1919, 2-seater, very nice condition, right steering, detachable box for rear, suit commercial traveller; £100; take half down.—Buntiug's Exchange, Wealdstone. [6881

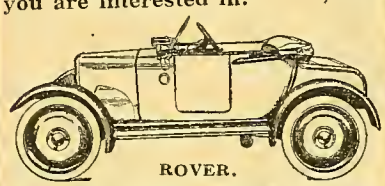
MORRIS-COWLEY 1922 Standard 2-seater model in stock,—dynamo lighting, etc.; 285 gns.—Elce, Ltd., 15-16, Bishopsgate Ave, Camomile St., E.C.3. 'Phone, Avenue 5548. [0073

# RATCLIFFE BROS.

## 200, GT. PORTLAND ST., W

'Phone—Langham 1704.

**Any make of machine can be supplied on our Payment out of Income Scheme. Write for full particulars, and state machine you are interested in.**



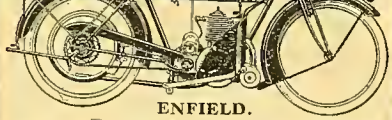
ROVER.

**£220 cash, or £57 4s. down and 12 payments of £14 6s.**

## 1922 MACHINES IN STOCK.

| | |
|---|---|
| A.J.S. 7 h.p. Combination .. .. | £175 |
| A.J.S. 2¾ h.p. Solo .. .. .. | £85 |
| B.S.A. 4½ h.p. K.2., Solo .. .. | £107 |
| B.S.A. 4½ h.p., H.2. „ .. .. | £110 |
| B.S.A. K.2., with box carrier .. | £139 |
| B.S.A. model "E" Combination .. | £164 |
| DOUGLAS, 2-speed, fully equipped | £75 |
| DOUGLAS, 3-speed „ | £90 |
| DOUGLAS 4 h.p. Combination .. | £135 |
| ENFIELD model No. 200 .. .. | £55 |
| „ „ No. 190 .. .. | £158 |
| „ „ No. 180 .. .. | £140 |
| MATCHLESS Combination .. .. | £170 |
| RALEIGH 5·6 h.p. Solo .. .. | £130 |
| RALEIGH 2¾ h.p. Solo .. .. | £68 |
| RUDGE, I.O.M. .. .. .. .. | £85 |
| SUNBEAM 4½ h.p. Solo .. | £141 15 |
| TRIUMPH model H. .. .. | £105 |
| TRIUMPH model S.D. .. .. | £115 |
| ZENITH BRADSHAW.. .. .. | £113 |
| COVENTRY PREMIER CAR .. | £250 |

**MILLFORD, CANOELET, HENDERSON, SWAN and MONTGOMERY SIDECARS in Stock.**



ENFIELD.

**£55 cash, or £14 6s. down and 12 payments of £3 11s. 6d.**

## SECONDHAND MACHINES.

| | |
|---|---|
| COVENTRY PREMIER CAR, 1922 model, mileage negligible .. .. | £210 |
| ARIEL 3½ h.p., shop soiled only .. | £85 |
| LEA-FRANCIS 3½ h.p., slightly shop soiled .. .. .. .. .. | £90 |
| RUDGE, I.O.M., shop soiled.. .. | £75 |
| ZENITH model "D," shop soiled .. | £100 |
| 1920 6 h.p. Bradbury combination, fully equipped .. .. .. .. | £90 |
| NEW IMPERIAL 2¾ h.p., 1921, slightly used, only.. .. .. .. | £57 |
| DOUGLAS 2¾ h.p., fully equipped | £50 |
| ENFIELD combination, magdyno, speedometer, mileage 2,000, as new .. .. .. .. .. .. | £115 |
| TRIUMPH Combination fully equipped.. .. .. .. .. .. | £75 |
| JAMES 3½ h.p. Sports, fully equipped, mileage negligible .. | £85 |
| SCOTT 1920, fully equipped .. | £75 |
| ZENITH 1920 6 h.p. Sports, fully equipped .. .. .. .. .. | £78 |
| SIDECARS by all the leading makers, shop soiled only, at special clearance prices from .. | £15 |

TRADE SUPPLIED.

## CARS FOR SALE.

GENUINE Little 6h.p. De Dion Car, fitted with 2-seater sporting body, very smart, in excellent order; complete, £45; delivered 50 miles free; trial.—11a, Dafforne Rd., Upper Tooting. [4547

8-10 de Marcay Demonstration Model for sale. Better than new. Fitted dynamo lighting, detachable wheels, etc., £125. Also special Competition model, £120.—A. H. Lakeman, Ltd., 26, Long Acre, London, W.C.2. [5355

1919 Chevrolet Touring Car, dynamo lighting, self-starter, 5 detachable wheels, repainted as new, any trial given; bargain, £160, or exchange motor cycle or combination with cash.—5, Norwood Rd., Herne Hill, S.E.14. [5840

£160.—13.9h.p. Swift, 4-seater, 4-speed, 5 detachable wheels with tyres, 2 new others perfect, fully equipped, and perfect in every detail; ideal economical family car; only requires to be seen and tried.—1, Norwood Rd., Herne Hill, S.E.24. [5842

1916 Warren-Lambert, 2-seater, 2-cyl., water-cooled, 3-speed and reverse, differential, etc., electric lighting set, speedometer, horn, good tyres, recently overhauled, perfect condition throughout; £55, or exchange motor cycle.—30, Belsize Park Gardens, Hampstead. 'Phone, 5590. [6855

## MOTOR TRANSPORT VEHICLES.

STAR 1916 2-ton lorries (6 for sale), dynamo lighting, tax paid to July, 1922, 4 speeds, live axle; £225 each.—See below.

GARNER 1917 2-2½ tonners (4 for sale), dynamo lighting, tax paid to July, 1922, overhead worm drive; £200 each.—See below.

GARFORD 30-cwt. lorries, all new lamps, horns, cushions, worm drive; £200 each.—See below.

FIAT 1 tonners, £185 each; Willys-Overland 1 tonners, £125 each.—See below.

BRITISH Ensign 3-4 tonner 1919, overhead worm drive, £200; also 1917 Caledon 3-4 tonner, dynamo lighting, £200.—See below.

MOTOR lorries (30 for sale) repainted, retyred, all new lamps, etc., tax paid to July, 1922. Come and test them. Write for our photos and list.—Shard Garage, Shards Square, Peckham Park Rd., Old Kent Rd., London. [6235

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. [8428

SECOND-HAND Models at special rates. Send your requirements.—Halifax Motor Exchange, Horton St., Halifax. [6935

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1. [0672

## ENGINES.

SWIFT Engine, complete, with 2 speeds and free engine; £4/10.—31, Silver St., Enfield. [6890

£2.—M.M.C. 2¾h.p., A.I.V., with B. and B. carburetter.—Bear, Tendring, Hailsham. [6286

4h.p. o.h.v. J.A.P. Single, good condition; £10, carriage paid.—6, Wilkins Ct., Caldewgate, Carlisle. [6353

SUNBEAM 3½h.p. engine, splendid condition, with Bosch magneto; £20.—Snow, Laurel St., Dalston, E.8. [6953

BASTONES.—Blackburne 8h.p. twin engine with carburetter; £30.—228, Pentonville Rd., King's Cross, London, N.1. [5133

2¾h.p. 2-stroke (1922), brand new, eminent make, £8, less magneto and carburetter.—Grant, 1, Gosta Green, Birmingham. [6733

8h.p. 90×77½ o.h.v. J.A.P. with mag. off Matchless, condition and appearance new; £22/10, approval.—70, Micklegate, York. [6170

4h.p. Levis Flat Twin, 2-stroke, carburetter and mag., perfect, £10; 6h.p. ditto. £12.—Cole, 457, Rathgar Rd., Loughborough Junction, S.W.9. [4924

J.A.P. Speed Twin, 90mm. bore, 77½mm. stroke, o.h.v.; had very little wear; waterproof magneto, racing Amac. carburetter; £21/10 carriage free; approval.—Jack Lucas, 110, Williams Rd., Cannon Hill, Birmingham. [6325

90h.p. Mercédès engine complete, £45. 200h.p. Clerget engine complete, £60. 20h.p. Beaver marine engine, with Langdon gear, new, unused, £95.—77, Acre Lane, S.W.2. [6788

8h.p. J.A.P., latest ball and roller bearing design, special show finish, unused, complete with magneto. Bargain, £30. Also 1919 5-7h.p. J.A.P. Twin, perfect condition, with mag., £20.—R. B. Pullin, The Warren, Northolt Junction, Middlesex. [6312

4¼h.p. Precision, new, with silencer and pulley, £10/10; 3¾h.p. ditto, new, with waterproof Boach, and silencer fitted, £12; another one, second-hand, 3¾h.p., less mag., £8; drop us a line if you require an engine.—DeCort and Flynn, 39, Essex Rd., London, N.1. [6692

## ENGINES.

'UGE Vee Twin Cyclecar Engine, built of Clerget aero parts, 120mm. bore, steel cylinders, o.h.v., plete and ready for chassis, with Claudel carburetter, lubrication, and ignition systems, clutch, rting handle, exhaust pipes, etc., weight 2cwt.; £10 cash, or exchange.—40, Wheathill Rd., S.E. [6622

COMPLETE High-speed Power Unit for Morgan. 10h.p. 1921 (July) o.h.v. J.A.P. racing engine sale, fitted with the following: Ricardo pistons, ac carb., clutch (complete), engine plates, two n. expansion tubes, magneto; best offer; deposit em (motor cycle).—C. V. Wood, 134, Newport , Cardiff. [6386

)14 4h.p. Triumph Engine, just overhauled by makers, £14; 1912 ditto, in good order, £10; ision 4½h.p. engine, £10; J.A.P. 4h.p. single-nder engine, £9; Hockley new 2¾h.p. 2-stroke ne and magneto, £9/10; Verus 2-stroke engine magneto, £7.—Alf Holland, Hearsall Lane, Coven- [7009

OUGLAS 8h.p. Water-cooled, C.W. radiator, petrol tank, bedplate, starting handle, induction pipe, l condition, £11/10; thoroughly overhauled, new ., carburetter, guaranteed running order, £19/10, iage forward; make splendid light car engines; e selection; stamp reply; trade supplied.—Derring- Grafton Rd., New Malden. [6749

A.P. Engines. J.A.P. Engines. J.A.P. Engines.— I have the largest stock of J.A.P. engine parts in land; over 30 engines, all in stock, to select from; the prices: 5hp. £15, and the 8h.p. at £20 and /10, and I have all parts for the 8h.p. (see acces- s for parts). I have a big twin engine £12, a 4h.p. glas engine and mag. and carburetter £15, a small oke and mag. £10; stamp reply.—South Croydon or Exchange, 22. South End, Croydon. [4765

EPPLETHWAITE'S.—8h.p. W.C. single, £8; suit- able for stationary work, 3½h.p. Humber unit, 3½h.p. Premier, £10; 5-6h.p. Rex A.I.V., less 1 on, £4; 3½h.p. Alldays M.O.V., £4/10; 3h.p. .V. Minerva, £3/10; racing 7h.p. J.A.P. A.I.V., by Collier on tract, complete unit, £9/10; also P. 5h.p. spares, and Rover and New Imperial. re stock of W. H. Hawkins. Write us for com- list, enclosing stamp. 'Phone: 1958 Brixton.— Wilcox Rd., South Lambeth, London, S.W.8. [6919

## IGNITION, LIGHTING, ETC.

.H.I.

.B. Ignition Co. carry large stocks of new and second-hand magnetos. Thomson-Bennett 42, 45, 55, and 180°, single and twin.

.B. Specialise in T.B. for fixing on Triumph, P.M., B.S.A., J.A.P., Douglas, etc., £2/10, postage 1/6; V. clock twin, for 2¾h.p. Douglas, etc., £2/15.

.B. will take your old magneto in payment.

.B. sends all magnetos on approval against cash. Every magneto dispatched carry H.B. 12 months' antee.

.B. Ignition Co. ('Phone: Brixton 610), 78, New Park Rd., Brixton Hill, London. [0694

—Trembler coil, almost unused.—Bear, Tendring, Hailsham. [6287

)UNTY of London Engineering Works, Ltd.

CEPTIONAL offer of Government surplus mag- netos, new, unused, must be cleared to make for fresh stock.

'ARANTEE—We guarantee all our magnetos twelve months, and will willingly repair or re- any magneto that should prove defective within period.

)SCH single, clock, or anti, £3. Thomson-Bennett, single or twin, clock or anti, 42, 45, 50, 55, and degrees, £2/10.

A.V. single or twin, clock or anti, £2/10; special long driving spindle for Rudge, fitted to any of above magnetos, 10/- extra. Postage on mag- s, 1/6.

ESE magnetos are fitted with variable ignition, and leads, and also baseplates ready to be imme- ly fitted on; please state make of engine when ring.

)VERNMENT surplus, new plugs in boxes, A.C. (Titan), 1/6 each; K.L.G. types, F.8, F.6, F.5, R.3, 1/8 each; Lodge types, K. and K.2, 1/8 each. age on orders of one plug, 3d.; four or more, free.

L goods on approval per return post on receipt of cash; money refunded if not satisfactory.

)UNTY of London Engineering Works, Ltd.—Note new address: 6, Garden Lane, Christchurch Rd., itham, London, S.W. Tel.: Streatham 2898. : Ignitionac, Brixstret, London. [5935

'NAMOS (new), 120 watts, £7; 250, £9.—En- gineer, 20, Glendarvon St., Putney. [6948


# MAUDE RUBBER Co.

**58, PRAED STREET, W. 2**

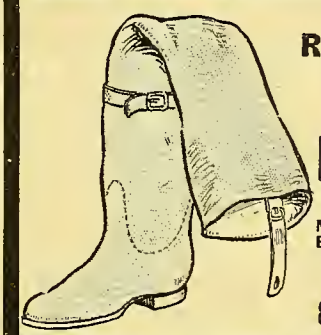
## ALL GOODS GUARANTEED

**and sent immediately on 7 days' approval against Cash.**

| | | |
|---|---|---|
| 24×2¼ | **Avon** Ribbed. Heavy..... | 20/6 |
| 26×2 | **Kempshall** Non-skid. Heavy.. | 22/6 |
| 26×2¼ | **Avon** Rubber-studded. Heavy | 24/6 |
| | **Avon** Stonehenge. Heavy .... | 25/- |
| | **Wood-Milne** Key-grip. Heavy | 13/6 |
| | **Dunlop** Rubber-studded. Heavy | 25/- |
| | **Goodyear** Diamond. Ex. Hvy. | 25/- |
| | **Goodrich** Safety. Extra Heavy | 30/- |
| | **Bates** 3-ribbed. Extra Heavy.. | 27/6 |
| | **Beldam** Combination. Extra Heavy Steel Studded .... | 24/6 |
| 26×2⅜ | **Dunlop** Rubber-studded. Extra Heavy..... | 36/6 |
| | **Bates** 3-ribbed. Extra Heavy.. | 27/6 |
| 26×2¼×2¼ | **Avon** "Stonehenge." Heavy.. | 22/6 |
| | **Avon** Ribbed. Heavy..... | 30/- |
| 26×2½ | **Wood-Milne** Key-grip. Heavy | 13/6 |
| | **Wood-Milne** Key-grip. Ex. Hvy. | 16/6 |
| | **Goodyear** Diamond. Ex. Hvy. | 25/- |
| | **Avon** Ribbed. Extra Heavy.. | 22/6 |
| 28×3 | **Wood-Milne** Key-grip. Ex. Hvy. | 28/- |
| | **Kempshall** Non-skid. Ex. Hvy. | 30/- |
| | **American** Fisk. Extra Heavy.. | 40/- |
| | **Dunlop** 29×3½. Extra Heavy. | 45/- |
| 650×65 | **Wood-Milne** Key-grip. Heavy | 13/6 |
| | **Wood-Milne** Key-grip. Ex. Hvy. | 20/- |
| | **Dunlop** (grooved). Extra Heavy Voiturette..... | 40/- |
| | **Goodyear** Diamond. Ex. Hvy. | 30/- |
| | **Kempshall** Non-skid. Ex. Hvy. | 30/- |
| | **Avon** 3-ribbed. Extra Heavy. Voiturette..... | 30/- |
| 700×80 | **Avon** 3-ribbed. Extra Heavy. Voiturette..... | 35/- |
| | **Wood-Milne** Key-grip Ex. Hvy. | 20/- |

**Tubes.** Brand new **Dunlops, Palmers,** and **Avon.**
All sizes to 28×3 5/6 each.
„ 700×80 6/6 „

**SUPERIOR TO THOSE SOLD ELSEWHERE AT 12/6**



**RUBBER HIP BOOTS (WADERS)**

**Made by North British Rubber Co., Ltd.**

**Our Price 8/6** Postage 1/3

**Wholesale & Repair Depot: 42, Binfield Rd. Stockwell, S.W.**



# Helen Sidecar Bodies

**Many Models.**
**SPORTS, TOURING, ETC.**

**Complete with Coverall Aprons. £8.**

**Shop Soiled Models £6 10s. 0d.**

*Catalogue on request.*

**ROBINI MANUFACTURING CO.,**
**1 & 3 Tulse Hill, Brixton, London, S.W.**
'Phone: Brixton 1585.


## IGNITION, LIGHTING, ETC.

BOSCH 1-cyl., weatherproof, and as new, variable ignition; 57/6 delivered.

THOMSON-BENNETT and M-L's, of Coventry, 1-cyl. A.D.S. or P.L.R. types, 37/6 delivered, suitable for stationary engines; if variable ignition, 10/- extra.

C.A.V., as new, suitable for 2 or 1-cyl. lightweight motor bicycles height 4½in., breadth 2⅝in., depth 4½in., variable ignition and short-circuiting terminal, guaranteed platinum points, and workmanship of the finest; 2-cyl. fires at 180°; all working parts are interchangeable with C.A.V.'s, types KU 1 and 2; 50/- delivered.

THOMSON-BENNETT, types A.M. 1 and 2, as new, variable ignition and short-circuiting terminal; A.M. 2 fires at 180°; 52/6 delivered.

THOMSON-BENNETT 4-cyl., variable ignition; £5/5 delivered.

N.B.—Any of the above magnetos supplied, clock or anti-clock. When ordering state which when looking at driving end, and whether 1, 2, or 4-cyl.

C.A.V. 2-cyl. Clockwise Aeroplane Starting Magnetos, platinum points, workmanship of the finest, and all working parts are interchangeable with C.A.V.'s, type KU2, perfect for plug testing; one carriage paid, 25/-; lots of 6, rail forward, 22/6 each; of 20 at 21/6 each; of 100 at 20/-.

MAGNETOS Leave our Works in perfect condition.

GUARANTEE.—Will replace within one month, or refund cash if unsatisfactory.

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 977. [0698

RELIANCE Magneto Repairing Co. for repairs and new magnetos.—See below.

RELIANCE guarantee to return your magneto within 3 days, and if necessary 24 hours, with a written guarantee for 12 months.

RELIANCE test every magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE manufacture and stock spares for Thomson-Bennett, E.I.C., Splitdorf, U.H., Bosch, Dixie, etc.; special line geonine platinum screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice free of charge upon any qestion concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy that we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., E.C.1, for new and second-hand magnetos.—See below.

THOMSON-BENNETT Magnetos, new and unused, single-cyl., clock and anti, suit any machine, price 55/-; twins, 45, 48, 50, 55, 60, 180 degrees, for J.A.P., Clyno, Douglas, etc., price 55/-. See our guarantee.—Below.

C.A.V. Magnetos, new, single-cyl. and 180° twins, clock or anti, ideal for Douglas, Levis, Coltherpe, O.K., or any lightweight; these magnetos are of the finest workmanship throughout; price 55/-. See our guarantee.—Below.

BOSCH D.A.L. Magnetos, soiled only, otherwise as new, single cyl., suitable for any stationary engine or big single, £3/15; twins, any degree, ready to drop on Indian, Harley, or any big twin, £4/5; a powerful spark at low speed, ensuring easy starting. All the above magnetos are variable ignition and fitted short-circuiting switch. See our guarantee.—Below.

GUARANTEE.—Every magneto that leaves our works, no matter what the price or make, carries a written guarantee. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee every machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE Magneto Repairing Co. hold one of the largest stocks in London, and can be depended upon for a straight deal at the right price. When buying it pays to deal with a firm of repute.

RELIANCE cordially invite customers to their works to see any of the above on test. Magneto list giving full particulars sent upon application.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1. [6616

K.L.G. W.D. Sparking Plugs, wonderful value, 4 for 5/-, post free.—Thompson, 59, Queen St., Wolverhampton. [7944

BOSCH and M-L singles, 30/-; C.A.V., 37/6; variable ignition guaranteed.—84, Greenside Rd., Croydon. [6582

MAGNETO Sprocket Manufacturers.—7-tooth to 24-tooth stocked.—Ridington, 202-4, Southampton St., Camberwell. [6886

FLAT Twin, C.A.V. magneto, practically new; bargain, £4.—Thomas, Twycross, Tenby, Pembrokeshire. [6239

## IGNITION, LIGHTING, ETC.

TWIN Bosch, Z.A. 2,450, equal to new, very cheap; £3/15.—16, Archway Rd., Upper Holloway, London, N.19. [6180

"NORWICH."—Repairs to magnetos, etc. Price rarely exceeds 35/-. Guaranteed.—Chipperfield's, 37, Prince of Wales Rd [6359

SNIP.—Coach-built Body as new, with apron, weight 45 lbs.; bargain, £6/15.—Webber, "Eastleigh," Honiton [6482

REMY lighting ignition set off Harley, less lamps; also new unused Thomson-Bennett A.D.4C. magneto; sell, offers.—Box 8375, c/o *The Motor Cycle*. [6289

DASH Switchboards, 4-way, with ammeter, 20/-; with ammeter and voltmeter, 35/- each nett.—Leslie Dixon and Co. (Dept. H 1.), 9, Colonial Av., Minories, E.1 [0760

GOVERNMENT Surplus, plugs, K.L.G., detachable, standard thread, 1/- each, postage 3d., three or more post free.—Spencer, Potter St., Bishop's Stortford. [6800

THOMSON-BENNETT brand new magnetos for 2¾ or 4h.p. Douglas, 35/-; C.A.V. for 2¾ or 4h.p. Douglas (not W.D.), 50/-. approval.—Dowell, Pyrford, Surrey. [6726

CHELTENHAM.—Repairs to magnetos, self-starters lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham 'Phone: 1256. [0758

DYNAMO Lighting Sets, complete, new, £6 per set, including new accumulator, cut-out, Lucas dynamo; accumulators only £1/3.—Jenner (Dept. M.C.), 165, Church Rd., Mitcham. [5401

CONTINENTAL Ignition Repair Co.—We repair Continental magnetos only. By specialising on Bosch, U.H., Eisemann, Mea, Splitdorf, Dixie, and Berling magnetos, we can naturally give you better service.

PRICE: Rewinding 18/-, condensers 10/-, platinum screws (Bosch standard) 6/-, remagnetising 2/6 slip rings 6/6, H.T. terminals 4/6. Our price for overhauling a motor cycle magneto ranges between 20/- and 35/-, and never exceeds the latter figure Guaranteed for 12 months, and redespatched to you in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardwick Rd., Chiswick, London. [3758

U.H. Magneto Repairs.—We specialise in these magnetos, and can be relied upon to give you good service. A1, B1, AO, KB1, KB2V, KZ2V type spares stocked; prices moderate; 12 months' written guarantee.—Charles Parker and Co., Churchfield Rd., Acton, London. [4455

THOMSON-BENNETT Magnetos, unused, W.D., guaranteed perfect, single or 180° twin, variable ignition, switch terminal and leads, clock or anti; week's approval against cash.—Brockbank, 58, Lord St., Southport. [0756

C.A.V. Magnetos: Extraordinary Bargains.—Brand new 180° twin or single-cyl., 38/6, carriage free. Every magneto thoroughly tested before dispatch; approval against cash.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [6567

LIGHTING Dynamos, contained in Government surplus mine exploders, dynamo will light seven 10-volt lamps in series, all as new and perfect, 17/6 each, or 22/- each, carriage paid passenger train; stamp for detailed particulars; three days' approval against cash.—Galpin, rear of 35, Milton Court Rd., New Cross, London, S.E.14. [6918

THE Magneto Repairing and Winding Co. (estab lished 1912), contractors to H.M. Government, and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can mostly return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock, all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1. 'Phone: Museum 1158. T.A.: Kumaguelec, Eusroad, London. [2445

MAGNETOS.—Government surplus. New unused for all machines, all degrees; we have the following in stock:—Bosch singles and twins, £3; Thomson-Bennett singles and twins, £2/12/6; C.A.V. singles and twins, £2/12/6. All fitted with variable ignition, and base plates for machines requiring same. Sparking plugs, all makes in stock as delivered from makers, 2/3 each. Carriage on all goods; cash refunded if dissatisfied.—The Central Motor and Ignition Works, 14a, Longhborough Rd., Brixton, London, S.W. Tele.: Brixton 210. [7038

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repairs and spares. All repairs are tested on an approved A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock; charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034. T.A.: Magdyno, Eusroad, London. [0263

# BASTONES

Established 16 Years

*No Better or Cheaper House*

**NEW CLEARANCE LINES, APPROVAL AGAINST CASH. CARRIAGE PAID.**

**WOOD-MILNE Key Grip COVERS**

| | | |
|---|---|---|
| 26×2¼ / 650×65 | Special / Heavy | 13/6 |
| 26×2½ | Extra Heavy | 16/6 |

**GOODYEAR All-Weather Tread COVERS. Extra Heavy.**

| | |
|---|---|
| 26×2¼ Diamond Pattern | 26/- |

**GOODRICH Safety-Tread COVERS Extra Heavy.**

| | |
|---|---|
| 26×2¼ | 28/- |
| 26×2½×2¼ | 36/- |
| 26×2½ | 35/- |
| 650×65 | 40/- |
| 26×3 for 650×65 rim | 48/- |
| 28×3 | 48/- |

**CLINCHER Rubber Non-Skid COVERS.**

| | |
|---|---|
| 24×2 De Luxe Junior | 17/6 |
| 24×2¼ | 20/- |
| 26×2 De Luxe Heavy | 23/6 |
| 26×2⅜ | 25/- |
| 26×2⅜ Extra Heavy | 27/- |
| 26×2½×2¼ Heavy | 30/- |
| 650×65 Dreadnought 3-ribbed | 39/- |
| 700×80 to fit 650× / 28×3 De Luxe Extra Heavy | 47/- |
| 28×3 De Luxe Extra Heavy | 37/6 |

**TUBES.**

**Goodrich, Clincher, and Hutchinson.**

| | |
|---|---|
| 26×2¼ and 26×2½ | each 6/3 |
| 650×65 / 700×80 / 28×3 | each 7/6 |

**228, Pentonville Road, King's Cross, London, N.1**

Phone: 2481 North. 'Grams: 'Bastones, London'

# JULIANS

**BIGGEST DEALER IN THE SOUTH.**

*Write for list of machines in stock, including :—*

**A.J.S., Triumph, Levis, O.K., Matchless, Norton, Ariel, Rover, Zenith, Scott, Raleigh, New Imperial, Humber, Enfield.**

**Exchanges : 84, Broad Street,**

'Phone : 1024.

# READING

## IGNITION, LIGHTING, ETC.

SURPLUS Magnetos, with written guarantee one yea M-L single, 35/-; B.L.I.C. ditto, 42/-; Bosch dit 45/-; Thomson-Bennett and C.A.V. singles and twi 50/-. We specialise in repairs and spares for makes. Lists with pleasure. Deal with experts a avoid certain disappointment.—Whitdale Magneto Se vice, Cherry Orchard, Croydon. 'Phone: Croydon 162 [69

## TYRES.

MISS DOOLEY.—28×3 Dunlop butt-ended tub and Palmer endless at 5/- each.

MISS DOOLEY.—26×3 Dunlop butted at 6/- eac

MISS DOOLEY.—Please apply for above to Miss Dooley, 33, Killyon Rd., Clapham. [69

CENTRAL Garage will send any of the followi tyres on approval against cash, postage 1/6 extr

26×2¼ Dunlop, 37/3; Goodyear E.H., 27/6; Bat 31/6; Beldam Combination, 30/-; Avon, 25, Clincher-de-Luxe, 21/-; Palmer cord, 22/6.

26×2⅜ Dunlop E.H., W.D., 40/-; Clincher E. (for 2¼), 27/6; Avon R.S., 27/6.

26×2½×2¼ Dunlop, 46/-; Avon E.H., 30, Hutchinson T.T., 37/6; Clincher, 30/-.

28×3 Wood Milne E.H., 30/-; Clincher (plain ri 42/6; Mackintosh, 30/-.

650×65 Goodyear E.H., 30/-; Dunlop groove soiled, 48/-; Wood Milne, 30/-.

700×80 Wood Milne E.H., 41/6; Avon (3-ribbe 38/6; International grooved, 55/-.

RUBBER thigh boots (waders), brand new, all size 8/6.

TUBES, all sizes; 5/6 each; orders prompt executed.—Central Garage, 302, London R Thornton Heath. [67

ECONOMIC Tyre Co.—Great reduction in covers a tubes. All goods sent on 7 days' approval, c riage paid, against remittance.

ECONOMIC.—24½×2¼ (oversize 2in. rims) Clinch de Luxe heavy, 26/-, listed £2.

ECONOMIC.—26×2¼ Dunlop heavy, 37/3; Bat W.D., 28/6; Palmer W.D., 29/-; special hea tubes, 6/-.

ECONOMIC.—26×2⅜ Bates special heavy W.I 30/-; Hutchinson T.T., 29/-; special heavy tub 6/6.

ECONOMIC.—26×2½×2¼ Goodyear diamond cle ance, 42/6; Avon rubber stud extra heavy, 30/ Clincher De Luxe, 30/-.

ECONOMIC.—650×65 Goodyear Diamond clearan 30/-; 700×80 Goodyear diamond clearance, 5C/ tubes, W.D., 6/-.

ECONOMIC.—Fully guaranteed Dunlop rubber str 24×2 22/6, 24×2¼ 24/9, 26×2 24/6, 26×2 25/9.

ECONOMIC Tyre Co., 314, New Cross Rd., S.E. (near Town Hall). 'Phone: New Cross 1393. [53

MOTOR Cycle Tyres on Easy Terms, standard make list post free.—J. G. Graves, Ltd., Sheffield. [05

TYRES. Tyres. Tyres.—For special bargains, see Br croitian Co.'s advertisement under Parts and Acc sories. [07

THE Difference between a good retread and a b one is its mileage. Try us. Watch results.—Melt Rubber Works, Melton Mowbray [06

26×2½ and 650×65 Wood Milne, 17/6 each; 26 for 2½ rims. Pedley, £1 each.—DeCort a Flynn, 39, Essex Rd., London, N.1. [66

SCOTTISH Readers will find it advantageous to p chase their tyres from McArthur, Hill and C 47, Carrick St., Glasgow. Lists post free. [39

MOTOR Cyclists.—Send your covers for retreadi 3,000 miles guaranteed. Repairs of every descri tion; carriage paid.—Buxton Vulcanising Co., Buxto Derbys. [43

RETREADING Diamond Nobby, grooved and ribb treads, 7 patterns, American and H.F. proces tubes repaired.—Midland Tyre Works, Green La Walsall. [61

BURST Motor Cycle Tyres, chafed beads, remoulde made perfect, tube vulcanising, butt-ends fitte retreading; send for list.—Melton Mowbray Rubb Works, Melton Mowbray. [03

DUNLOP Sidecar Tyres, New.—Covers, 28×3, 20 26×2½, 16/-. Tubes, 26×2¼, 5/-; 26×2½, 5/ 28×3, 6/-. Plus 1/- carriage.—H. Clayton, 13 Huddersfield Rd., Stalybridge. [70

SPECIAL line of "New Clincher de Luxe stud n skid" (Junior) covers, not W.D., 26×2¼, 16/ also 26×2½ (for 2¼ rims), heavy, 25/-.—Maude 100, Great Portland St., W.1., Walsall and Exeter [70

TYRE Repair Specialists.—H.F. process throughou including retreading burst covers. Every kind repair to tyres and tubes in 24 hours, retreads in days.—The Motor Tyre Co., 66, High St., West Bro wick. [38

## TYRES.

STARTLING Offer.—New Beldam covers, 26×2 or 2¼ 20/- each, 26×2½ 30/-, 28×3 35/-, 650×65 40/-, 700×80 45/- each; new Avon or Michelin steel studded covers, W.D., 700×65 35/- each.—The Homerton Rubber Works, Brooksby's Walk, Homerton, E.9. [0331

TYRES.—26×2¼ Avon Tricar, 21/-; Wood Milne Special, 2¼-2½ and 650×65, 15/6; 26×2⅜ Dunlop extra heavy, 40/-; Clincher extra heavy, 27/6; 26×2½ Wood Milne extra strong, 19/-; Combination, 17/6; Light Stud for 2¼ rim, 24/-, extra heavy, 28/6; Dunlop ribbed and Palmer cord light car, 40/-; Michbbe, 55/-; belts, W.D. ⅝, all lengths, 11d. foot; 26in. × ⅞in., 9/-; new, 8ft. × ¾in., 10/6; 26in.×¾in., 11/-; 8ft. 6in×⅞in., 13/6. Trade inquiries invited.—Great Eastern Cycle Co., Waveney Rd., Lowestoft. [6794

## TANKS.

TANKS for B.S.A., new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [6392

TANKS for Triumph, new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [6393

COVENTRY Tankers, Ltd., makers to the principal manufacturers; petrol tanks for any style supplied, extra capacity.—Hearsall Works, Coventry. [6394

TANKS Re-enamelled to Pattern. High-class work only.—D. Jenkins and Sons, 6, Richard St., Atkinson St., Deansgate, Manchester. Established 25 years. [3601

ALL Manner of Repairs, rebuilds, etc., to any pattern First-class enamelling. Reasonable charges and quick delivery.—Day, 27, St. Luke's Rd., Birmingham. [3393

ASHTON BROS'. Tanks. Price lists and order forms available through your dealer or direct from 14, Market Place, Manchester. All tanks guaranteed. [5706

TANKS repaired, re-enamelled; we guarantee makers' colours, designs, and transfers. Handles and all parts plated. Lists free.—Park Works, Paradise Rd., Highbury, N.5. [6533

TANKS of every description replaced, repaired, and re-enamelled at our own works; all kinds of fittings stocked; quick service and reasonable charges. Illustrated list free.—A. Green, Water St., Chapel St Salford, Manchester. Tel.: 2191 Central. [0256

TAYLOR'S Stock Tanks for Douglas, Hazlewood, B.S.A., Triumph, Omega, enamelled makers' colours, plated fittings, 40/-, complete; other design or shape to order. 12 months' guarantee with every tank.—Camdon Street Tank Works, Coventry. 'Phone: 1774. [0770

## BELTS.

NEW Clipper Belts.—8ft.×¾in. 11/6, 8ft. 6in.×¾in. 13/-, 8ft. 6in.×⅞in. 14/-, 8ft. 6in.×1in. 16/9.

W.D. Belts, 6ft. 6in.×⅞in., 10/-; new Pedley belts, clearance, 6ft. 6in.×¾in., 10/-; clearance belts, 1in.×1in., 8/6.

E. EMANUEL and Co., Tyre Factors, 27, Belgrade Rd., Stoke Newington, N.16. Stores: 37a, Balls Pond Rd., Dalston, London, N. Tel.: Dalston 3161. [0726

TAN, New Belts, 7ft. 11/-, 6ft. 6in. 10/3. ⅝×8ft. 3/6, carriage paid; approval.—Davies, Union St., Aldgeesbury. [4452

VALATA and Chrome Combination V Belts, suitable for all classes of motor cycles, ¾in., 1/4; ⅞in., 1/6; 1in., 1/9; 1¼in., 2/- per foot. Fasteners 9d. each. Postage 1/-.—W. Pollin & Son, Hollington, St. Leonards-on-Sea. [6656

## CARBIDE.

FINEST Carbide, cwt. drums, 22/6, f.o.r.; 23 depots; prices packed in tins on application.—Sports Depot, Denby Dale, Huddersfield. [5068

CARBIDE.—Finest quality only, 21/- per cwt., c.w.o., f.o.r. depots all parts, also ½ to 7lb. tins. Lodge & Co., Warwick Rd, Bristol. [6639

CARBIDE, finest quality, giving brilliant light, economical, 22/- cwt., 12/6 ½-cwt., carriage forward, drums free.—Kemp's Garage, Importers, Louth. [6462

"INCANTO."—Guaranteed British Acetylene Association standard, 19/6 cwt. Decorated tins, 7lbs., 3/3; 14lbs., 4/9 doz. Sample and other prices on application. Dawson, 15, Cumberland Park, Willesden Junction. [6669

CARBIDE, finest quality, giving 100 per cent. pure gas yield, all sizes, cwt. 26/6, ½-cwt. 16/3, 28 lb. drums free; support the old firm; established over 30 years; satisfaction guaranteed.—Young, Importers, Laverton, Somerset. [9557

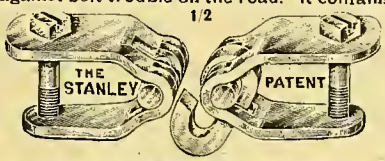
CARBIDE.—Immediate delivery of all sizes in 1 lb., 2 lb., 4 lb., and 7 lb. lever lid tins, and 2 cwt. drums, labelled or plain for retailers' own labels, quality guaranteed, and all standard sizes supplied by the largest firm in the trade.—The Premier Lamp and Engineering Co., Ltd., Moorfield Works, Armley, Leeds. [3286

# STANLEY BELTS AND FASTENERS.

**MILLIONS ordered and in use by H.M. WAR OFFICE and our ALLIES.**

A BOX OF STANLEY SPARES is a complete belt equipment outfit—the best and cheapest insurance you can effect against belt trouble on the road. It contains

1/2

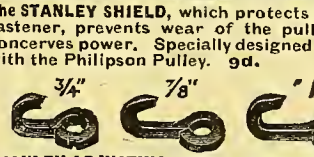



The STANLEY FASTENER with the BEND that NEVER BREAKS, the BEST at any price. Hardened & tempered hook and flanged pins

1/1

The STANLEY SPARE LINK which is the best belt length adjuster yet invented. Saves time, trouble & money. Saves the cost of a new belt.

The STANLEY SHIELD, which protects the belt fastener, prevents wear of the pulley, and conceives power. Specially designed for use with the Philipson Pulley. 9d.



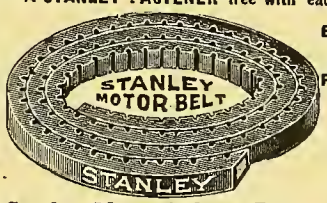

STANLEY ADJUSTING HOOKS, for adjusting the length of your belt in one second. Set of 3, 6d.

*"Never be without a box of Stanley Spares."*

*Price 3/6 post free. Send size of belt when ordering.*

The LION FASTENER, guaranteed for 5,000 miles—11d.

Our Goods are World-renowned for their Reliability.
A STANLEY FASTENER free with each belt.

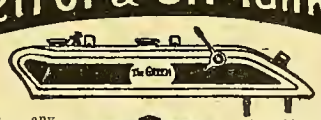



Belt Punches 1/6
Adjustable Punches 2/-

| Per ft. | |
|---|---|
| ⅝" | 1/6 |
| ¾" | 1/7 |
| ⅞" | 1/10 |
| 1" | 2/2 |
| 1⅛" | 2/8 |

**Stanley Motor Belts & Fasteners Co.,**
BRITISH THROUGHOUT
(STANLEY WEBB, inventor of the original Hook Belt Fastener and other Practical Belt Aids.)
**32, London Road,**
**BROMLEY, KENT.** 'Phone, Bromley 806

# Petrol & Oil Tanks



Tanks any shape to order. Repairs and re-enamelling from 15/6. Illustrated List free.

Auxiliary tanks, with filler, tap, T piece, piping, clips, complete, always in stock.

A. GREEN, Water St., off Chapel St., Salford, Manchester

## PATENT AGENTS.

J. E. S. LOCKWOOD, 3, New Street, Birmingham. 'Phone: 5816 C. Patents guide free. [9057

FREE, 100 Page Patent Guide, postage 3d.—The Consulting Patent Agency, 253m, Gray's Inn Rd., London. [2416

PATENTS Advice, handbook free.—King, Registered Patent Agent, 146a, Queen Victoria St., E.C. 35 years' references. [0129

W. BRYSON, B.Sc., Assoc.M.Inst.C.E., Chartered Patent Agent, 29, Southampton Buildings, London, W.C.2. 'Phone: Museum 3651. [9242

## PATENTS.

WE Buy, Sell, and Finance Inventions and Patents, and advise on their marketing.—Send postcard for full particulars to Dept. C, Inventors' Sales Agency, 22-24, Spencer Av., Coventry. [3717

## AGENCIES.

REPRESENTATIVES calling upon Cycle Agents and Traders to sell, as side line, the new patent pneumatic real waterproof motor suit; a whirlwind seller.—Write "Aquamac Works," Manchester. [7014

THE Mohawk Cycle Co., Ltd., requires sole agents for their celebrated motor cycles in districts where they are not already represented.—Write for list and terms to Mohawk Cycle Co., Ltd., 3569, Alexandra Rd., Hornsey. [6290

SLADE-J.A.P. Motor Cycles, 55 gns. Sole agents required in districts where not already represented. These machines will take the market by storm. Specification—2¾h.p. J.A.P., 2-speed kick start, B. and B. carburetter, drip feed, etc.; sell at 55 gns. retail.—Terms from Whittles Motors, Longsight, Manchester. [4021

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at competitive rates.—Ernest Bass, 40, Chancery Lane, W.C.2. 'Phone: Museum 2234. [0005

ROYS, Ltd., Insurance Brokers.—Agents for all companies and Lloyd's. Insurance of every description effected. Enquiries invited.—170, Gt. Portland St., London. [0055

COMPREHENSIVE Policies for motor cycles, cycle cars, Morgans, etc., from £1/4/6; immediate cover; prompt settlement.—John Clements and Co., 65a, Holborn Viaduct, E.C.1. [6469

THE Motor Cycle" Insurance Policy is the policy authorised by "The Motor Cycle," and covers motor cycles or cycles and sidecars used for private purposes. Complete comprehensive cover. Maximum benefits, minimum rates. Full particulars and prospectuses on application.—The Autocar Fire and Accident Insurance Co., Ltd., 77, Cheapside, London, E.C.2. [0007

## TUITION.

HOUSE and Estate Agency, Auctioneering, etc.—Train by post for this paying profession. Start a business of your own. Prospectus free.—Agricultural Correspondence College (Dept. T), Ripon. [0389

## SITUATIONS WANTED.

EXPERIENCED Amateur Competition Rider desires engagement for 1922 T.T. Race at purely nominal fee.—Box 8407, c/o *The Motor Cycle.* [6862

EX-D.R. Colonial desires a post in factory. Motor cycle mechanic.—Box 8436, c/o *The Motor Cycle.* [7029

KEEN Motor Cyclist with post order experience large firm, seeks change; motor accessories, etc.—Box 8415, c/o *The Motor Cycle.* [6872

EX-OFFICER wishes position with motor cycle firm; 12 years' experience riding and overhauling; educated; small capital.—Box 8335, c/o *The Motor Cycle.* [6179

YOUNG man, 21, good education, 4 years' apprentice mechanical engineering, enthusiastic motor cyclist, drive car, in uncongenial employment, desires position in motor trade, salesman, competition rider, hard work welcomed.—Box 8374, c/o *The Motor Cycle.* [6238

## FINANCIAL.—PARTNERSHIPS.

WORKING Partner Wanted in Limited Company with all-round knowledge of motor cycle repairs, willing to invest £250.—829, Fulham Rd., London, S.W.6. [6470

## BUSINESSES AND PROPERTY FOR SALE, TO BE LET, OR WANTED.

MOTOR and cycle garage and workshop for sale, going concern, est. 10 years, living rooms above, good stocks, splendid opportunity for two energetic partners, 14 years' lease; £650 all at; no offers.—64, Mill Lane, Brixton Hill. [6572

SMALL Motor Cycle Business for disposal, water and electricity laid on, London district; reason for sale, owner going into totally different line of business; will he let go for valuation of stock, etc.; about £100.—Full particulars, Box 8405, c/o *The Motor Cycle.* [6434

## BUSINESSES AND PROPERTY FOR SALE, TO BE LET, OR WANTED.

ENGINEERING and Motor Works, Bournemouth.—Small, well-fitted workshop, gas engine, 2 lathes, driller, milling machine and press machine and hand tools; good profits; room for extension; price £650, all at.—R. C. Drew, F.A.I., Business Agent, Bournemouth. [6145

## GENERAL TRADE.

AUCTION Sales, Palmer's Garage, Tooting, the oldest solely motor auction rooms in London. Terms 7½ per cent., not chargeable if machine unsold. Motor cycles and cars bought and sold for cash. Nearest goods stations, Falcon Lane, L. and N.W.R., Wimbledon. L. and S.W.R. and G.W.R.—Sole address, Palmer's Garage, Tooting, London. [6442

## WANTED.

SCOTT front forks or other parts.—79, Berkley St., Liverpool. [6819

WANTED, Motor Cycle House, cheap.—C. G. Owen, 116, Bedford St., Crewe. [6598

HARVEY-FROST Garage Vulcaniser, with mandrils, tools; exchange lightweight.

TOURING Ford, for good combination Triumph or Douglas.—Whitehead, Braunstone Gate, Leicester. [6570

INDIAN parts, flywheel for 1913 7-9-h.p.—196, Gladstone Ave., Wood Green. [6663

TRADE Sidecar, suit Triumph, any condition; cheap.—437, Norwood Rd., S.E.27. [6334

WANTED, Morgan in good condition; no fancy prices.—1, Othello St., Liverpool. [6400

WANTED, sidecar, coachbuilt, to fit P. and M., cheap.—King, Egrove Farm, Oxford. [6213

WANTED, Light Sidecar, sprung wheel; moderate price.—E., 9, Nelson Rd., Whitstable. [6491

MORGAN, must be in good condition; cheap for cash.—Box 8435, c/o *The Motor Cycle*. [6974

WANTED, pair or one front Douglas cylinder, 1911, A.I.V.—Addyman, Engineer, Starbeck. [6199

TRIUMPH Back Wheel, 3-speed hub and controls, also light sidecar.—33, Richmond Rd., Shepherd's Bush. [6149

WANTED, 2-speed Gear and rear portion of frame for 4h.p.; must be cheap.—8, Hope St., Maidstone. [6500

WANTED, Second-hand Sidecar to suit 3½h.p. bike, also lamp set.—J. Smith, Brookside, Limpsfield, Surrey. [6164

WANTED, cheap secondhand Countershaft, 3-speed gearbox, complete with controls.—Box 8391, c/o *The Motor Cycle*. [6329

£7 offered for good 3-speed gear box, S.A. or other approved type.—19, Wilcox Rd., South Lambeth, London. [5975

WANTED, s.h. Zenith Carburetter, No. 30, D.E.F., good condition.—Particulars, 294, Upper Newtowards Rd., Belfast. [6293

WANTED, Chain Cases for 8h.p. Clyno-Jap; also Millford underslung sidecar.—Kennard, 78, Yerbury Rd., Holloway, N.19. [6366

MORGAN wanted; particulars and price required of one that has not had much wear.—Hoather, Bushey Heath, Watford. [6507

SEMI or Racing Handlebars, 15/16 stem, for 1921 Douglas Lightweight, footboards, spares; cheap.—Lord, Mountfield, Prestwich. [6356

WANTED, 4-cyl. F.N. Magneto (distributor incorporated), F.N. carburetter controls.—Shelley, 11, Junction Rd., Brentwood. [6362

WANTED, good up-to-date second-hand motor cycle accessories; state particulars and price.—Service Co., 292, High Holborn, W.C.1. [0671

WANTED, 6h.p. (76×85mm.) J.A.P. engine, perfect, cheap.—Age, full particulars, to "Wentworth," Chessington, Nr. Surbiton. [6545

WANTED, Catyon & Mudd, sporting body only; also Hopley folding chassis.—Lowest price and particulars to Box 8392, c/o *The Motor Cycle*. [6330

SPECIAL Racing bullet shape Sidecar, with quick detachable fittings, painted N.U.T. brown; bargain, £10.—Davies, Hwyu Ysgaw, Llandudno Junction. [6345

WANTED, Triumph C.S. Frame and Tank, less front forks, with or without gear box, any year; reasonable.—134, Dobbs Brow, Westhoughton, Lancs. [6487

WANTED, Tradesman's Box, complete, one suitable for Big Four Norton preferred; must be cheap and in good condition.—Wood, Pelton, S.O., Co. Durham. [6301

RENOLD Chain Wanted, ½in.×3-16in., ex-W.D., heavy unused. Send sample link and price for large quantity.—Super Power Co., 81, Northside, Clapham, S.W.4. [6385

P. and M. Parts wanted: Chains, exhaust pipes, filler caps, gear operating chains, kick starts, and chain, valve caps, front brakes; second-hand preferred.—S. E. Porter, Whitchurch, Salop. [3865


WE HAVE STILL A LIMITED NUMBER OF

BRAND NEW

SHOP-SOILED MODELS

IN STOCK

and immediately after the Scottish Show is over we are proposing to make a list quoting

Still Further Reduced Prices

in order to make a quick clearance.

Meantime, please write us stating the type of machine which interests you, and we may have something very special to offer you which may well repay your trouble.

"A SPEEDY SWEEP-OUT REGARDLESS OF COST!"

WILL BE OUR SLOGAN.

ALEXANDER'S,

113-115, LOTHIAN ROAD, EDINBURGH.
272-274, GT. WESTERN RD., GLASGOW

"CHALLENGE"

MOTOR CYCLE OIL

GRADE H.M.

WILL NOT THICKEN IN COLD WEATHER.

*Of all Dealers.*

Challenge Oil Co. Ltd.
Stoke Newington, N.16.


## WANTED.

WANTED, Morgan, for practically new 8h.p Cl; Jap, hand clutch, 3-speed, Camber sidecar, e tric lighting, original tyres, unpunctured; £110.— East Hill, Wandsworth. [6

WANTED to Purchase Outright for cash, haokr stocks. W.D. spares, miscellaneous spares. S full particulars.—McNeille and Platt, 57, Gt. Ge St., Liverpool. 'Phone: 1092 Royal. [2

WANTED, for countershaft Triumph, timing of crank case, or complete crank case; also S mey gear box case, or complete gear box if chea Hole, 129, Park Lane, Carshalton. [4

## EXCHANGE.

SUN V.T.S. 2-stroke, equipped, and cash, for Sc —29, Old Ford Rd., E.2. [6

CLYNO 5-6h.p. Combination (1917); exchange lc power.—79A, Clapham Rd., S.W.9. [6

3½h.p. Norton B.R.S., 1921, close Ratio gears; change.—270, Bolton Rd., Atherton. [6

EXCHANGE, Vauxhall 17h.p. 3-seater for C hination; or sell £85.—8, Hope St., Maidsto [6

STUDEBAKER 4-seater; exchange Combiatic 79A, Clapham Rd., S.W.9. 'Phone, Brixton 3 [6

PERRY 1914 twin, 5 wheels, nice order; c bination and cash.—Hillside, Surbiton Hill S.W. [6

CYCLOTRACTEUR, cost £20; accept useful change or offer.—Edwardes, 277, Camberwell S.E. [6

TRUMBLE 1916 10 h.p. 2-seater, 5 wheels, fast, trial; exchange combination.—Terrace Gar Chiswick. [6

PEUGEOT 10h.p. with dickey, 4 speeds, 5 ri exchange combination and cash.—54, Canal Mortlake. [6

LA PANNETTE 1914 dickey, 10h.p., 4 cyl., 5 wh exchange combination and cash.—83, Sheen L Mortlake. [6

14h.p. Belsize. Cab Chassis, running order, motor cycle, solo.—Holt, Hill View, Yat near Bristol. [6

CLYNO Combination, 2-speed, kick start, for l power, cash adjustment.—57, Kenbury St., C berwell, London. [1

AUGUST, 1919, P. and M. sporting sidecar £20 for late Triumph combination.—163, Gu Rd., Coventry. [6

EXCHANGE 7-9h.p. Harley, 500 motor, all on, Triumph, Sunbeam, etc.—A. Harmer, 2, Ch St., Kingston. [6

HUMBERETTE 1914, fast and reliable, nice or exchange combination.—Springhurst, Fa Rd., Kingston. [6

SWIFT 1914, staggered, 7-9h.p., dickey, equip smart, fast; combination and cash.—83, S Lane, Mortlake. [6

2¾h.p. A.J.S. for sidecar, Henderson or Norton ferred; cash adjustment.—67, Ramsden Barrow-in-Furness. [6

DOUGLAS 4h.p. 1918-19, as new, for solo cash; or sell £65.—Kemp, 62, Southfield Bedford Park, W.4. [6

HALIFAX.—1922 Coventry-Premier Light Car, good Combination and cash.—Motor Excha Horton St., Halifax. [6

MOTOR Van, splendid running order, 4-cyl. en for motor cycle, or furniture; sell £50.—Gr 36, Bath St., E.C.1. [6

CARDEN 1921, hood, screen, dynamo, done miles, perfect, decent combination part.— Canal Rd., Mortlake. [6

WILLIAMSON Combination, 8h.p., W.C.; exch lower power.—79A, Clapham Rd., S.W 'Phone, Brixton 3037. [6

EXCHANGE 2-seater twin cylinder Swift car good motor cycle or combination; sell £45.—K Egrove Farm, Oxford. [6

EXCHANGE 1914 Ford Car for powerful 2-se Sidecar Combination; cash adjustment.—Ni Kirkby Stephen, West. [6

NORTON 1921 T.T., single-speed, unscratched, new T.T. Rudge-Multi racing model.—32, W chester Rd., Colchester. [6

EXCHANGE good Motor Cycle, value £20, bicycle and cash.—Stevens, Roseleigh, Spring Rd., Heston, Hounslow. [6

EXCHANGE 1918 P. and M. Combination for seater, Morgan preferred; cash adjustment.— Oster Terrace, St. Albans. [6

1919 Ford Tourer, exchange Solo or Combina or 2-seater, cash either way.—Jones, 131, Be croft Rd., Upper Tooting. [6

WANTED, Cycle Car or Lightweight; exchange and M. Combination; cash adjustment.— Oster Terrace, St. Albans. [6

## EXCHANGE.

15 Studebaker, 5-seater, electric lighting, exchange Combination, or sell £165.—Hollands, James Rd., Croydon. [6842

1CK 1917 Ton Chassis, dynamo, pneumatics, 5 rims, right steering, 2-seater or combination part. Yiew Garage, Surbiton. [6222

RGE screw-cutting lathe, complete, for motor cycle, Douglas or Triumph preferred.—Ball, 49, side, Kingston-on-Thames. [6260

DFORD-BUICK 4-seater, Warland rims, 15h.p., good running order; exchange decent combina- o—Yellow Garage, Surbiton. [6228

AMOPHONE, massive 50-guinea model, cabinet, new condition, for motor cycle; no rubbish.— , 76, Cromwell Rd., Luton. [6311

p. Precision Engine, 2-speed, combined with crank case, silencer, carburetter; exchange for sox.—10, Dunhill Rd., Goole. [6243

DEBAKER 1913 15h.p., 2-seater, nice order, new tyres, whole car as new, recent combination r-Morland's Garage, Mortlake. [6220

20 (Sept.) Beardmore, spring frame, electric lights, speedometer; £55; for Douglas or Rudge value.—8, Manor Rd., Coventry. [7020

ANTED, good Douglas, for 3½h.p. Rudge, 2-speed, clutch, kick starter, good tyres, running t.—89, East Hill, Wandsworth. [6740

CHANGE 1918 Maxwell 4-seater, dynamo lighting, self-starter, nearly new, for Combination, or £85.—64, Church St., Edware Rd. [6955

17-18 Ford Touring Car, in very good order, in exchange for good Combination or Solo; or 390.—5, Hill St., Douglas, I.O.M. [6369

21 B.S.A. Comb., 4½h.p. Magdyno lighting, mileage 400 approx., and cash for Morgan, 1921— Lovatt, 86, Manor St., Clapham. [6485

ARVEY-FROST Standard Model A garage vulcaniser, tools, materials, used twice; motor cycle sid.—15, Upper Northgate, Chester. [6358

TE Model 3½h.p. Rudge-Multi coachbuilt Combination, excellent condition, and cash, for 4 H. glas.—92, Newhall St., Cannock, Staffs. [6857

CHANGE Humberette 2-seater, water-cooled, overhauled, as new, for good combination.—Mose- 30, Canterbury Rd., Kilburn, N.W.6. [6505

RLEY-DAVIDSON Combination 1917, equipped, good condition; exchange Douglas or Scott combination.—Parkedge, Thorne Rd., Doncaster. [6479

20h.p. Humber, ¾ landaulet, 5 detachable wire wheels, for Combination or Solo or 2-seater, cash way.—Gage, c/o Eton Garage, Balham. [666

UBLE-BARRELLED gun, like new, and gent.'s cycle, splendid condition; exchange for motor valued £20.—Brown, Minster Hotel, York. [6344

CHANGE 7-9h.p. Indian Combination for 4¾h.p. or 3½h.p. solo, or anything useful, and or sell £120.—17, Freme St., Blackburn. [6144

CHANGE 1916 10h.p. 4-cylinder Belsize, 2-seater dickey, 5 detachable wheels, electric lighting, for a rination.—64, Church St., Edgware Rd., W. [695

NTLEMAN has for exchange a 15.9h.p. Star Landaulette; Combination wanted, or sell £100. oughborough Rd., Brixton, London, S.W.9. [7042

h.p. Singer 2-seater, lamps, spare wheel, etc., grand running order; exchange comb. or solo cash.—Ramsden's, May Bell Ave., Blackpool. [6390

CHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hausler Rd., Dulwich. Call, write, or 'phone, Sydenham 2452. [6879

CHANGE 1914 8h.p. Humberette, 3-speed and reverse in good condition, value £70, for Zenith her good combination.—61, Grand Parade, Har- [6610

19-20 4h.p. Douglas Combination, hood, windscreen, spare tyres, tubes, belt, excellent con- , for Solo, or sell.—56, Streathbourne Rd., m. [6676

.C.H. are noted for fair exchanges.—Fair Offer Car House, 5, Heath St., Hampstead. (Near Tube.) e, Hampstead 3752. Hours 9-7, including days. [6414

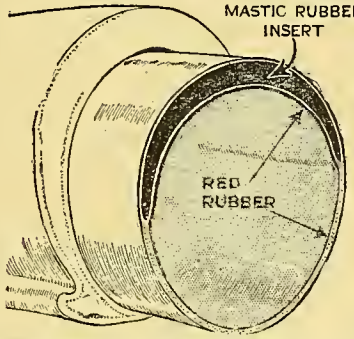
AL Lightweight 1921 2¾h.p. Blackburne-Coulson, 5 speeds, K.S., all on, for Harley Solo not pre- 1915.—Letters, Bartlett, 11, Albemarle, Beckenn Kent. [6509

h.p. Douglas, rebuilt November last, new frame, tank, and all wearing parts; exchange for P. M. Combination or offer.—133, Cambridge Rd., Kings. [6340

20 Zenith 8h.p. sports and sporting Swan sidecar, new March, 1921, fast, fine engine, equal nge for twin touring comb.—58, Argyll St., try. [6231

CHANGE.—Good Lightweight, £30, and cash adjustment offered for good Coventry-Premier wheeler.—Newnham Motors, 223, Hammersmith London. [6774


# PUNCTURE SEALING
! ! ! !
## CHALLENGER TUBES.




The only difference from an ordinary tube is that the tread portion is very slightly thicker and is built of three layers so adjusted as to be self-sealing; the centre layer being composed of the patent hole-proof composition, which instantly closes up when the nail or article causing the puncture is withdrawn.

PRICE LIST.

| | | | | | |
|---|---|---|---|---|---|
| 24×2 .. | £0 14 3 | 700×80 .. | £1 8 3 |
| 24×2¼ .. | 0 15 0 | 30×3 .. | 1 5 6 |
| 26×2¼ .. | 0 15 3 | 30×3½ .. | 1 18 0 |
| 26×2⅜ .. | 0 16 9 | 710×90 .. | 1 12 3 |
| 26×2½ .. | 0 18 0 | 815×105 .. | 2 8 0 |
| 26×3 .. | 0 18 6 | | |
| 28×3 .. | 1 0 3 | Write for Folder and | |
| 650×65 .. | 1 0 9 | Sample Section. | |

ALL THE ABOVE SIZES ARE IN STOCK.

## GODFREYS, LIMITED
THE B.S.A., INDIAN, SCOTT & LEWIS, SPARE PARTS SERVICE DEPOT.
208 Great Portland St., London, W.1
Telephone: LANGHAM 1300.
Telegrams: "GOFRABIKE," London.

# REYS
## 173, Gt. Portland Street.
*Telephone—Langham 1257*

## HIRE
Motor Cycles and Combinations.
Any period from one day.
A GOOD SELECTION OF 1922
## MODELS IN STOCK
*Easy Payments taken on New Machines, and Exchanges Entertained.*

### SECOND-HAND MACHINES.

1919 **ZENITH,** sports, 6 h.p., with Sidecar and all accessories ..... £85
1920 **LEA-FRANCIS** and Sidecar, all acces. £110
1918 **HARLEY-DAVIDSON** ..... £85
1919 2¾ h.p. **NEW IMPERIAL,** 2-speed, clutch, and kick-starter..... £50
1919 **TRIUMPH,** all accessories ..... £80
1921 **MARTINSYDE** Combination, all acces. £110
1920 6 h.p. **NEW IMPERIAL** Combination, all accessories ..... £105
1921 8 h.p. **NEW IMPERIAL** Combination, all accessories ..... £110
1921 2¾ h.p. **COULSON,** all accessories.... £68
1920 4-speed **A.B.C.,** as new, all accessories £70
1920 **HENDERSON** and Sidecar, all acces. £119

G.N.'S, COVENTRY PREMIERS, MORGANS, and ROVERS IN STOCK.

## REPAIRS.
**Good Machines taken in for Sale on Commission**
*New Imperial Spare Parts Stockists.*


## EXCHANGE.

EXCHANGE Motor Car, speedometer, complete, good Stepney rim and pair of good motor car lamps, for gent's 3-speed cycle.—Box 8320, c/o *The Motor Cycle.* [6195

1916 3½h.p. Brough, o.h.v.'s, 3-speed, used one season; exchange lightweight and cash; sell £70. Evenings.—120, Marlborough Flats, Walton St., Chelsea, S.W.3. [6454

EXCHANGE 3½h.p. Triumph and 3½-4h.p. Peugeot engine, frame, forks, tank, and mag., for hub-geared Triumph, or sell separately.—117, Cavendish Rd., Leicester. [6556

17 GNS.—B.S.A. Oilbath Cycle, as new; also girl's new 9 gn. cycle and cash, for solo or combination. Wanted, A.J.S. spare wheel.—S. Crouch, Sutton St., Edmund, Wisbech. [6391

1914 Bradbury 4½h.p. N.S.U., 2-speed and free engine, Bosch, B. and B., in good order, also coach-built sidecar to fit. Wanted, 2¾h.p. Lightweight.—8, Edwin Rd., Leeds. [6377

FLIGHT!—Sheffield Simplex Racing Car remodelled to smart sporting 2-seater, 16h.p., handsome appearance, dynamo lighting, etc.; £150, or tempting exchange.—Bunting's, Wealdstone. [6884

CROSSLEY Landaulette, 20h.p., magnificent condition throughout, suitable high-class hire. Would exchange motor cycles, light car, or motor cycle business.—288, Sangley Rd., Catford. [6709

ROVER, 6h.p., modern appearance, sound, repainted, good tyres, magneto, hood, screen, 2-seater; £50, or exchange good motor cycle.—c/o 1, Newcastle Avenue, Beeston, Notts. [6313

EXCHANGE.—1917 Grand Prix Morgan, just repainted dark red, £115; 1913-14 Morgan, £75; for motor cycles. Cash either way.—Newnham Motors, 223, Hammersmith Rd., London. [6773

1919, 7-9h.p. Powerplus Indian, as new, good mechanical condition, enamelling, plating, unscratched; 48 gns.; exchange lightweight and cash.—Green, Crown Yard, South Gates, King's Lynn. [6494

PROFESSIONAL Cinematograph, fire-proof spool boxes, rewinder, screen, 3,800ft. films, comedy and drama; will exchange Levis or Radco; cash offer considered.—Baker, 332, Hackney Rd., London. [6251

EXCHANGE, for Solo or Combination and cash, 1920 4-cyl. Henderson with 2-seater sidecar, lavishly equipped, £127/10.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station), London. [6544

EXCHANGE 1921 (Oct.) Carden, 2-seater, electric lighting, detachable wheels, spare wheel, almost like new, for Lightweight and cash, or sell; £85.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [6814

9h.p. Temperino 2-seater, 3 speeds and reverse, live axle, hood, screen, electric and acetylene lighting, 1919, for late Combination and case, or sell £125 —De Cort and Flynn, 39, Essex Rd., London, N.1. [6695

EXCHANGE Trumhull car, 1915, 4-cylinder, new tyres, 15.9h.p., in perfect order, 2-seater, lamps, tools, licence first quarter, for Seal 3-wheeler or similar.—22, Fourth Ave., Selly Park, Birmingham. [7017

1921 Carden 2-seater, spare wheel, hood, screen, electric lighting, cost 150, run 200 miles; £85; exchange motor cycle, cash adjustment.—Junction Garage, Highstone, Leytonstone. 'Phone, Wanstead 403. [6795

LATE property of a Gentleman.—Metallurgique Landaulette, 25h.p., detachable rims, upholstered Bedford cord, Bosch mag., Zenith carb., for a first-class combination.—Full particulars to Central Ignition Works, 14a, Loughborough Rd., Brixton, London, S.W. [7040

8h.p. 3-wheel Runabout, W.C., 3 speeds and reverse, electric horn and lights, speedometer, windscreen, hood, car steering, etc.; £95; for good combination, level exchange.—Offers, 56, Brookville Rd., Fulham. [6354

£50 and upwards, and 6h.p. Twin "Rex," 2-speed gear, with coach-built sidecar, in splendid condition, for best combination offered (2-seater preferred). Expert examinations.—Box 8404, c/o *The Motor Cycle.* [6427

EXCHANGE 1920 2-seater, Kingsbury Junior, dynamo lighting, 2 spare wheels, nice appearance, any examination or trial run, for combination and cash, or sell; £165.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [6815

EXCHANGES.—Newnham Motor Company, 223, Hammersmith Rd., London, always have large stock for exchange. Write full particulars your present machine. Post exchanges. Distance no object. —Newnham Motors, 223, Hammersmith Rd., London. [6772

4¼h.p. B.S.A. (1916) Combination, perfect order, nearly new tyres and tubes, C. and B. sidecar with extra strong chassis, and all complete, for higher power Matchless (preferred 1920-21), A.J.S., B.S.A., Sunbeam; cash adjustment arranged.—Hill, 41, Connaught Rd., Brookwood, Surrey. [6549

## REPAIRERS.

ANY

ARMSTRONG or Sturmey-Archer Gears Repaired promptly and efficiently.—County Engineering Co., Hounslow. [0517

TRIUMPH, Douglas, J.A.P. Repair Specialists.

OUR Works do nothing else but repair the above makes of machines. Cylinders rebored, new pistons fitted, engine and gear boxes overhauled. Enamelling, plating, all on the premises. Send your engines or gear boxes; bench test and road test before returning. No need to send complete machine. All spares in stock, and we are more prompt than the makers. Work guaranteed. We pay carriage one way. Discount to trade.—The Winstan-Henny Motor Co., 63, South End, Croydon. 'Phone: 2431. [4764

WHITTALL for Welding. Aluminium experts. Prompt delivery.

WHITTALL.—Pistons complete for Triumph, Premier, J.A.P., Bradbury, B.S.A., Douglas, Sunbeams, etc.; 14/- to 24/-, on approval, exact to pattern.

WHITTALL.—Cylinders reground and new complete pistons fitted from £2, perfection guaranteed. Twelve years' first-class reputation. Pistons to pattern or sketch.—Whittall Machinists Co., Whittell St., Birmingham. [0017

C. R. FOSTER, of Leeds, is the original cylinder grinding specialist.

CYLINDER Grinding by Foster, of Leeds, has no equal. Price, complete with piston, from £2.

£1,000 is the value of the machine and equipment that will grind your cylinder at our works.—Foster, of Leeds, 170, Cardigan Rd. [0003

ENGINE Overhauls, quality work only, cylinders reground, pistons, valves, bushes, etc.—Below.

PISTONS for every standard motor cycle in stock from 14/- each.—Below.

CYLINDER Grinding, our speciality 2¾h.p. Douglas reground, fitted with new piston, rings, and gudgeon, 25/- each.—Below.

TRIUMPH, J.A.P., Bradbury, and all 3½h.p., 4h.p., cylinders reground and fitted new piston, rings, and gudgeon, 35/-; returned in 48 hours.—Below.

QUALITY and Satisfaction is our motto. Entrust your work to specialists and get a guaranteed repair. — C.M.D. Engineering Co., Leamington Spa. 'Phone: 768. [9659

HUB Gears.—Great reductione in prices of replacements for Sturmey-Archer and Armstrong gears.

HUB Gears.—Wheels repaired and returned within the week; send for latest price lists.

HUB Gears.—Why pay an extortionate price for fitting a few new parts to an old gear?

HUB Gears.—We undertake to supply the complete new internal portion of the gear mechanism less main driver for £5.

HUB Gears.—A. F. Lewis, Charlestown, Weymouth. Look out for the Lewis patent 2-speed countershaft gear and clutch. [0747

ARMSTRONG and Sturmey-Archer Gear Specialists. Repairs while you wait.—Tavistock (below).

ARMSTRONG and Sturmey-Archer Gears completely assembled for 6/- in 2 hours.—Tavistock (below).

ARMSTRONG and Sturmey-Archer Parts at cut prices by return of post.—Tavistock (below).

GEARS, shafts, valves, etc., for car or cycle, made promptly.—Tavistock (below).

GEARS.—Send all gear repairs and replacements to Tavistock Engineering Co., 254a, Portobello Rd., North Kensington, London. 'Phone: Park 643. [3719

WHEELS Repaired, rebuilt; sidecar chassis repaired.—Pritchard, 7, All Saints Lane, Coventry. [X5307

WELDING Aluminium Crank Cases, gear boxes by experts; immediate attention; seasonable prices.—Below.

WELDING Broken Cylinders, flanges, combustion experts of 11 years' experience.—Below.

CYLINDER Grinding on latest machinery, installed since hostilities ceased; accuracy guaranteed; new pistons fitted.—Sadgrove and Co., 140, Conybere St., Birmingham. [4769

ENGINES Rebushed, overhauled, rings fitted, compression guaranteed; singles 30/-, twins 40/-; returned 3 days.—Below.

CYLINDERS Rebored, fitted with new pistons, from 30/- to 40/-.—Turner Bros., Motor Engineers, Summerseat, Manchester. [4143

FRAME and Chassis repairs, alterations, etc. We are specialists and sidecar makers; reasonable charges.—Below.

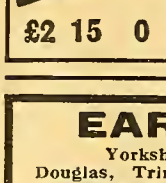
ENGINES overhauled, rebushed, singles, 35/-; twins, 45/-. Try us for anything motorish.—Henry V. Smith, Osmondthorpe Lane, Leeds. [6728

**STURMEY-ARCHER AND ARMSTRONG**
**Hub and Countershaft Gears repaired immediately.**
Every part for all types actually in stock. No waiting. Price List and Instruction Sheet by return of post. Usual trade terms. Send repairs to Putney Station, L. & S.W. Rly.
**CROMWELL ENGINEERING Co.**
327, PUTNEY BRIDGE ROAD, S.W.15.

**Preserve your Cylinder.**
**Withstands heat, petrol, and oil.**
Tins 1/2 and 2/-. post free.
**OWEN BROS. & Co. Ltd., HULL, England.**

**STURMEY-ARCHER and ARMSTRONG**
**Hub or Countershaft Gears repaired while you wait.**
Actually in Stock—New Sturmey-Archer Countershaft Gear and Boxes spare parts.
Send for illustrated list. Trade supplied.
Send wheels, Hounslow L.S.W. Railway.
**COUNTY ENGINEERING CO.,**
**64 Staines Road, HOUNSLOW.**
Wires: 'Three-speed, Hounslow.' 'Phone: Hounslow 322

**AFTER THAT DIRTY JOB**
**SNOWHYTE**
**will clean the hands with or without water and leave them soft and supple.**
*NO SAND OR GRIT IN SNOWHYTE.*
In tins, Car size, 1/- Cycle size, 6d.
From Garages, Cycle Stores, Ironmongers, etc.
SNOWHYTE Co., 1-3, Pocock St., LONDON, S.E.1.



**SANDUM V-shaped WINDSCREEN**
**Instantaneous Success.**
**The Talk of Olympia Show.**
**£2 15 0**
SANDUM SIDECARS, 336, Gray's Inn Road, W.C.1
'Phone: City 6982.

**EARNSHAW**
**Yorkshire service depot for Douglas, Triumph, Matchless, B.S.A., P. & M., Enfield, Rudge, Humber, Norton, Indian, Morgan, L.S.D., Coventry Premier, Etc., Etc.**
**HUDDERSFIELD.** 'Phone 1232.

## REPAIRERS.

STOVE-ENAMELLING.—Frames, 9/-; wheels, 9 tanks, makers' colours, plating.—De la Cour, 2 Kennington Rd., S.E.11. [65

FRAME, chassis, and tank repairs, enamelling & painting by experts; prompt deliveries.—Langh Co., Fitzroy St., Leicester. [60

INDIAN Owners.—If you have trouble with your m chine, send to Indian repair specialists, Dea 89, Brixton Rd., London. [18

J.A.P. and Blackburne Engine Experts; reasona and reliable.—Kingsbury Garage, Edgware R Hendon. 'Phone: Kingsbury 134. [42

FOR Expert Engine Overhauls, cylinder grindi new pistons, and spares, Hedley and Co., Fe St., Newcastle-on-Tyne. [13

P. and M. Gear Specialists. Any 1911 to 1921 P. & M. gear repaired promptly and efficiently.—A. Phillipson, Engineer, 1a, Hilda St., Grimsby. [38

GARAGE and Cycle Repairs, Bromley, Kent. Sto tools, and fittings, all at £150; offers; leavi country.—Box 8,414, c/o *The Motor Cycle.* [68

ENGINES Overhauled, rebushed, cylinders regrou new pistons fitted, frame repairs, etc., low possible prices.—Winterton, Brechford, Birmingham. [64

ENAMELLING, Plating.—Tanks enamelled as befo handle-bars, etc., plated.—Send to Murray's Plati Works, Union St., Coventry. Platers and enamellers the trade. [00

CYLINDER Grinding, new pistons, etc.; accur and highly finished work; prompt delivery; pr list on application.—W. and F. Wills, Ltd., Enginee Bridgwater. [07

YOUR Tank re-enamelled; makers' colours, corr designs, transfers, guaranteed; handlebars, et plated; lists.—Park Works, 1a, Paradise Rd., Hi bury, N.5. [60

SPEEDOMETER Experts.—Repairs to all make Stewart repairs a speciality. New and second-ha sets in stock.—London Speedometer Co., Kramer Me Earl's Court. [40

FRAMES.—Repairs and alterations; special fram and tanks built, any design; enamelling & plating.—A. Pilkington and Co., 390, Lichfield R Birmingham. [84

FRAME Repair Specialists.—New tubes, lorks, sta cut-downs, etc.; enamelling and plating at low prices; quick despatch.—A. E. and F. Brittain, Bentl Lane, Walsall. [26

ROC 2-speed overhauls, Humber, Rex, Vinde V.S., Alldays, Campion; spares stocked; & licencee for all Roc 2-speed gears.—Connolly, Carmel Rd., Coventry. [70

ALUMINALLOY Pistons. — Our pistons signal efficiency for 20,000 miles. Cylinders groun pistons fitted. Trade supplied.—Commercial Engineeri South St., Keighley. [39

ENAMELLING, Plating, Brazing, tanks origin colours from 6/-; motor cycles renovated throug out; parts plated from £6.—Fisher, Works, 111, Ha nall Lane East, Coventry. [63

CYLINDER Grinding, new pistons, rings, a gudgeons, 85 mm. J.A.P.'s, etc., 29/6; other siz on request. Aluminium pistons if desired. — Vulc Engineering Works, Walsden. [96

N.S.U. N.S.U. N.S.U. Gears repaired at qui notice. Spare parts in stock; send gear alo to us.—Butterworth Garage, 64, Mill Lane, Brixt Hill. 'Phone: Streatham 2813. [65

WELDING.—Broken flanges, aluminium crank case cracked water jackets, valve seatings, weld and machined complete; scored bores filled in & ground to existing pistons.—Below.

CYLINDERS Reground, new pistons fitted complet in cast iron or aluminium.—West London Wel ing Co., Essex Place, Chiswick. 'Phone: Chiswi 536. [04

COULSON Repair Specialists. Spares for all mode stocked. Trade inquiries invited. Tube bendin welding, brazing, and enamelling.—H.W.H. Engineeri Co., 40, Old Town, Clapham, S.W.4. [25

CYLINDERS Regrounnd, accurate finish, compre sion guaranteed; Triumph, Rover, Premier, 35/ 2¾h.p. Douglas, 25/-; 70 mm. bores, 30/-; rings a gudgeons complete, twins low price.—Below.

PISTONS, all patterns, oversize specialists, l price.—Below.

PISTON Rings, oversize or slip-cut, 2/-; standar 1/6; return post; none better. Thousands testimonials.—Patent Rings, 30, Wigan Rd., Atherto [51

SPRING Fork Repairs and Replacements. specialise in these and can execute to any ma at half manufacturers' prices; 2-day service.—Ja Lucas, 110, Williams Rd., Cannon Hill, Birmingha [63

THE MOTOR CYCLE
ESTABLISHED IN 1903
FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).
BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.
MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d per annum.

## The Date of the Scottish Show.

WAS the date chosen for the Scottish Show the most propitious? Although a great success, and duly appreciated by a large section of the northern public, the Show has been criticised on one point: the date was not regarded with favour by Scottish agents. This was mentioned in our report in last week's issue.

From our conversations with prominent members of the trade in Scotland, we gathered that it is a conviction in the North that a large number of buyers who visited Olympia, with true Scottish cautiousness, withheld their orders until the Glasgow Show provided a further opportunity for examination. The net result of the Show, it is claimed, is that orders which would be given at Olympia are delayed. In other words, the Glasgow exhibition has tended to hold up business during December and January, when manufacturers should be busy preparing for the spring demand.

It would appear that to make a Scottish Show satisfactory to all concerned, it should be held immediately after the exhibition in London, when the manufacturers could transfer their Olympia models to the northern exhibition.

Next year there may also be the question of an Irish Show, to which the above remarks also apply to a large extent. Perhaps it could be arranged for this to follow the Scottish event, so that there would be no time wasted to the trade by periods of waiting, which are very detrimental to business of any description.

It may be argued that such matters are purely of trade interest, but a broader view should be taken, as by keeping the manufacturers employed all the year round—instead of at abnormal pressure for the spring and summer months—the cost of motor cycles must be decreased, as the output of a factory which is fully employed for six months only has to bear the heavy overhead charges for the whole year.

One cannot further hide the fact that multiplication of shows is in disfavour among a large section of the trade. One important and representative exhibition each year is, in many quarters, considered sufficient. Supplementary shows form a big drain upon the industry's resources, and tend, as we have already pointed out, to delay the placing of definite orders.

## Service and Sales.

IF certain motor cycle manufacturers could glance through our letter bag, there would, we are confident, be immediate and considerable improvements in the efficiency of their spare parts supply systems. We are not referring to the occasional complaints received, now happily becoming rarer, but to the daily eulogies of those firms which are becoming noted for their prompt and courteous repair and replacement service.

So many of these unsolicited testimonials do we receive that we have long given up attempting to publish them all; but so often do readers go as far as to aver their intentions of placing repeat orders simply on account of good factory service that, even at the risk of repetition, it seems justifiable to keep the fact before the public eye.

Good service and attention by the manufacturer *after* a machine has been disposed of, is the best form of advertisement. Motor cyclists are the keenest sportsmen in existence, and they are apt to talk rather freely. If, therefore, an enthusiastic user is obtained by prompt attention to orders for replacements, it is easy to recognise that such riders are in effect perpetual missionaries for the particular make of machine which they ride.

An index to the advertisements in this issue will be found on the page facing the back cover.

### "Upper" Lubrication.

DO you know what it is? I did not until this morning when I received a circular from a concern which is just entering the lubricating oil trade. It was written by a publicity expert. The preface fairly put the wind up me. It described the conditions ruling in the combustion chamber of a petrol engine in the vein of a thirsty soul who finds himself stranded in the Sahara, or newly arrived in New York without knowledge of the magic words which unlock the secret bars. Piston rings, I gathered, do their work so well that not one drop of oil ever reaches the combustion chamber. So the rings wear, the cylinder becomes oval, the valve stems bind in their guides, the piston melts, and the top portion of the engine is soon reduced to a number of white-hot 'bits of metal clanking against each other. I got quite frightened till I remembered that the paper was only an advertisement, and that I had oiled up two plugs the day before, in spite of these miraculously efficient piston rings. The sting of the folder came in the tail. To avert all the above catastrophes you should mix 2oz. of a particular oil with every 5 gallons of petrol, and this oil costs you 12s. 6d. Per gallon? Certainly not. Per *quart*. Let me justify the price by explaining that the oil is supposed to be fireproof. It not only does not burn itself, but keeps the engine so oily inside that common oils which *do* burn cannot cling to the greasy surfaces. If you find any carbon when you dismantle the engine you just mop it off with a duster. When I retire from journalism and produce the "Ixiona" super motor bike, I must get that "ad." writer for my staff. Hardened old cynic as I am, he first frightened me and then made me eager to splash 12s. 6d. on a quart of his wonderful oil. Had it been 12s. 6d. per gallon I fear I must have fallen.

### Some Odds and Ends.

WHEN I find a good thing I believe in putting other people on to it. Perhaps the best article I have encountered this winter is the Aquamac legging. It really keeps out downpours, which is more than many alleged waterproof twills can do; its seams are so cunningly constructed that no rain can drive past them; it has chains under the insteps in lieu of the usual fragile leather straps; and after you have pulled off the pressbuttons which secure its slit sides the trousers collapse in a heap round your bootsoles. Next in order of merit I should mention a Kaye oilcan, which is as strong as it is light. The Pidko twist grip is a very nice conversion fitting for those riders who like the American type of control on a British 'bus. I have previously stated that I am almost exclusively clad in ex-Government fabrics. My Sidcot suit keeps me warm in cars and cycle cars and sidecars—yes, even in the midday frost of January 24th—but is hardly proof enough for solo work in wet weather. When dismounted I wear one of Weston's trench coats—smart enough when new for Sunday work, and cheap enough to be good wear for tramp motor cycling when its twill exterior gets dirtied. Rubber hip boots are far and away the cosiest footwear for a cold day, and as disposal stuff at 12s. 6d. they are more economical than shoe leather. But you must have trousers wide enough to stop rain soaking into the boot tops, and I regret that my own feet are so large that I cannot get a pair of ordinary walking shoes into any of the stock sizes of rubber boots.

### Jet Controls.

IF 1921 has taught me anything it is the unparalleled value of a variable jet Nothing but the laziness of the public prevents these fittings being standardised by universal demand, for, having already two carburetter controls on the average motor cycle, John Citizen is dead against being bothered with a third. The result is that manufacturers experience a limited demand for the fitting, and as it must increase the cost of a carburetter quite appreciably the average carburetter maker prefers to push a fixed jet. But we are not all of us idle or untechnically minded Speaking for myself, I find that for nine-tenths of my mileage I prefer a small jet; it gives me all the speed and climb which I ordinarily want, plus real economy —possibly 110 m.p.g on a 500 c.c. four-stroke engine. For the remaining tenth of my mileage I care nothing about economy, but I yearn for lurid acceleration, intense speed, and terrific climb. This unrestrained tenth of my mileage being irregularly sandwiched into the more docile nine-tenths, changing a fixed jet occasionally does not fit my needs. I like to have jet control, so that a twitch of a lever converts my gentle tourist into a fire-eating road-burner. Those readers who have never tried a jet control should experiment with one in 1922.

### Automatic Oil Pumps.

OUR editorial pages and the advertisement columns combine to prove that quite a number of technical authorities believe in automatic lubrication, and that quite a lot of riders are experimenting by adding such fittings to standard machines

**Occasional Comments.—**

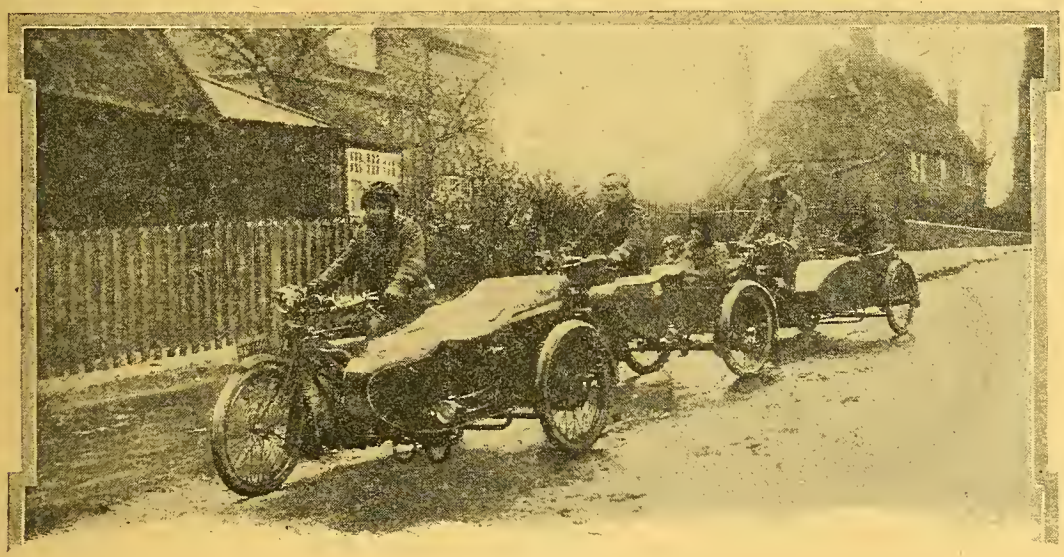
equipped by their makers with the ordinary hand pump or drip feed. Yet, odd to relate, I do not know a single rider who uses one of these accessories, nor have I ever met along the road an owner who had made the bold experiment. It would doubtless interest many readers if some of those who used these pumps last season would forward their verdicts on the subject. During the recent arctic snap I was caught with (i) a tank full of summer oil, and (ii) no inspection lamp on my oil drip. By day I had to dismount so often to coax the thick oil through to the engine that I travelled at night in a perfect fever of apprehension. I fell a-musing that my ideal 'bus would have, item, gravity pipes so fat that any oil would necessarily run through them, and, item, a pump which saw that the oil went where it is wanted. I warn readers who are apt to be casual that with the thermometer at 27° it is really difficult to induce even a "water-cooled" oil to quit the tank. I was only able to continue a recent ride in broad daylight by heating the oil in my tank, running it out, and replenishing with the sort of stuff which one uses to lubricate a multiple plate clutch or a sewing machine. The oil which my makers recommended for winter work would just leave the tank, but froze into a kind of grease as soon as it got into the cold pipe leading to my crankcase; that pipe silted up so hard in a few minutes that no amount of blowing would clear it, and I had to borrow Bowden wire at a garage to thread through it.

### Quite Interesting.

LIKE most motor cyclists, I can read anything with a petrolic flavour, but generally give the heavy stuff a miss. However, when 'flu had enabled me last night to exhaust all the light literature in the house, I pounced on the current issue of *Motor Transport*. Much to my surprise, I found it quite as interesting as the Blue 'Un. How many miles per gallon does a lorry do on petrol and eke on oil? I have often cursed the motor chars-à-bancs in the Dartmoor lanes, but a long article from the 'bus owner's standpoint has created new sympathies for them, especially when they are struggling with Devon gradients in a sea fog on the famous grease of those districts. Rather a wistful sort of boy discoursed pleasantly in another column of his early efforts to make a living with a Ford van. Further on I read how the motor lorry is ousting the camel in the matter of banana transport between orchard and sea. (Query: Do bananas grow in "orchards," or should it be "plantations"?) Then came a picture of S. F. Edge dispatching two famous piglings from his Ditchling herd to Strasbourg in a Goliath air liner. Finally I met an illustration of Glenn Curtiss' latest brain-wave—a motor 'bus with a hinge in the centre of its chassis so that it could turn corners quickly; this was no fit brain-fodder for a sick man with a temperature that suggests nightmares, so I put the journal hastily away; but I must become a regular reader when I have exorcised the 'flu demon.

### Semi-Diesel.

THE mysterious engines sold by Bramco, Ltd., of which I published the advertising slogan under the head of "Another Puzzle" on January 12th, are, of course, of the semi-Diesel type. They are started by compressed air, and utilise a compression of 450lb. per sq. in., which creates a temperature of approximately 1,000° F., at which any external ignition becomes "otiose," as the murderer remarked when they served a County Court writ on him in the condemned cell. One or two readers mistook my correspondent's inquiry for pure spoof. Thus one solution was: "How does the beastly thing go?" Answer: "It doesn't—it is a stationary engine." The Bramco people evidently became alarmed lest our readers should try to fit these engines to motor cycles, and hastily forwarded me a list, from which I gather that the smallest single-cylinder model weighs well over a ton. To soften the blow, they enclosed a split-pin puller for which they are agents. How I wish I had owned this tool in the evil days when it was my mournful fate to dismantle aero engines, disfigured by several gross of those necessary evils.

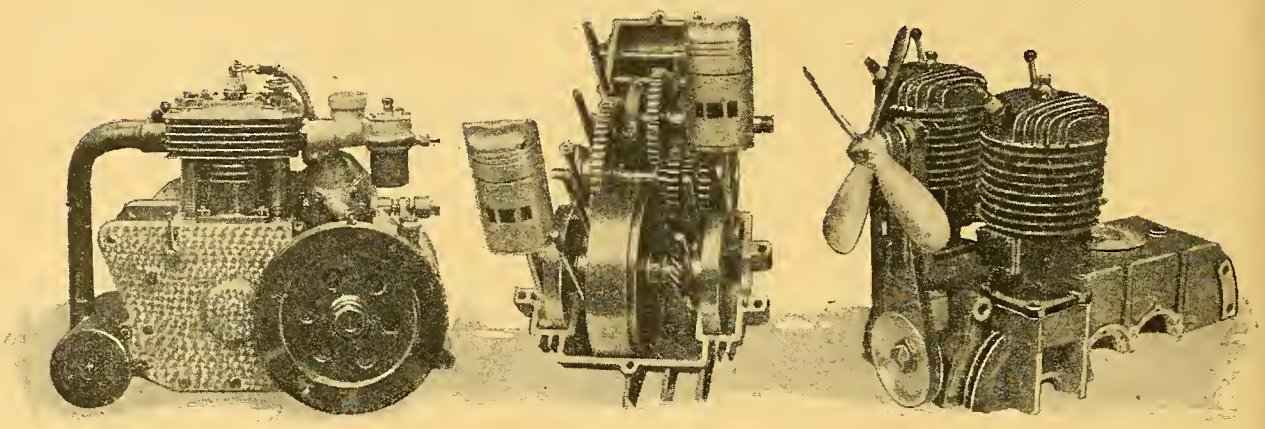


OFF FOR A WINTER RUN.

A hardy family party taking advantage of a brief spell of fine weather during the short February days. Although not comparable with spring, summer and autumn riding, a good deal of enjoyment is forthcoming even though the sky be grey, the lanes drip with moisture and the roads are heavy.

# FRENCH SIDE-BY-SIDE TWINS.

## Tendencies in Motor Cycle Design across the English Channel.



BLERIOT FOUR-STROKE AND TWO-STROKE SIDE-BY-SIDE TWINS.

Four-stroke unit showing belt pulley and valve arrangement.

Lower half of the Bleriot cycle-car engine-gear unit, showing pistons, cranks and gears.

Two-cylinder two-stroke, shown with lower portion of crank case detached

IN France there is a certain tendency for motor cycle engineers to follow motor car practice in the design of engine, clutch, and gear box. In other words instead of Vee type engines with chain drive to a change-speed mechanism specially designed for motor cycle use, and then chain or belt drive to the rear wheel, some designers are showing a preference for a twin-cylinder vertical engine, forming a unit with its clutch and gear box.

One of the best examples of this practice is to be found in the Viratelle machine, built at Lyons. The firm responsible for this has two models—a single-cylinder of 350 c.c., and a twin of twice the piston displacement, both of them being water-cooled. Although the Viratelle is not very well known outside its home country, the design is not altogether new, for this firm had a single-cylinder water-cooled model on the market as far back as 1906. The reply to the objection that this design makes for a heavier machine is that with the extensive use of aluminium the increase in weight is only slight, while the advantages are a more reliable and uniform cooling quite independent of the speed of the machine, complete protection for all the working parts, a greater degree of silence, and neater appearance.

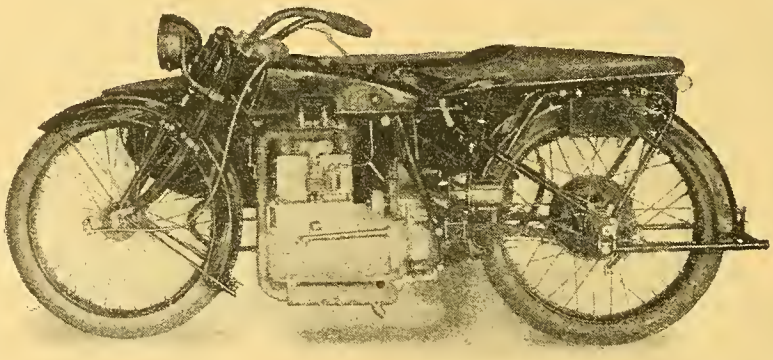
The Viratelle cylinders have a bore and stroke of 73 and 82 mm. respectively. On the twin-cylinder model the two cylinders are mounted side by side, across the machine, with the crankshaft throws at 360°. This means that so far as balance is concerned the Viratelle approximates to two single-cylinder engines, but when one piston is at the top of its compression stroke, the other has completed its exhaust stroke. This gives even firing.

On the twin Viratelle the flywheels are inside, between the two cranks. The shaft is carried in ball bearings, and roller bearings are used for the connecting rod big-ends. Side-by-side valves are used, the valve chamber being to the rear of the cylinder block, with the carburetter bolted up direct on the same side. The position itself gives protection to the valves, but this is further enhanced by a cover plate. As the engine is practically independent of a draught of air for its cooling, an adequate shield can be fitted in front of it for the protection of both the mechanism and the rider.

### A Fan within the Radiator.

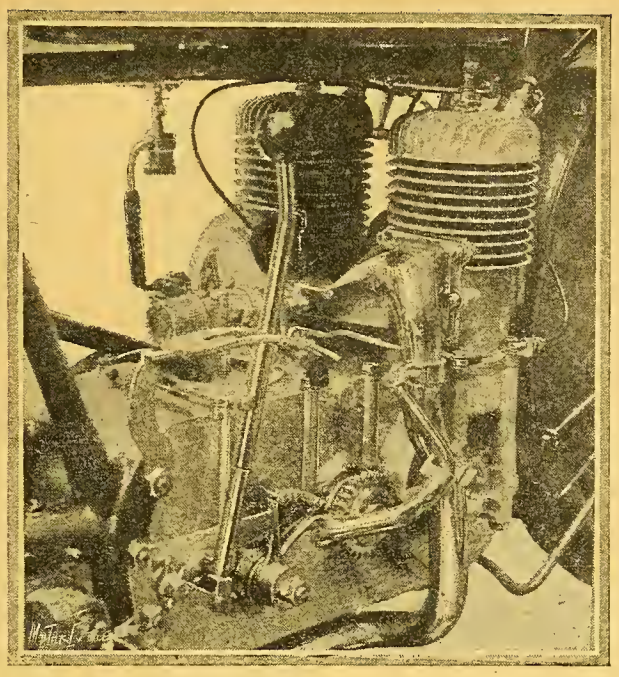
The radiator on the Viratelle machine is mounted in the frame, just ahead of the petrol tank, and is composed of circular copper tubes uniting two collector tanks. Water circulates by thermo-syphon, but cooling is further assured by a centrifugal fan in the radiator, driven in a very neat manner by an enclosed belt from the engine. About six pints of water are used for the twin-cylinder machine.

A three-speed planetary transmission is contained in the engine base



With its unit construction of engine, clutch and gear box and shaft drive, the Lutece is almost a motor car on two wheels.

**French Side-by-Side Twins.**—chamber of the Viratelle machine, the connection between the engine and the change-speed gear being by an intermediate pinion with spring coupling, the final drive to the rear wheel being by means of an enclosed chain. One of the outstanding features of this machine is the manner in which gear changes are made. The rider can select his gear in advance by the use of a lever on the handle-bar, and can bring it into engagement by pressing a pedal at the correct moment. The arrangement of the control levers on this machine is as follows: Left-hand handle-bar, valve lifter and clutch; right-hand handle-bar, change-speed lever, throttle and brake; left foot for the brake, and right foot for the lever which locks the planetary gears in engagement.

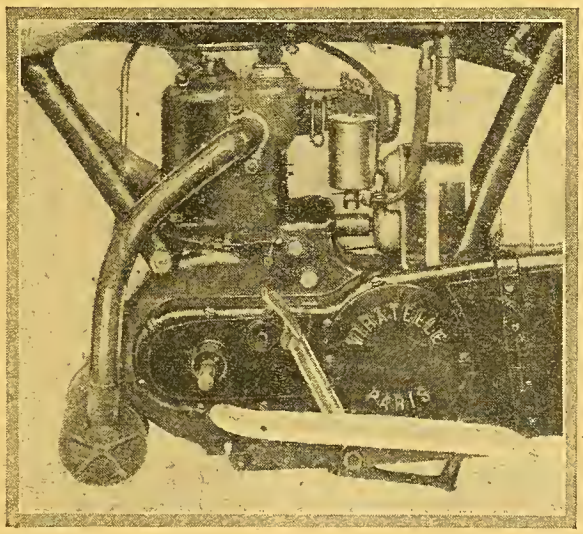


The Bleriot two-stroke side-by-side twin (minus the cooling fan) shown fitted in a motor cycle frame. This machine was exhibited at the Paris Show.

### Complete with Electric Starter.

Car practice is most closely approached in the Lutece machine, which has a unit construction engine, gear box, shaft and worm drive which might have been laid out for service on a four-wheeler. This machine has been built by an important French aviation company, or, it would be more correct to say, will be built by this company, for up to the present aviation contracts have prevented the firm going ahead on its motor cycle programme, and only a few machines exist in the hands of agents and demonstrators.

The Lutece has two vertical air-cooled cylinders mounted in line on an aluminium base chamber, which also forms the housing for the clutch, the three-speed gear with gate change, and the universal joint for the driveshaft. Mounted on the group, immediately behind the cylinders, is the combined electric generator and starter, which also provides current for ignition purposes (for no magneto is fitted), and even for heating. Car practice is followed even to the lubricating system, which is of the forced feed type, with all the oil in the base chamber, a gear pump delivering it through the hollow crankshaft to the main bearings and the big ends. The level of the oil is judged by a steel gauge attached to the combined filler and breather cap on the left-hand side of the base chamber.




The water-cooled Viratelle, which is made with both single and side-by-side twin cylinders.

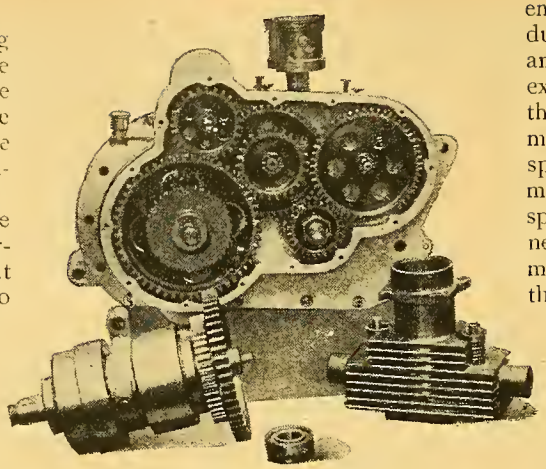
It has to be admitted that in this case car practice gives a remarkably neat machine. The cylinders, although separate, appear to be one block; the four valves are all on one side, protected by a detachable plate, and the carburetter bolted on the left-hand side with a Y-shaped intake manifold is as accessible as the most fastidious could desire.

With the very deep base chamber necessary to provide for a reserve of oil, the height from the top of the cylinders to the bottom of the base chamber is considerable, and tends to give a top-heavy appearance to the machine. One of the advantages of this design is the absence of oil leaks. There being no external oil pipes, there cannot be leaks at the connections. It is quite easy to make the joint between cylinders and crank case quite oil-tight, and there need be no leakage of any importance from the valve stem guides. The only other joint is that between the crank case and the oil reservoir forming the bottom portion of the case. This joint, however, is low down, under the aluminium footrests, and if any leak should occur here it will not splash on the rider's feet or legs.

Cylinder dimensions of the Lutece engine are 75 mm. bore, with a piston stroke of 113 mm. Very deep radiating fins are employed. The crankshaft is carried in ball bearings, while split type plain bearings are used for the connecting rods. Aluminium pistons are used, with three rings, one of these of the double type. The degree of silence is considerably enhanced by the mounting of the camshaft parallel with the crankshaft, connection between the two being by means of a silent chain,

**French Side-by-Side Twins.—** the general arrangement being similar to that adopted on the majority of car engines. On the first series to be produced the speedometer will be driven off the front end of the camshaft, instead of from the front wheel.

As in light car practice, the Lutece has a pair of quarter-elliptic leaf springs, attached at their forward and thick end to the gear box housing. The driveshaft is enclosed in a torque tube with a ball head at the forward end which allows for the rise and fall of the wheel in relation to the engine base. So far as the frame is concerned, there is comparatively little departure from standard practice.

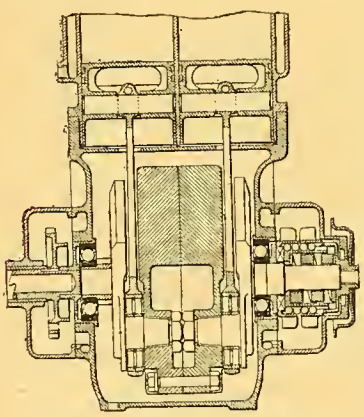


Bleriot twin four-stroke. Timing gear cover removed showing camshaft and magneto drive and how reduction is obtained between engine shaft and lay shaft. The T head type of cylinder is shown on the right.

Although there is no attempt to follow car design, the Blériot machine is a good example of the French practice of using two vertical cylinders and combining the change-speed gear with the engine. This machine has air-cooled cylinders set side by side, across the frame, with valves on opposite sides, the exhausts being in front and thus getting the direct current of air, and the intakes being towards the rear. The arrangement has much to recommend it, for the exhaust side, which needs most vigorous cooling, is in the direct current of air, while the carburetter is well protected behind the pair of cylinders.

### Cranks at 360°.

Bore and stroke of this engine are 60 and 88 mm. respectively, which brings it in the 500 c.c. class. The two throws of the crankshaft are in the same plane, or at 360°, as in the case of the Viratelle. The magneto is driven from a cross-shaft, and is mounted behind the group of cylinders, just under the intake manifold, in a well-protected but at the same time fairly accessible position. Use is made of the timing gears, contained in a housing on the right-hand side of the engine, to get the initial gear reduction, between the engine-shaft and the pulley-shaft. A rearward extension of the crank case forms the combined housing for the metal disc clutch and the change-speed mechanism. On the first models to be brought out only two speeds were provided, but a newer type about to go on the market has three speeds. From the lay shaft drive is transmitted to the rear wheel in the usual manner, by means of a belt. Except that disc wheels are standard, the other parts of the Blériot motor cycle do not show any departure from standard practice.

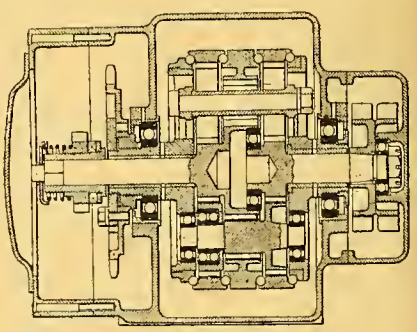


The Viratelle twin-cylinder side-by-side engine, with central flywheel.

There is another example of the twin vertical engine in the Blériot cycle car engine, which was exhibited at the Paris Salon in a motor cycle. It is of the two-stroke type with cylinders 70 × 96 mm. The two cylinders are mounted side by side on a common base chamber with sufficient space between them for the central flywheel, which also contains the disc clutch. In this case the cranks are opposed, or at 180°, whereas in the four-stroke they are in the same plane. An extension of the base chamber forms a housing for the change-speed mechanism, which provides three speeds and reverse. Final drive is by belt to the rear axle.

### Four Cylinders for Cycle Cars.

The majority of French cycle car designers appear to favour a small four-cylinder water-cooled engine in preference to the types evolved from motor cycles. One of the exceptions is the Françon, which is fitted with a twin-cylinder vertical two-stroke engine. It is rather remarkable that in France air-cooling appears to find very little, if any, favour for anything but motor cycles. The French makers of the Morgan specialise in the water-cooled model, and the firm making the G.N. in that country have thought it necessary to produce a four-cylinder water-cooled type in addition to the model with air-cooled engine.



The planetary three-speed mechanism and chain sprocket on the twin water-cooled Viratelle motor cycle.

## BAD ROADS IN SOUTH AFRICA.

In Natal the roads are in a terrible condition, and on a complaint being made by the Natal Automobile Club to the Engineer-Superintendent, a reply was received to the effect that as there were no funds some of the roads would have to remain rough and rutted. Natal motorists talk of refusing to pay the provincial motor tax until such time as the Council have the main roads put into a proper condition.

# BUYING A SECOND-HAND MACHINE.

## Advice to would-be Purchasers of used Motor Cycles. Processes of Elimination.

AT this time of the year thousands of our readers must be considering the purchase of a second-hand machine, usually because it is cheaper than a new mount. But although all prospective buyers of used motor cycles may thus be classified as seekers after the maximum value for the minimum expenditure, their requirements vary greatly in other respects. It is not easy to generalise on this matter.

Obviously what might apply with some force to the family man who has £150 wherewith to purchase a modern fully-equipped big twin-passenger outfit might be quite useless to a keen youngster who is looking for a 1911 Triumph at £25 with a view to extensive renovating operations. Yet, as we have emphasised already, both are equally anxious to get the utmost value for their money, and, therefore, much of what follows should interest all potential buyers who are not absolutely wedded to the current year's machine fetish.

### Advice to the Novice.

For the pure beginner, probably the best plan is to put himself entirely in the hands of a firm of reputable and well-established agents who make a speciality of selling motor cycles overhauled by themselves, telling them what he wants, or, better still, what he wants it for, and how much cash he has available for the purchase. He will probably pay 7-10% more than if he bought in the open market, but he will be assured of satisfaction, and, dealing with the leading firms, may rely on being safely "nursed" through any early troubles. A good business concern nowadays looks ahead, and a humble order for, say, a pre-war sidecar outfit is treated with just as much care and courtesy as if the purchase had been a 1922 Rolls-Royce—the latter may come later from the same source!

Considering next the case where the buyer feels fairly confident of his ability to make a good bargain, it cannot be too strongly emphasised that a little knowledge is a dangerous thing in any sphere of action, but doubly so on the second-hand motor cycle market. Not that there is an unduly large number of "sharks" to be avoided, but because it is quite possible to buy, from a perfectly honest seller, an entirely unsuitable machine which at any price would be expensive.

Therefore, the most important point is to choose rightly. Possibly the buyer has already settled on five or six makes which promise to give satisfaction; it is preferable to decide this first, and then to glance through the miscellaneous advertisements in *The Motor Cycle* to ascertain just how modern a model is available at his pre-determined figure.

Naturally, the longer and franker advertisements of the genuine private owner make the greater appeal; but some excellent bargains may be hidden in a two-line advertisement over a box number. Generally speaking, however, the owner's name and address and date, mileage, and price of the machine should be looked for.

It is then easy to pick out four or five possibilities, and since the market is not extremely active at present, there should be ample time to write each of the advertisers for fuller particulars. Engine and frame number should be obtained, and dates may then be verified by making application to the manufacturers concerned, who are usually very willing to supply this information.

### Inspecting the Final Selection.

The final choice should undoubtedly be made on personal inspection, and if the procedure indicated has been followed faithfully no very searching examination of mechanical features and general condition should be necessary. Again, it is difficult to generalise on what should be looked for. Little things, such as the presence or absence of lamps or tools, often make a greater difference to the value of a machine than the fact that the steering-head or wheel-bearings are slack. It should be definitely ascertained, too, whether the tax has been paid and for how long.

If a decision is made to purchase, it is well to part with no cash until the registration book has been produced; and a trial run is regarded as a *sine quâ non* by many. In the case of very old machines, the latter step is certainly advisable, but it may well be dispensed with when a little-used last year's model is under consideration.

Commonsense and an ability to judge the seller—and not so much his machine—usually lead to a more satisfactory purchase than a wonderful theoretical knowledge of motor cycles generally.

# THE OLD WYCHE ROAD.

AN enquiry was recently held at the Shire Hall, Worcester, concerning applications as to the closing of the Old Wyche Road by Mr. F. C. Cook, D.S.O., Inspector of the Ministry of Transport. The applications were opposed by Mr. C. Blewitt on behalf of the various organisations representing the interests of users of private cars, motor cycles, and commercial vehicles, and also the motor cycle trade.

In support of the applications in respect of the Old Wyche Road, which has been frequently used in motor cycle trials, the County and Urban District Council called eighteen witnesses, whose evidence chiefly related to the noise and interference with Church services when the road was used on Sundays, while with regard to danger only two cases of accidents were put forward. During the past year only six prosecutions for dangerous driving have been instituted, one of which was unsuccessful. Mr. Blewitt, on behalf of the motoring organisations, contended that the applicants had entirely failed to establish danger or unsuitability. The Ministry of Transport has not yet announced its decision.

## Early Activity on the Track. Surface Much Improved. A New Speed Aspirant?

ALTHOUGH the repairs had not finally been completed, Brooklands track was partially re-opened on Wednesday of last week, mainly, we were told, on account of the keenness of the motor cycle element among its patrons to be "at it" again.

It was a glorious, summer-like morning, but the rain of the night before still lay in puddles along the inner edge of the track, guiltily indicating that nearly two months' work and the use of many tons of concrete had failed to produce the billiard table surface still popularly and erroneously associated with Brooklands.

The roar of a healthy single drowning the buzz of two chain-driven Zenith-Bradshaws "on test" suggested that Judd or O'Donovan might be early arrivals, but enquiry revealed the somewhat surprising information that the machine was a P. & M. That the makers of such an essentially "slogging," touring type of mount should turn their attention to speed work for the first time after so many years of successful reliability performances is, to say the least, significant. While we were there, P. Cunningham on a stripped 3½ h.p. model, lapped at nearly 58 m.p.h., but, previously lap speeds of very much over the mile-a-minute mark had been obtained. It is realised the track is a great teacher, and, even should the P. & M. remain (almost exclusively) unobtainable as a sports model, much of value may be learned.

### An Early Start.

D. R. O'Donovan, the unassuming Norton wizard, and his most promising pupil, Judd, were also there—Brooklands would not be Brooklands without them—but not bent on any serious work, although the former gave us to understand that long-distance records would be in danger on the following week. The phrasing is ours, of course, not his.

O'Donovan is keenly interested in the question of an amateur T.T. race. He suggests Brooklands as a venue, and that standard stock machines, tuned only by their riders, be used. A half-serious proposal by our representative that the test hill be included was dismissed as too dangerous, although he agreed that the track might possibly be temporarily converted into a really "sporting" miniature I.O.M. course.

When on this subject it is worthy to mention that if the test hill were widened and then continued over the track by means of a substantial bridge it would be possible to add a mile of mixed going to each lap.

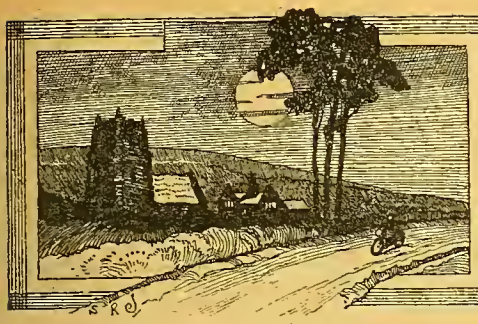
Competitors would race in the "reverse" direction, come round a hairpin bend at the fork, down the straight, up the test hill, round the outside of the track, through the tunnel, and back through the paddock and up the straight. An even better, but of course more expensive scheme would be to construct, in addition, an inner and an outer circle on the track itself and to connect them by a temporary bridge. The cost might be prohibitive and the danger element great, but imagine the "gates" that would be drawn! Football shares might even experience a slump.

### Round the Track.

However, to get back to the track as it is, our representative decided to make a personal examination awheel. His mount, a four-valve Triumph, had not yet reached its second hundred miles; so, bathing it with oil, he tried a lap at a cautious forty. This of course involved keeping well down off the banking, and here the going is roughest, for naturally water runs off less readily; however, it compared favourably with almost any road.

Having located the survivors of the repair gang, who were completing operations with brooms and scrapers, and finding no suspicion of overheating on the part of a new engine, another circuit was made at a considerably higher average, probably fifty, but at a maximum of 56 m.p.h. by Bonniksen. This time the banking proved to be in very fine condition, but the middle of the railway straight was none too good.

On the whole, therefore, the track may be classified as excellent, and to all appearances ready for very high speeds by either motor cycle or car. Without doubt some extraordinary figures will be attained.



# LIGHT ON THE LIGHTING PROBLEM.

## Acetylene, Accumulator, Dry-battery and Dynamo Systems Compared.

ALTHOUGH the days are growing longer, lamps are still a vital necessity. Whether we ride daily or only at week-ends, a lampless machine holds over us the threat of being compelled to train home in the event of some unexpected delay; or of having to start back early and miss some pleasant hours. There are three separate lighting systems which are worth consideration.

### Acetylene Generators.

The first is the old-fashioned gas head lamp with acetylene generator. Its chief merit is its cheapness. More ostentatious outfits have blinded people to the fact that a gas generator set is perfectly reliable in the hands of a man who will take the trouble to master the control of the water drip and to keep the lamp clean. When I use such a set, I do not fill the carbide chamber till the lamp is wanted, lest dust should choke the water valve; and I make a test to discover where the valve should be set to procure the desired "spotty" flow of water in blobs, as opposed to a practically continuous stream, which drowns the charge, and leaves the rider lightless. I am equally careful to cleanse the lamp thoroughly after each run. After these precautions a stop is unknown, except when a hard-worked burner gives out after many hours of use, or an all-night run exhausts the charge. Both these emergencies are catered for by carrying a little spare carbide and an extra burner. On these terms a generator set may be used all the year round without the least shadow of anxiety; and no system is so cheap. My one heresy with regard to gas generator sets is that the tail lamp is never too trustworthy. Solo machines are not now required to show a tail lamp in all districts, but the tail lamp makes for safety in two special circumstances—on a main road amidst dazzling head lamps, and whenever the machine is put on its stand after dark. The gas tail lamp is fairly reliable when armed with a separate small generator of its own; but one generator is enough bother for anybody at cleaning time. When a long tube from the head lamp generator is employed, the gas pressure at the tail lamp is not always adequate.

### Dry Battery Tail Lamps.

I use a dry battery tail lamp in conjunction with a gas head lamp: Siemens, Ward and Goldstone, and A. H. Hunt all list good examples. Gas lighting is enjoyed at its best if dissolved acetylene cylinders are used. The tourist cannot yet rely on a universal supply of replacement cylinders; but it is easy to coax one's local supply man to stock them.

The second system may be termed "exhaustible electricity," and consists of electric lamps, fed from a dry battery, or from an accumulator which is not kept charged by a dynamo mounted on the motor cycle. The dry battery head lamp is quite excellent for a machine which is not very fast and is not used too much. Such outfits will give a moderate light for lengthy periods at a reasonable cost. They will not give a tremendous ray, as a high candle-power bulb would soon exhaust the cells; and the batteries are now far too costly for a regular rider to depend upon them. The accumulator system can give as good a light as any dynamo outfit, but is usually designed to furnish a weaker ray in the interests of the accumulator; heavy discharges—in the absence of a dynamo—spell rapid exhaustion, possible damage to the plates, and increased liability to being stranded with exhausted cells. The staffs of power stations are not always too careful over such small jobs as handling the recharging of a small 20 ampère-hour accumulator, and I, personally, should only rely on this system if I could recharge from the domestic supply in my own house. The boxes for carrying dry batteries and accumulators are now carried in the rear prongs of a double lamp bracket, acetylene generator fashion, and are both neat and convenient.

### Best but Most Expensive.

The third form of lighting is unquestionably the best, and consists of accumulators which are continuously charged up from some source of electric energy on the machine. The dynamo may be a separate unit, or may be combined with the magneto. These sets are quite expensive, but afford the maximum of cleanliness, convenience, and light. One or two equipments in which surplus current is tapped from the magneto are not suitable for a motor cyclist who does the bulk of his riding in the dark, as the discharge rate with lamps lit is heavier than the charge rate, so that the daylight riding must exceed the night work in the proportion of, say, 2 to 1. Moreover, the bulbs of such sets must be designed to avoid very heavy discharge rates, and therefore cannot afford a terrific light. Within these limitations such outfits as the B.T.H. Sparklight are thoroughly satisfactory; I have used one for over a year without a moment's trouble, and without renewing any bulbs. But for the fast full-size machine, which is worked hard, the genuine dynamo outfit is still a necessity. If spare bulbs are carried, it is as reliable as acetylene, gives a better light, is much less troublesome, and is altogether to be preferred.

ROAD RIDER.

# A T.T. Race for Private Owners

## Difficulty of the Amateur Definition. Some Cold Facts Reviewed.

THE proposal to organise a T.T. race in which entries shall be limited to private owners has naturally roused considerable interest, and is calculated to make every sporting amateur sit up and take notice. Loth as one is to pour cold water on any sporting proposition, and most of all on a suggestion which aims at divorcing sport from all commercial associations, the idea emanates from people with little or no experience of the administration of sport. The first problem is to find your private owner, to arrive at a theoretical definition of what constitutes a private owner, and then to apply that definition in practice so as to keep the trophy out of the hands of cleverly camouflaged trade riders.

The man in the street, unaccustomed to the lions in the path, says, roundly, "Insist that every entrant shall earn his living at some job which has not even the most distant connection with the motor trade." It sounds simple; but immediately the undergraduates are up in arms. They don't earn their own living at any job, they include many of the purest amateurs on the road, and you must unquestionably welcome their entries. The same applies to young fellows subsisting on allowances from their parents, or on incomes which they have inherited. After you have considered a few cases of this kind, you begin to realise that the definition of an amateur must not insist on his earning his living in any shape or form. Presently you hear of an intended entry from some enthusiast whose means of subsistence are extremely vague. He satisfies your committee that he normally exists on a couple of hundred a year, derived from backing horses, success at cards, and an annuity of, say, £50 from a deceased maiden aunt. You have to take his entry; but there is quite a chance that the whole of his racing expenses are being footed by a manufacturer, and that there will be a cool £100 in cash in his pocket if he wins. Finally, apart from the clear cases which widen your definition net till its mesh will admit almost anybody, and apart from the dubious cases which defy verification owing to the dishonesty of parties to the job, there are the borderline cases.

For example, we will suppose that an entry is received from a young man who is studying wireless telegraphy in the works of a big concern which not only constructs wireless apparatus but also manufactures magnetos and automobile lamps and dynamos. Is he "trade" or is he not? He may be as pure an amateur as any University Blue, or he may be subsidised to exploit his firm's magnetos, though he is not employed in their magneto department. Another youngster may be the son of the principal shareholder in a company which owns extensive rubber plantations. The boy may be a genuine private owner as a motor cyclist, but very possibly his father's rubber plantations sell the bulk of their output to one of the tyre companies. If so—and the facts will be hard to come by—it is probable that he will get considerable assistance in his efforts to win the Amateur T.T.

I think everybody with real experience in organising competitions will admit that it is quite impossible to sieve the entries so that the exclusion of riders enjoying special advantages can be even moderately guaranteed. If that is so, the whole principle of the race falls to the ground.

### Assistance from the Manufacturers.

In the second place, the factories manufacturing motor cycles cannot be left out of the reckoning. Business is business. These firms no doubt possess strong sporting interests, but they are money-makers before they are sportsmen. Victory in such an event may be worth thousands of pounds to some of them. They are not going to let victory go to a rival without putting forward a finger to grasp it. Few of them

**A T.T. Race for Private Owners.—**

would go the length of constructing special machines or special engines. But there would be no need to construct special engines. Some of the factories already possess special engines. These would freely be loaned to any "amateur" who wanted to borrow them. In other cases standard engines would be faked by the works staff. The private owner, entering a stock engine bought in the ordinary way and tuned by himself or with the aid of his local agent, would not stand a dog's chance in the race. He would be just as certainly beaten before ever he started as if he adopted the same procedure in the open T.T.

However, if we pretend for the moment that an exceedingly alert and shrewd management succeeded in squeezing out the shamateur and the camouflaged trade man, and contrived to guarantee that every engine in the race was a stock engine tuned only by amateur labour and skill, the event still remains unattractive, because—other things being equal—victory would fall to the longest purse.

Comparatively few amateurs can rely on adequate leisure. Preparations will consist of at least ten days in the Isle of Man, preceded by two or three months' hard training and hard tuning. Experimental work on Brooklands would be invaluable, and entails a considerable outlay; there is no road in the country where even at sunrise one can test an engine for *sustained* racing speeds; to compete in a 150 miles race with a machine which has never done more than two miles' hard work at a time is ridiculous. A certain amount of early morning speedwork on the road is possible, but there is nothing like a day or two at Brooklands to *prove* that an engine will stand an hour or two all out without injury. This test would not cost the metropolitan rider much money; but it implies a pretty bill for men living in the North or West, and particularly so if the engine is unsatisfactory on its first visit to the track, and requires a second and even a third test of an hour at full r.p.m.

**Practising Expenses.**

Expense is further connected with the preliminary practice in the Island. If the time at a rider's disposal is short, he really needs a couple of machines, as he cannot afford to miss several practices because he breaks something vital one morning. So if he goes to the Island a week before the race, he needs two machines; if he goes three weeks before the race, his hotel bills and incidental expenses will be correspondingly high.

The only distantly practicable suggestion which I have heard is that the promoters (presumably the A.C.U.) should buy the machines from agents' stocks, and deliver them to entrants in the Island after sealing all parts; and that all repairs, tuning, and adjustment should be done under supervision. For example, if I entered a Norton, Mr. Loughborough would buy it for me, say, in Bristol; and neither the Norton Co. nor myself would see the machine until I took it over under official supervision at Douglas. This system, analogous to the "stock machine" one-day trial, would probably succeed in eliminating "special" engines, and narrow the race down to machines "the same as you can buy" It would not, however, meet the main wish of many enthusiastic amateurs, which is that their *tuning* powers, no less than their *riding* ability, should be tested. For if the preparation period were lengthy, the knowing ones would manage to introduce one or two special engine parts; and if the preparation period were short, the entrants would have insufficient time both for tuning and for practice. Moreover, it might easily prove impossible for the A.C.U. to find all the necessary machines in stock. If trade revives, it is an open question whether scouring the agencies, say, in June, would produce as many T.T. Nortons or o.h.v. Triumphs or Scott-Squirrels as the entry might specify. It would naturally be impossible to enter a machine of any "small" make, or for any amateur to race on a machine of his own design and construction, fitted with a proprietary engine.

Altogether, attractive as the suggestion undoubtedly is from a sporting standpoint, it seems to me hopelessly impossible so long as human nature remains what it is.

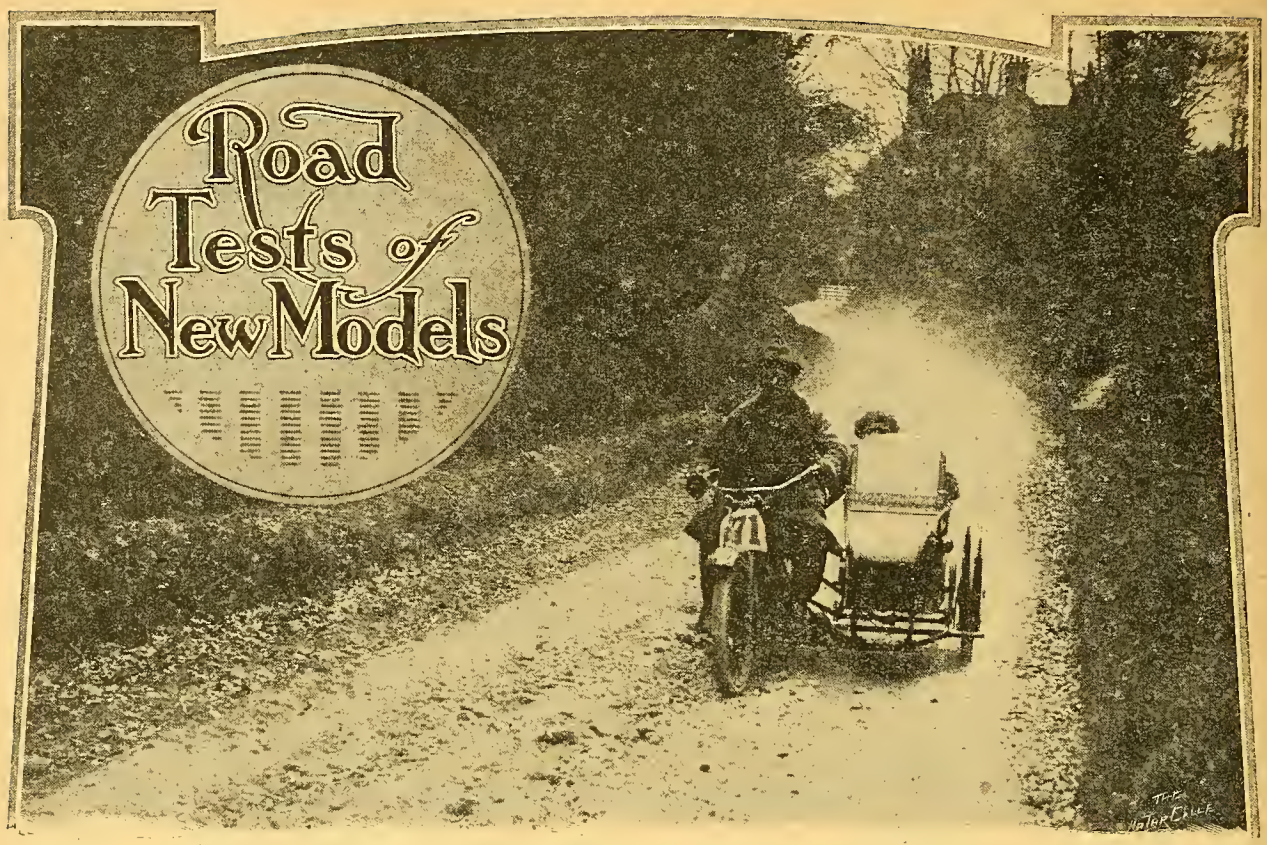
B. H. DAVIES.

# MOTOR CYCLES IN SCANDINAVIA.

DESPITE the very large number of British motor cycles which go overseas, almost every mail brings us news that our manufacturers are not adequately represented in many countries. Below we give a letter received this week from a reader who has just returned from a two years' sojourn in Scandinavia:

"'Seeing that this country is dependent on export,'' he writes, "I was surprised to find hardly any English motor bicycles in either Sweden or Norway. Though the place was full of American machines, mostly Reading-Standards, Harley-Davidsons, Indians, and a few Clevelands, I only saw about five English machines during my two years' stay. There are excellent opportunities for motor cycles, as competitions are popular, while during the winter months races on the ice, which gives excellent wheel grip for straight riding, are of frequent occurrence.

"The fault lies with our advertising and agents. During the whole of my stay in Sweden I saw no printed advertisements and only two display machines, and in both cases the model displayed was of a type not adapted to the country. The type of machine wanted is a cheap, reliable, high-powered one with large wheels and a very strong frame. Refinements such as legshields, windscreens, and electric light are seldom wanted. Now the agent of the Ariel Company in Gotenburg was displaying their 4 h.p. single-cylinder model, whereas their 8 h.p. model with its 28 × 3in. tyres and good springing would have suited the country well. Any British manufacturer producing a good 8 or 10 h.p. machine should be able to find a good market, though in many cases larger wheels and better ground clearance together with further simplifying and cheapening would be essential to success."




THE 6 h.p. MARTINSYDE SIDECAR OUTFIT.

*SPECIFICATION.*

*ENGINE: Martinsyde V twin, 70×80 mm. (680 c.c.), exhaust valves over inlets.*
*LUBRICATION: Semi-automatic drip feed.*
*TRANSMISSION: Enclosed chains, $\frac{5}{8}$in.×$\frac{3}{8}$in.*
*TYRES: 650×65 mm.*
*SIDECAR: Martinsyde.*
*CARBURETTER: Amac single lever.*
*IGNITION: Lucas Magdyno.*
*GEAR BOX: A.J.S. type; three speeds.*
*WEIGHT: 289lbs.*
*PRICE: £160 (less lighting outfit).*
*MAKERS: Martinsyde Ltd., Maybury Hill, Woking.*

THE more apparent virtues of a machine which reveal themselves when the latter is submitted to a brief road trial provide the critic with an appreciable knowledge of its behaviour. A trial spread over a period of months, however, enables the rider to become acquainted with both the good and bad points, which are found only by constant use and by necessary adjustments and repairs in the garage.

Equipped with a V twin engine having an unusual valve layout, the 6 h.p. Martinsyde, when first taken over for trial, was tested with special regard to the excellence of this feature of its design. As is now well known, this engine has overhead exhaust valves and inlets at the side, below them, thus the inlets are cooled by the incoming gases from the carburetter, while the exhausts are exposed to greater cooling draughts and are to some extent separated from the main portion of the cylinder casting. This must undoubtedly tend towards efficient and cool running and freedom from distortion. The engine is not unduly noisy, although a reduction of the valve clatter is possible. When correct adjustment of the carburetter is obtained, the engine "ticks over" in a most pleasing manner and answers faithfully to every touch of the throttle control.

Until we gained experience it was found that the operation of the gear control was somewhat difficult, and improved design of this detail might well be considered by the manufacturers.

Good judgment, however, has been exercised in dispensing with the all-enclosed chain case, and although the machine has been run through many trials during the past season, no chain trouble has been experienced; withal the chains are accessible.

Regarding the other mechanical details, the engine was at first equipped with pistons of an early type, provided with a minimum of frictional surface on the skirt. With these, piston slap became very evident, and finally new pistons were fitted; these—the present standard pattern—are good, being provided with a flush bearing surface which has been reduced slightly to facilitate running in.

So much for the unit. It would be impossible to outline the duties that the machine has had to complete during its trial. On the road the machine has never

**Road Tests of New Models.—**

suffered a serious failure. Once, during an abnormally heavy rainstorm, a "short" occurred between one of the high-tension terminals of the Magdyno and the aluminium cover provided for this instrument, and that is the worst trouble the writer can record against the machine.

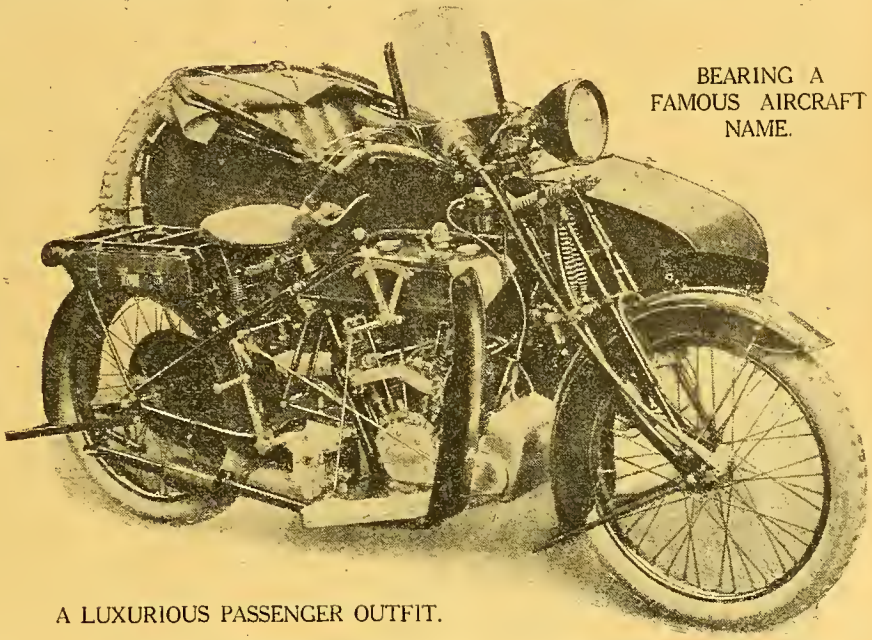
As for performance, the Martinsyde has demonstrated its climbing abilities by climbing the Brooklands test hill with four people on board, while on the level it will do normal touring speeds of 40 m.p.h. with ease and will touch 45 m.p.h. when required.

Correct handling of the three speeds is undoubtedly an important factor when the highest efficiency is required from the engine. The latter is more grateful when kept turning over at high speed, consequently changing down should never be unduly delayed. Detachable wheels would have been a pleasant luxury, but since punctures have been few, this has not been of great account.

### Criticisms—Pro and Con.

Steering is good, whilst the riding position is all that could be desired. A slightly larger capacity petrol tank (this has been fitted to the later models) would have been exceedingly useful, but it is possible to carry a two-gallon tin of petrol and a quart tin of oil in addition to luggage in the spacious locker behind the seat in the sidecar. This latter provides the comfort essential for a long tour, and equipped with a Martinsyde hood and screen, provides ample protection from the elements. The Magdyno lighting outfit has, with one exception, when water forced an entry into the switchbox, proved very successful.

Undoubtedly the Martinsyde is a thoroughly practical sidecar outfit designed to take two people anywhere at quite a good pace in comfort and with reasonable economy; moreover, in view of its quality, it appears that the manufacturers have made an honest attempt to provide real value for money.



BEARING A FAMOUS AIRCRAFT NAME.

A LUXURIOUS PASSENGER OUTFIT.

Two models of the 6 h.p. Martinsyde sidecar outfit are available—the *de luxe*, with interchangeable wheels and electric lighting, and the "standard," which, with these luxuries eliminated, sells at a competitive price.

## RECORDING THE AVERAGE SPEED.

ACCORDING to the majority of those who possess a speedometer, this accessory almost doubles the pleasures of motor cycling. Yet, on the average not one machine in six is so fitted. Without doubt the reason for this state of affairs is the expense of the instrument and the fact that much of its value is lost unless it is fitted to the new mount immediately on delivery.

We are afraid, therefore, that the future of an even more costly and complicated fitment—the average speed indicator, as outlined in an article in *The Motor Cycle* of the 12th ult. and supported by correspondents—would be by no means assured. It is pointed out as an advantage that the suggested indicator would embody a clock. Handlebar watches, however, are neither excessively unreliable nor expensive; and wristwatches are common and convenient. But the biggest objection to the instrument lies in something it does not do; it fails to record sheer maximum speed, unless, as far as present designs have gone, by the addition of practically another speedometer proper.

While, no doubt, average speed records are more faithful and true representations of a journey than the memory of a needle momentarily crossing the mile-a-minute mark, it is to be feared that, human nature being what it is, the latter would be preferred by the majority of motor cyclists. The average speed indicator would be too truthful to be popular.

## AN ENLARGED OLYMPIA.

OLYMPIA is to be enlarged. A new hall on similar lines to the existing building is to be erected on the property adjacent to the present hall, and will have an entrance in the Hammersmith Road. This project has resulted on representations by the Society of Motor Manufacturers and Traders.

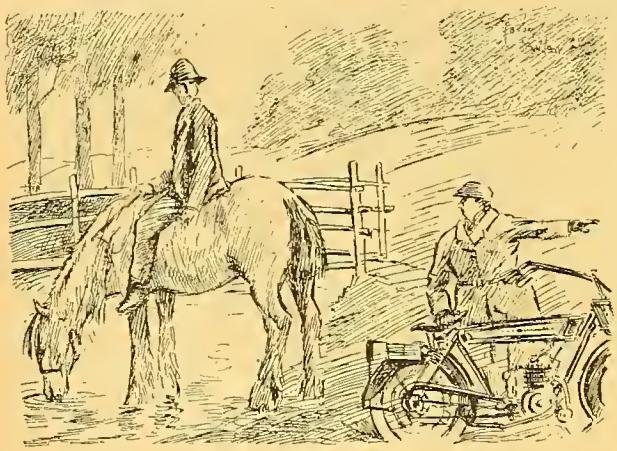
The floor space of the present and new halls will give a total area of over 300,000 square feet, which will make Olympia by far the most complete and up-to-date exhibition building in the United Kingdom. It is hoped to complete the new building by next autumn.

# A Motor Cyclist's Country Diary

Far from the Madding Crowd.

The Motor Cyclist's Heritage.

EVEN certain agriculturalists are advocating uprooting all the hedgerows in England and thereby adding many hundreds of acres of land to that available for producing food. Perhaps the hedgerows and the spreading trees rob the farmer of a certain amount of both grain and grazing, and no doubt neglected hedges, which are allowed to grow too high, are a source of danger and difficulty to



The farm lad who tells you of a "short cut."

both motorists and motor cyclists. But picture rural England without them! After all, the beauty and poetry and tradition of the country *do* count for something even in these days of materialism. We do not want to sacrifice everything to "hustle" and haste.

To return to a system of tethered cattle, to uproot all the wayside avenues, to banish the hawthorn and honeysuckle, would be to tear the very heart out of Eden and reduce it to a land of uninspiring railings.

Of course, no one in his right senses denies that there are certain stretches on many roads, and thousands of corners, which would be much better fenced with railings. As they stand, they are now a danger to all who journey that way, but to condemn them is not to include all the picturesque hedgerows in the country which are an integral part of its joy.

### A Bad Corner.

Writing of bad corners reminds me that only the other day a most careful motor cyclist, despite the continuous tune he had played upon his horn, narrowly missed being mixed up with a roadman, a wheelbarrow, a dog, and a heap of stones, which were located on the far side of a sharp turn hidden by towering hedges. The roadman admitted he was deaf, and then delivered himself of a bit of sound wisdom which might well be printed in red ink and forwarded to every road authority in England. He spoke thuswise:

"Now, you know, you or I might easily have been killed. . . . And if one of us had been then they'd have done summat at this 'ere corner. I allus notice that it takes about two smashes up to get these dangerous places putten right." . . .

### A Lunatic's Will.

I wonder if any reader of *The Motor Cycle* has by any chance seen extracts from a wonderful will left by a lunatic in Sunning Asylum? There is a wealth of poetry in it, and those of us who love the sounds and scenes of the country, who find an ever open and fascinating book in Nature, cannot help but feel that, insane though Charles Lounsbury may have been on some points, he yet had a soul. Note especially the following few sentences of what in his fancy he bequeathed to us.

"The meadows, with the clover blossoms and butterflies thereof, the woods and their appurtenances, squirrels, birds, echoes and strange noises, all the distant places which may be visited, together with the adventures there found. . . . The bloom of the hawthorn, the sweet strains of music, and the white clouds that float high over giant trees, and long days to be merry in, and the night and the moon and the train of the Milky Way to wonder at."

It is sometimes a wholesome thing that we whose heritage these sweets of life are, and who have the means of close association with them, should ask if we make the best use of our opportunities.

### Ruralists' "Directions," and Gypsies.

"You look troubled in your mind, my dears; let the gypsies tell you what's in store for you." Those were the exact words addressed to two motor cyclists the other day who had endeavoured to cut off three

"There was the fire with the stew-pot bubbling above it."

**A Motor Cyclist's Country Diary.—**

miles of good road which that day was infested with flocks of sheep and apparently all the cattle in England on their way to a local fair.

I know of few things more uncertain of their geography than sheep—except it be farm lads who tell us of short cuts. In France we used to ask military police and others the way to places, and always received the same answer, "We've only come here to-day." Well, that was better than the confidence the average "local" gives to motor cyclists as to ways and distances.

Well! we had been harried in mind and nerves and our souls endangered by violent curses upon all sheep and cattle breeders and their flocks and herds, when we came to a by-road. There was a youth ploughing in the field at the corner of it where it turned off the main highway, and, as luck would have it, he was turning his horses at the hedge as we came up.

### A Short Cut.

"There was nowt to stop us," he assured us; in fact, it was a short cut to where we wanted to be, and he would never think of going any other way. Possibly not—on foot; but he had not taken into account the squeezing of motor cycles over the narrowest of foot-bridges, the opening of eleven field gates, through which young horses were anxious to dash to the imminent danger of our machines, nor had he taken into account a bridgeless stream and ruts in places a foot deep. These were unconsidered trifles to him—or perhaps he was a humorist. Be that as it may, he went on whistling "To mow and sow and reap and hoe and be a farmer's boy," all unconscious of our inclusion of him in our general anathema of everybody and everything. . . .

Then, in a grassy country lane, which one might have imagined had got lost or was forgotten in these days of hustle, we came across a gypsy encampment. There was the fire with the stew-pot bubbling above it, there were the horses grazing in the hedge-backs, the black-haired, tawny children in clothes several sizes too big were in the picture playing with a greyhound, and the gypsiest of gypsy women smoking around the burning wood.

### A Gypsy Dish?

If we had been in a better humour we should have been struck by the picturesqueness of the scene which suddenly confronted us, and we might even have asked to taste the hedgehogs I am sure they were cooking. We might have inwardly thanked the farm boy for his advice. But, probably foolishly, we were out of tune with the world at large.

We had taken things too seriously instead of preparing ourselves for adventures—which, by the way, come much more frequently to the motor cyclist in the peaceful miscalled "uneventful country" than amid the crowd and hustle of town and city. So, I am afraid, we were rather offhand and even rather rude to the raven-haired lady who rightly judged we were worried and who'd have told us a wonderful story and promised us no end of good things for sixpence. . . . I have always loved the gypsies, too! and so I regret all the more that we passed on without a chat with them, for they can tell you more of England and Scotland than the most travelled of us know. J. FAIRFAX-BLAKEBOROUGH.

# STEERING BALANCE.

## A Plea for Closer Consideration of Over-all Efficiency at a time when Engines are Receiving so much Attention.

IN the drawing offices of most factories there appears to be a tendency to allow the question of engine performance to overshadow over-all efficiency. One point which, in the writer's opinion, has been badly neglected is steering balance. The difference in steering qualities of different machines has only to be tried to be appreciated, the average being a long way from the ideal.

I have ridden almost every standard make of machine, but have only found one or two which can be said to be self-balancing, a quality which every machine should possess. This leads one to conclude that proper weight distribution and the correct arrangement of the steering head have not yet received the attention due to them. I have had two Scotts, and found that both of them could always be ridden and steered "hands off" without the slightest difficulty. It may be argued that the low centre of gravity is the reason for this, but I do not think so.

Another machine I found which could be steered "hands off" riding solo was the 7-9 h.p. Harley-Davidson, which cannot be said to be low built by any means. For my own satisfaction, I once rode this machine from the outskirts of Garstang to the outskirts of Preston on the main road north (a distance of about ten miles) without touching the bars.

To appreciate that steering balance is one of the main factors in tireless riding, one should try to steer the average machine with hands off the bars. It can be done by gripping the tank and pressing on the footrests alternately, but the effort required will be a surprise to any rider who tries this method. When it is considered that opposing forces have to be corrected by constantly changing the position of the front wheel by means of the bars, the advantage of a self-balancing machine will be appreciated.

It is high time the makers gave the question of steering balance their closer attention. A machine should be ridden by body balance alone, and not by pushing first one and then the other of the handlebars.

Some designers seem to think that placing the engine so low that it will catch every three-inch projection, and by arranging the saddle position so that the unfortunate rider has to fold himself concertina fashion promote easy steering; but they are wrong. At present I ride one of the super-speed mounts which is of the above specification, but it is as bad, if not worse, than the majority. Why should this be so? A. E. S.

# OVERHAULING AN OLD MACHINE.

## How Skilled Attention may restore a Much Used Motor Cycle to New Condition.

SINCE the advent of the magneto and the countershaft gear box motor cycle design has undergone no radical change. There are many old machines, therefore, which, if they embody these two components, may be modernised to compare very favourably with the 1922 product.

These renovations usually imply the exercise of a certain amount of engineering knowledge—more or less in inverse proportion to the price paid for the machine. In the case under review, the machine was a spring frame 1915 7-9 h.p. Indian, and when purchased it appeared to be in poor condition in its detail parts, but the principal items, such as the engine, gear box, etc., were sound.

Fig. 1.—Hollow hinge pin for the spring frame, fitted with a large J.M. greaser.

### Attention to the Springing System.

The first item to demand attention was the spring frame. Due to inadequate lubrication, the moving parts were badly worn, probably due to the small oilers provided. A new hinge pin for the frame was made as shown in the first illustration. Similar pins were made for the small joints at the rear end of the chain stays and also for the connections between the eyes of the springs and the vertical members of the spring frame.

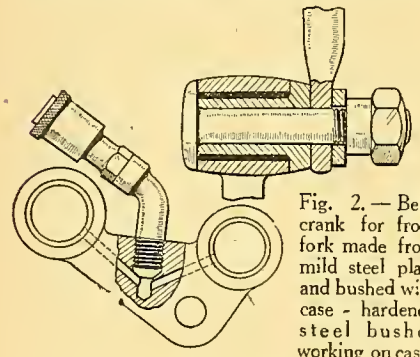


Fig. 2.—Bell-crank for front fork made from mild steel plate and bushed with case-hardened steel bushes working on case-hardened pins.

Fig. 3.—Method of fixing clevis pins in the front fork links.

The leaf springs were thoroughly scraped, and, before assembling, their working faces were treated to a mixture composed of equal parts of thick graphite grease and thick paint.

When the front fork was examined, it was found to need attention, the smaller holes in the bell-cranks being oval to the extent of $\frac{3}{32}$in. It was apparent that nothing short of new bell-cranks of huge proportions would provide any permanent satisfaction, so a completely new set of bell-cranks and pins was made. The former were cut from a piece of mild steel plate, and were as shown in fig. 2. They were bushed with case-hardened steel bushes, and worked on case-hardened pins.

The principal dimensions are as follows:

| | |
|---|---|
| Diameter of hole in large eye of bell-crank ... ... ... | $\frac{11}{16}$in. |
| Diameter of hole in small eye of bell-crank ... ... ... | $\frac{5}{8}$in. |
| Width of large eye of bell-crank | $1\frac{1}{8}$in. |
| Width of small eye of bell-crank | $\frac{13}{16}$in. |

The method of fitting the pins into the clevises (which were new and made larger) is shown in fig. 3, the nut being turned away from the hub. Both the pins were lubricated from one large greaser on the bell-crank.

On dismantling the engine completely, it was at once seen that it wanted new big ends. Both the crank pin and the connecting rod races were ruined through running with chipped rollers. These parts were ordered and fitted, great care being taken to make the flywheels true. New exhaust valve tappets were made and put in, the guides being reamed out to $\frac{5}{16}$in. to suit. The timing gears were perfect.

### Engine Modifications.

However, the pistons were in poor condition, also the cylinders, the clearance at the top of the cylinders being 18/1,000 in the rear and 15 in the front. As the machine was to be used with a sporting sidecar, the writer decided to effect any changes which might conduce to speed. As new aluminium pistons had to be made for the engine, raising the compression ratio from $3\frac{1}{2}$ to $4\frac{1}{2}$ to 1 did not involve much work.

The cylinders were chucked up in a lathe and three very light cuts taken off the bore of each. Each cylinder was then lapped on two lead laps. The outcome of this was a perfect bore both as regards accuracy and finish. Only two other changes of note were made on the engine. One was the fitting of a new throttle, the other the fitting of dustproof covers to the exhaust valve springs. These changes are worthy of description in detail.

Undoubtedly the most annoying feature of the old Indian engines was the throttle. This quickly developed wear, causing air leaks and difficult starting, while the slow running was completely spoilt. A new throttle was made to the design shown in fig. 5. The old throttle barrel was bored out to make it true, and a new throttle made out of a solid piece of gun-metal. This throttle had a trunnion formed on each end of it, and these trunnions turned in end plates fixed into the barrel. The end plates were held in position by long studs running on each side of the barrel. A slot for admitting extra air was cut in one end of the throttle, and a corresponding slot cut in the end plate. A small slide outside the end plate shuts this off when necessary. A small lever was fixed on the outside trunnion for moving the throttle. The friction on the air slide was caused by the small spring washer shown at (a) in sketch, pulling the lever (b) up against the air slide. Sufficient end play was left in the throttle to allow for this. When these alterations were finished, the machine's slow running was wonderful. It was possible to start from cold in summer without injecting.

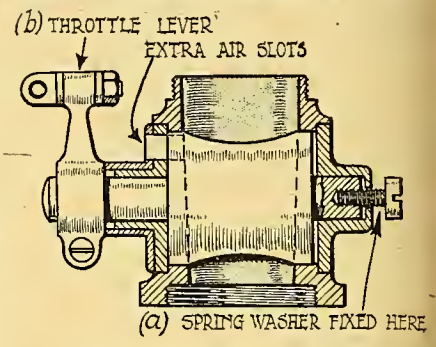



Fig. 5.—Alterations to the throttle.

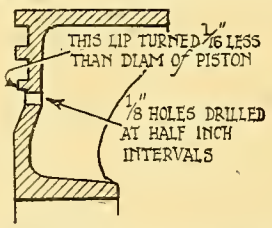



Fig. 4.—Section of wall of aluminium piston. The distance from the centre of gudgeon pin to the crown was increased by $\frac{3}{8}$in. in order to raise the compression.

The small push rods on the tops of the inlet domes were removed. These were made of silver steel, the ends being made red hot and quenched in oil. Covers were fitted over the exhaust valve springs. The construction of these is shown in fig. 6. A considerable amount of minor detail work was also carried out.

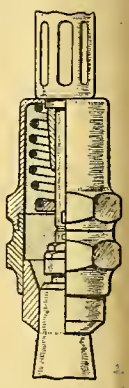
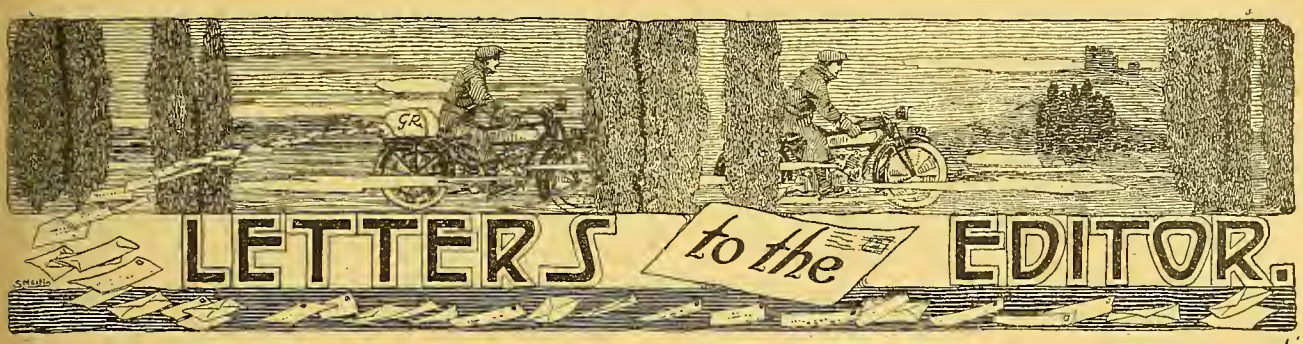


Fig. 6.—Construction of exhaust valve spring cover.

All the painted parts were treated to three coats of Indian enamel, and two coats of copal varnish, the finish obtained being well worth the trouble entailed by this procedure. When the outfit was finished it looked exceedingly handsome, and ran beautifully. The changes to the engine made a considerable difference to the speed, the machine with a sporting sidecar being capable of 60 m.p.h. without undue fuss.

It might be added that all the work was carried out on a 6in. lathe, and in the course of three winter months.—ENGINEER.




The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *FAMOUS SCOTTISH HILLS.*

Sir,—Will you allow me a few comments on Mr. B. H. Davies's notes, which recall many pleasant and a few unpleasant memories? I have not a copy of the Scottish contour book at hand, but I think reference to it will show that the "Pass of the Cattle" is six, not five, miles each way. I wonder if he has ever ridden a machine of less than the 500 c.c. class up it? I am inclined to doubt it, or he would not give four miles as the top gear length. I should say three miles top gear, two and a quarter second and threequarters bottom, certainly so for small machines. Again, if I may venture to doubt so eminent an authority, I do not think the gradient of the Inverfarigaig corkscrew even approaches 1 in 5; as far as the *gradient* goes it is an easy second gear hill, and that probably accounts for the many failures. Riders do not take it slow enough; on a low bottom gear, with very little throttle, it is not, in my opinion, a difficult hill to climb clean.

Two hills which between them in the last two Scottish Six Days have accounted for more failures than any others are not mentioned—Mam Rattachan and Glendoe. If memory serves, there were no fewer than twenty-four failures on the first named in 1920, due chiefly, it is true, to a fiendish patch of very loose earth about halfway up; but, under any circumstances, it is a "man's size" hill—with an extremely deceptive gradient. Glendoe is possibly even more beloved by the Edinburgh M.C. than Amulree. I doubt if there is any hill in the British Isles on which a novice, even though mounted on a first-class machine, is more likely to fail. The down hill stretches before the top eventually convinces him that he has missed the "end of an observed hill" notice; then suddenly there is a snorter of an "S" bend on a pukka 1 in 4 gradient with a surface chiefly conspicuous for its absence. (Rev.) J. M. PHILPOTT.

### *ECONOMICAL MOTORING FOR TWO.*

Sir,—Is there any British firm having sufficient courage and enterprise to build a really cheap efficient two-seated three-wheeler? As a motorist of long experience, I can say that an unlimited market awaits a machine on these lines:

Pressed steel frame carrying two-cylinder vertical two-stroke air-cooled engine (say 70×80 mm.) set on centre line, giving flywheel ignition and lighting and driving by disc to cross-shaft, thence by cased chain to rear wheel.

Weight need hardly exceed 3 cwt. 2½in. tyres would suffice; perhaps 3in. on rear wheel.

Reliability, simplicity, and economy would be obtained with smooth, variable gear of wide range and a reverse. There is no reason other than greed why such a machine could not be profitably sold at £90. VIATOR.

London, S.W.16.

### *HEAVY SIDECAR FUEL CONSUMPTION.*

Sir,—Might I inquire through your columns what mileage per gallon any of your readers are getting with M.A.G.-engined two-seater Matchless 1921 or 1922 machines? My usual load, including myself, is twenty stone, and I was surprised to find that my m.p.g. works out at about 35, speed average about 20 m.p.h. G.E.

Sheerness.

### *IS "THE GAME" WORTH THE CANDLE?*

Sir,—I have read with interest the article entitled "The Great Game," in which the writer complains that more private owners do not go in for such events. The reason for this appears to me, however, to be pretty obvious. Motor cycles were designed to travel on roads, or apologies for such, and were not intended to clamber up boulder-strewn mountain tracks, or cross the rocky beds of rivers. While no doubt fun on somebody else's machine, to the average owner who takes a pride in his mount, and who is probably none too well blessed with this world's goods, the game is not worth the candle. Smashed guards, damaged crank cases, and bent footrests may not constitute a wrecked machine, but they cost quite a lot to repair, and insurance companies will, quite rightly, not pay for this class of damage.

As to sport, I cannot see where it comes in. To my mind, using a good machine for this purpose is like galloping across a boulder-strewn seashore with a hunter. One might finish the ride with nothing worse than a few bruises (and who minds that?) but it could hardly be called sport for the poor horse. A. ARNOLD.

### *CONDENSED CRITICISMS.*

Sir,—As the owner of an American big twin, I am comparing it with the British machine of your correspondent "3485." The machine, a 1920 Harley sidecar outfit, has covered 5,620 miles, which includes a tour in North Wales, and is ridden all weathers:

Tyres.—New rear tyre, other two still good, no punctures at all.

Cycle Parts.—Very strong, no trouble.

Mudguarding.—Bad.

Springing.—Excellent 3in. tyres and spring saddle pin.

Silence.—Excellent.

Speed.—50 m.p.h. with two up.

Oil Consumption.—Small (automatic hand pump only used on rare occasions).

Oil Pump.—Automatic, no trouble.

Petrol Consumption.—50 m.p.g. on the average.

Engine.—Quite a wonderful engine, no trouble whatever, and, except for decarbonising every 2,000 miles, has cost me nothing in repairs.

Gear.—Foolproof change, no trouble at all.

Clutch.—Foot and hand; it has never had any adjustment, and I can drive through London easily on top gear to-day.

Chains.—Front chain runs in oil spray, quite good; one new rear chain, and that considerably worn.

General Accessibility.—Chains good; engine, carburetter, and magneto practically inaccessible unless engine unit taken out of frame.

Brakes.—Internal and external, both powerful.

Lighting Set.—Six volt accumulator, no trouble whatever, and is most satisfactory.

Stewart Mechanical Horn.—No trouble, placed on sidecar bar and works hand or foot.

Sidecar.—Comfortable, possible to get two persons in at a pinch.

Sidecar Box.—In bulbous back, room for luggage for two for a week's tour.

Petrol Tank.—Double tank with two separate feed pipes, nothing will make the filler caps splash over.

Kick-starter.—Excellent; will mostly start engine at fourth kick without injecting even in winter.

Plugs.—Had trouble with mica plugs due to fraying.

Carburetter.—Excellent for slow running, easy starting, speed, acceleration, and reliability.

Transmission Shock Absorbers.—Must use clutch instead.

General Reliability.—No involuntary stops, except for a smoked plug or two when in Wales due to use of hand oil pump. The only nut I have ever found loose during the whole distance travelled was one in the spring fork.

F. W. ALGAR.

Sir,—I own a machine fitted with a 350 c.c. Precision engine which has been in regular use since January, 1920. I do about 100 miles nearly every week-end, and holiday tours of considerably more.

Speed.—Never been timed and have no speedometer, but will pass certain other much-advertised two-strokes which enjoy a reputation for speed, both on the level and uphill, as many of their testers know. Both machines being 350 c.c.

Hill-climbing.—Very good. Will climb Beacon Hill, sclo, on 5¼ to 1 top in dry weather. The Wyche Cutting is easily climbed on bottom 9½ to 1, as is also Rising Sun, even in bad weather, driving being the main factor on Cotswold grease.

Petrol Consumption.—Never below eighty, sometimes ninety, and tuned only for economy, have done 110 m.p.g., two up, on undulating roads.

Oil.—Is extremely economical on oil, about 150 miles to the sump full, about one pint for ordinary riding. The makers' claim of 300 miles per sump is too optimistic.

General Criticism.—Usually an easy starter, but requires an injection on very cold mornings. Vibration is practically non-existent. My carburetter is an early Amac with the gauze removed and a hole in the induction, four-stroking does not occur, even at the lowest speed, with intelligent handling of the air lever. Plugs have been my biggest trouble, and no porcelain plug I have tried will stand up long. The only plugs I have found to give satisfaction are K.L.G.'s (aero type). I have not escaped entirely trouble free. The makers replaced a defective crankshaft which broke—close to the garage, luckily. I also split the detachable head, due, I think, to a flaw in the casting, but maybe to my own carelessness in tightening the bolts down. I decarbonise at short intervals and very often fit new rings.

T.F.M.

Sir,—The following criticism of my 1921 6-7 h.p. B.S.A. sidecar outfit may be of interest. It was purchased on the 12th of August, 1921.

Tyres.—First-class, sidecar and front wheel have never needed reinflation since taking delivery; one puncture in back wheel, picked up nail wheeling out of garage.

Cycle Parts.—Very strong; no trouble at all.

Mudguarding.—Good; back best.

Springing.—Splendid (spring seat pillar).

Silence.—Nothing to complain about.

Speed.—55 m.p.h. on threequarter throttle; never been run all out.

Petrol Consumption.—50 to 55 m.p.g. on No. 1 spirit, 55 to 60 m.p.g. on half No. 1 and half benzole.

Oil.—No record kept. I am very generous with this.

Oil Pump.—No trouble at all.

Engine.—Ample power; would pull me out of a coal pit if road wheels would grip.

Chains.—Have not seen them yet.

Gears.—Perfectly simple, simply perfect.

Brakes.—Excellent; back, internal expanding, will stop machine on any incline; front very good.

Sidecar.—Roomy and comfortable, very well sprung, only fault rather too high for lady to step into; bad steps fixed on chassis.

Starting.—Four or five kicks after injection when cold, one kick when warm.

In conclusion, I will say that I have such good faith in the B.S.A. that if I were twenty-five years younger (I am forty-nine next birthday) I would enter for the London to Edinburgh Run, and I think I should have a chance of a gold.

Preston. CK 5269.

Sir,—With reference to the interesting account of "3485's" experiences with an Enfield, the particulars of the 5-6 h.p. Raleigh outfit of which I took delivery in July may be of service. I do not claim to be an "expert driver"; perhaps the "average touring duffer" referred to in another article in the same issue would fill the bill. Mileage 2,205 (Midlands, North Devon, Yorkshire dales).

Tyres.—Good; one puncture (one nail).

Cycle Frame.—Duplex frame and fittings excellent, lateral whip absent, slight whip noticeable at times on single tube above tank.

Mudguarding.—Good; rear guards might be wider in really bad weather. Legshields very efficient and keep engine cool.

Springing.—Excellent; the comfort of a spring frame when rigid laterally must be experienced to be believed. On the occasion of my only puncture, I drove four or five miles on a back tyre which was flat without knowing it until a really bad pot-hole caused be to look at the wheel. (My previous mount was a rigid frame.)

Silence.—All that can be desired.

Speed.—Up to 42 m.p.h. with all spares, passenger, petrol spare, and heavy luggage. Long runs, speedometer 30-35 for two hours on end (except, of course, slows for villages). (Salisbury, Basingstoke, Bagshot Road).

Oil Consumption.—Not measured. The automatic lubrication system via crank case suction and emergency flooding are quite satisfactory and absolutely reliable.

Petrol.—General average 50-55 m.p.g.; average running speed usually scheduled for 22-25 m.p.h. Load includes passenger and an Airedale, weight about 50 lb., also week-end luggage.

Engine.—As near perfection as can be obtained. Flexibility and acceleration good, climbs well, and one is tempted to hang on to top too long on one figure hills. Accessibility of engine perfectly arranged.

Gear.—Sturmey-Archer, so needs no comment.

Chains.—Appear rather on light side, ½in. Front chain tends to stretch unevenly (Renold chain), but I may have got hold of a "dud," though a colleague of mine has had similar experience. Adjustment very simple and has further merit that each chain adjusts independently of other. Chain cases very efficient, and chains keep free from grit and water.

A spectacular method—but not one we would advise readers to adopt—of demonstrating the stability of a Scott motor cycle. E. H. Widdowson travelling at 30 m.p.h. on Nottingham Embankment.

Wheels.—Interchangeability a great advantage, but wheels must be screwed very tightly on to hubs to avoid trouble. Original locking device poor, but this has been remedied.

Brakes.—Very powerful; no cause for anxiety anywhere in North Devon.

Sidecar.—Passenger compares this unfavourably with the large Rudge sidecar of our former outfit. Springing fair, but springing and upholstery of cushions, etc., could be improved. Bluemel latest pattern screen found to be perfectly satisfactory. Luggage grid (extra) carried on sidecar body is efficient, but does not stow a 30in. portmanteau comfortably (perhaps this is not a reasonable requirement). Sidecar locker very capacious and takes an endless amount of spare luggage; locker under seat also very convenient.

Petrol Tank.—2¼ gallons, no need to split a tin; petrol strainer in tank is of use and not for ornament only.

Plugs.—Lodge weatherproof; have not be touched so far.

Carburetter.—Amac, fairly satisfactory, prefer Senspray as fitted on old 'bus.

Shock Absorber (Transmission.)—Very good, can run evenly and slowly on top gear, but could do with more oil than it gets.

General.—One involuntary stop in whole use so far—petrol tank was dry. Engine runs smoothly, and, punctures excepted (touch wood), one can set a schedule and be sure of keeping well up to time. I note that one correspondent comments on the absence of this outfit from competition events, and the same fact surprises me, especially as during the first three months I had the outfit I purposely drove it hard to see what would smash while I was under guarantee, but nothing did. A.Y. 9093.

Loughborough.

## *FUTURE T.T. RACES.*

Sir,—I have followed the correspondence *re* the T.T. dates with much interest, as I have seen many T.T. races and am a prospective amateur entrant. Although the suggestion has been made to hold the races in September, it does not seem to have been taken up by the A.C.U. I give some reasons below which I have not seen given before in favour of this suggestion.

(1.) The race would take place shortly before Olympia and would give a splendid opportunity to manufacturers to show us the capabilities of their new models.

(2.) The weather is usually ideal in September.

(3.) Many motor cyclists who are in business would not consider taking their holidays in May or early June. On the other hand, quite a number would be glad of an opportunity to spend a fortnight in the island in September. The 'varsities also would be down. Here are two fields from which a larger number of private-owner entrants might be gathered. The only apparent objection to holding the races in September seems to be the difficulty of the morning practising. R. G. SHAW.

Sir,—There have been so many suggestions for the future T.T. that I feel I must give my opinion. I think the most useful race to the trade would be a standard machine contest. It would be much more searching, and would give the manufacturers of the winning machines much more credit than the present race. Unlike an amateur race, it would have to be managed by the A.C.U., who could easily make arrangements concerning standardisation. I do not mean for this to take the place of the present T.T., but to be included just for a trial. SUGGESTION.

Bury.

## *THROUGH FEMININE GOGGLES.*

Sir,—As a lady rider of some nine year's standing may one be permitted to controvert some of the statements made in the article "Through Feminine Goggles" in your issue of January 26th?

Firstly, the statement that two-stroke machines are not considered to be very fast. The writer's standard Velocette—a lady's model—is capable of a maximum speed of 42 m.p.h. (by stop watch), and is capable of maintaining the Bonniksen at 36 m.p.h. continuously, without either "excessive vibration or piston slam." If one considers sporting models (and one notices four of the five ladies on the frontispiece are addicted to sporting handle-bars), the writer's sporting mount has actually averaged 27 m.p.h. over 175 miles of flat country—in the rain. More powerful sporting machines would do very little better than this.

After fairly extensive experience with both four-stroke and two-stroke machines, for sheer speed in comfort the two-stroke has it every time; but the cylinder must not be above 250 c.c. (this applies only to single-cylinder air-cooled machines).

The writer's open frame lady's model weighs 4lb. more than the gentleman's model, and the steering is even better. Altogether, the lady's machine is ideal for "stunting," and, for the average lady rider, is to be recommended in preference to the standard machine, if only on account of convenience and comfort. It is not always convenient to don special attire for short journeys, and the open frame obviates the necessity for this. Has the writer of the article ever ridden a Scott?

(Mrs.) MARY C. JENNISON.

## *MYSTERIOUS TEMPORARY SEIZURES.*

Sir,—I was rather surprised to read the letter in your issue for January 19th, 1922, under the above title. Surely, if your correspondent's engine is troubled in this way, the obvious thing to do would be to put his clutch "out" instead of raising the exhaust valve; then he would have no need to congratulate himself on coming to rest "fortunately still upright."

Incidentally, this would also prove whether the trouble is in the engine or elsewhere.

Would it not be possible that the trouble lies in his gear box, which automatically cures itself through the action of kick-starting? 5-6 BROUGH SOLO.

Cheshire.

Sir,—When I took my engine down for decarbonising, etc., I made the alarming discovery that the pin which carries the inlet valve rocking lever in the timing case was loose and free to move endways through the crank case wall into the flywheels. It also happens that there are three or more holes drilled in the flywheel rim, for balancing purposes, I suppose, and these holes revolve exactly opposite the end of the rocking lever pin.

The consequences of the pin moving endways can be left to the imagination, and I dread to think what might have happened had the machine been chain-driven and the engine suddenly locked while at speed.

Why the engine was not smashed up I cannot understand, as the locking actually happened twice on the road, once while testing at speed.

I would suggest that your correspondents who have been troubled with "temporary seizure" on four-stroke engines verify the security of their valve rocker pins, as there is a brightening on my flywheel where the pin had been rubbing.

Leeds. U 9896.

## *TOLLS AND HOW TO AVOID THEM.*

Sir,—I beg to thank your correspondent, Mr. Cuthbert Wilkinson for his information. It is not the paying so much as the imposition of being mulcted a return ticket when not needed. The one consolation with regard to the Bursledon Bridge is the "privilege" of taking a single ticket! Considering the recent information that two million odd pounds have accrued from the motor tax, I think it time some movement was set afoot to do away with these bridge tolls once and for all. P. FREEMAN.

Sir,—If Mr. Wilkinson or any other of your readers wishes to avoid the tolls at Bursledon and Itchen ferry between Chichester and Southampton, and, incidentally, find better roads, let him try the following:

On entering Fareham turn sharp right for Wickham instead of carrying straight on, thus avoiding the tram lines in Fareham and the nasty corner in Titchfield. From Wickham to Botley, bearing left at each of the two fork roads between these places, Botley to West End, and enter Southampton *via* Swaythling and Portswood.

At present the road between Swaythling and Portswood is "up." This can be avoided by keeping straight on instead of taking the sharp left-hand bend immediately after the railway bridge at Swaythling Station. This road will bring one into the Southampton-Winchester road, where turn left and enter Southampton *via* the Avenue and London Road.

Southampton. CR 4910.

### REAR LAMPS FOR ALL.

Sir,—At the annual general meeting of the Gloucester M.C. and L.C.C., held at the Spread Eagle Hotel, Gloucester, on the 31st ult., pleasure was expressed for all that you have done, and are still doing, in connection with the furthering of legislation dealing with the carrying of rear lights on cycles, and taxation. As a club, we feel strongly that these matters must not be lost sight of, and that the re-establishment of the law compelling all vehicles to carry rear lights should take place immediately in the general interest of all road users.

FOR THE GLOUCESTER CLUB,
Frank R. Ware, Hon. Secretary.

### "UTTERLY AMAZING SPEEDS."

Sir,—Referring to "Tomaso Dubitans's" letter under the above heading in your issue of January 26th, we, as importers, immediately recognise, by the performance, the Henderson.

It seems strange to us that your correspondent should criticise statements made concerning a motor cycle of which he has little or no knowledge (no retail deliveries at this time having been made in this country). The statements referred to can be vouched for by the American Police, who witnessed the trials of the new de luxe model, and who have placed numbers of orders in view of the extraordinary performance. Ignoring the question of the veracity of his remarks, he cannot even correctly or fairly quote an extract. He states, "a straightaway run from," which words do not appear in the catalogue referred to, and are, therefore, misleading.

Every model de luxe Henderson is guaranteed by the factory to do 75 m.p.h., and there is no reason why, on a good straight road across the desert for thirty-two miles to the mountains, an average speed of 65 m.p.h. should not be obtained. The grade varying from 2% to 14% (a maximum of 1 in 7.14) would not appreciably reduce the speed of a four-cylinder motor cycle travelling at over 70 m.p.h. The catalogue referred to does not imply in any way that the motor cycle was running up the maximum incline the whole time, nor for any great portion of the time.

Now as regards coolness of the cylinders, why should they not be touched with the bare hand? No suggestion is made or implied that bare hands were held indefinitely against the cylinders.

We cannot help but think that if "Tomaso Dubitans" delights in seeing his nom-de-plume in your excellent publication, that it would be an advantage for him to make correct quotations, and at the same time have some knowledge of the subject to which he refers.

MELCHIOR, ARMSTRONG AND DESSAU, LTD.
H. Harris.

### T.T. RACES FOR PRIVATE OWNERS.

Sir,—May I beg a little space of your valuable paper in answer to Mr. Pooley's letter? I have nothing to say regarding an amateur T.T. I am in favour of it. What I do object to are his club rules: "Membership is prohibited to those who are engaged or employed in the manufacture, sale, exhibition, or exploitation of motoring goods or accessories." Supposing other sports clubs, say football and cricket, refused men who were connected with the manufacture of goods used, what is going to happen to those concerned?

R. H. E. LOTEN.

Sir,—It would appear that, apart from the difficulty of defining an amateur, the grave problem is to find a suitable course owing to road races being prohibited in England. In your issue of January 26th, two different sands were mentioned as being good speedways; this may be so, but if an open T.T. race were held on any beach, I think that the essential road race flavour of the I.O.M. T.T. would be lacking; the same applies to Brooklands, also mentioned. Again, there are no sands placed centrally enough to be convenient to motor cyclists from all parts of the country. Altogether, "Sportsman's" description of some road races in Ulster should appeal to the sporting fraternity as the sort of thing that is wanted, but, unless a suitable park or estate is lent, or the Government approached successfully, many riders, myself included, will be disappointed.

Rugby. MUDGE.

Sir,—In reply to Mr. Thos. L. M. Gibson, who, by the way, does not appear to be a private member of the Auto Cycle Union, although so jealous of their interests, may I say that the Competitions Committee of the Auto Cycle Union—none of the members of which Committee are directly interested in the sale or manufacture of motor cycles—would gladly consider the promotion of a race for private owners if Mr. Gibson could show them by letter or, better still, by attendance before the Committee in person, that such a proposition is a practicable one. It would, I suggest, be necessary to satisfy the Committee on the following points:

(1.) The object of such a race.
(2.) The definition of a private owner.
(3.) The support such a race would receive.
(4.) Its financial aspect.

T. W. LOUGHBOROUGH,
Secretary, Auto Cycle Union.

### WHEN BORED WITH MAIN ROADS.

Sir,—I was much interested in Mr. Fincher's three "stunt" hills. Nos. 1 and 2 I know well, but I am not sure of No. 3. I usually go out on an A.B.C., but have now a 2¾ h.p. A.J.S. I have taken a Cubitt chassis up Crowell Hill on two occasions, but it was quite dry on each occasion.

There is a sloping grass track up Beacon Hill—Sheet 106. It starts half a mile from the Lambert Arms on the Stokenchurch Road. I have been down it once on a chassis, but should not care to repeat, but it should "go" on a solo taken upwards.

There is also an interesting grass path on the right, going half mile from Crowell towards and almost into Oakley. There is one stile, but a detour avoids it. The A.B.C. would not take the path direct, but the surface of the hill permits wide zigzags on the grass. T. S. SHARRATT.

Sir,—I know of a freak hill at South Harting, in Sussex, which I have never yet seen a machine climb—and I have seen several make attempts. I myself have tried several machines on the hill, without success. The entrance turns off the main road about one mile from South Harting, on the Midhurst and Elsted road. It lies at the foot of the Beacon Hill, on the main line of the South Downs. Not much trouble is experienced till after the second bend. The road is cut across by numerous water ruts, particularly on the top bend (approximately 1 in 3). The hill is about one mile long.

REGINALD S. FOWLER (R.A.F.).

Sir,—Mr. G. E. Meade gives a very interesting account of the hill included in the road from Topley Pike to Peak Forest Station, near Buxton. This hill is called Wormhill, and can only be likened to several worms tied in knots. Fortunately, it is exceedingly difficult of approach with a sidecar, as the nearest hospital is nearly four miles distant.

HAROLD KARSLAKE.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
New Edition. Just Published. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 5/-. By post, 5/4.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of 'The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### BELT FOR VARIABLE PULLEY GEAR.

(1.) What do you consider the most suitable belt for a 3½ h.p. Rudge-Multi for general durability over hilly country? (2.) Does the one you recommend also prevent excessive belt slip in wet weather? (3.) I have had balata belts recommended. Do you consider them satisfactory?—R.H.F.

(1 and 2.) For obvious reasons we cannot undertake to recommend any particular accessory in preference to others of the same description on the market. You should get good results from almost any rubber belt of first-class make, especially if you use the Multi-gear exactly as recommended in the makers' handbook. (3.) Belts made of balata fabric are possibly more satisfactory in wet weather, but, generally speaking, the rubber belt is preferable on this particular machine.

### MACHINE FOR A MIDDLE-AGED RIDER.

For some months past I have been interested in following motor cycle matters through your pages, and should now be greatly obliged if you would kindly advise me as to the purchase of a machine. I have been a cyclist all my life, but have only ridden a motor cycle a few times during the last twelve months. My age is forty-five, and I want a machine filling the following requirements as far as they can be obtained in one costing from £60 to £70: Lightweight; an engine which (without a kick start) will start up quite easily; absence of vibration; sufficient horse-power to take a pillion passenger (9½ st.) occasionally (my weight is 10 st. 11 lb.). General ease, comfort, and reliability in riding; speed does not matter. It is essential that an effective windscreen can be fitted. I understand this is possible, and should like to know where such a screen can be obtained.—E.A.M.

We should recommend you to obtain a 2½ or 2¾ h.p. two-stroke machine with two-speed gear, clutch and kick-starter. There are several machines on the market with such a specification at about £70. Windscreens on touring solo machines cannot be recommended; they are only used in racing, when they may be fitted very low down on the handle-bars to afford protection to the rider, who assumes a position which would not be comfortable for any length of time in ordinary riding.

## Important Dates.

**Sat., Feb. 25th—Colmore Cup Trial.**
**Sat., Feb. 25th, to Sunday, Mar. 5th—Brussels Motor Cycle Show.**
**Wed., Mar. 1st, to Sun., Mar. 5th—Paris—Nice Trial.**
**Sun., Mar. 5th—Argenteuil Hill-climb (France).**
**Mon., Mar. 6th—La Turbie Hill-climb (Nice).**
**Wed., Mar. 15th—A.C.U. One-day Trial for Stock Machines.**
**Sat., Mar. 18th—Victory Cup Trial.**
**Thurs., Mar. 23rd—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs. June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**

### LONG EXHAUST PIPES AGAIN!

Does a straight-through exhaust pipe 4ft. 6in. in length, without muffler of any kind, comply with the law when fitted to a 4 h.p. Triumph?—T.H.T.

The law requires that the exhaust gases shall be reasonably silenced by being passed through an expansion chamber or "other device" suitable for the purpose. A long exhaust pipe certainly does not give that degree of reasonable silence which the law was framed to obtain, and although the police in your district may not raise any objection, you are quite likely to find trouble in other districts away from your home if you do any extensive touring.

### FITTING DECOMPRESSORS.

I read in a handbook that a decompressor can be fitted to any make of engine. I have an 8 h.p. Royal Enfield, 1921 model; could I fit decompressors?—J.H.A.

Decompressors can be fitted in the valve caps of your machine, but they should not be necessary, as, if the engine is in good order, it is particularly easy to start. Most of the accessory houses supply decompressors that would suit, but it would be necessary to have your exhaust valve caps drilled and tapped with a sparking plug thread to receive them.

### MEASURING FOR WHEEL ALIGNMENT.

How does one line or measure a motor cycle frame to see if it is true, as I met with an accident, and since then I have to steer with the front wheel running towards the right, and this makes my arms ache pulling on the right all the time?—F.W.N.

The essential thing is that the two wheels shall be in the same track. This may be measured by stretching a cord tightly across both wheels, trying it first on one side and then on the other. It should be touching, or equally distant from the four points of the rims which it passes, on both sides.

### LICENCE TO BE ENDORSED.

Having been summoned for driving a sidecar to the danger of the public, I did not attend the Court and was not represented. I have received a notice from the Clerk stating I have been fined 50s., and asking for my licence to be forwarded for endorsement. I am remitting the fine, but have not sent my licence for endorsement, as I should like to know whether I can ask for reconsideration of the order to endorse, or appeal against it. If so, what procedure shall I have to adopt, as I cannot afford legal aid?—C.H.K.

If you wished to make any appeal against the endorsement of your licence you should have been either present or represented at the Court when the case was heard; but you cannot do anything now. We should advise you to forward the licence, as it will probably save further trouble. Provided there is no further endorsement during the next three years, you will then be able to apply for a "clean" licence at the end of that period.

### TYRE SIZE FOR 4½ h.p. B.S.A.

Please enlighten me in reference to the rear wheel tyre of my chain-cum-belt B.S.A. and sidecar. I have just fitted a new one; on examination I find it wearing very badly just where the beading comes in contact with the rim, and cutting the canvas through; it is a 26×2½in., and the wheel measures 21¼ diameter and the rim is 2in. wide. I may say the wheel is not quite true, and I find the joint of rim opening slightly.—H.J.

You do not give the date of your machine, but all the later ones at any rate are fitted with B.S.D.2 rims and sent out from the works with tyres 26×2½ for 2¼ rims. If by chance you have got a 26×2½ (old size) cover, this is not suitable for this rim, but if the latter is beginning to open at the joint, it would be advisable to have the wheel rebuilt with a new one.

### VARIOUS ADJUSTMENTS.

Will you kindly inform me on the following: (1.) 3½ h.p. Rover, 1920 countershaft solo model: at slow speeds, below 10 m.p.h., the machine jerks badly; what is the remedy? It is all right on any higher speed. (2.) In place of the twenty-one teeth on engine sprocket, I have had a twenty-five tooth sprocket fixed; what is the gear now? (3.) Do you recommend a spark intensifier attachment to the plug? (4.) On my front wheel the cone that is movable tightened up on my last ride, and I was thrown over the handlebars. As this is a very serious matter, especially should I be going fast or down a hill, I should like to know the cause. I have had the wheel off, and adjusted it. It was quite tight, and the wheel would only just move round. The balls are all right. There seems to be no contrivance for keeping the thing from screwing up. (5.) The head seems to answer far too easily to the helm.—R.C.R.

(1.) The trouble is probably due to the gear ratio being slightly too high for top gear running at very low speeds. You should change down to middle gear when you wish to run very slowly. (2.) You will find instructions for calculating gear ratios in the latest edition of "Motor Cycles and How to Manage Them." We cannot answer your question without knowing the numbers of teeth (or diameters of the pulleys) of all the elements of the transmission. (3.) "Spark intensifiers" will not necessarily improve the running, but they are of some advantage in guarding against sooting of the plugs on oily engines. (4.) If the front wheel cones were properly fitted it should be impossible to tighten up while the machine is running; it is just possible that you have removed the wheel and fitted it in the forks with the adjusting cone on the wrong side. The off side cone should be screwed up to the end of its thread or to a shoulder on the spindle. The adjusting cone should be on the near side of the machine. (5.) If the head is loose, it is quite easy to adjust. We would recommend that you obtain the makers' instruction booklet.

## READERS' REPLIES.

### FOR A LEGLESS RIDER.

I think "Legless" would find that a 1921 Bleriot-Whippet with the variable geared belt drive would suit his requirements, as this does away with the necessity for declutching when changing gear. The only alteration required to make the car completely hand-controlled is to fit a hand lever connecting up with the foot brake. The makers do this for about £4. Though not a legless driver myself, I am somewhat similarly placed, as I am paralysed from the waist downwards, the result of a shrapnel bullet in the spine, and, of course, cannot use my feet.—SPINE CASE.

With reference to your reply to "Legless" I am rather doubtful whether the Scott Sociable would be the most suitable machine to convert to hand control. I have never driven one of these machines, but it appears to me that gear-changing would present some difficulties, as one usually requires to manipulate clutch, throttle, and gear lever more or less simultaneously besides steering. Might I suggest that a 1914 or 1915 G.W.K. would be very suitable for the purpose, or, if the controls are of the same type, one of the current "engine behind" models. The car in question had a combined clutch and brake, by pedal, which was, I believe, particularly light to operate, and a foot throttle control. The latter could be worked by a lever on the steering wheel with the left hand, leaving the right free for the gear lever and hand brake. I suggest that, for working the clutch, a lever could be arranged working transversely and in such a position that it could be operated by the right elbow, being pushed outwards to release clutch, a further movement, of course, applying the brake. The top of the lever could be fitted with a flat plate about 8in. long, which would allow the elbow to slide backwards and forwards when changing gear, which is accomplished on this car by a straight backward and forward movement of the gear lever, there being no gate. The fact that the friction drive is foolproof and does not require delicate handling when changing gear would, I think, make such a control quite satisfactory. — The Scott Sociable certainly scores as regards starting, as an electric starter would, I suppose, have to be fitted to the G.W.K., but, on the other hand, the latter has a reverse, the lack of which might occasionally be felt on the Scott. In conclusion, might I, as another "disabled" driver, ask whether any of your readers have ever fitted an electric starter to a Morgan runabout, and whether there is any particular difficulty or disadvantage in doing so.—R.F.G. (Weymouth).

I think an outfit like mine would be the very thing for "Legless." It is a 2¾ h.p. three-speed Douglas, adapted to be driven entirely by hand from the light sidecar. It has one long handle-bar on which are the gas, air, and exhaust levers. The saddle has been removed, and the gear controls and brakes are arranged in its place. There is a lever to work the kick-start, and the second rider sits on the carrier. Are Derbyshire hills worse than these we have in the Lake District, I wonder? My Douglas regularly takes Dunmail Raise with two riding.—MARION W. LEE.

### IT WOULD BE NICE!

With reference to "Beginner's" query regarding the conversion of a four-stroke into a two-stroke when extra power is needed, I only know of one solution to this problem, namely, that he visits Slough and purchases a few spares (cylinder, piston, crankshaft, and crank case) all of two-stroke pattern. With these in his tool roll, he will be able to challenge any two, four, six, or eight-stroke on the market!—CONVERT.

The A.A. Scout equipped with his motor cycle and yellow side carrier is a familiar sight on British roads, and now the Association has extended its much appreciated service to France. The photograph depicts a scout on duty on the boulevards of Nice.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"G.J.C." (Burgess Hill).—Low generator; Terry spring saddle; Terry spring links, Wex carburetter; W.S.R. jet adapter; "Zoom-zoom" exhaust pipe; all for 2¾ h.p. Douglas.

"C.E.H." (Ware, Herts).—8 h.p. Blackburne with sidecar under heavy loads.

"G.A.W." (Northampton).—2½ h.p. Sun-Vitesse with rotary valve; solo or with light sidecar.

"E.C.B." (Rugby).—Overlap cam on 3½ h.p. Rudge Multi; speed, noise, general running.

"C.F.B." (Leith).—Fallolite lamps; reliability and life of pastille.

"Jeweller" (Harrow).—Sidecar outfit (box carrier); suitable for collecting and delivering clock repairs; absence of vibration first consideration.

"W.R." (Maldon).—Best mechanical lubricator.

"T. O'G." (Swinton).—2¾ h.p. A.J.S. 1922 touring model: speed; consumption.

"V.G.H." (Plymouth).—4½ h.p. Quadrant; solo.

"O.W.G." (Watford).—8 h.p. Royal Ruby outfit: speed, consumption, and lateral rigidity of springing system under heavy and continuous work.

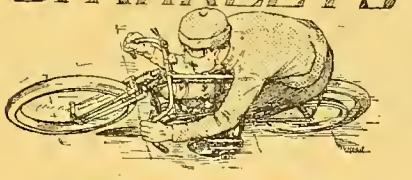
"W.C." (Edinburgh).—Binks or Atmos carburetter on 7-9 h.p. Harley-Davidson: advantage of Flexekas on valve stems.

"H.B." (Denton).—Methods of improving consumption of 2¼ h.p. New Hudson. B. and B. carburetter fitted with 26 jet (70 m.p.g.).

E.P. (Aspatria).—Watsonian Featherweight or similar sidecar on 2¾ h.p. 3-speed New Imperial; consumption and climbing in moderately hilly district.

"F.G.T." (Lewes).—7 h.p. F.N. and 8 h.p. Henderson for heavy sidecar work.

# SPARKLETS



### Spare Parts Price Reduction.

A reduction of 15% in the catalogue price of replacement parts is announced by Rudge-Whitworth, Ltd., Coventry.

### At the Scottish Show.

It is claimed that 53 per cent. of the tyres and 72 per cent. of the belts fitted to the machines staged in Kelvin Hall were of Dunlop manufacture.

### Another London-Exeter Echo.

A gold medal has now been awarded to P. Cunningham, the P. & M. rider, in place of the silver, with which he was credited in the M.C.C. Exeter run.

### A French Motor Cycle Journal.

Our French contemporary, *Motocyclisme*, is now published from its new address at 18 Rue Saint-Marc, Paris; starting with February the journal will appear on the 10th and 25th of each month.

### A Floating Exhibition.

It is proposed to send a Diesel oil engine driven 20,000-ton ship round the world fitted up as an exhibition of British trade. One of the suggested stands illustrated is shown fitted up for the exhibition with a sidecar outfit on the floor and a showcase at the rear for accessories. The ship is due to sail from London on August 15th, 1923, and will finish on February 7th, 1925. Particulars of available space can be obtained from the British Trade Ship, Ltd., 12, Grosvenor Gardens, London, S.W.1.

### For Competitions Committees

New motor cycle clubs, the committees of which are at a loss where to obtain suitable medals and awards for the year's competitions, would no doubt find their requirements met by W. O. Lewis (Badges), Ltd., of Howard Street, Birmingham.

### Triumph Service Depots.

Service agents who will carry comprehensive stocks of Triumph replacements are being appointed in all parts of the country; in addition there are already over 1,000 appointed agents in the British Isles, most of whom can supply spares for current models from stock.

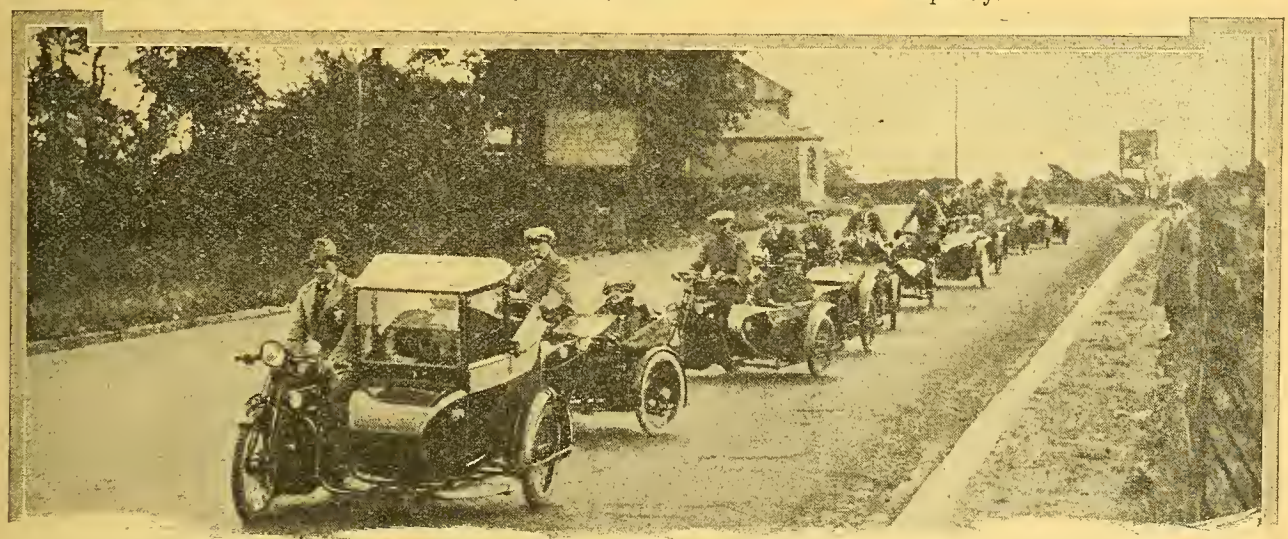
### Catalogues Received.

Holroyd Motors, 6, Warwick Street, Regent Street, London, W.1: A leaflet concerning the Holroyd sporting model, which was described in *The Motor Cycle* of December 8th, 1921.

Brookes and Harris, Bishop Street, Wolverhampton: A folder describing the compact folding coupé sidecar made by this concern. The body is one offering more protection from the weather than most, and the complete sidecar, on Millford chassis, is listed in two models at £51 and £58 respectively.

S. A. Newman, Ltd., 49, Lichfield Road, Birmingham: The first part of the new Ivy catalogue is devoted to a general description and chief features of the 2½ h.p. and 3 h.p. two-strokes and useful details, such as gear ratios for both solo and sidecar models, chain sizes, and just those particulars which the user wants.

Triumph Cycle Co., Ltd., Coventry: A well-written descriptive catalogue of thirty-two pages, with five illustrations printed on art paper. All the Triumph models are described, and many of the essential parts are shown in detail. All the preliminary details a prospective purchaser requires to know are dealt with adequately.



TO FOSTER THE SOCIAL SPIRIT. Staff trials and works reliability trials were a feature of last year. Development of the social side is all to the good in the motor cycle world, for when the productive staffs of factories are all keen riders the quality of the machines they make is bound to improve. Above is shown a group of Bradbury workers—may many such social runs take place in 1922.

# CLUB NEWS

### Uxbridge and District L.C. and M.C.C.

The first annual dinner was held at the Chequers Hotel, Uxbridge, Col. the Hon S. Peel, D.S.O., M.P., the president of the club, presiding over a fairly representative gathering. The club, which only started in the middle of last season, has now a membership approaching forty

### Bulwell M.C

Considerable progress has been made by this comparatively new club, and the membership is increasing very satisfactorily. Both sides of the movement, social and sporting, are receiving attention; sub-committees have been formed and are now at work, and the club has joined the East Midland Centre A.C.U. The honorary secretary is Mr. Chas. Marriot, 110, Commercial Road, Bulwell, Nottingham.

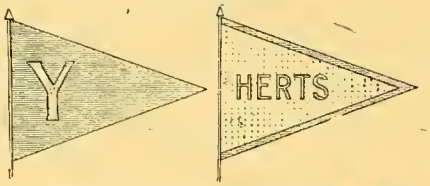
### Dublin and District M.C.C.

The sixteenth annual dinner was held on the 28th ult. at the Dolphin Hotel, under the chairmanship of Mr. S. L. Hutchinson, the president of the club. The company numbered over one hundred and twenty, and the proceedings throughout the evening were characterised by a good deal of merriment. The chairman said it gave him particular pleasure to have the honour of being the first chairman of a motor cycle club dinner to propose the sentiment of the "Irish Free State," and he expressed the hope that in the more settled state of affairs that the future promised for Ireland the sport would continue to flourish, and that it would be less difficult to carry out their competitions than it had been during the past two years. During the evening the toasts of "The Club," "The President," "The Visitors," "The Press," and "The Hon. Secretary" were honoured. Submitting the latter, the chairman mentioned that Mr. W H. Freeman had presented to the club a fifty guinea cup as a perpetual trophy for the winning team in the club's twenty-four hours' trial, which had been officially recognised by the British Motor Cycle Manufacturers' Union. Replicas of the cup would be given to the individual members of the team.

### Ilkley M.C. and L.C.C.

Headquarters of the club have been transferred from the Crescent Hotel to the Lister Arms Hotel, Ilkley.

CLUB COLOURS




We have several times recently published illustrations of the colours adopted by motor cycle clubs, and have encouraged a more general extension of the scheme. Here are two more: the blue and gold pennants of the Yeovil and District M.C.C and the Herts M.C. and L.C.C. The enamelled badge of the City and Guilds M.C.C. is shown at the side

### West Kent M.C.

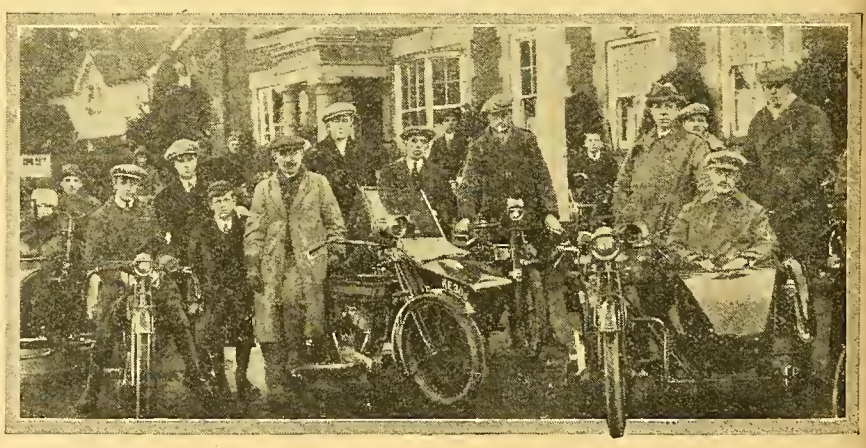
Fifteen machines took part in the speed judging twenty-mile trial starting and finishing at Chislehurst Common. A ten-mile circuit was well marked with arrows. Before the start, speedometer glasses were covered and watches handed over. The winner was T. Spratt (8 Matchless sc.), 5s. outside schedule. J. Wilson (4 Harley) was awarded consolation prize.

### South Birmingham M.C.C.

The annual general meeting was held on Tuesday of last week, at the Mermaid Hotel, Birmingham. The following officers were elected: President, Mr. Alec Ross; hon. secretary, Mr. E. Boydell; treasurer, Mr. J. Luckett; captain, Mr. Bert Kershaw; vice-captain, Mr. H. Uzzell. The balance sheet showed a very successful year and was passed without discussion. All communications should be addressed to Mr. E. Boydell, 93, John Bright Street, Birmingham. The first trial will be held on February 18th, the premier award being a cup to be won outright.

### Atherton and District M.C.C.

Members and friends of the newly formed club had their first run on Sunday, the 29th ult., under the captaincy of Mr. J. Mansley. It had been intended to have a run of thirty miles over Rivington and Bolton moors, but unexpected difficulties in the form of deep snow prevented the carrying out of the programme. Clean ascents were made of Rivington Pike, but along the top road to Belmont snowdrifts of two or three feet in thickness were encountered. The solo riders managed to find channels where the depth of snow was only 6in., but a sidecar machine had to be carried about 200 yards. The next run takes place on February 12th, when Blackpool will be visited under the captaincy of Mr. A. Bleakley.



A WINTER TRIAL. Start at Chislehurst Common of the West Kent M.C. Speed Judging trial, on the 27th of January. A 10 mile hilly circuit was covered twice.

**Club News.—**

### Proposed Brixton M.C.C. Club.

Mr. C. Willcox, of the Light Car and Motor Cycle Eng. Co., 22-26a, Tulse Hill, Brixton, has been approached by several local motor cyclists suggesting that he should form a club as above. He would like to hear the views of other local readers.

### Wallington and District M.C. and L.C.C.

Mr. Wilfrid Hiscox accepted the presidency of the club, the officers were re-elected, and a strong committee formed at the second annual general meeting, held on January 23rd at the Greyhound Hotel, Croydon. Messrs. A. Gruzelier and R. A. Green jointly presented a challenge cup, and the programme for the ensuing year was discussed.

### Keighley M.C.

Quite a large number were present at the second annual dinner held recently at the Victoria Hotel. Responding to the toast of "The Club," Mr. G. A. Shore said they could claim to have a big percentage of sporting riders. Last year two of the members took part in the Senior T.T., and he ventured to say that it was only mechanical trouble which prevented them from bringing the trophy home to Keighley. In addition, some of their members won gold medals in the Scottish and English Six Days Trials, so, he thought, the club could claim to be making some progress.

### Colchester and District M.C.

Sir L. Worthington Evans, Bart., M.P., the War Minister, was re-elected president at the annual general meeting, held at headquarters, the Red Lion Hotel, Colchester, on Friday, January 27th. The club has received from this gentleman a valuable silver challenge cup. The secretary's report showed that the club was in a sound financial position. All interested should address their inquiries to the secretary, Mr. T. S. Wilkin, 10, Osborne Street, Colchester.

### Avalon and Wells M.C.C.

A most successful annual meeting and dinner was held at the Swan Hotel, Wells, on Wednesday of last week, followed by presentation of two cups and prizes valuing £20 by Mr. A. J. Clare. An excellent musical programme ensued. Mr. W. H. Millard, 32, Bore Town, Glastonbury, is the honorary secretary.

### Redhill, Reigate and District M.C.C.

The first annual dinner took place on Wednesday, February 1st, at the Warwick Hotel, Redhill. It was regretted that the president, Mr. C. S. Case-Green, was unable to be present. Mr. B. L. Jephson presided. In addition to the Challenge Cup given by the President, some 30 medals, gold and silver, were presented. An excellent entertainment completed a most enjoyable evening.

The annual general meeting will be held on Thursday next at 8 o'clock at the Warwick Hotel, Redhill. New members will receive a hearty welcome. The hon. secretary is Mr. E. P. Duplock, 15, High Street, Redhill.

### Public Schools M.C.C.

The opening run will be held on March 12th, and the rendezvous will be, as usual, the Bear Hotel, Esher, at 11 a.m. The subscription is one guinea except for members who are still at school, who pay 10s. 6d. only. A fee of 10s. 6d. paid in addition to the subscription will cover entries for all competitions during the 1922 season. This does not prevent a member who anticipates entering for only one or two events paying these entry fees only; but it is pointed out that the entry fee for a Brooklands race is 7s. 6d., so that for an additional 3s. the member is free to enter all other 1922 competitions.

### Shirebrook M.C.

The club recently held its first annual meeting since severing its connection with the North Derbyshire Club. There was a good attendance, but the business was confined to the election of officers and arrangements for affiliation with the A.C.U.

### York and District M.C.

On Wednesday of last week, the club held its annual general meeting at the club headquarters, the Windmill Hotel. A satisfactory season was reported. Mr. G. A. Walker was elected captain for the ensuing year, and Mr. F. T. Cleveland hon. secretary; his address is "The Kiosk," Lendal, York.

### Ulster M.C.C.

On Monday of last week the club held its first annual general meeting, with Mr. T. Moles, M.P., in the chair. The report of the committee showed that the club had carried out a very big programme of competitive events during the past season, despite the difficulties of the times. The club had a membership of 150, and can claim to be the largest motor cycle organisation in Ireland. In moving the adoption of the report, Mr. Moles referred to the possibility of an international motor car race being held in Ireland next year, and suggested the Ulster club might consider whether it could on its own, or in co-operation with others, promote about the same period an international motor cycle contest on the lines of the Tourist Trophy Race.

### Acton M.C.C.

On March 11th the club will open its competition season with a sporting trial for solo machines. The trial will consist of sixty-mile circuits, each non-stop. All non-stop finishers within the time limits of 10m. late or early will receive gold medals. All entries have to be in by March 1st. Full particulars and entry forms can be obtained from the secretary, 46, Churchfield Road, Acton, London, W.3.

### North West London M.C.

Chiefly known for the fact that it gives every encouragement to the private owner, the club held its seventeenth annual dinner at the Holborn Restaurant on the evening of the 2nd inst., with Mr. J. W. Thomas in the chair. The duty of proposing "The Club" fell upon Prof. A. M. Low, who made an excellent speech, mentioning that the club was the only one in England composed solely of amateurs. It had had a clean record and a clean run for seventeen years. He coupled with its name the names of Mr. H. J. Pooley, the honorary secretary, and Mr. Frank Thomas, son of the chairman.

Mr. Pooley, in reply, mentioned that the members were out for sport only, and did not decry the ordinary trade club, as the British trade was the most sporting in the world. Their club had started with fifteen after the war, having lost fifty members. He was glad to say these fifteen had carried on the old traditions.

Then followed the distribution of prizes by Mrs. J. W. Thomas. The toast of the ladies was proposed by Dr. C. H. Auty and ably replied to by Mrs. Goddard.

In the course of the evening Mr. H. J. Pooley was presented with a cheque as a recognition of his services, and was instructed by the chairman that it was the wish of the club that he should purchase anything he desired with it. That most excellent sportsman stated that nothing would give him greater pleasure than to devote the money to the purchase of a challenge cup for a car event.

# A FRENCH ONE-DAY TRIAL.

THERE will be a repetition of last year's motor cycle and cycle car non-stop reliability trials in the Forest of Marly, near Paris, on February 19th. The trials, which are organised by the national body, the *Union Motocycliste de France*, are based on English non-stop runs, with penalties of 5 marks for each time the machine is stopped to take up supplies, 5 marks for a stoppage of the engine to change tyres, 15 marks for a stop to carry out repairs or make adjustments, and 10 marks for a stoppage for any other cause. A closely guarded and rather difficult circuit of about five miles will be used, the average speed varying from 18.6 m.p.h. for 250 c.c. machines to 24½ m.p.h. for machines of 500 c.c. and upwards. Scooters and motor-assisted bicycles are admitted, the average speed required of them being 12½ m.p.h.

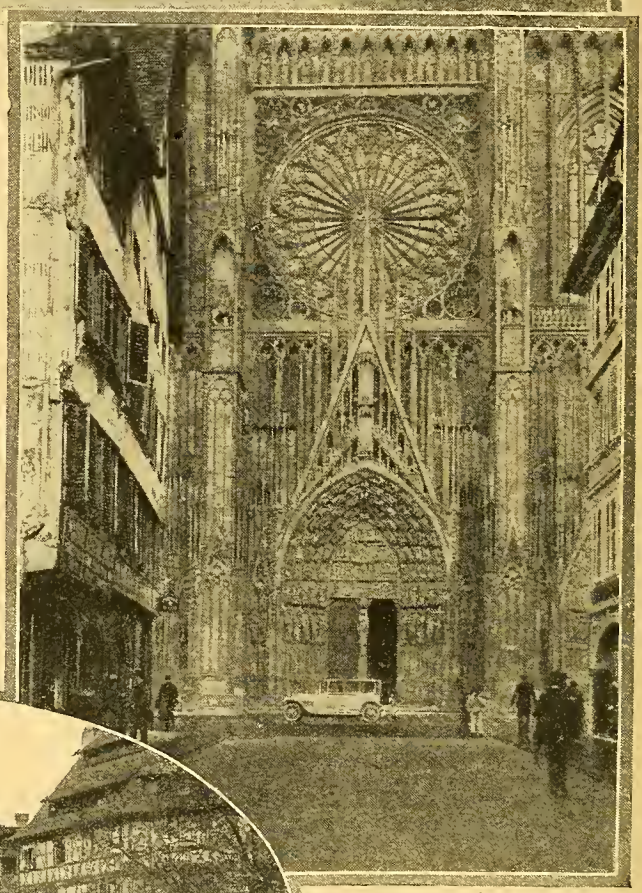
The distance varies with the class of machine, the maximum being 155 miles. Last year's event attracted considerable interest, but a freak hill having been included in the course, and rain having made the surface of this greasy, there were many complaints that the event was unnecessarily severe. In view of this it has been decided to improve the hill by giving sufficient width for a motor cycle and a cycle car to run side by side. If the weather conditions should be very bad, this hill will not be included. For the scooters and motor-assisted bicycles a shorter and easier course will be adopted.

# THE FRENCH GRAND PRIX.

## France's big Motor Cycle Event this Year to form part of Great Alsatian Fete.

AS every race in France is glorified with the title Grand Prix, it is often a difficult matter for British motorists to distinguish between the really great international event of the year and the scores of competitions of nothing more than local interest.

This year the leading motor cycle race in France will be a long distance speed contest to be held at Strasbourg, probably on July 12th. The race is organised by the national body, the *Union Motocycliste de France*, and doubtless will be open to machines of 250, 350, and 500 c.c. Strasbourg has been selected as the scene of the great French Car Grand Prix on July 15th, in which French, British, and Italian cars are entered. This speed contest for machines of



(Top).
One of the fast stretches on the Strasbourg course selected for the French Motor Cycle Grand Prix on July 12th.

(Centre).
Strasbourg Cathedral is one of the architectural beauties of the old Alsatian capital.

(Bottom).
A picturesque corner of France's regained city, which will be the centre of much motor activity next summer.

**The French Grand Prix.—**

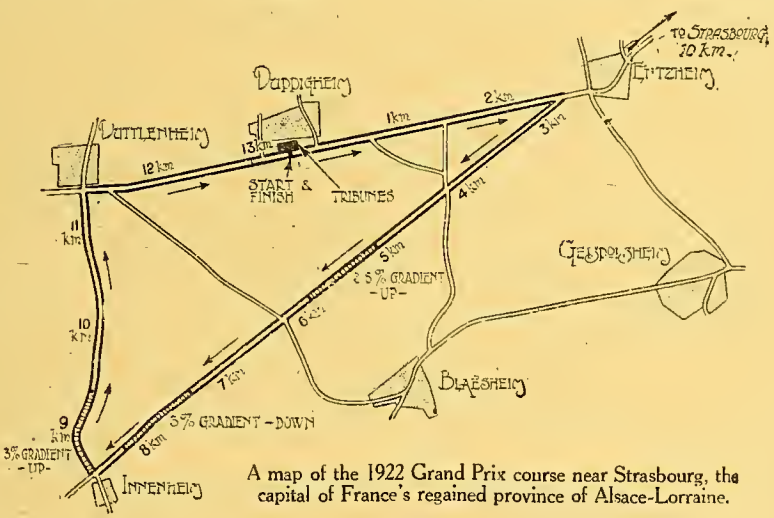
2,000 c.c. will be followed on the 16th by a Touring Car Grand Prix, the contestants in which will be granted a limited amount of fuel.

The Motor Cycle Grand Prix, to be run on the 12th, will have all the advantages of the preparations made for the great car race. A triangular course a little more than eight miles round has been laid out, and will be provided with grand stands, substantial supply pits, barricades at all dangerous corners, and on the day of the race will be guarded by regular troops. Some idea of the importance of the preparations can be gathered from the fact that 150,000 francs (£3,000 at present exchange) will be spent on improving these eight miles of road, and that in addition the City of Strasbourg has voted a subsidy of 300,000 francs (£6,000) towards general expenses.

### Hard Granite Surface.

The Strasbourg circuit is about as level as the Grand Prix course at Le Mans, on which a Sunbeam machine was victorious last year. It has the great advantage, however, of being made of hard granite, which will not be affected at all by the passage of the two-wheelers, and is expected to stand up under the strain of the 100 mile an hour racing cars.

The motor cycle and car races in Alsace will form part of a general programme of festivities to begin on July 9th and to finish on the 17th of the same month. These activities will comprise exhibitions of Alsatian costumes, the opening of the new race-course with important horse races, a competition for the decoration of houses and balconies, military reviews on the French national holiday, the *Quatorze Juillet*, boxing matches, boat races, and finally the arrival of the cyclists in the Tour de France 3,000 mile bicycle race. This big programme cannot fail to add to the general interest of the Motor Cycle Grand Prix and to attract big crowds from all parts of the country.




A map of the 1922 Grand Prix course near Strasbourg, the capital of France's regained province of Alsace-Lorraine.

### Tourist Attractions.

This part of Alsace being particularly attractive to the tourist, it is quite certain that not a few British motoring parties will take advantage of the race to explore the region. Excellent hotel accommodation can be obtained in Strasbourg, while in addition there are at least a score of surrounding towns and villages, comprising such historic centres as Saverne, Molsheim, and Colmar, where travellers are sure of finding all that they desire.

Another important French race will be organised by the *Motocycle Club de France*, one of the most active organisations in Paris. There will be two distinct races—the one on June 4th being for motor cycles, and that on the following day being reserved to cycle cars. A course has been selected close to the town of Montargis, about 65 miles due south of Paris. The distance round is eight miles, this comprising four turns, of which three will be banked. The town of Montargis has shown its interest by granting a subvention of 30,000 francs, while the local authorities have promised to remake the roads entirely.

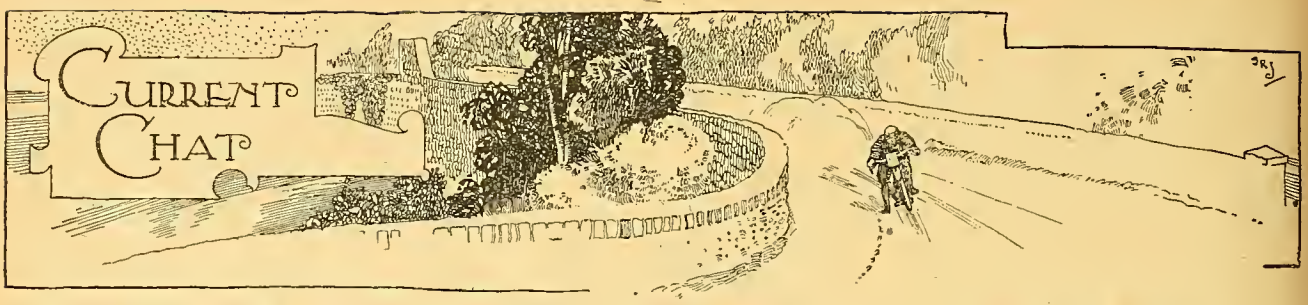
# INTERESTING DESIGNS.

THE conservatism of the British people is well illustrated when those who have followed the evolution of the motor cycle recall the many interesting designs which have been produced and which, for some reason or another, are not now offered to the public.

Most of these promising machines were of the unconventional type, and this fact may have been the cause of their abandonment. For example, the Stella twin-cylinder two-stroke was a most advanced design, embodying a water-cooled engine with cylinders side by side and in line with the frame. The gear box was combined within the crank case, and altogether the machine was a most workmanlike job, not unlike the French-made Lutece illustrated elsewhere in this issue.

Then there were the two-cylinder two-stroke machines produced by the Levis, Allon and Connaught firms. The first mentioned name appeared on the tank of motor cycles having both flat and side-by-side twins; the Connaught was a neat flat twin with a very ingenious method of transferring the charge, while the Allon resembled the Levis side-by-side engine, both being placed with their crankshafts across the frame.

Another design which many regret has disappeared from the market is the T.M.C., a four-cylinder shaft-driven machine with a spring frame; still another was the Barry, with rotary two-stroke engine. If we extend the list to American machines, we may add the Indian two-stroke lightweight and the tiny flat twin, both of which were sold in the U.S.A. during the war period, when importations were prohibited in this country.




## Times to Light Lamps.

| | | |
|---|---|---|
| Feb. 9th | .. .. | 6. 0 p.m. |
| „ 11th | .. .. | 6. 4 „ |
| „ 13th | .. .. | 6. 8 „ |
| „ 15th | .. .. | 6.12 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### An Encouraging Sign.

Every week motor cycle factories are increasing their staffs—a sign of improved trade.

### Clearance Tyres.

The economical motor cyclist wanting a new pair of tyres, in readiness for the harder riding which he expects to do when finer weather returns, might do worse than try some of the clearance lines which are being offered; they usually represent really good value.

### Garages for London Motorists.

To meet the requirements of motorists who are regularly using their cars and motor cycles in the Metropolis, the A.A. has now completed the inspection and appointment of upwards of fifty garages within a five-mile radius of Charing Cross. Members will be supplied with a full list of these recommended garages upon application.

### A "Second Olympia."

In addition to the new hall to be erected at Olympia, referred to elsewhere in this issue, a project is afoot to acquire the site of Crosse and Blackwell's jam factory in the Charing Cross Road upon which it is proposed to build a "second Olympia." When completed, the Kensington hall will be sufficient for the motor cycle exhibition next November however.

### Inter-'Varsity Hill Climb.

This year the rival Oxford and Cambridge clubs, in the inter-'varsity hill-climb to be held on Aston Clinton on March 4th, will be represented by teams of three riders in each class—350 c.c., 500 c.c., 750 c.c., and unlimited solo; 600 c.c. and unlimited sidecar; and light cars and cycle cars. Both the clubs concerned are, we hear, taking the matter very seriously.

### Entries for Continental Competitions.

Prospective British entrants for the Paris-Nice Trial, or any other foreign event, should note that their entries must pass through the Auto Cycle Union, the penalty for non-observance of this rule being disqualification. An F.I.C.M. rule states "that every entry for an International Competition shall be made to the promoting body through the governing body of the country which has registered such entrant."

### A.C.U. General Committee Meeting.

The next general committee meeting of the A.C.U. will be held at the R.A.C. at 2.30 p.m. to-morrow, Friday.

### An o.h.v.—at Brooklands?

It is not unlikely, we learn, that a new o.h.v. edition of a famous machine hitherto marketed solely as a side-valve model may shortly be seen at Brooklands.

### "The Motor Cycle" Index.

Indexes and binding cases for the volume of *The Motor Cycle* ending December, 1921, are now obtainable on application to Messrs. Iliffe and Sons, Ltd., Dorset House, Tudor Street, London, E.C.4. The price of the indexes is 4d., post free, and that of the binding cases, 3s. 10d. post free.

### idecar Fuel Consumption Records.

Arising from the controversy in our "Correspondence" columns under the above heading, the private fuel consumption test being organised by Mr. H. S. B. Booth, 235, Harrow Road, Paddington, London, W.9, has now been opened to all makes of sidecar and a limited number of solo machines. Intending competitors are asked to send stamped envelopes to Mr. Booth for particulars.

## Special Features.

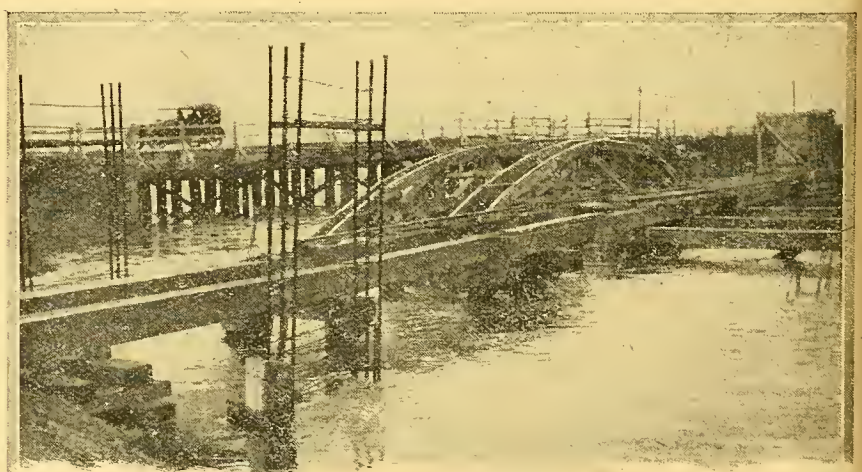
FRENCH SIDE-BY-SIDE TWINS.
T.T. REGULATIONS.
BUYING A SECOND-HAND MACHINE.

### Variations in Sunset.

In February sunset is 13 minutes earlier in Aberdeen than at Greenwich, and in July 44 minutes later. This month the evenings are drawing out at the rate of about 6 minutes every three days.

### Coachbuilders' Journal on Sidecars.

The building of sidecar bodies is becoming an important industry, and the advantages accruing from the Olympia exhibitions is seen in the eager competition by a vast array of ingenious minds, and every degree of talent and skill, in providing the most perfect combination that will ensure both comfort and protection to the passengers with the positive requirements of lightness in weight and beauty of general appearance. . . . . Individual requirements are as widely varied in the sidecar body as in any other type. It is not, therefore, too much to say that great and rapid as have been the improvements in the past, we venture to think they are but a prelude of much further advancement and future success in the application of the art of the coachbuilder to the motor cycle body.—*Cooper's Vehicle Journal*



REPLACING A DANGEROUS BRIDGE.—The old wooden structure in the background spans the Trent near Newark, and will be remembered by London-Edinburgh competitors. To motor cyclists the bridge was dangerous because of its sharp angle in relation to the highway on both banks, and to heavier vehicles because of its instability. The new bridge is to be in a straight line with the roadway.

# REGULATIONS FOR THE T.T.

## Minor Alterations Only. Trophy Replicas instead of Gold Medals. Entrance Fee Changes.

THERE are no very startling innovations in the regulations governing this year's Tourist Trophy Races, except as regards the official recognition of the (250 c.c.) Lightweight Race, already announced in *The Motor Cycle*.

Entries close at ordinary fees at noon on Saturday, April 1st, and at double fees at noon, Saturday, April 15th. The number of entries will be limited in the following manner: Entries are to be classified into two groups—(1) entries from manufacturers; (2) other entrants.

Group 1 will be arranged according to the number of entries per make; the manufacturer having the greatest number will have his entries reduced until they equal the next largest. The process will be continued until the required reduction has been attained, or until no manufacturer has more than three entries.

Of course, this procedure will only be carried out if the maximum is exceeded, but if, in spite of this reduction, the limit is still exceeded, Group 2 will be similarly treated until no entrant has more than one entry. If a still further reduction is called for, Group 2 will be further reduced by arranging the entrants according to the makes of machine, and cutting out the latest representatives of the most frequently entered makes.

The entry fee is now twenty-one guineas, which includes number plates and other items previously charged as extras.

### Awards.

In addition to the Senior Tourist Trophy, of which the others are exact replicas, there will be also the Junior and Lightweight Tourist Trophies; the driver of the winning motor cycle will receive a cash prize and a replica of the Trophy; the drivers of the second and third of each race will also receive cash prizes; and a replica of the Trophy will be awarded to the entrant of every motor cycle completing the course within thirty minutes of the winner's time.

### Team Prizes.

There will be the usual team prizes for teams of motor cycles of the same make in each race, whose drivers must finish within thirty minutes of the winners' times. Lastly, there is the Nesbit Award, granted by the stewards of the meeting to such competitor or competitors who, in their opinion, shall have exhibited outstanding pluck and endurance, or capacity to triumph over difficulties so noteworthy as to deserve special recognition.

It is now definitely settled that the Junior and Lightweight Races will be held on Tuesday, May 30th, and the Senior Race on Thursday, June 1st.

As the races are international competitions, they will be run under the competition rules of the *Fédération International des Clubs Motocyclistes* as well as under the open competition rules of the A.C.U. and under certain supplementary regulations.

Without going into the details of the regulations to be conformed to under the F.I.C.M. rules, we may recapitulate the following: Machines entered for the Senior race must be touring motor cycles with engines not exceeding 500 c.c., and must weigh not less than 187½lb. without fuel, oil, and tools; machines for the Junior Race must be fitted with engines not exceeding 350 c.c., and must weigh not less than 165½lb.; and for the Lightweight event 250 c.c. and 132¼lb. are the figures. For the lightweights, the minimum tyre diameter is 50 mm. (1.97in.), and here, as in the case of the other two classes, three security bolts must be used, one of which may be a bolt valve. (This last requirement may be waived in the case of those competitors who apply for exemption and who show good cause.)

### Silencers.

Silencers are not compulsory in the races, but must be fitted for practising. When the silencer is detached for the purposes of racing, the exhaust pipes must extend as far as the back axle.

Helmets of an approved type are compulsory, and metal-studded boots are forbidden during practice and during the races. The Union may require any driver to undergo a medical examination, and may disqualify a driver adversely reported on.

### Practising.

As in previous years, a driver will not be allowed to start unless he has ridden a motor cycle for at least five laps of the course in practice, one of which must be covered in one hour (Senior), in one hour and ten minutes (Junior), or one hour and thirty minutes (Lightweight). Drivers, however, who started in the 1920 or 1921 T.T. Races need only do three practice laps.

Machines and their riders will be weighed and the weight published, while machines which finish to time will be examined after the race.

# LAND'S END TO JOHN O' GROAT'S

## To Celebrate the Motor Cycling Club's Coming of Age—an End-to-End Run this Summer.

A LAND'S END to John o' Groat's trial, to celebrate the twenty-first birthday of the M.C.C., will be a feature of this year's events.

The Motor Cycling Club is the oldest motor cycle club in the world and boasts of about one thousand members, and this interesting decision was come to at the annual general meeting held at Pagani's Restaurant on January 31st. The agenda was of the simplest description, and the business consisted merely of the secretary reatling the notice convening the meeting, and the adoption of the report and of the statement of accounts, which were agreed to unanimously. It was while he was supposed to be criticising the accounts that Mr. Arthur Candler made the suggestion referred to above, which was received with enthusiasm. He considered that the competition should be confined to private owners and that the number of entries should be limited, owing to the difficulty of finding hotel accommodation on the route. He recalled some interesting facts concerning the Club's history. In 1904 the membership was only 151, and of these there were twelve who still belonged to the Club, while he himself was the only remaining member of the original committee.

As announced at the annual dinner, the president-elect was Mr. J. K. Starley, and on it being put to the meeting he was elected unanimously. The next procedure was to elect the Club officers for 1922. These are: Vice-presidents, Messrs. Albert Brown, E. B. Dickson, J. Van Hooydonk, J. A. Jackson, F. J. Jenkins, E. Perman, Harry Smith, R. C. Davis, and Lt.-Col. Charles Jarrott, O.B.E.; captain, Mr. W. H. Wells; hon. secretary, Mr. Southcomb May; hon. treasurer, Mr. L. A. Baddeley; and hon. auditor, Mr. W. Richards.

While the ballot papers for the election of the committee were being scrutinised, discussion was invited regarding the 1922 competitions. Mr. Harrison suggested the stiffening up of M.C.C. competitions and the re-institution of double-journey events. He thought that the smaller machines should be given a better chance. Mr. D. S. Parsons opposed the idea of double-journey events, and, referring to the smaller machines in the big trials, mentioned the case last year of a 2¾ h.p. sidecar outfit which was disqualified for being too early. Mr. Sawtell thought that car entries should be limited to vehicles with engines not exceeding 1,500 c.c., so that large cars might not obstruct the motor cycle competitors.

The Chairman replied to the effect that the M.C.C. events were more in the nature of club runs than competitions, and the Club did not intend to make them of the "knock-out" variety.

It was announced that Mr. W. H. Elce was again offering a cup for three-wheelers in the Land's End run, while Mr. L. A. Baddeley offered a cup for the Land's End to John o' Groat's competition, and a cup was also offered by Mr. H. Taylor for 350 c.c. machines for the same event.

The 1922 committee consists of the following members: Messrs. R. H. Head, A. Candler, H. G. Bell, E. M. P. Boileau, E. Bridgman, W. Cooper, B. A. Hill, J. A. Masters, J. Ogilvie, V. Olsson, G. Pettytt, and R. C. Empson.

# SIDECAR CHASSIS DESIGN.

## Extracts from an Informative Paper read before the Coventry Graduates of the I.A.E.

AT a meeting of the Coventry graduates of the Institution of Automobile Engineers, held at the Broadgate Café last week, Mr. R. R. Grindlay read an interesting and informative paper (illustrated by figures) on "Sidecar Design." Mr. E. Caudwell was in the chair, and there was a very good attendance. Extracts from Mr. Grindlay's paper follow :—

The first sidecar chassis was invented in 1902 and provisionally patented in 1903. Up to that period trailers and fore-

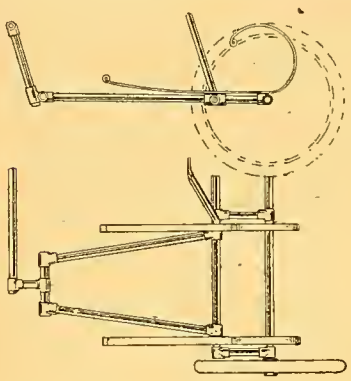


Fig. 1

carriages were being used as motor cycle attachments for the purpose of carrying an extra passenger, with very unsatisfactory results. The side method of attachment has affected the motor cycle industry to a degree second only to the advent

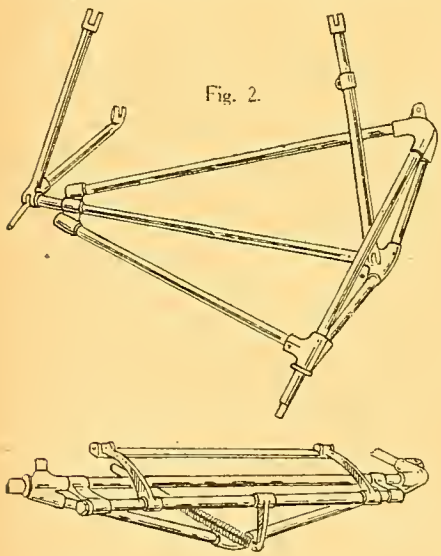


Fig. 2.

of the magneto and the pneumatic tyre. An illustration of the first sidecar chassis is given in fig. 1, and an inspection shows that there is very little difference discernible between this and the modern sidecar, at least in principle.

### Chassis Design.

There are, generally speaking, two types of chassis in use, one following a rectangular plan in construction, and the other a triangular plan. Steel tubing is in the majority of cases the material used in construction, chiefly by virtue of the simplicity and cheapness of a tubular frame, and also because it provides the easiest method of attaching the sidecar.

The rectangular plan is more generally used, and is in some ways preferable, as it permits of the easy attachment of a pair of front springs, one on either side of the body. Although one central front spring may be fitted with quite satisfactory service on a triangular chassis with a very light, small body, too much roll is experienced with the average body fitted, unless some form of anti-rolling device, such as a pair of hinged bell-cranks, suitably linked together, and

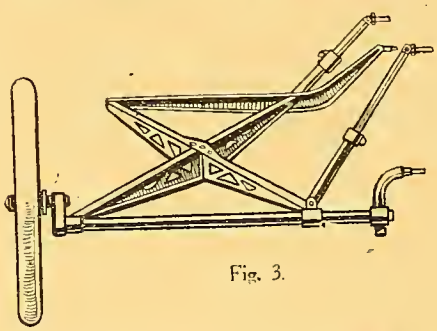


Fig. 3.

working in conjunction with coil springs, is used for springing the rear of the body.

To the best of the author's knowledge, only one triangular tubular chassis, the Scott design, fig. 2, has any advantage in rigidity over the usual rectangular form, since, with the one exception, none appears to be correctly triangulated to meet vertical shocks. It must be borne in mind that the centre of gravity of the sidecar must be kept as low as possible, in order to minimise the danger of the sidecar wheel lifting when negotiating a left-hand corner, and difficulty is experienced in designing a correctly triangulated chassis, as the height of the body would be increased too much.

### Rectangular Chassis and Distortion.

The objectional feature with regard to the usual rectangular chassis is the distortion occasionally found when a heavy load is carried at the front of the sidecar, resulting in the slight bending of the longitudinal members. The duplication of the longitudinal tubes is a method of minimising distortion, and many chassis having duplicated side members are found on the heavier and very powerful sidecar outfits.

A new design of chassis, made of girder section angle steel, has recently made its appearance (fig. 3). It will be seen that the chassis is composed of two main girder members arranged to cross one another after the manner of the diagonals of a quadrilateral, thus providing four arms. The arms are connected at the front by an I section member, which is deepest at the point of connection to the inner arm. The I section member then extends upwards and forms the main front connection to the motor cycle. The rear arms of the frame are joined by the underslung

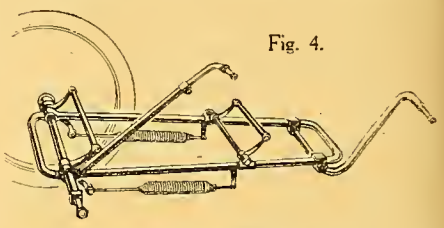


Fig. 4.

axle tube. This design certainly shows very favourable promise, as a rigidity much superior to the rectangular design is given, without the disadvantages of the triangulated tubular chassis.

Another very interesting chassis which has recently been evolved is shown in fig. 4. The frame is constructed of channel steel in one piece in the form of a truncated triangle with rounded corners. The chassis is void of any brazing, the ends of the channel steel being welded together. To this extremely simple frame are attached the axle tube, front connection tube, and the front spring crossbar, by means of suitable clips.

### The Simplest Chassis.

The very simplest design of chassis is illustrated in fig. 5. The principal component of the lay-out is the axle tube. This member is of exceptionally large diameter (2 inches), and may almost be

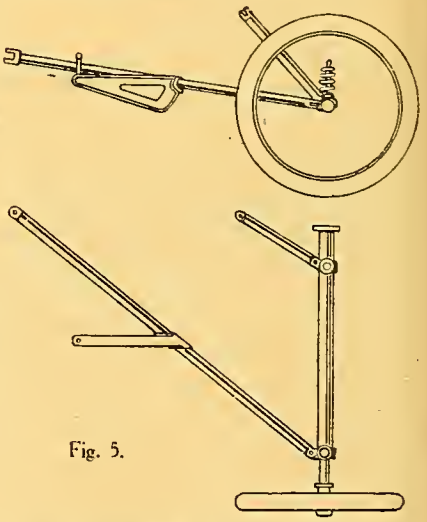


Fig. 5.

said to comprise the sidecar chassis itself, as it not only positions the sidecar wheel, but also supports, through the medium of helical coiled springs, the greater part of the load carried. The front of the body

**Sidecar Chassis Design.—**

is supported by a ball and socket joint attached to the underside of the sidecar, and to the connection tube running from the sidecar wheel to the down tube of the motor cycle by a girder pressing. No doubt this chassis, probably supreme in the elimination of non-essentials, would give satisfactory service attached to a very light machine.

To keep the centre of gravity as low as possible, a design in which the frame is underslung from the axle a matter of 4 or 5 inches is preferred. It is also a simple matter, in a dropped frame design, with the use of a simple bracket for the wheel axle, to fit a detachable sidecar wheel. There are still a number of designs in which the wheel spindle is brazed into the axle tube. This, in the author's opinion, is a deplorable practice, which has only one advantage, that of cheapness of manufacture. Apart from the possibility of weakening the tube in brazing, the trouble of removing the cones, balls, etc., from the wheel hub in order to detach the sidecar wheel has to be experienced to be realised.

An important point to be noted in the design of a sidecar chassis is with regard to the arrangement of the weight distribution on the chassis. The greater part of the load should be taken by the axle tube. In a few instances observed, the whole of the load is on the chassis in front of the axle tube, resulting in heavy steering and excessive tyre wear,

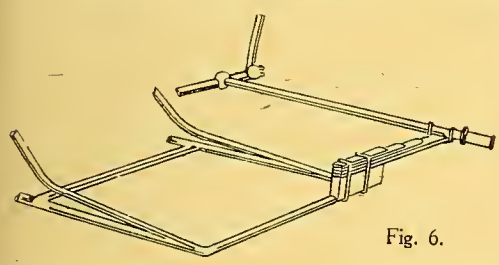


Fig. 6.

due to too much strain being placed upon the steering head of the machine.

**Flexibility in a Sidecar Chassis.**

There is no doubt that a certain amount of flexibility at some point between the sidecar wheel and the frame of the motor cycle is a very desirable feature, as the comfort of the rider of the machine is materially increased and the frames of the motor cycle and sidecar relieved of the unpleasant side shocks due to the sidecar wheel striking an obstruction. Also, the severe strains imposed upon the frame of the machine when cornering would be considerably alleviated in a design which allows the position of the motor cycle to depart slightly from the vertical.

Many attempts in various directions are evident to arrive at this flexibility, and to provide the necessary movement we find flexible sidecar connections and spring-wheel chassis.

One very questionable method still to be found in a few designs is where the sidecar is attached to the machine by means of three long bent tubes. The front connection is often an extension of the inner side member of the chassis, and usually has two right-angle bends. It is claimed

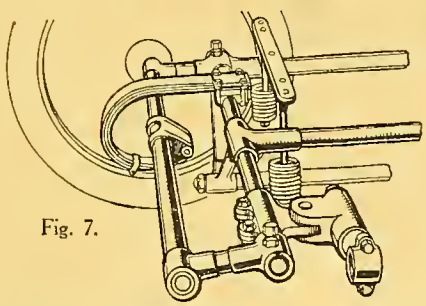


Fig. 7.

that this tube, being long and "whippy," allows a certain amount of flexibility, thus minimising the possibilities of fracture in the cycle frame. This claim is possibly correct, but trouble is practically certain to ensue as the result of following this practice. It is surely most undesirable to rely upon the "whip" of a bent tube to give flexibility, as the tube being stressed in cornering, or even as a consequence of the camber of the road, will eventually take a permanent set at one of the bends, causing the machine to lean inwards and run out of alignment. Breakage of the tube itself is also liable to occur, owing to the crystallisation of the metal in constant "whip." The type of design in question is, in the author's opinion, most unsatisfactory, and one to be avoided, as it is certain that commercial steel tubing has not a sufficiently high elastic limit to be used for this purpose.

The system of providing flexibility by means of correct flexible connections has met with little success in this country, although for many years designs have been applied and tested. The usual form of flexible connection incorporates some form of hinged joint, working in conjunction with a spring to hold the machine in a vertical position when stationary, and allowing the machine to tilt when cornering. The small degree of success the various devices have met with is probably due to the feeling of insecurity experienced when cornering, and the general instability of the machine and sidecar with this type of attachment fitted.

The most satisfactory method of providing flexibility appears to be given in a wheel. Where a spring-wheel chassis is used there is less possibility of the alignment being affected (as is the case with flexible connections), and the machine is permitted to lean so slightly out of the vertical as to be unnoticeable in use.

Many very satisfactory spring-wheel chassis are now in use, and three typical designs are shown in figs. 6, 7, and 8.

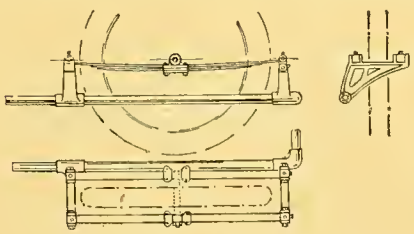


Fig 8.

The A.B.C. (fig. 6) is a commendable design for attachment to a spring-frame motor cycle, and to allow for the independent movement of the rear wheel and sidecar wheel the axle tube is connected to the motor cycle chain stay through a ball type of universal joint. The chassis is connected very rigidly to the frame of the motor cycle, and a leaf spring holds the axle tube in position and gives the required flexibility.

In the Sheffield Henderson design (fig. 7) the axle tube is swivelled from the chassis from two points at the extreme width of the frame, and is held in position by a central laminated spring.

The Grindlay design (fig. 8) embodies a floating hub spindle carried between two half-elliptic springs shackled at the rear. It

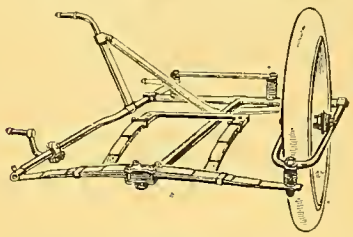


Fig. 9.

will be seen that the wheel itself is practically the only unsprung weight.

**An American Flexible Chassis.**

A typical American design of a flexible chassis is shown in fig. 9. In this design the only rigid member of the frame is the near side tube, which is fixed longitudinally with the machine. The front tubular member, to which is connected the wheel frame, is free to swing on the bearing on the longitudinal member, and carries the coil springs for the front of the body, also a centre tube extending rearwards. On the end of the centre tube is (1) a transverse stay supporting the quarter-elliptic rear body springs, and (2) a long transverse spring, the ends of which are connected to the end of the wheel frame and rigid member respectively.

It will clearly be seen that a great amount of flexibility is afforded by this chassis, and it is largely used for racing in America, as the design allows the machine to lean at an extreme angle.

---

## Motor Coaching in 1922.

THE average motor cyclist has not generally a good word to say of motor coaches, but they represent a very important section of motordom and have come to stay. As a rule, the majority of complaints are caused by the few black sheep of drivers who are found everywhere. The rapid development made in the coach business can be best realised by the special coach number of our sister journal, *Motor Transport*, to be published on Saturday next, which deals with every aspect of the industry from mechanical to traffic control and organisation. There are two matters, however, that will particularly interest motor cyclists; one is the growth in popularity of small sized coaches and the other the development of pneumatic tyres for such machines.

# STIFFENING THE CLASSIC RUNS.

BY the older school of motor cyclists, such time-honoured runs as the M.C.C. provides each year in the London-Edinburgh, London-Land's End, and London-Exeter trips, are followed as much for their sentimental associations as for any kudos to be obtained from "pot-hunting" in these events.

A younger band of motor cyclists, with that iconoclasm which is the privilege of youth, seeks to convert these annual "runs" into stiff competitions in which the gaining of a medal will have more significance than that the recipient thereof completed a certain more or less main road journey in a certain time.

Now before this stiffening up cry is allowed to stampede the Competitions Committee of the M.C.C. into a change of established policy, let the reformers review the status of the M.C.C. events.

These classic runs were originated in the days when it was an achievement to conduct a motor cycle with certitude and reliability from one place to another at the extremity of the country, making use of just such roads as the ordinary tourist might venture upon. If the M.C.C. had any ideas of publicity for the movement, it certainly did not want to demonstrate that motor cycles could *not* do the journeys, but that they *could* complete them. If, nowadays, 98% of the starters cover the runs successfully, the propaganda effect is good, and everyone should be satisfied—except the odd 2%!

### London—Land's End.

Surely, however, it is not the function of a pure club to provide propaganda, publicity or public testing in runs which are only open to its own members; such matters are for the governing body.

Most of the desires for an increase in the difficulty of an M.C.C. run appear to centre on the Land's End trip at Whitsuntide, particularly with regard to the Porlock-Lynton section.

Last year, it will be remembered, the commencement of Porlock to the summit of Lynton (this included the dangerous descent of Countisbury) was made a timed section scheduled at about 19 m.p.h. On account of the necessarily slow speeds of the ascents, some dangerous "blinding" took place in order to gain time on the indifferent level and dangerous down grades in the section. To eliminate this dangerous practice, it would be better to time the ascents of Porlock and Lynton separately—say three miles of the former and one of the latter—setting minimum speeds for each class and type of machine. Should this prove insufficiently difficult, there are worse hills than either Porlock or Lynton in North Devonshire on which gold medals might be lost easier than won; at the same time it would be well to guard the M.C.C. runs from the savour of "colonial trials," a feature which might be introduced by the demands of those unaware of the traditional lines on which the classic M.C.C. runs are conducted.

# THE TOUR DE FRANCE.

GREAT interest is being taken in the Tour de France motor cycle and cycle car 2,300 miles reliability trials, to start from Paris on March 25th, as is evidenced by the seventy-one entries on the closing of the lists at ordinary fees. It is certain that this number will be increased before the final closing, and it is even possible that the increase may be considerable if, as suggested, the acceptance of entries at ordinary fees is continued until February 15th. This change is proposed owing to the fact that foreign firms have requested an extension for the closing date.

According to M. Hamon (President of the *Motocycle Club de France*), who is responsible for the organisation of these trials, an offer of a valuable international cup has been received from a well-known sportsman, and will be accepted if, on the final closing of the lists, there is sufficient international representation for French, Italian, Belgian, British, and American teams to be formed.

One of the features of the Tour de France is the large number of entries in the two cycle car classes, for machines of 750 and 1,100 c.c. respectively. There are twelve competitors in the former class and nineteen in the latter, making thirty-one out of a total of seventy-one in all classes. Out of these thirty-one small cars, it is interesting to note that twenty-six have four-cylinder water-cooled engines. This gives a proportion of practically 84% water-cooled engines to only 16% air-cooled, thus revealing the pronounced tendency of French makers to prefer the small four-cylinder water-cooled engine in place of the air-cooled twin receiving so much attention in England. All the cycle cars are regular trade entries, with experts at the wheels; they are being prepared with the very greatest care, for it is recognised that 2,300 miles at an average of nearly 25 m.p.h. will constitute a trial of no mean order. It is hardly necessary to say that trade rivalry runs high, and that the performance of the competitors on the road will be followed with the closest attention.

### British Machines.

The motor cycles in the Tour de France vary from 250 c.c. solo mounts to 1,100 c.c. sidecars. The British representatives are B.S.A., Velocette, Levis, McKechnie, and Sunbeam, with indirect representation in the Yvels, made up almost entirely of British parts. Several entirely new models will make their appearance in these trials, among them being the Gnome and Rhône single-cylinder four-stroke which made its appearance for the first time at the last Paris show. The A.B.C. is built by the same firm, but only one machine is entered, with Naas as rider. The Blériot in the 500 c.c. solo class will be a new model with three-speed gears, while the 1,100 c.c. sidecar of the same make will be an entirely new production. There will be four water-cooled motor cycles in the trials, all of them being Viratelles. Two are in the 350 c.c. solo class, one in the 750 c.c., and another in the 1,000 c.c. sidecar class. The Janoir is another rather original French machine, which, although announced some time ago, has not yet figured in public competitions. It is a flat twin of 965 c.c. with aluminium cylinders having steel liners, forced feed lubrication, a three-speed gear box combined with the engine, and a special type of pressed steel frame.

The following is the list of the motor cycles entered:

250 c.c. Solo.
1 Levis, 2 Velocette, 2 Soyer.

350 c.c. Solo.
1 D.F.R., 1 Rasser, 2 Yvels, 2 Viratelle, 4 Gillet.

500 c.c. Solo.
1 Sunbeam, 1 A.B.C., 2 Blériot, 2 Gnome and Rhône.

750 c.c. Solo.
1 Viratelle, 1 B.S.A., 1 McKechnie, 1 Indian, 1 Harley-Davidson.

600 c.c. Sidecars.
1 D.F.R., 1 Sunbeam.

1,000 c.c. Sidecars.
1 Sunbeam, 1 René Gillet, 1 Blériot, 1 Viratelle, 2 Indian, 3 Harley-Davidson, 3 Janoir.

# FORTHCOMING IRISH TRIALS.

THE prospect of more settled conditions in Ireland which is foreshadowed by the improved political situation is likely to result in 1922 being a year of great activity amongst Irish clubs. The manner in which the majority of the clubs succeeded in carrying on during the troubles of the past two years created admiration; despite radius restrictions and trenched roads, most of them succeeded in carrying out a competition programme. Circumstances were too strong in some cases, however, and two of the Irish classic events, the End-to-End and the Cork "Twenty," another strenuous reliability trial, had to be abandoned last year.

Although the Ulster Centre of the Motor Cycle Union has not yet moved in the matter, it is regarded as more than likely that the End-to-End will be held as usual in July next. In the south, the Southern Centre of the Union has already sanctioned the dates of two of the classic events of previous years, namely the Dublin "Twenty-four," which will be held on the 23rd-24th June, and the Cork "Twenty" on Whit-Monday, June 5th. Interest in the first-mentioned trial will be enhanced by the fact that Mr. W. H. Freeman has presented to the club a fifty guinea challenge trophy as a perpetual prize for the winning team in the event.

# COX "ATMOS" CARBURETTER

## STOP THE ROT!

*OBTAIN HIGH EFFICIENCY FROM YOUR MACHINE EFFICIENCY OF A SUSTAINED CHARACTER THAT WHILST PRODUCING THE GREATEST POSSIBLE POWER, AT THE SAME TIME PROLONGS THE LIFE OF THE ENGINE.*

*SUCH EFFICIENCY AND ENGINE LIFE IS TO BE OBTAINED BY USING A COX "ATMOS" SINGLE LEVER CARBURETTER — THE ONLY KNOWN SINGLE LEVER CARBURETTER THAT PERFECTLY ATOMIZES THE FUEL AND DELIVERS A CORRECT MIXTURE TO THE ENGINE AT EVERY POSITION OF THE THROTTLE, AND UNDER ALL CONDITIONS.*

*A FEW OF THE ADVANTAGES:—*

*EASY STARTING,*

*FLEXIBILITY,*

*INCREASED POWER AND SPEED,*

*A QUIETER EXHAUST, WHICH MEANS BETTER COMBUSTION AND FUEL ECONOMY,*

*MUCH LESS CARBON DEPOSIT,*

*A SMOOTHER ENGINE AND SOFTER DRIVE, THEREBY PROLONGING THE LIFE OF ENGINE BEARINGS AND TRANSMISSION.*

## *THE CARBURETTER THAT IS DIFFERENT*

*AND TIME HAS PROVED OUR CLAIMS TO BE CORRECT.*

*PRICE £4 10 0 READY TO FIT. GET THE RIGHT SIZE FOR YOUR ENGINE AND YOU WILL BE DELIGHTED. ASK YOUR AGENT FOR PARTICULARS OF OUR 60 DAYS' TRIAL.*

**COX CARBURETTERS, LTD.,**

**LOWER ESSEX STREET, BIRMINGHAM.**

REGISTERED.

# THE NEW CAMEO

## DE LUXE

¶ When the question of a windscreen comes to be considered, the claims of the Cameo are irresistible.

Quickly adapted to any size, any make of sidecar, its simplicity, fine workmanship, and splendid material — the ease with which it is manipulated— make it the most attractive of all windscreens.

Ask any "Cameo" user—

**Price** Screen only .. **£2 15 0**

" Side Panels, each **£1 0 0**

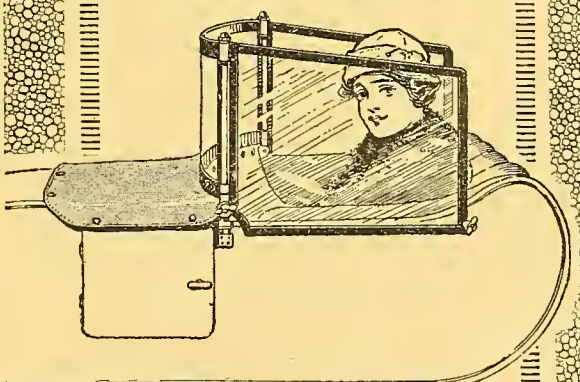
**IMMEDIATE DELIVERY.**

The Panels are adaptable to all CAMEO SCREENS, and can be fitted in one minute.

**Ollard, Westcombe & CO., LTD.,**

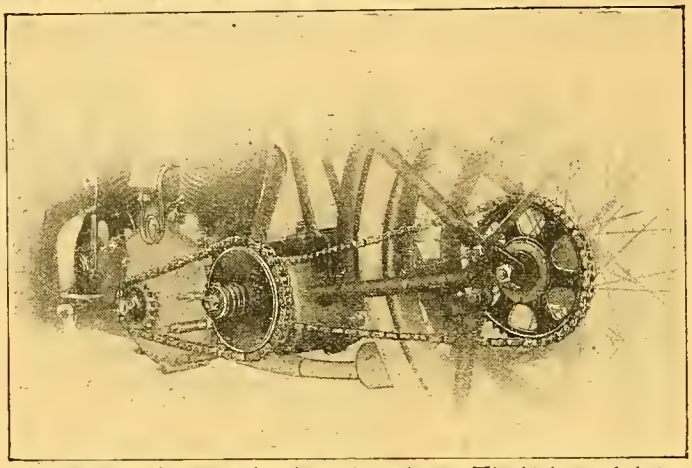
46-47, Great Charles Street, BIRMINGHAM.

Central 682. "Ollard, B'ham."



SEND YOUR ORDER TO-DAY.

# MARTINSYDE TRANSMISSION



Transmission of power is by chain, throughout. The high-speed chain is enclosed in a cast-aluminium case, the rear chain being protected by a pressed-metal shield. Easy means for lubrication of the rear chain is provided. Every part is so perfectly adjusted that the absence of noise is a distinctive feature. The even, smooth running qualities are such that they become immediately apparent to every Martinsyde rider

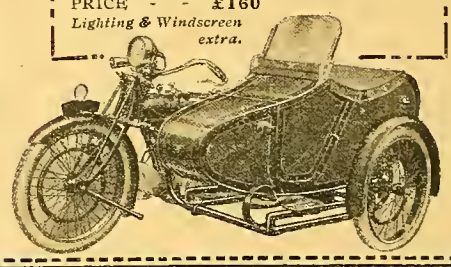
MARTINSYDE LTD. WOKING

We want you to know *all* about ∴ the famous ∴ 'MARTINSYDE'

REGISTERED TRADE MARK

*"The Symbol of Success"*

6H.P. COMBINATION PRICE - - £160
*Lighting & Windscreen extra.*



# Radco

THE KING OF LIGHTWEIGHTS.

ACKNOWLEDGED BEST VALUE at OLYMPIA.

WRITE FOR BOOKLETS

No. 2 **34 Gns.**

9 events only entered during 1921 and were awarded
4 SILVER CUPS. 5 GOLD MEDALS.
3 SILVER MEDALS.
Only one machine entered in each event.

No. 1 **42 Gns.**

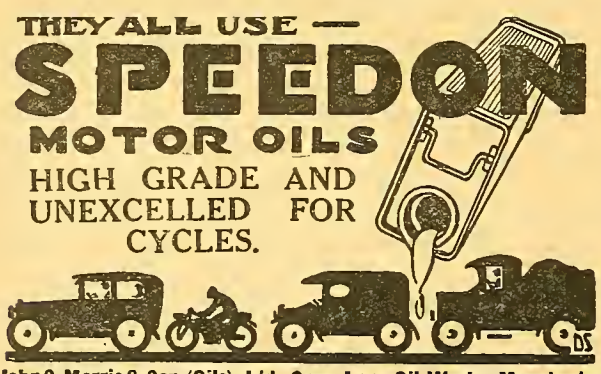
E. A. RADNALL & CO. - - - Dartmouth Street - - - BIRMINGHAM.

THEY ALL USE —

# SPEEDOIL

MOTOR OILS

HIGH GRADE AND UNEXCELLED FOR CYCLES.



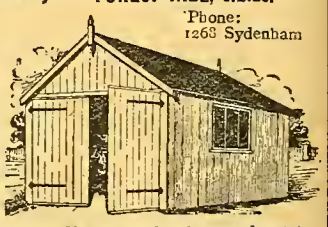
John S. Morris & Son (Oils), Ltd., Cross Lane Oil Works, Manchester

## A. TURRELL & SONS, PORTABLE BUILDING WORKS, FOREST HILL, S.E.23.

Phone: 1263 Sydenham

| Lth. ft. | Wth. ft. | Height to Ridge ft. in. | Height to Eaves ft. in. | £ | s. | d. |
|---|---|---|---|---|---|---|
| 7× | 5 | 7 0 | 5 0 | 7 | 5 | 0 |
| 8× | 6 | 7 6 | 5 3 | 9 | 0 | 0 |
| 9× | 7 | 8 0 | 5 6 | 11 | 7 | 0 |
| 10× | 8 | 8 4 | 5 9 | 12 | 19 | 0 |
| 12× | 8 | 8 4 | 6 0 | 17 | 5 | 0 |
| 14× | 8 | 8 7 | 6 3 | 21 | 0 | 0 |
| 16× | 9 | 8 9 | 6 4 | 26 | 0 | 0 |
| 18× | 9 | 8 9 | 6 4 | 31 | 0 | 0 |
| 20× | 10 | 9 0 | 6 6 | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ¾in. tongued and grooved match boards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed: 21oz. glass. Flooring: Strong joists, one inch boards. All bolts supplied for erecting house.

CYCLES MOTOR CYCLES

# The Speed Mount for 1922

— is the —

"JAMES"

## 3½ h.p. Twin

# Sports Model

**Not only fast but comfortable too at all speeds. In addition to this it is thoroughly reliable. Every part is made in our own factory under the supervision of our own experts, all of whom are experienced road and track riders.**

*Send for our illustrated Price List containing full specifications. Post Free on request.*

OFFICES & WORKS. GREET. BIRMINGHAM. "JAMES" London Depot 22 Holborn Viaduct

# DON'T PAY TAXI FARES

## DON'T KEEP YOUR COMBINATION GARAGED THROUGHOUT THE WINTER.

There's joy at the start of a winter's trip if your combination is equipped with an "Easting." Your passenger will appreciate the infallible protection from cold, wind, rain or snow. She will arrive cosy and warm without a curl out of place.

**REDUCED PRICES**

| | |
|---|---|
| ROYAL - | - £5 0 0 |
| STANDARD | - £3 18 0 |
| BABY - | - £3 0 0 |

*SPECIAL NOTE.—Complete sets of Royal fittings for converting "Standard" models to "Royal," giving simplified adjustment to any position—and quick, easy entry or exit, price* 45/-.

*New Celluloids can be fitted and returned in three days, Royal and Standard* 20/-. *Baby* 16/-

EASTING

**EASTING WINDSCREENS LTD.,**
**132, STEELHOUSE LANE, BIRMINGHAM.**

*London Office & Service Depot:*
**24, FINSBURY SQUARE, LONDON, E.C.2**
*Telephone* *Clerkenwell* 1904.

WHOLESALE STOCKISTS: AUSTRALIA—J. J. Wilkins & Sons, 586, George St., Sydney. IRELAND—C. E. Jacob, 18, Great Brunswick St., Dublin. SCOTLAND—Of all factors.

Sole Manufacturing Rights in U.S.A.: Messrs. Shillan, Beck & Co., Inc., 68-72, East 131st St., New York.

# OMEGA

## Better value than ever

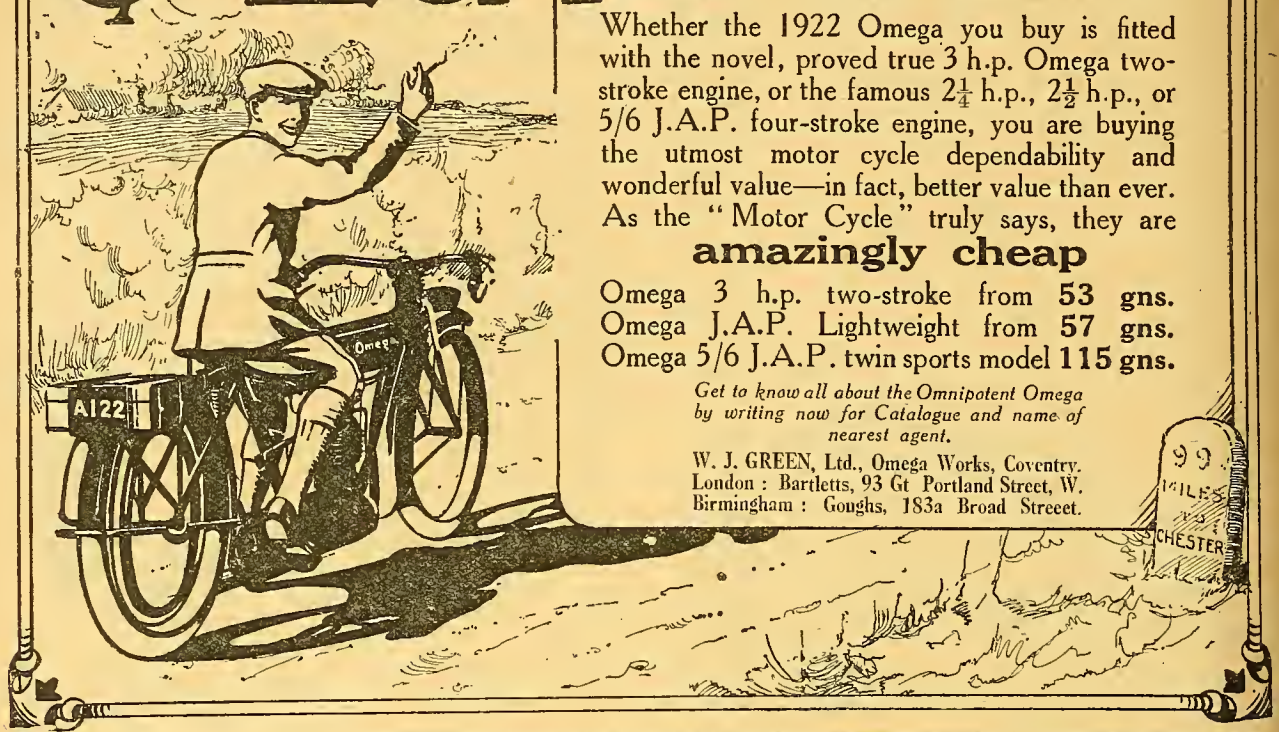
Whether the 1922 Omega you buy is fitted with the novel, proved true 3 h.p. Omega two-stroke engine, or the famous 2¼ h.p., 2½ h.p., or 5/6 J.A.P. four-stroke engine, you are buying the utmost motor cycle dependability and wonderful value—in fact, better value than ever. As the "Motor Cycle" truly says, they are

**amazingly cheap**

Omega 3 h.p. two-stroke from **53 gns.**
Omega J.A.P. Lightweight from **57 gns.**
Omega 5/6 J.A.P. twin sports model **115 gns.**

*Get to know all about the Omnipotent Omega by writing now for Catalogue and name of nearest agent.*

W. J. GREEN, Ltd., Omega Works, Coventry.
London : Bartletts, 93 Gt Portland Street, W.
Birmingham : Goughs, 183a Broad Streeet.




# Speed on Hills

One of the joys of motoring in the

## L.S.D.

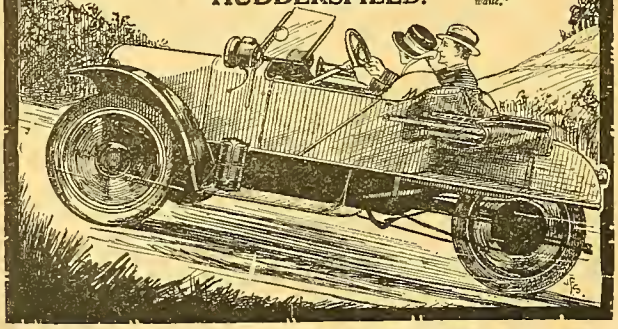
is its ability to climb practically all main road hills on *top*.

It also saves time and money.

Have you had that experience yet?

***Write us for Demonstration.***

**SYKES & SUGDEN, Ltd.,**
'Phone: 40 Slaithwaite. LINTHWAITE. HUDDERSFIELD. 'Grams: "Light, Linthwaite."



# Grindlay

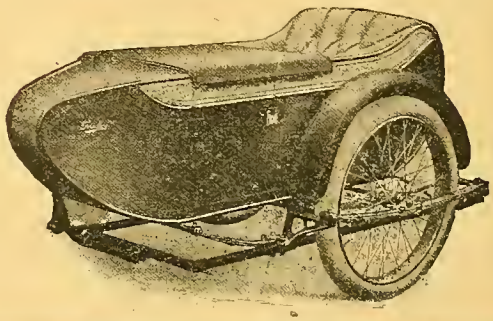
*"For the Rider who will have the best."*

## The sidecar SUPREME in appearance and comfort.

Eight Models to choose from, for machines from 2¾ h.p. to 10 h.p.

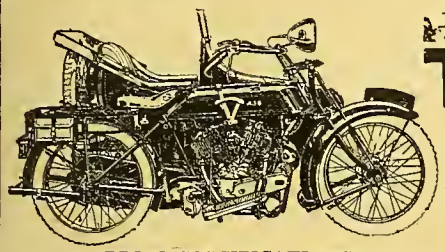
**Prices to suit all purchasers, from £17 to £38.**

*A copy of our latest illustrated catalogue mailed free anywhere upon request.*



**GRINDLAY (Coventry), Ltd., Melbourne Works, COVENTRY.**

Also Sole London and District Distributors for Excelsior and Dunelt Motor Cyles.



**BRIEF SPECIFICATIONS.**

7 H.P. twin 799 c.c. 3-speed, clutch and kick-starter. Windscreen, Storm Apron and Luggage Grid. Price complete and carriage paid .. .. **£175**
Extra for 2-seater Sidecar with 2 Screens and Aprons .. .. .. .. .. .. **£10**
Dynamo Lighting .. .. .. .. .. **£20**
Spare Wheel and Tyre .. .. .. .. **£8**
Acetylene Lighting .. .. .. .. ..**£6 : 4**

GET IT AT

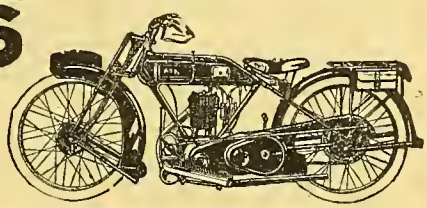
# TAYLORS

Sole London Distributors and Service Agents for the world famous

# A·J·S

**All Models to be seen at our KENSINGTON SHOWROOMS**

Have you received a Taylor Lighting-up Time Tablet? They are neatly printed on Ivorine and are FREE for the asking.



**BRIEF SPECIFICATIONS.**

2¾ H.P. 349 c.c. 3-speed, clutch and kick-starter, knee grips. Marketed in three models, all of which are very speedy and intended for fast road work.
Model B—Touring. Model B1—Sporting.
Model B2—Stripped Sporting.
All models supplied at the uniform price of **£85**, carriage paid.

**The demand for A.J.S. machines of all Models has exceeded all expectations. It is, therefore, advisable for prospective purchasers to place their orders well in advance of their requirements in order to avoid delay in delivery. There is no time like the present, so act NOW, and be sure of getting your favourite mount in good time for Easter. We are the biggest A.J.S. Agents in the country, and offer A.J.S. Service to all riders of these machines. Large stocks of spares always available.**

**For those who desire to purchase out of income we offer exceptional facilities. Write for order form and special insurance tariff.**

## H. TAYLOR & Co., Ltd.

SHOWROOMS **52-53, Sussex Place, South Kensington, S.W. 21a, Tottenham Court Road, London, W.**
'Phones .. .. Kensington 7260, Museum 1240.
Telegrams .. .. "Dynametro, Westcent, London."

# MILLFORD

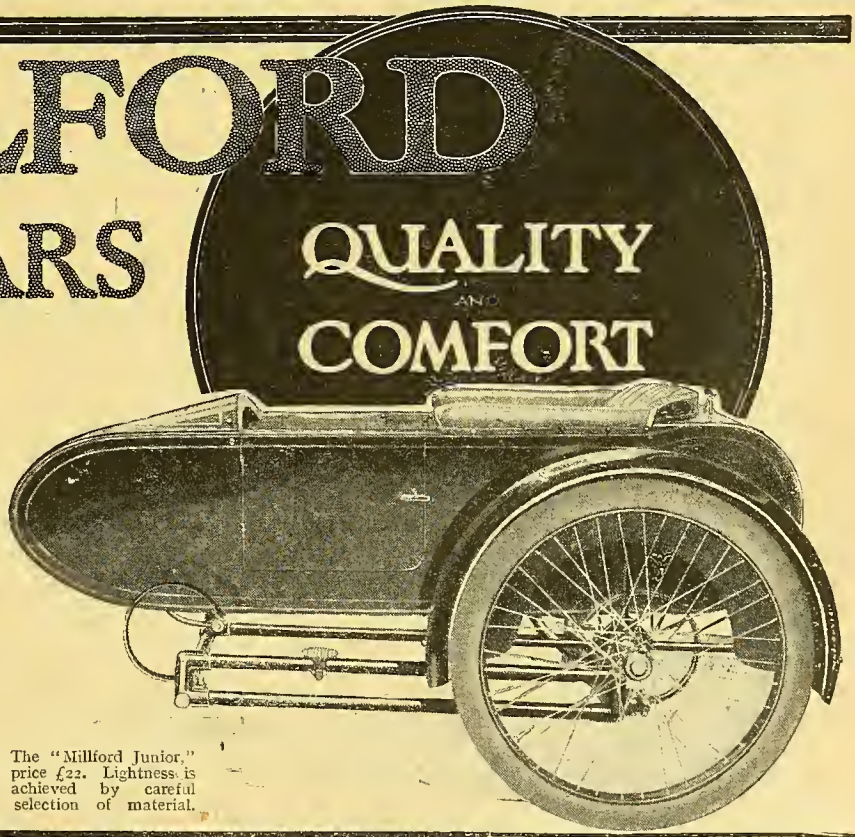
# 1922 SIDE CARS

ALTHOUGH prices have been reduced, the high quality and comfort of the Millford Sidecars remain: the quality never varies. For nearly 20 years the Millford Sidecars have been the best sidecar investment.
There are 8 models for 1922.

You can save **£5** by buying your mount solo and fitting a "Millford." Compare with the cost of a combination.

*Write for Folder C.*

MILLS-FULFORD LTD., COVENTRY.
The *Original* Sidecar Makers.
*(Established 1899.)*




The "Millford Junior," price £22. Lightness is achieved by careful selection of material.

**FAMOUS FOR QUALITY & COMFORT**

# Every Motor-Cyclist should have one.

We cordially invite you to send for our New Illustrated Catalogue. This includes many illustrations of all the principal makes of machines, and much data of keen interest to every motor-cyclist.

Everything is dealt with fully—machines, tyres, repairs, insurance, spare parts and Service: this Allen-Bennett book forms a useful guide on all those points so vital to the motor-cyclist if he wishes to make economical purchases and secure a full upkeep service.

*This Catalogue will save you time and money—why not send for it now?*

**Allen-Bennett**
Motor Company Limited

9, 10, 11, Royal Parade, W. Croydon.

Phone: Croydon, 2450.
Grams: Track, Croydon.

*Commercial Publicity*

# WHITELEYS

## FOR MOTOR CYCLE BARGAINS BY DEFERRED PAYMENTS.

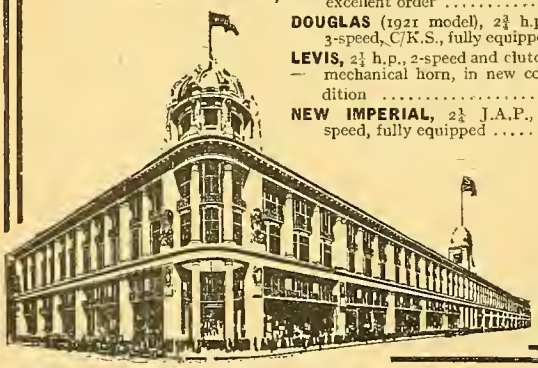
### 1921 SHOP-SOILED SOLO MACHINES and COMBINATIONS offered at REDUCED PRICES.

**TRIUMPH,** 2¾ h.p., 2-stroke, 2-speed, fully equipped ..... £59
**NEW HUDSON,** 2¼ h.p., 2-stroke, single-speed ..... £42 10
**"P. & M.",** 3½ h.p., 2-speed., C/K.S., complete with coachbuilt Sidecar ..... £119
**QUADRANT,** 5 h.p., 3-speed, C/K.S., complete with coachbuilt Sidecar and screen ..... £99
**ENFIELD,** 8 h.p., 2-speed, handle starter, coachbuilt Sidecar, Lucas dynamo lighting and luggage carrier ..... £145
**ROYAL RUBY,** 8 h.p., 3-speed, C/K.S., coachbuilt Sidecar and luggage carrier, Lucas dynamo lighting set, Easting windscreen, spare wheel and spring frame ..... £185
**READING STANDARD,** 10 h.p., 3-speed, C/K.S. plus one single or double Sidecar, electric lighting, horn, screen, hood and apron ..... £182 10

### SECOND-HAND

#### SOLO.

**NEW IMPERIAL,** 2¾ h.p. J.A.P. 2-speed, horn and licensed—practically new—only in use two months ..... £55
**IXION** (1920 model), 2½ h.p., Villiers 2-speed, C/K.S. ..... £39 10
**O.K. JUNIOR** (1920 model) Villiers fully equipped, little used, excellent order ..... £35
**DOUGLAS** (1921 model), 2¾ h.p., 3-speed, C/K.S., fully equipped £67 10
**LEVIS,** 2¼ h.p., 2-speed and clutch, mechanical horn, in new condition ..... £37
**NEW IMPERIAL,** 2¾ J.A.P., 2 speed, fully equipped ..... £47 10



#### COMBINATIONS.

**MARTINSYDE** (1921 model), 6 h.p., equipped with hood, screen, speedometer, clock, head lamp, rear lamp, Sidecar lamp, horn, luggage carrier, sidecar step, mileage 1,800—a smart outfit and as new ..... £125
**"P. & M."** (1921 model), 3½ h.p., 3-speed, C/K.S., coachbuilt Sidecar, leg shields, petrol carrier, sidecar screen, and fully equipped ..... £110
**ACME** (1920 model), 8 h.p. combination, little used, just re-conditioned by makers, and fully equipped—practically as new ..... £125
**NORTON,** 3½ h.p., 1921, 3-speed, C/K.S., all-chain drive electric lighting, mechanical horn, sporting Canoelet Sidecar with torpedo, apron and screen, a very sporting lot ..... £105

*4 per cent. only added for interest. 20 per cent. cash down and 12 equal monthly payments.*

***Any make of 1922 motor cycle supplied on similar terms.***

## Wm. WHITELEY, LTD.,
## Queen's Road, W.2.

Telegrams: "Whiteley, London." Telephone: Park, One.

## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with pleasure.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

B.S.A.'s, all models; exchanges.—Harry Nash, 365, King St., Hammersmith. [6852

B.S.A. 4¼h.p. 1921, Type K2, shop-soiled, unused; £92.—The Morris Garages, Oxford. [7137

£45.—1916 4¼h.p. B.S.A., lamps, horn, Bonniksen, full 1922 tax paid, any trial.—Brockbank's, 58, Lord St., Southport. [7216

4¼h.p. B.S.A., 3-speed, all accessories, fine condition, bargain; £65.—Rosslyn, Devon Rd., Cheam, Surrey. [7701

B.S.A., 1917, 4¼h.p., 3-speed, perfect order, good appearance, tax paid; 55 gns.—"Brentor," Shooter's Hill, S.E.18. [7424

B.S.A.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7236

1920 4¼h.p. B.S.A. Combination, perfect condition, any trial; £85.—Wed. Engineering Co., 5, Churchfield Rd., Acton. [7463

1915 B.S.A., 3-speed, countershaft, fully equipped, excellent condition; 40 gns.—Exchanges, Kents, 17, Lord St., Southport. [7673

1919 4¼h.p. B.S.A. Combination; exchange for solo with cash adjustment or sell cheap for cash.—2, High St., Luton, Beds. [7478

1914 B.S.A. 3½h.p. Philipson T.T. model, exceptionally fine throughout; £35.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [7799

B.S.A. 1921 4¼h.p. H2 Model, all-chain, with coach-built sidecar, shop-soiled only; £120.—P. J. Evans, John Bright St., Birmingham. [7345

1921 B.S.A. Combination, condition as new, Lucas lighting, spare wheel, etc.; owner just bought car.—Youngman, Evercreech, Somerset. [7187

1918 4¼h.p. B.S.A. and sidecar, lamps, horn, splendid running order; £68.—D. and S. Autocar Co., 33, The Parade, Golders Green. [7888

3½h.p. B.S.A., 2-speed, H. and F. central, 1914, Venacia sidecar; 45 guineas; exchanges considered.—Whitmore Chase, Lynn, Norfolk. [7900

1915 4¼h.p. B.S.A. Combination, owner returning Colonies, mechanically sound, appearance fair; 7 gns.—Colonial Agency, 49, Bedford St., Strand. Gerrard 4672. [7982

B.S.A. 1921 K2 with B.S.A. sidecar, perfect condition; £120. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 0. [7528

B.S.A. 4¼h.p. model K., 2 speeds, thoroughly renovated, fitted with new B.S.A. No. 2 sidecar; £76.—Eagles and Co., 275, High St., Acton, London. [7885

B.S.A. 3½h.p. 3-speed hub gear, lamps, horn, good tyres, good condition, insurance Sept. 1922; £33, or near offer; must sell.—Burry, All Cannings, Wiltshire. [7102

B.S.A. Combination 4¼h.p., chain-drive, just overhauled and enamelled, good order; £65; or exchange for late Triumph solo.—J. Easter, Five Ways, Swanley, Kent. [7179

EXCEPTIONAL Bargain, B.S.A. Model H.2 4¼h.p., with B.S.A. sidecar, 1921 latest model combination, brand new; £125.—Wilkins Simpson, opposite Olympia, London. [7729

B.S.A. New 1922 Model H2 in stock; exchanges, extended terms arranged.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0066

B.S.A., 1920, Henderson Elite sidecar, speedometer, lamps, horn, discs, fine outfit, £88; ditto cane sidecar, electric lamps, horn, £79.—Clark, 7, Exhibition Rd., S.W.7. [7837

1916 Model 4¼h.p. B.S.A., with sidecar (coach-built), complete with new dry battery and 2 new tyres, good condition; £80 or nearest offer.—Apply Rector, Swanage. [7191

B.S.A., 3½h.p., 2 speeds, clutch, appearance and mechanical condition almost new; accept £28 cash, or with coachbuilt sidecar, £32.—Allen, 10, Freshford St., Earlsfield, S.W.18. [7504

B.S.A.—All 1922 models for immediate delivery. Best prices allowed on second-hand machines. Let us quote you.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7509

B.S.A.—All 1922 models supplied; exchanges; also new 1921 4¼h.p. K.2 combination, No. 2 sidecar; £114.—Eagles and Co., 275, High St., Acton, London. [7883

1921 B.S.A. 4¼h.p. chain drive model, with coachbuilt sidecar, complete with lamps, horn, speedometer, etc.; £110; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [7378

1920 4¼h.p. B.S.A. Combination, nearly new sidecar, 3-speed, clutch, kick starter, lamps, horn, tools, perfect condition, just overhauled, any trial; £110 or near offer.—Haynes Bros., Maidstone. [7564

# BARGAINS!

**Our Bargain List contains a host of second-hand and new (shop-soiled) machines at figures which cannot fail to interest you.**

**A COPY WILL BE FORWARDED ON REQUEST.**

## *A few of this Week's Bargains:*

**CLEVELAND,** 1920, 3 h.p., 2-speed clutch and k.-s., fully equipped, absolutely as new .. .. **£45**

**B.A.T.,** 1915, 6 h.p. Combination, 3-speed, k.-s., clutch, fully equipped, speedometer .. **£55**

**SCOTT,** 1914, 3¾ h.p., 2-speeds, k.-s. Lucas accessories, speedometer, Binks carburetter .. **£40**

**SUNBEAM,** 1918, 3½ h.p. and s/car, fully equipped, nice condition .. .. .. **£100**

**ROYAL-RUBY,** 1919, 2½ h.p.. fully equipped, new condition .. .. **£32 : 10**

**RUDGE,** 1919, T.T. 3½ h.p. Multi, fully equipped, tax paid, good condition **£47 : 10**

**P. & M.,** 1918, 3½ h.p. 2 speed clutch, fully equipped, tax paid. Bargain .. **£52 : 10**

**ROVER** Light Car, 1921, 8 h.p. Dynamo lighting, speedometer, coupé hood, as new .. **£175**

**DOUGLAS,** 1914, 2¾ h.p. Combination, 2-speeds, fitted with Grosvenor Sporting Sidecar, fully equipped. Good condition .. .. **£47 : 10**

**ZENITH,** 8 h.p. Sporting Model. Special high gear pulley, very fast, fully equipped .. .. **£60**

**COVENTRY-PREMIER,** 1921, Runabout, Water-cooled, Dynamo lighting, spare wheel, dickey-seat, absolutely as new .. **£175**

**HARLEY-DAVIDSON,** One only. BRAND NEW (shop-soiled). 7/9 h.p. Magneto Model, Speedometer .. .. .. **£145**

**CASH OR DEFERRED PAYMENT**

***IMMEDIATE DELIVERY of 1922 Models by all the :: Leading Manufacturers. ::***

# PARKER'S

**DEPOTS:**

**MANCHESTER:** 245, Deansgate. Telephone—Cen. 861.

**BOLTON:** Bradshawgate. Telephone—1348.

## MOTOR CYCLES FOR SALE.

### B.S.A.

1921 6-7h.p. Twin B.S.A. Combination, spare wheel, speedometer, D.A. lighting, Easting, large sidecar, as brand new; cost £208, accept £135.—37, Canterbury Rd., Ball's Pond Rd., Dalston, London, N.1. [7977

4¼h.p. B.S.A. (1916 late) Combination, C.B. sidecar, countershaft, chain-cum-belt, clutch, K.S., licensed, and all complete, perfect, extra strong S.C. chassis; nearest offer £65.—Hill, 41, Connaught Rd., Brookwood, Surrey. [8095

B.S.A. Combination, 1916, 4½h.p., 3-speed countershaft, K.S., chain drive, lamps, horn, hood, and windscreen, perfect condition, just the machine for a family man; £50.—Gordon R. Croxford, The Motor Cycle, 461, Upper Richmond Rd., East Sheen, S.W.14. 'Phone: Richmond 322. [7966

1921 B.S.A. Combination, all chain, three separate generators, with lamps, Easting Royal, Tan-Sad, mechanical horn, mirror, tyres good, carefully handled, tax paid, indistinguishable from new; £125 or offers. Must sell.—39, Barnsole Rd., Gillingham, Kent. [7659

1921 (April) B.S.A. Heavy 7h.p. Twin Combination, absolutely perfect, discs, spare wheel, luggage grid, Easting Royal, tax paid, fully insured, unscratched, new tyres, ride 100 miles; sacrifice, £145; no dealers.—23, Mayfield Grove, Harrogate. [7084

4¼h.p. B.S.A., Model K, coach-built combination, many refinements, including speedometer, Klaxon, full lighting set, special triplex screen, hood, luggage carrier, many spares, splendid order and appearance, purchased new by present owner, exceptional bargain; £80.—Griffio, 27, West End, Englefield Green, Surrey. [7265

WAUCHOPE'S, 9, Shoe Lane, London.—B.S.A. 1922 models, K2, chain and belt transmission, £107; with No. 3 sidecar, £139; Model H2, all-chain drive, £110; fitted with B.S.A. sidecar, £142; B.S.A. 6h.p. twin motor cycle, £132; fitted with B.S.A. sidecar, £164; B.S.A. 8h.p. twin combination, £185; easy terms and exchange; box carrier combinations from £139. 'Phone: Holborn 5777. [8055

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3609

B.S.A. Specialists.—All spares by return.—County Cycle and Motor Co., Broad St., Birmingham. [4677

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All B.S.A. parts in stock. No waiting. [7869

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all B.S.A. spare parts always in stock. Write for free spare part list, stating year of manufacture. [0750

### Calthorpe.

CALTHORPE-J.A.P. 2¾h.p., 1920, 2-speed, perfect; £45.—Clark, 7, Exhibition Road, S.W.7. [7838

£25.—Calthorpe-Jap, 2½h.p., 2 speeds, nice condition (tax paid 1922).—8, High St., Wandsworth. [7574

CALTHORPE 3h.p. Combination, with M-L Magnita set, shop-soiled only; £85.—P. J. Evans, John Bright St., Birmingham. [7346

CALTHORPE-PRECISION Junior, 2h.p., 2-speed, free, new piston and rings, lamps, horn, running order; £12.—Pape, Osbourneby, Sleaford. [7491

1916 5h.p. Twin Calthorpe-Jap Combination, good condition, fully equipped; £50, offers, or exchange Solo Harley level.—2, Poplar Grove, Hammersmith. [7435

CALTHORPE 1921 Combination, actually in stock for immediate delivery; cash or deferred terms; place your orders with the Calthorpe specialists.—Burlington Motors, Ltd., Clapham Common, S.W.4. 'Phone: Brixton 2417. [0509

### Campion.

4h.p. Campion-Jap Combination, July, 1921, Sturmey 3-speed, as new; £105, or will separate.—100, Addey St., Sheffield. [7476

£28 or near offer.—1915 2¾h.p. Campion-Jap, Sturmey-Archer 3-speed, kick start, hand clutch, lamps, etc., good running order, bargain.—Field, Steeple Aston, Oxford. [7775

### Chater-Lea.

WAUCHOPE'S 9, Shoe Lane, London.—1922 Chater-Lea; agents all models; supplied on easy terms or exchange. [8056

4½h.p. Chater-Lea 2-speed Combination, brand new body, splendid condition; £38/10. Would sell solo £28/10. All accessories.—26, Tulse Hill, Brixton. 'Phone, Brixton 1292. [7804

### Clyno.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. 1919 Clyno 2-stroke; £35. [8080

CLYNO Combination, 2-speed, kick start, splendid condition, £58; take lower power part.—57, Kenbury St., Camberwell, London. [7636

1918 Clyno Combination, 5-6h.p., Clyno sidecar, complete, electric lighting, tax paid March, perfect; £57 gns.—17, Redfern Rd., Harlesden. [7535

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue BI7
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Clyno.

19 21 Clyno, 2-stroke, 2-speed, fully equipped, and in excellent condition; an unrepeatable bargain at £45 cash.—The Layton Garages, 30, Holywell St., Oxford. [7818

CLYNO 5-6h.p. 1917, condition perfect, Degory, very large coach-built sidecar, Cameo screen, apron, 4 interchangeable wheels, licensed, lamps; £65; exchanges.—C. Haslett, Garlands, Caterham. [7165

CLYNO 8h.p. Latest Spring Frame Combination, luxuriously equipped, Lucas Magdyno lighting, electric horn, spare wheel, mirror, hood, apron, mat, windscreen, luggege and petrol carriers, etc., cost over £300, little used, guaranteed perfect, licensed; £145, great bargain.—Moss, Wem. [7128

*Spare Parts:*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3610

### Connaught.

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Connaught Motor Cycle. [8057

CONNAUGHT 1920 2¾h.p. standard model, lamps, horn, etc., tax paid for year, in first-class condition; £35.—14, Kingsway, Coventry. [7376

CONNAUGHT 2¼h.p. 1921 model, Lucas lamps and horn; £45. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7525

### Cotton.

COTTON-BLACKBURNE 2¾h.p., patent triangulated frame, 62 gns., in stock.—South London Agents, Leng Bros., Sangley Rd., Catford. [7702

### Coulson.

COULSON 2¾h.p. Blackburne, countershaft, brand new, tax paid; £70.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [7798

£37/10.—1920 Coulson-Blackburne 2¾h.p., 2-speed, semi T.T. hars, Brampton biflex forks, spriog frame, lamps, horo, tools, taxed; sporting machine, special engiae.—W.J.C. Motor Co., 5, Addison Avenue, Holland Park, W 11. Park 2071. [7934

### Coventry Eagle.

COVENTRY EAGLE 1921 sporting model, 3½h.p. Abingdon, B. and B., E.I.C., 3-speed S.A. hand-controlled clutch, K.S., chain-cum-belt, 2 rear brakes, good tyres, lamp, tools, excellent condition; £86 or nearest offer.—C. H. Morley, Skillington, nr. Grantham, Lincs. [7364

### Coventry Victor.

COVENTRY VICTOR.—The perfect flat twin engine. Before deciding on your new mount, get our list for 1922, showing Coventry Victor motor cycles fitted with this famous 5-7h.p. engine. Also our special offer of demonstration machine. The last word in motor cycle design and construction.—The Coventry Victor Motor Co., Ltd., Coventry. [0520

### Dalm

19 20 Dalm 3h.p., single 2-stroke, perfect, all on, tax paid; £26.—East, Wrotham. (P) [7605

### De Dion.

6h.p. Single-cylinder De Dion, 1906, modernised, insured, Bosch, 3 speeds, reverse, recently overhauled, excellent running order; £30.—Offers, Box 8544, c/o *The Motor Cycle.* [7321

### De Luxe.

19 17 De Luxe Combination, 8h.p. J.A.P., Sturmey-Archer countershaft gear, Bosch magneto, electric and acetylene lighting, horo, pillion, speedometer, grid, and windscreen; trial run by appointment; exchange lower power and cash, or sell £100.—Offers to 161, Markhouse Rd., Walthamstow. [7757

### Diamond.

DIAMOND-J.A.P 2¾h.p. Sept. 1920, 2-speed, all on, lovely condition, licensed; £44.—Walters, Dixton Rd., Monmouth. [7049

DIAMOND-VILLIERS, 2-stroke, excellent condition; £30.—Bonner, 63, Fairlop Rd., Leytonstone, E.11. 'Phone, Wanstead 583. [7247

19 20 Diamond 2¾h.p. J.A.P. 2 speeds, kick start, clutch, all accessories; £55, or near cash offer.—Winder, 10, Rampart Rd., Leeds. Tel.: 22297. [7196

19 20 Diamond 2¾h.p., Villiers 2-stroke, kick start, 2 speeds, clutch, sound condition guaranteed, all accessories; £50, or near offer.—Winder, 10, Rampart Rd., Leeds. Tel.: 22297. [7197

### Douglas.

DOUGLAS 1922 models in stock.—Jack Pilling, Rock St., Bury. [8021

THE Morris Garages, Oxford.—All Douglas models in stock, including sports. [7147

DOUGLAS 2¾h.p. 1915, overhauled, perfect, all on; £30.—17, Heaton Rd., Mitcham. [7649

19 19 2¾h.p. 2-speed Douglas, perfect; £42.—24, Balliol Rd., North Kensington. [7765


TYRES

GREAT REDUCTIONS

Satisfaction Guaranteed

| *WOOD-MILNE. | | Our Price |
|---|---|---|
| 26×2¼ | Special Heavy | 13/6 |
| „ | Combination | 22/6 |
| 26×2½ | Special Extra Heavy | 30/- |
| 26×2½ | Special Heavy | 13/6 |
| „ | Special Extra Heavy | 18/6 |
| „ | Combination | 30/- |
| 650×65 | Special Heavy | 13/6 |

*Please note that, owing to the exceptionally low price of these covers, we cannot guarantee them.

MISCELLANEOUS.

| | | |
|---|---|---|
| 24×2 | almer Ribbed | 21/- |
| 26×2¼ | eldam Combination | 25/- |
| „ | oodyear A.W. Tread | 27/6 |
| 26×2½ ×2¾ | Rubber Studded Extra Heavy | 27/6 |

TUBES. EX GOVERNMENT STOCK. ALL SIZES.

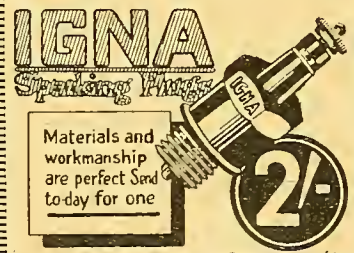
24in. and 26in. Endless 4/9 Butted, 5/9
28in. „ 5/6 „ 6/6
700×80 mm. „ 6/9

BEST QUALITY GUARANTEED.

| | | | |
|---|---|---|---|
| 24×2, | 4/6 | 26×2, 4/9 | 26×2¼, 6/3 |
| 26×2⅜, | 7/6 | 26×2½ ×2¼, 7/9 | 28×3, 8/9 |
| 26×2½, | 7/9 | | 700×80, 10/- |

BELTS. IN STANDARD LENGTHS

| | ½in. | ¾in. | 1in. | 1¼in |
|---|---|---|---|---|
| Bates Avon etc., per foot | 1/- | 1/5 | 1/9 | 2/- 2/6 |




Materials and workmanship are perfect Send to-day for one

Original Price 4/6.

These Special Clearance Lines are sent Carriage Paid on 7 Days' Approval against remittance. Trade supplied. Write to-day.

ORDER THE ELITE WAY

The Name RUBBER CO. LTD. The Firm

Tyre Specialists

LONDON'S LEADING TYRE HOUSE

264-266, VAUXHALL BRIDGE RD. VICTORIA. S.W.1

— AND AT —

44, SURBITON ROAD, KINGSTON-ON-THAMES.

Please address all post orders to Vauxhall Bridge Road.

TELEPHONE - VICTORIA 6553 & 6554.

OUR AGENT IS THE PILLAR-BOX


## MOTOR CYCLES FOR SALE.

### Douglas.

DOUGLAS 2¾h.p., 2-speed, accessories, excellent condition; £35.—Two Brewers, Ongar, Essex. [7309

19 20 2¾h.p. 3-speed Douglas, fully equipped; £50. —9, Wallingford Avenue, North Kensington. [7719

19 13 2-speed Douglas T.T., good little 'bus; £27.—Exchanges, Kent's, 417, Lord St., Southport. [7676

19 20 4h.p. Douglas Combination, small mileage; £75.—9, Wallingford Avenue, North Kensington. [7717

DOUGLAS 2¾h.p. 1918, overhauled, re-enamelled, 2-speed, perfect; £49/10.—Hayes, Builder, Malvern. [7461

DOUGLAS 2¾h.p. 1915, guaranteed good order, tax paid; £31, or nearest.—15, Windsor St., Uxbridge. [7068

DOUGLAS 1920 4h.p. Combination, fully equipped, new condition; £90.—Clark, 7, Exhibition Rd., S.W.7. [7839

19 21 2¾h.p. Sports Douglas, fully equipped, run 500 miles, equals new; £60.—Dosser, Slingsby, Malton. [7631

LAST week's 4h.p. Douglas, unsold, reduced to 42 gns. for quick sale.—284, South Lambeth Rd., Stockwell. [7479

19 20 4h.p. Douglas Combination, beautifully equipped, as new; £75.—24, Balliol Rd., North Kensington. [7760

19 19 2¾h.p. Douglas, fully equipped, good condition; £45.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [7800

2¾h.p. Douglas, believed 1917, in very good order, nicely equipped; £32 10s.; evenings.—67, Fernlea Rd., Balham. [7996

DOUGLAS.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7228

DOUGLAS, 4h.p., 1920, late, most luxuriously equipped; £75.—Dentist, 216, Portobello Rd., North Kensington. [7668

LATE 1918 Douglas Combination, in very good order, well equipped, any trial; 58 gns.; evenings.—67, Fernlea Rd., Balham. [7995

DOUGLAS late 2-speed, buffer, forks, shield, perfect, kept in repair six months free; £46.—165 Church St., Mitcham. [7303

19 19 Douglas 2¾h.p., lamps, horn, long exhaust, perfect; £48/10.—P. H. Allin and Sons, 12, Bridge St., Cambridge. [7363

DOUGLAS 2¾ h.p. 1916, excellent condition; great bargain, 30 gns.—Longman Bros., 17, Bond St., Ealing. Telephone: 689. [7928

DOUGLAS Combination 1920, electric lighting, sidecar repainted, fine condition; £80.—63, Stewart Rd., Bournemouth. [7093

DOUGLAS.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7237

19 21 2¾h.p. Douglas, 2-speed, fully equipped, insured till June, 1922; £62.—Shepherd, Enfield Highway. Tel.: Waltham X 31. [0775

4h.p. 1916 Douglas Combination, Binks, all on, trial; sacrifice, £60 lowest.—Motorist, 40, Scaitcliffe St., Accrington, Lancashire. [7086

DOUGLAS, 1920, 2¾h.p., 3-speed, indistinguishable from new, fully equipped; £55.—Dawe, 216, Portobello Rd., North Kensington. [7669

19 18 Douglas Combination, perfect condition, equipped; £54.—Ascott's Drug Stores, 13, Prince of Wales Rd., Kentish Town. [7787

A SOILED 1921 4h.p. Combination, insured, to clear; 105 gns.—Knight, 126, Upper Tooting Rd., S.W. 'Phone: Streatham 2390. [0779

F.O.C.H. have two 4h.p. Douglas Combinations, 1919 and 1920, fully equipped; bargains.—5, Heath St., Hampstead. (Near Tube.) [6410

19 19 4h.p. Douglas Combination, speedometer, lamps, insurance, tax paid, fine condition; £65. —Surman, 12, Brooks Rd., Chiswick, W.4. [7422

DOUGLAS, 1921, 2¾h.p., 3-speed, clutch and kick start; £72.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7533

19 20 4h.p. Douglas Combination, very attractive and nicely appointed; £90; take half down.—Bunting's Exchange, Wealdstone. [7825

19 15 2¾h.p. Douglas, splendid all-round condition, deliver at sacrifice; £35.—Brockbank's, 58, Lord St., Southport. [7896

4h.p. Douglas Combination, May, 1920, splendid condition, fully equipped, insured, taxed; nearest £100, or exchange 2-seater.—Tribbeck, 46, Coombe Rd., Salisbury. [7660

4h.p. Douglas Combination, 1919, good condition, fully equipped, including speedometer, petrol-tin carrier; 70 gns.—Dr. Crock, 15, Earl's Terrace, W.8. [7268

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### New Hudson.

£25.—2¾h.p. 4-stroke New Hudson, 3-speed, clutch, excellent order throughout, 150 m.p.g.—10, Whitmore Rd., Beckenham. [7577

NEW HUDSON, 2¾h.p., J.A.P., 3-speed, clutch, engine overhauled; £23.—Clark, 7, Exhibition Rd., S.W.7. [7842

NEW HUDSON 1922 Models, 2¼h.p., Popular and De Luxe 2-speed lightweights, 4½h.p. solo and combination, 10h.p. light car, all models in stock, immediate delivery; send for lists; deferred payments arranged. All spares stocked.—New Hudson Dept., 45, Gray's Inn Rd., Holborn, W.C.2. [5150

### New Imperial.

NEW IMPERIALS, all models; exchanges.—Harry Nash, 365, King St., Hammersmith. [6853

NEW IMPERIAL 2½h.p. 1914, 2-speed; £25.—Chandler, 37, Andover Place, Kilburn. [7653

NEW IMPERIAL, 2¾h.p., 2-speed, late model, lamps, horn, bargain; £32.—Crown Garage, Weybridge. [7467

1920 New Imperial-Jap Combination, 8h.p., any trial; £85.—24, Balliol Rd., North Kensington. [7764

NEW IMPERIAL 2¾h.p. 1921, slightly used; only £57.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [7544

1921 New Imperial-Jap 2¾h.p., 3 speeds, clutch, K.S.; £58 inclusive.—Aznee, 12, St. Michael's Terrace, N.22. [7201

1919 New Imperial 2¾h.p., 2-speed, K.S., clutch, Dunlops, lamps, like new.—65, Linden Avenue, Thornton Heath. [7436

NEW Imperial 1922, Models 1 and 2, just delivered; in stock for immediate delivery.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. Phone: Avenue 5548. [0071

NEW IMPERIAL 2¾h.p., 2-speed, new, only shop-soiled, to clear £55; 2-speed clutch model ditto, £60; or machine taken in part payment.—Edwin Knight, High St., Reigate. [7306

WAUCHOPE'S, 9, Shoe Lane, London.—1922 New Imperial-Jap, 3-speed model, £63; 3-speed, kick start, and clutch model, £69; 2¼h.p. I.O.M. sports model, all-chain, 3 speeds, £80; easy terms and exchange; write for list. [8063

NEW IMPERIAL.—We are offering a few latest 1922 guaranteed models of this famous make, but fitted with Burman 2-speed gear, clutch, and kick start; fully guaranteed; our price, £58.—Maudes', 100, Great Portland St., London. [8093

### New Scale.

1920-1921 New Scale 3½h.p. Combination, Easting, licensed till Dec. 1922, insured, good condition; £55; or exchange with cash for higher power.—Vicar, Garsdale, Sedbergh, Yorks. [7164

NEW Scale, precision, clutch, K.S., late 1921, hardly soiled; £45; quick sale, or exchange and cash for one higher power.—Neville, Hanch Place, Walsall. [8044

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All New Imperial engine parts in stock. Lists free. [7875

### Norton.

PREMIER Motor Co. for 1922 Nortons:

NO. 9, 3½h.p., belt drive, £80; 16H 3-speed T.T., £115; Big 4, 3-speed, £120; easy payments 4% extra.—Immediate delivery from the Norton Specialists: The Premier Motor Co., Aston Rd., Birmingham. [0625

3½h.p. T.T. Norton, 1921 model; £65.—Frank Eele, Thame. [7199

TRY Julians of Reading for Nortons; you will never regret it. [7099

NORTON 1921 Models.—Sole district agents, Wessex Motors, Ltd., 60, Catherine Street, Salisbury. Phone: 72. [0717

NORTON, No. 9 model; £55; any machine taken part payment.—The Motor Market, 80a Jermyn St., Bradford. [8047

65 GNS.—3½h.p. Norton, 3-speed Sturmey, chain-cum-belt, all on, licensed, perfect condition.—Smith, Southlands, Scarborough. [7683

NORTON 1922 Sports model, 16H, just delivered, 3½h.p. kick starter, 3-speeds, etc.; £115.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. Phone: Avenue 5548. [0070

1921 Norton 16H., clock speedometer, lamps, tax, absolutely as new, just cost £135; accept £95; exchanges.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [7795

NORTON Big Four, Oct. 1920, splendid order throughout, 1922 tank fitted; £70; approval deposit.—Wilkinson, Washington St., Workington, Cumberland. [7627

16H., 3½h.p. Norton, new July last, recently overhauled, Lucas lights; £95.—11, Frankfurt Rd., Herne Hill, S.E. [7382

# EXCHANGE
## v.
# OVERHAUL

**Have you ever considered how far the cost of a general overhaul will go towards an exchange for another mount which is bang up-to-date? The saving is obvious and annoying delays avoided. WHY WAIT?**

### *1922 LIGHT CARS.*

**AIREDALE 11.9 h.p. 4-seater .... £475**
**CALTHORPE 10 h.p. 2-seater.... £355**
**CALTHORPE 10 h.p. 4-seater.... £375**
**CALTHORPE de Luxe 2-seater .. £410**
**CALTHORPE de Luxe 4-seater .. £435**
**L.S.D. 3-wheeler, All on ..... £165**
**LAGONDA (Coupé or 4-seater).. £395**

### *1922 MOTOR CYCLES.*

**B.S.A. 4¼ h.p. Chain-Belt..... £107**
**B.S.A. 4¼ h.p. Combination..... £139**
**B.S.A. 6 h.p. Light Comb. ..... £164**
**B.S.A. 8 h.p. Comb. ..... £185**
**BRADBURY 6 h.p. Comb. ..... £146**
**DOUGLAS 2¾ h.p. 2-speed, All on £75**
**DOUGLAS 2¾ h.p. 3-speed, All on £90**
**DOUGLAS 3½ h.p. 3-speed Sporting £130**
**EDMUND-BLACKBURNE 2¾ h.p. £85**
**ENFIELD 8 h.p. Combination.... £140**
**ENFIELD 2¼ h.p. 2-speed..... £55**
**LEVIS Popular 2¼ h.p. ..... £48**
**LEVIS 2¼ h.p. 2-speed ..... £58**
**LEVIS 2¼ h.p. 2-speed, kick-start £60**
**MARTINSYDE 6 h.p. Combination £160**
**NEW IMPERIAL 2¾ h.p. 3-speed 60 Gns.**
**NEW IMPERIAL 2¾ h.p., All-Chain £73**
**NEW IMPERIAL 8 h.p. Comb. .. £145**
**NORTON Big Four Combination £149 10**
**NORTON 3½ h.p. 3-speed..... £115**
**NORTON Big Four ..... £120**
**REX-ACME 2½ h.p. 2-speed..... £50**
**REX-BLACKBURNE 2¾ h.p..... £69 15**
**REX-ACME 8 h.p. Combination.. £150**
**ROYAL RUBY 2¾ h.p. 2-speed.... £70**
**SCOTT-SQUIRREL 3½ h.p. 2-speed £105**
**SCOTT 3¾ h.p. 2-speed Comb. .. £145**
**SUNBEAM 3½ h.p. (New Type) 120 Gns.**
**SUNBEAM 4¼ h.p. Comb. ....174 Gns.**
**SUNBEAM 8 h.p. Combination.. £217 7**
**TRIUMPH 4 h.p. Chain-Belt .... £105**
**TRIUMPH 4 h.p. All-Chain..... £115**

### *DEPENDABLE SECOND-HANDS*

| *Solos.* | £ | s. | *Combinations.* | £ | s. |
|---|---|---|---|---|---|
| A.B.C. 1921 - | 87 | 10 | A.J.S. 1919 | 125 | 0 |
| Ariel 1920 3½ | 75 | 0 | American X | 79 | 10 |
| Alecto 1920 - | 52 | 10 | Ariel 1920 - | 87 | 10 |
| Bradbury 3½ | 35 | 0 | Alecto 1920 - | 69 | 10 |
| Beardmore - | 59 | 10 | B.S.A. 4¼ - | 67 | 10 |
| Douglas 1920 | 69 | 10 | Chater-Lea - | 69 | 10 |
| Zenith 3½ - | 32 | 10 | Enfield - - | 85 | 0 |
| Ind. Scout - | 95 | 0 | Henderson- | 145 | 0 |
| New Imperial | 35 | 0 | Harley 1920 | 135 | 0 |
| O.K. 2-speed | 35 | 0 | Rex 6 h.p. - | 49 | 10 |
| Rudge 1920 - | 59 | 10 | Rover 3½ - | 39 | 10 |
| Rover 3-sp. - | 35 | 0 | Rudge 7 1920 | 97 | 10 |
| Wooler - - | 49 | 10 | Scott 1920 - | 95 | 0 |
| Triumph 3½ | 42 | 10 | Sunbeam 8 | 115 | 0 |
| Premier 2-sp. | 35 | 0 | Triumph 4 h.p. | 55 | 0 |

Full List on Application.

**The Halifax Motor Exchange, 25, Horton Street, Halifax.**
'Phone: 1400. 'Grams: "Perfection."

## MOTOR CYCLES FOR SALE.

### Norton.

BIG FOUR NORTON, new Feb. 1921, Montgomery sports sidecar, good accessories, perfect condition; cheap, £110.—Beck, Sandon, Hoole Rd., Chester. [7048

NORTON, Model 9, 1921, mileage 3,600, Philipson, Bonniksen, Klaxon, new tyres, year's licence, as new; £67.—C. R. Catesby, c/o Middleton, 39, Lawrence St., Partick, Glasgow. [7707

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Big Four Norton, £120; 3½h.p. sports model, £115; family sidecar combination, £154; list on application; easy terms and exchange arranged. [8064

1921 Norton 16H 3½h.p. model, fully equipped with lamps, horo, has been overhauled in our own workshops and is guaranteed perfect; offered at £85 cash.—The Layton Garages, 30, Holywell St., Oxford. [7819

SPECIAL Brooklands Norton 1921, 80 m.p.h., perfect condition, certificate, competed Brooklands, little used, polished tank, standard fittings, lamps, licensed, new insurance, only speed merchants should apply, exceptional machine; bargain price, £90 cash.—Harold Lindop, Islip, Oxford. [7695

TUCKERS', Redcliffe Hill, Bristol.—Big Four Norton and family sidecar, £154; 16H sports model, £115 (tuned for competition work); T.T. 3½h.p., £80, finest value in the trade; all machines delivered carriage paid from stock to any address in England.—G. H. Tucker, Norton Rider Agent and Specialist. 'Phone: 4042. [5207

MODEL 16H 1922 Norton, unscratched, Lucas Magdyno, 650×65 Palmer heavy tyres, Brooks cantilever saddle, Cox Atmos carburetter, Pedley handle and knee grips, comfortable, fast, flexible, mileage 500; cost £150 this month; owner leaving immediately for India; quick sale, first offer over £116; seen appointment.—Box 8559, c/o *The Motor Cycle.* [7340

*Spare Parts:*

HERBERT ROBINSON Ltd., Green St., Cambridge.—Complete Norton list post free. [7874

### N.U.T.

1921 (August) 3½h.p. N.U.T., complete, like new; £82.—P. H. Allin and Sons, 12, Bridge St., Cambridge. [7352

MR. E. REMINGTON'S famous 90×77 O.H.V. Racing N.U.T., chain drive, 2 carbs., special mag., perfect condition, guaranteed as left Brooklands, numerous spares of all essential parts; price £70 or close offer.—B.P. Garage, 40, Murray Mews, Murray St., Camden Town, N.W. [7882

### O.K.

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. 1917 O.K. Junior; £25. [8065

O.K.-VILLIERS, 2 speeds, clutch, kick start, July, 1921.—Offers, 209 Upper Richmond Rd., East Sheen. [6612

O.K. Junior, 2½h.p., 4-stroke, 2-speed Albion, lamps, etc., excellent condition; £18.—18, St. Edmund's Terrace, St. John's Wood. [7615

£23/10.—O.K.-M.A.G., 2¼h.p., 2-speed, lamps, horn, excellent condition, fast; offers.—Barnes, 83c, Trinity Rd., Tooting, S.W. [7644

### Omega.

1921 Omega-Jap, 2¾h.p., 2 speeds, clutch, K.S., unused; £44.—12, St. Michael's Terrace, N.22. [7202

1921 Omega, 2¾h.p. Villiers engine, 2-speed gear, lamps, etc., as new; £42.—Bartlett's, 93, Gt. Portland St., London. [8083

BARTLETT'S, 93, Gt. Portland St., sole London and district distributing agents for Omega's; all models from 53 gns. to 115 gns.; deferred payments. [8082

1921 Omega, 2¾h.p. Villiers, 2-speed, kick starter and clutch, lamps, etc., all new, shop-soiled only, clear; £58.—Bartlett's, 93, Gt. Portland St., London. [8084

1921 Omega-Jap 2½h.p., 2-speed, fully equipped; this machine has been completely overhauled, and carries our guarantee; offered at the bargain figure of £47/10 cash.—The Layton Garages, 30, Holywell St., Oxford. [7821

### P. and M.

1918 P. and M., 2-speed, clutch, kick start; £37.—56, Park Lane, Kidderminster. [7493

P. and M. 1921 3½h.p. Combination, unused, shop-soiled; £110.—The Morris Garages, Oxford. [7139

P. and M. 3½h.p., 2 speeds, new tyres, new magneto, ride away; £23.—25, Nursery Rd., Merton, S.W.19. [7301

RENOVATED P. and M., 2-speed, all chain, equipped, perfect; £37.—1, Othello St., Liverpool. [5096

1920 P. and M. combination, 2-speed, latest hand brake and kick starter, etc., lighting set, horn, etc., most beautiful running engine, condition practically new; £74.—Blackmore, 769, Romford Rd., Manor Park, London, E. [7681

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue B23
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### P. and M.

P. and M. late Combination, accessories, tax paid, as new, sacrifice; £48.—143, Ravensbury Rd., Earlsfield, S.W. [7850

LATE 1918 P. and M. Combination, Douglas side-car, perfect condition, tax paid 1922, £60; take lightweight part.—17, Oster Terrace, St. Albans. [7332

1918-19 P. and M. Combination, equipped, lovely sidecar, exceptionally fine condition throughout; 56 guineas.—120, Fairbridge Rd., Highgate, N.19. [7439

P. and M., 1919, not W.D., Canoelet Sporting, Cox Atmos, undershield, long exhaust, perfect condition, fully equipped, tax paid; £87, offers.—Cox, London Hospital, E.1. [7276

P. and M. Combination 1919, hood, screen, combined electric and acetylene, fully equipped, splendid outfit, new condition, taxed; 72 gns. quick sale.—31, Nursery Row, Walworth, S.E.17. [7212

1921 P. and M. Combination, absolutely as new, fully equipped, tax paid, and insurance up to July next; £85; no offers.—171, Church St, Notting Hill Gate, W.8. [7620

3½h.p. P. and M., late 1919, not W.D., perfect running, reliable all weathers, speedometer, lamps, acetylene, electric, horn, tools, many spares, including tube, chains. Loth to sell, going abroad; £60, offers.—Toms, Red House, Kingston Rd., Staines. [7374

P. and M. Motor Cycles (ex R.A.F.), rebuilt and renovated as new, fitted with many new parts, including mag., B. and B. carburetter, chains, tyres, etc., £45; combination £60; equipped £5 extra. Sidecars reupholstered, painted, and new tyre.—S. E. Porter, Whitchurch, Salop. 'Phone: 74. [3059

*Spare Parts:*

P. and M. Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7219

P. and M. Spares stockist, every part in stock; cheap.—Inman, Durham Rd., Seaforth, Liverpool. [6397

P. and M.—All spares in stock; stamp requirements: P. and M. spares specialist.—H. Beardwood, 147, Burlington St., Liverpool. [9986

### P. and S.

P. and S. (Pearson and Sopwith), 1920, 2¾h.p., 2-speed, lighting set, Cowey horn, etc., condition practically new, a bargain; £37.—Surgery, 769, Romford Rd., Manor Park, London, E. [7679

### Peco.

1915 2¾h.p. Peco, 3-speed Sturmey, new magneto, carburetter, born, tyre, fine condition; £23; money wanted; sacrifice.—Rix, Springhill Farm, Canwell, Warwickshire. [7299

### Precision.

2¾h.p. Precision, every accessory, good order throughout; £20.—18, Hestercombe Avenue, Fulham. [7897

PRECISION Combination 3¾h.p., perfect order, new Grado gear, kick start, tyres and tubes, lamps, etc., new belt, trial, privately owned; must sell; £35.—Thurstans, 82, Elmers End Rd., Anerley. [7161

### Premier.

PREMIER, 2½h.p., drop frame, Bosch, splendid order; £17.—14, Devonshire Rd., Forest Hill. [7786

PREMIER 2½h.p. Lightweight, in exceptional condition; £16/10.—26, Tulse Hill, Brixton. 'Phone, Brixton 1292. [7803

£23.—Premier 3½h.p. T.T. Model, £12 new parts fitted, lamps, splendid order; exchanges.—63, Solon Rd., Brixton. [7066

4h.p. Premier Coach-built Combination, 3 speeds, clutch, Bosch, any trial; £40; exchanges.—76, London St., Chertsey. [7607

£18.—Premier 2½h.p., perfect, cheap, all on, overhauled, 40 miles every week; unemployed.—Hebblethwaite, 18, Dunkeld St., Lancaster. [7118

PREMIER 3½h.p. Combination, excellent order; 50 gns. for quick sale.—Seen at Todd and Wright, Ltd., 34, Craven Rd., Lancaster Gate, W.2. [7133

PREMIER Combination, 3½h.p., 2-speed, K.S., lamps, horn, speedometer, windscreen, etc., good condition; £27/10.—Gordon R. Croxford, The Motor Cycle, 461, Upper Richmond Rd., East Sheen, S.W.14. 'Phone: Richmond 322. [7965

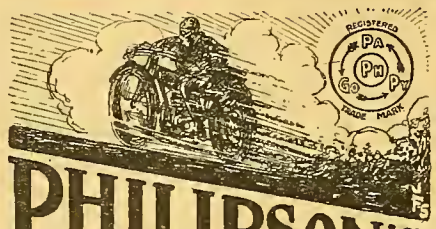
*Spare Parts:*

PREMIER Spares and Repairs.—We are the most competent advertisers of these, as we served in the Premier works. Any part quoted per return.—Forfield Motors, Forfield Place, Leamington Spa. [7362

### Quadrant.

QUADRANT £100 4½h.p. Combination, delivery from stock.—Frank Whitworth, Ltd., Distributers, 139, New St., Birmingham. [0767

QUADRANT 1922 models, immediate delivery; exchanges, extended terms.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0072




# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

# Philipson's Latest!

## GOVERNOR PULLEY AND VARIABLE GEAR COMBINED WITH FLY WHEEL for all two-stroke engines.

**The Lightest, Speediest, and Simplest Gear on the market for direct belt-driven 2-stroke and 4-stroke engines.**

ONLY adds 2 lb. (approx.) to the weight of a 2-stroke machine, and 6 lb. (approx.) to the weight of a 4-stroke machine.

**During the past week we have fitted the following machines:**

| 2-stroke. | 4-stroke. |
|---|---|
| LEVIS, | TRIUMPH, |
| O.K., | NORTON, |
| CALTHORPE, | ROVER, |
| VILLIERS, | SINGER, |
| etc. | COULSON-BLACKBURNE |

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

Our Flywheel Governor converts a single-speed 2-stroke into a speed model —*the lightest speed model on the market!*

**THE ONLY GEAR WITH NO END THRUST.**

**IMMEDIATE DELIVERY.**

*Send for Illustrated Booklet.*

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

*What is your make? Write us*

REDUCED PRICE £7 7 0 Carriage Paid.

**Philipson & Co., Ltd.,**
Astley Bridge, BOLTON, Lancs.

(Established over 50 years.)
'Grams: "Safety, Bolton." 'Phone: 147 Eagley

## MOTOR CYCLES FOR SALE.

### Quadrant.

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Quadrant Motor Cycles, all-chain solo, £85; sidecar combination, £105; easy payments and exchange; list on application. 'Phone: Holborn 5777. [8066

CLIFFORD WILSON Mfg. Co., Quadrant Works representatives and sole wholesale distributors for London, Middlesex, Surrey, Sussex, Kent, Essex, Buckinghamshire, Hertfordshire, Bedfordshire, Norfolk, Cambridgeshire, Suffolk, Huntingdonshire, Berkshire, etc. All models in stock. Early delivery. Deferred payments. Exchanges. Chain-cum-belt 4½b.p. solo, £80. All chain solo, £85. Chain-cum-belt combination, £100. All chain combination, 100gns. Lucas dynamo lighting sets 16gns extra. Official repairers and spare part stockists. Day and night service.—177, Westminster Bridge Rd., London, S.E.1. Tel.: Hop 210. [6633

### Radco.

RADCO (2-stroke), ride away; £25.—P. 602, King's Rd., Fulham, S.W.6. [7699

RADCO 2¼h.p., perfect condition, C.A.V. mag., accessories, Dunlops; £20.—Macklin, 19, Boundary Rd., Wood Green. [7621

NEW 1922 Radco lightweights in stock; single-gear, £35/14; 2-speed, £42; 2-speed clutch, kick starter, £47/5; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [7922

RADCO, 1919, single speed, lamps, horn, tax paid 1922, splendid condition, a real good machine; £22/10.—Gordon R. Croxford, The Motor Cycle, 461, Upper Richmond Rd., East Sheen, S.W.14. 'Phone: Richmond 322. [7963

### Raleigh.

PREMIER Motor Co. for 1922 Raleighs

IMMEDIATE Delivery of 5-6h.p., spring frame, detachable wheels, £130; standard sidecar, £35; De Luxe sidecar, £42; early delivery of the new Raleigh lightweight, £68; easy payments 4% extra.—The Premier Motor Co., Astoo Rd., Birmingham. [0626

TRY Julians of Reading for early delivery of Raleigh lightweight. [7100

1921 Raleigh 5-6b.p. Cumbination, unpunctured, as new, electric; £115 lowest.—58, Beaconsfield Rd., Brighton. [7441

RALEIGH.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7230

RALEIGH 1921, late, 5-6h.p. Combination, equal new; £130; licensed.—Fairburst, Behind 68, Standishgate, Wigan. [7456

RALEIGH.—The 2¾h.p. lightweight cannot be beaten, 2-speed, clutch, and kick start; £68. Demonstration model in stock. Exchanges. Buy from the authorised agents, who specialise in Raleighs.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7510

### Reading-Standard.

READING-STANDARD Combination, 1920, dynamo lighting, mechanically sound; £80.—Colonial Motors, 104a, Fincbley Rd. Hampstead 7822. [7956

### Rex.

REX 6b.p. Twin, 2-speed, good running order; £27. Crown Garage, Weybridge. [7469

4h.p. Rex T.T., new T.B. mag., Senspray, Philipson, tax paid, guaranteed, photo; £25.—98, Ock St., Abingdon, Berks. [7057

REX 3½h.p., mechanical valves, Bosch, B. and B., spring forks, good 26 tyres, needs assembling; £7, gift.—Ball, 49, Riverside, Kingston-on-Thames. [7111

1913 Rex-Jap Combination, Roc clutch, electric horn, etc., good tyres and in splendid running order; price £35.—or near offer.—Dunwell's Garage, Wigan. Tel.: 328. [0764

REX 6b.p., with sidecar, just overhauled and repainted, in perfect running order, Mabon variable gear, lamps, speedometer, tyres as new, windscreen, and all accessories, tax paid; no reasonable offer refused.—Bittles, Hamble, Hants. [7177

### Rover.

ROVER, 1920 Combination, lovely condition; £85.—Clark, 7, Exhibition Rd., S.W.7. [7844

6h.p. Rover Combination, 1919, 3-speed, clutch, K.S., perfect; £70.—13, Vernon Rd., East Sheen, Surrey. [7584

1921 3½h.p. Rover, brand new, unridden; first offer of £85 secures.—Box 8514, c/o *The Motor Cycle*. [7204

£70.—1920 3½b.p. Rover, 3 speeds, countershaft, as new, and guaranteed perfect.—Tucker, 94, Redcliffe Hill, Bristol. (D) [6445

£42/10.—Rover, 3½b.p., 3 speeds, countershaft, clutch, kick starter, accessories (tax paid 1922). —8, High St., Wandsworth. [7573

1919 T.T. Rover, Philipson pulley, £10 carburetter fitted, fully guaranteed, very fast; £45.—Smith, 2, Milbourne St., Blackpool. [7242

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Rover.

OVER 1921 3½h.p., 3-speed, with coach-built sidecar, shop-soiled only; £115.—P. J. Evans, 1n Bright S., Birmingham. [7350

OVER 3½h.p. 1919 and Sidecar, recently over- hauled, tyres, belt good; £76; meet half-way for l.—Stafford, c/o Burliugham, Evesham. [7419

OVER 5-6h.p. 1919 Model, £65; sidecar with hood, screen, £15; Lucas dynamo lighting, £15; rs.—Seen at Central Garage, West St., Bromley, at. [7243

OVER 5-6h.p. 1921 Combination, nearly new, equipped, cost £170; bargain £114, or exchange solo and cash.—W. Ayres, Old Barracks, Kensing- Palace. 'Phone: Park 86. [7409

85.—Rover 3½h.p. motor cycle and sidecar, 1920, not run 1,000 miles, Lucas head and tail lamps l horn, full tools, good as new, licence paid to June h, extra cushioned seat on back of cycle; seen appointment.—Rudheath, Canford Cliffs, Bourne- nth. [7317

*Spare Parts:*

OVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7225

### Royal Ruby.

OYAL RUBY 1920 3h.p., 3-speed, spring frame, as new; £60.—The Morris Garages, Oxford. [7143

OYAL RUBY, 2-stroke (Villiers), excellent con- dition, fully equipped, tax paid, genuine bargain; .—Mulhall, Nest, Whitchurch, Hants. [7262

UBY 1919 8h.p Combination, excellent condition, owner going abroad; 79 gns.—Colonial Agency, Bedford St., Strand. Gerrard 4672. [7984

### Rudge.

UDGE I.O.M., shop-soiled; £75.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [7540

AUCHOPE'S, 9, Shoe Lane, London.—3½h.p. I.O.M. Rudge, 1920; £50. [8067

25.—3½h.p. Rudge, hand clutch, splendid running order.—King, Egrove Farm, Oxford. [7741

UDGE, 1921, new condition, equipped; £58.— Clark, 7, Exhibition Rd., S.W.7. [7845

UDGE 3½h.p. Clutch model, splendid order throughout; £22/10.—Speechley, 86, Churchfield , Acton, W.3. [7405

922 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, swell Hill, N.10. [0791

UDGE-MULTI, T.T., 3½h.p., brand new, un- packed, cost £85; accept £67/10.—147, Devon- re Rd., Forest Hill. [7784

921 Rudge Multi Combination, spare belt, all accessories, tax paid, fine condition; £85.—Roper, rpe-on-the-Hill, Lincoln. [7588

1h.p. I.O.M. Rudge-Multi, Nov. 1919, accessories, 2 tax paid, excellent order; £50.—Tebb, Wivels l Vicarage, Haywards Heath. [7104

920 Rudge Multi, Montgomery sidecar, Triplex screen, speedometer, lamps, horn, grid, licence l.—Perkins, 455, High Rd., Leyton. [7387

921 Rudge-Multi, 7-9h.p., Twin and Rudge de Luxe sidecar, only ridden 100 miles; £110.— tlett's, 93, Gt. Portland St., London. [8085

913 3½h.p. Rudge, single gear, new Senspray, re-enamelled, equipped, excellent condition; , carriage paid.—56, Lawrence Hill, Bristol. [7612

1h.p. Rudge, fixed gear, re-enamelled, first class 2 order, tyres good; £29.—Shepherd, Enfield ghway. Waltham X 31. [0792

UDGE Multi 1922, brand new, I.O.M. model; im- mediate delivery at latest reduced price; £77.— e, Ltd., 15-16, Bishopsgate Avenue, Camomile St., .3. 'Phone: Avenue 5548. [0073

920 I.O.M. Rudge-Multi, all on, mileage only 3,170, splendid condition; £60 or reasonable r.—Reeve, 61, Victoria Terrace, Littlehampton, sex. [7779

ATE 1920 7-9h.p. Rudge Multwin Combination, all on; perfect condition for solo 3½h.p., 2- ke, or late Morgan; would sell reasonable figure.— yhound, High St., Battersea. [7582

UDGE 1922 Isle of Man models at the new reduced price; £77. Exchanges.—Newnham Motor Co., , Hammersmith Rd., W.6. 'Phone, Hammersmith [7513

UDGE 5-6h.p. Combination, perfect condition and appearance, lamps, spare tube, 2 spare belts, new k tyre; £75; insured.—Morgan, St. James's Rd., wesend. [7498

921 Rudge-Multi 3½h.p. I.O.M., as new, lamps, Klaxon, speedometer, tools, spare belt, tax d 1922; 62 gns.—Winter, 18, Cambridge Rd., nes, S.W.13. [7259

AUCHOPE'S, 9, Shoe Lane, London.—New 1922 3½h.p. Rudge, sloping tank, I.O.M.; £77; any del supplied; write for list; easy terms arranged; ondhand machines taken in exchange. [8068


# "THEY SERVED ME WELL!"

This is the character given us by a customer when writing of The Eastern Garage Co. to a friend, and we do our utmost to live up to this good name in every transaction we carry through.

If you will get into communication with us you will at once realise that your enquiry is being dealt with in a businesslike manner, and throughout the negotiations it will be obvious to you that we are endeavouring to give effect to your every wish and ensure your satisfaction.

Whether you make a cash purchase from us, exchange your old machine for a new one, or avail yourself of our Deferred Payment Scheme, you will receive the same courteous attention, the same straightforward treatment, and the same efficient service that prompted our customer to say :—

**"THEY SERVED ME WELL."**

Your first step in securing a motor cycle that will fulfil your requirements is to write for our New and Second-hand stock lists. The cash and deferred payment prices are shown clearly against each machine, and when you have selected a few that are likely to suit you, we will furnish the fullest possible details of each to enable you to make a final choice.

**THE EASTERN GARAGE CO.**

(Official Repairers to R.A.C., A.C.U., A.A., & M.U.)

**418 ROMFORD ROAD, FOREST GATE, E.7.**

Telephone ..... 490 East Ham.
Telegrams ..... "Egaraco, London."


## MOTOR CYCLES FOR SALE.

### Rudge.

7-9h.p. Multwin T.T. Rudge 1921, Lucas lamps, speedometer, etc., oversize tyre, spares, ex- cellent condition, done 500 miles, sell or exchange (see Exchanges).—Mathias, Burwood, Formby. [7412

AN exceptional opportunity occurs of purchasing a 3½h.p. Rudge-Multi, September, 1921, with long plated and standard exhausts, etc., for £65; no offers.— 120, Ridley Rd., Forest Gate, E.7. [7789

DOWN Again!—Another reduction, 1922 3½h.p. T.T. Rudge, brand new, in stock, immediate de- livery; latest reduced price £77; secure now, cash or easy payments.—Wilkins Simpson, opposite Olympia, London. [7728

*Spare Parts:*

RUDGE Spares.—Write for list half-price new ex- W.D.; lists free; big stock.—Banister and Botten, 341, Upper St., N.1. 2480 North. [7601

### Ruffles.

RUFFLES 1918 model 2h.p., Villiers engine, in good condition; £30, or nearest offer; lights com- plete.—Apply Rector, Swanage. [7192

### Scott.

SCOTT 1922 models in stock.—Jack Pilling, Rock St., Bury. [8022

SCOTT 3¾h.p., 2-speed, Bosch magneto, Senspray; £30.—39, West St., Leek, Staffs. [7297

SCOTT 3¾h.p., 2-speed, kick start, good order; or exchange.—24, Littlewood Rd., Lewisham. [7756

SCOTT Combination (1920), for Morgan or Triumph. —Chapman, Twomile Hill, Kingswood, Bristol. [7584

1922 Scott Models in stock, complete; £110; de- livered free.—Millard's, Scott Agents, Chester- field. [4276

1922 Scott Squirrel, unable to complete purchase, machine unregistered; £95.—72, Redcliff St., Bristol. [7706

1922 Scott, Brand New, unpacked, must sell, list £110; sacrifice £93.—Box 8558, c/o *The Motor Cycle.* [7339

SCOTT Motor Cycles, new and second-hand; 1922 Scott Sociables; great demand; order now.—99, Great George St., Liverpool. [7752

SCOTT SQUIRREL in Stock; £105; the nifty sports 'bus; carriage paid.—G. H. Tucker, Scott Agent, Redcliff Hill, Bristol. 'Phone . 4042. [5205

1920 Scott 3¾h.p., Bonniksen speedometer, electric lamps, long copper exhaust, perfect; £60.— P. H. Allin and Sons, 12, Bridge St., Cambridge. [7355

SCOTT 3¾h.p. 2-speed Combination, lamps, horn; £44. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7530

SCOTT Sports, 1921, July, mileage 1,500, un- punctured, lamp, generator, 1922 type oiling, appearance as new; £87/10.—65A, Mount Pleasant Rd., Tunbridge Wells. [7393

SCOTT Combination, 1920, Fallolite lamp and dis- solved acetylene, mileage 4,000, in splendid con- dition throughout, going abroad; £95.—Major Pepper, The Avenue, Milford Hill, Salisbury. [7682

SOUTH LONDON Scott Service Depôt.—'Phone Croy- don 1129 for demonstration runs; early deliveries; prices from £105.—John R. Kinsey and Co., Ltd., 350- 352, Lower Addiscombe Rd., Croydon. [8030

EXCEPTIONAL Bargain.—Advertiser having de- cided to buy a car, will sell brand new 1922 Scott, unwrapped, complete with horn, lamps, in- surance policy; accept £110.—Box 8498, c/o *The Motor Cycle.* [7154

£28.—Late 1912 Scott 3¾h.p., very little used and really fast, new tyres, 1921 tank, T.T. bars, Amac carburetter, 1921 lubrication system, Lucas water- proof magneto, good appearance, will ride 100 miles to purchaser.—110, Willows Rd., Cannon Hill, Bir- mingham. [7486

*Spare Parts:*

SCOTT Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7226

SCOTT Service Depot.—Scott spares and repairs.— Cathedral Motor Works, 99, Great George St., Liverpool. [7753

WARD Motors, Ltd., 32, Hustler St., Bradford, for serviceable second-hand Scott parts. Huge stock. [0739

SOUTH LONDON Scott Service Depôt.—Scott Spares; Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone 1129. [8031

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list, stating year of manufacture. [0751

### Singer.

SINGER, 3½h.p., 3-speed, Milford C.B. combination; sale cheap.—78, Maury Rd., N.16. [7622

## MOTOR CYCLES FOR SALE.

### Singer.

3½h.p. Singer sidecar, 3-speed, perfect mechanical condition, new tyres, full licence; £40.—17, Garden Ave., Mitcham, S.W. [7587

*Spare Parts.*

SINGER Genuine Spares in stock. Don't be misled. Let me quote you.—Alf. Holland, Hearsall Lane Corner, Coventry. 'Phone: 1945. [7890

### Sparkbrook.

SPARKBROOK, 2½h.p., 2-stroke, 2-speed, fast, good order, tax paid 1922, bargain; £24/10.—Hargreaves, Middlewich, Cheshire. [7626

### Sun.

1916 Sun Villiers, 2-stroke, all on, tax paid; 20 gns.—Day, 10a, North Pole Rd., W.10. Park 3258. [7970

29 GNS., Bargain.—1919 Sun-V.T.S., 2 speeds, footboards, smart, rehushed.—Seabridge, Hansler Rd., East Dulwich. (Sydenham 2452.) [7936

1921 Sun-Vitesse, 2-speed, countershaft, lamp, horn, original tyres, done very little; £35.—Curtis, Mount St., King's Lynn. [7899

FOR Sun, J.A.P., or Sun Vitesse, get in touch with the sole North London agents. Models in stock, single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., 60 gns. Send for catalogues. Trade supplied.—Jones Garage, Broadway, Muswell Hill, N.10. [0790

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Sun-Villiers and Sun-Jap engine parts in stock. [7876

### Sunbeam.

THE Morris Garages, Oxford.—All latest Sunbeam models in stock. [7150

CROSS, Effingham Square, is agent for Sunbeams in Rotherham. 4½h.p. from stock. [7552

SUNBEAM 1921 3½h.p. Solo, unused, shop-soiled; £130.—The Morris Garages, Oxford. [7140

3½h.p. Sunbeam Touring, fully equipped, condition like new; £85.—Dosser, Slingsby, Maltoa. [7630

3½h.p. Sunbeam, late model, in absolutely new condition; £85.—17, Tamworth Park, Mitcham. [7399

1919 3½h.p. Sunbeam, all chain drive, 3-speed; £65.—24, Balliol Rd., North Kensington. [7767

WAUCHOPE, 9, Shoe Lane, London.—New 1922 Sunbeams, order now; also 3½h.p. 1917 model; £75; easy terms and exchange. [8069

SUNBEAM 3½h.p. 3-speed Sports model, new Oct. 1920, little used, guaranteed perfect, owner buying car; £85, genuine bargain.—Moss, Wem. [7129

SUNBEAM Combination 1916 3½h.p., 3-speed, new Sunbeam sidecar, condition excellent, just overhauled; £80.—Percy and Co., 314, Euston Rd., N.W.1. [7926

1921 (late) Sunbeam 3½h.p., all accessories, mechanically perfect, unscratched; £105, near offer.—Mann, Glemham, Wickham Market, Suffolk. [7444

1920 3½h.p. Sunbeam, excellent condition, tyres and engine perfect, lamps, horn, kick start; 90 guineas.—Write, Court, 6, Datchelor Rd., Camberwell, S.E. [7397

SUNBEAM 3½h.p. 1920, splendid condition, detachable wheels, Binks, lamps, horn, with light coach sidecar; £100.—Gore, Wickfield, Hungerford. [7904

8h.p. Sunbeam, late 1918, triple tank, exchangeable wheels, Tan-Sad, lamps, Klaxon, Fulford sidecar, two luggage grids, Easting, overhauled, good condition; £120.—Edwin, 50, Abbotts Park Rd., Leyton, E.10. [7278

SUNBEAM 1919 3½h.p. Combination, complete with lamps, tools, tubes, 2 horns, speedometer, and pump, condition as new, low mileage; genuine bargain, £95, or nearest offer.—Private, 126, High St., Croydon. [7112

SUNBEAM Combination 3½h.p., engine number 130/5538, frame number 1919, lamps, horn, spare cover; accept £80, or near offer; owner going abroad. Can be seen at Hastings' Garage, Ramsgate Rd., Broadstairs, Kent. [7186

1921 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual spares, cast aluminium plates, new in April last, and in exceptionally good condition, tyres unpunctured; nearest offer to £115.—Geoffrey Smith, *The Motor Cycle*, Coventry. [X4285

SUNBEAM, special model, great bargain to any prospective Sunbeam buyers, latest 1922 sports T.T. model, fitted latest 1922 T.T. handlebars, Lucas largest lamp, and horn, Cowey speedometer, plated Tan-Sad, absolutely brand new and unridden; cost over £150; exceptionally fast; will ride one hundred miles; reasonable offers invited.—Apply Box 8,568, c/o *The Motor Cycle*. [7750

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Sunbeam parts in stock. Immediate delivery. [7877


THE

# ASTRA

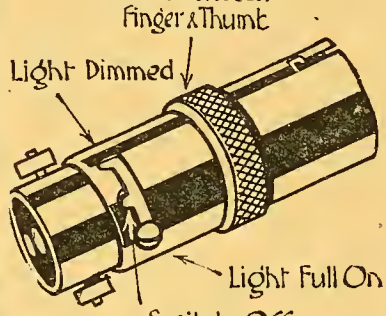
MOTOR CYCLE

## DIMMER SWITCH

AND

## CURRENT ECONOMISER

*Patent Applied for*




Actual Size

**Price 7/6 Post Free**

When ordering state voltage and candle power of Head Lamp Bulb

**CAN BE INSTANTLY FITTED TO ANY LAMP with standard double contact S.B.C. lamp holder**

AS EASILY FITTED AS A NEW BULB

**No cutting or alterations whatever to the existing wiring**

GREAT SAVING OF CURRENT for town riding and machines left standing with lights on

**Inexpensive :: Inconspicuous :: Cannot go Wrong :: Beautifully Finished in Nickel Plate**

FULL PARTICULARS, AND ALSO PARTICULARS OF MOTOR CYCLE DYNAMO LIGHTING SETS COMPLETE WITH ALL FITTINGS FROM **£12-0-6** AND LIGHT CAR SETS FROM

**The Astra Dynamo Compy.**

**110, Victoria Street, S.W.1**

Telephone: Victoria 7545.


## MOTOR CYCLES FOR SALE.

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £10! Type SD, chain drive, £115; Type LW, lightweigh £65; sidecars from £20 to £50; easy payments 4% extr —Buy direct from the leading Triumph agents: Th Premier Motor Co., Aston Rd., Birmingham. [062

TRY Julians of Reading.—All Triumph models i stock. [710

£15 down secures C.S. Triumph, and 12 paymen £3/2/8.—Below.

£18 down secures C.S. Triumph, lamps, horn, disc etc., and 12 payments £3/6/3.—Below.

£20 down secures C.S. Triumph, 1918 renovate and 12 payments £4/0/8.—Below.

£20 down secures C.S. Triumph, 1918, renovated a new, and 12 payments £4/18/7.—Below.

£25 down secures C.S. Triumph, fitted with 192 new gear box, beautiful condition, and 12 pa ments £4/18/7.—Below.

£28 secures 1921 C.S. Triumph, lamps, horn, etc and 12 payments £5/2/2.—The Triumph Specia ists, Hackford Engineering Co., 33, Hackford Rd Brixton, S.W.9. [800

TRIUMPH 1922 models in stock.—Jack Pilling Rock St., Bury. [802

TRIUMPHS, all models; exchanges.—Harry Nash 365, King St., Hammersmith. [685

1918 Countershaft Triumph, perfect; £48.—9, Wa lingford Avenue, North Kensington. [771

CROSS, Effingham Square, is agent for the Trust Triumph for Rotherham and district. [755

TRIUMPH Combination, fully equipped; £75.—Ra cliffe Bros., 200, Gt Portland St., W.1. [754

£20.—Sporting 3h.p. Triumph, T.T. bars, discs, ta paid.—King, Egrove Farm, Oxford. [774

RICARDO Trimph, delivery early Feb., must sell best offer.—Box 8516, c/o *The Motor Cycle*. [720

BABY Triumph, 1916-17, countershaft, perfect con dition, 1922 tax paid, bargain; 35 gns.—35 Shepherd's Bush Rd., Hammersmith. [801

1918 Triumph Combination, brand new sidecar screen, lamps, beautiful condition; £68.—37 Canterbury Rd., Balls Pond Rd., Dalston, N.1.

1921 Triumph Baby, as new, lamps, horn, licensed £50.—Bennett, 49, York Rd., Birkdale, Lancs. [724

1918 Countershaft Triumph, perfect, fine machine £48.—24, Balliol Rd., North Kensington. [776

TRIUMPHS.—A fine assortment of all models i stock at prices to suit all.—Ross, 86, High Rd, Lee. [502

£38.—1920 Baby Triumph, unscratched, horn lamps, etc.—Brockbank's, 58, Lord St., South port. [721

1913 3½h.p. clutch model Triumph, tax paid, al on; £26, offer, exchanges.—187, Elm Rd., New Malden. [674

£30.—3½h.p. Triumph, 1914, 3-speed, licence paid good running order, quick sale.—88, Park Rd. Dulwich. [766

TRIUMPH, 4h.p., 3-speed, clutch, lamps, horn, ta paid, ride away, bargain; £35.—219, Belsize Rd. Kilburn. [765

TRIUMPH Junior, 1921, brand new, slightly soiled £58.—Eagles and Co., 275, High St., Acton London. [788

1919 Triumph-Gloria Combination, good condition £80.—Goad, 122, Maida Vale. 'Phone, Hamp stead 1353. [780

F.O.C.H. have 1922 Triumph Model H, in stock also 1918 Combination.—5, Heath St., Hampstead (Near Tube.) [641

3½h.p. Triumph, good condition, lamps, tyres, a new, any trial; £22/10.—100, Beulah Hill Upper Norwood. [767

£32.—Triumph 3½h.p. 1911, S.A., 3-speed hub, goo condition, go anywhere, lamps.—Smith, Chemist Shepshed, Leics. [740

1921 Triumph 4h.p., Model H, in splendid con dition, lamps, horn, licence paid; £78.—Tip pen, Marden, Kent. [745

1921 Triumph Baby, 2¼h.p., two speeds, tax, abso lutely as new, insurance; £52/10.—Goad, 122 Maida Vale. 'Phone, Hampstead 1353. [779

TRUMP-J.A.P., 6h.p., 3-speed, clutch, Canoele combination, lamps, etc., perfect condition; £45 —Rosebank, Thorkhill Rd., Thames Ditton [756

1921 Triumph, chain drive, Canoelet Sports sidecar all accessories, good condition, fast; £100.— Sherwood, Shelfanger Hall, Diss, Norfolk. [727

TRIUMPH 1922 all-chain models in stock. Ex changes.—Newnham Motor Co., 223, Hammer smith Rd., W.6. 'Phone, Hammersmith 80. [751

## MOTOR CYCLES FOR SALE.

### Triumph.

ONGMAN BROS., Bond St., Ealing. Telephone: 689. Official district agents.—All Triumph odels. Cash, exchange, or deferred payments. [5787

RENOVATED W.D. Triumph, electric lamps, speedometer, any examination, trial, £42.—17, ne Park, N.W.11. 'Phone, Hampstead 260. [7648

ONE-YEAR-OLD Triumph coachbuilt Combination, perfect condition, £20 worth accessories; sacri- e, £98/10.—Hayes, Fort Royal Hill, Worcester. [7462

TRIUMPH 1922, Model SD, just delivered, 4h.p.; £115; exchanges, extended terms arranged.— ce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., C.3. 'Phone: Avenue 5548. [0074

25.—Clutch model Triumph, in perfect running order, complete with lamps and horn.—Smith's, Chalk Farm Rd. (opposite Chalk Farm Tube ation). [7914

TRIUMPHS.—We are the East Lincolnshire Agents, and can deliver all 1922 models from stock; sh or deferred paymeots.—Kemp's Garage, Louth. [7941

920 (August) Triumph Combination, large roomy sidecar, complete with lamps and horn; £92. P. H. Allin and Sons, 12, Bridge St., Cambridge. [7351

55.—4h.p. renovated by Triumph's, 1920, 3-speed, lamps, horn, licence, discs, pillion; ride 20 les to purchaser.—Beaulieu, Avenue Rd., St. bans. [7388

920 Countershaft Triumph Combination, excel- lent condition; £75; evenings or any time ek-end.—6, Thurlow Rd., Elthorne Park Rd., Han ll, W.7. [7407

TRIUMPH 1920 3½h.p. Sports models (2) in new condition, accessories; £55 each.—Newnham Motor ., 223, Hammersmith Rd., W.6. 'Phone, Hammer- ith 80. [7522

TRIUMPH 4h.p. C.S., smart and perfect, Bosch, Dunlops, any trial; £50.—Wellington Garage, llington Mews, Ledbury Rd., Bayswater, W. none: Park 3699. [7437

921 Triumph, chain driven model, with special sidecar for travellers' samples, a grand outfit ual to new; £105.—Bunting's Exchange, Weald me. [78

921 3½h.p. Triumph, single-speed model, special forks, absolutely brand new, shop-soiled only; ered at the bargain figure of £65.—The Layton rages, 30, Holywell St., Oxford. [7815

921 Triumph-Junior 2¼h.p., 2-stroke, 2-speed; list price £65; this machine is brand new, and offered at the special price of £55.—The Layton rages, 30, Holywell St., Oxford. [7816

3 GNS.—Triumph 3½h.p., 3-speed, clutch, new Duolops, recent £5 overhaul, lamps, horn ence, perfect.—20, Treen Avenue, Hogger's Corner rnes. [7754

DON'T miss a look at our special lot of secondhand Triumph Combinations, 1922, 21, 20, and 19's nderful bargains; from £75; tax paid, insured.— night's, 126 Upper Tooting Rd., S.W.17. 'Phone eatham 2390. [077

TRIUMPH, all chain, perfect throughout, special competition tank, winner of numerous prizes ll go anywhere or climb any hill, ridden only by W. Duke, 211, Birchfield Rd., Birmingham; £100. [8043

PARKER'S Motors can supply all Triumph 1922 models at list prices and give an insurance policy inst mechanical breakdown for 12 months free sh, deferred, or exchanges.—194, Balham High Rd. V.12. [6420

960, Triumph Combination, 4h.p., 3-speed, tax paid (rated at 200lb. weight), horn, lamps, generator, complete, unused over 12 months, overhauled araged Highgate.—P., Box 8556, c/o *The Motor cle.* [7337

BRAND New Triumph, H. Montgomery special £37 sidecar, apron, all Lucas accessories, speedometer t paid 1922, the whole absolutely new and unused ured; £145.—Heath, 168, Wellington Rd., South unslow. [7207

TRIUMPH 4h.p. Combinations. We always have several of these outfits in stock at attractive ices. Exchanges. List on request.—Newnham Motor ., 223, Hammersmith Rd., W.6. 'Phone, Hammer ith 80. [7524

VAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Triumphs: 4h.p., all-chain models, 3-speed .15; 4h.p. chain and belt, £105; 2¼h.p., 2-stroke odel, £65; 4h.p combination, £145; easy terms and change. Holborn 5777. [8070

BRAND new 4h.p. Sports Triumph, £70, snip; 1920 Baby Triumph, excellent, £42; 1919 4h.p. ntershaft Sports Triumph, spleadid order, large cas headlamp, engine 60590, 60 gns.—Exchanges ots, 417, Lord St., Southport. [7671

921 S.D. Triumph, Whitley sidecar, leg shields, acetylene head, electric side and rear, fully uipped all spares, including tyre and tube, condi- tion excellent; best offer over £110; exchange Rover .p.—Forsyth, Woodlands Terrace, Darlington. [7256

# LEATHER JERKINS

**These leather jerkins are made from superior quality tan leather. Very soft and pliable, fleece lined and double stitched. They can be worn either over or under your overcoat. These goods could not be produced, even on the present slump prices, at less than 30/- each. Stock is not large, and when cleared cannot be repeated.**

# 10/- each

## Postage 1s. extra.

## RUBBER HIP BOOTS

**Manufactured by North British Rubber Co., Ltd., etc.**

**THESE GOODS ARE QUITE NEW AND NOT OLD SURPLUS STOCK.**

**Sizes: 7, 8, 9, 10, 11, 12.**

**SENT ON 7 DAYS' APPROVAL AGAINST REMITTANCE.**

Per Pair **12/6** Carriage /- Extra.

**"A BOON TO THE MOTOR CYCLIST"**

**ORDER THE**

*The Name.* **ELITE** RUBBER Co. LTD Tyre Specialists *The Firm.*

**WAY**

**LONDON'S LEADING TYRE HOUSE, 264-266, Vauxhall Bridge Rd., Victoria, S.W. 1.**

**Telephones: Victoria 6553 and 6554.**


## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH Junior 1920, in first-class condition; £42 Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7523

1916 Triumph Countershaft Combination, fitted Paragon quick detachable coachbuilt body, also large carrier box for same, splendid opportunity private or commercial use, complete with accessories; £65.—Jones Garage, Commerce Rd., Wood Green, N.22. [7244

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [5615

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [7392

HERBERT ROBINSON, Ltd., Green St., Cambridge, the Triumph Experts.—Complete illustrated lists post free. [7878

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Trump.

WAUCHOPE'S, 9, Shoe Lane, London.—Trump-Jap, 2¾h.p. engine; £60; easy terms and exchange. [8071

### Velocette.

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—All 1922 Velocette models supplied on easy terms and exchange. [8072

VELOCETTE 2¼h.p. 2-stroke, 2 speeds,, all-chain drive, lamps, licence, Klaxon, leg shields, footboards, splendid order; £25.—63, Solon Rd., Brixton. [7067

ORDER Your Velocette from G. H. Tucker, Redcliffe Hill, Bristol, carriage paid to any address in England; your mount taken in part payment for one of these wonderful machines.—'Phone: 4042 Bristol. [5204

ASTOUNDING value.—Special offer of brand new 1921 model D.2 Velocette, latest improvements, 2-speed, chain drive; £55. Carries maker's full guarantee; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [7925

### Victoria.

3¾h.p. Victoria Precision Combination, 3-speed, S.A., tax paid, trial; £27/10.—Ward, Red Bank, Chorley. [7447

### Villiers

1921 Villiers 2-stroke, 2-speed, fully equipped, excellent condition; £35.—Dosser, Sliogshy, Malton. [7632

### Vindec.

VINDEC, 1921, 2¼h.p., 2-speed, 2-stroke, new tyres, lamps, horn, etc., an excellent mount; £28/10.—Gordon R. Croxford, The Motor Cycle, 461, Upper Richmond Rd., East Sheen, S.W.14. 'Phone: Richmond 322. [7964

### White and Poppe.

£12/10.—3½h.p. W. and P., fixed engine, U.H. mag.—Speecnley, 86, Churchfield Rd., Acton, W.3. [7402

### Wilkin.

WILKIN-BLACKBURNE 4h.p. 1921, with Millford sidecar, 3-speed, hand clutch, speedometer, and lamps; nearest offer £85, or would sell separately.—Box 8500, c/o *The Motor Cycle.* [7156

### Wolf.

1919 2¾h.p. Wolf-Villiers, 2 speeds, Brampton forks, Dunlop heavies, as new, enamel perfect, snip; £29.—Mayuard, 161, Bowes Rd., Bowes Park, N.11. [7662

£35.—Bargain, late Wolf-Jap, 2¾h.p., 2-speed, hand clutch, kick start, plated lamps, long brass exhaust, speedometer, Klaxon; exchange Douglas.—89, East Hill, Wandsworth. [7571

### Wooler.

NEW Wooler, 2¾h.p. Flat Twin, Brooklands Sports model, complete with lamps and horn; reduced from £105 to £75; a bargain; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [7381

WOOLER, 1920-21, 2¾h.p. Flat Twin, variable gear, spring frame, many latest improvements, special T.T. bars and aluminium footboards, etc., excellent tune and condition, reserve price, £40; best offer for quick sale secures.—Kinsey and Co., 350, Lower Addiscombe Rd., Croydon. 'Phone 1129. [8028

### Zenith.

1922 Zenith-Bradshaw, Gradua gear model; £98.—59, High St., Clapham, S.W. [7359

ZENITH, Model D, shop-soiled; £100.—Ratcliffe Bros., 209, Gt. Portland St., W.1. [7541

THE Morris Garages, Oxford.—Zenith, Bradshaw oil-cooled Gradua, for immediate delivery. [7151

## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH.

ALLAN GRUZELIER.—Specialist in Zenith Motor Cycles.

IF you want a Zenith, come and see me first, in London or Coulsdon.

IF you have not tried a chain drive Zenith-Bradshaw, make an appointment to do so. You will be amazed! They're simply wonderful.

WRITE for list of new or secondhand machines to: Ulster Chambers, 168, Regent St., W., Regent 205, or Knight and Wheatley's Garage, The Pavement, Coulsdon. Purley 1277. [7790

ZENITH 1920 5-6h.p. Sports, fully equipped; £78.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [7545

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Zenith-Bradshaw; £113; easy terms and exchange. [8073

ZENITH 6h.p. clutch Combination; £47.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7531

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, for immediate delivery from stock of Zenith-Bradshaw; price £119. [0711

ZENITH Combination, 5-6h.p. 1918, good order and condition; £75 for quick sale.—145, Northcote Rd., Clapham Junction. [7383

ZENITH 5-6h.p. Sports, fully equipped with Lucas accessories, spare belt, case, perfect order; £70.—Emons, South Bank, Ipswich. [7546

1919 Sports Zenith, 5h.p., smart appearance, excellent machine, accessories; 56 gns.—Exchanges, Kents, 417, Lord St., Southport. [7674

ZENITH-BRADSHAW.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7240

ZENITH 8h.p., 90×77½, special late sports model, perfect condition, with almost new cancelet sidecar; bargain, £45.—573, High Rd., Tottenham. [7059

ZENITH 6h.p., fast, reliable, 1915, all on; £45; exchange P.M. part.—6, Daneville Rd., Camberwell, S.E. [7774

1915 4-5h.p. Twin Zenith, 1921 rear brake, splendid condition; £40.—Brockbank's, 58, Lord St., Southport. [7895

ZENITH-GRADUA, 1916, 6h.p. combination, spare tyre, luggage-grid, 3 lamps, hood, screen, excellent condition; 52 gns.—35, Shepherd's Bush Rd., Hammersmith. 'Phone, Museum 7286. [8018

1919-20, 6h.p., Zenith Combination, new Cancelet sidecar, Eastings, electric lighting, K.S. clutch, guaranteed faultless; £93.—Fison, Sudbury, Suffolk. [7275

F.O.C.H. have 1922 Zenith-Bradshaw, 3-speed, all chain in stock, also 1920 8h.p. countershaft combination.—5, Heath St., Hampstead. (Near Tube.) [6412

ZENITH-J.A.P., 4½h.p., overhauled and enamelled; condition as new, too fast; £45 and tax; sidecar and fitting for same, good spares.—48, Pentney Rd., Balham. [7368

ZENITH-BRADSHAW 1922 all-chain drive models for immediate delivery. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7514

1921 8h.p. Sports Zenith, new August, privately owned, done 1,300 miles, guaranteed perfect throughout, any trial, as new; £85, no offers.—127, Midland Rd., Wellingborough. [7492

ZENITH, 1921, countershaft, 5-6h.p., new type engine, Lucas lamps, Cowey horn, speedometer, machine scarcely used; £85.—Clark, 7, Exhibition Rd., S.W.7. [7845

ZENITH, 1920, 8h.p., countershaft, Zenith sidecar, mechanical condition perfect, 2 tyres practically new, very fast, any trial; £95.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822 [7957

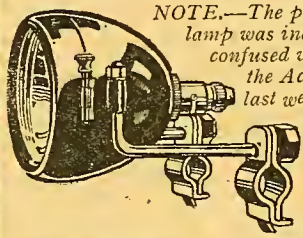
1922 Zenith-Bradshaw in stock for immediate delivery; £118; cash, exchange, or extended payments.—Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0734

ZENITH 8h.p. Clutch Model, just overhauled at cost of £25, latest colours, new tyres, belt, etc., guaranteed perfect; solo, £55; with Millford sidecar, as new, £65.—S. E Porter and Co., Whitchurch, Salop. [6403

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free. Cash deferred or exchanges.—194, Balham High Rd., S.W.12. [7416

1921 Zenith 5h.p Sports model, fully equipped with lamps, horn, speedometer; this machine is a truly excellent specimen of this make, and is guaranteed perfect; offered at the very special price of £75 for cash.—The Layton Garages, 30, Holywell St., Oxford. [7817

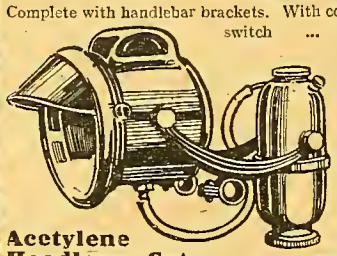
Bertie continues his campaign against high prices. Here are a few more scalps.



*NOTE.—The price of this lamp was inadvertently confused with that of the Acetylene Set last week. These are the correct prices.*

**Electric Headlamp.**

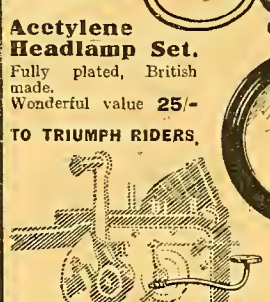
Complete with handlebar brackets. With combined switch ... **27/6**

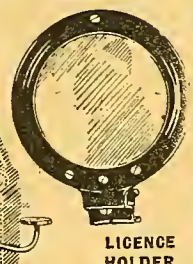


**Acetylene Headlamp Set.**

Fully plated, British made.
Wonderful value **25/-**

**TO TRIUMPH RIDERS.**





**LICENCE HOLDER.**

For handlebar or fork fitting. Price 2/-

**Triumph Clutch Pedal.**

Convert your clutch to foot, as well as hand control. Simple to fit by any amateur in a few minutes. Price **4/-**

Postage Extra.

**TRADE SUPPLIED.**

**BURLINGTON MOTOR CYCLE CO., LTD**

**7, South Side, Clapham Common, S.W.4.**

'Phone: Brixton 2417.

**(Just by Clapham Common Underground Station.)**

## MOTOR CYCLES FOR SALE.

### Zenith.

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, Bond St., Ealing. [72

### Ladies' Motor Cycles.

LADY'S Velocette, dainty little machine, 2 speed splendid order; £35.—Bunting's Exchange, Weastone. [78

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Idaintiest of all ladies' machines; £62, complete. Sefor list. [07

VELOCETTE 1922 Model, E.L.2, ladies' open fran for immediate delivery, 2-speed, chain driclutch, kick starter, all-black weatherproof finis £65; the ideal lady's mount; write for illustrat catalogue; easy payments only 4% extra.—Premi Motor Co., Aston Rd., Birmingham. [79

### Miscellaneous.

HEMSWORTH.—Send for catalogues and terms.

HEMSWORTH.—Late Feb. delivery guarantee Reconditioned W.D., Douglas, Clyno, P. and M £45; others from £25. Hire purchase, 1/5th down.

HEMSWORTH.—Combinations from £50 upward Lists free.

HEMSWORTH.—Exchanges a Speciality. Let quote you.

HEMSWORTH.—New 1922 Models. Hire purcha 1/5th down.

HEMSWORTH.—Sidecars Renovated any colour, carriage paid home. Send that old sidecar, will return it like new.

HEMSWORTH.—We are still buying second-hand machines.

HEMSWORTH.—Ring up Hemsworth Exchang they will put you straight through to us. T new lines just installed.

HEMSWORTH Motor Works, Hemsworth, N Wakefield. [80

JONES GARAGE.—1920 3½h.p. Ariel combinatio fully equipped, showroom condition, mileage und 1,000, absolutely as new, with a 3 months' guarante £80.

JONES GARAGE.—Brand new 1921 Magdyno E field Combination to clear, £13 under to-day price; £145.

JONES GARAGE.—Almost new late 1920 4-cy Henderson, with extra large cancelet sideca would make an excellent 2-seater; fully equippe including rear drive, speedometer; absolutely as new 3 months' guarantee; £135.

JONES GARAGE.—1914 3½h.p. Humber, with Mi fulford coachbuilt sidecar, 3-speed, kick start, a clutch; fully equipped and guaranteed 3 months; £4

JONES GARAGE.—Late 1919 3½h.p. P. and M Combination, fully equipped with Lucas acce series. This is not one of the W.D. duds, but machine that left the works in September, 1919, h not done 2,000 miles, and is in showroom conditio £80.

JONES GARAGE.—1920 4½h.p. chain-drive Qua rant Combination, fitted with Easting, Lang and P. and H. lamps, Lucas horn; all absolute as new; £80.

JONES GARAGE.—Brand new 3½h.p. Rover Com bination, simply shop-soiled, 3-speed, kick star to clear, £99.

JONES GARAGE.—1914 2-speed Indian, renovate and overhauled as new, guaranteed perfect; £4

JONES GARAGE.—Late 1921 7-9h.p. Matchle Combination, spare wheel, Lucas lighting, a re bargain; £130.

JONES GARAGE.—Late 1919 3½h.p. Sunbeam absolutely as new, fully equipped with Luca accessories, a real bargain at £90.

JONES GARAGE.—1919 4h.p. Sept. Triumph Com bination, not a renovated model, but as it le the works, all in new condition, fully equipped wit the best; £100.

JONES GARAGE.—1913 Triumph, 3-speed and kic start, fitted with a very nice coachbuilt sideca and fully equipped—a real good pre-war outfit; £40

JONES GARAGE.—All the above machines wi have the 1922 licence paid, and will also carr our usual 3 months' guarantee.

JONES GARAGE can supply any new or second hand machine on earth. Send for our list. Jones Garage, The Broadway, Muswell Hill, London N.10. [80

F.O.C.H. for second-hand cycles, combinations, an runabouts at bargain prices. Exchanges a ranged. Any new cycles, combination, or car su plied, cash or deferred payments.—Fair Offer C House, 5, Heath St., Hampstead. (Near Tube 'Phone, Hampstead 3752. Hours 9-7, includi Saturdays. [64

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

920 Clyno, £38; 1914 2¾h.p. Douglas, £40.—Box 8,300, c/o *The Motor Cycle.* [6002

VANDSWORTH Motor Exchange.—100 motor cycles, combinations, to choose from; finest ection in London.

VANDSWORTH.—Buy your motor cycle from the old-established firm; backed by 24 years' ex-ience; satisaction guaranteed.

VANDSWORTH.—Easy terms. The only firm to give immediate delivery first deposit.

VANDSWORTH.—Premier fine Coach-built Combination, 3½h.p., 3 speeds, clutch, lamp; 39 gns.; hanges.

VANDSWORTH.—Vindec Combination 3½h.p., magneto, 2 speeds, kick, lamps; gift, 26 gns.; hanges.

VANDSWORTH.—Matchless Combination 8h.p. Twin, 2 speeds, kick, drive away; 45 gns.; ex-nges.

VANDSWORTH.—1920 Kenilworth 1¼h.p., magneto, chain-cum-belt, lamps; only 22 gns.; ex-nges.

VANDSWORTH.—1920 T.D.C. De Luxe 2¼h.p., Palmer tyres, very fast machine; 29 gns.; ex-nges.

VANDSWORTH.—Singer 2½h.p., magneto, 2-speed gear box, splendid condition; 29 gns.; ex-nges.

VANDSWORTH.—Wolf 2½h.p., J.A.P. engine, magneto, 3 speeds, clutch, lamps; 32 gns.; ex-nges.

VANDSWORTH.—Rudge 3½h.p., magneto, 2 speeds, kick, newly enamelled, beauty; 36 gns.; hanges.

VANDSWORTH.—Humber, almost new machine, 3½h.p., 2 speeds, everything fitted; 46 gns.; hanges.

VANDSWORTH.—Scott (reconstructed) Twin (water-cooled), fine machine, runs splendidly; 39 ; exchanges.

VANDSWORTH.—Triumph, almost new, unscratched, 4h.p., 3 speeds; who wants? 92 ; exchanges.

VANDSWORTH.—1921 Bradbury, with Grindlay, 4h.p., 3 speeds, absolntely new; 89 gns.; ex-nges.

VANDSWORTH.—1920 Bradbury, with Grindlay, 4h.p. 3 speeds, beautiful condition; 79 gns.; hanges.

VANDSWORTH.—1920 Scott, almost new, Combination, twin, water-cooled, everything fitted; gns.; exchanges.

VANDSWORTH.—1920 Sunbeam, lovely combination 3½h.p., 3 speeds, everything fitted; 96 ; exchanges.

VANDSWORTH.—1920 B.S.A., beautiful Combination 4¼h.p., 3 speeds, everything fitted; 85 ; exchanges.

VANDSWORTH.—1920 Henderson, dynamo lighting, 10h.p., 4 cyl., 3 speeds; only 96 gns.; ex-nges.

VANDSWORTH.—1919 Harley-Davidson, beautiful combination, 7-9h.p., 3 speeds, lamps; 85 gns.; anges.

VANDSWORTH.—Triumph 3½h.p., 22 gns.; J.A.P. Twin, 23 gns.; Peugeot Twin, 16 gns.; ex-nges.

VANDSWORTH.—12 beautiful coach-built sidecars from 8 gns.; fit almost any machine.—Below.

VANDSWORTH.—Easy terms.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town lon). 'Phone: Latchmere 4686. [7967

ALIFAX.—50 secondhand machines and combinations. Keen exchanges. Get list.—Halifax Motor ange, Horton St., Halifax. [7906

50 Bright Steel assorted nuts, studs, bolts, etc., sent carriage free, 10/-, approval.—Palmer's ge, Tooting. [7950

.p. Douglas 1918-19 Combination, excellent condition, £50, bargain; also 3h.p. Enfield Twin, eeds, £27.—24, Albion Rd., Lewisham. [7667

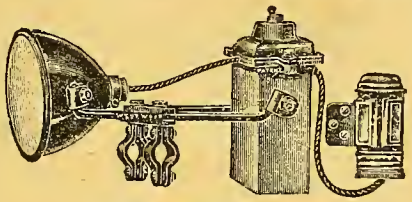
ARGAIN, Harley-Davidson Combination, £50; Scott 3¾h.p., £35; perfect running order; take the two.—Owner, 223, Cavendish Rd., Balham. [7430

R Sale.—A.J.S. Combination 1915 5-6h.p., £85; 7-9h.p. Indian, clutch, racing model, 1917, £60. ain.—Oakes, Longford Bridge Garage, Winwick Warsington. [7124

UNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction ance immaterial.—Bunting's Motor Exchange. ldstone. [6945

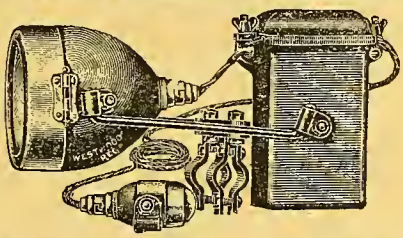
INNER 3 Reliability Gold Medals, 8 firsts speed events, 3½h.p. 3-speed Countershaft Colonial ial, foot-operated oiling, all accessories, spares, oversize tyres, sound throughout, any trial; £78; ate owner.—67, Bostall Hill, Plumstead, S.E.18. [7442


# "DAYBEAM" ELECTRIC SETS.

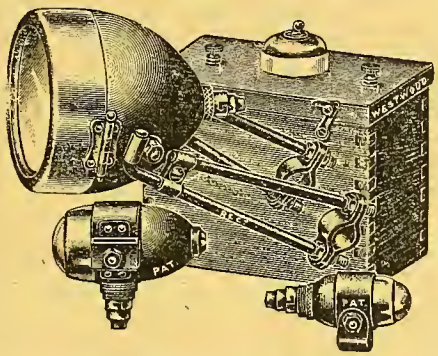


For Lightweight Machines.

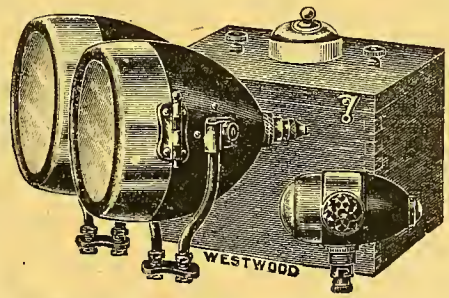
List No. 30/5 complete Outfit £3 3.0
List No 30/6 Combination Outfit £3-15-0



No. 30 1 complete Solo Outfit £5.5.0



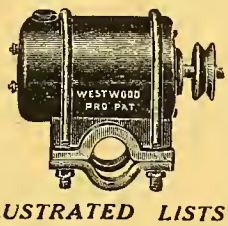
No. 30/2 complete Comb. Outfit. £7 7.0



No 30/3 complete Light Car Outfit £8 10 0

"WESTWOOD DYNAMOS"

MOTOR CYCLE
MARK 1. £6 0 0
LIGHT CAR.
MARK 2 £7 0 0
SWITCH BOX 30



WRITE FOR ILLUSTRATED LISTS

TRADE MARK
WESTWOOD
RIM & PATENTS LTD
LAWDEN RD BORDESLEY BIRMINGHAM.


## MOTOR CYCLES FOR SALE.

### Miscellaneous

BARGAINS.—New O.K.s, Ariels, Harleys, Omegas, Quadrants; exchanges entertained. — Booths Motories, Halifax.

BARGAINS.—1920 Matchless combination, detachable wheels, £130/10/6; 6h.p. Zenith combioa tion, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6.—Booths Motories.

BOOTHS' Bargains.—1920 Sun, 2 speeds, clutch, £39/10/6; 4-cyl. F.N., 2 speeds, £22/10/6.

BOOTHS' Bargains.—Harley-Davidson combioation, mileage 300, £139/10/6; free engine Triumph, £22/10/6.

BOOTHS' Bargains.—1920 Weeler, £49/19/6; 3h.p. 2-speed Enfield, £29/10/6.

BOOTHS' Bargains.—8h.p. Premier combioation, £49/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—Matchless combination, 3-speed, countersbalt, £69/10/6; 1920 3½h.p Ariel, £69/10/6.

BOOTHS' Barga.ns.—4h.p. Douglas's, £55/10/6; another, £59/10/6; 1914 4h.p. Douglas combination, electric, £85/19/6.

BOOTHS' Bargains.—1920 8h.p. Tamplin, £79/10/6; 1920 Morgan De Luxe, £165/10/6, cost £250/10; nearly new Ariel combination, £85/10/6; new 3½h.p. 3-speed Ariel, £87/10/6; new 4½h.p. Quadrant combination, £100; several others, cheap; push cycles taken exchange.—Booths' Motories, Portland Place, Halifax. 'Phone: 1062. [5146

MOTOR Cycle Bargains.—Peugeot, 5-6h.p., £15; Connaught (1919), 2-stroke, £29/10; Ariel, 4h.p., 3-speed, £39/10; Precision (countershaft) Combination, £39/10; Bat-Jap, 4¼h.p., 3-speed Sports Model, £45; Rex 6h.p., disc wheels, electric light, £50; Indian Combination (1921), dynamo, etc., a beautiful machine, 95 gns.; Clyno Combination, all on, £67/10; Triumph countershaft Combination, as new, £67/10; Triumph Combination, £47/10; P. and M. Combination, as new, £57/10; exchanges made.—79A, Clapham Rd., S.W.9. 'Phone, Brixton 3037. [7563

## MOTOR CYCLES WANTED.

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326 Euston Rd., London. Museum 5391. [0332

CASH

WAITING

COMBINATION or Solo, any make, any quantity. Best prices given.—Write, 'phone, or call, T. and B. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5564

WE ARE

ACTUAL BUYERS.

PLEASE offer us your Motor Cycle or Combination. We pay cash on sight. Write, 'phone, or call.—Percy & Co., 314-316, Euston Rd., N.W.1. Museum 1337. [5995

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted, machine can be included in Auction Sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling commission, 7½%, not chargeable unless machine is sold. If no sale, a nominal auction fee is charged: For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Tel.: 208 Streatham. Telegrams: Palmer's Garage, Tooting [7948

## MOTOR CYCLES WANTED.

LATE A.B.C. Combination.—Smith, 5, Queen's Gate Mews, S.W.7. [7055

5-6h.p. Rudge Multi, cheap for cash.—67, Wantage Rd., Reading. [7501

JAMES Combination, 4¼h.p., or B.S.A.—406, Garratt Lane, Earlsfield, S.W. [7973

COMBINATION wanted, modern; £60-£70.—Frederick, 58, Malvern Rd., Dalston, E.8. [7988

SOUND Douglas, modern; cheap for cash.—3, Jackson Rd., East Barnet, Herts. [7031

WANTED, two-stroke or Douglas 2¾ or 4h.p., cheap.—61, Grand Parade, Harrogay. [6609

£25 for best Lightweight offered.—F. L., 91, Mapledene Rd., Dalston, E.8. [7990

WANTED, a good Triumph and Douglas motor cycle.—C. G., 17, Birchington Rd., Kilburn, N.W.6. [7802

WANTED, 1920-21 Combination, no rubbish, no dealers.—9, Wallingford Ave., North Kensington. [7721

WANTED, Scott Squirrel, late model, cheap for cash.—Waycott, 43, Old Market, Bristol. [7507

WANTED, good Solo or Combination, reasonable.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [6504

WANTED, good Solo or Combination for cash.—C. S., 14, Swaton Rd., Bow, E.3. Tel.: E.3155. [7474

WANTED, late date secondhand motor cycle; spot cash.—Parker, Churchfield Rd., Acton, London. [7634

INDIAN SCOUT, Sunbeam, N.U.T., Triumph, etc.; best value secures spot cash.—88, Lord St., Southport. [7678

MATCHLESS, Bat, Harley; must be cheap; cash waiting.—Picture Framer, 217, Belsize Rd., Kilburn, N.W.6. [7654

WANTED, Sunbeam 8h.p. Solo, must be first-class condition.—Box 8501, c/o *The Motor Cycle*. [7157

4h.p. Douglas Solo 1920-21, private, Woking district.—Lowest price to Box 8545, c/o *The Motor Cycle*. [7322

COMBINATION Wanted, about £35, slight repairs not objected to.—63, Arlingford Rd., Brixton, S.W.2. [7266

2-STROKE, Lightweight, or Douglas; reasonable price.—24, Fernbank Avenue, Sudbury Hill, Harrow. [7246

WANTED, Combination, 5-9h.p., good condition, cheap.—Particulars, 5, Marquess Rd., Canonbury, N.1. [7213

MODERN Solos or Combinations for cash; highest prices paid.—Clark, 7, Exhibition Rd., S.W.7. [7846

ZENITH 5h.p. Sports, 1921, must be good condition, and at rock-bottom price.—Osborne, 93, Foxley Lane, Purley. [7792

LATE Type 4h.p. Douglas, tank complete, front stand, oil pipes, sidecar complete.—66, Umfreville Rd., Harringay, N. [7286

WANTED, Combination, not lower 4h.p.—Write fullest particulars, date, condition, price, 11, Hilda Rd., East Ham, E.6. [7107

WANTED, Motor Cycles and Combinations; any condition; must be cheap for cash.—R. Watson, Victoria Rd., Aldeburgh, Suffolk. [5714

LATE 2¾h.p Douglas, New Imperial, etc.; also Morgan, 1921-22, watercooled; cheap; cash waiting.—H., 63, Soloo Rd., Brixton. [7559

WANTED, New Imperial Lightweight; exchange 1918 P. and M. combination, cash adjustment.—Box 8545, c/o *The Motor Cycle*. [7328

WANTED privately, late model Combination, detachable wheels, London district.—Detail specification to Box 8518, c/o *The Motor Cycle*. [7210

WANTED, Lightweight, with gears preferred; must be reasonable.—King, Egrove Farm, Oxford. [7743

DOUGLAS and P. and M. wanted for immediate cash; incomplete machines considered.—Letters only to K. Kemp, 68, Belsize Park, London. [7979

1920-21 5h.p. Sports Zenith. Write lowest for cash. Private buyer.—Box 8,561, c/o *The Motor Cycle*. [7693

WANTED, Combination or 3-wheeler up to £100; not later than 1920. No dealers.—Write only, Glover, 26, Holland Rd., Brixton. [7732

WANTED, 4h.p. Douglas or Countersbalt Triumph Combination; must be cheap.—Lawson, 391, Lordship Lane, East Dulwich, S.E. [7782

WANTED, 3½h.p. Sunbeam Combination; reasonable price.—1, Tavistock St., Leamington Spa. [7780

PRIVATE Owners.—£45 offered, solo, 3½h.p. or over; not earlier 1918.—Particulars, 61, Silver St., Edmonton, N.18. [7778

COMBINATION Wanted, about £35 cash; slight repairs not objected to.—63, Arlingford Rd., Brixton, S.W.2. [7580


An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

Insurance Policies

**IMPORTANT AGENCY EXTENSION**

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS

Address—Agency Dept.,

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED**

Head Office:

77, **Cheapside, London, E.C.2**

*Telephone: City 9831 and 9832.*

*Telegrams: "Autoinsure, Cent. London."*


## MOTOR CYCLES WANTED.

GOOD Combination or Solo wanted. Cash on s Call if possible.—Snow, Laurel St., Dalston, [

WANTED to purchase for cash, motor cycles combinations; must be in good conditic Barker's Motors, 194, Balham High Rd., S.W.12 [

CASH Waiting; solo and combinations, good p given.—Write, 'phone, or call, Edwards, 50, lington Rd., South Kensington. 'Phone: Ken. 3 [(

PRIVATE buyer requires late model Sunbeam Norton, solo preferred; combination conside —Details, letters only, 53, Ruskin Walk, Herne S.E. [

WANTED, your motor cycle or combination. We buyers. Full market price given and cash pai the spot. Write, call, or 'phone Museum 5938 Smith and Co., Motor Agents, Ltd., 52-54, Hampe Rd., N.W.1. [(

CASH on Sight for new and second-hand motor c and combinations, any make or condition.— write, or 'phone, Short and Glass, Ltd., 485-493, U Richmond Rd., East Sheen, S.W. 'Phone: Richo 2362 and 2363. [(

WANTED, good modern Motor Cycles, solo combination, in part exchange for 8h.p. R or other light car. Best prices allowed, extended ments arranged.—Vivian Hardie & Lane, Ltd., 23 Woodstock St. (off Blenheim St.), Bond St., 'Phone: Mayfair 6559. [(

SEND Your Motor Cycle to Palmer's Garage Motor Auction Rooms, High St., Tooting. offer telegraphed immediately on receipt. Nea station, Wimbledon. We will collect from any Lor station. Machine can be included in auction sa desired.—Sole address, Palmer's Garage, Tooting. [

## TRICARS FOR SALE.

WEST NORWOOD! Splendid 1915½ Warwick Autocarrier, extra large box, carry 5 cwt.; £ Douglas S. Cox, West Norwood. (See Cars.) [

2H.P. De Dion Tricycle; believed 1899 model; n refinements; band brakes and differential; torically of great value; £4/19/6; also Panhard h in the same category; splendid body, unused s tyres.—Kinsey and Co., 350, Lower Addiscombe Croydon. [

## MOTOR SCOOTERS.

WAUCHOPE'S, 9, Shoe Lane, London.—1½ Kenilworth Motor Cyclette, 1921; £35. [

SCOOTAMOTA, demonstration model; what offe —Frank Eele, Thame. [

KINGSBURY Scooter and Spare Parts.—3, Kend Mews, Blandford St., W.1. [

FOR Sale.—Auto-scooter, perfect; £11; exchar considered.—17, Oster Terrace, St. Albans. [

FOR Sale.—Auto-scooter, perfect condition; £ would take geot's cycle part.—Box 8547, *The Motor Cycle*. [

BRAND new Autoped Scooter, dynamo light 1½h.p.; bargain, £12/10 each.—Percy and 314-316, Euston Rd. [

## MOTOR ATTACHMENTS.

WALL Auto Wheel, good order, spare Palmer ty £10.—Britten, Tisbury. [

AUTO-WHEEL, late model, excellent condition, g running order; first £10 secures.—Knowlson, Bridport Rd., Darnall, Sheffield. [

## HOODS, WIND SCREENS, ETC.

EASTING Royal Windscreen for sale; £3; top-l condition.—Chapman, 17, Kings Parade, South [

HERCULES Hoods and Aprons. Write for lis Hercules Hood Co., 698, Seven Sisters Rd., Tott ham. [

BENT Hoops, hood fittings, straps, turnbuttc twills, etc.; hardwood polished wind scree 27/6.—Henry Jones, 778, High Rd., Tottenham, L don. [

RENNOC Co.—We are actual manufacturers of hoc screens, and aprons. Send for list.—Ren Motors, Ltd., 155a, Marlborough Rd., Upper Hollow N.19. [

ROBINI Manufacturing Co.—The Bower adjusta windscreen with cover-all apron; 30/-, carri paid.—'Phone: Brixton 1585. Robini Manufactor Co., 1 and 3, Tulse Hill, Brixton, S.W. [

## BODIES.

RENNOC Sidecar Bodies, actual manufacturers. models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, upholstering.—Rennoc Motors, Ltd., 155a, M borough Rd. Upper Holloway, N.19. [

## BODIES.

AMBER Coach Bodies from £4/17/6.—Bright and Hayles, 78, Church St., Camberwell. [7596

ASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's oss, London, N.1. [5131

OUGLAS Body (green), with spring, also Tan-Sad with hack-rest; £5.—141, Hazelwood Lane, mers Green. [7182

OACH-BUILT Family Sidecar Body, exceptionally comfortable and well sprung; £8/10.—41, Chase ort Gardens, Enfield. [7121

ENUS Step Bodies, 2 dozen to clear; from 50/- each; great bargains.—Venus Sidecar Co., 694, en Sisters Rd., Tottenham. 'Phone, 2102. [7697

OBB Speedman Sporting Sidecar Bodies fit any chassis; carriage paid from £2/12/6, fully guaranteed.—Carlton Sidecars, 18, Midland Rd., Carlton, ttingham. [7283

OYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearline lines from £5 each; extra good value.—The llowbrook Motor Co., Leicester. [0336

ARGAINS, Shop-soiled Bodies (all types, with or without suitable chassis), to clear, cheap; inspection invited.—T. Williams, manufacturer, Lower atham St., Oxford Rd., Manchester. [7689

IDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original ideas, also working drawings, full-sized or to scale.—oper's Vehicle Journal, Ltd., established designers the coach trade for over 80 years. Consult us when igning new ideas.—20, Tudor St., London, E.C.4. [0004

ONDERFUL Bargains in Bodies.—Shop-soiled, with aprons, £6/10. Write for catalogue; large mber of second-hand. We repaint, repair, and olster bodies; low prices; carriage extra. See ecar column.—'Phone: Brixton 1585. Robini anufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [7860

## SIDECAR ATTACHMENTS.

OR

ANDHAM the smartest sidecar specialists

ANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue

ANDUM (V-shaped) Wind Screen, a hood, screen and apron, £2/15 and £3/18. Write for list.

ANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold 4; send further supply." Agents, get in touch with us

ANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427 [0015

UDGE Coach-built Sidecar; £6/10.—77, Acre Lane, S.W.2 [7851

IDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

IDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, Imperials, Sunbeam, Blackburnes, etc.

IDIANS with kick starter on left present no difficulty with Middleton's special model.

IDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

ECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

IDDLETON'S Spring Wheel Sidecars are not only easier and more comfortable, but are faster on roads than rigids. They give to the humps, not in into them.

IDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud en Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

ASTONES for Sidecars, no better or cheaper house. All latest models in stock.

ASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

ASTONES. – Sports model sidecar, complete, £17/10; several other models in stock, including demi, all at low prices.

ASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £19/10. Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £31/10, Model de Luxe £34/10, tandem model £30.

ASTONES.—Whitley 1922 sports model in stock, £25.

ASTONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/-.—, Pentonville Rd., King's Cross, London, N.1. one: 2481 North. 'Grams: Bastones, London. [5132

.M. Sidecar, nickel fittings, etc., £11.—Write Murry, 109, Fenchurch St., E.C. [7993

# H. F. EDWARDS & CO.

## 50, Harrington Road South Kensington, S.W.7

beg to announce that they have opened additional premises at

## 101, GT. PORTLAND ST. W.

and offer the following

## COLOSSAL BARGAIN AT BOTH BRANCHES

Several **BRAND NEW** 2¾ h.p. **KINGSBURY** two-strokes, 2-speed, clutch, all chain drive. **Price 39 Guineas** (listed 73 gns.)

### NEW 1922 MODELS IN STOCK AT BOTH BRANCHES

**MATCHLESS,** all Models.
**NEW IMPERIAL,** Model 3.
**RALEIGH,** light weight.
**TRIUMPH,** Ricardo.

### SECOND HAND COMBINATIONS

| | | Guineas. |
|---|---|---|
| *1921 | **ENFIELD,** Magdyno, speedometer, hood, screen | 118 |
| *1921 | **P. & M.** Demonstration Model, equipped, as new | 109 |
| *1921 | **B.S.A.,** Model H2 and No. 3, sidecar Magdyno, speedometer, screen, leg-shields, licensed | 125 |
| 1920 | **BLACKBURNE,** 4 h.p. Lucas dynamo, speedometer, mirror | 95 |
| 1920 | **REX,** 8 h.p., electric lighting, windscreen, etc. | 75 |
| 1919 | **ZENITH,** 8 h.p., sports with swan sporting sidecar, speedometer | 73 |

### SECOND HAND SOLOS

| | | |
|---|---|---|
| *1921 | 4 h.p. **INDIAN SCOUT,** speedometer, licensed for year, mileage 450, indistinguishable from new | 98 |
| *1921 | 2¾ h.p. **LEVIS SPORTS,** Lucas lamps | 37 |
| *1921 | 4 h.p. **VERUS BLACKBURNE,** 3-speed, as new | 75 |
| 1921 | 4 h.p. **VERUS BLACKBURNE,** 3-speed, mechanical oil pump, ace discs | 63 |
| 1921 | 2¾ h.p. **COULSON-BLACKBURNE,** equipped, mileage 100, as new | 52 |
| 1920–21 | 3½ h.p. **N.U.T.,** Magdyno lighting | 74 |
| *1920 | 2¾ h.p. **FRANCIS-BARNETT,** equipped, perfect condition | 53 |
| 1921 | 2¾ h.p. **BABY TRIUMPH,** equipped | 40 |
| 1920 | 2¾ h.p. **NEW IMPERIAL,** 2-speed | 43 |
| *1919 | 6 h.p. **SPORTS ZENITH,** Lucas lamps, speedometer, special finish | |

### LIGHT CARS

| | | |
|---|---|---|
| 1921 | **BLERIOT-WHIPPET,** Handle Starter, Electric Light, good condition | 85 |
| *1921 | **AERO MORGAN,** M.A.G. Engine, Ace, Discs, etc., Mileage 200. As new | 170 |

### DEFERRED PAYMENT OR EXCHANGES

Wanted Solos and Combinations, cash waiting.

All machines starred are to be seen at Great Portland Street, the remainder at South Kensington.

## SIDECAR ATTACHMENTS.

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [8036

LIGHTWEIGHT C.B. Sidecar, 4-point, off 2¾h.p. Douglas; £7.—56, Ormeley Rd., Balham. [7772

P. and M. Sidecar, complete, new tyre, upholstered leather; £8/10.—Matthews, Ockley, Surrey. [7180

HALIFAX.—New Perfection Coach Sidecars, £12/10.—Motor Exchange, Horton St., Halifax. [7908

HALIFAX.—New Swan and Millford De Luxe Sidecars for Harley and American X.—Motor Exchange, Horton St., Halifax. [7910

SPORTING Sunbeam Sidecar, new condition; cheap.—Leggett, 306, Fulham Rd., South Kensington. [7408

SIDECAR, underslung, brand new coach body, 26×2¼ wheel; complete, £9.—637, Seven Sisters Rd., Tottenham. [7279

BOOTHS Bargains.—Coachbuilt chassisless sidecar, £7/10/6; Gloria cane, spring wheel, £6/19/6; Hercules coach, £9/10/6.

BOOTHS Bargains.—Shop-soiled £27/10 sidecar, suit Triumph, B.S.A., £18/15; cane sidecar, £5/10/6.

BOOTHS Motories.—Ruby coach sidecar, £9/10/6; new large size coach bodies, locker under seat, £6/19/6.—Booths Motories, Portland Place, Halifax. [5144

SIDECARS.—Several cheap, room wanted; fitted free.—57, Kenbury St., Camberwell, London. [7639

MILLS-FULFORD Underslung Sidecar; £9.—Seymour (side-door), 152, Crystal Palace Rd., Dulwich. [7618

WATSONIAN Sidecars, all models, from £17/10, stocked by Bartlett's, 93, Gt. Portland St., London. [8086

SIDECAR, coachbuilt, underslung, connections, complete, storm apron; £8/10.—17, Heaton Rd., Mitcham. [7651

CAMBER Sidecars from £16/10; write for 1922 price list.—Bright and Hayles, 78, Church St., Camberwell. [7597

TOURING coachbuilt Sidecar, 26×2½ Dunlop, excellent condition; £9, carriage paid.—56, Lawrence Hill, Bristol. [7610

P.M. Sidecar complete, new bodies, plated fittings, upholstering paint, new, £10/10.—55, St. James's Rd., Bermondsey. [7992

C. and M. Semi-Sporting Sidecar, windscreen, electric lamp, as new, black and silver; £42/10 or close offer.—198, King St., Hammersmith. [7506

CAMBER Utility Sidecar; £25; with spacious locker accommodation, illustrations free.—Bright and Hayles, 78, Church St., Camberwell, London. [7598

RENNOO Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoo Sidecar Co.

RENNOO Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOO Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOO Co. have the finest selection of complete sidecars in the trade.

RENNOO Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOO Co. have in stock sidecars to fit all makes, English and American.

RENNOO Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOO Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589 [2319

B.S.A. No. 2 Sidecars, brand new, slightly soiled, at greatly reduced prices.—Eagles and Co., 275, High St., Acton, London. [6449

COACH-BUILT Sidecar, Easting, excellent condition, complete with fittings, suit 3½h.p. Rudge or Sunbeam; £16.—57, St. Albans Rd., St. Anne's-on-Sea. [7116

STRONG Box Carrier Sidecar, 3ft.×2ft. 6in., 26×2¾ tyre and spare tube; £4/10, or nearest; must clear.—Synyer, 35, Bingham Rd., Sherwood, Nottingham. [7646

GROSVENOR Sidecars.—Our special sports model is very suitable for use with fast sporting bikes; distinctive design and quality; £15.—Grosvenor Motor Co., Bradford St., Bolton. [X5093

SPECIAL Racing bullet shape Sidecar, with quick detachable fittings, painted N.U.T. brown; bargain, £10.—Davies, Hwyn Ysgaw, Llandudno Junction. [6345

## SIDECAR ATTACHMENTS.

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

UNDERSLUNG Coach-built Sidecar, new, 4-point connection, Easting windscreen, luggage grid, lamp; sacrifice, £10; must sell; seen any time, not Sunday.—T. Cheesman, Highfield, Edenbridge, Kent. [7536

£5 for a complete renovated Douglas underslung chassis, all springs and arms, wheel, etc., suitable for any make of machine to order.—Old Man Hep, 19, Wilcox Rd., South Lambeth, London, S.W.8. [4176

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

SIDECAR, Gloria off Triumph, little used, splendid condition, body slightly damaged, easily repaired, £8; wicker sidecar, step body, splendid chassis, suit Trimmph, £3/10; new hack and front 1½in. fittings, complete, £1.—Candler, "Springfield," Rye, Sussex. [7432

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Winecycle Co., Ltd., 236, High Holborn, W.C.1. [0388

FURTHER Reductions.—Underslung chassis, complete, new tyre and tube, shop-soiled body, coverall apron, £13/10; P. and M. chassis, new tyre and tube, new bulbous back body, complete, £12.—'Phone: Brixton 1585. Rohini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [7861

WINDSCREENS, complete with adjustable fittings, 27/6; bodies, special lightweight coach-built, £5; sports model, £7/10; touring, £7; De luxe, £9/10.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton (½ minute from Brixton Skating Rink). 'Phone: Brixton 1292. [7805

SIDECARS! Sidecars! Several Secondhand Coach-built Sidecars from £7/10. Brand New Coach-built Sidecars with bulbous backs and complete with aprons; a first-class job; not cheap and nasty; £17/10. Brand New Sidecars, coachbuilt, from £16. These are really wonderful value. We have two Langford spring wheel sidecars, 5-point attachments, large bulbous backs with Picnic cases, completely fitted with all utensils, most elaborately finished, complete £35.—Jones Garage, Muswell Hill, London, N.10. [6065

## RUNABOUTS AND CYCLE CARS.

WAUCHOPE'S, 9, Shoe Lane, London.—5-6h.p. Cardeo Monocar; £50. [8074

A.C. Sociable Runabout, good order; £45.—Foal, 173, Hainton Avenue, Grimsby. [7114

GIBBON'S Type Cyclecar, Twin Rex, built 1921; £65.—Dr. Burrow, Westbury, Wilts. [7263

REYNOLDS' Runabout 1921 3h.p., unused, shop soiled; £65.—The Morris Garages, Oxford. [7141

BEDELIA.—The new 1922 model, 8-10h.p., with air-cooled or water-cooled engine.

BEDELIA.—Air-cooled model, £185; water-cooled model, £195. Immediate deliveries. Trial runs free.

BEDELIA.—Catalogues free from L. N. Palmer, Sole Concessionaire for the British Empire, —Palmer's Garage, Tooting. [7949

WE can supply any Morgan spares from stock; write, call, or 'phone.—Maudes' Motor Mart, 100, Great Portland St., W.1. [8090

BLERIOT WHIPPET, as new; 100 gns.; larger car wanted.—Pearce, Homefields Rd., Hunstanton. [7477

TAMPLIN, 1921, owner ordered abroad, licensed, bargain price.—Bewlay, Gresham Rd., Staines. [7623

TAMPLIN, late 1921, demonstration, carries guarantee; bargain price.—Tamplin Motors, Ltd., Staines. [7624

8h.p. Rover.—1922 model in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7159

£105 cash for best Morgan offered, tax paid; write full particulars.—R. Marnham, 27, Green St., Cambridge. [7628

COVENTRY PREMIER.—1922 model in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7160

MORGAN, 1922, M.D.L., £175; also Grand Prix, secondhand, £120, and others.—Bunting's Exchange, Wealdstone. [7834

1920 De Luxe Morgan, 10h.p., M.A.G., water-cooled, perfect condition; £120.—9, Wallingford Ave., North Kensington. [7720

MORGAN, 1920, Grand Prix, sports, M.A.G. engine, discs, electric light, speedometer, new oversize tyres, very fast, and in fine order; £145.—Hall, 91, St. Peters St., St. Albans. [7777

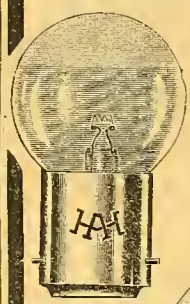

Manufacturers of Accessories for the MOTOR TRADE

REGISTERED H A H TRADE MARK

H.A.H. METALLIC FILAMENT
ELECTRIC AUTO BULBS.

FULL TRADE TERMS.
High Efficiency Frosted Type.
30 per cent. increase in light.

H.E. Screw Pattern, for Head Lamps, 19 mm. special, 2/- each.

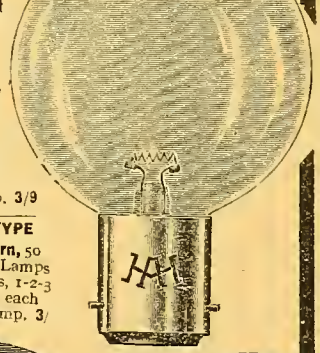


Special Flashlight, Screw Pattern, 15 mm. 2-5½ volts, 9d. ea.

H.E. Bayonet Pattern 25 mm. for Side and Head Lamps, 4-6-8-12 volts and up to 1 amp., 2/- each.



H.E. Bayonet Pattern for Head Lamps, 50 mm. Extremely Powerful Light, Frosted Anti-Dazzle Front, Nickel Cap. 4-6-8-12 volts. 1-2-3 amps. 3/- each. 12 volt. 3 amp. 3/9



ORDINARY TYPE
Bayonet Pattern, 50 mm. for Head Lamps 4-6-8-12 volts, 1-2-3 amps. 2/6 each 12 volt. 3 amp. 3/

Bayonet Pattern 25 mm. 4-6-8-12 volts up to 1 amp. 1/8 each

Flashlight Bulbs, 12 mm. round, clear 6d. each. Ditto, flat, half opal 7d. ea.



Flashlight Screw Pattern, 15 mm. flat, 2-5½ volts. 7d. each.

Write for Leaflet No. 126.

Postage extra on the above.

A. H. HUNT, LTD.,
I.A.H. WORKS,
Tunstall Road, CROYDON, Eng.
Telephone— Croydon 222s, 2226
Telegrams— 'Kevage Croydon.'


## RUNABOUTS AND CYCLE CARS.

CYCLECAR, 3-speed, chain drive, 2-seater, any test; £30, offers; bargain.—176, St. Alban's Avenue, Bedford Park. [7370

ROVER, 8h.p.—Your motor cycle taken in part exchange for new models.—Agents, R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7847

1920-21 8h.p. A.V., splendid condition, fast, tyres new; £70; exchange solo Henderson Ace.—Reynolds, 17, Landford Rd., Putney. [7994

CLIFFORD WILSON Mfg. Co., have in stock, new 1922 Morgan Popular Model, £150.—177, Westminster Bridge Rd., S.E.1. Tel.: Hop 210. [6634

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Morgans supplied on easy terms or exchange. 'Phone: Holborn 5777. List on application [8077

HALIFAX.—New 1922 Coventry Premier, 4-wheeler, with speedometer and insurance for 12 months; £250. Liberal exchanges.—Halifax Motor Exchange, Horton St., Halifax. [7905

CROUCH 1321 2 seater, water-cooled, 5 detachable wheels, etc., perfect, smart, fast; £125, offers; exchange.—Cronch, 26, Tulse Hill. 'Phone: Brixton 1292. [7807

MORGANS.—1922 De Luxe, Grand Prix, and Popular models in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7158

MORGAN Grand Prix, water-cooled, 1915, exceptional condition, electric lighting, etc.; 76 gns.—Longman Bros., 17, Bond St., Ealing. Telephone, 689. [7929

1919 Carden Monocar, 6-8h.p. J.A.P. engine, countershaft, 3-speed, splendid order; £75; exchanges entertained.—Speechley, 86, Churchfield Rd., Acton, W.3. [7404

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co 292, High Holborn, W.C.1 [0673

G.N. 8h.p. August, 1921, Standard Touring, dynamo lighting, not used until this year, mileage 500, as new; £195.—St. Maur, Benhill Wood Rd., Sutton, Surrey. [7318

MORGANS 1922 models in stock; immediate delivery, any specification. Official agents for Essex, Kent, and City of London. All spares.—Below.

ROVER 1922 8h.p., light car, in stock, dynamo lighting, etc.; £220.—Below.

G.N. 1922 standard model, with dynamo lighting, dickey, seat, door, etc.; £225; in stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0075

SPECIALLY-BUILT 1921 Clover-leaf 3-seater Sporty 8-10h.p. Light Car; stamp particulars; £150 or exchange heavy Combination.—Hurt, South Darley, Matlock. [7178

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St. London, W.1. [0736

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220; in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0773

SALE or Exchange, Humberette A.C. 2-seater, thoroughly overhauled and repainted, all new tyres, lamps, hood, screen, Stepney; offers.—Milsom, Brickworks, Cinderford, Glos. [7211

SPORTING Morgan A.C., J.A.P., hood, screen, discs, electric lighting, good condition, exchange big twin solo and cash, chain drive preferred, or sell; £95.—19, Wood Lane, Shepherd's Bush. [8004

G.N., 1920, dynamo lighting, spare wheel, etc., special condition, overhauled by makers; 129 gns. —Longman Bros., 17, Bond St., Ealing. Telephone, 689. [7930

8h.p. 1916 Morgan, 2-seater, speedometer, horn, electric and acetylene lamp, in good condition and guaranteed in perfect order; a genuine bargain, £85. —Herbert Robinson, Ltd., Regent St., Cambridge. [7075

A.C. Sociables, by the A.C. Co., dependable runabouts, take 2 persons anywhere, good condition and appearance, fully equipped; from £50 to £85; trial.—29, Allsop St., Upper Baker St., London, N.W. [7056

BARKER'S Motors can supply all models of light cars at list prices and give a free insurance guarantee for 12 months against mechanical breakdown. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6423

WEST NORWOOD! Sample bargain (fifty others), 10h.p. Blumfield Cyclecar, 4-speed, reverse, 4-wheeler, hood, screen, lamps, smart, worth £135; bargain, £85.—Douglas S. Cox, West Norwood. (See Cars.) [8013

RILEY 9h.p Car, less engine, 5 detachable wheels, 3 shod Dunlops. Lanchester type springing, 3-speed and reverse gear box, irreversible steering, central chain-driven rear axle, 2-seater and dickey, metal body upholstered real leather, hood, would easily convert to splendid cyclecar every part guaranteed perfect; gift, £25; photo.—Jack Lucas, 110, Willows Rd., Cannon Hill, Birmingham. [7487

## RUNABOUTS AND CYCLE CARS.

**19**19 Carden Monocar, 8h.p. J.A.P., Sturmey 3-speed, new tyres, lamps, horn, Triplex Aero windscreen, painted cream, excellent condition, comfortable and lean; gift at 45 gns.; seen Camberley.—Box 8555, c/o *The Motor Cycle.* [7336

**19**21 Spacke cyclecar, 9h.p., dynamo lighting and starting, hood, screen, spare wheel, 2-speed and reverse, good climber, bevel axle, tyres as new, room for luggage and extra seats; £60 or offer.—Lowe, 4, Carlton Terrace, Child's Hill, N.W.2. [7947

G.N. 1921 Engine and Steering, just overhauled and fitted new pattern cylinder heads and new bearings, dynamo lighting, speedometer, 3 oversize tyres recently fitted; £150 for prompt sale; owner buying larger car.—Allen c/o Jessops, 27, Park Row, Leeds. [7082

**10**h.p. 1922 G.N.—This handsome car has a roomy body, aluminium instrument board; luxuriously equipped, including all-weather hood, adjustable windscreen, electric lighting, installation with dynamo batteries, switchboard and ammeter, two head lamps, tail lamp, speedometer, detachable wheels, etc.; £225. Exchanges and terms arranged.—Herbert Robinson, Ltd., Regent St., Cambridge. [7076

*Spare Parts.*

MORGAN Spare Part Depot.—Spares for all models in stock. List free.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0077

## TAXI-COMBINATIONS AND CABS.

"COUNTY," B.S.A., Taxis, as licensed throughout the country.—Write for full particulars, County Cycle and Motor Co., "Originators," 300, Broad St., Birmingham. [5353

## CARS FOR SALE.

RENAULT 20h.p. Limousine, guaranteed; £85.—77, Acre Lane, S.W.2. [7852

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 G.N.'s; easy terms and exchange. [8075

DAIMLER 15h.p. S.K. Tourer, C.A.V., noiseless; £165, or exchange.—8, Crowhurst Rd., S.W.9. [7855

PALMER'S Garage, Tooting.—The pre-eminent place for purchasing. Auction every Thursday.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £5 secures superb Napier 5-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£60 down and 12 monthly payments £8 secures 10h.p. Singer 2-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £5 secures 12-seater live axle Panhard wagonette.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures splendid Sheffield Simplex landaulet.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8/10 secures magnificent Oakland touring car, self-starting, dynamo lighting.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7/10 secures reliable Renault ¾ landaulet.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable Napier chassis.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8 secures Delaunay-Belleville limousine, 17h.p.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 18h.p. Maxwell Sporting 2-seater.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures Studebaker landaulette, dynamo lighting, self-starting.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £7 secures 16h.p. Minerva touring car, monobloc engine

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable S.C.A.T. 12-seater wagonette.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £5 secures excellent 12-14h.p. F.I.A.T. chassis.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 12-14h.p. F.I.A.T. 15 cwt. van.

PALMER'S Garage, Tooting.—All above cars are in good running order. For cash price deduct 10 per cent. from above totals.—Palmer's Garage, Tooting. [7954

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London W.1 [0350

WAUCHOPE'S, 9, Shoe Lane, London.—Rover Light Cars; £220; fully equipped; easy terms or exchange, list on application. [8076

MERCEDES 38h.p. Grand Prix Racer; £150, or exchange.—H.P., 10, Thornbury Rd., Clapham Park, S.W 4. [7857

M.T. 2-seater four-wheeled light cars, 5-6h.p., 3 speeds; prices from £125.—Write for specification to the Metro-Tyler Co., Ltd., Banister Rd., Kilburn Lane, W.10. [7699


# MANUFACTURERS' SPECIAL OFFER.
## Extraordinary Bargains!

Fig. 1

### WATERPROOF MOTOR CYCLE SUIT (Fig. 1).

Fawn double texture material, interlined rubber, seams cemented and taped, wind cuffs, wind gusset in overalls, and clasp fasteners. Perfectly waterproof.

**SUIT COMPLETE**

**35/-**

**POST YOUR ORDER EARLY**

Any of these garments sent carriage paid. Prompt despatch.

**OUR GUARANTEE.** Money refunded in full if not thoroughly satisfied.

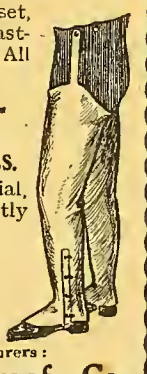
### WATERPROOF TRENCH COAT 25/-

(Fig. 2) Fawn material, rubber lined, wind cuffs, guaranteed waterproof.

Fig. 2

**SEAT-LESS** trousers fawn, double texture material rubber interlined, wind gusset, & clasp fasteners. All sizes.

**18/-** per pair.



**WATERPROOF OVERALLS.**

Double texture material, clasp fasteners, perfectly waterproof.

per **15/-** pair.

*If you cannot call, send money with breast measurement and height.*

**Actual Manufacturers:**

**Martin Waterproof Co.,**

**208, Oldham Rd., New Cross, Manchester**


## CARS FOR SALE.

WEST NORWOOD! Bargains always waiting. Over fifty vehicles, all types, always actually on premises.

WEST NORWOOD! Absolutely straight dealing. Fair representation. Accurate dates. Exchanges reasonably valued. Satisfaction!!!

WEST NORWOOD! Few samples follow only. Postcard procures complete printed list fifty. Call.

WEST NORWOOD! Rover, £35; Warwick, £45; Darracq, £50; Alldays, £60; Adams, £65; De Dion, £85.

WEST NORWOOD! Blumfield, £85; Duhanot, £85; White, £85; Unic, £95; 3-tonners from £100.

WEST NORWOOD! I.W.K., £125; Coupe, £125; 1-ton Ford, £135; Maxwell, £135; Sizaire, £135.

WEST NORWOOD! Singer, £145; 6-cylinder tourer; landaulets from £150 to £750; saloons from £250.

WEST NORWOOD! Douglas S. Cox, the absolutely straight motor man, 6c, Lansdowne Hill, West Norwood. (Established 1902.) [8016

**38**h.p. Silent Knight Daimler Landaulette, C.A.V., perfect, £175.—Chauffeur, 14, Glenelg Rd., London, S.W. [7854

FORD Car, excellent condition; £110; exchange big combination, part.—Fairhurst, Behind 68, Standishgate, Wigan. [7457

STUDEBAKER, 1914, 5-seater, excellent condition, bargain; £80; take hall down.—Bunting's, Wealdstone. Closed Sundays. [7832

ROVER Cars.—The famous 8h.p. model in stock, £220; for immediate delivery.—Eagles and Co., 275, High St., Acton, London. [0761

£20.—8h.p. Rover Single, 3-speed, reverse, lamps, good running order; suit tradesman.—8, Half Moon Lane, Herne Hill, S.E.24. [7341

ELECTION. A beautiful Sirron touring car, splendid order, dirt cheap; £175; 2-seater or combination in exchange.—Bunting's, Wealdstone. [7833

COVENTRY PREMIER, 1922, 4-wheel model; £250; immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hansler Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452. [7938

6-CYL. Ford, 2-seater, slightly damaged by fire; bargain; £50; or exchange for combination; photo. willingly.—Francis, 45, Cornwall Rd., Brixton, S.W.2. [7496

BEDFORD-BUICK 2-seater, dickey, C.A.V., perfect condition, tax paid, trial; £130 or offer; motor cycle in part exchange.—Gatward, 121, Turnpike Lane, Hornsey. [7727

MORRIS Cowley 1922 standard, 2-seater model in stock, dynamo lighting, etc.; 285 gns.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0076

GENUINE Little 6h.p. De Dion Car, fitted with 2-seater sporting body, very smart, in excellent order; complete, £45; delivered 50 miles free; trial.—11a, Dafforne Rd., Upper Tooting. [4547

DARRACQ Landaulet, 18h.p., 4-cylinder, fully equipped and ready for use; £60 or near; must sell this week; will consider motor cycle in exchange or part.—62, New St., Woodbridge, Suffolk. [7688

8-10 de Marcay Demonstration Model for sale. Better than new. Fitted dynamo lighting, detachable wheels, etc., £125. Also special Competition model, £120.—A. H. Lakeman, Ltd., 26, Long Acre, London, W.C.2. [5355

WAUCHOPE'S, 9, Shoe Lane, London.—Coventry-Premier, new 1922, 4-wheelers, immediate delivery from stock, dynamo lighting; exchange and easy terms arranged; price £250. 'Phone or call. 'Phone: Holborn 5777. [8077

**19**19 Chevrolet Touring Car, dynamo lighting, self-starter, 5 detachable wheels, repainted as new, any trial given; bargain, £160, or exchange motor cycle or combination with cash.—5, Norwood Rd., Herne Hill, S.E.14 [5840

DARRACQ 5-seater 10-12h.p. W.C. Twin, 3-speed, reverse, Bosch, C. H. hood, screen, side curtains, Stepney, splendid condition throughout, outer water-jacket slightly cracked, easily repaired; accept £30.—Mead, Draper, Amersham. [7307

£160.—13.9h.p. Swift, 4-seater, 4-speed, 5 detachable wheels with tyres, 2 new others perfect, fully equipped, and perfect in every detail; ideal economical family car; only requires to be seen and tried.—1, Norwood Rd., Herne Hill, S.E.24. [5842

UNIT, 1 2-seater 1921, water-cooled engine, dynamo lighting, spare wheel and tyre, new condition, only driven 200 miles; £125; good modern combination taken in part exchange.—Vivian, Hardie and Lane, Ltd., 23-24, Woodstock St. (off Blenheim St.), New Bond St., W.1. 'Phone: Mayfair 6559. [7319

## MOTOR TRANSPORT VEHICLES.

KRIT 15h.p. Tourer; £85, or exchange.—15, Mervan Rd., Brixton, London. [7853

STAR 1916 2-ton lorries (6 for sale), dynamo lighting, tax paid to July, 1922, 4 speeds, live axle; £225 each.—See below.

GARNER 1917 2-2½ tonners (4 for sale), dynamo lighting, tax paid to July, 1922, overhead worm drive; £200 each.—See below.

GARFORD 30-cwt. lorries, all new lamps, horns, cushions, worm drive; £200 each.—See below.

FIAT 1 tonners, £185 each; Willys-Overlaod 1 tonners, £125 each.—See below.

BRITISH Ensign 3-4 tonner 1919, overhead worm drive, £200; also 1917 Caledon 3-4 tonner, dynamo lighting, £200.—See below.

MOTOR lorries (30 for sale) repainted, retyred, all new lamps, etc., tax paid to July, 1922. Come and test them. Write for our photos and list.—Shard Garage, Shards Square, Peckham Park Rd., Old Kent Rd., London. [6235

WEST NORWOOD! Ford 1-ton, £135; 3-ton, 1913, worm drive, De Dion, £85; 3-ton Daimler, £150; dozen others.—Douglas S. Cox, West Norwood. (See Cars.) [8014

EXCEPTIONAL bargain to clear—4-ton Loco. 4 speeds and reverse, Hecco magneto, Standard Loco. carburetter, tyres excellent, engine overhauled, body first-class condition, free delivery, £150.—Woodcock & Crowfoot, 12, Ampthill St., Norwich. [7270

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. 'Phone, Holborn 5777. [7218

HALIFAX.—Secondhand models at special rates. Send your requirements.—Halifax Motor Exchange, Horton St., Halifax. [7907

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1. [0672

## ENGINES.

7-9h.p. Indian and Senspray Carb.; £12.—Friday, College Avenue, Slough. [7062

FOSTER'S New Engine Bargains.—1½h.p. (4-stroke) engines, complete; aluminium cylinders and pistons, overhead valves; £5.—Below.

2¾h.p. new engines (2-stroke), complete with flywheel, magnetos; £10; 4h.p. new engine, complete with gear box and clutch (combined unit); £15.—Fosters, 31, Clissold Rd., Clissold Park, London, N16. Phone, Dalston 2526. [7755

2¾h.p. Premier engine unit, Bosch, carburetter, as new; £9.—Fairhurst, Behind 68, Standishgate, Wigan. [7458

MINERVA, 2¼h.p. Lightweight, B.B. Dunlop, ignition; £4/19/6.—Thomas Butler, Littleover, Derby. [7080

20h.p. Marine Engine, complete with Langdon gear, unused; £85., or exchange.—77, Acre Lane, S.W.2. [7856

SPECIAL Overhead Valve 90-bore J.A.P. Engine, as new; offers to Mirfield Engineering Co., Newgate, Mirfield. [7077

BASTONES.—Blackburne 8h.p. twin engine with carburetter; £30.—228, Pentonville Rd., King's Cross, London, N.1. [5133

3h.p. Radial Engine, brand new (picked), complete with magneto and carburetter; £25.—T. Lynam, Bridge St., Castleford. [7117

1910-11 Triumph Silencer magneto drive, plates, etc., recently overhauled; £7/10.—58, Cromwell Rd., Upton Park. [7664

VILLIERS Engine, nearly new, C.A.V. magneto, Amac carburetter, seen running; £16.—P. Driscoll, 58, Woodfield Rd., Ealing. [7290

TRIUMPH 1914 4h.p., £11; 3½h.p. Humber, £7/10; Sturmey 3-speed wheel, £8/10.—Margrave, Dean Head, Audenshaw, Manchester. [7471

2¾h.p. M.M.C. engine, A.I.V., E.I.C., magneto band B., mechanically perfect, sacrifice; £7/10, carriage paid.—56, Lawrence Hill, Bristol. [7609

1920 Metro-Tyler Engine, 2¾h.p., 2-stroke, with 1921½ Albion, 2-speed clutch gear; excellent condition; £11.—Copus, Wigginton, Tring. [7282

1922 Blackburne engine, 2¾h.p., £20.—5, O. Lamb's, 387, Euston Rd., N.W.; 50, High Rd., Wood Green; and 151, High St., Walthamstow. [7343

3½h.p. Minerva, M.O.V., £3; ditto, less cylinder and piston, 30/-; approval.—Burton, St. Peter's Park Rd., Broadstairs. [7722

A.B.C. twin, 500 c.c., stationary, air-cooled, steel cylinders, overhead valves, Bradshaw carburetter; practically new; complete with magneto, oil tank, silencer, kick starter; ideal for fitting to motor cycle; photo; £16.—Jeakins, Harvington, nr. Evesham. [7712

7-9h.p. M.A.G., 1922, twin engines, brand new, only a few left, as fitted to Matchless; ideal in cycle cars, Morgans, etc.; also fits latest Ariel; power with silence and perfection indeed; £32/10 only; approval.—Jooes Garage, Muswell Hill, N.10. [8039

## SALVAGE SALE

A local trader has gone out of the business; and I have bought his stock of Douglas parts cheap, and while they last you can have the benefit.

**LATEST 4 h.p. FRAME,** list price £13 10s.; price **£8.**

**BEAUTIFUL COACHBUILT DINKY SIDECAR BODY,** finished in Lemon, hinged dash, black adjustable hammock seat, a real sporting car and a picture, £20; reduced to **£13 10s.**

| | Usual Price. | Price. |
|---|---|---|
| **2¾ h.p. Three-speed Parts.** | | |
| 838D. 26T Gear Wheel | 8/6 | 5/6 |
| 838D. 24T " | 9/- | 6/- |
| 842D. Ball Bearing, 17 mm. | 10/3 | 6/- |
| 843D. " " 20 mm. | 10/9 | 6/6 |
| 844D. " " 12 mm. | 9/3 | 5/6 |
| **2¾ h.p. Two-speed Parts.** | | |
| 775D. Mainshaft | 11/3 | 6/6 |
| 778D. Operating Fork | 6/- | 4/- |
| 768D. Dog Clutch | 5/3 | 4/- |
| 770D. Friction Rings | 5/6 | 4/- |
| 763D. Chain Wheel Nut | 10d. | 8d. |
| 780D. Plain Sleeve Pinion, 30T. | 10/- | 6/6 |
| 785D. Screwed Sleeve Pinion, 24T | 13/- | 9/6 |
| **4 h.p. Gear Parts.** | | |
| 605N. Screwed Sleeve Pinion, 15T | 15/- | 12/6 |
| 606N. Gear Wheel, 19T | 12/6 | 10/6 |
| 607N. " " 23T | 12/6 | 10/6 |
| 616N. Hollow Sleeve for Operating Fork | 6/- | 4/3 |
| 618N. Bronze Forks | 9/- | 6/6 |
| 610N. Ball Bearing, 1 in. | 10/9 | 8/- |
| 611N. " " 19 mm. | 11/6 | 9/- |

**EXTRA LARGE TOOLBAGS,** metal armoured, two straps and buckles, finest quality for 4 h.p. Douglas. Usual price 20/-. My price **12/6.** Smaller size for 2¾ h.p., two straps and metal covered real leather. List price 11/-. My price **9/-.**

**A SADDLE OF REAL MERIT.** Pan Seat covered in real leather, adjustable springs, gives a low riding position on 2¾ h.p. and does not foul the 4 h.p. Sidecar Stay. A real comfy seat. List 35/-. My price **25/-.**

**EXTRA HEAVY PASSENGER SUPER STUDDED HUTCHINSON TYRES.** New stock, fully guaranteed, only a few 26×2¾" and 28" left. List 49/6, my price **38/-.** This offer cannot be repeated, as they are not W.D. soiled or damaged stock like many others advertised.

**SPECIAL LODGE PLUGS,** Mica with radiating fins. The best plug for hot stuff engines. New, in original boxes. W.D. surplus. List 8/6 to clear, **2/9.**

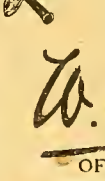
**BLACK METAL LINED INFLATORS** with long connections and foot attachment to fit Douglas Clips. List 8/6, to clear **6/-.**

**HUTCHINSON HEAVY TUBES,** 26×2¾ or 2¼", to clear **5/-.**

**EXHAUST BAFFLES** for 2" Pipes, fixed in one minute, a real police dodger, where they're hot, **2/6,** and a host of other lines cheap.

Now for some of **MY OWN SPECIALITIES. TWIN RINGS,** real power producers, oil savers and compression makers for 2¾ h.p. and 4 h.p. Douglas. 2¾ h.p., **1/6** each; 4 h.p. **1/8** each. Made under a patented process; don't be misled—insist on your agent fitting them.

**ALLOY AIR COOLED VALVE CAPS** for 2¾ h.p. and 4 h.p. Douglas, as fitted by the Grand Prix winners and T.T. riders. The original and best. If they don't stop your engine knocking and prevent overheating, send them back. **4/-** each.



**ZOOM! ZOOM!!** The Exhaust System that everybody is talking about. It gives extra power, has a lovely Zoom note that offends nobody. A real coppersmith's job. Adds £10 to the appearance of any Douglas. My price **30/-** in burnished coppered finish, **3/6** extra in nickel-plated finish. Mr. Charles Stagg, Newport, says: "I received the pipe before the Speed Trial and won the Challenge Cup."

*W. G. Coram*

OFFICIAL DOUGLAS AGENT.

**140, VICTORIA STREET, BRISTOL**

*(Late Douglas Motors, Ltd.)* *Tel. 3792*

The man on the spot. I can meet any train and will collect or deliver anything for you. One minute from Temple Meads (Bristol, Main) Station.

## ENGINES.

4½h.p. Levis Flat Twin, 2-stroke, carburetter and magneto, perfect, £10; 6h.p. ditto, £12.—Cole, 457, Rathgar Rd., Longhborough Junction, S.W 9. [7604

2¾h.p. 2-stroke engine (1922), brand new, latest type; £8; with new C.A.V. magneto, new Amac carburetter, £12/10.—(B.M.S.) 1, Gosta Green, Birmingham. [7302

2¾h.p. 2-stroke De Luxe, T.B. magneto, Senspray, silencer, etc., rehored, new piston, crankshaft and bearings, seen on bench; best offer.—Nunn, School Rd., Woking. [7108

4½h.p. Minerva Twin Engine, side by side valves, detachable heads, B. and B., Bosch, overhauled, splendid condition; £7, or near offer.—Jones, 1, Cwmavon Rd., Blaenavon, Mon. [7089

DOUGLAS 8h.p. Water-cooled, C.W. radiator, petrol tank, bedplate, starting handle, induction pipe, good condition, £11/10; thoroughly overhauled, new mag., carburetter, guaranteed running order, £19/10, carriage forward; make splendid light car engines; large selection; stamp reply; trade supplied.—Derrington, Grafton Rd., New Malden. [6749

J.A.P. Engines. J.A.P. Engines. J.A.P. Engines.—I have the largest stock of J.A.P. engine parts in England; over 30 engines, all in stock, to select from; and the prices: 5h.p. £15, and the 8h.p. at £20 and £17/10, and I have all parts for the 8h.p. (see accessories for parts). I have a big twin engine £12, a 4h.p. Douglas engine and mag. and carburetter £15, a small 2-stroke and mag. £10; stamp reply.—South Croydon Motor Exchange, 22, South End, Croydon. [4765

BRAND New Engines.—An exceptional opportunity: 1921 Precision 3h.p., 2-stroke (as fitted to the Beardmore motor cycle, etc.), a complete unit with Thomson-Bennett magneto, Cox Atmos single lever carburetter, list price over £30; limited number to clear, £14; what a gift; or less magneto and carburetter, 10 gns.; only a few left.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd. 789. [7974a

HEPPLETHWAITE'S.—8h.p. W.C. single, £8; suitable for stationary work; 3½h.p. Humber unit, £10; 3½h.p. Premier, £10; 5-6h.p. Rex A.I.V., less 1 piston, £4; 3½h.p. Alldays M.O.V., £4/10; 3h.p. M.O.V. Minerva, £3/10; 3 h.p. Noble engine, M.O.V., £3/10; also J.A.P. 5h.p. spares, and Rover and New Imperial. Entire stock of W. H. Hawkins. Write us for complete list, enclosing stamp. 'Phone: 1958 Brixton.—19, Wilcox Rd., South Lambeth, London, S.W.8. [6919

## IGNITION, LIGHTING, ETC.

H.B.I.

H.B. Ignition Co. carry large stocks of new and second-hand magnetos. 'Thomson-Beonett 42, 45, 50, 55, and 180°, single and twin.

H.B. Specialise in T.B. for fixing on Triumph, P.M., B.S.A., J.A.P., Douglas, etc., £2/10, postage 1/6; C.A.V. clock twin, for 2¾h.p. Douglas, etc., £2/15.

H.B. will take your old magneto in payment.

H.B. sends all magnetos on approval against cash. Every magneto dispatched carry H.B. 12 months' guarantee.

H.B. Ignition Co. ('Phone: Brixton 610), 78, New Park Rd., Brixton Hill, London. [0694

MAGNETOS 50% Below List.

APPLY Vale Engineering Syndicate, 9 and 10, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 877. [0698

COUNTY of London Engineering Works, Ltd.

EXCEPTIONAL offer of Government surplus magnetos, new, unused, must be cleared to make room for fresh stock.

GUARANTEE.—We guarantee all our magnetos twelve months, and will willingly repair or replace any magneto that should prove defective within that period.

BOSCH single, clock, or anti, £3 Thomson-Bennett single or twin, clock or anti, 42, 45, 50, 55, and 180 degrees, £2/10.

C.A.V. single or twin, clock or anti, £2/10; special long driving spindle for Rudge, fitted to any of the above magnetos, 10/- extra. Postage on magnetos, 1/6.

THESE magnetos are fitted with variable ignition and leads, and also baseplates ready to be immediately fitted on; please state make of engine when ordering.

GOVERNMENT surplus, new plugs in boxes, A.C. (Titan), 1/6 each; K.L.G. types, F.8, F.6, F.5, and R.3, 1/8 each; Lodge types, K, and K.2, 1/8 each. Postage on orders of one plug, 3d.; four or more, post free.

ALL goods on approval per return post on receipt of cash; money refunded if not satisfactory.

COUNTY of London Engineering Works, Ltd.—Note new address: 6, Garden Lane, Christchurch Rd., Streatham, London, S.W. Tel.: Streatham 2898. T.A.: Ignitionac, Brixstret, London. [5935

## IGNITION, LIGHTING, ETC.

DIXIE Magneto, 50° Twin, 45/-; also Baby Fellows, 30/-.—219, Stansted Rd., Forest Hill. [7783

RELIANCE Magneto Repairing Co. for repairs and new magnetos.—See below.

RELIANCE guarantee to return your magneto within 3 days, and if necessary 24 hours, with a written guarantee for 12 months.

RELIANCE test every magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE manufacture and stock spares for Thomson-Bennett, E.I.C., Splitdorf, U.H., Bosch, Dixie, etc.; special line genuine platinum screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice free of charge upon any qestion concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy that we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., E.C.1. for new and second-hand magnetos.—See below.

THOMSON-BENNETT Magnetos, new and unused, single-cyl., clock and anti, suit any machine, price 55/-; twins, 45, 48, 50, 55, 60, 180 degrees, for J.A.P., Clyno, Douglas, etc., price 55/- See our guarantee.—Below.

C.A.V. Magnetos, new, single-cyl. and 180° twins, clock or anti, ideal for Douglas, Levis, Calthorpe, O.K., or any lightweight; these magnetos are of the finest workmanship throughout; price 55/-. See our guarantee.—Below

BOSCH D.A.L Magnetos, soiled only, otherwise as new, single cyl., suitable for any stationary engine or big single, £3/15; twins, any degree, ready to drop on Indian, Harley, or any big twin, £4/5; a powerful spark at low speed, ensuring easy starting All the above magnetos are variable ignition and fitted short-circuiting switch See our guarantee.—Below

GUARANTEE.—Every magneto that leaves our works, no matter what the price or make, carries a written guarantee. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee every machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE Magneto Repairing Co. hold one of the largest stocks in London, and can be depended upon for a straight deal at the right price. When buying it pays to deal with a firm of repute.

RELIANCE cordially invite customers to their works to see any of the above on test. Magneto list giving full particulars sent upon application.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1. [6616

BOSCH and M-L Singles, 30/-; C.A.V., 37/6; variable ignition guaranteed.—64, Greenside Rd., Croydon. [7465

K.L.G. W.D. Sparking Plugs, wonderful value, 4 for 5/-, post free —Thompson, 59, Queen St. Wolverhampton [7964

MAGNETO Sprocket Manufacturers.—7-tooth to 24-tooth stocked.—Ridington, 202-4, Southampton St., Camberwe... [6886

ELECTRIC Head Lamp Bracket and 6-volt accumulator, in case; reasonable offer.—Morton, Crescent Lodge, Windsor. [7122

LUCAS Lighting Sets, lightweight 12v. dynamo, 12v. battery, cut-out, £6/6 set.—Jenner (Dept. M.C.), 65, Church St., Mitcham. [5401

TWIN Magnetos, 50°, Anti Dixie, guaranteed perfect; 45/-.—Kennard, 78, Yerbury Rd., Holloway, N.19. [7162

VOLEX Dry Battery Lighting Set for Combination; new; batteries need renewing; cost eight guineas; £5.—Rev. Hughes, Sunnyside, Faversham. [7274

DASH Switchboards, 4-way, with ammeter, 20/-; with ammeter and voltmeter, 35/- each nett.—Leslie Dixon and Co (Dept H 1.), 9, Colonial Av., Minories E.1 [0760

CHELTENHAM.—Repairs to magnetos, self-starters lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham Phone: 1256 [0758

ANY Motor Cycle Magneto repaired, no matter what condition, provided complete, for 30/-; 24 hour service.—Kays, Electrical Dept., 8, Bond St., Ealing, W. [7232

HEAD Lamp, 5in., M/C., all-black electric, complete dimmer device with switch incorporated, adj. focus; 45/- or offer.—Greenhill, 19, Vernon Park Rd., Worcester. [7169

JEBRON, registered 291298, greatly superior to platinum, for blades, screws, etc., cures misfiring; Jebron screws, fit Bosch mags., 10/6 pair; old screws, any make, Jebronised, 4/9 each return post.

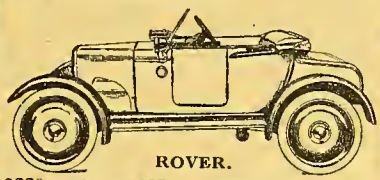
JEBRON, the pioneer motor contact, registered March, 1907, and March, 1921; hundreds of unsolicited testimonials.—Jebron, 38, Herbert Rd., Woolwich, S.E.18. [0001


# KATCLIFFE BROS.

## 200, GT. PORTLAND ST., W

'Phone—Langham 1704.

**Any make of machine can be supplied on our Payment out of Income Scheme. Write for full particulars, and state machine you are interested in.**



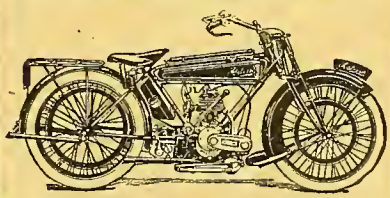
ROVER.

**£220 cash, or £57 4s. down and 12 payments of £14 6s.**

## 1922 MACHINES IN STOCK.

| | |
|---|---|
| A.J.S. 7 h.p. Combination .. .. | £175 |
| A.J.S. 2¾ h.p. Solo .. .. .. | £85 |
| B.S.A. 4½ h.p. K.2. Solo .. .. | £107 |
| B.S.A. 4½ h.p., H.2. „ .. .. | £110 |
| B.S.A. K.2., with box carrier .. | £139 |
| B.S.A. model "E" Combination .. | £164 |
| DOUGLAS, 2-speed, fully equipped | £75 |
| DOUGLAS, 3-speed, „ | £90 |
| DOUGLAS 4 h.p. Combination .. | £135 |
| ENFIELD model No. 200 .. .. | £55 |
| „ „ No. 190 .. .. | £158 |
| „ „ No. 180 .. .. | £140 |
| MATCHLESS Combination .. .. | £170 |
| RALEIGH 5·6 h.p. Solo .. .. | £130 |
| RALEIGH 2¾ h.p. Solo .. .. | £68 |
| RUDGE, I.O.M. .. .. .. | £85 |
| SUNBEAM 4½ h.p. Solo .. | £141 15 |
| TRIUMPH model H. .. .. | £105 |
| TRIUMPH model S.D. .. .. | £115 |
| ZENITH BRADSHAW.. .. .. | £113 |
| COVENTRY PREMIER CAR .. | £250 |

**MILLFORD, CANOELET, HENDERSON, SWAN and MONTGOMERY SIDECARS in Stock.**



**£68 cash, or £17 down and 12 payment of £4 9s. 8d.**

## SECONDHAND MACHINES.

| | |
|---|---|
| ARIEL 3½ h.p., shop soiled only .. | £85 |
| LEA-FRANCIS 3½ h.p., slightly shop soiled .. .. .. .. | £90 |
| RUDGE I.O.M., shop soiled.. .. | £75 |
| ZENITH model 'D," shop soiled .. | £100 |
| 1920 6 h.p. Bradbury combination, fully equipped .. .. .. | £90 |
| DOUGLAS 2¾ h.p., fully equipped | £50 |
| TRIUMPH Combination, fully equipped.. .. .. .. .. | £75 |
| JAMES 3½ h.p. Sports, fully equipped, mileage negligible .. | £85 |
| NEW IMPERIAL 2¾ h.p., 1921, slightly used only .. .. .. .. | £57 |
| ZENITH 1920 6 h.p. Sports, fully equipped .. .. .. .. | £78 |
| SIDECARS by all the leading makers, shop soiled only, at special clearance prices from .. | £15 |

TRADE SUPPLIED.


## IGNITION, LIGHTING, ETC.

MAGNETOS Overhauled, repaired, returned in 2 days as new, guaranteed for 12 months, from 15/-; no price exceeds 35/-.—Turner Bros., Motor and Electrical Engineers, Summerseat, Manchester. [7194

CONTINENTAL Ignition Repair Co.—We repair Continental magnetos only. By specialising on Bosch, U.H., Eisemann, Mea, Splitdorf, Dixie, and Berling magnetos, we can naturally give you better service.

PRICE; Rewinding 18/-, condensers 10/-, platinum screws (Bosch standard) 6/-, remagnetising 2/6, slip rings 6/6, H.T. terminals 4/6. Our price for overhauling a motor cycle magneto ranges between 20/- and 35/-, and never exceeds the latter figure. Guaranteed for 12 months, and redespatched to you in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardwick Rd., Chiswick, London. [3758

MAGNETOS.—New Thomson-Bennett 180° Twin Anti Clock, all perfect, but less bush holders; 35/- each, carriage 1/6 extra.—187, Elm Rd., New Malden. [7565

C.A.V. Magnetos.—Extraordinary bargains.—Brand new 180° twin- or single-cyl.; 38/6, carriage free. Every magneto thoroughly tested before dispatch; approval against cash.—Below.

BOSCH Magnetos.—We specialise on the repair and overhaul of these magnetos. Every repair guaranteed; lowest prices.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [8009

RECONSTRUCTED Magnetos.—Every make and type in stock; not ex W.D. junk; English and Continental makes from £2/5, with a 12 months' written guarantee.—Standard Magneto Co., 55, Churchfield Rd., Acton, London. [7581

THOMSON-BENNETT Magnetos, unused, W.D., guaranteed perfect, single or 180° twin, variable ignition, switch terminal and leads, clock or anti; £2, postage 1/6; week's approval against cash.—Brockbank, 58, Lord St., Southport. [0756

U.H. Magneto Repairs.—We specialise in these magnetos, and can be relied upon to give you good service. A1, B1, AO, KB1, KB2V, KZ2V type spares stocked; prices moderate; 12 months' written guarantee.—Charles Parker and Co., Churchfield Rd., Acton, London. [4455

21/- is all I charge for a thorough overhaul of your magneto, which includes fitting new platinum points and a guaranteed repair in three days.—Brooker, Ignition Specialist, Wood End, Long Hanborough, Oxon. [7946

LIGHTING Dynamos, contained in Government surplus mine exploders, dynamo will light seven 10-volt lamps in series, all as new and perfect, 17/6 each, or 22/- each, carriage paid passenger train; stamp for detailed particulars; three days' approval against cash.—Galpin, rear of 35, Milton Court Rd., New Cross, London, S.E.14. [7385

SURPLUS Magnetos, with written guarantee one year: M-L single, 35/-; B.L.I.C. ditto, 42/-; Bosch ditto, 45/-; Thomson-Bennett and C.A.V. singles and twins, 50/-. We specialise in repairs and spares for all makes. Lists with pleasure. Deal with experts and avoid certain disappointment.—Whitdale Magneto Service, Cherry Orchard, Croydon. 'Phone: Croydon 1625. [6910

SPLITDORF Magnetos, single, anti clock, variable ignition, and guaranteed perfect; 38/-. Please note, these magnetos are not reconstructed or converted starter magnetos. They are the real thing designed for a motor cycle (not an aeroplane); if you are out to buy a magneto, buy the right thing.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd 789. [7975

THE Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government, and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can mostly return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock, all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1. 'Phone: Museum 1158. T.A.: Kumagnelec, Eusroad, London. [2445

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repaire and spares. All repairs are tested on an approved A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock; charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034. T.A.: Magdyno, Eusroad, London. [0265

## TYRES.

2/- to 5/6 is the cost of repairing bursts, cuts, or broken beads; tubes rejoined; valves fitted, etc., 1/- (below).

OLD covers re-treaded, equal to new; extra heavy 17/6, heavy 15/6, medium 12/6 (below).

POST your tyres for repairs to Phœnix Tyre Repairing Co., 224, Sherlock St., Birmingham. [8051

## TYRES.

ALWIN Tyre co. will send on approval any of the following tyres:—

**26**×2¼ Clincher, 19/-; Palmer Cord, 21/-; Goodyear, 25/-; 26×2⅜ Clincher E.H., 26/-; Dunlop E.H., W.D., 37/-; Avon R.S., 27/6; 26×2½×2¼ Clincher, 25/6; Avon E.H., 28/6. 28×3 Fisk E.H. (splendid line), 45/-; Dunlop ribbed, 30/-; Clincher ribbed, 42/-; Dunlop E.H., 29×3½ for 28×3, 50/-.

WE also offer a splendid set of P. and H. Lamps, No. 127 (5½in.), brand new (all black), at 35/6. Motor cycle tubes, all sizes, at 6/-.

ANY of the above lines will be sent on 7 days' approval against cash, plus 1/6 for post.—The Alwin Tyre Co., 37, Red Lion St., High Holborn, W.C. [7827

MISS DOOLEY.—29×3 New Palmer or Dunlop butt-ended tubes, 5/- each.—Below.

MISS DOOLEY.—26×3 butt-ended Dunlops, 5/- each, in wrappers.—Please apply for these bargains to Miss E. Dooley, 33, Killyon Rd., Clapham, S.W.8. [7357

HERBERT ROBINSON, Ltd., Green St., Cambridge.

**24**×2¼ Avon, steel stud, 35/-; Moseley extra heavy, 3-ribbed, 32/6; Dunlop heavy, 36/3; best make tubes, 6/-.

**26**×2. Special bargain in tubes, 4/6 each, guaranteed perfect.

**26**×2¼ Pedley, 15/-; Matchless, 15/-; Avon light, 15/-; Dunlop, 25/9; heavy, 37/3; Bates W.D., 27/6; tubes, 6/6; Cuthbe, 35/-; tubes, 6/6.

**26**×2¼ Wood-Milne, 15/-; Matchless, 15/-; Moseley 3-ply, 32/-; Kempshall, 30/-; Dunlop clearance, 27/6; Dunlop heavy, 46/-; Avon steel stud, 37/6 tubes, 4/6; best make, 6/6.

**26**×2⅜ Kempshall, 30/-; Dunlop clearance, 27/6; John Bull, 42/-; Hutchinson, 27/6; Dunlop heavy, 41/6; tubes, 4/6; best make, 6/6.

**26**×2½, fit 2¼ Dunlop, 46/-; Cuthbe, 45/-; Bates, 45/-; tubes, 6/6.

**28**×3 Avon extra heavy, 32/6; Cuthbe, 50/-; Dunlop, 58/6; tubes, 6/6.

**29**×3½, to fit American rims, Dunlop clearance, 50/-; Bates extra heavy, 50/-.

**650**×65 Avon extra heavy, 37/6; Bates, 47/6; Cuthbe, 45/-; Dunlop, 46/9; Wood-Milne, 15/-; best make tubes, 6/6.

**700**×80 Bates, 47/6; Cuthbe, 55/-; John Bull, 50/-; Dunlop, 61/-; Avon steel stud, 45/-; Bates extra heavy, 50/-; inner tubes, 6/6.

HERBERT ROBINSON, Ltd., Green St., Cambridge. [7881

TYRES. Tyres. Tyres.—For special bargains, see Buncroftian Co.'s advertisement under Parts and Accessories. [0769

CENTRAL Garage will send any of the following tyres on approval against cash, postage 1/6 extra.

**26**×2¼ Dunlop, 37/3; Goodyear E.H., 27/6; Bates, 31/6; Avon, 25/-; Clincher-de-Luxe, 21/-; Palmer cord, 22/6.

**26**×2⅜ Dunlop E.H., W.D., 37/6; Clincher E.H. (for 2¼), 27/6; Avon R.S., 27/6.

**26**×2½×2¼ Dunlop, 46/-; Avon E.H., 30/-; Hutchinson T.T., 37/6; Clincher, 30/-.

**28**×3 Wood Milne E.H., 30/-; Clincher (plain rib), 42/6; Mackintosh, 30/-; Dunlop ribber, 32/6; Fisk, 45/-; Dunlop E.H. (29×3½) for 28×3, 50/-.

**650**×65 Goodyear E.H., 30/-; Wood Milne, 30/-.—Below.

**700**×80 Wood Milne E.H., 41/6; International grooved, 55/-; Excelsior, 50/-.

RUBBER thigh boots (waders), brand new, all sizes; 8/6.

TUBES, all sizes; 6/6 each; orders promptly executed.—Central Garage, 302, London Rd., Thornton Heath. [7825

THE Difference between a good retread and a bad one is its mileage. Try us. Watch results.—Melton Rubber Works, Melton Mowbray. [0636

SCOTTISH Reeders will find it advantageous to purchase their tyres from McArthur, Hill and Co., 47, Carrick St., Glasgow. Lists post free. [3940

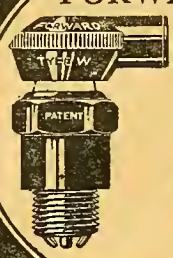
MOTOR Cyclists.—Send your covers for retreading. 3,000 miles guaranteed. Repairs of every description: carriage paid.—Buxton Vulcanising Co., Buxton, Derbys. [4357

RETREADING Diamond Nobby, grooved and ribbed treads, 7 patterns, American and H.F. process; tubes repaired.—Midland Tyre Works, Green Lane, Walsall. [6154

BURST Motor Cycle Tyres, chafed beads, remoulded, made perfect, tube vulcanising, butt-ends fitted retreading; send for list.—Melton Mowbray Rubber Works, Melton Mowbray. [0347

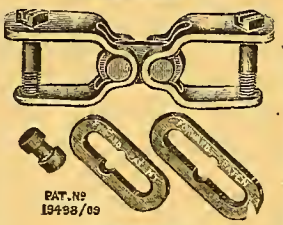
SPECIAL line of New Clincher de Luxe stud non-skid (junior) covers, not W.D., 26×2¼, 16/-; also 26×2½ (for 2¼ rims), heavy 25/-.—Mandes', 100, Great Portland St., W.1, Walsall, and Exeter. [8089


FORWARD




TYPE W. The perfect weatherproof plug with quickly detachable terminal, 5/6 each.

TYPE W.M. Similar but with detachable mica insulator, 7/6 each.

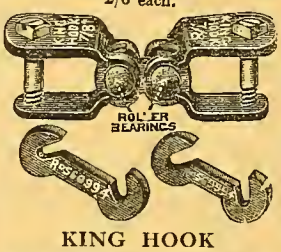



FORWARD

The World's best adjustable Belt Fastener complete with three assorted links and spare roller .. 1/9 each.

Forward Leather Covered Link, 1/6 each.

Forward Belt Punch, for boring a dead central hole in your belt. 2/6 each.




KING HOOK

The strongest hook fastener on the market,

1/3 detachable.
1/6 adjustable.

King Hook Leather Covered Link, 1/- each.

FORWARD PLUG CO., 35, SUMMER ROW, BIRMINGHAM.



SPECIAL OFFER

£12 - 10 - 0

12 only

New bodies, upholstered in various art leather cloths, with renovated underslung chassis, suitable for any machine, complete with coverall apron, new tyre and tube .. .. .. .. .. £12 10 0

Catalogue on request. Open Sunday mornings.

COLLINS & SON, rear of 84, HIGH ST., PUTNEY, S.W.


## TYRES.

ECONOMIC Tyre Co.—Great reduction in covers tubes. All goods sent on 7 days' approval, riage paid, against remittance.

ECONOMIC.—24½×2¼ (oversize 2in. rims) Clincher de Luxe heavy, 26/-, listed £2.

ECONOMIC.—26×2¼ Dunlop heavy, 37/3; B W.D., 28/6; Palmer W.D., 29/-; special he tubes, 6/-.

ECONOMIC.—26×2⅜ Bates special heavy W 30/-; Hutchinson T.T., 29/-; special heavy tu 6/6.

ECONOMIC.—26×2½×2¼ Goodyear diamond cl ance, 42/6; Avon rubber stud extra heavy, 3( Clincher De Luxe, 30/-.

ECONOMIC.—650×65 Goodyear Diamond cleara 30/-; 700×80 Goodyear diamond clearance, 5( tubes, W.D., 6/-.

ECONOMIC.—Fully guaranteed Dunlop rubber s 24×2 22/6, 24×2¼ 24/9, 26×2 24/6, 26× 25/9.

ECONOMIC Tyre Co., 314, New Cross Rd., S.E (near Town Hall). 'Phone: New Cross 1393 [5.

HERCULES Tyre Co., Northampton.—Seve thousand 26×2⅜, 26×2¼ Army clearance t at ¼d. per mile, small minimum payment, rest expected until you have had an arranged mileage. [7(

TYRE Repair Specialists.—H.F. process throughou including retreading burst covers. Every kind repair to tyres and tubes in 24 hours, retreads in days.—The Motor Tyre Co., 66 High St., West Bro wick. [3(

STARTLING Offer.—New Beldam covers, 26×2 or 20/- each, 26×2½ 30/-, 28×3 35/-, 650×65 4( 700×80 45/- each; new Avon or Michelin steel studd covers, W.D., 700×65 35/- each.—The Homerton Rub Works, Brooksby's Walk, Homerton, E.9. [02

## TANKS.

TANKS for B.S.A., new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [63

TANKS re-enamelled from 10/6.—Bright and Hay 78, Church St., Camberwell, London. [75

TANKS for Triumph, new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [63

TANKS.—Renovated makers' designs, transfers; 13/ —Whitworth Motor Renovating Co., 7, Jamai Row, Birmingham. [74

TANKS, new, unenamelled, latest design. Best a Lloyd fittings and pump; 45/- each.—B. R., 42 King's Rd., Chelsea, S.W.10. [74

COVENTRY Tankers, Ltd., makers to the princi manufacturers; petrol tanks for any style supplie extra capacity.—Hearsall Works, Coventry. [63

TANKS Re-enamelled to Pattern. High-class wo only.—D. Jenkins and Sons, 6, Richard St., Atki son St., Deansgate, Manchester Established 25 yea [36

TANKS Made or Repaired, re-enamelled, lined, tran ferred; handle-bars, etc., plated. Established years.—Attwood's, 86, Rosebery Av., London, E.C.1. [70

ALL Manner of Repairs, rebuilds, etc., to any pa tern First-class enamelling. Reasonable charg and quick delivery.—Day, 27, St. Luke's Rd., Birmin ham. [33

ASHTON BROS'. Tanks. Price lists and orde forms available through your dealer or dire from 14, Market Place, Manchester. All tan guaranteed [57

HERBERT ROBINSON, Ltd., Green St., Cam bridge.—Tanks, all makes, supplied, repaired, an re-enamelled in makers' colours. Prompt delivery moderate charges. [787

TANKS repaired, re-enamelled; we guarant makers' colours, designs, and transfers. Handl bars and all parts plated. Lists free.—Park Work 1A, Paradise Rd., Highbury, N.5. [653

TANKS of every description replaced, repaired, an re-enamelled at our own works; all kinds fittings stocked; quick service and reasonable charge Illustrated list free.—A. Green, Water St., Chapel St Salford, Manchester. Tel.: 2191 Central. [025

AVERY'S Stock Tanks for Douglas, Hazlewood B.S.A., Triumph, Omega, enamelled maker colours, plated fittings, 40/-, complete; other design shape to order. 12 months' guarantee with every tank.— Gordon Street Tank Works, Coventry. 'Phone: 177 [0.7

## BELTS.

1IN. New Belts, 7ft. 11/-, 6ft. 6in. 10/3, ⅝×8f 3/6, carriage paid; approval.—Davies, Union St Wednesbury. [445

BALATA and Chrome Combination V Belts, suitab for all classes of motor cycles, ¾in., 1/4; ⅞in 1/6; 1in., 1/9; 1¼in., 2/- per foot. Fasteners 9 each. Postage 1/-.—W. Pollio & Son, Hollington, S Leonards-on-Sea. [665

## BELTS.

NEW Clipper Belts.—8ft.x¾in. 11/6, 8ft. 6in.x¾in. 13/-, 8ft. 6in.x⅞in. 14/-, 8ft. 6in.x1in. 16/9

V.D. Belts, 6ft. 6in.x⅞in., 10/-; new Pedley belts, clearance, 6ft. 6in.x¾in., 10/-; clearance belts, 6x1in., 8/6.

T. EMANUEL and Co., Tyre Factors, 27, Belgrade Rd., Stoke Newington, N.16. Stores: 37a, Balls Pond Rd., Dalston, London, N. Tel.: Dalston 3161 [0726

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All brand new guaranteed and carriage paid: Dunlop, best make, round top, ⅝in., 1/10 ft.; ¾in., 2/2 ft.; 1in., 2/8 ft.; 1⅛in., 3/2 ft.; John Bull, ⅞in., 1/11 ft.; ⅞in., 2/3 ft.; 1in., 2/8 ft.; 1¼in., 3/2 ft.; any length cut; Pedley belts, 6ft. 6in. x¾in., 10/- each. [7880

## CARBIDE.

FINEST Carbide, cwt. drums, 22/6, f.o.r.; 23 depots; prices packed in tins on application.—Sports Depot, Denby Dale, Huddersfield. [5068

CARBIDE, finest quality only, 21/- per cwt., c.w.o., f.o.r., depots all parts; also ½ to 7 lb. —Hudge and Co., Warwick Rd., Bristol. [7483

CARBIDE, finest quality, giving 100 per cent. pure gas yield, all sizes, cwt. 26/6, ½-cwt. 16/3, 28 lb. drums free; support the old firm; established over years; satisfaction guaranteed.—Young, Importers Waterton, Somerset. [9557

CARBIDE.—Immediate delivery of all sizes in 1 lb., 2 lb., 4 lb., and 7 lb. lever lid tins, and 2 cwt. drums, labelled or plain for retailers' own labels, quality guaranteed, and all standard sizes supplied by the largest firm in the trade.—The Premier Lamp and Engineering Co., Ltd., Moorfield Works, Armley, Leeds. [3286

CARBIDE, finest quality obtainable, brilliant, lasting, 20/- cwt., drum free, cash with order, free rail, Aberdeen, Bristol, Cardiff, Edinburgh, Glasgow, Gloucester, Grimsby, Hull, Leeds, London, Newcastle, Liverpool, Lincoln, Manchester, Newcastle, Preston, Port Talbot, Runcorn, Sharpness, Swansea, Yarmouth.—E. C. Maddock, Wareham, Dorset. [8033

## PATENT AGENTS.

E. S. LOCKWOOD, 3, New Street, Birmingham 'Phone: 5816 C. Patents guide free. [9057

FREE, 100 Page Patent Guide, postage 3d.—The Consulting Patent Agency, 253m, Gray's Inn London. [2416

PATENTS Advice, handbook free.—King, Registered Patent Agent, 146a, Queen Victoria St., E.C. years' references. [0129

W. BRYSON, B.Sc., Assoc.M.Inst.C.E., Chartered Patent Agent, 29 Southampton Buildings, London, W.C.2 'Phone: Museum 3651 [9242

T. N. & W. S. SKERRETT (H. N Skerrett, Fellow of the Chartered Institute of Patent Agents, A.Mech.E., A.I.A.E., Associate I.E.E., etc.; W. S. Skerrett, A.I.E.E., Registered Patent Agent).—Patents, designs, and trade marks.—24, Temple Row, Birmingham. Tel.: Central 1038. T.A.: Skerrett, Birmingham. [1534

## PATENTS.

WE Buy, Sell, and Finance Inventions and Patents, and advise on their marketing.—Send postcard for particulars to Dept. C, Inventors' Sales Agency, 24, Spencer Av., Coventry [3717

## AGENCIES.

A FIRM with West-End Showrooms are prepared to handle the sale of motor cycle accessories on commission.—Write, Box 8482, c/o *The Motor Cycle*. [7094

THE Mohawk Cycle Co., Ltd., requires sole agents for their celebrated motor cycles in districts where they are not already represented.—Write for list of terms to Mohawk Cycle Co., Ltd., 3569, Alexandra Rd., Hornsey. [6290

TRAVELLER, connection Denmark, Holland, Sweden, with Danish competition licence, wishes to represent good lightweight house. Would compete in trials if required. To England for fortnight.—Motor Cycles, 53, Upper Baker St., London. [7945

## INSURANCE.

Covers All Risks for 2¾h.p., others at competitive rates.—Ernest Bass, 40, Chancery Lane, W.C.2. 'Phone: Museum 2234. [0005

BOYS, LTD., Insurance Brokers.—Agents for all companies and Lloyd's.—Competitive rates for motor insurance.—170, Gt. Portland St., London. [0055

COMPREHENSIVE Policies for motor cycles, cycle cars, Morgans, etc., from £1/4/6; immediate cover; prompt settlement.—John Clements and Co., 9, Holborn Viaduct, E.C.1. [8003

"THE Motor Cycle" Insurance Policy is the policy authorised by "The Motor Cycle," and covers motor cycles or cycles and sidecars used for private purposes. Complete comprehensive cover. Maximum benefits, minimum rates. Full particulars and proposals on application.—The Autocar Fire and Accident Insurance Co., Ltd., 77, Cheapside, London, E.C.2. [0007

# SPRING WILL COME

although we admit that it does not look much like it now.

The point we would make is that when the weather outlook is bad, second-hand prices are down, and that is when the wise man buys. In the Spring £10 goes on the price of every used motor bike, so that is an argument in favour of buying to-day.

And now for an argument in favour of buying from us.

## EVERY SECONDHAND MOTORCYCLE

which we sell as our own property (as distinct from motorcycles sold on commission) is stripped in our works and necessary repairs done. Thus we know they are sent out sound, and they are

## GUARANTEED FOR THREE MONTHS

on the same terms as the makers' guarantee. We give this guarantee because we recognise that second-hand motorcycles are viewed with suspicion, often for good reasons. We offer the following to-day:—

| | | |
|---|---|---|
| 1915 | 7/9 Indian, 3 speed and sidecar | £85 |
| 1920 | 7/9 Indian & Henderson Elite Sidecar | £140 |
| 1919 | 7/9 H.P. Indian (solo) | £63 |
| 1919 | 4 H.P. Norton & Milford Sidecar | £90 |
| 1921 | Model 16 H. Norton 3½ three speed | £90 |
| 1921 | Big 4 Norton, De Luxe Sidecar, All on | £120 |
| 1921 | Velocette two speed | £47 |
| 1920 | 2¾ Zenith (Flat twin) | £60 |
| 1920 | 4 H.P. Wilkin & Sidecar, Blackburne engine, dynamo lighting | £105 |
| 1914 | 6 H.P. A.J.S. & Sidecar, All on | £75 |
| 1920 | 3½ Sunbeam, All on | £90 |
| 1921 | Sports Model Sunbeam | £95 |
| 1920 | 5-6 H.P. Rudge Combination | £70 |

*We are Agents for the following:—*

**Norton, Levis, Indian, Raleigh, Velocette, Martinsyde B.S.A., Victoria, Quadrant, F.N. and Scott Motor Cycles. Wolseley, Lagonda and G.N. Cars.**

Let us supply you your new mount for CASH, EASY PAYMENTS or EXCHANGE.

# VICTOR HORSMAN, Ltd.

**7, Mount Pleasant,**

# LIVERPOOL.


## SITUATIONS VACANT.

EX-SERVICE Despatch Riders.—Write for particulars how to earn money without any outlay.—Apply Box 90, Pratt's, 9, Essex St., London. [0783

## SITUATIONS WANTED.

EXPERIENCED rider wishes to offer his services as rider in 1922 T.T.—Will any firm interested please write Box 8517, c/o *The Motor Cycle*. [7208

COMPETITION, Racing, etc., driver desires fixtures, T.T., etc.; expert cars or motor cycles.—Box 8515, c/o *The Motor Cycle*. [7205

YOUNG man, 22, desires post, salesman, motor cycles or accessories, London; smart appearance; 2 years' engineering college, enthusiastic motor cyclist, months' trial, services free.—Box 8564, c/o *The Motor Cycle*. [7746

## FINANCIAL.—PARTNERSHIPS.

WANTED, someone to finance deferred payment deals on motor cycles.—Box 8,562, c/o *The Motor Cycle*. [7744

ADVERTISER, opening branch, requires partner capable taking charge; old-established cycle business; stock reduced suit; capital available.—Particulars, Box 8579, c/o *The Motor Cycle*. [8037

## BUSINESSES AND PROPERTY FOR SALE, TO BE LET, OR WANTED.

SMALL Motor and Cycle Business wanted; main road in small town preferred; must produce living all year.—Box 8563, c/o *The Motor Cycle*. [7745

DISSOLUTION of Partnership Sale, Stamford, Lincs., GN. & MR.—The whole of the stock in trade of the Aero Motor Works, Park Lane, St. Martins, including 2¼h.p. Racing Massey Arran and other motor cycles, machinery, tools, accessories, etc., will be sold without reserve on Thursday, February 16th, at 11 a.m., by Messrs. Goddard & Smith on the above premises; catalogue post free 6d. [7314

## GARAGES.

TO Let, in Ramsey, Isle of Man, during T.T. races, premises suitable for 6 or more machines.—Apply W. Kewley, Market Hill, Ramsey, Isle of Man. [7113

## GENERAL TRADE.

AUCTION Sales.—Palmer's Garage, Tooting, the oldest solely motor auction rooms in London. Terms, 7½ per cent., not chargeable if machine unsold. Motor cycles and cars bought and sold for cash. Nearest goods stations, Falcon lane, L. and N.W.R.; Wimbledon, L. and S.W.R. and G.W.R.—Sole address, Palmer's Garage, Tooting, London. [7952

## WANTED.

SCOTT Chassis, late model appearance no object.—6, Steiner St., Accrington. [7052

WANTED, Premier 3-speed, K.S. gear box.—24, Michea St., Port Talbot [7188

WANTED, Late W.C. Morgan for cash.—B. M., 497, Old Ford Rd., Old Ford, E. [7475

CYLINDERS for 6h.p. Rex a.i.v. Engine, complete. —Stael, Meopham Station, Kent. [7123

TRICYCLE with 2h.p. motor attachment.—Doctor Field, 1, Cambridge Place, Falmouth. [8011

TWIN Rex Frame, 1914, 6-8h.p.—Number and particulars to Lingfords, Coxhoe, Durham. [7167

MODERN Clyno Sidecar Body and Windscreen wanted.—Hollings, Llanidloes, N. Wales. [7115

MATCHLESS-J.A.P., 4-5h.p., 1915, P.S. ½, crank-case, wanted.—Barnview, Medstead, Hants. [7579

TRIUMPH Clutch Wheel, with chain stays and brake.—Bnotman, Easton Neston, Towcester. [7663

A.B.C., dynamo lighting, condition perfect not essential; reasonable figure.—164, Broadfield Rd., Catford. [7703

WANTED, Sidecar Chassis with wheel, suitable 8h.p. Enfield.—Ernest Walter, Lower Bentham. [7176

SIDECAR, underslung; good condition, make, and full particulars.—18, Approach Rd., St. Albans. [7572

N.S.U. Gear, any condition; also Grados, Philipsons, Albions; cheap.—Box 8567, c/o *The Motor Cycle*. [7749

WANTED, 2½h.p. J.A.P. cylinder, complete A.I.V.; sound.—Bratton, Sandhill, Winslow, Bucks. [7694

SCOTT Rear Sprockets, and other parts, in good condition.—Ward Motors, Ltd., 32, Hustler St., Bradford. [0784

J.A.P. 8h.p., rear cylinder, 1910 pattern A.I.V., 77½ mm. bore; also piston.—20, Horsell Rd., Highbury. [7776

WANTED, Autoglider, first-class condition, lowest price.—Full particulars, Bain, 52, Nares St., Scarborough. [7258

£7 offered for good 3-speed gear box, S.A. or other approved type.—19, Wilcox Rd., South Lambeth, London. [5975

## WANTED.

WANTED, magnetos and spares, any condition, for cash.—Charles Parker and Co., Churchfield Rd., Acton, London. [7633

WANTED, second-hand 3½h.p. Zenith, Gradua gear, complete with pulley.—Walker, 71, Stuart Rd., Peckham Rye, S.E.15. [7053

5h.p. Twin P.F. Engine, complete; cheap for cash. —Write Refreshment Bar, Tram Terminus, Wilmington, Dartford, Kent. [7054

WANTED, Lightweight motor cycle frame complete, suitable for Villiers engine wheels, carburetter.—Huntrod, Danby, Yorks. [7711

WANTED, good up-to-date second-hand motor cycle accessories; state particulars and price.—Service Co., 292, High Holborn, W.C.1 [0671

WANTED, 8h.p. Clyno chassis ammunition carrier, with all couplings, new; ex W.D.—Particulars, W. C. Hurling, Butterwick, Boston. [7484

BRADBURY cylinder and piston wanted for 1913 4h.p.; good condition essential.—Barrett, 77, Hartsholme Drive, Swanpool, Lincoln. [7692

WANTED, Sturmey Heavyweight Gear Box, chain-cum-belt, new condition.—Fullest particulars, Huxtable, Chittlehampton, Devonshire. [7261

WANTED, 2-seater De Dion, Rover, 1 cylinder, real good; cheap.—Douglas S. Cox, West Norwood. 'Phone, Streatham 1370. [8017

WE make a good offer on sight for motors in any condition.—Smith's, 86, Chalk Farm Rd., opposite Chalk Farm Tube Station. [7915

2-SPEED Box and Shaft incorporated, for 4-cyl. F.N.; one needing repairs not objected to; good price given; urgent.—Box 8483, c/o *The Motor Cycle*. [7103

WANTED to Purchase Outright for cash, backyard stocks. W.D. spares, miscellaneous spares. Send full particulars.—McNeille and Platt, 57, Gt. George St. Liverpool 'Phone: 1092 Royal [2488

DRUID, Saxon, or Brampton Spring Forks, in any condition, purchased for cash; good value given for smashed or bent girders or any parts.—Rayner, 6, Temple Row, Birmingham. Bankers, Lloyds. [7488

## EXCHANGE.

EXCHANGE 1914 4-seater R.M.C. for combination or solo.—24, Geraldine, Chiswick. [8038

5-SEATER touring car, dynamo lighting, for good combination.—Crown Garage, Weybridge. [7470

EXCHANGE 4 Magnetos for Scott Sidecar; cash adjustment.—Smith 20, Park Crescent, York. [7119

EXCHANGE Auto-scooter and Lady's Cycle for good 2-stroke.—Allston, 17, Oster Terrace, St. Albans. [7333

EXCHANGE your present machine for a new car or motor cycle at Kays, 8, Bond St., Ealing. [7231

LONG Copper Exhausts for Douglas, cost £1; best offer, exchange pillion.—Paulson, Edale, Sheffield. [7174

EXCHANGE Piano Player, valuable old violin, for motor cycle.—88, Replingham Rd., S.W.18. [7272

EXCHANGE £15/15 Table Grand Gramophone for anything motorish.—76, London St., Chertsey. [7608

4-5-SEATER car, sound, for motor cycle and a little cash.—9, Jubilee Terrace, Broomfield Rd., Chelmsford. [7450

HALIFAX.—1922 Coventry Premier Light Car for good combination and cash.—Motor Exchange, Horton St., Halifax. [7909

SWIFT 2-seater for late lightweight Douglas preferred, and £12.—Cooper, 36, Milton Rd., Margate. [7652

EXCHANGE A.B.C. 1921 dynamo, speedometer, etc., for Norton, or sell.—82, Caledonian Rd., London, N. [7499

AUTO-WHEEL, bicycle, both perfect, for 8h.p. air-cooled engine; cash adjustment.—Hall, Laughton, Rugby. [7452

4h.p. Engine, watertight, Bosch, as new, for Sturmey gear box chain; sell £10.—17, Worthington St., Leicester. [7189

1921 Rudge-Multi, practically new, and cash for 1920 Douglas combination.—1, Ombersley Rd., Worcester. [7713

EXCHANGE 1918 P. and M. Combination for good lightweight; cash adjustment.—Box 8548, c/o *The Motor Cycle*. [7330

1920 2¾h.p. 3-speed C. and K. Douglas, plus cash, for Sports Sunbeam, or similar.—Buxton Station, Belper. [7173

EXCHANGE 3-ton Daimler Lorry, good order, for car, combination, or what offers?—Box 8550, c/o *The Motor Cycle*. [7323

1921 Coventry Eagle, gap, tax, all on, Sturmey gear, for combination or solo; cash either way.—174, Avenue Rd., Acton. [7490

UNIC Taxicab 12h.p., 2 cylinders, splendid order, overhauled; £65; exchanges considered.—63, Solon Rd., Brixton. [7557

SEDIA 2-seater Light Car, as new; exchange twin combination and little cash.—Spurling, 8, Conrthope Rd., Hampstead, N.W.3. [5848


# BASTONES

Established 16 Years

*No Better or Cheaper House*

**NEW CLEARANCE LINES, APPROVAL AGAINST CASH. CARRIAGE PAID.**

**WOOD-MILNE Key Grip COVERS**

| | | |
|---|---|---|
| 26×2¼ / 650×65 | Special / Heavy | 13/6 |
| 26×2½ | Extra Heavy | 16/6 |

**GOODYEAR All-Weather Tread COVERS. Extra Heavy.**

| | |
|---|---|
| 26×2¼ Diamond Pattern | 26/- |

**GOODRICH Safety-Tread COVERS Extra Heavy.**

| | |
|---|---|
| 26×2¼ | 28/- |
| 26×2½×2¼ | 36/- |
| 26×2½ | 35/- |
| 650×65 | 40/ |
| 26×3 for 650×65 rim | 48/- |
| 28×3 | 48/- |

**CLINCHER Rubber Non-Skid COVERS.**

| | |
|---|---|
| 24×2 De Luxe Junior | 17/6 |
| 24×2¼ | 20/- |
| 26×2 De Luxe Heavy | 23/6 |
| 26×2⅜ | 25/- |
| 26×2⅜ Extra Heavy | 27/- |
| 26×2½×2¼ Heavy | 30/- |
| 650×65 Dreadnought 3-ribbed | 39/- |
| 700×80 to fit 650× / De Luxe Extra Heavy | 47/- |
| 28×3 De Luxe Extra Heavy | 37/6 |

**TUBES.**

Goodrich, Clincher, and Hutchinson.

| | |
|---|---|
| 26×2¼ and 26×2½ | each 6/3 |
| 650×65 / 700×80 / 28×3 | each 7/6 |

**228, Pentonville Road, King's Cross, London, N 1**

'Phone: 2481 North. 'Grams: 'Bastones, London'

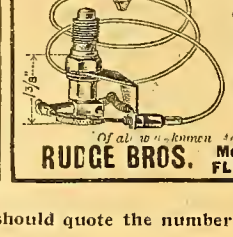


**A.C.U. 6 DAYS TRIAL**

**1919** Ariel machine won silver medal, James machine won silver medal, **1920** Scott machines won team prize and six gold medals. **1921** Matchless machines won team prize two gold and two silver medals F.N. machines won two gold and two silver medals plus bonus marks for petrol consumption

**ALL FITTED WITH THE W.S.R. VARIABLE JET ADAPTER**

Speed, power, economy, easy starting, slow running, choked jet done away with.



**A.M.A.C., S. & B., 8/6 Senspray, Triumph, Claudel Hobson, 10/6**

*Postage and Packing 6d.*

If fitted with **BOWDEN CONTROL 11/6 EXTRA.**

When ordering state length of jet, including plug and year of carburetter. Write for leaflet, it will interest you.

*Of all up-to-date agents or direct from*

**RUDGE BROS.** Motor Fittings Manufacturers FLEET ST., BIRMINGHAM


## EXCHANGE.

TWO 3-speed Humber Lightweights in exchange heavy twin or combination.—Golding, Ospringe Rd., Tufnell Park. [7

SEE A.B.C., A.J.S., B.S.A., Douglas, Triumph, Zenith, columns Exchanges.—Kent's, 417, L St., Southport. 'Phone 1273. [7

WE Specialise in Exchanges. Large number 2- 4-seaters to choose from.—Morlands Mot Sheen Lane, East Sheen, S.W.14. [7

EXCHANGE Cycle Car, good order, for Ford combination, lightweight, push cycles, or sell £ —Mendham, Terrington, Norfolk. [7

EXCHANGE Brand New Motor Scooter, cost £ for reliable motor cycle, or sell.—Offers, F. G frey, 63, Brighton Rd. Surbiton. [7

FORD 2-seater Sims, Bosch magneto, suit sa exchange Morgan, condition immaterial.—Ki 9, Vicarage St., Stockton-on-Tees. [7

ARMSTRONG 3-speed clutch wheel, perfect; £5/ exchange J.S. or countershaft, cash adjustme —11, Pretoria Avenue, Walthamstow. [7

EXCHANGE 5-6h.p. Sports Indian, racing clut model, for kick start combination; sell £50 Sessions House Hotel, Clerkenwell Rd. [7

1915 Douglas 2¾h.p., excellent condition, Lu lamps, fast; exchange lightweight; sell £32/1 —Brown, 15, Sheep St., Bicester, Oxon. [7

EXCHANGE Humberette 2-seater, water-cool overhauled, as new, for good combination.—Mo dale, 30, Canterbury Rd., Kilburn, N.W.6. [65

WANTED, N.S.U. 2-speed for Triumph, io change for Splitdorf 180° twin magneto, o adjustment.—Millett, 11, Chatham Row, Bath. [7

EXCHANGE 1921 Diamond-Jap, 2¾h.p., 2-spe gear, with cash, for late combination, Matchl preferred.—11, Balfour Mews, Mayfair, W.1. [7

BABY Triumph and 2¼h.p. Enfield, in first-cla order, offered in exchange for modern Scott; ca adjustment.—10, Feckenham Rd., Redditch. [7

BINKS Rat Trap wanted for Norton; exchan 1921 Cowey, 10-80 m.p.h., mileage 250; s £3/10.—P. Driscoll, 58, Woodfield Rd., Ealing. [7

WEST NORWOOD! Fifty vehicles all types exchange!!!—Douglas S. Cox, West Norwo (See Cars.) [80

EXCHANGE 1922 7h.p. Combination, magni cently equipped for Triumph combination, solo and cash.—51, Upper Richmond Rd., Putney. [7

EXCHANGES a Speciality!!! 2- and 4-seater ca from £50 to £500!—Seabridge, 35, Hansler Rd East Dulwich. Call, write, or 'phone, Sydenham 245 [7

EXCHANGE good 4-cylinder Magneto, guarantee perfect, and motor car speedometer, for gen gent's 3-speed cycle.—Box 8554, c/o *The Motor Cycle* [7

LARGE Sandum Elite bulbous back Sidecar, e closed wheel, as new; sell £14; exchange sportin Canoelet.—P. Driscoll, 58, Woodfield Rd., Ealing. [7

EXCHANGE 1917 Calcott, 2-seater, for combin tion and cash.—Newnham Motor Co., 223, Ha mersmith Rd., W.6. 'Phone: Hammersmith 80. [7

B.S.A., 1913, 3½h.p., 2-speed hub, clutch, goo order, tax paid; £35; part exchange Triump or similar solo.—Blackledge, Blacker Hill, Barnsley. [7

EXCHANGE Perry 2-seater, 8h.p., 1915, five detach able wheels, good tyres, value £100, for goo combination and cash.—8, High St., Wandsworth. [7

2¾h.p. Douglas 1918; 3½h.p. Rudge-Multi, clutch 4 kick starter, 1916; both equipped; faultles condition; exchanges considered.—63, Solon Rd., Brix ton. [7

18-22h.p. Siddeley, with touring and 12-seater bu body; exchange combination to value £30, sell; parts, etc.—Armstrong, Eastington, Stonehous Glos. [7

INDIAN (Sports) 3½h.p. Twin, 3-speed, K.S., clutch new condition, fully equipped; £60. Wanted, Com bination or lightweight.—121, Acton Lane, Chiswick W.4. [7

ROVER, 1913-14, 3-speed Coachbuilt Combination advertised 26-1-22, and up to £50 cash, for bes twin combination offered.—Webster, Torwood, Hig Beach. [7

F.O.C.H. are noted for fair exchanges.—Fair Offe Car House, 5, Heath St., Hampstead. (Near Tube 'Phone, Hampstead 3752. Hours 9-7, includin Saturdays. [6

CARDEN 1921 2-seater, fully equipped, specia finish, completely overhauled; exchange genuin sports solo; sell £85.—Bramwell, Market Square, Ston Stratford. [7

6h.p. W.C. Humber Engine and clutch, L.C. 2-spee Chater-Lea gear box, for good P. and M. engin and magneto.—West, 150, Amyand Park Rd., Twickenham. [7

2-SEATER Clement-Talbot 7h.p., water-cooled twin re-upholstered, repainted, and new hood; ex change for combination and cash.—Apply, 347, Ba Rd., Hounslow. [7

THE MOTOR CYCLE

ESTABLISHED IN 1903

FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street.
*Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street.
*Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate.
*Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## As Others See Us.

IT may surprise many of our readers to learn that manufacturers of the best known American motor cycles consider long-distance events, such as the London-Edinburgh run, of greater importance from a publicity standpoint than the Tourist Trophy races.

To British motor cyclists this view may, at first, appear somewhat strange, but, studied in conjunction with the state of affairs in the United States, the opinion referred to has certain significance.

At the present time America is suffering a trade depression such as she has not experienced for many years, and, as is usual at such times, a close study is being made of the true value of different methods of propaganda. As a result of this, track racing is at a discount, and, while another reason is given by enthusiasts on the other side of the Atlantic, there is no doubt that, as part of a publicity campaign, track racing has been proved to possess a purely local value. In other words, if and when phenomenal speeds are attained in America the rest of the motor cycle world (if the achievement obtains prominence) is unconcerned, or doubts its authenticity.

On the other hand, the attainment of a success in a leading British reliability trial or race is accepted as authentic the world over because it is endorsed either by a club of unquestioned integrity and independence or by the governing body of the motor cycle movement in a country whose traditions have always upheld clean sport.

This fact is significant and accounts in no small measure for the decision of leading American factories to curtail track racing in the United States. One factory, too, has decided to again support the T.T. races, and it may be taken for granted that the two best known American motor cycles in this country will be represented in the leading reliability events held here.

A decision of this kind is encouraging to British clubs, and an incentive to improve still further regulations governing the leading contests.

In sober fact, Great Britain is recognised as the arena for motor cycle competitions, and the results are reflected, and therefore influence trade, throughout the world.

## Varying Garage Charges.

FROM time to time—especially during the summer touring season—we receive complaints from readers of excessive charges for garage accommodation. Some of these complaints appear to be justified, as a shilling and sixpence is too high a figure for the temporary storage of a sidecar while its owner seeks refreshment.

It would appear that the edict of the Petrol Combine to the effect that the value of anything is the price the public will pay has been adopted by certain garage proprietors. In those cases of alleged overcharge which we have investigated, we have found that the fixed idea has been to obtain a full year's profit in the few months when visitors may be expected.

This may, or may not, be sound business, but it would undoubtedly prevent heartburning if garage charges were posted conspicuously to serve as a guide to would-be patrons. Garage charges for motor cycles vary from sixpence to a shilling and sixpence per hour; consequently there is every reason for a motor cyclist to consider himself overcharged when asked to pay the latter figure, particularly if, on the previous day, the charge was a fraction of that amount. Though seaside garages are most often complained of, inland garage charges are by no means uniform.

This unsatisfactory state of affairs appears to offer further scope for the activities of our motor cycle organisations, the A.C.U. and the A.A., which might classify and standardise garage charges by arrangement with the proprietors.

An index to the advertisements in this issue will be found on the page facing the back cover.

## At Last.

I HAVE owned innumerable machines, but never till this month did I own one with really rational toolbags. I have a fluent pen, but it is not nearly so fluent as my tongue, when the latter is duly roused; and thrice in 1921 did I dismount at the other end of nowhere to effect a repair and find the flap of one of my panniers hanging disconsolately downwards, revealing an empty space above it. This catastrophe is extremely unlikely to occur with my present mount. The toolbags have sliding claws; locks with a key which is certainly small enough to be easily lost, but is at least so strong that its wards won't twist off, as befell twice in 1921; and, finally, a cunning little vertical catch, which just safeguards the radially sliding claw from jarring off its catch. Of course, the bags aren't big enough to please me; but that too may come in time.

## Chain Waves.

MR. HALLIDAY TURNER may be perfectly correct in supposing that the waggles of a chain running at high speed occasionally permit a tooth to get ahead of itself, so to speak, though I doubt it. He has forgotten that my paragraph (to which he refers) concerned a spring frame. I had newly adjusted my rear chain, and was pottering happily along with the sun on my flank, when I suddenly caught sight of the shadow of my chain on the road, and nearly expired of heart failure on the spot. In this case the eccentric looping of the chain must have been chiefly due to the spring frame, which was not pivoted at the sprocket centre. It would be interesting to know if any research student has cinema'ed a chain in action with the Ultra-Rapid film camera. There is also an excessively ingenious device known as the Oscilloscope, with which the naked eye can watch an exhaust valve bouncing on the cam as if it were a child's hoop flopping to rest. Until such a test has been made, I shall continue to feel dubious about Mr. Turner's diagnosis. But all these things can be proved—does not Professor Boys photograph shells quitting the muzzle of a gun?

## A Bright Idea.

THE above mention of the ultra-rapid camera reminds me that there are a lot of films which I want to see it attempt. In particular, as a lad who plays golf of the 36 hcp. variety when all his bikes are broken down, I want to see it register Abe Mitchell's drive. Even more do I wish to see it photograph George Dance climbing Park Rash. Will some clubman with what the Americans call "film affiliations" please arrange for a few hundred feet of these crawly pictures to be ready for the next Show, or the 1922 club dinners, or the Manx week?

## Why?

THREE of my friends have just taken delivery of their 1922 machines. Each machine in the trio has plated wheel spokes. Rain was teeming down when the 'buses reached the local station, but who will blame the bridegrooms if they incontinently took the road? It was a pitiful sight on Sunday morning to see these three owners busily rubbing up their spokes with Globe polish. Despite the huge advances which galvanising rustproof processes have made lately (witness the dull grey barrels of K.L.G. plugs), one expects a lot of plated nuts and lugs and rods and tubes on a motor cycle. But *why, why, why* need we clean the spokes? If the makers won't dull-proof them, let us at least have them stoved. It was raining when my own new 'bus arrived. Did I take it on the road? Not much. I got out a tin of Howes' "Corrosine," and as that by no means sufficed to finish off the whole of the plated area, I used it for the parts which I was most likely to finger. For the rest I used some Price's hub lubricant, melted down on the kitchen range.

## Wanted, Perfect Goggles?

A MIDLAND rider seeks my aid in selecting the perfect goggle. Ordinary glass he considers perilous in the event of a crash. Triplex is usually built up with open sides, so that your eyes get full of foreign matter and chilled by side draughts (I have used a Triplex mask, but do not know if it is still procurable). Mica distorts the vision. Being a fearless person, devoid of medical knowledge, I buy any old pair and do the same again when I break the originals. Gentlemen, the ball is open. Any grafter desiring a free advertisement for his patent goggle may write to the Editor, belauding the same, and it will be inserted in our correspondence columns—perhaps.

## How do the Miniature Sidecars Wear?

MY POSTBAG makes it evident that plenty of canny people are open to buy lightweight sidecar outfits as soon as they are assured that continuous hard pulling does not abbreviate the life of the engine, and that the featherweight construction of the chassis does not lead to expensive fractures in the second year. In other words, they nourish the suspicion that the ultra light outfit is a good first-year 'bus, but might not be dependable or economical in its second season. The suspicion strikes me as unjustified. No sane manufacturer is going to market a proposition which will presently make his name stink in the public nostril. The lightweight sidecar is so juvenile that the mass of riders can possess no personal knowledge of its stamina. But the manu-

**Occasional Comments.—**

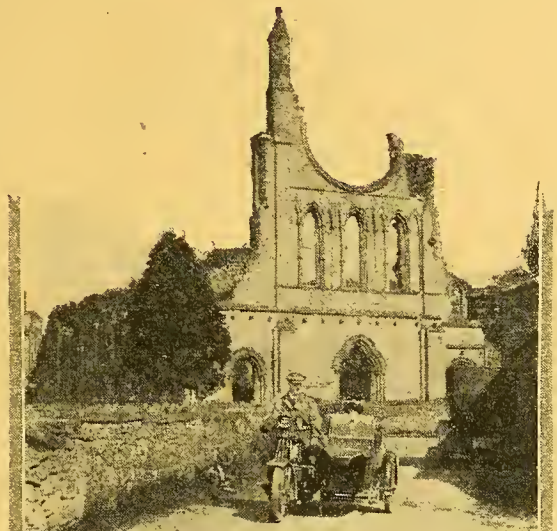
facturing concerns do not list it and push it without ample data, and we may take it for granted that they are satisfied with their own experimental tests. It must be remembered that these tiny engines have already proved themselves gluttons for continuous hard work in solo frames, and that cooling has made such strides that the extra load no longer worries an engine. So far as the chassis is concerned, its lightness is obvious; but, on the other hand, its comparatively low road speed limits the stresses to which it is subjected. I have no doubt that they will last quite satisfactorily.

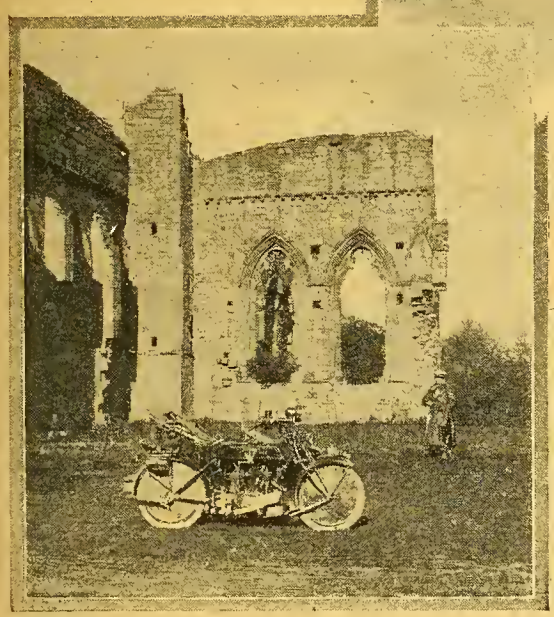
## The Ricardo-Triumph.

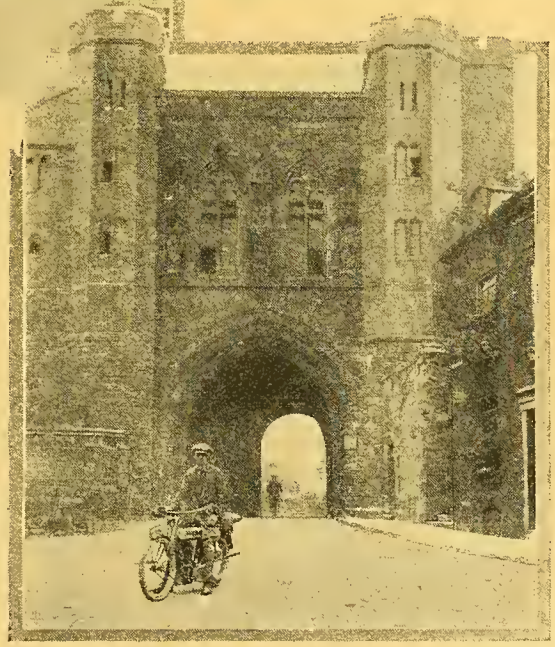
I HAVE just taken delivery of a four-valve Triumph (no, it wasn't *my* picture that graced *The Motor Cycle* of December 29th, though he is a nice fellow enough). Readers may be surprised to hear that it is neither the speed nor the acceleration which have so far impressed me most. The high spot of the machine is its great comfort. It hammers one more nail—a big one—in the coffin of narrow tyres. The second item which amazed me is the transmission. The indirect gears are as near silent as can be, and the all-chain drive tugs considerably less than a tight belt would do when the engine is pulling slowly. Under circumstances where docility is required, such as starting up, or dodging through heavy traffic, she is as meek as a tame rabbit; but open the throttle, and she feels just like a Waterloo Cup winner looks.

## "Assembled" Machines.

THEOLOGIANS accuse their opponents of "invincible ignorance," and Mr. G. R. Morgan will suspect me of that vice if I stoutly assert that I have not changed my views on assembled machines by the breadth of a whisker. If all his arguments were sound, surely there wouldn't be any assembled machines on the market, as nobody would buy a type which was more expensive, depreciated more rapidly, and enjoyed inferior "service." Probably both he and I generalise rather too easily. However, I will make a confession which will charm the soul of Mr. Morgan and other enthusiasts for the special design. Once upon a time I owned quite a succession of assembled machines, all built by smallish concerns. The purchases were inspired by two motives. First, I could get my own fads incorporated in the specification. Secondly, they were cheaper than parallel specifications of special design, because the "establishment charges" item in their costing was nothing like 25%, as it often is with a special design (I fancy this saving tends to be balanced nowadays by the economies of scientific manufacture). I chose them cannily, and the "service" which I enjoyed with them was equal to the best service that the big factories give, and better than I can obtain to-day from certain ill-organised and ill-managed concerns. But I have not bought an assembled mount for years, and I can state my reason in a nutshell—they depreciate much too heavily.







HAUNTS OF ANTIQUARIANS.

(Top.) Ruins of the west front of Byland Abbey, a few miles from Thirsk.

(Left.) The remains of Egglestone Abbey, near Barnard Castle, Durham.

(Right.) Old gateway at Worcester, known as the Edgar Gate.

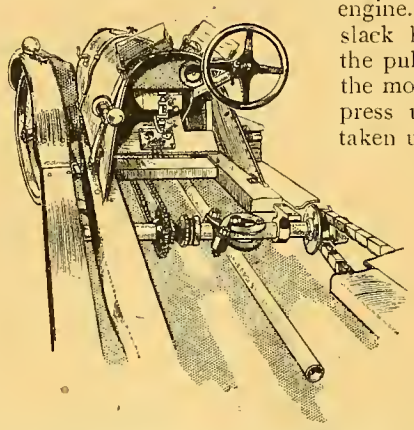
An A.J.S. outfit and a Triumph figure in the illustrations.

# PASSENGER MACHINE TOPICS.

## Jottings on Matters of Interest to Owners of Sidecars and Cycle Cars, not to mention their Passengers.

IT is accepted as a firm rule that, the larger the machine, the greater the tyre wear. The writer has not found this to be the case, and the heaviest sidecar outfit owned—an 8 h.p. with double-seater sidecar—has given the greatest tyre economy. It is speed and incorrect sidecar alignment that are responsible for tyre wear more than weight, provided, of course, the machine is adequately tyred.

On this point, some time ago, we received a letter from The County Cycle & Motor Co., of Birmingham, who specialise in taxi sidecars. They stated that, after a 3 months' careful observation of a number of vehicles plying for hire in Birmingham, they found that, up to a mileage of 6,000, it had not been necessary to replace a single cover. The tyres used were Dunlop and Palmer, but some credit is due to the excellent shock absorbers fitted on the big twin B.S.A. machines, and, it was emphasised, to the perfect alignment and balance of the vehicles.



Governor device on the countershaft of the Tondeur cycle car by which the gear ratio is altered automatically by the speed of the engine.

DESIGNERS of cycle cars are still favourably considering belt drive, and two of the machines illustrated here are so equipped. The Tondeur is chiefly interesting as regards the method of transmission employed and the type of springing utilised. It is the invention of a young Belgian engineer, Mr. R. Tondeur, who, began his experimental machine in 1914. It was not complete when war broke out, and when he went to look for it after the armistice he found that all the brass portions had been removed by the enemy.

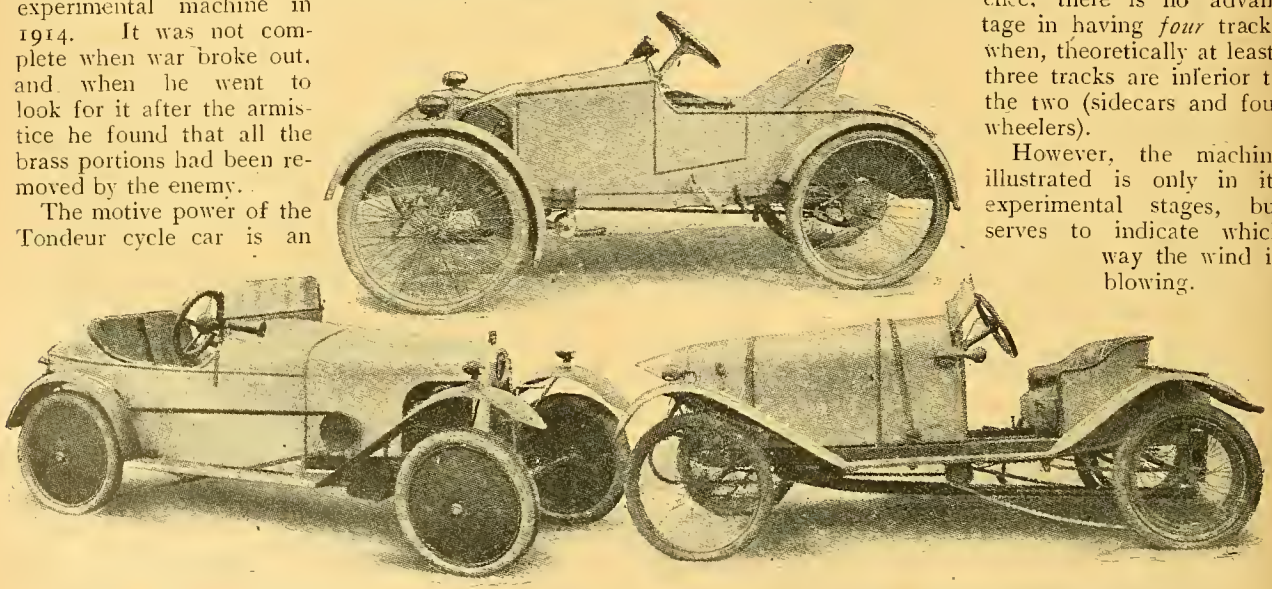
The motive power of the Tondeur cycle car is an M.A.G. engine with battery-cum-dynamo, for lighting and ignition. It is therefore one of the few vehicles with which this journal deals in which a magneto is not employed.

The drive from engine to countershaft is by means of a chain. The chief novelty in the design consists of a peculiarly shaped governor which automatically controls the diameter of the belt pulleys by expanding or contracting them according to the speed of the engine. When at rest the belts hang perfectly slack lying on loose rings at the bottom of the pulleys. When the engine is accelerated the movable flanges in the pulleys immediately press up against the belts and the drive is taken up. However efficient this may be, we think that bygone failures to make variable pulleys a success will prejudice prospective buyers.

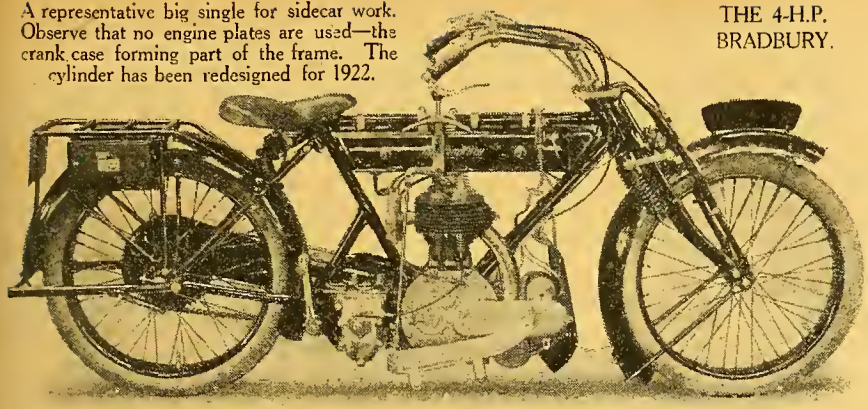
The address of the designer is R. Tondeur, 38, Queensborough Terrace, Bayswater Rd., London, W.2.

THE second cycle car shown on the left of the group is known as the Foster, and has a flat twin engine and pulleys of practicable size. The third machine is a monocar, but this vehicle has not belt drive. It is an experimental machine, produced by the Eastbourne Aviation Co. Like the Peugeot Quadrilette, the wheel tracks at the front and rear differ, that of the front being 43in., while the rear wheels span a track only 27in. wide. Except for manufacturing convenience, there is no advantage in having *four* tracks when, theoretically at least, three tracks are inferior to the two (sidecars and four wheelers).

However, the machine illustrated is only in its experimental stages, but serves to indicate which way the wind is blowing.



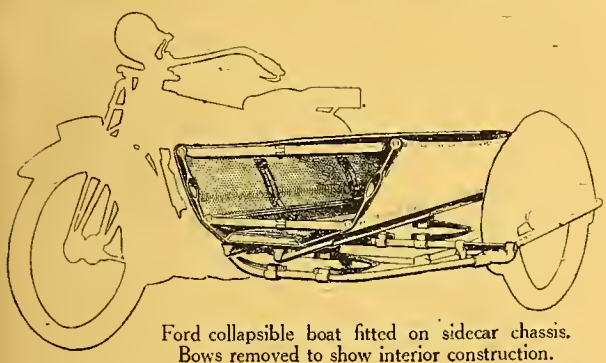
THREE SIMPLE CYCLE CARS. (Top.) A monocar with four tracks. (Left.) A Midland production—the Foster. (Right.) The Tondeur, which has variable pulley gearing.



A representative big single for sidecar work. Observe that no engine plates are used—the crank case forming part of the frame. The cylinder has been redesigned for 1922.

THE 4-H.P. BRADBURY.

THOSE dismal prophets who foresee the ultimate doom of the sidecar through the development of the cycle car always overlook the fact that, at whatever cost a small four-wheeler can be produced, a sidecar outfit giving an equal road performance can be manufactured and marketed at a lower price. Whatever the ultimate fate of the high-powered elaborately equipped outfit, the economical single-cylinder machine will always hold its own among passenger machines. The 4 h.p. Bradbury is an excellent example of this popular type, represented by so many makers, and, in its latest form, is bound to attract the attention of the sidecarist who requires a robust machine—and a sturdily built mount is necessary in certain parts of the country where the roads are not so good as they should be.



Ford collapsible boat fitted on sidecar chassis. Bows removed to show interior construction.

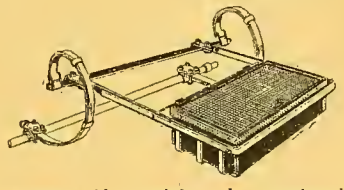
Single-cylinder Bradburys are distinctive at least in one exclusive feature, the crank case forms part of the frame itself. In other words, it has no engine plates, and the engines in old pre-war machines of this make are just as rigid in their frames as those in new mounts.

◈ ◈ ◈ ◈

CONSIDERING we are supposed to be a maritime nation, comparatively few of us get acquainted with the water other than by an occasional half-day in a hired skiff. There is a good reason for this, of course, for the British youth is never slow to take up any healthy outdoor pastime, as witness the popularity of the motor cycle. Few of us have facilities for boating, but where one is within a few miles of free water the idea patented by Mr. A. E. Ford, the manufacturer of Ford folding boats, is worthy of consideration. Here we have a sidecar which can be converted conveniently into a motor boat by placing the motor bicycle inside the collapsible body or hull. Those who have vetoed all suggestions for a sidecar T.T. may allow a boat race over a triangular course in the Solent. Such an event should be worth witnessing if such sidecar experts as J. A. Masters, Hugh Gibson, and Reg. Brown were at the helms.

◈ ◈ ◈ ◈

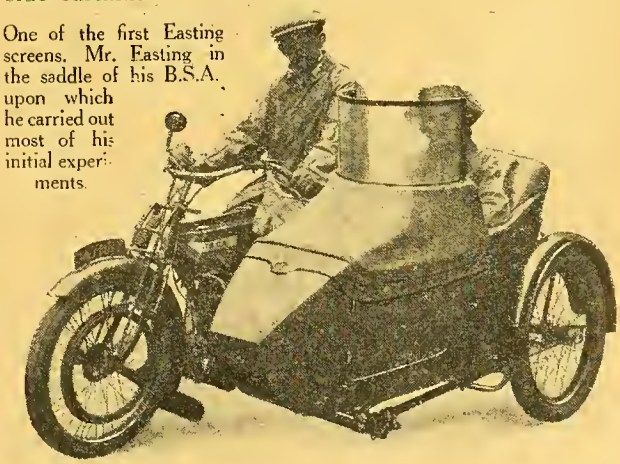
QUITE a useful sidecar luggage carrier for fixing to the cross-bar of the rear body springs is sold for a guinea by James Grose, Ltd., 4, Old Jewry, London, E C.2. As will be seen from the illustration, it embodies a useful box with an aluminium-covered top which is provided with a suitable hasp for a padlock.



Luggage grid containing a box marketed by James Grose, Ltd.

◈ ◈ ◈ ◈

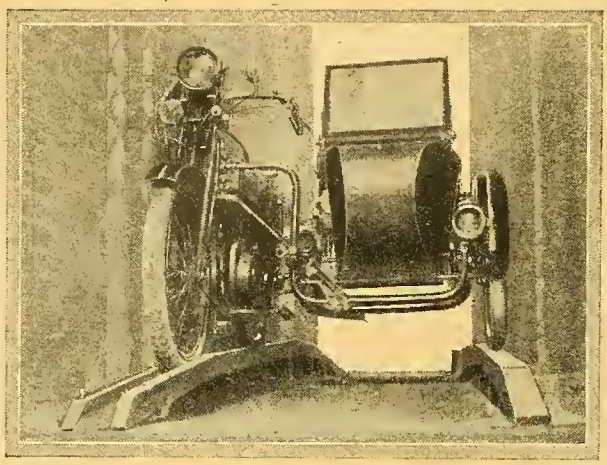
MANY motor cyclists who use the Easting wind screen have remarked that it is so simple that it is a wonder that no one thought of it before. Like Phil May's sketches, this is an excellent example of the fact that the simplest things are usually the outcome of a great deal of work. When it was first brought to *The Motor Cycle* Office by Mr. Easting, the now famous screen was quite an elaborate affair; in fact, the designer aimed to convert all open sidecars into coupés. The illustration on this page depicts one of the earliest Easting screens, which, it will be seen, embodies the present-day idea, but is of another type intended to be used in conjunction with a hood and side curtains.



One of the first Easting screens. Mr. Easting in the saddle of his B.S.A. upon which he carried out most of his initial experiments.

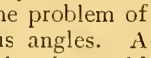
**Passenger Machine Topics.—**

IN many large cities—London particularly—the difficulty of storage is very acute, and the problem of garaging has to be tackled from various angles. A Mr. Starbuck, of Lee, S.E.12, found that he could



The difficulties of a narrow entry overcome by run ways.

get his Brough outfit through a narrow entry but for the several steps in the way. He surmounted the trouble by building runways in the form of troughs, as shown in the illustration on this page. No doubt there are many readers who, by utilising this method, may save the weekly bill for storage in the public garage "round the corner."



DURING the recent rains we have had a further opportunity of testing Erusa, the belt-slip preventive. We are satisfied that we have at long last found a preparation which will not only prevent belt slipping in wet weather, but does not call for application every day. The makers are Thomas & Bishop, Ltd., 37, Tabernacle Street, E.C.2.



ALL motor cyclists are aware that a new saddle is not ideal for long-distance touring, and some hundreds of miles have to be covered before full comfort is attained. This stricture, however, does not obtain with the Jelley flexible top saddle. There is no metallic frame to this admirable device, and the seat is constructed largely of moulded rubber, which "gives" to the required shape and is wonderfully soft and comfortable. This is not the only advantage, for rain does not soak into the fabric, and, if the machine has been left out in a storm, it is only necessary to give the saddle a wipe over in order to obtain a perfectly dry seat. As a proof of our esteem for the Jelley saddle, we may add that we refused to part with ours when selling our last year's machine, and the same saddle has now been in use for 5,000 miles on its second mount. This saddle is now marketed by Alfred Roberts, Ltd., Birmingham.

# NORTH-EASTERN A.A. AFFAIRS.

## The Relationship of Northumbrian Clubs with the Auto Cycle Union.

ARISING out of a meeting of the Northern clubs held in the Y.M.C.A., Sunderland, on January 12th, with the object of forming a North-Eastern Centre of the A.C.U., we have received the following letter from Mr. J. E. Hodgkin, honorary secretary of the North-Eastern Automobile Association:—

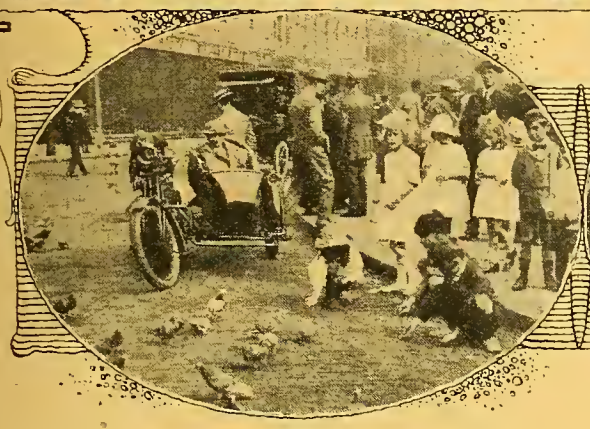
"For several years past the North-Eastern Automobile Association, which has had affiliated with it practically all the motor clubs, both car and motor cycle, in Northumberland and Durham, has maintained as part of its organisation a motor cycle section, which was, at the same time, by agreement, the Northern Centre of the A.C.U. When the R.A.C., for reasons which do not enter into this question, determined the Association agreement with the N.E.A.A. at the end of 1920, the above-mentioned arrangements for the motor cycle side of the N.E.A.A. were not interfered with and the motor cycle section functioned quite normally during the whole of 1921. Two successful competitions were held, and no question was ever raised at the general committee of a desire to break up the existing arrangement as an A.C.U. centre.

"Towards the end of 1921 a general meeting of members of the N.E.A.A. was called to consider its position and prospects, the committee's recommendation being that it should be carried on and that any idea of again associating with the R.A.C. should be dropped. At this meeting a large number of affiliated members were present, and by their vote carried a resolution to wind up the N.E.A.A. When it subsequently transpired that the club to which these gentlemen belonged had not paid its affiliation fees for 1921 the N.E.A.A. general committee ruled the meeting 'out of order' and disregarded the resolution. This action will be brought forward for confirmation at the N.E.A.A. general meeting in February.

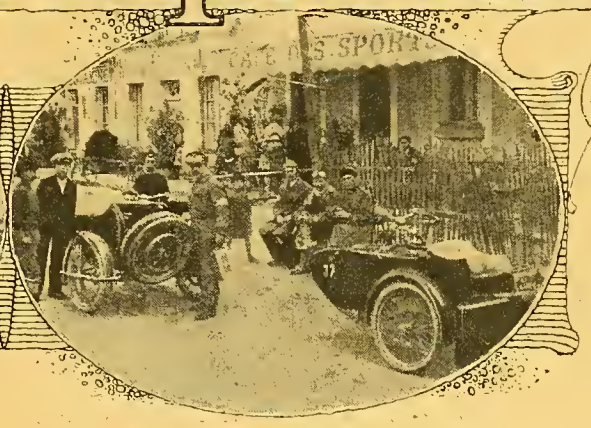
"The committee's action appears to have been greatly resented by the affiliated club in question, which has now taken the extraordinary step of summoning a meeting of Northern motoring organisations, though I notice that only two other clubs accepted their invitation. What surprises me is that Mr. Loughborough, as the secretary of the A.C.U., with whom the N.E.A.A. has had the friendliest relations ever since the A.C.U. was formed, should commit himself (as he is reported to have done) to the statement 'that the A.C.U. would consider that the N.E.A.A. had ceased to exist.' This is directly contrary to the facts; the Association was never more alive than it is at present. I cannot but wonder if Mr. Loughborough has been incorrectly reported. [This statement did not appear in *The Motor Cycle* report.—ED.]

"The N.E.A.A. general committee has always left to the motor cycle section the fullest freedom in organising sporting events as the Northern Centre of the A.C.U. The general committee has defrayed the expenses of the Motor Cycle Board, which have never been covered by the affiliation fees from motor cycle clubs, after the fees of the A.C.U. have been paid, and if such Northern clubs as the Newcastle and District have failed to make a success of their association with other similar bodies under the auspices of the N.E.A.A., what reasonable chance is there of their doing better under any newly constituted body which will not have behind it the financial and political support which the N.E.A.A. has always given?"

# INTERNATIONAL TOURING



A scene in front of St. Paul's Cathedral.



Touring in France: a halt at a wayside café.

## Information for all Motor Cyclists who contemplate a Tour on the Continent, and to Overseas readers who wish to bring their Machines into this Country.

WE have on several occasions given information to the motor cyclist who desires to tour on the Continent of Europe, but the average reader has no idea as to the formalities the visitor to England has to go through before he can use his machine in this country.

It is by no means an infrequent occurrence that one of our readers who lives overseas desires to bring his machine over to England with him on his leave, for there are quite a number of motor cyclists occupying posts in foreign countries who receive perhaps a six months' leave every second year; consequently we are often asked what formalities have to be gone through before a private machine can be landed in the home country. The same remarks apply to the Continental visitor who is anxious to tour in Great Britain.

### Bringing a Motor Cycle into England.

In the first place, the intending visitor should apply to the A.C.U., R.A.C., or A.A. & M.U. for a *triptique* (or Customs paper) and deposit 33⅓ per cent. of the value of the machine, the cost of insurance and the freight, with the institution to which he applies and of which he should be a member. If he writes in the first place in good time before landing, his papers will be all ready for him, and he will only have to apply at the port of arrival to the R.A.C. guide or A.A. scout, when he will be given special numbers, a licence-holder and licence for a fee of £1 7s. 6d., and the said guide or scout will also procure for him his driving licence, which will cost 5s.

Foreign visitors or others who enter the country under these conditions are granted numbers, of which the index letters are Q Q, and a special licence is issued at the same time. This is available for four months, and if the period is exceeded by even one day the visitor becomes liable for the local taxation licence dating from the time of his arrival in England. If the visitor is riding a machine of British manufacture he must provide the Customs authorities with proof of export, and the machine can then be brought into the country free of duty.

### Taking a Motor Cycle to the Continent.

Every year quite a number of motor cyclists enjoy a very pleasant and profitable change by taking their machines to the Continent. Moreover, during 1922 there will be several interesting Continental competitions, such as the Grand Prix near Strasbourg, the International Six-Days Trial in Switzerland, to say nothing of other minor events such as the Paris-Pyrenees Trial and the Tour de France.

The visitor to the Continent should become a member of one of the motoring organisations (the A.C.U., either through an affiliated club or as a direct member, or the A.A. & M.U.), which transact all business connected with the journey, such as obtaining passports, visas, and the International driving licence. Moreover, the money representing the duty may be deposited with them before starting, and will be returned provided the papers are in order when they come back to England.

The following information is up to date at the moment of writing, but may be modified shortly. Passports are necessary for all foreign countries; their cost is 10s., 7s. 6d. for the passport and 2s. 6d. messenger fee charged by the two organisations mentioned; the same charge is also made by Messrs. Thos. Cook & Son. No visa is necessary for France or Belgium; the cost of a visa, including messenger fee, for Italy is 12s. 6d., Holland 10s., Switzerland 12s. 6d., and Spain 7s. 4d. In France every motor cyclist has to pay a fee of 12 francs to the Customs on landing, which licenses the machine for one year. Motor bicycles may be introduced into France and Holland on presentation of the special Customs card issued by the A.C.U., or

**International Touring.—**

A.A. & M.U. Sidecar outfits are admitted free into Holland on presentation of the special customs card.

In France, when a sidecar is attached the accompanying scale will give the information required :—

| | General Tariff. | | Minimum Tariff. |
|---|---|---|---|
| | American makes. | Other makes. | British makes. |
| Motor cycles only ; per 100 kilos. net .. | 250 fr. | 330 fr. | 220 fr. |
| Sidecars only ; charges on body only, weighing less than 125 kilos. net .. .. .. | 150 fr. | 180 fr. | 120 fr. |

These rates are minimum; therefore any machine or sidecar not turning the scale up to the specified weight is chargeable exactly as above. Those exceeding are dutiable proportionately higher by the above basis. The charges for motor bicycles must also be multiplied by the co-efficient 1.3, while the charges for sidecars must be multiplied by the co-efficient 2.3.

**Other European Countries.**

| Country. | Types of Machines. | Duty. |
|---|---|---|
| Belgium. | Motor bicycles and motor cycles with sidecars .. | 20% ad valorem. |
| Norway. | Motor bicycles and motor cycles with sidecars .. | 15% ad valorem. |
| Sweden. | Motor bicycles and motor cycles with sidecars .. | 15% ad valorem. |
| Spain. | Motor bicycles .. .. | 1s. 2d. per lb. |
| | Motor cycles with sidecars .. .. .. | £1 19s. per cwt. |
| Italy. | Motor bicycles .. .. | £12, plus 1% ad valorem. |
| | Motor cycles with sidecars .. .. .. | £14, plus 2% ad valorem. |
| Switzerland. | Motor bicycles and motor cycles with sidecars .. | £3 per cwt. |

**Passengers' Fares.**

| Railway. | Route. | First Class. Single. | First Class. Return. |
|---|---|---|---|
| | | £ s. d. | £ s. d. |
| G.E.R. .. | Harwich to the Hook | 2 0 0 | — |
| | Harwich to Antwerp | 2 0 0 | — |
| S.E. & C.R. .. | Dover to Ostend .. | 14 3 | 1 8 5 |
| | Dover to Calais .. | 18 0 | 1 16 0 |
| | Folkestone to Boulogne .. .. | 16 0 | 1 12 0 |
| L.B. & S.C.R.. | Newhaven to Dieppe | 1 15 6 | 3 7 10 |
| L. & S.W.R. | Southampton to Havre .. .. | 2 2 9 | 3 6 3 |
| | Southampton to St. Malo .. .. | 2 1 11 | 3 4 7 |
| | Southampton to The Channel Isles .. .. | 1 15 0 | 2 17 9 |

These rates are liable to slight variations owing to the fluctuations of the various exchanges.

**The Unattached Motor Cyclist.**

We are sometimes asked by readers how they can manage to take their machines on the Continent without belonging to one of the recognised motoring organisations, and the answer is that this is possible but highly inconvenient, and not to be recommended, the motor cyclist placing himself in much the same position as the man who tries to act as his own lawyer. The International Pass and the *triptique* are only issued by these organisations, and if the motor cyclist takes his machine, say, to France he would first of all have to inform the customs at the port of embarkation that he was temporarily exporting the machine from this country, and to obtain a licence from them to do so. He would then have to deposit money with the French customs authority in hard cash, and even here his troubles would not end, as he would have to register the machine in France and take out a French driving licence. On his return he would have to get the deposited money back from the French customs, and on his arrival in England he would immediately have to satisfy the English customs that the machine had only been exported temporarily. The desirability, therefore, of belonging to and making full use of membership of a motoring organisation is indisputable, for otherwise the traveller is liable to be involved in heavy expenses and vexatious delays.

**Charges for the Transport of Motor Cycles on the Principal Cross-Channel Routes**

| Railway. | Route. | Boat Departs. | Vehicles Alongside. | Motor Bicycles. Accompanied. | Motor Bicycles. Unaccompanied. | Motor Cycles and Sidecars. Accompanied. | Motor Cycles and Sidecars. Unaccompanied. |
|---|---|---|---|---|---|---|---|
| G.E.R. .. | Harwich to The Hook .. | 10.15 p.m. | 3 p.m. | £1 | £1 2 6 | £2* | £4* |
| | Harwich to Antwerp .. | 10.20 p.m. | 3 p.m. | | | | |
| S.E. & C.R. (Belgian State Rly.) | Dover to Ostend .. | 11 a.m. | 10 a.m. | 16s. 7d. | | £1 2 10 | |
| | | 4.15 p.m. | 3.15 p.m. | | | | |
| | Dover to Calais .. .. | 10.40 a.m. | 8.30 a.m. | £1 | | £2 | |
| | | 1.0 p.m. | 12.0 noon | | | | |
| | London to Calais .. | | | £1 10 0 | | £3 | |
| | Folkestone to Boulogne. | 3.50 p.m. | 2 p.m. | £1 | | £2 | |
| | Dover to Boulogne .. | 10.15 a.m. | 8.30 p.m. | £1 | | £2 | |
| L.B. & S.C.R. | Newhaven to Dieppe .. | 11.45 a.m. | 9.30 a.m. | 12s. | | £1 11 6 (300 lb. is allowed; excess weight charged at 9d. per 10 lb. or part of 10 lb.) | |
| | | 10.15 p.m. | 8.0 p.m. | | | | |
| L. & S.W.R. . | Southampton to Havre . | 11.30 p.m. | 8.30 p.m. | 11s. 5d. owner's risk, 14s. Company's risk. | | £2 3 9 owner's risk, £3 2 6 Company's risk. | |
| | Southampton to St. Malo and the Channel Isles | | | | | (Rates for all classes of cars under 10 cwt., £4 1s. 3d. owner's risk, £5 12s. 6d. Company's risk.) | |

* Plus 5s. transmission fee.

# F.I.C.M. WEIGHT LIMITS.

IN a leading article in our issue for January 26th we drew attention to the fact that certain standard motor cycles competing in the Tourist Trophy races had to carry extra weight as ballast, in order to bring them up to the F.I.C.M. minimum limits. While such *minimum* weights remain in force it cannot be said that full encouragement is being given to designers of lightweights, and it seems a pity that they are handicapped by regulations framed to protect over-zealous riders on the Continent.

We also mentioned the fact that the F.I.C.M. cyclecar definition includes a *maximum* weight limit, and inferred that if it were justified in one class, it would seem more consistent to apply it to all classes.

We have now received this rejoinder from Mr. T. W. Loughborough, the General Secretary of the *Fédération Internationale des Clubs Motocyclistes* :—

"The leading article in your issue of the 26th January," Mr. Loughborough writes, "conveys the impression that the F.I.C.M. International Competition Rules are out of date, and that in particular the rule which lays down various weight limits is in need of revision.

"Neither of these conclusions appears to be justified when the facts are known, although I admit that in this country, owing to the fact that it may still claim to be the leader in the sport of motor cycling, the International Rules are not always in accord with our latest practice. The underlying object of these rules is to encourage progress along sound lines. British manufacturers have passed the stage during which such education is called for. No competitor would, for instance, think of racing at Brooklands on a machine so light that, unless steered clear of the famous bumps—now, I believe, all smoothed out—it would collapse. But at a Continental hill-climb such risks would be cheerfully taken if no minimum weight limits existed, and freak machines would appear as they did years ago to the great detriment of the sport and the pastime generally.

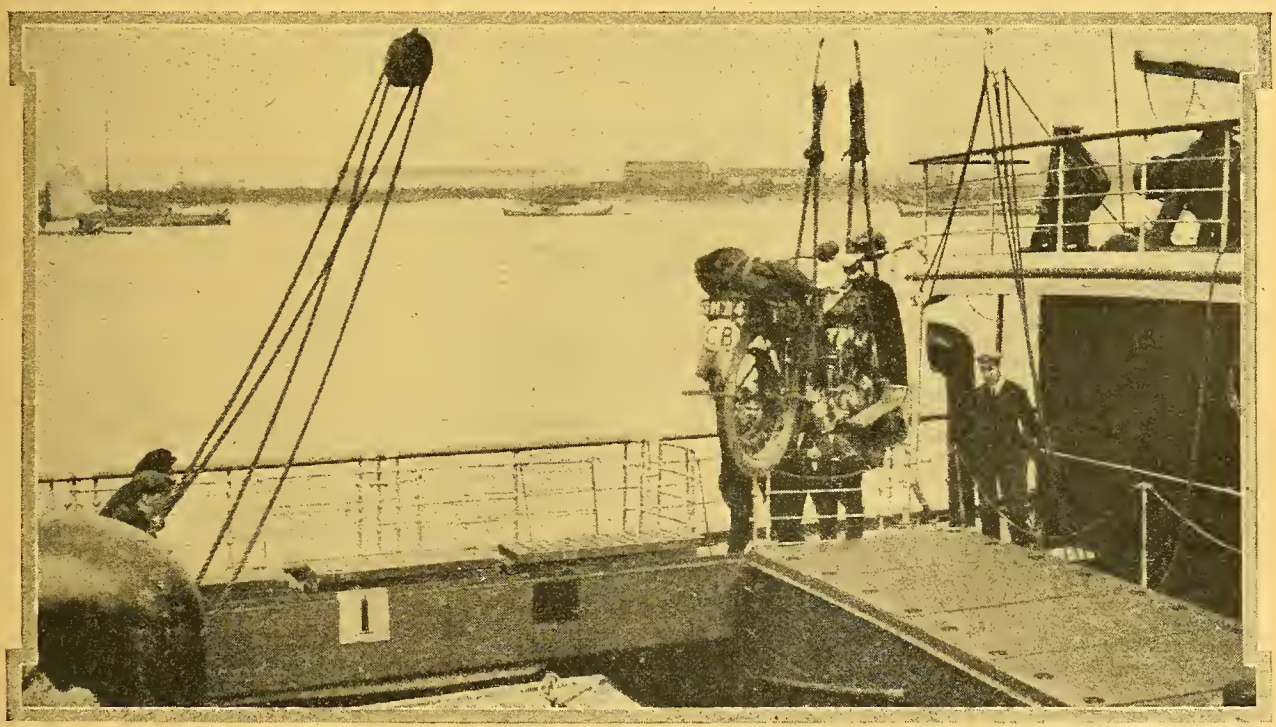
"On the other hand I do not think, as is inferred by the writer of your article, that even in this country the International weight limits are any handicap to those praiseworthy manufacturers who are trying by good design and the use of fine material to reduce weight.

"The following table shows that, after making a generous allowance for the weight of fuel, oil, etc., etc., in Cols. 3 and 4, there is still a large margin for improvement before the F.I.C.M. minimum weight limit is reached.

| Class. | F.I.C.M. min. wt. limit, not including fuel, oil, tools, etc. | Average wt. of m/cs. in Six Days, 1921, including fuel, oil, tools, etc. | Average wt. of m/cs. which finished in 1921 T.T., including fuel, oil, tools, etc. | |
|---|---|---|---|---|
| | lbs. | lbs. | lbs. | |
| A. (250 c.c.) .. | 132 | 213 | 192 | Solos. |
| B. (350 c.c.) .. | 165 | 226 | 225 | |
| C. (500 c.c.) .. | 187 | 302 | 253 | |
| D. (750 c.c.) .. | 220 | 328 | — | |
| E. (1,000 c.c.) .. | 264 | — | — | Side-cars. |
| F. (600 c.c.) .. | 275 | 391 | — | |
| G. (1,000 c.c.) .. | 352 | 600 | — | |
| H. (1,100 c.c.) .. | 550 | 910 | — | Cycle-cars. |

"The International Competition Rules are frequently revised, and, by the time actual weights have more closely approached the minima, these will doubtless be reduced.

"Finally, I would remark in answer to the last paragraph of the article that there is a minimum as well as a maximum weight for cycle cars."

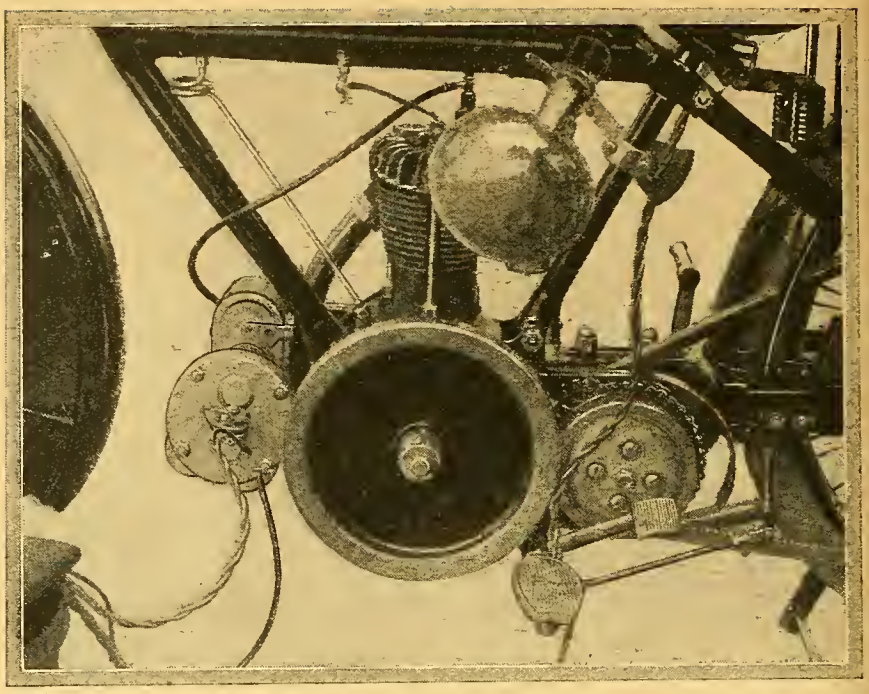


DISEMBARKING AT ANTWERP. Solo machines are usually taken ashore by means of cranes; sidecars, too, are sometimes subjected to this method of handling, but obviously the best way is to support the outfit on a base instead of attaching the ropes directly to the machine.

# VALVE BOUNCE MADE VISIBLE.

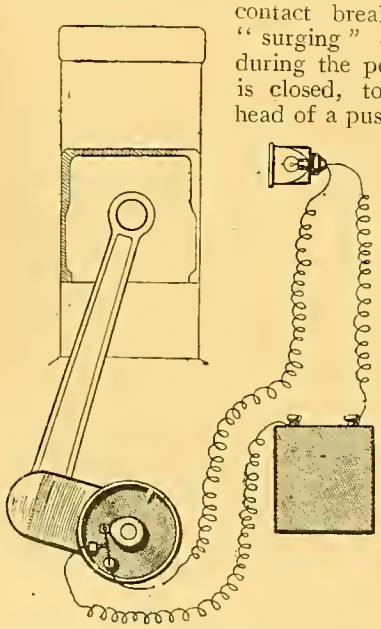
## The Oscilloscope — an Epoch-making Invention.

WE have already made mention of Mr Elverson's oscilloscope in the pages of *The Motor Cycle*, but a practical demonstration of some of its many applications induces us to record for the public benefit some of the possibilities which lie before this invention in conjunction with research work.



The magneto contact breaker provides a convenient drive for the oscilloscope, which is shown complete with, hand lamp and ready for action. Darkness is, of course, an essential condition.

At the outset it may be stated that at various times we have been able, by the aid of the oscilloscope, to count and measure the bounces of a valve (between the lifts) in an engine running at high speeds, to examine the "break" and "flutter" of a magneto contact breaker, to watch the "surging" of a valve spring during the period that the valve is closed, to examine the ball head of a push rod taking its seat in a valve rocker, and to watch the vibrations of a single cylinder engine in a motor cycle frame reduced in speed to such an extent that it would have been possible to measure their frequency and magnitude.

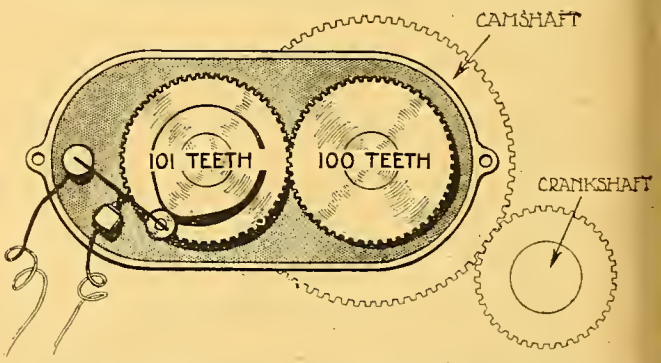


When it is desired to examine a moving part at one particular point in its movement, the switch-cam is simply geared direct, as shown.

These instances serve to illustrate the adaptability of the device to everyday occurrences, but they form the merest fraction of the possible applications of this ingenious instrument. The operations of any high speed machinery can be slowed down by means of the oscilloscope to a speed at which they can be optically examined, and it is even possible to examine any stage of operation under stationary conditions. To designers and others interested in research work the value of such an instrument is almost unbounded, and its advantages have been quickly realised by those who have been able to watch it in operation.

### Action of the Oscilloscope.

The action of the apparatus may best be described as an optical gear ratio having, normally, a value of 1%, though this percentage may be varied in special circumstances. In explanation it may be said that the gearing of the instrument is driven from a given shaft of the mechanism under inspection, and this mechanism is then illuminated by intermittent flashes




Since the cam-wheel actuating the oscilloscope switch runs, in this case, at 1% of the speed of the engine camshaft, the light only occurs each $\frac{99}{100}$ of a revolution; thus the moving point of the valve gear under examination is momentarily illumined in 99 consecutive positions each hundred complete cycles—each flash being fractionally later than the previous one. In effect this shows, to the observer's eye, one complete slow movement.

**Valve Bounce made Visible.—**

from a special form of electric light. With the apparatus in its normal form the mechanism under examination (in a subdued light) will appear to be operating normally, but at $\frac{1}{100}$ of its actual speed. Thus any part can be scrutinised under working conditions, and many phenomena hitherto only dimly suspected are clearly seen by the observer.

### Arrested Motion

If under examination any stage in the operation of a valve, or other part, appears to be faulty, a second phase of the oscilloscope can be brought into action merely by actuating a two way switch. This simple action causes the part to appear stationary at the position it had reached when the switch was thrown over, and in this way it is possible to make a thorough examination of each stage in the action of any part, and even to take measurements.

One of the most useful and interesting features of the oscilloscope is that by its means it is possible to determine without calculation the periodicity of vibrations in relation to a given shaft and to decide whether the vibration is in any way connected with the rotation of that shaft.

Experiments are now in progress for the detection of mechanical noises, by aid of the oscilloscope, by substituting a microphone with telephonic attachment for the flashing lamp used when visible results are required. Similar results can be obtained with this attachment, which can be rendered deaf to extraneous noises. The noise under examination can be stretched out, as it were, in duration, and its origin can be determined both in locality and in angular relation to a given shaft. Thus these experiments lead us to hope that it will be possible to locate a knock with exactitude and to determine exactly when it occurs.

### Simplicity of Action

As is often the case with inventions of importance, the mechanism is employed in the construction of the oscilloscope is simple and exact in action. The results obtained can be relied upon, and there can be few who will not appreciate the advantages of clear optical or audible solutions to mechanical troubles instead of complicated mathematical solutions.

The oscilloscope is handled by the Oscilloscope Syndicate, Ltd., c/o Herbert Kennedy & Co., 70, Fenchurch Street, London, E.C.3.

---

# DO WE EXPECT TOO MUCH?

## The Sidecar Blamed for Alleged Over-development of the Solo Mount.

IN spite of recent reductions in motor cycle prices, there still seems to be a good deal of envious talk about the price of motor cycles in the good old days before the war. But do we not, as motor cyclists, expect too much?

In the old days a motor cycle was a motor bicycle, used for just such journeys as would ordinarily have been ridden on a bicycle, except for the added advantage that you had a much wider radius at your disposal. Then some genius thought of the sidecar; the motor cycle for one became the outfit for two, and the modern craze for luxury began.

Since then, it seems, motor cyclists have changed their tastes. Nowadays the genuine motor cyclist is dying out.

### Evolution by Popular Demand

Motor manufacturers are human, and, seeing the trend of public demand, they have been obliged to cater for this new class of motor cyclists. For so many of the "improvements" which are yearly announced at the Show are merely accessories which are taken for granted in the modern light car. The three-speed gear box was amongst the first. Rendered necessary by the sidecar, it has, like the sidecar, come to stay. Then the extra weight of the sidecar, together with the gear box, made a more powerful engine a necessity, considerably increasing the first cost of the outfit as well as increasing the running expenses.

Then the more powerful engine required a more robust motor cycle frame, which meant—still more expense. So it will easily be seen that the three-speed gear box, together with the clutch, kick-starter, the electric lighting set, spare wheel, the luxurious sidecar (to quote the catalogue term), hood, and windscreen account in a most decided manner for the present high cost of our machines, yet, when all is said and done, the motor cycle is still only a motor cycle.

### Not Confined to Big Machines.

Even the lightweights seem to be suffering from this complaint. The number of small two-strokes to be seen manfully tugging at a "sporting" coach-built sidecar is enormous, and, although these sturdy little engines will stand pulling two-up for a long while, there really ought to be a law passed making it a penal offence to so maltreat innocents in this way.

Motor cyclists must be the most generous race on earth. Anyone counting the number of sidecar outfits on the road, knowing, as a motor cyclist does, their difference in price compared with purely solo mounts (nearly double in most cases), *and* considering the fact that they have generally to be put to bed at the local garage, will believe this.

But from now on, however, if motor cyclists wish the high cost of motor cycling to come down, they must be *firm*.

They must return to the Spartan simplicity of their forefathers, and stoutly resist the appeal of "twa sweet 'een of bonnie blue," and inform the owner of them that she knows nothing whatever about motor cycles (I am sure that this modern craze for luxury is really feminine in its roots), and that if she wants to motor cycle she must jolly well ride one herself.

Then, and not till then, will the cost of motor cycles come down to pre-war level, and then perhaps I shall be able to afford that khaki monster which Estelle has determined will be just the thing to take us on our honeymoon.

V.H.

# IDEAS: USEFUL AND INGENIOUS

## A Selection of our Readers' Home-made Gadgets, with some Practical Hints on Work in the Garage.

### On Soldering.

SOLDERING is one of those easy jobs which even more than ordinarily intelligent people can absolutely muddle through a little bit of carelessness.

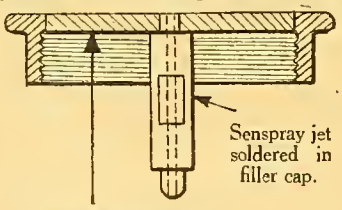
Cleanliness is a first essential. As a rule, motor cyclists' soldering jobs are confined to control wire nipples, pipe unions, and the occasional construction or repair of some accessory in sheet brass or tin. All parts to be soldered must be scraped or filed bright before they can be joined—grease or oil on the work is fatal. The soldering iron must also be quite clean and well tinned. To "tin," bring the iron to a good heat, file bright quickly, dip in the flux, and rub with a stick of solder until the surfaces are brightly coated; occasionally dipping in flux will keep the iron bright. Don't expect the best results if you warm the iron in a flaming coal fire or a smoky blow-lamp flame.

The function of the flux is to dissolve the oxides created on the surface of the heated metal. "Killed spirits" used by tinsmiths are too troublesome for occasional amateur use; buy a ready-made flux such as Fluxite, Chemico Soldering Paste, or Baker's Soldering Fluid. Paste fluxes are apt to be "messy" in working and require some skill in use; liquid fluxes are very "clean" to work, but must be washed off the finished job if corrosion is to be avoided. Paste fluxes for Bowden wire work every time!

Very handy for unions and nipples are the prepared paste and wire solders which combine a flux. Tinol paste, for example, will fuse with the heat of a match (although the smoky flame must *not* be played on the actual surfaces to be joined). This preparation is admirable for small electrical joints. D.H.S.

### Anti Splash Filler Cap.

HERE is a little job on which some of the above soldering hints may not come amiss. Mr. D. Pierrepont has trouble with petrol leakages from a glass-topped filler cap. Being a masterful man,

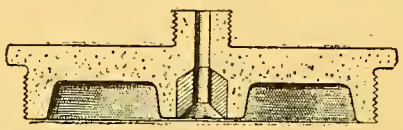



A non-splash filler cap air vent.

with an address in Lancashire, he promptly knocked the glass out, substituted a metal disc, and in the centre drilled a hole to receive the screwed end of a Senspray jet. (As a matter of fact, not having the correct tap handy, he filed off the threads and soldered the jet in.) As Mr. Pierrepont says, the device prevents any petrol from splashing over whilst riding; but what will the inventor of glass-topped filler caps think about it?

### Top Feed Float Chambers and Flooding.

NO doubt many riders have been troubled with mysterious carburetter flooding, yet have been unable to discover any cause of derangement on dismantling their carburetter. How this flooding may be caused, and a method of curing it, in the case of top feed float chambers, is submitted by a Birmingham rider of a B.S.A., Mr. C. Gavin, who has spread an ownership of five different machines over the last seventeen years. Mr. Gavin discovered that, after the machine had been standing two or three days, it invariably flooded when the petrol was turned on. No ordinary adjustments effecting a cure, it was concluded that the trouble lay in the float needle falling too low when the float sank to the bottom of the empty chamber, and, consequently, slipped sideways into the ⅛in. recess below the needle valve seating, where it then jammed. A bush having a slightly larger hole than the petrol orifice was pressed into the recess of the float chamber cover and the trouble ended. It might be suggested, of course, that alternative cures for this trouble would be a longer needle which could not drop so far away from its seating, or a thick washer or nut in the base of the float chamber, which would limit the downward movement of the float, with the same effect.

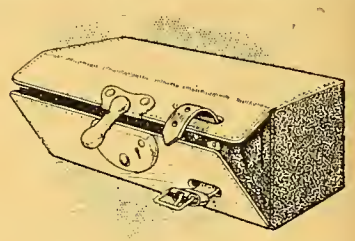


Guide bush for needle in float chamber cap of B.S.A. carburetter.

*Hints, Tips and Descriptions of Home-made Fitments are invited for inclusion on this page. Rough sketches and brief notes only are needed, and payment will be made for all matter used. Letters should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and should be marked "Ideas."*

### A Wise Precaution.

MR. J. STUART WHITE is a north country motor cyclist who infuses a spirit of native caution into his hobby. He does not believe in the soundness of toolbag locks, apparently, and doctors his panniers as shown in the sketch; suitable short straps are sold at cycle shops as inflator clips. Not at all a bad scheme, and a twopenny strap may save a fifteen shilling tool kit.



A tip for ensuring the safety of the tool kit.

### A Tip for Amac Users.

A FRAGMENT of sound sense is here culled from a letter veiled in anonymity. "The main jet of an Amac carburetter screws inside another chamber having five or more smaller holes (vaporising jets). As main jets may vary in height above the threaded portion, it is essential to see that they do not come in contact with the spraying jet platform. A pencil passed up to the top of the inner chamber and marked at the jet plug shoulder will allow one to test whether the jet is clear. Polished concentric rings round the jet orifice are a sure sign that it is touching."

### An Acetylene Gas Purifier.

ADDED efficiency from acetylene lamps is gained by the use of a gas purifier constructed as shown in the drawing. It consists of a tube, 1in. in diameter, containing a mixture of bleaching powder and quicklime (calcium oxide), held together by two wire gauze discs. The end pieces are simply corks with brass tubing inserted.—E.W.

An easily-made acetylene gas purifier, which greatly improves lighting efficiency.

The Editor does not hold himself responsible for the opinions of his correspondents.

Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.

### *PERFORMANCES OF A PRE-WAR SIDECAR.*

Sir,—"Normac" is evidently the gentleman responsible for the report of a fish taken out of Lake Windermere, who, being unable to have it weighed, gave an idea of its size by saying that the level of the Lake was lowered by one foot when he took it out of the water. J. MILNER.

Sir,—On reading "Normac's" letter of praise for "Top-hole's," and incidentally his own machine, I would like to give my experience on a 7-9 h.p. Indian, which is not slow by any means. My "colossal" record was 10.2 miles in seventeen minutes riding solo, early in the morning, with a reasonably clear road.

This is, as you see, 36 m.p.h. solo for ten miles, not 40 m.p.h. sidecar (carrying 23 st.), as "Normac" claims for seventy-four miles.

I should be very pleased to know "Normac's" top speed, as my speed needle was quivering at 55 to 60 m.p.h. at times, and well I knew it. BIG BUS.

London, N.W.10.

Sir,—Have I read "Normac" right when he states that he does the journey from Bolton to Ambleside with a 3½ h.p. 1911 Triumph coachbuilt sidecar (weight of passengers 23 stone) in one hour fifty minutes—a distance of 74 miles? If so, his Triumph must be some 'bus, or buzz! I know the road well and frequently make the trip myself on a heftier machine than a 3½ h.p. Triumph. I also go several times during the summer to Barrow-in-Furness, about fourteen miles further than Ambleside. But I always consider it good travelling if I do Barrow in four hours.

Bolton. J. W.

Sir,—I take my hat off and pay humble homage to "Quite Satisfied." His performance runs away with Messrs. Huntley and Palmer's factory. After that I'll believe anything—even "Normac's" claim of an average speed of 40 m.p.h. and a consumption of 134.5 m.p.g., with two up.

But I beg of this super-tuner never to tell his secret. If he does, my whole-hearted sympathy extends to investors. If his secret reaches the ears of the few thousand motorists in the world, what will happen to the shares of the big oil producers? MUTT.

New Malden.

Sir,—Referring to the claims made by "Normac" regarding his racing with a 1911 3½ h.p. Triumph sidecar, would this speedman care to meet us any week-end at Preston and see if he can ride from there to Ambleside in one hour and fifty minutes, let alone from Bolton, which will be another fifteen to twenty miles further?

G. H. MAYOR.

### *LUMINOUS SPEEDOMETER DIALS.*

Sir,—May I inform Mr. A. O. Russell, that a luminous speedometer can be distinctly seen, when night riding, with the lamps full on. It may make a small difference having electric lights, as the bicycle I have ridden had only acetylene lamps VIZ.

Essex.

### *DROPPED BARS FOR CONTROLLABILITY.*

Sir,—I have often been puzzled by the number of people who ride motor cycles with touring, or "Sit up and beg" type handle-bars. T.T. or semi-T.T. bars are far more comfortable and give one better control over the machine. Of course, there may be a reason. If so, would someone kindly enlighten me? MARTINIVY.

I.O.M.

### *SMOOTH RUNNING OF A SPORTS SINGLE.*

Sir,—"Ixion's" writings have always appealed to me, and, although Truth has often been garbed in the motley of jest, it has been, nevertheless, persistently present. Alas! when he penned his article entitled "What I Rode in 1921," he turned aside from the paths of veracity in a manner both distressful and unworthy of one so admirable.

He avers that the Sports Sunbeam was a little inclined to be coarse at full throttle. It is this totally unjustified accusation which calls forth immediate and emphatic denials. Last year I owned two of the 'buses he mentioned, one of which was the Sports Sunbeam, and for sweet running at full throttle occasions, such as hillclimbs, the Sunbeam engine is conspicuously ahead of any one of many machines (including one specifically mentioned by "Ixion" for smooth running) that I have owned.

I can only suggest that the proverbial pressman's neglect resulted in his "'Beam" not giving him the best that was in her.

As for one of the other machines he writes of, I challenge him to fully open the throttle when in low gear, and succeed in keeping his feet on the footrests, so like a perambulating earthquake is this machine at "speed." JOVE.

Bromley, Kent.

### *ASSEMBLED MACHINES.*

Sir,—Let me state my personal views on the subject of "Assembled Machines." If I am unable to obtain a high-class special design, I much prefer the machine embodying high-class components, than the low-grade machine of special design, made by a little-known small firm. For, as is obvious, the manufacturers of such components, naturally, have better facilities than has the small maker, though it may be said that a gear box and engine does not make a machine.

However, in service after purchase, the "special design" has it all the way SPECIAL DESIGN.

London, S.W.19.

Sir,—"Ixion" may be trusted to speak for himself, but perhaps it may not be out of place to suggest to the famous firm who "set about" him recently that they have been patronising, since 1914, a firm making gear boxes for the assembling trade; also, that even in 1922, not to mention engines, they are fitting an assembler's spring fork—I might almost say the fork that has enabled assemblers to live since 1907, produced by "men of brains who give their whole power and being to the continuous improvement of the article which they design and manufacture." Usual disclaimer.

Leeds. RUFF RHODES.

### COMPARATIVE COMPRESSION RATIOS.

Sir,—May I join "E. F. G." in his proposal for a discussion on "Compression Ratios"? To put it mildly, I was flabbergasted by "Harmony's" statement that the compression ratio of his machine was 5.9 to 1. I have heard of a number of motor car engines (water-cooled) having compression ratios of between 5½ and 7 to 1, but not production models of air-cooled single-cylinder engines. I am quite aware that special engines for short sprints stand up to a very high compression, but there is a limit for roadster work surely. ESPOIR.

Leigh-on-Sea.

### THE WORLD'S BEST ROADS.

Sir,—Under the above heading in your current issue, I see that two correspondents, Mr. C. W. Beale and "Pothole" are inclined to ridicule Mr. H. Beacon's statement that during four months' riding he never saw a bad road or hit a single pothole. As an example of bad roads, Mr. C. W. Beale cites Essex, while "Pothole" mentions, among other places, Barnet.

For some years I have lived at Barnet, and during last summer I went to Clacton-on-Sea, *via* Waltham Cross, four times. With the exception of the first few miles, the whole of these journeys were made on Essex roads, which I found very good indeed. I must admit that the tramline portion of the road from Barnet to Finchley is in a disgusting state. In one place the tramlines are quite 3in. above the rest of the road. But this road is O.K. if one keeps to the side.

From the foregoing statements do not think that I am a spring frame merchant, for, as a matter of fact, my 'bus is a well-known 4 h.p. single with indifferent spring forks.

If Mr. C. W. Beale and "Pothole" are fed up with English roads, I suggest that they go to France for a spell. Why, the Rue de la Paix, the best known and most visited street in the world is like a miniature "No Man's Land."

English roads for me every time for speed on a 4 h.p. single, which is, in my opinion, the best test to find out what sort of surface a road has. HANDLEBARS.

Friern Lane.

Sir,—Mr. Beale's letter (if I read his meaning aright) confirms my opinion that English motorists do not realise what a bad road is; he is an extremely fortunate gentleman to have the use of those in Essex. I know that country, also the Staines and Egham district, particularly the latter, very well. Most of these roads deserve the title of "world's best."

Mr. Gibson's letter re Amateur T.T. races strikes the right note, although I think it would be a pity to relieve the A.C.U. of the trouble of organising these events.

Undoubtedly the enthusiastic motor-cyclist (however little in the know) is sick of the way everybody is bamboozled with special machines, shamateurs, and the usual trade method of racing something called the "same as you can buy," but which rarely is.

Enough of encouragement for the unbuyable, let us get down to results with private owner-drivers, and have amateur T.T.'s and an amateur records list.

H. BEACON.

### WHY THE REAR PLUG SOOTS UP.

Sir,—My twin gives me this trouble, but it cannot be due to the difference in length of the exhaust pipes as on my machine I have two short pipes leading into one large one, which gives exactly the same length of pipe from each cylinder. MC 5185.

Wallingford.

### REVERSING A TWO-STROKE ENGINE.

Sir,—Since fitting an M-L maglita to my 1921 touring model Scott, I find that when starting with the engine warm and the ignition lever anything beyond half advance, the engine will start running indifferently forward or backwards.

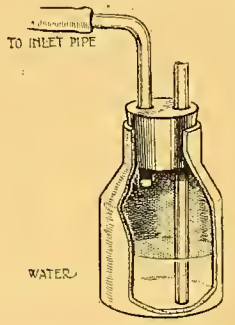
A slight change in the exhaust noise is the only apparent difference. There is no appreciable "kick" on the starter. The engine seems to have plenty of power, and will propel the cycle backwards, even up a stiff hill. I have more than once purposely run back some thirty yards, to the general surprise of all present. M.L.L.

Suffolk.

### YOUTHFUL INGENUITY.

Sir,—When at school I was enamoured of the idea of making a motor scooter from an Auto-Wheel auxiliary attachment. Mainly with this end in view, I induced my father to buy me a second-hand Wall Auto-Wheel, from which, in the interim, I got much pleasure, using it in the capacity intended by its makers. At length, however, a friend and myself collaborated in producing the atrocity, of which we are sanguine enough to hope you will reproduce a photograph in your valuable paper.

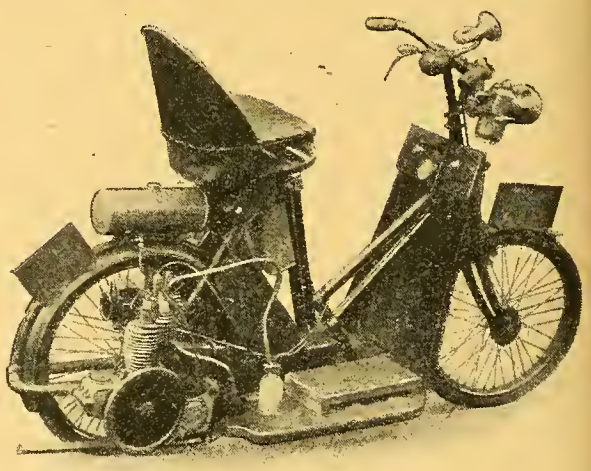
It will be observed (though not too readily, we hope) that the basis of the machine is the frame of a lady's bicycle of very ancient design. The back forks of this frame are secured to the horizontal members of the Auto-Wheel frame by U bolts, the angle and depth of the junction being controlled by wooden separators. The front wheel is of Auto-Wheel size (20in. × 1¾in.) and was obtained from the Cheltenham agents of the Auto-Wheel Co.



Humidifying the mixture by homely methods.

The footboard is supported by brackets, which my friend made from 1in. × 5/16in. iron. These brackets are merely clipped on to the frame and made fast by nuts and bolts, so that it will be seen that in no place has the frame been either brazed or drilled, for the front wheel fits into the original spindle holes.

Connected to the sparking plug is a home-made spark intensifier (extra spark gap), while on the footboard will be seen a humidifier, which is a device whereby the extra air for the engine can be drawn through water to saturate the air with aqueous vapour, and thus provide the mixture of petrol and air with a greater quantity of the catalytic agent necessary for its explosion. We gleaned this idea from an American periodical, *Science and Invention*, and the apparatus is arranged as in the sketch.


Quite a passably attractive miniature resulted from the conversion described in the accompanying letter from Mr. H. Hine, who, however, modestly calls it an atrocity.

In addition to the acetylene head lamp, a small electric lamp is fitted to the front of the dashboard, which carries on its obverse side a watch and an instrument lamp.

I am thinking (though with much reluctance) of scrapping the elaborate seat shown in favour of an orthodox saddle. This will enable me to lower the centre of gravity, which, at present, lies distressingly higher than the axle-to-axle line. HOWARD HINE.

### EXPERIENCES WITH PUNCTURE-SEALING TUBES.

Sir,—On page 400 of the last volume I find "Ixion" has found someone of a different opinion concerning these tubes. I beg to state my personal experience on a 3½ h.p. Humber Roc gear and sidecar.

A Challenger tube 26×2¼in. was fitted to the driving wheel, and was run 2,000 miles inside a Palmer cord cover, and was not touched until some spokes that broke required replacing. The cover was badly worn through to the canvas in places, which I found out was due to the sidecar wheel being out of line. Consequently, I made a very close examination of the tube, and was not surprised when I found many long thorns and flints embedded in the tube, which were extracted. The surprise came next, for on replacing the tube without any repair I pumped the tyre hard in the evening. On the following morning I certainly expected to find the tyre flabby; but not so: it has done another 1,000 miles in a new cover without another pump. This machine was subsequently sold and replaced by a 5-6 h.p. 1918 Clyno. This was also fitted with a Challenger tube, and has done 900 miles without attention. I must certainly give credit where it is due, and I consider it the best investment I ever made. "Ixion's" experience is just mine, and I could not let the other user's experience appear in print without making mine known, in fairness to the tube that has served me so well. Usual disclaimer. C. W. NICHOLS.

### SOLUTION-CARRYING SOLUTIONS.

Sir,—Your correspondent "BT 6807" complains of not being able to carry his rubber solution in a satisfactory manner. I should advise him to scrap his tool-bags on the carrier and get a tool-box on the top tube. Y. I.
Elland, Yorks.

Sir,—I have had a tube in use for this purpose about fifteen years, which has given every satisfaction. It is made of a short length of cycle frame tubing with a sheet iron bottom brazed in (probably soldering would do). The top is a screw cap and collar, such as plumbers fit to the bend under a kitchen sink. The collar is soldered into the steel tube, and the joint of the cap is made with a fibre washer. Short of being run over by a lorry, this tube is indestructible.
J. C. BENNETT MITCHELL.

Sir,—"BT 6807" might try one of the oil "bottles" issued, I believe, with army rifles, for his rubber solution. It is solid enough to stand any rough treatment, being of metal; the size is convenient, and the screw cap carries a wire ¼in. thick, which is convenient for spreading solution.
(Rev.) J. GRENVILLE BIGGS.

Sir,—Just lash the tube of solution on to any part of the frame with insulation tape. When required it can be easily cut off, and after use carried in the pocket until one arrives home. U 4968.
Leeds.

Sir,—Buy a Patchquick outfit, and one can rely on finding the solution in the tin when one wants it. NN 254.
Winchester.

Sir,—Obtain from a gasfitter about 5in. of ordinary lead gas pipe, and a threaded piece of brass gas tube 1in. long to fit inside one end of the lead pipe. A screw cap is also required to screw on to the brass tube. Solder the brass tube into one end of the lead pipe, put on the screw cap, and fill the tube with rubber solution through the open end. Then close the end of the tube with the pliers, fold over, and squeeze up tightly. It is too stiff to squeeze in the fingers, but the solution, if not too thick, will flow out. If too thick to flow, it can be forced out with the pliers. L. V. A.
Liverpool.

Sir,—If "BT 6807" will carry his repair outfit in a pouch on the handle-bars he will have no trouble with his solution, or French chalk, to say nothing of the saving of space in his tool-bag. REG. SAMSON.

[Correspondents from all over the country have come to the rescue of "BT 6807," who asked for a method of carrying rubber solution in safety. Above is a representative selection, the army "oil bottle" suggestion being repeated in another dozen letters.—ED.]

### BULBS FOR DRY-BATTERY LIGHTING.

Sir,—We can endorse "Ixion's" opinion of Siemens batteries, but our main object in writing is to point out that any cheap pocket-lamp bulb will not necessarily prove satisfactory, and, moreover, the normal candle-power of the 3.5 volt bulb is only about 1 c.p. Such a lamp is quite sufficient for the rear lamp, but the cheapest types may prove very expensive in current consumption in relation to light emitted. We have some 3.5 volt bulbs that consume 0.1 amp., yet they give more light than some of the Japanese bulbs consuming 0.5 amp. or more; these latter bulbs are worth wholesale about 12s. per 100.

We think it a pity that "Ixion" has described these small bulbs by letters that are not universally used in the trade. The correct name for them is M.E.S. ("Miniature Edison screw") and we would say that relatively high candle-power bulbs fitted with M.E.S. caps are usually unobtainable, and cost as much as the S.B.C. ("Small bayonet cap") lamps, which, by the way, are sold retail at 1s. 8d. for all normal voltage up to 12, except for candle-power greater than the voltages of the lamp, when the price is increased to 2s. 6d. Dimmer bulbs fitted with two filaments (as used on latest Fords) cost a little more, and are fitted as standard equipment to some cycles. J. J. EASTICK AND SONS.

### "BUYING FOR KEEPS."

Sir,—I was most interested in "Ixion's" remarks, and would like to carry the idea further.

In looking round the 1922 designs, I was disappointed to find it largely neglected by manufacturers—from the lordly specialist to the humblest assembler. If motor cycling is to be economical, the machine must be owner-repairable.

How many manufacturers fit a simple sturdy exhaust union? Many use small studs, some use peg wrenches—both slippery abominations. What is wrong with the large hexagon nut?

How many fit a decent adjuster for transmission tension? How many fit the gear lever on the box and avoid the extra adjustment?

How many of those who fit belt drive give it adequate protection? To my mind, lack of this is killing the belt, rather than freak hills and wet weather.

How many cut slots for a screwdriver in the wheel spindles?

How many fit the magneto where it does not act as a mud-catcher, and its drive as a shock absorber in the event of a side-slip?

How many fit lubricators of reasonable size and quality to hubs, spring forks and steering head?
Reading. HABITUAL GROUSER.

### VERY EXCLUSIVE AIR!

Sir,—May I warn those of your readers who are enthusiastic enough to regard a silencer as an unnecessary and power-wasting encumbrance not to allow the products of combustion from their engines to escape into the very exclusive air of that charming garden town of Cheltenham Spa?

Some while ago I was riding through that town a hot stuff 2¾ h.p. Douglas, with exhaust arrangements terminating in a pipe of rather sporting dimensions, when I was apprehended, and later relieved of 5s., in return for which an official ornamented my hitherto unblemished licence with divers hieroglyphic characters. HOWARD HINE.

### ENGLAND'S BEST SPEED-WAY.

Sir,—We are of opinion that the best piece of road between two towns for pure speed work is the stretch between Holyhead and Menai Bridge—twenty-two miles of fine wide road, with magnificent surface, little traffic, and no dangerous corners. We do not think that the United Kingdom can boast of many finer stretches of roadway than this one.
Malpas, Cheshire. MA 3087.
MA 6259.

### SPEEDS OF LIGHTWEIGHT TWO-STROKES.

Sir,—My machine is a Sparkbrook fitted with a 269 c.c. Villiers engine. I have obtained 47 m.p.h. along the Portsmouth Road, on the Guildford side of Ripley, to be exact, and have had 52 m.p.h. on Brooklands track while "coming off" the banking. These speeds are by a Cowey speedometer, which I can guarantee accurate at 35 m.p.h.

For Brooklands the machine was stripped, and the carburetter—a B.B.—specially tuned, but on the Portsmouth Road the machine was as I always ride it. W. M. COOPER.

### UTTERLY AMAZING SPEEDS.

Sir,—I have had the good fortune to pick up the humorously written and highly diverting 1922 American catalogue —"bulletin" it prefers to call itself—quoted by "Tomaso Dubitans" in his recent letter.

If, however, he had read on further, he would have learnt a tuning tip of value to him, that is, if he is a "speed fan."

May I give the extract for the benefit of those who have not seen the document in question?

". . . . the speedometer registered but 69 m.p.h. L——, however, was plainly disappointed and suggested that he try to get more, but after one go at it, he announced that the tyres were entirely too soft for high speeds, and he proceeded to spend about fifteen perspiring minutes getting the tyres up to pressure. . . . Here I took over the machine and started on the fastest ride of my life. . . . It was not until I sat up that I had an opportunity to read the speedometer, and although it was an 80 m.p.h. instrument, the maximum hand had been pushed a considerable distance beyond the last mark. When it is considered that this was done on a machine with the same equipment as delivered to the purchaser, wide mudguards, big tyres, etc. . . ."

Now that it has been thus firmly established that a machine's speed can be raised from 69 to well over 80 m.p.h. by the simple expedient of tyre inflation, it is time the Brooklands authorities laid down a power-driven air compressor plant for the use of would-be record breakers. It would be necessary, however, to fix a strictly enforced pressure limit if accidents are to be avoided, as, I understand, the Brooklands banking was only designed for speeds up to about 160 m.p.h. G. F. RANDALL.

### PRACTICAL THOUGHT MATERIALISATION.

Sir,—I beg to be allowed space for a few further remarks with reference to my assertion that anything we desire may be obtained by the power of creative, controlled, scientific thinking.

Your correspondents are highly amused; like most people, perhaps they think "thoughts" are airy nothings, a mere flash in the consciousness, coming and going just like light breezes on a summer's day. I beg to emphasise the fact that thought is the greatest power in the universe, and that every achievement of man, every single thing that has ever been built up in this world, has been created by thought power in the mind first. First the vision—then the accomplishment.

Your readers may be unaware of the nature and power of thought, since they appear to be confusing a clear definite image formed in the mind with a kind of juggling business or magical trickery (I understand they are not taking the matter seriously).

To think upon anything for one minute makes it a reality for one minute; to focus the powers of creative imagination upon one clearly defined mental image, to hold to this thought, to visualise it, with indomitable persistency and faith, with strong desire, is to see that image sooner or later take shape in the objective world aronnd us.

One word more—the writer has proved this; for a long time my desire has been towards motor cycling; within the last few months my desire has materialised. I, the merest infant with regard to any knowledge of motor cycles, am now driving a 4 h.p. Bradbury and sidecar; true the sidecar is a hired one, but this also—one of our very own—will come along in God's good time, which is the quickest possible time. (Mrs.) MAUDE STANSFELD.

Sir,—With interest I have followed up the above-mentioned topic, but differ widely from Mrs. Maude Stanfeld's and W. H. M. P.'s assertions.

Certainly, after concentrating the mind on a given factor, it generally materialises in dreams alone, and not the much-wanted and dreamt-of motor cycle. I remember quite well during a *dream* ordering a 3½ h.p. 'bus fitted with a special close ratio gear box and trying it all out on perfect dream roads doing a cool 70 m.p.h. After waking up I spent the rest of slumber hours in a sleepless night and a wakeful morning.

Cleveland, Yorks. CLEVELAND.

### MODERNISING THE LONDON-EDINBURGH RUN.

Sir,—With reference to this year's London-Edinburgh Run, cannot something be done to "even up" the chances. I would suggest that cars should not be entered, but any four-wheeled vehicle should be limited to 10 h.p. (terming them as cyclecars), sidecar machines to 8 h.p., and solos to 3½ h.p. It is quite unfair to class a 2½ h.p. two-stroke with a 5-6 h.p. twin solo. From an advertising point of view, I think "the Edinburgh" is far ahead of many of the more severe trials, which only kindle interest in the ardent enthusiast. As riders know, the Edinburgh not only creates great interest at Highgate, but in all the towns and villages passed *en route*. G. T. UDALL.

### T. T. RACES FOR PRIVATE OWNERS.

Sir,—With reference to the remarks in "Mudge's" letter that there are no sands situated centrally enough to be convenient for motor cyclists from all parts of the country, I should like to point out that the Southport beach is almost exactly half way between London and Edinburgh, and also readily accessible to the motor cyclists of Lancashire and Yorkshire, where the majority of sporting amateurs reside.

As to the absence of "road race flavour," I can assure "Mudge" that he will get all the excitement he desires should he care to compete in our 100-mile race.

H. F. BROCKBANK.

---

### SUMMARY OF CORRESPONDENCE.

Heath Super-oil sparking plugs are recommended by Mr. Chas. G. Huntley, A.M.I.E.E., etc., as being "impossible to oil up."

"A. B. C." complains of the conduct of the occupants of a two-seater Vauxhall car, which, on Sunday, the 5th inst., was seen careering to and fro on the Coventry-Birmingham road at speeds between 50 and 60 m.p.h., and with considerable disregard for the safety of other road users.

Recounting the experience of a customer who sent him a valve with the instructions to "make one to pattern, but a little larger"—not specifying in which dimension and by how much!—Mr. L. F. Bishop, a Bristol engineer, points out that repair work would be much expedited if fully detailed explanations of what is required always accompany the job.

Referring to the recent article on "Map Reading for Motor Cyclists," Mr. Frank L. Wimhurst recommends the *new* ¼in. to the mile edition of the Ordnance Survey maps (which, incidentally, are folded in an illustrated cover showing a motor cyclist studying a map) in preference to the bulkier ½in. sets.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 5/-. By post, 5/4.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# THE LONDON-LAND'S END TRIAL.

## Severity of Route to be Increased. Minimum Speeds for the Various Classes on Porlock.

SEVERAL innovations have been embodied in the regulations for the tenth London-Land's End trial. In the first place, the start will be at 10.30 p.m. on the evening of Friday, April 14th, from the Slough Transport Co.'s premises, close to the twenty-second milestone from London on the Bath Road.

The route will be as follows: Maidenhead, Reading, Newbury, Hungerford, Marlborough, Devizes, Trowbridge, Frome, Bridgwater, Porlock, Lynmouth, Lynton Hill, Holsworthy, Launceston, Bodmin, Truro, Penzance, St. Buryan, Land's End.

These references to the route camouflage several difficulties, and we can assure intending competitors that part of the trial will be over difficult country, which is interesting in view of the brief article in last week's issue entitled "Stiffening the Classic Runs."

### A Wise Condition.

Notwithstanding the fact that the present laws exempt motor bicycles from carrying red rear lamps, the M.C.C. insists that all competitors in the trials should carry these.

So far as awards are concerned, cups will be presented by various officers of the club for the best performances by motor bicycles, sidecar outfits, three-wheelers and cars, and of the three latter the Captain's cup, presented by Mr. W. H. Wells, will be for sidecars; the Elce cup, presented by Mr. W. H. Elce, for three-wheeled cycle cars; and the Pettytt cup, presented by Mr. G. Pettytt, for cars.

Gold medals will be awarded to competitors who comply with the regulations and who are not more than ten minutes early at any point on the journey, or more than five minutes late at the bottom of Porlock Hill, or slower than the following specified speeds for a measured mile beginning near the Ship Inn, Porlock: 18 miles an hour for motor bicycles above 350 c.c.; 15 miles an hour for motor bicycles not exceeding 350 c.c.; 15 miles an hour for sidecar outfits exceeding 500 c.c.; 15 miles an hour for cycle cars and cars exceeding 1,000 c.c.; 12 miles an hour for sidecar outfits not exceeding 500 c.c., and 12 miles an hour for cycle cars and light cars not exceeding 1,000 c.c. Competitors qualifying for gold medals must not be more than five minutes late at the top of Lynton Hill, and a second hill to be announced later, both of which must be ascended without a stop and with the entrant and passengers all normally seated. Competitors may not be more than ten minutes late at any other point. Silver medals will be awarded to competitors who comply with the regulations and are not more than ten minutes early or twenty minutes late at any point on the trial.

A cup for each class will be awarded to the competitor qualifying for a gold medal in his class whose speed for the one mile beginning near the Ship Inn, Porlock, is nearest to 20 m.p.h.

### Entry Fees.

Entries cost £2, including the entry fee of £1 14s. and deposit of 6s. on the number plates. These must reach the trials hon. secretary, F. T. Bidlake, 84, North End Road, Golders Green, London, N.W.11, on or before Saturday, March 25th.

The latest date on which members may join the club to be eligible to enter for this competition will be on Monday, March 13th. Anyone not a member of the club who wishes to compete should apply to the hon. secretary, Mr. Southcomb May, 34, Gower Place, London, W.C.1, for a membership application form. These applications for membership and the fees relating thereto should not be sent to the trials secretary, but entry forms for the trial may be sent by prospective members to Mr. F. T. Bidlake for acceptance pending election.

# THE MOTOR CYCLE MOVEMENT IN THE U.S.A.

## American Machines for the T.T. Racing Giving Place to Reliability Runs in the States.

"INDIANS hope to be in the T.T. this year." Such was the remark made to us by Mr. W. H. Wells, who has just returned from his annual visit to America. As regards competitions in the U.S.A., Mr. Wells indicated that there was a distinct tendency to drop racing and to concentrate on reliability trials, as the speed was getting too great for the American one mile dirt tracks. He informed us that C. B. Franklin was, nevertheless, getting busy with the T.T. machines, but he would have been far happier if the T.T. races had been held later in the year—in fact, Mr. Wells was most emphatically opposed to the holding of the races just before Whitsuntide, when the whole of his organisation should be devoting their attention to delivering machines to the public. He astonished us considerably by saying that the London-Edinburgh run was thought a great deal more of in America than the T.T. Races, for the reason that the T.T. was witnessed by a comparatively few enthusiasts, while the London-Edinburgh event takes the competitors through the whole length of England. It is, moreover, in the nature of a reliability trial in which purely standard machines are used. He also mentioned that the International Six Days Trial was being received with enthusiasm in America, and that every effort was being made to find a representative team.

### Lessons from the Public.

Reverting to the question of racing, he stated that the Hendee organisation seemed to be of the opinion that a great deal more could be learnt from the service department, where its staff came into actual touch with riders of standard machines, than from racing with experimental machines.

We asked Mr. Wells if motor cycles are becoming more popular in America. He told us that they were, especially in the Western States, but in the Eastern States there was too much motor traffic, and it was really difficult to get out of the Eastern towns during the week-end owing to the roads being so tremendously congested by cars. There are no by-roads to which the cars could be diverted, consequently, the speed of these cars was restricted to that of the slowest vehicle on the road, and there could be no passing, because there was an equally heavy stream of traffic coming in the opposite direction.

Asked as to the condition of the industry in the United States, Mr. Wells said that prospects were improving, and good business was being done in the South and West. The Hendee Manufacturing Co. were turning out 175 machines per week on direct orders—that is to say, they were only manufacturing machines for which orders had been received.

# "KEEP TO THE LEFT" PAVEMENT RULE.

THE Director-General of Roads, Ministry of Transport, has invited local authorities to consider the introduction of the "Keep to the left" rule for pedestrians, which, as recorded in *The Motor Cycle*, has already been adopted in Bristol.

According to *The Autocar*, Sir Robert Peacock, the Chief Constable of Manchester, upholds the "keep to the left" rule for the footpath in a commendable report recently issued, and, furthermore, regards cars with left-hand steering as dangerous because it is impossible for the driver of such a car to indicate to other road users when he intends to stop or turn. Sir Robert is also recommending the Ministry of Transport to make compulsory the use of a device to prevent mud-splashing, especially on heavy vehicles (it will be remembered that the Camberwell Borough Council carried out a series of trials of devices to combat the nuisance last spring). Dazzling head lights, too, are condemned by the Manchester Chief Constable, as also the bicycle minus a rear warning light.

# INEXPENSIVE ELECTRIC LIGHTING.

## Two Self-contained Sidecar Sets by Well-known Firms. Conversions from Acetylene to Electricity.

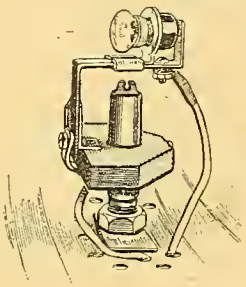
LIGHTING from a self-contained dry battery or accumulator is becoming increasingly popular, and for all but the hardest users of the heavier machines the system has much to commend it. There is also a distinct tendency for users of acetylene outfits to convert them to the electric type.

Wates Bros., 132, Charing Cross Road, London, W.C.2, are among the pioneers of the firms who supply the necessary components to effect the latter conversion, and a description of these and of the company's self-contained solo set appeared in *The Motor Cycle* of November 10th, 1921.

A sidecar set has now been introduced,

Extreme simplicity is a good feature of the Siemens dry battery lighting set for sidecars.

the accumulators being carried in the sidecar. The connection to the lamps is through substantial electric plugs attached to the side of the accumulator case. These cases contain three two-volt cells, so that a six-volt current is employed. The lamps are of the best possible quality and comprise a tail lamp, sidecar lamp, and head lamp. An adaptor is also supplied for converting an acetylene lamp. The accumulators supplied are made by the Hart Accumulator Co. and are capable of lighting the three lamps for about eight hours.



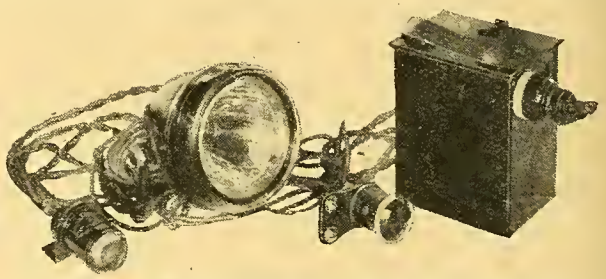
When the Siemens adaptor is swivelled into the position shown the light is automatically switched on.

### A Dry Battery Set.

Siemens Brothers and Co., Ltd., Caxton House, Westminster, London, S.W., have also devised a new lighting set including a head lamp and bracket of their own design, a side lamp, tail lamp, and dry batteries in a battery box, complete with switch and wiring.

This company has also introduced a system for converting acetylene lamps to electric for use for short runs, so as to obviate the necessity of continually cleaning and charging the acetylene generator. The fitting consists of an insulating base of ebonite on which is pivoted a movable arm carrying the lamp holder. The base is so constructed that it can be fitted over the burner and clamped to the stem by means of a grub screw.

When the movable arm is placed in the correct position the light is automatically switched on. The fitting has been so designed that when the lamp bulb is in the lighting position the filament is immediately above the gas burner, and consequently the source of light occupies the same position as the acetylene flame. The electric bulb faces towards the rearward side of the lamp, and thus all the illumination emitted from the front of the lamp is reflected light. It has been found that even when the acetylene burner is used no shadow or loss of light is caused by the electric fitting.



It is claimed that 8½ hours light for the three lamps is supplied by one charging of the Wates accumulator sidecar set.

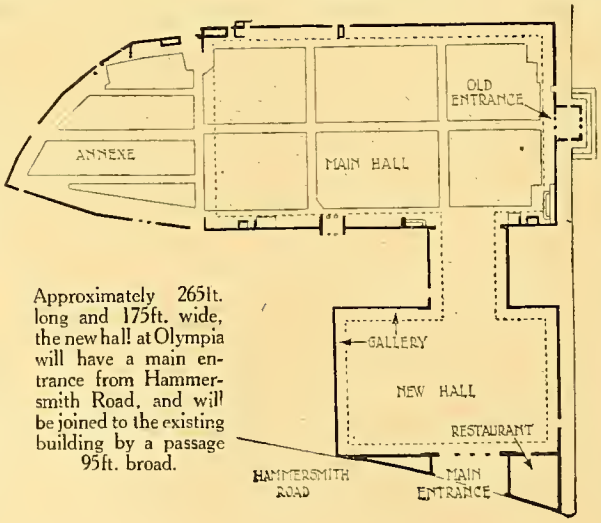
# THE NEW OLYMPIA.

## Particulars of the Additional Hall which is to be Erected. Plan of the Extension.

AS mentioned in last week's issue of *The Motor Cycle*, Olympia is to be enlarged. Building operations are to be commenced at the earliest possible moment. It is hoped that the new hall will be completed in time for the automobile exhibition this year, in order that once again that show may be housed under one roof.

From *The Autocar* plan herewith, which is approximately to scale, but at the same time merely of a diagrammatic nature, it will be seen that the new hall is to be erected between the existing Olympia and the Hammersmith Road, the site at present being occupied by house property, which has, of course, to be demolished ere building operations proper can be commenced.

Of rectangular form, the new hall will be approximately 265ft. long by 175ft. in width, and it will be connected to the existing building by a broad passage approximately 95ft. wide and 97ft. long. Opposite this passage, on the other side of the building, will be the main entrance from the Hammersmith Road, with a suitable restaurant and cloakroom buildings erected in the triangular space between the side of the new hall and the Hammersmith Road frontage.




Approximately 265ft. long and 175ft. wide, the new hall at Olympia will have a main entrance from Hammersmith Road, and will be joined to the existing building by a passage 95ft. broad.

Round the new hall will run a gallery, 30ft. wide, connecting up to the existing gallery of the main hall.

The effect of the new building will be to increase the capacity of Olympia by almost one-half, and the total floor space will, it is estimated, be increased from approximately 200,000 square feet to rather over 300,000 square feet.

Naturally, at this early stage the plans are by no means complete, and may be subjected to many alterations of detail; but the new building will be of much the same construction as the existing building, and will have a single span glass roof not quite so high as the roof of the existing building.

A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### ADVICE ON TUNING.

I have a machine with a 2¾ h.p. Blackburne engine, and a single lever Amac carburetter which I would like to tune up for speed. Could you kindly tell me the best way to set about it? Would you kindly tell me the most suitable jet, tappet clearances, valve and ignition timing, etc.?—J.M.

There is no royal road to tuning up a machine for speed, and it is quite impossible to tell you exactly what you must do. The whole thing is a matter for continual trial and experiment, but we would suggest as a help that you obtain such useful handbooks as "Motor Cycles and How to Manage Them," also "Hints and Tips for Motor Cyclists" from our publishers. The engine makers will advise you as to the best timing, and might be able to supply you with special cams, while the carburetter makers' booklet will also help. Having assimilated all the hints in these books, your tuning efforts will have to proceed experimentally, every modification being separately tested out.

### IMPROVING THE SILENCER SYSTEM.

It is desired to improve the silencing of an 8 h.p. Chater-Lea without causing any undue back pressure or uneasy running. I propose to do this by blocking up one end of the silencer box, which is perforated at ends, and fitting a pipe to the other end. Other things being equal, which will give me the best results: (1.) A large (say 2in.) or a small (say 1in.) pipe? (2.) A pipe with a fishtail, or one with the same diameter all its length, with or without saw cuts? (3.) If a fishtail, should it be flattened at the end or for about 18in. of its length, or be furnished with a box at end similar to a Zenith?—W.E.G.

If a large silencer is already fitted, it might be possible to fit a 1in. outlet pipe, but this size is rather small and might cause back pressure. Probably a 1⅛in. pipe would be better. (2.) This is really a matter for experiment, although saw cuts along the pipe would no doubt assist in quieting the sound of the exhaust. (3.) A flat outlet pipe is of no particular advantage, and is generally used in order to give clearance to the kick-starter crank, when the pipe passes close to the gear box, etc., rather than with any special regard to silencing efficiency. As a silencer is already fitted there is no need to fit another one at the end of the outlet pipe.

## Important Dates.

**Sat., Feb. 25th—Colmore Cup Trial.**
**Sat., Feb. 25th, to Sunday, Mar. 5th—Brussels Motor Cycle Show.**
**Sun., Mar. 5th—Argenteuil Hill-climb (France).**
**Mon., Mar. 6th—La Turbie Hill-climb (Nice).**
**Wed., Mar. 15th—A.C.U. One-day Trial for Stock Machines.**
**Sat., Mar. 18th—Victory Cup Trial.**
**Sat., Mar. 25th—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs. June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**

### MAKING A TRAILER.

Will the ex-W.D. aeroplane wheels and axles which are now available be suitable for a trailer which I am building for my Harley-Davidson, to carry about 6 cwt.?; also if 700×80 mm. or 28×3in. tyres will fit the 700×75 mm. wheels advertised.—W.K.

The aeroplane wheels and axle which you mention would be quite suitable for the purpose of making a trailer, and they would certainly carry the load; 700×80 mm. tyres would fit the 700×75 mm. wheels, but it is doubtful whether 28×3in. American size tyres would answer as their internal diameter is much greater.

### A SIDECAR FOR SKID PREVENTION.

I have a 2¾ h.p. three-speed Douglas and have had the misfortune to have a skid and break my collar bone. Being no longer young, some of my friends advise me to attach a light sidecar for safety's sake. Others say, "Don't, you will be less safe than riding solo." I know the machine is not intended for sidecar work, but I should almost always use it empty. There are a good many 2¾ h.p. sidecar outfits on the road now, but I always doubt their capabilities. I want to be on the safe side. It strikes me that with a Douglas the kick-starter is on the wrong side for a sidecar.—W.A.

Your machine should be quite capable of pulling a light sidecar, especially if you do not intend to use it extensively for passenger carrying. A light machine with a light sidecar ridden empty is rather difficult to manage at first, especially when rounding left-hand bends, but there is certainly no danger of skidding, and very little fear of the sidecar lifting if only reasonable care is used. It might be difficult to use the kick-starter on the Douglas, but the machine is so easily started by pushing on second gear, that it should not have much bearing on the matter. Just at first it would be advisable to carry about 56 lb. of dead weight in the sidecar to keep it down on corners.

### MAGNETISED MAGNETO DRIVING SPROCKET.

I have a Dixie magneto, and the sprocket becomes magnetised. I have taken both magnets off, and find this condition ceases, but occurs the moment the magnets are replaced. Is this detrimental to magneto? If so, I should be glad if you can tell me how to prevent it. —R.T.D.

We cannot say definitely whether the magnetising of the driving sprocket is detrimental to the magneto. It should not be so, of course, as, theoretically at any rate, the rotor spindle should be of non-magnetic material. Providing your magneto gives reasonable satisfaction, there is no need to worry about the condition described.

### MOTOR CYCLES AND NERVES.

On mentioning to some friends of mine, who have had considerable experience of motor cycles, that I am considering purchasing a sidecar outfit, they have advised me, on account of the shock and vibration which they say is apparent in most makes of machines, not to entertain the idea, as it is eventually detrimental to sound health, and particularly having a decided effect upon the nervous system. Personally, I have had no experience whatever, and I cannot contradict this opinion. Will you enlighten me on this matter so that I may profit by your sound and impartial advice?—H.S.

Although we have been in touch with thousands of motor cyclists, we have yet to hear of anyone having to give up riding as a direct result of the effect of vibration on the nervous system. Indeed, this idea seems to be quite contradicted by the fact that medical men frequently recommend motoring or motor cycling to persons of neurotic temperament.

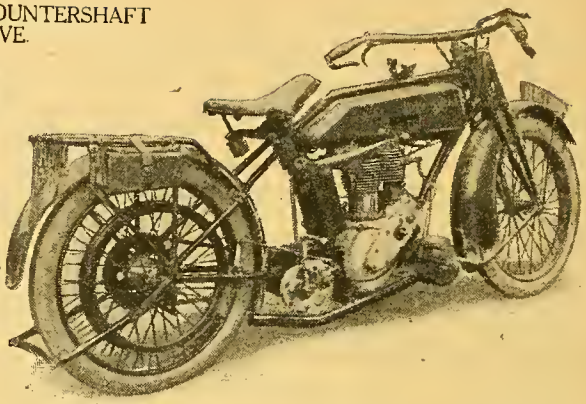
### DIFFICULTIES WITH A TWO-STROKE.

I have a 1920 motor cycle with 2½ h.p. Villiers two-stroke engine, C.A.V. magneto, and Amac carburetter, which has begun to run very erratically. The symptoms are popping back in the carburetter, slight misfiring at all speeds (but not up hill), and an occasional slowing down in speed without apparent reason. The engine has always run well on a 27 jet, but I have gradually increased the jet until I am now using a 34, but the popping is becoming gradually worse. Owing to a defect of my drip feed—and as I do much night riding I use the petrol system of lubrication—the engine gets plenty of oil, because it smokes occasionally, and the end of the exhaust pipe is always oily. Petrol consumption has dropped from 120 m.p.g. to about 70 m.p.g., and the engine has lost power and speed. Total distance run is about 3,500 miles and the compression is excellent. Engine recently decarbonised, and there is no undue play in the bearings. I suggest that the carburetter is at fault; but if it is an air leak, how can I find out this, and what is the remedy? The needle has a "collar" worn in it, but the carburetter does not drip. In addition to the above trouble, the engine during the last few weeks seems to race even when the machine is travelling at a moderate pace, and yet there is no belt slip. I have tested the gear ratios (Albion two-speed) with the machine on the stand, by pulling the belt round after marking the engine pulley and belt rim, but the ratios are the same as when the machine was purchased. Can there be some "slip" in the gears when on the road? —H.L.L.

Blow-back is usually caused by the mixture being too weak, and this may be brought about by an air leak in the induction system, or by a partial stoppage of the petrol supply due to a floating obstruction in the carburetter between the float chamber and the jet, or in the jet itself. Another possible cause of trouble is that the filter at the petrol pipe union beneath the float chamber is choked, or that the needle sticks in its seating. The transmission slip might also account in part for high consumption. It is almost certain to be belt slip, as the gears are positively engaged and cannot slip.

## CONVERSIONS TO COUNTERSHAFT CHAIN DRIVE.

Several readers have asked recently for instructions on the conversion of direct belt-driven machines to countershaft drive. Here is a 3½ h.p. Rudge-Multi, fitted up by A. Pilkington & Co., 390, Lichfield Road, Birmingham, with a Sturmey-Archer gear box, new bottom bracket and stays, and a new wheel and brakework to suit the chain transmission.



### FITTING DYNAMO LIGHTING.

What do you consider a suitable place from which to drive a 12 volt dynamo on an 8 h.p. Zenith sidecar outfit, and what is the best voltage and candle-power for the lamps I could use for head, side, and tail? The lamps will be fitted in series.—G.S.W.B.

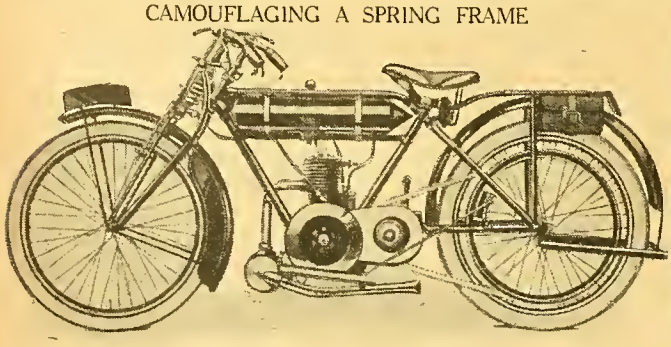
It should be possible to fit some attachment for the driving pulley of the dynamo on to the main shaft of the engine, probably on the outside of the Gradua pulley. You will, of course, need an accumulator, and the wiring of the lamps in series is not to be recommended at all. Without knowing the output of the dynamo, we cannot specify any special sizes for the bulbs in the various lamps. A 6 volt dynamo would be preferable for motor cycle lighting, and it should for choice have an output of 4 to 5 amps. A 6 volt 3 amp. bulb in the head lamp and 6 volt ½ amp. in the side and the tail, all the lamps being in parallel, would not overload the dynamo, so that an electric horn and speedometer lamp, etc., could safely be used in addition.

### SLIPPING OF SELECTIVE CLUTCH GEAR.

The gears of my 1918 3½ h.p. P. and M. outfit have for some time been giving trouble by slipping. Evidently the expanding drums are considerably worn as adjustment merely improves matters for a short time. Is there on the market any make of gear (two or three-speed) giving, of course, free engine and kick start that I could fit to my outfit in place of the manufacturers' gear? If so, would you be good enough to give particulars?—H.W.H.

There is no gear which could be readily fitted to your machine in place of the standard one, nor should there be any need to scrap such a normally satisfactory and reliable item of the specification. Slipping of the selective clutches is very readily put right by the insertion of packing strips in the wedge bars. You should write to the makers for their instruction booklet and spare parts list. We assume, of course, that the slipping is actually taking place in the gears, and not, as frequently happens, in the slipping clutch on the engine-shaft. It is quite likely that tightening up the adjusting nuts on the latter would solve your difficulties.

## CAMOUFLAGING A SPRING FRAME



When people ask "Where are the spring frames?" there is some excuse for them forgetting such a design as the Paragon lightweight, which is so neat that it needs close examination to discover that it really has a rear suspension system. It is made by the The Motor Works, Cressing Road, Braintree, Essex.

## READERS' REPLIES.

### ACCUMULATOR CHARGING.

With reference to the reply of Mr. Arvon Glynne in your issue of January 19th on accumulator charging, we think that if he was charging his accumulator from a 220 volt circuit at, say, 2.5 amps., the 100 ohm. "A" net would get very hot, as this net is only designed to dissipate 260 watts, whereas 220 volts at 2.5 amps. is 550 watts. We would strongly advise two of our B Type nets placed in series rather than the above. Should any of your readers be in difficulty, if they will write us stating the voltage of their circuit and charging rate in amps. of their cell, we shall be pleased to advise them as to the best net or combination of nets to use.—F. W. POTTER AND CO.

### SOME ROAD GRADIENTS.

Your reply to "W. U." on the question of road gradients was interesting, as I know Blue Bank fairly well, and have twice been over Mamm Tor, and I should certainly regard the contour book you quote as unreliable in these instances. Without precise measurements, but from observation confirmed by my machine's comparative performance on a grade of 1 in 7 (measured) over a longer distance than the steepest portions of either of the hills mentioned, I should estimate Blue Bank as 1 in 4½, and Mamm Tor 1 in 6 in the worst places. If the former is really 1 in 7, then I should expect such a hill as the Old Wyche, reputed 1 in 2½, to be quite unclimbable, if only on account of the risk of falling backwards. I should be interested to hear of authentic measurements. Whilst on the subject of gradients, I was told by a friend who quoted a well-known contour book, that the last corner on Kirkstone Pass, approached from Ambleside, was 1 in 3. This also I was unable to believe.—U 5436.

### PETROL AND OIL CONSUMPTION OF A SINGLE.

I cannot help writing about "H.W.B.'s" consumption query regarding the 1921 4¼ h.p. B.S.A. solo. He says he gets only 65 m.p.g. with jet opened half a turn. I bought a similar machine new last March with a No. 2 B.S.A. sidecar, and during two days in August I covered 186 miles on a carefully measured consumption of 78⅓ m.p.g. with the jet threequarters open and a strong wind against me for over fifty miles. The weight of the outfit was 6½ cwt., including self and passenger, and many stops were made. On the other hand, my oil consumption has been heavy, viz., 525 m.p.g. for 3,152 miles, using B.B. oil. In other respects the machine is reliability itself, my only troubles being the exhaust valve stuck up twice.—S. E. J. LONGHURST.

### FOR A LEGLESS RIDER.

Regarding the type of machine best suited to the requirements of "Legless," I see that the "Harper Runabout" is mentioned as a likely mount if the enquirer "makes certain modifications." I cannot pass an opinion for or against the "Harper," because I don't know its structural details fully, but if what I am going to say is of benefit I shall be glad, as it happens that I am an enthusiastic motor cyclist and have been for many years. I am a member of the Leeds and District Motor Club, being on the committee for the last two years, and I am the holder of the Kelly Cup for the Leeds to London and back (400 miles), and I have gold, silver, and bronze medals for hill climbs, reliability trials, etc. I also hold the silver medal for second place in Yorkshire Centre A.C.U. Team Trial, 1920. All this, in addition to thousands of miles touring, I have accomplished on a 6 h.p. Royal Enfield Combination, which requires no alteration or modification whatever. Oh, by the way, I nearly forgot to say that I lost both my legs sixteen years ago. I am riding now my fourth Enfield, in every case the machine being standard in *every detail*. I should not care to trust myself on a machine fitted only with brakes operated by wires from the handle-bar, excellent as are the Bowden wires. The brake pedal on the Royal Enfield is on the off side, and stands just on the inside of the right artificial foot. All I have to do is to raise the foot and it drops on to the brake pedal, the weight of the leg being almost sufficient to apply the brake in most cases, and a gentle pull at the handle-bar gives me power sufficient to skid the wheel any time.—TOM HARDY.

---

## EXPERIENCES WANTED

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"P.R." (Northampton).—A.J.S. and Matchless 2-seater outfits compared; speed no object.

"C.H.L." (Brondesbury Park).—2¾ h.p. 3-speed Wooler with sidecar; speed and climbing.

"G.R.W." (Sutton Coldfield).—Villiers-engined lightweight, also 3½ h.p. Rudge Multi with sidecar; particularly belt experiences with latter when climbing.

"C.H.L." (London, N.W.10).—3 h.p. A.B.C. with sidecar: Life of bearings, springing, gudgeon pin fixings, and general efficiency.

"S.H." (Middleton).—2¾ h.p. Connaught: Comfort, consumption, lubrication, silence.

"M.L.L." (Aldeburgh).—Zenith-Bradshaw: Speed, valve noise; three-speed compared with Gradua model; oil consumption.

"A.V.W." (Beeding).—Dégory, Binks, or Atmos carburetters on 8 h.p. Reading Standard.

"R.H.C." (Falmouth).—1922 Quadrant with sidecar: Reliability; faults, if any.

"P.W.M." (Birmingham).—Atmos carburetter on 4 h.p. Norton and 2¾ h.p. A.J.S.: General results.

"R.B." (Southport). — S.A. impulse starter: ease of fitting and reliability on big twin.

"F.M." (Daventry).—4½ h.p. 1921-22 Humber: Reliability; brake power with sidecar; general experiences.

"W.S.H." (London).—Ner-a-car: Reliability; wear of friction disc.

SPARKLETS

### Kingsbury Spare Parts.

All the jigs, tools and material used in the manufacture of the Kingsbury motor cycles at Hendon have been purchased by the Vulcan Works, Ltd., Welshpool, from whom spares may be obtained from stock.

### Piston Ring Sizes.

A most useful thing for garage proprietors is the Brico Piston Ring Directory, a large wall chart giving the piston ring sizes for all standard motor cycle, car, lorry, and tractor engines. It is published by the British Piston Ring Co., Ltd., Holbrook Lane, Coventry.

### Sheet Celluloid Supplies.

Polished sheet celluloid, in various thicknesses and a number of sizes, from 54in. × 24in. down to 13½in. × 12in., is being offered by the Athol Engineering Co., 9, Peru Street, Higher Broughton, Manchester; it is eminently suitable for windscreens, windows, etc. The same firm also makes windscreens and aprons to customers' special requirements.

### Under New Management.

We are glad to learn that the manufacture of the Wooler motor cycle has been resumed, the company having been bought by Mr. William Dederich, of Messrs. W. Dederich, Ltd., railway contractors, Imperial Buildings, Ludgate Circus, London, E.C.4. The Alperton Works will be carried on under entirely new management, but Mr. Wooler will continue as the company's chief engineer and designer.

### Down a Long Hill.

*Apropos* of "Ixion's" recent paragraph on the subject of oil plugs, resulting on closed throttle coasting on long hills, Bowden Wire, Ltd., of Willesden Junction, redraw attention to the fact that the A.J.S. teams in the last Six Days Trials used Bowden extra air inlets, and by so doing helped to attain economic running as well as guarding against oiled plugs on the descents.

### Wiring Diagrams.

"Lektrik Lighting Connections" (A. P. Lundberg and Sons, 477, Liverpool Road, London, N.) is a most useful booklet dealing with electric lighting, giving diagrams of wiring, illustrations of various types of switches, and a complete section devoted to motor car lighting, including diagrams for the electrical wiring of motor cycles; the price is 1s. 2d. post free.

### Catalogues Received.

James Cycle Co., Ltd., Greet, Birmingham: Much informative matter and many illustrations relative to the James range of machines lose much of their effectiveness on account of the curiously grained paper on which the twenty-four page catalogue is printed.

# CURRENT CHAT

## Time to Light Lamps

| | | |
|---|---|---|
| Feb. 16th | .. .. | 6.13 p.m. |
| „ 18th | .. .. | 6.17 „ |
| „ 20th | .. .. | 6.21 „ |
| „ 22nd | .. .. | 6.25 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Police Activity.

Number-plates and rear lights are receiving close scrutiny in the Camberley district, according to the report of a reader who has suffered there recently.

### A Royal Order.

A special scooter for her own use has been ordered by the Queen of Belgium from Messrs. Roberts and Hibbs, of Manchester, the makers of New Scale machines. This follows on the satisfaction which the King of Belgium has had in his New Scale motor cycle which was recently supplied.

### Another Second-hand Show.

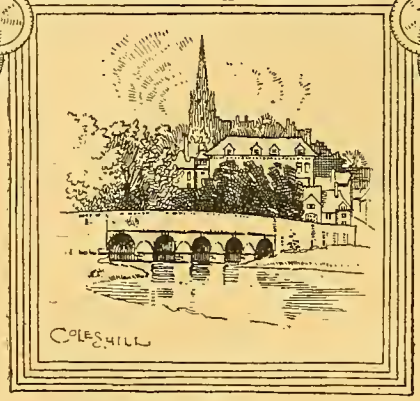
The fourth show of used motor vehicles, including motor cycles, is to take place at the Crystal Palace from March 27th to April 8th. It will be recalled that the vehicles entered are examined by experts, and that a certificate recording the condition of the vehicle is displayed on it during the show as a kind of warranty. The organiser is Mr. William Glass, 12, Buckingham Street, Strand, London, W.C.2.

### Rendezvous Wanted.

A reader in North London suggests that motor cyclists around the Metropolis should pool their experiences of beauty spots and comfortable quarters suitable as the objectives of week-end trips. By so doing the way to new haunts would be opened to many who at present have exhausted their own immediate neighbourhood. This is a commendable idea, and our columns are open for information regarding (in the words of our correspondent) "happy experiences of week-ends spent at hotels or inns with rambling, boating, fishing, or any pleasant surroundings within fifty miles of London."

### Institution of Automobile Engineers.

On Tuesday next, Dr. W. R. Ormandy and Mr. E. C. Craven will read a paper on "The Physical Properties of Motor Fuels—A Discussion of their Bearing on the Motor Industry" at the Chamber of Commerce, New Street, Birmingham, at 7 p.m. On Thursday next (the 23rd) Mr. E. L. Bass will read his paper on "Engine Lubrication" in the Masonic Hall, Coventry, at 7.45 p.m.; while on February 28th, at the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, S.W.1., at 8.30 p.m., various recording instruments used on motor cars will be demonstrated and discussed.




## Special Features

VALVE BOUNCE MADE VISIBLE.
INTERNATIONAL TOURING.
PASSENGER MACHINE TOPICS.

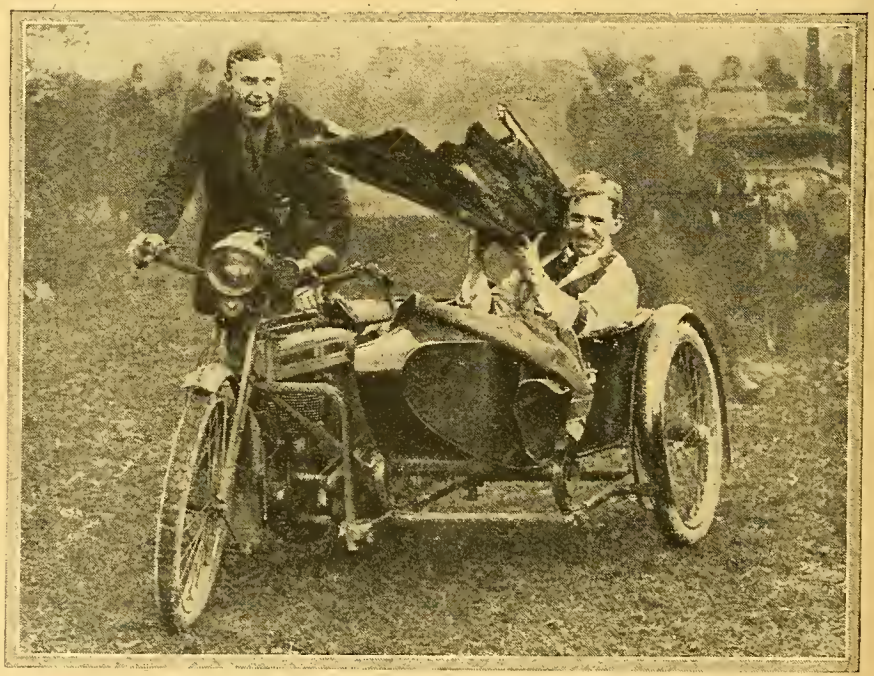
### The Colmore Cup Trial.

First of the year's classic one-day trials, the Colmore Cup event, will be held on February 25th. As last year, it is no longer an open competition, but all members of clubs affiliated to the Midland Centre A.C.U. are eligible, the organising club, of course, being the Sutton Coldfield and North Birmingham A.C. The route to be followed is apparently the same as in previous years, Stonebridge being the starting and finishing point, and Cheltenham being the lunch stop. Starting from cold, stopping and restarting on a hill, and flexibility tests are to be held, and there is as usual a special class for machines with fixed gears. The entry list closed this morning, and a large field will face the starter

### Yorkshire D.R.'s Re-union.

Except for four members kept away by illness or business, there was a full muster of former motor cyclists of the 62nd (West Riding) Divisional Signal Company, Royal Engineers, at the Griffin Hotel, Leeds, on Saturday evening, January 28th, on the occasion of the fourth annual re-union. One member had travelled from Eastbourne specially to be present, but the others were from various parts of the West Riding. The chair was taken by ex-Sergt. T. I. Laxton (Batley), who, after a seven-course dinner, gave the loyal toast. The health of "The D.R.'s" was proposed by ex-Artificer Corpl. T. F. Groocock (Dewsbury); and "Absent Friends" was submitted by ex-Artificer Corpl. H. Crump.

There was no demand for an alternative menu offered by ex-Artificer Groocock, as follows:—*Entrée, Pâté Valve Grinding; Soups, Price's Huile de Luxe, Vacuum B; Fish, Gudgeon Pins; Stews au Waterhouse* and *au Squires* (two members memorable for their culinary efforts in France); *Joint, Universal, Saddle of Brooks, Baked ¼in. Balls and Insulation Tape; Sweet, Compôte of "Tiffy's" Spares; and Dessert, Nuts and Washers.*



LENT BUMPING AT CAMBRIDGE. A Triumph sidecar utilised to carry home the "Queen's" damaged bow after being broken in bumping "Lady Margaret."

### Inter-'Varsity Brooklands Meet?

Brooklands may be the scene of an inter-'varsity (Oxford and Cambridge) motor cycle race meeting some time in the summer.

### A New Midland Road.

A new road from Birmingham to Wolverhampton is to be bullt at a cost of £400,000. The new road will be nine and a half miles long and eventually will have a width of 150 feet.

### The late Sir Alfred Bird.

Sir Alfred Bird, M.P. for Wolverhampton, who last week was knocked down and killed by a motor car outside St. George's Hospital, was a remarkable man. At the age of seventy and more the old gentleman would leap on his bicycle on a Saturday and go for a long tour comprising the number of miles corresponding to his birthday, with apparently no fatigue whatever. Sir Alfred Bird was president of the Wolverhampton and District M.C.C.

### Those Rear Lights.

"Uncompromising Opposition" is the attitude to be displayed by the South Hants District Association of the C.T.C. towards any proposed legislation on the matter of rear lights for cyclists. The *Southern Daily Echo* recently reported at length a resolution which was passed in which, almost hysterically, a catalogue of the dire consequences and dangers which would follow the reimposition of cyclists' rear lamps was given. In greater words than ours, "Methinks he doth protest too much."

### A French One-Day Trial.

Sixty-one entries have been received for the one-day trial organised by the *Union Motocycliste de France*, which is the French equivalent of the A.C.U., on February 19th. There are numerous English machines but only one English rider—Pinney, the Triumph exponent, who resides in Paris.

There are five Peugeots, one Velocette, two Royal Enfields, two D.F.R.s, one Madoz, one Rush, two A.B.C.s, one Sunbeam, five Harley-Davidsons, one B.S.A., four Triumphs, and one New Hudson. There are also two Monet-Goyon scooters.

### A T.T. Dance.

To raise funds to be handed over to the Auto Cycle Union to help to defray the cost of the T.T. Races, the Manx Motor Cycle Club is organising a masked ball at the Villa Marina, Douglas. Tickets will be issued by the Committee at 5s. 6d. a head, which will include supper, while the balcony at the Villa Marina will be open to the general public at a charge of 2s., entitling the purchaser to participate in the grand whist drive.

His Excellency the Governor and Lady Fry have consented to give their patronage, and have signified their intention of being present. The Chief Constable (Col. Madoc), His Honour Deemster LaMothe, Mr. A. B. Crookall, Mr. H. Norris, Mr. Hughes-Games (Vicar-General and Director of the Steam Packet Co.), Mr. Corkhill (Manager of the Steam Packet Co.), and other well-known people will be present. The dance will be held on the evening of Shrove Tuesday.

### Father Has to Pay?

Recently, at Kingston, a fourteen-year-old rider was summoned because his number-plate was obscured by the coat of his father, who was riding on the carrier. The boy was fined 10s., but the summons against the father for aiding and abetting was dismissed.

### Motor Cycle Taxation in 1923.

That influential body, the Motor Legislation Committee, has urged the Ministry of Transport that motor taxation be reduced by 25% all round from the beginning of next year, and that consideration be given to reverting to a system of taxation on motor spirit.

### Loyalty to the Parent Body.

It is interesting to know that the New South Wales M.C.C., the Hamilton M.C.C., the Goulburn M.C., New Castle M.C.C., Toowoomba M.C.C., and the Cootamundra M.C.C. are affiliated to the Auto Cycle Union of Great Britain. The M.C.C. of New South Wales is the parent body in Australia.

### Inaudible and Insufficient Warning.

The other day a native driver was hauled up before the Maritzburg Borough Court, and, when under trial, was asked what he had to say for not blowing his horn. "I wanted to make it cry, but it would not cry." His meaning was satisfactorily explained by the official interpreter.

### An Antipodean Acceleration Test.

Parramatta was the scene of a quarter-mile acceleration test recently held by the New South Wales M.C.C. In the motor bicycle class the winner was R. King (7 Excelsior), while the second place was held by H. Munro (3½ Norton). In the sidecar class M. Wood and C. Wood were first and second respectively on 7-9 h.p. Harley-Davidson outfits.

### Safeguarding Road-Repair Men.

Where large sections of road are being repaired, the road men are usually protected by barriers, but in some cases where small portions are being dealt with in patches, etc., it is not practicable to protect the workman in this way. In consequence, the Automobile Association appeals to road users generally to drive with due regard to the safety of such men, especially so since there are a few reports of alleged inconsiderate driving when passing road men at work.

### A South African Consumption Test.

A petrol consumption test was recently held near Durban for the S.A. Motorist Cup, over a course of 24½ miles. Motor bicycles were allowed half a gallon of petrol and 1¼ hours for the course, while sidecar outfits were allowed one gallon of petrol and 1½ hours for the course. The results were as follows: 1, N. Taylor (7-9 Harley-Davidson sc.), 55 m.p.g.; 2, R. Suzor (3½ Norton), 163 m.p.g.; 3, S. Harris (8 Enfield sc.), 64 m.p.g.; 4, G. Elgin (4¼ B.S.A.), 106 m.p.g.; 5, G. Clark (8 Enfield sc.), 42 m.p.g.; 6, C. Young (8 Enfield sc.), 51 m.p.g.; 7, S. Ford (4 Triumph), 115 m.p.g.; 8, S. Williams (8 Enfield sc.), 46 m.p.g.; 9, O'Dougherty (3½ Norton), 100 m.p.g.

### A South African Hill Climb.

At a hill-climb organised by the Natal M.C.C. at Westermeyer's Hill, the winners were C. Woodward (3½ Norton), C. H. Young (3½ Triumph), and L. R. Cohen (4 Triumph). The first six machines were of British manufacture.

### Reviving Export Trade.

After six months' progressive decline in exports of British motor cycles, it is distinctly encouraging to find that the figures for January show a substantial increase amounting to £17,217 in value. During last month £57,183 worth of machines and parts was exported, as compared with £39,966 in December. On the other hand, imports show an increase of £2,797, the total value for January being £11,968.

### The Motor Coach.

Any among our readers who are interested in the running and maintenance of motor coaches should make a point of obtaining a copy of the Special Motor Coach Number of *Motor Transport*, which was published on Monday last. This deals with many interesting aspects of the motor coach movement, including chassis design, coach-work and seating accommodation, as well as matters affecting the organisation and control of a passenger-carrying service. The issue throughout is profusely illustrated, and altogether provides a very valuable work of reference.

### Congratulations.

It will be remembered that Mr. E. Kickham, the well-known agent and competition rider of Bristol, crashed very badly in the Grand Prix in France last year. A long period of hospital treatment, several operations in France, and a painful journey home were undergone before he became convalescent in October, and many friends will remember that, with much painful effort, on crutches, he gamely attended the Olympia Show for a few days. Just when good progress seemed certain, about Christmas-time, he contracted a cold, which quickly developed into pneumonia, and once again he became an invalid. He has pulled through, however.

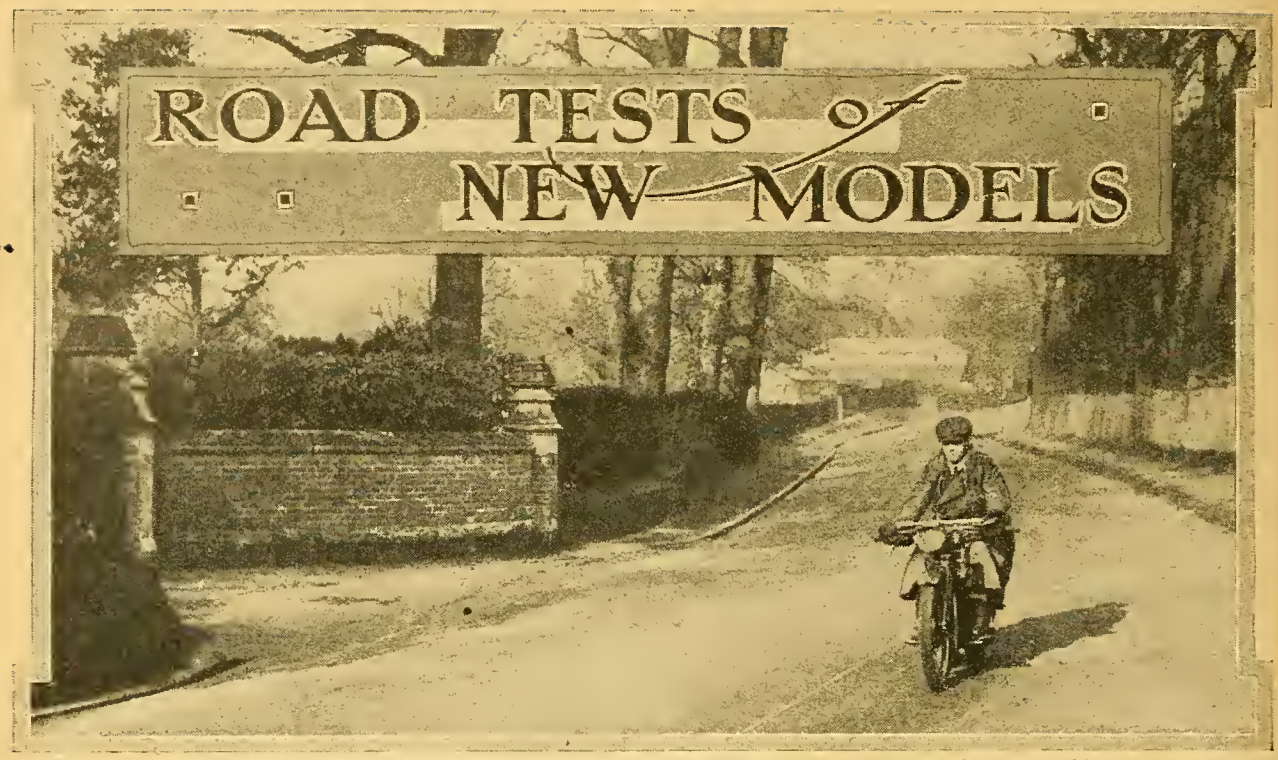
### No Speed Trials at Weston-super-Mare.

The Bristol M.C. and L.C.C. recently decided that they will not organise any more speed trials on the sands at Weston-super-Mare, on account of the treacherous nature of the surface; thereupon they made application to the local Council for permission to use the promenade or the adjacent Marine Drive, in June next.

After much correspondence the Works Committee reported to the monthly meeting of the Weston U.D.C. that they were unable to sanction racing on any public highway within the district.

Thus the powers that be definitely put the bar up to an event which would attract large numbers of visitors to the town.

There is a fine stretch of sand at Bream, a few miles below Weston, which is said to have an excellent surface after certain tides; but, failing that, the Bristol Club are without any suitable speed trial venue within reasonable distance of their district.



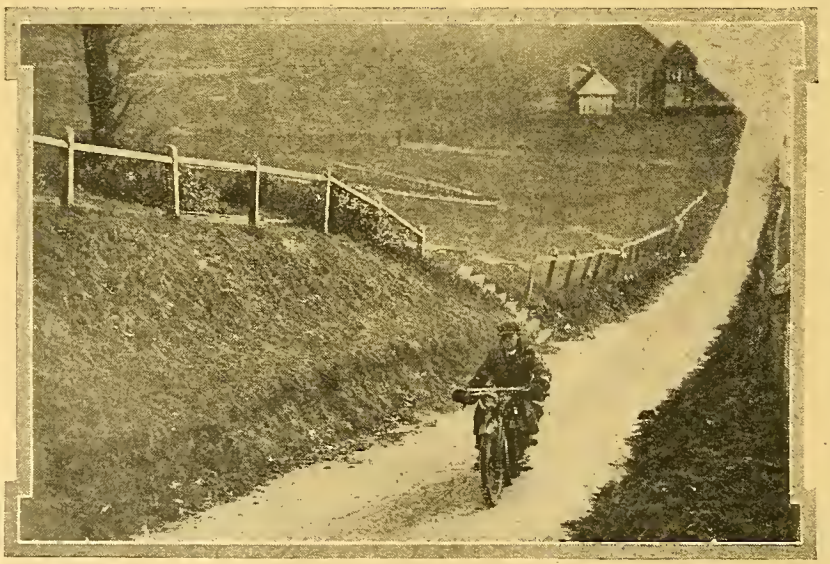

The 4 h.p. Flat-Twin Harley-Davidson.

*SPECIFICATION.*

| | | |
|---|---|---|
| *ENGINE: 4 h.p. flat-twin (69 × 76 mm. = 584 c.c.)* | *CARBURETTER: Schebler automatic* | *BRAKES: Internal expanding and external contracting.* |
| *GEAR-BOX: Harley-Davidson three-speed, multi-plate clutch and kick-starter.* | *TRANSMISSION: Primary gear drive; protected rear chain.* | *WEIGHT: Approximately 270lb.* |
| | *TYRES: 27 × 3½in. and 26 × 3in.* | *PRICE: £140; £155 electrically equipped.* |

IN America the 4 h.p. flat-twin Harley-Davidson is regarded purely as a solo machine, and although in this country it is often fitted with a light sidecar, and is quite capable of such service, the factory which produces it no doubt regards the fact with something akin to mild surprise.

It was with this in mind that we took over one of these machines for a test of its road capabilities and behaviour — particularly as compared with the British conception of an ideal solo mount. Since the ideals of America in this matter are obviously not the ideals of Coventry, Birmingham, or Wolverhampton, it is not surprising that the respective machines should differ considerably both in general design and detail specification.



On the 1-in-4 portion of Brooklands test hill.

### Contrasts in Control.

This latter point was very forcibly impressed on us when we rode up to the Harley-Davidson depôt in Newman Street on a typical Coventry-built sporting single, and a few minutes later rode away on the American flat twin.

**Road Tests of New Models.—**

An automatic carburetter (Schebler) controlled by the right twist grip, a heel and toe pedal operated clutch, and a service brake (internal expanding) on the right-hand side of the machine instead of the left are the main points in which the Harley differed from our previous mount, but most readers will realise that these factors contained possibilities of half-a-dozen awkward moments in the same number of initial miles. Added to that is the fact that, almost immediately after starting up, we found ourselves negotiating Oxford Street traffic at—so it seemed!—its very worst. The Harley came through this severe test of controllability unscathed and with flying colours.

### Controllability.

Only in three prolonged traffic blocks was the rider compelled to put down a foot; the slow-running setting of the Schebler saw to it that the engine was not once involuntarily stopped, and the beautiful balance, good acceleration on second gear, and efficient braking of the machine combined to transport us clear of London traffic with considerable rapidity and without—as had been half-feared—arousing the ire of taxi-driver, policeman, or 'bus-driver.

All things considered, we think that this performance speaks for itself and that any further comment on the controllability of the machine—which weighs about 280lb.—would be superfluous.

Further out on the Portsmouth road other characteristics began to make themselves apparent. The engine, as nearly as any reciprocating engine ever will be, is vibrationless at all speeds, and, in conjunction with 27 × 3½in. and 26 × 3in. tyres on the rear and front wheels respectively, provides such a degree of smooth running and comfort that, in our opinion, it would be absurd to fit a spring frame.

Acceleration is not startling, but a quick turn of the throttle grip as far open as it will go brings a perfect response from the engine without any of the "dead-spot" misfiring much too common on flat twins with extensive intake manifolds. Exhaust heated inlet pipes are probably responsible for this. On the road the maximum speed—42 m.p.h.—was disappointing, and a move was made to Brooklands to see if this could be improved upon without retuning; 45 m.p.h. proved possible on the straight, but no more. If no speed indicator had been fitted we should certainly have estimated the speed at fifty, but, while admitting the possibility of an error by the Corbin-Brown speedometer (perhaps caused by the gigantic rear tyre on this particular machine), we have learned not to place too much reliance on personal guesses at velocity.

It would be unfair, too, to estimate the fuel consumption during the time the Harley was in our possession, but at touring speeds well above the legal limit 65 m.p.g. must be considered a fair average. An early 45 miles cost just the price of 1 gallon of fuel, but this was considerably improved before we returned the machine.

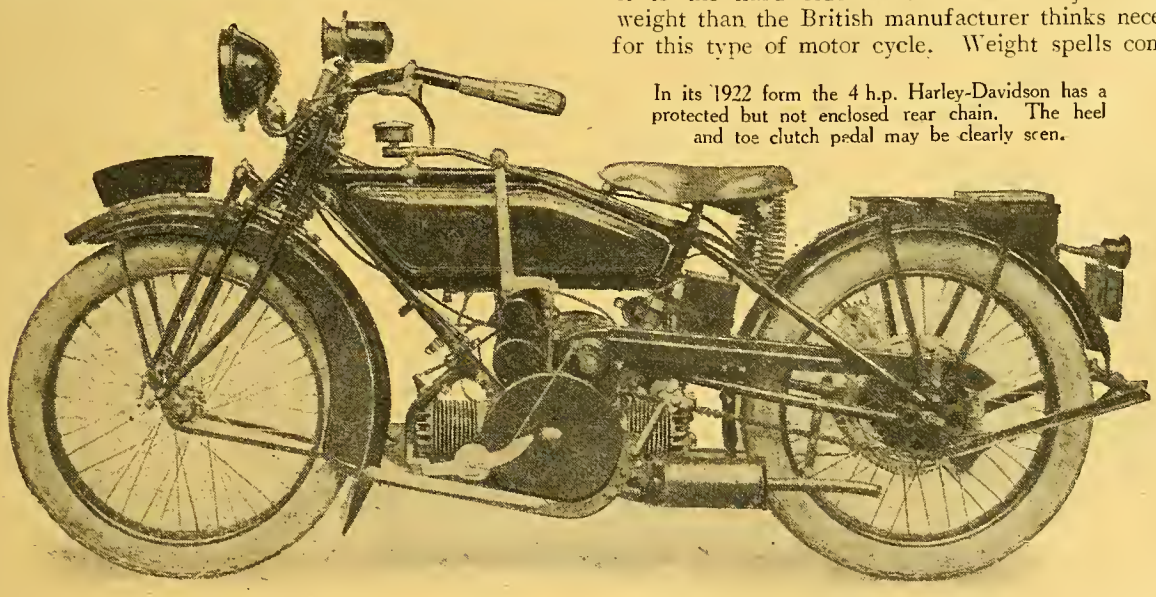
### On Brooklands Test-Hill.

There are no easily-reached hills in Surrey or the adjoining counties that might reasonably be expected to extend the Harley, and therefore it was decided to be content with an ascent of the Brooklands test-hill.

Lubrication is by mechanical pump, and in consequence the rider may dismiss the subject from his mind; there is an auxiliary hand pump also.

Gear-changing and kick-starting are more efficiently performed after some little experience. The gears are easily "found," but the "high" position of the lever is apt to be disturbed by the skirt of a heavy leather coat. The clutch is smooth in engagement, and the large pedal permits very gradual manipulation.

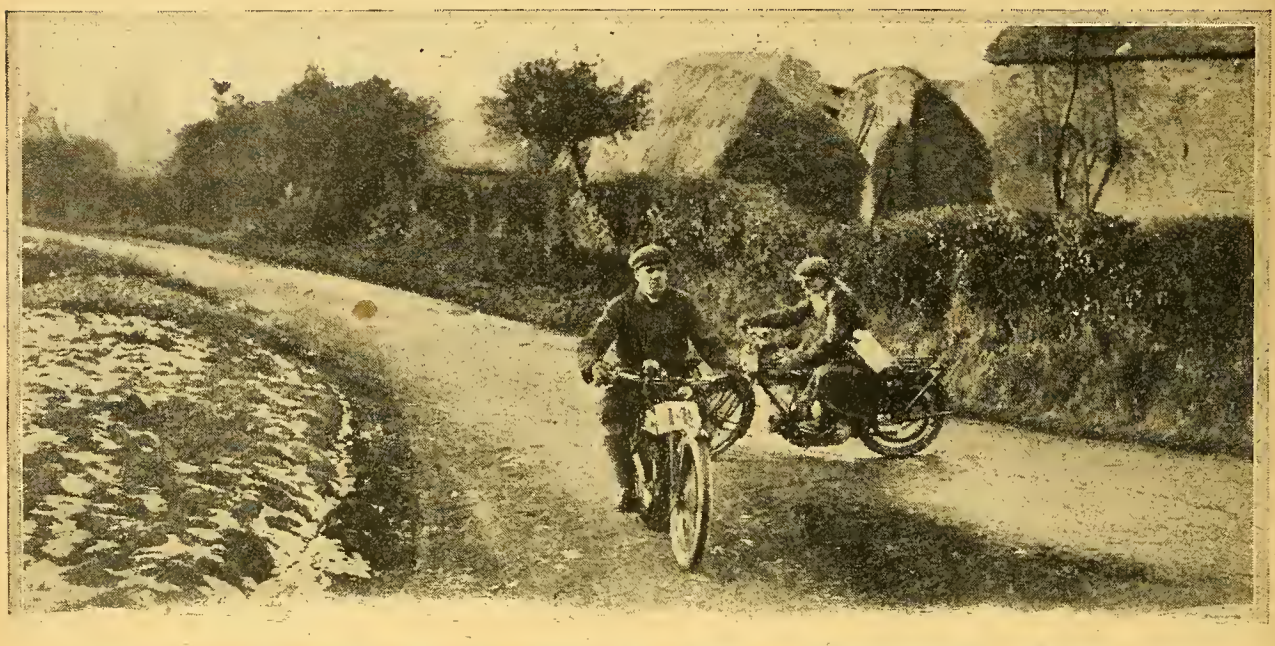
Summarising, the 4 h.p. Harley is extremely smooth running, very controllable, and very comfortable, but is not particularly speedy at anything approaching an economy setting of the carburetter. From all indications, it should be just as steady on greasy tramlines as on dry tarmac, and has much to commend it to the hard rider who does not object to more weight than the British manufacturer thinks necessary for this type of motor cycle. Weight spells comfort.



In its 1922 form the 4 h.p. Harley-Davidson has a protected but not enclosed rear chain. The heel and toe clutch pedal may be clearly seen.

# ROUGH-RIDING IN WARWICKSHIRE.

## 42-Mile Course in the Coventry and Warwickshire M.C. Solo Trial proves Impossible at 20 m.p.h. Every Finisher Late.



Two chain-driven Triumphs on one of the "natural" hairpin bends. The riders are A. P. McGowran and D. Brandish.

WE imagine that there is only one way in which last Saturday afternoon's solo championship trial of the Coventry and Warwickshire M.C. might have been made more difficult, and that would be to hold it over the same route after a week of rain.

There is no need, however, for a re-run, for every one of the 45 starters—excepting three who retired altogether—finished late, only six being less than a quarter of an hour behind. Since the course only totalled 42 miles, its "discoverer," the Rev. J. M. Philpott, must be heartily congratulated—unless the reader be one of the suffering competitors!

Alarming rumours were current at the start (at Keresley Church) that an official exploring party had set off one morning last week to verify the mileages and that darkness had fallen with the task uncompleted, but no one really believed that it was possible to map out such a route beginning and ending within ten minutes of Coventry. At the finish, however, all were agreed that it would not be disparaging to the Yorkshire classic event to christen Saturday's sporting scramble as a miniature Scott trial.

Some idea of what the latter half of the route was like may be gathered from this picture, which shows C. N. Green (5-6 Rover) cleverly recovering from a wild skid. W. L. Danskin (3½ Rudge) is behind.

Excepting S. A. Tomson (4 Triumph), who was carrying on—and actually finished—with a punctured rear tyre, few had much difficulty in keeping to schedule for the first 12 miles, and Atkin's Hill, although approached by a surprise left-hand turn and in a rather wet condition, failed to bring the majority of the medium- and heavy-weights off second gear. Perhaps half a dozen marks were lost for footing on the initial hairpin, but further clumsy driving in a stretch of unpleasant grease a few yards over the summit apparently went unpunished.

### Artificial Hairpins.

One or two natural and artificial hairpins—the latter constructed by means of judiciously placed flags—were the sole other causes of delay before the first and only time check, which was located sixteen miles from the start and at the foot of a precipitous track, down on the route-card as Steppe Lane.

Competitors were sent up this acclivity one at a time, and consequently many had quite a wait at the foot, which

**Rough Riding in Warwickshire.—**

valuable lost time may conceivably be allowed to the finishers.

The only possible track up the hill was a nine-inch wide ditch with a surface like a ploughed field. Heavy machines with large tyres were at a slight advantage, but ample foot-rest clearance was also necessary to avoid any further, and possibly disastrous, ploughing of the hillside. There were many complete failures and very few perfectly clean ascents.

A clean strip of banking near the summit saved the quick-thinkers and amply justified the inclusion of the test.

From here to the finish more than 50 per cent. of the course was a second gear "slither" over a disused Roman road, cart tracks, horse tracks, and no tracks at all. The only water-splash was a relief—for it was not deep and had quite a solid bottom; none availed themselves of the club's kind permission to take the single-plank foot-bridge.

**Quaint Names.**

Sister Susy's hairpin, being easy of access from the main road, attracted quite a crowd of spectators. Among the earlier men, E. A. Barnett (2¾ Francis-Barnett) and E. H. Broughall (3½ Coventry Challenge) made excellent performances; W. Brandish (4½ Humber), E. Tutton (2¾ Mars), H. J. Stretton-Ward (4 Triumph), A. P. McGowran (4 Triumph), W. A. Jones (4 Triumph), J. N. Roberts (2¾ New Imperial), A. Maclennan (3½ Triumph), and D. Brandish (4 Triumph), who was very late, were all good. F. Davis (4 Norton) footed before starting to negotiate the bend.

A veil may well be drawn on Temple and Cow Lanes and on the worst hairpin of all—half natural, half artificial—which, as there appeared to be no observer in the neighbourhood, everyone "cut"; but the final observed clamber, Gobling, was, to say the least, a remarkable obstacle.

As a matter of fact, Gobling was, and is, an absurd test, and would have severely tried a well-tuned tank, but the fact that the great majority of the riders reached the summit more or less under power proved that it was no real cause of complaint.

S. R. Philpot obviously found it difficult to keep his Douglas on a straight course. So did the others!

Only two men made anything like clean ascents of the upper reaches, M. G. Scalley (4½ Humber) and W. L. Danskin (3½ Rudge), and they probably failed lower down.

**Obstacles.**

E. H. Broughall (3½ Coventry Challenge) charged up to hit an overhanging branch of a tree, which was later cut away; E. A. Barnett (2¾ Francis-Barnett) very nearly made a clean climb, but stuck in the glutinous mud higher up; D. Brandish (4 Triumph) repeated this performance, but got away without actually stopping. Then A. P. McGowran (4 Triumph) made a sensational charge into the bridge and J. N. Roberts (2¾ New Imperial) gave up in apparent disgust. D. A. Atkin (2¾ Hobart) made a brave show, disdaining outside assistance; and A. Maclennan (3½ Triumph) was quite fast but by no means neat—apparently he ducked his head to save his glasses and simply opened his throttle trusting his steed to find a safe path for itself.

W. A. Jones (4 Triumph) and P. L. Mayo (2½ Coventry Eagle) both failed, and P. H. Johnson (3½ Rudge Multi) lurched right off the saddle. J. Hardy, whose Triumph had full touring handlebars, did well to get up with a little foot waving, but G. Packmann on a big Matchless was not nearly so effective; J. A. Watson-Bourne on his Brough Superior also footed. R. Grindlay (4½ Humber) was not so erratic as some; F. T. Sibley (3½ Rudge) failed and baulked C. N. Green (5-6 Rover), while R. Elliot on another Rover was also unsuccessful. G. F. Evans (3½ Sunbeam) came to the conclusion that it was better fun watching the others than attempting it himself.

After Gobling a few yards of main road gave hand oil pumps a much needed opportunity to be operated, and except for two further "make-weight" hairpins the going was fair to the finish.

| FINISHERS. | Mins. late. |
|---|---|
| E. Poppe (2½ White and Poppe) ... ... | 4 |
| J. A. Watson-Bourne (8 Brough Superior) | 4 |
| E. H. Broughall (3½ Coventry Challenge)... | 8 |
| E. A. Barnett (2¾ Francis-Barnett) ... | 8 |
| R. Elliot (4 Rover) ... ... ... ... | 8 |
| A. Maclennan (3½ o.h.v. Triumph) ... ... | 12 |
| A. P. MacGowran (4 Triumph) ... ... | 15 |
| J. N. Roberts (2¾ New Imperial) ... ... | 16 |
| G. Packman (8 Matchless) ... ... ... | 16 |
| L. Crisp (4½ Humber) ... ... ... | 16 |
| D. Brandish (4 Triumph) ... ... ... | 17 |
| R Grindlay (4½ Humber) ... ... ... | 17 |
| C. N. Green (5-6 Rover) ... ... ... | 17 |
| W. L. Danskin (3½ Rudge) ... ... ... | 17 |
| F. T. Sibley (3½ Rudge) ... ... ... | 18 |
| R. Mathers (3½ Rudge-Multi) ... ... | 18 |
| D. A. Atkin (2¾ Hobart) ... ... ... | 19 |
| P. H. Johnson (3½ Rudge-Multi) ... ... | 19 |
| J. Hardy (4 Triumph) ... ... ... | 19 |
| M. G. Scally (4½ Humber) ... ... ... | 20 |
| L. Hathaway (4 Triumph) ... ... ... | 22 |
| W. A. Jones (4 Triumph) ... ... ... | 25 |
| F. Arbuckle (4½ Humber) ... ... ... | 25 |
| P. L. Mayo (2½ Coventry Eagle) ... ... | 33 |
| J. Hazelwood (5-6 Hazelwood) ... ... | 39 |
| R. B. Roberts (4 Triumph) ... ... ... | 44 |
| R. Wright (4 Triumph) ... ... ... | 46 |
| J. W. Moxon (2½ Coventry Eagle) ... ... | 46 |
| G. M. Ravenhall (4 Rover) ... ... ... | 48 |
| H. S. Perry (4½ B.S.A.) ... ... ... | 48 |
| A. Elliott (4 Rover) ... ... ... ... | 48 |
| S. Wright (4½ Humber) ... ... ... | 50 |
| H. J. Stretton-Ward (4 Triumph) ... ... | 56 |
| W. Hancox (2¾ Douglas) ... ... ... | 56 |
| S. A. Tomson (4 Triumph) ... ... ... | 59 |
| G. L. White (2¾ A.J.S.) ... ... ... | 70 |

# SCOTTISH SIX DAYS EARLY THIS YEAR.

OWING to the selection of the early date of May 1st for the commencement of the 1922 Scottish Six Days Trials, it has not been possible to announce the route, as the final selection of the test hills will depend to some extent on the weather prevailing during the period immediately preceding the event.

In the preliminary regulations, however, it is stated that "the proposed itinerary will include already well-known roads, and it can well be taken that any new portions to be included are suitable for trials purposes."

There will be approximately twelve test hills, but a failure on one alone will not result in the forfeiture of a gold medal. The trials are open to manufacturers, agents, or private owners, and the latter class is clearly defined, especially as regards the term "financial assistance."

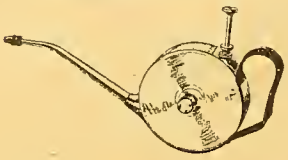
**Judge's Discretion in Making Awards.**

Awards will be made under the two headings of climbing and reliability, and team prize class special awards are offered for solo motor cycle, sidecar, and light car teams, the judgment of these being based, in the event of a tie on marks, on deviations from standard (*i.e.*, low gearing or skeleton machines), uniform steadiness in hill-climbing, general appearance (and condition) and cubic capacity.

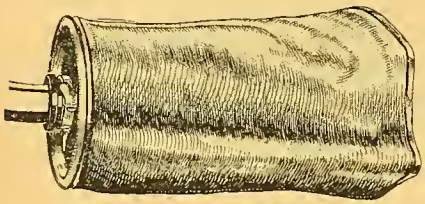
As in previous years, the timing will be carried out over one hour (approximately) checks, and each check will stand complete in itself, so that no time lost or made in one check may be regained or credited in another; replenishments must all be made in running time, and the machine otherwise will be under the control of the Edinburgh and District M.C. The usual allowance for tyre changing will be made on the third day, but no other repairs must be done.

Entries at ordinary fees close on April 17th (at double fees on April 22nd), and the address of Mr. Campbell McGregor, the secretary, is 6, Castle Terrace, Edinburgh.

## Force-feed Oiler.

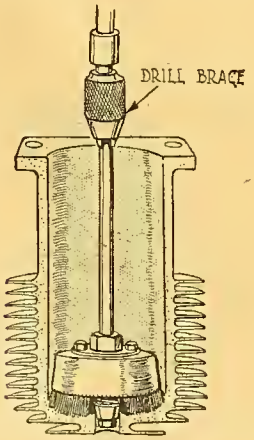


Oil injection under pressure through tiny motor cycle lubricators is made possible by this Bancroftian oil can. Price 3s. 11d. (The Bancroftian Co., 64, Bishopsgate Street, London, E.C.2.)



## Handle-Bar Muffs.

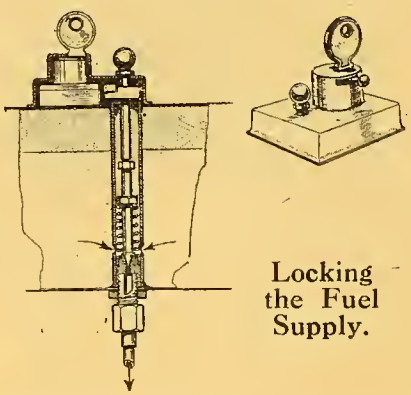
Having stiffened ends which are clipped over the handle-bar, John Bull muffs allow uninterrupted control of the machine. They are thoroughly waterproof and weatherproof and do not sag. (Leicester Rubber Co., Ltd., Post Office Place, Leicester.)




## Mechanical Decarbonisation.

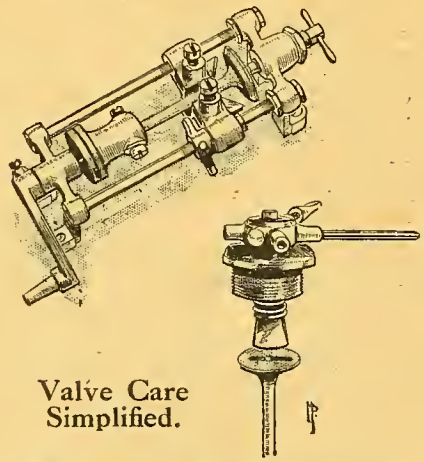
Provided that the steel bristles stand up to their task, decarbonisation by the "Vril Stick" should be child's play. A tapered plug in the compression tap hole centres the device, which, it is claimed, actually burnishes the cylinder-head, thus lessening the tendency to further carbonisation. (R. Birkett, Fern Lea, Clyde Road, West Didsbury, Manchester.)

## Fitments for the Rider's Convenience in the Garage and on the Road.



## Locking the Fuel Supply.

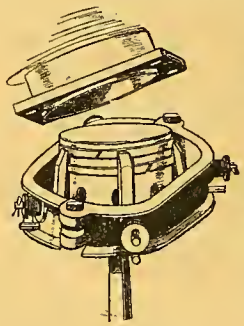
Simply a needle valve held down by the tapered, and thus self-adjusting, tongue of a Yale pattern lock, the Brierley petrol lock appears to have possibilities. Pressure on the knob end of the needle automatically shuts off the fuel supply, the little trigger (in the smaller sketch) merely actuating a key-hole dust-cap. (Brierley's, Ltd. (Premier Welding Co.), 140, Manor Street, Clapham, London, S.W.4.)



## Valve Care Simplified.

For those who possess a bench and who enjoy keeping their engines in perfect mechanical trim, the Grado self-centring valve facing tool (above) has been produced. When face-cutting operations are completed, the concentric grinding tool on the right, intended to displace a valve cap, may be conveniently used. (Grado, Ltd. 26, Cross Street, Hatton Garden, London, E.C.1.)

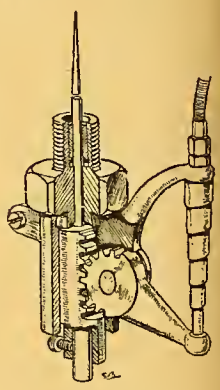
## Piston Replacement Made Easy.

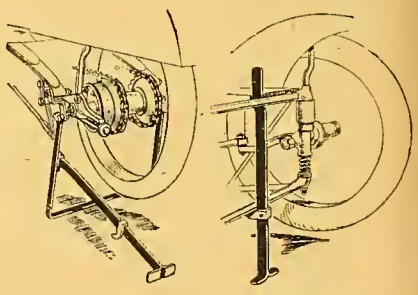


This somewhat elaborate but well-made tool has been designed to make easier the operation of replacing pistons with ultra "springy" rings. Its construction and action are obvious. (Robertson's Motors, Ltd., 157b, Great Portland Street, London, W.1.)

## Handle-bar Controlled Variable Jet.

Simply a handle-bar controlled (by means of a rack and pinion) inverted needle in the jet, this device adds considerable efficiency to most carburetters (Sutton, Pocklington & Co., 111, Clerkenwell Road, London, E.C.1.)





## Jacking up a Morgan.

By substituting the lower bolts of the rear spring shackles of a Morgan with others of special design, an anchorage is provided for this simple stand (left), which is detachable and is normally carried in the seat locker. Leverage is gained by a long foot lever, which is also available, as shown on the right, as a front wheel stand. Price 15s. (S. Hall, 91, St. Peter's Street, St. Albans.)

# THE MOTOR CYCLISTS' PARLIAMENT.

## Great Influx of Affiliated Members to the A.C.U.

THERE were fifteen items on the agenda of the first Auto Cycle Union General Committee meeting to be held in 1922 at the Royal Automobile Club on the 10th inst., and perhaps the most interesting item to record was the number of new clubs which have come into the Union's fold. These are the Bulwell M.C., the Buxton and District M.C., the Eccles and District M.C., the Prescott and District M.C., the Birmingham Motor Cycling Gipsy Club, the Guernsey M.C. and L.C.C., the Hirwain and District M.C.C., the Shirebrook M.C., the Slough and District M.C. and L.C.C., the Spalding and District M.C.C., the West Bromwich and District M.C.C., and the Wolverhampton Auto Nomads. The following clubs come under the newly formed North-Eastern Centre: The Alnwick and District M.C.C., the Annfield Plain and District M.C.C., the Bishop Auckland and District M.C.C., the Newcastle and District M.C., the Northern M.C., the South Shields A.C., the Stockton and District M.C., and the Sunderland and District M.C.

### Col. F. S. Brereton re-elected Chairman.

Pending the election of the chairman, the meeting was presided over by Mr. H. P. E. Harding, who gave up his seat during item two of the agenda, when Col. F. S. Brereton was re-elected chairman amid acclamations. The four vice-chairmen chosen to form the A.C.U. Management Committee were Major Potter, Messrs. Otto Thomas, H. P. E. Harding, and Doctor A. M. Low. Mr. Stanley Carter was re-elected hon. treasurer.

Arising out of the minutes of the competitions of the 9th January, Mr. T. W. Loughborough lucidly explained how the sum received for competitions and licences amounted to £1,061 8s. 11d., and how against that figure all expenses, salaries of the staff, and 30% of the time of the secretary and assistant secretary had been charged, with the result that the competitions cost about £1,000, or 6.5% of the total expenditure of the Union. It was agreed that the expenditure of this amount for the good of the pastime and the improvement of motor cycles was justified, and that a similar statement should be prepared when the annual accounts are presented.

The secretary then dealt with the difficulty of choosing a date for the South Wales open speed event, which threatened to clash with the Yorkshire Centre's open trial. Owing to the change in the date of the Essex Motor Club's open event, it was announced later in the afternoon that July 5th had been selected.

### N.E.A.A. Affairs.

Next, Mr. Loughborough explained how the seven local clubs hitherto part of the N.E.A.A. previously mentioned had considered the forming of a North-Eastern Centre from the ashes of the defunct body. The chairman proposed that the N.E. centre should be formed, which was agreed. Also arising out of the same minutes was a brief discussion on centre boundaries, but the matter was left to the Management Committee to investigate.

Items 12 and 13 on the agenda were then taken. These were proposals by Mr. E. Featherstone and Mr. Q. A. Nicol respectively—the first to the effect that members of sub-committees should be allowed third-class railway fares when attending these meetings, and the second that these sub-committees should be held on the same day as the General Committees. The first item provoked lively and lengthy discussion, but eventually both were passed together unanimously.

### Competitions Committee.

Previous to the election of the Competitions Committee there was a certain amount of misunderstanding regarding the eligibility of members. It was thought by a good many that, as well as those connected with the technical press, those associated with the industry were also ineligible, but it eventually transpired that only those connected with the sale of motor cycles came under the latter category; consequently, members engaged in the sales of engines or accessories and interested in the motor cycles to which they were fitted were free to serve.

The 1922 Competitions Committee elected consists of: Messrs. J. W. G. Brooker, G. J. A. Brown, E. J. Bass, W. Cooper, A. G. Reynolds, E. B. Ware, V. C. Hardy, A. V. Ebblewhite, E. Featherstone, N. Longfield, T. Rutherford, and Major V. Brook.

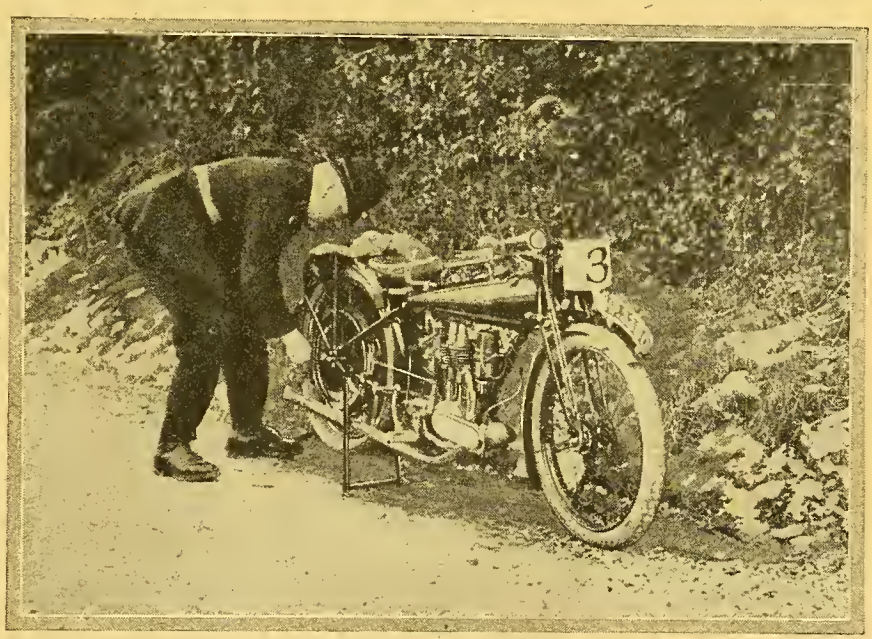
Next followed the election of the Touring Committee, which is now composed of Major S. R. Axford, Messrs. J. W. G. Brooker, W. Pratt, T. Rutherford, — Treloogan, E. M. P. Boileau, J. Samuels, S. R. Noble, B. Marians, Geoffrey Smith, and Lt.-Com. Pearce.

The question of the formation of a Cheshire Centre was discussed at some length, and it was eventually decided to refer the matter to the Management Committee.

When the question of representation on the R.A.C. General Committee came up, it was agreed to nominate the whole of the A.C.U. General Committee—sixty-three members in all. The dates selected for the A.C.U. General Committee meeting during the present year are May 5th, October 6th, and December 8th.

Mr. V. Horsman then sought to obtain a reversal of the decision at the Leicester meeting, which decided on the number of open trials to be held in 1922, and powers to be granted to centres to issue trials permits and license riders, but his first motion was lost and the remainder was left in abeyance.

The final proposals in the name of Mr. E. J. Bass were to write to the secretary of each affiliated club and request him to circularise his members and urge them to point out to the local M.P., or candidate, the unfairness of the present tax on motor vehicles, especially on those used by owner-drivers only at week-ends, and to urge members of Parliament, or candidates, to obtain the early repeal of the tax and resort to the tax on petrol.




POLICE SPORTSMANSHIP.

Years ago there was decided antagonism between motor cyclists and certain members of the police forces throughout the country. A happier feeling now prevails, however, as will be judged by the illustration depicting a police officer withdrawing a three-inch nail from the tyre of a competitor's machine in the Coventry and Warwickshire M.C. trial last Saturday.

### University College (North Wales) M.C.C.

A reliability trial (Bangor to Aberystwyth) will be held during Inter-Coll. week.

### Western Centre A.C.U.

Prizes won during the 1921 events will be presented at the annual dinner, to be held at Cheltenham on Saturday, March 4th. Tickets, 7s. 6d. each, may be obtained from Mr. John Howell, 12, The Foregate, Worcester.

### Public Schools M.C.C.

It has been decided to organise Sunday runs fortnightly throughout the year, meeting at a certain point on the outskirts of the Metropolis, and proceeding to the country for the day. Details will be published at a later date. The impromptu race meeting at Brooklands will take place on April 1st at 2 p.m. Members will be admitted to the track free of charge.

### Sheffield M.C.C.

About 50 members were present at the recent annual general meeting. The financial secretary reported a balance of £9 15s. 6d., which is most satisfactory, the annual subscription being only 2s. 6d. per member (paid-up members, 150).

Trials, picnics, and outings to beauty spots not generally known have been arranged for every week-end in summer and alternate week-ends in winter.

### Coventry and District Works M.A.

Membership of the association now totals between 300 and 400, and other works are coming into line with those which have already joined. A strong competition fixture list has been drawn up for 1922. The opening run takes place on February 18th, taking the form of a paperchase. Each rider will spin for his speed with a five-sided "Put and Take." Scheduled speeds, 16 and 20 m.p.h.

### Westmorland M.C.C.

Over thirty new members have swelled the ranks of the Westmorland club during the past few days, and arrangements for the 1922 programme are being rapidly completed. The first event takes place on March 26th. Many new features have been incorporated for every event, special attention having been devoted to novices. During the present month the committee are carrying out a propaganda campaign throughout the scattered county, members approaching all motor cyclists with a view to enlisting them in the ranks, and posters are to be exhibited in all places of advantage from the north to the south of the county.

### Solihull Old Boys' M.C.C.

It is proposed to hold an event each month during 1922 on dates that do not clash with open and "semi-open" competitions. The subscription is 5s.

### Kirkby Stephen M.C.C.

The activities of the club seem to have fallen into abeyance, but the Northern Centre of the A.C.U., through its chairman (Mr. Bryan Jefferys), is endeavouring to revive it.

### Herts M.C. and L.C.C.

The annual general meeting took place at the Red Lion Hotel, Hatfield, on Saturday, February 4th, under the chairmanship of Dr. A. M. Low. The club membership was stated to stand at 100, and a satisfactory bank balance was disclosed. The new hon. sec. elected was Mr. W. H. Hardman, "Westcott," Northaw, Potters Bar.

### Southport A.C.

The general annual meeting was held at the Queen's Hotel, Southport, on January 31st, and there was a good attendance of members. Officers for 1922 were elected including: President, Sir A. E. H. Naylor-Leyland, Bart.; chairman, Mr. G. T. Whiteside; captain, Mr. R. W. H. Cunningham; hon. treasurer, Mr. E. Jones; secretary, Mr. Rowland Hill, 75, Sefton Street, Southport. The programme for 1922 was provisionally agreed upon, and includes reliability trials, social runs, and speed trials on the shore, and, in connection with the latter, it is hoped to have a fifty or 100 mile race on a triangular course for amateurs riding their own machines. The opening run is a paperchase and is fixed for March 12th. The annual dinner and prize distribution took place on February 3rd at the Queen's Hotel.

### Northern Centre A.C.U.

Already two well-attended meetings have been held—at Kendal and Grasmere—and everything points to the centre having a very successful time in this, its second year. As only one open event was to be allocated to the centre, it was a matter of some discussion which club should be granted the honour. Cumberland asked for the event in good time, but at the eleventh hour Barrow came along and wanted a reliability trial. Westmorland proposed that the trial should be conducted by the centre itself. It was finally decided to run the event under the name of the centre, and the Cumberland club will simply be the organising body. It is quite on the cards that the centre will support Barrow in a speed trial which they wish to run, and this may well be an event of no little importance throughout Lancashire, Cumberland, and Westmorland.

### Prestwich and District M.C.C.

A special recruiting meeting is to be held on Wednesday next at the George Hotel, Sedgley Park, commencing at 7.30 p.m. All interested motor cyclists and light car owners are invited to attend.

### West Birmingham M.C.C.

A general meeting will be held on Friday, February 24th, at 7.30 p.m., at headquarters, King's Head Hotel, Hagley Road, Edgbaston. Agenda: Election of officers and committee; fixtures for the coming year. Prospective members are cordially invited to attend.

### Bristol M.C. and L.C.C.

In spite of pouring rain, some forty members visited their neighbours at Bath on Saturday, February 4th. Tea at the Bath headquarters and a visit to the theatre, followed by supper and a late return journey, made up a very successful social event; the return event is billed at Bristol on the 18th.

### Blyth and District M.C.

The club held its first annual masquerade ball early in February in the Mechanics' Hall. There were about 120 present, and great success has attended the efforts of the officials. During the winter months there has been a series of whist drives and dances held for the purpose of swelling the funds of the club.

### Gloucester M.C. and L.C.C.

At the annual general meeting held on January 31st (at the Spread Eagle Hotel, Gloucester), the following officers were duly elected: Pres., Rev. C. E. Kingsford, M.A.; vice-pres., Mr. B. F. Peplow: hon. treas., Mr. J. H. A'Bear; capt. (Thursday), Mr. O. E. Blackwell; capt. (Saturday), Mr. R. Purnell; trials hon. sec., Mr. J. Boakes; sec. of awards, Mr. A. W. Cooper; hon. sec., Mr. F. R. Ware, St. Sidwell's, Tuffley Avenue, Gloucester.

### Woolwich, Plumstead, and District M.C.C.

Great interest will be attached to the Woolwich Club's opening fixture—the Captain's "surprise run" on March 12th from country headquarters, Green Street Green. They will be piloted to a newly discovered hill—more severe than any of the known Kent hills. Only one solo machine—a Triumph—has made the climb so far. All passenger machine attempts have failed. At the annual general meeting it was decided to support the proposed end-to-end trial and to promote eight monthly members' competitions. Each member of the committee of eight will be responsible for a competition.

# Keep within the law!

"Silence is Golden"

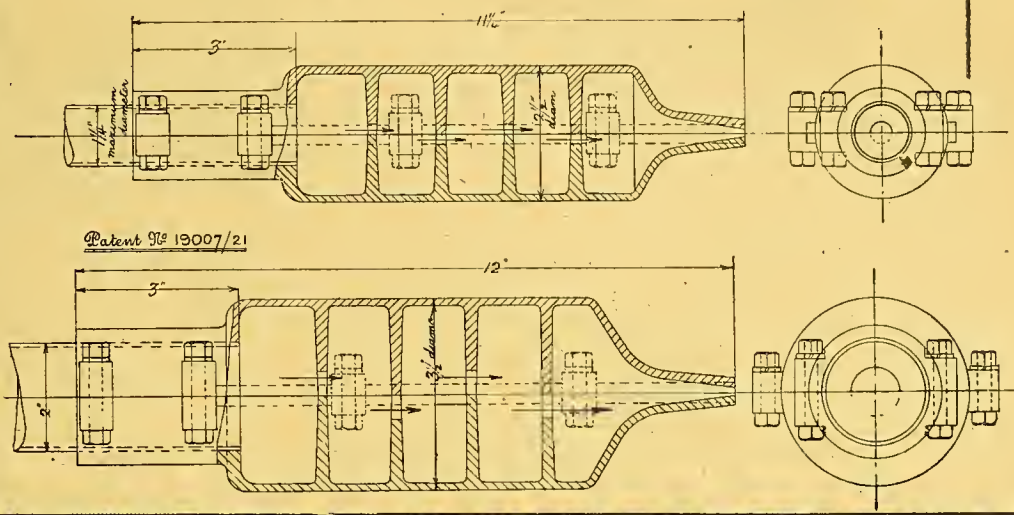
Adaptable to any H.P. Motor Cycle. Send us outside diameter of the Exhaust Pipe.

## The "ARGUS" SILENCER for open exhaust pipes.

THE patent silencer is made of aluminium, on account of its lightness and heat dispersing qualities.
DELIVERIES can be made 7 days from receipt of order.
Full satisfaction guaranteed or money returned.
An efficient silencer incurring the slightest possible loss of power.

Price **15/-** each.

*Delivered Great Britain.*
**CROOKES, ROBERTS, RITCHIE & CO., Ltd.**
**Owners:**
**W. J. RITCHIE & CO.**
**Freedom Works, John St., SHEFFIELD**



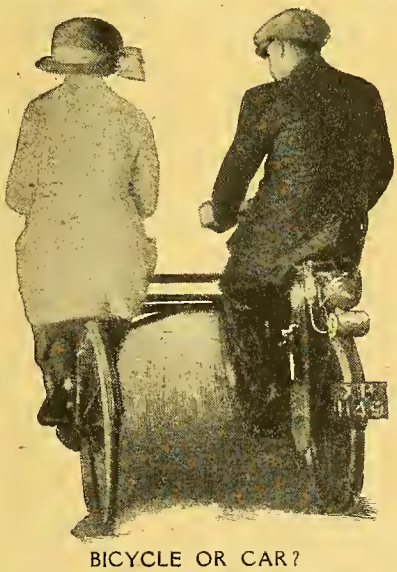


## A STRIKING TESTIMONY.

ECONOMICAL MOTORING FOR TWO.

Sir,—I enclose a photograph which may be of interest to your readers. I think I can claim that it is the only "combination" of this kind on the road. The gentleman's cycle is the Waltham Engineering Co.'s special cycle with their Young 1¾ h.p. attachment. This is coupled to the lady's cycle with a rigid coupling.

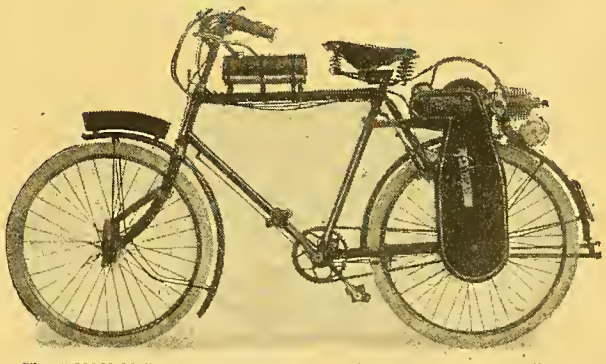
The power of the engine is simply wonderful. I ran it all last season, and have been from London to Brighton and back comfortably in the day. With, of course, pedal assistance, we can get up all but freak hills with ease. On test, with the engine in best form, we have run from Ashtead to Tooting without ever turning the pedals! I suppose that is with about a 20 st. load. It is very cheap to run, and the initial outlay is relatively small.—CLAPHAM, London, S.W.12.



BICYCLE OR CAR?
"CLAPHAM," in the accompanying letter, gives his experiences with these coupled pedal cycles driven by a 1¾ h.p. Young motor attachment.

*—Reprinted from* THE MOTOR CYCLE, Dec. 22, 1921.


# YOUNG MOTOR ATTACHMENT.



The "YOUNG" Motor Attachment as ridden by "CLAPHAM" can be obtained either with or without Cycles from all High Class Agents.

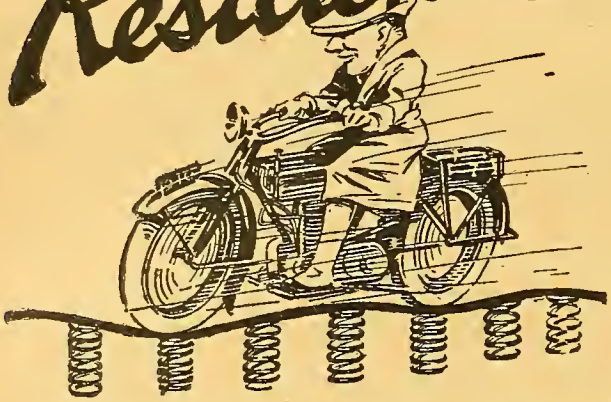
**PRICES.**

The "YOUNG" Motor Attachment, complete with Back Wheel (1¾in.) and Chain Wheel, to fit any ordinary Pedal Cycle (Ladies' or Gents').. **£19 19 0**
Standard Model "YOUNG" Motor Attachment, fitted to W.E.C. Gents' Cycle **£29 17 6.** Ladies' Model **£1** extra.
Model de Luxe (Gents') complete **£33 7 6.** Ladies' Model **£1** extra.
The "YOUNG" Motor Attachment fitted to the W.E.C. Cycle is **Guaranteed.**
(1) To travel 130 miles on a gallon of petrol.
(2) To carry a rider weighing 12 stone up a gradient of 1 in 12 without pedal assistance.
(3) To propel the Cycle at the rate of 25 miles per hour on a level road, and is **WARRANTED FOR 5 YEARS.**

Supplied by Messrs. WHITELEYS', LIMITED, Westbourne Grove.
For **£10** down, and 12 monthly payments of **£1 15s. 2d.** each.
If not stocked by your Agent, WRITE DIRECT TO US:

THE WALTHAM ENGINEERING COMPANY, LIMITED,
**Waltham Cross, Herts.**
**London Show Rooms**—136, Charing Cross Road, W.

# Resilience



## RIDING ON BATES TYRES IS LIKE RIDING ON SPRINGS

**Bates**

Tyres are made in oversizes as under:—
26 in. × 2½ in. for 2½ in. Rims.
26 in. × 3 in. (or 700 × 80) for 650 × 65 or 26 in. × 3 in. Rims.
27 in. × 3½ in. for 26 in. × 3 in. Rims.
29 in. × 3½ in. for 28 in. × 3 in. Rims.

THIS is an actuality which you can prove for yourself by fitting BATES TYRES on your machine.

The resiliency of BATES Tyres means greater comfort for the rider, and longer life for your machine because of slower depreciation, due to decreased wear and tear on the mechanism.

When ordering, it is always better to fit the largest tyre your rim can take. See list of BATES Oversizes.

**Specify BATES TYRES on your New Mount**

*Write for interesting Motor Cyclist's Booklet.*

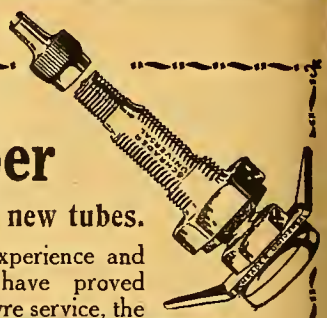
W. & A. BATES, LTD.
*(Rubber Manufacturers since 1863),*
St. Mary's Mills, Leicester.

Depots in London, Manchester, Glasgow, Newcastle, Belfast & Bristol.

COLONIAL WHOLESALE STOCKHOLDERS.

AUSTRALIA: A. G. Healing & Co., Ltd., 354, Post Office Place, West Melbourne; Bennett, Barkell, Ltd., Meagher and Chippen Streets, Chippendale, Sydney; Cornell, Ltd., 122, Pirie Street, Adelaide, S.A. BRITISH EAST AFRICA: Sultani, Kampala, Uganda. BURMA: Skippers and Co., Ltd., 51, Barr Street, Rangoon. F.M.S. AND S.S.: A. C. Davis, Penang. INDIA: Skippers & Co., Ltd., 86/1, Clive Street, Calcutta; Elphinstone Circle, Bombay, and at Cawnpore. NEW ZEALAND: Cycle and Motor Supplies, Ltd., Featherstone and Johnstone Streets, Wellington; 140, Lichfield Street, Christchurch. SOUTH AFRICA: H. E. A. Smith, London House, Loveday Street, Johannesburg. WEST INDIES: Frederick N. Martinez, Barbados. CANADA: Associated British Industries (of Canada), Ltd., 149, Victoria Street, Toronto, Ontario.

**Bates**
REGD. TRADE MARK
MOTOR CYCLE
TYRES, BELTS & ACCESSORIES
Season 1922
Best by— ACTUAL TEST



# Remember

**this when buying new tubes.**

BECAUSE long experience and world-wide use have proved that it assures better tyre service, the

**Schrader Universal**
BRITISH MADE **TYRE VALVE**

has been adopted as standard by practically every British Tyre Manufacturer. A "Schrader" Valved Tube makes the cover last longer. Reasons: Efficient, air-tight, accessibility, ease of pressure testing.

A. SCHRADER'S SON, INC.
*British Factory:*
**Victoria Road, London, N.W. 10.**
Manufacturers of the "Schrader Universal" Tyre Pressure Gauge.

Be sure it is a "SCHRADER"—Look out for the name.

# BEARINGS

**FOR CAR, LORRY, AND MOTOR CYCLE.**

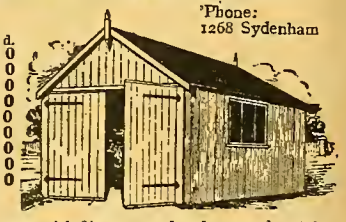
BALL AND ROLLER
**BRITISH** **R & M** **MAKE.**
BEARINGS.

**FOR DURABILITY, SILENT RUNNING & HEAVY DUTY**
**RANSOME & MARLES BEARING CO., LTD.,**
TELEGRAMS—Bearings, Newark.
TELEPHONES—Newark 170 & 171.
**Newark-on-Trent**

**A. TURRELL & SONS,** PORTABLE BUILDING WORKS, FOREST HILL, S.E.23.
'Phone: 1268 Sydenham

| Lth. ft. | Wth. ft. | Height to Ridge ft. in. | Height to Eaves ft. in. | £ | s. | d. |
|---|---|---|---|---|---|---|
| 7× | 5 | 7 0 | 5 0 | 7 | 5 | 0 |
| 8× | 6 | 7 6 | 5 3 | 9 | 0 | 0 |
| 9× | 7 | 8 0 | 5 6 | 11 | 7 | 0 |
| 10× | 8 | 8 4 | 5 9 | 12 | 19 | 0 |
| 12× | 8 | 8 4 | 6 0 | 17 | 5 | 0 |
| 14× | 8 | 8 7 | 6 3 | 21 | 0 | 0 |
| 16× | 9 | 8 9 | 6 4 | 26 | 0 | 0 |
| 18× | 9 | 8 9 | 6 4 | 31 | 0 | 0 |
| 20× | 10 | 9 0 | 6 6 | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ⅞in. tongued and grooved match-boards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed: 21oz. glass. Flooring: Strong joists, one inch boards. All bolts supplied for erecting house.

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

**ADVERTISEMENTS** in these columns First 12 words 3/–, and 3d. for every ad- onal word. Paragraphs of under 8 words charged double rate. Each paragraph is irged separately. Name and address must counted. Series discounts, conditions, and cial terms to regular trade advertisers will quoted on application.

Postal Orders and Cheques sent in payment for vertisements should be made payable ——— & Co. ILIFFE & SONS Ltd., and crossed ——— easury Notes, being untraceable if lost in nsit, should not be sent as remittances.

All advertisements in this section should be ompanied with remittance, and be addressed the offices of "The Motor Cycle," Dorset use, Tudor Street, London, E.C.4. To sure insertion letters should be posted in ie to reach the offices of "The Motor Cycle," the first post on Friday morning previous to e day of issue. Advertisements that arrive late for a particular issue or that are owded out will automatically be inserted in following issue unless accompanied by structions to the contrary.

All letters relating to advertisements should ote the number which is printed at the end of h advertisement, and the date of the issue which it appeared.

The proprietors are not responsible for clerical printers' errors, although every care is taken avoid mistakes.

## NUMBERED ADDRESSES.

For the convenience of advertisers, letters may be ressed to numbers at "The Motor Cycle" Office. en this is desired, the sum of 6d. to defray the cost of istration and to cover postage on replies must be added the advertisement charge, which must include the ds Box ooo, c/o "The Motor Cycle." Only the number l appear in the advertisement. All replies should be ressed No. ooo, c/o "The Motor Cycle," Dorset House, dor Street, London, E.C.4. *Readers who reply to Box No. ertisements are warned against sending remittance through post except in registered envelopes; in all such cases the of the Deposit System is recommended, and the envelope uld be clearly marked "Deposit Department."*

In the case of motor cycles offered for sale under a box mber, as it is unusual for these to be sold without first ng inspected by the intending purchaser, advertisers will ilitate business by embodying in their advertisements ae mention of the district in which the machine ered may be seen and tried.

## DEPOSIT SYSTEM.

Persons who hesitate to send money to unknown persons y deal in perfect safety by availing themselves of our posit System. If the money be deposited with "The tor Cycle," both parties are advised of this receipt. The time allowed for a decision after receipt of the ds is three days, and if a sale is effected we remit the ount to the seller, but, if not, we return the amount the depositor. Carriage is to be paid by the buyer, but the event of no sale each party pays carriage one way e seller takes the risk of damage in transit. For all nsactions up to £10, a deposit fee of 1/- is charged; on nsactions over £10 and under £50, the fee is 2/6; over 0 and under £75, 5/-; over £75 and under £100, 7/6 d on all transactions over £100, 1%. All deposit tters are dealt with at Dorset House, Tudor Street, ndon, E.C.4, and cheques and money orders should be de payable to Iliffe & Sons Limited.

The letter "D" at the end of an advertisement is an lication that the advertiser is willing to avail himself of Deposit System. Other advertisers may be equally irous, but have not advised us to that effect.

## SPECIAL NOTE.

Readers who reply to advertisements and receive no swer to their enquiries are requested to regard the nce as an indication that the goods advertised have eady been disposed of. Advertisers often receive so ny enquiries that it is quite impossible to reply to h one by post.

## MOTOR CYCLES FOR SALE.

A.B.C.

**1921** A.B.C., splendid condition, Lucas lamps and horn; £70; will consider exchange.—Hill, The ove, Oldswinford, Stourbridge [8103


## "GOOD SERVICE" TRENCH COATS AT 68/6 EACH

**Made from GUARANTEED Government materials ! ! ! New Triple Proof Gabardine, smart check lining, interlined Oilskin, with an ALL WOOL detachable fleece lining. Absolutely impervious to weather.**

Materials combined with the knowledge of workhands, whose experience was gained in war-time, who know *"What is required"* in

**OFFICERS' ARMY TRENCH COATS**

is embodied in the manufacture of the "GOOD-SERVICE" Coat, with fleece lining detached, can be used as Summer Raincoat.

*Now stocked in all Ladies' sizes at* **68/6.**

**OUR GUARANTEE IS Complete satisfaction or your remittance refunded in full.**

## 5000 EX W.D. UNDER-JACKETS.

Made in Extra Stout Twill Body and Sleeves. Lined wool, quilted to add strength. Back fastening with straps. No opening in front for wind or cold to penetrate.
Actual cost to manufacture ... 35/- each.

**"SERVICE" PRICE 4/9**
Post 9d.

## OILSKIN TRENCH COAT.

***The "Ideal" Oilie.***

Made from finest quality **"GOOD-SERVICE"** Oilskin, with the famous smooth dry non-sticky finish. Deep double breast, specially designed buttonless. Storm-proof front, all-round belt, two roomy "right through" pockets, smart roll collar, raglan shoulders. **Lined smart check material.** It does not matter how long you ride on a wet day, you will keep dry.
Colours BRONZE & MOLE.

Post **55/-** Paid

*State height & chest measurement*

**The Service Company Ltd. (LONDON)**

**289-293, High Holborn, W.C.1.**


## MOTOR CYCLES FOR SALE.

A.B.C.

**1920** T.T. A.B.C., long exhausts, superb appearance, accessories; £75; Exchanges.—Keat's, 417, Lord St., Southport. [8673

A.B.C. 1921 T.T., Lucas electric head lamp, rear, electric horn, Bonniksen, small mileage, perfect condition, very fast, tax paid; £75.—The Croft, Great Horkesley, Essex. [8601

A.B.C. 1920, gas and electric lighting, hand and foot throttle, speedometer, spare chain, Challenger inner tubes, internal condition excellent, external fair; £62.—Milward, 32, Woodville Rd., Ealing. [8116

*Spare Parts:*

A.B.C.—Largest stock in London.—Mandes' Motor Mart, 100, Great Portland St., W.1. [8718

Abingdon.

ABINGDON 3½h.p. 1914 2-speed Combination; £18, gift.—Bambridge 43, Riverside, Kingston-on-Thames. [8229

A.E.L.

SHOP-SOILED A.E.L. 2¼h.p., 2-stroke, 2 speeds, kick starter, used for one or two demonstrations only; list price £57, accept £48.—Dunwell's Garage, Wigan. Tel.: 328. [0766

A.J.S.

A.J.S. 1922 Combination, actually in stock.—Pickering, Shrewsbury. [8592

CROSS, Effingham Square, is agent for A.J.S.'s for Rotherham and district. [8725

**1917** 4h.p. A.J.S. Combination, all accessories, bargain; £65.—1, Bellingham Terr., Catford. [8464

A.J.S. 1922 2¾h.p. Sports and 7h.p. Combinations in stock.—Clifford Motories, Eastwood, Notts. [8826

**1922** A.J.S.—Early delivery of any model from Premier Motor Co., Aston Rd., Birmingham. [6922

A.J.S., all models, highest exchange allowances.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7835

A.J.S.—Quickest deliveries all models.—Merrick's Stores, Listerhills Rd., Bradford. Tel.: 2439. [1163

A.J.S, Standard Sports model, actually in stock; Exchanges.—Keat's, 417, Lord St., Southport. [8674

**1920** A.J.S. combination, Lucas dynamo lighting, as new; £110.—24, Balliol Rd., North Kensington. [8425

LONGMAN Bros., Bond St., Ealing, District Agents, all models; cash, exchange, or deferred payments. [8958

**1922** 7h.p. A.J.S. Combination in stock; £175.—Walbro' Motor Cycle Co., Saffron Walden 'Phone: 45. [8994

D. and S. Autocar Co. are agents for A.J.S. machines; early deliveries; cash or deferred.—33, The Parade, Golders Green. [8804

A.J.S.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Easthaok St., Southport. 'Phone: 607. [7235

A.J.S. 1920 Combination, spare wheel, Lucas lighting, very smart combination; £120.—157, Burntwood Lane, Earlsfield, S.W.17. [8659

A.J.S., immediate delivery of 1922 models. Cash and exchanges. Easy payments 4 per cent. extra.—P. J. Evans, John Bright St., Birmingham. [8327

FOR A.J.S. 1922 models, 2¾h.p. solo, or 7h.p. combinations, get in touch with the N. London agents.—Jones Garage, The Broadway, Muswell Hill. [0785

6h.p. A.J.S. Combination, complete, and in good condition, must sell; 55 gns.—Anthony, 1, Townshend Cottages, St. John's Wood, N.W.8. [8430

A.J.S. 1921 7h.p. Combination, spare wheel, Lucas lamps, triplex screen, tax paid, unscratched; £145.—Taylor, 5, New Dover Rd., Canterbury. [8684

A.J.S., 6h.p., complete equipment, tax paid, insured; £125 cash; genine hargain.—Full particulars, owner, 66, Sneinton Hermitage, Nottingham. [8655

A.J.S. 1922 New Sports Model B1, immediate delivery from stock; £85.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0065

2¾h.p. A.J.S. 1916, 3-speed, clutch and kick start, stored 3 years, excellent condition; £53.—Newnham, 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [8807

**1917** A.J.S. Combination, lamps, horn, speedometer, Tan-Sad, spare wheel, screen, hood, tax paid, insured, absolutely sound, real hargain; £125.—Everitt, Ludgate, Alloa, N.B. [8661

**1914** A.J.S. Combination, 6h.p., perfect condition, nearly new, oversize tyres, electric light, Easting screen, spares, fully equipped; £90.—41, Therapia Rd., E. Dulwich, S.E.22. [8391

## MOTOR CYCLES FOR SALE.

### A.J.S.

WAUCHOPE'S, 9, Shoe Lane, London.—A.J.S. Combination, latest 1922 model from stock, £175; also lightweight 2¾h.p., £85; easy terms and exchange. 'Phone: Holborn 5777. [8052

A.J.S. 1921 7h.p. Combination, in perfect condition, Lucas dynamo lighting set, electric horn, Cowey speedometer, hood, Tan-Sad, spare wheel, etc., tax paid to end of year; on view.—Owner, Henley, Green St. Green, Orpington, Kent. [8922

A.J.S. 1920 Combination, complete with spare wheel, Brooks cantilever saddle, trip speedometer, 2 windscreens, Lucas lamps and Tan-Sad, splendid condition, only driven 3,000 miles; price £130.—Brown, 29, Abbotsbury Rd., Weymouth. (P) [8768

A.J.S. Combination, late 1921, new August, spare generators, Klaxon horn, all lamps, spare valves, etc., overalls, 2 sets, Watford speedometer, tax paid 1922, full insurance policy transferred, complete outfit good as new, bargain; £145.—C. S. Goddard, 67, Palace Rd., Streatham Hill, S.W. [8154

69 GNS., Exchange.—Aristocrat of Lightweights, very late 1921 Sports A.J.S., 2¾h.p., 3 speeds, hand clutch, kick start, chain drive, lavishly equipped, absolutely indistinguishable from new, very smart, many extras.—Seabridge, Hansler Rd., East Dulwich. ('Phone, Sydenham 2452.) [8949

*Spare Parts.*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3608

A.J.S. Spares; prompt delivery.—Cyril Williams, Chapel Ash Depot, Wolverhampton. T.A.: Parts. [7901

### Alecto.

NEW Alecto 3½h.p., 2-stroke motor cycle, clutch, and kick starter, all on; £60; best value offered to-day.—Daw, 114, Brixton Hill. [8647

### Alldays.

ALLDAYS' Alloa, 2-speed, lamps, horn, etc., new tyres, excellent condition; £35 or exchange.—Brown, 71, Twilley St., Wandsworth, S.W.18. [8915

1921 Alloa, 2-stroke, Model de Luxe, 2-speed, clutch, and K.S.; this machine is brand new; accept £50 cash.—The Layton Garages, 30, Holywell St., Oxford. [8969

ALLON 2¾h.p., new Dec. 1920, original belt and tyres, 2-speed, clutch, K.S., any trial with passenger; £50; complete year tax, insurance.—Standen, Askew Rd., London, W.12. [8172

### American X.

1921 American X 7-9h.p. Twin, 3 speeds, new but slightly shop-soiled, at a very low price to clear; an opportunity for the bargain hunter.—14, Gt. Marlborough St., W.1. [0769

BRAND New 1921 American "X," with Mills-Fulford Model-de-luxe sidecar; list price £213, reduced to £150; easy payments 4% extra. Write for special clearance bargain list.—Premier Motor Co., Aston Rd., Birmingham. [6923

### Ariel.

ARIEL, 3½h.p., shop soiled, only £85.—Ratcliffe, Bros., 200, Great Portland St., W.1. [8794

ARIEL, 3½h.p., belt drive, Bosch, Amac, new tyres, gift; 19 gns.—53, Swaffield Rd., Wandsworth. [8643

ARIEL, July, 1921, C.B. Combination, 7h.p. twin, all on, as new; £105.—56, Lordship Lane, Tottenham, N. [8880

F.O.C.H. have 1920 3½h.p. Ariel Combination, fully equipped, Easting; £78.—6, Heath St., Hampstead. (Near Tube.) [8324

ARIEL.—All models, cash or gradual payments. Spares supplied from stock.—West Central Agency, Wineycle Co., Ltd., 236, High Holborn, W.C.1. [0704

1920 Ariel 3½h.p. Combination, as good as new, mileage 2,000, Easting screen, horn, tools, tax paid.—Offers to W. G. Price, Minawel, Bala, N. Wales. [8888

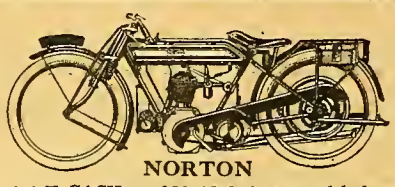
6h.p. Ariel Combination, 1920 improvements, fully equipped, tons spares, tax paid; £70 lowest; appointment.—Purry, 41, St Dunstan's Rd., Hammersmith. [8392

WAUCHOPE'S 9, Shoe Lane, London.—6-7h.p. Ariel Combination 1921, new, reduced to £139; 3½h.p. Ariel, 3 speeds, clutch, £87/10; no extra charge for easy terms. [8053

1921 Ariel 3½h.p. Combination, complete with Ariel sidecar, fully equipped, including windscreen, small mileage, and as new; originally cost £148, offered at £105 cash.—The Layton Garages, 30, Holywell St., Oxford. [8968

ARIELS.—Longman Bros., Bond St., Ealing. Telephone: 689.—All models obtainable from the Ariel experts. Specially tuned sports models, 3-speed, certified to have exceeded 65 m.p.h.; £92/10 Cash, exchange, or deferred payments. [5785

1921 (July), 6-7h.p. Ariel de Luxe Combination, chain drive, hand and foot clutch, Dyno lighting, electric horn, all accessories, tax paid better than new, any trial, bought car; what offer?—Morton, 31, Corsica St., Highbury, N.5. 9.30 to 6.30; Saturdays 9.30 to 1. [8874



## NORTON

**£115** CASH or £29 18 0 down and balance in 12 monthly payments of £7 9 6

*Discounts allowed if account paid in 2, 4, or 6 months.*

**A.C. ROVER B.S.A. MORGAN NEW HUDSON COVENTRY PREMIER MORRIS COWLEY P. & M. A.J.S. B.S.A. ARIEL JAMES LEVIS ROVER RUDGE TRIUMPH ZENITH NORTON INDIAN DOUGLAS ENFIELD RALEIGH SUNBEAM CALTHORPE CONNAUGHT QUADRANT MATCHLESS O.K. Junior ALLDAYS NEW HUDSON NEW IMPERIAL HARLEY DAVIDSON**

**NEW COMBINATION (Soiled):**

| | | | | |
|---|---|---|---|---|
| 1921 | **ENFIELD** s/seater plain model | £130 | 0 | 0 |
| 1921 | **ARIEL** 6/7 h.p. standard comb. | £137 | 10 | 0 |
| 1920 | **CLYNO** 8 h.p. comb. spare wheel | £135 | 0 | 0 |
| 1920 | **P. & M.** 3½ h.p. comb. | £100 | 0 | 0 |
| 1920 | **JAMES** 4½ h.p. standard | £120 | 0 | 0 |
| 1922 | **BLACKBURNE** Engine, 2¾ h.p. | £17 | 10 | 0 |
| 1922 | **JAMES,** dynamo lighting, spare wheel, leg shields | £178 | 19 | 6 |

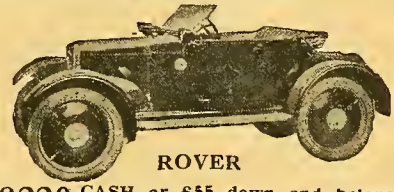
**SECONDHAND COMBINATIONS AND CARS:**

| | | | | |
|---|---|---|---|---|
| 1921 | **WOLSELEY** "10" 2-seater, as new (due in February 20th), fully licensed | £355 | 0 | 0 |
| 1922 | **COVENTRY PREMIER**, water cooled, 3-speed, reverse, dynamo lighting, ridden 100 miles | £230 | 0 | 0 |
| 1920 | **HARLEY DAVIDSON** special H.D. s/c., sports model, F.R.S., electric, discs, speedometer | £145 | 0 | 0 |
| 1920 | **HARLEY DAVIDSON** standard H.D. s/c., discs, spdr. hood and screen | £130 | 0 | 0 |
| 1920 | **HARLEY DAVIDSON** 7/9 h.p. comb., acetylene ltg. | £140 | 0 | 0 |
| 1920 | **ENFIELD** s/seater, dynamo, hood and screen | £110 | 0 | 0 |
| 1921 | **ENFIELD** comb. dyno. 2-seater, screen, as new | £135 | 0 | 0 |
| 1915 | **ENFIELD** 6 h.p. comb. and access. | £75 | 0 | 0 |
| 1920 | **ENFIELD** standard comb. | £95 | 0 | 0 |
| 1921 | **MATCHLESS** comb., mag. dyno. | £140 | 0 | 0 |
| 1922 | **JAMES DE LUXE,** dyno., spare wheel | £179 | 10 | 0 |
| 1920 | **MORGAN** Family model and access. | £150 | 0 | 0 |
| 1921 | **A.J.S.** 2-seater, dyno. ltg., mileage approx. 1,000 | £175 | 0 | 0 |
| 1918 | **DOUGLAS** 4 h.p. comb., 2 lps., horn | £69 | 10 | 0 |
| 1920 | **RUDGE** 7/9 h.p. and Canoelet s/car | £85 | 0 | 0 |
| 1920 | **B.S.A.** b.c.c. and s/car, electric, every access. | £82 | 10 | 0 |
| 1916 | **B.S.A.** all chain, new Watsonian s/car | £59 | 10 | 0 |
| 1920 | **AMERICAN EXCELSIOR** comb., 7/9 h.p. dyno. | £126 | 0 | 0 |

**SECONDHAND SOLOS:**

| | | | | |
|---|---|---|---|---|
| 1921 | **LEVIS** 2-spd., 2 lps., horn, as new | £47 | 10 | 0 |
| 1921 | **LEVIS** single speed | £37 | 10 | 0 |
| 1915–16 | **LEVIS** single speed | £24 | 10 | 0 |
| 1922 | **CONNAUGHT** 2-spd. ridden 200 miles | £49 | 10 | 0 |
| 1922 | **CONNAUGHT** single spd. returned from hire | £42 | 10 | 0 |
| 1920 | **DIAMOND** 2-stroke | £31 | 10 | 0 |
| 1922 | **CONNAUGHT** 2-spd., k-str. only soiled | £52 | 10 | 0 |
| 1920 | **CALTHORPE JAP** 2-spd. | £34 | 10 | 0 |
| 1921 | **ENFIELD** 2-spd. k-str., as new | £42 | 0 | 0 |
| 1916 | **DOUGLAS** W.D. | £45 and | £35 | 0 0 |
| **AUTO WHEEL** and **B.S.A.** cycle | | £18 | 10 | 0 |

## EXCHANGES.



## ROVER

**£220** CASH or £55 down and balance in 12 instalments of £14 9s. 8d.

*Discounts allowed if account paid in 2, 4, or 6 months.*

## WANTED—ROVER "8"

# LAMB'S LTD.

**WOOD GREEN, N. – 50, High Road**
'Phone—Hornsey 1956.
**WALTHAMSTOW, N.E. – 151 High Street**
'Phooe—Walthamstow 169 (2 lines).
**EUSTON ROAD, N.W.** (Opp. Gt. Portland St. Stn.)
'Phooe—Museum 4978.

## MOTOR CYCLES FOR SALE.

### Ariel.

ARIELS, the most reliable machines on the ro all models from stock; spare parts sent e where; trade supplied.—F. Speakman, Ariel Exp Ariel Garage, 7, Rochdale Rd., Harpurhey, M chester. Tel.: 325 Cheetham Hill. [5

### Bat.

BAT-J.A.P. 5h.p. Twin, spring frame, perf £14/10.—17, Heaton Rd., Mitcham. [8

1920 6h.p. Bat combination, all accessories, li used, snip; £75; exchanges.—Kent's, 417, L St., Southport. [8

BAT 1922 8h.p. J.A.P. Combination, spare wh shop-soiled; £10 off list.—Alex. Thom, 201 203, City Rd., Cardiff [8

£15.—3½h.p. Bat Mechanical Valves, T.B. m neto, B. and B. carburetter, long exhaust, spr forks.—181, Newton Rd., Burton-on-Trent. [8

### Beardmore.

1921 spring frame Beardmore-Precision, shop soil only £79.—Cross, agent, Rotherham. [8

BEARDMORE-PRECISION, 1921, 2-speed, spr frame, run only 800 miles, cost £85; 52 gn Longman Bros., Bond St., Ealing. 'Phone, 689. [8

BEARDMORE-PRECISION.—1922 models for mediate delivery. Cash, exchange, or defer payments.—Kays, 8, Bond St., Ealing. [7

1922 Beardmore-Precision 3h.p., brand new, reduced to £65; lightweight 3h.p. sidecar co bination, £85; easy payments only 4% extra.—Prem Motor Co., Aston Rd., Birmingham. [8

### Blackburne.

1921 4h.p. Blackburne; £88, as new, speedomet lamps, 1922 licence, chain drive.—P. Colly Peppering, Arundel. [8

BLACKBURNE 8h.p. Combination, dynamo lig ing, hood, screen, spare wheel, latest roll bearing competition engine, very fast and powerf only used twice, owner bought car; £147/10.—Vivi Hardie and Lane, Ltd., 23-24, Woodstock St. ( Blenheim St.), Bond St., W.1. 'Phone: Mayf 6559. [88

### Bradbury.

BRADBURY, 1914, 4h.p., excellent conditio offers.—Nisbett, 43, Minard Rd., Catford, S.E [82

1920 6h.p. Bradbury Combination, fully equipp £90.—Ratcliffe Bros., 200, Great Portland S W.1. [86

£10.—3½h.p. Bradbury, enclosed waterproof m neto, B. and B. sloping tank.—King, Egre Farm, Oxford. [89

BRADBURY 6h.p. 1921 3-speed Combination, M ford sidecar, new and unused; best offer secur or exchange entertained.—Eagles and Co., 275, Hi St., Acton London. [87

BRADBURY, 4h.p., new Dunlops, discs, new Bin belt, mudguards, Semi-T.T., Brooks, lamps, paid, excellent condition; £42/10; trial 2 up.— Finch, 47, Dooda Rd., Reigate, Surrey. [85

WAUCHOPE'S. 9, Shoe Lane, London.—2¾h Bradbury, new 1921 model, reduced to £6 also 6h.p Bradbury combination, new 1921, reduc to £130; no extra charge for easy terms. [80

1920 Bradbury, 6h.p., A.J.S., detachable hea Grindlay cantilever sidecar, fully equipp carefully used, perfect condition, bargain; £90 (p vately owned); consider solo part.—11, Balfour Me Mayfair, W.1. [84

BRADBURY 4h.p. Combination, about 19 N.S.U., 2 speeds, free engine, clutch, back whe nice sidecar (coachbuilt), all lamps, horn, pillion se tools, new tyres, beautiful condition throughout, w sacrifice; £39/10.—365, King St., Hammersmith. [87

### Brough.

BROUGH.—Don't disturb your capital; we w supply any model on our easiest of easy term —Holmes and Vonnie, Hunter's Bar, Sheffield. [86

500 c.c. Brough, O.H.V., electric lighting, ma spares, cams, valves, etc., lap Brooklan 61 m.p.h.; 50 gns., near offer.—Merlewood, Coon Lane, Kingston. [84

### Brough Superior

BROUGH SUPERIOR, Mark II., in stock immediate delivery.—Pickering, Shrewsbury. [85

ALLEN-BENNETT Motor Co., Ltd., Service Dep and sole London agents for the Brough Superi the sporting rider's ideal.—Immediate delivery of 19 models at reduced prices. Mark I., 90×77½, o.h.v., speed, clutch, and kick starter, £160; Mark I., sporti combination, step, mat, screen, etc., £180, or w special side valve J.A.P. engine, same price; Ma II. 6.5, mag., 72×90, 3-speed, clutch, and kick start £125; sporting combination, step, mat, screen, e £150. Demonstration models in stock. Catalogues s post free on request.—The Allen-Bennett Motor C Ltd., 9-10-11, Royal Parade, London Rd., West Cr don. 'Phone: Croydon 2450. [07

## MOTOR CYCLES FOR SALE.

### Douglas.

DOUGLAS 4h.p. 1920 Combination, mileage 5,820, exceptional condition and appearance, every conable accessory and spares, licensed 1922; fuller rticulars, stamp; £90.—12, John's St., Colchester. [8760

1920 4h.p. Douglas, dynamo lighting, speedometer, horns, legshields, screen, handlebar muffs, and tools and spares, perfect; £90; in exchange.—itt, 80, Streatham High Rd. 'Phone: 2701. [8910

OR Douglas 1922 2¾h.p. and 4h.p. combinations, get in touch with us; we are North London agents d give you the best of service; all spares in stock; no D. rubbish.—Jones Garage, The Broadway, Muswell ll. [0786

PARKER'S Motors can supply all Douglas 1922 models at list prices and give an insurance policy inst mechanical breakdown for 12 months free. sh, deferred, or exchanges.—194, Balham High Rd., V.12. [6419

DOUGLAS 1922 models at Brixton; early deliveries; cash or exchange; reconditioned h.p. Douglas machine, 80 per cent. new parts, aranteed, all on; £55.—Daw, Douglas Agent, 114, ixton Hill. [8652

EXCEPTIONAL Bargain.—1921 3½h.p. Sports Douglas, perfect condition throughout, done m.p.h. in competition; £100 cash lowest; exchange nsidered; ride any distance.—O. Clark, 75, Paxton ., Cambridge. [8348

DOUGLAS, 2¾h.p., 1914, just renovated, tank in makers' colours, many new parts fitted, including w P. and M., large lamp set, footboards, tool-bags, ., any trial.—Dowell, Pyrford, Surrey. (Byfleet ation 1 mile.) [8785

DOUGLAS 2¾h.p. 1916, 1916, 1917, 1918, 1920, 2- and 3-speed models; prices from £35, all in lendid condition.—Gordon R. Croxford, The Motor cle House, 461, Upper Richmond Rd., East Sheen, W.14. 'Phone: Richmond 322. [8783

£20 Down secures a New 1922 2¾h.p. Douglas, complete with lamps, horn, licence-holder, etc.; lance in 12 monthly payments of £5/5; price inudes full insurance.—Full particulars from Herbert obinson, Ltd., Green St., Cambridge. [8347

VAUCHOPE'S, 9, Shoe Lane, London.—1922 New Douglas, 2-speed, £75; 2¾h.p., 3-speed model, 90; 4h.p. solo, £110; 4h.p. sidecar combination, 135; 3½h.p. sports model, £130; 6h.p. light sidecar combination, £165; accessories on all models, no tra; also second-hand 2¾h.p. 1921 model, 3 speeds, utch, £65; another, 1915, 3-speed model, £45; sy terms and exchange; trade supplied. 'Phone: olborn 5777. [8058

DOUGLAS Agents.—1922 models in stock, lamps, horn, licence-holder, pump, tools, etc., included following prices: 2¾h.p., 2-speed, £75; 2¾h.p., speed clutch, and kick starter, £90; 4h.p. combinaon, £135; 3½h.p. Sports, £130; 6h.p. combination, 165; in stock; easy payment terms and exchanges rranged.—Write for particulars, Herbert Robinson, td., Green St., Cambridge. [8346

*Spare Parts.*

DOUGLAS Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3611

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Complete illustrated Douglas lists, post ee. [8833

DOUGLAS 4h.p. spares; everything at bargain prices, all spares guaranteed, approval against sh.—R. G. Gamble and Co., 13, Somers Mews, Edgare Rd., W.2. Tel.: Padd. 899. [8710

DOUGLAS 2¾h.p. Unused Pistons, complete, 9/6; connecting rods, 15/6; sprockets, engine, 3/-; ear box, 4/6; Coventry chains, 5/6; crankshafts, 5/-; layshafts, 14/6; screwed sleeves, 8/6; all spares n stock, reduction quantities; postage extra.—A. Knapton, 30, Crystal Palace Park Rd., Sydenham. [8630

### Dunelt.

DUNELT, Solo or Combination, the best value for 1922, delivery from stock.—Sam Missin, Cottingham, Hull. [5441

DUNELT 4½h.p., with coachbuilt sidecar, spare wheel, 2 spare tyres, spare belt and chain, M-L Maglita lighting and ignition, Brooks B600 saddle, in ood condition; £90.—Teage, Whitehouse, Kenilworth. [9015

### Edmund.

1921 Edmund-Blackburne, 2¾h.p., spring frame, Burman 2-speed, clutch, and K.S., brand new; resent list price £85, offered at £62/10 cash.—The Layton Garages, 30, Holywell St., Oxford. [8971

1921 Edmund-Jap, 2½h.p., spring frame, Enfield 2-speed, disc wheels, brand new, shop soiled nly; current list price £75, accept £60 cash.—The Layton Garages, 30, Holywell St., Oxford. [8972

EDMUND-J.A.P. 1921, unused, 2¾h.p., Burman 2-speed, clutch, kick; 60 gns.; same with Enfield gear, all chain, £58; the most comfortable lightweight.—S., 20, Clavering Avenue, Barnes, Surrey. [8376

# BUY
from
# BIRMINGHAM
## The Centre of the Industry!

We have now on view in our SHOWROOMS —the largest Motor Cycle Showrooms in the British Isles—

## OVER FIFTY
## Brand New 1922 Models

ranging from the
**2¼ h.p. RADCO Lightweight at 34 Gns.**
to the wonderful new "De Luxe Model"
**12 h.p. 4-Cylinder HENDERSON, £175**
and each one the BEST in its class.

*Principal Birmingham Agents since 1906 for*
**TRIUMPH.**
*Sole Birmingham Agents for*
**HENDERSON . LEVIS**
**RALEIGH . VELOCETTE**
*Contracting Agents for*
**A.J.S, ENFIELD, NORTON, RADCO, &c.**

All these models are ready for
**IMMEDIATE DELIVERY.**

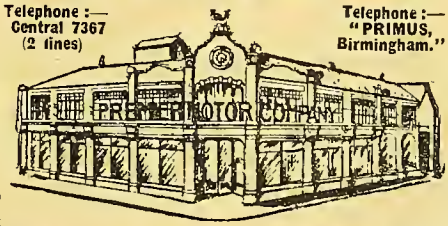
**EASY PAYMENTS 4% extra.**

Makers' Catalogues with specifications on request. Machines despatched by road or rail—delivery FREE.

# THE PREMIER MOTOR COMPANY,
**ASTON ROAD, BIRMINGHAM.**

Telephone :— Central 7367 (2 lines)

Telephone :— "PRIMUS, Birmingham."




## MOTOR CYCLES FOR SALE.

### Enfield.

1920 Enfield, 2¼h.p., 2-speed tax paid; 40 gns.—H. A. Smith, Cholsey, Berks [8211

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

ENFIELD 2¼h.p., 2-speed, K.S., 1921 tax paid, as new; £44, offer.—'Phone: 1991 Tottenham. [8937

1916 6h.p. Enfield Combination, hood, screen, lamps, etc.; £70.—Daw, 114, Brixton Hill. [8651

1918 Enfield Combination, 8h.p. Colonial model; a bargain, £85; like new.—Ross, 86, High Rd., Lee, S.E. [2162

£34.—1920 2¼h.p. Enfield, completely overhauled, guaranteed; exchanges.—Hudson, Brook Rd., Redhill. [8306

ENFIELDS.—1922 Combinations and 2-speed lightweights in stock.—Clifford Motories, Eastwood, Notts. [8829

3h.p. Enfield, 1919, small mileage, new condition, licence paid; 50 gns.—Brewster, 58, Wakering Rd., Barking. [8412

ENFIELD C.B. Combination, overhauled at cost of £23, 8h.p., perfect, all on; £50.—56, Lordship Lane, Tottenham. [8331

1919 3h.p. Enfield Twin, overhauled, fully equipped; £44.—Shepherd, Enfield Highway, Tel.: Waltham X 31. [0776

1920 Enfield, 2¼h.p., 2 speeds, lamps, exceptionally fine; £37/10.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [8735

ENFIELD, 3h.p., overhauled, re-enamelled and plated, splendid condition; £38.—6, Wilton Mews, Grosvenor Place, London. [8268

6h.p. Enfield Combination, cane sidecar, fully equipped, perfect order; £50.—Hubbard, 60, Chalk Farm Rd., London. [8536

ENFIELD 1919 2¼h.p. Lightweight; £36.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [8997

1922 Enfield.—Early delivery of any model; easy payments 4% extra; exchanges.—Premier Motor Co., Aston Rd., Birmingham. [8961

ENFIELD.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7238

ENFIELD 1921 8h.p. Combination, shop-soiled only, £125; with Lucas Magdyno, £145.—P. J. Evans, John Bright St., Birmingham. [8329

ENFIELD 3h.p. 2-speed model; £30. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7527

£67/10.—Enfield 6h.p. Combination, late model, screen, accessories (tax paid 1922), splendid running order.—8, High St., Wandsworth. [8545

ENFIELD 1922 models for immediate delivery Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7515

LONGMAN BROS., Bond St., Ealing. Telephone: 689. Sole official district agents.—All Royal Enfield models. Cash, exchange, or deferred payments. [5788

ENFIELD, exceptional bargain, 1922, 2-stroke, 2-speed, tax paid, driven 50 miles, fully equipped; £46.—Dentist, 216, Portobello Rd., North Kensington. [8585

1921 Enfield Lightweight 2¼h.p., 2-stroke, 2-speed, fully equipped, not done 200 miles; a real bargain, £42/10.—The Layton Garages, 30, Holywell St., Oxford. [7820

ENFIELD.—All 1922 Models in stock for immediate delivery. Cash and exchanges. Easy payments 4 per cent. extra.—P. J. Evans, John Bright St., Birmingham. [8330

VERY hot, 1917 Semi-T.T. Enfield 3h.p. Twin, automatic lubrication, O.H.I.V., 2 speeds, perfect, new pistons, chains, etc., tax paid; gift, £35.—69, St. Peter's Rd., Croydon. [8152

ENFIELD Combination late 1916, perfect condition, engine and magneto overhauled at cost of £12, deliver by road if required, tyres good; £75, or offer.—Slade, 130, Snargate St., Dover. [8367

ENFIELD 2¾h.p. Twin, chain drive, 2 speeds, free engine, drip lubrication, tyres, mechanism good order, tools, bags, horn, and spares complete; £25.—Collett, Old Barn, Harrow Weald, Middlesex. [8163

1921 Enfield Combination, as new, speedometer, spring handle-bars, windscreen, numerous accessories, spare new tyre and tube, tax paid.—G. L. Meacham, 31, Thursby Rd., Northampton. [8168

ROYAL ENFIELD Twin Combination, mechanically perfect, late model, 6-7h.p., Lucas dynamo lighting, Klaxon and spare horn, speedometer, luggage grid, spares, tools, tax paid; £110 for quick sale; owner ordered abroad; any trial or examination.—Write Flat 5, 118, Long Acre, London. Telephone: Regent 4791. [8173

## MOTOR CYCLES FOR SALE.

### Enfield.

ENFIELD Twin, 3h.p. engine, just overhauled by makers at cost of £17; also light C.B. sidecar for same, all in good condition; £55 includes all lamps, Klaxon, and tax.—Wingrove, 36, Winchester St., Salisbury. [8162

ROYAL ENFIELD Combination, late 1921, Vickers engine, 2-seater, Easting, hood, Cowey, 1 spare tyre, full set of tools, Magdyno, cost £207; bargain, £170, or nearest offer.—A. Wiles, 148, Haig Rd., Plaistow, E.13. [8335

WAUCHOPE'S, 9, Shoe Lane, London.—1922 2¼h.p. Royal Enfield, 2-stroke, £55; 2¼h.p. Royal Enfield with kick starter, £57; 8h.p. Royal Enfield sidecar combination, £140, dynamo lighting, £158; 8h.p. 1917-18 combination, £95; easy terms and exchange; trade supplied. 'Phone: Holborn 5777. [8059

*Spare Parts:*

ENFIELD Spares. — Immediate delivery. — Kays, 8, Bond St., Ealing. [3612

ENFIELD Spares.—Try us for the best service.—Forfield Motors, Forfield Place, Leamington Spa. [8960

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Enfield engine parts in stock. [8834

### F.N.

SECONDHAND Machines. — F.N. Combination 7-8h.p., 1920; £135.—Motorists' Advisory Agency, Ltd., 89, Wigmore St., W. [8808

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 F.N.'s, 7h.p. Combination, £127; solo machine, 2½h.p., £55; easy terms and exchange. [8060

BARTLETT'S, 93, Gt. Portland St., London, authorised agents for F.N.'s, 1922, 4 cylinders, 7h.p.; £95 solo, combination £127; deferred payments. [8081

LANGFORD'S, 37, Cricklewood Broadway, N.W.2.—In stock, 1922 4-cyl. shaft drive F.N.; £95; combination, £127; the greatest bargain of the year; deferred payments. 'Phone, Hampstead 8616. [8520

*Spare Parts:*

F.N. Spares.—We can supply for all models from 1904. Prompt attention to all inquiries. Stamp please. Langford's 37, Cricklewood Broadway, N.W.2. [8521

### Grandex.

GRANDEX 1916, 2-speed, hand clutch, lighting set, horn, etc., re-enamelled and plated, beautiful machine, appearance like new, only needs seeing; £35.—Teeth, 769, Romford Rd., Manor Park, London, E. [8410

### Haden.

19 21 brand new 3½h.p. Haden-Precision, 2-speed, countershaft clutch and kick start; £57/10.—Rhind and Co., Stone Place, Rusholme. [8765

### Harley-Davidson

SHEFFIELD Agent for Harley-Davidsone; from £120. Stacey, 12, Ecclesall Rd. [0577

HARLEY Combination 7-9h.p., trip speedometer, lamps, Tan-Sad, screen, dash; £68.—54, Dieppe St., West Kensington, W.14. [8310

19 19 Harley-Davidson Combination, beautifully equipped; £80.—Hillier, 9, Wallingford Ave., North Kensington. [8488

4 h.p. Harley-Davidson Motor Cycle Model W Flat Twin, new machine, never been used, bargain; £100.—73, Claremont Rd., Luton. [8756

19 15 Harley Combination, 7-9h.p., 2-seater sidecar, 3-speed, tax paid 1922; quick cash £45.—19-21, Drapers Lane, Leominster, Herefordshire. [8556

HARLEY-DAVIDSON late 1920 4h.p., flat twin, electric lighting, fully equipped, condition as new; £77.—4, Chesterford Gardens, Hampstead, N.W. [8114

HARLEY-DAVIDSON 1921 7h.p. Combination, dynamo lighting, brand new and guaranteed; £175.—Alex. Thom, 201 and 203, City Rd., Cardiff. [8145

19 22 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices; catalogue with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5986

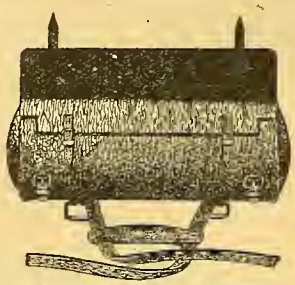
£77/10.—A genuine bargain; late 1918 Harley-Davidson, with large bulbous sidecar, fitted Easting, good acetylene lighting, etc., splendid condition throughout, any trial.—56, Tollington Park, N.4 (14 bus route). [8451

BARKER'S Motors can supply all Harley-Davidson models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6422

HARLEY-DAVIDSON, 1921 model, 7h.p. motor cycle, in perfect condition, electric lighting, speedometer, has only been used a few hundred miles, guaranteed perfect, any trial and examination; offered for quick sale, £95. Fryer, Leominster. [8118

HARLEY.—Longman Bros., Bond St., Ealing. Telephone: 689. Sole official district agent.—All models, immediate delivery. Cash, exchange, or deferred payments. Specially tuned machines certified to have exceeded 75 m.p.h., £5 extra. [5786

COMPACT—*READY FOR ANYWHERE*



Outside straps unfastened. Ample protection is afforded to tools, etc.

## SPECIAL LINE.

## Tool Bags.

*15 in. long; 7 in. deep; 19 in. girth.*

**These tool bags are made from selected hides by leading manufacturers. As illustrated above, with block ends and complete with 30 inch carrying strap and handle. Can be attached to carrier or carried in sidecar.**

**12/6** CARRIAGE PAID.

*Cost more than double to manufacture.*

## TUBES. EX GOVERNMENT STOCK. ALL SIZES.

| | | | |
|---|---|---|---|
| 24in. and 26in. | Endless | 4/9 | Butted, 5/9 |
| 26in. | „ | 5/6 | „ 6/6 |
| 700×80 mm. | „ | 6/9 | |

**BEST QUALITY GUARANTEED.**

| | | |
|---|---|---|
| 24×2, 4/6 | 26×2, 4/9 | 26×2½, 6/3 |
| 26×2⅛, 7/3 | 26×2½ ×2¼, 7/9 | 26×3, 8/9 |
| 26×2½, 7/9 | | 700×80, 10/- |

## BELTS. IN STANDARD LENGTHS

| | | | | | |
|---|---|---|---|---|---|
| Bates Avon etc., per foot | ½in. 1/- | ⅝in. 1/5 | ¾in. 1/9 | 1in. 2/- | 1½in. 2/6 |

## STRAPS.

**Made from best quality leather. 30 in. long and 1 in. wide. Complete with buckle & fastener.**

**1/6** PER PAIR POST FREE

## IGNA PLUGS, 2/- Original Price 4/6.

*Send for one to-day.*

**These Special Clearance Lines are sent Carriage Paid on 7 Days' Approval against remittance. Trade supplied. Write to-day.**

ORDER THE ELITE RUBBER CO LTD Tyre Specialists

*The Name* *The Firm*

WAY

LONDON'S LEADING TYRE HOUSE

264-266, VAUXHALL BRIDGE Rd. VICTORIA. S.W.1

AND AT

44, SURBITON ROAD, KINGSTON-ON-THAMES

(Please address West end letters to Vauxhall Bridge Road.)

TELEPHONE: VICTORIA 6553 & 6554

OUR AGENT IS THE PILLAR-BOX

## MOTOR CYCLES FOR SALE.

### Harley-Davidson

19 20 (new Sept.) 7-9h.p. electrically equipped Harley-Davidson Combination, complete with Bluemel screen, Tan-Sad seat, new spare Palmer cord tyre, insurance until next Sept., tax paid, small mileage, perfect mechanical order and condition; £150, or nearest offer.—Haddon, North St., York. [8308

*Spare Parts:*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3613

### Hazlewood.

19 22 Hazlewood, all models, for early delivery. See the 6h.p. J.A.P. Twin Combination at £118; finest value for money to-day; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5988

### H.B.

H.B., 1922 Models, 2¾h.p. Blackburne engine, 2-speed Burman gear box, chain belt, C. and K.S., £72; with 3-speed gear box, £75; 4h.p., 3-speed, £82; 4½h.p., 3-speed model, clutch and kick start, £100; cash, deferred terms, or exchange.

H.B., 1922 Models for earliest deliveries.—Write London Motors, 61, Holborn Viaduct, E.C., sole distributing agents for the following counties:—Kent, Surrey, Sussex, Hants, Berks, Oxford, Bucks, Northants, Beds, Hunts, Cambridge, Norfolk, Suffolk, Essex, Herts, Middlesex (including London). [9021

### Henderson.

HENDERSON, 10h.p., 4-cyl., clutch model, just overhauled; £70; lightweight wanted with cash adjustment.—42, Taplow St., City Rd., London, N.1. [8213

19 20 Henderson de Luxe Combination, exceptionally fine outfit, unscratched; £135; exchanges.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [8731

19 21 Henderson Combination, Milford sidecar, dynamo lighting, Bonniksen, Easting, tax paid, first class condition, cost £300 (April); 150 gns; owner requiring light car.—Lindley, jeweller, Bedford. [8481

BARKER'S Motors are agents for the luxurious 4-cyl. Hendersons; all new models at list prices supplied carry a free insurance policy against mechanical breakdown for 12 months. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6421

### Hobart.

£28.—5h.p. Hobart Twin, gradua gear, nice condition.—King, Egrove Farm, Oxford. [8902

HOBART-VILLIERS, 1920, 2-speed; £35.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7532

### Humber.

£15.—3½h.p. Humber, 2-speed, Bosch, Amac, fast.—Middleton, 56, Leo St., Old Kent Rd., S.E. [8394

HUMBER Lightweight, 2¼h.p., condition as new, splendid little mount; £14.—Box 8,684, c/o *The Motor Cycle*. [8890

HUMBER Combination, 4h.p., 3-speed, water cooled; £48; take lightweight part.—57, Kenbury St., Camberwell, London. [8468

HUMBER.—Don't disturb your capital; we will supply any model on our easiest of easy terms.—Holmes and Younie, Hunter's Bar, Sheffield. [8666

£16.—2h.p. Humber, genuine lightweight, easy starter, Bosch, B. and B., Druids, pan seat, mechanical valves, perfect order.—Ewers, Newton Rd., Burton-on-Trent. [8566

£21.—Humber, 3½h.p., 2-speed, handle start, late model, drop frame, decompressor, excellent mechanical condition, smart appearance, photo stamp.—Bacon, Offington Lane, Worthing. [8414

HUMBER Agents.—1922 Models in stock: 4½h.p. fast sporting model, £100; 4½h.p. combination, £144; Humber motor cycles are silent, vibrationless, and faultless; in stock; easy payment terms and exchanges arranged.—Herbert Robinson, Ltd., Green St., Cambridge. [8351

19 17 Humber Combination, 6h.p., W.C., 3-speed, flat twin, aluminium disc wheels, electric accumulator lighting, large head lamp, tool box and luggage carrier, Tan-Sad, Easting windscreen, completely equipped; £75, rockbottom price.—55, Edith Rd., South Norwood, S.E.25. [8264

### Indian.

INDIAN 7-9h.p. Road Racer, clutch model, perfect; £30.—17, Heaton Rd., Mitcham. [8455

LATE 1920 Indian Scout, as new, any trial; £66.—24, Balliol Rd., North Kensington. [8419

£30.—Indian, 7-9h.p., road racer, accessories.—Simpson, 4, St. Ann's Gardens, Kentish Town, N.W. [8399

3½h.p. Indian motor cycle for sale; £40; or exchange lightweight.—H. Taylor, Loose Hill, Loose, Maidstone. [8204

19 16 7-9h.p., dynamo lighting Powerplus Indian combination, very nice order; £70.—Ross, 88, High Rd., Lee. [8752



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Metro.

ETRO-TYLER 2¾h.p., accessories licensed, excellent condition; £30; evenings.—Read, 55, oun Rd., Brixton. [8582

ETRO-TYLER Sports Model, disc wheels, leg-shields, lighting set, horn, only used 3 months; examination; bargain, £34.—20, Chatham Place, hton. [8590

### Moto-Reve.

½h.p. Twin Moto-Reve Lightweight; bargain, £18; accept £12 and good push cycle.—Steveus, eleigh, Springwell Rd., Heston, Hounslow. [8432

### Minerva.

INERVA, 3½h.p., single, new magneto, perfect order; £14.—17, Heaton Rd., Mitcham. [8458

INERVA, 3h.p., running order; £12.—Wise, Barton Lodge, Winkfield, Berks. [8287

¼h.p. Minerva Single, tax 30/-, rebushed and new 2 rings recently, Bosch, B. and B., Brooks, foot-rds, new Hutchinson rear; £16.—Stephen, 42, Broad Peterhead. [8259

### Mohawk.

'OHAWK Cycles, new or second-hand, at lowest possible prices for cash or easy payments.—Mohawk le Co., Ltd., Alexandra Rd., Hornsey. [4793

### Motosacoche.

12/10.—Motosacoche Lightweight, Bosch magneto, smart appearance, splendid running order.—King, rove Farm, Oxford. [8903

18.—2¼h.p. Motosacoche, kick start, clutch, gears, Bosch, Druids; ride away.—Argyle Lodge, Newton ., Burton-on-Trent. [8564

### Ner-a-Car.

'EW Ner-a-Car; £55; owner leaving England; complete fittings, speedometer, pillion seat; Hove.—x 8,687, c/o *The Motor Cycle*. [8898

### New Hudson.

EW HUDSON, 2¾h.p., J.A.P., 3-speed, clutch, engine overhauled; £28.—Clark, 7, Exhibition Rd., .7. [7842

EW HUDSON De Luxe, fully equipped, mileage negligible; £45.—Ratcliffe Bros., 200, Great Port-d St., W.1. [8801

'EW HUDSON 2¼h.p. Lightweight Popular model, shop-soiled; £40.—New Hudson Depôt, 45, Gray's n Rd., Holborn, W.C.2. [7751

920 4h.p. New Hudson Combination, Ace aluminium discs, C.S., very smart; given away at gns.—Claremont Garage, Blackpool. [8280

920 New Hudson Combination, 3-speed, Lucas equipped, excellent condition, guaranteed; £75. Vard, 51, Upper Richmond Rd., Putney. [8930

EW HUDSON-J.A.P., 4h.p., sporting machine, Cox Atmos Mabon countershaft gear, splendid nning order fully taxed; £38; ride 20 miles to rchaser.—Jarman, Hosey Common, Westerham. [8913

914 New Hudson 4½h.p. and sidecar, 3-speed gear, clutch, kick starter, new sidecar, just overuled, enamelled and re-plated; £90.—Apply, F., Felpham Motor Works, Ltd., Felpham, Sussex. [8165

EW HUDSON 1922 Models, 2¼h.p., Popular and De Luxe 2-speed lightweights, 4½h.p. solo and nbination, 10h.p. light car, all models in stock, mediate delivery; send for lists; deferred payments anged. All spares stocked.—New Hudson Dept., 45 ay's Inn Rd., Holborn, W.C.2. [5150

### New Imperial.

28.—2¾h.p. New Imperial-Jap, 2 speeds, splendid running order.—King, Egrove Farm, Oxford. [8904

920 8h.p. New Imperial Combination, well equipped; £80.—24, Balliol Rd., North Ken-gton. [8426

EW IMPERIAL, 2¾h.p., 1921, slightly used; only £57.—Ratcliffe Bros., 200, Great Portland-, W.1. [8799

EW IMPERIAL, 2¾h.p., 1921 (August), 3-speed, clutch, K.S., and accessories; £52.—Rooks, 1, rdon Rd., Leyton, E.15. [8235

919 2¾h.p. New Imperial-Jap, complete, lamps, horn, etc., in excellent order; £35.—Maynard, 1, Bowes Rd., Bowes Park, N.11. [8514

920 New Imperial, 2¾h.p. J.A.P., clutch, kick start, excellent condition; £45.—Goad, 122, aida Vale. 'Phone, Hampstead 1353. [8737

23.—2¾h.p. New Imperial, 2 speeds, new tyres, ride away.—Ewers, Newton Rd., Burton-on-Trent. [8568

EW IMPERIAL 1922, Models 1, 3-speeds, and 2, 3-speeds, kick starter, clutch; immediate delivery. Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile ., E.C.3. 'Phone: Avenue 5548. [0071

VAUCHOPE'S, 9, Shoe Lane, London.—1922 New Imperial-Jap, 3-speed model, £63; 3-speed, kick art, and clutch model, £69; 2¼h.p. I.O.M. sports odel, all-chain, 3 speeds, £80; easy terms and exange; write for list. [8063

# EXCHANGE
## v.
# OVERHAUL

**Have you ever considered how far the cost of a general overhaul will go towards an exchange for another mount which is bang up-to-date? The saving is obvious and annoying delays avoided. WHY WAIT?**

### *1922 LIGHT CARS.*

**AIREDALE 11.9 h.p. 4-seater .... £475**
**CALTHORPE 10 h.p. 2-seater.... £355**
**CALTHORPE 10 h.p. 4-seater.... £375**
**COVENTRY PREMIER 4-wheeler £250**
**L.S.D. 3-wheeler, All on ..... £165**
**LAGONDA (Coupé or 4-seater).. £395**

### *1922 MOTOR CYCLES.*

**B.S.A. 4¼ h.p. Chain-Belt..... £107**
**B.S.A. 4¼ h.p. Combination..... £139**
**B.S.A. 6 h.p. Light Comb. ..... £164**
**B.S.A. 8 h.p. Comb. ..... £185**
**BRADBURY 6 h.p. Comb. ..... £146**
**DOUGLAS 2¾ h.p. 2-speed, All on £75**
**DOUGLAS 2¾ h.p. 3-speed, All on £90**
**DOUGLAS 3½ h.p. 3-speed Sporting £130**
**EDMUND-BLACKBURNE 2¾ h.p. £85**
**ENFIELD 8 h.p. Combination.... £140**
**ENFIELD 2¼ h.p. 2-speed..... £55**
**LEVIS 2¼ h.p. 2-speed ..... £58**
**LEVIS 2¼ h.p. 2-speed, kick-start £60**
**MARTINSYDE 6 h.p. Combination £160**
**NEW IMPERIAL 2¾ h.p. 3-speed 60 Gns.**
**NEW IMPERIAL 2¾ h.p., All-Chain £73**
**NEW IMPERIAL 8 h.p. Comb. .. £145**
**NORTON Big Four Combination £149 10**
**NORTON 3½ h.p. 3-speed..... £115**
**NORTON Big Four ..... £120**
**REX-ACME 2½ h.p. 2-speed..... £50**
**REX-BLACKBURNE 2¾ h.p..... £69 15**
**REX-ACME 8 h.p. Combination.. £150**
**ROYAL RUBY 2¾ h.p. 2-speed.... £70**
**SCOTT-SQUIRREL 3½ h.p. 2-speed £105**
**SUNBEAM 3½ h.p. (New Type) 120 Gns.**
**SUNBEAM 4¼ h.p. Comb. ....174 Gns.**
**SUNBEAM 8 h.p. Combination.. £217 7**
**TRIUMPH 4 h.p. Chain-Belt .... £105**
**TRIUMPH 4 h.p. All-Chain..... £115**

### *DEPENDABLE SECOND-HANDS*

| *Solos.* | £ | s. | *Combinations.* | £ | s. |
|---|---|---|---|---|---|
| A.B.C. 1921 - | 87 | 10 | A.J.S. 1919 | 125 | 0 |
| Ariel 1920 3½ | 75 | 0 | American X | 79 | 10 |
| Alecto 1920 - | 52 | 10 | Ariel 1920 - | 87 | 10 |
| Bradbury 3½ | 35 | 0 | Alecto 1920 - | 69 | 10 |
| Beardmore - | 49 | 10 | B.S.A. 4¼ - | 67 | 10 |
| Douglas 1920 | 69 | 10 | Chater-Lea - | 69 | 10 |
| Zenith 3½ - | 32 | 10 | Enfield - - | 85 | 0 |
| Ind. Scout - | 95 | 0 | Henderson- | 145 | 0 |
| New Imperial | 35 | 0 | Harley 1920 | 135 | 0 |
| O.K. 2-speed | 35 | 0 | Rex 6 h.p. - | 49 | 10 |
| Rudge 1920 - | 59 | 10 | Rover 3½ - | 39 | 10 |
| Rover 3-sp. - | 35 | 0 | Rudge 7 1920 | 97 | 10 |
| Wooler - - | 49 | 10 | Scott 1920 - | 95 | 0 |
| Triumph 3½ | 42 | 10 | Sunbeam 8 | 115 | 0 |
| Triumph3-sp. | 37 | 10 | Triumph4 h.p. | 65 | 0 |
| Premier2-sp. | 35 | 0 | Zenith 4/5 - - | 65 | 0 |

**Full List on Application.**
**Deferred payments or Exchanges.**

**The Halifax Motor Exchange,**
**25, Horton Street, Halifax.**
'Phone: 1400. 'Grams: "Perfection."

## MOTOR CYCLES FOR SALE.

### New Imperial.

NEW IMPERIAL 2¼h.p. J.A.P., 2-speed, T.T. bars, engine just overhauled by makers, top-hole condition, hot stuff; £30.—Gordon R. Croxford, The Motor Cycle House, 461, Upper Richmond Rd., East Sheen, S.W.14. 'Phone: Richmond 322. [8782

8h.p. New Imperial, Sunbeam sidecar, 1919 6h.p converted to 8h.p. Dec. 1920, Easting, car size D.A. outfit, luggage carrier, 2 horns, speedometer, mirror, spares, smart condition; any reasonable offer; owner buying car.—Lucking, 12, Churchfield Rd. East, Acton, W. [8186

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All New Imperial engine parts in stock. Lists free. [8838

### Norton.

PREMIER Motor Co. for 1922 Nortons:

NO. 9, 3½h.p., belt drive, £80; 16H 3-speed T.T., £115; Big 4, 3-speed, £120; easy payments 4% extra.—Immediate delivery from the Norton Specialists: The Premier Motor Co., Aston Rd., Birmingham. [0625

NORTON.—Latest 1922 models from stock.—Pickering, Shrewsbury. [8597

NORTONS.—All models. If you require one that pulls, try Gibb, Gloucester. 'Phone: 852. [8125

NORTONS, 1922.—Immediate deliveries of all models.—Clifford Motories, Eastwood, Notts. [8828

LONGMAN Bros., Bond St., Ealing, District Agents, all models; cash, exchange, or deferred payments. [8959

NORTON 1921 Models.—Sole district agents, Wessex Motors, Ltd., 60, Catherine Street, Salisbury. 'Phone: 72. [0717

NORTON Big Four 1921 and sidecar, mileage 2,500, electric lamps; £115.—98, Shakespeare Rd., Stoke Newington, N.16. [8638

NORTON, 3½h.p., 3 speeds, K.S., thoroughly overhauled, rebushed, nearly new tyres; £42, approval.—68, Gloucester Rd., Chalk Farm. [8301

1921 Norton, 16H, and Special Norton racing sidecar, lamps, horn, speedometer, sprockets, absolutely as new; £120.—Collins, 114, Queen St., Burton-on-Trent. [8653

£58.—Norton, 3½h.p. T.T., model 9, specially tuned, in good condition, complete with large Lucas head lamp, horn, speedometer; seen at Tuckers', Redcliffe Hill, Bristol. [9013

NORTON new 1922 3½h.p., Sports model 16H, in stock, 3 speeds, kick starter, etc.; £115.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Big Four Norton, £120; 3½h.p. sports model, £115; family sidecar combination, £154; list on application; easy terms and exchange arranged. [8064

1921 Norton (Sept.), Big Four, Model No. 1 and sporting sidecar, Lucas lamps, Stewart speedometer and mechanical horn, perfect condition; sacrifice £135. —Full particulars, Tippett, 48, Union Rd., Exeter. [8560

1921 3½h.p. Norton Racing Combination, entirely special outfit, winner of many firsts in open events, perfect order and well equipped.—Fullest particulars by letter, Box 8,676, c/o *The Motor Cycle*. [8897

1921 Norton 16H 3½h.p. model, fully equipped with lamps, horn, has been overhauled in our own workshops and is guaranteed perfect; offered at £85 cash.—The Layton Garages, 30, Holywell St., Oxford. [7819

1920 3½h.p. I.O.M. Norton Combination, R.34 sidecar, new, close ratio gear box, the whole machinery perfect, sacrifice, £100, no offers; also Mills-Fulford C.B. sidecar, ready for fitting to Big Four Norton, good condition, £14.—Kimble, Victoria Gardens, Neath. [8160

3½h.p. Norton, 1921 Sports Model, all chain, close ratios, Ricardo piston, specially tuned, 70 m.p.h. guaranteed, plated tank, latest T.T. bars, beautiful condition and perfect throughout, many spares, tax paid; £95 or lighweight part exchange.—Please write, Box 8661, c/o *The Motor Cycle*. [8247

TUCKERS', Redcliffe Hill, Bristol.—Big Four Norton and family sidecar, £154; 16H sports model, £115 (tuned for competition work); T.T. 3½h.p., £80. finest value in the trade; all machines delivered carriage paid from stock to any address in England.—G. H. Tucker, Norton Rider Agent and Specialist. 'Phone: 4042. [5207

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Complete Norton list post free. [8837

### N.S.U.

6h.p. N.S.U. Twin, 2-speed, free; £25.—79, Tottenhall Rd., Palmers Green. [8605

£10.—3½h.p. N.S.U., Bosch magneto, B. and B., spring forks.—King, Egrove Farm, Oxford. [8905

3½h.p., N.S.U., magneto, variable jet, variable gear, gift; £11.—Weavers, 6, Burras Lane, Otley, Yorks. [8693

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue A33
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### N.U.T.

1921 N.U.T. combination, Lucas dynamo lighting, as new; £85.—24, Balliol Rd., North Kensington. [8420

N.U.T. Motor Cycle Electrical Model, new machine, never been used, bargain; £100.—Rookwood, Waller Avenue, Leagrave, near Luton. [8757

1921 (July) 5h.p. 3-speed N.U.T., done 1,300 miles, as good as new, unscratched; bargain, £85.—22, Johnson Terrace, New Washington, S.O. [8194

PRACTICALLY brand new N.U.T., Lucas Magdyno lighting equipment, electric horn, speedometer, mileage 400; sacrifice £87.—37, Canterbury Rd., Balls Pond Rd., Dalston. [8936

MR. E. REMINGTON'S famous 90×77 O.H.V. Racing N.U.T., chain drive, 2 carbs., special mag., perfect condition; guaranteed as left Brooklands, numerous spares of all essential parts; price £70 or close offer.—B.P. Garage, 40, Murray Mews, Murray St., Camden Town, N.W. [7882

N.U.T. Coachbuilt Combination, about 1916, 6h.p. twin J.A.P., just thoroughly overhauled, re-enamelled and plated, fitted with Philipson pulley which cost £12, appearance like new; a bargain, £53.—Motorist, 769, Romford Rd., Manor Park, London, E. [8411

£120.—1921 3½h.p. Twin N.U.T., 3-speed, countershaft, with sporting aluminium Swan sidecar, Lucas dynamo lighting set, speedometer, etc., mileage positively under 1,000, and guaranteed in good condition, exceptional appearance, cost £180; or exchange light car and cash, not earlier than 1920, deliver 100 miles.—Solwaybank, Hayes, Kent. 'Phone, Bromley 532. [8284

### O.K.

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. 1917 O.K. Junior; £25. [8065

O.K.-VILLIERS, 2 speeds, clutch, kick start, July, 1921.—Offers, 209 Upper Richmond Rd., East Sheen [6612

£19/10.—O.K., 4-stroke, 2-speed, complete, engine guaranteed.—21, Overhill Rd., East Dulwich. [8435

LATE 1921, O.K.-Villiers 2½h.p., 2 speeds, well equipped, only run few miles, tax paid; £48, or offer.—111, Moyser Rd., Streatham, S.W.16. [8303

O.K. JUNIORS.—We have Mark IX, X, XI models in stock, new and unused, at greatly reduced prices.—Eagles and Co., 275, High St., Acton, London. [8790

O.K. Junior, 2-stroke, 2-speed, clutch, long copper exhaust, fully equipped, bought new September, 1921, splendid condition, 110 m.p.g.; £45 or near offer.—Apply, M. N., 16, Winterstoke Gardens, Mill Hill, N.W.7. [8253

### Omega.

1921 Omega, 2¾h.p. Villiers engine, 2-speed gear lamps, etc., as new; £42.—Bartlett's, 93, Gt. Portland St., London. [8083

OMEGA.—Don't disturb your capital; we will supply any model on our easiest of easy terms.—Holmes and Younie, Hunter's Bar, Sheffield. [8667

BARTLETT'S, 93, Gt. Portland St., sole London and district distributing agents for Omega's; all models from 53 gns to 115 gns.; deferred payments [8082

1921 Omega, 2¾h.p. Villiers, 2-speed, kick starter and clutch, lamps, etc., all new, shop-soiled only, clear; £53.—Bartlett's, 93, Gt. Portland St. London. [8084

NORFOLK, Northamptonshire, Huntingdonshire, Cambridgesbire, Hampshire, Rutlandshire, Bedfordshire, Berkshire, Buckinghamshire, Oxfordshire, Suffolk, Essex, Hertfordshire, Sussex, Surrey, Kent, with the exception of 20 mile' radius of London.

OMEGA 1922 Models; prices from 53 gns.—Write for catalogue London Motors, 61, Holborn Viaduct, E.C. Your old machine taken in part payment, for cash, or on deferred terms. [9022

### P. and M.

P. and M. Combination, late 1920, as new, all accessories, tax and insurance paid; £100.—Dean, 114, Brixton Rd., S.W. [8385

P. and M., ex-W.D., exceptional condition, lamps, Klaxon, speedometer, tools, spares, tax, any trial; £47/10.—Arnold, Henlow, Beds. [8702

P. and M. 1920 3½h.p., late model, mechanical oil pump, ratchet brake, all on; £65.—Warnes, Ltd., 46, Churchfield Rd., Acton, W.3. [8135

£48.—1918 P. and M. Combination, fully equipped, excellent condition, tax paid, sacrifice.—143, Ravensbury Rd., Earlsfield, S.W.18. [8819

£45.—P. and M. 3½h.p. Combination, late R.A.F. type, accessories, screen, good lot; exchange lightweight.—8, High St., Wandsworth. [8546

1920 P. and M. Combination, recently overhauled makers, electric lighting, tax paid, insurance; £75.—17, Byron Rd., Harrow-on-the-Hill. [8374

TO Insure Easter Delivery order your 1922 P. and M. now from the specialist agent, Lewis M. Inman, Durham Rd., Seaforth, Liverpool. 'Phone: Waterloo 296. [5097

## This Real Value-for-Money Proposition ?

We challenge anyone to produce a finer.

The proposition is the Burlington Reconstructed 4 h.p. Douglas Combination. Although referred to as Reconstructed, these machines are mainly composed of new parts and neither in appearance nor service do they differ from absolutely new models.

Compare their price (below £100)—compare their quality—you cannot find a better bargain on the market to-day.

**FULLY GUARANTEED**
**FULLY EQUIPPED**

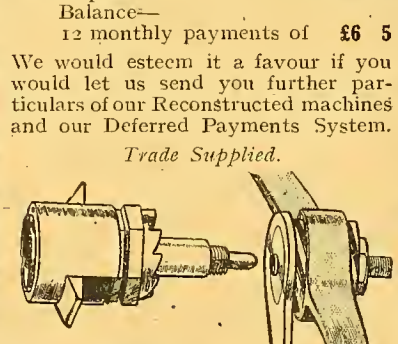
## CASH PRICE 93 GNS.

Above specification also applies to our Reconstructed 2¾ h.p. Douglas models at 55 gns. and 4 h.p. Reconstructed Douglas Solos at 75 gns.

On our Easy Payments Terms it would be: Deposit .. .. .. **£26 10**
Balance—
12 monthly payments of **£6 5**

We would esteem it a favour if you would let us send you further particulars of our Reconstructed machines and our Deferred Payments System.

*Trade Supplied.*



To 4 h.p. Douglas Owners

**No more broken drawbolts**

A new form of operating mechanism for the 4 h.p. Douglas Motor Cycle, by which the Drawbolt is entirely eliminated.

*Write for full particulars.*
*Trade Supplied.*

**BURLINGTON**
**MOTOR CYCLE CO., LTD.,**
**7, South Side, CLAPHAM COMMON, S.W.4**
*'Phone: Brixton 2417. Wires: Burlington Motors, Clapham*
Just by Clapham Common Underground Station.


## MOTOR CYCLES FOR SALE.

### P. and M.

P. and M. 1918 motor cycle for sale, perfect running order; £50.—72, Glenthorne Rd., Hammersmith. [8914

£43.—P. and M. 1918 (November), lamps, Klaxon, speedometer, tools, spares, just thoroughly overhauled, guaranteed perfect, any trial.—44, Mackenzie Rd., Beckenham. [8354

P. and M. Motor Cycles (ex R.A.F.), rebuilt and renovated as new, fitted with many new parts, including mag., B. and B. carburetter, chains, tyres, etc., £45; combination £60; equipped £5 extra. Sidecars reupholstered, painted, and new tyre.—S. E. Porter, Whitchurch, Salop. 'Phone: 74. [3059

*Spare Parts:*

P. and M. Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7219

P. and M. Spares stockist, every part in stock; cheap.—Inman, Durham Rd., Seaforth, Liverpool. [6397

P. and M.—All spares in stock; stamp requirements; P. and M. spares specialist.—H. Beardwood, 147, Burlington St., Liverpool. [9986

P. and M. Spares.—Send stamp for latest list of new and secondhand spares; all goods dispatched on approval against cash.—Gamble and Co., 13, Somers Mews, Edgware Rd., W.2. Padd. 899. [8709

### Peugeot.

4-5h.p. Twin Peugeot, overhauled; £19, exchange lightweight.—Lawton, 2, Whiteheads Grove, Chelsea. [8272

PEUGEOT 6h.p. Twin, Bosch, Senspray, ride away; £6.—1, Albert Cottages, Marlborough Rd., Old Kent Rd., S.E.1. [8625

### Premier.

T.T. Premier 3½h.p. 1914, fast, sporty, 100 m.p.g.; £35.—14, Boundaries Rd., Balham. [8474

*Spare Parts:*

PREMIER Parts in stock.—Alf. Holland, Hearsall Lane Corner, Coventry. 'Phone, 1945. [9008

PREMIER Spares and Repairs.—We are the most competent advertisers of these, as we served in the Premier works. Any part quoted per return.—Forfield Motors, Forfield Place, Leamington Spa. [7362

### Quadrant.

1920 4h.p. Quadrant combination, genuine bargain, trial given; £70.—Ross, 86, High Rd., Lee. [8751

1921 Chain-drive Quadrant Combination, perfect, all accessories; £70.—31A, Comptoa Rd., Wakeman Rd., N.W.10. [8386

QUADRANT £100 4½h.p. Combination, delivery from stock.—Frank Whitworth, Ltd., Distributers, 139, New St., Birmingham. [0767

QUADRANT, immediate delivery of 1922 models. Exchanges; extended terms arranged.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0072

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Quadrant Motor Cycles, all-chain solo, £85; sidecar combination, £105; easy payments and exchange; list on application. 'Phone: Holborn 5777. [8066

CLIFFORD WILSON Mfg. Co., Quadrant Works representatives and sole wholesale distributors for London, Middlesex, Surrey, Sussex, Kent, Essex, Buckinghamshire, Hertfordshire, Bedfordshire, Norfolk, Cambridgeshire, Suffolk, Huntingdonshire, Berkshire, etc. All models in stock. Early delivery. Deferred payments. Exchanges. Chain-cum-belt 4½h.p. solo, £80. All chain solo, £85. Chain-cum-belt combination, £100. All chain combination, 100gns. Lucas dynamo lighting sets 16gns extra. Official repairers and spare part stockists. Day and night service.—177, Westminster Bridge Rd., London, S.E.1. Tel.: Hop 210. [6633

### Radco.

2¼h.p. Radco, good condition, trial; 20 gns.—Chappell, 6, Thorley St., Bishop's Stortford, Herts. (P) [8108

RADCO, 2¼h.p., belt drive, Amac, low, first deposit secures; 19 gns.—53, Swaffield Road, Wandsworth. [8642

RADCO, overhauled, smart, electric lighting, discs, ride away; £18, bargain.—H. H. K., 151, Caledonian Rd., King's Cross. [8271

NEW 1922 Radco Lightweights, all fitted with the new 2½h.p. 247 c.c. engine, now in stock; single gear, £35/14; 2-speed, £42; 2-speed clutch, kick starter, £47/5; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [8964

### Raleigh.

RALEIGH.—Early delivery of all models.—Pickering, Shrewsbury. [8598

RALEIGH.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7230

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH Combination, fully equipped; £75.—Ratcliffe Bros., 200, Great Portland St., W.1. [8797

1919 Countershaft Triumph, disc wheels, lamps, horn; £65.—317, King St., Hammersmith. [8195

TRIUMPH Combination, 1920, fully equipped; £85. —Dawe, 216, Portobello Rd., North Kensington. [8587

TRIUMPH Combination 3½h.p. Armstrong, 3-speed, licensed, perfect; £50.—Ash Villa, Bushey Heath. [8413

TRIUMPHS.—A fine assortment of all models in stock at prices to suit all.—Ross, 86, High Rd., Lee. [5020

1918 4h.p. Countershaft Triumph, fully equipped; £48.—9, Wallingford Avenue, North Kensington. [8493

TRIUMPH, late model, countershaft, Paragon folding sidecar, as new; £75.—16, Elsden Rd., Tottenham. [8938

JUNIOR Triumph, unscratched, done few miles, accessories.—Write, Hill, Acre House, Kempsey, Worcester. [8140

1919 Triumph, 4h.p., excellent condition, all on; £60.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [8734

TRIUMPH Junior, 1921, new condition, tax paid; £45, rare bargain.—Bunting's Exchange, Wealdstone. [8713

TRIUMPH-GLORIA Combination, guaranteed, as new; £100, near offer.—33, Hackford Rd., Brixton, S.W.9. [8941

1916 Triumph Combination, really good order; £57/10.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [8868

BABY Triumph 1920, 2-speed, all accessories, tax paid, as new; £50.—"Elmcroft," Farnborough, Kent. [8174

1912 Triumph Combination, clutch and Philipson pulley, lamps, horn; £40.—317, King St., Hammersmith. [8197

£27/10.—Triumph 3½h.p., 3 speeds, clutch, accessories, Bosch magneto, real reliable lot.—8, High St., Wandsworth. [8547

1920 Triumph Combination, electric lights, screen, as new; £85.—Levitt, 80, Streatham High Rd. 'Phone: 2701 [8911

TRIUMPH.—Genuine 1911 I.O.M. T.T. model, short wheelbase, very fast, licensed; complete, £35.—Wall, Ranworth, Horley. [8512

1921 Triumph 4h.p., Model H, in splendid condition, lamps, horn, licence paid; £78.—Tipden, Marden, Kent. [7459

F.O.C.H. have 1922 Triumph Model H. in stock; also 1920 Combination.—5, Heath St., Hampstead. (Near Tube.) [8323

TRIUMPHS.—Several Countershaft Triumphs from £45; also quantity spare parts.—Hole, 129, Park Lane, Wallington. [8658

TRIUMPH 1914, 3 speeds, clutch, perfect condition, tax paid, fully equipped; quick sale, £35.—365, King St., Hammersmith. [8771

TRIUMPH Combination, 1919, Model H., 3-speed, 4h.p., excellent condition; 69 gns.—Longman Bros., Bond St., Ealing. [8955

EXCELLENT 3½h.p. 1913 clutch model Triumph, all on, bargain, must sell; £30.—14, Tottenhall Rd., Palmers Green, N.13. [8288

TRIUMPH Combination, 4h.p., 3-speed, K.S., snip; £45; exchange Clyno Combination, Level.—534, Fulham Rd., Walham Green. [8403

TRIUMPH 2-stroke, slightly soiled only, equipped, £45; 4h.p. sports, only run 200 miles, £58.—Clark, 7, Exhibition Rd., S.W.7. [9003

3½h.p. clutch Triumph, splendid running order, all on, £38; new Grado gear, kick start, for same, £5.—Shepherd, Sunburys, Billericay. [8233

1921 Baby Triumph; fully equipped, tax paid, overhauled by Triumph Jan.; £45; exchange A.B.C.—37, Arlington Rd., Surbiton. [8632

1918 Triumph Combination, 3-speed, countershaft clutch and kick start, excellent condition; £75. —Rhind and Co., Stone Place, Rusholme. [8766

1921 Triumph Baby, 2¼h.p., 2 speeds, guaranteed as new throughout, tax paid; £48/10.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [8733

TRIUMPH 1922 all-chain models in stock. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7511

TRIUMPH-GLORIA Combination, late 1919, Easting, lamps, etc., fully licenced, original tyres; £80 lowest.—Wiles, Littlestone-on-Sea, Kent. [8557

TRIUMPH and Sidecar, 1914, 3-speed gear, clutch, lamps and speedometer, in splendid condition; £37/10.—10, Freshford St., Earlsfield, S.W.18. [8660

LONGMAN BROS., Bond St., Ealing. Telephone: 689. Official district agents.—All Triumph models. Cash, exchange, or deferred payments. [5787

1918 Triumph, 4h.p., November, 1921, engine, new gears, lamps, horn, licensed, and fully insured: £60 or nearest.—Elkington, East Wharf, Cardiff. [8476


# Officers' Regulation TRENCH COATS at 65/- each.

Post 1/3 extra.

**BRAND NEW, TRIPLE-PROOFED GOVERNMENT GABARDINE, OIL-SKIN** Interlining, Smart Check Lining, and Heavy **DETACHABLE WOOL FLEECE** Lining. **FOUR COATS IN ONE.**

Absolutely Waterproof. Ideal Garment for Motoring, Motor Cycling, Fishing, or Walking. We have purchased a large quantity of these Coats, but once sold it will be impossible to repeat them at this price. Actual value to-day: £7 - 7 - 0.

*One of many Unsolicited Testimonials:*

Dear Sir, Denbigh,

The trench coat you sent is very satisfactory and excellent value. I shall not besitate to recommend if I get the opportunity.—J.P.W.

*Delivery guaranteed within 7 days of order, and money returned if not perfectly satisfied.*

**SIZES: Chest, 34in. to 44in. Height, 5ft. 3in. to 6ft. 4 ins.** Please state size required.

# SOUTH AFRICAN FIELD BOOTS

(ANKLE)

**20/- per pair.** Post 1/3 extra

SPECIFICATION: BLACK CHROME CALF or SUPERIOR TAN CALF UPPERS, Leather lined throughout, Standard screwed and sewn, Stitched round heel, Full Waterproof Double Tongue, Extra Stout Sole. Broad fitting, Uppers soft and pliable. The finest Pound Boot on the market.

**Sizes: 6, 7, 8, 9, 10 and 11's. Prompt Delivery. Money returned if not satisfied**

Cheques, Money Orders, and Postal Orders should be crossed and made payable to:

## ERNEST MANNERS

**GOVERNMENT SURPLUS STORES, 4, WINDMILL LANE,**

## RUGBY, Warwickshire.

Bankers: Lloyds, and London City and Midland.


## MOTOR CYCLES FOR SALE.

### Triumph.

1920 countershaft Triumph, 4h.p., Milliford sidecar, complete, excellent condition, nearest offer £75. —6, Thurlow Rd., Elthorne Park Rd., Hanwell, W.7 [8453

COUNTERSHAFT Triumph, 3-speed, etc., K.S., clutch, perfect condition, guaranteed, makers' colours, snip; £45.—33, Hackford Rd., Brixton, S.W.9. [8940

£38.—1918 T.T. Triumph (engine 52,616), as new, fully equipped, owner must realise; genuine bargain (unemployed).—121, Acton Lane, Chiswick, W.4. [8619

TRIUMPH, 4 h.p., renovated by makers July, 1920, 3 speeds, K.S., lamps, splendid condition, mileage 1,600; £70.—Noble, 110 Mill Lane, West Hampstead [8293

TRIUMPH C.B. Combination 1914, excellent running order; sell cheap for cash, or exchange lightweight, condition immaterial.—108, The Crescent, Slough. [8397

TRIUMPH 1920 3½h.p. Sports models (2) in new condition, accessories; £55 each.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7522

1913 Triumph, decompressor, enclosed Bosch, modern tank, lamps; £25, quick sale.—Simpson, Orchard Rd., near Reservoir Inn, Sunbury-on-Thames. [8532

1918 Triumph Combination, brand new sidecar, screen, lamps, beautiful condition throughout; £67/10.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [8935

1919 (Oct.) Triumph and Coach-built Sidecar, 3 lamps, spares, and Easting screen, perfect condition; £85 complete.—P. Pocock, Cold Ash, Newbury, Berks. [8448

TRIUMPH late 1918, perfect condition, original tyres not worn out, lamps, tools, complete; £70, no offers; Ramsgate.—Apply, Box 8602, c/o *The Motor Cycle*. [8130

1916 Triumph, 4h.p., countershaft, in really nice condition throughout, complete with lamps, horn, tools, etc.; £48.—Clark, Old Palace Yard, Richmond, Surrey. [8460

TRIUMPH, late 1919, delivered 1920, 4h.p. countershaft, footboards, touring bars, fully equipped, splendid condition, tax paid; £68.—30, Crystal Palace Park Rd., Sydenham. [8629

1921 Triumph-Junior 2¼h.p., 2-stroke, 2-speed; list price £65; this machine is brand new, and is offered at the special price of £55.—The Layton Garages, 30, Holywell St., Oxford. [7816

1921 3½h.p. Triumph, single-speed model, special forks, absolutely brand new, shop-soiled only; offered at the bargain figure of £65.—The Layton Garages, 30, Holywell St., Oxford. [7815

TRIUMPH 1922 Model SD, 4h.p. chain drive, £115; Model H, chain-cum-belt, £110. Immediate delivery from stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0074

BARKER'S Motors can supply all Triumph 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6420

TRIUMPH 4h.p. Combinations. We always have several of these outfits in stock at attractive prices. Exchanges. List on request.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7524

TRIUMPH 1921 (June), Grindlay sidecar, hood and screen (cost £45), all lamps, tax paid year, insured, condition as new (mileage 500): £120 or offer, by appointment.—3, Chatsworth Avenue, Wembley Hill, Middlesex. [8381

EXCHANGES.—Brand new Sports Triumph; £70, bargain. 1919 4h.p. countershaft, really exceptional, accessories, engine 60,590; 60 gns. 1920 Baby Trimph, excellent; £42.—Kent's, 417, Lord St., Southport. [8678

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Triumphs: 4h.p., all-chain models, 3-speed, £115; 4h.p. chain and belt, £105; 2¼h.p., 2-stroke model, £65; 4h.p combination, £145; easy terms and exchange. Holborn 5777. [8070

1921 Triumph Gloria combination, Model H, lamps, Cowey speedometer, unpunctured, sidecar, and solo sprockets; under 2,000 miles; Brockes' leggings, luggage box, guaranteed perfect; £125, offers.—22, Bourntille, Goole. [8618

1920 Triumph-Gloria, sidecar, speedometer, horn, mirror, lamps, generators, Easting screen, spare belt, tube, full kit, under 9,000 miles, licenced to December, splendid condition; sacrifice £100.—Parkes, Priory St., Monmouth. [8554

1921 Triumph, Countershaft, Lucas £8/8 lighting set specially mounted, Terry pillion seat, Cowey speedometer, mileage 2,000, F.E.W. valve attachments, tax renewed, stored since October; £95.—Lieut. Barraclough, 46, Tresillian Rd., Brockley, S.E.4. [8988

TRIUMPHS, all models, expert repairs agent, Nicholson Smith (late of Triumph Cycle Co.), Barlow Moor Rd., Chorlton-cum-Hardy, Manchester. All chain combination, electric lighting, mileage 2,000, fully guaranteed, £125; type H. combination, all on, £80, guaranteed. [8217

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH, 1919, 3 speeds, countershaft, clutch, kick starter, beautifully polished crankcase and gear box, enamel and plating equal to new; fast and reliable, and the smartest machine on the road; 79 gns., or exchange and cash.—53, Swaffield Rd., Wandsworth. [8645

TRIUMPH Agents.—1922 Models in stock: 4h.p., belt and chain drive, £105; 4h.p., all-chain drive, £115; 2¼h.p., 2-stroke, £65; 3½h.p., fast roadster, £120; in stock; easy payment terms and exchanges arranged.—Catalogues and full particulars from Herbert Robinson, Ltd., Green St., Cambridge. [8349

1921 Triumph (issued new October), model H, fitted with Watsonian sidecar, fully equipped with lamps and horn, indistinguishable from new, very small mileage, originally cost £142; offered at the bargain price of £108, cash. Several other current model Triumph combinations available at below bargain prices.—The Layton Garages, 30, Holywell St., Oxford. [8967

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

HERBERT ROBINSON, Ltd., Green St., Cambridge.—The Triumph Experts. Complete illustrated lists post free. [8641

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [7392

TRIUMPH Official Service Agent in West of England. Every part in stock.—Moffat, Town Hall Garage, Yeovil. 'Phone, 50. Traders please note. [8239

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Trump.

WAUCHOPE'S, 9, Shoe Lane, London.—Trump-Jap, 2¾h.p. engine; £60; easy terms and exchange [8071

### Tyler.

MUST sell, reliable 2-speed Tyler-Precision Lightweight, equipped, overhauled; best offer secures. —16, Wooler Rd., Weston-super-Mare. [8762

### Velocette.

1922 Velocette.—Immediate delivery of any model from Premier Motor Co., Aston Rd., Birmingham. [8965

WAUCHOPE'S, 9, Shoe Lane, London, E.C.—All 1922 Velocette models supplied on easy terms and exchange. [8072

MRS. JENNISON'S special racing Velocette Peter, 70 m.p.h., with additional touring cylinder, etc.; nearest offer £70.—217, Hainton Avenue, Grimsby. [8770

1921 Velocette, 2-speed, 2-stroke, 2¼h.p., mechanical lubrication, machine is brand new; a genuine bargain at £52/10 cash.—The Layton Garages, 30, Holywell St., Oxford. [8975

ORDER Your Velocette from G. H. Tucker, Redcliffe Hill, Bristol, carriage paid to any address in England; your mount taken in part payment for one of these wonderful machines.—'Phone: 4042 Bristol. [5204

ASTOUNDING value.—Special offer of brand new 1921 model D.2 Velocette, latest improvements, 3-speed, chain drive; £55. Carries maker's full guarantee; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [7923

### Verus.

48 GNS.—1921 Verus Blackburne, 2¾h.p., Sports model, 3-speed, close ratio, S.A. gear box, clutch, equipped, fast.—20, Treen Ave., Hoggers Corner, Barnes. [8503

### Vindec.

VINDEC-SPECIAL 5-6h.p., stored five years; sacrifice, £12.—Whittock, Council Houses, Radstock. [8102

### Wooler.

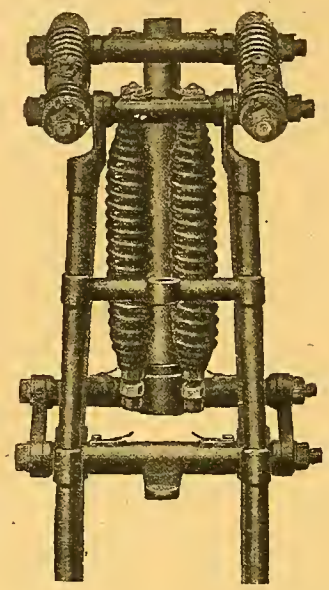
1920 Wooler, lamps, tools, etc., 150 m.p.g.; £45.—Shepherdson, Reading Rd., Wokingham, Berks. [8444

WOOLER 1921 2¾h.p., 3-speed, all-chain drive, £63; also 1920 Standard Model, £47; exchanges. —Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [9000

### Yale.

5-6h.p. Yale, countershaft, very fast, renovated like new, bargain; £34.—Ross, 86, High Rd., Lee. [8755

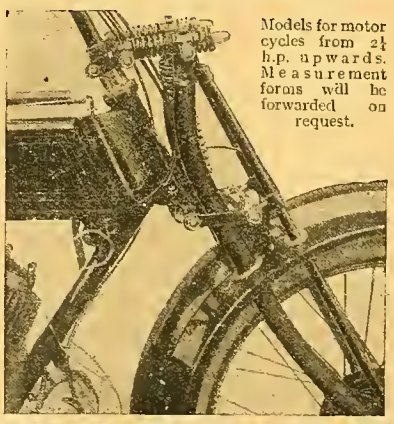
# The BRAMPTON Bi-Flex SPRING FORK.



## An appreciation and a resolution: — *Extract of letter dated 13/1/1922, received from the rider of an 8-h.p. machine fitted with the "BRAMPTON" Bi-Flex Spring Fork.*

"I may say that the Forks are the very finest I have ever ridden on, and I can keep up a higher pace on bad roads than I could on any other machine I have ever tried. When riding with friends, I have many times had to slow down owing to their inability to stand the bad roads, whereas I have considered the going quite comfortable. I shall specify your Forks on whatever machine I go in for next."

## BRAMPTON Bros., Ltd., Oliver Street, BIRMINGHAM.



Models for motor cycles from 2½ h.p. upwards. Measurement forms will be forwarded on request.

## MOTOR CYCLES FOR SALE.

### Zenith.

ALLAN GRUZELIER, Specialist in Zenith motor cycles.

1921 5h.p. Sports model, bargain; £65

1921 5h.p. Countershaft model, another bargain; £75.

I HAVE many other bargains, too numerous to tabulate here, and add daily to my long list of delighted clients by such offers as above.

1922 3-speed Bradshaw model, £119; Gradua gear model, £113.

MAY I have the pleasure of meeting you to-morrow?

ALLAN GRUZELIER, Ulster Chambers, 168, Regent St., 'phone, Regent 205, and Knight and Wheatley's Garage, 4, The Pavement, Coulsdon. 'Phone, Purley 1277. [8812

1915-16 5h.p. Zenith, clutch model, very fast; £56. Ross, 86, High Rd., Lee. [8753

ZENITH, model D, shop soiled, £100.—Ratcliffe Bros., 200, Great Portland St., W.1. [8796

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Zenith-Bradshaw; £113; easy terms and exchange. [8073

ZENITH.—Special offer 1922 5-6h.p. sports model, new, guaranteed; £76.—Clark, 7, Exhibition Rd., S.W.7. [9005

1919 Sports Zenith, topping appearance, sound 'bus, absolute gift; £56; exchanges.—Kent's, 417, Lord St., Southport. [8680

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, for immediate delivery from stock of Zenith-Bradshaw; price £119. [0711

ZENITH 4h.p. J.A.P., fully equipped, new Dunlops, £12 overhaul, like new; £55; must sell.—Offers, Upperstonehurst Farm, Lingfield. [8161

ZENITH, July, 1921, 5h.p., countershaft, Gradua, hand clutch, electric lighting, faultless; £75.—Warren, 193, Ponders End, Middlesex. [8507

ZENITH-BRADSHAW.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7240

ZENITH, 8h.p., Sports, mileage 3,000, as new and perfect, electric light, Cowey horn, a genuine bargain; £75.—Lambert, Brenchley, Kent. [8696

NEW Machines.—6h.p. Zenith, 1920, countershaft, clutch model, shop soiled; £110.—Motorists' Advisory Agency, Ltd., 89, Wigmore St., W. [8809

F.O.C.H. have 1922 Zenith-Bradshaw, 3-speed, all chain, in stock; also 1920 8h.p. countershaft combination.—5, Heath St., Hampstead (Near Tube.) [8322

ZENITH-BRADSHAW 1922 all-chain drive models for immediate delivery. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80 [7514

1921 8h.p. Zenith Countershaft Combination, fully equipped, perfect condition; £90, no offers.—James, 91, Abingdon Rd., Kensington; appointment. 'Phone: Western 1344. [8433

1915 Zenith, 3½h.p. to 4h.p. Sports model Combination, coachbuilt sidecar, windscreen, lamps etc., recently overhauled; £65.—S. Marshall, 3, Roding Rd., Clapton Park, E.5 [8294

ZENITH 8h.p. Combination, clutch model, late 1920, condition perfect, electric lighting, Cowey speedometer, screen, etc., many spares, bargain; £125. Dickinson, 125, Newport Rd., Stafford. [8633

ZENITH 1921 Countershaft 5-6h.p., new type engine, Lucas lamps, Cowey horn, speedometer, as new, £85; 1920 8h.p. sports, Swan sidecar, equipped, perfect, £78.—Clark, 7, Exhibition Rd., S.W.7. [9004

1922 Zenith-Bradshaw in stock for immediate delivery; £118; cash, exchange, or extended payments.—Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0734

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free. Cash deferred or exchanges.—194, Balham High Rd., S.W.12. [6416

1922 3½h.p Zenith-Bradshaw Gradua Gear Model, fully equipped, best accessories, and tax paid, guaranteed not been 200 miles, and indistinguishable from brand new; cash £98.—Walbro' Motor Cycle Co., Saffron Walden. 'Phone: 45. [8992

1921 Zenith 5h.p Sports model, fully equipped with lamps, horn, speedometer; this machine is a truly excellent specimen of this make, and is guaranteed perfect; offered at the very special price of £75 for cash.—The Layton Garages, 30, Holywell St., Oxford. [7817

ZENITH 8h.p. Countershaft late 1920 model Combination, latest Swan sports sidecar, Avro windscreen, disc wheels, long polished copper exhaust pipe, recently overhauled and guaranteed in perfect condition, new tyres and belt; bargain, £100, view and trial by appointment.—Giles, 11, Fitzroy Square, W.1. [8111

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Zenith.

1921 Zenith 8h.p. countershaft Combination, complete, all Lucas lamps, equal to new, very little used, many improvements, a very smart outfit; £120.—Harris, 14, Gt. Marlborough St., W.1. [8786

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7222

### Ladies' Motor Cycles.

DOUGLAS 1915 Ladies 2¾h.p., K.S., fully equipped, new tyres, perfect; £25 gns.—54, Coval Rd., Portlake. [8531

LADY'S Douglas, 1915, 2¾h.p., 2-speed, clutch, kick start, complete, licensed 1922; £40.—Moffat, Douglas Expert, Yeovil. 'Phone, 50. [8237

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

VELOCETTE, lady's open frame, 2-speed, all-chain drive, mechanical lubrication, Amac carburetter, leg shields, lamps, horn, mirror, complete, splendid order and appearance; £40; (Birmingham).—Box 8674, c/o *The Motor Cycle*. [8343

VELOCETTE 1922, Model E.L.2, open frame, clutch, kick starter, is the ideal lady's mount; all black waterproof finish, clean to ride in all weathers; £68; easy payments 4% extra; illustrated catalogue on request.—Premier Motor Co., Aston Rd., Birmingham. [8966

### Miscellaneous.

WANDSWORTH Motor Exchange.—Great bargains in motor-cars, landaulets, 2-seaters. Your own prices.

WANDSWORTH.—Easy terms. Easy terms. First deposit secures immediate delivery. Any car.

WANDSWORTH.—1920 Tamplin 2-seater, 8h.p., J.A.P., 3 speeds, everything fitted; 79 gns.; exchanges.

WANDSWORTH.—1914 Humberette, 2-seater, 8h.p., 3 speeds, hood, screen, lamps; 69 gns.; exchanges.

WANDSWORTH.—1914 Humberette, 2-seater, almost new car, everything fitted, unscratched; 65 gns.; exchanges.

WANDSWORTH Wolseley landaulet, 4-cyl., flush-sided, bulbous-back, Stepney, lamps; 59 gns.; exchanges.

WANDSWORTH.—Panhard landaulet, 4-cyl., 4 speeds, Stepney, lamps, drive away; 85 gns.; exchanges.

WANDSWORTH.—1915 Belsize London Taxi-cab, 10-12h.p., 4-cyl., Stepney, lamps; 195 gns.; exchanges.

WANDSWORTH.—1918 Morgan 2-seater, 8-10h.p. J.A.P., hood, screen, lamps; 85 gns.; exchanges.

WANDSWORTH.—Violette, nice 2-seater, 4 speeds, reverse, hood, screen, lamps; 68 gns.; exchanges.

WANDSWORTH.—A.C. sociable 2-seater, 5-6h.p., 2 speeds, hood, screen, lamps; 39 gns.; exchanges.

WANDSWORTH.—Tribet (coupé), 10-12h.p., 4-cyl., 4 speeds, spare wheel, lamps; 89 gns.; exchanges.

WANDSWORTH.—A.C. tradesmen's box carrier, detachables, good tyres, drive away; 49 gns.; exchanges.

WANDSWORTH.—Easy terms.—Wandsworth Motor Exchange, Ebner St., Wandsworth (town station). 'Phone: Latchmere 4686. [8831

BARGAINS.—New O.K.'s, Ariels, Harleys, Omegas Quadrants; exchanges entertained. — Booths Motories, Halifax.

BARGAINS.—1920 Matchless combination, detachable wheels, £130/10/6; 6h.p. Zenith combination, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6.—Booths' Motories.

BOOTHS' Bargains.—1920 Sun, 2 speeds, clutch, £39/10/6; 4-cyl. F.N., 2 speeds, £22/10/6.

BOOTHS' Bargains.—Harley-Davidson combination, mileage 300, £139/10/6; free engine Triumph, £22/10/6.

BOOTHS' Bargains.—1920 Wooler, £49/19/6; 3h.p. 2-speed Enfield, £29/10/6.

BOOTHS' Bargains.—8h.p. Premier combination, £49/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—Matchless combination, 3-speed, countershaft, £69/10/6; 1920 3½h.p. Ariel, £69/10/6.

BOOTHS' Bargains.—4h.p. Douglas's, £55/10/6; another, £59/10/6; 1914 4h.p. Douglas combination, electric, £85/19/6.

BOOTHS' Bargains.—1920 8h.p. Tamplin, £79/10/6; 1920 Morgan De Luxe, £165/10/6, cost £250/10; nearly new Ariel combination, £85/10/6; new 3½h.p. 3-speed Ariel, £87/10/6; new 4½h.p. Quadrant combination, £100; several others, cheap; push cycles taken exchange.—Booths' Motories, Portland Place, Halifax. 'Phone: 1062. [5146


# MANUFACTURERS' SPECIAL OFFER.
## Extraordinary Bargains!

Fig. 1

**WATERPROOF MOTOR CYCLE SUIT (Fig. 1).**

Fawn double texture material, interlined rubber, seams cemented and taped, wind cuffs, wind gusset in overalls, and clasp fasteners. Guaranteed waterproof.

**SUIT COMPLETE 35/-**

**POST YOUR ORDER EARLY**
Any of these garments sent carriage paid. Prompt despatch.
**OUR GUARANTEE.** Money refunded in full if not thoroughly satisfied.

**WATERPROOF TRENCH COAT 25/-**

(Fig. 2) Fawn material, rubber lined wind cuffs, guaranteed waterproof.

Fig. 2

**SEAT-LESS Trousers** Fawn double texture material rubber interlined, wind gusset, & clasp fasteners. All sizes.

**18/-** per pair.

**WATERPROOF OVERALLS.**
Double texture material, clasp fasteners, perfectly waterproof.

per **15/-** pair.

*If you cannot call, send money with breast measurement and height.*

**Actual Manufacturers:**
**Martin Waterproof Co.,**
**208, Oldham Rd., New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### Miscellaneous.

JONES Garage.—1920 3½h.p. Ariel Combination, fully equipped, showroom condition, mileage under 1,000, absolutely as new; £80.

JONES Garage.—Brand new 1921 Magdyno Enfield Combination; to clear, £13 under to-day's price, £145.

JONES Garage.—Almost new late 1920 4-cylinder Henderson, with extra large canoelet sidecar, would make an excellent 2-seater, fully equipped, including rear drive speedometer, absolutely as new; £135.

JONES Garage.—1914 3½h.p. Humber, with Mills-Fulford coachbuilt sidecar, 3-speed, kick start and clutch, fully equipped; £40.

JONES Garage.—Late 1919 3½h.p. P. and M. Combination, fully equipped with Lucas accessories. This is not one of the W.D. duds, but a machine that left the works in September, 1919, has not done 2,000 miles, and is in showroom condition; £65.

JONES Garage.—1920 4½h.p. chain-drive Quadrant Combination, fitted with Easting, Lange and P. and H. lamps, screen, horn, all absolutely as new; £80.

JONES Garage.—Brand new 3½h.p. Rover Combination, simply shop-soiled, 3-speed, kick start; to clear, £99.

JONES Garage.—Late 1921 7-9h.p. Matchless Combination, spare wheel, Lucas lighting; a real bargain, £130.

JONES Garage.—Late 1919 3½h.p. Sunbeam, absolutely as new, fully equipped with Lucas accessories; a real bargain at £90.

JONES Garage.—1920 4h.p. Triumph, not W.D., but as it left the works, exactly as new, fully equipped; £85.

JONES Garage.—1913 Triumph, 3-speed and kick start, fitted with a very nice coachbuilt sidecar, and fully equipped, a real good pre-war outfit; £40.

JONES Garage.—All the above machines will have the 1922 licence paid, and will also carry our usual 6 months' guarantee.

JONES Garage can supply any new or second-hand machine on earth; send for our list.—Jones Garage, The Broadway, Muswell Hill, London, N.10. [9011

ALLBER Garage, Thornsett Rd., Earlsfield, London, S.W. (opposite Earlsfield Station, L.S.W.Ry.). 'Phone, Latchmere 4388. Easy terms, no extra charge where a fair amount is deposited; immediate delivery, no inquiries; satisfaction our motto.

ALLBER.—James 2-stroke, 1919, 2 speeds, all accessories, in good order, a bargain; £35.

ALLBER.—Sun-Villiers, 1916, 2¾h.p., all accessories, in good order; £25.

ALLBER.—1919 Douglas, 4h.p., 3 speeds, clutch, kick starter, new tyres, all accessories, in splendid condition; £58.

ALLBER.—1916 Calthorpe-Jap, 2½h.p., 2 speeds, complete with lamps, etc., in good order; £28.

ALLBER.—1914 B.S.A., 3½h.p., 2 speeds, clutch, all accessories, in excellent condition; £32.

ALLBER.—Levis, 1916, 2¼h.p., 2 speeds, all accessories, good tyres; £32.

ALLBER.—1920 New Hudson, 2-stroke, 2 speeds, leg shields, full equipment, tax paid 1922, absolutely as new; £35.

ALLBER.—1914 Humber Combination, 4h.p., 3 speeds, clutch, kick starter, coach sidecar, all lamps, horn, etc., in beautiful condition, new tyre; £42.

ALLBER.—1918 P. and M. Combination, 3½h.p., 2 speeds, clutch, kick starter, coach sidecar, all accessories, complete, and in good condition; £48.

ALLBER.—1920 Henderson Combination, dynamo lighting, speedometer, 2 horns, Grindlay de Luxe spring-wheel sidecar, aluminium front, adjustable windscreen, rear carrier box, storm apron and side curtain, kit of tools, etc., absolutely as a new outfit; £125; tax paid.

ALLBER.—Enfield Combination, 1916, 2-seater sidecar, 8h.p., thoroughly overhauled, new pistons and cylinders, small mileage, stored 2½ years, speedometer, lamps, horn, etc., complete, in new condition throughout; £80.

ALLBER.—1921 Blackburne Combination, 4h.p., 3 speeds, etc., sporting sidecar, windscreen, speedometer, all lamps, horn, etc., tax paid; £80; in new condition. [8787

MATCHLESS Bargains.—1920 Matchless combination, all on, £110; 1920 Zenith 8h.p. combination, all on, £115; 1920 Enfield combination, all on, £110; 1920 5.6h.p. Rover combination, all on, £95; 1920 6h.p. Ariel combination, all on, £80; 1920 Douglas 4h.p. combination, all on, £100; 1921 5h.p. Sports Zenith, as new, £75; 1921 8h.p. Chater-Lea combination, dynamo lighting, all brand new, £150; 1920 Douglas 2¾h.p. 3-speed, clutch, all on, £65; 1921 Royal Ruby, spring-frame, 3h.p., £65; brand new Montgomery sidecar, Harley finish and fittings, £20; ditto, Triumph finish, £20; 1922 Morgan-Popular, £150.—Batchelor's, 36, Clarence St., Kingston-on-Thames. 'Phone, 1809. [3981

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

WALBRO'S Startling Offer!!—We guarantee to accept back any of the following motor cycles if in reasonable condition, and to allow the full cash price paid in part exchange for any new machine in stock of similar or higher horse-power any time within 6 months from date of purchase. Think this over. It means you have the use of a motor cycle for 6 months for nothing.

WALBRO.—1920 Morgan de Luxe, 8h.p. water-cooled engine, speedometer, disc wheels, hood and screen, all lamps and horn, very fast and will climb most hills top gear; £140.

WALBRO.—1921 Morgan de Luxe, 10h.p. water-cooled M.A.G. engine, fully equipped as above; appearance and mechanical condition equal to new; £150.

WALBRO.—6-7h.p. B.S.A. Combination, big B.S.A. sidecar with windscreen, best Lucas lamps all round, all wheels interchangeable, spare wheel and tyre; this is a very powerful lot and equal to new; £140.

WALBRO.—1918 4h.p. Douglas, 3 speeds, K.S., all lamps and horn, guaranteed perfect in every way; £65.

WALBRO.—5h.p. Zenith, J.A.P. engine, variable gears with clutch and kick starter, all lamps and horn; appearance and mechanical condition exceptionally good; £65.

WALBRO.—1912 3½h.p. Triumph, free engine, model, all lamps and horn, condition very good; £35.

WALBRO.—1912 3½h.p. Rover, 3 speeds and free engine, all lamps and horn; a cheap lot; £30.

WALBRO.—1913 3½h.p. Triumph, free engine model, fitted with new tyre, disc wheels, lamps and horn, plate and enamel equal brand new, very smart; engine is as new and very fast; one of the best we have had; £40; or, if fitted with new N.S.U. 2-speed gear, £45.

WALBRO.—1915 5h.p. Indian Combination, coach-built sidecar, 3 speeds, all lamps and horn; £50.

WALBRO.—1¼h.p. Auto Wheel, complete, only been 100 miles and is perfect; £15.

WALBRO.—1912 2¾h.p. Douglas, 2 speeds, wants some adjustments; £20.

WALBRO.—2¾h.p. Omega-Jap, 2 speeds, very fast, good tyres, and all lamps; £40.

WALBRO.—6h.p. Chater-Lea, J.A.P., new Burman 2-speed gear box, with kick starter, new tyre, Bosch magneto, cheap; £25.

WALBRO.—1921 2¾h.p. Diamond, J.A.P. engine, 2 speeds, all lamps and horn, little used, quite new and perfect; £45.

WALBRO.—We have a good stock of Brand New 1922 Models and invite your inquiries.

WALBRO Motor Cycle Co., Saffron Walden, Essex. 'Phone, 45. [8991

1920 4h.p. Harley, speedometer, lamps, tools, ride 80 miles to purchaser; £82.—2, Fortune Gate Rd., Harlesden, N.W. [8609

2¾h.p., 2-stroke, roller bearings, only done few miles, bargain; £5.—Weavers, 6, Burras Lane, Otley, Yorks. [8692

1¾h.p. Lightweight motor cycle, splendid running order; £18.—D. Gibbons, Holywell Lake, Wellington, Somerset. [8138

HALIFAX.—50 second-hand machines and combinations; keen exchanges; get list.—Motor Exchange, Horton St., Halifax. [8741

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction distance immaterial.—Bunting's Motor Exchange, Wealdstone. [6945

F.O.C.H. for second-hand cycles, combinations, and runabouts at bargain prices. Exchanges arranged. Any new cycles, combinations, or car supplied, cash or deferred payments.—Fair Offer Car House, 5, Heath St., Hampstead. (Near Tube.) 'Phone, Hampstead 3752. Hours 9-7, including Saturdays. [8326

TRIUMPH and Douglas Motor Cycles.—The Layton Garages offer the highest possible prices for good sound modern examples of these machines in part payment for any type of 1922 machine. Let us quote you before placing your order elsewhere.—The Layton Garages, 30, Holywell St., Oxford. 'Phone: 581 Oxford. [8976

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigden, 130, Euston Rd. [0795

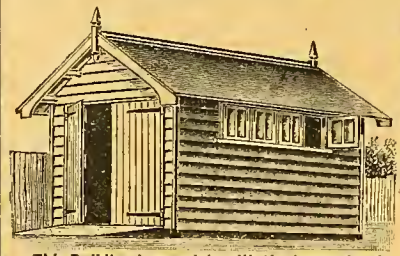
## MOTOR CYCLES WANTED.

WANTED, Late Solo; must be cheap, for cash.—89, East Hill, Wandsworth. [8622

LIGHTWEIGHT, late model, for cash.—Lowen, 26, Bryanstone Rd., Crouch End, N. [8561

# STOP

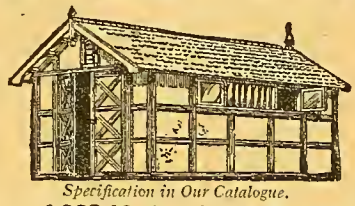
**at this and compare prices and quality. Invitation to inspect before purchasing.**



**This Building is complete with 1in. tongued and grooved floor, ⅜in. match-boards or weatherboards, 3in. framing, strong boarded roof, best pluvex felt. Building treated with weather-proof composition. Prices, complete and carriage paid to any station in England and Wales.**

| | | | | | |
|---|---|---|---|---|---|
| 8×6 | £8 0 0 | | 16×10 | £27 5 0 | |
| 10×8 | 1[illegible] 0 0 | | 18×10 | 33 0 0 | |
| 12×8 | 17 10 0 | | 20×10 | 37 10 0 | |
| 14×10 | 23 5 0 | | 20×12 | 40 0 0 | |

**OLYMPIA MODEL ASBESTOS BUILDING**



*Specification in Our Catalogue.*

| | | | | | |
|---|---|---|---|---|---|
| 12×8 | £23 10 0 | | 18×10 | £42 10 0 | |
| 14×10 | 32 15 0 | | 20×12 | 46 15 0 | |
| 16×10 | 37 15 0 | | | — | |

Delivered with iron roof complete. Fire-proof and sound proof.

| | | | | | |
|---|---|---|---|---|---|
| 10×8 | £14 10 0 | | 16×10 | £29 0 0 | |
| 12×8 | 18 10 0 | | 18×12 | 34 10 0 | |
| 14×10 | 25 0 0 | | 20×12 | 45 0 0 | |

*Heavy Specification and Light Prices.*

**Our unsolicited testimonials should create confidence.**

64, Dorrington Road, Lancaster.
*Feb.* 1, 1922.

Dear Sirs,—Motor House arrived safely and has given every satisfaction.

Yours faithfully,
J. WATTS.

27, Foxley Lane, Purley, Surrey.
*Feb.* 2, 1922.

Gentlemen,—I am very pleased with the Garage you sent me, and think it excellent value for the money.

Yours obediently,
W. GORDON-FOWLER.

"Waverley," Arthog Road, Hale, Cheshire.
*Feb.* 3, 1922.

Dear Sirs, — The "Walton" is to hand, and I need hardly say that the value is exceptional, and am very well pleased.

Yours obediently,
D. M. HANSON.

**Illustrated Catalogue Free.**

**SOUTH-WESTERN APPLIANCE Co.**
**High Street, Fulham, London, S.W.**
Telephone: PUTNEY 2771.

## MOTOR CYCLES WANTED.

WE ALWAYS Buy SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer,—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391. [0332

WE Are ACTUAL Buyers. PLEASE offer us your Motor Cycle or Combination. We pay cash on sight. Write, 'phone, or call.—Percy & Co., 314-316, Euston Rd., N.W.1. Museum 1337. [5995

CASH WAITING

COMBINATION or Solo, any make, any quantity. Best prices given.—Write, 'phone, or call, T. and B. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5564

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted, machine can be included in Auction Sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling commission, 7½%, not chargeable unless machine is sold. If no sale, a nominal auction fee is charged: For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Tel.: 208 Streatham. Telegrams: Palmer's Garage, Tooting. [8856

DOUGLAS or Single Zenith; bargain for spot cash.—61, Clarence Rd., Teddington. [8315

LIGHTWEIGHT 2-speed wanted, cheap for cash.—Mayville, Kingston-by-Sea, Sussex. [8151

£25-30 for best Lightweight offered; gears.—Taylor, 49, Trentham Rd., Longton, Staffs. [8179

WANTED, good Combination for cash, about 1919.—7, Central Hill, Upper Norwood. [8487

1920 or 1921 Medium or Lightweight Motor Cycle.—Box 8,685, c/o *The Motor Cycle.* [8889

WANTED, late Combination, Solo, or Morgan, cheap, for spot cash.—49, Well St., Hackney. [8634

8h.p. Combination 1921, Trandum sidecar preferred; private buyer.—3, Danecroft Rd., S.E.24. [8926

WANTED, Triumph Countershaft Model; must be cheap.—Tate, 23, Edward Rd., Gainsborough. [8191

WANTED, Motor Cycle, modern; cheap.—Write, Motor Cycle, c/o Hibbert, Newsagent, Slough. [8242

WANTED, good Solo or Combination, reasonable.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [6504

WANTED, good modern Combination, cheap for cash.—Ward, 6, Earlsdon Avenue, Coventry. [8990

INDIAN Scout, appearance immaterial if sound; cheap for cash.—Box 8663, c/o *The Motor Cycle.* [8249

MODERN Solos or Combinations for cash; highest prices paid.—Clark, 7, Exhibition Rd., S.W.7. [7846

WANTED, late model Combination, large, strong, perfect, cash.—Edward, 3, Balfour Rd., South Norwood. [8445

WANTED, Countershaft Combination, cheap for cash.—Send particulars, King, Egrove Farm, Oxford. [8906

WANTED, Triumph, 4h.p., also 2¾h.p. Douglas, late date, cheap for cash.—N. Clifton, Knockholt, Kent. [8701

CASH waiting for good lightweight and Triumph motor cycles.—C. G., 17, Birchington Rd., Kilburn, N.W.6. [8739

## MOTOR CYCLES WANTED.

WANTED, 4h.p. late Countershaft Triumph; £40-£50; S.E. district.—Box 8,686, c/o *The Motor Cycle.* [8900

CASH waiting for A.J.S., Enfield, or other first-class Combination, also Sports Solo.—88, Lord t., Southport. [8682

WANTED, P. and M. late, cheap for cash, unreconditioned machine considered.—M., 50, Chisick Lane, London, W.4. [8098

ATE 2¾h.p. Douglas, New Imperial, etc., also Morgan, 1921-22, water cooled, cheap, cash waiting. -H., 63, Solon Rd., Brixton. [8439

WANTED, 1920 Indian or Harley Combination; state price.—Smiths, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [8792

WANTED, 3½h.p. Countershaft Norton, B.S. or B.R.S. engine preferred, 1920-21, kick start.—oodeve, Plaistow, Bellingshurst, Sussex. [8275

INDIAN Solo or Combination, or other 8h.p. combination, 1920 or 1921; please give fullest particulars and lowest price.—New, Lambeg, Belfast. [8355

WANTED to purchase for cash, motor cycles and combinations; must be in good condition.—arker's Motors, 194, Balham High Rd., S.W.12. [7773

CASH Waiting; solo and combinations, good prices given.—Write, 'phone, or call, Edwards, 50, Harington Rd., South Kensington. 'Phone: Ken. 3709. [0604

CASH immediately for motor cycles, combinations, and light cars.—Seabridge, Hansler Rd., East ulwich. Call, write, or 'phone, Sydenham 2452. [8951

B.S.A. for cash; also Lightweight for microscope; student's splendid complete outfit, as new, £35 adjustment).—14, Royal Parade, Blackheath, London. [8662

WANTED, 6-8h.p. Twin Combination, Enfield, Matchless, Bat or B.S.A. preferred; must be liable and cheap.—Write, Box 8638, c/o *The Motor cycle.* [8203

WANTED, Matchless Combination 1921, H2 model preferred, must be first-class order; £110 to 120.—H. Roe, 48, Arden Rd., Finchley, N.3. 'Phone, entral 12780. [8886

WANTED, your motor cycle or combination. We are buyers. Full market price given and cash paid on he spot. Write, call, or 'phone Museum 5938.—J. mith and Co., Motor Agents, Ltd., 52-54, Hampstead d., N.W.1. [0768

CASH on Sight for new and second-hand motor cycles and combinations, any make or condition.—Call rite, or 'phone, Short and Glass, Ltd., 485-493, Upper ichmond Rd., East Sheen, S.W. 'Phone: Richmond 362 and 2365. [0372

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Bradburys, Martinsydes, Zeniths.—Wandsworth Motor Exhange, Ebner St., Wandsworth (Town Station). Phone, Latchmere 4686.

4-CYLINDER F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted.—Wandsworth Motor Exchange, bner St., Wandsworth.

RED INDIANS, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth Town Station). [8830

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover r other light car. Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Blenheim St.), Bond St., W.1. Phone: Mayfair 6559. [0772

MOTOR Cycles bought, sold, or exchanged.—Longman Bros., Bond St., Ealing. 'Phone, 689. We buy for cash and will instruct our representative o call, inspect, and purchase on receipt of full particulars and lowest price. We only consider sound machines of good make. [8952

SEND your motor cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting.—Cash ffer telegraphed immediately on receipt. Nearest tation Wimbledon. We will collect from any London tation; machine can be included in auction sale if esired.—Sole address, Palmer's Garage, Tooting. [8859

## MOTOR SCOOTERS.

KINGSBURY Scooter and Spare Parts.—3, Kendall's Mews, Blandford St., W.1. [5499

WAUCHOPE'S, 9, Shoe Lane, London.—1¼h.p. Kenilworth Motor Cyclette, 1921; £35. [8079

MOTOR Scooter, 1¼h.p., thoroughly good condition, tax paid; £17.—5, Melrose Rd., Weybridge. [8299

SKOOTAMOTA, splendid condition; £25.—Apply, Garage, Winton Lodge, Streatham Common. [8216

MOTOR Scooter, A.B.C., perfect, reliable, little used; £18.—11, Hamilton Rd., New Brighton. [8312

BRAND new Autoped Scooter, dynamo lighting, 1½h.p.; bargain, £15 each.—Percy and Co., 14-316, Euston Rd. [5996

# WE PROMISED

**SOMETHING SPECIAL!**

# HERE IT IS!

**Brand New Unused 1921 Models clearing out regardless of cost.**

| LIST PRICE | | SALE PRICE |
|---|---|---|
| £226 | 1921 7/9 h.p. INDIAN Power-plus Combination, full electric equipment, speedometer, etc. Wonderful Value. | £140 |
| £184 9s. | 1921 6/7 h.p. B.S.A. Twin Combination, complete with spare wheel. A record value price. | £158 |
| £185 | 1921 8 h.p. MATCHLESS Combination, spare wheel and sidecar screen. Don't miss this chance. | £158 |
| £209 12s. ★ | 1921 8 h.p. REX Combination, Blackburne engine, all chain drive, detachable wheels and spare wheel. Startling value. | £125 |
| £182 | 1921 8 h.p. ENFIELD Combination, electrically equipped. Don't miss this chance. | £140 |
| £155 ★ | 1921 6 h.p. MARTINSYDE Combination, 3-speed, clutch, kickstarter. A gift. | £120 |
| £185 | 1921 4 h.p. VERUS Combination, Blackburne engine, Show model, with sporting sidecar and mahogany tool box. Nearly half price. | £105 |
| £115 10s. | 1921 3 h.p. CALTHORPE Combination, 2-stroke, 2-speed, electrically equipped. 50% reduction. | £65 |
| £112 ★ | 1921 3½ h.p. COVENTRY EAGLE, 3-speed, clutch and kickstart. Seize this opportunity. | £75 |
| £132 ★ | 1921 4 h.p. WILKIN, 3-speed, clutch, kickstart. Wonderful value. | £77 |
| £120 ★ | 1921 2¾ h.p. WILKIN Sports Model, all chain drive, 3-speed. Can you beat it? | £75 |
| £99 15s. ★ | 1921 2¾ h.p. MASSEY-ARRAN, Blackburne engine, 2-speed, disc wheels. Only one left, cannot be repeated. | £68 |
| £75 | 1921 2¾ h.p. DOUGLAS, 2-speed, lamps, horn and licence holder. Don't miss this chance. | £67 |
| £65 | 1921 2½ h.p. VELOCETTE, 2-speed, all chain drive. Compare our prices with others. | £50 |
| £110 | 1921 4½ h.p. B.S.A. Model H 2, 3-speed, clutch, kick-start, all chain drive. Grab it! | £93 |
| £42 | A number of brand new 4 h.p. DOUGLAS Sidecars, complete with screen, side curtains and lamp. Throwing away. | £20 |
| £27 10s. | A number of brand new MILLFORD Sidecar Chassis with 28"×3" wheel and tyre, specially made for 7 h.p. INDIAN spring frame, with left-hand kickstart. Never such value offered. | £14 |

★ **Denotes that this particular machine is at Glasgow Depot.**

**Take advantage quickly of those almost half-price offers, as the extreme value ensures that they will not stay long with us.**

# ALEXANDER'S

**113-115, LOTHIAN ROAD, EDINBURGH.**
**272-274, GREAT WESTERN ROAD, GLASGOW.**

## MOTOR ATTACHMENTS.

NEW Young Attachment, complete, ready for fixing; £10/10.—Linnell, Market Harborough. [3219

TWO Wall Anto Wheels, with or without cycles, in excellent condition; owner going abroad.—Box 8664, c/o *The Motor Cycle.* [8250

DECEMBER, 1920, Simplax Attachment, perfect condition throughout; £10/10, or near offer.—Maples, 10, Kingsmead Rd. South, Birkenhead. [8096

1921 Young attachment and special gent.'s bicycle, nearly new, great bargain; £20; cash wanted; would deliver free up to 50 miles.—15, Broadway Market, Barkingside, E. [8578

## HOODS, WIND SCREENS, ETC.

EASTING Royal Windscreen, new; £4.—Jeffreys, 5, Eaton Row, Victoria. [8232

HOOD and Cameo Windscreen, nearly new; what offers?—"Epworth," New Rd., Windsor. [8230

HERCULES Hoods and Aprons. Write for list — Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [3230

RENNOO Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoo Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

BENT Hoops, hood fittings, straps, turnbuttons twills, etc.; hardwood polished wind screens. 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3772

SIDECAR Coverall Aprons, stout leathercloth, felt lined, side flaps, smart, durable; cheap; send pattern for price.—Leathercloth Speciality Co., 176d, High St., Camden Town, London. [8231

COLLINS and Son for hoods, screens, and aprons, hoods with solid brass Auster fittings, covered with double texture twill, polished sticks; 35/-; the biggest bargain ever offered.—Below.

ADJUSTABLE windscreens, complete with all fittings and apron; 30/-; celluloid panels fitted to any windscreen in a few hours; send for list.—Collins and Son, rear of 84, High St., Putney, S.W. [8498

ROBINI Manufacturing Co.—The Bower adjustable windscreen, with coverall apron; 30/-, carriage paid.—'Phone Brixton 1585. Ribini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [8854

## BODIES.

COLLINS and Son for bodies, new bulbous back, coachbuilt models with aprons; from £6/5.

TWELVE months' guarantee given; Write for catalogue.—Below.

WE repaint, repair, and upholster bodies at very moderate charges, insurance work a speciality; estimates free.—Collins and Son, rear of 84, High St., Putney, S.W. [8500

RENNOO Sidecar Bodies, actual manufacturers, 55 models, also several clearance, cheap to clear.

RENNOO Co. specialise in repairs, repainting, and upholstering.—Rennoo Motors, Ltd., 155a, Marlborough Rd. Upper Holloway, N.19. [2320

HALIFAX.—New Perfection coach bodies; £5.—Motor Exchange, 25, Horton St., Halifax. [8743

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5131

VENUS Step Bodies, 2 dozen to clear; from 50/- each; great bargains.—Venus Sidecar Co., 694, Seven Sisters Rd., Tottenham. 'Phone, 2102. [7697

ROYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [0336

COBB Speedman sidecar bodies, smart, light, and strong, unpainted and unupholstered, £2/12/6; superbly finished, any colour, £3/15, carriage paid.—Carlton Sidecars, 18, Midland Rd., Carlton, Nottingham. [8393

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—20, Tudor St., London, E.C.4. [0004

SIDCAR Bodies.—We have a few lightweight coachbuilt bodies, brand new, at the extremely low price of £4/10; special touring model, £8; ordinary touring, £7; De Luxe model, £9/10.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton (half minute from Brixton Skating Rink). 'Phone Brixton 1292. [8869

GREATEST Bargains in Sidecar Bodies.—Call and see our 1922 productions; beautifully finished and upholstered, satisfaction guaranteed, complete with Coverall apron, £7/15; a few 1921 models, shop soiled, with aprons, £6/10. Write for catalogue. Large number of secondhand always in stock; we repaint, repair, and upholster bodies; low prices; trade enquiries invited; carriage extra. See chassis column.—'Phone Brixton 1585. Ribini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [8852

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/12/6.

BASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £19/10, Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £28/10, Model de Luxe £34/10, tandem model £30.

BASTONES.—Whitley 1922 sports model in stock, £25.

BASTONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/-.—228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. 'Grams: Bastones, London. [5132

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [8036

GOOD coachbuilt Sidecar, fit any 3½h.p.; £5; bargain.—Box 8678, c/o *The Motor Cycle*. [8895

CANOELET Touring Sidecar, C.B. good tyre, a gift; £4/19.—Claremont Garage, Blackpool. [8281

SNIP.—Coach-built Body as new, with apron, weight 45 lbs.; bargain, £6/15.—Webber, "Eastleigh," Honiton. [6482

RENNOO Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoo Sidecar Co.

RENNOO Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOO Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOO Co. have the finest selection of complete sidecars in the trade.

RENNOO Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

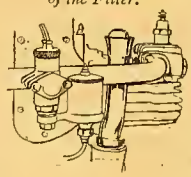
RENNOO Co. have in stock sidecars to fit all makes, English and American.

RENNOO Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

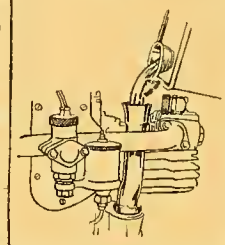
RENNOO Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

DYNAMO (tyre drive), with head lamp, complete, 35/-; Douglas chain, 4/-; Gravity drip, 5/-; foregoing new; Binks 3-jet, 35/-; Triumph carburetter, 10/-; 1in. semi-T.T. bars, 5/-.—21, Leamington Gardens, Seven Kings. [8505

Here is a little convenience that you will all appreciate—a **FUNNEL OIL FILLER AND CRANKCASE COMPRESSION REDUCER.** Can be fitted in three minutes by any novice. Beautifully made in heavy steel, plated fittings, with nipple, union and cap complete, **10/6.** All riders of the 4 h.p. Douglas should have one. If you are not satisfied your money returned.

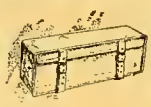


*This shews the fitting of the Filler.*

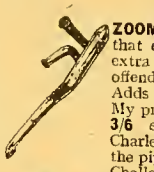


The last drop of oil can be drained out of the can without waste. A combined filler and funnel that makes your oil sump easy to fill—it is quite clean, and being high and compact is out of the dust. It has the advantage of reducing the oil consumption because it lowers the crankcase compression considerably.

**TANKS! TANKS!! TANKS!!!** Strike an individual note, smarten up your Douglas and make it different from the everyday 'bus—here are some of my colour schemes: Lemon with blue panel and blue lines. Brown with chocolate panels, and double gold lines. Lemon with chocolate panels and single chocolate lines. Robin egg blue, with Douglas blue panels and blue lines. Chocolate with gold leaf panels, and white single lines. Black with carmine panels and white lines. Any of the above for 2¾ h.p. or 4 h.p. **£3 15s.** each, or fitted for purchasers of new machines by arrangement. Latest Douglas Instruction Books, **1/6.**



**EXTRA LARGE TOOLBAGS,** metal armoured, two straps and buckles, finest quality for 4 h.p. Douglas. Usual price 20/-. My price **12/6.** Smaller size for 2¾ h.p., two straps and metal covered real leather. List price 11/-. My price **9/-.**



**ZOOM! ZOOM!!** The Exhaust System that everybody is talking about. It gives extra power, has a lovely Zoom note that offends nobody. A real coppersmith's job. Adds £10 to the appearance of any Douglas. My price **30/-** in burnished coppered finish, **3/6** extra in nickel-plated finish. Mr. Charles Stagg, Newport, says: "I received the pipe before the Speed Trial and won the Challenge Cup."

**RADIATED PLUG COOLERS,** beautifully made, worth 4/-, now **2/6.** Write me for anything you want to buy or sell.

**SPECIAL BARREL VALVE SPRINGS** made of cold drawn carbon steel. Unbreakable and very flexible. Touring type **9d.** each, racing type **1/-** each. Any valve spring for any make made to order in a few days.

Now for some of **MY OWN SPECIALITIES. TWIN RINGS,** real power producers, oil savers and compression makers for 2¾ h.p. and 4 h.p. Douglas, 2¾ h.p., **1/6** each; 4 h.p. **1/8** each. Made under a patented process; don't be misled—insist on your agent fitting them.

**ALLOY AIR COOLED VALVE CAPS** for 2¾ h.p. and 4 h.p. Douglas, as fitted by the Grand Prix winners and T.T. riders. The original and best. If they don't stop your engine knocking and prevent overheating, send them back. **4/-** each.

**SPARES** by return. AGENTS—I give big discounts. Official Douglas Agent, A.C.U. Repairer, E.I.C., West of England Service Depot.

*W. G. Coram*

OFFICIAL DOUGLAS AGENT.

**140, VICTORIA STREET, BRISTOL**

*(Late Douglas Motors, Ltd.)* *Tel. 3792*

The man on the spot. I can meet any train and will collect or deliver anything for you. One minute from Temple Meads (Bristol Main) Station.

## SIDECAR ATTACHMENTS.

SIDECAR.—Have a Hopley folding sidecar. Save garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

SIDECARS, several, also Douglas chassis, cheap; room wanted.—57, Kenbury St., Camberwell, London. [8471

CLYNO Tradesman Ammunition Carrier, perfect; £9/10.—534, Fulham Rd., Walham Green (basement). [8402

SIDECAR, coachbuilt, bulbous back, underslung; suit 4h.p. machine; £8.—8, High St., Wandsworth. [8548

WATSONIAN Sidecars, all models, from £17/10; stocked by Bartlett's, 93, Gt. Portland St., London. [8086

BOOTHS Bargains.—Coachbuilt chassisless sidecar, £7/10/6; Gloria cane, spring wheel, £6/19/6; Hercules coach, £9/10/6.

BOOTHS Bargains.—Shop-soiled £27/10 sidecar, suit Triumph, B.S.A., £18/15; cane sidecar, £5/10/6.

BOOTHS Motories.—Ruby coach sidecar, £9/10/6; new large size coach bodies, locker under seat £6/19/6.—Booths Motories, Portland Place, Halifax. [5144

TRADESMAN'S Box Standard James 4-point Attachment, fine condition, carries 4½-cwt.; £8/15.—Fleming Co., Redcar, Yorks. [8871

DOUGLAS 2¾h.p. Pateot Leather Mudshields, with attachments, noiseless, 5/-; postage 1/-.—Baskerville School Rd., Hale, Cheshire. [8519

HALIFAX.—New Swan Sporting and Milford de Luxe sidecars for Harley and American X.—Motor Exchange, 25, Horton St., Halifax. [8745

COLLINS and Son for Sidecars.—A few new bulbous back models, complete with renovated underslung chassis, tyre and tube, and coverall apron, all fittings; £12/10.—Below.

FAMILY Model Light 2-seater, built to accommodate one adult and child up to 12, with renovated underslung chassis, tyre, tube, and apron; £15.—Below.

WE have various models in stock to suit any machine.—Send for catalogue.

WE specialise in frame and chassis repairs of all kinds; all work guaranteed.—Collins and Son, rear of 84, High St., Putney, S.W. [8499

YOUR Sidecar renovated equal to new from £2. Damaged sidecars our speciality; send your car for repairs.—Write, Crescent Sidecar Co., 8, Blast Lane, Sheffield. [8317

GLORIA Sidecar, as new, for Triumph, £23; Duohill sidecar, as new, bargain £20; Millford sidecar, new body, complete, £16.—33, Hackford Rd., Brixton, S.W.9. [8942

1921 Indian Scout Body, apron and lamp, 70/-; also a few 5h.p. Rover chassis parts, cheap.—Smiths, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [8793

SIDECARS.—Longman Bros., Bond St., Ealing. 'Phone, 689. We have a large selection of new and second-hand sidecars in stock. Wholesale and retail agents for the famous Montgomery. [8957

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

1,000 Douglas Underslung Chassis, suitable for any make of machine to order, absolutely complete and renovated, as new; £5 each.—Old Man Hep, 19, Wilcox Rd., South Lambeth, London, S.W.8. 'Phone, 1958 Brixton. [8822

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

CHASSIS.—Underslung chassis, complete, new tyre and tube, shop soiled body, coverall apron, £13/10; P. and M. chassis, new tyre and tube, new 1922 bulbous back body, £12.—'Phone Brixton 1585. Ribici Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [8853

SIDECARS! Sidecars! Several Secondhand Coachbuilt Sidecars from £7/10. Brand New Coachbuilt Sidecars with bulbous backs and complete with aprons; a first-class job; not cheap and nasty; £17/10. Brand New Sidecars, coachbuilt, from £16. These are really wonderful value. We have two Langford spring wheel sidecars, 5-point attachments, large bulbous backs with Picnic cases, completely fitted with all utensils, most elaborately finished, complete £35.—Jones Garage, Muswell Hill, London, N.10. [6065

## RUNABOUTS AND CYCLE CARS.

WAUCHOPE'S, 9, Shoe Lane, London.—5-6h.p. Carden Monocar; £50. [8074

## RUNABOUTS AND CYCLE CARS.

EDELIA.—The new 1922 model 8-10h.p., with air-cooled or water-cooled engine.

EDELIA.—Air-cooled model, £185; water-cooled model, £195; immediate deliveries; trial runs free.

EDELIA.—Catalogues free from L. N. Palmer, Sole Concessionaire for the British Empire.—Palmer's rage, Tooting. [8857

ARDEN, 7h.p., 2-seater, 1921, as new, equipped; £85.—40, Cornwallis Rd., Maidstone. [8537

.C. Sociable Runabout, good order; £45.—Foal, 173, Hainton Avenue, Grimsby. [7114

18.—Riley 3-wheeler Chassis, 8h.p., water-cooled.—215, Hampstead Way, Golders Green. [8365

ORRIS-OXFORD 2-seater, as new; for sale or exchange.—Claremont Garage, Blackpool. [8282

AUCHOPE'S, 9, Shoe Lane, London, E.C.4.—2¼h.p. Royal Enfield, 1920, tax paid; £42/10. [8977

h.p. Rover.—1922 model in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. one: 45. [7159

ORGANS Always in Stock.—The West of England Agent, Gibb, 100, Northgate, Gloucester. one: 852. [8127

OVENTRY PREMIER.—1922 model in stock; exchanges.—Walbro Motor Cycle Co., Saffron Wal- 'Phone: 45. [7160

.N. 1920, dynamo lighting, been treated like a pet, looks new, tax paid; £150.—Bunting's Exnge, Wealdstone. [8712

COTT Sociables for comfort and low running expenses; order now.—Cathedral Motor Works, 99, George St., Liverpool. [8878

OVER, 8h.p.—Your motor cycle taken in part exchange for new models.—Agents, R. B. Clark and , 7, Exhibition Rd., S.W.7. [7847

920-1921 G.N., exceptional condition, dynamo, spare wheel, speedometer, tools, mileage 2,500; 45.—9, Fleet St., Torquay. [8669

ORGAN, water-cooled, De Luxe M.A.G. engine, splendid condition, tax paid; £130 cash; a gem. ating's Exchange, Wealdstone. [8711

ORGAN 1918 Grand Prix Aero Model, as new, great bargain; £120.—Particulars, Stone, 280, ucester Rd., Horfield, Bristol. [8541

920 (Sept.) G.N., £245 model, take £127/10, snip.—Junction Garage, Highstone, Leytonne, E.11. 'Phone: Wanstead 403. [8781

ORGAN'S 1922 models in stock; the most reliable 3-wheeler on the market. Official agents for nt, Essex, City of London; spares. Below.

OVER 1922 8h.p. light car, dynamo lighting, etc.; £220. Authorised agents. Below.

.N. 1922 standard model, dynamo lighting, dickey seat, door; £225; delivery from stock. Below.

.N. 1920 standard model, dynamo lighting, speedometer, watch, horo, aluminium dash, etc.; £130. Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile E.C.3. 'Phone Avenue 5548. [0075

AUCHOPE'S, 9, Shoe Lane, London, E.C.4.—G.N. cars, 1922, all models from stock. Easy ments or exchange. 'Phone: Holborn 5777. [8978

AUCHOPE'S, 9, Shoe Lane, London.—New 1922 Morgans supplied on easy terms or exchange. one: Holborn 5777. List on application [8077

LIFFORD WILSON Mfg. Co., have in stock, new 1922 Morgan Popular Model, £150.—177, Westster Bridge Rd., S.E.1. Tel.: Hop 210. [6634

ORGANS.—1922 De Luxe, Grand Prix, and Popular models in stock; exchanges.—Walbro tor Cycle Co., Saffron Walden. 'Phone: 45. [7158

921 Morgan de Luxe, 10h.p., W.C., M.A.G. engine, lavishly equipped, dynamo lighting; £145.—llier, 9, Wallingford Avenue, North Kensington. [8492

ARDEN, 2-seater, 1921 (Oct.), demonstration car fully equipped, electric light, hood, screen, tools; fect condition; £110.—Page and Girling, Melton, folk. [8555

EW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy ments, or exchange.—Service Co., 292, High Holborn C.1 [0673

920 A.C. C.A.V. dynamo lighting, spare wheel, perfect; bargain, £265.—Junction Garage, hstone, Leytonstone, E.11. 'Phone: Wanstead [8780

YCLECAR Chassis, underslung, 8h.p. twin, W.C., O.H. valves, complete less radiator, sporty; £35. oto; exchanges.—Decourcy, Frankfort St., Birmingn: [8538

UCKINGHAM 10h.p. Cycle car, 2 speeds, disc wheels, dynamo, do 60, 50 m.p.g., real sporty ; £55 cash; exchange like.—8, High St., Wandsrth. [8549

ALIFAX.—Morgans, 8h.p., J.A.P. hood, screen; £85, £100, £110.—Motor Exchange, 25, Horton Halifax. [8748

# BE NOT AFRAID

No need to have the old fear of being let in for a crock if you buy a second-hand from us. Every used machine is stripped and put into perfect running order before it is offered for sale. Because we have seen the inside we can

## GUARANTEE FOR THREE MONTHS

on the same terms as the manufacturer does

## EVERY USED MACHINE WE SELL.

We give the following selection from our stock. If you don't see what you want, write us.

### NEW SHOP SOILED.

| | List Price. | Our Price. |
|---|---|---|
| 3 Cleveland 2-stroke, 3-speed | £85 | £50 |
| 2½ Victoria 2-speed | £60 | £40 |
| 2¾ Royal Ruby Sports, 2-speed, kick start and clutch | £70 | £60 |
| 7/9 Solo Powerplus Indian, electric equipment | £140 | £110 |
| 7 h.p. F.N. Combination, hood and windscreen | £188 | £120 |

### SECOND-HAND.

| | |
|---|---|
| 1920 3 h.p. A.B.C., lamps, etc. | £80 |
| 1915 7/9 Indian 3-speed and sidecar | £85 |
| 1919 7/9 h.p. Indian (solo) | £63 |
| 1919 4 h.p. Norton and Milford sidecar | £90 |
| 1921 Model 16 H. Norton 3½, 3-speed | £106 |
| 1921 Big 4 Norton de Luxe sidecar. All on | £120 |
| 1921 3½ h.p. I.O.M. Norton, 3-speed | £90 |
| 1921 4 h.p. in 3½ h.p. frame Norton | £90 |
| 1922 3½ h.p. Norton 16 H., 3-speed | £95 |
| 1921 Velocette 2-speed | £47 |
| 1920 2¾ Zenith. (Flat twin) | £55 |
| 1920 4 h.p. Wilkin and s/car, Blackburne engine, dynamo lighting | £105 |
| 1914 6 h.p. A.J.S. and sidecar. All on | £75 |
| 1920 3½ Sunbeam. All on | £90 |
| 1921 3½ Sunbeam. Touring model | £105 |
| 1920 5/6 h.p. Rudge Combination | £70 |
| 1914 Overland Car, 5-seater, 25.3 h.p. | £100 |
| 1918 4 h.p. Douglas Combination, reconditioned | £80 |

Our 1922 new stock includes Velocette, Indian, Quadrant, Norton, B.S.A., Scott, F.N., Raleigh, Levis, Martinsyde, Victoria motor cycles, Wolseley, Lagonda and G.N. cars.

CASH, EASY PAYMENTS, or EXCHANGE.

# VICTOR HORSMAN,

7, Mount Pleasant, Ltd.

LIVERPOOL.


## RUNABOUTS AND CYCLE CARS.

A.C. Sociable, by the A.C. Co.; late model, with reverse, good condition, fully equipped; £60; no reasonable offer refused.—Gerrard, 111, High St., Guildford. [8473

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0736

BRAND New Carden de Luxe, dynamo lighting, speedometer, clock, cost £184; accept £100, or good combination.—Hillier, 9, Wallingford Avenue, North Kensington. [8491

D.U. Cyclecar, 9h.p., water-cooled, 2-seater, detachable wheels, dynamo lighting, complete with hood, screen, speedometer, etc., low mileage, bargain; £85.—Bond, Brasted, Kent. [8388

MORGAN 1920 Grand Prix M.A.G., acetylene and electric, speedometer, clock, aluminium dash, Dunlop Magnums, very smart; £145.—Clark, 7, Exhibition Rd., S.W.7. [9006

HALIFAX.—New 1922 Coventry Premier, 4-wheeler, with speedometer and 12 months' insurance; £260; liberal exchanges.—Halifax Motor Exchange, Horton St., Halifax. [8740

7-9h.p. Swift Chassis, gear box incomplete, a snip, £25; also 9h.p. 1919 Temperino 2-seater, all on, £95; exchanges considered.—DeCort and Flynn, 39, Essex Rd., London, N.1. [8691

1921 Bleriot-Whippet, excellent condition throughout; £110; or would exchange motor cycle and cash.—Goad, 122, Maida Vale, W. 'Phone: Hampstead 1353. [8370

1921 (October) Carden de Luxe, spare wheel, electric lighting, hood, screen, as new; £85, cost £150.—Junction Garage, Highstone, Leytonstone, E.11. 'Phone: Wanstead 403. [8779

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220; in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0773

CARDEN 1921, Aug. 20, special side curtains, accessories, 700 miles, new condition; £85, offers considered; cost £148; cash wanted.—B. Freeman, Union St., Winchester [8182

MORGAN Grand Prix, water-cooled, 8-10h.p. overhead, J.A.P., fully equipped, sporty, as new throughout; £120, or combination and cash.—436, Whitehorse Rd., Thornton Heath [8497

COVENTRY Premier, 3-wheeler, dynamo lighting, spare wheel, tax paid 1922, absolutely as new, any examination; £160; condition guaranteed.—Beauchamp, 27, West Park, Bristol. [8600

A.V. Monocar 1921½ Sports, special J.A.P. racing engine, new oversize tyres, speedometer, lighting set, and horn, guaranteed perfect; £79.—Haven, Portsmouth Rd., Esher, Surrey. [8932

1914 D.U. Cyclecar, less engine, otherwise complete; friction drive, five detachable wheels with good tyres, hood, windscreen, etc.; 3d. for photo; £30 or near offer.—Gotch, Chesham House, Kettering. [8617

A.C. Sociables, by the A.C. Co., dependable runabouts, take 2 persons anywhere, good condition and appearance, fully equipped; from £50 to £86; trial.—29, Allsop St., Upper Baker St., London, N.W. [7056

MORGAN DE LUXE, 1917, engine just overhauled, splendid condition, new tyre spare, fully equipped, trial; £95, exchange solo or combination.—Smith, 37, Revelstoke Rd., Wimbledon Park, London. [8255

1921 Carden, with lamps, horn, hood, screen, speedometer, spring seat, mascot, insurance, guaranteed in excellent running order and condition; offer about £80 wanted.—Box 8636, c/o *The Motor Cycle*. [8201

BARKER'S Motors can supply all kinds of light cars at list prices and give a free insurance guarantee for 12 months against mechanical breakdown. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6423

BLERIOT WHIPPET, hardly used, hand starter, electric lighting, hood, screen, spare wheel, luggage grid, side curtains, beautifully equipped, licensed, original tyres, absolutely perfect; £97 (exchange entertained).—89, East Hill, Wandsworth. [8623

NEW 1922 Morgans at Brixton, De Luxe model, mauve, discs, etc., in stock, £189/10; second-hand 1920 G.P. Morgan, lamps, speedometer, run 3,500 miles only, £130; 1914-15 sporting model, air-cooled J.A.P., £75.—Daw, Morgan Agent, 114, Brixton Hill. [8646

A.V. 2-seaters.—A few second-hand and demonstration models in stock for disposal at very low prices; also special model fitted with 10h.p. o.h.v. J.A.P. engine suitable for competition work, practically new.—Please apply for list to the makers, Ward and Avey, Ltd., Teddington, Middlesex. [8246

£129/10.—G.N., late 1920, dynamo lighting, detachable wheels, spare wheel, all 5 tyres as new, hood, screen, aluminium dash, four lamps, horn, speedometer, Pyrene fire extinguisher, aluminium number plates, etc.; tax paid.—Moss, c/o Delaocey Garage, 63A, Defancey St., Camden Town, London. [8761

## RUNABOUTS AND CYCLE CARS.

1922 8h.p. Coventry Premier, 2-3-seater, brand new, painted grey, spare wheel and tyre, horn, Rotax lighting set, speedometer, etc., beautifully designed and mechanically perfect; £250 cash, or by economical instalments of £68 down and 12 monthly instalments of £17, which includes comprehensive insurance; strict privacy, no unpleasant inquiries, any district; modern motor cycle or combination taken as first instalment; full particulars by post.—Herbert Robinson, Ltd., Regent St., Cambridge. [8167

1922 10h.p. G.N., brand new, very roomy body, aluminium instrument board, luxuriously equipped, all-weather hood, adjustable windscreen, electric lighting installation with dynamo batteries, switchboard and ammeter, two head lamps, tail lamp, speedometer, detachable wheels, etc.; £225 cash, or by economical instalments £62 down and 12 monthly instalments of £16, which includes comprehensive insurance; strict privacy, no unpleasant inquiries, any district; modern motor cycle or combination taken as first instalment; full particulars by post.—Herbert Robinson, Ltd., Regent St., Cambridge. [8166

*Spare Parts:*

MORGAN.—Largest stock in London.—Maudes' Motor Mart, 100, Great Portland St., W.1. [8719

MORGAN Spare Part Depot.—Spares for all models from stock; list free.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone Avenue 5548. [0077

## TAXI-COMBINATIONS AND CABS.

"COUNTY," B.S.A., Taxis, as licensed throughout the country.—Write for full particulars, County Cycle and Motor Co., "Originators," 300, Broad St., Birmingham. [5353

## CARS FOR SALE.

PALMER'S Garage, Tooting.—The pre-eminent place for purchasing. Auction every Thursday.

PALMER'S Garage, Tooting.—£60 down and 12 monthly payments £8 secures 10h.p. Singer 2-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £5 secures 12-seater live axle Panhard wagonette.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures splendid Sheffield Simplex landaulet.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8/10 secures magnificent Oakland touring car, 7-seater, dynamo lighting, self-starting.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7/10 secures reliable Renault 9 landaulet.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures reliable Napier chassis, detachable wire wheels.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8 secures Delaunay-Belleville limousine, 17h.p.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 18h.p. Maxwell Sporting 2-seater.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures Studebaker landaulette, self-starting, dynamo lighting.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £7 secures 16h.p. Minerva 4-seater, monobloc engine.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £4 secures reliable S.C.A.T. 12-seater wagonette.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £5 secures excellent 12-14h.p. F.I.A.T. chassis.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 12-14h.p. F.I.A.T. van.

PALMER'S Garage, Tooting.—£70 down and 12 monthly payments £7/10 secures magnificent Berliet touring car, 6 cylinders.

PALMER'S Garage, Tooting.—All above cars are in good running order. For cash price deduct 10 per cent. from above totals.—Palmer's Garage, Tooting. [8862

6h.p. Rover, 2-seater, good order, bargain; £32.—1, Bellingham Terrace, Catford. [8463

£32.—7-9h.p. Swift, 2-seater, twin cylinders, W.C., requires magneto only.—King, Egrove Farm, Oxford. [8907

NAPIER 6-cylinder Limousine, large handsome body, excellent order; £65.—7, Farror St., Brixton, S.W. [8720

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

CROSSLEY 1918 Tourer, 6 Rudge wheels, C.A.V., perfect order; £165.—Mrs. Wright, c/o 77, Acre Lane, S.W.2. [8722

HUMBER, 5-seater, detachable wheels, Auster screen, electric light; offers or exchange.—15, Mervan Rd., Lambeth, S.W.9. [8723

# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

# Philipson's Latest!

## GOVERNOR PULLEY AND VARIABLE GEAR COMBINED WITH FLY WHEEL for all two-stroke engines.

**The Lightest, Speediest, and Simplest Gear on the market for direct belt-driven 2-stroke and 4-stroke engines.**

ONLY adds 2 lb. (approx.) to the weight of a 2-stroke machine, and 6 lb. (approx.) to the weight of a 4-stroke machine.

**During the past week we have fitted the following machines:**

| 2-stroke. | 4-stroke. |
|---|---|
| LEVIS, | TRIUMPH, |
| O.K., | NORTON, |
| CALTHORPE, | ROVER, |
| VILLIERS, | SINGER, |
| etc. | COULSON-BLACKBURNE |

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

Our Flywheel Governor converts a single-speed 2-stroke into a speed model —*the lightest speed model on the market!*

**THE ONLY GEAR WITH NO END THRUST.**

**IMMEDIATE DELIVERY.**

*Send for Illustrated Booklet.*

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

***What is your make? Write us***

REDUCED PRICE **£7 7 0** Carriage Paid.

## Philipson & Co., Ltd.,

**Astley Bridge, BOLTON, Lancs.**

**(Established over 50 years.)**

Grams: "Safety, Bolton." Phone: 147 Eagley


## CARS FOR SALE.

ROVER Cars.—The famous 8h.p. model in stock £220; for immediate delivery.—Eagles and Co. 275, High St., Acton, London. [0760

DAIMLER 15h.p. S.K. touring car, Rudge wheels and spare, C.A.V., noiseless; £165, or part exchange.—8, Crowhurst Rd., S.W.9. [8720

WAUCHOPE'S, 9, Shoe Lane, London.—Rover Light Cars; £220; fully equipped; easy terms or exchange, list on application. [8070

PEUGEOT BABY 1916, good condition, tax paid £120; or exchange 1920 Harley combination.—Foggitt, 145, Rustlings Rd., Sheffield. [8181

COVENTRY PREMIER, 1922, 4-wheel model; £250 immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hanster Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452. [7938

1914 Perry 8h.p. Twin, 2-seater and dickey, detachable wheels, 6 tyres, 4 practically new, 1922 tax paid, perfect running order; £100, or nearest offer.—Haddon, North St., York. [8507

DARRACQ Laadaulet, 18h.p., 4-cylinder, fully equipped and ready for use; £60 or near; must sell this week; will consider motor cycle in exchange or part.—62, New St., Woodbridge, Suffolk. [7688

MORRIS-COWLEY 1922 standard 2-seater model in stock, dynamo lighting, etc.; 285 gns.; exchanges; extended terms.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone Avenue 5548. [0076

## MOTOR TRANSPORT VEHICLES.

TIPPING lorries, Star 2-ton, fitted twin-screw tipping body, repainted, retyred, guaranteed; £265. —See below.

TIPPING lorries, Alldays 30-40 cwt., single screw tipping body, all equipment; £225.—Shard Garage, Shards Sq., Peckham Park Rd., Old Kent Rd., London. [8156

110 GNS.—Talbot 1 ton-30 cwt. chassis on pneumatics, twins on rear, ideal for a 14-seater body, needs axle sleeve only.—See below.

120 GNS.—Standard 10-15-cwt. van, C.A.V. dynamo lighting, Sankey detachable wheels.—See below.

185 GNS.—British Ensign 3-5-ton lorry, 1919, worm drive, new tyres, 4 speeds, fast, like new all round.—See below.

185 GNS.—Garford's 1916 30-cwt lorries (6 for sale), worm drive, fast, doing 14 miles per gallon, repainted, retyred, all equipment.—See below.

120 GNS.—Willys Overland 1 ton-30 cwt. lorries, 1916, repainted, retyred, all equipment, guaranteed.—See below.

200 GNS.—Star 1916 2-ton lorries (six), dynamo lighting, repainted, retyred, all equipment, fast and economical, doing 14 miles per gallon, ideal for all passenger work; 200 gns. each.—Shard Garage, Shards Sq., Peckham Park Rd., Old Kent Rd., London. [8155

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. 'Phone, Holborn 5777. [7218

HALIFAX.—Second-hand models at special rates; send your requirements.—Motor Exchange, 25, Horton St., Halifax. [8742

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1. [0672

HERBERT ROBINSON, Ltd., Green St., Cambridge. Any make of motor cycle or light car supplied on easy terms, strict privacy, no unpleasant inquiries; any district, full particulars by post. [8843

## ENGINES.

VILLIERS Engine for sale, cheap, or will sell parts. —Huntrods, Danby, Yorkshire. [8225

3½h.p. Quadrant Engine, A.O.I.V., overhauled; £3/10.—Race, 54, Gt. Passage St., Hull. [8477

EXCELSIOR Engine, 3½h.p. Bosch, B.B., good order; £6, offer.—25, Ravensbourne Rd., Catford, S.E. [8222

SPECIAL Overhead Valve 90-bore J.A.P. Engine, as new; offers to Mirfield Engineering Co., Newgate, Mirfield. [7077

1920 3½h.p. M.A.G., racing T.T. engine, minus 1 cylinder head; £7/10.—2, Fortune Gate Rd., Harlesden, N.W. [8608

3½h.p. Lincoln-Elk Engine, magneto and carburetter, splendid condition; £8/10.—Prout, Canon St., Taunton. [8542

NEW 1921 2¾h.p. 2-stroke engine, complete, C.A.V. magneto, Senspray, guaranteed perfect; £15 or offer.—W. Collins, 18, Colin Rd., Willesden, N.W.10. [8224

## ENGINES.

A.E.C. 1922 2-stroke, 70×70, with magneto drive and chain guard; £6/10.—Auto Eng. Co., Edgwick ill, Coventry. [8113

h.p. Minerva, beautiful engine, as new, mechanical t valves, gift; £4/10.—Hood, 15, Totteridge Lane, Whetstone, N.20. [8276

£00 h.p. Clerget engine, complete and unused; £50, cost nearly £1,000.—Captain Jackson, o 77, Acre Lane, S.W.2. [8724

A.P. Engine, 85×85 bore and stroke, unused, with new Binks carburetter; £23/10.—A. Bryson, Cecil St., East Stanley, Co. Durham. [8415

BRAND new 3½h.p. Broler, 2-stroke, Dec., 1921, complete; £11, carriage paid to purchaser.—rkes, 25, Moorpark, Steveaston, Ayrshire. [8559

1h.p. Levis Flat Twin, 2-stroke, carburetter and 2 magneto, perfect, £10; 6h.p. ditto, £12.—le, 457, Rathgar Rd., Longhborough Junction, W.9. [7604

BARR and Stroud.—Delivery of all makes with this engine, 7 days (approx.). Official London monstrators.—Warnes, Ltd., 46, Churchfield Rd., lton, W.3. [8137

3h.p. 1911 A.I.V. Douglas engine, complete, Bosch 4 and carburetter, cylinders regrouud, pistons d crankshaft new, perfect; £6.—76, Knighton Rd., ymouth. [8223

TRIUMPH Engines, 1914, 3½h.p., complete with belt pulley, in perfect condition, overhauled and w parts fitted; £8/10.—Marble Arch Motor Exange, 135, Edgware Rd., W.2. 'Phone, Padd. 789. [8947

7-9h.p. o.i.v. Indian Engine, 1914 model, completely overhauled, condition as new, Bosch magneto, ss carburetter, exceptional bargain; £17/10.—Langrd's, 37, Cricklewood Broadway, London, N.W.2. [8525

3h.p., A.I.V., Motosacoche, complete, magneto, car-4 buretter, good condition, £3; 3h.p. M.O.V. inervas, slight repairable damage, £2/5 the two; h.p. Amac carburetter, 10/-.—4, The Square, ston, Lincs. [8616

WE have for disposal engines, new and second-hand, any horse-power; makers, Clyno, J.A.P., ecision, and others; let us have your requirements; delay; prompt replies to all inquiries.—DeCort d Flyon, 39, Essex Rd., London, N.1. [8690

RACING J.A.P. 2¾h.p., o.h.v., as used at Luton Hoo, special E.I.C. Senspray, stainless steel valves, reamline posts and special cams, long copper exust, and engine plates, will fit New Imperial frame; 1.—Wellington, 40, Lowlands Rd., Harrow. [8305

BOOSTERS for new engines, bargains. We have a bankrupt stock of new 1½h.p. engines (4-stroke), erhead valves, aluminium cylinders and pistons, comete, to clear, £5; also 2¾h.p. 2-stroke engines, comete with magneto and carburetter, new, £10.—sters, 31, Clissold Rd., Clissold Park, London, N.16. [8266

DOUGLAS 8h.p. Water-cooled, C.W. radiator, petrol tank, bedplate, starting handle, induction pipe, od condition, £11/10; thoroughly overhauled, new g., carburetter, guaranteed running order, £21, riage forward; make splendid light car engines; ge selection; stamp reply; trade supplied.—Derringa, Grafton Rd., New Malden. [8864

J.A.P. Engines. J.A.P. Engines. J.A.P. Engines.—I have the largest stock of J.A.P. engine parts in gland; over 30 engines, all in stock, to select from; d the prices: 5hp. £15, and the 8h.p. at £20 and 7/10, and I have all parts for the 8h.p. (see accesries for parts). I have a big twin engine £12, a 4h.p. uglas engine and mag. and carburetter £15, a small troke and mag. £10; stamp reply.—South Croydon otor Exchange, 22. South End, Croydon. [4765

BRAND New Engines.—An exceptional opportunity. 1921 Precision, 3h.p., 2-stroke (as fitted to the ardmore motor cycle, etc.); a complete unit with omson-Bennett magneto. Cox Atmos single-lever rburetter, list price over £30; limited number to ar, £14. What a gift. Or, less magneto and rburetter, 10 gns. Only a few left.—Marble Arch otor Exchange, 135, Edgware Rd., W.2. 'Phone, ddington 789. [8945

HEPPELTHWAITE'S 5h.p. J.A.P. Engines (new cylinders) fitted, £12 to £14 each; 3½h.p. iumph, £8; 2¾h.p. Precision, new, £8, chipped tin, herwise perfect; 4h.p. Douglas engine, magneto, carretter, and 3-speed gear box, £14, or separate; h.p. 2-stroke engine and magneto, £8; 3½h.p. mber unit, £10; 3½h.p. Alldays, £4/10; 2h.p. in Moto Reve and magneto, £3/15; 5h.p. and h.p. J.A.P. cylinders, 30/-, 8h.p., £2; crank cases, pair; 5h.p. Rover spares, entire stock of W. wkins, York Rd., Battersea; see parts and accesries under Heppelthwaite's. Old Man Hep. 'Phone, 58 Brixton. Stamp please.—19, Wilcox Rd., South mbeth, London, S.W.8. [8823

## IGNITION, LIGHTING, ETC.

OSCH Twin, D.A., 45°, as new; 65/-.—T.V.M.C., 86, Shacklegate Rd., Teddington. [8606

PLAT Twin, C.A.V. magneto, practically new; hargain, £4.—Thos. Twycross, Tenby, Pembrokeshire. [8192

OSCH and M-L Singles, 30/-; C.A.V., 37/6; variable ignition guaranteed.—84, Greenside Rd., oydon. [8511

# It points to Layton's . . .

**Your need of help in purchasing your 1922 mount—of the unbiassed expert counsel that will enable you to decide between the apparently equal merits of half-a-dozen machines that are by no means alike; that will ensure your getting the right machine at the right price—*t points to Lay'on's.* And your desire to feel that you will be treated as *you* would treat your best friend, and as *he* would treat you. This also *points to Layton's.***
**It is our aim to give you such service that everything you can wish shall be realised—that every transaction we undertake *points to Layton's* as a house who will do all that is humanly possible to ensure your satisfaction and pleasure. This has been the keynote of our policy for over a quarter of a century of motor-cycle and car trading, and nearly eighty years in business before.**

*Immediate deliveries of any of these 1922 models:*

**ARIEL, BROUGH-SUPERIOR, B.S.A., DIAMOND, DOUGLAS, EDMUND, ENFIELD, HUMBER, INDIAN, MASSEY-ARRAN, MATCHLESS, NORTON, RUDGE, SCOTT, SUNBEAM, TRIUMPH, and VELOCETTE Motor Cycles: BELSIZE-BRADSHAW, CROUCH, LAGONDA, ROVER and WOLSELEY Light Cars.**

***Cash, Exchange, or on most liberal extended payments.***
***Wherever you may be our service can reach you—our methods can give you advantage.***

**Layton Garages**

**J. W. TOLLADY,**
General Manager.
**90, High Street, OXFORD, and London Road, BICESTER.**

'Phones: 581 & 784 Oxford; 35 Bicester.
'Grams: "Integrity," Oxford and Bicester.

H.G.T.


## IGNITION, LIGHTING, ETC.

H.B.I.

H.B. Ignition Co. carry large stocks of new and second-hand magnetos. Thomson-Bennett 42, 45, 50, 65, and 180°, single and twin.

H.B. Specialise in T.B. for fixing on Triumph, P.M., B.S.A., J.A.P., Douglas, etc., £2/10, postage 1/6; C.A.V. clock twin, for 2¾h.p. Douglas, etc., £2/15.

H.B. will take your old magneto in payment.

H.B. sends all magnetos on approval against cash. Every magneto dispatched carry H.B. 12 months' guarantee.

H.B. Ignition Co. ('Phone: Brixton 610), 78, New Park Rd., Brixton Hill, London. [0694

COUNTY of London Engineering Works, Ltd.

EXCEPTIONAL offer of Government surplus magnetos, new, unused, must be cleared to make room for fresh stock.

GUARANTEE.—We guarantee all our magnetos twelve months, and will willingly repair or replace any magneto that should prove defective within that period.

BOSCH single, clock, or anti, £3. Thomson-Bennett, single or twin, clock or anti, 42, 45, 50, 55, and 180 degrees, £2/10.

C.A.V. single or twin, clock or anti, £2/10; special long driving spindle for Rudge, fitted to any of the above magnetos, 10/- extra. Postage on magnetos, 1/6.

THESE magnetos are fitted with variable ignition, and leads, and also baseplates ready to be immediately fitted on; please state make of engine when ordering.

GOVERNMENT surplus, new plugs in boxes, A.C. (Titan), 1/6 each; K.L.G. types, F.8, F.6, F.5, and R.3, 1/8 each; Lodge types, K, and K.2, 1/8 each. Postage on orders of one plug, 3d.; four or more, post free.

ALL goods on approval per return post on receipt of cash; money refunded if not satisfactory.

COUNTY of London Engineering Works, Ltd.—Note new address: 6, Garden Lane, Christchurch Rd., Streatham, London, S.W. Tel.: Streatham 2898. T.A.: Ignitionac, Brixstret, London. [5935

BOSCH 1-cyl., weatherproof, and as new, variable ignition; 57/6 delivered.

THOMSON-BENNETT and M-L.'s, of Coventry, 1-cyl. A.D.S. or P.L.R. types, 37/6 delivered, suitable for stationary engines; if variable ignition, 10/- extra.

C.A.V., as new, suitable for 2 or 1-cyl. lightweight motor bicycles, height 4½in., breadth 2⅝in., depth 4½in., variable ignition and short-circuiting terminal, guaranteed platinum points, and workmanship of the finest; 2-cyl. fires at 180°; all working parts are interchangeable with C.A.V.'s, types KU 1 and 2; 50/- delivered.

THOMSON-BENNETT, types A.M. 1 and 2, as new, variable ignition and short-circuiting terminal; A.M. 2 fires at 180°; 52/6 delivered.

THOMSON-BENNETT 4-cyl., variable ignition; £5/5 delivered.

N.B.—Any of the above magnetos supplied, clock or anti-clock. When ordering state which when looking at driving end, and whether 1, 2, or 4-cyl.

C.A.V. 2-cyl. Clockwise Aeroplane Starting Magnetos, platinum points, workmanship of the finest, and all working parts are interchangeable with C.A.V.'s, type KU2, perfect for plug testing; one carriage paid, 25/-; lots of 6, rail forward, 22/6 each; of 20 at 21/6 each; of 100 at 20/-.

MAGNETOS Leave our Works in perfect condition.

GUARANTEE.—Will replace within one month, or refund cash if unsatisfactory.

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 977. [0698

MAGNETO Sprocket Manufacturers.—7-tooth to 24-tooth stocked.—Ridiogtoo, 202-4, Southampton St., Camberwell. [6886

NEARLY New Lucas Dynamos, 6-volt accumulator, and switchbox; nearest £7.—Hague, York Avenue, Wolverhampton. [8759

LUCAS Lighting Sets, lightweight 12v. dynamo, 12v. battery, cut-out, £6/6 set.—Jenner (Dept. M.C.), 165, Church St., Mitcham. [5401

THOMSON-BENNETT A.C.V. Twin, 60°, brand new, £4/10; C.A.V. twin, off Douglas, 35/-.—Perseus Works, Burton-on-Trent. [8583

DIXIE Magneto, suit lightweight, 38/-; also T.B. magneto, suit 3½h.p.; clockwise, 65/-; approval.—56, Sutton St., Aston, Birmingham. [8361

K.L.G. W.D. Plugs, unprecedented value, 4 for 2/6, postage 9d.; immediate return of money if not satisfied.—Thompson, 59, Queen St., Wolverhampton. [8206

CHELTENHAM.—Repairs to magnetos, self-starters, lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham 'Phone: 1256. [0758

## IGNITION, LIGHTING, ETC.

RELIANCE Magneto Repairing Co. for repairs and new magnetos.—See below.

RELIANCE guarantee to return your magneto within 3 days, and if necessary 24 hours, with a written guarantee for 12 months.

RELIANCE test every magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE manufacture and stock spares for Thomson-Bennett, E.I.C., Splitdorf, U.H., Bosch, Dixie, etc.; special line genuine platinum screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice free of charge upon any qestion concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy that we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., E.C.1, for new and second-hand magnetos.—See below.

THOMSON-BENNETT Magnetos, new and unused, single-cyl., clock and anti, suit any machine, price 55/-; twins, 45, 48, 50, 55, 60, 180 degrees, for J.A.P., Clyno, Douglas, etc., price 55/- See our guarantee.—Below.

C.A.V. Magnetos, new, single-cyl. and 180° twins, clock or anti, ideal for Douglas, Levis, Calthorpe, O.K., or any lightweight; these magnetos are of the finest workmanship throughout; price 55/-. See our guarantee.—Below.

BOSCH D.A.L. Magnetos, soiled only, otherwise as new, single cyl., suitable for any stationary engine or big single, £3/15; twins, any degree, ready to drop on Indian, Harley, or any big twin, £4/5; a powerful spark at low speed, ensuring easy starting. All the above magnetos are variable ignition and fitted short-circuiting switch. See our guarantee—Below.

GUARANTEE. — Every magneto that leaves our works, no matter what the price or make, carries a written guarantee. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee every machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE Magneto Repairing Co. hold one of the largest stocks in London, and can be depended upon for a straight deal at the right price. When buying it pays to deal with a firm of repute.

RELIANCE cordially invite customers to their works to see ony of the above on test. Magneto list giving full particulars sent upon application.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1 [6616

ANY Motor Cycle Magneto repaired, no matter what condition, provided complete, for 30/-; 24 hour service.—Kays, Electrical Dept., 8, Bond St., Ealing, W. [7232

POCKET electric inspection lamps, magnet dynamo type, 10/6 each.—G. Purkis, 120, Fielding Rd., Bedford Park. [8405

C.A.V. Magnetos.—Extraordinary bargains.—Brand new 180° twin- or single-cyl.; 38/6, carriage free. Every magneto thoroughly tested before dispatch; approval against cash.—Below.

BOSCH Magnetos.—We specialise on the repair and overhaul of these magnetos. Every repair guaranteed; lowest prices.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [8524

MAGNETOS Overhauled, repaired, returned in 2 days as new, guaranteed for 12 months, from 15/-; no price exceeds 35/-.—Turner Bros., Motor and Electrical Engineers, Summerseat, Manchester. [7194

CONTINENTAL Ignition Repair Co.—We repair Continental magnetos only. By specialising on Beseh, U.H., Eisemann, Mea, Splitdorf, Dixie, and Berling magnetos, we can naturally give you better service.

PRICE: Rewinding 18/-, condensers 10/-, platinum screws (Bosch standard) 6/-, remagnetising 2/6 slip rings 6/6, H.T. terminals 4/6. Our price for overhauling a motor cycle magneto ranges between 20/- and 35/-, and never exceeds the latter figure. Guaranteed for 12 months, and redespatched to you in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardwick Rd. Chiswick, London. [3758

HARLEY-DAVIDSON Owners, send your Remy sets to E O Lucking, the Remy specialist; all makes of magnetos repaired; obsolete parts made up.—Office, 12, Churchfield Rd. East, Acton, W.3. Works, Park Royal. [8983

RECONSTRUCTED Magnetos.—Every make and type in stock; not ex-W.D. junk; English and Continental makes from £2/5, with a 12 months' written guarantee.—Standard Magneto Co., 55, Churchfield Rd., Acton, London. [8987

U.H. Magneto Repairs.—We specialise in these magnetos, and can be relied upon to give you good service. A1, B1, AO, KB1, KB2V, KZ2V type spares stocked; prices moderate; 12 months' written guarantee.—Charles Parker and Co., Churchfield Rd., Acton, London. [4455

# BASTONES

**Established 16 Years.**

***No Better or Cheaper House***

Special Line.
Limited number only.

**B-and New USCO**

**RUBBER NON-SKID COVERS (Heavy)**

Manufactured by the United States Rubber Co.Ltd.

List Price 53/6. Our Price **28/6.**

These Covers are not marked in any way and are a real Bargain.

### WOOD-MILNE Key Grip COVERS

| | | |
|---|---|---|
| 26×2¼ / 650×65 | Special Heavy .. | 13/6 |
| 26×2½ | 4-ply .. .. .. | 16/6 |

### GOODRICH Safety-Tread COVERS Extra Heavy.

| | |
|---|---|
| 26×2¼ .. .. .. .. | 28/- |
| 26×2½×2¼ .. .. .. | 36/- |
| 26×2⅝ .. .. .. .. | 35/- |
| 650×65 .. .. .. .. | 40/- |
| 26×3 for 650×65 rim .. .. | 48/- |
| 28×3 .. .. .. .. | 48/- |

### CLINCHER Rubber Non-Skid COVERS.

| | |
|---|---|
| 24×2 De Luxe Junior .. | 17/6 |
| 24×2¼ .. .. .. .. .. | 20/- |
| 26×2 De Luxe Heavy .. .. | 23/6 |
| 26×2⅜ .. .. .. .. | 25/- |
| 26×2⅜ Extra Heavy .. .. | 27/- |
| 26×2½×2¼ Heavy .. .. | 30/- |
| 650×65 Dreadnought 3-ribbed | 39/- |
| 700×80 to fit 650×65 / De Luxe Extra Heavy | 47/- |
| 28×3 De Luxe Extra Heavy | 37/6 |

### MISCELLANEOUS COVERS.

| | |
|---|---|
| 26×1¾ Best British Make | 14/- |
| 26×2 Englebert Passenger .. | 19/6 |
| 26×2¼ Hutchinson T.T. .. | 23/- |
| 26×2⅜ .. .. .. | 27/- |
| 26×3 Englebert Rubber Stud .. | 25/- |
| 26×2½ Michelin Fine Ribbed .. | 21/- |
| 26×2⅜ Englebert (wired edge) | 25/- |
| 26×2¼ Rom. Rubber, Non-Skid | 29/- |
| 26×2¼ ,, Combination .. | 40/- |
| 26×2¼ Goodyear Diamond Tread | 26/- |
| 26×2⅜ Skew Rubber, Non-Skid | 35/- |
| 28×2 Clincher A Won (Wired edge) | 20/- |
| 28×3 Hutchinson Super-Studded | 64/3 |

### TUBES.

**Goodrich, Clincher, and Hutchinson.**

| | |
|---|---|
| 26×2¼ and 26×2½ .. | each 6/3 |
| 650×65 / 700×80 / 28×3 .. .. .. | each 7/6 |

*The above new Clearance lines are sent on approval against remittance.*
*Carriage Paid.*
**Hours—9 till 6; Sat., 9 till 1.**

**228, Pentonville Road, King's Cross, London, N 1.**
'Phone: 2481 North. 'Grams: 'Bastones, London'

## IGNITION, LIGHTING, ETC.

THOMSON-BENNETT Magnetos, unused, W.I guaranteed perfect, single or 180° twin, variab ignition, switch terminal and leads, clock or ant £2, postage 1/6; week'a approval against cash. Brockbank, 58, Lord St., Southport. [075

LIGHTING Dynamos, contained in Government su plus mine exploders, dynamo will light seve 10-volt lamps in series, all as new and perfect, 17/ each, or 22/- each, carriage paid passenger train stamp for detailed particulars; three days' approv against cash.—Galpin (below).

MAGNETOS, 8-cylinder, by B.T.H.—These magnetc are in good order and complete with contac breaker; they can be used for 4-cylinder, twins o singles, with very slight alteration; 30/- each, ca riage 2/6 extra (per passenger train).—Galpin, rea of 35, Milton Court Rd., New Cross, London, S.E.14 [829

SURPLUS Magnetos, with written guarantee one year M-L single, 35/-; B.L.I.C. ditto, 42/-; Bosch ditto 45/-; Thomson-Bennett and C.A.V. singles and twins 50/-. We specialise in repairs and spares for al makes. Lists with pleasure. Deal with experts an avoid certain disappointment.—Whitdale Magneto Ser vice, Cherry Orchard, Croydon. 'Phone: Croydon 1625 [691

SPLITDORF magnetos, single, Anti' clock, variable ignition, and guaranteed perfect, 36/-. Pleas note these magnetos are not reconstructed or con verted starter magnetos. They are the real thing designed for a motor cycle (not an aeroplane) If yo are out to buy a magneto, buy the right thing.— Marble Arch Motor Exchange, 135, Edgware Rd. W.2. 'Phone, Paddington 789. [894

THE Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government, and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can mostly return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock, all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1. 'Phone: Museum 1158. T.A.: Kumagnelec, Eusroad, London. [2445

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repairs and spares. All repairs are tested on an approval A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock, charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034. T.A.: Magdyno, Eusroad, London. [0263

## TYRES.

BRAND new Dunlop tyres, 26×2, 16/6, delivered.—Clarke, 12, Queen St., Leuth. [8551

MISS DOOLEY.—28×3 New Palmer or Dunlop butt-ended tubes, 5/- each.—Below.

MISS DOOLEY.—26×3 butt-ended Dunlops, 5/- each, in wrappers.—Please apply for these bargains to Miss E. Dooley, 33, Killyon Rd., Clapham, S.W.8. [8806

ALWIN Tyre Co. will send on approval any of the following tyres:—

**26**×2¼ Clincher, 19/-; Palmer Cord, 21/-; Goodyear, 25/-; 26×2⅝ Clincher E.H., 26/-; Dunlop E.H., W.D. 37/-; Avon R.S., 27/6; 26×2½×2¼ Clincher, 25/6; Avon E.H., 28/6. 28×3 Fisk E.H. (splendid line), 45/-; Dunlop ribbed, 30/-; Clincher ribbed, 42/-; Dunlop E.H., 29×3½ for 28×3, 50/-.

WE also offer a splendid set of P. and H Lamps No 127 (5½in.), brand new (all black), at 35/6. Motor cycle tubes, all sizes, at 6/-.

ANY of the above lines will be sent on 7 days' approval against cash, plus 1/6 for post.—The Alwin Tyre Co., 37, Red Lion St., High Holborn, W.C. [8815

CENTRAL Garage will send any of the following tyres on approval against cash, postage 1/6 extra.

**26**×2¼ Dunlop, 37/3; Goodyear E.H., 27/6; Bates, 31/6; Avon, 25/-; Clincher-de-Luxe, 21/-; Palmer cord, 22/6.

**26**×2⅜ Dunlop E.H., W.D., 37/6; Clincher E.H. (for 2¼), 27/6; Avon R.S., 27/6.

**26**×2½×2¼ Dunlop, 46/-; Avon E.H., 30/-; Hutchinson T.T., 37/6; Clincher, 30/-.

**28**×3 Wood Milne E.H., 30/-; Clincher (plain rib), 42/6; Mackintosh, 30/-; Dunlop ribbed, 32/6; Fisk, 45/-; Dunlop E.H. (29×3½) for 28×3, 50/-.

**650**×65 Goodyear E.H., 30/-; Wood Milne, 30/-.—Below.

**700**×80 Wood Milne E.H., 41/6; International grooved, 55/-; Excelsior, 50/-.

RUBBER thigh boots (waders), brand new, all sizes; 8/6.

TUBES, all sizes; 6/6 each; orders promptly executed.—Central Garage, 302, London Rd., Thornton Heath. [8814

## TYRES.

MOTOR Cycle Tyres on Easy Terms, standard makes; list post free.—J. G. Graves, Ltd., Sheffield. [0589

28×3, 700×80, new Wood-Milne, 16/-; ditto, 26×2¼, 650×65, 12/6.—3, Jewin St., E.C.1. [8171

TYRES. Tyres. Tyres.—For special bargains, see Bancroftian Co.'s advertisement under Parts and Accessories. [0769

OATES Special Heavy clearance covers, 26×2, 29/-; 26×2⅜, 37/6; 26×2½×2¼, 42/-; carriage paid; approval.—Davies, Union St., Wednesbury. [4452

ECONOMIC Tyre Co.—Special Bargains in clearance and surplus stock covers. All goods sent on seven days' approval, carriage paid, against remittance.

ECONOMIC.—24×2¼ (also oversize for 2in. rims) Clincher De Luxe Junior, 20/-; extra heavy, 27/6.

ECONOMIC.—26×2¼ Dunlop heavy, 37/3; Bates special heavy, 28/6; Wood-Milne extra strong, 26/-; special heavy tubes, 6/-.

ECONOMIC.—26×2⅜ Dunlop heavy, 41/6; Bates special heavy, 30/-; Hutchinson T.T., 29/-; special heavy tubes, 6/6

ECONOMIC —26×2½×2¼ Dunlop heavy, 46/-; Goodyear Diamond, 42/6; Clincher extra heavy Dreadnight, 37/6; heavy, 30/-, Avon rubberstud, extra heavy, 30/-.

ECONOMIC.—28×3 Fisk extra heavy, 42/6; Kempshall Antiskid, 35/-; tubes, 6/6.

ECONOMIC.—650×65 Goodyear Diamond, 30/-; special heavy tubes, 7/-; 700×80 Goodyear Diamond, 50/-; tubes, 6/

ECONOMIC.—Fully warranted Dunlop Rubberstud, 24×2, 22/6 24×2¼, 24/9; 26×2, 24/6, 26×2¼, 29/-.

ECONOMIC Tyre Co 314, New Cross Rd., S.E.14 (near Town Hall). 'Phone New Cross 1393. [9010

HERBERT ROBINSON, Ltd., Green St., Cambridge.

4×2¼ Moseley extra heavy 3-ribbed, 32/6; Dunlop heavy, 36/3; best make tubes, 6/-.

26×2. Special bargain in tubes, 4/6 each, guaranteed perfect.

26×2¼ Pedley, 15/-; Matchless, 15/-; Dunlop, 25/9; heavy, 37/3; Bates W.D., 27/6; Cuthbe, 26/-; tubes, 6/6.

26×2½ Wood-Milne, 15/-; Matchless, 15/-; Moseley 3-ply, 32/-; Kempshall, 30/-; Dunlop clearance, 26/6; Dunlop heavy, 46/-; tubes, 4/6; best make, 6/6.

26×2⅜ Kempshall, 30/-; Dunlop clearance, 27/6; John Bull, 42/-; Hutchinson, 27/6; Dunlop heavy, 41/6; tubes, 4/6; best make, 6/6.

26×2½, fit 2¼ Dunlop, 46/-; Cuthbe, 45/-; Bates, 45/-; tubes, 6/6.

28×3 Avon extra heavy, 32/6; Cuthbe, 50/-; Dunlop, 58/6; tubes, 6/6.

29×3½ Bates, extra heavy, 50/-.

650×65 Avon extra heavy, 37/6; Bates, 47/6; Cuthbe, 45/-; Dunlop, 46/9; Wood-Milne, 46/-; best makes tubes, 6/6.

700×80 Bates, 47/6; Cuthbe, 55/-; John Bull, 50/-; Dunlop, 61/-; Bates extra heavy, 50/-; other tubes, 6/6.

HERBERT ROBINSON, Ltd., Green St., Cambridge. [8846

THE Difference between a good retread and a bad one is its mileage. Try us. Watch results.—Melton Rubber Works, Melton Mowbray. [0638

SCOTTISH Readers will find it advantageous to purchase their tyres from McArthur, Hill and Co., Carrick St., Glasgow. Lists post free. [3940

MOTOR Cyclists.—Send your covers for retreading. 3,000 miles guaranteed. Repairs of every description; carriage paid.—Buxton Vulcanising Co., Buxton, Derbys. [4357

RETREADING Diamond Nobby, grooved and ribbed tread, 7 patterns, American and H.F. process; tubes repaired.—Midland Tyre Works, Green Lane, Walsall. [6154

WORST Motor Cycle Tyres, chafed beads, remoulded, made perfect, tube vulcanising, butt-ends fitted while reading; send for list.—Melton Mowbray Rubber Works, Melton Mowbray. [0347

HERCULES Tyre Co., Northampton.—Several thousand 26×2⅜, 26×2¼ Army clearance tyres 1¼d. per mile, small minimum payment, rest not collected until you have had an arranged mileage. [7074

SPECIAL Clearance Line of New Clincher De Luxe stud non-skid (Junior) covers, not W.D., 26×2, 16/-; also 26×2½ (for 2¼ rims), heavy, 25/-.—Cycludes', 100, Great Portland St., W.1, Walsall and Leicester. [8717

SHEMPSHALL Tyres.—Heavy non-skid (C.L.), 26×2½×2¼, 30/-; 26×2⅜, 27/6; 26×2¼, 25/-; 28×3, 25/-; 28×3, 30/-; 26×3 (700×80), 42/6; 650×65, 32/6; 650×65 new tubes, m/c valves, 5/-.—H. Cross, 1, Shaftesbury Rd., Walthamstow, E.17. [8924

# LEATHER JERKINS

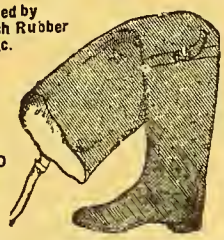
**These leather jerkins are made from superior quality tan leather. Very soft and pliable, fleece lined and double stitched. They can be worn either over or under your overcoat. These goods could not be produced, even on the present slump prices, at less than 30/- each. Stock is not large, and when cleared cannot be repeated.**

# 10/- each

## Postage 1s. extra.

## RUBBER HIP BOOTS

**Manufactured by North British Rubber Co., Ltd., etc.**



**THESE GOODS ARE QUITE NEW AND NOT OLD SURPLUS STOCK.**

**Sizes: 7, 8, 9, 10, 11, 12.**

**SENT ON 7 DAYS' APPROVAL AGAINST REMITTANCE.**

Per Pair **12/6** Carriage 1/- Extra.

**"A BOON TO THE MOTOR CYCLIST"**

**ORDER THE**

*The Name.* **ELITE** RUBBER Co. LTD Tyre Specialists *The Firm.*

**WAY**

**LONDON'S LEADING TYRE HOUSE, 264-266, Vauxhall Bridge Rd., Victoria, S.W. 1.**

**Telephones: Victoria 6553 and 6554.**

## TYRES.

INNER Tubes at clearance prices: 24×2 at 3/5, 26×2 at 3/8, 26×2¼ at 3/9, 26×2½ at 4/3, 28×3 at 5/-.—Martin Walker, Folkestone. [8336

TYRE Repair Specialists.—H.F. process throughout, including retreading burst covers. Every kind of repair to tyres and tubes in 24 hours, retreads in 4 days.—The Motor Tyre Co., 66, High St., West Bromwich. [3852

STARTLING Offer.—New Beldam covers, 26×2 or 2¼ 20/- each, 26×2½ 30/-, 28×3 35/-, 650×65 40/-, 700×80 45/- each; new Avon or Michelin steel studded covers, W.D., 700×65 35/- each.—The Homerton Rubber Works, Brookeby's Walk, Homerton, E.9. [0331

## TANKS.

TANKS for B.S.A., new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [6392

TANKS for Triumph, new, 42/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [6393

TANKS, new, unenamelled, latest design, Best and Lloyd fittings and pump, 45/- each.—B. R., 429B, King's Rd., Chelsea, S.W.10. [8495

TANKS Renovated, makers' designs, transfers; 13/6.—Whitworth Motor Renovating Co., 7, Jamaica Row, Birmingham. [8274

I SPECIALISE in Repairs, Rebuilds, etc., to any pattern; first-class enamelling; reasonable charges.—Day, 27, St. Luke's Rd., Birmingham. [8245

COVENTRY Tankers, Ltd., makers to the principal manufacturers; petrol tanks for any style supplied, extra capacity.—Hearsall Works, Coventry. [6394

TANKS Re-enamelled to Pattern. High-class work only.—D. Jenkins and Sons, 6, Richard St., Atkinson St., Deansgate, Manchester. Established 25 years. [3601

TANKS Made or Repaired, re-enamelled, lined, transferred; handle-bars, etc., plated. Established 30 years.—Attwood's, 86, Rosebery Av., London, E.C.1. [7073

HERBERT ROBINSON, Ltd., Green St., Cambridge. Tanks, all makes, supplied, repaired, and re-enamelled in makers' colours; prompt delivery at moderate charges. [8844

TANKS repaired, re-enamelled; we guarantee makers' colours, designs, and transfers. Handle bars and all parts plated. Lists free.—Park Works, 1A, Paradise Rd., Highbury, N.5. [6533

TANKS of every description replaced, repaired, and re-enamelled at our own works; all kinds of fittings stocked; quick service and reasonable charges. Illustrated list free.—A. Green, Water St., Chapel St., Salford, Manchester. Tel.: 2191 Central. [0256

AVERY'S Stock Tanks for Douglas, Hazlewood, B.S.A., Triumph, Omega, enamelled makers' colours, plated fittings, 40/-, complete; other design or shape to order. 12 months' guarantee with every tank.—Gordon Street Tank Works, Coventry. 'Phone: 1774 [0770

## BELTS.

NEW Clipper Belts.—8ft.×¾in. 11/6, 8ft. 6in.×¾in. 13/-, 8ft. 6in.×⅞in. 14/-, 8ft. 6in.×1in. 16/9

W.D. Belts, 6ft. 6in.×⅞in., 10/-; new Pedley belts, clearance, 6ft. 6in.×¾in., 10/-; clearance belts 6ft.×1in., 8/6.

H. EMANUEL and Co., Tyre Factors, 27, Belgrade Rd., Stoke Newington, N.16. Stores: 37a, Ball-Pond Rd., Dalston, London, N. Tel.: Dalston 3161 [0726

BALATA and Chrome Combination V Belts, suitable for all classes of motor cycles, ¾in., 1/4; ⅞in., 1/6; 1in., 1/9; 1⅛in., 2/- per foot. Fasteners 9d. each. Postage 1/-.—W. Pollin & Son, Hollington, St. Leonards-on-Sea. [6656

HERBERT ROBINSON, Ltd., Green St., Cambridge. All brand new, guaranteed, and carriage paid: Dunlop, best make, round top, ¾in. 1/10 ft., ⅞in. 2/2 ft., 1in. 2/8 ft., 1¼in. 3/2 ft.; John Bull, ¾in. 1/11 ft., ⅞in. 2/3 ft., 1in. 2/8 ft., 1¼in. 3/2 ft.; Any length cut; Pedley belts, 6ft. 6in. × ¾in., 10/- each. [8845

## CARBIDE.

FINEST Carbide, cwt. drums, 22/6, f.o.r.; 23 depots; prices packed in tins on application.—Sports Depot, Deeby Dale, Huddersfield. [5068

CARBIDE, finest quality only, 21/- per cwt., c.w.o., f.o.r.; depots all parts; also ½ to 7 lb. tins.—Hodge and Co., Warwick Rd., Bristol. [7483

CARBIDE, finest quality, giving 100 per cent. pure gas yield, all sizes, cwt. 26/6, ½-cwt. 16/3, 28 lb. 9/6, drums free; support the old firm; established over 30 years; satisfaction guaranteed.—Young, Importers, Misterton, Somerset. [9557

CARBIDE.—Immediate delivery of all sizes in 1 lb., 2 lb., 4 lb., and 7 lb. lever lid tins, and 2 cwt. drums, labelled or plain for retailers' own labels, quality guaranteed, and all standard sizes supplied by the cheapest firm in the trade.—The Premier Lamp and Engineering Co., Ltd., Moorfield Works, Armley, Leeds. [3286

## PATENT AGENTS.

J. E. S. LOCKWOOD, 3, New Street, Birmingham. 'Phone: 5816 C. Patents guide free. [9057

## PATENT AGENTS.

FREE, 100 Page Patent Guide, postage 3d.—The Consulting Patent Agency, 253m, Gray's Inn Rd., London. [2416

PATENTS Advice, handbook free.—King, Registered Patent Agent, 146a, Queen Victoria St., E.C. 35 years' references. [0129

W. BRYSON, B.Sc., Assoc.M.Inst.C.E., Chartered Patent Agent, 29, Southampton Buildings, London, W.C.2. 'Phone: Museum 3651. [9242

## PATENTS.

WE Buy, Sell, and Finance Inventions and Patents, and advise on their marketing.—Send postcard for full particulars to Dept. C, Inventors' Sales Agency, 22-24, Spencer Av., Coventry. [3717

## AGENCIES.

AGENTS wanted, all districts, to introduce popular motor cycle accessories; good profits; state qualifications.—Box 425, United Advertising Service, Ltd., 27, Chancery Lane, London, W.C.2. [8948

THE Mohawk Cycle Co., Ltd., requires sole agents for their celebrated motor cycles in districts where they are not already represented.—Write for list and terms to Mohawk Cycle Co., Ltd., 3569, Alexandra Rd., Hornsey. [6290

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at competitive rates.—Ernest Bass, 40, Chancery Lane, W.C.2. 'Phone: Museum 2234. [0005

ROYS, LTD., Insurance Brokers.—Agents for all companies and Lloyd's.—Competitive rates for motor insurance.—170, Gt. Portland St., London. [0055

COMPREHENSIVE Policies for motor cycles, cycle cars, Morgans, etc., from £1/4/6; immediate cover; prompt settlement.—John Clements and Co., 65a, Holborn Viaduct, E.C.1. [8372

"THE Motor Cycle" Insurance Policy is the policy authorised by "The Motor Cycle," and covers motor cycles or cycles and sidecars used for private purposes. Complete comprehensive cover. Maximum benefits, minimum rates. Full particulars and prospectuses on application.—The Autocar Fire and Accident Insurance Co., Ltd., 77, Cheapside, London, E.C.2. [0007

## TUITION.

HOUSE and Estate Agency, Auctioneering, etc.—Train by post for this paying profession. Start a business of your own. Prospectus free.—Agricultural Correspondence College (Dept. T), Ripon. [0389

## SITUATIONS VACANT.

EX-SERVICE Despatch Riders.—Write for particulars how to earn money without any outlay.—Apply Box 90, Pratt's, 9, Essex St., London. [0733

## SITUATIONS WANTED.

COMPETITION Rider, Colonial, desires appointment with firm.—Hawkes, 9, Ethel Rd., Harborne, Birmingham. [8267

ADVERTISER Desires Situation as Assistant Salesman Demonstrator. Good education; energetic and willing; 5 years' shop experience; competent driver and mechanic; good references.—Box 8637, c/o *The Motor Cycle*. [8202

## FINANCIAL.—PARTNERSHIPS.

£150 secures half interest in prosperous motor cycle dealers.—Smith, 2, Milbourne St., Blackpool. [8671

YOUNG Engineer, well used cars, cycles, desires active position in motor business; South or South-East Coast preferred, but not essential; up to £500.—Box 8622, c/o *The Motor Cycle*. [8139

## GENERAL TRADE.

AUCTION Sales.—Palmer's Garage, Tooting, the oldest solely motor auction rooms in London; terms 7½%, not chargeable if machine unsold. Motor cycles and cars bought and sold for cash. Nearest goods stations, Falcon Lane, L. and N.W.R.; Wimbledon, L. and S.W.R. and G.W.R.—Sole address, Palmer's Garage, Tooting, London. [8860

## WANTED.

SCOTT front forks or other spares.—79, Berkley St., Liverpool. [8877

WANTED, pair D.A. cylinders, cheap.—Brown, Ironmonger, Chesham. [8654

TAN-SAD pillion seat; also Albion gear; cheap.—15, Dallin Rd., Woolwich. [8580

MORGAN Runabout Wanted at once.—Offers to V., 56, Tollington Park, N.4. [8221

WANTED, front forks for 6h.p. 1914 Enfield.—Agars, 50, Savile St., Hull. [8558

OLD 2-seater single cylinder cars, at low prices.—Write, 53, Brownhill Rd., Catford. [8462

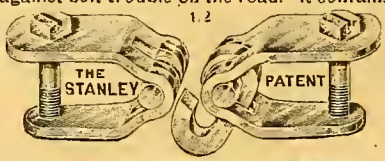
WANTED, secondhand engine, detachable heads.—Stevens, 55, Prince's Gate, S.W.7. [8429

SUNBEAM No. 1 Sidecar, with interchangeable wheel.—43, Carson Rd., W. Dulwich. [8921


# STANLEY BELTS AND FASTENERS.

**MILLIONS ordered and in use by H.M. WAR OFFICE and our ALLIES.**

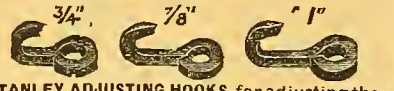
A BOX OF STANLEY SPARES is a complete belt equipment outfit—the best and cheapest Insurance you can effect against belt trouble on the road. It contains




The STANLEY FASTENER with the BEND that NEVER BREAKS, the BEST at any price. Hardened & tempered hook and flanged pins

The STANLEY SPARE LINK which is the best belt length adjuster yet invented. Saves time, trouble & money. Saves the cost of a new belt.

The STANLEY SHIELD, which protects the belt fastener, prevents wear of the pulley, and conserves power. Specially designed for use with the Philipson Pulley. 9d.



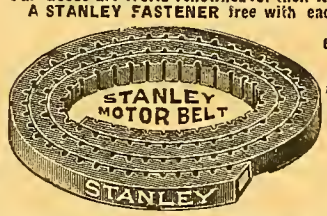

STANLEY ADJUSTING HOOKS, for adjusting the length of your belt in one second. Set of 3, 6d.

*"Never be without a box of Stanley Spares."*

*Price* 3/6 *post free. Send size of belt when ordering.*

The LION FASTENER, guaranteed for 5,000 miles—11d.

Our Goods are World-renowned for their Reliability. A STANLEY FASTENER free with each belt.




Belt Punches 1/6
Adjustable Punches 2/-
Per ft.
¾" 1/6
⅞" 1/7
1" 1/10
1¼" 2/2
1½" 2/8

Stanley Motor Belts & Fasteners Co., BRITISH THROUGHOUT
(STANLEY WEBB, inventor of the original Hook Belt Fastener and other Practical Belt Aids.)
32, London Road, BROMLEY, KENT. 'Phone, Bromley 806



# THE 'K' SERRATED MOTOR CYCLE OILCAN.

Fitted with BRASS TUBULAR SCREW SPOUT

*NO LEAKING JOINTS.*

*Post free* 1/9 *each from the SOLE MAKERS:*

J. KAYE & SONS, LTD., 93 High Holborn, LONDON, and Lock Works, LEEDS


## WANTED.

WANTED, pair Rudge T.T. bars, Rudge tool bags —Bush, North St., Sudbury, Suffolk. [8699

GLORIA sidecar wanted, new condition.—Lowest price to Cooke, Aldborough, Norwich. [8615

WANTED, A.I.V. Front Cylinder for 5-6h.p. 1911 Rex.—Box 8672, c/o *The Motor Cycle*. [8341

WANTED, De Dion 2¾h.p. cylinder head, sound; price.—Hern, Wickham Market, Suffolk. [8105

WANTED, Cylinder and Piston for Brown 2¾h.p. M.O.V.—King, Egrove Farm, Oxford. [8908

NEW or secondhand 2¾h.p engine, Blackburne or other make.—59, Gillibrand St., Chorley. [8571

PREMIER Douglas sidecar, not W.D., cheap.—Full particulars, 336, Moorside Rd., Bradford. [8478

WANTED, Sidecar, coach-built, any condition, fit Indian preferred.—Gales, Stalham, Norfolk. [8178

WANTED, N.S.U gear parts and controls; deposit system.—Chauffeur, Killiocer, Drogheda, Ireland. [8297

PHILIPSON pulley; state price.—Hollis, Robert Cottage, Gravel Rd., South Farnborough, Hants. [8441

WANTED, 3½h.p. Sunbeam, detachable spare wheel, and pair of footboards.—11, May St., Newport, Mon. [8979

SCOTT Rear Sprockets, and other parts, in good condition.—Ward Motors, Ltd., 32, Hustler St., Bradford. [0784

COULSON Sidecar, spring wheel, good condition, cheap.—Borrett, Post Office, Cattawade, Manningtree. [8535

WANTED, magnetos and spares, any condition, for cash.—Charles Parker and Co., Churchfield Rd., Acton, London. [8700

WANTED, Henderson Elite sidecar, late model; will exchange late Canoelet, cash adjustment.—17, Highland Rd., Southsea. [8614

WANTED, Dynamos with defective wiodiugs, motor cycle or car; state price.—J. W. Heron, c/o Beaton, Invergowrie, Dundee. [8269

STURMEY-ARCHER or Lightweight, 2- or 3-speed gear box or hub might suit.—19, Wilcox Rd., South Lambeth, London, S.W.8. [8324

WANTED, good up-to-date second-hand motor cycle accessories; state particulars and price.—Service Co., 292, High Holborn, W.C.1. [0671

MODERN 2-seater Millford Sidecar, enclosed, 28in. wheel, quality essential, or chassis alone.—25, Flanders Mansions, Turnham Green. [8931

OLD Motor Cycle Engine, spring forks, frame, wheels, etc.—Full particulars and lowest price to 15, Milverton Terrace, Whetstone, N.20. [8778

SIDECAR for Triumph-Gloria, Grindlay luxe preferred, good condition, not earlier 1920; moderate price; Herts.—Box 8604, c/o *The Motor Cycle*. [8132

4h.p. Douglas.—Complete new engine required for 1918 model; also gear box and clutch complete; quote lowest price for cash.—Box 8635, c/o *The Motor Cycle* [8200

WANTED, Coach Sidecar, touring, complete with connections, cheap, suitable for 3½h.p.; also set of P. and M. chain cases complete with caps.—Thoroley's Motors, Boreham Wood, Herts. [8291

WANTED to Purchase Outright for cash, bankrupt stocks. W.D. spares, miscellaneous spares. Send full particulars.—McNeille and Platt, 57, Gt. George St., Liverpool. 'Phone: 1092 Royal. [2489

## EXCHANGE.

HARVEY-FROST Garage Vulcaniser, with mandrils, tools; exchange lightweight.

TOURING Ford, for good combination Triumph or Douglas.—Whitehead, Brannstone Gate, Leicester. [6570

SIDECAR and cash for good solo.—Mitchell, 44, Wellington St., Camden Town. [8909

NEW Solo Electric Set, 7in. head, for speedometer, or sell.—24, Belamy St., S.W.17. [8407

4¼h.p. B.S.A. for Powerplus Indian or similar big twin.—Bolton, Stover, Newton Abbot. [8176

RUDGE-MULTI, foot oiler; exchange T.T. Rover; sell £45.—61, Clarence Rd., Teddington. [8316

5-6h.p. Twin Rover, fully equipped, for Triumph or Norton 1919-20.—Moy, Merrick Lodge, Coventry. [8180

EXCHANGE your present machine for a new car or motor cycle at Kays, 8, Bond St., Ealing. [7231

CENTAUR 3½h.p., 2-speed, fine order, cash, lightweight.—37, Leamington Rd. Villas, W.11. [8599

EXCHANGE 1920 Triumph for Morgan or combination; sell £85.—Close, 4, Ahoyne Rd., S.W.17. [8604

ENFIELD Combination 1917, for good single.—Particulars, 152, Gt. Knollys St., Reading. [8482

8h.p. Ruby Combination, 1918, for really good piano; cash either way.—Box 8621, c/o *The Motor Cycle*. [8164

## EXCHANGE.

XCHANGE 5h.p. twin 2-speed Motor Cycle for 2-speed Lightweight.—Box 8679, c/o *The Motor Cycle.* [8896

XCHANGE, for Combination, piano, full octave, by Tolkien.—Johnson, Cleveland Cottage, South ot. [8107

ORD Van, 1916, good order; exchange combination or 2-seater.—Jeavons, Draper, Lye, Stourdge. [8356

AMPLIN 1921, speedometer, fully equipped; exchange.—38a, Sidney Rd., St. Margarets, Twickenam. [8887

VEST NORWOOD! Fifty vehicles all types for exchange!!!—Douglas S. Cox, West Norwood. e Cars.) [8012

914 Precision Lightweight, 2 speeds, shabby, £16; for good Douglas, P. and M.—Welsh, Janefield , Glasgow. [8244

UN-VILLIERS, single gear; exchange, with cash, for machine with gears.—Penny, 146, Hnish, ovil. [8620

XCHANGE Small 2-seater, privately owned, for combination.—Particulars, Reynolds, Melbourn, mbs. [8570

1h.p. Frame, tank, complete wheels, etc.; exchange 2 good engine, cycle, etc.—89, Congleton Rd., Sdulph. [8508

EE A.B.C., A.J.S., Bat, B.S.A., Douglas, Scott, Triumph, Zenith, columns.—Kent's, 417, Lord , Southport. [8681

915 Indian Combination 7-9h.p.; exchange for 2¾h.p. Douglas, with cash.—8, Ray St., Fargdon Rd. [8939

AIMLER Limousine Body, 25-30h.p. model; exchange for motor cycle, or sell £20.—"Bath ern," Mitcham. [8408

OMBINATION, P. and M. 1917, for solo C.S Triumph, B.S.A., or Clyno.—F., 25, Kildare race, Bayswater. [8416

1h.p. Rudge, clutch, good condition; £26; exchange lightweight.—4, Aynscomb Mart, High , Orpington. [8147

921 A.B.C. as new; exchange lightweight and cash; callers preference.—Ewers, Newton Rd., rton-on-Trent. [8562

913 3½h.p. Rex, good condition, £25, and £15 cash, for 4h.p. 3-speed countershaft.—Webb gwardine, Hereford. [8442

XCHANGE Lagonda Coupe 12h.p., 4-cyl., detachable wheels, spare, for combination and cash. 9, Valnay St., Tooting. [8518

XCHANGE 1921, 2-speed, 2-stroke, perfect, and cash, for combination; sell £46.—Kemp, 27, estmorland Rd., S.E.17. [8576

-STROKE, 2-speed Countershaft, lamp sets, for 3½h.p. T.T. Single preferred.—Ibbetson, 27, rk Hill Rd., Croydon. [8943

IDECAR, bulbous, almost new, £15; or exchange Watsonian R.34, cash either way.—Wythes, 68a, gent St., Leamington. [8614

XCHANGE 1915 4h.p. J.A.P., clutch, good running order, for upright iron frame piano.—Coporne, Chase Rd., Epsom. [8384

.V. 6h.p. 1921, 2-speed, electric lighting, fully equipped, perfect, for solo or combination.—17, ssex Rd., New Malden, Surrey. [8581

XCHANGE Lucas gas lamp set and cash for Lucas dynamo set for motor cycle.—11, May St., ewport, Mon. [8980

917 7-9h.p. Indian Combination, lovely order; exchange lower power combination.—Folley, Parson rove, Wisbech. [8243

HALIFAX.—1922 Coventry Premier Light Car for good combination and cash.—Motor Exchange, 25, orton St., Halifax. [8744

PARTLY Assembled Light Car, 10h.p.; exchange late model motor cycle; or sell, nearest £70.—1, Kerbey St., Poplar. [8373

JACK PRUEN, Oxford St., Weston-super-Mare, will exchange modern solo or combination with cash r 1921 Sports Sunbeam. [8159

1h.p. Peugeot, 2¾h.p. Werner (2 solo machines); 2 exchange for combination.—A. Aldous, 54a, reen Lane, Hanwell, W.7. [8157

EXCHANGE £50 worth of jewellery, clothing, boots, for good make solo or combination.—Box 665, c/o *The Motor Cycle.* [8251

TRIUMPH Combination, 1914, 3-speed, kick start, any trial; £48; take lightweight part.—57, Kenary St., Camberwell, London. [84[illegible]

EXCHANGE Special Demonstration Model Broler 1920 2¾h.p., 2-stroke, 2-speed, K.S., clutch; £45, Bostock, Byron St., Ilkeston. [8188

EXCHANGE Magneto Motor Cycle, good condition, for good Gent.'s 3-speed Cycle and little cash.—ox 8677, c/o *The Motor Cycle.* [8894

EXCHANGE Brand New Motor Scooter, cost £55, for reliable motor cycle, or sell.—Offers, F. Godey, 63, Brighton Rd. Surbiton. [7152


H. F.

# EDWARDS

& CO.

50, HARRINGTON ROAD, SOUTH KENSINGTON, S.W. 7

Telephone: KENSINGTON 3709.

beg to announce that they have opened additional premises at

## 101, GT. PORTLAND ST. W.

and offer the following

## COLOSSAL BARGAINS AT BOTH BRANCHES

Several **BRAND NEW** 2¾ h.p. **KINGSBURY** two-strokes, 2-speed, clutch, all chain drive. **Price 39 Guineas** (listed 73 gns.)

Several **BRAND NEW** 1921 5 h.p. **ZENITH SPORTS.** Usual maker's guarantee. **Price 73 Guineas** (list price £110.)

**NEW 1922 MODELS IN STOCK AT BOTH BRANCHES.**

**MATCHLESS,** all Models.
**NEW IMPERIAL,** Model 3.
**RALEIGH,** light weight.
**TRIUMPH,** Ricardo.

**SECOND HAND COMBINATIONS.**

| | | Guineas. |
|---|---|---|
| 1919. | **SUNBEAM SPORTS** comb., 4 h.p. fully equipped | 85 |
| *1921 | **ENFIELD,** Magdyno, speedometer, hood, screen | 118 |
| *1921 | **P. & M.** Demonstration Model, equipped, as new | 109 |
| *1921 | **B.S.A.,** Model H2 and No. 3, sidecar Magdyno, speedometer, screen, leg-shields, licensed | 125 |
| 1920 | **BLACKBURNE,** 4 h.p. Lucas dynamo, speedometer, mirror | 98 |
| 1920 | **REX,** 8 h.p., electric lighting, windscreen, etc. | 72 |
| *1920 | 8 h.p. **ZENITH** and side-car, windscreen, speedometer, equipped, splendid order | 78 |
| *1918 | 8 h.p. **ENFIELD** comb., dynamo lighting, tan-sad windscreen, condition excellent | 82 |
| *1921 | 6 h.p. **MARTINSYDE** comb., fully equipped | 85 |
| 1920 | 3½ h.p. **ARIEL** comb., speedometer, lamps, etc. | 80 |

**SECOND HAND SOLOS**

| | | |
|---|---|---|
| *1921 | 4 h.p. **INDIAN SCOUT,** speedometer, licensed for year, mileage 450, indistinguishable from new | 98 |
| *1921 | 2¾ h.p. **LEVIS SPORTS,** Lucas lamps | 37 |
| *1921 | 4 h.p. **VERUS BLACKBURNE,** 3-speed, as new | 75 |
| 1921 | 4 h.p. **VERUS BLACKBURNE,** 3-speed, mechanical oil pump, ace discs | 63 |
| 1921 | 2¾ h.p. **BABY TRIUMPH,** equipped | 40 |
| *1921 | **A.B.C.,** dynamo lighting, oversize tyres, equipped as new | 82 |
| *1921 | **A.B.C.,** Lucas lamps and horn new condition | 72 |
| *1921 | 2¾ h.p. **DOUGLAS,** 3-speed clutch kick-starter, equipped, practically unused | 55 |
| *1916 | 2¾ h.p. **DOUGLAS,** equipped, fine condition | 37 |

**LIGHT CARS**

| | | |
|---|---|---|
| *1921 | **AERO MORGAN,** M.A.G. Engine, Ace Discs, etc., Mileage 200. As new | 170 |

**DEFERRED PAYMENT OR EXCHANGES**

Wanted Solos and Combinations, cash waiting.

All machines starred are to be seen at Great Portland Street, the remainder at South Kensington.


## EXCHANGE.

SMALL 1-manual Pipe Organ, value £30; for 1922 touring A.J.S., New Imperial, cash adjustment.—Bateman, Harmondsworth, Middlesex. [8215

DOUGLAS 2¾h.p., all on, good condition, for powerful combination, cash adjustment.—23, Barrett Avenue, Wood Green, N.22. [8687

TRIUMPH, 3-speed, Sturmey hub, 1913, and cash to £30, for best machine or combination offered.—Smith, 35, Kensington Place, W.8. [8382

ALLDAYS 12h.p. 4-seater, dark blue, unscratched, remarkably good condition, value £150; exchanges invited.—63, Solon Rd., Brixton. [8440

EXCHANGE 1920 light car, inspected 53, Kingscourt Rd., Streatham, London, for good combination, or with cash for late Morgan. [8146

EXCHANGE 1918 Powerplus Indian, T.T. bars, special Aero sidecar; for T.T. Rudge or Scott.—Captain Harrison, Rothley, Leicestershire. [8260

EXCHANGE 1922 7h.p. A.J.S. Combination, magnificently equipped, for Triumph combination, or solo and cash.—51, Upper Richmond Rd., Putney. [8933

PERFECT 8-10h.p. Air-cooled Williamson Combination, full equipment, spares for lower power; cash adjustment.—4, Elm Gardens, Brook Green. [8695

EXCHANGE 1917 Calcott, 2-seater, for combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7520

EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hansler Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452. [7939

EXCHANGES or Offers invited for the following 1921 new machines: B.S.A., Beardmore, New Imperial, Levis.—S. E. Porter and Co., Whitchurch, Salop. [8119

1914 G.N. Cyclecar, in very good order, aluminium body; exchange for motor cycle or combination, Scott preferred.—Johnson, 29, Austerby, Bourne, Lincs. [8205

NORTON 1921 Sports Model, close ratio gear box Ricardo piston, perfect order, tax paid; £95, or lightweight part exchange.—Box 8662, c/o *The Motor Cycle.* [8248

EXCHANGE Flanders Small 4-seater, 5 lamps, horn, front and rear windscreens, overhauled and painted, for combination, or sell £70.—6, Albert Rd., Peckham. [8110

EXCHANGE Conjuring Tricks and Illusions (professional apparatus), for motor cycle, combination, or cash.—Write, for particulars, Box 8634, c/o *The Motor Cycle.* [8199

F.O.C.H. are noted for fair exchanges.—Fair Offer Car House, 5, Heath St., Hampstead. (Near Tube.) 'Phone, Hampstead 3752. Hours 9-7, including Saturdays. [8325

EXCHANGE brand new 1922 8h.p. Rover, 2-seater, for combination or Morgan and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7517

6h.p. Rudge-Multi Combination 1916-17, overhauled, equipped, spares, excellent, guarantee given; sell or accept solo and cash adjustment.—43, South St., Ponders End, N. [8475

1921 8h.p. Solo Williamson-Jap, all-chain, Sturmey, oversize Dunlops, small mileage; for 1921 chain B.S.A. or Sunbeam single.—26, Ripon Gardens, Newcastle-on-Tyne. [8183

EXCHANGE brand new 1922 Coventry Premier, 4-wheeler, for combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7518

HENDERSON Combination, bought April, 1921, lavishly equipped, dynamo lighting, cost £300; for Coventry Premier 3-wheeler.—6, Eridge Rd., Bedford Park, W.4. [8254

EXCHANGE Ford Tonner 1918, tax paid, excellent order throughout, for combination, solo, or 3-wheeler, cash adjustment.—Merry, 168, Wellington Rd, South, Hounslow. [8627

EXCHANGE 1921 (July) 2¾h.p. Douglas and 16ft. Canadian canoe, as new, cost £35; for 1921 combination, or offers invited for either.—3, College Court, Hammersmith. [8218

1916 3½h.p. Sports Brough, 2-speed, discs, best lamps, very fast (winner competition), for Douglas, Levis, or good 2-stroke and little cash.—7, St. Mark's Mansions, N.4. [8452

EXCHANGE New Hudson, 2¾h.p. J.A.P. engine, 3-speed, clutch, lamps, etc., for screw-cutting lathe or gas engine and cash; sell £22.—Brown, 71, Twilley St., Wandsworth, S.W.18. [8916

EXCHANGE 1920 4h.p. Campion Combination, tax paid, electric light, Easting, speedometer, etc., excellent condition, for higher power, or sell £100.—Dickinson, Chemist, Stamford. (D) [8847

WILLIAMSON New Radiator, water-cooled cylinders and pistons, water-pipes; exchange air-cooled ditto and cash, or accessories to value.—19, James Terrace, Wallsend-on-Tyne. [8285

## EXCHANGE.

EXCHANGE 1914 Standard, dynamo lighting, and thoroughly overhauled, for good combination and cash.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7521

CARDEN A.V. type Monocar, 1914-15, 5-6h.p. J.A.P., sporty, tuned for speed, 4 lamps, horn, tax paid; exchange Douglas, Rudge, Scott; Zenith preferred.—152, Peckham Park Rd., S.E.15. [8369

WANTED, 1921 8h.p. Sports Matchless Combination; exchange late 1920 4h.p. Triumph Combination, specially built sidecar; cash adjustment.—Letters, D. Woolf, 27, Hoxton St., London, N.1. [8151

MORGAN DE LUXE, 1917, engine just overhauled, splendid condition, many spares, fully equipped, trial; for solo or combination, cash adjustment.—Smith, 37, Revelstoke Rd., Wimbledon Park, London. [8256

EXCHANGE 1921 8h.p. Zenith, clutch, combination, Magdyno, for 1921 Big Four Norton combination, Magdyno, equipped, or cash adjustment.—Write, Pollard, "Shanklin," The Avenue, Chingford, Essex. [8657

EXCHANGE 1919 Rudge-Multi, touring model, perfect condition throughout, for 3-speed Indian, 7-9h.p., Powerplus preferred, in same condition.—Langford's, 37, Cricklewood Broadway, N.W.2. 'Phone, Hampstead 8616. [8523

AGENTS.—Best exchange proposition accepted by owner 1921 American Ace, Swan sports sidecar, for 8h.p. Brough Superior or 1922 Henderson combination; machine garaged near London.—Box 8605, c/o *The Motor Cycle*. [8133

EXCHANGES.—We will allow you highest market value for your present cycle in part exchange for either a new or second-hand machine; any make supplied.—R. Bamber and Co., Ltd., 2, Eastbank St., Southport. 'Phone: 607. [7241

EXCHANGES.—The Newnham Motor Co. have specialised in motor exchanges for several years, and can offer best prices for secondhand cars or motor cycles in part payment for new or later models. Cash either way. Distance no object. Exchanges arranged by post. All makes supplied.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7516

## REPAIRERS.

ANY

ARMSTRONG or Sturmey-Archer Gears Repaired promptly and efficiently.—County Engineering Co., Hounslow. [0517

C. R. FOSTER, of Leeds, is the original cylinder grinding specialist.

CYLINDER Grinding by Foster, of Leeds, has no equal. Price, complete with piston, from £2.

£1,000 is the value of the machine and equipment that will grind your cylinder at our works.—Foster, of Leeds, 170, Cardigan Rd. [0003

ENGINE Overhauls, quality work only, cylinders reground, pistons, valves, bushes, etc.—Below.

PISTONS for every standard motor cycle in stock from 14/- each.—Below.

CYLINDER Grinding, our speciality 2¾h.p. Douglas reground, fitted with new piston, rings, and gudgeon, 25/- each.—Below.

TRIUMPH, J.A.P., Bradbury, and all 3½h.p., 4h.p., cylinders reground and fitted new piston, rings, and gudgeon, 35/-; returned in 48 hours.—Below.

QUALITY and Satisfaction is our motto. Entrust your work to specialists and get a guaranteed repair. — C.M.D. Engineering Co., Leamington Spa. 'Phone: 768. [9659

ENAMELLING, plating tanks; from 6/-.—Send to Fisher, Works, 111, Harnall Lane, East Coventry. [8158

REPAIRS and renovations to motor cycles, any make.—Swift Repair Works, 133, Long Acre, W.C. [0796

WELDING Aluminium Crank Cases, gear boxes by experts; immediate attention; sensonable prices.—Below.

WELDING Broken Cylinders, flanges, combustion experts of 11 years' experience.—Below.

CYLINDER Grinding on latest machinery, installed since hostilities ceased; accuracy guaranteed; new pistons fitted.—Sadgrove and Co., 140, Conybere St. Birmingham. [4769

FRAME and Chassis repairs, alterations, etc.; we are specialists and sidecar makers; reasonable charges.—Below.

ENGINES overhauled, rebushed; singles 35/-, twins 45/-. Try us for anything motorish.—Henry V. Smith, Osmondthorpe Lane, Leeds. [7561

ENGINES rebushed, spindles, etc.; parts made to pattern or sketch.—Mallin Milbourne, Queen St., Romford. [7771

INDIAN Owners.—If you have trouble with your machine, send to Indian repair specialists, Dennis, 89 Brixton Rd London [1853

FRAME Repair Specialists.—New tubes, forks, stays, cut-downs, etc.; enamelling and plating at lowest prices; quick despatch.—A. E. and F. Brittain, Bentley Lane, Walsall. [2622


An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

Insurance Policies

**IMPORTANT AGENCY EXTENSION**

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS.

Address—Agency Dept.,

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED**

Head Office:

**77, Cheapside, London, E.C.2.**

*Telephone: City 9831 and 9832.*

*Telegrams: "Autoinsure, Cent. London."*


## REPAIRERS.

ENGINES Rebushed, Overhauled, rings fitted, compression guaranteed; singles, 30/-; twins, 40/-; returned 3 days.—Below.

CYLINDERS Rebored, new pistons fitted, 30/- to 40/-; piston slots recut, complete with ring, 3/- each.—Turner Bros., Motor Engineers, Summerseat, Manchester. [7193

ARMSTRONG and Sturmey-Archer Gear Repairs and replacements; all parts supplied from stock.—Tavistock, below.

ARMSTRONG and Sturmey-Archer Gears repaired while you wait.—Tavistock, below.

GEARS.—Any type of gear boxes or gear replacements made to pattern or drawing at competitive prices.—Tavistock, below.

KINDLY Note our new address.—Tavistock Engineering Co., 9, Johnson St., Notting Hill Gate. [8589

STURMEY and Armstrong gears repaired or parts supplied promptly.—Cherry Lane Garage, Lymm, Cheshire. [8885

STOVE Enamelling.—Frames, 9/-; wheels, 9/-; tanks, makers' colours; plating.—De la Cour, 298, Kennington Rd., S.E.11. [8705

FRAME, chassis, and tank repairs, enamelling and painting by experts; prompt deliveries.—Loughan Co., Fitzroy St., Leicester. [6097

PISTONS, Aluminium, cast iron, steel; cylinder grinding; engines overhauled.—Birmingham Piston Mfg. Co., 173, Newtown Row. [8683

J.A.P. and Blackburne Engine Experts; reasonable and reliable.—Kingsbury Garage, Edgware Rd., Hendon. 'Phone: Kingsbury 134. [4209

HENDERSON Specialist repairs and overhauls, 12 years' experience with leading makes.—Mardon, 13, Shirlock Rd., Hampstead, N.W. [8209

ROC 2-speed Overhauls; Humber, Rex, V.S., Campion, Alldays; all repairs guaranteed; spares stocked.—Connolly, Carmelite Rd., Coventry. [8989

WELDING.—Broken cylinders, crank cases, etc., made like new; work guaranteed; quick return.—Tonge Welding Co., Morton St., Middleton, Manchester. [8550

ENAMELLING, Plating.—Tanks enamelled as before handle-bars, etc., plated.—Send to Murray's Plating Works, Union St., Coventry. Platers and enamellers to the trade. [0024

CYLINDER Grinding, new pistons, etc., fitted; satisfaction guaranteed; lowest prices.—Ford Welding and Engineering Co., Ltd., The Tunnel, Queen St., Cardiff. [7269

CYLINDER Grinding, new pistons, etc.; accurate and highly finished work; prompt delivery; price list on application.—W. and F. Wills, Ltd., Engineers, Bridgwater. [0728

SPEEDOMETER Experts.—Repairs to all makes; Stewart repairs a speciality. New and second-hand sets in stock.—London Speedometer Co., Kramer Mews, Earl's Court. [4043

FRAMES.—Repairs and alterations; special frames and tanks built, any design; enamelling and plating.—A. Pilkington and Co., 390, Lichfield Rd., Birmingham. [8811

ALUMINALLOY Pistons.—Our pistons signalise efficiency for 20,000 miles. Cylinders ground, pistons fitted. Trade supplied.—Commercial Engineering, South St., Keighley. [3937

CYLINDER Grinding, new pistons, rings, and gudgeons, 85 mm. J.A.P.'s, etc., 29/6; other sizes on request. Aluminium pistons if desired.—Vulcan Engineering Works, Wilsden. [9642

WELDING.—Broken flanges, aluminium crank cases, cracked water jeckets, valve seatings, welded and machined complete; scored bores filled in and ground to existing pistons.—Below.

CYLINDERS Reground, new pistons fitted complete in cast iron or aluminium.—West London Welding Co., Essex Place, Chiswick. 'Phone: Chiswick 536. [0415

COULSON Repair Specialists. Spares for all models stocked. Trade inquiries invited. Tube bending, welding, brazing, and enamelling.—H.W.H. Engineering Co., 40, Old Town, Clapham, S.W.4. [2537

CYLINDERS Reground, accurate finish, compression guaranteed; Triumph, Rover, Premier, 35/-; 2¾h.p. Douglas, 25/-; 70 mm. bores, 30/-; rings and gudgeons complete, twins low price.—Below.

PISTONS, all patterns, oversize specialists, low price.—Below.

PISTON Rings, oversize or slip-cut, 2/-; standard, 1/6; return post; none better. Thousands of testimonials.—Patent Rings, 30, Wigan Rd., Atherton. [5136

TRIUMPH Cylinders reground and fitted with genuine Triumph oversize pistons, complete with rings and gudgeon; 40/-; J.A.P., Rover, B.S.A., etc., same price; compression and accuracy guaranteed.—Below.

WE specialise on engines, complete overhauls, any part made to pattern or drawing, accurate work only; no waiting.—Harvey and Co., 47, South Lambeth Rd., S.W.8, near Vauxhall Station. [0793

THE MOTOR CYCLE

ESTABLISHED IN 1903

FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street.
*Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street.
*Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate.
*Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## Despite Disabilities.

IN our last issue a letter of more than ordinary interest appeared under the sectional heading of "Readers' Replies" on our "Questions and Replies" pages. It was a note of encouragement and advice from one disabled rider to another who recently sought for a machine which would suit the requirements of a man who had had the misfortune to lose both his legs.

The letter described how the writer, an official in a North of England club, had competed with success on his sidecar outfit in a number of events, despite the handicap imposed by the fact that he lost both legs sixteen years ago, and has since had to depend upon artificial limbs. Such an example of triumphing over physical difficulties is by no means isolated, as we are aware, but it is only when special circumstances arise that a case is brought to public notice.

During the interval since the war there must be many men who have had the misfortune to lose a limb who otherwise have now fully recovered their normal health and strength; where the disability has affected the lower limbs a wide field of activity becomes impossible, yet, to an ordinarily active man nothing is more limiting and cramping in outlook than confinement to a restricted area within his own district. It is in such cases where the sidecar or small runabout will provide the means of locomotion—independent and always available—which the disabled man has lost. It is, moreover, in cases such as that referred to above, wherein those who have suffered similar losses may find the inspiration that will lead to their regaining an equality in an active sport which will allow them to compete with, and even excel, their more fortunate fellows despite seemingly insuperable drawbacks. Regarded practically, of course, a single track machine cannot be recommended in such circumstances (although we know of many instances where a solo mount is ridden successfully). The risks, however, are too great, and a machine which is in stable equilibrium when at rest should certainly be selected.

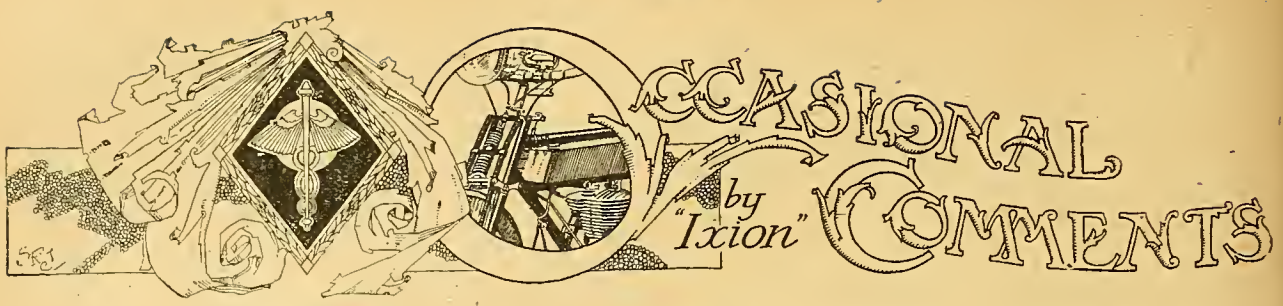
## Freak Trials and the Second-hand Market.

ARISING from an article a few weeks ago by an enthusiastic supporter of the ultra-sporting or freak trial, there has been considerable correspondence from our readers on this subject, mainly, however, disagreeing with the views of the first writer. It has been said, for example, that using a good machine in some of these events is analogous to galloping across a boulder-strewn seashore with a hunter, and subjecting a good motor cycle to unnecessary abuse. That may be so; but the broken leg of a horse, a likely occurrence under the circumstances, cannot readily be replaced, and even if repairable inevitably causes pain to the animal; on the other hand, the damage usually accruing to a motor cycle in consequence of completing a "colonial" trial's course is seldom really vital, and in the case of the sturdiest and best machines rarely amounts to more than kinks in the rims or bent foot-rests.

Modern motor cycles have reached the stage where they can withstand a considerable amount of rough riding without receiving even a trace of lasting damage, although naturally this applies more indubitably to the premier medium- and heavy-weights.

Therefore we emphatically do not agree with the further complaint that trials of to-day have a most detrimental effect on second-hand prices. The keen amateur trials rider is usually just the type of man who takes the greatest care of his mount from a mechanical standpoint, and maintains it in its best possible running order.

An index to the advertisements in this issue will be found on the page facing the back cover




### Good Plating.

THERE is plating and plating. I took out a new machine in a drizzle the other night and found, next morning, that lots of the small plated screws securing mudguards and such like were bright orange. But the nickelling on the old 1911 Lucas head lamp, which has covered many thousands of miles and also spent months lying idle in damp garages, is still white and free from pitting or brown patches. In fact, its finish has worn better than the black—doubtless an oxide process—applied to the body of the lamp and the handle-bar clips. These are less smart than the plating, and even shaded with mild rust in certain places, so that I gave them all a coat of quick-drying black before restoring them to commission. The aforesaid orange screws have since been cleaned, doped with Corrosine, and rained upon once more. They have given the dope best, and to-night look quite white if a shade duller than factory polish. Incidentally I found that one tin of Corrosine sufficed for the whole of the machine, over-bespangled with nickel as it was, with the sole exception of the spokes, which for the moment are merely greased.

### Deposit Against Spares.

I ALWAYS thought that depositing a fiver at the factory so as to ensure prompt attention to telegraphic wails for spare parts was a stunt which many catalogues prate of, but no rider actually performs. This week I met in the flesh an owner who keeps £5 on permanent deposit at the factory stores. The habit has not been greatly advertised of late, and readers who are temperamentally nervous and prudent may like to be reminded that most manufacturers welcome such deposits. I am sure I should, if I were a manufacturer, and all my clients indulged in it.

### My Gas-Electric Headlamp.

SEVERAL readers want to know what sort of a light I get from the cunning Siemens gadget which I mentioned recently—an electric bulb clipped to the burner support of an acetylene head lamp and fed by a dry battery. I do not know whether it is fair to answer, as much must obviously depend upon the focus and the reflector. The gas lamp in question chances to be a very ancient Lucas, dating from about 1911, and was never a great light giver in its palmiest days. Its illumination with the Siemens miniature opal bulb is very curious. A very narrow shaft of quite intense light is thrown a long way—approximately 250ft.; the shaft is very narrow, and there is practically no diffusion of any width close up to the lamp. Quite a different effect would naturally be obtained with other foci and reflectors, but this ray suits me quite well for occasional short-distance work on a fast machine, and I shall not bother to make the focus adjustable or to try a better head lamp. Another reader wishes to know how I lead the wires out of the lamp. I took a hammer and chisel and knocked out some of the ventilating perforations in the base of the lamp shell, padding the wires with insulating tape to fill the hole snugly.

### Oil for the Season.

CLUBS, pubs., and Press are full of complaints about the difficulty of getting a thick oil through a small pipe on a cold day. On which grievances I have four remarks to make. The first is that there is no apparent reason why our oil passages should be so microscopic, and that the cost of our machines would not be perceptibly increased if these passages were enlarged. The second is that our British climate is as capricious as a cinema star (female gender); there comes a premature spell of spring, and we fill our tanks with BB; then a polar frost begins, and a thin oil will not flow. Moral, go by the calendar rather than the feel of the air. The third remark is that it is silly to slop a quart of Vacuum A into the tank on the top of an inch of thick sludge which has accumulated during the summer. The sludge is the first to quit the tank for the pipe, and of course it immediately waxifies. Moral, cleanse all the thick stuff out of the tank and pipes before replenishing with winter oil. Lastly, some roughriders lag their oilpipes from October till March—it is the 2ft. of exposed $\frac{3}{16}$in. pipe which creates the trouble, rather than the tank or the pump.

### Progress.

EXAMINING a Villiers-engined machine this week, I fell to thinking of the vast strides which the babies have made since pre-war days. At that era I owned a single-geared two-stroke, minus clutch, with gas lamps and a belt drive which was fertile in trouble. But the 1922 sample had a weather-proof drive (chain-cum-belt), a flywheel magneto which sparked furiously at absurdly low speeds, a complete electric lighting set which was listed as a £4 10s. extra, including two good lamps, a three-speed gear, and a clutch so efficient that it could be used as recklessly as any car clutch, and rendered a kick-starter quite unnecessary. On the top of that the engine seemed to two-stroke down to as low a speed as the owner could balance at. I do not wonder that such

**Occasional Comments.—**

layouts are becoming very popular for really hard work. And the price is absurdly low considering how little money is worth nowadays. The combined ignition-cum-lighting flywheel unit is bound to boom; it represents an increase in efficiency and luxury at a saving in cost, a combination which is extremely rare.

## The "Properprop."

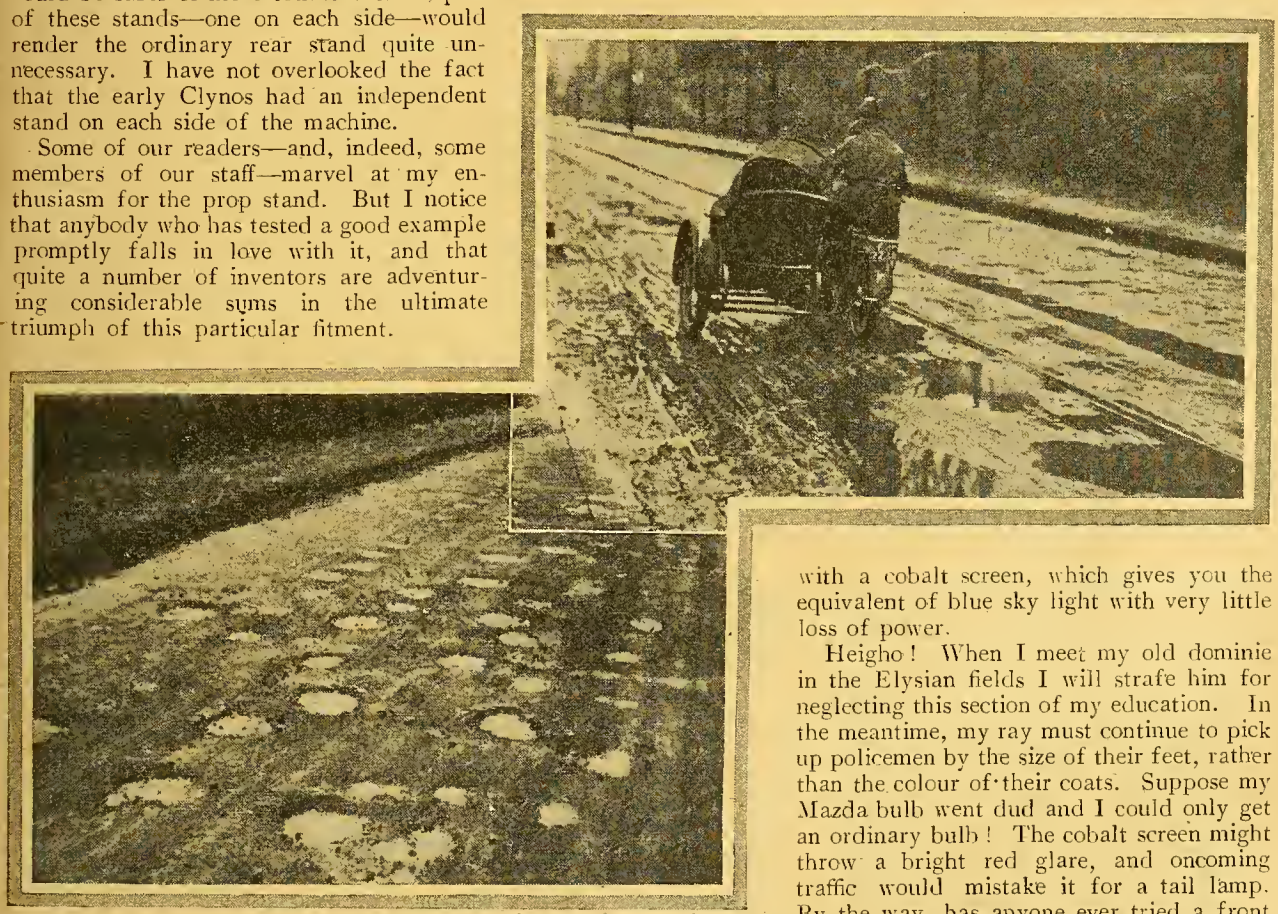
I APOLOGISE for the nomenclature, for which I bear no responsibility. Two Blackburn gentlemen are answerable for the latest prop stand, which is patented and goes into mass production next week. It differs from the other types which I have described, for when out of action its leg is contained in a casing which projects upwards from the footboard or rest, as the case may be. When the rider stops, he pushes down a small trigger with his toe, and as the leg is toothed along one edge the effective reach of the stand can be varied to suit road cambers or rough ground; the foot of the leg is shaped to bite on any surface. When he wants to remount, he touches off another trigger, and a concealed spring shoots the leg back into its casing again. Nothing could be safer or more convenient. A pair of these stands—one on each side—would render the ordinary rear stand quite unnecessary. I have not overlooked the fact that the early Clynos had an independent stand on each side of the machine.

Some of our readers—and, indeed, some members of our staff—marvel at my enthusiasm for the prop stand. But I notice that anybody who has tested a good example promptly falls in love with it, and that quite a number of inventors are adventuring considerable sums in the ultimate triumph of this particular fitment.

## Orthochromatic Lamps.

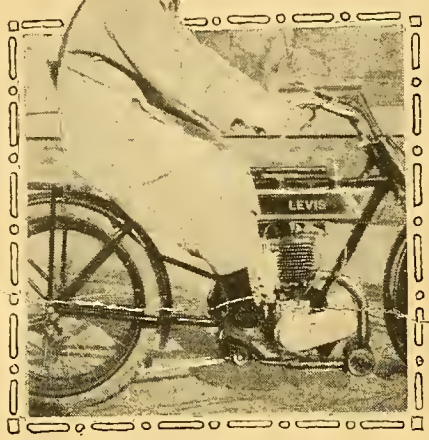
MY complaint about the failure of our head lamps to distinguish *colour* values, thus forcing us to pick out objects at night purely by their *form*, has brought me one letter. I am glad there was only one answer. The learned writer thereof has used for years a Wratten and Wainwright "acetylene daylight" screen. Our lamps destroy colour values because acetylene flame contains far too much red light, and far too little blue. The screen corrects this, but weakens the beam by killing the surplus red. To get good results with this filter, the ordinary reflector may need re-silvering with good silver and good backing. Commercial reflectors are often cheaply silvered, which implies a blue reflection liable to deteriorate rapidly, and a red reflection which is apt to increase. But with a good reflector this filter gives a good imitation of noon daylight. Electric lamps vary so enormously in all the vital factors that it is impossible to market a filter which will prove serviceable with any lamp bought at random, and correct colour values can only be hoped for when the lamp-maker provides a filter suited to his own equipment. The one exception, according to my tame professor, is a Mazda lamp with a cobalt screen, which gives you the equivalent of blue sky light with very little loss of power.

Heigho! When I meet my old dominie in the Elysian fields I will strafe him for neglecting this section of my education. In the meantime, my ray must continue to pick up policemen by the size of their feet, rather than the colour of their coats. Suppose my Mazda bulb went dud and I could only get an ordinary bulb! The cobalt screen might throw a bright red glare, and oncoming traffic would mistake it for a tail lamp. By the way, has anyone ever tried a front glass with camouflage colours and a jazz pattern? The roads depicted on this page would look really effective under such conditions.

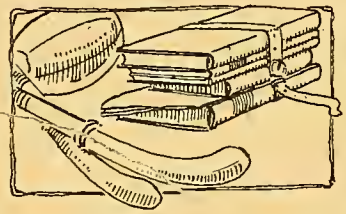


Gloucester motor cyclists are up in arms against the highway authorities in consequence of the atrocious state of the highways—and no wonder. The illustration on the left is not a French shell-spattered road but part of the Cheltenham-Stroud highway. On the right is a section of the main London road within two miles of Gloucester.

# Motor Cycles for Boys and Girls



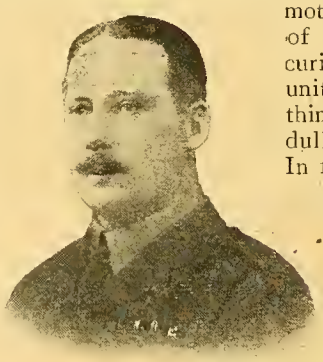

A Plea for the Youthful Motor Cyclist. Development of the Young Mind and the Training of Temperament.



By Lt.-Col. F. S. BRERETON, C.B.E.

*In his article the talented author, known in our schooldays as Captain Brereton, whose books of adventure we so often enjoyed, encourages motor cycling among schoolboys and schoolgirls. The popular chairman of the Auto Cycle Union, Col. Brereton wrote the Medical History of the Great War and with his own hand constructed many interesting models of field dressing stations and sections of dug-outs for the Imperial War Museum. He is still an active motor cyclist.*

THE law states quite definitely that a licence to drive a motor-propelled bicycle may be issued to any individual who shall have attained the age of fourteen years. Yet the same law does not differentiate between this young person and toothless, tottering old age, nor between the degenerate, the mentally unsound, the blind, the deaf, and the hopeless cripple. It may, therefore, be quite reasonably assumed that the Law—itself termed a "hass"—has very carefully refrained from admitting that because a licence to drive a motor bicycle is issuable at the age of fourteen, therefore, as a natural sequence, as it were, the individual of fourteen, male or female, is fitted so to drive, and is an absolutely responsible person.



Lt.-Col. F. S. Brereton, C.B.E.

How many boys of fourteen are actually capable of handling a machine at the legal age for licensing? I submit that quite a considerable number are capable—many more, in fact, than are generally credited. And, further, I venture to state that the ownership of a motor cycle—preferably of the small lightweight type—provides at once a healthy stimulus to the boy or girl of fourteen, whereby much that is desirable in youth—care, discrimination, thoughtfulness, a keen eye for detail, the faculty of observation, good temper, judgment, and pluck—is encouraged and developed in a manner far more natural than under many other conditions.

Think of the joy of anticipation of ownership! The need in the first place to discover the nomenclature of the hundred and one parts and gadgets which go to make up that somewhat complicated machine—the motor bicycle. It must sharpen the wits of any youngster and inflame his natural curiosity when accosted with a modern power unit, while the desire to comprehend everything connected with it will make even a dull and somewhat stupid fellow liven up. In fact, he will have to brighten up considerably if, as is rare in these days, when the nursery is incomplete without its engineering toys, he reaches the age of fourteen still ignorant of the many contraptions about a motor machine.

There will be the need to master the difference between two- and four-stroke, and perhaps friendly, if heated, debates with pals, as to the superiority of either. The rival claims of chain or belt drive or chain-cum-belt will require investigation, and who is going to decide for the would-be owner as to lubrication?

### Every Boy Mechanically Minded.

It is a foregone conclusion that any youngster not attracted by machinery is sick, or dull, or unusually constructed. The vast majority of the rising generation appear to be indubitably inclined towards mechanics, to be, in fact, what is generally termed mechanically minded, and the motor bicycle—a much

**Motor Cycles for Boys and Girls.—**

handy, inexpensive machine—provides a means whereby that mechanical inclination may be developed along correct paths towards that fuller and more complete understanding which is desirable in the adult. It goes without saying that the pros and cons of forced lubrication, as compared with splash lubrication, must engender the faculty of consideration. The fact that the charge is fired by so small and inconspicuous an object as the modern magneto is certain to demand from any healthy youngster an intimate inquiry.

Frame construction may not appeal so much at first, but sooner or later the proud owner of a motor cycle will become caught up in the whirl of argument which screeches about the subject of spring suspension, will think about it and study it, and before long this new recruit to the motor cycle movement will be laying down the law as to such-and-such forks, and eagerly discussing the subject of a new form of rear suspension.

### Educational Influence.

Does all this mean simply nothing? Is the opportunity provided by the motor bicycle to be considered by parents and masters alike as incomparable in value with the monotony of lessons in form time, and the opportunities of attaining to a smattering of mechanical processes as provided in the average school workshop? I once put the question to an eminent schoolmaster, who has never ridden a motor bicycle solo, does not know of the delights of the road, but admits to once having driven a sidecar outfit, and to have found himself " piled up," to use an Americanism, upon a roadside bank with the machine—a wreck—on top of him. Incidentally, he did not tell me who, or what, he carried in his sidecar or what happened to this, and with some knowledge of my many friends who own this class of outfit, and of their passengers, I studiously refrained from pressing the question. He stoutly declaimed at the idea of providing a youngster of fourteen with a motor bicycle :

" Sheer madness ! A kill or cure process ! " is his considered opinion.

But is it a kill or cure process? I have endeavoured to show that the possible, or actual, possession of a motor bicycle cannot fail to stimulate mechanical enthusiasm in the mind of any boy or girl. But I have by no means exhausted the list of desirable qualities which such possession may stimulate and bring into being.

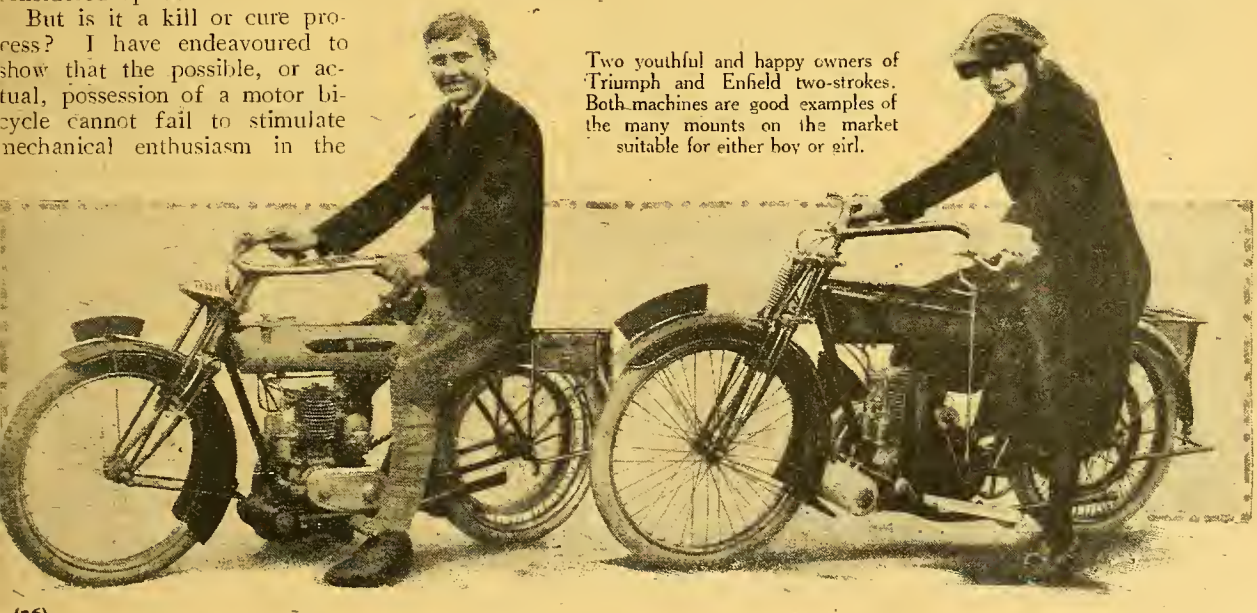
### Training Temperament.

Good temper, for example, is an absolute essential, otherwise we should have dejected and exasperated youngsters throwing their machines into the ditch or battering them to pieces with the hammer ; good temper to face breakdowns, inevitable punctures, those mysterious happenings to the carburetter which arrest progress, and those still more mysterious disabilities to which a magneto is occasionally prone. Without good temper, no one can settle to the often exacting task of discovering the cause of the trouble ; the need for differential diagnosis between this and that is absolutely the high road to the attainment of that valuable faculty of deduction which is one of the stepping-stones to success in life ; and if you banish all the other characteristics which every proud father would like to see in his offspring, there still comes the other side of the question, the health and strength side.

### Health and the Motor Cycle.

No motor cyclist who cares to cast his eye over these lines will dare to suggest that health is not one of the great attributes of the motor cycle. For the open road calls him, the clear fresh air swishes by him as he spins along. Of course there is dust, of course there is noise and grease, but there is sun and wind and rain ; and it all calls for the exercise of those qualities of endurance which we value so highly, while the need to care for one's own personal safety and the absolutely necessary consideration for the safety of other people, is bound to eradicate any trait of recklessness which may have existed in the first days of ownership when, proud of the capacity to manage a machine, the youngster opens up his throttle and lets her " rip " along the high road.

I am positive that, with due safeguarding, the possession of such a machine can only result in good.



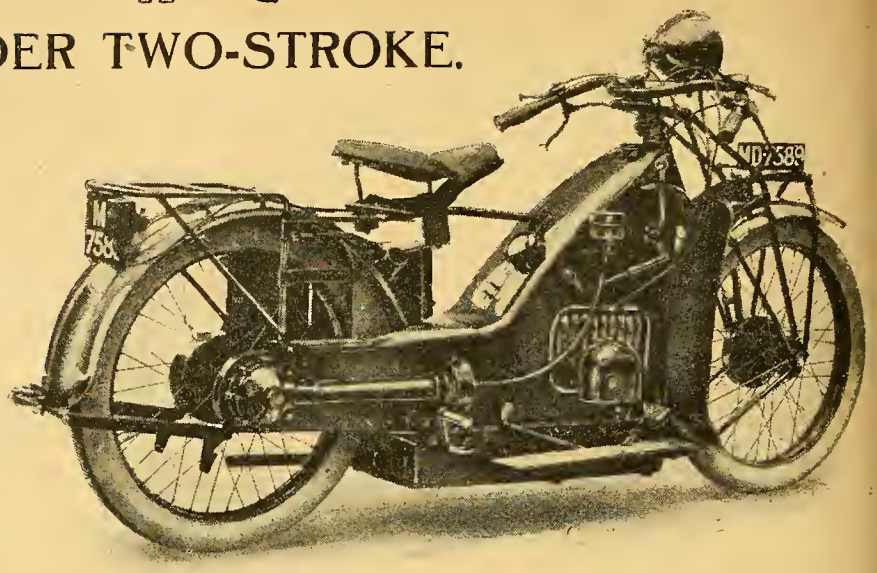
Two youthful and happy owners of Triumph and Enfield two-stroke. Both machines are good examples of the many mounts on the market suitable for either boy or girl.

# A FOUR-CYLINDER TWO-STROKE.

## Advanced Design Exemplified in the Low Motor Cycle; Much Originality and Many Commendable Features.

PRACTICAL and enthusiastic riders have given much thought to the ideal motor bicycle, which has been comparatively easy to conceive, but insuperably difficult to produce on account of expense. The machine described below is the "ideal" of Professor Low, who has been long connected with the motor cycle movement, and has made a careful study of motor cycle design: in fact, his association with the Auto Cycle Union as a judge has placed him in close relationship with all types of machines.

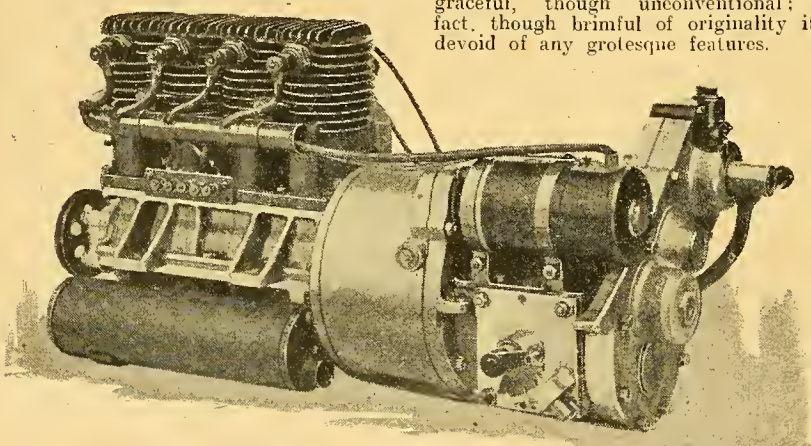
His production is of thoroughly sound design and bristles with novel points.



Off-side of the Low four-cylinder machine, showing the enclosed transmission and the speedometer drive from the propeller-shaft. There are no decompressors, but the clutch is controlled by the left Bowden lever and the front brake by the right Bowden lever. The left-hand pedal controls the back brake and the right-hand one the clutch, for which there is a dual control. The change speed lever will be noticed adjacent to the top tube.

### All Mechanism Concealed.

A certain section of potential purchasers of motor cycles require a mount which can be ridden in white flannel trousers to the tennis club, or in dress clothes, as well as in everyday garb. Many riders have also expressed a wish for a machine with shaft drive, an even torque, and one which could be hosed after a muddy ride. Such a machine is the Low four-cylinder two-stroke.



### Not Available on the Market.

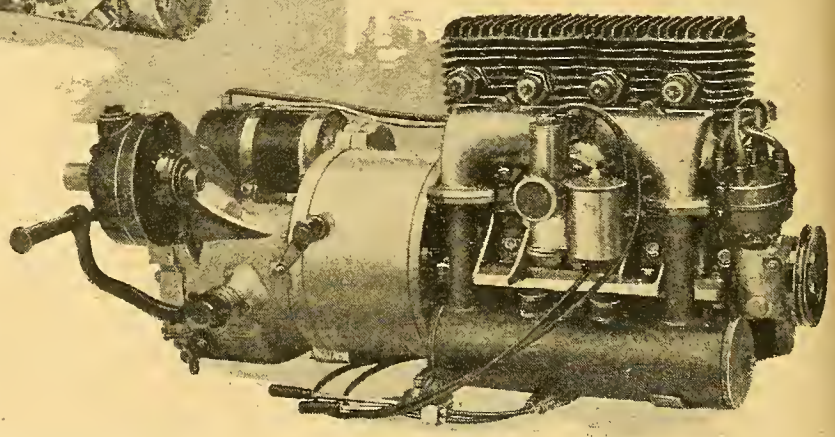
It is a great pity, however, that it should have first seen the light as the production of a clever inventor who has made it as an experiment to prove his ideals and to give him useful data for the future. It cannot be supplied to the public, and even if some enterprising manufacturer arranged to produce it tomorrow it would be months before it would be in a fit state to be placed on the market. Still, the dreams of the imaginative enthusiast have been fulfilled, and the machine is actually, so to speak, in the flesh and running, if not perfectly, well enough to promise great things in times to come.

The charm of the Low machine is that engine and transmission are entirely enclosed, while the general lines are graceful, though unconventional; in fact, though brimful of originality it is devoid of any grotesque features.

Pressed steel is used for the frame construction, and serves to enclose engine and gear box units and the two and a half gallon petrol tank, tubes being employed only in the forks and carrier. No attempt has been made to embody rear spring suspension in the design, but the saddle is mounted on duplex laminated springs and a linked stay, while the cantilever type forks are of light, but strong construction, employing a laminated spring.

### Four-cylinder Three-port Two-stroke.

For the first time in the history of the motor cycle movement a four-cylinder two-stroke engine forms the power unit of a single track vehicle. Though of the three-port variety, the engine design



Four-cylinder two-stroke power unit of the Low motor cycle. Note the high tension distributor, the Rotax dynamo mounted on the gear box, the clutch casing forward of it, the drive to the propeller-shaft and the kick-starter. It will be seen that a fan pulley is shown in the lower illustration but it has been found that a fan is unnecessary.

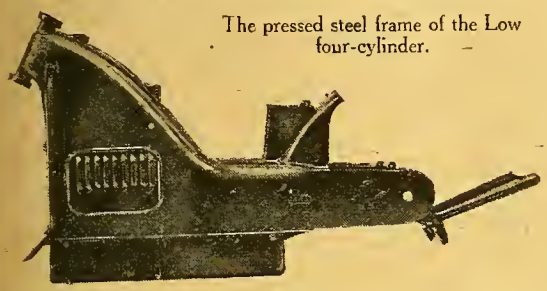
**A Four-cylinder Two-stroke.—**

shows originality; the cylinders form a ribbed *monobloc* casting, but with air passages between each, and Prof. Low took considerable trouble in designing them, beginning operations by making a set of dummy cylinders with glass sides, and pumping in smoke so as to see how the gas whirled and mixed with the incoming charge. The inlet and exhaust manifolds are one casting, so that the incoming charge is adequately heated by the exhaust. On the inlet side of the engine are shown compression release valves, but these have been discarded as they have proved to be useless in actual practice.

**Four-throw Crankshaft.**

The crankshaft is machined out of a solid bar, and has the cranks set at 90°, while the pistons have been carefully designed so as not to break up the incoming charge and cause condensation.

Lubrication is effected by pressure in the oil tank, about 4lb. per sq. in. being attained after a few revolutions when



The pressed steel frame of the Low four-cylinder.

the oil is forced through to every part of the engine, while there is also a connection from the crank case to the inlet pipe so that a small amount of oil mist is introduced into the cylinders, producing much the same effect as petroil lubrication. The oil also serves to form a seal between the crank case divisions, oil flowing between each partition, and thus helping to retain crank case compression.

The flywheel is rather small, being but 6in. in diameter, yet it contains a multi-disc clutch, which consists of alternate Ferodo and steel plates; the clutch fork is similar in design to that usually employed in motor car construction.

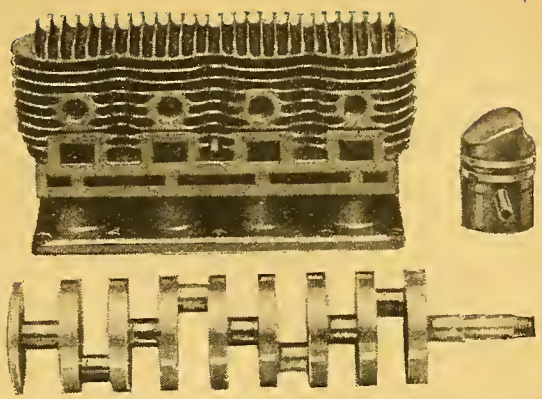
Engine and three-speed gear box form a complete unit, the gear box being of standard design with constant mesh wheels, the change being effected by means of dog clutches. The gear ratios are 4.75, 8.35, and 13.5 to 1, while the gear shafts run on Skefko ball bearings. The lubrication of the gear is carried out by splash from a sump in the gear box, a special idler pinion driven off the layshaft being provided for this purpose.

**Shaft Transmission.**

As the final drive is by shaft and bevel, the drive to the shaft universal joint is through a train of gear wheels with one intermediate idler wheel, the final drive pinion terminating in a square, and there being pot universal joints at each end of the propeller-shaft. The propeller-shaft is enclosed by a telescopic sleeve, a portion of which can be slid backwards to allow disconnection with the drive in the event of the rear wheel requiring to be withdrawn. Mounted on the face of the crown wheel is a plate bearing a series of steel pegs, which engage with holes in the wheel flange, consequently if the withdrawable spindle is removed and the distance piece unscrewed the wheel may be instantly changed, both front and rear wheels being interchangeable, while if a sidecar should be fitted the wheel of this will also be interchangeable.

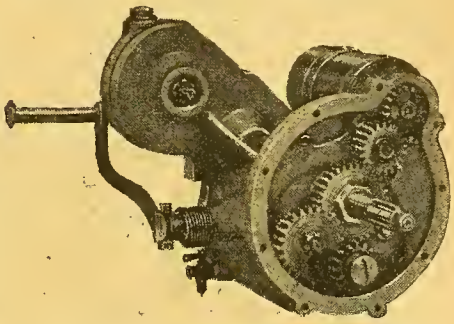
**Intended to Pull a Sidecar.**

Though only 492 c.c., the machine is designed to take a sidecar, and cup-shaped threaded holes are provided in the frame construction into which a ball joint may be inserted. This ball joint is secured by a threaded collar and fastened by a spring clip to prevent it unscrewing.



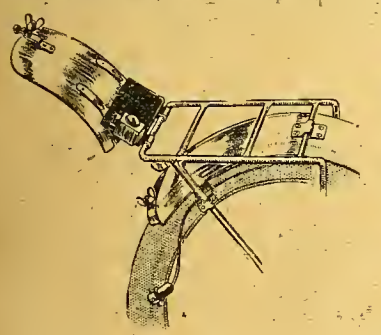
Monobloc cylinder casting of the Low four-cylinder, the five bearing four-throw crankshaft and one piston. The bore and stroke are 52 × 58 mm.

A Rotax dynamo is mounted over the gear box, and is driven by a train of gear wheels. The dynamo supplies current for ignition as well as for lighting: a coil and accumulator being used in con-

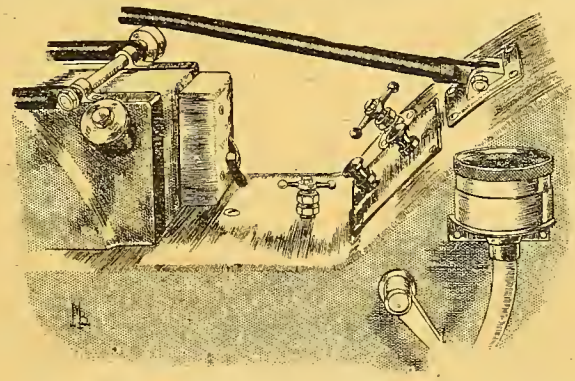


Kick-starter mechanism and dynamo drive. The small independent wheel beneath the main shaft is for splashing the oil into the gear box.

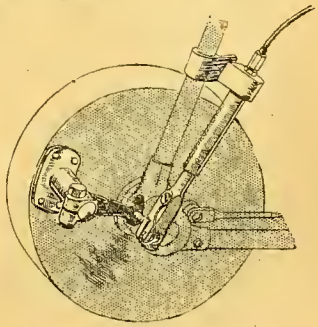
junction with a distributer mounted at the forward end of the crankshaft. A thermostatic switch is employed, which switches the current off automatically if the driver has omitted to do so after stopping. This prevents the accumulator being run down. Metal boxes are carried



To facilitate the removal of the rear wheel, and allow of access to the rear tyre, the lower section of the mudguard is hinged on the luggage carrier.



Lubrication economy is a feature of the Low motor cycle. On the left is the half-gallon oil-tank, which holds sufficient lubricant for 600 miles. Of the two lubricator controls the upper one regulates the main oil supply and the lower one the oil pipe to the inlet manifold.



With interchangeable wheels, quick detachability of the brake control is a necessity. A spring clip holds the brake lever in the yoke end.

**A Four-cylinder Two-stroke.—**

on each side of the lower portion of the rear guard, that on the right holding the tool kit, and that on the left the accumulator.

### Accessibility of Power Unit.

As we have mentioned before, the power unit is carried on detachable beams bolted into the frame, the undershield being attached to the beams, so that accessibility has not been neglected. For the purpose of carrying out ordinary adjustments to plugs or distributer, it is only necessary to open the doors in the frame.

The weight of the machine is 290lb.; 26×2½in. tyres are fitted on wheels built up of 12 gauge spokes, with barrel hubs carried on large size Skefko ball bearings, and each is fitted with an internal expanding brake, which comes away intact with the wheel; front and rear brakes are interchangeable. The steering head is fitted with 3in. ball races.

Despite its rough state, the experimental machine ran extremely well. There was no silencer fitted at the time of our brief test, but the exhaust made a delightful hum reminiscent of a miniature aeroplane, while the acceleration was all that could be desired, and the engine ran with the smoothness of an eight-cylinder, there being four impulses per revolution.

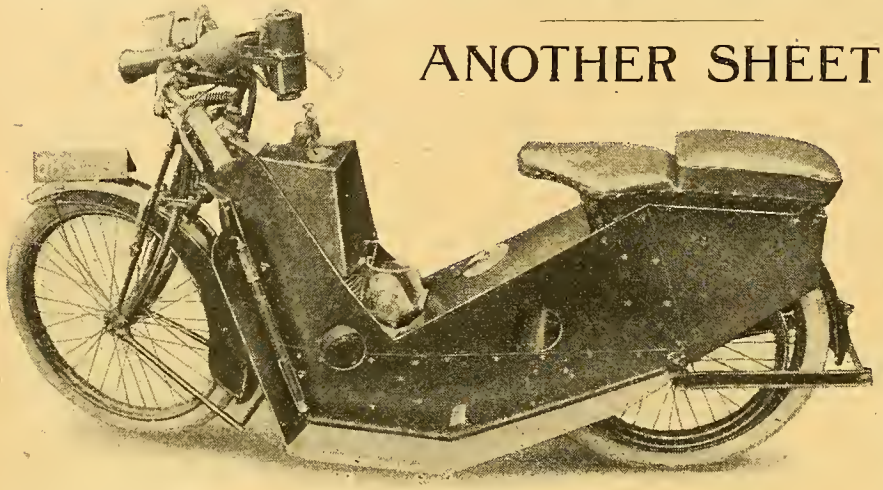
Experiments relating to carburation are still in their infancy, and though the machine was not perfect in this respect it showed great promise, and when once the proper adjustment has been effected it seems as if the flexibility would be considerably superior to that of other two-strokes we have tried. The saddle suspension and forks were most comfortable, but it is admitted that the rake of the steering was a quarter of an inch out, while the design of the handle-bars was not ideal. Still, these are but trivial points, and for an experimental model its behaviour was quite remarkable.

### Cycle Car Engine Foreshadowed.

Prof. Low is quite confident that the faults of which he is fully aware can be entirely eradicated, and that the weight may be considerably reduced. Altogether, the experimental machine has run a distance of about 1,500 miles. We understand that experiments are being carried out with an engine on similar lines for cycle car use.

# ANOTHER SHEET STEEL FRAME.

## A Weather-proof Machine Privately Constructed by Two Readers in their Spare Time.

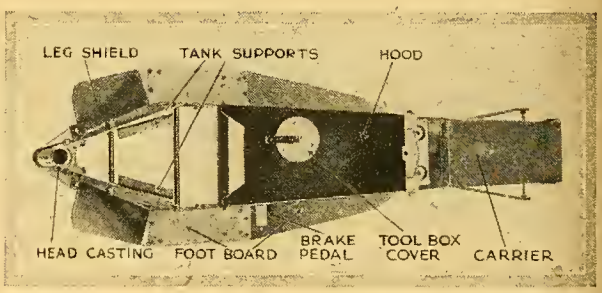


Although constructed of steel plates, this machine approximates in weight to a conventional motor cycle with the same equipment.

COINCIDENT with our description of the Low four-cylinder machine, we are able to publish illustrations of another "ideal" produced by two readers in their spare time, but since these enthusiasts sign themselves "Cygnet" we assume that they wish to remain anonymous. Their efforts, however, have produced a mount which in no way suggests the amateur constructor.

The frame is built up from a number of bent steel plates and one malleable casting—the head. Bolted to this are two plates forming the front members, the parts of which are bent nearly at right angles to form leg shields and also to aid cooling of the engine. Extending from the front members are two plates, the bases of which are turned up to provide footboards. Two further plates of very light gauge steel form the carrier and rear mudguard. From the rear wheel axle to beneath the saddle and running inside the side shields are two bent plates acting as stays. In practice this method of construction has proved very simple; but the engine fixing perhaps needs a little improvement.

The design is somewhat reminiscent of the Swan motor cycle, which was on the market before the war. Since the designers sign themselves "Cygnet," they may have had the older machine in mind when carrying out their ideas. It will be observed that the stand is constructed of channel steel, while a pillion seat is part of its permanent equipment. Altogether the machine is a very creditable piece of work.




Plan view of the sheet steel frame.

# THE BELGIAN GRAND PRIX.

SOME considerable interest will be attached this year to the Belgian Grand Prix, concerning the date of which there has been some difficulty. Originally its date was sandwiched in between the Five Hundred Miles race and the International Six Days trials, rendering it too close to these events. However, the date has been altered to July 23rd. The French Grand Prix is on July 2nd, and the Five Hundred Miles race has been postponed to September 25rd.

Last year the Belgian Grand Prix attracted several English entrants, and a thoroughly sporting little race was held on a delightful course near Spa in August, resulting in a win for H. W. Hassall (Norton). This year there will be three classes—250 c.c., 350 c.c., and 500 c.c.—and the Francorchamps circuit will be utilised, which is 15 kilometres in extent.

### 28 Laps for 500 c.c. Machines.

The smaller class will cover the circuit twenty times (300 kilometres), the 350 c.c. machines twenty-four times (360 kilometres), and the 500 c.c. machines twenty-eight times (420 kilometres). It has been estimated that the baby class will finish a quarter of an hour before the 500 c.c. class, and the 350 c.c. class five minutes after the baby class.

The start of the race will be at 10 a.m., which is quite late in the day for a Continental event. Entries, which cost 500 francs (about £10), should be sent to the Secretary of the Auto Cycle Union, 83, Pall Mall, S.W.1. Entries close at ordinary fees (500 francs) on May 31st, and at increased fees (750 francs) on July 15th.

# A T.T. Race for Private Owners

## Possibilities Discussed by One who Refuses to Regard the Scheme as Impracticable. Suggested Regulations.

TWO able writers in *The Motor Cycle* of the 9th inst.—Mr. B. H. Davies in an article, and Mr. T. W. Loughborough, the secretary of the A.C.U., in a letter—succeeded in pouring much cold water over the proposal to hold a T.T. race for private owners. This is a pity; the other side of the question deserves a hearing.

Perhaps the case for holding an amateur event may best be put (1) by answering Mr. Loughborough's four concise queries and (2) by commenting on the additional and, in some cases, far-fetched objections cited by Mr. Davies.

The secretary of the A.C.U. requires further information under the following heads:

(1.) The object of such a race.
(2.) The definition of a private owner.
(3.) The support such a race would receive.
(4.) Its financial aspect.

I will deal with each point separately.

(1.) Mainly sporting. *Incidentally*, the public might learn something of interest regarding the comparative performances of standard sports models; but, if the A.C.U. were to organise the event, it should strictly enforce a rule prohibiting the advertising of successes, either by machines or accessories. I imagine the A.C.U. is powerful enough to do this itself, but possibly the help of the Manufacturers' Union might be obtained.

To find the best amateur *rider* would be the primary aim; the super-tuner who was not also a fine driver would, I feel sure, automatically take a back place among the finishers in such a race as the T.T. This fact, too, rather disposes of the assertion of B. H. Davies that victory would fall to the longest purse.

(2.) Mr. H. J. Pooley, the honorary secretary of the N.W. London M.C.C., a purely amateur association, supplied in a recent issue his club's definition, which is reprinted below:

"The membership of the club shall be confined to amateurs only.

"No member shall be eligible for membership or shall remain a member who accepts or has accepted any monetary benefit or consideration or the equivalent from a person or firm trading in the manufacture of motors or accessories thereof, or who shall have secured possession of a motor vehicle or accessories from such trading person or persons at a price or on terms which may, in the judgment of the committee, represent the equivalent of such consideration. The committee is entitled to demand the production of receipt or other satisfactory evidence in demonstration of this qualification.

"Membership is prohibited to those who are engaged or employed in the manufacture, sale, exhibition, or exploitation of motoring goods or accessories.

"No member shall willingly or knowingly permit his name to be used in connection with the advertisement of motoring goods or accessories.

"Members competing in competitions organised by this club shall use only machines and accessories which are their own *bona fide* property, or are similarly owned by another member of the club.

"No member shall accept any cash prizes for any motoring achievement or service, whether in competition or otherwise. He may, however, accept from the donor a prize in kind in lieu of the cash prize should such alternative be proffered. No member shall during his membership convert into cash any prize gained in motor cycling competitions."

Taking this as a basis, further precautionary rules might be added as follows:

Each machine must have been in the owner's possession for at least three months prior to the announcement of the race; it must be a listed model, to catalogue specification, and have been offered to the public in its present form for at least six months prior to the date of the race.

Each entrant must sign a declaration certifying that the above particulars are complied with and, further, that he has received no help or assistance from any manufacturer, and that his machine has not been returned to the works for any cause whatsoever since delivery.

### A T.T. Race for Private Owners.

Modifications from catalogue specification, such as changes of carburettor and/or substitution of aluminium pistons, close ratio gear boxes, etc., to be declared. (In most cases these would be allowed; but any flagrant rebuilding of a machine would be detected by an independent committee, which would work on the main principle that the race is first of all a driving test, and would act accordingly.

Machines to be kept under A.C.U. observation right through practising; necessary replacements to be notified at once, and made under observation from a stock of spares for the six or seven makes entered (there would not be more) to be kept specially for entrants by the organising body.

(In the event of the race being held in the I.O.M. four practice laps only required and allowed; and three laps to constitute the race.

(3.) Already a dozen private owners, none of whom are famous riders, have announced their intention, in letters to this journal, of competing if the race is held. It is just this type of rider we want—not the well-known "shamateurs" who were evidently in the minds of Messrs. Loughborough and Davies when they penned their objections.

Granted that a responsible body such as the A.C.U. guaranteed the enforcement of strict regulations based on those already outlined, there seems no reason why the event should not receive an exceptionally fine entry. There are over 370,000 motor cyclists in this country; surely there are fifty genuine private owners willing and financially able to enter an amateur race.

(4.) The financial aspect is, of course, bound up with the question of support. Let the A.C.U. experiment in the first place by running a 500 c.c. race only, say, on the day between the Junior and Senior races proper. Let a £20 entry fee be charged, and if, with all the Union's resources already concentrated on the Island, it does not pay—well, the Union had better go out of business.

Glancing through the foregoing and then through B. H. Davies' article I can find few of his objections which have not already been countered. If defining an amateur motor cyclist is an impossible task, how is the difficulty overcome in other sports—golf, billiards, running, yachting?

Again, the "insufficient leisure" and "expense" bogies surely do not apply to all our 370,000 motor cyclists? No! even should the stock machine idea have to be resorted to, and I do not think this necessary or likely, there should still be the requisite number of entrants eager to buy the machines to ride on the Island and, of course, to use afterwards in more prosaic ways.

As I see it there is as yet no proof that T.T. races for private owners are impracticable; the reverse would appear to be the case. A. McL.

# STOCK MACHINES TO BE TESTED.

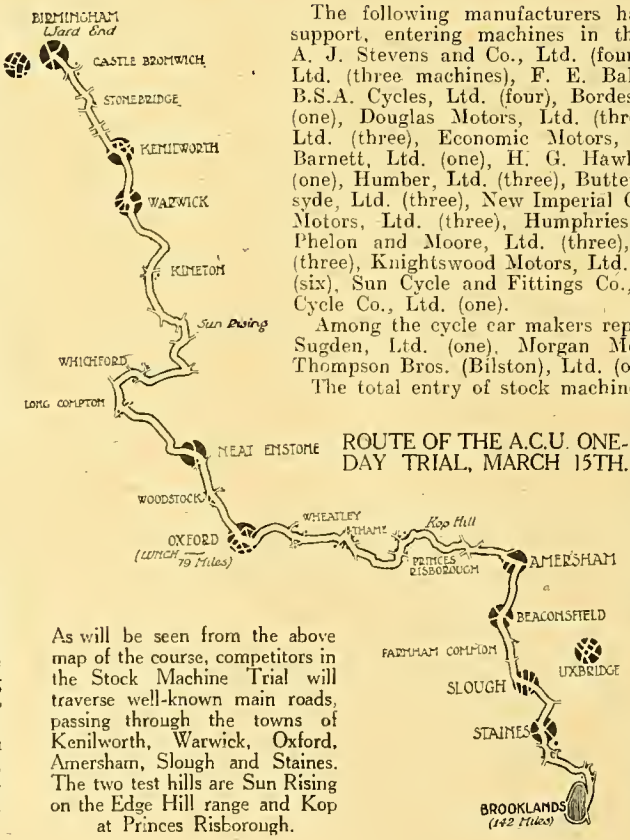
## Notes on the Course of the A.C.U. One Day Trial. Sixty-two Stock Models Entered.

ENTRIES have already closed for stock machines which will compete in the A.C.U. one day trial on Wednesday, March 15th; ordinary entries may be received up to midday on March 1st.

Thanks to the courtesy of the Wolseley Motor Co., Ltd., the start will take place at their Ward End Works, about a quarter of a mile to the west of the Birmingham race course. The route then runs through Castle Bromwich to Stonebridge, and *via* Kenilworth and Warwick to Gaydon, where a turn to the left is made by way of Kineton for Sun Rising Hill. After this hill is climbed the road runs through Shutford to Tadmarton Heath, Wichford, Long Compton, and Enstone, where the main road is joined to Oxford, where the luncheon control will be established—seventy-nine miles from the start.

### The Afternoon Course.

After lunch the main London-Oxford road is followed to Wheatley, after which village the route branches off to Thame, Chinnor, and Princes Risborough, where Kop, the second test hill, will be negotiated. The course then follows through winding lanes to Great Missenden, proceeds to Chesham, and reaches Brooklands *via* Amersham, Beaconsfield, Farnham Common, Slough, Colnbrook, Staines, and Chertsey. Brooklands is sixty-three miles from Oxford, and the total length of the course is 142 miles.




ROUTE OF THE A.C.U. ONE-DAY TRIAL, MARCH 15TH.

As will be seen from the above map of the course, competitors in the Stock Machine Trial will traverse well-known main roads, passing through the towns of Kenilworth, Warwick, Oxford, Amersham, Slough and Staines. The two test hills are Sun Rising on the Edge Hill range and Kop at Princes Risborough.

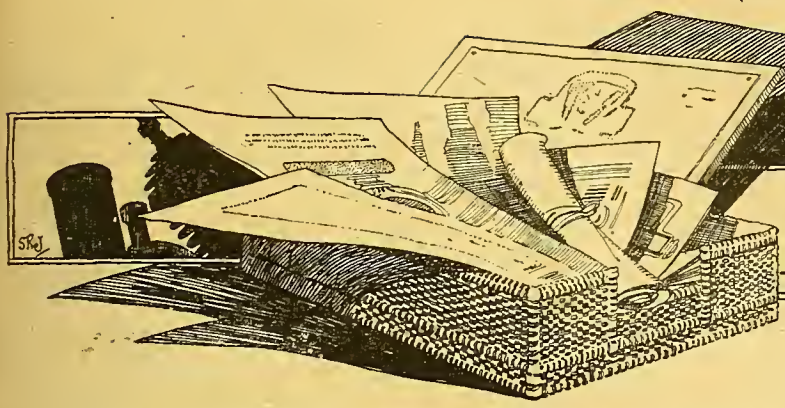
The following manufacturers have given the trial their support, entering machines in the stock model category: A. J. Stevens and Co., Ltd. (four machines), Ariel Works, Ltd. (three machines), F. E. Baker, Ltd. (two machines), B.S.A. Cycles, Ltd. (four), Bordesley Engineering Co., Ltd. (one), Douglas Motors, Ltd. (three), Dunford and Elliott, Ltd. (three), Economic Motors, Ltd. (one), Francis and Barnett, Ltd. (one), H. G. Hawker Engineering Co., Ltd. (one), Humber, Ltd. (three), Butterfields, Ltd. (two), Martinsyde, Ltd. (three), New Imperial Cycles Ltd. (three), Norton Motors, Ltd. (three), Humphries and Dawes, Ltd. (two), Phelon and Moore, Ltd. (three), Raleigh Cycle Co., Ltd. (three), Knightswood Motors, Ltd. (one), John Marston, Ltd. (six), Sun Cycle and Fittings Co., Ltd. (one), and Triumph Cycle Co., Ltd. (one).

Among the cycle car makers represented will be Sykes and Sugden, Ltd. (one), Morgan Motor Co., Ltd (six), and Thompson Bros. (Bilston), Ltd. (one).

The total entry of stock machines is sixty-two.

The course is over average main roads such as would be traversed by any motor cyclist on his first run out on a new machine. Sun Rising and Kop are the only two hills, the former being a main road on the Edge Hill range, and not regarded as a particularly stiff ascent by the majority of touring motor cyclists.

Such a trial obviously is one in which any manufacturer confident of his products may enter with confidence, knowing they will be tested under normal riding conditions.



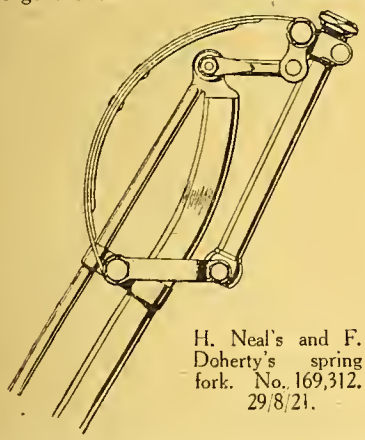
# RECENT PATENTS

Reviewed by B. H. Davies

## Various Applications of the Leaf Spring: Absorbing Transmission Shock: Tank Fixing.

### Single Leaf Front Fork.

THE Neal and Doherty spring fork is a special modification of the "parallel ruler" type, in which curved leaf springs are substituted for the ordinary

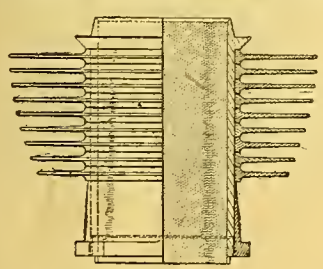


H. Neal's and F. Doherty's spring fork. No. 169,312. 29/8/21.

coil type. The sketch explains the construction. It may be questioned whether the idea is any improvement on the more conventional layout. Leaf springs generally embody a better damping effect on the rebound than coil springs as the result of their internal friction, but the sharp curve of this particular leaf arrangement seems to threaten a rather fierce recoil. The alteration does not cheapen the fork, and few people would claim that its appearance is better.

### Shrunk-on Copper Fins.

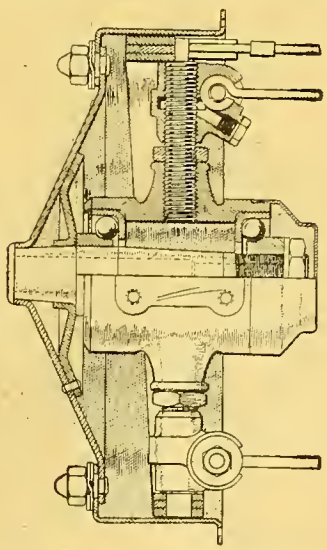
The B.S.A. Co. and Mr. Pearsall are busily seeking a perfect cooling system. Commencing with a finless cast iron cylinder barrel, slightly tapered, they thread over the barrel stamped copper fins, tinned on the inside, and made "of such an interference fit on the barrel that they do not, at the temperatures reached, expand off the barrel." Mr. Pearsall has forgotten more about "fits" and temperature than I ever knew, so I suppose that the last proviso is attainable. The tinning material melts at the maximum temperature which the barrel can attain, and therefore assists towards an absolute metallic union between barrel and fin. Mr. Pearsall has, doubtless, not paid his fees until his experiments proved satisfactory, and so I take it that the shrinking on of these light fins after tinning has been found quite feasible. The cylinder is not likely to be a cheap product.



B.S.A. Company's mounting of copper radiating fins. No. 163,499. 26/5/20.

### Three-Wheeler Simplification.

Many rumours have been afloat anent a possible Matchless three-wheeled run-

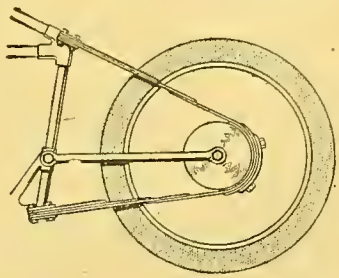


A. H. G. Girling's interchangeable wheel. No. 162,358. 22/4/21.

about, and those readers who have sighted the experimental chassis on the road may be able to tell whether it embodies the steering, braking, and detachable wheel layout patented by Messrs. Collier and A. H. Girling. All three wheels are alike interchangeable and detachable, and the single rear driving wheel is as open and accessible at one side as the front wheels. There is no front axle in the ordinary sense. The centres of the front wheels are cupped. Within this cup a vertical steering pivot is secured at top and bottom to the frame by transverse leaf springs. A short stub axle revolves in bearings carried in a cage which swivels round the vertical pivot, to enable the car to be steered. Expansible brake bands operate against the inner surface of each hub, the detachable wheels being secured to the fixed hubs by a number of bolts, Sankey fashion. The car has no chassis, and its body serves as a frame. The stub axle of the rear wheel runs on bearings mounted in a box fixed to radius rods, designed to obviate any lateral movement. The drive, springing, etc., of this wheel are carried on a projection of the stub axle, so that the rear wheel may be changed as easily as either of the front wheels.

### Springs instead of Tubes.

To evolve a really novel spring frame is no mean feat in these days, and the inventor deserves high credit for originality, whether the device proves practical



L. Pearson's rear springing. No. 165,568. 7/7/21.

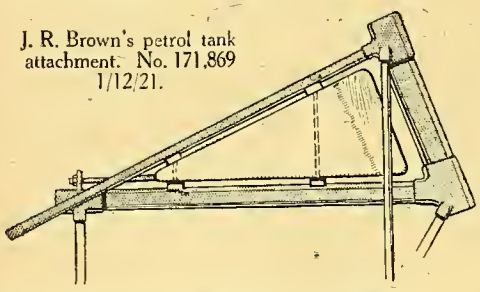
or not. Mr. Lindon Pearson builds his rear frame with a single pivoted fork hinged on the seat-pillar. From the seat lug and bottom bracket spring two pairs of straight leaf springs, and each fork end carries a large disc to which is bolted a U shaped spring. The free ends of each U rest upon the free ends of the main frame springs, sliding thereon. There will, undoubtedly be lots of spring in this frame and the

**Recent Patents.—**

inventor's main difficulty will be to hit a happy mean between "tremble" and "bounce," *i.e.*, the frame will probably give too little or too much. May I seize this opportunity of appealing to inventors, patent agents, and H.M. Patent Office to drop that silly old word "velocipede," which is really extinct in every other mouth?

### Tank Fixtures.

Our tanks are attached to the frame by a variety of methods, ranging from clips at a variety of points to suspending the tank from a tube, or anchoring it upon a platform. Mr. J. R. Brown seeks a more excellent way. He provides a tank with a number of shaped pads, by which it engages the frame tubes in two directions. A threaded bolt with locknuts protrudes from one end of the tank through a threaded lug on the frame, to make all fast by wedging. I don't think manufac-

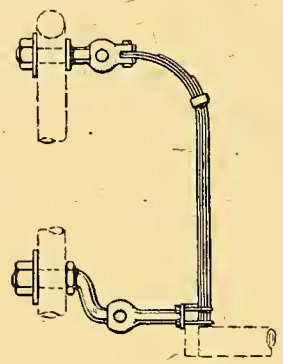


J. R. Brown's petrol tank attachment. No. 171,869 1/12/21.

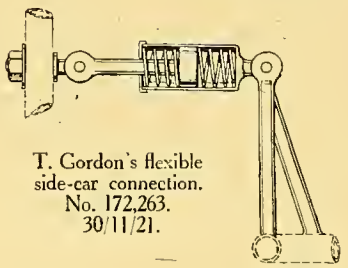
turers will fall in love with this notion at first sight. I can imagine a novice, supposing that his tank was loose, putting a 14in. wrench on the lock nuts, and pulling the end of his tank right out.

### Flexible Sidecar Connections.

Mr. T. Gordon's specification is hardly complete enough to satisfy an inquisitive student. Being an Australian, Mr. Gordon has unquestionably fractured at least one rigid sidecar chassis on his native roads. So the notion of a flexible, or, as he prefers to call it, "yieldable" connection between cycle and sidecar not unnaturally occurred to his brain. The sketches show the results.



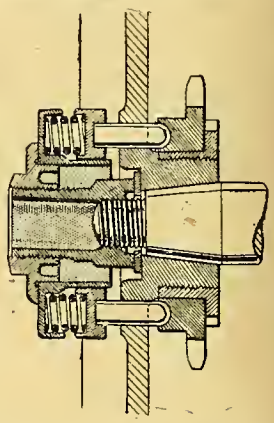
T. Gordon's leaf spring side-car attachment. No. 172,264. 30/11/21.



T. Gordon's flexible side-car connection. No. 172,263. 30/11/21.

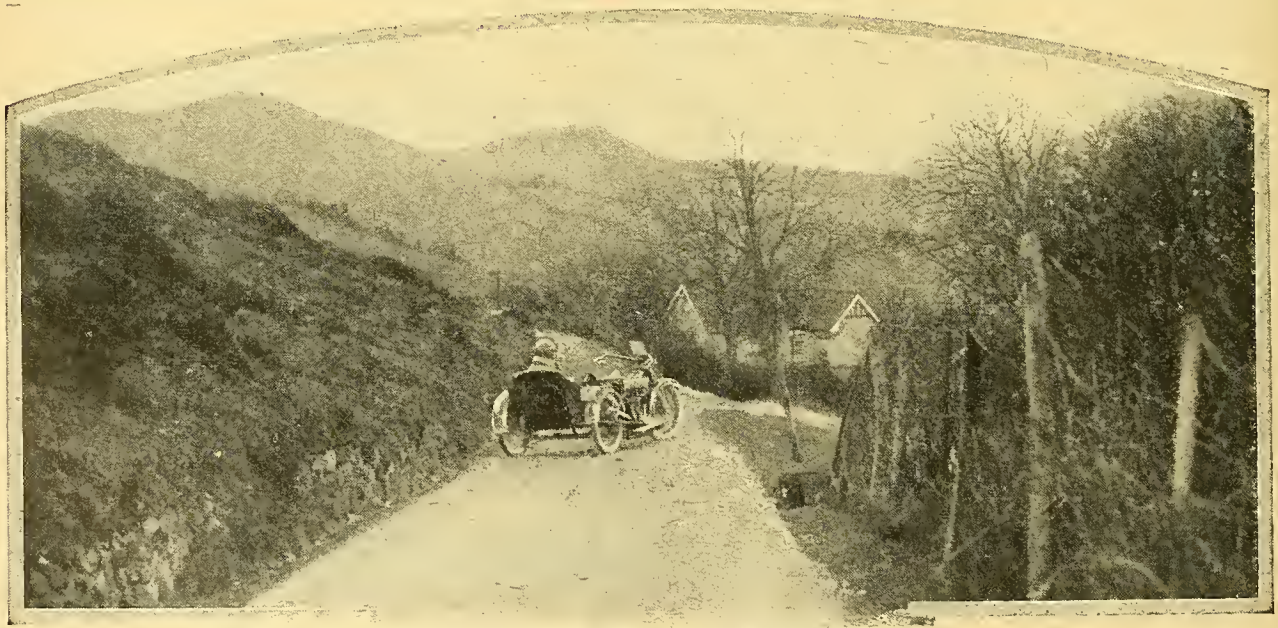
### Absorbing Transmission Shocks.

An obvious merit of the shock absorber now to be described is that it can be entirely dismantled without affecting any other part, although it is fitted to an outside flywheel engine. Invented by



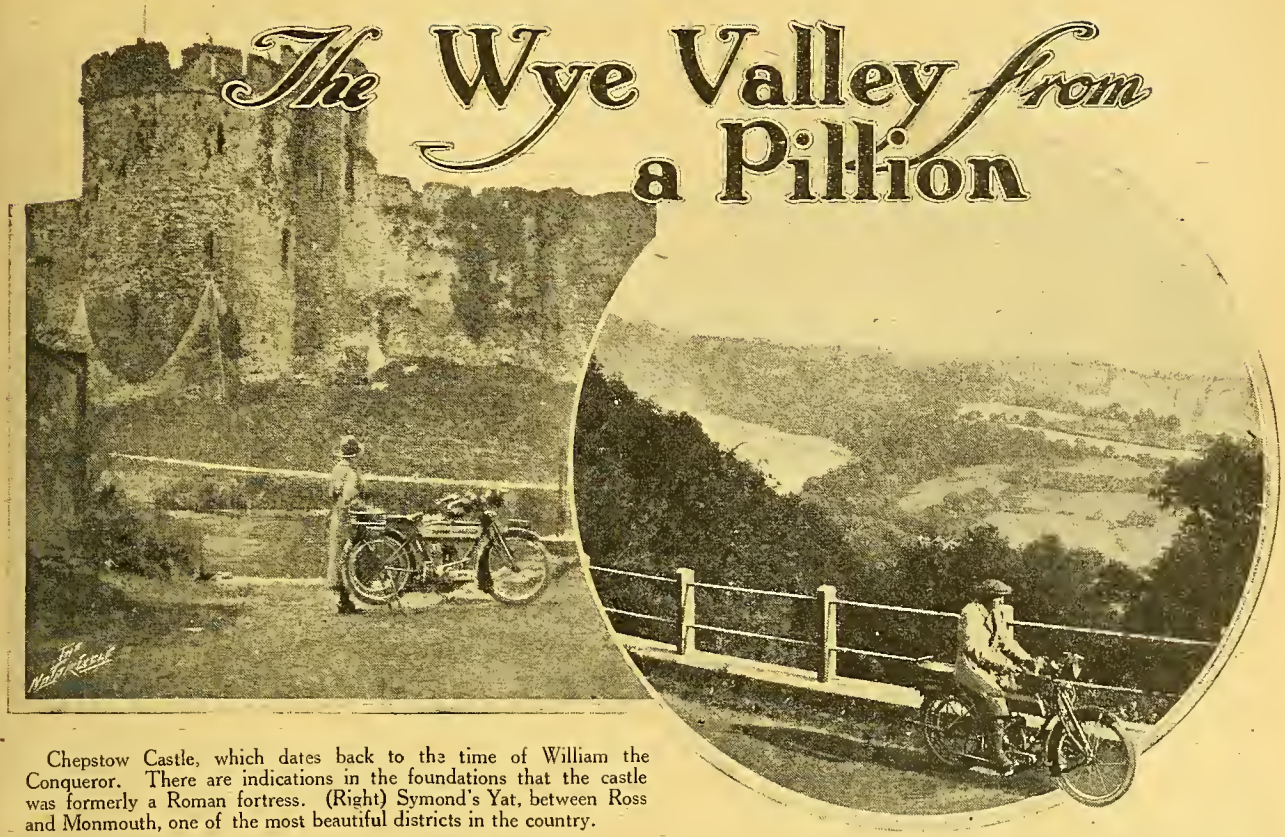
S. L. Bailey's shock absorber. No. 172,093. 28/11/21.

Mr. S. L. Bailey, it now adorns the sporting o.h.v. Douglas machines. The chain sprocket is an easy riding fit on a flange screwed to the inner side of the flywheel hub. Six conical recesses are formed in the boss of the sprocket. Six hard steel pins have rounded ends fitting in these recesses, and the shanks of the pins slide through holes drilled in the web of the flywheel. On the outside of the flywheel are the necessary carriers, with adjustments, for six small coiled springs. When the engine starts the flywheel carries the pins round, and they tend to be forced out of the recesses in the sprocket against the pressure of the springs.



ON THE MALVERN HILLS. Although grey and barren at this time of the year the Worcestershire Beacon and the other hills of the Malvern group stand out like sentinels in the midst of a plain which is one of the most fruitful gardens of England. Several grass tracks lead to the summits, and the Enfield sidecar here shown has just descended to the foot of one of them.

# The Wye Valley from a Pillion



Chepstow Castle, which dates back to the time of William the Conqueror. There are indications in the foundations that the castle was formerly a Roman fortress. (Right) Symond's Yat, between Ross and Monmouth, one of the most beautiful districts in the country.

## Describing a Day's Run in Beautiful Monmouthshire, where the Wye and Severn meet.

NOT even the prospect of a *very* early start deterred me from accepting an invitation to go to Tintern on the pillion of a 4 h.p. Triumph.

As it happened, the start was hardly so early as intended, for we did not get away until just after half-past seven. An uneventful run of thirty-two miles through sleepy villages brought us to Gloucester, sleepier still in the righteous calm of a Sunday morning. The cathedral was closed, but the west doors were open behind the gratings, and we were able to see inside. One's first impression of the massive Norman pillars is that they are far too big for the length and breadth of the building, but they certainly add to the solemnity of the place, if not to its beauty. The statues in the niches outside the south porch are fine, but we were surprised to notice the weather-worn state of some of the stonework.

### Seeing an Interior at Second-hand.

After inspecting photographs of the interior of the cathedral in the shop window of a photographer who kindly leaves his blind up on Sundays, we set off again down Westgate Street, crossing the Severn just outside the town. More people were about now, and the good roads lent themselves admirably to our obvious duty of reducing the pride of other cyclists and sidecar drivers. Then came hilly country, but the Triumph was undismayed and seemed to enjoy the climbs as much as we enjoyed the glorious views of well-wooded slopes and pasture lands much refreshed by the recent rains. It was not long before we came to Ross, well set up on a hill above the Wye. Here we saw the quaint old Market House, and also had a peep inside the church to see the two trees growing there, but were not able to examine them, as a service was being held. Leaving Ross and turning south after crossing the Wye, we left the main road near Goodrich and made our way towards Symond's Yat. The Wye was crossed again by an iron bridge, on which we met a patrol of boy scouts, and then we followed a rough and stony road until it divided, one branch going uphill and the other down, in the same direction and both equally bad. Here a passer-by told us to take the upper road to get to the head of the Yat, and the lower road for the ferry, assuring us that both we and the Triumph could get across the river. Out of consideration for our tyres, and also because a remarkably heavy rainstorm appeared to be approaching, we went only part of the way up the higher road, but were able to take a photograph which gives a good idea of the place. The densely wooded banks rise up steeply from the river's edge, and here and there great crags and boulders stand out among the trees. Dotted about on the right bank there are many houses, and away to the right we heard a church bell ringing, though the church itself was hidden.

### No Help from the Ferries.

Coming down again, we went to the ferry, but it was impossible to get the Triumph across, as, quite apart from the size of the ferry boat, there was no

**The Wye Valley from a Pillion.—**

approach on either bank. Refusing several invitations to " 'ave a boat on the river this afternoon, sir," we went back again across the iron bridge to join the main road where we had left it, and rode on to Monmouth. Here we ran through the town to see the old gateway to the bridge over the Monnow, and then back again across the Wye, which we followed closely down to Tintern. The scenery here is beautiful, the river winding among the hills and woods of the Forest of Dean. Tintern Abbey, a Cistercian foundation, stands near the river, with a background of tree-clad hills. It it a glorious building, and considering that it was Henry VIII. who, to quote the guide, "took the roof off it," it is in a wonderful state of preservation. The abbey itself is perfectly cruciform in shape, and what is left of the monastery buildings lie on the north side. We took several photographs of it, but scaffolding mars most of them. Notices warning visitors to stand clear of falling *débris* are posted in many places, and bear the date " May 6th, 1914," from which one gathers that the work of restoration was interrupted by the war; whether or not it has yet been resumed I do not know. The guide was busy with another party, so we were able to wander round as we liked. Picture postcards are on sale at the entrance turnstile (admission is 6d. each).

The ruins of Tintern Abbey, five miles from Chepstow. These venerable monastic ruins excel in beauty anything of the kind in the kingdom.

The famous Windcliff, from which it is said that the finest view in the kingdom is to be obtained, was passed, as we did not see a road up which the Triumph could be driven; even from the main road, however, one gets splendid views, from the Wye at one's feet, across stretches of fields and woods far away to the Severn, gleaming like silver in the distance, with Kelston Roundhill (near Bath) standing solidly in the background. We took a photograph of a curious wall of rock rising, so it seemed, almost vertically from the trees which encircle its base, and ending most abruptly. On the left one sees the river Wye, and right in the background there are several glimpses of the Severn.

On again we went to Chepstow, a very hilly little town near the junction of the Wye with the Severn. Going down two or three steep and stony hills, we stopped to look at the castle and then came out on the last road bridge across the Wye, from which we had another splendid view of the Castle. Crossing into Gloucestershire again at the middle of the bridge, we followed the course of the Severn through Lydney to Newnham. Here again we were disappointed of a ferry, for the tide was out, and there seemed more sand than water in the river bed. It seems unreasonable to be obliged to go up to Gloucester and back again when one's home lies about twelve miles, as the crow flies, from Chepstow. From Newnham we went through Westbury to Gloucester, and home again by the way we had come. It was a no-trouble run, and we reached home after having done 143 miles in just under ten hours, and having seen one of the most beautiful corners of England in a very delightful way. M.H.L.

# FAMOUS SCOTTISH HILLS.

THE Rev. J. M. Philpott has raised a few points in connection with my impressions of some famous Scottish Hills. In a sense, it is rather over six miles from the absolute base of the Tornapress side of the Pass of the Cattle to the summit; but the road barely rises 100ft. in the first mile, which, therefore, has an average gradient of about 1 in 50, and is hardly worth inclusion in a " climb." The Applecross side is as near as no matter five miles in length. No survey of the Inverfarigaig Corkscrew has yet been published, so far as I know, and it is not in the contour books; the gradient, as given in my article, is a maximum, not an average, occurs on two corners, and was measured by a Tapley motor cycle gradometer, which is not a precise scientific instrument. I agree with Mr. Philpott that it is a " rider's hill," rather than an " engine hill." Mam Rattachan is, surely, a surface hill, and except for very small engines the same applies to Glendoe. Mr. Philpott is a famous rider of such engines, and it must be admitted that one's mount makes an immense difference to the impression which a hill creates. With a 250 c.c. or 350 c.c. which has been driven hard all day, and is high geared on its low ratios to permit of maintaining a fair average, most hills figuring as " observed " in big trials will put a certain amount of wind up a good rider. With a $3\frac{1}{2}$ h.p., running well inside itself all day and possessed of a dreadnought emergency gear, surface is really the only factor which matters on an observed hill. I have never driven a baby up the Pass of the Cattle, nor have I any intention of doing so. Not because it wouldn't get up, but because I dislike being pitched about the road, and I find weight reduces this discomfort to the minimum. B. H. DAVIES.

# AN ITALIAN THREE-WHEELER.

## Engine, Gear Box, and Driving Wheel carried in Hinged Sub-frame.

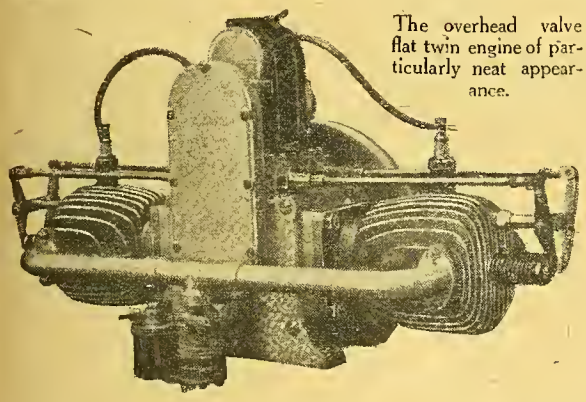
THE designer of the Moto Cor has mounted engine, gear box, and driving wheel in a sub-frame hinged to the main chassis, connection between the two being effected by semi-elliptic springs.

By this construction, of course, the body and passengers are adequately sprung, but a fairly high proportion of the engine and transmission weight is unsprung.

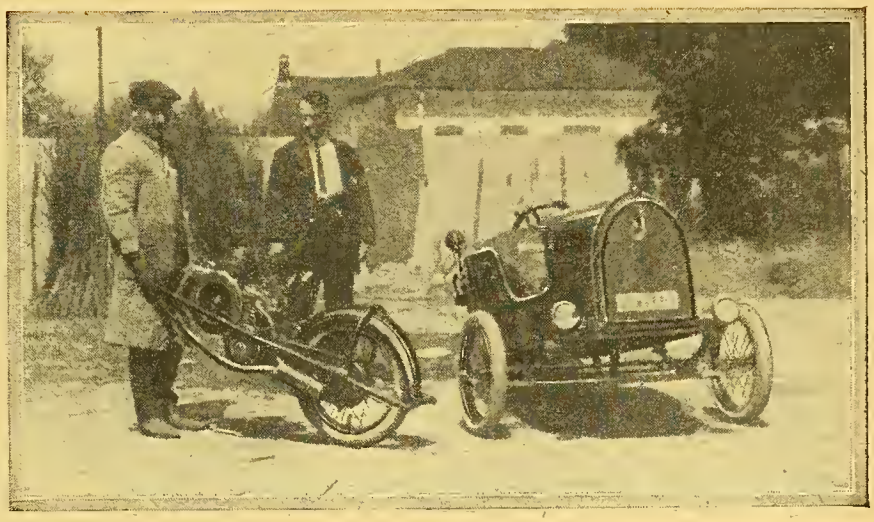
### Flat Twin o.h.v. Engine.

The power unit is a horizontally-opposed four-stroke twin of 575 c.c., having all valves overhead. Vertical radiating fins, set longitudinally upon the cylinders, are used.

Lubrication is by hand pump with semi-automatic drip-feed delivering oil to a reservoir in the crank case and on to the ball bearing connecting rods and crank-shafts, and conducting it by means of grooves to all other moving parts of the engine.



The overhead valve flat twin engine of particularly neat appearance.



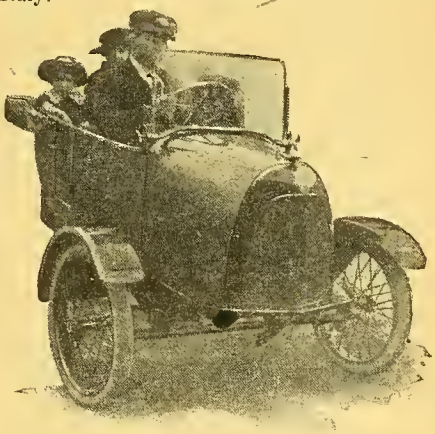
This shows the Moto Cor sub-frame detached complete with engine and gear box.

Placed behind the engine and anchored to the sub-frame is the three-speed gear box, which gives three ratios of 4½, 8, and 13 to 1.

The driving wheel is easily detachable, by means of a withdrawable spindle, without interfering with the transmission mechanism and a motor cycle type of stand is provided. Both brakes are applied to the rear wheel, one being of the external and the other of the internal variety.

Semi-elliptical springs are used for the front suspension; also the body lends itself to many variations: one type carries the seats tandem fashion, and the stability of the machine is not affected by the presence or absence of the extra passenger, while a commercial body can be fitted without structural alterations.

The designer of this vehicle is Armino Mezzo, 6, Via Giuseppe Grassi, Turin, Italy.

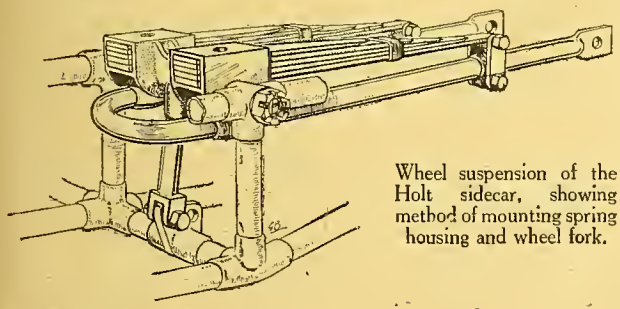


The Moto Cor with two-seater body. Note that there is room for a child beside both passenger and driver.

# A NEW SPRING WHEEL SIDECAR.

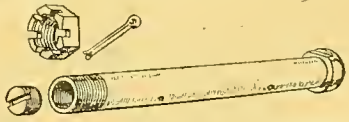
## The Holt Chassis: A Soundly Constructed Attachment Suitable for Medium-weight Machines.

THE problem of suspending the sidecar and its wheel in such a manner as to absorb all road shocks before they reach the motor cycle frame is one that has been tackled on numerous occasions, and with varying degrees of success. In many cases it has meant the addition of weight, increased expense, inaccessibility, and many moving parts in which wear may take place. It is with the object of overcoming these difficulties that the Holt spring wheel sidecar has been evolved.



Wheel suspension of the Holt sidecar, showing method of mounting spring housing and wheel fork.

The underslung chassis is rectagular in shape, and is composed of two main side members of girder construction. Three tubes form the base while the whole of the wheel and its suspension is encircled by tubes also built up in girder formation. Built on to the chassis is a forward extension whereon is mounted the foot-



The hollow main axle with oil retaining screw removed. The flat on the end cap forms the key-way that prevents rotation of the axle when assembled.

**A New Spring Wheel Sidecar.—**

board, and beneath this is a space that may be utilised for the housing of the accumulators.

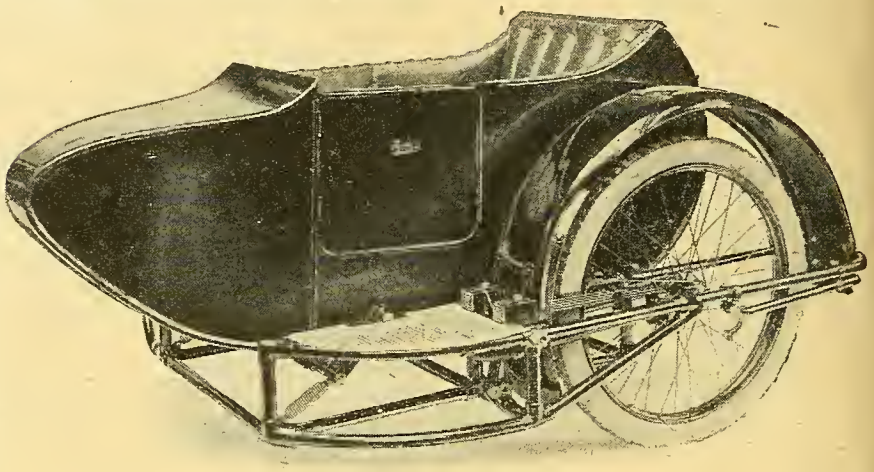
The wheel is carried by a substantial U-shaped member pivoted, with the spring housing, on a common main axle.

### Springing System Described.

In the suspension of the wheel, two quarter-elliptic springs are employed, each having five leaves and extend rearwards to links carried by lugs on the fork ends.

Coil springs in tension are used to suspend the body. A 7½in. mudguard is secured direct to the chassis by means of two detachable tubular stays. A particularly well finished body has detachable backrest and seat, and behind the former, in the bulbous back, are receptacles for a spare petrol tin and a luncheon basket. Two more compartments carry tools and a spare tyre. The upholstery is carried out in leather cloth, and contains pockets for maps, gloves, etc. The weight of the chassis complete is 105lb. With the body fitted the sidecar scales less than 1½cwt. The retail price at present fixed is £40. The patentees and manufacturers are The Holt Motor Manufacturing Co., Earlsdon, Coventry.

During the course of a brief test, we were able to observe the behaviour of the springing arrangements. The roads traversed were chosen on account of their appalling surfaces, and it was found that the shocks received by the wheel were almost entirely damped out. The body was remarkably steady; indeed, the sensations were in every way similar to those experienced in a well-sprung car.

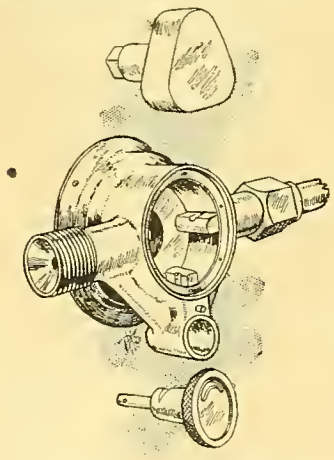


Good appearance and comfort are outstanding features of the Holt body. The pleasing manner in which the lines of the body blend with those of the chassis is at once apparent.

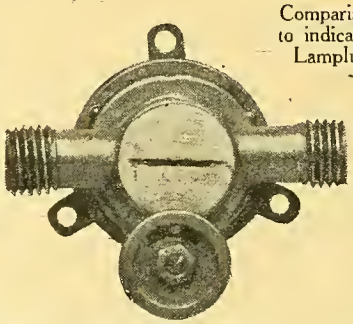
# A MINIATURE MECHANICAL OIL PUMP.

## Novel Driving Arrangements and easily varied Oil Delivery in New Lamplugh Fitting.

MOST of the manufacturers of brass tank and lubricator fittings have entered the market with some form of mechanical oil-pump, and one of the earliest was S. A. Lamplugh, Ltd., of Tyseley, Birmingham. The throttle-controlled Lamplugh pump was quite well known, but unfortunately it did not gain universal popularity.



Chief components of the pump. Above is the rotating impellor disc, and, below, the by-pass regulating valve, while the main casting in which the impellor revolves is shown with its cover removed. The plunger blocks are clearly indicated.



Comparison with a half-crown serves to indicate the compactness of the Lamplugh mechanical oil pump.

Under the Lamplugh name, however, a new and much simplified pump, adaptable to any machine, has been evolved. In construction it consists of a shallow cylindrical shell in which revolves an impellor disc having three flats on its periphery. Two spring-loaded rectangular steel plungers are set radially in the pump casing 90° apart, and these plungers are each provided with an oil groove. One of the plungers is in communication with the pipe from the oil tank, the other leads to a regulating valve which directs the oil to the outlet pipe or by a by-pass back to the inlet orifice.

### The Pumping Action.

When in rotation the periphery of the impellor disc is closely followed by the spring plungers, and as the front of the pump is enclosed by a cap which just allows clearance for the impellor, oil flowing from the inlet pipe fills the space between one of the flats and the casing of the pump. This oil is carried round the casing (the spaces above the other flats being filled in turn as they pass the inlet plunger) until it is arrested by the outlet plunger and finds, in the groove of the latter, its only way of escape, and is so forced to the engine or through the by-pass according to the setting of the regulator; all or only a part of the oil may be by-passed back to the inlet side.

### Slow Speed Driving Gear.

Although the Lamplugh pump will run at almost any speed, an ingenious reduction gear has been designed for use in conjunction with it. This consists of an eccentric driven off the half-time shaft (say the magneto driving sprocket), which causes a small plate to oscillate; this plate has a single projecting tooth which in its combined up and down and side to side movement engages with the teeth of a star wheel secured to the impellor disc spindle. One revolution of the eccentric causes one oscillation of the plate, and as the star wheel has ten teeth, it makes one-tenth of a revolution.

The Lamplugh pump is simple, all parts work in oil, and the maximum delivery is greater than any motor cycle engine would require continuously. If any criticism could be made it would be that the pump depends largely on a gravity supply of lubricant; but the makers assure us that the oil may be raised from a supply at a lower level; it is to be assumed, however, that the pump would need "priming" before this could be done.

# MOTOR CYCLES FOR EVERY PURSE.

## A List of Second-hand Machines from the Miscellaneous Advertisements in Last Week's Issue of "The Motor Cycle," arranged in Order of Price.

IN a recent article on "Buying a Second-hand Machine" we advised potential purchasers that the most sensible procedure first of all was to find out just what was obtainable at the pre-determined maximum amount of cash available. This week we carry the idea further by publishing the following table, which gives this information in a most convenient form.

It should be noted that, except in the case of very moderately priced or easily identifiable machines, advertisements offering undated motor cycles have been ignored, but otherwise the list gives a very valuable, if general, indication of the state of the second-hand market as revealed by the most reliable barometer existing, the classified advertisements of machines offered each week by readers of *The Motor Cycle*.

### £20 and under.

| | | |
|---|---|---|
| £6 | | 6 h.p. Pengeot. |
| £10 | | 3½ h.p. N.S.U. |
| £12 | | 5-6 h.p. Vindec Special. |
| £12 | | 2¾ h.p. Moto Reve. |
| £12 | 10s. | 2 h.p. Motosacoche. |
| £12 | 10s. | 5-6 h.p. Rex (single speed). |
| £14 | | 2¼ h.p. Humber. |
| £14 | 10s. | 5 h.p. Bat. |
| £15 | | 3½ h.p. Humber (two speed). |
| £15 | | 3½ h.p. Bat sidecar. |
| £18 | | 1914. 3½ h.p. Abingdon sidecar. |
| £19 | | 1916. 2¼ h.p. Sun (two speed). |
| £19 | 10s. | 1914. 3½ h.p. B.S.A. (single speed). |
| £20 | | 3½ h.p. Triumph (belt). |
| £20 | | 3½ h.p. Ariel (belt). |
| £20 | | 2¼ h.p. Radco. |

### £21 to £30.

| | | |
|---|---|---|
| £21 | | 3½ h.p. Humber. |
| £25 | | 1916. Royal Ruby. |
| £25 | | 2¾ h.p. Dalm (two speed). |
| £25 | | 1913. 2¾ h.p. Douglas. |
| £25 | | 6 h.p. N.S.U. |
| £25 | | 2¾ h.p. Enfield Twin. |
| £26 | 10s. | 1919. 2½ h.p. Royal Ruby (two-stroke). |
| £27 | 10s. | 3½ h.p. Triumph (three-speed). |
| £28 | | 2¾ h.p. New Hudson-Jap. |
| £28 | | 5 h.p. Hobart. |
| £28 | 10s. | 1914. 4½ h.p. Chater Lea-Precision. |
| £29 | | 3½ h.p. Rudge (fixed gear). |
| £30 | | 1916. 2¾ h.p. Douglas. |
| £30 | | 1920. 2½ h.p. Diamond-Villiers. |
| £30 | | 1915. 2¾ h.p. Douglas (three-speed) |
| £30 | | 7-9 h.p. Indian (clutch). |
| £30 | | 1914. 6 h.p. Matchless. |
| £30 | | 1912. 5-6 h.p. Rex. |
| £30 | 9s. | 1919. Sun V.T.S. (two-speed). |

### £31 to £40.

| | | |
|---|---|---|
| £31 | 10s. | 1917. 2¾ h.p. Royal Ruby-Jap. |
| £32 | | 1914. 3½ h.p. Coventry Eagle. |
| £32 | | 1920. 2½ h.p. Invicta-Villiers. |
| £32 | 10s. | 1914. 3½ h.p. B.S.A. (T.T.). |
| £32 | 10s. | 1917. 2¾ h.p. Douglas. |
| £33 | | 1920. 2¼ h.p. James. |
| £34 | | 1920. 2½ h.p. Enfield. |
| £35 | | 1919. 2¾ h.p. New Imperial. |
| £35 | | 1913. 5-6 h.p. Rex-Jap sidecar. |
| £35 | | 1919. 2½ h.p. Clyno. |
| £35 | | 1914. 3½ h.p. Premier (T.T.). |
| £35 | | 1917. 3 h.p. Enfield. |
| £35 | | 1920. 2¼ h.p. James. |
| £35 | | 1920. 2½ h.p. Hobart-Villiers. |
| £35 | | 4 h.p. Zenith. |
| £36 | 15s. | 1913. 3½ h.p. Rover sidecar. |
| £37 | | 1921. Levis. |
| £37 | 10s. | 1920. 2½ h.p. Enfield. |
| £38 | | 1920. 2¾ h.p. Ixion Villiers. |
| £38 | 10s. | 1921. Levis (two-speed). |
| £40 | | 2½ h.p. Clyno. |
| £40 | | 2½ h.p. New Hudson. |
| £40 | | 1920. 2¾ h.p. Diamond-Jap. |
| £40 | | 1912. 3½ h.p. Triumph sidecar. |
| £40 | | 3½ h.p. Indian. |

### £41 to £50.

| | | |
|---|---|---|
| £42 | | 1920. 2½ h.p. Enfield. |
| £42 | | 1915. 4½ h.p. B.S.A. |
| £42 | | 1921. 2¾ h.p. Omega Villiers. |
| £42 | 10s. | 1921. 2½ h.p. Enfield. |
| £42 | 10s. | 1919. 2¾ h.p. Douglas. |
| £43 | | 1918. 3½ h.p. P. & M. |
| £44 | | 1917. 4 h.p. Douglas. |
| £45 | | 1920. 2¾ h.p. New Imperial. |
| £45 | | 1921. 2½ h.p. Clyno. |
| £45 | | 1920. Wooler. |
| £45 | | 3½ h.p. Rudge sidecar. |
| £45 | | 4 h.p. Triumph sidecar. |
| £45 | | 1915. 7-9 h.p. Harley-D. sidecar. |
| £45 | | 1921. 2½ h.p. Diamond Jap. |
| £45 | | 1921. 2½ h.p. Connaught. |
| £45 | | 1920. 2¾ h.p. Calthorpe-Jap. |
| £45 | | 1921. O.K. |
| £47 | 10s. | 3½ h.p. P. & M. (ex-W.D.). |
| £48 | | 1918. 4 h.p. Triumph sidecar. |
| £48 | | 1918. 4 h.p. Triumph. |
| £48 | | 1918. 3½ h.p. P. & M. sidecar. |
| £48 | 10s. | 1921. 2¼ h.p. Triumph. |
| £50 | | 1921. 2¾ h.p. Allon. |
| £50 | | 1920. 3½ h.p. Rudge-Multi. |
| £50 | | 1920. 2½ h.p. Triumph. |
| £50 | | 1918. 4 h.p. Douglas sidecar. |
| £50 | 8s. | 1921. 2¾ h.p. Verus-Blackburne. |

### £51 to £60.

| | | |
|---|---|---|
| £51 | 9s. | 1920. 4 h.p. New Hudson sidecar. |
| £52 | | 1917. 7-9 h.p. Indian sidecar. |
| £52 | | 1921. 2¾ h.p. New Imperial. |
| £52 | 10s. | 1921. Velocette. |
| £53 | | 1920. 3 h.p. Royal Ruby. |
| £53 | | 1916. 6 h.p. N.U.T. sidecar. |
| £54 | 12s. | 1921. Beardmore-Precision. |
| £54 | 12s. | 1917. 4½ h.p. B.S.A. |
| £54 | 12s. | 1917. 6 h.p. Clyno sidecar. |
| £55 | | 1920. 2¾ h.p. Douglas (three-speed). |
| £55 | | 1919. 4½ h.p. James sidecar. |
| £55 | | 2½ h.p. Ner-a-Car. |
| £55 | | 1921. 2¾ h.p. Ivy. |
| £55 | | 1916. 4½ h.p. B.S.A. sidecar. |
| £55 | | 1918. 4 h.p. Douglas sidecar. |
| £56 | | 1919. 5 h.p. Zenith. |
| £56 | 14s. | 5-6 h.p. Clyno sidecar. |
| £57 | 10s. | 1919. 7-9 h.p. Indian. |
| £57 | 10s. | 1919. 7-9 h.p. Indian. |
| £57 | 10s. | 1921. 3½ h.p. Rudge. |
| £57 | 15s. | 1920. 7-9 h.p. Indian. |
| £57 | 15s. | 4½ h.p. B.S.A. sidecar. |
| £58 | | 1921. 3½ h.p. Rudge-Multi. |
| £58 | | 6 h.p. Clyno sidecar (two-speed). |
| £58 | | 1921. 2¾ h.p. Omega Villiers. |
| £60 | | 1921. 2½ h.p. Edmund-Jap. |
| £60 | | 1921. 2¾ h.p. Coulson-B. |
| £60 | | 1915. 7-9 h.p. Indian sidecar. |
| £60 | | 8 h.p. Enfield sidecar. |
| £60 | | 1921. 3½ h.p. Rudge-Multi. |
| £60 | | 1917. 3½ h.p. Rover sidecar. |
| £60 | 18s. | 1921. 2¾ h.p. Douglas (three-speed). |

### £61 to £70.

| | | |
|---|---|---|
| £62 | | 1920. A.B.C. |
| £62 | | 1921. 2¾ h.p. Douglas. |
| £62 | 10s. | 1921. 2¾ h.p. Edmund-Blackburne. |
| £63 | | 1921. 2½ h.p. Edmund-Jap. |
| £63 | | 1921. Wooler. |
| £65 | | 1921. 3½ h.p. Triumph (single speed). |
| £65 | | 1921. 5 h.p. Zenith. |
| £65 | | 1919. 3½ h.p. Sunbeam. |
| £65 | | 1921. 2½ h.p. Coulson. |
| £65 | | 1920. 3½ h.p. P. & M. |
| £65 | | 1920. Indian Scout. |
| £65 | | 1917. 4 h.p. A.J.S. sidecar. |
| £67 | 10s. | 1919. 4½ h.p. B.S.A. |
| £68 | | 1921. 3½ h.p. Rudge-Multi. |
| £68 | | 1921. 2¾ h.p. Douglas (three-speed). |
| £69 | | 1918. 4½ h.p. B.S.A. sidecar. |
| £70 | | 1920. 4 h.p. Quadrant sidecar. |
| £70 | | 1916. 7-9 h.p. Indian sidecar. |
| £70 | | 1922. 3 h.p. Calthorpe Jap. |
| £70 | | 1921. 4 h.p. Quadrant sidecar. |
| £70 | | 1919. 8 h.p. Matchless sidecar. |
| £70 | | 1920. 5-6 h.p. Rudge-Multi. |
| £70 | | 1916. 6 h.p. Enfield Sidecar. |
| £70 | | 1921. A.B.C. |
| £70 | | 1921. 3½ h.p. Rudge-Multi. |

### £71 to £80.

| | | |
|---|---|---|
| £72 | | 1921. 2¾ h.p. Douglas (three-speed). |
| £72 | | 1920. 4 h.p. Douglas. |
| £72 | 3s. | 1921. 2¾ A.J.S. |
| £73 | 10s. | 1919. 4 h.p. Douglas sidecar. |
| £75 | | 1920. 4 h.p. Douglas sidecar. |
| £75 | | 1920. 4 h.p. Douglas. |
| £75 | | 1920. 4 h.p. Invicta sidecar. |
| £75 | | 1921. 2¾ h.p. Coulson. |
| £75 | | 1921. 6 h.p. Rover (Blackburne). |
| £75 | | 1921. 5 h.p. Zenith. |
| £75 | | 1920. A.B.C. |
| £75 | | 1920. 6 h.p. Martinsyde sidecar. |
| £75 | | 1920. 4 h.p. Triumph sidecar. |
| £75 | | 1920. 4½ h.p. B.S.A. sidecar. |
| £75 | | 1920. 6 h.p. Bat sidecar. |
| £75 | | 1917. 6 h.p. Humber sidecar. |
| £77 | | 1920. 4 h.p. Harley-Davidson. |
| £77 | 10s. | 1918. 7-9 h.p. Harley-D. sidecar. |
| £78 | | 1921. 4 h.p. Triumph. |
| £78 | | 1920. 3½ h.p. Ariel sidecar. |
| £79 | | 1920. 4½ h.p. B.S.A. sidecar. |
| £80 | | 1916. 3½ h.p. Sunbeam sidecar. |
| £80 | | 1920. 8 h.p. New Imperial sidecar. |
| £80 | | 1919. 7-9 h.p. Harley-D. sidecar. |
| £80 | | 1920. 10 h.p. Reading Standard. |

### £81 to £90.

| | | |
|---|---|---|
| £82 | | 1918. 8 h.p. Matchless-M.A.G. sidecar. |
| £84 | | 1920. 3¾ h.p. Scott. |
| £85 | | 1921. 3½ h.p. Norton. |
| £85 | | 1919. 7-9 h.p. Indian sidecar. |
| £85 | | 1921. 3½ h.p. N.U.T. |
| £85 | | 1921. 2¾ h.p. Coulson. |
| £85 | | 1921. 5 h.p. N.U.T. |
| £85 | | 1919. 3¾ h.p. Scott sidecar. |
| £85 | | 1920. 3½ h.p. Rover sidecar. |
| £85 | | 1921. 3½ h.p. Rover sidecar. |
| £85 | | 1918. 8 h.p. Enfield sidecar. |
| £86 | | 1921. 3½ h.p. Coventry Eagle. |
| £90 | | 1914. 4½ h.p. New Hudson sidecar. |
| £90 | | 1920. 4½ h.p. James sidecar. |
| £90 | | 1914. 6 h.p. A.J.S. sidecar. |
| £90 | | 1920. 8 h.p. Royal Ruby sidecar. |
| £90 | | 1920. 6 h.p. Bradbury sidecar. |
| £90 | | 1920. 5-6 h.p. James sidecar. |
| £90 | | 1921. 4½ h.p. Dunelt sidecar. |
| £90 | | 1920. 4 h.p. Douglas sidecar. |
| £90 | | 1921. 2¾ h.p. Douglas (three-speed). |
| £90 | | 1921. 8 h.p. Zenith sidecar. |
| £90 | | 1920. 6 h.p. Bradbury sidecar. |

### £91 to £100.

| | | |
|---|---|---|
| £92 | | 1920. Indian Scout. |
| £95 | | 1920. Indian Scout. |
| £95 | | 1920. 7-9 h.p. Indian sidecar. |
| £95 | | 1920. 7-9 h.p. Indian sidecar. |
| £95 | | 1920. 8 h.p. Royal Ruby sidecar. |
| £95 | | 1921. 4 h.p. all chain Triumph sidecar. |
| £95 | | 1921. 3½ h.p. Sunbeam sidecar. |
| £95 | | 1921. 7 h.p. Harley-Davidson. |
| £95 | | 1921. 3½ h.p. Norton. |
| £100 | | 1920. 8 h.p. Matchless sidecar. |
| £100 | | 1919. 8 h.p. Matchless sidecar. |
| £100 | | 1920. 7-9 h.p. Indian sidecar. |
| £100 | | 1920. 4 h.p. Triumph sidecar. |
| £100 | | 1921. 4 h.p. Harley-Davidson. |
| £100 | | 1921. 3½ h.p. N.U.T. |
| £100 | | 1921. 3½ h.p. Douglas. |
| £100 | | 1920. P. & M. sidecar. |
| £100 | | 1920. 3½ h.p. Norton sidecar. |

### £101 to £120.

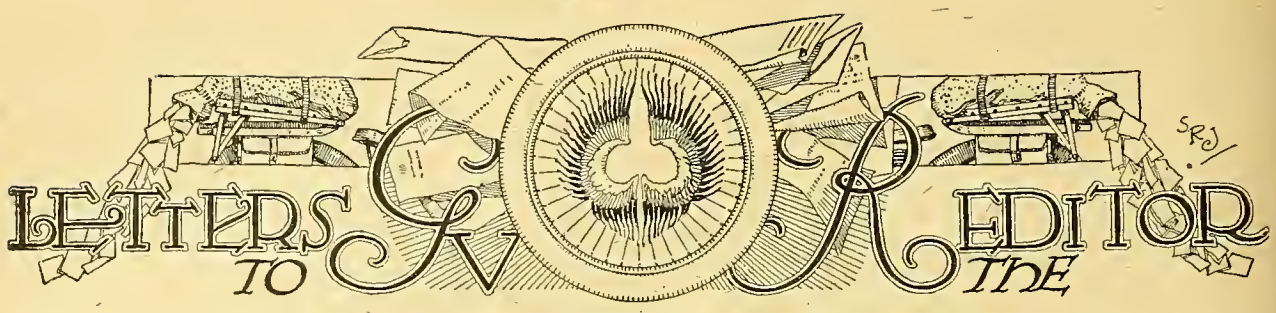
| | | |
|---|---|---|
| £105 | | 1921. 3½ h.p. Sports Sunbeam. |
| £105 | | 1921. 3½ h.p. Rudge sidecar. |
| £105 | | 1921. 7 h.p. Ariel sidecar. |
| £110 | | 1921. 8 h.p. Matchless sidecar. |
| £110 | | 1921. 7-9 h.p. Rudge sidecar. |
| £110 | | 1919. 8 h.p. Sunbeam sidecar. |
| £110 | | 1920. 5-6 h.p. James sidecar. |
| £110 | | 1920. 6 h.p. A.J.S. sidecar. |
| £115 | | 1921. 4 h.p. Norton sidecar. |
| £120 | | 1921. 4 h.p. Triumph sidecar. |
| £120 | | 1921. 3½ h.p. N.U.T. sidecar. |
| £120 | | 1921. 4 h.p. Norton sidecar. |

### £121 to £140.

| | | |
|---|---|---|
| £125 | | 1917. 6 h.p. A.J.S. sidecar. |
| £125 | | 1920. 8 h.p. Zenith sidecar. |
| £125 | | 1921. 8 h.p. Enfield sidecar. |
| £127 | | 1921. 5-6 h.p. Raleigh sidecar. |
| £128 | | 1921. 8 h.p. Matchless sidecar. |
| £130 | | 1920. 6 h.p. A.J.S. sidecar. |
| £135 | | 1921. 8 h.p. Matchless sidecar. |
| £135 | | 1920. 10 h.p. Henderson sidecar. |
| £135 | | 1921. 4 h.p. Norton sidecar. |
| £135 | | 1920. 7-8 h.p. F.H. sidecar. |
| £135 | | 1921. 6-7 h.p. B.S.A. sidecar. |
| £140 | | 1921. 7-9 h.p. Indian sidecar. |

### Over £140.

| | | |
|---|---|---|
| £145 | | 1921. 7 h.p. A.J.S. sidecar. |
| £148 | | 1921. 5-6 h.p. Raleigh sidecar. |
| £150 | | 1921. American X. sidecar. |
| £150 | | 1920. 7-9 h.p. Harley-D. sidecar. |
| £157 | 10s. | 1921. 10 h.p. Henderson sidecar. |




The Editor does not hold himself responsible for the opinions of his correspondents.

Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.

### *NON-STOP TRIALS IN THE DARK.*

Sir,—Might I ask your permission to point out a slight error which has crept in concerning my Stewards' Report on the North-West London M.C.C. open trial? I think the A.C.U. report was probably condensed before being sent to you, and consequently gave rather a wrong impression.

My suggestion was that where a non-stop section occurs at night on narrow and difficult roads the average speed, for such non-stop section only, should be 17 m.p.h.

I am sure you will agree that it is very important that the public should not receive the impression that trials are dangerous, and whilst 20 m.p.h. is safe to the experienced rider, rules are made to cover the safety of *everyone*.

A. M. LOW, A.C.G.I., etc.

### *HEADLAMP DIMMING DIFFICULTIES.*

Sir,—To reply fully to Mr. Troughton's letter of February 2nd would require a short treatise on optical projection, space for which you could not afford in these columns.

This misquotation of "wide dispersion and no glare" I had attributed to the printer. I should not knowingly use the word depression in an optical sense.

I am compelled to state [owing to Mr. Troughton's admission of inability to understand one of the most elementary statements in the phenomena of optical projection together with the perfectly impossible presentation of the ray paths in Figs. I. and II., and also in consideration of the fact that every optical statement he has made is incorrect] that I am forced to the opinion that he has not the qualifications necessary to discuss the matter at all, much less to place this device before us as an American solution of the anti-dazzle problem.

"*Minimum* loss of light," of course, is very different to "*without* loss of light," as he originally wrote. Nevertheless, I reiterate all I previously mentioned in my former letter, since I there dealt with the minimum loss in one particular kind of lamp calculated from particulars given by Mr. Troughton, and under what I considered best riding conditions.

He asked, or suggests, that the intensity of all lamps varies inversely as the square of the distance from the lamp. It does not. Neither does a searchlight have a law to itself!

I hope Mr. Troughton is not responsible for Fig. 3, because it is just optical nonsense.

I hope also that your correspondent does not wish me to take his last paragraph seriously. The manufacturers, by the way, do know their job—that is, to sell lamps and lenses!

I am not acquainted with the Grubb lamp or the dipping lamp referred to by your correspondent. The latter, if its title describes it correctly, is undoubtedly proceeding upon sound lines and is one step forward, or two-fifths, the solution of this very simple problem.

Finally, this American device I am sure would not be accepted by our committee on "Lights on Vehicles, etc.," and further, in my opinion at any rate, it does not do anything that cannot be more efficiently done by tilting the lamp until the top of the beam is parallel to the ground (or just touching it at 400ft. distance, say), and using a straight filament bulb in a horizontal plane or fixing a single cylindrical lens of suitable power in front of the lamp.

Like Mr. Troughton, I am in no way connected with the motor or lamp trade, but only a more than satisfied rider of a "ROVER."

London, W.19.

### *FACTORY TESTS AND THEIR EFFECT.*

Sir,—Your comments in last week's issue by "Ixion" as to how miniature sidecars wear, and the tests to which makers may or may not have put such productions before placing them upon the market, prompts us to give you a few words. Nearly two years ago, on account of long war service, our motor delivery vans were in a shocking condition. Prices of new four-wheel vans were so exorbitant that we decided to scrap two, and built in their stead three lightweight sidecars, of course with luggage boxes instead of passenger bodies, which were attached to our O.K. lightweight machines.

The result over the last two years of continuous knocking about more than justified us in entering a lightweight sidecar in the last A.C.U. Six Days' Trial.

The general public should bear in mind that the hack machine of the motor cycle manufacturer is hardly ever in the same driver's hands two days running, and unlike a competition machine which owns its driver, and is in turn owned by the driver, who takes an immense amount of pleasure and pride in it, the hack mount very seldom sees a water hose, or indeed gets any of those little cares and attentions which go to make such pleasurable driving. It is called upon to go out in all weathers at short notice.

We have one machine here now constantly in use fetching castings from the Black Country, which is often loaded up with as much as 2cwt. of malleable castings, and then brought from a Black Country town over the atrocious roads out to our works at Hall Green. Notwithstanding, its original engine and the original sidecar chassis are still, so to speak, "as you were."

p.p. HUMPHRIES AND DAWES, LTD.
E. H. Humphries, Director.

### *"UTTERLY AMAZING SPEEDS."*

Sir,—Mr. Harris, of Melchior, Armstrong, and Dessau, Ltd., has "immediately recognised" the machine indicated in my original letter as the 1922 *de luxe* Henderson.

His identification is, of course, entirely correct, and I am glad indeed to have this opportunity of replying to him—as a disinterested, but greatly experienced, private owner—in fact, as one typical, I think, of the majority of your readers.

The trials, we are told, took place under most arduous conditions, over desert roads, and up mountains which included gradients of 1 in 7. The distance (non-stop, I believe) was thirty-two miles, and the average speed 65 m.p.h. (which means that the machine was travelling at its maximum guaranteed speed of 75 m.p.h. for practically the entire distance). There were also other tests in which these performances were exceeded, and, at the end of each, we are invited to believe the police authorities at once placed their naked hands upon the cylinder casting without discomfort. Add to all this that the day chosen for the trial was the hottest of the year, and the exhibition becomes even more remarkable.

I feel that it is quite useless for me or anyone else to attempt a serious criticism of such extraordinary statements—in fact, I cannot but suspect Mr. Harris of attempting to pull the leg of the amiable, British motor cyclist, which is not very kind or wise of him.

But enough, Mr. Harris should obtain, as soon as possible, authenticated certificates supporting the claims made by him for the 1922 Henderson; let him then enter the machine for a Scottish Six Days or Scott trial and, at the end of it, come back and tell us all about it.

Subject to the award of a gold medal and a non-stop record for the whole trial, my homage is Mr. Harris's. My garments shall be sold and my furniture pawned—anything, in fact, to be able to buy at £175 (or £182? complete with reverse gear) such a truly extraordinary machine.

London, W.2. TOMASO DUBITANS.

Sir,—On reading Mr. Parson's recent letter, I think he must have made a slight error in his calculations. He infers that to do 60 m.p.h. an engine would have to turn over at 7,000 r.p.m.

Now, as a matter of fact, a machine with a 4½ to 1 gear, which is the average top gear ratio of the 3½ h.p. sporting machine, would do 120 m.p.h. at 7,000 r.p.m. This means that only 3,500 revolutions are necessary to attain a speed of 60 m.p.h. H. C. RHODES.

### *IS "THE GAME" WORTH THE CANDLE?*

Sir,—I entirely agree with "Brough Solo" that "the Great Game" is a most expensive one. Further, I do not see what purpose trials over impossible surfaces and up impossible hills can serve. A man would never venture on such routes for pleasure, and if business necessitated it, well, he'd probably ride a horse.

It can only be looked upon as an advertisement for the machines which come through, though one quite as good could be arranged by the firms concerned in a test to destruction of their finished product. Something like boxes are tested in a large revolving drum with beaters inside! There is very little difference, to my mind.

I maintain that the trials of to-day have a very detrimental effect on second-hand prices.

How is a man to know that the machine he is buying hasn't been run in some "gruelling test" and is suffering from cracks and crystallisation owing to being driven over ridiculous surfaces at equally ridiculous speeds?

Does anyone deny that a trials ridden bike wears 50 to 100% more than a touring machine, mileage for mileage?

Ampthill, Beds. ZENITH SOLO.

[We discuss this subject in a leader in the present issue.—ED.]

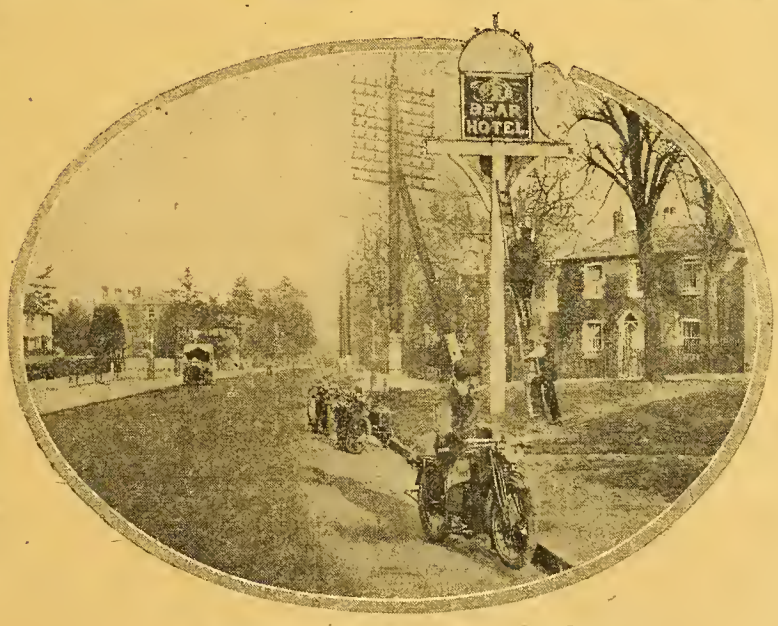
### *SOLUTION-CARRYING SOLUTIONS.*

Sir,—I was touched by the "Agony Par" that appeared in your columns for a suitable method of carrying rubber solution in tool bags, and beg to suggest the following remedy:

Purchase at any garage a short length of the thick rubber-and-canvas water tube ordinarily employed on the radiator connections of cars. Cut it so that about half an inch is left at each end beyond the length of the solution tin, and push in so that it can be shifted up and down with the thumb. (Of course, the diameter of the piece of tube should be such as to allow a good push fit.) Even if the tool-bag be filled with loose tools, it is impossible even to scratch the tin if this device is employed.

M. H. TOWNLEY.

[This correspondence is now closed.—ED.]




On one of the most famous of highways—the London-Portsmouth road. The scene, familiar to thousands of London motor cyclists, is at Esher.

### *"IN AND AROUND CONSTANTINOPLE."*

Sir,—This article was of considerable interest to me, as I also rode a Triumph many hundreds of miles out there in 1920. I should, however, like to make two comments on what the author has said.

First, that there *are* worse roads to be found in this country. Although the surface of the roads in Constantinople has certainly become very bad, the foundations of the roads mostly used are excellent. However, the less about the roads on the Asiatic side the better.

Secondly, the pride of the author at seeing so many British-made bicycles out there is a little premature. The author says that he has seen mostly Triumphs, a couple of Rudges, a Douglas, and two Indian sidecars. Had he interested himself a little more in the nationality and origin of these "Trusty" steeds he would have discovered that in 1920 the British Trade Corporation disposed of a large number of old Army Triumph and Douglas cycles in the city, which were eagerly bought up by the local dealers. Thus we see that the credit is not due to the British export trade but to the disposal of the Army's surplus stores. The Wanderers, of course, were left by the German Army. My observations were that far too little British-made motors and machinery were being imported into the country, which showed a marked preference to the cheaper American and Italian productions.

In passing, I must say that the Triumph machines have made a great name for English machines in Turkey, which should provide an excellent market for British productions when times get more normal, both there and in South Russia. ADVENTURER.

Harlow, Essex.

Sir,—As an ex-D.R. only just returned from two years' motor cycling in Constantinople, the article "In and Around Constantinople" was naturally very interesting to me. I can heartily agree with everything "W. S. J." says about the horrible "roads." Comparing the British D.R. with the Turkish motor cyclist, "W. S. J." says, "The Britisher slips *quietly* and quickly through the traffic," etc. He is, I think, slightly wrong when he says "quietly." The Turk has the standard "Jazz band" silencer, and gets all his noise by always running in second gear. It is a very uncommon sight to see "Johnny Turk" using his top gear, even on a clear road.

It is wonderful the way in which the Triumph stands up to the work out there. They are driven "all out" over the worst possible roads by most D.R.'s whenever they are able to do so without bumping right off the machine, and the only thing which will not stand it is the barrel spring in the forks.

Apart from such little troubles, we had very few things to worry us, and found plenty of excitement in shooting at the large dogs which abound there and seem to delight in chasing a motor cycle and snapping at the rider's legs.

I notice also "W. S. J." remarks about brigands, but think that he has nothing to fear from these gentlemen, as they are really very scarce and have very much "got the wind up" about Britishers.

E.L.

London, S.E.26.

### WEIGHTS OF SIDECARS.

Sir,—We have been very interested to read the letter from your correspondent "F.C. 3888." This gentleman is quite correct when he implies that sidecar manufacturers do not make a practice of announcing in their catalogues and general literature the weights of their various models.

The reason for that fact is this: To ninety-nine people out of one hundred stating the weight of a sidecar conveys nothing; to the hundredth, which your correspondent evidently is, the weight of a sidecar has a meaning because he is an enthusiast.

So far as we are concerned, and we think other manufacturers treat the matter in the same light, there is no secret about what our sidecars weigh. To anybody who is really interested we are always only too pleased to give the fullest possible details both as to weight and upon any other point. Our own "Featherweight" model, for instance, weighs 65 lb., but for any manufacturer to quote such a figure by itself is not very informative—the point which matters is the ratio between the weight and the strength. Unless strength, and great strength, is there, light weight is a risky fetish. For DUNHILLS, LTD.
A. Crawley.

Sir,—I am afraid "F.C. 3888" did not read the "umpteen" lists of sidecars obtained from the Show very carefully, for, in addition to the Canoelet, both the Henderson and Montgomery catalogues quote the weight of each sidecar described, and Messrs. Hughes also give the weights of some of theirs. C.L. 4610.
Norwich.

Sir,—On our stand at the recent Olympia Show we had our twentieth annual sidecar catalogue available for free distribution, and over 2,000 people availed themselves of this opportunity for securing a copy. We mention this because for the last fifteen years we have given the weight as part of the specification under each one of our sidecars. We also give the measurements—overall length, size of seat and height of back, and for the last three years we have given the size packed for shipment and the equivalent cubic feet for export. W. MONTGOMERY AND CO.

### WHEN BORED WITH MAIN ROADS.

Sir,—Referring to Mr. Reg. S. Fowler's recent letter, several members of the West Sussex M.C.C. were interested in his discovery of an unclimbable hill near South Harting, and accordingly a party of some half-dozen machines (both solo and sidecar) made their way there and essayed the climb.

All failed except one, on a 3½ h.p. Rover solo, who made a perfectly clean ascent without foot-slogging or steadying. The weather, I may add, was very frosty, and all of us are unanimous in the opinion that under any other conditions it would be practically impossible.

I do not agree with his statement that the gradient is approximately 1 in 3—it is about 1 in 4 in the steepest part, and the average about 1 in 6 or 7. I wonder if any sidecar machine could now conquer the hill? Owing to the ruts and water gulleys, a high ground clearance to the sidecar chassis is essential.

L. J. FLEMING,
Hon. Sec. West Sussex M.C.C.

[Access to the hill referred to is gained by turning off the main Midhurst-Elsted road about one mile from South Harting; it lies at the foot of the Beacon Hill, on the main line of the South Downs.—ED.]

### GREAT BRITAIN'S HIGHEST ROAD.

Sir,—I was extremely interested when I read in *The Motor Cycle* of December 1st, 1921, the description of a climb to the highest road in Great Britain, and do not for a moment doubt Messrs. Cumming and Sangster when they claim to have reached the record altitude in metalled roads in Britain. But, if my memory serves me rightly (being at present in the bush in Northern Nigeria without any data to go on), I think there is a slight mistake in saying that the Tomintoul Hotel is the highest one in Great Britain. I always understood that the Alargue Hotel, commonly known as the "Cockbrig Hotel," situated at the foot of the "Lecht," in Aberdeenshire, was about 200ft. higher than Tomintoul.
MOUNTAIN LOVER.
Lagos, West Africa.

### HEAVY SIDECAR FUEL CONSUMPTIONS.

Sir,—In reference to a letter in your pages, signed "G.E.," and complaining about heavy petrol consumption with a Matchless sidecar outfit, I should recommend your correspondent to follow "Ixion's" advice and fit a variable jet.
Ipswich. H.W.B.

Sir,—I have owned a two-seater Matchless-M.A.G. outfit since March, 1921. My mileage to December 31st was 3,492 by speedometer, which registers about two miles over per hundred miles. The amount of petrol used was 64 galls., which equals about 54 m.p.g., so that there is evidently something very wrong with "G.E.'s" machine if he only gets 35 m.p.g. My usual load is about 23 or 24 stones.
Edinburgh. A.F.S.

Sir,—The m.p.g. of my (May, 1921) Matchless-M.A.G. two-seated outfit is about the same as "G.E.'s." Thinking the balance would be improved, I transferred third passenger to Tan-Sad. I think bad consumption in my case due in great measure to bad hill-climbing and lack of acceleration causing continual change of gear. B.B.
London, W.C.

Sir,—Can any of your readers tell me the correct way to use a W.S.R. variable jet on an 8 h.p. J.A.P. engine, with Amac two-lever carburetter? I have a 31 jet in just now, and I get about 55 m.p.g., but when I put the W.S.R. jet in I only get about 30 m.p.g. If I turn the screw to a smaller jet the engine misfires and spits out at the air intake of the carburetter. If I turn to a bigger jet the petrol consumption becomes greater, and the engine gets hot and starts smoking at the exhaust. ACME.
Dundee.

### MOTOR CYCLE TAXATION IN 1923.

Sir,—The Portsmouth and District M.C. and L.C.C. is unanimously of opinion that the unfair tax on motor cycles should be reduced, and, taking into consideration that the incomes of the owners of these vehicles have been considerably decreased, that the tax should be at least reduced in proportion. F. G. ROACH (Secretary),
for Portsmouth and Dist. M.C. and L.C.C.

### LIGHT ON THE LIGHTING PROBLEM.

Sir,—Accumulator lighting is by far the cheapest form of illumination. It is clean, convenient, and free from trouble, ranking second in pride of place to the complete, but overwhelmingly more expensive, dynamo set.

Acetylene is troublesome before, during, and after use; its reliability is questionable, even though attention is given to the lamp a few hours before using.

The appended figures speak for themselves:

*Electric Equipment.*

Lucas 510B head lamp, tail lamp, electric horn, and Fuller block accumulators (6 volt 24 amp. hour).

Accumulator charged every month, cost 8d. Twelve hours' service, in periods of approximately half hour daily. Brilliant ray of thirty yards. Cost per hour, 0.7d.

*Acetylene Equipment.*

Lucas head lamp (14 litre burner); tail lamp.

One pound of carbide, 10d., lasts five hours in periods of approximately half-hour daily. Majority of light a few feet in advance of front wheel. Cost per hour, 2d.

One season's riding was sufficient to adjust the difference in the initial cost of the equipments. FOURSTROKE.
Wednesbury.

### COMPLICATED COASTING.

Sir,—May I ask through the medium of your excellent journal why one meets so few motor cyclists who attempt to "free engine" or even "switch off" whilst going down fairly long inclines, which results naturally in less wear and tear, and, in these hard times, the saving of that precious fluid petrol.

The Royal Enfield machine, I might add, lends itself excellently on account of its simple controls to such purposes, with no exertion at all to restart a "dead" motor.
REGINALD GEARY.

### IMPORTANT TRIALS WHICH CLASH.

Sir,—It appears from the rules and conditions governing the Scottish Light Car Trial that entrants in same must submit their cars for inspection not later than 9 a.m. on June 3rd. If this rule is strictly enforced, it will prevent entrants in the Scottish Trial from participating in the popular London-Edinburgh Run, and thereby deprive them of participating in a double event.

From correspondence I have had with the secretary of the Royal Scottish Automobile Club, it would appear that there is a possibility of arrangements being made whereby competitors in the London-Edinburgh Run may present their cars for examination in Glasgow on the morning of June 4th, providing entrants in the Scottish Trial make a definite representation that they are competing in same and also desire to participate in the London-Edinburgh Run.

I, therefore, trust that all who desire to enter both events will promptly notify the secretary of the Royal Scottish Automobile Club, 163, West George Street, Glasgow, so that an early decision can be arrived at.

W. H. WELLS, Captain M.C.C.

### EXPERIENCES WITH A SIMPLE FOUR-WHEELER.

Sir,—Having often considered changing from a solo motor cycle to something with four wheels, chiefly on account of the extra comfort and cleanliness, I was very interested to read "J.H.G.'s" experience with an A.V. monocar.

However, although I have no doubt whatever that the machine is excellent as regards power and reliability, it has occurred to me that, when taking a sharp bend, especially if to the right, there might be a great tendency for it to overturn owing to the very narrow track.

Perhaps "J.H.G." would be good enough to enlarge on this point because, when it comes to a spill, I am for the solo motor cycle every time. R. G. TOLLEY.

Sir,—I would very much like to bear out "J.H.G.'s" statements in regard to the A.V., but in my case with one of the two-seaters, fitted with 8-10 h.p. J.A.P. engine and Sturmey-Archer three-speed gear box.

Although I have only had my 'bus about two months, after having owned nearly every make of motor cycle and sidecar, I would not go back to them for anything. I have yet to be passed on a hill or on the road by a sidecar machine of the same power when I did not want to be, and can take the average North Lancashire main road hills on top with two up.

S. WHITTAKER.

### T.T. RACES FOR PRIVATE OWNERS.

Sir,—I have been following this correspondence with considerable interest, and both from the nature of the correspondence and from friends' opinions there certainly appears to be a great demand for such an event. I feel sure that were such a race organised by the A.C.U. or any other capable body it would meet with a large measure of success, and would undoubtedly be well supported. Your correspondent who deals with the subject in last week's issue is quite correct in what he says *re* defining an amateur and difficulties as to finding a course, but nevertheless I think it would be a great pity to dismiss the matter in this way. In the first place, as to the actual course. The idea of the authorities granting a road is most improbable, the I.O.M. is too far (especially for amateurs paying their own expenses), and I do not think Pendine Sands would meet the occasion either. There remains, therefore, Brooklands as the only really likely venue for an amateurs' T.T.

Trusting that you will use your influence in this matter, and see that the idea is not dropped. I am a prospective entrant. C. C. LABIN.

Sir,—Now that the Southport Motor Club has decided to hold a T.T. race for amateurs, may I venture to make the following suggestion: That the usual classes (*i.e.*, 250 c.c., 350 c.c., etc.) should each be subdivided into—(1) a class for the fast sports machines, of which there are many now on the market; and (2) a class for the standard touring models. R. G. SHAW.

Sir,—Why not have a race for two-year-olds, five-year-olds, aye, and twenty-year-olds?

Now, Mr. Fellowes, look out; *I* have a twenty-year-old De Dion. BRISTOL.

Harfield, Bristol.

(5-6)

### TWO-STROKE EFFICIENCY.

Sir,—I read with interest the letter by Mrs. Mary C. Jennison in your issue of February 9th.

While agreeing with your correspondent regarding the many good points of two-strokes generally, I am somewhat at a loss to understand her statement in which she says, "But the cylinder must not be above 250 c.c. (this applies only to single-cylinder air-cooled machines)."

Does Mrs. Jennison suggest the possibility of overheating or rattle? If so, why?

I might add that I have ridden a Velocette, but at present own a single-cylinder air-cooled two-stroke of 293 c.c., and so far neither of the above-mentioned troubles have manifested themselves. CURIOUS.

Glasgow.

### REAR LAMPS FOR ALL.

Sir,—As a woman motor cyclist, I should like to express my entire disagreement with the Gloucester M.C. and L.C.C. in its desire for legislation to compel *all* vehicles to carry rear lights. There must be an enormous number of motor cyclists, especially of the feminine sex, who do not see any reason why they should be forced to equip their machines with an accessory so superfluous and troublesome as a rear lamp. I cannot help thinking that some of the gentlemen who are supposed to watch over the interests of motor cyclists have got rear lamps on the brain, or they would not advocate a measure which will inevitably lead to large numbers of us who do not possess dynamo lighting outfits getting into difficulties, sooner or later, with the police.

If motor cyclists want to carry rear lamps on solo machines let them do so (although I never heard of one being run down in the dark), but it is surely the height of folly to plead for compulsion, which simply means punishment for failure. A motor cycle is about the last thing in the world that requires a rear light, and the people who are demanding that motor cyclists should be obliged to carry one are doing a great disservice to our pastime.

(MRS.) MARGARET M. STANCER.

### SUMMARY OF CORRESPONDENCE.

Further correspondents challenge "Normac's" claim to have driven a 1911 3½ h.p. Triumph sidecar from Bolton to Ambleside in one hour fifty minutes—an average speed of 37 m.p.h. and fuel consumption of 130 m.p.g.

Referring to "Ixion's" article, "What I Rode in 1921," Mr. J. H. W. Douglas recommends a Longuemare single-lever carburetter, which, he says, gives most excellent results.

Mr. T. Kingsbury complains that on a recent Sunday evening he lent a motor cyclist his lamp generator; it has not been returned.

The "Float-on-Air" pneumatic saddle cover is highly praised by Mr. A. H. C. Randall.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

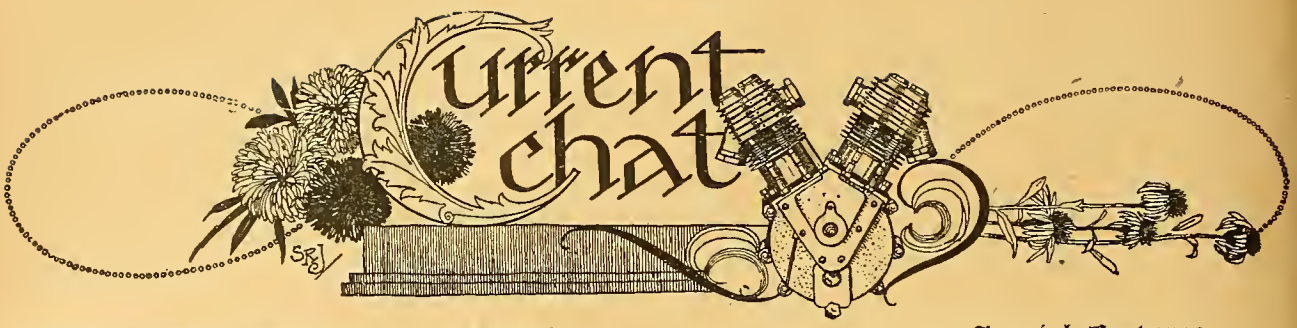
**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 5/-. By post, 5/4.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.




## Times to Light Lamps.

| | | | |
|---|---|---|---|
| Feb. | 23rd | ... ... | 6.27 p.m. |
| ,, | 25th | ... ... | 6.30 ,, |
| ,, | 27th | ... ... | 6.33 ,, |
| Mar. | 1st | ... ... | 6.37 ,, |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Land's End to John o' Groats.

Wednesday, July 12th, has been fixed as the date for the Land's End—John-o'-Groat's trial to be organised by the M.C.C. to celebrate its 21st birthday.

### Record Club Activity.

Sixty or so of Great Britain's 350 motor cycle clubs apparently held their annual general meetings within the last week or two; and in one or two cases reports were sent to us which would have required a page or so of *The Motor Cycle* apiece to publish them in full.

### British and American Miles.

English people in the past have been somewhat dubious about the wonderful speeds made in America. The other day an American racing man was discussing the astounding speeds made by small engined motor cycles in England, and remarked, "The British mile is shorter than our own." Investigation revealed that the fact was correct; but the British mile is only 0.18in. shorter Not such a very great difference after all!

### Well Done!

"For Sale—Baker's business, large oven; owner been in it for ten years." This advertisement appeared under "Parts and Accessories" in *The Motor Cycle* of the 9th inst. It will be, we fear, a severe shock to the amazing speed and fuel consumption heroes of our Correspondence columns.

### Cedos Developments.

Business, stock, plant, registered name, etc., of the Cedos motor cycle have been purchased by a London financier, and deliveries of a re-designed model with a detachable cylinder head will commence in three to six weeks time. Prices will be lower and the output greater; the works are now being re-organised under the direction of Mr. Ernest Smith, who was the designer of the original machine.

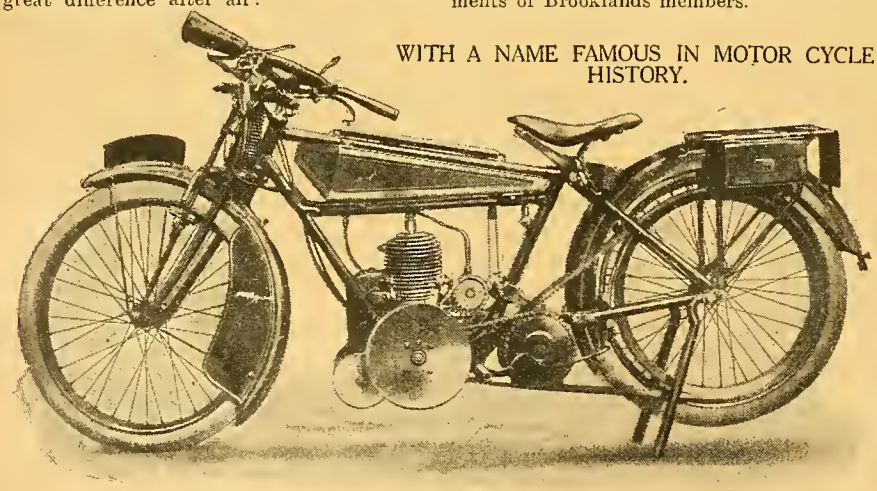
### To Popularise Brooklands.

It is proposed to admit people to the test hill at Brooklands on Sunday afternoons and to allow those who desire to go round the track to do so at a reduced fee. There will also be a band playing.

These innovations will be inaugurated shortly before Easter and further particulars will be published in *The Motor Cycle* in due course.

The catering for Brooklands track has been undertaken by Messrs. Jones, of Kingston, who, we believe, are taking special pains to look after the requirements of Brooklands members.

WITH A NAME FAMOUS IN MOTOR CYCLE HISTORY.



White & Poppe four-stroke engines were in the front rank in the early days. The name now re-enters the motor cycle field, gracing a two-stroke engine which is giving remarkable results, almost unbelievable rates of revolution and a degree of silence not usually associated with units of its type. The machine in which it is shown is obviously merely a testing assembly.

## Special Features.

**MOTOR CYCLES FOR BOYS AND GIRLS.**
**A FOUR-CYLINDER TWO-STROKE.**
**THROUGH THE WYE VALLEY.**

### Motor Cycles in France and Germany.

In 1921 there was one motor cycle in Germany for every 2,244 inhabitants, while in France, where the population is considerably less, there was one motor cycle per 738 inhabitants.

### To Followers of Rugby.

Motor traffic attending the International Rugby match at Twickenham on Saturday next (25th) should follow the route *via* Whitton, recommended by the A.A., and not use the route covering Hill View Road, London Road, and Mogden Lane.

### Prize for First Climb of New Hill.

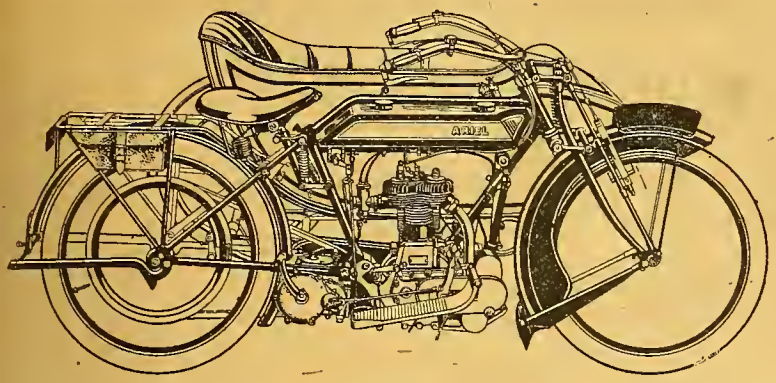
A special prize is to be given to the driver of the first sidecar outfit to climb the new Kent hill "find" that figures in the Woolwich Club's opening invitation run on March 12th. The discovery, first brought to light in the Correspondence columns of *The Motor Cycle*, is arousing great interest, and the officials are receiving many inquiries.

### Motorists and the Eastbourne Bench.

In cases of highway obstruction by a motorist it is contended that there is no legal obligation for the defendant to be present in person, and he may avail himself of the option of being represented by a solicitor. The A.A. has been granted a rule *nisi* by the Divisional Court for a mandamus against the Eastbourne Bench to compel them to hear a case of alleged highway obstruction. The Bench has already refused to dispose of the case on four occasions because the defendant did not appear in person.

### Manufacturers and Motor Licensing.

At a meeting of the Administrative Committee of the National Union of Manufacturers the following resolutions were passed: (1.) "That the existing system of licensing motor vehicles is causing serious injury to the motor and kindred trades, and, incidentally, restricting transport, manufacture, and the export trades. (2.) The registration book has been proved to serve no useful purpose and should be withdrawn, as it is a handicap to the motor trade and interferes with the freedom of buyer and seller. (3.) That makers and sellers of motor vehicles should be enabled to register in the first place in the name of the purchaser."



This sidecar combination has won a position for itself by sheer merit. It is famous for its unvarying reliability, and is known as the

# Standard

# ARIEL

## 3½ h.p. Touring Model

**Price of this 3½ h.p. model: Solo, £95; Comb., £125**

A special form of this machine is also made, with several modifications, and is known as the Sports Model.

**Price £87 10s.**

*Other Ariel prices are:—*

4½ h.p. (chain-drive) single, **Solo, £105; Comb., £140**

6-7 h.p. Twin (belt-drive), **Solo, £110; Comb., £140**

6-7 h.p. Twin (chain-drive), **Solo, £117 10s.; Comb., £152 10s.**

8 h.p. Twin (chain-drive), **Solo, £125; Comb., £160**

Riders who desire a mount of the higher-powered class, but who wish to ensure getting the same qualities that have always distinguished this model, have a choice of the 4½ h.p. chain-drive; 6-7 h.p. Twin (in both the belt and chain-drive forms) and the 8 h.p. Twin (M.A.G. engine). All Ariel models are illustrated and described in the 1922 list, free on request.

**ARIEL WORKS, Ltd., 3, BOURNBROOK, BIRMINGHAM.**

**ARIELS HOLD THE RECORD FOR RELIABILITY**

# *Have you investigated the claims of the*

# L.S.D.

**Its merits are many.**

**A few features of appeal to those interested in a really sound LIGHT CAR are :**

Low running costs, 55 miles per gall. of petrol.
" " 1,000 " " oil.
Constructed sturdily for all weather conditions.
The Hood is instantly adjustable.
Provision for a third seat.

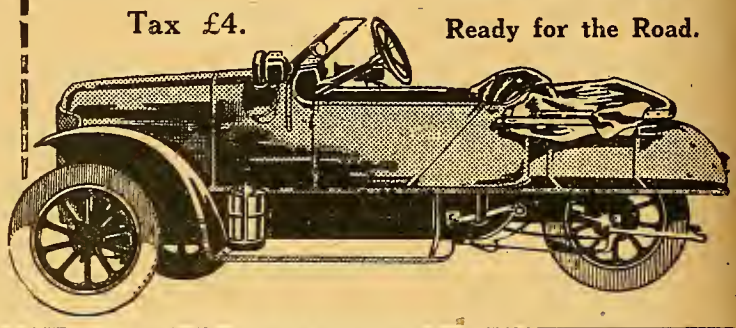
**BRIEF SPECIFICATION :**

**ENGINE**—8 h.p. J.A.P. or M.A.G. Twin, air-cooled. **MAGNETO**—High grade. **CARBURETTOR**—Amac, or other approved make. **CLUTCH**—Leather faced cone. **TRANSMISSION**—Shaft to Gear Box, thence by Chain to Back Wheel. **GEAR BOX**—Aluminium with two forward speeds and reverse, actuated by a separate handle. Fool-proof. **KICK-STARTER**—Operating through Gear Box. **CHASSIS**—Built of Angle Steel and Ash. **TYRES**—Dunlop, 26 x 3. **WHEELS**—Pressed Steel. **BRAKES**—Two external contracting; one pedal and one hand. **LIGHTING**—Acetylene, two head and one tail lamp. **BODY**—Roomy two-seater, with provision for third seat, ample legroom and luggage accommodation. **EQUIPMENT**—Hood, fixed angle windscreen, horn, tools, jack and pump.

? *"The little car that is proving its big worth."*

Tax £4.

PRICE :
**£165**
Ready for the Road.



**SYKES & SUGDEN Ltd., LINTHWAITE, HUDDERSFIELD.**

LONDON Distributing Agents : Messrs. A. H. Lakeman, Ltd., 26, Long Acre, London, W.C.2.

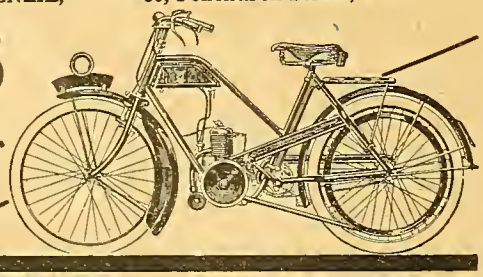
## 180 Miles per Gallon

The McKenzie Safety Lightweight has revolutionised motor cycling just as the Ford revolutionised motoring.
Mass produced at the famous Hobart Coventry factory, this wonder machine is a triumph of sturdy construction, lightness and serviceability. The remarkable 1¾ h.p. two-stroke engine with Fellows Magneto, "Vici" Carburettor, etc., gives sufficient power to mount any ordinary hill and will *maintain* a steady 25 m.p.h. on the level.

The
# McKENZIE
**Safety Lightweight Motor Cycle**

weighs only 75lbs., is suitable for lady or gentleman, and is sold complete with tools, ready for the road. Costs no more than a really dependable pedal cycle, yet gives ten times the service and pleasure. Not an adapted "push" cycle, but a complete motor cycle in every respect.
The McKenzie is worth investigating! Send a postcard to-day for full information to
**G. McKENZIE, - - 80, Fenchurch Street, E.C.3.**

**26 GNS.**



*For the HIGHWAY, the BYWAY, the AIRWAY, and the FAIRWAY.*

# Reduced Prices

of

WAKEFIELD **Castrol** Regd MOTOR OIL

*"IT SELLS BECAUSE IT EXCELS."*

**The World's Finest Lubricant** are now in force at your garage.

## A NEW ECONOMICAL-SIZED DRUM

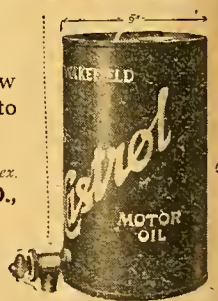
We are now supplying in the new CASTROL 3-gallon drum—easy to handle and most economical.

*Write for price list and pocket lubrication index.*

**C. C. WAKEFIELD & CO., LTD.,**
***All British Firm.***
***Specialists in Motor Lubrication.***
**Wakefield House, Cheapside, London, E.C.2.**

Telephone: Central 1156 (3 lines). Telegrams: "Cheery, Cent., London."

**Agent for South Africa:**
Wm. Campbell, P.O. Box 1814, Johannesburg.




The Wakefield Patent Screw-in Tap, with detachable key, is the best tap on the market.
**Price .. .. 6d**
**Nickel-plated 9/-**
*Post Free*

### British Industries Fair.

Next Monday the 1922 British Industries Fair opens concurrently at the White City, London, and the Castle Bromwich Aerodrome, Birmingham.

### Contrast in Trials.

No greater contrast is imaginable than last Saturday's trial of the Essex M.C. and the previous week-end's event of the Coventry club; the former was the more sensible, but the latter was more enjoyable.

### Midnight Police Activity.

Pouring rain at 11 o'clock at night does not, according to a reader's warning letter, deter the Gomshall, Surrey, police from holding motor cyclists up for speed, braking and obscured number-plate offences.

### 1922 Portents.

It does not require any great discernment to see that enthusiasm is higher than ever in the motor cycle world. Everyone is tired of waiting for what is called stabilisation, and directly warmer weather comes sales of new and second-hand machines must move with a rush.

### Improving Countisbury.

A scheme is in hand to improve Countisbury, the famous North Devon Hill. Many of the worst bends are being straightened and a wall built in place of the banks of brambles. On certain stretches the hill will be widened. No doubt the widening of this notorious hill will be appreciated—but stone walls in place of brambles——!!

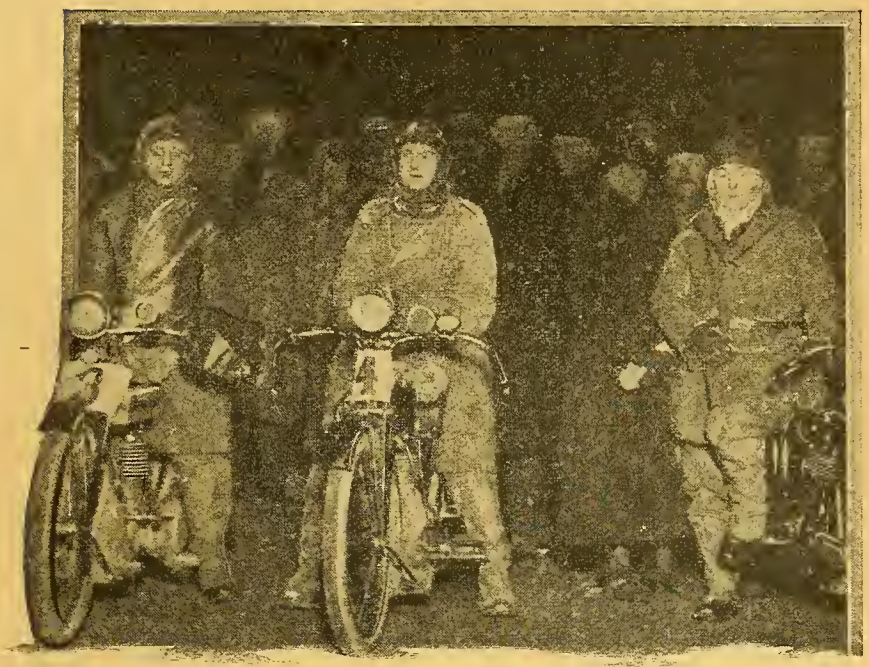
### Brooklands as a Society Rendezvous.

As the result of the Duke of York's forthcoming visit to the Essex M.C. meeting at Brooklands, it is hoped that race meetings on the track will eventually become fashionable social functions after the style of Ascot and Henley. Arrangements for the event in question are going on apace, and we understand His Royal Highness is taking more than a superficial interest.

### Midland Freak Trial Results.

J. A. Watson-Bourne (8 Brough Superior) proved the winner by an easy margin of the solo championship trial described last week; he retained 195 marks out of an initial 200. The others in order of merit were:

C. N. Green (5-6 Rover), 185; L. Crisp (4½ Humber), 183; D. Brandish (4 Triumph), 178; J. N. Roberts (2½ New Imperial), 179; R. Mathers (3½ Rudge), 177; E. A. Barnett (2¾ Francis-Barnett), 176; W. L. Danskin (3½ Rudge), 175; R. Elliott (4 Rover), 174; D. A. Atkin (2¾ Hobart), 173; R. Grindlay (4½ Humber), 173; F. T. Sibley (3½ Rudge), 172; A. P. McGowran (4 Triumph), 172; A. Maclennan (3½ Triumph), 169; F. Arbuckle (4½ Humber), 165; P. H. Johnson (3½ Rudge), 165; M. G. Scally (4½ Humber), 165; E. H. Broughall (3½ Coventry Challenge), 163; L. Hathaway (4 Triumph), 163; J. Hardy (4 Triumph), 162; C. Little (5-6 Coventry Victor), 158; W. A. Jones (4 Triumph), 155; J. W. Moxon (2¾ Coventry Eagle), 155; G. Packman (8 Matchless), 152; R. B. Roberts (4 Triumph), 151; K. Hazlewood (8 Hazlewood), 149; S. Wright (4½ Humber), 148; R. Wright (4 Triumph), 144; P. L. Mayo (2½ Coventry Eagle), 141; Stretton-Ward (4 Triumph), 140; E. Poppe (2½ White & Poppe), 136; H. S. Perrey (4½ B.S.A.), 132; A. Elliot (4 Rover), 131; S. A. Tomson (4 Triumph), 125; G. L. White (2¾ A.J.S.), 122; W. Hancox (2¾ Douglas), 121; G. M. Ravenhall (4 Rover), 114; G. F. Evans (3½ Sunbeam), 94.



AN ALL NIGHT RELIABILITY TRIAL. A flashlight photograph taken at the start of the Hull M.C.C. night trial to York and Scarborough, in which 15 competitors started and five completed the course. Some of the party encountered snowdrifts on the Yorkshire wolds.

### Godalming Again.

Godalming police are very zealous in enforcing the minutest details of the Motor Car Act. Recently a rider was stopped late in the evening during the week-end because his number-plates were insufficiently illuminated. The police carefuly inspected his machine as to the efficiency of the brakes and silencer, with the result that he was reported for failing to illuminate his numbers properly, and for using only one brake.

### Output of Motor Cycle Industry.

By a process of deduction, *The Autocar* has arrived at an approximate figure representing the output of British cars and motor cycles. The following shows how this was done in the case of motor cycles:

| | |
|---|---|
| Number in use, Nov., 1921 .. ... | 355,000 |
| ,, ,, ,, April, 1921 .. .. | 185,000 |
| (Transport Ministry's Returns) | |
| Brought into use in the interval .. | 170,000 |
| Deduct Imports: April—Nov., 1921 | 1,909 |
| (Board of Trade Returns) | |
| | 168,091 |
| Add Exports: April—Nov., 1921 .. | 7,093 |
| (Board of Trade Returns) | |
| Output for 8 months (approx.) .. | 175,184 |
| Approximate monthly output .. | 21,898 |

### Open Trial in the Peak District.

Arrangements for an event on a big scale are being made by the Leicester and District M.C., which has charge of the East Midland Centre A.C.U. open trial on March 25th. The route will be in the Peak District, and competitors will run through the towns of Loughborough, Nottingham, Derby, as well as Leicester, the starting and finishing point. Headed by the Raleigh Cup (pre-war value, £100), the award list is of imposing dimensions.

### In this Issue.

Proud parents who hesitate to buy their boy or girl a motor cycle should read the article on page 226, by Col. Brereton, chairman of the A.C.U.

A reply to Mr. B. H. Davies' article on the difficulties of a T.T. race for private owners appears on page 231.

Particulars of two interesting motor cycles appear this week: one a 4-cyl. 2-stroke designed by Prof. A. M. Low, and the other a sheet steel machine constructed by two enthusiasts in their spare time (page 230).

What one can obtain, for a given sum of money, in the way of secondhand motor cycles, may be seen at a glance on page 239, whereon a list, selected from last week's advertisements, appears.

### South Birmingham Sporting Trial.

More marks were lost in a surprise brake test in last Saturday's opening trial of the South Birmingham M.C.C. than at any other point on the 42-mile route, which included Swan, Beacon, Gravel Pit and Gaby Glide Hills. J. Stretton-Ward (4 Triumph) won the cup for the best performance of the day, and the other results were as follows:—

Club silver medal for next best solo performance: B. Burgoyne (3½ James).

Club silver medal for best solo performance (two-speed only); L. Cox (3¾ Scott).

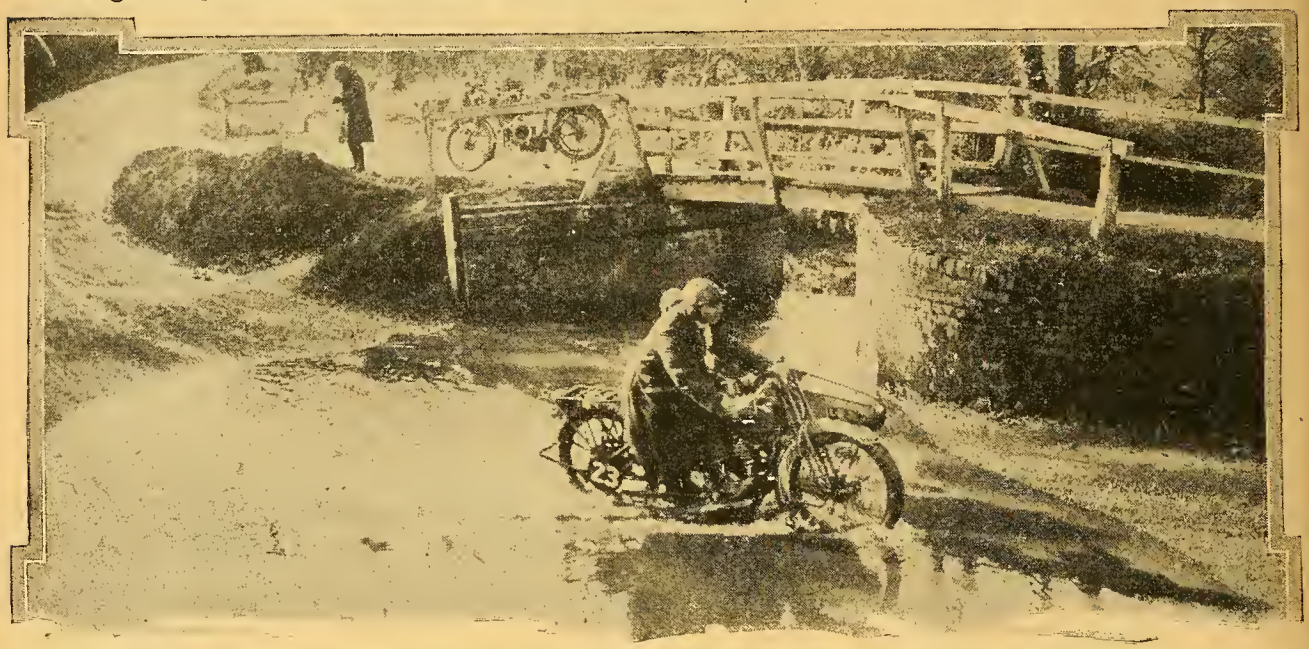
Silver medal for best 350 c.c. sidecar: N. Hall (2¾ O.K. sc.).

Silver medal for best 350 c.c.-1,000 c.c. sidecar: H. Perrey (6 B.S.A. sc.).

Bronze medals: J. Barrett 2¾ O.K.), W. Handley (2¾ O.K.), H. Uzzle (8 New Imperial sc.).

# TOURING CONDITIONS IN ESSEX TRIAL.

## Large Proportion of Finishers in Essex M.C. Winter Trial in Epping Forest District.



The only watersplash was not deep and there was no doubt about the majority of crossings. L. F McCardie (7 Indian sidecar) taking it slowly.

ON the programme of last Saturday's trial of the Essex M.C. it was said that the test was intended to demonstrate the capabilities of the modern motor cycle under ordinary touring conditions. This it did most effectively, although it must be confessed that many a day on an average private owner's holiday tour is often infinitely more severe than the Essex competition.

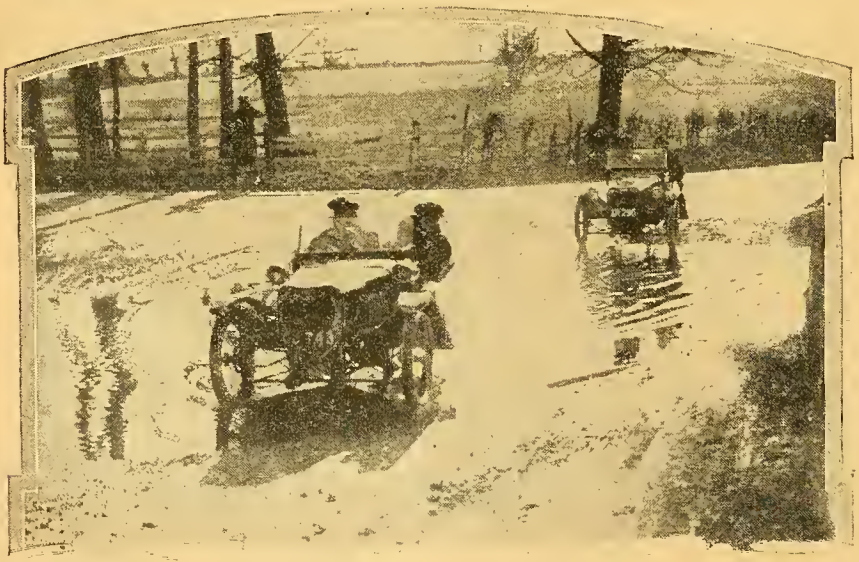
Woodford, on the London edge of Epping Forest, was the scene of the start of a two-lap course, totalling 109 miles. There were no freak hills, nor "colonial" sections, and greasy roads presented the only serious obstacles to a non-stop ride at the scheduled 20 m.p.h.

### Various Driving Tests.

In order to find a winner in each class, however, various tests were included, the first being a fast and slow hill climb on Mott Street Hill five miles from the start; competitors were required to cover the slow portion, which naturally came first, at less than 5 m.p.h. In the 250 c.c. class, F. W. Applebee (2¼ Levis) just succeeded in beating his only opponent, E. J. Anderson (2¼ New Imperial).

In the next class W. C. Hemy (2¾ A.J.S.) was fastest, but apparently he was also too fast in the slow section, and the honour will go to C. Pearson (2¾ Douglas). H. W. Harrington (2¾ Douglas), who was behind time already, stopped, and a little later retired.

Two Indian Scouts and a Triumph competing together resulted in victory for one of the former, driven by D. H. Davidson. Of the sidecars, C. G. Pullin (6 Douglas sc.) streaked up easily fastest in the eyes of the spectators, but E. A. Bridgman (7 Indian sc.) actually recorded a better time by the simple expedient of opening out on the slow portion as soon as his passenger had calculated that sufficient time had elapsed to avoid exceeding the maximum speed. The 4¼ h.p. Hawker outfit, in the hands of L. F. Peatty, emitted sounds suspiciously like "conking."



H. W. Holmes and S. A. McCarthy on Morgans at the watersplash, near Harlow.

### A Star Performance.

Fastest time of all the motor cycle entries, however, was undoubtedly made by S. M. Greening, on a Sunbeam fitted with the latest sporting 3½ h.p. J.A.P. twin engine.

Low Hill, thirteen miles further on, had been originally chosen for the flexibility test, but was ruled out on account of its bad surface. As it was, everybody climbed it with ease. Near Parndon, a watersplash provided the press photographers with something more "live" than main road pictures, but the solitary

**Touring Conditions in Essex Trial.—** observer did not unsheath his fountain pen. Just beyond, however, a Coventry Victor outfit was noted at a standstill, while its driver, J. Wallis, cleared a choked petrol pipe; eventually he retired, owing to persistent recurrence of this trouble. F. W. Applebee (2¼ Levis) was also unfortunate, being brought to a stop by chain trouble. Incidentally, the veteran rider provided one of the only thrills of the day—by pilling up in front of the official hotel at the lunch stop. There were no casualties.

### Same Route Repeated.

Exactly the same route was covered in the afternoon, ten seconds being allowed to start up cold engines.

Several lost marks, including two who had otherwise been doing well—W. C. Hemy (2¾ A.J.S.) and C. Pearson (2¾ Douglas).

Mott Street this time was marked off for a very short acceleration test. The competitors were timed from a standing (clutch) start, and, with two exceptions, those who distinguished themselves in the morning repeated their successes. On this occasion S. J. Marks (4 Triumph) and C. G. Pullin (6 Douglas sc.) gained top marks in their respective classes. Some amusement was caused by C. W. Bairstow (7 Indian sc.) removing his gloves to gain greater freedom of action and then making an extremely slow get-away. Alan Hill's Indian was also none too impressive, and there were symptoms of carburetter trouble.

Since the roads had dried somewhat, little more need be said concerning the afternoon's run. G. E. Cuffe (2½ Metro-Tyler) lost his non-stop through a puncture, and others had minor worries; but, generally speaking, the survivors toured round to the finish dead on time.

Results:

250 c.c Class.—E. J. Anderson (2¼ New Imperial), silver medal.

350 c.c Class.—C. Pearson (2¾ Douglas), silver medal; W. C. Hemy (2¾ A.J.S.), bronze medal.

500 c.c Class.—S. M. Greening (3½ Sunbeam-J.A.P.), silver medal.

750 c.c Class.—S. J. Marks (4 Triumph), silver medal.

600 c.c. Sidecar Class.—L. F. Peatty (4¼ Hawker sc.), silver medal.

1,000 c.c. Sidecar and Threewheeler Class.—E. A. Bridgman (7 Indian sc.), gold medal; C. G. Pullin (6 Douglas sc.), silver medal; H. W. Holmes (8 Morgan), bronze medal.

# A RECORD ENTRY IN A CLASSIC EVENT.

## 208 Riders Entered for Next Saturday's Colmore Cup Trial.

ALTHOUGH the present-day arrangement to limit the number of open trials, which exists between the Manufacturers' Union and the A.C.U., has shorn some of the historic events of their "open" status, it cannot be said that the Colmore Cup Trial, always the first big event in the spring of the year, has suffered in support, a fact which the list given below emphasises.

From 1912 to 1914 this trial attracted record entries. In 1920 it was held for the last time as an open event. Since that date it has become a trial open to members of those clubs constituting the A.C.U. Midland Centre; the organisation, of course, being in the hands of the Sutton Coldfield and North Birmingham Automobile Club.

For this year 208 entrants have made application to face the starter on Saturday in order to compete for the Colmore Cup over the familiar course in the Cotswold Hills.

### Motor Bicycles.

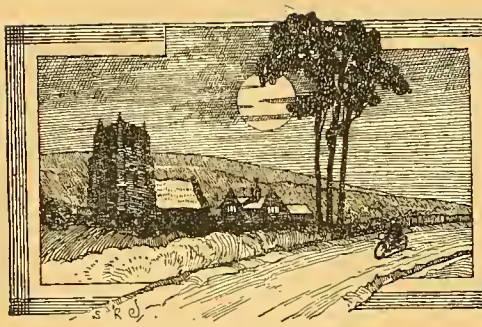
G. S. Davison (2¼ Levis).
R. E. Pugh (2¼ Levis).
W. B. Gibb (3½ Douglas).
A. W. Thrush (3½ Sunbeam).
George Dance (3½ Sunbeam).
Alec. Bennett (3½ Sunbeam).
Cyrd Greenwood (3½ Sunbeam).
P. L. Mayo (2½ Coventry Eagle).
A. D. Mayo (2¾ Coventry Eagle).
Howard Newey (2¼ Levis).
A. R. Edwards (2¼ Levis).
W. S. Haweutt (2¼ Levis).
S. H. Jones (2¼ Levis).
H. R. Lane (2¼ Levis).
J. N. Roberts (2¼ New Imperial).
G. Strange (3½ James).
R. W. Duke (3½ Triumph).
E. A. Barnett (2¾ Francis-Barnett).
A. J. Dowler (3½ Sunbeam).
Geoff. R. Butcher (3½ Sunbeam).
Jack Bacon (3½ Sunbeam).
F. C. Parkes (2½ Sun-Vitesse).
F. Jack Johnson (2½ Sun-Vitesse).
M. Bishop (2½ Sun-Vitesse).
J. Nicholson (2¾ Omega).
D. A. Atkin (2¾ Francis-Barnett).
E. Arthur (6.5 Brough Superior).
J. G. Orford (2¾ Henley).
Frank Woolley (2¼ Sun-Vitesse).
W. R. Haggas (3½ Sunbeam).
Wilfrid Wells (3½ Sunbeam).
R. B. Clark (8 Matchless).
C. S. Burney (3 Beardmore Prec.).
L. A. Bees (3 Beardmore Prec.).
J. Doherty, Jnr. (2¼ Levis).
D. G. Prentise (2¼ New Imperial).
G. E. Austin (5-7 Coventry Victor)
E. R. Jacobs (2¾ Wooler).
H. W. Parkes (2¼ Sun-Vitesse).
Bert Kershaw (2¼ New Imperial).
Geo. Denley (2¼ Velocette).
W. L. Handley (2¾ O.K. Junior).
L. Tonks (2¾ O.K Junior).
Mrs. G. M. Janson (2½ Ner-a-car).
Hugh Gibson (2¾ Raleigh).
C. B. Hemphill (2¾ Excelsior).
W. R. Bown (2½ Bown-Villiers).
F. Whitworth, Jnr. (3 Ivy).
C. L. Reading (3½ Ariel).
W. T. Woodcock (3½ Ariel).
A. E. Rollason (3½ Ariel).
S. H. Rhodes (2¾ Wolf—Barr & Stroud).
T. C. Thacker (2¼ Velocette).
P. Mosedale, Jnr. (2¾ A.J.S.).
S. A. Thomson (4 Triumph).
Eric Williams (2¾ A.J.S.).
A. C. Cope (3½ Douglas).
E. Poppe (2½ Hobart—White & Poppe).
F. G. Morgan (2¾ Cotton).
C. W. Ramstedt (2¾ Cotton).
E. Smith (2½ Connaught).
C. W. Lewis (4¼ Beardmore Prec.).
H. O. Hayes (2¾ A.J.S.).
L. V. Bowen (Radco).
C. W. Anderson (2¼ Sun-Vitesse).
Parker Walker, Jnr. (2¾ Excelsior).
N. W. Busby (4 Douglas).
John W. Moxon (2¼ Coventry Eagle).
F. J. Adam (3½ Norton).
E. C. Gates (2½ Sun-Vitesse).
C. R. Little (5-7 Coventry Victor).
G. H. Kirby (3½ Triumph).
R. A. Wright (4 Triumph).
E. Mundey (2½ New Hudson).
W. Bell (2¼ New Hudson).
G. E. Turner (3½ Sunbeam).
F. A. Robbins (2½ Triple H.).
F. R. Downes (2¾ Hobart).
W. F. Smith (2¼ Hobart).
F. W. Hughes (3½ Sunbeam).
T. L. Williams (4 Triumph).
J. G. Oates (3 Edmund).
Geo. W. Shepherd (4¼ Edmund).
W. H. W. Drew (3½ Norton).
A. R. Evans (3½ Sunbeam).
N. Schobel (2¾ Rex-Acme).
J. Whalley (2½ Massey-Arran).
R. Scott Walford (4 Triumph).
G. Packman (8 Matchless).
A. J. Jacobs (3¾ Scott).
Tuck Davies (2¼ Velocette).
J. E. B. Bramley (3½ Coventry Challenge).
H. J. Stretton Ward (4 Triumph).
J. C. Smith (2½ Calthorpe).
A. King Smith (2¼ Morris).
H. S. Perry (4½ B.S.A.).
G. F. Limbird (2¾ Marloe).
J. A. Neuman (3½ Douglas).
N. M. Bligh (6 A.J.S.).
G. D. Johnston (4 Triumph).
P. Worsley (3¾ Scott).
R. C. Cooper (2½ Allon).
W. E. Hill (2½ H.B.).
R. G. R. Smith (3½ Sunbeam).
H. Jennens (3½ James).
J. H. Mathers (3½ Rudge).
M. G. A. Scally (4½ Humber).
J. Bacon (4½ B.S.A.).
Fred Mould (3 A.B.C.).
J. W. Wills (2¾ Edmund).
Geo. Brough (8 Brough Superior).
J. A. Watson-Bourne (8 Brough Superior).
C. N. Faulconbridge (2¾ Coventry Eagle).
G. A. Lovegrove (2¼ Radco).
R. C. Atcherley (4 Triumph).
L. Heller (4 Douglas).
E. C. Stringer (4 Douglas).
Gus Kuhn (4 Douglas).
D. H. Davidson (4 Indian Scout).
F. H. Meakin (3½ Triumph).
L. Crisp (4½ Humber).
T. H. Richards (8 Brough Superior).
W. Swiffen (2¾ Hobart).
J. Worthington (————).
H. Bennett (3½ Ariel).
C. Green (2¾ Coventry Eagle).

### Sidecars.

J. E. Greenwood (4½ Sunbeam).
T. C. de la Hay (4½ Sunbeam).
Reg. Brown (3½ Sunbeam).
W. A. Fell-Smith (8 Brough-Superior).
J. Lidstone (7 James).
A. D. Arter (7 James).
T. G. Amphlett (4½ James).
G. S. Arter (7 James).
H. Boynton (7 James).
G. I. Francis (2¾ Francis Barnett).
Alan Watson (4½ Sunbeam).
R. G. G. Beesley (3½ Sunbeam).
F. W. Viles (5-6 Raleigh).
Will Chapman (7 A.J.S.).
P. Platts (4 Powell).
Frank Hallam (8 Brough Superior).
C. W. Vallings (4 Dunelt).
P. Pehrson (4 Dunelt).
Archie G. Cocks (4½ Beardmore Prec.).
H. Greaves (4½ Beardmore Prec.).
G. L. White (8 Brough Superior).
B. L. Bird (4½ B.S.A.).
Tom Peck (4½ Ariel).
Len Newey (8 Ariel).
Neville Hall (2¾ O.K. Junior).
W. E. Smith (3½ Norton).
F. W. Becker (5-7 McKechnie Victor).
R. Simpson Harvey (8 Matchless).
L. F. Peatty (4½ Hawker).
F. W. Giles (7 A.J.S.).
H. Poole (7 A.J.S.).
Bert Bladder (8 New Imperial).
T. H. Weaver (2½ Sirrah).
Leslie Paynter (3½ Norton).
F. V. Wood (3½ Connaught).
J. Chater-Lea (8 Chater-Lea).
H. P. Cutler (4 Norton).
F. C. Gray (6 Excelsior).
H. V. Collins (3½ Norton).
H. Finch (4 Triumph).
B. Bourke (4.5 New Hudson).
W. E. Baylis (4.5 New Hudson).
T. R. Gibbins (6-8 Rex-Acme).
S. E. Longman (3½ Zenith-Bradshaw).
H. G. Uzzell (8 New Imperial).
H. Reed (8 Dot).
S. R. Philpott (6 Martinsyde).
J. A. Stamps (3 Caltborpe).
G. S. Smith (2¼ Morris).
J. H. Walker (6-7 B.S.A.).
V. H. Smith (3½ Norton).
L. E. Clulee (2½ Allon).
F. T. Sibley (3½ Rudge).
W. L. Danskin (7-9 Rudge).
Frank Morrall (4½ B.S.A.).
W. V. Weston (6 Martinsyde).
F. G. Edmond (4 Triumph).
F. H. Brown (4 Norton).
Clifford Wilson (4½ Quadrant).
R. R. Grindlay (4½ Humber).
Dennis Brandish (2¾ A.J.S.).
Sam Wright (4½ Humber).
W. Brandish (4½ Humber).
C. Fisher (5-6 James).
W. E. Brough (5 Brough).
T. F. Blumfield (8 Ariel).

### Cycle Cars.

J. W. Meredith (8 T.B.).
T. S. Spouse (8 T.B.).
E. W. Bewshea (10 Morgan).
J. H. Pedley (10 T.B.).
H. F. S. Morgan (8 Morgan).
C. Hayes (10 Morgan).
W. A. Carr (8 Morgan).
C. E. Hulse (8 Morgan).
W. Ridley (10 New Hudson).
P. Yates (10 New Hudson).
J. Allday (10 Rhode).
Jack Cave (8-7 G.N.).
Eric Walker (9-8 Bayliss-Thomas).
N. Norris (10 Morgan).
H. B. Denley (9-5 Rhode).
G. H. Goodall (8 Morgan).
G. W. Wilkin (9.5 Deemster).



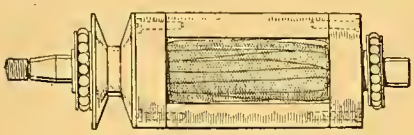
# A DYNAMO LIGHTING SET FOR 25/-.

## How a Reader Converted a Scrap Magneto into a Simple and Effective Lighting Dynamo.

THE following is a description of how a perfectly satisfactory dynamo lighting set may be constructed at the comparatively low cost of 25s. by any amateur motor cyclist, however slight his knowledge of electricity may be.

The first essential is to beg, borrow, or steal any old motor cycle magneto. In the writer's case, one was obtained from the Slough depôt for 10s.

Such a magneto need not have contact-breaker, condenser, or even windings, only the magnets, armature,



Complete armature before commencing operations.

and end plates being necessary, and, of course, the slip ring and brush holder.

### Method of Construction.

Unscrew the brush holder and one end plate. The armature can then be withdrawn, and a piece of soft iron inserted in its place, this being done to prevent weakening of the magnets due to the large air gap.

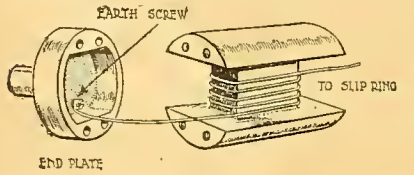
To dismantle the armature, first remove the slip ring, usually held in position by the end ball-race bush, which is a driving fit on the shaft

Then remove the end plates, which are screwed to the armature core, but first mark their relative positions by making a couple of scratches, or a file cut, across the core and end plates.

If the armature is wound, first remove the outer insulation, then cut off the fine secondary winding with a sharp penknife, as it will be found impossible to unwind it. The primary winding, which is usually of 24 gauge enamelled wire, can then be unwound, until the whole of the armature core is stripped of wire, leaving only the insulating material between the iron and the winding space.

### Rewinding the Armature.

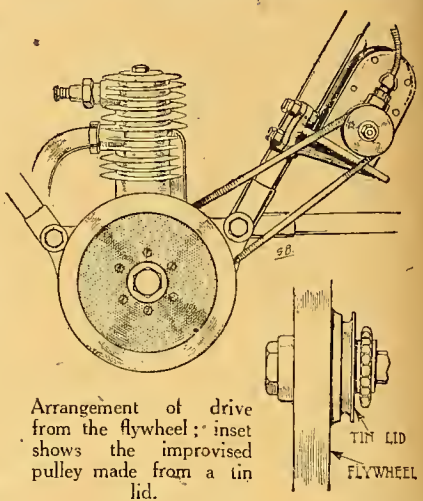
Rewind the armature in any direction with 20 S.W.G. single cotton-covered copper wire, leaving




End plates and slip ring removed showing commencement of the rewinding

about six inches of spare wire for an earth connection. The best method of winding is to hold the wire firmly with one hand and turn the armature with the other; do not hold the armature and wind the wire round it as one would roll up a ball of wool, or else the wire will kink and damage the insulation.

Wind on the wire in even layers, and continue until the armature is nearly full; cut off the wire, leaving about 12in. of free end.

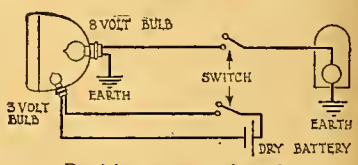



Arrangement of drive from the flywheel; inset shows the improvised pulley made from a tin lid.

Obtain a piece of ½in. cotton tape and cut a small hole in it about 3in. from one end; pass the free end of the wire through this hole, and bind the tape firmly over the winding and secure with a little seccotine.

Then replace the original outside insulation, or, failing that, wrap the whole of the winding over with adhesive tape, taking care that no part of the winding is of a greater diameter than the iron core of the armature, or else it will foul the pole pieces.

Fasten the beginning of the winding to the shaft end-piece which fits on the end of the armature core furthest away from the slip-ring end. A set screw is usually fitted for this purpose, and "earths" one end of the winding to the frame. The other end of the winding is threaded through the hole in the other end plate and secured to the slip-ring.




Rewiring system adopted.

The end plates may then be screwed into position, and the amature replaced in the frame of the magneto, the bearing plates fixed in position and the brush and brush-holder replaced.

After assembling, twist the armature round with the fingers and make sure that no part of it rubs against the pole shoes.

### Driving Arrangements.

The method of driving has now to be determined upon, and the type of bulb to be used. For a similar

**A Dynamo Lighting Set for 25/-**

dynamo, run on a motor cycle with an outside flywheel, the writer used the following method.

A small brass pulley of 2in. diam., with a V groove, was fixed to the armature shaft, in place of the usual sprocket, and the dynamo was then supported on a bracket between the back mudguard and the down tube, the pulley being placed in line with the inside edge of the flywheel. The corresponding pulley on the flywheel was made from the lid of a syrup tin held in place between the engine sprocket and the flywheel, the flange on the lid forming a pulley with the inside of the flywheel, a ¼in. leather belt being used.

**Selecting a Bulb.**

If a bulb be used which will take the whole of the available current generated, it will be found that practically any voltage bulb can be used (within certain limits) due to armature reaction on the permanent magnet field, which also provides a perfectly automatic control preventing the burning out of the bulbs used.

This feature will perhaps be better explained if the experiments carried out by the writer are given :—

It was found that at an engine speed corresponding to about 20 m.p.h. on top gear (5-1) a voltage of 12 volts was obtained (read by voltmeter). A 12-volt ½-amp. lamp was tried, but burned out at a speed of about 30 m.p.h., which showed that the whole of the available current was not being used. A 12-volt 1-amp. lamp was next used, which lit up brilliantly at 20 m.p.h. and did not burn out at higher speeds. It was therefore concluded that the maximum output obtainable was approximately 1 amp., and an 8-volt 1-amp, bulb was installed. This bulb reached its maximum brilliancy at about 14 m.p.h., and maintained a perfectly even light at all speeds above 14 m.p.h. without burning out.

This lamp has been in constant use during the whole of the winter with an average night riding of three hours per week, and shows no signs of blackening. A 4-volt 1-amp. lamp was also tried, without injury to the lamp, and reached its maximum brilliancy at about 6 m.p.h., but was discarded owing to its low maximum candle power (*i.e.* 4 c.p.).

It will be seen from these experiments that, provided the whole of the current is taken, bulbs of any voltage below the maximum volts obtainable may be used to suit the individual rider's idea of the best speed at which the maximum light is required.

The maximum current (in the absence of an ammeter) may be obtained by the same methods at the cost of a lamp or so.

For use when the engine is running, a 4-volt dry battery may be installed, lighting a small bulb in the bottom of the head-lamp, which will give sufficient light to act as a stand-by in case of breakdown of the main lighting system.

Balance-sheet of total cost :—

| | £ | s. | d. |
|---|---|---|---|
| Magneto | 0 | 10 | 0 |
| Magnets re-magnetised | 0 | 2 | 0 |
| ¼lb. 20g. S.C.C. wire | 0 | 2 | 4 |
| 1 12-volt ½-amp. bulb (burnt out) | 0 | 1 | 8 |
| 1 12-volt 1-amp. bulb (discarded) | 0 | 1 | 8 |
| 1 8-volt 1-amp. bulb (in use) | 0 | 1 | 8 |
| Dry battery and bulb | 0 | 3 | 0 |
| 2 yards flex | 0 | 2 | 0 |
| Total | £1 | 4 | 4 |

In conclusion, I would strongly advise any motorcyclist who may manufacture such a lighting set to invest a few extra shillings on an electric lamp of the focussing type with parabolic reflector. Such a lamp will give 100 per cent. more light than a converted gas lamp, and may be obtained at any of the large stores for 30s. or so. W. R.

# A SIDECAR FUEL CONSUMPTION TEST.

FOR the past seven or eight weeks a lively controversy has been raging in our correspondence columns regarding the fuel consumption of various popular sidecar outfits. In an attempt to settle the question, one of the original participants in the discussion, Mr. H. S. B. Booth, decided to organise a private test open to private motor cyclists.

This fact was mentioned in *The Motor Cycle*, and quite a considerable amount of interest has been aroused in the affair. Now, however, things have taken a somewhat curious turn, as the following letter, addressed to us from Mr. Booth, 285, Harrow Road, London, W.9, indicates :—

"I enclose a copy of a letter I have received from the A.C.U. respecting the above test which I am organising. Would your readers kindly give me their observations thereon?

"Surely we are not coming to the time when we must apply to the A.C.U. for 'permission' to use our machines? I can imagine that if the A.C.U. take to themselves more power we will just have to patronise only those hotels bearing the A.C.U. emblem. As to 'infringement of their rules,' the remark is absurd, as I am neither interested nor concerned with the rules until I subscribe to them.

"The test will take place whether the A.C.U. agrees, dissents, or remains neutral, and particulars of the test will be sent to any motor cyclist who feels that he can use his machine in any way he chooses. Stamped addressed envelopes can be forwarded to me at the above address."

[COPY.]

The Auto Cycle Union,
83, Pall Mall, S.W.1.
February 13th, 1922.

H. B. Booth, Esq.

Dear Sir,—My attention has been called to a paragraph in the current issue of *The Motor Cycle* in which it states that a private fuel consumption test which you are organising has now been opened to all makes of sidecars and a limited number of solo machines.

I would point out that such a competition is an open competition and cannot be held without infringement of the rules of the Auto Cycle Union unless a permit has been previously applied for and granted.

Further, having regard to the fact that the number of open competitions is strictly limited, I doubt whether, even if you made application for a permit, my committee would be prepared to grant it.

I shall be much obliged if you will kindly send me full particulars as to what you propose doing in this matter.

Yours faithfully,
T. W. LOUGHBOROUGH, Secretary.

7 h.p. James Sidecar Outfit.

*SPECIFICATION.*

| | |
|---|---|
| *ENGINE: 73 × 89·5 m.m. = 749 c.c. V-twin.* | *GEAR BOX: James 3-speed, clutch and kick-starter.* |
| *CARBURETTER: Cox single lever.* | *FORKS: Brampton.* |
| *LUBRICATION: Drip feed.* | *WEIGHT: 296lb. (solo).* |
| *TRANSMISSION: ⅝ × ⅜in. chains.* | *PRICE: £160, solo; £195, sidecar (Magdyno extra).* |
| *TYRES: 28 × 3in.* | |

FROM time to time there has been considerable comment in our correspondence columns on the lack of British "big twins," except for one or two machines fitted with proprietary engines. To a certain extent the complaint is justified, if only engines of between 950 to 1,000 c.c. are entitled to the name of "big twin"; on the other hand, there are several all-British one-factory machines which are undoubtedly "big enough." A typical example of this type is the 7 h.p. James, and a recent road test has convinced us of the fact that it will answer all the requirements of nine out of ten sidecar drivers. Actually, the capacity of the James is 749 c.c. (73 × 89.5), but the 251 c.c. short of the 1,000 c.c. limit is not easily realised by the owner, except in the matter of fuel economy. Built as strongly and equipped as luxuriously as any outfit on the market, the twin James supplies confirmation of the fact that capacity is not necessarily proportionate to power.

Following conventional lines, except for the rectangular cylinder fins, the engine is distinctive on account of its clean exterior, a feature which is assisted in no small degree by the incorporation of neat cylindrical valve and tappet casings. These covers, which are quickly detachable, assist very materially in excluding grit from the valve stems and guides, and in assisting lubrication of these important parts. Apart from the appearance of the before-mentioned practical features, this should make for greater ease in cleaning, a point which is not without importance to the fastidious owner. The magneto (or Magdyno in this particular case) lies in a protected position behind the rear cylinder, and the chain case enclosing the drive is commendably free from excrescences.

**Gear Box Design.**

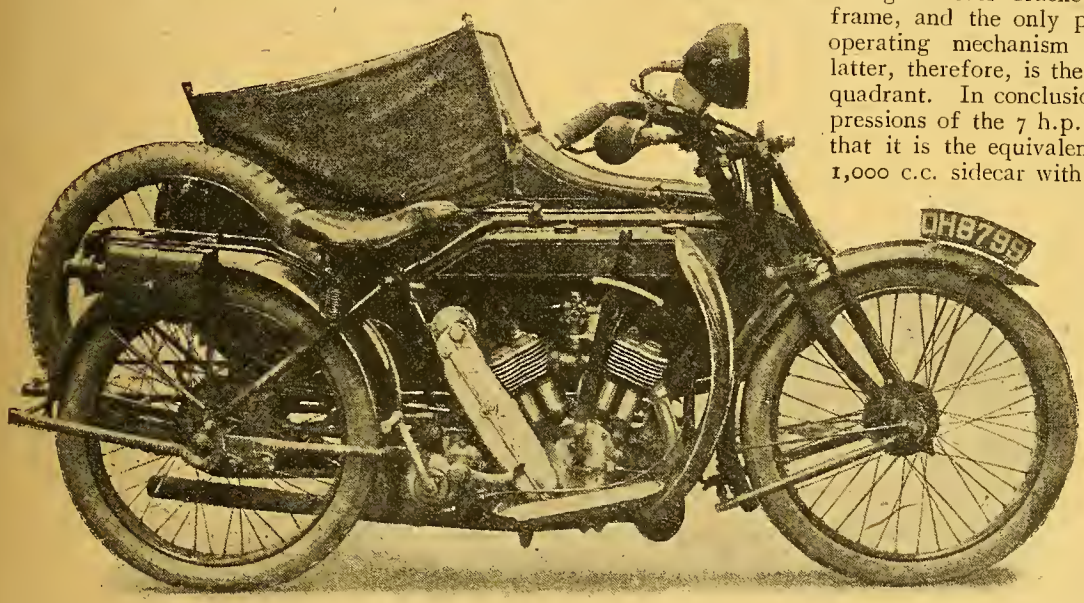
Gear box, clutch, and starter are on generous and massive lines, though the last-mentioned might advantageously be provided with an increased range of action. Clutch control, in addition to the normal handle-bar lever may be effected by a conveniently placed heel pedal at the rear of the right footboard, and we found the clutch sweet in action and the gears easy to change under all circumstances. As has already been indicated, the makers have not over-estimated the capabilities of their production by rating it at 7 h.p. On a 50-mile journey, repeated on the following day on a 4 h.p. solo machine, the heavy sidecar outfit was only seven minutes slower, and on both occasions there were excellent reasons for being as quick as possible. Of the well-finished sidecar our passenger spoke most highly, while the driver's comfort is attended to by spring footboards, long leg-shields, patented saddle suspension and large diameter tyres.

Despite full equipment, including Lucas Magdyno, and spare interchangeable wheel, the 7 h.p. James is undoubtedly a fast machine. It will negotiate all normal hills on top gear, and the average single-figure gradient can be climbed at speeds well up to the legal limit on the middle ratio, the lowest gear being purely an emergency fitting, though nevertheless useful for starting purposes. Control is simplified as far as possible by a Cox single-lever carburetter, which is conveniently adjusted to provide nice slow running when closed down. Neither engine nor gear box is noisy mechanically, and the exhaust is well silenced. Throughout the whole range of speed (a wide one) there is no appreciable vibration, and although there is a slight snatch in the chain transmission at anything

**Road Tests.—** below about 14 miles an hour on top gear, this is fully compensated by the sweet running of the machine on middle gear. It is safe to say that if the average owner made more use of his lower ratios, he would extend the life of his machine and considerably reduce tyre wear. Special attention must be called to the finish of the James machines; the black and brown with buff panelling and gold and red lining give a handsome effect, which at the same time does not show unduly the ravages of dust and dirt, while the cast aluminium gear change quadrant and the polished magneto chain case of the same material, together with the nicely rounded and buffed crankcase and gear box castings, all enhance the handsome appearance.

Even in winter Warwickshire lanes are not without their charms, and the 7 h.p. James enables one to cruise in comfort.

One feature which the twin James machines possess, and which is peculiar to themselves, is the mounting of the change-speed lever on a stud on the engine timing cover; the construction climinates a gear lever bracket clipped to the frame, and the only part of the gear-operating mechanism carried on the latter, therefore, is the afore-mentioned quadrant. In conclusion, our main impressions of the 7 h.p. James outfit are that it is the equivalent to a luxurious 1,000 c.c. sidecar with the performance of a sporting outfit.




The 7 h.p. James sidecar offers good protection to rider and passenger. Note the valve spring covers and position of spare wheel.

# MOTOR TAXATION IN IRELAND.

## General Feeling in Favour of a Tax on Petrol.

SO far the Irish Government has not given any indication of what its intentions may be with regard to the taxation of motor vehicles. The Government of Northern Ireland has decided to continue the licence tax on its present basis until an opportunity occurs of considering the whole question. It would seem likely that the Government of the Irish Free State may be inclined to adopt a similar attitude, and doubtless the new Irish Motor Legislation Committee will be able to voice the views of motorists in Ireland. As far as we are able to ascertain, there appears to be unanimity of opinion amongst Irish motor users of all classes that a reversion to the petrol tax would be preferable to the British system of taxation by horse-power, and we shall not be surprised to find that this view is urged on the Government. It remains to be seen whether the committee will be prepared to suggest a policy in respect of the taxation of imports. As this may be considered a political question, it is quite possible it may prefer to be silent on the subject.

Another point of much interest to motorists in Ireland to which the new committee will doubtless apply itself is the obtaining of a guarantee from the new Government that the proceeds of such duties as may be imposed will be applied to the improvement of Irish roads.—*The Autocar.*

# CLUB NEWS

Start of the Coventry Club's Sporting Trial.

### Annfield Plain and District M.C.

This club has recently held its first annual meeting, at which Mr. Percy Taylor-Smith, of Colepike Hall, Lanchester, was elected president. The financial statement, which showed a credit balance of £31 7s. 8d., was passed as satisfactory. It was unanimously decided to affiliate to the A.C.U. under Scheme A.

### Wolverhampton Auto-Nomads.

There was a good attendance at the annual general meeting held at the Talbot Hotel, Wolverhampton, on February 2nd. The Chairman, Mr. H. B. Piper, in dealing with a motion "that the club affiliate with the A.C.U. for competition purposes," called attention to the policy of the club as being especially constituted for social events.

### North Derbyshire M.C.C.

The annual general meeting was held on Tuesday of last week, under the chairmanship of Mr. T. J. Roberts, at the Portland Hotel, Chesterfield. Mr. A. W. Webb presented the balance-sheet, which showed a surplus of £31. Notice will be given of the opening run of the season, which will take place at an early date. Secretary's address: Mr. Chas. Ullyatt, 14, Sydney Street, Brampton, Chesterfield.

### Harrow and District M.C.C.

A committee meeting was held on the 10th inst., with Prof. A. M. Low in the chair. The first item of discussion was the programme of events for the coming season. Five of the General Committee were chosen to form an "Events Committee," with Mr. W. J. Philpott as "Events Secretary."

It was decided that the first annual general meeting should be held on Thursday, March 23rd, at the Club Headquarters, Swan Hotel, Sudbury.

### Motor Cycling Club.

With Brighton, as usual the destination, the opening will be on March 18th. The committee dinner, which past and present members of the committee are eligible to attend, will be held on March 1st, at Pagani's Restaurant, Great Portland Street, London, W.1, at 7 p.m.

### Yorkshire Centre A.C.U.

Mr. J. N. Longfield presided at the first annual general meeting, held in Leeds on February 6th, over fifty delegates being present. The secretary, Mr. W. A. Dovener, reported that 12 clubs constituted the centre at the beginning of 1921, and now the membership was 31. All the officials were re-elected.

### Yeovil and District M.C.C.

About fifty were present at the annual dinner and prize distribution on the 11th inst., Major H. C. C. Batten being in the chair.

It was mentioned at the dinner that the club was the third largest affiliated to the A.C.U. in the S.-Western Centre, and it was hoped that it would be the largest by next year.

### Goldthorpe and Thurnscoe M.C.C.

Over 100 members and friends spent a most enjoyable evening at the recent annual dance and presentation of prizes on the 8th inst. The M.C.s were Messrs. Robinson and Reeves.

Mr. T. Bull, the president of the club, presented two handsome cups, won by Messrs. A. E. Booth and F. Horn during 1921.

### Glasgow University M.C.C.

A non-stop reliability trial was held on February 11th over a course, 35 miles in length, of main roads and bye-roads, including a very tricky short "colonial section," which incidentally caused no little anxiety among the competitors. A very creditable performance was put up by R. W. Saunders (8 Matchless sc.), but the premier award went to C. Paterson (3½ Sunbeam sc.).

### Burnham, Highbridge and District M.C.C.

The inaugural meeting was held in the Royal Clarence Hotel, Burnham, Somerset, on Saturday evening, Mr. Ford Tilley presiding over a good attendance.

### Bolton and District M.C.

At a meeting held in the Central Restaurant on February 7th, which was well attended, many new members were enrolled, including several ladies. After the emendation of the rules, which was the chief business of the meeting, had been carried through, the opening run was fixed for Chester on March 5th.

### Atherton and District M.C.C.

Under the captaincy of Mr. H. Bleakley, the second run of the year took place recently, the destination being Blackpool. There was a good turn-out. The road selected was through Astley Bridge, Belmont, and Preston, which, nearing the latter place, was in a bad state. Further runs will be arranged at a meeting to take place the last day in this month.

### Blaina and District M.C.C.

Dr. Brown presided at the annual meeting and dinner, held at the Red Lion Hotel, on Tuesday of last week. There was a large attendance. The following officers were elected: President, Dr. Brown; chairman, Mr. L. Murray; treasurer, Mr. E. Campbell; vice-chairman and captain, Mr. A. Roberts; vice-captain, Mr. E. Beeson; secretary, Mr. H. Prichard, chemist, Blaina.

### Birmingham M.C.C.

There were well over fifty members present at the annual general meeting at the Imperial Hotel, Mr. A. D. Arter in the chair. The balance sheet was discussed, and it was seen that the club, after it had cleared all liabilities, had still a good balance, and also a large amount in War Stock and Bonds. The secretary then stated that during the last year they had admitted ninety-two new members, and that the club was the largest of its kind outside London.

**Club News.—**

### Ross and District M.C. and L.C.C.

Opening meetings point to a very strong membership being obtained for this newly formed club. Anyone desirous of joining should communicate with the hon. secretary, Mr. H. J. Llewellyn, Wilton, Ross.

### Banbridge and District M.C.C.

There were fully three hundred guests present at the recent club dance. The hall was decorated with good taste, an outstanding feature being the club badge, which was prominently displayed on the back of the platform.

### Western M.C.C. (Glasgow).

Close on three hundred guests attended the annual dinner which was held on Friday, February 3rd, in the Athenium Restaurant, Glasgow, under the chairmanship of Mr. W. N. Simpson, the club president. Evidence of the popularity of the club was furnished by the large attendance of English visitors from amongst those who were exhibiting at the Scottish Show. During the speech-making the Chairman referred to the new club house, the subscription list for which had been considerably over-subscribed.

### Bohemian M.C.C. (Southampton).

The opening trial of the year of this club will take place on March 26th. The route will be: Southampton, Chandlers Ford, Hursley, Winchester, Whitchurch, Newbury, Reading (lunch), and then *via* Basingstoke to Winchester.

### Newport and County M.C.C.

The recent annual general meeting gave promise of a very successful season. The hon. treasurer (Mr. E. A. Reid) presented a satisfactory report, showing a bank balance of £26. Approximately one hundred awards had been won by members during 1921.

### Connaught M.C.C.

A most successful evening was held at the Mars Restaurant, Frith Street, Soho, on the 9th inst., when some forty members of the club were present. Mr. J. Stanley Woodward, who is president, occupied the chair. The company was much intrigued by some novel competitions, particularly the following: Fifteen of the component parts which go to make the Connaught lightweight were numbered and handed round, and the correct title of each had to be written against its respective number on the form provided.

### Folkestone and District M.C.C.

On Wednesday of last week a very enjoyable evening was spent at Flessati's Restaurant, Rendezvous Street. The first half of the programme consisted of a whist drive, and a dance and concert followed.

### Woolwich, Plumstead and District M.C.

On Wednesday of last week the club held its annual dinner at the Shakespeare Hotel, Woolwich, well over a hundred members and friends spending a thoroughly enjoyable evening. That the club pays attention to the social side was proved by the number of ladies present; while the fine array of prizes for presentation indicated a very successful year of competitions, including, of course, the one-day open event. All the speeches were short, and not lacking in humour, and a concert programme, contributed by members and friends, brought the affair to a very happy close.

In the absence of Mr. T. W. Loughborough, Mr. Viney occupied the chair, thus setting himself the task of speaking on four separate occasions. He made some interesting references to motoring in earlier days. Other speakers were Messrs. W. Whittaker, C. R. Collier, T. G. Ross and H. H. Collier.

# ORIGINAL SPRING FRAME TESTS.

## Over Railway Sleepers and up a Vertical Bank on a McKechnie-Victor.

A CONSIDERABLE amount of attention has been attracted to the unusual suspension system embodied in the McKechnie-Victor motor cycle. It will be remembered that by the McKechnie system the rider, engine, and gear box are carried by a leaf spring extending from the head to the rear carrier, a rigid duplex frame connecting the rear wheel to the head and Brampton forks attending to the front springing of the machine.

### Preparing the Testing Track

It was with considerable interest that we undertook the observation of some tests to demonstrate the efficiency of this suspension. A special track was prepared with sleepers laid crosswise in groups. These sleepers varied from 4in. to 4½in. in height, and were spaced from 5in. to 24in. apart. Mr. F. W. Becker, who was handling the machine, rode it across these obstacles a number of times with the greatest of ease, and it was most interesting to watch the proceedings. Though the machine was ridden moderately fast, and though the wheels struck the obstructions violently the rider appeared to float and to be subjected to very little shock, the wheels bouncing independently of the main frame.

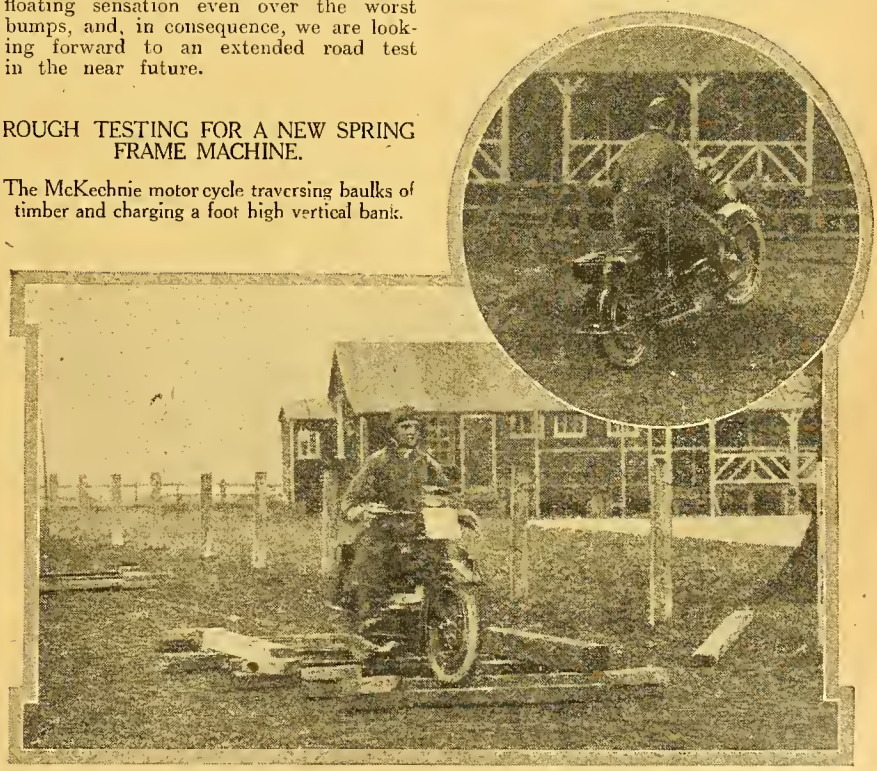
After giving many demonstrations, several attempts were made on an almost vertical bank of about 12in. in height. Each of these jumps was successful, and though the gear box hit the top of the bank, necessitating a steadying foot, the machine otherwise made light of the test.

We made a personal test of the machine, riding it fast round a field of ridge and furrow, and were delighted with the easy floating sensation even over the worst bumps, and, in consequence, we are looking forward to an extended road test in the near future.

Col. McKechnie, the inventor, intends to ride one of these machines in the forthcoming "Tour de France."

ROUGH TESTING FOR A NEW SPRING FRAME MACHINE.

The McKechnie motor cycle traversing baulks of timber and charging a foot high vertical bank.



A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of 'The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### BALANCING A SINGLE.

(1.) Will you give me the formula for balancing a single-cylinder engine? (2.) Is there any way of doing it without dismantling the flywheels and crankshaft?—C.G.B.

(1.) It is the usual practice to balance the whole of the revolving and somewhere about half the reciprocating weight. (2.) You will find it impossible to manage this without dismantling the crank case assembly.

### ENGINE WON'T START.

I have an a.i.v. Kerry engine, the horse-power of which I do not know, but the cylinder is about 2⅜in. bore. The timing is as follows: Exhaust valve opens four-fifths down the firing stroke, and closes when the piston reaches top dead centre (inlet stroke). Ignition: Advance and retard lever in centre, piston dead centre (top) points just breaking. The engine has started once, but will not start again. Could you help me in this matter?—H.F.

With the timing as described, and if everything is in good order, there is no reason why the engine should not run. The ignition should be timed so that the spark occurs on top dead centre of the compression stroke with the magneto control two-thirds retarded. Possibly the reason of the engine refusing to run after it first started is that the magneto timing has slipped, and it would be as well to verify this. You do not give us enough details to enable very much help to be given.

### CONVERTING AUTOMATIC VALVE TO MECHANICAL.

I am thinking of converting an old automatic valve engine to a mechanically operated overhead inlet valve. Do you think it practical and worth the expense? Should you think it worth while, please give number of degrees inlet cam requires setting with regard to exhaust cam.—H. G. C.

If you convert the engine to mechanical operation of inlet valve, the new cam should be so arranged as to commence to open the valve when the piston is on top dead centre of the induction stroke. The valve should then remain open through about 200 degrees of crankshaft rotation, closing when the piston has passed the bottom dead centre. There is no actual need, of course, to introduce another timing wheel and cam as you could arrange for the opening of the inlet valve from the existing exhaust cam by the use of a suitably shaped tappet lever pivoted correctly in relation to the cam. The position of the pivot will have to be determined experimentally.

## Important Dates.

**Sat., Feb. 25th—Colmore Cup Trial.**
**Sat., Feb. 25th, to Sunday, Mar. 5th—Brussels Motor Cycle Show.**
**Sat., Mar. 4th—Inter-Varsity Hill-climb.**
**Sun., Mar. 5th—Argenteuil Hill-climb (France).**
**Mon., Mar. 6th—La Turbie Hill-climb (Nice).**
**Wed., Mar. 15th—A.C.U. One-day Trial for Stock Machines.**
**Sat., Mar. 18th—Victory Cup Trial.**
**Sat., Mar. 25th—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs. June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Fri., June 23rd, and Sat., June 24th—Irish twenty-four hour Open Reliability Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**

### TUBES FOR OVERSIZE TYRES.

Must one use a 28×3in. inner tube for a 28×3in. outer cover fitted on a 26×2¼in. rim, or will the original 26×2¼in. inner tube do? Would 26×3in. fit my 26×2¼in. rims, or would they be inadvisable?—T.M.G.

It is advisable to use a 28×3in. inner tube with the 28×3in. outer cover, but it is not absolutely essential; the 26×2¼in. will do. 26×3in. covers will not fit 26×2¼in. rims.

### SOME TRIUMPH QUESTIONS.

How are the front hub bearing cups of a Triumph motor cycle fitted in? Are they a driving fit, or are they shrunk in? Also, by increasing the number of friction plates in the Sturmey-Archer clutch, could I do away with the fibre rings, as I wish to convert the chain cover into an oil bath, which, I believe, is impossible at present.—F. H.

The cups are pressed into the hub shells, and you will find it quite an easy matter to drive them out; they are very easily tapered. You cannot alter the clutch in the way you suggest.

### STIFFENING A SIDECAR SPRINGING SYSTEM.

My sidecar has a transverse leaf spring at the back, and the top leaf has broken twice (load in sidecar, 11st.). There does not seem to be enough strength in the spring, as it flattens out straight when loaded, and when a pot-hole is encountered the spring bends beyond its limit, and so breaks. Would a central coil spring between the leaf spring and the bottom of the sidecar give the necessary support, or would it cause rolling?—C. M. H.

From your description, the springing certainly does not appear to be up to the load which it has to carry. The trouble might be eliminated by fitting an additional long leaf immediately below the top one. The coil springs which you suggest should certainly help matters; probably two 6in. apart would be better than a single central one, as there would then be no tendency for the sidecar body to roll about the central point, although the front springs should prevent this to some extent.

### VOLUMES AND PRESSURES.

Will you solve the following problem for me? A mixture (10%) of petrol vapour and air is compressed into a cubic foot at a pressure of 50 lb. per sq. in. The mixture is now exploded by means of an electric spark. What volume would the resultant gases occupy at the original pressure of 50 lb. per sq. in.? This seems a simple question, but I have been unable to get the information. —E. A. C.

You do not say whether the 10% mixture is by volume or weight. As it would be four times too strong by volume, weight will be assumed, however. Taking 10% by weight, it is still a very strong mixture, the amount of petrol being 50% above that required for theoretically perfect mixture—in fact just ouside the range of figures available for reference; moreover, the published figures deal with higher compression (5 to 1 ratio—approximately 70 lb.), and therefore an accurate result cannot be given. Working by extrapolation from the results of Tizard and Pye, for pure heptane, the explosion temperature will be in the region of 2,200° C., and the volume of the *cooled* gases after combustion 1.24 cu. ft. Assuming that the gases were at 20° C. before explosion, we have:

absolute temperature before = 293°
" " after = 2,473°

therefore $\frac{\text{volume after}}{\text{volume before}} = \frac{2,473°}{293°}$

or volume after $= \frac{2,473°}{293°} \times 1{\cdot}24 =$ approximately 10 cubic feet.

Owing to the lack of exact information, and the extreme richness of the mixture, one could not say more accurately than between 8 and 13 cu. ft. For further information you should read the paper on "The Character of Fuels," by Tizaud and Pye. This appeared in *The Automobile Engineer* of February, March, and April, 1921.

### AFTER FAITHFUL SERVICE.

I have a 1913 3½ h.p. J.A.P.-engined Royal Ruby hub geared motor cycle. It has been used to draw a heavy sidecar, which it has done successfully till just recently. Now it cannot take top gear without slowing down and knocking heavily. Compression when warm is weak. It runs very hot readily, despite plenty of oil. The bearings seem all right. What I would be glad to have your opiuion about is: (1.) Are those signs of wear irremediable by valve grinding (the seating looks very low) or fitting new piston rings? (2.) Should I get a new 3½ h.p. J.A.P. cylinder and valves, etc.? (3.) If I do so, shall I need a new piston? (4.) Would such new parts restore the original power of the engine, seeing that the big and little ends are all right? (4.) May I hope for, say, six years' satisfactory running by fitting those new parts (apart from anything else going out of repair).—D.P.K.

(1.) The details you give do not indicate sufficiently clearly the cause of the loss of power; but in all probability it is due to the wearing of some of the engine parts, most likely the timing gear and valves. If the exhaust valve seating is worn very low, this may be the root of the trouble, and, of course, the cams themselves may have worn badly, and, in consequence, have reduced the lift of the valves. (2.) It might not be necessary to have a new cylinder. It is quite likely that the makers could recut the valve seating, and you could easily renew the cams and rockers if necessary. (3.) It does not follow that a new piston will be needed in the new cylinder, but new rings will be advisable. (4.) If other parts of the engine are in good order, there is no reason why you should not have the same service after fitting a new cylinder, or otherwise having matters put in order, as you did previously.

### STRENGTH AND WEIGHT OF FRAME.

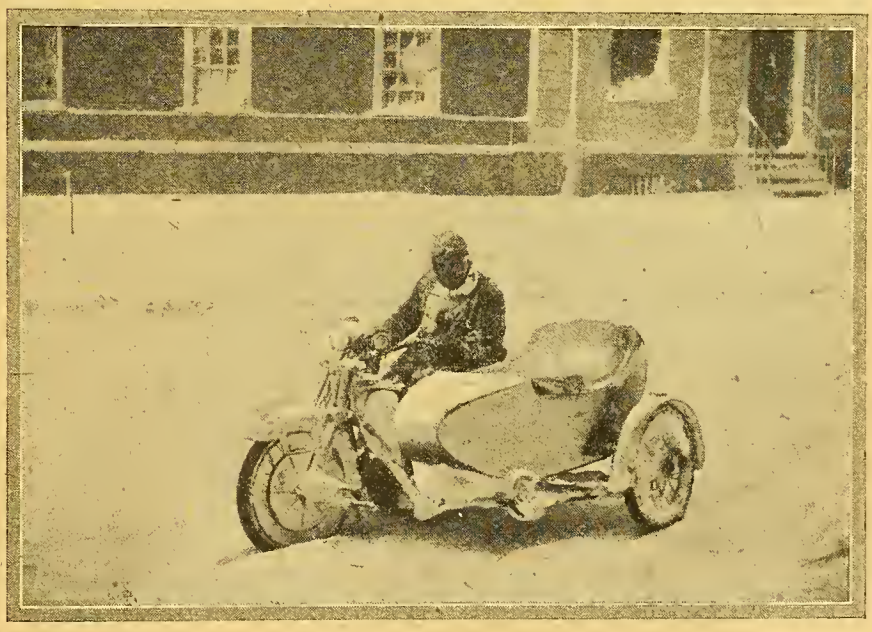
As I am rebuilding a motor cycle frame to carry a 10 h.p. V twin engine, I would like to know: (1.) What is the wheelbase of the frame to carry a two-seater sidecar. (2.) What is the weight of a motor cycle for heavy sidecar work? (3.) What weight would you advise me to build the frame, to suit the above engine?—J. M.

(1.) There is no fixed length of wheelbase; machines vary between about 54in. and 58in. (2.) Weight entirely depends upon the specification, type of engine, and gear box, etc; we cannot give any definite figures. (3.) Weight does not necessarily have anything to do with the strength of the frame. By careful designing, it is quite likely that a frame weighing 80 lb., for instance, can be made infinitely stronger than one weighing 100 lb. Weight depends entirely upon good design and excellence of material.

### SPEED WANTED AT ANY COST.

I should be obliged if you could give me information on the following matters. I am undertaking, as a hobby, the obtaining of the maximum road speed possible from a 4 h.p. Triumph. I have every facility for the work where workshops, time, etc., are concerned. The following are the alterations I purpose making: (1.) Increasing the compression ratio. (2.) Substituting a slipper piston, and, of course, rebalancing. (3.) Substituting a new cam giving timing: Inlet valve opening $\frac{1}{32}$in. before top dead centre; exhaust valve closing $\frac{1}{8}$in. after top dead centre. (4.) Lightening the valves, tappets, etc. Kindly let me know the probable maximum speed attainable.—J.W.

The standard Triumph machine is not primarily designed for extremely high road speeds, and in all probability it will not lend itself to the attainment of a higher speed than about 60-65 m.p.h. (1.) The simplest way of increasing compression would be the fitting of a domed top piston, but it is doubtful whether you could make an appreciable increase without spoiling the running of the engine. This depends entirely on experiment. (2.) It is not certain that the fitting of a slipper piston would effect any considerable improvement. (3.) Variations in timing must necessarily be of an experimental nature, and we cannot tell you whether the suggested alteration will be advantageous or otherwise. (4.) It should not be necessary to lighten the valves or tappet. Provided you raised the compression, a little improvement might be effected by reducing the diameter of the flywheels slightly, so lightening them and minimising oil drag.



An enthusiast who attempted to take his 5-6 h.p. Raleigh sidecar outfit through the recently snow-covered roads in the Eastern Counties. The accumulation of snow beneath the sidecar shows clearly the result of charging a snow drift. The rider felt a pride in passing stranded cars on the way and being able to prove to their disconsolate occupants that it takes more than an ordinary blizzard to stop a really good motor cycle.

## READER'S REPLY.

### TYRE SIZES FOR 4¼ H.P. B.S.A.

Judging from the rim diameter which your correspondent "H.J." gives, it would appear his rim is the old style 26 × 2½, and if so, apparently he has had the correct size of tyre, but as he says the rim is not true this would probably account for the rim cutting which has been troubling him. This rim cutting would also be accentuated if the edge of the rim at the tyre seating is worn or rusty.—DAVID MOSELEY & SONS, LTD.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"P.B." (Horley).—Comparisons of 8 h.p. J.A.P. and 10 h.p. M.A.G. engines in G.P. Morgan.

"W.B." (Bradford).—4½ h.p. Quadrant: Consumption, cooling brakes, balance and torque of engine.

"B.W." (Yorks).—4 h.p. Dunelt outfit: Consumption, cooling, climbing, and starting.

"R.D." (Edinburgh).—Scott, 3¾ h.p. and 3½ h.p. models: Reliability, consumption, life of gears and chains.

"C.S.C." (Salisbury).—3½ h.p. Norton (16H), solo: Touring, replacements, shock absorbers, ground clearance.

"H.J." (Manchester).—Grado pulley on 1911 Triumph: Ratios, wear on belts with sidecar, ease of control.

"E.R." (Stockton-on-Tees). — W.S.R. variable jet on 4 h.p. Triumph.

"L.G.F.A." (Norbury).—4¼ h.p. Ariel sidecar: Consumption, climbing, engine noise.

"G.F.M." (Bedford). — 7-9 h.p. 1919 Indian, solo: Vibration, tyres, consumption; also 2¾ h.p. 1921 New Imperial: Climbing, general remarks and life of small end.

"R.H." (Shoeburyness).—Levis Popular: B.T.H. Sparklight: W.R.S. jet adapter.

"Anxious" (Banbury). — 2¾ h.p. 1921 Cedos, particularly with sidecar.

"J.F." (Liverpool).—Binks carburetter for 3½ h.p. Rudge: Power at slow speed and consumption.

"J.H." (Belfast).—Binks carburetter on 2¾ h.p. A.J.S. and New Imperial: most suitable jets (solo) and results obtained.

"A.H.L." (Ramsgate).—1921 10 h.p. M.A.G.-engined w.c. Morgan: accessibility of back wheel, stability on grease, general reliability.

"G.C." (Wishaw).—7 h.p. James (*de luxe* model outfit) and 4 h.p. Norton with family sidecar.

"G.R." (Wakefield).—Atmos or Binks on R.A.F. model P. and M.

"T.S.A." (Leicester).—2¾ h.p. A.J.S. standard sports model: Speed and consumption.

"J.D.M." (Edinburgh). — 6-7 h.p. Ariel, 1921 outfit.

"H.H." (Derby).—4½ h.p. New Hudson outfit; heavy loads in North Wales; also 6 h.p. Excelsior.

"A.B.C." (Bradford).—Atmos or other carburetter; W.S.R. jet adapter on Claudel; most suitable mechanical pump; all for A.B.C.

"S.A.A." (London, S.E.21).—W.S.R. jet adapter on 1921 3½ h.p. T.T. Rudge-Multi.

"F.W.M.D." (Jersey).—A.B.C.: general touring and everyday use; comparison with Scott Squirrel and Zenith-Bradshaw.

"Novice" (Daventry).—6 h.p. Hazlewood outfit.

"J.A.P.W." (Edinburgh).—Most suitable leather belt, and effect on pulleys on 7-9 h.p. Rudge Multwin.

"D.Mc.A." (Glasgow).—B. and B. carburetter on Villiers two-stroke: Jet size and consumption; W.S.R. jet adapter with above; 28in. × 3in. tyres on 26in. × 2¼in. rims; Watsonian featherweight sidecar with Villiers engine and three speeds

THE FIRST FOUR-CYLINDER TWO-STROKE.

Near Feltham. The Hon. Victor Bruce demonstrating the running of the Low four-cylinder two-stroke, described on page 228. On low gear there are 54 power impulses for each revolution of the driving wheel.

SPARKLETS

### In Liverpool.

The offices of the A.A. in Liverpool have been transferred to 35, Dale Street.

### The Razor King.

Those of our readers who use safety razors may be interested to learn that Mr. King C. Gillette is a director of the Ner-a-car Corporation of Syracuse, N.Y., and that he recently celebrated his sixty-seventh birthday by riding a Ner-a-car.

### Kirkstone Pass.

After the recent snowstorms, the first motor cycle to go over Kirkstone Pass was a 3½ h.p. Ariel with sidecar; the crossing was accomplished despite the fact that the snow was still six inches deep and the weather conditions only just made vision possible.

### A French Colonial Exhibition.

British manufacturers seeking new markets for export should bear in mind the great French Colonial Exhibition, which is to be held at Marseilles from April to November. Information regarding it may be obtained from the offices of the Paris, Lyons, and Marseilles Railway, 179, Piccadilly, London, W.1.

### Electric Wiring.

Of great use to those who frequently require different varieties of insulated cable is Ripault's Cable Chart. This gives the sizes of a number of high tension and armoured lighting cables, together with small specimen sections of the actual goods, which are manufactured by Ripault's, Ltd., 1, King's Road, St. Pancras, N.W.1.

### Catalogues Received.

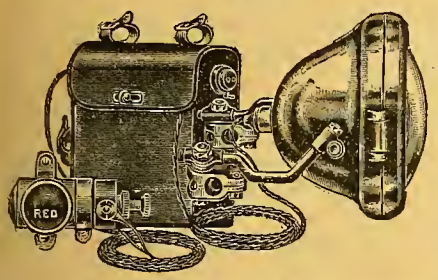
H. Jones, 778, High Road, Tottenham, London, N.17: Leaflet showing prices of four sizes of lean-to and span roof huts for motor cycles and sidecars; the figures are very moderate.

Veloce, Ltd., Victoria Road, Six Ways, Aston, Birmingham. A very well got up catalogue, with lucid illustrations of the Velocette machines. The various models are illustrated, described, and priced.

The "Coventry" Chain Co., Ltd., Spon End Works, Coventry. Particulars of "Coventry" chains fitted to motor cycles. A very useful list of motor bicycles giving the model, date, type of chain required, size of chain, and length in pitches of each chain fitted.

Prices' Co., Ltd., Belmont Works, Battersea, London, S.W.11: A series of booklets, one giving the prices of the firm's motor cycle lubricants, another entitled M.P.G., showing how best to get economy with an internal combustion engine, a third giving notes on the use of paraffin and petrol substitutes in engines designed to run on petrol, and, lastly, a list of motor cycles and the grades of Prices' oils recommended for each.

## SOLO SETS.

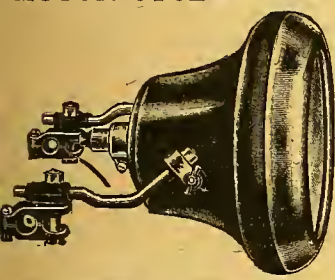


The most efficient Dry Battery Solo Sets produced. Head Lamp is provided with 6-volt bulb giving an exceptionally brilliant light, and ample light is provided in the rear lamp.

**Head and Rear Set.** 5½ in. front Head Lamp, M10/10 .. .. .. .. .. .. **£4 10 0**
Head Lamp Set only, M10/7 .. .. .. **£4 0 0**

**"Superba de Luxe" Head and Rear Set.**
7 in. front Head Lamp, M10/11.. .. .. **£5 7 6**
Head Lamp Set only, M10/8 .. .. .. **£4 17 6**

## MOTOR CYCLE HEAD LAMPS.



Excellent finish Exceptionally efficient.

Fitted with Adjustable Handle Bar Bracket Attachments and focussing Type Holder.

Complete with Lampholder and Adaptor.

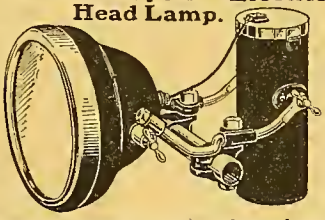
The "Challenge" 5 in front .. .. .. Price **24/-**
The "Superba" 5½ in. front .. .. .. Price **40/-**
The "Superba de Luxe," 7 in. front .. .. Price **50/-**

## "VOLEX"

**DRY BATTERY LIGHTING OUTFITS for Motor Cycle and Sidecar**

**British Made.**
**Recommended for Home and Export.**

### The "RAYONITE" Self-contained Motor Cycle Electric Head Lamp.



No accumulator, oil, or acid required; a brilliant light obtained at will. The convenience of this self-contained Set cannot be over-estimated, the pleasure of having a lamp always ready for use without preparation will be appreciated. Comprising Head Lamp (5½ in. front), combined with a strong metal container holding the "Ray-o'-nite" Dry Battery, complete with bulb. Ready for immediate use.

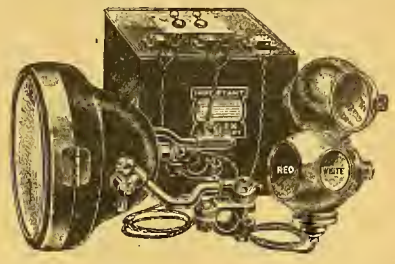
No. M9/1 .. .. .. .. .. **£3 10 0**
Spare "Ray-o'-nite" Dry Batteries, **10/6**
Can be fitted in a few seconds.

## ELECTRIC REAR LAMP.

Excellent finish complete with Lampholder and Adaptor.
Price **7/6.**

**Ward & Goldstone** PENDLETON MANCHESTER LTD

## COMBINATION SETS,



"Volex" Dry Battery Lighting Sets are the ideal no-trouble outfit. No other battery outfit will give results equal to the "Volex."
In satisfactory service for over 10 years with a constantly increasing demand due to their reliability, convenience, and economy in use.
**These sets give from 9 to 12 months' service, in ordinary intermittent use, without renewal batteries.**
**Specification.**—6-volt "Volex" Dry Batteries in metal container, Switchboard, Head Lamp (5½ in. front), Side and Tail Lamps, Cord and Bulbs.
No. Mc/490, as illustrated .. Price **£6 10 0**
Also supplied with "Superba de Luxe" Head Lamp (7 in. front).
No. Mc/450 .. ... ... Price **£8 0 0**
Ready for immediate use.

## POCKET TYPE METERS

Highly finished.
Accurate and Reliable.
0 to 6 volts **9/6.**
0 ,, 12 ,, **9/6.**
0 ,, 16 ,, **9/6.**
0 ,, 6 Amps. **9/6.**
0 ,, 30 ,, **10/6.**
Combined Volt and Ammeter **11/6.**
SECTIONAL LIST M/202 ON REQUEST.

# The Humber

## 4½ h.p. FLAT TWIN

*Cambridge.*

*Gentlemen,—In January 1920 I purchased a Humber Flat Twin Motor Cycle; its records to-day are: Mileage approximately 8,500 miles, engine trouble nil, petrol consumption phenomenal. Quite recently one gallon sufficed for 105 miles, a non-stop run which involved a considerable portion of Birmingham, all Coventry and Northampton. The machine has been tested under the severest conditions. I rode for eight hours on end over the Welsh mountains, and the roads in many cases were merely rough-hewn rock surface. It has to be a very powerful machine to pass my Humber on the road.—C. R. BENSTEAD.*

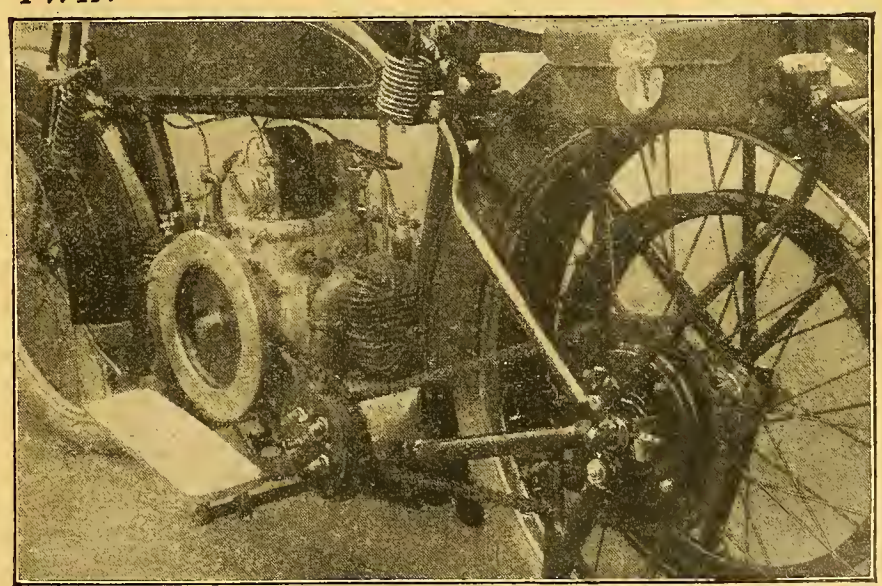
REMARKABLE alike for its great Silence and Reliability, this model has been described in motor cycling quarters as "Coventry's finest production."—The illustration shows the all-chain transmission (chain cover removed).

If you are out for sport, our new Sports model is a tempting proposition well worth your consideration.

4½-h.p. Flat Twin Solo Model - £110
4½-h.p Flat Twin Sports Model - £100
4½-h.p. Combination Outfit - - - £144

*Write for full particulars.*

**HUMBER LTD., COVENTRY**
**LONDON: 32, Holborn Viaduct, E.C.1**
**Dealers everywhere.**



## AIRMEN'S LEATHER FLYING COATS

CASH WITH ORDER. **65/=** MONEY RETURNED IF DISSATISFIED.

Only 40 left. Cannot be repeated for 4 Times the Price. All Coats have been worn but are in Good Condition.

## CLOTHING BARGAINS

REGULATION TRENCH COAT (Oilskin Inter-Lined) 55/-
" " (Ditto & Fleece-Lined) 70/-
BLUE GABARDINE TRENCH COAT (Wool) 45/-
" " (Ditto & Inter-Lined) 52/6
DINNER & DRESS SUITS - 60/- to 120/-
LOUNGE SUITS (Second-Hand) 35/- „ 80/-
" " (New & Misfit) 40/- „ 90/-

*Cash with Order. Money Returned if Dissatisfied.*

ILLUSTRATED PRICE LIST AND SELF-MEASUREMENT FORM ON APPLICATION.

Gent's Clothing of Every Description, Bought, Sold, or Taken in Exchange.

## MOSS BROS. ('Phone: Park 4817)

83-5, HIGH ST., NOTTING HILL GATE, & 224, HIGH ROAD, KILBURN, N.W. 6

## E. T. MORRIS & Co., LIMITED, 139, Finchley Road, N.W.3.

OLDEST AGENTS IN N.W. LONDON.

Agents for :—

RALEIGH, TRIUMPH, ZENITH, MARTINSYDE, ROYAL ENFIELD, B.S.A., RUDGE-WHITWORTH, ECONOMIC, and A.J.S. Motor Cycles, Solo or Combination.

HILLMAN, ROVER, BELSIZE, and COVENTRY PREMIER CARS, ECONOMIC BUCKBOARD, any other make of Car or Cycle supplied.

B.S.A.'s., ENFIELD'S, ZENITH'S, TRIUMPH'S, and BELSIZE CAR now in stock.

1920 HILLMAN, all accessories, repainted, bargain £285. Only 6,000 miles.

Deferred payments, exchanges and Insurance.

## ACE (PATENT) SUPER DISCS

MAKE YOUR MACHINE DISTINCTIVE

Your Agent can supply

CORNERCROFT, LTD. ACE WORKS, COVENTRY.

## THE 'K' SERRATED MOTOR CYCLE OILCAN.

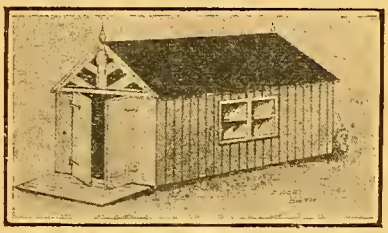
Fitted with BRASS TUBULAR SCREW SPOUT

*NO LEAKING JOINTS.*

*Post free* **1/9** *each from the SOLE MAKERS:*

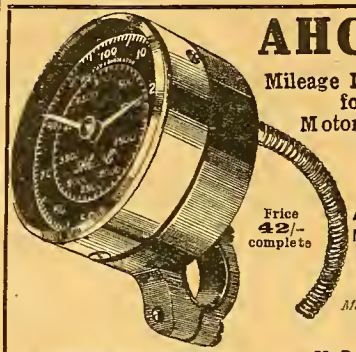
J. KAYE & SONS, LTD., 93 High Holborn, LONDON, and Lock Works, LEEDS

## PRATTEN'S Motor & Sidecar Houses for Quality and Value.



10×7×8, price £11 2s. Floor 50/- Carriage paid. Order now for immediate dispatch. Catalogue free showing other sizes at proportionate rates. Also Bungalows, Greenhouses, Poultry-houses, etc. Our Agents, Messrs. J. G. Graves, Ltd., Sheffield, will arrange for easy payments.

— F. PRATTEN & CO., — Midsomer Norton, BATH.



## AHCOL

Mileage Indicator for Motor Cycles.

Price 42/- complete

TOTAL AND TRIP MILEAGE.

*Manufactured by*

ANDREW HYSLOP & Co. Ltd. 30, Durham Rd., London, N.7.

## Motor Houses

For your Motor Cycle or Car. Built of Best Quality Timber. Sectional. Tenant's Fixtures.

PRICES from £5 5 0.

*Catalogues post-free.*

FOTHERGILL & SCHOFIELD, Warwick Road. BATLEY, Yorks.

## "ASLATT" TYRE STOPPING (patented).

"is 'the goods'" (*vide* a Burnley user). TEST IT. Will save your L.S.D. Permanently repairs at small cost, 1/3 & 5/- per tube (post 1/5 & 5/4).

THE ASLATT CO., WESTEND, SOUTHAMPTON.

*Special Terms to the Trade.*

*If it's an* **ML** *you can rely on it*

## MAGNETOS

*Makers: The M.L. Magneto Synd., Ltd., Coventry. Inquiries to S. Smith & Sons (M.A.), Ltd., Central Works, London, N.W.2.*

Purchase of entire stock of

## APOLLO ELECTRIC HORNS.

Guaranteed new and perfect.

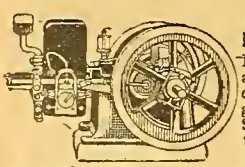
Car type.—Usual price £6 6 0; our price £2 5 0
Cycle „ — „ „ £2 15 0; „ „ £1 5 0

All complete with flex and Klaxon push button.

Cash with order from

E. LOMAX, Factor, 192, Drake Street, ROCHDALE.

*Special terms to traders.*



1½ h.p., 2¼ h.p., & 3½ h.p. Petrol-Paraffin Engines

For Farm or other stationary work. Hopper cooled, magneto ignition-governed. Easy to start. Sent out complete, ready to run. Send for list.

*Delivery from Stock.*

Booth's Motories, A.C., Portland Place, HALIFAX.

## The V Shaped SANDUM Windscreen

Gives greatest comfort at least cost. Scientifically designed, most sturdily made, fits any sidecar. Costs only .. .. £2-15-0

*Sandum Sidecars*

*336, Grays Inn Rd., W.C.1*

## Enamelled Badges for Clubs.

Gold, Silver and Bronze Medals (suitable awards for Hill Climbs, Speed Trials and other Club events). Challenge Shields and Cups.

"Club Colours" for fixing on machines.

*Enquiries from Club Secretaries solicited. Designs and Estimates free.*

W. O. LEWIS (BADGES) LIMITED, Howard Works, Howard Street, BIRMINGHAM.

## THE TAN-SAD PILLION SEAT

Price 30/-

Backrest 7/-
Footrest 5/-
Handle 2/-

TAN-SAD LIMITED Freeman Street BIRMINGHAM

## 75/- BENCH DRILLING MACHINE WITH CHUCK,

Takes all Drills up to ½ in.

*Splendid Value.*

Approval—Money back.

Tuck & Blakemore, Ltd. COVENTRY.

# An Unparalleled Offer !

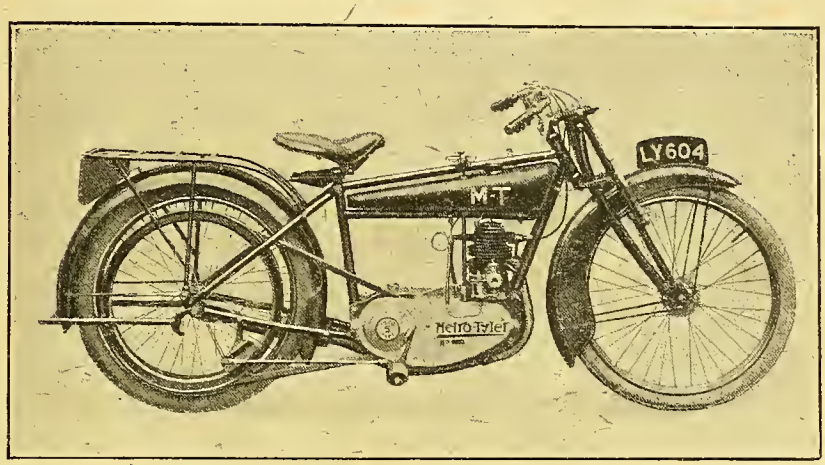
## METRO-TYLER

**£55** THE SUPER TWO-STROKE NOW WITHIN THE REACH OF ALL. **£55**

THE ALL ENCLOSED DE-LUXE MODEL

SPORTS MODELS from £45. Combinations £73 10s.

Roller and Ball Bearing Engines.




M.T. LIGHT CARS from £125.

Roller and Bal Bearing Engines.

The only small Two-Stroke to obtain GOLD MEDAL in LONDON-EXETER TRIAL.

The METRO-TYLER CO., LTD., Banister Road, Kilburn Lane, London, W.10. Telephone: Willesden 1356

REGISTERED TRADE MARK.
*"The Symbol of Success."*

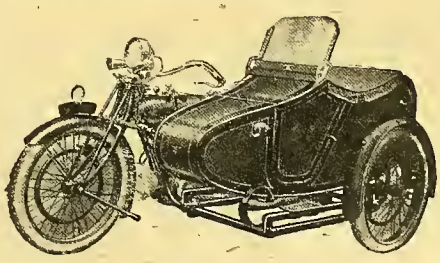
# 'MARTINSYDE' 1922 PRODUCTIONS

Deliveries of our 1922 machines have commenced. The days of Spring are coming and soon *you* will be wanting that new mount. Why not see the Martinsyde Agent in your district and let him show you the machine you will eventually buy—the Martinsyde.

Our fully illustrated 1922 catalogue together with the name of your nearest agent will be sent you free upon request.

MARTINSYDE LTD. WOKING.

6H.P. COMBINATION
PRICE - - £160
*Lighting & Windscreen extra.*



# 38 AND 75 GUINEAS.

## WHY PAY

these amounts for a machine,
WHEN YOU CAN BUY AN

## INDIAN PRINCE MOTOR CYCLE

for **42 GNS.** and a

## SILVER PRINCE

for **46 GNS.,**

which are acknowledged to be the **FINEST VALUE IN THE WORLD,** and **FINISH** is up to any **100 GUINEA Model SHOWN** at **OLYMPIA. SEND** direct to **US** for **LISTS** if no **LIVE** agent in your district. **ALWAYS insist upon having SPECIFICATION before BUYING and SEE THAT EVERYTHING CORRESPONDS.**

*MANUFACTURERS:*

**TRYUS CYCLE CO.,**
**Johnstone Street, Birchfields, BIRMINGHAM.**

---

# ALBION LIGHTWEIGHT COUNTERSHAFT GEARS.

Three Speed with Clutch and Kick Starter.
Two Speed with Clutch and Kick Starter.
Two Speed, Plain Box.

SPECIFY ON YOUR NEW MACHINE, OR IF YOU WISH TO CONVERT YOUR PRESENT ONE SEND FOR CATALOGUE.

**ALBION ENGINEERING CO., LTD.,**
**UPPER HIGHGATE STREET, BIRMINGHAM.**
London Stockists: H. Taylor & Co., Ltd., Store St., W.1.

---

*The cure for ignition troubles*

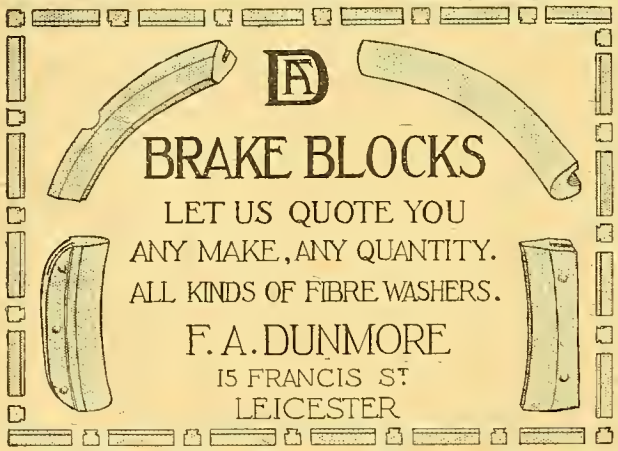
**E·I·C MAGNETOS**

Fully guaranteed. Ask your agent for prices

E·I·C MAGNETOS Ltd.
Sampson Rd North,
BIRMINGHAM.

*West of England Service Depot*
W. B. CORAM
140 Victoria St. Bristol

---



**F A DUNMORE**

## BRAKE BLOCKS

LET US QUOTE YOU
ANY MAKE, ANY QUANTITY.
ALL KINDS OF FIBRE WASHERS.

F. A. DUNMORE
15 FRANCIS ST.
LEICESTER

---

*Know your Speed & Mileage!*

**Model 42** (*as illustrated*)—Black finish. Nickel-plated bezel. Indicates speeds to 60 miles per hour. Total mileage counter to 10,000 and repeats. Quickly reset trip-counter.
**Price £5 5 0** (or without trip, model 40) **£5 15 0**

Pack wheel drive for Triumph, 5s extra. Back wheel drive for Indian or Harley-Davidson, 10s. extra.

*Manufactured by*
**NORTH & SONS, Ltd., WATFORD,** & 14, Soho Sq., London, W.1

NORTH'S BRITISH MADE Watford

**SPEEDOMETERS** for Motor Cycles

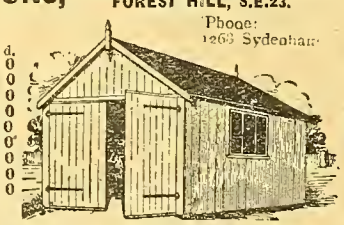
---

## A. TURRELL & SONS, PORTABLE BUILDING WORKS. FOREST HILL, S.E.23.

Phone: 1263 Sydenham

| Lth. ft. | Wth. ft. | Height to Ridge ft. in. | Height to Eaves ft. in. | £ | s. | d. |
|---|---|---|---|---|---|---|
| 7× | 5 | 7 0 | 5 0 | 7 | 5 | 0 |
| 8× | 6 | 7 6 | 5 3 | 9 | 0 | 0 |
| 9× | 7 | 8 0 | 5 6 | 11 | 7 | 0 |
| 10× | 8 | 8 4 | 5 9 | 12 | 19 | 0 |
| 12× | 8 | 8 4 | 6 0 | 17 | 5 | 0 |
| 14× | 8 | 8 7 | 6 3 | 21 | 0 | 0 |
| 16× | 9 | 8 9 | 6 4 | 26 | 0 | 0 |
| 18× | 9 | 8 9 | 6 4 | 31 | 0 | 0 |
| 20× | 10 | 9 0 | 6 6 | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ⅞in. tongued and grooved match boards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed: 21oz. glass. Flooring: Strong joists, one inch boards. All bolts supplied for erecting house.

---

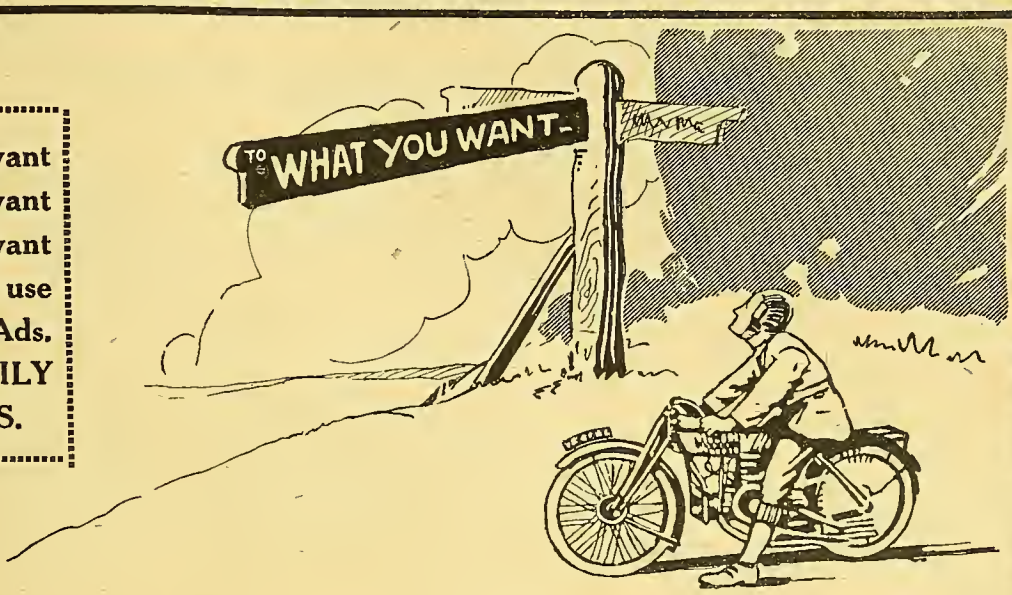
## KEEP HIM OFF!

This little beggar works whilst you're asleep or busy—takes pounds and pride off your "outfit." Stop his activity with "Corrosine" *the* Rust-Preventer and "Derusta" *the* Rust-Remover.

*In 1/6 and 2/6 sizes, of all enterprising dealers, or direct from*

**HOWSE'S** —*The* Rust-Preventer Firm.— Union Works, SMETHWICK.

If you want what you want when you want it, read and use the Want Ads. of the DAILY EXPRESS.




# An invaluable guide to what's what in the Motor Cycling world

The articles on motor cycling written exclusively for the DAILY EXPRESS are an invaluable index to what is going on in the motor cycling world. Written by keen and practical riders, they deal with every phase of motor cycling in a striking and individual way.

These articles form an extra "exclusive article" to your morning paper if that paper be the DAILY EXPRESS for only in the DAILY EXPRESS can these articles be found.

In order to avoid missing any of these articles, order the DAILY EXPRESS to be delivered to you regularly.

***Read the***

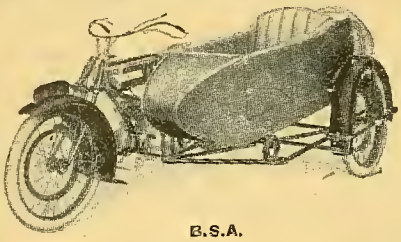
# Daily Express

**£7,000**
**FREE INSURANCE**

**The DAILY EXPRESS insures YOU and YOUR WIFE against ACCIDENT and ILLNESS for one registration**

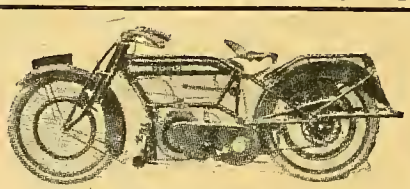
**Buy to-day's issue and fill up the coupon**

## Just a Selection from our Stock of over 50 New 1922 Models.



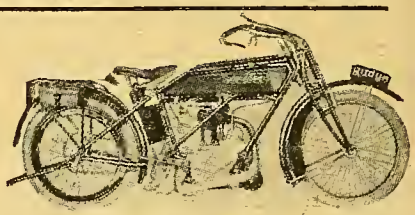
**B.S.A.**

| | |
|---|---|
| 4½ h.p., K.2, chain cum belt | £107 0 |
| 4½ h.p., H2 | 110 0 |
| 6/7 Combination | 164 0 |



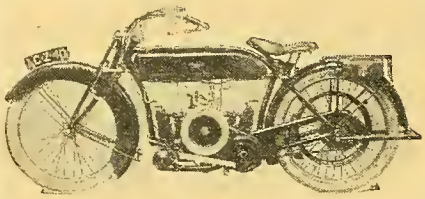
**ZENITH.**

| | |
|---|---|
| 3½ h.p., Bradshaw, oil cooled | £113 0 |
| 3½ h.p., all chain, 3-speed, clutch and k/s | 118 0 |
| 5 h.p., sports | 110 0 |



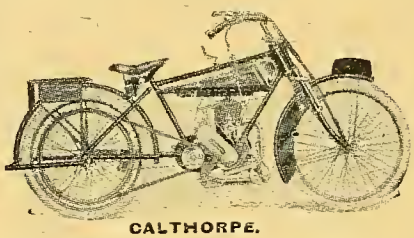
**RUDGE.**

| | |
|---|---|
| 3½ h.p., I.O.M. Multi | £77 0 |



**HUMBER.**

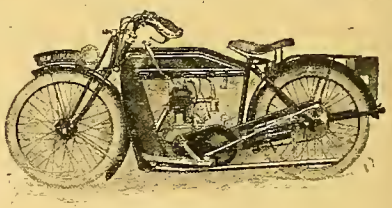
| | |
|---|---|
| 4½ h.p. flat twin, 3-speed clutch and k/s, all-chain drive combination | £144 0 |
| 4½ h.p., sports model, 3-speed | 100 0 |



**CALTHORPE.**

| | |
|---|---|
| 2½ h.p. single speed, 2 stroke | £35 0 |
| 2½ h.p., 2-speed | 45 0 |
| 2¾ h.p., Jap, 2-speed clutch | 65 0 |
| 2¾ h.p., 2 stroke, 2-speed clutch | 60 0 |

Kick starter, £5 extra.



**NEW IMPERIAL.**

| | |
|---|---|
| 2¾ h.p. model I, Jap, 3-speed | £63 0 |
| 2¾ h.p., model I, Jap, 3-speed clutch and k/s | 69 0 |
| 2¾ h.p., model I. Jap, 3-speed clutch and k/s, all chain | 73 0 |
| 2¾ h.p., I.O.M. sports | 80 0 |
| 2¾ h.p., I.O.M., 350 c.c. | 84 0 |
| 8 h.p., combination | 145 0 |

*Extended payments from 4% extra.* *Full list of new and secondhand sent post free.*

**ALLEN-BENNETT MOTOR CO., LTD., 9-10-11, Royal Parade, West Croydon.**

'Phone - - Croydon 2450.

# Get it at TAYLORS

**Sole London and District Distributing Agent for A.J.S., Excelsior, and Dunelt Motor Cycles.**

### Extract from "MOTOR CYCLE" Nov. 17th, 1921.

"The big single two-stroke is another type of motor cycle which will interest the prospective purchaser of a medium powered machine. In this class the 'DUNELT' is the best known; in fact the only one made in any quantities, and one member of our staff, who has owned one for the past year, has found it eminently satisfactory. In its road performance it resembles a 5-6 h.p. twin, and, as it possesses the slow pulling qualities of all two-strokes, it may be regarded as a top gear machine, in that it is not necessary to change down so much in traffic, or corners, or on hills, for the 'DUNELT' pulls well on a hill almost to a crawl, when the majority of four-stroke singles would knock and konk out."

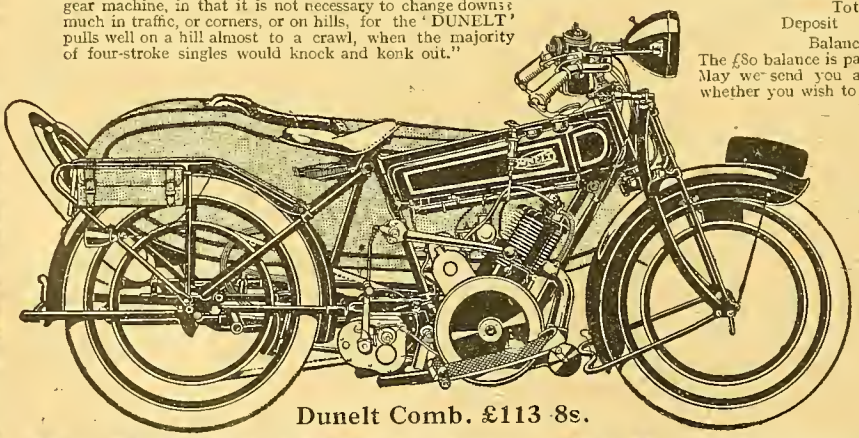
### THE IDEAL FAMILY OUTFIT.

The Dunelt is often referred to as the Ideal Family Outfit for the man of moderate means. It is capable of taking three adults practically anywhere, and for ease of control the Dunelt is unbeatable.

For those wishing to purchase out of income we add only 4 per cent. to the purchase price as follows:

| | |
|---|---|
| Dunelt 4 h.p. comb. with spare wheel and tyre | £113 5 0 |
| 4 per cent. interest | 4 10 6 |
| Total | 117 15 6 |
| Deposit | 37 15 6 |
| Balance | £80 0 0 |

The £80 balance is payable in 12 monthly instalments of £6 13s. 4d. May we send you a catalogue and order form. Please state whether you wish to pay cash or purchase on the E.P. System.



Dunelt Comb. £113 8s.

DUNELT TWO-STROKE

**Brief Specifications.**

Patent 4 h.p. single cylinder 2-stroke engine 500 c.c. Sight feed lubrication, Sturmey Archer 3-speed gear, clutch and kick-starter; 26×2½ detachable interchangeable wheels.

Price complete with Sidecar, storm apron and spare wheel and tyre £113 5

28×3 tyres extra £4 0

**H. TAYLOR & Co., Ltd.**

SHOWROOMS **52-53, Sussex Place, South Kensington, S.W.7**
**21a, Store Street, Tottenham Court Road, W.**

'Phones .. .. Kensington 7260, Museum 1240.
Telegrams .. .. "Dynametro, Westcent, London."

## MOTOR CYCLES FOR SALE.

### Blackburne.

**1920** Semi-sporting 4h.p. Blackburne, first-class condition, full accessories and spares, special mudguards; £65.—Holland, Handscombe, Stoneygate, Leicester. [9193

**1920** 2¾h.p Blackburne Combination, Canoelet sidecar, 2-speed, clutch, kick start, equipped solo, £55; combination, £63.—31, Drakefield Rd., Upper Tooting. [9561

### Bradbury.

BRADBURY 4h.p. 1921, unused, unlicensed, a bargain; £80.—Motor Co., Hereford. [1071

**1920** 6h.p. Bradbury Combination, fully equipped; £90.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9878

BRADBURY, 1914, 4h.p., excellent condition; offers.—Nisbett, 43, Minard Rd., Catford, S.E.6. [8241

BRADBURY 4h.p., new, latest model, fitted with lamps, etc.; £92.—R. Wm. Thomas, Cycle Agent, Dolgelley. [9663

BRADBURY Combination, 1920, 4h.p., 3-speed, beautiful turnout; 78 gns.; take older lot part. —57, Kenbury St., Camberwell, London. [9485

BRADBURY 6h.p. Combination 1915, stored during war, in excellent condition, tax paid; £75.—Wood, Talbot Hotel, Kington, Herefordshire. [9180

BRADBURY, 6h.p., 1921, new, 3-speed Combination, Milliord sidecar; best offer secures, or exchange entertained.—Eagles and Co., 275, High St., Acton, London. [9733

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. Bradbury, new 1921 model, reduced to £55; also 6h.p. combination, new 1921, reduced to £130; no extra charge for easy terms. [9970

BRADBURY 1913, 4h.p., 2-speed, clutch, new belt, good tyres, lamps, horn, licence paid, excellent running order, any trial; £33.—Mortimer, Rushall, Marlborough, Wilts. (D) [9269

*Spare Parts:*

BRADBURY Spare Parts.—See our advertisements under Parts and Accessories.—Bright and Hayles, 78, Church St., Camberwell. [9630

### Brough.

NEW 1922 3½h.p. O.H.V., speed model, 70m.p.h., very sporty machine; £110.—Premier Motor Co., Aston Rd., Birmingham. [1031

£28.—Brough and Sidecar, 6h.p., Mabon gear.—Clifford Wilson Manufacturing Co., 177, Westminster Bridge Rd., S.E.1. [1041

### Brough Superior.

BROUGH SUPERIOR, Mark II., in stock for immediate delivery.—Pickering, Shrewsbury. [8593

BROUGH SUPERIOR, 8h.p., o.h.v., dynamo lighting set, speedometer, electric horn, complete set spares, perfect throughout; £135 or offer.—128, Alderman's Hill, N.13. [9915

BROUGH SUPERIOR, late 1921, special 8h.p. o.h.v. J.A.P., guaranteed 80 m.p.h., mileage 500, complete with Swan sporting sidecar, finished in blue with disc wheel, all accessories (Lucas), spares, and tools; all puncture-proof tubes, any trial; £150.—Rae, Annickvale, Saltcoats. [9047

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½, o.h.v., 3 speed, clutch, and kick starter, £160; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0733

### Brown.

£12 2¾h.p. Brown, M.O.V. magneto, 2-speed gear box, K.S., requires cylinder.—King, Egrove, Oxford. [9719

2¾h.p. Brown, clutch, etc., very reliable machine, £4 bargain; £20; accept bicycle part.—Stevens, Roseleigh, Springwell Rd., Heston, Hounslow. [9600

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with pleasure.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

B.S.A. and Sidecar, done 1,000 miles, not scratched, licensed; £115.—Apps, Bracknell. [9765

THE Morris Garages, Oxford.—Prompt deliveries of all B.S.A. models. [9296

B.S.A. 1922.—All models; immediate deliveries.—Clifford Motories, Eastwood, Notts. [8827

**1921** K.2 B.S.A., with sidecar, unused, shop-soiled; £124.—The Morris Garages, Oxford. [9287

**1920** B.S.A., 4¼h.p., model H., small mileage; £75.—32, Lawson Rd., Southsea, Hants. [9801

SHREWSBURY Agent for B.S.A.—1922 solo and combination in stock.—Pickering, Shrewsbury. [8594

# PARKER'S PERFECTED PAYMENT POLICY!

| DEPOSIT | and | 12 MONTHLY PAYMENTS. |
|---|---|---|
| £20 | ROYAL-RUBY. 2¼ h.p., fully equipped, new condition .. .. .. | £1-2-6 |
| £15 | CLEVELAND, 1920. 3 h.p. 2-speed, K.S./C., fully equipped .. .. | £2-13-9 |
| £15 | BAT, 1913. 6 h.p. C.B. Combination, 3-speed, C./K.S., hood, screen, speedometer .. | £3-11-8 |
| £15 | SCOTT, 1914. 3¾ h.p. 2-speed, K.S., Binks, Lucas accessories, speedometer .. | £2-4-10 |
| £17-10 | RUDGE, 1919. 3½ h.p. Multi, fully equipped, tax paid | £2-13-9 |
| £25 | P. & M., 1918/19. 3½ h.p. C.B. Combination (*not* ex-R.A.F.) fully equipped, Lucas accessories, fine condition .. | £3-11-8 |
| £45 | INDIAN, 1921. 7-9 h.p. combination, electrically equipped, tax paid, as new. Cost £230 .. .. .. .. | £9-8-0 |
| £14 | DOUGLAS, 1914. 2¼ h.p., sporting combination, fully equipped, tax paid, excellent condition .. .. .. .. | £3-0-0 |
| £40 | HARLEY-DAVIDSON, 1920. 7-9 h.p. C.B. Combination, electrical model, fine condition .. .. | £8-10-3 |
| £30 | HARLEY-DAVIDSON, 1920. 7-9 h.p. electrical model, electric horn, new condition .. .. .. .. .. | £6-5-5 |

**IMMEDIATE DELIVERY OF 1922 MODELS BY ALL THE LEADING MANUFACTURERS.**

***Exchanges. Deferred Payments.***

**BOLTON: MANCHESTER:**

**Bradshawgate.** Tel.: 1348.

**245, Deansgate.** Tel: Cen. 864.

## MOTOR CYCLES FOR SALE.

### B.S.A.

**1921** Chain Drive 4¼h.p. B.S.A., perfect condition, accessories; £80.—38, Cowley Rd., Oxford. [9583

B.S.A., Model K, fully equipped, perfect order; £50.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9880

B.S.A. Combination (new June, 1918), chain, Easting, A1 condition; £68.—40, Lorne Rd., Forest Gate. [9074

**1914** B.S.A. 3½h.p. Phillipson T.T. Model, excellent, date and condition guaranteed; £32/10.—Below.

**1919** B.S.A. 4¼h.p., 3 speeds, equipped as new, date and condition guaranteed; £67/10.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [9935

NEW 1921 4¼h.p. B.S.A. Combination and accessories; £130.—Bounds, Garage, 223, High Rd., Kilburn. [9226

B.S.A. 1921 4¼h.p., chain and belt drive, No. 3 sidecar, mileage 1,500; £130.—Foxall, Postern Gate, Bridgnorth. [9504

B.S.A.'s, all models; exchanges, highest prices given. —Harry Nash, Contracting Agent, 365, King St., Hammersmith. [9828

**1919** 4¼h.p. B.S.A., 3-speed, K.S., excellent condition; must sell.—E. C. Linington, Nether Wallop, Hampshire. [9213

40 GNS.—1915 B.S.A., 3-speed, countershaft, 4¼h.p.; snip. Exchanges.—Kent's, 417, Lord St., Southport. [9539

OCTOBER 1919 B.S.A. 4¼h.p. Combination, splendid condition, all on, appearance new; £85.—134, Earlsbrook Rd., Redhill. [9437

B.S.A.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7236

B.S.A. 1921 4¼h.p. H.2 Model, all-chain drive, with coachbuilt sidecar, shop-soiled only; £120. —P. J. Evans, John Bright St., Birmingham. [9846

B.S.A. 1922, brand new 4¼h.p., Model H.2, in stock; £110; easy payments arranged; lists free. —Wilkins Simpson, Opposite Olympia, London. [9241

B.S.A., 3½h.p., kick start, clutch, excellent condition throughout, lamp, horn, accessories, tax paid.—Carisbrooke, St. George's Rd., Sevenoaks. [9061

B.S.A. 1916 Coachbuilt Combination, 3-speed countershaft, well tyred, screen, lamps, Tan-Sad, 1922 paid; 60 gns.—Hillrise, Surbiton Hill Rd., S.W. [9247

55 GNS.—4¼h.p. 3-speed B.S.A. coachbuilt Combination, lamps, windscreen, taxed, excellent condition.—15, Elsenham St., Southfields, S.W.18. [9441

B.S.A.—Get your new 1922 B.S.A. from George Smith's, Clapham Junction, 268-270, Lavender Hill, 1 min. station. Cash, easy payments, exchanges. [9357

B.S.A. 1920 Canoelet Combination, electric lighting, excellent order; £79. 1922 models in stock; exchanges arranged.—R. B. Clark & Co., 7, Exhibition Rd., S.W.7. [9001

B.S.A. 4¼h.p. Combination, C.B., believed 1917, 3-speed, countershaft, speedometer, lamps, hood, excellent condition, tax paid; 49 gns.—1, Priory Rd., Kew Green. [9505

B.S.A. 1922 model, H.2, chain drive; £110; exchanges, extended terms.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone: Avenue 5548. [0067

B.S.A., all 1922 models supplied, exchanges; also new 1921 4¼h.p. K.2 Combination, No. 2 B.S.A. sidecar; £114.—Eagles and Co., 275, High St., Acton, London. [9736

**1919** B.S.A. Combination, 3-speed, kick start, Tan-Sad, speedometer, luggage carrier, lamps, and accumulator, very little used; owner unable to ride.—59, Clarendon Square, Euston, N.W.1. [9658

B.S.A., 1920, 4¼h.p., Milliord sidecar, Easting, Lucas accessories, speedometer, full spares, tax paid, any trial or examination; £80, lowest.—27, Holmesdale Avenue, East Sheen. [9400

**1921** B.S.A. 4¼h.p., chain drive model with coachbuilt sidecar, complete with lamps, horn, speedometer, etc.; £110; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [9382

B.S.A.—All 1922 models for immediate delivery. Best prices allowed on second-hand machines. Let us quote you.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7509

**1919** 4¼h.p. B.S.A. and sidecar, 3-speed gear, clutch, kick starter, two new tyres, sidecar screen, and all accessories, in perfect condition and open to any trial; £63.—Cox, 60, De Freville, Cambridge. [9615

B.S.A. July 1921 4¼h.p., all-chain, semi-T.T. bars, footrests, mileage 2,170, original tyres unpunctured, Lucas lamps and horn, spare tube, chain, sprocket, valve, plug, chain-links, etc., complete toolkit, appearance excellent, mechanically perfect; £87/10.—45, St. John St., Oxford. [9461

## MOTOR CYCLES FOR SALE.

### B.S.A.

OCTOBER, 1915, 4¼h.p. B.S.A., chain-cum-belt, unused three years, lamps, horn, tyres, belt, enamel good, fully licensed, insurance; £55, offers, will ride 100 miles, Sundays.—Walker, T.6, Pembroke College, Cambridge. [9116

1921 6-7h.p. Twin B.S.A. Combination, spare wheel, D.A. lighting, speedometer, Easting, largest sidecar, as brand new throughout; cost £208, accept £135.—37, Canterbury Rd., Ball's Pond Rd., Dalston, N.1. [9963

B.S.A. 4¼h.p. 1920 chain drive Combination, new condition, Hopley folding chassis, special body for adult and child, new tyres, lamps, horn, windscreen, hood, spares; £98.—Manager, 31, Shardeloes Rd., New Cross. [9075

1921 B.S.A. Combination, B.S.A. 4¼h.p. engine R.34, luxurious Rennoc car, strong tip-up child's front seat, complete equipment, spare belt, valve, kit, step, luggage grid, honestly perfect, cared for, admittedly handsome lot; £115, or near.—20, Glisson Rd., Cambridge. [9185

£52 4¼h.p. B.S.A. Combination, No. 3 £35 sidecar, 3-speed, countershaft, licensed, cameo screen, hood, F.R.S. lamps, Stewart speedometer, etc., 1914-15, 1921 improvements, appearance and condition practically as new; photo, stamp; any examination.—Bacon, Offington Lane, Worthing. [9506

WAUCHOPE'S, 9, Shoe Lane, London.—B.S.A. 1922 models, K.2, chain and belt transmission, £107; with No. 3 sidecar, £139; model H.2, all chain drive, £110; fitted with B.S.A. sidecar, £142; B.S.A. 6h.p. twin motor cycle, £132; fitted with B.S.A. sidecar, £164; B.S.A. 8h.p. twin combination, £185; easy terms and exchange; box carrier combinations from £139.—'Phone: Holborn 5777. [9971

B.S.A. 1921 7-8h.p. Combination, very special, original Olympia Show model, Lucas mag. dynamo, electric lighting, electric horn, Cowley speedometer, spare wheel complete, spare tubes, luggage carrier, special hood and wind screens, tax paid; cost £290; price £150, or deferred payments, £30 down, balance 12 monthly payments; any trial and examination.—Flat 1, 46, Emperor's Gate, Kensington, W. 'Phone: Regent 4945. [9391

*Spare Parts.*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3609

B.S.A. Specialists.—All spares by return.—County Cycle and Motor Co., Broad St., Birmingham. [4677

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all B.S.A. spare parts always in stock. Write for free spare part list, stating year of manufacture. [0750

### Calthorpe.

CALTHORPE-J.A.P. 2¾h.p., 1920, 2-speed, perfect; £45.—Clark, 7, Exhibition Road, S.W.7. [7838

CALTHORPE 1921 Combination, actually in stock for immediate delivery; cash or deferred terms; place your orders with the Caltborpe specialists.—Burlington Motors, Ltd., Clapham Common, S.W.4 'Phone: Brixton 2417. [0509

### Campion.

2¼h.p. 1914 Campion-Precision, 2-speed, running order, £10.—Hammond, Waterloo Rd., Shepton Mallet. [9066

£28 or near offer.—1915 2¾h.p. Campion-Jap, Sturmey-Archer 3-speed, kick start, hand clutch, lamps, etc., good running order, bargain.—Field, Steeple Aston, Oxford. [9464

### Chater-Lea

WAUCHOPE'S, 9, Shoe Lane, London.—1922 Chater-Lea; agents all models; supplied on easy terms or exchange. [9972

IMMEDIATE delivery all models 1922 Chater-Lea motor cycles; stamp for catalogue.—H. Beardwood, 147, Burlington St., Liverpool. [9851

CHATER-LEA, 2¾h.p., 1921, disc wheels, lamps, horns, all accessories, splendid condition; bargain, £45; low mileage, 600.—Apply, 61, Golden Lane, before 6. [9068

### Cleveland.

CLEVELAND, new 3h.p., 2-speed, clutch, K.S.; £48. Drummond 3½in. treadle s.c. lathe, with s.c. attachment, and Indian "Scout" combination wanted.—70, West Hill, E. Putney. [9795

### Clyno.

WAUCHOPE'S, 9, Shoe Lane, London.—2¼h.p. 1919 Clyno, 2-stroke; £35. [9973

CLYNO Combination, 6h.p., 1917, insured, must sell; 47 gns.—129, Larkhall Lane, Clapham. [9232

5-6h.p. Clyno Combination (equal new); £90 wanted; 2-stroke.—Hammond, Waterloo Rd., Shepton Mallet. [9065

1917 Clyno, 2-stroke, 2-speed, clutch, all on, good condition, not done 200 miles since overhaul by makers; £30 or near offer.—Parfitt, Holly House, Peasedown, nr. Bath. [9133


# An Opportunity for Keen Buyers.

**A FEW**

## SPECIAL BARGAINS

**Motor Cycling DRIVING GLOVES.**

**Made of the best quality soft leather. Could not be purchased even on to-day's slump prices at double the price.**

**4/9** Per Pair. POSTAGE **6d.** Extra.

**BEST QUALITY HEAVY CARRIER STRAPS.**

**Made from superior quality leather by one of the largest saddle manufacturers. 30in. long and 1 in. wide. Price the set as shown.**

**1/6** PER PAIR POST FREE

**SPECIAL LINE OF IGNA PLUGS.**

Mica, single point metric ½ in. reach. The material and workmanship of these plugs are perfect to ensure engine efficiency.

**2/-** Original Price 4/6.

**LEATHER JERKINS.**

**Made from superior quality tan leather. Very soft and pliable. Lined and double stitched. Can be worn over or under your overcoat. Could not be produced, even on the present slump prices at less than 30/- each. Stock is not large and when cleared cannot be repeated.**

**10/-** each. Postage 1/- extra.

*All these bargains are sent on 7 days approval against remittance.*

ORDER THE WAY — *London's Leading Tyre House* — ELITE RUBBER Co. LTD Tyre Specialists — 264-266, VAUXHALL BRIDGE ROAD, S.W.1. — *'Phone: Victoria 6553-4.*


## MOTOR CYCLES FOR SALE.

### Clyno.

1917 Clyno Combination, 3-speed, K.S., electric lighting, windscreen, perfect; 52 gns.—17, Rufero Rd., Harlesden, N.W.10. [9431

1917 Clyno 5-6h.p. Combination, excellent condition, four detachable wheels, tax paid to end of year; £58.—248, Bentley Rd., Doncaster. [9477

6h.p. Clyno Combination, 1917; sidecar new 1920, good mechanical condition; £70; nearest offer.—Davies, 10 B, Hut, Beaufort, Breconshire. [9781

1921 Clyno, 2-stroke, 2-speed, fully equipped, as in excellent condition; an unrepeatable bargain at £45 cash.—The Layton Garages, 30, Holywell St., Oxford. [7811

1917 Clyno Combination, K.S., 3 speeds, spare wheel, best tyres, quantity spares, Tan-Sad, fine condition; £65 or near offer.—Evans, Grocer, Lambourst, Kent. [9561

CLYNO 6h.p. Combination, coachbuilt sidecar, 3 speeds, all-chain drive, totally enclosed, clutch kick start, detachable and interchangeable wheels and spare, very good tyres all round, outfit is in exceedingly good condition throughout, any trial and examination; £50.—R. Watson, Victoria Rd., Aldeburgh, Suffolk. [9831

*Spare Parts.*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing [3611

### Connaught.

1922 Connaughts from stock.—J. C. Pickering, Mardol, Shrewsbury. [8591

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Connaught motor cycle. [9971

CONNAUGHT 2½h.p. 1921 model, Lucas lamps and horn; £45. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7521

1922 2¾h.p. Connaught; £45; we have one only 1921 shop-soiled model; £39.—Write or call W. & H. Motor Co., Ltd., 287, Deansgate, Manchester. [9351

CONNAUGHTS.—All 1922 Models in stock; limited number of shop-soiled and secondhand machines from £30; extended payments arranged; trade supplied.—Connaught Depot, 111, Great Portland St., W.1. 'Phone, Langham 1968. [9321

### Cotton.

COTTON-VILLIERS 1921, as new, 2½h.p., 2-speed, sports model, discs and accessories, must sell; 39 gns.; cost £75.—After 7 p.m., Brown, 11, Ellerby St., Fulham. [9591

COTTON-BLACKBURNE, 2½h.p., 1922, patent triangulated frame; 62 gns.; kick start, clutch, £3 extra, in stock; trade supplied; official agents.—Lenz Bros., Saagley Rd., Catford. [9321

### Coulson.

COULSON-BLACKBURNE 1920-21 2¾h.p., taxed, spring frame, all accessories, perfect condition, 49 gns.—63, Devonshire Rd., Merton. [9431

COULSON 1921 T.T. 350 c.c. Super Sports J.A.P., close ratio, 3-speed, really hot; £65.—Clark, 7, Exhibition Rd., S.W.7. [9881

COULSON-BLACKBURNE, 1921, S.A., 3-speed, K.S., tax paid, fully equipped; £53. Exchanges; cash either way.—49, Well St., Hackney. [9751

EXCEPTIONAL Bargain.—Brand new 4h.p. Coulson-Blackburne, spring frame, Moss gears, clutch, kick starter, horn, tools, licensed; £85.—40, Wellington Rd., St. John's Wood, N.W.8. [9191

### Coventry Eagle

1914 Coventry-Eagle, 3¾h.p., sporty single, lamps, horn, tax paid 1922, good condition; £32.—Malyon, Burnham, Bucks. [9581

1922 Coventry Eagle; prices from 44 gns. upwards.—Write for illustrated lists to W. & H. Motor Co., Ltd., 287, Deansgate, Manchester. [9341

COVENTRY EAGLE Combination 3½h.p. Abingdon, S.A. 3-speed, speedometer, Tan-Sad, Millford sidecar with Cameo windscreen, and luggage grid, Dunlop Magnum tyres, P. and H. acetylene lamps; mileage 2,000, very smart, new condition; £95.—The Cottage, Mulgrave Rd., Sutton. [9141

### Coventry Victor.

COVENTRY VICTOR.—The perfect flat twin engine. Before deciding on your new mount, get our list for 1922, showing Coventry Victor motor cycles fitted with this famous 5-7h.p. engine. Also our special offer of demonstration machine. The last word in motor cycle design and construction.—The Coventry Victor Motor Co., Ltd., Coventry. [0521

### Diamond.

DIAMOND 1922.—Latest models in stock.—Pickering, Shrewsbury. [8591

1921 Diamond-Jap, 2½h.p. Enfield 2-speed, brand new, and only slightly shop soiled; current list price £57/10, accept £45 cash.—The Layton Garages, 30, Holywell St., Oxford. [8971

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Douglas.

THE Morris Garages, Oxford.—All Douglas models in stock, including sports. [9297

ALL Douglases.—A trial order only is requested.—Gibb, Gloucester. 'Phone: 852. [8121

1916 2¾h.p. 2-speed Douglas, perfect; £30.—24, Balliol Rd., North Kensington. [9641

DOUGLAS, 2¾h.p., late model, renovated like new; £30.—17, Heaton Rd., Mitcham. [9589

1916 2¾h.p. Douglas, just overhauled; £32; exchange Scott.—99, Park Hill, Clapham. [9948

1921 Douglas, 2-speed, scarcely used, complete with lamps and horn; 60 gns.—Springett, Billericay, Essex. [9204

DOUGLAS 1920 4h.p. Combination, fully equipped, new condition; £90.—Clark, 7, Exhibition Rd., W.7. [7839

1917 Douglas Combination, renovated throughout, very smart, licensed; 59 gns.—67, Fernlea Rd., Balham. [9951

h.p. Douglas, 2-speed, equipped, genuine, trial; £33. —S. Miller, Devonshire Cottages, Barrow Hill, Chesterfield. [9190

h.p. Douglas Combination, late model, all accessories; £59/10; exchange.—73, Windermere Rd., South Ealing. [9812

1920 Douglas Combination, 4h.p., like new, any trial; £65.—Ralph, 7, Cambridge Place, Norfolk Sq., W.2. [9264

£50.—1920 2¾h.p. Douglas, 3-speed, kick start, clutch, splendid condition.—Brockbank's, 58, Lord St., Southport. [9854

BARGAIN, 1916 2¾h.p. Douglas, new tyres, 30/- paid, all on, perfect; £34.—362, Albert Rd., North Woolwich. [9374a

1915 2¾h.p. Douglas, 2-speed, all on, Tan-Sad, tax paid, splendid condition; £37/10 or near offer. Houchin, below.

1915 2¾h.p. Douglas, 2-speed, all on, overhauled; £32/10.—Houchin, 14, York Grove, Peckham, S.E.15. [9429

DOUGLAS.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Pound St., Ealing. [7228

LATE 1920 4h.p. Douglas Combination, lavishly equipped, any trial; £75.—Dawe, 216, Portobello Rd., N. Kensington. [9690

DOUGLAS 1920 2¾h.p., 3 speeds, clutch, kick starter, lamps, Cowey horn, new condition; £55.—6, Solon Rd., Brixton. [1006

THE New Six Douglas Combination, fully equipped; £165; delivery from stock.—Gibb, Douglas Depot, Gloucester. 'Phone 852. [9808

1920 Douglas, 2¾h.p., 3-speed, tax paid, insured, spares, leg shields, Tan-Sad, etc; £65.—Davies, 2, Wood St., Woolwich. [9584

DOUGLAS.—Bamhers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7237

DOUGLAS, 2¾h.p., 2-speed, excellent tyres and condition, £30; also, single 2-stroke, £17.—66, Perry Vale, Forest Hill Station, S.E. [9501

1919 Douglas, 2¾h.p., 2-speed, complete, lamps and horn, guaranteed good condition; £45.—Moffat, Douglas Expert, Yeovil. 'Phone, 50. [8236

DOUGLAS 1917 2¾h.p., enamel, plating, mechanism splendid condition, equipped; £38.—30, Crystal Palace Park Rd., Sydenham. [9554

DOUGLAS, 4h.p. Combination, new frame, lamps, discs, Klaxon, first-rate condition, any trial; £55.—261, Mitcham Lane, Streatham. [9819

DOUGLAS 2¾h.p. 1916, £30; 1914, £28, tax paid; also 1915 ladies' K.S., £25; all perfect order, good tyres.—198, Sheen Lane, Mortlake. [9246

DOUGLAS 1915 2¾h.p., 2-speed, thoroughly overhauled, new parts, guaranteed; 35 guineas.—45, Heath Hurst Rd., Hampstead, N.W.3. [9611

1916 Douglas, 2¾h.p., 2-speed, buffer forks, lamps, etc., condition and tyres excellent; £35.—18, St. Edmund's Terrace, St. John's Wood. [9655

DOUGLAS, 1921, 2¾h.p., 3-speed, clutch and kick start; £72.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7533

1917-18 Douglas, 4h.p. combination, Douglas coachbuilt sidecar, bulbous back, fully equipped, perfect order; 49 gns.—4, Falmouth Rd., Boro', S.E. [9410

1919 Douglas 2¾h.p. 2-speed, equipped, just overhauled, date and condition guaranteed; £42/10. Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [9931

DOUGLAS.—25 motor cycles, 4h.p., dismantled for renovation, engines, gear boxes, frames, handlebars, front fork blades, top shackles, head stem, lock nuts, back forks, back stays, wheels, magnetos, carburetters, control levers, kick start quadrant, clutch sprocket, and quantity of new spares; price £27.—Penton Place Garage, 15, Penton Place, W.C.1. [9408

## SPECIAL OFFER TO CLEAR

**As we shall be shortly marketing a new Motor cycle Cover of our own design, we are anxious to dispose of our present stock of various makes at the following special prices. *These covers are not old W.D. stock but special clearance lines which we have purchased at slump prices.***

| Size. | Make. | Our Price. | List Price. |
|---|---|---|---|
| 26×2 | **Englebert,** Passenger, rub. std. | 17/6 | 53/- |
| ,, | **Englebert,** Touring rub. stud | 15/- | 46/3 |
| 26×2¼ | **Bates,** special hvy, wired-on | 30/- | 38/6 |
| ,, | **Bates,** special heavy, beaded | 28/6 | 40/- |
| ,, | **Beldam,** combination | 25/- | 66/9 |
| ,, | **Clincher,** de Luxe, heavy | 24/6 | 35/6 |
| ,, | **Hutchinson,** T.T. rub. stud | 23/- | 36/6 |
| ,, | **Wood Milne,** extra heavy or | | |
| ,, | **Spencer Moulton,** ex. heavy | 22/6 | 50/- |
| ,, | **Englebert,** Touring rub. stud. | 15/- | 49/- |
| ,, | **Wood Milne,** special heavy | 13/6 | 53/9 |
| 26×2½ | **Avon,** Tricar rubber stud | 26/- | 40/3 |
| ,, | **Hutchinson,** rubber stud | 25/- | 49/6 |
| ,, | **Clincher,** de Luxe, ex. heavy | 24/6 | 47/9 |
| ,, | **Avon,** Stonehenge | 21/- | 33/3 |
| 26×2½ (×2½ ( | **Bates,** special heavy | 39/6 | 56/- |
| | **Heavy,** rubber studded | 27/6 | — |
| 26×2½ | **Goodrich,** safety tread | 40/- | 52/6 |
| ,, | **Bates,** special heavy | 29/6 | 56/- |
| ,, | **Clincher,** de Luxe, heavy | 25/- | 28/3 |
| 26×3 fits 650×65 rim. | **Englebert,** Passenger rub. stud | 32/6 | 64/9 |
| 28×3 | **Goodrich,** safety tread | 48/- | 65/- |
| ,, | **Englebert,** Racing, ex. heavy | 36/6 | 70/6 |
| ,, | **Elite,** grooved retreads in sound casings | 17/6 | — |
| ,, | **Elite,** plain retreads | 12/6 | — |
| 29×3 oversize | **Dunlop,** extra heavy | 57/6 | — |
| 28×3 | | | |
| 650×65 | **Goodrich,** safety tread | 40/- | 67/6 |
| ,, | **Clincher,** de Luxe, ex. heavy | 30/- | 64/6 |
| ,, | **Soly,** rubber nonskid | 21/6 | 63/- |
| 700×80 | **Goodrich,** safety tread | 48/- | 69/- |

**TUBES** — BEST QUALITY GUARANTEED.

| | | | | | |
|---|---|---|---|---|---|
| 21 × 2, | 4/6 | 26 × 2, | 4/9 | 26×2½, | 6/3 |
| 23 × 2, | 7/6 | 26 × 2½ ×2½, | 7/9 | 28×3, | 8/9 |
| 23 × 2½, | 7/9 | | | 700×80, | 10/- |

**BELTS** — IN STANDARD LENGTHS

| | ½ in. | ⅝ in. | ¾ in. | 1 in. | 1½ in. |
|---|---|---|---|---|---|
| Bates Avon .. etc., per foot .. | 1/- | 1/5 | 1/9 | 2/- | 2/6 |

**These Special Clearance Lines are sent on 7 day's Approval against remittance. CARRIAGE PAID.**

ORDER THE ELITE RUBBER CO. LTD. Tyre Specialists
The Name — The Firm
WAY
LONDON'S LEADING TYRE HOUSE
264-266, VAUXHALL BRIDGE RD., VICTORIA, S.W.1
AND AT
44, SURBITON ROAD, KINGSTON-ON-THAMES
(Please address all orders to Vauxhall Bridge Road)
TELEPHONE—VICTORIA 6333 & 6334
OUR AGENT IS THE PILLAR-BOX

## MOTOR CYCLES FOR SALE.

### Douglas.

31 GNS.—1916 Douglas 2¾h.p., 2-speed, all lamps, etc., tyres good, recently overhauled, perfect.—30, Belsize Park Gardens, Hampstead. 'Phone: 5590. [1075

DOUGLAS New 1921 model, 2¾h.p., 2-speed, all-on model; £72/10.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone: Avenue 5548. [0068

DOUGLAS 4h.p. Combination 1920, good accessories, grand engine, tyres excellent, bargain; £85; accept half down.—Bunting's Exchange, Wealdstone. [9757

1921 2¾h.p. Douglas, 3-speed, kick starter and clutch, lamps, horn, and tax paid, very carefully used, as new; £65.—Argyle, 35, Milton Rd., Oxford. [9090

DOUGLAS.—Get your new 1922 Doug. from George Smith's, Clapham Junction, 268-270, Lavender Hill, 1 min. station. Cash, easy payments, exchanges. [9355

1920 Douglas 2¾h.p., 3-speed, clutch, kick start, fully equipped, licensed 1922, condition as brand new; £58.—37, Canterbury Rd., Ball's Pond Rd., Dalston, N.1. [9965

£35.—Douglas 1916 2¾h.p., 2-speed, overhauled, fitted with footboards and all accessories.—Smith's, 86, Chalk Farm Rd., opposite Chalk Farm Tube Station. [1012

DOUGLAS, 1920, 2¾h.p., condition indistinguishable from new, new Lucas lighting set, etc., bargain; £50.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [9810

1920½ Douglas Lightweight Combination, clutch, 3-speed, lamps, splendid condition, two anywhere, licensed; £75; weekdays.—Barlow, Coventry Rd., Market Harborough. [1052

ELI CLARK can give you good service both in new machines and spares; try me. I may be useful to you. The pioneer agent for Douglas motors.—196, Cheltenham Rd., Bristol. [0016

DOUGLAS, 2¾h.p., 1921, 3-speed, K.S., clutch, fully equipped, practically unused and indistinguishable from new; £70.—132 High Rd., East Finchley. Phone: Finchley 2338. [9815

DOUGLAS, June, 1920, 4h.p. Combination, all lamps, aluminium discs, tax paid year, any trial; £90, offer; exchange Triumph, Sunbeam.—Hiley, 1,502 Pershore Rd., Stirchley, Birmingham. [9024

DOUGLAS 1921, 2¾h.p., 3-speed, fully equipped, unscratched, guaranteed; £55; exchange late combination.—13, Grenfell Rd., Notting Hill (near Latimer Rd. Station, Metropolitan). [9221

£11!—1911 2¾h.p. Douglas, Bosch magneto, lamps, and generator, spare carburetter, tools, good tyres and belt, perfect, ride away.—1, Marguerite Villas, Molesey Rd., Hersham, Surrey. [1074

£58.—Douglas 1918 4h.p. Combination, just overhauled, re-enamelled, and plated, new sidecar, two new tyres and lamps; will give 30 miles trial; tax paid; no offers.—61, Grand Parade, Harringay. [9463

FOR Douglas 1922 2¾h.p. and 4h.p. combinations, get in touch with us; we are North London agents and give you the best of service; all spares in stock; no W.D. rubbish.—Jones Garage, The Broadway, Muswell Hill. [0786

BARKER'S Motors can supply all Douglas 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6419

1920 Douglas 4h.p. Combination, electric lighting, Cowey speedometer, windscreen, back seat and luggage grid, guaranteed perfect condition, owner buying car; £85.—Apply 164, Cranbrook Rd., Ilford, Essex. 'Phone: Ilford 379. [9664

DOUGLAS 2¾h.p. 1914, 1916, 1917, 1918, 1920, 2- and 3-speed models; prices from £25, all in splendid condition.—Gordon R. Croxford, The Motor Cycle House, 461, Upper Richmond Rd., East Sheen, S.W.14. 'Phone: Richmond 322. [8783

SULINA Garage, the Douglas Specialists.—We can supply reconditioned 2¾h.p. and 4h.p. Douglases on easy payments, one-fifth deposit only required.—The Sulina Garage Co., New Park Rd., Brixton Hill, S.W.2. See our advertisement under Parts and Accessories. [7893

DOUGLAS Agents.—1922 models in stock; lamps, horn, licence holder, pump, tools etc., included in following prices: 2¾h.p., 2-speed, £75; 2¾h.p., 3-speed, clutch, and kick starter, £90; 4h.p. Combination, £135; 3½h.p. Sports, £130; 6h.p. Combination, £165. In stock. Easy payment terms and exchanges arranged; write for particulars.—Herbert Robinson, Limited, Green St., Cambridge. [9900

WAUCHOPE'S, 9, Shoe Lane, London.—1922 New Douglas, 2-speed, £75; 2¾h.p. 3-speed model, £90; 4h.p. solo, £110; 4h.p. sidecar combination, £135; 3½h.p. sports model, £130; 6h.p. light sidecar combination, £165; accessories on all models, no extra; also second-hand 2¾h.p. 1921 model, 3 speeds, clutch, £65; another, 1915, 3-speed model, £45; easy terms and exchange, trade supplied.—'Phone: Holborn 5777. [9975

## MOTOR CYCLES FOR SALE.

### Douglas.

£20 Down secures a New 1922 2¾h.p. Douglas, complete with lamps, horn, and licence holder, etc. Balance in 12 monthly payments of £5/5. Price includes full insurance.—Full particulars from Herbert Robinson, Limited, Green St., Cambridge. [9901

*Spare Parts:*

DOUGLAS Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3611

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Complete illustrated Douglas lists, post free. [8833

BANISTER and Botten for Douglas Spares; immediate delivery, new, half makers' price; list free. 341, Upper St., N.1. [9660

DOUGLAS 2¾h.p. unused pistons complete, 9/6; connecting rods, 15/6; sprockets engine, 3/-; gear box, 4/6; crankshafts as new, 25/-; layshafts, 14/6; screwed sleeves, 8/6. Stamp for list; reductions for quantities; postage extra.—A Knapton, 30, Crystal Palace Park Rd., Sydenham. [9555

### Dunelt.

DUNELT, Solo or Combination, the best value for 1922, delivery from stock.—Sam Missin, Cottingham, Hull. [5441

### Edmund.

1921 Edmund-Blackburoe, 2¾h.p., spring frame, Burman 2-speed, clutch, and K.S., brand new; present list price £85, offered at £62/10 cash.—The Layton Garages, 30, Holywell St., Oxford. [8971

1921 Edmund-Jap, 2½h.p., spring frame, Enfield 2-speed, disc wheels, brand new, shop soiled only; current list price £75, accept £60 cash.—The Layton Garages, 30, Holywell St., Oxford. [8972

### Enfield.

THE Morris Garages, Oxford.—All Enfield models in stock. [9298

TRY Julians of Reading for Enfield lightweight or combination. [1087

£65.—Enfield Combination, 6h.p., taxed, insured.—Fraser, 62b, Much Park St., Coventry. [9807

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

WAUCHOPE'S, 9, Shoe Lane, London.—2¼h.p. Royal Enfield, 1920, tax paid; £42/10. [9989

3h.p. Twin Enfield, Binks, Bosch, splendid order; £40, offers.—Biles, Witchampton, Wimborne. [9181

1921 Royal Enfield 2¼h.p., 2-speed, unused, shop-soiled; £55.—The Morris Garages, Oxford. [9293

LATE 1917 6h.p. Enfield Combination, splendid order; £85.—Carnforth Motor Co., Carnforth. [9133

1918 Enfield Combination, 8h.p. Colonial model; a bargain, £85; like new.—Ross, 86, High Rd., Lee, S.E. [2162

ENFIELDS.—1922 Combinations and 2-speed lightweights in stock.—Clifford Motories, Eastwood, Notts. [8829

NEW 1921 8h.p. Enfield Combination and accessories; £130.—Bounds, Garage, 223, High Rd., Kilburn. [9225

1919 3h.p. Enfield, M.A.G. engine, condition as new; £40.—Premier Motor Co., Astoo Rd Birmingham. [1033

1921 Enfield, 2¼h.p., kick start, lamps, horn, tax paid; £42.—59, Mantua St., Clapham Junction, S.W.11. [9276

1921 Enfield Combination, magdyno, windscreen, pillion, tax, insurance; £125.—Vicarage, Gillingham, Kent. [9324

ENFIELD 1910, enclosed magneto, B. and B., real genuine old 'bus; £12.—Curtis, 82, Mill Hill Rd., Acton, W.3. [9755

1921 Enfield, 2-stroke, 2 speeds, practically new; accept £38 cash.—Allen, 10, Freshford St., Earlsfield, S.W.18. [9705

ENFIELD 1921 Combination, Magdyno, hood, screen, etc.; £120.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9882

1921 Enfield Combination, brand new; £129; exchange.—Shepherd, Enfield Highway. 'Phone: Waltham Cross 31. [0801

NEW 1922 Enfield Combinations in stock, Magdyno; £158.—Enfield Agent, Bounds, Garage, High Rd., Kilburn. [9227

ENFIELD 1921 8h.p. Combination, fully guaranteed, shop-soiled only; £125.—P. J. Evans, John Bright St., Birmingham. [9847

ENFIELDS, all models; exchanges, highest prices given.—Harry Nash, Contracting Agent, 355, King St., Hammersmith. [9827

ENFIELD 1919 2¼h.p. Lightweight; £36.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [8997

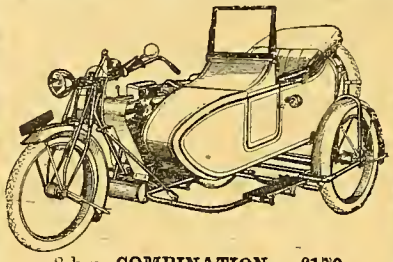
ENFIELD Combination 1919 8h.p., dynamo lighting, overhauled, in excellent condition; £90.—The Morris Garages, Oxford. [9302

1921 Enfield Combination, Lucas Magdyno lighting, Tan-Sad; £116.—Hillier (side bell), 9, Wallingford Av., North Kensington. [9496

# KEEN BUYERS

NOTE THE FOLLOWING

## 1922 MATCHLESS



8 h.p. COMBINATION £170

## SOLO.

| | | |
|---|---|---|
| 1922 | 2¾ h.p. A.J.S. ..... | £85 |
| 1922 | 2¾ h.p. ENFIELD .... | £55 |
| 1922 | 2¾ h.p. DOUGLAS.... | £75 |
| 1922 | 2¾ h.p. DOUGLAS.... | £90 |
| 1922 | 3½ h.p. ARIEL .... | £87 10s. |
| 1922 | 4¼ h.p. B.S.A. ..... | £107 |
| 1922 | 3½ h.p. NORTON, 16H | £115 |
| 1922 | 3½ h.p. ZENITH-BRADSHAW .... | £113 |

## COMBINATIONS.

| | | |
|---|---|---|
| 1922 | 7 h.p. A.J.S. ..... | £175 |
| 1922 | 8 h.p. MATCHLESS Sports ..... | £165 |
| 1922 | 8 h.p. ENFIELD .... | £140 |
| 1922 | 8 h.p. ENFIELD dynamo..... | £158 |
| 1922 | 3½ h.p. ARIEL ..... | £125 |
| 1922 | 6/7 h.p. ARIEL .... | £140 |
| 1922 | 4 h.p. DOUGLAS .... | £135 |
| 1922 | 4¾ h.p. B.S.A..... | £142 |

ANY MAKE SUPPLIED.

## SECOND-HAND MACHINES.

| | | |
|---|---|---|
| 1921 | 3½ h.p. N.U.T., shop soiled..... | £90 |
| 1921 | 2½ h.p. FEDERAL, 2-speed..... | £40 |
| 1920 | 4 h.p. NORTON, 3-sp. | £80 |
| 1920 | 4 h.p. TRIUMPH (Reno) ..... | £68 |
| 1920 | 3½ h.p. ROVER, 3-sp. | £70 |
| 1920 | 3½ h.p. P. & M., 2-sp. | £65 |
| 1920 | 4¼ h.p. B.S.A. comb... | £90 |
| 1920 | 2¼ h.p. LEVIS ..... | £29 |
| 1920 | 2¾ h.p. DOUGLAS, 3-speed..... | £55 |
| 1920 | 2½ h.p. METRO-TYLER | £50 |
| 1919 | 3½ h.p. ROVER comb. | £80 |
| 1915 | 2¾ h.p. DOUGLAS dyn. | £37 |

MANY MORE.

**WANTED your present machine in part exchange. HIGHEST MARKET VALUE ALLOWED.**

**DEFERRED PAYMENTS.**

**R. BAMBER & Co., Ltd.**

**2, EASTBANK ST., SOUTHPORT.**

'Phone 607.

## MOTOR CYCLES FOR SALE.

### Enfield.

ENFIELD.—Bambers are official agents; exchang a speciality; deferred payments.—2, Eastba St., Southport. 'Phone: 607. [72

£67/10.—Enfield 6h.p. Combination, late model, a cessories, screen, tax paid 1922, splendid runnin order.—8, High St., Waudsworth. [96

3h.p. Enfield, engine just overhauled, new pistons a rings, all on, last, take two anywhere; £35.- Webb, 81, Lichfield Rd., Stafford. [97

ENFIELD 3h.p. 2-speed model; £30. Exchanges. Newnham Motor Co., 223, Hammersmith Rd W.6. 'Phone, Hammersmith 80. [75

1920 Enfield 2¼h.p., 2-stroke, 2 speeds, date a condition guaranteed; £37/10.—Goad, 12 Maida Vale. 'Phone, Hampstead 1353. [99

ENFIELD 1922 models for immediate delivery E changes.—Newoham Motor Co., 223, Hamm smith Rd., W.6. 'Phone, Hammersmith 80. [75

1922 Enfield Combination, dynamo lighting, bra new; £158. Easy payments, 4% extra. Premier Motor Co., Aston Rd., Birmingham. [10

ENFIELD 1922, brand new 8h.p. Combination, stock; £140; easy payments arranged; lists fre —Wilkins Simpson, Opposite Olympia, London. [92

ENFIELD Combination, late model, small mileag hood, speedometer, tax paid; call and have tria bargain; £75.—Snow, Laurel St., Dalston, E.8. [99

LONGMAN BROS., Bood St., Ealing. Telephone 689. Sole official district agents.—All Roy Enfield models. Cash, exchange, or deferred payment [57

ENFIELD, exceptional bargain, 1922, 2-stroke 2-speed, tax paid, driven 50 miles, fully equipped £46.—Deotist, 216, Portobello Rd., North Keosington. [85

ENFIELD 1922, brand new 2¼h.p., 2-speed, kic starter, in stock; £57; easy payments arranged lists free.—Wilkins Simpson, Opposite Olympia, Lo don. [92

1921 Enfield Lightweight 2¼h.p., 2-stroke, 2-speed fully equipped, not done 200 miles; a re bargain, £42/10.—The Layton Garages, 30, Holywe St., Oxford. [78

1920 Enfield 3h.p. Twin, 2-speed, K.S., ne Klaxoo, large head lamp, tools, licensed, pe fect; sacrifice £57.—Gill, 27, Elm Crescent, Kingsto on-Thames. [93

ENFIELD, all 1922 models in stock for immedia delivery; cash and exchanges, easy paymen 4 per cent. extra.—P. J. Evans, John Bright St Birmingham. [98

1921 8h.p. Enfield Combination, dynamo lightin Vickers engine, Easting, Tan-Sad, many spare £125.—Crys-Pal Garage, 86, Church Rd., Upper No wood, S.E.19. [96

1920, November, 8h.p. Enfield Maydyno Combina tion, Cowey speedometer, Tan-Sad Nohurt sa dle and pillion, Easting windscreen; £125.—Bates, Union St., Bedford. [98

1921 Enfield 8h.p. Magdyno Combination, sho soiled only, originally costiog £183, and no offered at £137/10 for cash.—The Layton Garage 30, Holywell St., Oxford. [99

ENFIELD Combination, 6h.p., speedometer, Tan-Sa windscreen, luggage grid, P.H. lighting, sundr spares, thoroughly overhauled; £85.—Wilmott, 9 High Rd., Leyton, E.15. [94

1919 Enfield Combination, Lucas, dynamo lighting just been thoroughly overhauled, tank an sidecar re-enamelled; £90; offers.—Howich, Keeper Corner, Burstow, Surrey. [95

1921 8h.p. Enfield Combination, Vickers engine Lucas lamps, mileage 600, carefully handled, un scratched; £107.—Monro, 41, Queensborough Terrace Bayswater. Gerrard 4227. [95

1920 Enfield Combination, 8h.p. J.A.P., Luca dynamo lighting, Lucas horn, tax paid, jos overhauled by Enfield's, spleudid outfit; bargain £117/10.—365, King St., Hammersmith. [98

1919 (August) 6h.p. Enfield Combination, speedo meter, lamps, tools, windscreen, also box ca rier, all in fine condition, suit tradesman; £90.- Palmer, 8, Finden Rd., Shepherd's Bush. [90

3h.p. Twin Enfield, about 1917, 2-speed, all chain good condition, good tyres and tools, about 10 m.p.g., accumulator lighting; £35 or nearest offer.- Seen at Basset's Garage, Seal, Sevenoaks. [90

1921 Enfield Combination, as new, speedometer spring handle-bars, windscreen, numerous acce sories, spare new tyre and tube, tax paid.—G. Meacham, 31, Thursby Rd., Northampton. [81

1921 Enfield as new, 2-stroke, 2-speed, kick start lamps, horn, tax paid, iosured until 1923 £45.—Gordon R. Croxford, The Motor Cycle House 461, Upper Richmond Rd., S.W.14. 'Phone: Richmond 322. [10

WAUCHOPE'S, 9, Shoe Lane, London.—192 3¼h.p. Royal Enfield, 2-stroke, £55; 3¼h.p. Royal Enfield with kick starter, £57; 8h.p. Roya Enfield sidecar combination, £140; dynamo lighting £158; 8h.p. 1917-18 combination, £95; easy terms and exchange; trade supplied.—'Phone: Holborn 677 [99

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Levis.

EVIS 1916 Popular, engine and magneto overhauled, lamps, horn, W.S.R. jet; £28.—Armson, mworth Rd., Polesworth, Tamworth. [9268

EVIS, 2½h.p. Enfield, 2-speed gear and clutch, all-chain drive, engine just overhauled, licensed 1922; 30.—Syringa, Hainault Rd., Romford. [9443

OR 1922 Levis, the most reliable and neatest 2-stroke upon the road, send or call at Jones rage, The Broadway, Muswell Hill, N.10. [0788

EVIS, late 1921, Sturmey-Archer gears, hand clutch, perfect, complete accessories, 1922 tax; gns.—Fersfield, Westbury Rd., New Malden. [9618

EVIS. All 1922 models. Send your orders along; catalogues with pleasure.—Sam E. Clapham lotors), 27, Stockwell St., Greenwich, S.E.10. [7943

EVIS, 2¼h.p. Baby, T.T. Model, condition as new, new rear tyre and belt, complete, tax id; £27/10.—Andrews, Devonshire Garage, Buxton. [1050

AUCHOPE'S, 9, Shoe Lane, London.—New 1922 Levis, 2-stroke, £48; 3-speed model, £58; kick art, £2 extra; easy terms and exchange; list on plication. [9977

ISTRICT Levis Agents for Clapham, Balham, Streatham, Tooting, Mitcham, Wimbledon, and andsworth. Models in stock.—Knight Traction Co., per Tooting Rd., S.W. 'Phone: Streatham 2390. [0778

FEW slightly soiled 1921 Levis Models at greatly reduced prices, single gear from £42; 2-speed, tch, from £50. Write for special clearance bargain t.—Premier Motor Co., Aston Rd., Birmingham. [6926

*Spare Parts:*

EVIS Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7220

ERBERT ROBINSON, Ltd., Green St., Cambridge.—All Levis parts in stock. Complete list st free. [8836

ODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Levis spare parts ways in stock. Write for free spare part list, stating ar of manufacture. [0753

### Martin.

0 Guincas.—O.H.V. Martin-Jap 4h.p.,, Philipson pulley, very fast, lamps, horn, tools, etc.—iith's, 86, Chalk Farm Rd., opposite Chalk Farm ibe Station. [1014

### Martinsyde

h.p. 1921 Martinsyde Combination, new; £120.—Neale, 19, Sturges Rd., Ashford, Kent. [9572

ARTINSYDE 3½h.p. Sports 1922, equipped, little used; £85.—Worters, Ship Yard, Weybridge. [9158

N Stock, Martinsyde 3½h.p. Sports Model; £110.—D. and S. Autocar Co., 33, The Parade, Golders een. [9856

EW Martinsyde 1921 Combination, full guarantee; £125.—D. and S. Autocar Co., 33, The rade, Golders Green. [9857

ARTINSYDE.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—tys, 8, Bond St., Ealing. [7229

OR a 1922 Martinsyde 3½h.p. Sports or 6h.p. Combination get in touch with the North London ents, Jones Garage, The Broadway, Muswell Hill, 10. [0789

ARTINSYDES, 1922 models, Solos and Combinations. Immediate delivery from the authorised ents. Liberal exchanges.—Newnham Motor Co., 223, mmersmith Rd., W.6. 'Phone, Hammersmith 80. [7512

ARTINSYDE Combination (September, 1921), luxurious outfit, little used, maker's screen, rn, acetylene head, electric side and rear, Tan-Sad, rror, etc.; £128; receipts shown.—Whiting, 68, igham Vale, Tulse Hill. [9517

XCEPTIONAL Opportunity, 1922 6h.p. Martinsyde Combination, interchangeable wheels, special gine, sidecar fitted, hood, screen, used only London-ster, gold medal, cost £185; sell £125.—37, Arlington Rd., Surbiton. [9679

### Matchless.

RY Julians of Reading for your Matchless. Exchanges. [1089

919 8h.p. Matchless Combination, perfect; £75.—24, Balliol Rd., North Kensington. [9647

ATCHLESS West of England Agent is Gibb, 100, Northgate, Gloucester. 'Phone: 852. [8124

ATCHLESS, 1920, perfect, fully equipped; £105, no offers.—253, Munster Rd., Fulham. [9596

921 Matchless Combination, model H.; £120, as new.—24, Balliol Rd., North Kensington. [9646

ROSS, Effingham Sq., is agent for Matchless motors for Rotherham; 1922 models in stock. [9917

ASSELL, 1a, Bloomfield Rd., Plumstead, for anything Matchless. Deferred payments. Spare parts. [6144

ATE 1917 M.A.G. Matchless Combination, in very good order; £75; Sussex.—Box 8806, c/o *The otor Cycle.* [9703

**H. F.**

# EDWARDS

**& CO.**

**50, HARRINGTON ROAD, SOUTH KENSINGTON, S.W. 7**

Telephone: KENSINGTON 3709.

teg to announce that they have opened additional premises at

## 101, GT. PORTLAND ST. W.

and offer the following

## COLOSSAL BARGAINS AT BOTH BRANCHES

### Several BRAND NEW 1921 5 h.p.

## ZENITH SPORTS

**Usual Maker's Guarantee.**

**Price 73 Gns. (list price £110)**

**5 h.p. countershaft models 85 Guineas**

*Coachbuilt Sidecar fitted to any of the above models 17 Guineas extra.*

**NEW 1922 MODELS IN STOCK AT BOTH BRANCHES.**

**MATCHLESS,** all Models.
**NEW IMPERIAL,** Model 3.
**RALEIGH,** light weight.
**TRIUMPH,** Ricardo.

**SECOND HAND COMBINATIONS.**

| | | Guineas. |
|---|---|---|
| *1921 | **P. & M.** Demonstration Model, equipped, as new | 109 |
| *1921 | **B.S.A.,** Model H2 and No. 3, sidecar Magdyno, speedometer, screen, leg-shields, licensed.... | 125 |
| 1920 | 3½ h.p. **ARIEL** comb., speedometer, lamps, etc. | 80 |
| *1920 | **MATCHLESS,** electric lighting, speedometer, horn, screen, spare wheel, excellent condition, licensed 1922 | 106 |
| *1919 | **A.J.S.,** electric lighting, speedometer, splendid order | 93 |
| *1921 | 3½ h.p. **NORTON,** 16 H. Montgomery Sports Sidecar, Maximum-hand-Speedometer, Lucas Lamps | 107 |

**SECOND HAND SOLOS**

| | | |
|---|---|---|
| *1921 | 2¾ h.p. **LEVIS SPORTS,** Lucas lamps | 37 |
| *1921 | 4 h.p. **VERUS BLACKBURNE,** 3-speed, as new | 75 |
| 1921 | 4 h.p. **VERUS BLACKBURNE,** 3-speed, mechanical oil pump, ace discs | 63 |
| 1921 | 2¾ h.p. **BABY TRIUMPH,** equipped | 40 |
| *1921 | **A.B.C.,** Lucas lamps and horn, new condition | 72 |
| *1916 | 2¾ h.p. **DOUGLAS,** equipped, fine condition | 37 |
| 1921 | **INDIAN SCOUT,** speedometer, fully equipped, licensed for year, as new | 82 |
| 1919 | **DOUGLAS,** 2¾ h.p. 2-speed (not W.D.), equipped, licensed for year, excellent order | 40 |
| *1915 | **SCOTT,** fully equipped, good order | 33 |
| 1920 | **NEW IMPERIAL,** 2¾ h.p. J.A.P. 2-speed, fully equipped, year's licence, excellent condition | 43 |

**LIGHT CARS**

| | | |
|---|---|---|
| *1921 | **AERO MORGAN,** M.A.G. Engine, Ace Discs, etc., Mileage 200. As new | 170 |
| *1920 | **GRAND PRIX MORGAN,** dynamo lighting, speedometer, clock, mirror, discs, hoodcover | 132 |
| 1920/21 | **GRAND PRIX MORGAN,** fully equipped, discs, etc. | 120 |

**DEFERRED PAYMENT OR EXCHANGES**

Wanted Solos and Combinations, cash waiting.

All machines starred are to be seen at Great Portland Street, the remainder at South Kensington.

## MOTOR CYCLES FOR SALE.

### Matchless.

MATCHLESS 8h.p. Combination, windscreen, etc., good condition, any trial; £47 lowest.—Geiger, 24, Mansfield Rd., Gospel Oak, London, N.W.3. [1094

1914 Matchless 6h.p. Combination, excellent order, all accessories; what offers?—Hayward, High St., Tewkesbury. [9119

MATCHLESS 1921 H. Dynamo Combination, hood, screen, new, unregistered; 130 gns.—54, Caval Rd., Mortlake. [9248

1919 Matchless Combination, good condition, all accessories, complete, D.A. lighting; £72.—Box 8814, c/o *The Motor Cycle.* [9905

MATCHLESS, 1921 Standard, Magdyno, very fully equipped, taxed 1922, perfect; 135 gns.—Clark, 7, Exhibition Rd., S.W.7. [9891

MATCHLESS.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7239

MATCHLESS 1922, brand new, Model H.2, in stock; £170; easy payments arranged; lists free.—Wilkins Simpson, Opposite Olympia, London. [9244

SHEFFIELD Agent for Matchless. All models in stock. Sporting models £130, standard models £170.—A. J. Stacey, 12, Ecclesall Rd., Sheffield. [0574

MATCHLESS 1922 Models from stock; exchanges or easy payments; trial run any time.—Agents, R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7840

MATCHLESS Combination late 1920, Magdyno, hood, many spares, tax paid Dec., insurance end Oct.; £135.—Brandon, Blakemere, Totnes, Devon. [8104

1920 Matchless Combination, spare wheel, Lucas Magdyno lighting, unscratched; £105.—Hillier (side bell), 9, Wallingford Av., North Kensington. [9495

MATCHLESS 8h.p. Combination, Model H2, Magdyno, speedometer, hood, screen, spares, tax paid; £170, offer.—Box No. 8784, c/o *The Motor Cycle.* [9210

MATCHLESS Victory Combination, tip-top condition, Easting, Tan-Sad, spare wheel, tools, and accessories, any trial or examination, tax paid; £100.—110, Queen's Rd., S.E. [9599

MATCHLESS 1921 Sports Combination, fully equipped, spare wheels, etc.; £140, cash only.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone: Avenue 5548. [0069

MATCHLESS, 6h.p. Twin J.A.P., coachbuilt, overhauled, reupholstered and repainted, Tan-Sad; exchange for later model and £25; sell £65.—A. O., 16, Spenser Rd., Herne Hill, S.E. [9096

MATCHLESS Combinations.—Book your orders with Ross, 86, High Rd., Lee, S.E., or 'Phone Lee Green 744 for immediate delivery of 1922 models. Exchanges and gradual payments arranged. [2163

1921 Model J Matchless Sports, M.A.G. engine; machine is brand new, and only very slightly shop soiled; list price £130; accept £110 cash.—The Layton Garages, 30, Holywell St., Oxford. [8973

SEE Our Showrooms.—New and second-hand models always in stock. We are the recognised Agents. Finest Matchless repair and spares service.—Knight Traction Co., Upper Tooting Rd., S.W.17. [0759

MATCHLESS models for immediate delivery. We allow top prices for machines taken in exchange. Let us quote you.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7508

1916 Matchless-M.A.G. 7-9h.p. Coachbuilt Combination, tax paid December, 1922, 3-speed countershaft, fine running order, but rough appearance; sacrifice, 45 gns.—37, Elmbank Gardens, Barnes. [9170

WAUCHOPE'S, 9, Shoe Lane, London.—1922 Matchless, all models, sports twin solo, £130; sports sidecar combination, £160; spring-frame model, £170; sidecar combination, 2 seater, £175; 10h.p. commercial carrier combination, £170; easy terms and exchange; write for specifications. [9978

BARKER'S Motors, The South-West London "Matchless" Agents and Service Station.—1922 models at list prices. We give an insurance policy against mechanical breakdown for 12 months free. All "Matchless" spares in stock. Open from 9 a.m. until 8 p.m.—194, Balham High Rd., S.W.12. [6417

MATCHLESS Service Depôt. 'Phone Greenwich 751. Now is the time to order your new model from the agent to serve you best.—Sam E. Clapham, (Motors), Greenwich. Send your propositions along. Cash, exchange, easy terms. Agent for all leading makes. See Motor Cycling adverts.—Sam E. Clapham (Motors), 27, Stockwell St, Greenwich, S.E.10. [7942

*Spare Parts:*

MATCHLESS Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7221

MATCHLESS Spare Parts in stock.—Barker's Motors, 194, Balham High Rd., S.W.12. Open from 9 a.m. until 8 p.m. [6418

### Maxim.

MAXIM Dalm 3h.p. E.I.C. Magneto, Amac Carburetter, Hutchinson tyres, Albion, 2-speed, complete with accessories, absolutely new; £46/10.—224, Pentonville Rd., N.1. [9552

## MOTOR CYCLES FOR SALE.

### Merton.

£40.—Real Special Model Merton, 1918, very fast, winner medals, nickel, etc., as new, Phillipson, lamps; sole reason selling owner ordered abroad.—45, Lyndhurst Rd., Peckham. [9467

### Metro.

METRO-TYLER, 1920, discs, etc., accessories; £35.—Athron, South Elmsall, Pontefract. [9168

METRO-TYLER 2¾h.p. late 1920, excellent condition, very small mileage, licensed; £24.—17, Sussex Rd., New Malden, Surrey. [9550

### Minerva.

£12.—3½h.p. Minerva, m.o.v., magneto ignition, good running order.—King, Egrove Farm, Oxford. [9716

MINERVA, 4h.p., perfect running order, £14; smart sidecar, £7/10,—17, Heaton Rd., Mitcham. [9590

MINERVA 3½h.p., small tank, low variable pulley gear, Bosch magneto, excellent order; £18, or offers.—Porter, 110, Etherstone St., Leigh, Lancs. [9274

### Mohawk.

MOHAWK Cycles, new or second-hand, at lowest possible prices for cash or easy payments.—Mohawk Cycle Co., Ltd., Alexandra Rd., Hornsey. [4793

### Monopole.

MONOPOLE.—We are South London agents for these machines, and are anxious to introduce the high-speed sports model fitted with new 350 c.c. J.A.P. engine, price 73 gns., which we actually hold in stock; the range of models comprises 2 strokes from 43 gns. to 6h.p. combination 152 gns.; write for catalogue.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton (½ minute from Brixton Skating Rink). 'Phone, Brixton 1292. [1030

### Moto-Reve.

MOTO-REVE 2¾h.p. Twin, excellent running order; £10/10.—17, Heaton Rd., Mitcham. [9587

*Spare Parts:*

MOTO-REVE Spares for all models, also repairs, overhauls.—Motor Supply Co., Sole Concessionaires, 223A, High St., Lewisham, S.E. [9092

### Motosacoche.

1914 Motosacoche Combination, 3½h.p. Twin, M.A.G., 2-speed, lamps, tax paid; £35.—Stubbington, Hatfield Broad Oak, Essex. [9567

### New Hudson.

NEW HUDSON DE LUXE, fully equipped; £45.—Ratcliffe Bros., 200 Gt. Portland St., W.1. [9877

NEW HUDSON, 2¾h.p. J.A.P., 3-speed, clutch, engine overhauled; £25.—Clark, 7, Exhibition Rd., S.W.7. [9890

2¼h.p. New Hudson, 2-stroke, 2-speed, complete with lamps, etc., particulars on applications; £30:—T. Weller, Tenterden, Kent. [9109

1921 New Hudson, 2¾h.p., 2-stroke, unscratched, £5 access., taxed December, 1922; 36 gns.—31, Nursery Row, Walworth, S.E.17. [9458

NEW HUDSON Combination, 4h.p., 1919 model, clutch, 3 speeds, kick start, in splendid condition; £98 or near offer.—Greenlands, Farley, Oakamoor, North Staffs. [9236

1921 New Hudson Lightweight,—condition as new, unpunctured, an ideal lightweight; would consider exchange for light car in good condition only.—45, Alexandra Rd., Chesterfield. [9189

£47.—New Hudson Combination, 5-6h.p. twin, Sturmey 3-speed countershaft, clutch, kick starter, 1921 Amac, Cancelet sidecar, lamps, licence, accessories, splendid order.—63, Solon Rd., Brixton. [1007

NEW HUDSON 1922 Models, 2¼h.p., Popular and De Luxe 2-speed lightweights, 4½h.p. solo and combination, 10h.p. light car, all models in stock, immediate delivery; send for lists; deferred payments arranged. All spares stocked.—New Hudson Dept., 45 Gray's Inn Rd., Holborn, W.C.2. [5150

### New Imperial.

1921 2¾h.p. New Imperial, 2-speed, as new; £50.—Wilkinson, Malton. [9802

2¾h.p. New Imperial, 2-speed, excellent order and appearance; £28.—4, Nelson Rd., Caterham. [9466

NEW IMPERIAL 2¾h.p. 1921, slightly used only; £57.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9876

1920 New Imperial-Jap Combination, 8h.p., well equipped; £80.—24, Balliol Rd., North Kensington. [9645

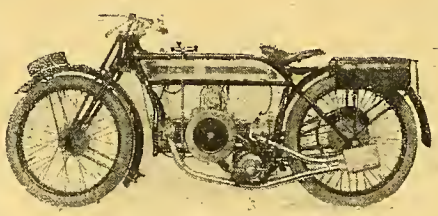
NEW IMPERIAL, 2¾h.p., late model, 2-speed, equipped, perfect; £32.—Crown Garage, Weybridge. [9671

NEW IMPERIALS, all models; exchanges, highest prices given.—Harry Nash, Contracting Agent, 365, King St., Hammersmith. [9829

1914 New Imperial-Jap 2¾h.p., 2-speed, all accessories, excellent condition; £27/10, offers.—8, Henniker Rd., Stratford, E.15. [9515


# THE FINEST AND LARGEST DISPLAY OF 1922 MODELS

**Outside of Olympia may now be seen at our depots in Edinburgh and Glasgow.**



**The following makes in great array:—**

**DOUGLAS, ENFIELD, NORTON, MATCHLESS, INDIAN, P. & M., N.U.T., NEW IMPERIAL, B.S.A., LEVIS, VELOCETTE, O.K., DIAMOND, QUADRANT, ZENITH, SIRRAH, McKENZIE LIGHTWEIGHT and MORGAN RUNABOUTS.**

**We have still a limited number of brand new shop-soiled models in stock. Those have just been still further reduced, and we can openly say with confidence, that the value is unequalled, as we have determined to clear remaining 1921 stock Regardless of Cost.**

**Send for our List, and to save time and ensure your own satisfaction, please give us an indication of your exact requirements so that we may advise you in a selection.**

# ALEXANDER'S

**113-115, Lothian Rd., EDINBURGH.**

**272-274, Gt. Western Rd., GLASGOW.**


## MOTOR CYCLES FOR SALE.

### New Imperial.

NEW IMPERIAL 2¾h.p., 1916, 2-speed, lar horn, mileage under 2,000, tyres good; £34 Whale, 20, Finchley Rd., N.W.8. [93

NEW IMPERIAL-J.A.P., 2¾h.p., countershaft, ty as new, lamps, real bargain; 29gns.—Lloyd, Kin Arms Yard, High St., Wandsworth. [96

1922 New Imperial; immediate delivery of model; easy payments 4% extra.—Prem Motor Co., Aston Rd., Birmingham. [1

NEW IMPERIAL-J.A.P. 2¾h.p., 2-speed, ty new, engine just overhauled, fully equipp photo.; £25.—128, London Rd., King's Lynn. [9

NEW IMPERIAL-J.A.P., 8h.p., 1919, Burnau, speed, K.S., Binks, re-enamelled, splendid dition; £75.—Write, 47, Snells Park, Edmonton, [9

NEW IMPERIAL 1922 models; 1, £63, and 2, £ in stock, immediate delivery.—Elce, Ltd., 15 Bishopsgate Ave., Camomile St., E.C.3. 'Pho Avenue 5548. [0

2¾h.p. New Imperial, 2 speeds, just been th oughly overhauled, new cylinder complete, piston fitted; £35; offers.—Howich, Keeper's Cor Burstow, Surrey. [9

NEW IMPERIAL Combination 8h.p. Twin J.A late 1919, lamps, horn, tools, windscreen, spee meter, Tan-Sad, 1922 tax, any trial; £85.—You 1238, Coventry Rd., Yardley, Birmingham. [1

1921 New Imperial, 2¾h.p., 2-speed, clutch, start, lamps, horn, cyclometer, licensed 19 practically unscratched, perfect throughout, mile 600; £54 or near offer.—Hale, 11, Upton Park, Slo (D). [9

NEW IMPERIAL-J.A.P. Combination, 3½h Jardine 2-speed, countershaft, speedome lighting set, windscreen, good tyres, smart app ance, good condition; £60.—Galpin, 35, Milton Co Rd., New Cross, S.E.14, London. [9

WAUCHOPE'S, 9, Shoe Lane, London.—1922 Imperial-Jap, 3-speed model, £63; 3-sp kick start and clutch model, £69; 2¼h.p. I.O sports model, all chain, 3 speeds, £80; easy te and exchange; write for list. [9

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., C bridge.—All New Imperial engine parts in st Lists free. [8

### New Scale.

NEW SCALE-PRECISION 3½h.p., 1920, 2 spe clutch, kick starter, good order, oversize ty £40.—Richardson's Garage, Rosslyn Hill Mews, Ha stead. [9

### Norton.

PREMIER Motor Co. for 1922 Nortons:

NO. 9, 3½h.p., belt drive, £80; 16H 3-speed £115; Big 4, 3-speed, £120; easy payments extra.—Immediate delivery from the Norton Speciali The Premier Motor Co., Aston Rd., Birmingham. [0

NORTON.—Latest 1922 models from stock.—Pic ing, Shrewsbury. [8

TRY Julians of Reading for Nortons; you never regret it. [1

NORTON 3½h.p T.T.; £45, quick sale.—Darke Warwick Pl., Paddington, W.9. [9

NORTON T.T. Model, 1917, fully equipped, paid; £45.—Ingle, Hilton, Hunts. [9

NORTONS.—All models. If you require one pulls, try Gibb, Gloucester. 'Phone: 852. [8

NORTONS, 1922.—Immediate deliveries of models.—Clifford Motories, Eastwood, Notts. [8

1920 (November) B.R.S. Norton, 68m.p.h., must £65, exchanges.—Kent's, 417, Lord St., So port. [9

3½h.p. 1916 Norton, direct drive, accessories, condition; £42; exchange Douglas.—Crook, fords, Horley. [9

NORTON, Model 9, 1921, new machine, unrid tax not paid; offers.—Andrews, Devon Garage, Buxton. [

1921 4h.p. Norton Combination, as new, all perfect, must sell, snip; £100.—Greaves Sheldon Rd., Cricklewood, London. [

NORTON 16h.p., new July last, excellent condi very fast, recently overhauled by O'Donov Lucas, tax, etc.; £90.—11, Frankfurt Rd., H Hill. [

NORTON 1922 3½h.p. Sports model, 16H., del from stock; £115.—Elce, Ltd., 15-16, Bis gate Ave., Camomile St., E.C.3. 'Phone: Av 5548. [

NORTON Big Four Sporting Combination, late small mileage, electric lighting, speedom £105.—Seen by appointment, 72, High St., Tunb Wells. [

75 m.p.h., 3½h.p., 3-speed Norton, April, 1 done 2,000; Ricardo piston, specially bala engine, racing gear box, silverplated tank, tax (cost £160); £98.—77, St. Mary's Rd., Sheffield [

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH 1920 3½h.p. Lightweight, condition as new, lamps, horn, licence paid; £50.—Tippen, Marden, Kent. [9063

BRANDISH and Sons, Coventry, for Trimmphs.—Triumph-Ricardo in stock.—W. Brandish and Sons, Coventry. [1043

3½h.p. Trinmph, 2-speed gear and free engine; £25 lowest.—Geiger, 24, Mansfield Rd., Gospel Oak, London, N.W.3. [1095

TRIUMPH Junior, new 1921 model, at greatly reduced price.—Eagles and Co., 275, High St., Acton, London. [9738

TRIUMPH Combination, 1918, all on, tax paid, excellent order, would separate; £65.—70, Baring Road, Lee, S.E. [9597

TRIUMPH, 1911 3½h.p. complete less engine, perfect; £14; accessories cheap.—58, Cromwell Rd., Upton Park. [949-

BABY Triumph, 2-speed, lamps, in perfect condition, ride away; 35 gns.—35, Shepherd's Bush Rd., Hammersmith. [9580

TRIUMPH Combination, 1914, 3-speed, any trial; £48; take lightweight part.—57 Kenbury St., Camberwell, London. [9484

1918 Trinmph, electric lamps, speedometer, enamel, plate, as new, trial; £65.—The Haven, 120, Sutherland Rd., Croydon. [9803

TRIUMPHS, all models; exchanges, highest prices given.—Harry Nash, Contracting Agent, 365, King St., Hammersmith. [9826

D. and S. Autocar Co. are agents for Triumph motor cycles, cash or deferred, or exchange.—33, The Parade, Golders Green. [9858

F.O.C.H. have 1922 Triumph, Model H, in stock; also 1921 solo and 1918 combination.—5, Heath St., Hampstead (near Tube). [9309

£25.—4h.p Triumph, 1914 T.T., 3-speed, clntch, splendid condition, all on.—G. Rawkins, 16a, Victoria Rd., Clapham, S.W.4. [9371

3 TRIUMPHS, 4h.p., countershaft, perfect running order, smart appearance; £45.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [9924

TRIUMPH 2-stroke, slightly soiled only, equipped, £45; 4h.p. sports, only run 200 miles, £58.—Clark, 7, Exhibition Rd., S.W.7. [9002

TRIUMPH, 1907, cylinder ground and new piston, with rod and valves, 70/-.—Kendall and Co., Engineers, Stoney Stanton Rd., Coventry. [9940

TRIUMPH 1919, just overhauled, fully equipped, new sidecar, Sandum hood, screen, Lucas lamps, insured; price £92.—3, Henry St., W.C.1. [9279

TRIUMPH 1922 all-chain models in stock. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7511

TRIUMPH, 1919, countershaft, T.T. bars, long exhaust, all on, tax paid, bargain; £65.—W. Avis, 53c, Hanworth Rd., Hounslow, Middlesex. [9370

TRIUMPH 1921, chain drive, in new condition, Lucas electric, roomy sidecar; £90; accept hal down or exchange.—Bunting's, Wealdstone. [9758

TRIUMPH, 4h.p., countershaft, 3-speed, hand clutch, Miller lamp set, new belt, nice order; £57/10.—261, Mitcham Lane, Streatham. [981

TRIUMPH, 4h.p., 1918, re-conditioned absolutely as new, new Dunlops, chain, belt, wheels, lamps, horn; £68.—14, Devonshire Rd., Forest Hill. [9739

LONGMAN BROS., Bond St., Ealing. Telephone 689. Official district agents.—All Triumph models. Cash, exchange, or deferred payments. [5787

TRIUMPH Countershaft Combination, Canoelet sporting coachbnilt sidecar, fine condition, equipped; 58 gns.—5, Wycombe Rd., Tottenham. [9270

20 Guineas.—Clutch model Triumph, complete with lamps and horn.—Smith's, 86, Chalk Farm Rd., opposite Chalk Farm Tube Station. [1013

1918 Triumph Combination, brand new sidecar, screen, lamps, beautiful condition, guaranteed; £67.—37, Canterbury Rd., Ball's Pond Rd., Dalston, N.1. [9964

TRIUMPH, £30; new engine fitted to crank-case by Triumph Co., single speed, straight frame, thoroughly reliable, tax paid.—Guinness, New College, Oxford. [9129

TRIUMPH C.S. and Paragon light detachable C.B. sidecar, lamps, horn, tax paid, all new Dunlops, good going order; £70.—8, Netherton Grove, Chelsea, S.W.10. [9188

£59/10.—Triumph Combination, 1918, 4h.p., speedometer, lamps, mechanical born, any trial.—Smith's, 86, Chalk Farm Rd., opp. Chalk Farm Tube Station. [9742

TRIUMPH.—Get your new 1922 Triumph from George Smith's, Clapham Junction, 268-270, Lavender Hill, 1 min. station. Cash, easy payments, exchanges. [9356

TRIUMPH 1920 3½h.p. Sports models (2) in new condition, accessories; £55 each.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7522


# MANUFACTURERS' SPECIAL OFFER.
## Extraordinary Bargains!

### WATERPROOF MOTOR CYCLE SUIT (Fig. 1)

Fawn double texture material, interlined rubber, seams cemented and taped wind cuffs, wind gusset in overalls, and claspfasteners. Guaranteed waterproof.

**SUIT COMPLETE**

**35/-**

**POST YOUR ORDER EARLY**
Any of these garments sent carriage paid. Prompt despatch.
**OUR GUARANTEE.** Money refunded in full if not thoroughly satisfied.

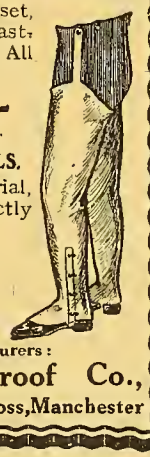
### WATERPROOF TRENCH COAT 25/-

(Fig. 2) Fawn material, rubber lined wind cuffs, guaranteed waterproof.

Fig. 2

**SEAT-LESS** Trousers Fawn double texture material rubber interlined, wind gusset, & clasp fasteners. All sizes.

**18/-** per pair.



**WATERPROOF OVERALLS.**
Double texture material, clasp fasteners, perfectly waterproof.

per **15/-** pair.

*If you cannot call, send money with breast measurement and height.*

Actual Manufacturers:
**Martin Waterproof Co.,**
**208, Oldham Rd., New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### Triumph.

1920, late, 4h.p. Triumph-Gloria Combination, speedometer, Lucas lamps, in perfect condition; £90.—Hillier (Side Bell), 9, Wallingford Ave., North Kensington. [9494

TRIUMPH Countershaft, thoroughly overhauled, all accessories, tax paid, in perfect condition; £65.—Richardson, 5, Rosslyn Mews, under 42, Rosslyn Hill, Hampstead. [9218

£58 1918 Triumph Combination, countershaft, 3-speed, mechanically perfect, condition excellent, fully equipped, seen any time.—156, Stockwell Rd., Brixton, S.W.9. [9524

TRIUMPH, 1922 models in stock; immediate delivery; models H. and S.D.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone: Avenue 5548. [0075

3½h.p. Triumph 1914¾, 3-speed, clutch, new cylinder, lamps, horn, Tan-Sad, all accessories, tax and insurance paid, excellent condition; £38.—33, Venner Rd., S.E.26. [9147

TRIUMPH Combination, 4h.p., 1918, real bargain, gentleman going abroad must sell; £60.—Seymour, c/o Marlborough Motor Works, Ltd., 20, Finchley Rd., N.W.8. [9394

1921 3½h.p. Triumph, single-speed model, special forks, absolutely brand new, shop-soiled only; offered at the bargain figure of £65.—The Layton Garages, 30, Holywell St., Oxford. [7815

GENUINE 1914 T.T. Triumph, 3-speed, clutch, excellent condition, new tyres, engine recently overhauled, 1922 tax paid, any trial, 2 up; £35.—Skelton, 11, Havana Rd., Wimbledon Park, London. [9178

TRIUMPH 1913 coachbnilt Combination, 3-speed, clutch, Binks, lamps, generators, grey roomy sidecar, in perfect running order; £40; exchange late Triumph.—Bottomley, South Park, Reigate. [9060

1921 Triumph-Junior 2¼h.p., 2-stroke, 2-speed; list price £65; this machine is brand new, and is offered at the special price of £55.—The Layton Garages, 30, Holywell St., Oxford. [7816

38 GNS.—1914 Trinmph Combination 4h.p., 3-speed, clutch, and K.S., lamps, horn, tax, speedometer, etc., just been renovated throughout.—0, Belsize Park Gardens, Hampstead. 'Phone: 5590. [1077

£25.—Triumph 3½h.p., adjnstable pulley, variable jet, Bosch magneto, new belt and lamp set, perfect order, in daily use, 2 up. No policemen, dealers, or five-for-two's.—56, Leander Rd., Thornton Heath. [9536

TRIUMPH 4h.p., 3-speed, large Sandum sidecar, Easting, spring footboards, speedometer, completely equipped, splendid condition, inspection invited; £85.—82, Woodgrange Avenue, North Finchley. [9946

£67/10 4h.p. Triumph Combination, late 1918, just completely overhauled, condition guaranteed perfect throughout, all accessories Easting; exchange considered.—Langford's, 37, Cricklewood Broadway, N.W.2. [9477

BARKER'S Motors can supply all Triumph 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6420

TRIUMPH 4h.p. Combinations. We always have several of these outfits in stock at attractive prices. Exchanges. List on request.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [7524

69 GNS.—1919 4h.p. Triumph Combination, 3-speed, clutch, K.S., Easting, excellent appearance, guaranteed sound, any trial, equipped, year's licence; after 5 p.m.—20, Treen Avenue, Hogger's Corner, Barnes. [9549

3½h.p. Triumph, 3-speed gears, just overhauled, insurance July, new tyre, lighting set, hooter, pump, tool kit, new Binks, all excellent condition, any trial; for sidecar or solo.—E. L. Manwaring, Martin's, Marden. [9108

1921 Triumph Combination, lamps, accessories, Easting, hood, luggage grid, Klaxon, spring footboards, tax paid 1922, original tyres unsoiled, unscratched, guaranteed as new; £112.—51, Upper Richmond Rd., Putney. [9335

1920 Triumph Combination, coachbuilt, 3-speed countershaft, kick start, clutch, Tan-Sad, Easting screen, lamps, accessories, tax paid, perfect condition, trial; £78, bargain.—128, Mackenzie Rd., Beckenham, Kent. [9151

TRIUMPH 4h.p. renovated 1921, new Lucas Magdyno (cost £26), oversize 28×3 tyres, Dunlop extra heavy front, Avon Combination back (new), Cowey speedometer, ammeter, spares; £75.—Webb, 4, Elm Vale, Fairfield, Liverpool. [9195

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Triumphs, 4h.p., all chain models, 3-speed £115; 4h.p. chain and belt, £105; 2¼h.p., 2-stroke model, £65; 4h.p. combination, £145; easy terms and exchange.—'Phone: Holborn 5777. [9985

TRIUMPH Model, W.D.B., purchased March, 1921. Dunhill triangular chassis sidecar, Easting screen, electric lighting, tax paid; £85, or nearest offer; can be seen at Reed's Garage, 168, Hither Green Lane, Lewisham, S.E.13 [9565

## MOTOR CYCLES FOR SALE.

### Triumph.

19 14 Triumph, Special T.T. Model, overlap cams, single gear, adjustable pulley, engine just overhauled, new parts fitted, new mudguards, tyres and appearance good, fully equipped, exceptionally fast, any trial; nearest £35.—Lockwood, 64, Cromwell Avenue, Highgate, N.6. [9142

TRIUMPH 4h.p. Countershaft, T.T. bars, Lucas gas and electric lighting, Swan sporting sidecar, nearly new tyres, spare belt, chain, tube, Cowey speedometer, Klaxon, small mileage, in tiptop condition, knee grips; £95; exchange Norton, higher power, or light car.—4, Stratford Sq., Nottingham. [9834

TRIUMPH Agents.—1922 models in stock. 4h.p., belt and chain drive, £105; all-chain drive, £115; 2¼h.p. 2-stroke, £65; 3½h.p. fast roadster, £120. In stock. Easy payment terms and exchanges arranged.—Catalogues and full particulars from Herbert Robinson, Limited, Green St., Cambridge. [9902

19 21 Triumph (issued new October), model H, fitted with Watsonian sidecar, fully equipped with lamps and horn, indistinguishable from new, very small mileage, originally cost £142; offered at the bargain price of £108, cash. Several other current model Triumph combinations available at below bargain prices.—The Layton Garages, 30, Holywell St., Oxford. [8967

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

HERBERT ROBINSON, Ltd., Green St., Cambridge.—The Triumph Experts. Complete illustrated lists post free. [8841

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [7392

TRIUMPH Spares in stock; illustrated list free; orders despatched by return.—W. Brandish and Sons, Triumph Garage, 625, Foleshill Rd., Coventry. [1044

TRIUMPH Official Service Agent in West of England. Every part in stock.—Moffat, Town Hall Garage, Yeovil. 'Phone, 50. Traders please note. [8239

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Tyler.

MUST sell, reliable 2-speed Tyler-Precision Lightweight, equipped, overhauled; best offer secures.—16, Wooler Rd., Weston-super-Mare. [8762

### Trump.

WAUCHOPE'S, 9, Shoe Lane, London.—Trump-Jap, 2¾h.p. engine, £60; easy terms and exchange. [9986

### Velocette.

19 22 Velocette.—Immediate delivery of any model from Premier Motor Co., Aston Rd., Birmingham. [8965

VELOCETTE 1919 2½h.p. Sports, speedometer, electrics, new tyres; £35.—Worters, Ship Yard, Weybridge. [9159

WAUCHOPE'S, 9, Shoe Lane, London.—All 1922 Velocette models supplied on easy terms and exchange. [9987

19 21 Velocette, 2-speed, 2-stroke, 2¼h.p., mechanical lubrication, machine is brand new; a genuine bargain at £52/10 cash.—The Layton Garages, 30, Holywell St., Oxford. [8975

ORDER Your Velocette from G. H. Tucker, Redcliffe Hill, Bristol, carriage paid to any address in England; your mount taken in part payment for one of these wonderful machines.—'Phone: 4042 Bristol. [5204

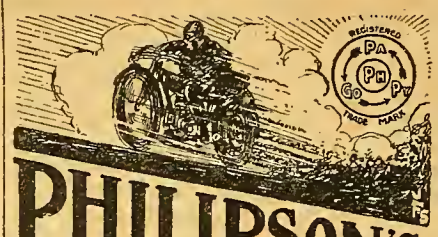
ASTOUNDING value.—Special offer of brand new 1921 model D.2 Velocette, latest improvements, 2-speed, chain drive; £55. Carries maker's full guarantee; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [7923

### Verus.

19 20 Verus 2-stroke, 2 speeds, clutch, kick start, date and condition guaranteed; £38/10.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [9933

19 20 2¾h.p. Verus-Blackburne, 2-speed, clutch, lamps, horn, disc wheels, etc., first-class order, tax paid; £55.—Shepherd, Enfield Highway. 'Phone, Waltham Cross 31. [0799

19 20 Verus 2¼h.p., single-speed, good as new, electric light outfit, good accessories, suit overalls (5ft. 6in.), insurance, tax paid; lot cost over £75; £45; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [1020



# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

# Philipson's Latest!

## GOVERNOR PULLEY AND VARIABLE GEAR COMBINED WITH FLY WHEEL for all two-stroke engines.

**The Lightest, Speediest, and Simplest Gear on the market for direct belt-driven 2-stroke and 4-stroke engines.**

ONLY adds 2 lb. (approx.) to the weight of a 2-stroke machine, and 6 lb. (approx.) to the weight of a 4-stroke machine.

**During the past week we have fitted the following machines:**

| 2-stroke. | 4-stroke |
|---|---|
| LEVIS, | TRIUMPH, |
| O.K., | NORTON, |
| CALTHORPE, | ROVER, |
| VILLIERS, | SINGER, |
| etc. | COULSON-BLACKBURNE |

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

Our Flywheel Governor converts a single-speed 2-stroke into a speed model *—the lightest speed model on the market!*

**THE ONLY GEAR WITH NO END THRUST.**

**IMMEDIATE DELIVERY.**

*Send for Illustrated Booklet.*

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

*What is your make? Write us*

REDUCED PRICE £7 7 0 Carriage Paid.

**Philipson & Co., Ltd.,**

Astley Bridge, BOLTON, Lancs.

(Established over 50 years.)

Grams. "Safety, Bolton." 'Phone: 147 Eagley.

## MOTOR CYCLES FOR SALE.

### Vindec.

VINDEC-SPECIAL Combination, 3½h.p., magnet 2-speed gearbox, clutch, kick, lamps, almost gift 26 gns.; easy terms.—Wandsworth Motor Exchange Ebner St., Wandsworth (Town Station). [978

### Wolf.

WOLF Motor Cycle, 2½h.p. Villiers engine, good condition.—Roberts, 9, Saxon St., Wrexham. [953

### Wooler.

WOOLER, brand new, never been used; accept £6 for quick sale.—Arm, Watling St., Wellington Salop. [106

19 21 Wooler, 2¾h.p., equipped, mileage 500, absolutely as new, tax paid; £49.—56, High St Tooting. [966

19 20 2¾h.p. Wooler, original tyres, perfect, accessories; nearest £40.—c/o Wilkinson Featherbank Lane, Horsforth, Leeds. [926

WOOLER, 2¾h.p., variable gear, mileage 1,100, accessories, purchased May, 1921 (invoice), fine condition; accept £53.—18, Carminia Rd., Balham S.W. [950

WOOLER 1921 2¾h.p., 3-speed, all-chain drive £63; also 1920 Standard Model, £47; exchange.—Newnham Motor Co., 223, Hammersmith Rd., W.6 'Phone: Hammersmith 80. [900

2¾h.p. Wooler, absolutely new condition, 14 m.p.g., licensed 1922, accessories and spares £49, or exchange more powerful twin.—27, Wandle Rd., Wandsworth Common, S.W.17. [974

NEW Wooler, 2¾h.p. flat twin, Brookland Sports model, complete with lamps and horn reduced from £105 to £75; a bargain; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [938

### Zenith.

ZENITH-GRADUA 1919-20 8h.p.; £65.—The Morr Garages, Oxford. [930

ZENITH 6h.p. Sports Model; £38, a real bargain.—East View Chase, Court Gdns., Enfield. [956

19 21 Zenith Sports Models (new); 73 gns.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [988

19 21 Zenith 3½h.p. Bradshaw, Gradua gear, unused shop soiled; £100.—The Morris Garages, Oxford [929

ZENITH-GRADUA 1920 8h.p. Twin J.A.P., excellent order; £90.—The Morris Garages, Oxford. [930

ZENITH Model D Sports, fully equipped; £100.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [987

19 21 Zenith 5-6h.p. Twin Sports, Gradua gear, unused, shop-soiled; £104.—The Morris Garage Oxford. [929

WAUCHOPE'S, 9, Shoe Lane, London.—New 192 Zenith-Bradshaw, £113; easy terms and exchange. [998

£38.—1915 4-5h.p. Zenith Twin, very fast, 1921 re brake, full tax paid.—Brockbank's, 58, Lord St Southport. [985

ZENITH 1920 8h.p. Sports, Swan sidecar, full equipped; £78, bargain.—Clark, 7, Exhibition Rd., S.W.7. [988

ZENITH Brand New 5h.p. Sports Models, guaranteed; £76/13; few only left.—Clark, 7, Exhibition Rd., S.W.7. [988

THE Morris Garages, Oxford.—Prompt delivery all models; Bradshaw Gradua and 5-6h.p. twin Gradua in stock. [930

ZENITH-BRADSHAW 1922 models in stock; £11 liberal exchanges.—Eagles and Co., 275, High St., Acton, London. [973

ZENITH late 1919 3½h.p. Sportiog Single, splendid condition, lamps and horn, any inspection; £5 —Tippeu, Marden, Kent. [906

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, for immediate delivery from stock Zenith-Bradshaw; price £119. [071

19 19 (late) 8h.p. Zenith, excellent condition, with Swan Canoeist sidecar; £65 (solo £55).—Jackson, 54, Victoria Rd., Surbiton. [962

ZENITH-BRADSHAW.—Bambers are official agent exchanges a speciality; deferred payments.—Eastbank St., Southport. 'Phone: 607. [724

LATE 1920 8h.p. Zenith, sports model, lamps, horn tools, perfect condition, any trial; bargain, £75. G. French, 1, Bedford St., Iffley Rd., Oxford. [920

19 20 Zenith 8h.p sports model, fully equipped air in very fine order; accept £75 to clear.—The Layton Garages, 30, Holywell St., Oxford. [995

SPECIAL Sports Zenith, 8h.p., winner many spe events, postage refunded to genuine inquiries £90 or offer.—Howard, Midsomer Norton, Bath. [90

ZENITH 8h.p. 1921 Motor Cycle, as new; cc £130, accept £100 or offer; owner bought lig car.—E. Newham, Toll Gavel, Beverley 'Phone, 22 [93

F.O.C.H. have 1922 Zenith-Bradshaw, 3-speed, a chain, in stock; also 1920 8h.p. countersha combination.—5, Heath St., Hampstead (near Tub [93

## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH 8h.p. Sports Solo 1919, speedometer, lamps, etc., tax paid, new condition; £60; trial, seen any time.—14, Ritherdon Rd., Balham, S.W.17. [9651

ZENITH-GRADUA 6h.p. J.A.P., coachbuilt sidecar, hood, screen, lamps, taxed, little used, perfect order; 49 gns.—35, Shepherd's Bush Rd., Hammersmith. [9579

LOOK! 50 gns. 1919 5h.p. Sports Zenith, accessories, splendid appearance, any trial; don't miss this bargain; exchanges.—Kent's, 417, Lord Street, Southport. [9544

5h.p. Zenith 1921 Sports Model, slightly used, condition as new, exceptionally fast engine; £75.—Kaye Don, Langlands, Kingston-on-Thames. 'Phone, Kingston 3381. [9089

BARGAINS, 8-10h.p. o.h.v. Special Racing Zenith 1915, guaranteed, numerous extras, really hot stuff, absolutely perfect condition, like new, photo, seen, tried; 80 gns.—Below.

UNDER List Price, any model supplied, new, from Zeniths.—Write, Barton, Coln, Fairford. [9111

ZENITH 5-6h.p. Combination, C.B. sidecar, lamps, horns, tools, pillion, excellent condition; £55, bargain.—Wadsworth, Holmhurst, New Wanstead, E.11. [9529

ZENITH-BRADSHAW 1922 all-chain drive models for immediate delivery. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80 [7514

ZENITH Combination, 8h.p., 1920, electric lighting set, a very complete outfit of tools, splendidly fitted-up machine, low mileage; £115.—Whale, 20, Finchley Rd., N.W.8. [9392

SPORTS Zenith, 6h.p., 1919, small mileage, perfect condition, Degory, disc wheels, electric lighting, all accessories; £65; exchange late Triumph.—Timber Hill Cottage, Caterham Valley. [9062

LONGMAN Bros., Bond St., Ealing. Tel., 689.—Sole district Zenith agents, specialists in repairs and tuning. All mode's for immediate delivery. Cash, exchange, or deferred payments. [9909

ZENITH Single, J.A.P., Gradua gear, coachbuilt, lamps, horn, overhauled and enamelled, smart, trial; £45; exchange lightweight, cash.—Ways Green Post Office, Winsford, Cheshire. [9278

5h.p. Zenith, Gradua countershaft, coachbuilt combination, 1914, stored war, latest colours, electric light, excellent condition, any trial; £52.—41, Sedgemere Avenue, East Finchley. [9339

1921 Zenith 8h.p. countershaft Combination, complete all Lucas lamps, equal to new, very little used, many improvements, a very smart outfit; £120.—Harris, 14, Gt. Marlborough St., W.1. [8786

1922 Zenith-Bradshaw in stock for immediate delivery; £118; cash, exchange, or extended payments.—Aller-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0734

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free. Cash deferred or exchanges.—194, Balham High Rd., S.W.12. [6416

1920, 8h.p., countershaft Combination, best sidecar, with grid, electric lighting, Astra dynamo, Cowey horn, and speedometer, really good lot, cost £224, receipt shown, condition guaranteed; £105.—Crys-Pal Garage, 86, Church Rd., Upper Norwood, S.E.19. [9638

ZENITH 8h.p. Sports, October, 1920, delivered January, 1921, mileage under 2,500, frame No. 6,347, complete with P. and H. lamps, horn, and spare new belt, tools, fully licensed, trial any time; £80 or offer.—E. Melton, Brighton Rd., Sutton, Surrey. [9842

1921 Zenith 5h.p Sports model, fully equipped with lamps, horn, speedometer; this machine is a truly excellent specimen of this make, and is guaranteed perfect; offered at the very special price of £75 for cash —The Layton Garages, 30, Holywell St., Oxford. [7817

MR. DEQUIN'S famous 7-9h.p. Zenith-M.A.G. for sale, 1921, in perfect condition, inside and out, complete with all accessories, full description with pleasure, cost nearly £200; accept £100 cash, or exchange 1921-22 close ratio.—Norton, Windermere, London Rd., Twickenham. [9748

ZENITH 8h.p. Countershaft late 1920 model Combination, latest Swan sports sidecar, Avro windscreen, disc wheels, long polished copper exhaust pipe, recently overhauled and guaranteed in perfect condition, new tyres and belt; bargain, £100, view and trial by appointment.—Giles, 11, Fitzroy Square, W.1. [8111

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7222

### Ladies' Motor Cycles.

2h.p. Humber, 3 speeds, all accessories, registered, any trial; £23.—Offington Cottage, Offington Lane, Worthing. [9176

LADY'S Douglas, 1915, 2¾h.p., 2-speed, clutch, kick start, complete, licensed 1922; £40.—Moffat, Douglas Expert, Yeovil. 'Phone, 50. [8237


# MAUDE RUBBER Co.

**58, PRAED STREET, W. 2**

**4484 Padd.**

## ALL GOODS GUARANTEED

**and sent immediately on 7 days' approval against Cash.**

Postage 1/3 single, 1/9 double.

| | | |
|---|---|---|
| 24×2½ | **Clincher de Luxe** ..... | 18/6 |
| 26×2 | **Englebert** Touring. Heavy.... | 19/6 |
| 26×2¼ | **Avon** Rubber-studded. Heavy | 22/6 |
| | **Avon** Stonehenge. Heavy .... | 22/6 |
| | **Wood-Milne** Key-grip. Heavy | 13/6 |
| | **Wood-Milne** Comb. Ex. Hy... | 22/- |
| | **Dunlop** Rubber-studded. Heavy | 27/6 |
| | **Goodyear** Diamond Ex. Hvy. | 25/- |
| | **Firestone** Safety. Ex. Heavy .. | 28/6 |
| | **Bates** 3-ribbed. Extra Heavy.. | 28/6 |
| | **Beldam** Combination. Ex. Hvy. | 24/6 |
| 26×2¾ | **Dunlop** Rubber-studded. Extra Heavy..... | 36/6 |
| | **Bates** 3-ribbed. Extra Heavy.. | 28/6 |
| | **Clincher de Luxe.** Ex. Hy... | 26/6 |
| | **Hutchinson** Rubber stud. Hvy. | 26/6 |
| 26×2¼×2¼ | **Avon** "Stonehenge." Heavy.. | 22/6 |
| | **Avon** Ribbed. Heavy..... | 27/6 |
| | **Goodyear** Diamond. Ex. Hvy. | 25/- |
| 26×2½ | **Wood-Milne** Key-grip. Heavy | 13/6 |
| | **Wood-Milne** Key-grip. Ex. Hvy. | 16/6 |
| | **Goodyear** Diamond. Ex. Hvy. | 25/- |
| | **Hutchinson** Rubber Stud. Hvy. | 26/6 |
| | **Englebert** Passenger. Ex. Hvy. | 22/6 |
| 26×3 | **Englebert** Passenger. Heavy.. | 30/- |
| | **Englebert** Super-reinforced. Ex. Heavy ..... | 35/6 |
| 28×3 | **American** Fisk. Extra Heavy .. | 40/- |
| | **Clipper-Reflex.** Extra Heavy | 35/6 |
| | **McGraw** Car tyre. Ex. Hvy. | 50/- |
| | **Avon** S. studded, Extra Heavy | 37/6 |
| 65×65 | **Wood-Milne** Key-grip. Heavy | 13/6 |
| | **Wood-Milne** Key-grip. Ex. Hvy. | 18/6 |
| | **Englebert** Square Voiturette. Extra Heavy ..... | 26/6 |
| | **Dunlop** Grooved Voiturette. Extra Heavy ..... | 40/- |
| | **Goodyear** Diamond. Ex. Hvy. | 30/- |
| | **Avon** 3-ribbed. Extra Heavy. | 30/- |
| | **Dunlop** S. studded, light car.. | 35/- |
| 700×80 | **Avon** 3-rib Sml. Car. Ex. Hvy. | 40/- |
| | **Dunlop Magnum** Extra Heavy | 50/- |
| | **Rodace** Sq. tread Ex. Hy. Lt Car | 42/6 |

**Tubes.** Brand new **Dunlops, Palmers,** and **Avon.**
All sizes to 28×3 .. 5/6 each.
Ditto 700×80 .. 6/3 ,

## THE SEASON'S OPPORTUNITY.

AN UNASSAILABLE BARGAIN.

**SPECIAL HEAVY**

# Palmer Cord Covers.

26 × 2½

For 2, 2½, and 2¾ rims.

## 32/6 each.

**ORDERS DISPATCHED IN ROTATION.**

**MADE BY NORTH BRITISH RUBBER Co., etc.**

**RUBBER HIP BOOTS (WADERS)**

**Actual Value 45/-**

**Thousands sold at 12/6.**

**SALE PRICE**

## 8/6

**Postage 1/3.**

**Wholesale and Repair Depot: Stockwell, S.W.**


## MOTOR CYCLES FOR SALE.

### Ladies' Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy daintiest of all ladies' machines; £62, complete. Send for list. [0724

VELOCETTE 1922, Model E.L.2, open frame, clutch, kick starter, is the ideal lady's mount; all black waterproof finish, clean to ride in all weathers; £68; easy payments 4% extra; illustrated catalogue on request.—Premier Motor Co., Aston Rd., Birmingham. [8966

### Miscellaneous.

BARGAINS.—New O.K.'s, Ariels, Harleys, Omegas, Quadrants; exchanges entertained. — Booths' Motories, Halifax.

BARGAINS.—1920 Matchless combination, detachable wheels, £130/10/6; 6h.p. Zenith combination, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6.—Booths' Motories.

BOOTHS' Bargains.—1920 Sun, 2 speeds, clutch, £39/10/6; 4-cyl. F.N., 2 speeds, £22/10/6.

BOOTHS' Bargains.—Harley-Davidson combination mileage 300, £139/10/6; free engine Triumph, £22/10/6.

BOOTHS' Bargains.—1920 Wooler, £49/19/6; 3h.p 2-speed Enfield, £29/10/6.

BOOTHS' Bargains.—8h.p. Premier combination, £49/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—Matchless combination, 3-speed, countershaft, £69/10/6; 1920 3½h.p. Ariel, £69/10/6.

BOOTHS' Bargains.—4h.p. Douglas's, £55/10/6; another, £59/10/6; 1914 4h.p. Douglas combination, electric, £85/19/6.

BOOTHS' Bargains.—1920 8h.p. Tamplin, £79/10/6; 1920 Morgan De Luxe, £165/10/6, cost £250/10; nearly new Ariel combination, £85/10/6; new 3½h.p. 3-speed Ariel, £87/10/6; new 4½h.p. Quadrant combination, £100; several others, cheap; push cycles taken exchange.—Booths' Motories, Portland Place, Halifax. 'Phone: 1062. [5146

JONES Garage.—1920 3½h.p. Ariel Combination, fully equipped, showroom condition, mileage under 1,000, absolutely as new; £80.

JONES Garage.—Brand new 1921 Magdyno Enfield Combination; to clear, £13 under to-day's price, £145.

JONES Garage.—Almost new late 1920 4-cylinder Henderson, with extra large Canoelet sidecar, would make an excellent 2-seater, fully equipped, including rear drive speedometer, absolutely as new; £135.

JONES Garage.—Late 1919 3½h.p. P. and M. Combination, fully equipped with Lucas accessories. This is not one of the W.D. duds, but a machine that left the works in September, 1919, has not done 2,000 miles, and is in showroom condition; £65.

JONES Garage.—1920 4½h.p. chain-drive Quadrant Combination, fitted with Easting, Lange and P. and H. lamps, screen, horn, all absolutely as new; £80.

JONES Garage.—Brand new 3½h.p. Rover Combination, simply shop-soiled, 3-speed, kick start; to clear, £99.

JONES Garage.—Late 1921 7-9h.p. Matchless Combination, spare wheel, Lucas lighting; a real bargain, £130.

JONES Garage.—Late 1919 3½h.p. Sunbeam, absolutely as new, fully equipped with Lucas accessories; a real bargain at £90.

JONES Garage.—1920 4h.p. Triumph, not W.D., but as it left the works, exactly as new, fully equipped; £85.

JONES Garage.—All the above machines will have the 1922 licence paid, and will also carry our usual 6 months' guarantee.

JONES Garage can supply any new or second-hand machine on earth; send for our list.—Jones Garage, The Broadway, Muswell Hill, London, N.10. [1093

1921 7h.p. Combination, luxuriously equipped; £130.—Dawe, 216, Portobello Rd., North Kensington. [9689

£8.—3½h.p. motor cycle, made by London Autocar Co., magneto ignition, running.—King, Egrove Farm, Oxford. [9720

HALIFAX.—50 Secondhand Machines and Combinations; keen exchanges; get list.—Motor Exchange, 25, Horton St., Halifax. [9865

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [6945

F.O.C.H. for second-hand cycles, combinations, and runabouts at bargain prices; exchanges arranged. Any new cycles, combination, or car supplied; cash or deferred payments.—Fair Offer Car House, 5, Heath St., Hampstead (near Tube). 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [9312

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigden, 130, Euston Rd. [0795

## MOTOR CYCLES WANTED.

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391. [0332

CASH

WAITING

COMBINATION or Solo, any make, any quantity. Best prices given.—Write, 'phone, or call, T. and B. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5564

WANTED, Harley Solo; must be cheap.—186, Southgate Rd., London, N. [9621

WE Are

ACTUAL Buyers.

PLEASE offer us your Motor Cycle or Combination We pay cash on sight. Write, 'phone, or call.—Percy & Co., 314-316, Euston Rd., N.W.1. Museum 1337. [5995

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage; Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted, machine can be included in auction sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling commission 7½%, not chargeable unless machine is sold. If no sale, a nominal auction fee is charged: For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Telephone: 208 Streatham. Telegrams: Palmer's Garage, Tooting. [9998

FIRST-CLASS Solo up to £75 spot cash.—52, West St., Southport. [9546

£50 for best Harley Solo offered, not previous 1918. —Box 8810, c/o *The Motor Cycle.* [9436

DOUGLAS 2¾h.p. Motor Cycle, not older 1914.—Box 8800, c/o *The Motor Cycle.* [9697

2-STROKE, must be reasonable.—Lloyd, King's Arms Yard, High St., Wandsworth. [9676

ENFIELD 8h.p. or 4½h.p. James Combination.—151, Globe Rd., Bethnal Green, London. [9431

WANTED, 1920 Coulson Frame, complete, perfect.—Symes, 45, Basin Rd., Chichester. [9837

4h.p. Triumph, countershaft, 1918-19; cheap; private.—61, Kings Avenue, Watford. (P) [9635

DOUGLAS 2¾h.p., also countershaft Triumph wanted; cheap.—37, Elmbank Gardens, Barnes. [9171

WANTED, good Solo or Combination, reasonable.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [6504

COUNTERSHAFT Triumph or Douglas; about £30. —40, Forest Hill Rd., East Dulwich, S.E.22. [9468

WANTED, 2¾h.p. Douglas or other good lightweight; reasonable.—67, Fernlea Rd., Balham. [9952

URGENTLY wanted, good Triumph motor cycle.—C. G., 17, Birchington Rd., Kilburn, N.W. [9937

LATE Model Solo or Combination for cash.—C. S., 14, Swaton Rd., Bow, E.3. Tel.: E. 3155. [9925

WANTED, 2¾h.p. Douglas, not later than 1919. J. Mack, 8, Noel St., Islington, N.1. Letters only. [9944

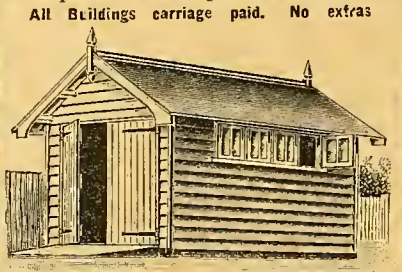
MODERN Solos or Combinations for cash; highest prices paid.—Clark, 7, Exhibition Rd., S.W.7. [7846

WOOLER Wanted, mechanically perfect; really cheap essential.—Cooke, 398, Woodbridge Rd., Ipswich. [9048


# STOP

**at this and compare prices and quality. Invitation to inspect before purchasing.**

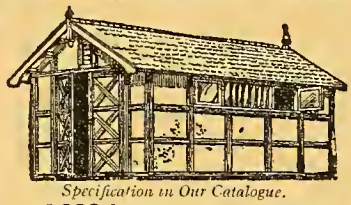
**All Buildings carriage paid. No extras**



**This Building is complete with 1in. tongued and grooved floor, ¾in. match-boards or weather-boards, 3in. framing, strong boarded roof, best pluvex felt. Building treated with weather-proof composition. Prices, complete and carriage paid to any station in England and Wales.**

| | | | |
|---|---|---|---|
| 8×6 | £8 0 0 | 16×10 | £27 0 0 |
| 10×8 | 13 0 0 | 18×10 | 33 0 0 |
| 12×8 | 17 10 0 | 20×10 | 37 10 0 |
| 14×10 | 23 0 0 | 20×12 | 40 0 0 |

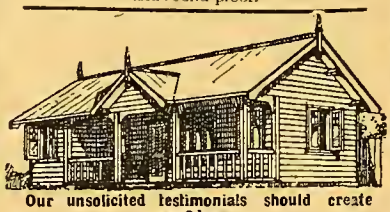
**OLYMPIA MODEL ASBESTOS BUILDING**



*Specification in Our Catalogue.*

| | | | |
|---|---|---|---|
| 12× 8 | £23 10 0 | 18×10 | £42 10 0 |
| 14×10 | 32 15 0 | 20×12 | 46 15 0 |
| 16×10 | 37 15 0 | | |

Delivered with iron roof complete. Fire-proof and sound proof.



**Our unsolicited testimonials should create confidence.**

5, York Place, Mirfield, Yorks.
*Feb.* 10, 1922.

The South-Western Appliance Co., London.

Dear Sirs,—The Motor Hut I ordered from you came to hand a few days ago. I have now erected same and am pleased to inform you that it is entirely to my satisfaction. In conclusion I must say it is excellent value for money.

Yours truly, A. WALKER.

94, Eaton Road, Brynhyfryd, Swansea
Mr. Brodrick, *Feb.* 11, 1922.

Dear Sir,—I am pleased to tell you the shed was delivered in good order and has given great satisfaction.

Yours faithfully,
JAMES BRAY.

3, Eddington Road, Fairhaven, Lytham.
*Feb.* 13, 1922.

Dear Sir,—In receipt of your letter of the 31st, I have received "Delholme" but alright. I am pleased with same and recommend it to our friends.

Yours truly
H. NEVILLE.

**Illustrated Catalogue Free.**

**SOUTH-WESTERN APPLIANCE Co.**
**High Street, Fulham, London, S.W.**
Telephone: PUTNEY 2771.


## MOTOR CYCLES WANTED.

WANTED, Late Combination or Solo; must b cheap.—Station Hotel, Bramley Rd., Nottin Hill, W.10. [931

WANTED, Modern 2¾h.p. Motor Cycle, in perfec condition.—Chatterton, 34, Elm Park Rd. Finchley, N.3. [932

WANTED, 1921 Sunbeam Combination, must b in first-class order.—Randle, Priesthills Rd. Hinckley, Leics. [918

WANTED, Scott, Rudge-Multi, or Triumph, fo cash; private purchaser.—P., River Home, Alex andra Rd., Thames Ditton. [928

NORTON, 16 H, not prior 1920.—Price and ful particulars, address, Box 49, Wheeler's Adver tising Agency, Manchester. [994

WANTED, Late 1921 Sunbeam 8h.p. Combination Magdyno, equipped; cheap.—Macmullan, 15 Serpentine Rd., Wallasey. (D) [904

GOOD Combination or Solo, cash waiting, lat model only, 1920-21.—Hillier (side bell), 9 Wallingford Av., North Kensington. [950

WANTED, by trade, brand new 1920 or 192 countershaft Triumph; also Triumph-Ricardo.— Box 8799, c/o *The Motor Cycle.* [969

LATE 2¾h.p. Douglas, New Imperial, etc., also Mor gan, 1921-22, water-cooled. Cheap. Cash wait ing.—H., 63, Solon Rd., Brixton. [100

2-3h.p. Douglas machines, complete or incomplete highest market prices given.—Pride and Clarke 156, Stockwell Rd., Brixton, S.W.9. [952

COMBINATION wanted, about 6h.p. preferred Not earlier than 1918. Must be reasonable.— F. S., 91, Mapledene Rd., Dalston, E.8. [995

WANTED, Good Sporting Countershaft Triumph not earlier 1918; no dealers.—Write, 49, Har bury Rd., Cannon Hill, Birmingham. [910

WANTED, good combination, solo, and Morgan o G.N.; good price paid, cash waiting; call an time.—24, Balliol Rd., North Kensington. [964

TRIUMPH Countershaft Solo or Combination, an condition, spot cash, or part payment new 192 A.J.S.—51, Upper Richmond Rd., Putney. [933

WANTED to purchase for cash, motor cycles an combinations; must be in good condition.— Barker's Motors, 194, Balham High Rd., S.W.12. [777

WANTED, 4h.p. Douglas Combination, 1920-21 all on, must be cheap for cash.—Write, P Kalis, 381, Queen's Rd., New Cross Gate, S.E. (P [937

CASH Waiting; solo and combinations, good price given.—Write, 'phone, or call, Edwards, 50, Har rington Rd., South Kensington. 'Phone: Ken. 3709. [060

WANTED, Coachbuilt Combination 4h.p.; £48 must be modern and in good condition, not late than 1916.—Box 8728, c/o *The Motor Cycle.* (D) [905

PRIVATE Purchaser wants really cheap moder lightweight, Connaught, Coulson, Calthorpe, simi lar, would consider Scott.—St. John's Vicarage, Ips wich. [904

WANTED, Motor Cycles or Combinations.—We ar buyers; we give full market price and pay cas on spot; write or call.—Dawe, 216, Portobello Rd. N. Kensington. [969

IF you have a Triumph or similar machine yo wish to sell for spot cash, I am a buyer; to prices for good machines.—Goad, 122, Maida Vale 'Phone: Hampstead 1353. [993

SPECIAL Cash Buyers.—Triumphs, Enfields B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts Bradburys, Martinsydes, Zeniths.—Wandsworth Moto Exchange, Ebner St., Wandsworth (Town Station) 'Phone: Latchmere 4686.

4-CYLINDER F.N.'s, Hendersons, T.A.C.'s, T.M.C. wanted.—Wandsworth Motor Exchange, Ebner St. Wandsworth.

RED INDIANS, Harley-Davidsons, wanted.—Wands worth Motor Exchange, Ebner St., Wandsworth (Town Station). [978

WANTED, Tourist Solo or C.B. Combination, 3½ 4½h.p., popular make, 3-speed countershaft, o Multi, kick start, clutch, fairly modern; Midlands.— Particulars, price, Box 8803, c/o *The Motor Cycle.* [970

WANTED, your motor cycle or combination. We ar buyers. Full market price given and cash paid o the spot. Write, call, or 'phone Museum 5938.—J Smith and Co., Motor Agents, Ltd., 52-54, Hampstea Rd., N.W.1. [076

CASH on Sight for new and second-hand motor cycle and combinations, any make or condition.—Cal write, or 'phone, Short and Glass, Ltd., 485-493, Uppe Richmond Rd., East Sheen, S.W. 'Phone: Richmon 2362 and 2363. [037

WANTED, good modern Motor Cycles, solo c combination, in part exchange for 8h.p. Rove or other light car. Best prices allowed, extended pay ments arranged.—Vivian Hardie & Lane, Ltd., 23/24 Woodstock St. (off Blenheim St.), Bond St., W.1 'Phone: Mayfair 6559. [077

## MOTOR CYCLES WANTED.

WANTED, Triumph Countershaft, late model, good condition; cheap.—Cragg, Werburgh's Churchyard, Derby. [9938

MOTOR Cycles bought, sold, or exchanged.—Longman Bros., Bond St., Ealing. 'Phone, 689. We buy for cash and will instruct our representative to call, inspect, and purchase on receipt of full particulars and lowest price. We only consider sound machines of good make. [8952

SEND your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address, Palmer's Garage, Tooting. [1003

## MOTOR SCOOTERS.

KINGSBURY Scooter and Spare Parts.—3, Kendall's Mews, Blandford St., W.1. [5439

KINGSBURY Scooter, used only a few times; £12. —37, Arlington Rd., Surbiton. [9681

A.B.C. scooter, nice order, bargain; £16.—1, Bellingham Terrace, Catford. [9576

MOBILE Pup Scooter, small mileage, for countershaft Triumph engine.—Longhurst, Sunnybank, Ewell. [9418

BRAND new Autoped Scooter, dynamo lighting, 1½h.p.; bargain, £15 each.—Percy and Co., 314-316, Euston Rd. [5996

EXCHANGE Stewart handy worker (£6/6), Stewart trip speedometer, for Skootamota.—Howdens, Seedsmen, Inverness. [9263

SCOOTAMOTA, nearly new, lights, horn, tools, splendid climber, licensed; £17; or exchange Autoped and cash.—Barland, Kington, Herefordshire. [9258

AUTO Glider, with seat, luggage carrier, aluminium number plates, horn, as new, £34; Unibus, secondhand but good, £34; Autoped, electric lighting, clutch, etc., new, £14/10.—Crys-Pal Garage, 86, Church Rd., Upper Norwood, S.E.19. [9636

WHIPPET Scooter!—Finest scooter made, fitted 1½h.p. air-cooled engine, large saddle seat, practically new condition; maker's price, £56; sacrifice, £20; also large number of new engines for this machine, complete with magneto and carburetter, £7/10 each; large quantity spare parts; genuine bargains for immediate clearance.—Seen, Patmore's Motor Emporium, 240, King St., Hammersmith, W.6. [9491

## MOTOR ATTACHMENTS.

AUTO Wheel, perfect mechanical condition; bargain. £6.—W. Freeston, Blisworth, Northants. [9130

YOUNG Attachment, cost £35, mileage 65, as new; £16.—Newton, Brampton, Northallerton. [9118

1921 Auto Wheel and Cycle, excellent condition; nearest £10.—61, Mizzy Rd., Rochdale, Lancs. [9800

YOUNG Attachment on Special Cycle, perfect running order, any trial; £22.—Furlong, Stapleford Tawney, Romford. [9332

£5.—Wall Auto Wheel, in good going order, new tyre and chain fitted; first cash secures.—Smith, 90, Dane Rd., Margate. [9073

1921 Young cycle and motor attachment, clutch, etc.; £17/10.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [9387

YOUNG'S Motor Attachment and Cycle, both practically new, licence paid; £20 or offer.—"Southside," Clydesdale Rd., Romford. [9452

## HOODS, WIND SCREENS, ETC.

V-SHAPED Screens, adjustable; £3/18.—Bright and Hayles, 78, Church St., Camberwell.

V-SHAPED Screens, small size; £2/15.—Bright and Hayles, 78, Church St., Camberwell.

V-SHAPED Screens are absolutely effective, and create no back draught.—Bright and Hayles, 78, Church St., Camberwell. [9631

HERCULES Hoods and Aprons. Write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [3230

BENT Hoops, hood fittings, straps, turnbuttons twills, etc.; hardwood polished wind screens. 7/6.—Henry Jones, 778, High Rd., Tottenham, London. [3772

RENNOO Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoo Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

COLLINS and Son for hoods, screens, and aprons, hoods with solid brass Auster fittings, covered with double texture twill, polished sticks; 35/-; the biggest bargain ever offered.—Below.

ADJUSTABLE windscreens, complete with all fittings and apron; 30/-; celluloid panels fitted to any windscreen in a few hours; send for list.—Collins and Son, rear of 84, High St., Putney, S.W. [9693

ROBINI Manufacturing Co.—The Bower adjustable windscreen, with coverall apron; 30/-, carriage paid. 'Phone: Brixton 1585.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [1017

# BASTONES

**Established 16 Years**

***No Better or Cheaper House***

### USCO RUBBER NON-SKID COVERS

Manufactured by the United States Rubber Co. Ltd.

| | | List Price | Our Price |
|---|---|---|---|
| 26 × 2½ to fit 26 × 2¼ | Heavy | | 53/- 28/6 |

### BERGOUGNAN Three Ribbed COVERS (Heavy)

| | | | |
|---|---|---|---|
| 26 × 2 | List Price | 46/- | Our Price 18/6 |
| 26 × 2¼ | ,, ,, | 49/- | ,, ,, 20/- |
| 26 × 2½ old size | ,, | 60/6 | ,, ,, 23/6 |

### WOOD-MILNE Key Grip COVERS

| | | |
|---|---|---|
| 26 × 2¼ 650 × 65 | Special Heavy .. | 13/6 |
| 26 × 2½ | 4-ply .. .. .. | 16/6 |

### GOODRICH Safety-Tread COVERS Extra Heavy.

| | |
|---|---|
| 26 × 2¼ .. .. .. .. | 28/- |
| 26 × 2½ × 2¼ .. .. .. | 36/- |
| 26 × 2½ .. .. .. .. | 35/- |
| 650 × 65 .. .. .. .. | 40/- |
| 26 × 3 for 650 × 65 rim .. .. | 48/- |
| 28 × 3 .. .. .. .. | 48/- |

### CLINCHER Rubber Non-Skid COVERS.

| | |
|---|---|
| 24 × 2¼ De Luxe Junior .. | 20/- |
| 26 × 2⅜ De Luxe Heavy .. | 25/- |
| 26 × 2¾ Extra Heavy .. .. | 27/- |
| 26 × 2½ × 2¼ Heavy .. .. | 30/- |
| 650 × 65 Dreadnought 3-ribbed | 39/- |
| 700 × 80 to fit 650 × 65 — De Luxe Extra Heavy | 47/- |
| 28 × 3 De Luxe Extra Heavy | 37/6 |

### MISCELLANEOUS COVERS.

| | |
|---|---|
| 26 × 2 Englebert Passenger .. | 19/6 |
| 26 × 2¼ Hutchinson T.T. .. | 23/- |
| 26 × 2⅜ .. .. .. | 27/- |
| 26 × 3 Englebert Rubber Stud .. | 25/- |
| 26 × 2¼ Michelin Fine Ribbed .. | 21/- |
| 26 × 2½ Englebert (wired edge) | 25/- |
| 26 × 2¼ Rom. Rubber, Non-Skid | 29/- |
| 26 × 2¼ ,, Combination .. | 40/- |
| 26 × 2¼ Goodyear Diamond Tread | 26/- |
| 26 × 2½ Skew Rubber, Non-Skid | 35/- |
| 28 × 2 Clincher A Won (Wired edge) | 20/- |
| 28 × 3 Hutchinson Super-Studded | 64/3 |

### TUBES.

**Goodrich, Clincher, and Hutchinson.**

| | | |
|---|---|---|
| 26 × 2¼ and 26 × 2½ .. | each | 6/3 |
| 650 × 65 700 × 80 and 28 × 3 .. | each | 7/6 |

*The above new Clearance lines are sent on approval against remittance.*

*Carriage Paid.*

**Hours—9 till 6; Sat., 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

'Phone: 2481 North. 'Grams: 'Bastones, London'

## BODIES.

HALIFAX.—New Perfection Coach Bodies; £5.—Motor Exchange, 25, Horton St., Halifax. [9867

CAMBER Coach Bodies from £4/17/6.—Bright and Hayles, 78, Church St., Camberwell. [9632

RENNOO Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOO Co. specialise in repairs, repainting, and upholstering.—Rennoo Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

COLLINS and Son for bodies, new bulbous back, coachbuilt models with aprons; from £6/5.

TWELVE months' guarantee given; Write for catalogue.—Below.

WE repaint, repair, and upholster bodies at very moderate charges, insurance work a speciality; estimates free.—Collins and Son, rear of 84, High St., Putney, S.W. [9694

SIDECAR Body 1921 Enfield, luggage grid attached, practically new; £6.—670, High Rd., Tottenham. [9329

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5131

VENUS Step Bodies, 2 dozen to clear; from 50/- each; great bargains.—Venus Sidecar Co., 694, Seven Sisters Rd., Tottenham. 'Phone, 2102. [7697

FULL Size Bulbous Sidecar Bodies, £7/7; lightweight boat shape, £5/5; also chassis if required; call and inspect.—Stock, 107, Coningham Rd., Shepherd's Bush. [9814

GREATEST Bargains in Sidecar Bodies.—Call and see our 1922 productions. Beautifully finished and upholstered. Satisfaction guaranteed. Complete with Coverall apron, £8.

A FEW 1921 Models, shop soiled, with aprons; £6/10.—Write for Catalogue.

LARGE number of second-hand, always in stock. We repaint, repair, and upholster bodies; low prices. Trade inquiries invited. Carriage extra. See Chassis column.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. 'Phone: Brixton 1585. [1019

ROYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [0336

A THING of beauty and a joy for ever; Cobb Speedman Sports sidecar bodies; from £2/12/6, carriage paid; coachbuilt, fit any chassis.—Cobb, 18, Midland Rd., Carlton, Nottingham. [9434

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—20, Tudor St., London, E.C.4. [0004

## SIDECAR ATTACHMENTS.

SFOR

SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

SIDECARS and Chassis.—Send for bargain list.—Cadby, Ltd., Farm St., Birmingham. [9723

CANOELET Minor Sidecar, new condition; £11/10. —Forrest, Laurel Grove, Armley, Leeds. [9528

SIDECARS.—Several cheap, room wanted, fitted free. —57, Kenbury St., Camberwell, London. [9486

SIDECAR Chassis, 26×2½in. wheel, good tyre; 50/-. —17, Sussex Rd., New Malden, Surrey. [9551

## SIDECAR ATTACHMENTS.

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/13/6.

BASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £19/10, Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £28/10, Model de Luxe £34/10, tandem model £30.

BASTONES.—Whitley 1922 sports model in stock, £25.

BASTONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/-.—228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. 'Grams: Bastones, London. [5132

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [8036

CAMBER Utility Models; £25.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Tandem Models; £26.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Semi Touring Models; £18/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Lightweight Models; £16/10.—Bright and Hayles, 78, Church St., Camberwell, London. [9627

CANOELET MM4 Touring Model, unused W.D., Harley connections, 28×3 Dunlop, £18; another £15.—56, High St., Tooting. [9674

GLORIA Sidecar, complete, good condition.—State price, Austin, 215, High Rd., Kilburn. [9419

CHASSIS, guard, wheel, springs, complete; £4.—Rowe, 22 Vallance Rd., Alexandra Park, N. [9214

2-SEATER C.B. Sidecar, aprons, screen, good tyre; £12.—Clark, 59, Kitchener Rd., E. Finchley. [9319

COACHBUILT Sidecar, complete, new tyre, lamp; bargain, £6/10.—6, Ward Rd., Tufnell Park, N.19. [9039

£5.—Cane Torpedo Sidecar, four point attachment, new Palmer tyre.—Spalding, 15, Charrington St., N.W. [9149

P.M. sidecars, plated fittings, complete, new bodies, tyre and tube, £10/10.—See P.M. Accessories Advt. [9959

SIDECAR, wicker, quick attachment, almost new; also Amac carburetter.—Ranken, Spence St., Edinburgh. [9259

LARGE Light C.B. Sidecar; £8; or part exchange Easting and anything useful for motorist.—Long, Tilmanstone, Kent. [9101

SIDECAR, Lightweight, coachbuilt, £7; Millford chassis incomplete, 35/-.—Kennard, 78, Yerbury Rd., Holloway, N.19. [9186

MILLS-FULFORD C.B. bulbous 4-point, Easting, luggage grid, lamp, well upholstered, off Triumph; £8.—Wilkins, 4, Merrick Sq., Boro' S.E.1. [9148

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 165a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

RUDGE Sidecar, new condition, dark green, storm apron, etc.; £12/12 or near.—5, Melrose Avenue, Streatham Rd., Mitcham. [9405

SIDECAR, bargain, Watsonian R.34, mileage under 200, excellent condition; 12 gns.—B.P. Garage, 40, Murray Mews, Camden Town. [1079

COACHBUILT Sidecar, complete, tyre, windscreen, apron, petrol carrier, off P. and M.; £8.—61, Sumatra Rd., West Hampstead, N.W.6. [9177


# An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

# Insurance Policies

## IMPORTANT AGENCY EXTENSION

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS.

Address—Agency Dept.,

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED**

Head Office:

**77, Cheapside, London, E.C.2.**

*Telephone: City 9831 and 9832.*
*Telegrams: "Autoinsure, Cent. London."*


## SIDECAR ATTACHMENTS.

CANOELET Touring Sidecar, complete, practic brand new, £12.—63, Solon Rd., Brixton. [1

BOOTHS Bargains.—Coachbuilt chassisless side £7/10/6; Gloria cane, spring wheel, £6/19 Hercules coach, £9/10/6.

BOOTHS Bargains.—Shop-soiled £27/10 sidecar, Triumph, B.S.A., £18/15; cane sidecar, £5/1

BOOTHS Motories.—Ruby coach sidecar, £9/10 new large size coach bodies, locker under s £6/19/6.—Booths Motories, Portland Place, Halifa [5

YOUR Sidecar renovated equal to new from Damaged sidecars our speciality; send your for repairs.—Write, Crescent Sidecar Co., 8, B Lane, Sheffield. [8

SIDECAR.—Have a Hopley folding sidecar. Sa garage worry and expense. Attached to mo will go through passage 28in. Tandem and sir bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your mo specify a Hopley folder. Suits motors up 10h.p. Can be changed from pleasure to commer in few seconds. Detachable wheels can be fit Tested 7 years.—Hopley, Upper Highgate St., Birmi ham. [0

COLLINS and Son for Sidecars.—A few new bulb back models, complete with renovated undersh chassis, tyre and tube, and coverall apron, all fittin £12/10.—Below.

FAMILY Model Light 2-seater, built to accom date one adult and child up to 12, with novated underslung chassis, tyre, tube, and apr £15.—Below.

WE have various models in stock to suit machine.—Send for catalogue.

WE specialise in frame and chassis repairs of kinds; all work guaranteed.—Collins and S rear of 84, High St., Putney, S.W. [ 9

BLUE Sporting Coachbuilt Sidecar, complete, Enfield chassis, 50/-.—116, Woking Rd., Gu ford. [9

SIDECAR, underslung, handsome new coach, 26× Dunlop, complete, £9; body separate, £4.—6 Seven Sisters Rd., Tottenham. [9

HALIFAX.—New Swan Sporting and Millford Luxe Sidecars for Harley and American X Motor Exchange, 25, Horton St., Halifax. [9

INDIAN Mills-Fulford Sidecar, exceptionally g condition, luggage grid, apron; £13/10.—La ford's, 37, Cricklewood Broadway, N.W.2. [9

WATSONIAN Featherweight Sidecar, shop soi only; cost, with accessories, £19; sell £15; proval.—Law, Great Billing, Northamptonshire. [97

12 BEAUTIFUL Coachbuilt Sidecars, fit any mo cycle; from 8 gns.; easy terms.—Wandswo Motor Exchange, Ebner St., Wandsworth (To Station). [97

SIDECAR, coachbuilt, £7/10; another, underslu with torpedo body, £5; new underslung, don frame chassis, £14 each.—Geiger, 24, Mansfield R Gospel Oak, London, N.W.3. [10

SIDECARS, new and secondhand, windscree lugs, tubes, all fittings bought, exchanged, e payments.—George Smith's, Clapham Junction, 2 270, Lavender Hill, 1 min. station. [93

1921 8h.p. Sunbeam, sidecar bulbous back, Bl mels windscreen, hood, apron, luggage gr etc., absolutely unscratched; £35.—Realf, 38, Du combe St., Wollaston, Stourbridge. [96

2 SIDECARS, complete, good condition and tyr Canoelet, C.B., 4 point off B.S.A. Tradesma 3 point off 2¾h.p. Douglas; £9 each, £17 two.—1 St. Margaret's Rd., St. Margaret's, Middlesex. [94

WILLOWBROOK Royal Leicester Sidecars, smart designs, first-class finish; prices from 17 g Write for catalogue. Repairs undertaken, hoods, wi screens, etc.—The Willowbrook Motor Co., Leicester. [03

LONGMAN Bros., Bond St., Ealing.—We have o or two sidecars to clear at special prices; o special for Indian Scout, one for 7-9h.p. model India and one for B.S.A. twin. Special Montgomery sh models. All other models at usual prices. [99

1,000 Douglas Underslung Chassis, suitable for a make of machine to order, absolutely comple and renovated, as new; £5 each.—Old Man Hep, 1 Wilcox Rd., South Lambeth, London, S.W.8. 'Phon 1958 Brixton. [88

PARAGON (patent) Folding Sidecar saves stora has 7 years to its credit, and has proved its absolutely reliable. Fits any make of motor cyc and, when folded, combination will pass through 30in. doorway. Call and see it demonstrated.—Wincyc Co., Ltd., 236, High Holborn, W.C.1. [03

SIDECARS! Sidecars! Several Secondhand Coac built Sidecars from £7/10. Brand New Coac built Sidecars with bulbous backs and complete wi aprons; a first-class job; not cheap and nast £17/10. Brand New Sidecars, coachbuilt, from £1 These are really wonderful value. We have two Lar ford spring wheel sidecars, 5-point attachments, lar bulbous backs with Picnic cases, completely fitted wi all utensils, most elaborately finished, complete £35.- Jones Garage, Muswell Hill, London, N.10. [60

## SIDECAR ATTACHMENTS.

CHASSIS.—Underslung chassis, complete, new tyre and tube, shop-soiled body, coverall apron, £13/10; P. and M. chassis, new tyre and tube, new 1922 bulbous back body, £12. 'Phone: Brixton 1585.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [1016

WE have several very cheap bodies and chassis taken in part payment which we will sacrifice for any reasonable offer. Good selection of new bodies in stock, prices range from £4/5. Mead and Deakin sporting hammock slung canoelet sidecar as new, £14.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton (½ minute from Brixton Skating Rink). 'Phone: Brixton 1292. [1029

## RUNABOUTS AND CYCLE CARS.

REY'S, of Euston Rd. (Nos. 378-384), have the following in stock:—

MORGANS, all models, also second-hand De Luxe and Grand Prixs in good condition.

COVENTRY PREMIER 1922, 4-wheeler model, £250; one shop-soiled only, £220.

ROVER 8h.p. model, £220; one second-hand, good condition, £165.

G.N.'s, all models; also 1920 with dynamo, very good order, £132/10; one 1921, £142/10.

EXCHANGES or deferred payments arranged. 'Phone: Museum 6436. [9313

£70 Morgan, J.A.P. engine, lamps, etc.—J. C. Pickering, Mardol, Shrewsbury. [9606

WAUCHOPE'S, 9, Shoe Lane, London.—5-6h.p. Carden Mooocar; £50. [9993

1921 Reynolds Runabout, unused, shop-soiled; £65.—The Morris Garages, Oxford. [9290

A.V. 8h.p. 1920 Monocar, just overhauled, trial; £56/10.—Lawford, Ringmer, Lewes. [9249

BRITON 10h.p., splendid condition; £75; or combination part.—Garage, Millett St., Bury. [9036

BLERIOT-WHIPPET, £100; mileage about 800; owner bought larger car.—Pearce, Surveyor, Hunstanton. [9128

HALIFAX.—Morgans, 8h.p. J.A.P., hood, screen; £85, £100, £110.—Motor Exchange, Horton St., Halifax. [9861

CARDEN 1921 2-Seater, equipped, perfect; £75; exchanges.—Bramwell, Market Square, Stony Stratford. [9722

8h.p. Rover.—1922 model in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden 'Phone: 45. [7159

MORGANS Always in Stock.—The West of England Agent, Gibb, 100, Northgate, Gloucester. Phone: 852. [8127

MORGANS.—Latest 1922 Models; immediate delivery; exchanges, extended terms. Official agents.—Below.

MORGAN Grand Prix 1921, dynamo and acetylene lighting, M.A.G. engine, horn, speedometer, etc.; £165.—Below.

MORGAN De Luxe 1921, M.A.G., acetylene lighting, etc., horn, tax paid; £155.—Below.

MORGAN Grand Prix, W.C., M.A.G., lamps, horn, etc., very good condition; £75.—Below.

ROVER 1922 8h.p. Light Car in stock, dynamo lighting, etc.; £220.—Below.

G.N. 1922 Standard Model, dickey seat, door, dynamo lighting; £225.—Below.

G.N. 1920 Standard Model, dynamo lighting, speedometer, watch, horn, etc.; £130.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. Phone: Avenue 5548. [0079

COVENTRY PREMIER.—1922 model in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7160

A.V. Bicar 1921 8h.p., all on; sell or exchange for solo 1921 2¾h.p. or 3½h.p.—W. Howells, Garn Rd., Blaenavon. [9085

G.N. 1920, dynamo lighting, engine overhauled, detachable wheels, speedometer; £125.—Joues' Garage, Droitwich. [9340

1921 Late Scott Sociable, perfect condition, owner recalled India; great bargain, £150.—Sellick, Cllamore, Tavistock. [9113

MORGANS, G.N.'s, and Rovers, second-hand, several in stock.—Rey's, of Euston Rd. (378-384). Phone: Museum 6436. [9314

A.C. Sociable, 2-speed, reverse, dickey; exchange 4h.p. Triumph, B.S.A., or sell.—Hutchings, 19, Richmond Rd., Kingston. [9573

G.N. 1920, dynamo lighting model, little used and equal to new; 125 gns.—Longman Bros., Bond St., Ealing. Tel.: 689. [9912

ROVER, 8h.p.—Your motor cycle taken in part exchange for new models.—Agents, R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7847

1920 P. and M., low mileage, like new, any reasonable offer accepted, motor cycle part.—Colonial Agency, 49, Bedford St., Strand. [9961

*Put me on Your Machine*

**The cheery little figure of Burlington Bertie adds to the attractiveness of any machine or sidecar. It's the cutest little mascot on the road.**

**Made in Solid Brass, heigth 3¾", with fittings for number-plate, handlebar or sidecar—10/6 each.**

Postage 6d.

## WE ARE CALTHORPE SPECIALISTS.

**Selection from Stock of new models:**

**1922 Calthorpe,** 2¼ h.p., single-speed model. The cheapest machine in the Motorcycle world . . . **£36**
**1922 Calthorpe,** 3h.p., 2-stroke, 2-speed gear, Olympia Show model . . . . . **£60**
**1921 Calthorpe,** 3h.p.,2-stroke, 2-speed, and k.-s. **£60**
**1921 Calthorpe,** J.A.P., 2¾ h.p., 2-speed, and k.-s. **£60**

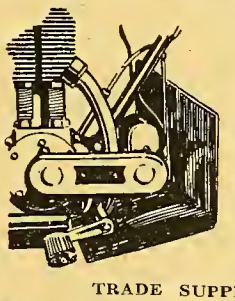
## NEW MACHINES IN STOCK.

**1922 F.N.,** 7 h.p., 4 cylinder, 3-speed, shaft drive, **£95**
**1922 James,** 4¼ h.p. Combination, Model No. 6 **£135**
**1922 Sun-Vitesse,** 2-stroke Ladies' Model, Sturmey-Archer 2 speed, clutch and k.-s. . . . . **55 gns.**
Olympia Show Model.
**1922 Wolf,** 2¾ h.p. Blackburne, Sturmey-Archer 2-speed, c. and k.-s. . . . . **£75**
**1922 Triumph,** Model H . . . . . **£105**
**1921 Scott** combination, with Burlington sidecar, fully equipped . . . . . **£115**

**Above are all new machines.**

***OUR DEFERRED PAYMENTS SYSTEM IS ONLY 40 EXTRA.***

*We shall be pleased to send you our Easy Payment Terms, also List of Second-hand Machines.*



**BURLINGTON UNDERSHIELD for TRIUMPHS.**

Can be fitted by any amateur in a few minutes. They are stove enamelled and add to the appearance of the machine.

Protects your engine and yourself against mud.

Price 6/6 each. Postage 1/3.

TRADE SUPPLIED.

## BURLINGTON MOTOR CYCLE CO., LTD.,

**7, South Side, CLAPHAM COMMON, S.W.4.**

*Phone: Brixton 2117. Wires: Burlington Motors, Clapham*

Just by Clapham Common Underground Station.

## RUNABOUTS AND CYCLE CARS.

WAUCHOPE'S, 9, Shoe Lane, London.—Carden de Luxe 2-seater, 1921, dynamo lighting, fully equipped, tax paid, fully insured; £110. [9994

£15.—3-wheeler chassis, worm drive, 4 speeds, reverse, friction, 8h.p., detachable wheel, complete, less magneto.—89, East Hill, Wandsworth. [9556

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Morgans supplied on easy terms or exchange. 'Phone: Holborn 5777. List on application. [9991

1920 Sporting Morgan, air-cooled, hood, screen, speedometer, discs, electric sidelamps, good condition; £115.—Page, Dulverton, Somerset. [9044

MORGANS.—1922 De Luxe, Grand Prix, and Popular models in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7158

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co., 292, High Holborn, W.C.1. [0673

1921 Grand Prix Morgan, lavishly equipped; £145; ditto, 1920, grand condition; £120.—Hillier (side hell), 9, Wallingford Av., North Kensington. [9498

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0756

BUCKINGHAM 10h.p. Cyclecar, 2 speeds, disc wheels, dynamo, do 60 m.p.h., 50 m.p.g., real sporty outfit; £55 cash; exchange bike.—8, High St., Wandsworth. [9687

A.C. Sociable, fine condition, dickey, take 3 anywhere, reliable, hood, Bosch, tax paid (£4), new tyres, chain, carburetter; £50, near.—Capt. Strutt, Wadhurst, Sussex. [9607

CARDEN 1921, accessories, perfect condition, just overhauled; will sell or exchange for Triumph or similar cycle in good condition.—Allfree, 43, Edgware Rd., London. [9097

MORGAN 1920 Grand Prix M.A.G., acetylene and electric, speedometer, clock, aluminium dash, Dunlop Magnums, very smart; £145.—Clark, 7, Exhibition Rd., S.W.7. [9006

HALIFAX.—New 1922 Coventry-Premier 4-wheeler, with speedometer and 12 months' insurance; £250; liberal exchanges.—Halifax Motor Exchange, 25, Horton St., Halifax. [9864

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220; in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0773

A.C. Splendid 2-seater (wheel steering), hood, screen, lamps, overhauled, newly painted; 58 gns.; exchange motor cycle; easy terms.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [9783

A.C. Sociables, by the A.C. Co., dependable runabouts, take 2 persons anywhere, good condition and appearance, fully equipped; from £50 to £85; trial.—29, Allsop St., Upper Baker St., London, N.W. [7056

MORGAN, Grand Prix model, water-cooled, J.A.P., electric lighting, oversize tyres, exceptional condition; 76 gns.—Longman Bros., Bond St., Ealing. Tel.: 689. Also A.V. Monocar, practically new condition; £50. [9911

BARKER'S Motors can supply all kinds of light cars at list prices and give a free insurance guarantee for 12 months against mechanical breakdown. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [6423

1916 8h.p. Morgan 2-seater, speedometer, horn, electric and acetylene lamps, in good condition, and guaranteed in perfect order; a genuine bargain, £85; full particulars by post.—Herbert Robinson, Ltd., Regent St., Cambridge. [9088

CYCLECAR, new, with special J.A.P. engine, used on track, electric lighting, detachable wheels, comfortable 2-seater body; £75. Exchange Morgan.—Gamble and Co., 13, Somers Mews, Edgware Rd., (off Cambridge Terrace). [9841

TAMPLIN 1919 2-seater, 8h.p., 3 speeds, Sturmey-Archer, F.R.S. electric lighting, all tyres good, very smart and fast, just been thoroughly overhauled; £70; would consider good solo motor cycle part.—R. Watson, Victoria Rd., Aldeburgh, Suffolk. [9836

8h.p. Tamplin 2-seater, complete with acetylene lamps and generator, bulb horn and other extras, licence to December, 1922, in perfect condition throughout, has been very little used; £85; full particulars by post.—Herbert Robinson, Ltd., Regent St., Cambridge. [9087

*Spare Parts:*

MORGAN Spare Parts. Largest stock in London.—Maudes' Motor Mart, 100, Great Portland St., W.1. [1084

MORGAN Spare Part Depot.—Spares for all models from stock; list free.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone: Avenue 5548. [0073

## TAXI-COMBINATIONS AND CABS.

"COUNTY," B.S.A., Taxis, as licensed throughout the country.—Write for full particulars, County Cycle and Motor Co., "Origioators," 300, Broad St., Birmingham. [5353

## CARS FOR SALE.

PALMER'S Garage, Tooting.—The pre-eminent place for purchasing; auction every Thursday.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £7/10 secures splendid 10-15h.p. R.M.C. 4-seater, dynamo lighting and self-starting.

PALMER'S Garage, Tooting.—£60 down and 12 monthly payments £8 secures 10h.p. Singer 2-seater, dynamo lighting.

PALMER'S Garage, Tooting.—£40 down and 12 payments £8 secures splendid Sheffield Simplex ¾ landaulet.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8/10 secures magnificent Oakland touring car, dynamo lighting, self starting.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7/10 secures reliable Renault ¾ landanlet, repainted.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £4 secures Napier chassis, detachable wire wheels.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8 secures Delaunay-Belleville limousine, 17h.p.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 18h.p. Maxwell sporting 2-seater.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £8 secures 20h.p. Studebaker landaulet, dynamo lighting, self starting.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £7 secures 16h.p. Minerva 4-seater, Monobloc engine.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £4 secures reliable S.C.A.T. 12-seater wagonette.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £5 secures excellent 12-14h.p. F.I.A.T. chassis.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures 12-14h.p. F.I.A.T. van.

PALMER'S Garage, Tooting.—£70 down and 12 monthly payments £7/10 secures magnificent Berliet touring car, 6 cylinders.

PALMER'S Garage, Tooting.—All above cars are in good running order. For cash price deduct 10% from above totals.—Palmer's Garage, Tooting. [9999

ROVER 8h.p. 2-seater, hood, screen, bargain; £34.—1, Bellingham Terrace, Catford. [9575

BEDELIA.—The new 1922 model 8-10h.p. with air-cooled or water-cooled engine.

BEDELIA.—Air-cooled model, £185; water-cooled model, £195. Immediate deliveries.—Trial runs free.

BEDELIA.—Catalogne free from L. N. Palmer, Sole Concessionaire for the British Empire, Palmer's Garage, Tooting. [1001

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

WAUCHOPE'S, 9, Shoe Lane, London.—Rover light cars; £220; fully equipped; easy terms or exchange; list on application. [9992

ROVER Cars.—The famous 8h.p. model in stock, £220; for immediate delivery.—Eagles and Co., 275, High St., Acton, London. [0761

COVENTRY PREMIER, 1922, 4-wheel model; £250; immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

DELIGHTFUL Family Car, 15h.p. Sirron, owner-driven, quiet, flexible, fast; £160; take part down or an exchange.—Bunting's, Wealdstone. [9760

WAUCHOPE'S, 9, Shoe Lane, London.—G.N. cars, 1922, all models from stock; easy payments or exchange.—'Phone: Holborn 5777. [9990

11.9h.p. Belsize 2-seater, 5966, tax paid, £9, mechanically sound and new tyres, 5 detachable wheels; Lucas dynamo, £240.—James Irving, Baker, Penrith. [1060

MORRIS COWLEY 1922 standard 2-seater model; 285gns; in stock.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St.,-E.C.3. 'Phone: Avenue 5548. [0077

ROVER 8h.p. Light Car, 1922 models, dyoamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

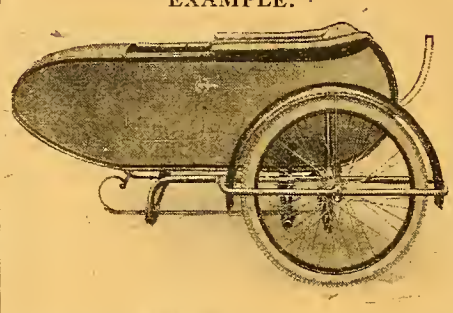
EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hansler Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452. [7938

2-SEATER Double Dickey 1920-21 4-cyl. McKenzie, mechanically perfect, newly painted, only done 7,000 miles, full equipment, speedometer; cost £550; sacrifice, £250; good combination taken part payment.—Grimes Garage, 18, Bruton Place, Bond St., W.1. [9746


Rideezi

SIDECARS.
EASY TERMS.
CARRIAGE PAID.
APPROVAL.
COLOURS TO CHOICE.
FIRST QUALITY.

EXAMPLE.



SPECIFICATION.

Well built Body of Finest Selected Birch Ply. Finished in first class style. Well upholstered in Antique Leather Cloth, with Spring Back and Seat. Finished in any colours. Underslung Chassis. 4 Point Attachments. 26" or 28" Wheel. Detachable, enclosed. Well sprung. Fittings to suit any machine.

£6 4 0 DOWN. 12 Monthly Payments £1 11 8

£6 4 0 DOWN. 12 Monthly Payments £1 11 8

*WRITE FOR CATALOGUE POST FREE.*
(Full particulars of Easy Payment System.)

**MODELS for EVERY W.D. MACHINE.**

Above Model very suitable for
**NORTON, TRIUMPH, DOUGLAS, P. & M., B.S.A., &c.**

Light Models from £18 each. If you have an old machine that you require a Sidecar for WRITE TO US ABOUT IT.

Please Note we finance the Easy Payments ourselves, therefore your private affairs are not placed before Money Lenders.

**RIDEEZI SALES**

**ATLANTIC HOUSE, OXFORD ST., W.**


## CARS FOR SALE.

FORD 1918 5-Seater, perfect condition; £100, or nearest; good Triumph countershalt taken in part payment.—Cragg, Werburgh's Churchyard, Derby. [9939

WAUCHOPE'S, 9, Shoe Lane, London.—Coventry Premier, 1922, new models; £250; £50 down, remainder in 12 equal monthly payments; motor cycles or motor combinations taken as part payment.—Wauchope's, 9, Shoe Lane, London. Write, call, or 'phone Holborn 5777. [9995

## MOTOR TRANSPORT VEHICLES.

10h.p. Adams Lorry, running order; take £28 to clear.—'Phone: 1958 Brixton. 19, Wilcox Rd., South Lambeth, London. [1062a

PARCEL Car, 3-wheeler, 8h.p., Precision engine, load 6cwt., in perfect running order; £30.—4L, Kramer Mews, Richmond Rd., S.W.5. [9146

1914 4-cylinder Florentia Van, 25cwt., in perfect condition; exchange for a solo machine or £50; or near offer.—Hyams, 10, Ash Grove, Cricklewood. [9235

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. 'Phone, Holborn 5777. [7213

HALIFAX.—Secondhand Models at special rates; send your requirements.—Halifax Motor Exchange, Horton St., Halifax. [9866

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1. [0672

HERBERT ROBINSON, Ltd., Green St., Cambridge. Any make of motor cycle or light car supplied on easy terms, strict privacy, no unpleasant inquiries; any district, full particulars by post. [9899

## ENGINES.

2¾h.p. Rex-Amac, just overhauled; £7/10.—Box 8762, c/o *The Motor Cycle.* [9138

P. and M. engine and gear, 1917; £8.—1, Springfield Park Cres., Catford, S.E.6. [9582

TRIUMPH 3½h.p., with Bosch carburetter, pulley, exhaust, silencer, perfect; £10.—Below.

JAMES 4¼h.p., complete unit, Bosch, perfect, about 1916; £12.—Morriatt and Co., Key Hill, Birmingham. [9616

£10.—Stationary Engine, 1h.p., 4-stroke, W.C., suitable lathe or lighting set, new.—King, Egrove, Oxford. [9713

3½h.p. Centaur Engine, mechanical valves; 50/-, bargain.—E. Littlekit, Long Sutton, Basingstoke. [9041

2½h.p. Verus 2 stroke Engine Unit, practically brand new; £8.—3, Hampton St., Birmingham. [9768

VILLIERS and Blackburne engine spares; any part from stock.—Maudes' Motor Mart, 100, Great Portland St., W.1. [1085

2¾h.p. Perfect, 4-stroke, magneto, carburetter, silencer, pulley, sound condition; £10.—82, Bingley Rd., Saltaire, Yorks. [9774

TRIUMPH engine, 4h.p., latest pattern, decompressor, magneto, carburetter, and controls, guaranteed perfect; £23.—Churchill, The Grove, Dorchester. [9531

4½h.p. Levis Flat Twin, 2-stroke, carburetter and magneto, perfect, £10; 6h.p. ditto, £12.—Cole, 457, Rathgar Rd., Loughborough Junction, S.W.9. [7604

1919 5-7h.p. J.A.P. Twin Engine, very little used, in perfect condition throughout, Thomson-Bennett magneto; bargain, £20.—Pullin, The Warren, Northolt Junction, Ruislip. [9117

8h.p. De Dion Water-cooled Engine, guaranteed mechanically perfect, complete with cone clutch and all fittings; bargain, £9.—Woodcock and Crowfoot, 12, Ampthill St., Norwich. [9083

2¾h.p. J.A.P., first-class condition, £3/10 only; new variable magneto, 50/-; 5in. adjustable pulley, 10/-; all in absolutely perfect condition.—Hood, 15, Totteridge Lane, Whetstone, N.20. [9450

TRIUMPH Engines, 1914, 3½h.p., complete with belt pulley, in perfect condition, overhauled and new parts fitted; £8/10.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone, Padd. 789. [8947

ENGINES, Engines, Engines.—We have a bankrupt stock of new 1½h.p. (4-stroke) engines, overhead valves, aluminium cylinders and pistons, complete, to clear, £5 (55 sold in 14 days); also 2¾h.p. 2-stroke engines, new, complete, less flywheels, only £3.—Fosters, 31, Clissold Rd., Clissold Park, London, N.16. [9334

J.A.P. Engines. J.A.P. Engines. J.A.P. Engines.—I have the largest stock of J.A.P. engine parts in England; over 30 engines, all in stock, to select from; and the prices: 5hp. £15, and the 8h.p. at £20 and £17/10, and I have all parts for the 8h.p. (see accessories for parts). I have a big twin engine £12, a 4h.p. Douglas engine and mag. and carburetter £15, a small 2-stroke and mag. £10; stamp reply.—South Croydon Motor Exchange, 22, South End, Croydon. [4765

THE MOTOR CYCLE

ESTABLISHED IN 1903

FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## Research Work and Motor Cycles.

THAT even the most modern design of motor cycle is capable of further improvement must be patent to all those who study engineering. Nevertheless, such considerable advances have been made during the last year or two that important improvements are not likely to be effected without careful research. In earlier days our mounts were so crude that "hit and miss" methods were sufficient to reveal lines along which development was essential if motor cycles were to be a commercial success.

It is only in recent years that motor cycle manufacturers in general decided to adopt scientific bench testing plants, yet this is perhaps the first and most obvious need for all engine manufacturers. It is true that the installation of such a plant entails much expenditure, but the outlay is eventually repaid by quicker and more definite results, in addition to which the human element, which plays such an important part when road tests have to be relied upon for results, is entirely eliminated. The suppression of mechanical noises and vibration is the problem which needs future attention, though there are other points which will spring to the mind of the critical reader. In *The Motor Cycle* of February 16th we were able to outline some of the possibilities of the Oscilloscope as an aid to research, and it is almost impossible to over-emphasise the importance of this invention, since not only can vibration be rendered visible, but its source can be located by this ingenious instrument. In the same way it is possible to trace a mechanical noise to its origin by locating its position with regard to the crank (or auxiliary) shaft and analysing the results. Again, the results are visible or audible, and therefore much more convincing to the average person than mathematical calculations. It is already possible to examine minutely operations which are normally much too rapid for the eye.

Such inventions are worthy of every encouragement, since they open up a channel for the rapid advancement of our mechanical mounts.

## Four Cylinders.

FOR reasons not immediately obvious, the four-cylinder motor cycle has not yet attained that degree of popularity that might have been expected. Twenty years ago a British four-cylinder bicycle made its appearance, but was doomed to the fate of most mechanical designs which appear before their time. More recently an up-to-date aluminium engine was exhibited at Olympia, but lack of working capital has hindered its development, with the result that British four-cylinder enthusiasts have been restricted to imported machines. At the present moment there is a recrudescence of feeling in favour of the four-cylinder engine, and more than one engine of this type is on the stocks in addition to the small four-cylinder two-stroke described in our last issue.

Probably the main causes of delay in development have been cost and a fear of multiplicity of small parts. The first-mentioned obstacle will undoubtedly make its presence felt in the early stages, but it is not insuperable, and the second has no excuse for its existence when we consider that if advantage be taken of the full 1,000 c.c. limit the cylinders will be quite appreciably larger than those of many existing twins. For a "square" engine the bore and stroke could be 68 m.m., or 60 m.m. bore × 88 m.m. stroke would be suitable dimensions for a long stroke type. The four-cylinder-in-line type offers scope for ample bearing surfaces and light moving parts, but this is not by any means the only solution to the problem; a four-cylinder of the double "flat twin" type will give the same impulses, and a four-cylinder Vee can be as good as regards balance, but slightly less even in torque.

An index to the advertisements in this issue will be found on the page facing the back cover.

### The Opulent, Middle-aged Rider.

WEEK-ENDING at country houses has made me realise what a number of people, resident at fair distances from stations, churches, post-offices, and the like, are looking to the motor cycle as a possible tender to their cars. I can recall at this moment a score of households, which maintain something like a 20 h.p. Austin as their main transport, and have since the war invested in some sort of a two-wheeler as a dinghy to the yacht. Madam wants to go to church, or to the station, or to post, when Papa is away with the car; there may be two or three dancing and tennis-playing daughters; there is a governess; occasionally the more youthful sort of son, say a Winchester boy on his holidays, requires short distance solo transport. Of course, young Clarence knows all there is to know about motor bikes, as his arguments with the governess at the breakfast table testify. Such households form curious backwaters of the motor cycle world. They muddle and struggle along quite on their own, innocent of club matters, technical matters, and the like, regarding motor cycles much as you and I, dear reader, regard a gas meter—as inexplicable boxes of mechanism, which are necessary evils of life under certain conditions.

### Their Choice of Mount.

IN 1920 and 1921 such families generally bought a scooter. I have yet to encounter one solitary case in which they loved it. It was not very strong on hills. It was quite easily upset. Frequent tumbles seem to have been the rule with it, especially on the part of the fair sex; and its history in their hands makes me rejoice that, before its failings were exposed, this journal gave it a very guarded and critical welcome. Just at present the Ner-a-car is what such families seem to fancy, though the small two-stroke is by no means unknown amongst them.

### What They Are Looking For.

I HAVE cross-examined some of these "motor cyclists *malgré lui*," as Molière might have called them; and I find that their special yearnings may be summed up as follows:

(1.) Weight as low as possible.
(2.) Foolproof starting.
(3.) Absolute reliability.
(4.) Cleanliness (no special clothing to be needed).
(5.) Unpuncturable tyres.

This specification is still guaranteed to puzzle any designer. I do not see why the three centre items should not be provided, but the first and the last are real problems. For example, the surest way of solving (5) would be to give them 3in. tyres containing such a tube as Jeff or the Challenger. Then up goes the weight. The slim little governess can no longer wheel the machine without its pulling her over on top of it, and so one has to add a third wheel or some type of trailing steadies.

### The Worst Crux.

THERE are designers who could lay out just the sort of machine which this special market requires. That they should do so is much to be desired. It would fill a need. It would reduce unemployment. It would strengthen our ranks. It would occupy idle plant and capital. But the man who could market such a machine hesitates, because he knows that the ordinary motor cyclist does not want this kind of machine, and that it will be a very long and absurdly costly business to execute the necessary propaganda, and convince the sort of household which I have indicated that his machine fills their needs. The Ner-a-car people have made the bold experiment, and it will be watched with keen interest by the more conventional type of motor cyclist.

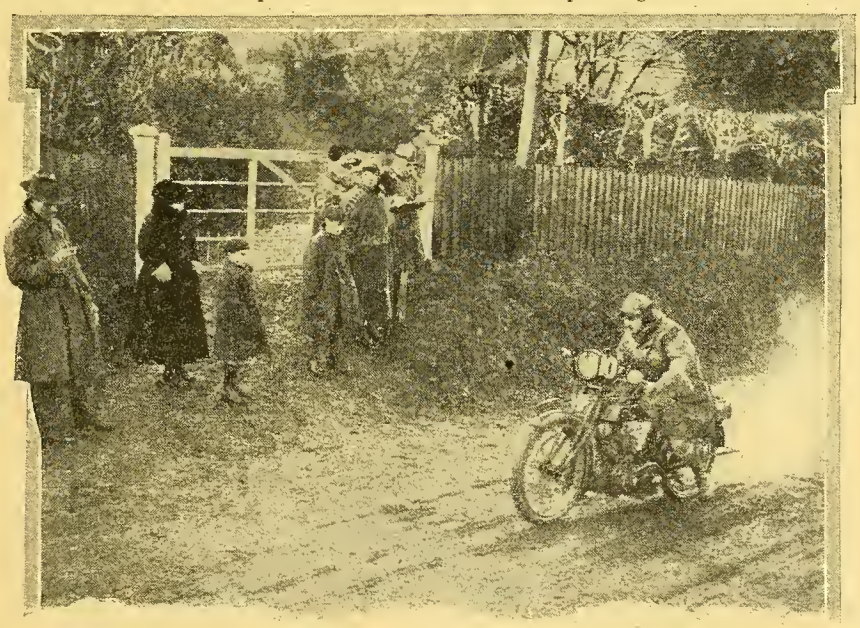
**Occasional Comments.—**

## A Tame Sports 'Bus.

NOBODY need be afraid of the modern sports 'bus, which is tractable and docile as a pet lamb. My new four-valve Triumph starts from stone cold on an Arctic morning at the first kick, and potters in and out of its small shed with the engine firing under easy and careless control, though quite ready to roar like a bull, and leap like a young unicorn, if one wishes to impress any stunt-merchant with its paces. It inspires a wondering curiosity at the restricted popularity of decompressors, which even now are quite scarce luxuries, immensely as they facilitate engine management. It seems a pity to lumber up such a machine with accessories, though serious roadwork naturally demands a hooter, a lamp set, a speedometer, a spare tube, and rough weather clothing in reserve. The pity is dual—such luggage spoils the clean lines of a beautifully designed mount, and anything carried out of centre on the handle-bar detracts a trifle from the perfection of the steering. Of course, a mechanical horn built to fit on the top tube is better than a bulbhooter carried lopsidedly on the steering bar; but the speedometer must be out of centre unless indeed one fits it, American fashion, to sit on the top tube and drive off the back wheel; and the latter already stacks quite enough lumber.

## Straws Show—

WHICH way the wind blows. Have you noticed how many firms have begun to boost the non-sporting, old man, utility type of machine? There is the Ner-a-car with the much-enduring Mrs. Janson riding from London to Glasgow in a month when wise men prefer the smoke-room fire, and going clean through the night as well as the day. There is the Harper Runabout, whose cunning sponsors have lifted a passage from B. H. Davies' open letter to the trade, and used it to indicate that the real "everybody's machine" is already with us, not to speak of organising races in skating-rinks. Then the M.C.C. is prattling of a Land's End—John-o'-Groat's ride, and the American trade are confessing that these lengthy potters have a better advertising value than the T.T. or the chamois-training schools of the A.C.U. The motor cycle seems to be approaching its utility epoch, just as the pedal cycle did before it. However, so long as we have the Coventry Club to send its men up bramble-roofed ditches in midwinter, the sporting side is not dead.



S. M. Greening demonstrating the acceleration of a 500 c.c. J.A.P. twin-engined Sunbeam in the Essex winter trial.

## The Best and Lloyd Pump.

MY recent comments on mechanical pumps provoked a regular bombardment of testimonies from satisfied owners of the Best mechanical pump. I need hardly say that my statement only meant that I had never had a heart-to-heart talk with an experienced user of this gadget, for everybody is by now familiar with its appearance and design. Its devotees are unanimous in saying that it solves all oiling worries, economises oil, slows down carbonisation, and is altogether a vast improvement on the "watch the milestones" system. Many of these enthusiasts specify that they deliberately use summer oils of the thickest grade right through the winter.

## Corrosine and Derusta.

WHAT quaint names, by the way, these chemical coves give to their inventions. These two dopes are marketed by Thos. Howse, Ltd., of Smethwick, and deserve to be much better known. If you use "Corrosine," you'll never need "Derusta." "Corrosine" is—apparently—a particularly white and transparent celluloid varnish of a very tough texture; at any rate, I splashed some on to my goggles, and had to study the directions on the tin before I could shift it. Apply it to your plating, leave the 'bus out all night in a sleetstorm, and she'll be quite fit for an Olympia stand next morning. (N.B.—Some of these celluloid varnishes are yellow and brittle, which is why I can praise "Corrosine" so unreservedly.) If you don't know and haven't used "Corrosine," you'll probably want "Derusta." It will shift ordinary juvenile rust like magic, but needs a prolonged offensive of the Somme character if you pit it against a chain which has been lying in the garden for two years. For such extreme cases as the latter, I should advise readers to chum up with an employee in the new L.G.O.C. repair garage at Chiswick. Do you know how they cleanse the underworks of motor buses? Convert caustic soda into steam, causing it to impinge on the rusty part at 500 m.p.h. from innumerable jets.

# Contrasts on the Riviera—

A fine vista on the road between Mentone and Sospel.

## A Note on the Maritime Alps.

By C. B. WATERLOW.

BRIGHT, fleecy clouds were dotted about on the mountains, and the mid-winter sun, shining intensely, warmed my back to the marrow as I turned northward from Cannes the other day. Rising into the mountains through Grasse upwards to 2,000ft. and higher still, the air that had been warm and soft by the Mediterranean grew keen and cold, invading the lungs and the whole body. It made one want to sing, and my little-2¾-h.p. A.J.S. sang its own merry song, climbing steadily always on top gear, picking up even round the sharp bends above Grasse and bringing me much too soon to my luncheon halt at St. Vallier.

This world offers some strange contrasts: the champagne air of these sunny heights and the fetid atmosphere of the Monte Carlo gambling halls just below. No wonder those who spend their time at the gaming tables consume liquid champagne in considerable quantities. The mountain air of the maritime Alps is less expensive, especially when it is tasted from the saddle of a lively solo machine of British make and the soundest construction.

### Quiet Haunts.

Two roads cross the mountain range to the north of St. Vallier, the one being the main road to Castellane, Grenoble, and the north, and the other a local mountain route to the lovely, but little known, summer resort of Thorenc. From this latter road at a certain point one looks almost vertically down on to the main road a thousand feet below, for here the two routes converge in plan, but diverge in elevation. It is a fine piece of road engineering, like many another in the French Alps.

The whole perspective is grand and sombre. The road to Thorenc rises steeply nearly all the way from Grasse to the Col de la Sine (3,690ft.), a distance of about 25 kilometres, from which summit there is a superb view down the valley of the little river Loup. The Gorges du Loup is a classic excursion for tourists on the Riviera. The village of Thorenc itself is higher still, 4,070ft. according to the Michelin guide, and before the war there were winter sports there.

The southern barrier of the Maritime Alps is incredibly bleak and forbidding, a great rolling chaos of limestone crags and boulders, almost devoid of vegetation. Fierce winds sweep across these inhospitable heights, which offer the utmost contrast to the luxuriance of the *littoral*. I went up into the clouds at one point. It was the strangest experience; for, after the brightness of the lower slopes, the clouds at close quarters were by no means celestial, but dark and cold. It was like going up to the lid of the earth.

Penetrating further into the mountains, one passes beyond the zone of desolation into a region of splendid pine trees. The village of Thorenc, which boasts two historic chateaux, is surrounded by the loveliest pine woods. They told me there that the climate appears to have changed, the snow does not fall now in the profusion of former years, and they doubt if it can ever again become a resort for winter sports. The hotels were shut, and the place was silent in its winter sleep. Only when I proceeded to photograph the chateau did any sign of

Amongst the clouds on the Maritime Alps.

**Contrasts on the Riviera.—**

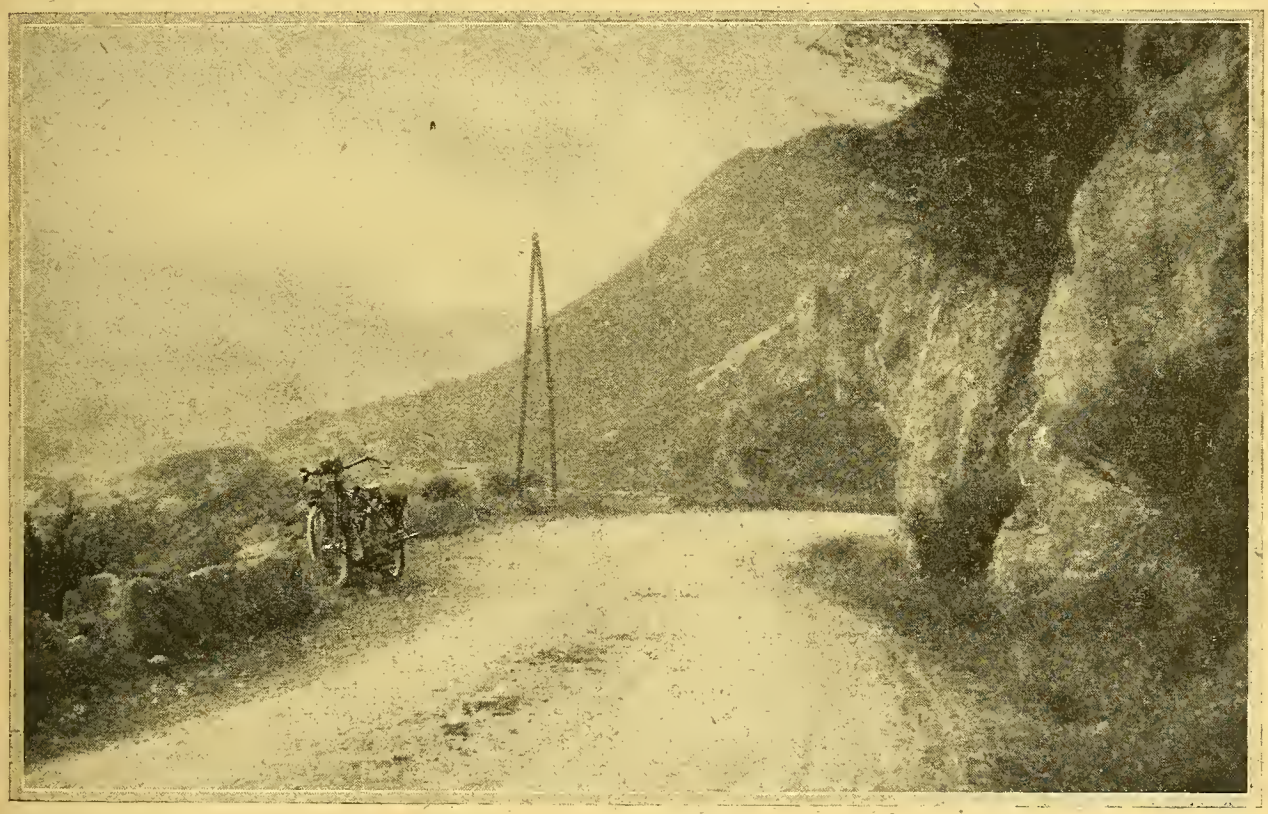
life appear; then an agitated caretaker ran out and informed me that I must not use my camera for the purpose of making picture postcards, but that if it was only a personal souvenir it did not matter.

### Scenes of Former Strife.

Mediæval fortresses and castles such as those at Thorenc can be found in many places in the Alpes Maritimes above the Riviera, and dry as dust are the accounts of their history in the hands of those who compile guide-books. There is peace now in the land, and it has reigned here for a hundred years; yet, as Sir Frederic Treves points out in his book on the Riviera, there were incessant sanguinary struggles in this country for seventeen hundred years, no mean period in the history of mankind. Ever since the days of Ancient Rome, potentates of Italy and of Gaul have fought each other for the mastery of this land.

But now there is peace. I stopped to take a photograph and gaze over the ravine of the Loup and the tumble of barren mountains to be passed on the way home. Even here in the South the mid-winter days are far too short, and the sun was slanting towards the horizon, lighting the clouds on their undersides. There was glittering hoar-frost on the road in the shadows of the pine trees, and everything was still with that absolute winter silence that lovers of the mountains know well: not even a trickle of water is to be heard, for the streams are frozen at their sources. A bird—a large hawk—flew by, and the swish of his wings sounded loud and clear, a notable disturbance. It seemed sacrilege to set chains, and valves, and flying wheels in motion; but it had to be done, for when the night comes it is not wise to be 3,000ft. up in the desolate Alpes Maritimes.

The roads inland at the back of the Riviera are not good, for the most part, though wonderfully engineered and easily graded. The coast route from Cannes to Nice, and on to Monte Carlo and Mentone, has been specially sandpapered for the procession of Rolls-Royces and the like which floats to and fro along it each winter. But those visitors to the Riviera who go no further than this gigantic marine parade miss all that is most beautiful. They do not get the contrasts or the real atmosphere of the country, and there is no better or more economical way of exploring here than with a sound, medium-weight solo motor cycle.



Magnificent scenery and unrivalled panoramas confront the rider as he nears the summit of the Col de la Sine.

## MAYOR OF HEREFORD OPPOSES A SPEED LIMIT.

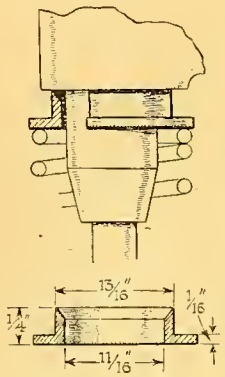
AT a recent meeting of the Hereford City Council there was a discussion as to the advisability of limiting speed in the city to ten miles an hour. The Mayor of Hereford wisely objected to the imposition of an artificial speed limit, saying that his experience in the police courts had shown him that it was best to deal with "road hogs" by prosecuting them for dangerous driving, his opinion being that any speed limit was an encouragement to drive at that speed irrespective of risk to others.—*The Autocar.*

# OBTAINING THE BEST RESULTS FROM AN 8 H.P. BLACKBURNE ENGINE.

## A Successful Competition Rider's Hints on Tuning for Touring Purposes.

DURING the comparatively short space of time, amounting to slightly over two years, since it was first available to the public, the 8 h.p. Blackburne engine has established a reputation for its ability to withstand an abnormal amount of hard wear.

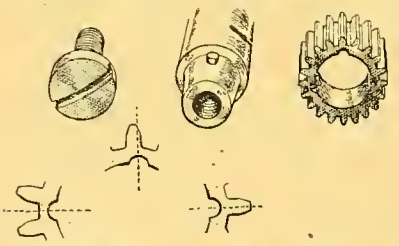
Designed more with a view to good pulling than high speed, this engine is essentially a "slogger," and when setting out to improve the running we are apt to overlook this desirable feature, and perhaps find that we have sacrificed it for the addition of two or three miles per hour to the maximum speed.




Valve spring collar arranged to insulate the spring from the heat of the cylinder.

The cylinder heads play an important part in the running of the engine; on many of the earlier engines, at all events, trouble made itself apparent in the form of warped valve seatings. This was due to the castings not having been previously heat-treated. The remedy is to have the seatings recut, after which the trouble is very unlikely to recur; in this respect a really old, well-seasoned pair of heads is of much greater value than new ones.

While on the subject of cylinder heads and barrels, it is necessary to emphasise the importance of maintaining a perfect joint between the two, since leakage of compression at this point is a latent source of trouble and lack of efficiency. The washer *must* be renewed every time the joint is disturbed, and a supply of these washers should always be kept in readiness. The heads must be bolted down evenly and dead tight, and it will usually be found possible to give the holding-down nuts an extra turn after the engine has been run for a time.

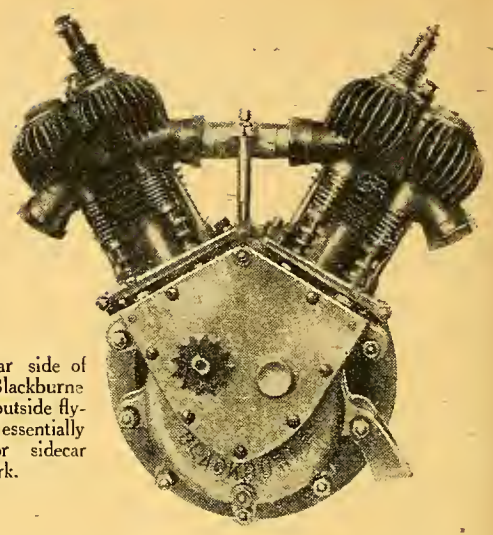


The well-known vernier system of locating the main shaft timing pinion is adopted on Blackburne engines.

The valve-timing should not be tampered with, as that recommended by the makers and detailed in the four items below will give the best results.

Inlet valve opens from top dead centre to 1 mm. down stroke.

Inlet valve closes from 5 to 7 mm. after bottom dead centre.



Timing gear side of the 8 h.p. Blackburne engine, an outside flywheel type essentially suitable for sidecar work.

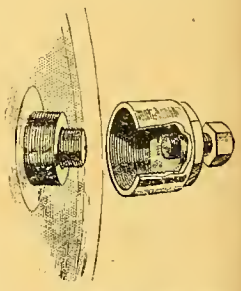
Exhaust valve opens from 14 to 16 mm. before bottom dead centre.

Exhaust valve closes from 1 to 3 mm. after top dead centre.

The correct setting of the tappets is of great importance. The clearances given in the makers' catalogue are as follows:—Inlet, ·003in. to ·005in.; exhaust, ·004in. to ·006in. The writer has found that a much greater exhaust tappet clearance is necessary on some engines, in many cases ·011in. or even more being required, but as a general rule ·004in. for the inlet and ·008in. for the exhaust will not be far wrong. A set of feeler gauges is a valuable asset and a necessity to ensure the best results.

There is a tendency on 8 h.p. Blackburne engines for exhaust valves to burn somewhat rapidly, and the only real safeguard against this is to fit stainless steel valves at the outset. This will save much grinding-in of valves and ultimate expense.

This same tendency to run hot in the region of the exhaust ports is responsible for exhaust springs losing their temper and the top coils closing up. This will cause a gradual falling off of power and ultimate misfiring, and can be entirely prevented by fitting protecting washers which insulate the springs from the hot cylinder. The writer has fitted these to his own machines of the shape shown in the accompanying diagram; these washers are a loose fit over the valve guides, so that they are only in definite contact with the hot cylinder through a knife-edge. They have entirely overcome the trouble, and necessitate no structural alteration to the engine which cannot be said of the washers supplied by the makers, which necessitate a reduction in the diameter of the valve guides.



Device for removing the flywheel now incorporated in all Blackburne engines.

The standard magneto timing calls for the contact breaker points being set to break 11 m.m. before top.

**Obtaining Best Results from a Blackburne Engine.—** dead centre at "full advance." This will be found suitable for all-round use, though a slightly earlier setting may be employed to advantage for speed; a later timing than that recommended will result in overheating and burnt exhaust valves. The magneto timing should be checked whenever persistent overheating occurs.

It is safe to affirm that no carburetter suits a Blackburne engine better than an Amac, the racing type in particular being excellent for touring as well as for speed work, though not so economical as the ordinary type. Excellent results may also be obtained with the Cox-Atmos by those preferring the single-lever type of instrument.

With regard to lubrication, probably any good brand of fairly thick oil will suit this engine, but the writer has always used Castrol "C." and can strongly advocate its use. No hard and fast rule can be given as to oiling, since the amount required varies very considerably according to circumstances; however, it will be found a golden rule to err on the liberal side, since decarbonising a Blackburne is simplicity itself.

Owing to the inherent quietness of these engines, "flywheel ring" makes itself rather evident. Possibly this could be entirely overcome by means of felt pads and so forth, but a much simpler method, which deadens the sound to a marked degree, is to enamel the flywheel all over. W. A. F. S.

# ONE MAKE OR MANY?

## Weighing up the Pros and Cons of Faithfulness to One Maker.

HOW many motor cyclists chose by chance the make they ride! Friend A., for example, really wanted a flat twin, but bought his present 350 c.c. single because a friend of his youth, now Benedict, was selling it cheaply in order to invest in a sidecar outfit. Benedict himself had fancied a new 6-7 h.p. Blink, but bought the 7-9 h.p. Yank he has because Messrs. Blank were selling them off at really advantageous prices. And so the tale goes on!

A proportion of the brotherhood, however, is more fastidious. Knowing what make and model they want, they wait until they obtain exactly what they require. This proportion, it seems, is subdivided into two classes.

A typical purchaser of the Class A type bought a single gear 3½ h.p. Blonk in 1912. It served him well, and because he is a conservative soul who trusts his luck rather than risking it, he has ordered, each November, next year's model of the same old make.

Class B contains riders of a far less tenacious breed. Motor cycle butterflies, they flutter from one make to another, never faithful to any for long. I can appreciate their motives, but shall never forsake the class I joined so many years ago.

### Reasons.

The 4¼ h.p. chain driver I ride is the direct descendant, albeit five-times-grandson, of the first machine I ever owned, and, true to type, has all the family characteristics I have grown to know so well. In various lairs in my workshop lie spares and gadgets innumerable, garnered from previous machines, whilst the roadster alongside carries almost as many.

### The Other Side.

And how I pity the butterfly! It is ten to one that for the first few weeks his very controls are strange, the riding position entirely changed, and the spares he had for his last machine no longer of any use. (Not knowing where next his fancy would settle, he hesitated to face the loss on selling them.) The still good 26 × 2¼in. cover from his last bus is no use on his this year's model, which has 2½in. rims and all-chain drive, rendering useless also his spare belt, belt lengths, and that wondrous assortment of fasteners.

Naturally enough, his system is not innocent of all good points, or it could not claim the adherents it does. One year he may ride over the most blissful spring frame ever made, another with the smoothest running engine, while for next season he is possibly promising himself the latest thing in sporting singles.

"Lucky man," I think, until I remember the covers—and the chains—and those belt fasteners.

Then I recall my old dog Tray—and it's the same old make for me! D.F.W.

# CLUB DEBATES.

TO provide interesting entertainment for members of motor cycle clubs is one of the most difficult matters which come within the purview of a club secretary. The Cumberland and County M.C.C., however, has discovered a scheme which has proved to be very satisfactory.

The idea is to get the members together for "an impromptu evening" and then to ask them each to write the title for a subject for debate. These suggestion slips are placed in a hat, from which one is drawn. The writer of the particular suggestion is allowed five minutes to deal with his question, and discussion and criticism follow by the rest of the company, which usually consists of a very satisfactory proportion of the most enthusiastic club members.

One of the agreeable surprises of this scheme has been that members who could never be prevailed upon previously to take part in debate found themselves in the happy, though possibly embarrassing, position of being actual leaders, and the good spirit which prevails appears to rob them of all self-consciousness.

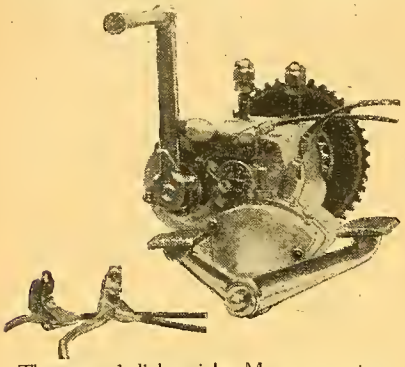
In addition, this club organises a series of lectures which have been voted an unqualified success, gaining in popularity as the session advanced.

# FOOT CONTROL FOR CHANGE-SPEED GEARS.

## The Moss Three-speed Operation with Positive Stop for Middle Gear.

FOR speed and competition riding where it is frequently impossible or dangerous to release the handle-bars, a foot-controlled speed gear is one of the greatest imaginable conveniences.

Where only two ratios are used pedal operation presents no difficulties, and the facility with which the gear may be dropped when the inevitable "tight corner" arises is delightful, assuming of course that the pedal is convenient to the rider's foot. When a three-speed gear is employed, however, difficulties arise.



Three-speed lightweight Moss gear box with foot control mechanism. The handle-bar trigger to release the middle gear stop is shown beside the clutch lever.

In many gear controls the location of the lever in its middle position is not so positive that it cannot be overrun, but in practice this is not a serious detriment, as the sensitiveness of the hand makes it always possible to feel when the middle gear pinions are in mesh by a more or less subconscious process which is carried out instantaneously. The same control, however, when an attempt is made to work it by foot, may become a positive nightmare, for the mind cannot extend its sensory nervous system to the extremities of an entirely insensitive boot heel.

During the 1921 T.T. races the Moss Gear Co., Ltd., of Aston, Birmingham, supplied both foot- and hand-controlled three-speed boxes, and users of the former claimed an advantage of several seconds per lap. In these boxes the middle gear location was not positive, but it has since been made so in a very simple manner.

### The Selecting Mechanism.

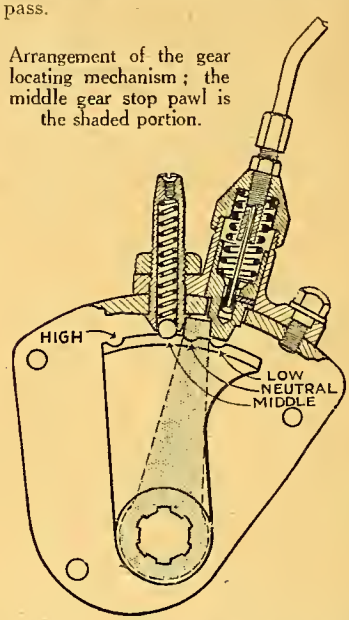
Location of the gears is effected by a spring-loaded ball dropping into grooves on a quadrant which moves with the control pedal. Mounted loosely on the same spindle is a pawl which moves parallel with and projects slightly beyond the periphery of the quadrant; this pawl works in a slot on the side of the quadrant extending from the low to the middle gear locating grooves. Projecting into the control case on the gear box is a spring-loaded steel plunger controlled from the handle-bar by a wire and finger trigger.

### Middle Gear Cannot be Passed.

When the quadrant is in the low gear position the pawl lies behind the plunger and a change to middle gear can be made by depressing the toe end of the pedal. The forward movement of the quadrant brings the end of the slot against the pawl, which in turn is held by the plunger, and thus middle gear cannot be overrun, but a change back to low can be made as desired. To get into top gear the pawl is released by raising the plunger with the handle-bar trigger, when the toe of the pedal will again move forward. The pawl is now at the forward side of the plunger, but a change back to middle can be made when the forward end of the quadrant slots limits the movement by meeting the stationary pawl, and so middle gear is positively obtained in the downward change also.

To return to low again, the plunger must again be raised to allow the pawl to pass.

Arrangement of the gear locating mechanism; the middle gear stop pawl is the shaded portion.

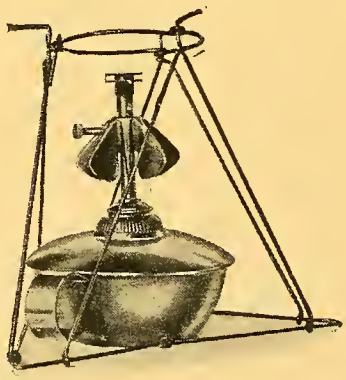



Although the operation sounds a little complicated it is really very simple if it is remembered that one can *always* change back to the last gear used, but that the trigger must be pressed to go to the other extreme ratio; an instantaneous change is always possible from top to middle and from middle to the last gear used.

# A CURIOUS APPLICATION OF AIR COOLING.

RECENTLY a representative of the Brillig Light Co., of 8, Wilmington Street, London, W.C.1, called upon us to demonstrate the Brillig lamp. This device is one which burns vaporised petrol with luminous flame, so providing light and heat either for household purposes or for camping and picnic-ing. Simplicity is the keynote of the lamp, petrol being drawn up to the burner head by a wick. The head is heated by the flame of a wax match, and the vapour then escapes from a ring of fine holes, and is ignited, when it serves to maintain the burner at a heat sufficient for the continued functioning of the apparatus. For boiling kettles, etc., a collapsible wire stand is available, and outdoors a mica cylinder is used to shield the flame.

Most interesting in the working of the lamp is the system of flame regulation. It will be seen that on the central wick column is an eight-vaned fitment capable of sliding vertically. The demonstrator showed that when this fitting was brought up to the head the flame was instantly lowered to a glimmer, rising immediately the regulator was dropped. The secret underlying this mysterious control is that the fitting absorbs the heat of the burner head and dissipates it so rapidly through its cooling flanges that the petrol is not vaporised so quickly.



For campers, picnic-ing and other applications where heat and light are needed: the Brillig petrol vapour lamp.

The lamp is nicely made, ornamental for indoor uses (of which there are a multitude), and as it burns petrol (most economically, too) it should be an invaluable gadget for the motor cyclist who indulges in summer picnic jaunts or holiday camping. The price with regulator is 12s. 6d.; the kettle stand, windshield, and a heating radiator are listed as extras.

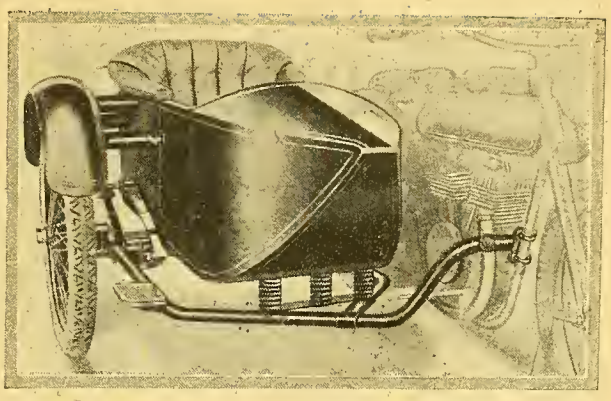
Incidentally, the inspiration for the name of the lamp was gained from Lewis Carroll's poem, which commences: "'Twas brillig. . . ."

# SIDECARS TO SUIT OVERSEAS ROADS.

## The Goulding Sidecar—an Australian Design with Semi-flexible Connections.

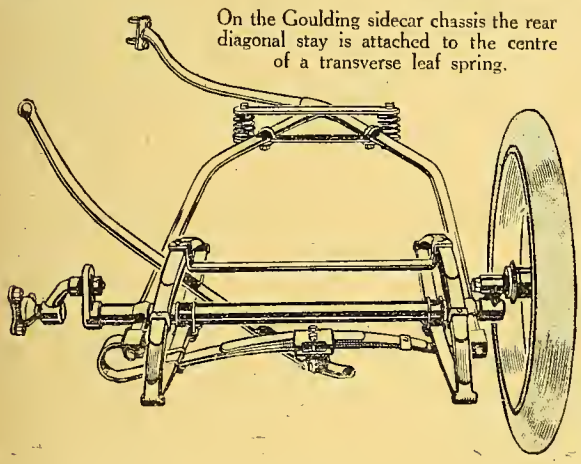
DESIGNED by an Australian, the Goulding sidecar has had considerable success in the land of its birth, and is now being made under licence in the United States by Messrs. Shillan, Beck and Co., Inc., at their Milwaukee factory.

Essential features of the sidecar are the chassis construction and connections. Taper bolts are used for fastening it to the motor cycle frame,



Exceptional ground clearance, massive construction, and very substantial mudguard fixings are features of this sidecar.

On the Goulding sidecar chassis the rear diagonal stay is attached to the centre of a transverse leaf spring.



thus ensuring security of attachment. An adjustment for the wheel is provided, which is fixed by a patent Drake lock so that the sidecar may be adapted to various machines with different sizes of wheels; there is a similar adjustment at the chain stays. The long diagonal tube passing from the saddle tube to the rear of the chassis is connected directly to a transverse spring, thus ensuring a flexible connection, and also steadying the machine against side sway.

### Roller Bearing Hub.

So as to conform to American and overseas conditions, the ground clearance is 11in. and the sidecar wheel revolves on Timken adjustable roller bearings.

The mudguard is attached to the body by means of tubular supports. These sidecars are fitted with extension axles so that the track of the vehicle may be adjusted to suit the ruts made by a motor car when travelling over bad roads.

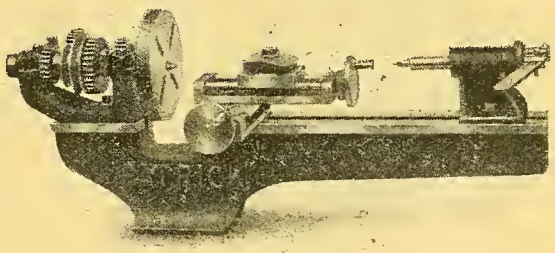
# MINIATURE LATHES FOR THE HOME WORKSHOP.

IN the pre-1914 period many motorcyclists who took up the mechanically-propelled machine because they were enthusiastic amateur mechanics, included a small lathe in their workshop equipment.

Nowadays the erstwhile five-guinea lathe has soared beyond the reach of most of those to whom it is a luxurious adjunct rather than a necessity to the following of their hobby. To meet the requirements of this class, however, as well as to satisfy the needs of model makers and amateur turners generally, a very fine range of 2in. centre lathes at remarkably low prices is being offered by F. Patrick, Ltd., Penraevon Place, Meanwood Road, Leeds.

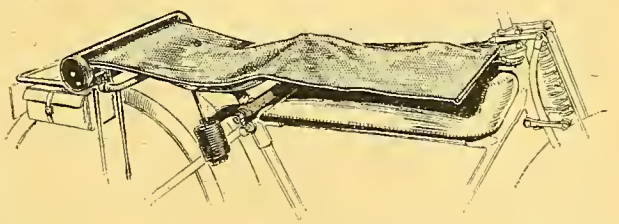
These lathes are capable of everything except screw-cutting, being fitted with a compound-slide rest (adaptable as a vertical milling slide) and a lever operated poppet spindle for sensitive drilling. The bed is solidly constructed and has a gap for the face-plate; the hollow mandrel is ground and runs in adjustable bearings, while both centres are taper. At £2 15s. this tool is of remarkable value, while at £4 5s. it can be supplied with a back gear. Mounted on a wooden stand, with treadle gear and belt complete, the prices are £5 and £6 10s. respectively.

Patrick 2in. centre back-geared lathe; it has a compound slide rest and admits 11in. between centres. The price as shown is £4 5s., and it can be used for drilling the slide rest and is easily arranged as a vertical milling slide.



# A COMBINED SADDLE AND TANK COVER.

RIDERS who have to leave their machines at the curb when making calls will be interested in the device patented by Mr. G. J. Coverley, of Rothesay, Church Road, Burgess Hill, Sussex. Occupying but little room on the carrier, it takes the form of a "blind" enclosed in a metal case, which it is intended shall have fittings rendering it suitable for any width of carrier. On the outer end of the blind there is a spring for attaching to the steering column when the cover is in use. In this position the saddle and tank are protected from the elements, while to uncover the machine is the work of a second, a spring rewinding the cover on its roller.



A useful fitment of interest to riders who use their motor cycles in all weathers.

# FRENCH NON-STOP TRIAL.

## 152 Miles at 24 m.p.h. average speed. Motor-Assisted Bicycles Compete with Big Machines.

THIS year's French motor cycle and cycle car non-stop trials, held in the Forest of Marly, on the western suburbs of Paris, were very much less difficult than those of a year ago, by reason of the decision of the committee to abolish the two test hills. One of these hills was really impracticable, for after heavy rain it was impossible for any wheeled vehicle to get a grip. The second hill consisted of a short, greasy descent through the wood, followed by a winding climb over a well-surfaced road. With these two hills eliminated, the five-mile course was practically level, and although the surface was not good anywhere, and in several parts was decidedly bad, there was nothing of an extraordinarily strenuous nature.

At the start of the French non-stop trial held in the Western suburbs of Paris.

Taking a bend in a greasy forest lane. Naas on a French A.B.C. passing a competitor on a motor-assisted bicycle.

The distance to be covered varied with the class of machine, and the average speed also varied, the highest being 24 miles an hour for the 500 c.c. mounts and those of higher piston displacement. These machines had to cover 152 miles, the time being taken on each lap, or every five miles.

### Eight Clean Scores.

Clean scores were obtained by Pierre (D.F.R.), Maillet (A.B.C.), and Naas (A.B.C.), Pinney (Triumph), Lambert (Harley-Davidson), Minot (Triumph sc.), Walbron (Harley-Davidson sc.), and Raymond (Harley-Davidson sc.). Sixteen others were either penalised or had to retire without completing the course.

A special class was provided for motor-assisted bicycles, which had to average 9 m.p.h. for a distance of 65 miles. Out of twenty-five starters, the seven successful machines in this class were an Evans, a Sicam, two Voisin Motor-Fly, and three Cyclotracteurs. In addition to the motor cycles, twenty-two cycle cars started in the competition, and nine of these finished with clean scores.

# LONDONERS AND A NORTHERN RALLY.

MR. ALAN W. DAY, the honorary secretary of the North London M.C.C., one of the most enterprising Southern clubs, sends us the following letter for publication :

"With reference to the annual rally on Good Friday at Richmond (Yorks), this club and several other similar organisations in the South are awaiting with interest the publication of the full regulations governing this year's event. In 1921 a band of enthusiasts from the North London M.C.C. made the long journey to the Northern market town, leaving the Metropolis on Thursday evening after the usual day's toil, snatching refreshments and a few hours' sleep at Bawtry, and arriving at Richmond with none too much time to spare before the count at 12.45 p.m.

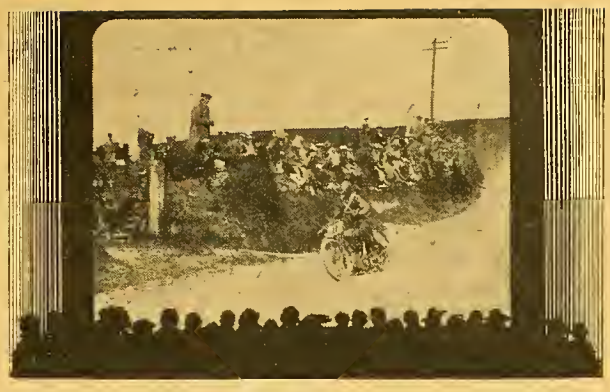
"Your interested readers will recollect that an attempt was made (and duly frustrated) to disqualify the Londoners on the grounds that they had not travelled the whole distance on the day of the rally—a feat well-nigh impracticable—although there was no clause in the rules to that effect. If the energetic organisers intend to include such an irksome restriction (from the point of view of Southern clubs) in this year's regulations, it is suggested that its seeming harshness be somewhat tempered by fixing the hour for the count considerably later in the afternoon, say, 3 p.m. This compromise would, at least, give the *enthusiastic* clubs a sporting chance, even though they dare not put foot to kick-start until the last stroke of the hour of midnight on the previous day.

"It is confidently assumed that our Yorkshire friends would welcome parties from Southern clubs, and in view of the foregoing facts and suggestions, it is repeated that the publication of the rules governing the 1922 Richmond Meet are awaited with interest.

"It is worthy of mention here that, in connection with the Second London Rally organised by this club, which takes place on Whit Monday (probable venue, Hendon Aerodrome) two Yorkshire clubs have already signified their intention of attending and that, in addition to the count taking place as late as possible in the afternoon, it will not be necessary for them, or any other distant club, to ride all night and thus arrive at the rally possibly too fagged to be able to participate in and enjoy 'the fun of the fair.'"

# CLUB ENTERPRISE.

## The Adventures of the Cork and District M.C.C. Special Messenger who journeyed to London to obtain "The Motor Cycle" Film.



THE enterprise of an Irish club in order to secure delivery of *The Motor Cycle* film is the subject of the following article. Owing to the railway strike in Southern Ireland, it seemed probable that the film, which had been "booked" for the benefit of its members, would not reach the Cork and District M.C.C. in time, and it was deemed necessary to send a special messenger to London to collect it. According to the planned schedule, the Cork motor cyclist would have a clear six hours in London, and arrive back in Cork at 9 a.m. on the morning of the day the film was to be shown in that city. But "the best laid schemes . . . ."

The Cork M.C.C. courier had scarcely settled down in his bunk when the engines of the ss. "Puma" stopped. From the porthole he could see that flares were lighting up the darkness. He dressed and repaired to the deck.

### A Rescue at Sea.

A dismantled coasting schooner, with her crew of seven lashed to her decks, and seas breaking right over, was rolling in the troubled sea. Capt. Swan, of the "Puma," putting his charge about, manœuvred with that skill gained only by long experience, to within hailing distance.

"Can you sling us a tow-rope?" came the distant wind-swept request from the schooner.

"Yes, if humanly possible," must have been the steamer captain's thought, and he did. Slowly, more slowly now, down he bore on this poor hulk, for now she was nothing more; yard by yard it seemed the "Puma" approached, now broadside, now stern on, to within what seemed feet of her goal, and how it blew and tossed and stormed the while! The third effort brought the line to the schooner's rail, and in a twinkling a heavy hawser followed and was made fast at either end.

Back to Queenstown the "Puma" dragged her half-submerged prize, and there safe in harbour she was handed over to the powers that be, saved, beyond doubt, solely by the magnificent seamanship displayed by Capt. Swan, whose masterly handling of his craft was described by two naval officers aboard as the finest piece of work they had ever witnessed.

With six hours' delay and a bad night it appeared that the Cork M.C.C. courier would miss his connection.

Fishguard was reached hopelessly late, and a wire in perhaps a none too hopeful strain sent to headquarters at Cork, and to London to have the film meet the courier at Paddington.

Half a carriage and a pipe helped to ease the monotony of a six-hour rail journey, and without a time-table, the traveller found a welcome relief from modern fiction in working out schedule with the aid of the "little liver pills" milestones and a watch. At Swindon he came to the conclusion that even a G.W.R. express engine can hardly average eighty m.p.h., so the lot fell on the Fishguard-Rosslare route for the return journey.

5.40 Paddington. Minutes which appeared to be hours were spent in looking for the film man and hunting through cloak rooms and parcels offices for the familiar tin box of films, but nowhere could it be found. Business houses close at six more often than not. The messenger from Cork got a taxi.

### Found at Last!

Checkmate! *The Motor Cycle* office was closed! Corner buildings must have back doors. "Good egg, if you turn that key I'll——" "Oh, yes, I am the Cork and District man. Thanks if you will. I'll sign for it. Right! Good-night."

Just at 7.50 p.m. the same slogging old taxi wandered into Paddington and dumped a box of films, a suit case, and an Irishman. Eight p.m. saw the Irish mail gliding from Praed Street like the hon. secretary's Scott. Dinner served en route to Fishguard was most welcome, being the first sit-down meal for 27 hours, and, as it turned out, for the whole trip.

Fishguard was reached in good time, followed by a splendid crossing to Rosslare on the "St. David," of happy memories when visiting the 1919 Show at Olympia.

### 130 Miles to Go.

A mere hundred and thirty odd miles to do now without a motor-bike, and with a doubtful rail service. The strike, however, had not spread, so if his luck were in the messenger would reach Fermoy at 10 a.m., with twenty-two miles to go. A wire to a fellow committee man would surely bring him to meet the train, and all would be well.

A heated political argument between two (happily) pacifist opponents helped (?) again to relieve the train's monotony, and Fermoy was welcome after a four-hour sitting.

Flooded roads, trenches, broken bridges, a good car, and a wet magneto summarise the last stage of the journey to Cork, which was completed in a downpour at 1.30.

A hurried meal, wash and brush up, and at 2.30 the club's special messenger wandered into the hall as if coming to see *The Motor Cycle* film were something he did every morning before breakfast. At the conclusion of the performance, when asked his opinion of the whole affair, he said: "Worth it? Well, if I knew before starting that the film was so good and all the railways and steamship lines were on strike, I'd have walked and swum."

C. M. R.

# THE QUESTION OF INSURANCE.

WITH the approach of Spring many motor cyclists are preparing their mounts for the road. On machines with a long mileage record to their credit there are many obvious necessities which result in reliability in running. There is, however, a point which so many motor cyclists fail to consider, and that is the question of insurance.

In many of those cases where machines have been damaged through the negligence of other road users it is found that the owners have neglected to insure. Very often a motor cyclist leaves his machine beside the kerb; a motor car drives up or passes too close to it, knocks it over, and some considerable damage is done. Incidentally, the car also suffers injury; probably its wings may be badly dented. The motor cyclist, not being insured, tries to make the best of things, but is horrified that, in addition to his own repair bill he receives a bill for repairing and repainting the wing from the owner of the car.

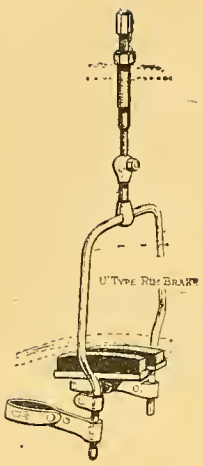
Now, if the owner of the car is insured while the motor cyclist is not, the latter may be put to endless law expenses in fighting the insurance company and proving the car owner was really to blame, and with very small hope of success.

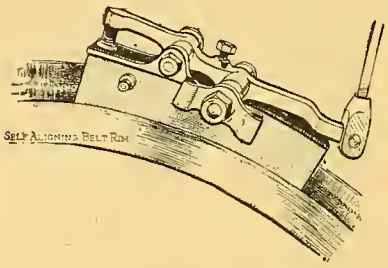
Quite recently a motor cyclist was run into by a Ford car. He sought a solicitor's advice and proceeded against the owner, only to find that he was a bankrupt.

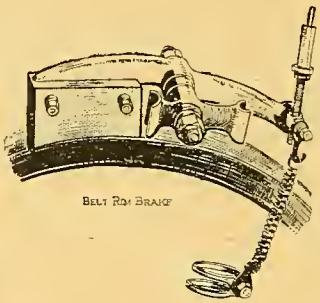
It is just as necessary to insure one's motor bicycle against damage and oneself against third party risks as it is to insure one's house and property against fire, and for their own protection readers who are not already insured are advised to see that they are covered against all risks, and by a sound policy, before they start their 1922 riding.

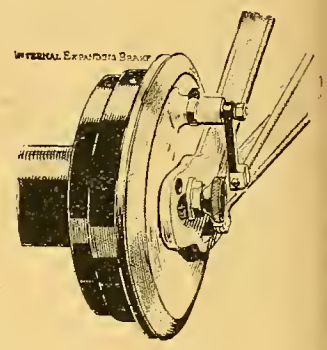
# BRAKING SYSTEMS OF TO-DAY.

## Variations in Design that Cause Differences in Efficiency. Neglecting a Serious Problem.




REPRESENTATIVE TYPES OF FRONT WHEEL BRAKES.

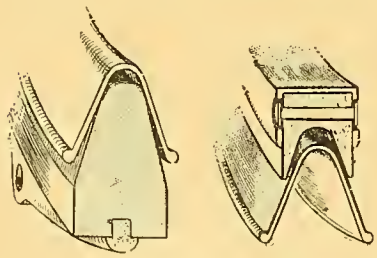
IN the motor cycle's march of progress brake design always lags just a little behind. This is unfortunate, for the advantages of increased power and efficiency are greatly nullified if the means of holding in check the resultant extra vim and velocity are not proportionately effective.

Too often, even in these enlightened days, a machine's braking arrangements forcibly strike one as being a designer's after-thought—perhaps merely to comply with a law that is wiser than we are inclined to believe. My only post-war smash, in the course of well over 20,000 miles on many different and often strange mounts, was caused by a thoroughly badly designed rear brake, and that on a 1921 sporting lightweight that was otherwise a very delightful solo mount. I defy any absolute novice to have driven that machine twenty miles without going over the handle-bars.

Granted, of course, that this case was an exception to the general rule, and that the model in question now proudly carries two extremely neat and efficient internal expanding brakes, I, nevertheless, still note 1922 products that, for reasons not unconnected with braking, I have no pressing desire to try on the road.

### Harsh Brakes Not Necessarily Efficient.

What many brakes lack is a wide enough range of action. They are either "full on," "three-quarter on," or "off"; some omit the intermediate position. In both cases emergency application retards the machine in an admirably prompt fashion, so promptly that the rider is in danger of going on, alone, with certainly unpleasant and possibly dangerous consequences. Further, if effective pressure on the pedal immediately locks the wheel, the brake, as a brake, ceases to do any useful work. It might just as well be replaced with a sprag between the spokes.



Apart from the wedging friction provided by the internal shoe (left), this type also has a considerably greater contact area than the external pad (right).

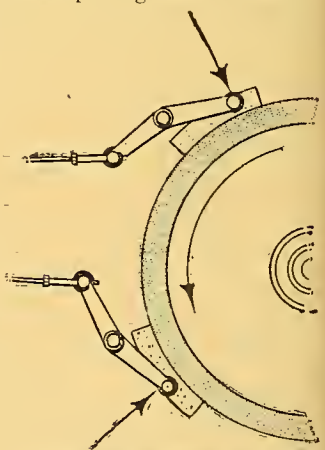
Theory and practice agree that the secret of a prompt pull up lies in retarding the wheel (or wheels) as much as possible without causing it to cease to revolve. The most skilful rider cannot ensure this on many machines.

### Belt Rim Type the Worst Offenders.

Belt rim brakes—"dummy" or otherwise—are usually the worst offenders in this respect. Yet two of the finest brakes of any at present fitted are of the same type. Shoes that are much too small are common; obviously the greater the friction area the less pressure is needed to give the same retarding effect. On the same reasoning, blocks working inside the V of the drum, apart from their wedging action, have a greater contact area than those that press on the narrow back part. Personally, I cannot understand why the latter design survives at all, for it has the added disadvantage of impeding rear wheel removal. There are several other points, little in themselves, that go to make or mar this type of brake.

### Even Application and Self Alignment.

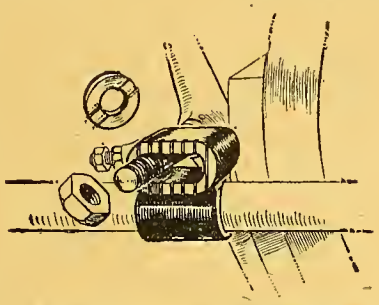
The pad should be balanced or, as it is usually called, "compensated" so that it engages equally along its whole length; if one end wedges in first, wear is bound to be uneven. It should also be self-aligning, so that it adapts itself to the eccentricity which is in time the inevitable lot of the average belt rim. Its pivot should be so



Diagrammatically illustrating good and bad practice in belt-rim brake design. The upper method causes "chatter," and may even result in a serious jam; the lower type gives a smooth trailing action with no loss of efficiency.

placed that it has a *trailing* motion with the wheel; one very famous machine suffers from much brake chatter through disregard of this rule; for, naturally, if the pivot arm be at a tangent *against* the direction of rotation, there is always a wedging tendency, quite absent when the lever (prolonged towards the shoe) follows the motion of the wheel. This is made clear in one of the sketches.

Much that applies to the control rods and pedals of the belt rim type also applies to any other rear brake, and should be read accordingly. Rods in compression are an abomination, and bent rods in tension are little better. Yet both are by no means uncommon. Obviously (the word may be harsh, but it again comes naturally), a strip of steel being subjected to end pressure tends to bend; or, if already bent, on being pulled tends to straighten out. Neither condition makes for greatest efficiency.



When a lug is provided on chain driven machines to permit brake pivot adjustment, some form of locking device is recommended. A suggested method is illustrated.

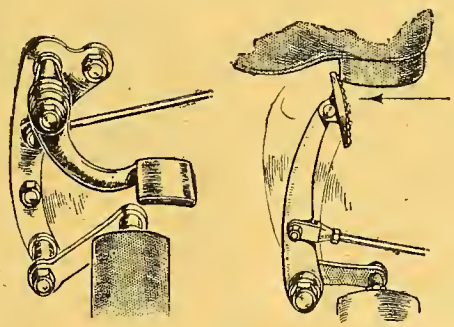
### Mechanical Methods.

In the same way, to take the control gear from one side of the machine to the other—*i.e.*, pedal on the left, brake on the right; or *vice versa*—is not, unless more mechanically carried out than the average motor cycle designer considers worth while, really good design. It is usually, too, quite unnecessary.

On many chain-driven machines the brake pivot is carried in a slotted lug on the rear chain stay, to allow for transmission adjustment. It seems time that some sort of safety locking arrangement was designed to prevent the nut working loose and allowing the whole brake gear to slide away from the drum, and so become inoperative when most required.

Progressing, logically, to the pedal, convenience of manufacture is again found holding pride of place at the expense of convenience of operation. Far too many pedals are set so that a forward kick, instead of downward pressure, is required to actuate them. In some cases the pedal is absolutely vertical, and no amount of adjustment will allow the brake to remain off after an angle of 20° has been passed. In consequence, the rider gets no leg leverage until the brake slips right on, and he finds himself, if still in the saddle, standing on the brake, with all sorts of possibilities of skids—dry or wet.

When, however, footboards are fitted instead of footrests, this type of pedal is just permissible, for then, usually, the heel has a convenient anchorage. At the same time, it is infinitely preferable that the pedal should be 45° from the vertical before it takes effect. Different riders favour different ways of operating the same pedal, but the designer's motto should always be "convenience."



Gradual or powerful application is possible with the pedal on the left, but the vertical type on the right usually must be operated by a kick forward from the knee, which allows no leverage and consequently no real control.

It is admittedly difficult to design foot control, for a machine equipped with only one pair of rests, that is (1) out of the way when not wanted, (2) accessible when needed without any appreciable change of position on the part of the rider's foot, and (3) capable of gradual application from a gentle touch to maximum pressure; but it is not impossible. One British "single" at least embodies all these qualities.

Most pedals are too short and too small. The longer they are, the more effective—within limits; the bigger, the more easily "found," especially by the Hutchinson-booted driver; indeed, there seems no reason why a three-inch bar should not extend right out from the usual diminutive foot-lever proper.

### Band Brakes.

Probably eighty per cent. of present-day machines are fitted with one type or other of rim rear brake, but the internal expanding design is gaining ground. Practically all cars use the latter method or its variation, the external contracting band, but I am by no means convinced that this is a case where we should follow four-wheeler practice. Properly designed, there is little to choose between the belt rim or band type in smoothness or efficiency; but the latter is probably more expensive to manufacture, and is more complicated, mainly because there is more concealed mechanism—in my opinion, the chief defect of the type. Careful design and careful workmanship are essential to ensure that it is water- and oil-proof; and, unless knock-out spindles and detachable hubs are used, it interferes to a certain extent with wheel detachability.

### Unnoticed Friction.

Of the two band types, as fitted to motor cycles, the internal expanding design seems preferable, and is considerably the more popular. With a thoroughly good lining it is most effective, and does not require frequent adjustment, although all users are recommended to satisfy themselves that it is absolutely out of action when "off." Much power may be unknowingly absorbed by a neglect of this simple precaution.

Bowden control is sometimes used, but, although extremely neat and, for a time, efficient, there must be a very heavy cable to avoid stretching or concealed (and dangerous) fraying after prolonged use. I have a purely personal suspicion of this type of control for a service brake.

For the elaborate sidecar outfit with interchangeable wheels, the expanding brake is undoubtedly the most convenient and on the front wheel of the solo mount it has several advantages, for a heavy dummy belt rim does not improve steering, especially at speed.

**Braking Systems of To-day.—**

However, before discussing front brakes in detail, one other general system deserves comment and commendation—the external shoe on the full-sized cylindrical rim. At present the Rudge is the only machine so fitted on both wheels; the new Rover front brake is on the same principle. The scheme is simple, very neat, and, with a large pad, very efficient indeed. It also permits fully interchangeable wheels to be used.

### Front Brake Requirements.

Not one-tenth of the machines on the market to-day are fitted with really useful front brakes. Perhaps it is just as well, for they are dangerous things in the hands of a novice, although very desirable, expertly used, on precipitous down-grades.

When the old-fashioned horse-shoe rim design is standard, it may be safely assumed that the manufacturer intends it more to comply with (or to evade) the law than to assist the rider. It should, and will, by those who dislike rusty rims, be used accordingly. In its best form it is quite usable—in emergencies.

Dummy rim belts, as already mentioned, are not ideal on a speedy machine, and are unsightly on any mount.

### Neat, Simple, and Light.

Neat internal expanding types have been gaining much ground lately, and rightly so, for they provide as great a retarding effect as is generally considered desirable, and may be quite practicably operated by Bowden wire, thus allowing for spring fork movement. In my opinion, however, something even simpler and lighter still should serve—say, a contracting band, of round section, working in a tiny grooved drum attached to the spokes, very much after the style of a once popular pedal cycle brake. Improved friction materials should provide a wearing and practically unstretchable strap; a Bowden cable would do the rest. One famous firm is at present experimenting with something of this sort.

It is not proposed to discuss sidecar brakes, compensated or otherwise, at present; but a few words on future possibilities for solo motor cycles may not be out of place. By reason of the steering and springing arrangements of to-day, it is, to all intents and purposes, impossible to design automatically compensated front and rear wheel brakes, rod operated, and controlled by a single lever. This is a pity, for no data are available as to the effect of such a scheme on a single-track vehicle.

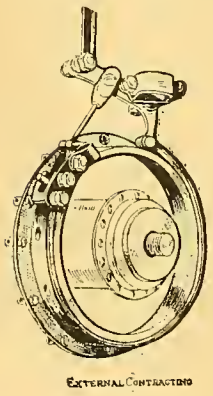
### More Data Required.

Would equal braking on both wheels provide the most efficient retarding action, least disturbing to the machine's equilibrium? Or should the rear wheel be retarded always slightly more than the front, or *vice versa?* Popular belief says that the front wheel should never be severely braked, but it is not unlikely that this is based on the general inefficiency and "roughness" of present-day designs. When, as coming down a steep hill, the greater weight is on the front wheel, that wheel should certainly be braked.

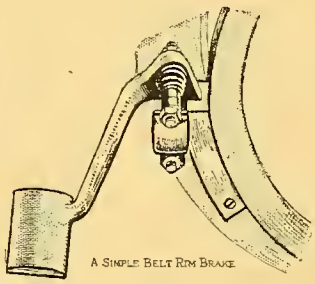
Hydraulically operated brakes appear to have possibilities, and might certainly provide solutions to the above queries. Flexible oil piping might be led to both the front and rear wheels of a motor cycle, and two separate pressure controls would provide some extremely interesting experiments. Anyhow, finality has by no means been reached.

A. McL.

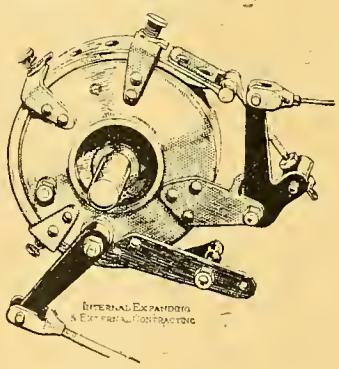
VARIATIONS IN REAR WHEEL BRAKING.



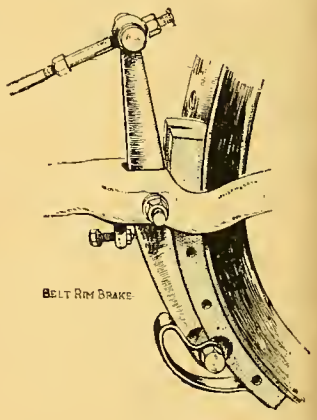
EXTERNAL CONTRACTING



A SIMPLE BELT RIM BRAKE



INTERNAL EXPANDING & EXTERNAL CONTRACTING



BELT RIM BRAKE

## RAILWAYS AND ROAD RATES.

IT is not unusual for the railway interests to lament their hard fate in so far as the payment of road rates is concerned. Railway managers sometimes talk about the "vast" annual sum contributed by their companies in highway rates, but, when the figures are analysed, it would not seem that these payments are quite so vast as might be anticipated.

The Secretary of the C.M.U.A. has gone into the matter, and tells us that the total highway rates paid during 1920 by all the railway companies in Great Britain amounted to £1,635,000, this figure including the rates paid in respect of motor taxation on railway-owned road vehicles. Against this sum may be compared the £9,000,000 provided by direct motor taxation, a great part of which is found by the owners of vehicles which do far less damage to road surfaces than is caused by the railway motor vans that collect goods and merchandise. Upon the whole, therefore, we have not very much sympathy to waste upon the railways as road ratepayers.—*The Autocar.*

# WHO SUGGESTED THE T.T. RACES?

## The True History of the Origin of the Tourist Trophy Races for Motor Cycles.

THOUGH it is true that the idea of an International Motor Cycle Road Race might be organised in Great Britain was mooted in the course of a private conversation, as mentioned by a contemporary, the proposal arose out of the original Tourist Trophy for cars given by Lord Montagu of Beaulieu and first run off in the Isle of Man in 1905. The actual suggestion that a motor cycle race should be organised on similar lines came from the late Mr. H. Walter Staner, at that time managing editor of *The Motor Cycle*, at the Auto-Cycle Club annual dinner held at the Criterion Restaurant on January 17th, 1906.

### The Birth of the Motor Cycle T.T.

Quoting from our report of Mr. Staner's speech, "he hoped that some competiton could be arranged on the lines of the Tourist Trophy for motor cycles. He suggested that the engine dimensions should be 80 x 80 m.m., and the weight of the machines 130lb., fitted with mudguards, brakes, etc., and should, in a word, be fit to ride as touring machines."

These remarks actually gave birth to the motor cycle T.T. A leading article on the subject was published in *The Motor Cycle* the following week, suggesting details, but the A.C.C. programme was full that year, and the final decision to hold the race was not arrived at till December, when, in the issue of the 12th of that month, 1906, *The Motor Cycle*, then the only journal representing the pastime and industry, announced the fact that it had definitely been decided to organise a Tourist Trophy competition, and that the prize would be presented by the Marquis de Mouzilly St. Mars. The next issue contained the interesting statement that the trophy was to be an international one, "the main object of the competition being to show that British motor cycles can beat their foreign competitors." In those days British machines had little chance of winning in a Continental event. For one thing, their design at that period was crude in the extreme and far behind their competitors, and for another the Continental organisers saw to it that the Englishman was placed at a disadvantage. All that is changed now, and the F.I.C.M. sees that there is a "fair field and no favour" for everyone.

The paragraph announcing the preliminary details of the T.T. stated that it had been decided to take an average speed of about 30 miles an hour, and, using this as a basis, the fuel consumption would be worked out. Since the main object would be to encourage the touring motor bicycle in its best possible form, great care would be taken to prevent any form of freak being brought into the race. The trophy would be awarded to the machine covering the course in the fastest time on minimum fuel consumption.

Such is the true and accurate account of the origin of the motor cycle Tourist Trophy race. It owed its birth to the suggestion of one who has passed into the great beyond, whose name is revered by all who knew him and whose work for the motoring movement, for which he lived, only those who worked with him can realise. Of him as of another great man may be truly written, *si monumentum requiris, circumspice*—if you need a monument look around you. Since the quoted paragraphs were written, one can see how the motoring and motor cycle movement, in the development of which he took such a generous share, has grown.

### Official Acknowledgment.

That our facts are correct can be further substantiated by the official recognition by the A.C.U. that Mr. Staner was responsible for the motor cycle Tourist Trophy races, and this fact has been mentioned on several occasions. Quoting from a T.T. programme of former years, "Some eight years ago Mr. H. W. Staner suggested a road race for motor cycles on similar lines to the race for motor cars that had already been held in the Isle of Man." In the same programme credit is also given to Mr. H. H. Collier, who, whilst in Austria in connection with the International Cup Race, mentioned the scheme to Monsieur de St. Mars, but this was not until the middle of July, six months after the A.C.C. dinner.

The brothers Collier were keen supporters of the early races, and shared the honours of winner on several occasions.

It is greatly to be regretted that the donor of the Senior and Junior Tourist Trophies has never seen one of these races run. Monsieur de Mouzilly St. Mars, as he now prefers to be known, has withdrawn from his vice-presidency of the Auto-Cycle Union and has retired from all prominence in the motor cycle movement. It is sad indeed to have to record this, but it may be he will yet relent; even if he does not, his name should ever be remembered as one who did untold good for the sport and industry, as it is to him we owe the two magnificent trophies which have given to the world the finest motor cycle races which have ever been organised.

---

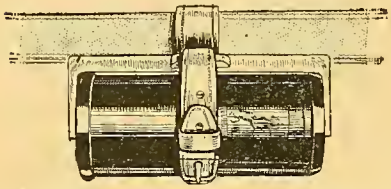
## 200 MILE SIDECAR RACE AT BROOKLANDS.

IT has been decided to alter the date of the Ealing and District M.C.C.'s 200 mile sidecar race from July 29th to June 17th. This will make the event one of the earliest long-distance races at Brooklands, and it is expected that considerable support will be received.

Up to the present there has never been a sidecar race held over such a distance, and it is anticipated that a good deal of information will be derived from it as regards sidecar chassis construction. A strong committee has been appointed to formulate the regulations, and one of its first decisions is to enforce the fitting of skids to the sidecar chassis, which will be capable of supporting the weight of the loaded sidecar in the event of that still all too common trouble—a broken sidecar spindle.

Entry forms have not yet been printed, but it is intended to allow early entrants an advantage in respect of the fee payable. The race will be confined to members of the Ealing Club, so those who anticipate entering may join at any time.

## Emergency Carbide Supplies.

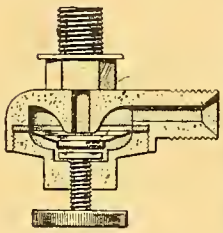


Enough carbide for one complete refill may be carried in the Samson carrier, which is supplied with aluminium bracket and strap for attachment to a frame tube at 2s. (Reg. Samson, Ladywood Road, Birmingham.)

## Double-Spark Ignition.

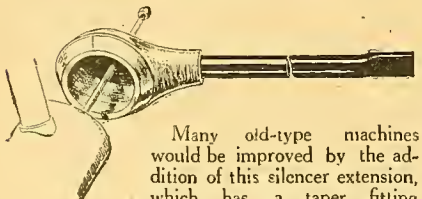
Two simultaneous sparks occur on the new Runbaken "Double-Spark" plug, which is on the double-pole principle, but unusually neat. Price 8s. 6d. (The Runbaken Magneto Co., Ltd., Cheetwood Lane, Derby Street, Manchester.)

## Leak-proof and Renewable Petrol-Tap.



While costing little more than the common type, the Hyatt petrol tap, it is claimed, may be maintained permanently leak-proof and the wearing parts are easily renewable. A flexible steel diaphragm carrying a fibre disc cuts off the fuel supply. (J. Hyatt, 1, Kingsfield Road, Watford.)

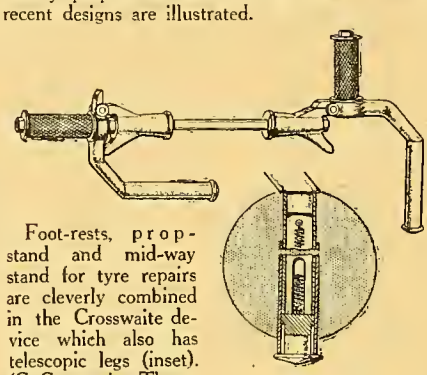
## Silencing Old Machines.



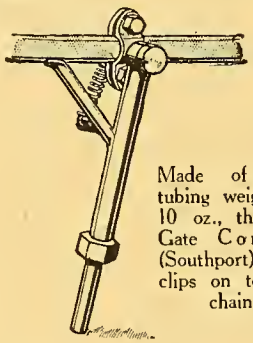
Many old-type machines would be improved by the addition of this silencer extension, which has a taper fitting adaptable to various sizes of exhaust box, 8s. 6d. (James Grose, Ltd., 4, Old Jewry London, E.C. 2.)

## Prop-Stand Developments.

Week by week more inventors and more manufacturers turn their attention to evolving satisfactory prop-stands for solo machines. Three recent designs are illustrated.

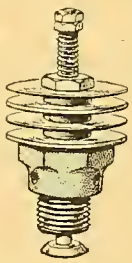


Foot-rests, prop-stand and mid-way stand for tyre repairs are cleverly combined in the Crosswaite device which also has telescopic legs (inset). (C. Crosswaite, Thornaby Hall, Thornaby-on-Tees.)



Made of aeroplane tubing weighing only 10 oz., the Tubular Gate Company's (Southport) stand clips on to the rear chain stay.

Clipping on to the saddle pillar tube the Barker stand consists of a 23in. hinged and spiked rod which is specially intended for use on soft ground. (J. S. Barker, Coningreys, Bloxwich, Essex.)



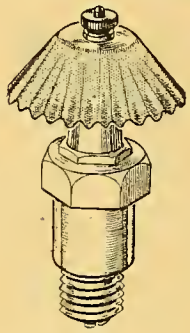
## An Automatic Air Inlet.

Opening only when the engine is throttled down, the Artic valve relieves suction on the jet and saves oil being sucked past the piston rings; it has also minor obvious advantages. 10s. 6d. (Reffells Motor Works, Comshall.)

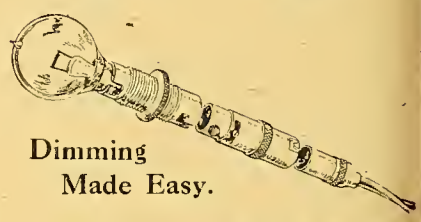
## Cooling the Sparking Plug.

Both these devices are intended to radiate excess heat from the sparking plug.

Left: The "Kool-plug," a radiator specially suited for two-stroke engines having the plug in a horizontal position at the rear. 2/-. (Capt. E. D. H. Robinson, Bourne End, Bucks.)



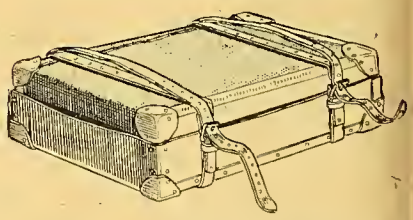
Right: Copper-asbestos washer and radiator combined. 1/-. (The Copper and Asbestos Washer Co., 111–112, Livery Street, Birmingham.)



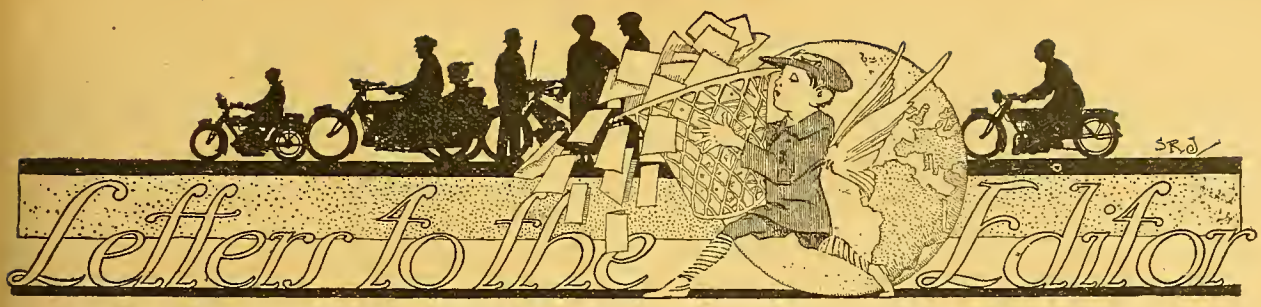
## Dimming Made Easy.

Provided with bayonet joints interposed between the ordinary lead connection and that on the head lamp, the Astra dimmer enables the driver to reduce the light of his lamp and, at the same time, to save current. The resistance has three positions. 7s. 6d. (The Astra Dynamo Co., Ltd., 110, Victoria Street, London, S.W.1)

## Armoured Carrier Case.



Aluminium and wood strips protect bottom of the Wearprufe case when strapped to the carrier. It is made of vulcanised fibre which is absolutely waterproof and has leather straps arranged to secure the case independently of the carrier fixings. Sold in two sizes, 18in. × 11½in. × 6in. (27s. 6d.), and 14in. × 10½in. × 6½in. (26s.) by Athill & Clark, 34a, Haymerle Road, Peckham, London, S.E.15.




The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *MODERNISING THE LONDON-EDINBURGH.*

Sir,—Recently the question of double journey events has been raised, but I have not observed any reference to a point which I consider is worthy of mention in favour of such events. To my mind, the horrible monotony of the long run South without any of the competition interest is appalling. I am not usually favourably situated enough to make the return journey a pleasure trip, and must needs hasten homewards with all speed.

The Sunday following the trial is occupied in reaching Carlisle, and the remaining 300 miles to London constitutes the Monday trip. After having ridden for several hours it is extremely depressing to be suddenly confronted with an A.A. notice board conveying the useful information that London is still 200 miles away. E. ATKINS.

### *PRACTICAL THOUGHT MATERIALISATION.*

Sir,—May I beg for a little more space, although on a subject alien to your much-appreciated journal?

In the first place, Mrs. Maude Stansfield wishes to accuse other correspondents of not taking the matter seriously, and not only being highly amused but also having a confused idea of the subject, which is hardly a fair criticism and certainly not a true statement. I am quite serious, and give other correspondents the same credit, otherwise they would not care to waste their time and the time and space of our valuable "Blue 'un."

Thought, like faith, is of no use by *itself*, and might I put forward an analogy by saying that petrol spirit, which is the prime mover in a petrol engine, is of no use by itself, without all the other items embodied in their proper place, thereby making the petrol function the desired way. Similarly thought actuates other members of our body (consciously or unconsciously), and we get a visible and tangible result.

To think upon anything certainly creates an image, and to our limited faculties exists as a reality until we "come back to earth" again, usually with a shock, to discover that our thoughts were mere day dreams.

Might I let your correspondents into a secret by saying that my thoughts and desires have always been of a very ambitious nature, and although some have materialised the majority are still in that ethereal space which contains the most perfect of perfections, and which still holds the secret of the perfect and flawless motor cycle?

First the vision, which is the perfect tour, with no troubles or worries, sunshine and blue skies, then the reality, which includes sooty plugs, punctures, deluges, and all those beautiful additions so "dear" to the motor cyclist. V. N.

'London, N.W.

Sir,—Do you think you could persuade your correspondent Mrs. Maude Stanfield to give us the name of previous owner who *thought* the 4 h.p. Bradbury belonged to him?

I have been wondering if he has a Sunbeam outfit, because if so *I* might *think* of it! HONY CATCH.

Sheffield.

Sir,—With reference to Mrs. Maude Stansfield's recent correspondence, may I, with due humility, suggest that although she is on the right track concerning the efficiency of will-power, so far as its potentialities are concerned, she yet seems to lack the true significance of other factors governing the subject. There is willing *and* willing, there is a right and a wrong way of going about it. I do not deny that—metaphorically speaking—faith *can* move mountains, but, what should chiefly concern us is the motive behind or impelling the will. The writer happens to be acquainted with "a bloke what willed" that he become the proud possessor of a "hot stuff" sidecar outfit, and when one fine day (in the middle of the night) he discovered the very machine unattended, up-to-date, and replete with every refinement—simply screaming to be "pinched"—he lost no time in putting his will into execution. It turned out to be a hotter 'bus than conceived of in his wildest dreams, and he has meanwhile had ample "time" to reconsider this complex will problem.

As one of your able correspondents rightly assumes, "willing," in order to bear fruit, is rendered more easily successful if backed up by a good motive, preferably an unselfish one. This is a *sine qua non*. VIC.

Hendon, N.W.4.

[This correspondence is now closed; several further communications on the same general lines as those published above have unavoidably been crowded out owing to the great pressure on our space by letters of a more practical and purely motor-cycling interest.—ED.]

### *SPEED AND CONSUMPTION OF AN AMERICAN FLAT TWIN.*

Sir,—I read with surprise your criticism of the 1922 4 h.p. Harley-Davidson. I feel sure that there must have been something radically wrong with the machine in question. I have now ridden my 4 h.p. Harley (1920) regularly for fifteen months, and have covered over 10,000 miles on it.

In your criticism you stated that the maximum road speed was 42 m.p.h. Without any tuning, other than carburetter adjustments, I attained a speed of 60 m.p.h. by my speedometer, which I have compared with many others and found correct within 3 m.p.h.

This speed was attained on the main road between Penrith and Appleby. I have never tried it out on the track.

By speedometer, I have many times exceeded 50 m.p.h. with an adult on the carrier, and occasionally with two on the carrier. I have also exceeded 40 m.p.h. with three on the carrier.

I think the above will testify that the 4 h.p. Harley has plenty of power, and reasonable speed.

As to petrol consumption: Last summer I rode down from Appleby to Newport (Salop), at an average speed of 30 m.p.h. (running time). The total mileage was 185.

When I started my tank was full, containing 2¼ gallons of petrol. When I arrived I had exactly a quarter of a gallon left. This works out at 92.5 m.p.g., which leaves very little to be desired.

As regards the other points in your criticism, I agree with and heartily endorse them.

I think a large majority of the 4 h.p. Harley riders will agree with me.

FOUR-UP-SOLO.

Newport, Salop.

### DROPPED BARS FOR CONTROLLABILITY.

Sir,—"Martinivy" asks why many riders use touring handle-bars, when T.T. or semi-T.T. are far more comfortable. Surely this is a matter of opinion. As a middle-aged rider I find the "sit-up-and-beg" position far less trying to the muscles of the back and neck than the "monkey-on-a-stick" position assumed by my young friends. As to controllability, the T.T. or semi-T.T. may give more of it to the youthful scorchers, but touring bars prove quite good enough for

Canterbury. MIDDLE-AGED TOURER.

Sir,—The motor cycle is now largely used by business men and is not entirely confined to the world of sport. For people who use a motor cycle for business, it is hardly dignified enough to use T.T. or semi-T.T. handle-bars—hence they use the "sit-up-and-beg" pattern.

Can "Martinivy" imagine his local doctor riding a motor cycle with T.T. handle-bars with any dignity?

Thanet. K.N.3242.

Sir,—From the ladies' point of view pillion riding is far more comfortable, for they are able to obtain support by the driver sitting upright, which cannot be obtained for long with dropped bars, as I have more than once noticed with riders of this type. G. W. WALKER.

Sir,—I have been having a rough time of it lately on Black Country roads, and determined to do something to ease my wrists. An hour before I got my copy of *The Motor Cycle* I had mentioned this fact to a certain benevolent gentleman in the trade. He made me a present of a pair of Scott touring bars.

Over lunch I read "Martinivy's" letter, and composed a reply in my mind, setting out the advantages of touring bars from the point of view of comfort and appearance.

At four o'clock the new bars were on the machine. At four-fifteen I went for a trial run. At five the old bars were back again.

In reply to "Martinivy" I have only two words to say —"Goodness knows." SCOTTITE.

Birmingham.

Sir,—Some of the reasons why many people prefer to sit upright are: (first) they like to sit comfortably on that portion of the anatomy best suited for sitting on; (second) they like to see where they are going without having to rick their necks; and (third) they do not admit that the machine is more easily controlled with the rider laying down on the handle-bars. G. PINKER.

Sir,—About two months ago I was persuaded, rather against my will, to bend out my "earscratchers" to a flat position in a garage door and with a wooden mallet. After a trial ride to get used to them I swore I would never again have "earscratchers." The comfort of my machine was increased, the controllability doubled. I never feel backache or wristache. M.A.3078.

Cheshire.

### SPEEDS OF LIGHTWEIGHT TWO-STROKES.

Sir,—I have read with much interest Mr. Cooper's letter of eulogy on his Sparkbrook. I am afraid that I find his speed of 52 m.p.h. rather hard to swallow.

My own 'bus is a Calthorpe, fitted with a 293 c.c. J.A.P. engine. It has only done 1,500 miles, and as I did not open it out till it had done close on 1,000 miles, I have no idea what its maximum speed is. I have done 42 m.p.h. recently (by a Bonniksen speedometer), and that before it had been decarbonised, but I have not yet tried it on Brooklands.

I should like to challenge Mr. Cooper to a three-lap race on Brooklands any time between April 14th and April 28th. As his machine is of smaller c.c. than mine, I will grant him a minute start if he wishes. I have no experience of racing, and I challenge him solely in a sporting spirit.

A. H. GRUBB.

Sir,—Will Mr. Cooper kindly give the gear ratio used when he attained 47 m.p.h. on the Portsmouth Road? With a top gear of 4¾ to 1 my maximum speed is 41 on an

London, S.W.9. IXION-VILLIERS.

### WANTED, PERFECT GOGGLES.

Sir,—The ordinary English goggles (or goggle) is a detestable thing, as ugly as the word. I refer to the chenille elastic type. It is unsightly, uncomfortable, and hot, soon gets dirty, and is almost impossible to keep clean. I have two pairs of what are called "eye protectors," both of American make, which are altogether superior. One pair was got from an American Army dump in France, and consists of large spectacles of a pale green colour with leather side pieces. The other pair I picked up at an optician's. It is called the "Rodaplane" eye protector, and somewhat resembles the popular tortoiseshell spectacles, with pale yellow glass instead of lenses, held on by wire springs over the ears. There are not even any side pieces, and in my experience the latter are quite unnecessary.

I notice that "flying masks" are being sold at greatly reduced prices, and I am not surprised.

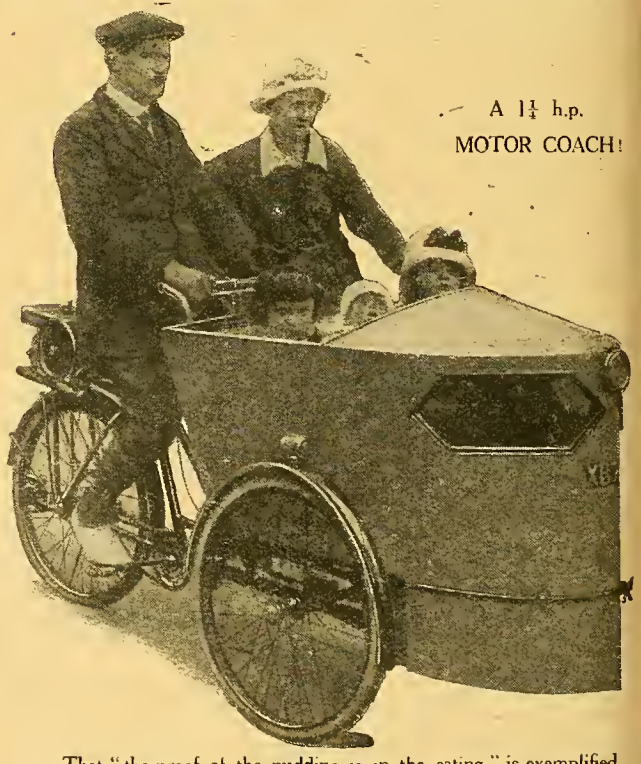
I trust some English makers will produce a light spectacle type of goggle—not a mask—before long. H.L.L.

London, W.C.

### LAND'S END OR THE LIZARD?

Sir,—Seeing that the Land's End-John O'Groats trial is being revived this year, would it not be possible, and *more appropriate*, for this trial to be run to or from the Lizard instead of Land's End? This would be from "farthest north" to "farthest south," the Lizard being considerably further south than Land's End, and the distance could be made the same by branching off at Camborne for Helston and thence direct to the Lizard, or slightly longer by turning to the right at Cury Cross Lanes (Wheel Inn) and thence past Mullion golf links, Poldhu Cove, and through Mullion Village. There are several tricky hills on this route, and the roads are good, and it would be somewhat new ground for motor trials.

Perhaps it might be possible to have a London to Lizard trial at Easter, 1923? H. P HARRISON.



A 1¼ h.p. MOTOR COACH!

That "the proof of the pudding is in the eating" is exemplified by the performance of this frail-looking and apparently overloaded hybrid, descended from a tradesman's pedal tricycle, which has been propelled 8,000 no-trouble miles by a 1¼ h.p. Simplex motor attachment. It is submitted by its designer and owner, Mr H. A. D. Joseph, as a solution of the "Economical Transport for Two" (or more) problem.

### COMPARATIVE IMPORTANCE OF CLASSIC EVENTS.

Sir,—It did not surprise me in the least to read in your leader that, from a publicity point of view, American manufacturers placed greater importance on long distance reliability runs than on the T.T. and similar races.

It is well known to motor cycle salesmen that the amateur will not, as a rule, purchase a speed machine "guaranteed 70 m.p.h." however much he may fancy it.

In the London-Edinburgh and similar runs one gets the results of machines as sold to the public; in T.T. races, Brooklands and American track races, machines are used which the public never see on the road, let alone purchase. In fact, there would be practically no sale for them if they were marketed. A. C. ROBBINS.

Sir,—Some months ago it was reported that the Harley-Davidson Co. had decided to retire from the racing game in America, and this announcement was to my mind an admission of the fact that purely speed events are not worth the money spent on them from a publicity point of view.

I have for many years advocated the importance to the "trade" of such trials as the classical London-Edinburgh and London-Land's End events. As a means of popularising motor cycling, I think these two events do more good to the trade than any other half-dozen trials put together. Crowds of people turn out along the London-Edinburgh route year after year to witness the passing of the competitors, and the predominant impression created in the minds of these thousands of onlookers must be that the modern motor cycle is wonderfully reliable.

Then again, when somewhere about 90% of the competitors arrive in Edinburgh dead on time this fact is widely reported in the press and read by millions, and this cannot help but be beneficial in bringing before the public the wonderful reliability of the motor cycle, apart from its appeal as a sport and pastime Once the general public thoroughly believe in the economy and reliability of the motor cycle a large influx of new comers to the ranks of motor cyclists will result.

I do not wish these remarks to be misunderstood. I fully realise and appreciate the great value of the T.T. Races and other long-distance speed events, which in the past have greatly tended to improve the breed of motor cycles. There will always be a sporting element in motor cycling. As a sport, the motor cycle has many advantages over the car; but as time goes on the sporting element will be in the minority, and the great rank and file of motor cyclists will in the future select machines more for utility purposes than for sport.

I observe that the M.C.C. proposes running a trial from Land's End to John-o'-Groat's, and I, personally, welcome this proposition, although I think it is a somewhat ambitious undertaking for a club to tackle. I should like to see the A.C.U. organise a 1,000, or, better still, a 2,000-mile trial for stock machines, the trial to be run over average roads, such as the classical End-to-End route. Such a trial run on straightforward lines similar to the Scottish Six Days would, in my opinion, do far more to popularise motor cycling than the usual A.C.U.'s Six Days Trial, the conditions of which are, as a rule, too complicated to interest the man in the street. HUGH GIBSON.

### ASSEMBLED MOTOR CYCLES.

Sir,—As an enthusiastic motor cyclist not connected in any way with the industry, I have encountered in my experience machines of the "special design" class that were not altogether above reproach, and some in the "assembled" category that were excellent both in design and construction, which shows that the *type* of machine is not necessarily a criterion of the quality. In the case of "assembled" motor cycles, I am now instancing those where care and attention are paid to choice of materials and finish—the various components are generally the product of years of specialisation, particularly the engine, gear box, hubs, and even frame components, carburetters, etc.

As a matter of fact, it seems to me difficult to draw the line of demarcation between the "specially designed" and the "assembled" motor cycle. Here, for instance, are some of the component parts which not all the leading motor cycle manufacturers (the "specialists") manufacture in their own shops: Drop-forgings for lugs, etc., steel tubing for frames and exhaust pipes, rims, spokes and nipples, mudguards, saddles, tank fittings, springs, magnetos, and sparking plugs, etc.; while, in many cases, in addition to these, castings are "farmed out," also tanks, carburetters, and silencers. Where, then, is the firm making the motor cycle throughout? In my view, then, there seems very little to choose between the two types of motor cycle.

One would like to know why, given harmonious design, accessibility to all parts, conscientious workmanship, and good finish all round, the "assembled" machine should not be quite as good as the so-called "special" product of any firm. E. S. HODGSON.

### TWO SIDES TO THE GARAGE QUESTION.

Sir,—With regard to the recent depression in motoring matters, and the regrettable circumstances under which many garages and repair shops are being forced to close down or carry on at a loss, would it not be well for a reputable journal like *The Motor Cycle* to draw attention to the necessity of these folks "putting their house in order." I refer more particularly to the gross carelessness, and equally gross charges, that are evident practically everywhere in connection with even the smallest jobs that are frequently necessary in connection with motor cycles.

It would be very interesting to hear the experiences of *confreres* in this respect; but, even allowing for the extra cost of things everywhere, if others have had experiences in any way resembling my own there is no room for wonder at the paucity of work at the motor "shops" at the present time. As examples of the sort of thing I refer to, the following may be of interest:

At one place I was charged 8s. 6d. for replacing the front cross bar of the sidecar, consisting of an iron rod ⅜in. thick, with two ¼in. holes and about an inch of thread for nuts at each end.

At another place I was asked 1s. for soldering a loose nipple to the petrol pipe; this came loose again in a few miles, and another shilling had to be expended for faulty work.

I enquired at a further garage what it would cost to put a sheet of very thin aluminium on the nose of the car (about 18 square inches of metal being required), and was informed that it could "probably" be done for £3! (I have obtained the aluminium (polished) myself, and cut it to shape, and fixed it at a total cost of 4s. 6d.!).

And so on. The worst part of this sort of thing, to me, is that when one has to leave a nicely kept outfit at a garage there is never the least assurance that it will be taken away again with out some irritating, and totally unnecessary, damage done during the repair, such as a bent speedometer bracket, scratched and dented tank, broken mirror stem, the enamel on sidecar irretrievably ruined in places, etc., to quote a few personal items. And the expression of amazement on the faces of some of these "repairers" when complaint is made of this sort of thing would be intensely funny no doubt in a stage sketch, but is only indicative of a stunted intelligence to people who take a pride in their mounts, and do not consider it necessary for a cycle or sidecar outfit to resemble a "W.D." machine after service on the Western front.

London, N.17. SCALE.

Sir,—With reference to your leading article recently in *The Motor Cycle*, we desire to mention that we cordially welcome motor cyclists who might be making Torquay their holiday centre, and for over six months have quoted our charges for garaging as follows:

| | Per night. | Per week. |
|---|---|---|
| Solo ... ... ... ... ... | 6 | 2 0 |
| Sidecars ... ... ... ... | 1 0 | 4 0 |
| Three-wheel cycle cars ... ... | 1 0 | 4 0 |

Further, our minimum *and maximum* charge for accommodation during the day is the same for solos and sidecar, viz., 6d. for any reasonable time (two or three hours).

These charges were *never varied*, even in the height of the season when (owing to lack of space, which we hope to remedy in the near future) we were continually, and most reluctantly, having to turn away would-be clients.

These charges, we think you will admit, allow of no further reduction, even in these days of falling prices, but it is not our intention to increase them, even though we did not make our "full year's profits" in a few (all too few) busy months. p.p. THE BABBACOMBE GARAGE.
E. R. BEST.

Sir,—With reference to the editorial article in a recent issue concerning garage charges, and your suggestion that this question offers scope for activities by the A.A. in the direction of classifying and standardising charges, by arrangement with the proprietors, this is a matter which has for several years past received the attention of the Automobile Association.

All appointed garages which are indicated in the A.A. Handbook have been carefully inspected, and their classification in the Handbook is strictly according to the facilities offered.

With regard to standardisation of charges this is a somewhat difficult matter, as naturally the charges made by a high-class establishment in the centre of a large town, catering for every need of all classes of motorists, could hardly be expected to be the same as those made at a small wayside establishment where rent is considerably lower, and garaging arrangements, owing to the limited space available, are not a regular feature of the business.

The Association, however, is always ready to assist members who feel that they are overcharged.

STENSON COOKE,
Secretary, The A.A. and M.U.

Sir,—We note an editorial article with reference to varying garage charges for motor cycles, and a complaint is made that the charge for motor cycles varies from sixpence to a shilling and sixpence an hour. Like yourself, we consider this charge exorbitant, and beg to enclose a card, from which you will see that the various garages in this town (Paignton) came to an arrangement in the matter of tariff of garage charges. (The charges in no case exceed 1s. 6d. per day.)

COLLINS, ERMEN AND CLARKE.

### *NER-A-CAR ROAD EXPERIENCES.*

Sir,—May I ask your favour to air my views of the Ner-a-Car in your columns, this machine being quite a departure from the usual construction of a motor cycle or two-wheeled vehicle.

The construction of the machine on the whole is perfect, certainly one that appeals to each sex. It has a very low riding position, and the machine certainly does not skid in grease. It is also one of the cleanest machines I have ever ridden, and the easiest to handle. All parts are very accessible considering the compactness of the design.

Its defects are: Engine difficult to start, troubles chiefly due to the lubricating system employed, that of mixing the oil with the petrol, the disadvantages of which are known to most riders of machines running with this system, one of the chief being that one cannot rely on garages to give one the correct proportions when asking for refills. The lamps are quite inadequate for country riding. I think the makers should have fitted a four-stroke engine of 2¾h.p.

Maldon, Essex. DESUNT CETERA.

### *UTTERLY AMAZING SPEEDS.*

Sir,—With reference to Mr. G. F. Randall's letter in your issue of February 16th, which obviously refers to the Henderson *de luxe*, we would like to point out that the extract quoted is from a bulletin, in which appears a copy of an article written by Mr. L. E. Fowler, Editor of *Motor Cycling and Bicycling*, who also was the rider of the motor cycle mentioned.

We, and we believe your readers also, have a very high opinion of the value of any statements made by you in your editorial columns, and we see no reason why anyone should make a feeble attempt to ridicule a statement made by a well-known contemporary by the questionable method of omitting certain vital phrases.

The article clearly states that at first attempt the road was quite bumpy, tyres entirely too soft, and rider unfamiliar with mount. It was then decided to pump up the tyres, and continue to a stretch of new surface, where a speed of over 80 m.p.h. was obtained. Surely it is not surprising that anyone should improve their speed on a smooth stretch with properly inflated tyres when it is admitted that the first attempt was given up owing to the unfavourable conditions, and, in the words of the author, "discretion being the better part of valour."

If your correspondent thinks he can increase the speed of his motor cycle by simply pumping up the tyres, we shall be pleased to pump his tyres with a power-driven pump to his requirements, when he will be able to satisfy himself that the remarkable performances described in catalogues and bulletins must be due to the new *de luxe* engine and not to the tyres.

MELCHIOR, ARMSTRONG & DESSAU (LONDON), LTD.,
H. HARRIS.

### *IS "THE GAME" WORTH THE CANDLE?*

Sir,—I cannot say that I agree with "Zenith Solo" and others that "the great game" is not worth the candle. They do not appear to realise that one of the chief objects of a freak trial is to supply the riders with a day's sport.

Who said that such trials *were* a test of reliability? For, as "A. McL." stated in his article, "it is driving ability—and luck—that counts!" Therefore let these critics be contented with the monotonous split-seconds competitions, for, after all, "the great game" is only for the real sportsman.

Bradford. A PLAYER OF THE GREAT GAME.

## SUMMARY OF CORRESPONDENCE.

"N.K. 1660" does not agree with Mr. H. F. Brockbank's statement, in his letter regarding an amateur T.T., that the majority of sporting amateurs reside in Lancashire and Yorkshire!

Last year Mr. G. Emanuel stayed at an old-fashioned refreshment house between Machynlleth and Dolgelly; on the south was a very picturesque lake, and the road to Machynlleth wound up a steep and long hill past some slate quarries. He wonders if any reader can identify the place from these particulars, as he wishes to reserve accommodation there again this year.

"Normac," whose wonderful fuel and speed records on a pre-war Triumph have aroused so much controversy, now confesses that the spirit used was "Johnny Walker No. 1."

After much starting-up difficulties with his new two-stroke lightweight, Mr. C. G. New found a satisfactory solution in the Roth and West plug, with extra sparking gap at the firing points, described recently in *The Motor Cycle*.

"Impervis" puncture-sealing compound and "Erusa" belt dressing are recommended by Mr. R. T. Thomas.

Stretching of a ¼in. chain on a 2½ h.p. light weight was cured by "D.L. 1234" by replacing the offending component with the, apparently nameless, chain fitted to A.B.C. Skootomotas.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# CLUB NEWS

Inter-club social events are proving very popular, the Bristol M.C. and L.C.C. and the Bath and West M.C.C. having already had two successful meetings. The photograph was taken during the visit of the latter club to Bristol, over 100 members of the combined clubs being present.

### Border M.C.C.

Starting with a social run on April 22nd, an interesting list of events for the summer months was drawn up at the annual general meeting of this year-old club.

### Reigate, Redhill, and District M.C.C.

Trials for single-geared and for pre-1914 machines were provisionally arranged at the annual general meeting, held at the Warwick Hotel on the 16th ult. The hon. secretary is Mr E. F Brewers, 22, Garlands Road, Redhill.

### Manchester M.C.

On the 5th inst an invitation reliability trial of approximately 25 miles will start at the Nag's Head Hotel, Bucklow Hill. Fuller particulars may be obtained from the hon. secretary, Mr. S. J McCann, 5, Blackburn Street, Heaton Park.

### North Wales M.C.C.

In the course of his report at the recent annual general meeting, the hon. secretary, Mr. J. H. Davies, mentioned that during 1921 the membership had increased from 78 to 104.

### Bedford M.C.

On a recent Friday evening members and a few friends of the club assembled at the first of a series of suppers, which took place at the club's headquarters, the Lion Hotel.

### Bradford M.C. and L.C.C.

Since the club has over 300 members a large and enthusiastic gathering is anticipated at the general meeting to be held at the Bellevue Hotel, Bradford, to-night (March 2nd).

### Neath and District M.C.

The club now commences its third year, and considerable progress has been made since its inception. The committee through its untiring efforts has been successful in obtaining the use of Morgan Park and also a delightful stretch of sands known as Rest Bay, Porthcawl (the Welsh Blackpool), for the holding of speed trials during 1922. The social side has been well provided for.

### Hartlepools M.C.

During the past year the membership has increased from 35 to 105 (motor cycle members). At the last annual general meeting it was decided to continue affiliation with the N.E.A.A.

### North London M.C.C.

This year the club will again organise an inter-club rally, probably at Hendon, on Whit Monday, and advance particulars are now available to clubs interested. The secretary of the football section, Mr. R. H Baxter, Livonia, Methuen Park, Muswell Hill, N.10, would be glad to hear if any other motor cycling club has a football team, so that matches can be arranged.

### Bloxwich and District M.C.C.

With the idea of arranging an afternoon's good sport and fun, an open freak hill climb and relay race was held on February 18th. Through the generosity of Mr. G. Arch, a field was chosen which included the necessary undulations.

From the starting point, a bank with a gradient of 1 in 6·7 stretched for 80 yards, with a right-hand turn at the top, immediately followed by a five yard rise of 1 in 3. The rest of the distance consisted of an S bend, with a downhill finish of 1 in 10. The total length was approximately 400 yards, and the course was five yards wide, and was fenced in with stakes and ropes throughout its length.

In spite of the fact that the grass was wet, some fairly fast riding was indulged in. In a few cases heats were won easily owing to the other competitor suffering from lack of wheel grip; but the restriction which troubled most was having to pull up in 20 yards after passing the tape.

In the relay race, the first man rode to the top of the hill, and there transferred his number to his partner's machine, who completed the course.

Results:—Hill Climb (1) R. Smith (3½ Sunbeam). (2) I. Anslow (2¾ A.J.S.).
Relay Race P. Cranmore (3¾ Scott) and N. Wiggin (3½ Triumph).

### Uxbridge and District L.C. and M.C.C.

Taking the form of a social run, the opening event will be held on the 5th inst., to Alms Hill, near Henley. The start is at 2.15 p.m. from the Chequers Hotel, Uxbridge, and any motor cyclists will be welcomed. The club has arranged a very full programme of events for 1922.

### Isle of Wight M.C. and L.C.C.

Dr. E. F. W. Buckett has again accepted the presidency, and was unanimously re-elected at the annual general meeting held at the Wheatsheaf Hotel, Newport, on the 16th ult. Much interest was shown in the programme for 1922. Intending members should join at once; the hon. secretary is Mr. E. H. Darling, Garrison Schools, Albany Barracks, Parkhurst.

### Surbiton M.C.

"With most clubs the opening run opens the new season; with the Surbiton Club this title is used by courtesy only, as our season continues all the year round and therefore does not need 'opening'"—extract from a circular with regard to the run which takes place on the 19th inst. to Ripley (tea at 4.30 p.m.).

### Worcester and District M.C.C.

Among the more important events definitely settled for 1922 are the Madresfield Court speed trials on June 22nd, and a Good Friday half-day reliability trial.

### Basingstoke M.C.C.

On the 19th ult. the club held a most successful trial for the "Fleming Cup," over a very stiff course of three circuits of 30¾ mls. each. Nine checks were operated very successfully, and the winner easily found, but as awards show, there was a tie for second and third places. Results: First, F. G. Hedges (3½ Norton), Fleming Cup; second, W Mansbridge (Royal Ruby), and M. Scales (8 Sunbeam s.c.), tie; third, W. Osmond (2¾ Massey-Arran), and W. Julian (8 Matchless s.c.), tie. £4 was handed to the local hospital as a result.

(*Club News is continued on page* 280.)

# CURRENT CHAT

## Times to Light Lamps.

| | | | |
|---|---|---|---|
| Mar. | 2nd | ... ... | 6.38 p.m. |
| ,, | 4th | ... ... | 6.42 ,, |
| ,, | 6th | ... ... | 6.46 ,, |
| ,, | 8th | ... ... | 6.49 ,, |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Transport Ministry Staff.

The staff employed by the Ministry of Transport in Great Britain has been reduced during the past twelve months from a total of 702 to 487, which is the total at the present time.

### Open Event in South Wales.

July 1st has now been definitely decided upon as the date of the open event allocated to the East South Wales Centre, A.C.U.; it has not yet been decided as to what form the competition will take.

### Middlesex Police Active.

"As a result of complaints by old ladies and gentlemen with Sandringham hats, whiskers, and spats," writes a correspondent, "there is marked police activity on Brockley Hill, between Canons Park, Edgware, and Elstree."

### Long-lived Neglected Batteries.

Run-down accumulators are apt to go all wrong in a very short time if not attended to; but last week we heard of a case where an exhausted battery had been laid aside as it was for three months, and at the end of that period it displayed no ill-effects and was re-charged forthwith. Is this a record?

### Opinions Wanted.

A very well-known firm of motor cycle manufacturers, whose name is a household word among speedmen, is contemplating the production of a real miniature motor cycle, to weigh about 75lb. and to sell in the neighbourhood of £30. It is to be fitted with a two-speed gear box, and pedalling gear will be optional. What do the public think?

### Railways and the Roads.

Capt. Viscount Curzon and Sir Wm. Joynson-Hicks have given notice that they will move in the House of Commons the rejection of the Railways (North-Western and Midland group) Bill, by which the railway companies seek Parliamentary powers to use the roads for through traffic, the second reading of which has been deferred until to-day.

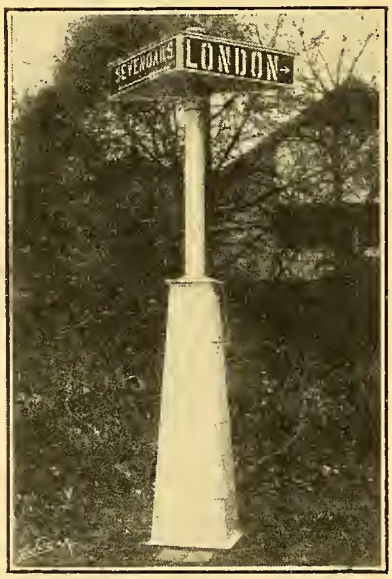
### Joy Riding!

People who have never been in a train are usually old residents in districts remote from the beaten path, but with the increasing popularity of motor vehicles there are now many youngsters residing in large cities who have yet to experience the joys (?) of railway travelling. This was brought home to us the other day when the young son of a keen motor cyclist expressed the wish to ride in a train "to see what it was like."

### Yorkshire Colonial Trial.

As already announced, the open trial allocated to the Yorkshire Centre for June 17th, will be a Colonial Reliability Trial, and will be run on an up-to-date principle (on lines suggested by the Ilkley Club). There will be a premier award in each class, the Centre having unanimously decided that it is impossible satisfactorily and fairly to find "a best performance of the day" from such a variety of entrants.

### A ROAD "LIGHTHOUSE."




An illuminated signpost at Wrotham Heath on the London-Folkestone road, designed and constructed by the Gas Accumulator Co. of Brentford. The illumination is not continuous, but flashes after the manner of the seaboard lighthouse.

## Special Features.

**CONTRASTS ON THE RIVIERA.**
**COLMORE CUP TRIAL.**
**BRAKING SYSTEMS.**

### Congratulations.

Our congratulations to Mr. Hubert W. Hassall, the Norton exponent, who, on Monday of last week, was married to Miss Winnie Gilman, daughter of Mr. Walter Gilman, who is so well known in the coaching world.

### Night Riding.

During 1921 a member of *The Motor Cycle* staff covered many thousands of miles of roads in the dark, and found that, with a good dynamo lighting set, his average speeds compared very favourably with similar trips in the daylight.

### Next Big Midland Trial.

Advance regulations of the second big spring trial, the "Victory Cup" event, organised by the Birmingham M.C.C. on Saturday, March 18th, are now available from Mr. Lawson Clarke, the trial's secretary, 43, Leyton Road, Handsworth, Birmingham. Entries close by the first post on Thursday next. In addition to the "Victory," "Midland," and "Duke" Cups, three further trophies—the "Premier," "Jennens," and "K-Nuts"—have been added to the prize list. Amateur riders only are eligible for the "Jennens" Cup, otherwise the event is open to all members of clubs in the Midland Centre A.C.U.

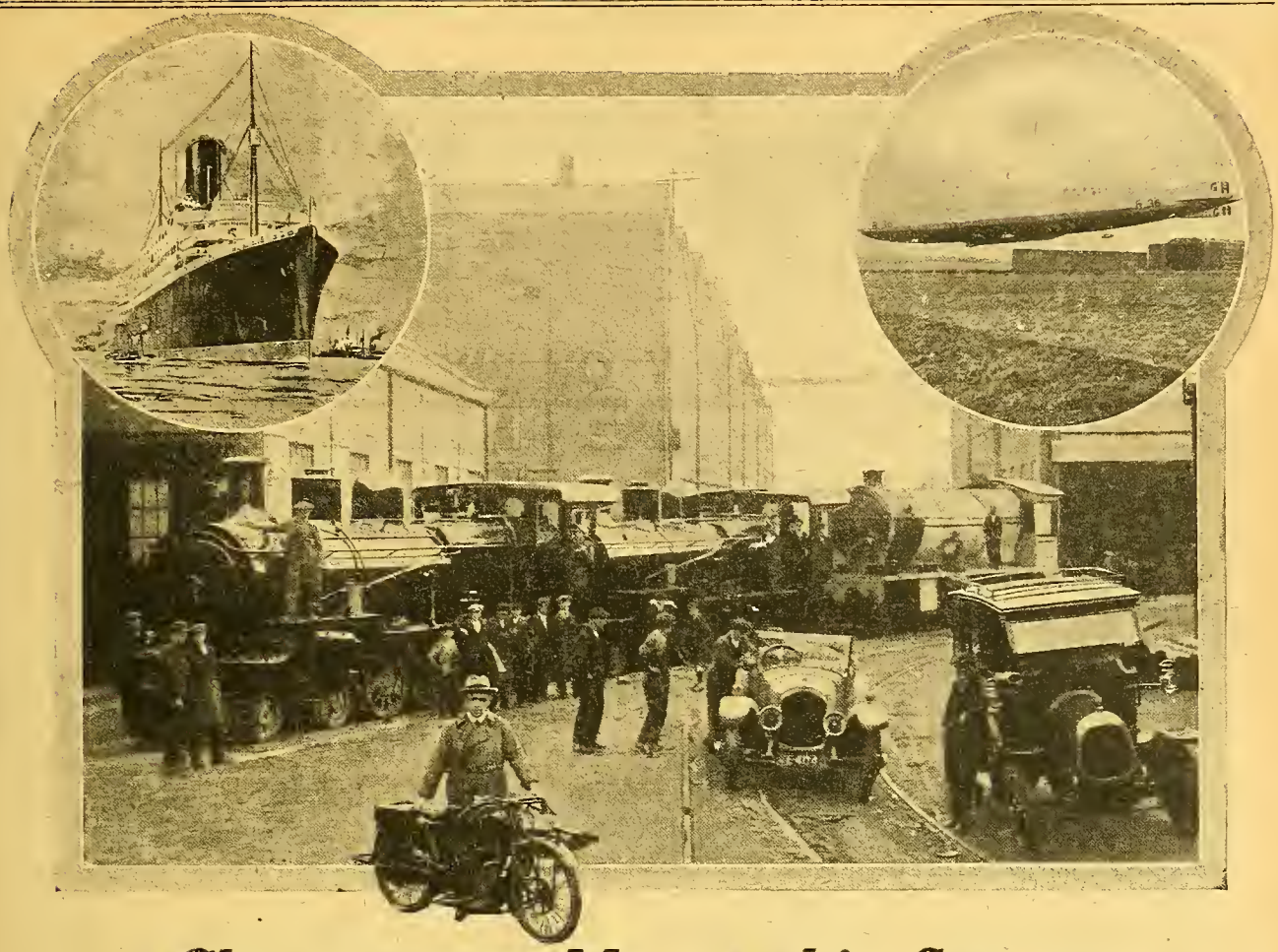
### In this Issue.

Those interested in motor-cycle history should turn to page 271, whereon is recorded the true story of the origin of the T.T. race.

For obvious reasons fewer motor-cyclists go to the Riviera than owners of cars. Nevertheless, readers will be interested in the article which appears on page 260 entitled "Contrasts on the Riviera."

Owners of machines fitted with the popular 8 h.p. Blackburne engine will find many useful hints in the article which appears on page 262. It is written by a well-known competition rider, who has scored many successes with this type of engine.

Considering its importance, the question of braking has not received the attention due to it. One cannot enthuse over the mechanism of a brake as one does in connection with an engine. An interesting article on braking systems will be found on page 268.



# *Choose your Mount this Season*

## *from the famous BEARDMORE Stable!*

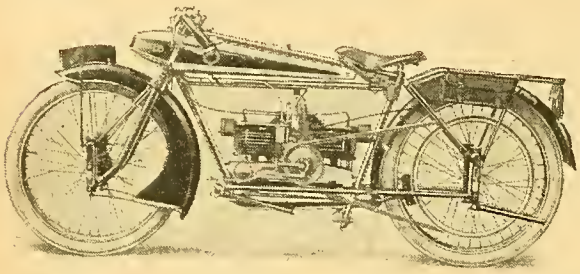
**IN the 1922 race for Better Transport there are no finer entries than those from the famous Beardmore Stable.**
**Airships, aeroplanes, ocean liners, railway engines, motor cars, and motor cycles—in every class the Beardmore entry is a winner.**
**And the "breeders" are not afraid to back their own mounts. Down at King's Norton we make a strong feature of this. In commercial transactions it is called Service-after-Sale.**
**We stand by you when you decide to ride the Beardmore mount that's bred at King's Norton. "Baker's are nice people to deal with"—was how one delighted customer summarised in a sentence the many testimonials our Service-after-Sale has brought us. So stick to "The Old Firm"! Your mount has the right stuff in it if it has the right name on its flanks—**

BEARDMORE
PRECISION

The picture shows some recent Beardmore contributions to the world of Transport:—the 18,000 ton liner, "Cameronia"; H.M. Airship R36; and the group in the Beardmore Locomotive Works, Dalmuir, is of 2 engines for the Nigerian Railway, one for the East Indian Railway, a Beardmore touring car and the Beardmore 'taxi'; in the foreground the spring-frame Beardmore-Precision.

F. E. BAKER, Ltd. PRECISION WORKS
*(Associated with William Beardmore & Co., Ltd.)* KING'S NORTON

'Phone: King's Norton 184-5. 'Grams: "Bachuck, Kingsnorton." London Depot:—112, Great Portland St., W.1. Scotland (Wholesale)—James Robertson, 48, West Nile Street, Glasgow.



**Semi T.T. Model**

**£65 : 0 : 0**

# THE QUALITY OF PROGRESS

**To study the specification of the WOOLER is to appreciate the quality of progress:**

Automatic Mechanical Sump Lubrication,
Ideal Front and Rear Springing,
Withdrawable Wheel Spindles,
All straight-tube Girder Frame,
Detachable Spare Petrol Tank.
Superheated Induction System,
Wonderful Petrol Economy
(145 miles per gallon guaranteed)

**are a few of the refinements which speak to you.**

**And when you purchase your WOOLER at £65 you realise what value for money means.**

Write to us to-day for the Specifications of all Models.

**ALPERTON,——————LONDON.**

**THE DEDERICH WOOLER ENGINEERING CO.**

# FREE SERVICE SCHEME

To all those who purchase their New Machine from us we are offering UNIQUE ADVANTAGES in the way of FREE SERVICE over a period of SIX MONTHS.

If you are thinking of buying a machine you cannot afford to ignore this offer. You have everything to gain and nothing to lose by placing your order with us.

NO MATTER WHERE YOU LIVE, whether in the North of Scotland or a few yards from our premises, YOU WILL BENEFIT UNDER THIS SCHEME.

Think of what it means to have your mount kept in tune for a whole season—free of charge.

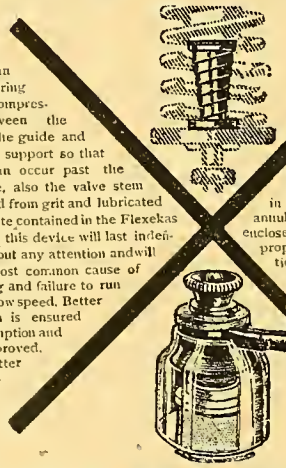
IT WILL PAY YOU TO DEAL WITH US.

*Write for further particulars to :—*

**COLLETT'S** Engineering & Motor Works,
1, RAILWAY BUILDINGS,
STATION ROAD, SOUTH NORWOOD, S.E. 25.

# FLEXEKAS

Flexekas is simply an airtight spring fitted in compression between the bottom of the guide and the spring support so that no leak can occur past the valve guide, also the valve stem is protected from grit and lubricated with graphite contained in the Flexekas. Once fitted this device will last indefinitely without any attention and will cure the most common cause of bad starting and failure to run evenly at slow speed. Better carburation is ensured and consumption and power improved. Valve clatter is also eliminated.



Sparxekas is a dome of strong tempered glass designed on the lines of an H.T. line petticoat insulator which ensures no leakage current across the insulator, of a sparking plug. Embodied in the neck of the dome is an annular spark gap completely enclosed yet visible externally; properly designed to give amplification of current without any strain on the magneto, this device will overcome oiling up of plugs and partial internal short due to dirty insulation. Sparxekas are very neat and give a striking effect.

# SPARXEKAS

**FLEXEKAS** fit any engine and are supplied with special heatproof graphite paste at 2/6 per valve. Extra cartons of paste to be used when overhauling are 1/6 each.

**SPARXEKAS** fit any plug and are supplied complete and ready for fitting under existing terminal nut at 2/6 per plug.

*If your dealer does not stock send direct to the patentee and sole manufacturer—*

**CLIFFORD PRESSLAND, A.M.I.E.E.,**
Engineer, HAMPTON-ON-THAMES.

**Prince as President.**

H.R.H. the Prince of Piedmont, heir to the throne of Italy, has accepted the post of honorary president of the Turin Motor Cycle Club. Needless to say, the Club is delighted at the honour granted to it.

**Moderately Priced British Big Twin.**

In our road test of the 7 h.p. James sidecar it was stated that the price of the machine solo was £160; obviously, this actually referred to the complete outfit, the motor cycle alone being only £125 (Magdyno extra in both cases).

**Mayor and Motor Cyclist.**

The Mayor of Lewes, Alderman C. Patrick, J.P., who is also president of the Lewes and District M.C.C., is an enthusiastic motor cyclist, and can often be seen astride a 2¼ h.p. two-stroke Royal Enfield. He claims to have been one of the first owners of a motor cycle in the town.

**Hill-Climb in Czecho-Slovakia.**

On April 16th a hill-climb will be held on the Zbraslav-Jíloviste, near Prague. The hill is 5½ kilometres (3 miles 770 yards), and the course comprises several bends (one of the "S" variety) and a maximum gradient of 1 in 11. The organisers are the Ceskoslovensky Klub Automobilistú de Prague. (Phew!)

**Motoring in South Africa.**

Statistics concerning the number of motor-cycles in actual use in South Africa show that from October 31st, 1920, to October 31st, 1921, there was an increase in motor cycles from 7,289 to 7,372. During the same period cars show a slightly greater increase, from 11,120 to 12,880. Nevertheless, considering the type of road which we are apt to associate with South African conditions, the number of motor-cycles in use is a clear proof of the reliability of modern machines under hard conditions.

**Promising Support for Scottish Trials.**

Already forty entries have been received for the Scottish Six Days' Trials, which start on Monday, May 1st.

**Inter-'Varsity Hill-climb.**

Next Saturday, as already announced, an inter-'Varsity speed event, run on a team basis, will be held on Aston Clinton Hill, near Tring, commencing at noon.

**Sidecar Skids.**

The regulations governing the 200-mile sidecar race on June 17th will demand that skids are fitted as a precaution against accidents should a sidecar shed its wheel.

**V-neck or V-twin?**

Under the motor cycle advertisements in a provincial paper we read: "J.A.P. silk-embroidered blouses, 7s. 6d."

**Lighting of Road Vehicles.**

The question of vehicle lighting is at present under consideration on reports made by the Departmental Committee on Lights on Vehicles.

**One British Paris-Nice Entrant.**

Entries for this year's Paris-Nice trial include only one British rider—Wood, on a B.S.A. Previously this event has been well supported by Great Britain.

FIRST TEST IN LAST SATURDAY'S COLMORE CUP TRIAL.

E. A. Barnett (2¾ Francis-Barnett) and A. J. Dowler (3½ Sunbeam) on Aston Hill, near Weston-sub-Edge, undergoing the Flexibility Test.

# COLMORE CUP TRIAL NOTES (See pages 281—285).

BUSHCOMBE the impossible! Let us hope that no club has the temerity to include the hill in any future serious trial.

Not a single clean ascent by a solo rider was accomplished, which is not surprising to those who saw the state of the surface.

Marshalling of competitors at the foot of Bushcombe was only thought of halfway through the contest.

Saturday's annual event was most successful, but for that unfortunate inclusion of Bushcombe Hill.

T. C. de la Hay's and George Brough's faces were a study when they stuck, as many others had, in the ruts of Bushcombe. The former was distinctly baulked, however.

The tail-enders of the long procession had to light lamps for some distance.

Springlike weather prevailed throughout, attracting crowds to the distant hills. Hundreds of Birmingham and Coventry motorists were assembled at one or other of the many vantage points.

Saintbury, once a difficult climb, was toyed with by the majority in the stopping and starting contest.

*The Motor Cycle* banners were in evidence at the start and finish as well as the turning point at Cheltenham.

Some spectators returned home feeling that they had had a tonic—the odour of castor oil was so strong on the test hills!

Few people worried about Gambles Lane with such an absurd titbit but a couple of miles away.

At the top of Rising Sun, No. 1, Davison (Levis) fell and opened out the belt rim. He knocked it together again and proceeded.

The Cheltenham control was well organised, particularly considering the large entry.

R.A.C. and A.A. scouts were useful at various danger points *en route*.

As usual, there was much gross bad driving.

W. B. Gibb, who, by the way, could not start, due to water in his petrol tank, declared that Bushcombe was unclimbable in the wet on Friday.

Over-zealous officials on Bushcombe tried to guide the competitors on to the best surface, but their efforts were of little avail, even if desirable at all.

We shall have motor cycles with caterpillar tracks without doubt if the freak hill policy is persisted in.

L. Newey had crowded four speeds into the tiny gear box of his Levis.

### Rugby M.C.

On March 12th the club will hold its opening event, which will take the form of a reliability trial over a course of approximately 100 miles. All correspondence should be addressed to the honorary secretary, Mr. G. Le Champion, Bridport House, Bilton Road, Rugby.

### Rochester, Chatham and District M.C. and L.C.C.

About forty enthusiastic members attended the annual general meeting held at headquarters on February 22nd, the president, Dr. A Packman, presiding. It is hoped to make arrangements with other Kent clubs for hill-climbs as last year. The opening run will be held on April 3rd. The hon. secretary is Mr. H. J. Lawrence, 300, High Street, Chatham, who will be pleased to give any particulars to local motorists interested.

### North West London M.C.

Being desirous of fostering the inter-club spirit, the club has come to the conclusion that it is not necessary to put this into effect on the road alone. It is suggested, therefore, that some methods of social intercourse during the winter months may help things along, and as a start it is hoped to fix up a chess match of, say, six boards a side, with one of the London motor cycle clubs. Mr. H. J. Pooley, 23, Clifton Avenue, Finchley, N.3, would be happy to hear from any secretary interested in the idea.

### Kirkby Stephen and District M.C.C.

A large number of members were present at the recent annual general meeting. Officers for 1922 were elected, including: President, Dr. Hugh Highet, J.P.; captain, Mr. C. J. Ward; hon. treasurer, Mr. G. W. Elliot; hon. secretary, Mr. W. Jackson; hon. trials secretaries, Messrs. A. L. Hook and K. Sayer. A satisfactory season was reported, both from social and financial standpoints, and an ambitious programme was arranged for 1922. All communications should be addressed to the secretary, at Church Avenue, Kirkby Stephen, Westmorland.

## Club News—*continued from page 277.*

### Week-End Club Events.

*Mar. 4.—Essex County and Southend A.C. Paper-chase.*
*Mar. 4.—Oxford University M.C.C. and Cambridge University M.C.C. Hill-climb.*
*Mar. 4.—Coventry and Warwickshire M.C.C. Paper-chase.*
*Mar. 5.—Southampton M.C.C. Surprise Run.*
*Mar. 5.—Manchester M.C.C. Invitation Reliability Trial.*
*Mar. 5.—Uxbridge and District L.C. and M.C.C. Opening Run.*
*Mar. 5.—Bolton and District M.C.C. Opening Run.*

### Ipswich and District M.C.C.

In the form of a reliability trial under ordinary touring conditions, the opening run will be held on the 22nd inst.

On Good Friday an inter-club reliability trial will be held in conjunction with the Norfolk M.C. and L.C.C.

### Berkhamsted and District M.C.C.

An attractive programme is in course of preparation for the coming season, the club possessing six challenge cups. The opening run is expected to take place on Easter Monday. Any motor cyclists interested are invited to communicate with the hon. secretary, Mr. H. Mills, 158, High Street, Berkhamsted.

### East Midland Centre A.C.U.

At a meeting of the Centre Board it was decided to award the Centre Cup this year on the result of the best club team performances in—

(*a*) Speed trials at Grimsthorpe Park conducted by the Lincoln Club on Easter Monday.

(*b*) Hill-climb organised by Burton Club, probably in July

(*c*) Reliability trial conducted by Nottingham Club on August Bank Holiday Monday.

A team is composed of one solo under 350 c.c., one under 500 c.c., and one unlimited sidecar. The annual meeting of the Centre Board will be held in the Recreation Rooms, Bennett's Garage, Nottingham, at 3.15, March 18th.

All motor cyclists in the Derby district who are willing to act as marshals in the Open Trial, Saturday, March 25th, should communicate with Mr. K. S. Topping, 64, Frederick Street, Loughborough.

### Lee, Lewisham and District M.C.C.

On Thursday of last week a most successful meeting was held at the Royal Oak Hotel, Lee, to form a club in this district. It was decided to name it as above. The opening run will be held on the 12th inst. Anyone desirous of joining should communicate with the hon. secretary, Mr. H. W. Allen, 23, Boone's Street, Lee, S.E.13..

### Cardiff and District M.C.

Owing to apathy during 1921 this club has been reorganised and re-officered for 1922, and it is hoped that, by the inclusion of a number of social outings to places of interest in the neighbourhood, in addition to reliability and speed events, largely increased membership will result. Prospective members are invited to the next general meeting on Monday, March 6th, at the Motor House, Wood Street.

### Goldthorpe and Thurnscoe M.C.C.

There was a good attendance of members present at the annual meeting held at the Goldthorpe Hotel. Mr F. N. Greenoff, the hon. secretary, gave a report on the club's activities of the past season. Mr Sayles, the treasurer, presented the annual balance sheet, which showed a balance brought forward of £5 0s. 8½d. The subscription for season 1922 was reduced to 6s.

### Oxford M.C.

On Saturday last the club opened its competition season with a most sporting half-day reliability trial. The start was from Cowley Place, Oxford, on main road to Thame, then Princes Risboro', after which it was a two hours' non-stop, strenuous cornering and hill climbing; the road had to be watched carefully all the time to be ready for surprises in the way of awkward corners and unexpected gradients. Certainly the most amusing item of the afternoon was the inability of "No. 13," Piper (7-9 Indian sc.) to do anything except live up to his unlucky number, and he certainly did do this Twenty-two entered, but two failed to face the starter. Silver medals were awarded to Kenning, Young and Scroggs (Sunbeams), Argyll and Avery (Harley-Davidsons), Pearson (Triumph), Hancox (Zenith-Bradshaw).

## MANUFACTURERS AND FREAK TRIALS.

SOME light on the present attitude of manufacturers towards freak trials may be gathered from the following letter from a well-known competitions rider, Mr. W. H. Carson, written on behalf of Messrs. Bayliss, Thomas and Co., manufacturers of Excelsior motor cycles, to the trials secretary of the Birmingham M.C.C., regarding the forthcoming Victory Cup trial:

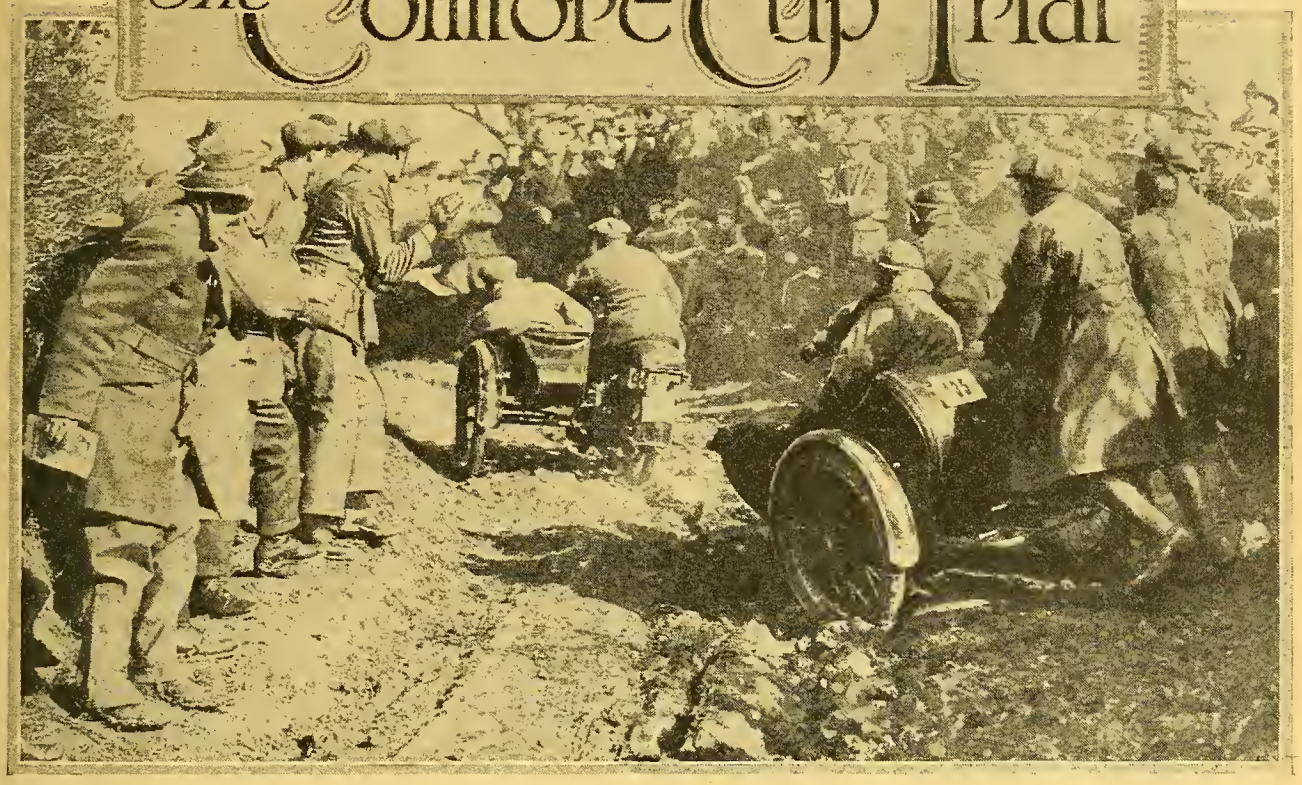
"As a keen supporter of competitions, the writer in all probability will either support the trial by entering several riders even if he does not take part himself, and in any case will probably be able to render you assistance as observer personally.

"There is one point whilst writing you that I should like to mention. You say in your circular letter that the route will be 'possibly within a twenty-five miles radius of Birmingham.' One thing quite a number of manufacturers object to is the inclusion in these trials of freak stunts to find a winner. What I am referring to is the fording of rivers, which, in many instances in the past, have been purposely dammed up to increase the depth. This makes drivers resort to ridiculous additions to their machines in the way of long flexible air intake pipes to carburetters, long exhaust pipes attached to the back carriers, and so forth. It is a pity trials cannot be organised to give some really severe test to the motor cycle without resorting to the inclusion of such ridiculous 'stunts' to find a winner. I suppose it is that motor cycles have got to such a state of perfection that it is more a case of the skill of the driver or sheer luck than the capabilities of the motor cycle.

"Only a few days ago we supported a light car event in which the organisers had included the ascent of two or three fields up a steep gradient with no proper road, having wheel ruts 8in. or 10in. deep, and the remainder of the field one mass of ice. This is no test for a car or motor cycle, but more a test of gripping qualities of tyres, and if you have anything of this kind in your mind, in arranging the course, we certainly would not for one moment think of supporting it.

"If it is to be a sporting trial, giving a machine a reasonable chance of success, we are with you every time."

# The Colmore Cup Trial



Bushcombe, the impossible! The tit-bit of the trial. That no solo rider succeeded in making a clean ascent is not surprising; observe the ruts. A. Watson (4¼ Sunbeam sidecar) made a star ascent, but the veteran T. T. rider, Rem Fowler (7 James sidecar), was not so fortunate. A large assembly of enthusiasts gathered on the hill to witness the ascents.

## A Midlands Classic. Record Entry. The "Freakiest" of Freak Hills Ever Introduced in a Serious Contest.

ONE hundred and ninety-seven starters, 174 finishers, 7 observed hills, a flexibility test, a stopping and starting test, and a sample of "colonial" tracks plus gates to be opened. Such is a summary of the Sutton Coldfield and North Birmingham Automobile Club's trial for the Colmore Cup, and all this incident was packed into a course of 125 miles.

Starting at Stonebridge the competitors followed the Warwick—Stratford-on-Avon—Broadway—Cheltenham course, already familiar to most Midland motor cyclists; there were, however, one or two deviations from the route employed on previous occasions.

### Innovations.

For instance, the flexibility test—the first event of importance—was held on Aston Hill. It would be hard to find a more suitable spot for the purpose, for the road is wide and straight, the surface is good, and the gradient not too severe. Weighing in was accomplished most expeditiously at Charlton King's Station, just before the lunch stop. After this the next important innovation was the inclusion of Bushcombe Hill, the *pièce de résistance* of the day. This hill lies parallel to Gamble's Lane, and the track joins the main Cheltenham-Broadway road at the summit of Cleeve Hill. Its steep, greasy surface defeated almost all the competitors, but of this more anon.

It would be scarcely fair to describe Bushcombe as a new find—an attack upon it was described in *The Motor Cycle* many years ago—yet it has not been incorporated in trials routes, and its inclusion on this occasion was the subject of much comment.

A final change lay in the substitution of a second ascent of Sudeley and some cross-country tracks to Snowshill for the now familiar acute hairpin in Sudeley Park.

### 1922 Models.

The first big Midlands event always evokes much enthusiasm, and amongst the crowd of competitors and spectators at the start there were many 1922 models and just a few machines which have not yet been exhibited to the general public. D. Prentice rode a 2¼ h.p. New Imperial with overhead valves inclined from the cylinder head at a considerable angle. George Denly's Velocette had a cylinder more familiar to Brooklands *habitués* than to trials spectators; it was fitted also with twin exhaust pipes. Barr and Stroud sleeve valve engines were to be seen in C. S. Burney's Beardmore and S. H. Rhodes' Wolf. E. Poppe had out an experimental White and Poppe engine in a Hobart frame. Long stroke T.T. Sunbeams were much in evidence, and Reg. Brown tackled the course with a sporting sidecar attached to a machine of this type and only a 10 to 1 low gear. T. C. de la Hay rode a 4¼ h.p. Sunbeam with smart Berthon boat sidecar; and much interest centred in the McKechnie Victor.

### The Start.

At 8.1 on a glorious morning the indispensable Mr. Alec Ross despatched the first man over the bumpy road to Kenilworth, and thereafter the competitors followed at half-minute intervals. For the first thirty miles main roads were followed, but shortly after Mickleton a notice gave warning of the proximity of the first time check. This was located at a turning to Aston-sub-Edge, and was closely followed by the flexibility test.

Stopping and restarting on Saintbury. G. E. Turner (3½ Sunbeam), W. Bell (2¼ New Hudson) and F. A. Robbins (2½ Triple-H. Liberty) between the tapes.

Here the arrangements were simple and good. Two tapes 73⅓ft. apart were laid across the road, and the intervening space was divided into three longitudinal strips by more tapes. Competitors were required to take not less than 10 secs. in traversing the section, then to accelerate to a third crosswise tape 110 yards away.

The slow test presented little difficulty to modern multi-geared machines, but G. S. Davison, who as usual rode a single-geared Levis, wisely made no attempt to slow down. He was last year's winner of the "Single Gear" Trophy.

### Conspicuous in Flexibility Test.

Amongst so many good performances it is difficult to pick the best, but of the early solo numbers the following were conspicuous: A. Bennett and G. Butcher (3½ Sunbeam), G. Strange (3½ James), E. A. Barnett and D. Atkin (2¾ Francis-Barnett), F. C. Parkes (2½ Sun-Vitesse), E. Arthur (6.5 Brough Superior), R. B. Clark and G. Packman (8 Matchless), D. Prentice and B. Kershaw (2¼ New Imperial), G. Denby (2¼ Velocette), W. Woodcock and A. Rollason (3½ Ariel), S. Rhodes (2¾ Wolf, Barr and Stroud), E. Williams (2¾ A.J.S.), A. Cope and J. A. Newman (3½ Douglas), F. Morgan (2¾ Cotton), L. Bowen (2½ Radco), T. Moxon (2¼ Coventry Eagle), F. Adam (3½ Norton), G. Kirby (3½ Triumph), E. Mundey and W. Bell (2¼ New Hudson). Nearly all the 2¼ h.p. Levises were first-class, but H. Newey's appeared to be considerably the fastest.

E. R. Jacobs (2¾ Wooler) passed with a flat front tyre and H. V. Collins (3½ Norton) made a particularly neat foot change as he shot away, but George Dance hesitated momentarily before getting going.

In spite of clear notices a few stopped, voluntarily or otherwise, and questioned officials as to procedure.

Leaving Aston Hill there followed five miles of side roads, culminating in the descent to Weston-sub-Edge, where the main road led as far as Saintbury and the stopping and restarting test.

### Restarting on Saintbury Hill.

Saintbury, on the Cotswolds, once upon a time an ascent to be reckoned with, proved small fry on Saturday. Even with the added difficulty introduced of stopping and restarting on the steepest stretch of 1 in 6½, most competitors performed faultlessly. There was a perfect blue sky overhead, but the clay surface was somewhat treacherous. The fortieth man, Austin (Coventry Victor) was first to fail, for he stopped his engine when engaging the clutch. Tonks (O.K. Junior) did well at the second attempt, whilst Mrs. Janson (Ner-a-car) showed up well, handling her machine dexterously. Turner (Sunbeam) stopped his engine, while Robbins (Triple-H) ran backwards, his two-stroke engine, too, reversing until it stopped with a terrific bang. Limbird (Mars) and Worsley (Scott) were others who stopped their engines. When Lewis (Beardmore) arrived he decided to retire, having sustained an earlier fall. Sometimes several would arrive between the tapes in a bunch. Watson Bourne was among one batch, and being thrust on to the roadside gave the Press photographer a fright by suddenly brushing him aside. When George Brough opens his throttle things begin to happen—they did on Saintbury, for he performed a magnificent pirouette in the grease, but recovered. Woodfield (James sc.) sooted a plug. Gordon Francis (2¾ Francis-Barnett sc) showed up splendidly, also Hall (O.K. Junior sc.). Bladder (New Imperial sc.) stopped momentarily below the line when his gear jumped out of engagement.

Down Willersey Hill and once again along main roads, the route wound over good surfaces to Winchcombe, and Sudeley Hill. The two big ruts have recently been filled with loose stones, and though the surface in between was greasy, comparatively little wheel spin was noticeable, and the climb presented no real difficulties.

Failures were few and far between, though Harry Reed (8 Dot sc.), who had damaged his gear box in the acceleration test, failed to get up on his high gear and retired. G. H. Goodall (8 Morgan) "konked" to a standstill for some unaccountable reason, and C. Hays (10 Morgan) took the ditch on a greasy part of the hill. For the rest, the three-wheelers behaved well, and T.B.'s, Morgans, and New Hudsons made fast and clean climbs. J. Cave's G.N., the two Rhode cars, and the Deemster were equally sound as regards performance.

C. E. Hemphill (2¾ Excelsior) carefully picked his way up the rough and steep gradients of Gamble's Lane (Sun Rising); Mrs. G. M. Janson (Ner-a-car), the only lady competitor, received assistance.

**The Colmore Cup Trial.—**

Of the solo and sidecar performances there is little to relate: a few came up fast, but generally speaking the riders, knowing that they had nothing to gain by speed, contented themselves with steady climbs with plenty of power in hand. Most meritorious climbs were made by the little sidecar outfits. T. Weaver (2¾ Sirrah sc.) was not quite so fast as G. S. Smith (2¼ Norris sc.), L. Clulee (2½ Allon sc.), N. Hall (O.K. Junior sc.), and G. Francis (2¾ Francis-Barnett sc.), but climbed steadily. S. Wright (4½ Humber sc.) distinguished himself, as usual, by a neat and very quiet ascent.

The following "colonial" section was in no bad condition, and the next event of interest was a time check at Charlton King's Station. Immediately after the check competitors passed on to the station weighbridge, the weighing operations being carried out in the briefest possible time, after which two miles brought the men to a welcome lunch stop at Steels Plough Yard garage.

### Once Dreaded Rising Sun.

The top part of Gamble's Lane (Rising Sun) was in better condition than usual, though, in spite of the fine drying wind, the lower reaches were quite greasy enough to be unpleasant, and J. Doherty (2¼ Levis) fell, damaging his carburetter. G. Davison (single-geared Levis) made a plucky climb, getting over the top with not too much in hand. R. E. Pugh (2¼ Levis) made a fine climb, but his stand was trailing. Dance and Bennett on 3½ h.p. Sunbeams rushed over the top of the hill. H. Collins (3½ Norton), P. Mayo (2¼ Coventry Eagle), D. Atkin (2¾ Francis-Barnett), and F. Woolley (2¼ Sun-Vitesse) all came up well. H. R. Lane (2¼ Levis) footed. B. Kershaw (2¼ New Imperial) was fast, but his tank had been overfilled, and petrol was pouring off the back.

Leaving Winchcombe. J. W. Wills (2¾ Edmund) and H. S. Perrey (4¼ B.S.A.) at the foot of Sudeley, a once formidable hill which almost every competitor took "on the run."

### Soloists on Gamble's Lane.

Mrs. Janson (Ner-a-car), the only lady competitor, received assistance. Hugh Gibson (2¾ Raleigh) S. Rhodes (2¾ Wolf, Barr and Stroud), and E. Williams (2¾ A.J.S.) made fine ascents. T. Thacker (2¼ Velocette) and E. Poppe (2½ White and Poppe) failed. H. O. Hayes (2¾ A.J.S.), and C. Ramstedt (2¾ Cotton) were fast. C. W. Anderson (2¼ Sun-Vitesse) broke a belt on the steep part. C. R. Little (5-7 Coventry Victor sc.) made a very fine climb. E. Mundey (2¼ New Hudson) came up well, but W. Bell on a companion machine, had shed his silencer and plates. J. Whalley (2¾ Massey-Arran) was fast, but neither of the Scotts handled by A. Jacobs or P. Worseley was up to form, and, for some extraordinary reason, N. M. Bligh (6 A.J.S.) was reduced to footing. Westwood-Wills (2¾ Edmund) made one of the best climbs of the day, and gave a very pretty display of riding. G. Lovegrove (2¼ Radco) came up very well. G. Brough (8 Brough Superior) came as fast as was safe, and J. Watson Bourne, on a similar machine, a little faster; nevertheless, he held his machine on the road, though the spectators had a thrill. D. H. Davidson (Indian Scott) and L. Crisp (4½ Humber) were both steady and quiet. C. Green (2¾ Coventry-Eagle) was again fast.

G. E. Greenwood (4¼ Sunbeam sidecar) struck a 2ft. vertical bank with his sidecar wheel. Observe the width of the track which the sidecars were expected to negotiate. T. C. de la Hay, on a sister mount, is at the rear, apparently discussing the state of the "road" with a helper.

### Sidecars do well.

There followed T. F. Blumfield (8 Ariel sc.), T. E. Greenwood, and T. C. de la Hay (4¼ Sunbeam sc.), and R. Brown (3½ Sunbeam sc.), and there was little to choose between these four fine performers, though perhaps the last mentioned deserves the palm owing to his smaller engine and high gear ratio. The James sidecar outfits again distinguished themselves, and F. W. Viles (5-6 Raleigh sc.) came up very well. G. I. Francis (2¾ Francis-Barnett sc.) made a wonderful ascent for so small a machine, and had plenty in hand.

The crowd of spectators, though not inconsiderable, was not quite so large as usual, since a number had passed on to watch the fun at Buschcome Lane, to which spot competitors were led *via* the sharp ascent of Stockall (sometimes known as Post Office Hill.

THREE WHEELERS ON BUSHCOMBE HILL. (Left)—H. F. S. Morgan (8 Morgan) attacked the rutted gradient in his usual style. (Right)—F. S. Spouse (10 T.B.) found that there was no such thing as "picking one's way."

Before 1.30 p.m. the long line of competitors commenced the ascent of the freakiest of freak hills ever introduced in a serious contest. Spectators gathered in hundreds at the corner approaching the summit of the Cleeve Hills, from whence a magnificent panoramic view of the plain below was obtainable.

Of the hill surface, how shall we describe it? Imagine a ploughed field with two exceptionally deep furrows, and loose rocks abounding, and then you have it!

### Bushcombe, the Tit-bit.

All the early men failed—no disgrace in that—until one recognised that, to keep going with any amount of footing, but without outside assistance, was a distinctly creditable achievement. Engine power was not the only consideration, for the little Levises and O.K.'s were just as much in the picture as the bigger machines, for they were naturally more easily controlled. Eric Barnett (2¾ Francis-Barnett) made a very plucky attempt, but was baulked by Hawcutt (Levis), who preceded him. R. W. Duke (Triumph) headed for a 1 in 2 bank and was effectually checked thereby. Dowler (Sunbeam) looked up wonderingly as the spectators yelled with excitement, and promptly fell over. Almost the same fate befell Parkes on a 2½ h.p. Sun-Vitesse. His *confrères* Bishop and Woolley did better still, for they only used their feet to steady themselves and kept going.

To this point No. 33, Haggas (Sunbeam), made the best showing, touching only now and again with his feet. Prentice (New Imperial), with any amount of power in his J.A.P. engine, careered about the course, but needed no help from pushers, which many others gladly accepted. Shepherd (Edmund) charged the spectators when halfway up, whilst Collins (Norton) made a very plucky climb. A Beardmore-Precision, L. A. Rees up, made a fine unassisted climb, but Cecil Burney stopped momentarily and yet got away again. Kershaw (New Imperial) performed conspicuously, followed by Denley (Velocette), who equalled him. Handley (O.K.) climbed the bank by the roadside, yet recovered, and went up well. Hugh Gibson demonstrated the 2¾ h.p. Raleigh to advantage. Then followed a batch of five men, Bown (Bown-Villiers) amidst excitement emerging from the throng without outside assistance.

The spectators credited Rollason (Ariel) with one of the best solo climbs over that cruel surface, clapping enthusiastically. Woodcock (Ariel) and Rhodes (Barr and Stroud) arrived side by side. Clearly one was to hinder the other, and Rhodes was the unfortunate. Then followed a long string of riders who failed to get up, even Eric Williams at one moment lying down in the road with his machine on top of him, whilst Mrs. Janson's Nera-car went up with many willing hands pushing at every available point. Ramstedt (Cotton) broke the monotony by getting up well, followed by Smith (Connaught), who was also excellent. Adam (Norton) was given an ovation for a neat climb. Little (Coventry Victor), the first sidecarist), sandwiched in among the motor bicycles, stuck gamely on until the fateful corner—and stopped. It was not solely a question of power, as Parker-Walker on a 2¾ h.p. Excelsior again proved, for he got up unassisted, though he swerved a lot and recovered himself well.

### Baulking Prevalent.

Mundey (2¼ New Hudson) was hampered by other stranded riders, but managed to restart twice, and got up under his own power. Bell, on a sister mount, did better still, also Gates (Sun-Vitesse). When Turner (Sunbeam) stopped, his back wheel lay in a slippery rut still spinning and sending back showers of mud. Downes (Hobart) crawled up very impressively and never stopped his road wheels. J. Whalley (Massey-Arran) drew stentorian cheers for a very good non-stop climb, followed by Stretton Ward (Triumph), Schobel (2¾ Rex Acme), and Newmans (Douglas), who contrived to make the hill look "possible" after all, though, of course, each man used his feet.

### Skilful Driving.

Bramley (Coventry Challenge) was good, also Smith (Calthorpe), Watson Bourne (Brough Superior), Cooper (Allon), and Faulconbridge (2¾ Coventry Eagle). The last named won applause as he had to scramble round other less fortunate competitors, of whom there was a goodly number hereabouts, some of the failures being due to baulking. One of the best climbs of the day was made by T. H. Meakin, a Coventry amateur riding a Triumph with Ricardo engine. He progressed upwards unassisted to the accompaniment of a crescendo of cheers. Later Crisp's 4¼ h.p. Humber got up well, also Green (Coventry Eagle).

### Passenger Machines on Bushcombe.

Then the sidecars commenced to arrive. Blumfield (Ariel) stopped, likewise Greenwood (4¼ Sunbeam), who for once in a way can be criticised for an error of judgment, for this clever veteran steered his bicycle so that the sidecar wheel came up against an almost vertical bank, which proved an effective scotch to this and many other sidecars. Worse luck, de la Hay was following, and had to stop for the path to be cleared, but he restarted successfully and finished well. To A. Watson (4¼ Sunbeam sc.) credit is due for a fine ascent, for he had the additional difficulty of scraping past Rem Fowler's stationary outfit. Francis, on his diminutive 2¾ h.p. Francis-Barnett sc. made a praiseworthy attempt, but found the surface too much for him. Beesley was the next successful man, on a 3½ h.p. Sunbeam sc., followed by L. Newey, to whom we should award the palm for the

**The Colmore Cup Trial.—**

best passenger climb. Mounted on an 8 h.p. Ariel sc., he was fast, and actually, in order to retain the best stretch of road for the driving wheel, lifted the sidecar wheel so that it cleared the hump which stopped so many, and thuswise continued for fully thirty yards.

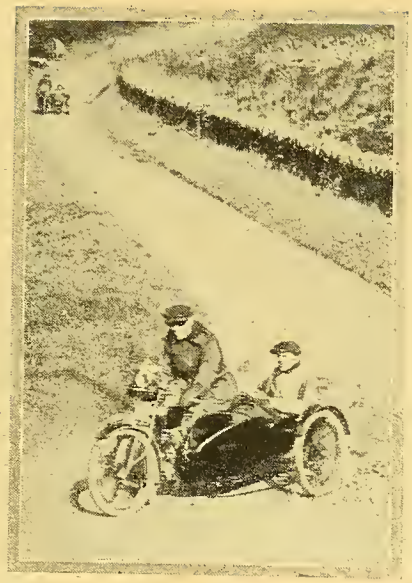
### Extreme Sidecar Types.

After five more had failed Hall (O.K. sc.) made a perfectly wonderful climb for so tiny a power unit. Bladder (8 New Imperial sc.) was twice baulked, and allowed another attempt, and then did exceptionally well. An excellent climb was made by Edmond (Triumph sc.), which won him applause, also Brown (Rex-Acme), who had wisely fitted a Parsons chain to the driving wheel. Brandish (4½ Humber sc.) succeeded, but Sam Wright got athwart the road in a deep rut and stuck there. The air was blue—with smoke of course! Parham (Coventry Victor sc.) climbed gamely, but the odour of castor oil—phew! The first runabout was Meredith's T.B., which showed up creditably; Mr. and Mrs. Morgan, always familiar figures on trials, followed equally well, also Spouse (T.B.) and Carr (Morgan). The New Hudson handled by Yates made a fine ascent, and Cave's G.N. only just failed to account for the gradient.

### Homeward Bound.

A description of the second ascent of Sudeley would be wearisome, since the hill was in no condition to stop any but the lamest of lame ducks, but before reaching the top of the hill the route swung off left-handed in the direction of Ford, and though closed gates caused some little delay the surface of the tracks was not bad enough to cause trouble.

From Snowshill the road led through Broadway to Willersey, but again this hill, which was in good condition, proved no test for the modern machine. T.



In the "colonial" section. One of the several light-weight sidecar outfits in the trial: the Francis-Barnett, which was skilfully piloted by Gordon Francis.

Stevens (7 James s.c.) passed with his front stand down. H. Boynton on a sister machine was going strong, in spite of a fractured sidecar spring. G. Francis (2¾ Francis-Barnett s.c.) was still plugging gamely along. H. Greaves (4¼ Beardmore-Precision) made a fine climb, but changed up too early. B. L. Bird (4¼ B.S.A. s.c.) climbed well. L. Newey (8 Ariel s.c.) was as good as ever, but F. W. Giles (7 A.J.S. s.c.) had a flat sidecar tyre, on which he pluckily finished the course without further damage. The descent of Saintbury finished the last excitement of the trial, but though the rest of the trip was plain sailing to the finish, it was not altogether without incident, as might have been expected of an entry exceeding 200.

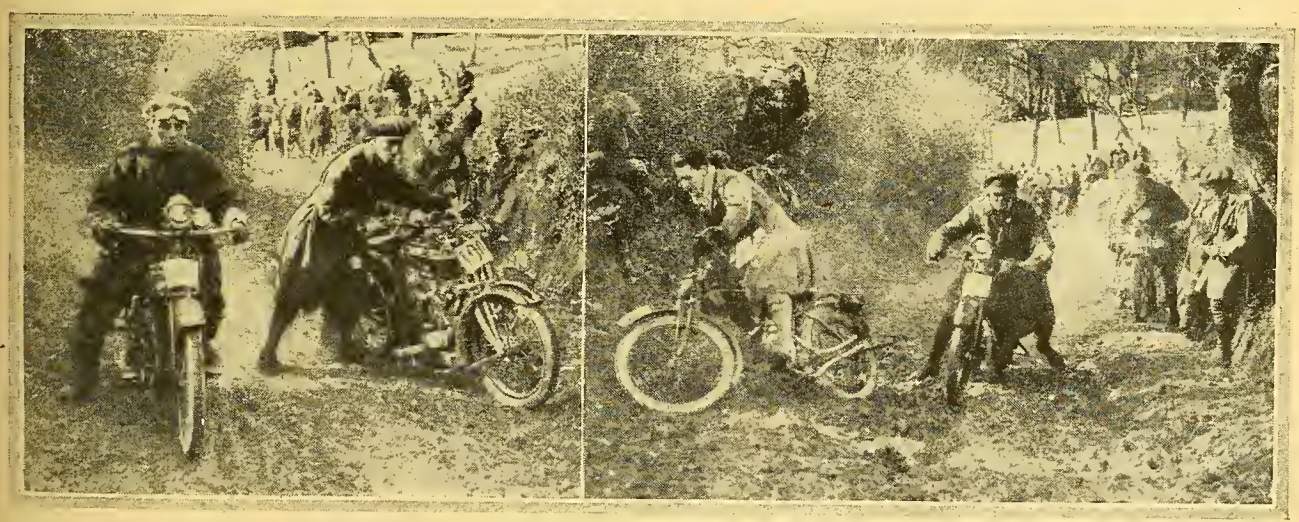
### Hard Luck!

Near Warwick, Neville Hall (2¾ O.K. Junior s.c.), who had undoubtedly put up one of the finest performances of the day, was unfortunately put out of the trial by a most unusual engine failure, a piece of bad luck which brought him the sympathy of all. A mile or two further on D. H. Davidson (4 Indian Scout) gave up with a deflated rear tyre, which persistently tried to come off. J. A. Newman (3½ Douglas) also finished the trial on a flat tyre which had deflated near Stratford-on-Avon.

### A Late Finish.

Though the first man was due to finish at 4 o'clock, the last man was not in till nearly 7, since baulking at Bushcombe had caused considerable delay. At this time the following were posted as absentees:—J. Doherty, jun. (2¼ Levis), A. D. Mayo (2¾ Coventry Eagle), H. R. Lane (2¼ Levis). J. Nicholson (2¾ Omega), T. Thacker (2¼ Velocette), C. W. Lewis (4¼ Beardmore-Precision), F. W. Hughes (3½ Sunbeam), G. F. Limbird (2¾ Mars), D. H. Davidson (Indian Scout), N. Worthington (2¾ Wooler), Woodfield (7 James s.c.), F. Hallam (8 Brough Superior s.c.) P. Pehrson (4 Dunelt s.c.), G. L. White (8 Brough Superior), N. Hall (2¾ O.K. Junior s.c.), W. E. Smith (3½ Norton s.c.), C. Greenwood (3½ Sunbeam), T. R. Gibbins (6-8 Rex Acme s.c.), H. Reed (8 Dot s.c.), F. Morrall (4¼ B.S.A. s.c.), C. Fisher (5-6 James s.c.), C. Hayes (10 Morgan), G. H. Goodall (8 Morgan).

At the conclusion of the trial almost everyone was agreed as to the excellence of the organisation, and the glorious day undoubtedly contributed to the success of the trial. The officials of the Club, and in particular their energetic trials secretary, Mr. Banner, are to be congratulated on their efforts.



If such hills as Bushcombe continue to be included in important trials, the only good purpose served will be the development of machines with caterpillar tracks. It is to be hoped that no club has the temerity to include it in any future serious trial. (Left)—J. Bacon (4¼ B.S.A.) and N. M. Bligh (6 A.J.S.). (Right)—J. H. Mathers (3½ Rudge) and Scally (4½ Humber) struggling to the top after the manner, more or less, of every other solo rider.

## Great Difficulties in the way of Avoiding or Minimising the Dazzle Effects of Head Lamps.

ONE frequently hears the complaint that powerful head lamps make night riding for motor cyclists not only extremely objectionable, but a source of considerable danger when they are encountered. Those who complain vent their expletives not only on the owner of the lights, but on the Ministry of Transport and other authorities for not immediately bringing into force legislation against their use or for providing a sure and efficient means for eliminating the dazzle.

Considering the prominence of the industry concerned in the manufacture of all types of lamps, there must be many brains concentrated on producing some device for effecting this much-desired object—we have yet to find it! If we consider the real cause of our being blinded by a head lamp it might allay somewhat the vigorous attack against the absence of legislation to restrict glare.

### Glare Only Comparative.

The glare is recorded on the human eye, due to the difference in ratio of the intensity of the illuminating light to the intensity of the natural light. The whole problem is resolved round the intensity of the two lights, and this is realised when we consider that the most powerful head lamps in strong sunlight do not affect our eyesight. On a dark night the intensity of the natural light is very small indeed, and it is only a good moon which can be said to help us to any extent.

To meet the trouble by fitting head lamps of similar power to those which we wish to encounter with immunity does not lead us much further. There will now be two opposing beams equal in intensity, but the difference in ratio of the natural light surrounding the vehicles to the illuminating light will be much the same as before, the only difference being due to the stray rays of light which penetrate the space surrounding the vehicles.

It is seen, therefore, that to overcome glare we must either (1) make the intensity of the illuminating light more nearly equal to the intensity of the natural light, or (2) provide an artificial "natural" light to keep the ratios more nearly equal. (3) A third possibility is to produce the rays of artificial light without affecting the vision of an observer.

The word "intensity" can be taken to mean the number of light rays divided by the area through which they pass. In the case of a good parabolic electric head lamp the number of rays emitted is large, the area of the lamp relatively small, and to make the beam "carry," the parabolic reflector sends the greater majority of them in a parallel path; hence the dazzle effect is apparent even when we get far away from the source of light.

Condition (1) could be satisfied by diffusing the source of light and therefore reducing its intensity, and many of the so-called anti-glare devices work to this end. The disadvantage of this method, however well carried out, is the fact that the amount of artificial light, effectively diffused, must be very great to be useful. It is apparent that we cannot make the area of an artificial light very great in order to effect diffusion, as we are limited by size of appliance which can be carried by any vehicle.

### Christmas Tree Illumination.

In considering condition (3) a suitable example would be to suppose that each road vehicle were lit by a number of "fairy" lights, like the decoration of a Christmas tree! This possibility is obviously absurd, but the effect would be towards the ideal, as we should have a largely diffused light, and the ratio of the illuminating light from one vehicle would be equal to the surrounding light of the other which it is meeting. Another way of attaining this object would be to mount head lamps on high standards above the vehicles, and the light from these lamps thrown on to the road would not only illuminate the path ahead, including the road and hedges, but would also illuminate the surrounding space of the vehicle which was being met, and the driver in this latter would not be dazzled, because he would not be constrained to look into the source of light. The position of the

**Head Lamp Glare.—**

source of this artificial light would illuminate the space surrounding both vehicles, making the aforementioned ratios more nearly equal. This, again, is, of course, an impracticable solution, but its effect may be best realised when we consider that we do not encounter any inconvenience from street lamps when driving through a well-lit thoroughfare.

If we, however, refer to what may be called the qualifying condition for overcoming glare, it was stated that the glare is recorded on the human eye, etc. We have so far considered, in conditions (1) and (2), minimising the effect of glare; if, however, we eliminate the element of the human eye, there is no need to consider the effect of the glare! This point is summarised in the third possibility (3). It is extremely difficult to produce an artificial light the rays of which will not affect our vision. The actual artificial light required by any vehicle on the road is an area of light, say, the width of the hedges and not exceeding, say, 2ft above the road surface. To satisfy condition (3) it is necessary to prevent the observer of the artificial light from being able, normally, to see the source of such light. The latter remark is, to a certain extent, answered when we consider the example of head lamps erected at a considerable height above the vehicle, as the observer's eye would not naturally tend to look up to a height much beyond the height of the vehicle which he was meeting. Another way of preventing the observer from seeing the source of light is to put the light very low upon the ground and to fix a shade consisting of a horizontal plane above the lamp. The disadvantage of this idea is that the shade must be very long and the light very near the ground, as it will be readily understood the further away the observer is from the vehicle equipped with this device, the more horizontal will the line of his eyesight become, and therefore the further away he becomes the more likelihood there is of his being able to see beneath the "shade" and so observe the source of light. Another disadvantage must not be overlooked—the lower we put the light on the road and restrict its upward rays, the less likelihood there is of the driver of the driven vehicle being able to see the road any distance ahead, as any unevenness of the surface or a rising gradient will immediately cut off his low-lying rays. Both in the conditions of (2) and (3) the vehicles would, of course, be equipped with low-power side lamps to indicate their width.

Some consideration has been given to the possibilities of fulfilling condition (3) by a device which we read consists of fixing a tube in front of the source of an artificial light, through which all the rays must pass, the result eliminating the possibility of the observer actually seeing its source. As far as the author knows, however, this device has not yet been marketed, and it is too early to predict what it may foretell, but it must be borne in mind that the more we restrict the space through which the artificial light is emitted, the greater must be the power and intensity of that light for effective illumination.

### Compromise the Only Solution.

The problem is an extremely difficult one to solve, and at the present time the most we can do is to suggest a compromise. That the drivers of cars should be compelled to switch off their head lights when they observe another vehicle meeting them is a point upon which there has been much adverse criticism. One thing is certain, that, with the limitation of our means of coping with the problem, and in order to allay the nuisance, motorists must be content to reduce their speed and drive with a light which does not project a penetrating beam a long way ahead. They will in this way make it easier and safer for the majority of road users than driving at times without any proper light at all. Dimming switches, possible on all electric sets (which are usually the worst offenders), used generously, provide a popular and appreciated solution. "Dipping" head lamps, too, have possibilities.

The author suggests that head lights should be placed as high up as possible (in the case of limousine cars, on the top of the roof); that legislation be brought in prohibiting lamps from being set to project a beam on the road, say, further than 200ft. ahead; that the emission of the light be as much diffused as possible; and that light must be allowed to fall on the road actually at each side of the vehicle-carrying light, thereby making it easier for others meeting the vehicle to see the boundary of the road. D. RIPLEY.

# TOURING WITHOUT THE SIDECAR.

ONE of the problems of the confirmed sidecarist who sets out on a solo tour is to find room to stow away the luggage and spares that are usually dumped somewhere in the sidecar.

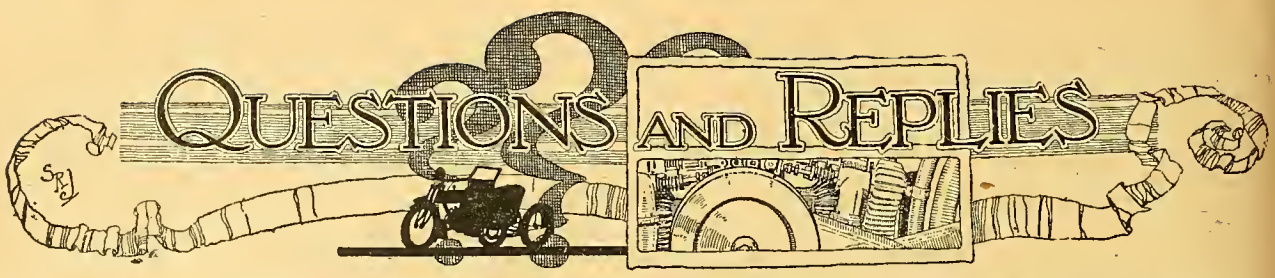
Personal luggage is the bulkiest item, and for this a compressed fibre suit case, 16 × 10in., which will hold a change of everything necessary, may be fitted on the carrier. Two long straps should be riveted to the underside of the case, in order to carry a trench-coat and overalls, also on the carrier (in the writer's case a camera was added as well).

Even on a machine that has fairly roomy pannier-bags, which accommodated most of the tools and small spares, a top-tube tool-box has been found to be a very great convenience for things one wants often and immediately, so a Clyno tool-box—a very substantial leather affair with a spring lock—has been fitted on the top of the tank by riveting the box to the upper edges of the knee-grips in place of the top pair of straps; the lower pair of straps, fastened under the tank in the usual way, then hold the lot securely.

A tin of oil is strapped to the off side board, and on the near side the spare belt, tube, and valve have been accommodated in the following manner:—

The footboard was removed, and a stout tin box, 5 × 7 × 8in. (which once held dry batteries), was slipped over the end, the two bolts securing the footboard to its clip passing through two holes drilled in the underside of the box. The footboard was then replaced and the clip tightened up, holding the box in position.

A. A. D.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of 'The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### STARTING AN OLD TYPE B.S.A.

Having recently bought a 1919 4¼ h.p. B.S.A. motor cycle, I find it is in very good condition and runs well when started, but is very difficult to start from cold. On using the starter either nothing happens at all, or else there is a back-fire, raising me into the air on the pedal, while petrol is blown back through the carburetter. Does this mean that the timing is far advanced, and that the exhaust valve lifter should be dropped later?—W.J.P.

It would appear that you are attempting to start with your ignition too far advanced. Retard the lever to about half-advanced position and try again; the best position will only be found by experiment. Of course, this particular model is not so easy to start as the later ones, and requires a certain amount of knack. An injection of petrol in the cylinder is almost essential, and on no account should a thick oil be used in the gear box, otherwise the clutch plates will be gummed and make the movement of the starter pedal almost impossible.

### TIMING AN OLD SINGLE.

How does one time a De Dion motor cycle? It is fitted with a Bosch magneto, which has only been overhauled a fortnight ago, and is in fine order, giving a good spark. There is one valve to be seen, and the carburetter is a B. and B. I have tried all ways, but no such thing as a start have I had. The engine was running a few weeks before I bought it, but not very well, owing to the magneto needing attention.—A.D.

The details supplied are not sufficiently complete to enable any definite opinion to be passed as to why the engine will not fire. Assuming, however, that everything is in good order mechanically, it can only be that the timing is at fault. As this engine has an automatic inlet valve, this may be ignored, provided that it is working correctly, which can easily be verified by direct observation. The exhaust valve should be timed so that it closes as the piston reaches top dead centre, its point of opening being assumed to be more or less correct provided it closes as stated. The spark should take place when the piston is on top dead centre of the compression stroke with the ignition control two-thirds retarded.

## Important Dates.

**Sat., Feb. 25th, to Sunday, Mar. 5th—Brussels Motor Cycle Show.**
**Sat., Mar. 4th—Inter-Varsity Hill-climb.**
**Sun., Mar. 5th—Argenteuil Hill-climb (France).**
**Mon., Mar. 6th—La Turbie Hill-climb (Nice).**
**Wed., Mar. 15th—A.C.U. One-day Trial for Stock Machines.**
**Sat., Mar. 18th—Victory Cup Trial.**
**Sat., Mar. 25th—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs. June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Fri., June 23rd, and Sat., June 24th—Irish twenty-four hour Open Reliability Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**

### CONSUMPTION, OILING, TYRE SIZES.

(1.) How many miles per gallon ought one to get out of a 3½ h.p. Ariel with sidecar? (2.) Drip feed: how many drops per minute for speed of 20 m.p.h.? (3.) How does one ascertain whether wheel rims are 2¼ or 2⅜in.?—NOVICE.

(1.) 55 to 65 m.p.g. (2.) 30 to 40. (3.) These sizes are the same; 26×2⅜in. tyres fit 26×2¼in. rims.

### CHOKED PETROL SUPPLY.

I have a 1916 2¾ h.p. Douglas to which I have recently fitted a new Binks carburetter. This proved entirely satisfactory on first fitting, but after about three weeks' running I find that the following occurs:—On opening the throttle the engine immediately accelerates, as it should, but after about 20 yards the power falls off and speed drops slightly, very much as if one were breasting a rise. No amount of juggling with the air or throttle lever will remedy this. As far as I know the engine is in perfect order, except that the tappet clearance is rather large. Would this alone be sufficient to cause the above trouble?—R.W.P.

From your description the trouble appears to be connected in some way with a partial restriction of the petrol supply; make quite sure that petrol is reaching the float chamber freely. Examine the filter in the petrol tap and also the filter at the base of the jet chamber, and make quite sure that the petrol pipe and jets are clear, and also that there is no air lock in the petrol tank due to the filler cap being an airtight fit.

### AN UNWISE MOTOR CYCLIST.

One evening last week I went to my brother's garage and took the loan of a motor cycle, going a distance of about a quarter of a mile. As I was coming back a policeman stopped me and stated that the engine was making too much noise (it had a long exhaust pipe). Has the law anything to do with this; also what has it to do with licences? The machine had no licence nor any number and although we had a trade licence it was not affixed at the time. Can we ride a new cycle with any numbers?—A.J.

No machine may be ridden on the public roads without being either licensed privately or without carrying trade registration numbers. The law also requires that a machine shall be reasonably silenced by having the exhaust gases passed through an expansion chamber or "other device" suitable for the purpose. It would appear that you were summoned for riding an unregistered machine, and also for riding a machine to which no silencer had been fitted, and you do not appear to have an satisfactory defence in either case.

### CRACKED CYLINDERS.

Please give me some advice regarding a 1910 5-6 h.p. Minerva which I purchased. The trouble is that the cylinders keep cracking between the valve caps, where the bridge is very narrow. I have had them welded three times; is this a common fault with that design of cylinder?—J.A.

The trouble you describe is one of frequent occurrence in certain old-type engines, and we doubt whether it can be overcome by welding.

### EFFORT WITHOUT WORK.

If a pedal bicycle can be made much easier to drive by a light flywheel carried conveniently, why should not the same idea be adapted to light-weight motor cycles in order to allow of less powerful engines being fitted?—J.F.S.

There is no value whatever in the method of using a flywheel as you suggest; a study of any elementary text-book on mechanics will make it quite clear that into all mechanisms more energy has to be applied than is given out again in useful work.

### A CURIOUS CASE.

Some month or so ago I purchased a torpedo model sidecar to attach to my Harley-Davidson motor cycle. I have recently been stopped by the local police superintendent (who doubtless finds great difficulty in finding enough trouble to warrant the expense of keeping himself and his satellites) with a warning that if I do not remove the letters R.34, which are painted on the sidecar, I shall be summoned for displaying two numbers. The numbers are painted in white on the nose of the sidecar, which is coloured grey to match the machine. I should be obliged if you would let me know whether it is necessary for me to spoil the finish of the sidecar, or whether I am within the law, especially as I do not feel inclined to spoil the model for a mere whim of an official.—R. S.

So far as we know, such a case as you describe has never arisen before; but we think it is quite likely that the police officer concerned could make matters troublesome for you if in any way the numbers painted on your sidecar tend to cause confusion with the registration numbers on the machine. Instead of painting them out altogether, however, we would suggest that you paint them over with a darker shade of grey than the prevailing colour of the sidecar. If you do this there should be no possibility of them being taken as registration numbers, since the law requires that these shall be painted in white on a black background. In a sense, we think there is some slight justification for the objection, as such numbers undoubtedly do cause some confusion, and the exhibition of any large and prominent figures on private machines, apart from those required by law, does not serve any useful purpose. The London motor 'buses, of course, carry their type letters and serial numbers on plates identical with registration plates. You might cite this as a precedent.

AIRMEN IN THE MUMMER'S ROLE. The Royal Aircraft Establishment Amateur Dramatic and Operatic Society are evidently alive to the value of originality in advertising. The illustration depicts two members touring the streets of Farnborough with a Sunbeam sidecar, attired in Mid-Victorian dress, exhibiting a poster advertising the play "Trelawny of the Wells."

### A 2 H.P. LIGHTWEIGHT.

I have a 1914 O.K. machine fitted with a 2 h.p. N.S.U. engine. It has a mechanical overhead inlet valve. (1.) How does one time inlet and exhaust valves and also ignition? (2.) What size jet is suitable for this machine (Amac carburetter)?—J.F.

(1.) Time the valves so that the exhaust is just closing and the inlet just commencing to open when the piston is on top dead centre; the ignition should be timed so that the contact breaker points are just commencing to separate with the piston on top dead centre of compression stroke and the magneto control two-thirds retarded. (2.) Size 24 to 26 should give the best all-round results.

### MODIFIED GEAR RATIO FOR TRANSMISSION CONVERSION.

I am converting a motor cycle from chain-cum-belt to all-chain drive, and I want to know what number of teeth I require on the driving sprocket of back wheel. The engine is a 1920 6 h.p. J.A.P., and the engine shaft sprocket has 14 teeth, while the Sturmey-Archer gear box has a 30-teeth clutch sprocket and a 17-teeth sprocket driving to the back wheel. The present belt rim on the back wheel is 19in. diameter (pulley on gear box being 8in. diameter).—T.T.

The present gear ratio with chain and belt drive is approximately 5 to 1. On account of the increased rigidity of the all-chain drive we would recommend that you have a slightly lower top gear, and a 42-teeth sprocket on the back wheel will give you 5.3 to 1, which should be satisfactory.

### AIR LEAKS OR MAGNETO FAULTS?

My 6 h.p. J.A.P. engine has lately developed one or two little idiosyncracies. In the first place there is constant firing in the exhaust pipe from the front cylinder—I have fitted a new valve, but this has not cured it. Secondly, the magneto (Splitdorf) has a habit of missing, and at slow speeds the engine only fires on one cylinder. I think myself that the breaker points in the magneto are too wide, but would like your opinion before making any alterations.—Rex.

From the symptoms you describe we should expect the trouble to be due either to a weak valve spring, a valve sticking in the guide, or to air leaks in the induction system. However, as you have apparently tested these points, the trouble may be due to the magneto. Examine the action of the contact breaker carefully and see that the points separate to an equal distance for each cylinder; also examine the high-tension brushes and their holders, and clean the slip ring with a piece of petrol-soaked rag inserted through one of the brush holes. If all these points are in order, return the magneto to the British depot of the makers for examination and report.

FRENCH TWO-STROKE WITH WELDLESS FRAME.

Great strength is claimed for the riveted channel steel frame of the 2½ h.p. (245c.c.) Train-engined Rasser two-stroke, a new French lightweight made by M. Rasser, 31, Rue Jean-Jaurès, Houilles (S. et O.), France.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"S.C.C." (Southall).—8 h.p. Matchless sidecar: Spring and rapid frame models, comparisons.

"R.W.F." (Cork).—Dunelt sidecar outfit: Heavy passengers, rough roads, and fairly hilly district.

"G.A." (Preston).—A.J.S. standard sports model.

"T.L.O." (London, W.).—Carburetter to give easy starting, slow running, and good consumption on 3 h.p. Ivy.

"NAVY" (Paisley).—4½ h.p. Quadrant with sidecar.

"C.M.C." (Whittlesey).—Family model Morgan: General experiences and advisability of four-speed gear.

"R.W.F." (Croydon).—4 h.p. Douglas and 3¾ h.p. Scott: General comparisons as sidecar machines.

"B.W.W." (Wellington). — 2¾ h.p. Raleigh: General experiences, two-speed model.

"ENQUIRER" (Banbury).—2¾ h.p. 1921 Cedos with sidecar.

"C.T.F." (London, N.13). — 2¾ h.p. Massey-Arran-Jap: Brooklands sports model; speed, climbing, slow running, maintenance of time.

"H.W.W." (Oldham).—8 h.p. Brough Superior sc., 8 h.p. Royal Ruby sidecar, 8 h.p. Matchless sc.; and N.U.T.

"J.R.K." (Sutton).—4½ h.p. Quadrant sidecar: Opinions as to long wearing qualities under heavy load.

"W.D.W." (London, N.1.)—Four-cylinder Henderson: General experiences.

"A.O.R." (Warrington).—3½ h.p. T.T. Norton with Philipson pulley and medium-weight sidecar: Life of pulley; ease of starting.

"G.H.H." (Macclesfield).—4½ h.p. Humber: Consumption; detachable valve pockets, speed, and climbing.

"J.C.B." (Birmingham).—2¾ h.p. A.J.S. (semi-sporting): Speed; consumption; climbing.

"F.A." (Stevenage).—4½ h.p. Beardmore-Precision: General remarks.

"R.J.T." (London, N.W.6).—3 h.p. A.B.C. Reliability and speed of standard model.

"J.C." (Mansfield).—3½ h.p. Douglas sports model: Comfort, reliability, consumption.

"K.T.C." (Norwich).—7 h.p. A.J.S. and two-seater sidecar: Consumption and speed with standard Amac, also with variable jet; ditto with Binks carburetter.

"W.J.B." (London, W.1).—Wattalite lighting set.

"H.C." (Cleckheaton).—Four-cylinder Henderson and two-seater sidecar: Power, petrol, and oil consumption.

"C.G.P." (Haywards Heath).—2¾ h.p. Raleigh: Consumption, etc. Will it pull light sidecar?

"C.A.R." (St. Helen's).—5-7 h.p. Coventry-Victor, solo or sidecar: Speed, consumption, finish.

"J.B.Y." (Helensburgh). — Atmos or Binks carburetter on 3½ h.p. N.U.T.

"A.E.S." (Bradford). — Scott Sociable: Speed, economy, and upkeep.



## READERS' REPLIES.

### DIFFICULTIES WITH A TWO-STROKE.

Reading "H.L.L.'s" complaints, it brought back to my mind an exactly similar trouble that I suffered from last year, my machine also being a 1920 Villiers two-stroke, C.A.V magneto, but with B. and B. carburetter. I traced the fault eventually, not to weak mixture, but to a badly worn magneto chain, three of the links of which measured 1¾in. Every time this part of the chain passed the sprockets it had the effect of greatly retarding the spark, causing the popping back through the mixture being ignited much too late, I suppose. Immediately a new chain was fitted the trouble vanished, and I beg to suggest that future enquirers be advised to examine the condition of their magneto chains, as well as the petrol supply and induction system. The drop in "H.L.L's" consumption would seem to indicate the same trouble, as he is apparently unable to give the engine full air.—C. W. FORDHAM.

The solution of "H.L.L.'s" trouble is this. The gudgeon pin of the Villiers engine has an oil hole drilled in it, and it has been put back incorrectly, *i.e.*, the oil hole facing up to the piston instead of facing downwards towards the connecting rod, and as the latter rod is cut out at the top when the piston descends the charge in the crank case blows back over the top of the gudgeon pin through the oil hole and out through the carburetter, which causes all the trouble the machine is suffering from.—SIDNEY T. CADGE.

The back-firing and erratic running of which your querist "H.L.L." complains in the current issue may easily be due to his faulty drip feed. He does not say what is actually wrong, but if air leaks through here (*e.g.*, *via* a broken glass) the mixture in the crank case will be hopelessly upset. So long as his petroil system proves satisfactory, the delivery tube from the drip feed should be removed and the crank case union securely sealed up.—CHITTY-BANG-BANG.

For three years I had the same or similar trouble to "H.L.L." At long last we found the float needle valve cone had not been attached to the needle in dead centre. I got a new needle valve from Amac, Ltd., and my machine took a test hill at 30 m.p.h. on which it had stopped before.—L. Y.

### MOTOR CYCLES AND NERVES.

It appears to me to be a fallacy on the part of many that motor cycling is prejudicial to nerves. Having had a practical experience in this particular phase, I should like your correspondent "H.S." to know that only as a result of taking up motor cycling have I recovered from "nerves" to such an extent that I now fear nothing, and can drive or take on any job that requires nerve energy, although the bogey mentioned by your correspondent was used in my case by those who did not know the benefit to be obtained by the motor cycle and sidecar. I agree that solo work is much more likely to be trying than sidecar driving. Especially is this so under wet or greasy conditions, but I do both.—SIDNEY R. GIDDINGS.

### Change of Address.

More commodious premises at 78, Bishopsgate, London, E.C. have been taken over by the Bancroftian Co.

### Tanks and Silencers.

As sole selling agents for the Coombe Manufacturing Co., Ltd., of Coventry, the firm of Green and Wheatcroft, 83, Murray Road, Rugby, are able to quote for all kinds of motor cycle tanks and silencers.

### Spare Parts Reduction.

During February the prices of Indian spare parts were reduced 20%, excepting such items as carburetters, magnetos, electrical equipment, and sidecars, the manufacture of which is not controlled by the Hendee Manufacturing Co.

### In Ireland.

Readers and agents across the Irish Sea who are interested in the Dunelt machine should note that a representative of Dunford and Elliott, Ltd., Bath Row, Birmingham, is making a business tour and giving demonstrations in Ireland.

### Found on the Road.

A motor cyclist who fell from a Triumph at Bromley Hill, S.E., on February 19th, left behind him a pair of aero Triplex goggles; these were rescued by Mr. M. B. Lee, 1, Gresham Buildings, Basinghall Street, London, E.C.2.

### The "Big Four."

Registration of a trade mark design in which the phrase "Big Four" is an essential device has been obtained by Norton Motors, Ltd., of Birmingham. The firm claim to have originated this designation for 4 h.p. machines of the big single type.

### Glass's Automobile Show of Used Motor Vehicles.

Second-hand motor cycles will be a feature of Glass's Automobile Show, to be held at the Crystal Palace from March 27th to April 8th. On Saturday, March 18th, there will be a hill test of machines entered for the show, under A.C.U. supervision. The organiser is Mr. W. Glass, 12, Buckingham Street, Strand, London, W.C.2.

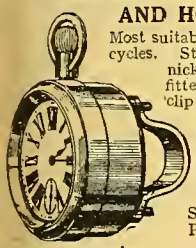
### Cost of Carriage.

Some machines are now quoted at "carriage paid" prices, but a section of the manufacturing trade considers that machines should be quoted "at works," so that the man near by or who collects the machine personally shall not pay an overhead charge based on the average cost of carriage. Amongst the latter category are the makers of Abingdon, Beardmore, Excelsior, Connaught, Bradbury, Brough-Superior, Calthorpe, Chater-Lea, Douglas, Enfield, Omega, Hawker, Quadrant, P and M., and Verus motor cycles and Millford sidecars.

# BENETFINKS Stocktaking Sale

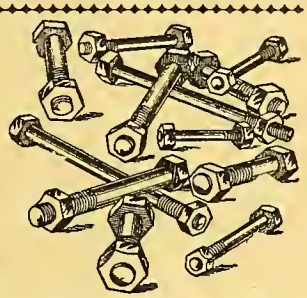
## BARGAINS FOR MOTOR CYCLISTS

### HANDLEBAR WATCHES AND HOLDERS



Most suitable for motor cycles. Strongly made, nickel finish and fitted with spring clip inside case to absorb vibration. Complete with good reliable watch. Usual price 12/6. SALE PRICE **5/3**

Post 6d.



### NUTS AND BOLTS

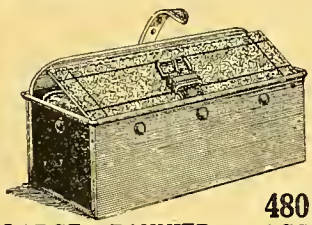
1 doz. assorted sizes, ¾" to 2½" Engineers' Bolts and Nuts. Indispensable to every outfit. Usual price 3/9 doz. SALE PRICE, per doz. **1/-** In gross lots **11/9**. Post free.

### 275 STRONG MOTOR CYCLE BRASS OILERS

Nickel plated. *Will not leak.* Curved spout. Usual price 2/9. SALE PRICE **1/9** Postage 4d.

### BULB HORN

Deep note, treble twist, large bulb. Usual Price 8/6. SALE PRICE **4/11** Post 9d.

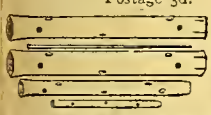


### 480 LARGE PANNIER BAGS

Armoured. With fibre lining and leather front. Fitted with straps and clips complete. Usual price 8/6 Post 9d. SALE PRICE **4/11**

### CELLULOID FACE SHIELDS

The most popular protector on the market. Very light and compact. Bound Chenille. Usual price 2/9. SALE PRICE **1/-** Postage 3d.



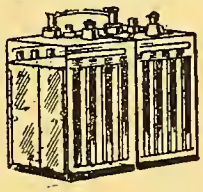
**760 SETS MOTOR-CYCLE SIZE**

### BOX SPANNERS

Giving 6 useful standard sizes. Complete with tommy bar. Usual price 2/9. Post 4d. SALE PRICE **1/2½**

### Further Reductions in ACCUMULATORS.

Best English made. Strong Celluloid cases. Stout plates of the best quality.



NOTE. Accumulators cannot be sent charged.

| | | | |
|---|---|---|---|
| 4 volt 10 amp. Usual price 15/- | **8/6** | 4 volt 80 amp. Usual price 45/- | **27/3** |
| 4 volt 20 amp. Usual price 20/- | **12/-** | 6 volt 20 amp. Usual price 37/9 | **20/-** |
| 4 volt 40 amp. Usual price 27/6 | **15/9** | 6 volt 40 amp. Usual price 42/6 | **26/6** |
| 4 volt 60 amp. Usual price 35/- | **19/11** | 6 volt 60 amp. Usual price 50/- | **31/-** |

Postage **1/-** extra.

### GREAT PURCHASE OF 1,750 SPARKING PLUGS

By all best makers, including Bosch, Apollo, Cooke, L.M. and C.X., and are guaranteed perfect and **Not for Aero Engines.** Note.—When ordering Sparking Plugs please state if metric or gas thread. Usual price 5/-. SALE PRICE **2/3** Postage 3d.

### ENGINE CLEANING BRUSHES

Fibre or bristle. Amazing offer, as these were never made for double the price. Usual price 1/3. SALE PRICE **4½d.** Post 5d.

### ROUND NOSED PLIERS

780 pairs only. 5 or 6 inch. Usual price 2/6 SALE PRICE **9d.**

Post 3d.

***Write for our Sale List Post free on request.***

**BENETFINKS,** CHEAPSIDE. LONDON, E.C.2.

# THE DANCE

## OR SOCIAL EVENING

**will lose all their charms if your passenger arrives cold, wet or dishevelled—be forearmed—employ the most efficient means of combating Nature's elements—fit the Windscreen that gives perfect protection—that prevents ruined clothes, chills and colds, and gives a touch of luxury to any sidecar.**

**Underneath its handsome streamline qualities are many mechanical refinements, providing adjustments to any position, and enabling pronounced ease of entry or exit—its well balanced design has occasioned favourable comment wherever it is seen.**

**REDUCED PRICES**

| | |
|---|---|
| ROYAL - - | £5 0 0 |
| STANDARD - | £3 18 0 |
| BABY - - | £3 0 0 |

*SPECIAL NOTE—Complete sets of Royal fittings for converting "Standard" models to "Royal," giving simplified adjustment to any position—and quick, easy entry or exit, price* **45/-.**

*New Celluloids can be fitted and returned in three days. Royal and Standard* **20/-**, *Baby* **16/-.**

# EASTING

## EASTING WINDSCREENS LTD.,

**132, STEELHOUSE LANE, BIRMINGHAM.**

*London Office & Service Depot*

**24, FINSBURY SQUARE, LONDON, E.C.2**

*Telephone* *Clerkenwell* 1904.

WHOLESALE STOCKISTS: AUSTRALIA—J. J. Wilkins & Sons, 585, George St., Sydney. IRELAND—C. E. Jacob, 18, Great Brunswick St., Dublin. SCOTLAND—Of all Factors. Sole Manufacturing Rights in U.S.A.: Messrs. Shillan, Beck & Co., Inc., 68-72, East 131st St., New York.

## Genuine Bargain Offer

of our No. 38 SUPERIOR **MOTOR CYCLE HOUSE.**

**Must not be confused with inferior buildings now being so freely offered by some Makers. Ours is the best value for money in the kingdom.**

**Larger sizes suitable for motor car.**

| Size. | Height to eaves. | Height to ridge. | Reduced price. | Floor & sloping platform. | Treating. |
|---|---|---|---|---|---|
| 8′×6′ | 6′ | 8′ | £9 12 6 | £2 0 0 | 9/6 |
| 9′×7′ | 6′ | 8′3″ | 10 18 6 | 2 7 6 | 11/- |
| 10′×8′ | 6′ | 8′6″ | 12 15 0 | 2 15 0 | 12/- |
| 12′×8′ | 6′ | 8′6″ | 14 5 0 | 3 2 6 | 12/6 |
| 14′×8′ | 6′ | 8′6″ | 16 6 0 | 3 10 0 | 15/- |
| 14′×10′ | 7′ | 10′3″ | 20 7 6 | 5 7 6 | 17/6 |
| 16′×12′ | 7′ | 10′3″ | 24 12 6 | 6 15 0 | 20/- |

Carriage paid to stations in England and Wales for cash with order. PROMPT DESPATCH. Made in complete sections to bolt together, of SEASONED BEST QUALITY Swedish Red Deal, planed, tongued and grooved from ⅞in. boards on strong framing, mortised, tenoned, and pinned together. Roof of matchboards covered with superior waterproof felt. Tongued and grooved FLOOR AND SLOPING PLATFORM made from ⅞in. boards. Two larger sizes 1in. floor and platform. Bolts and nuts for erection supplied. **Satisfaction guaranteed.** Write for Free List No. 88 for Bargains in Portable Buildings, or No. 7 for Motor Houses.
Estimates free to customers' own requirements.
The principal and best Makers at lowest prices of portable wood and iron buildings, poultry houses, etc.

**J. T. HOBSON & CO., BEDFORD.**
Established 80 years. Works 9 acres.

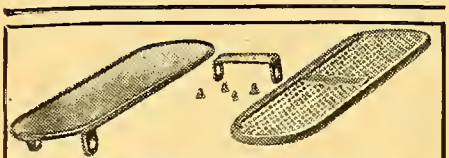
### To DEALERS and OTHERS.

**Compulsory Sale of Cars, Motor Cycles, & Motor Cycle Combinations.**

Owing to unforeseen circumstances we must dispose of the following stock within the next few weeks.

5-Seater Car, 2-Seater Car, 2 Triumph Combinations, 1 Pope Combination (with spares), 1 Matchless Combination, 1 Premier Combination, 1 Rex Combination, 1 A.J.S. Solo, 1 Auto-Carrier.

Call, write, or Telephone:
**SAMUEL REED & SONS, 136, Gt. Oover St., S.E.1, 168, Hither Green Lane, Lewisham, S.E.13.**
'Phone: Hop 2537, Lee Green 794.
Trials arranged. Full specifications sent on request.



## S.V. FOOTBOARDS

can be fitted by any rider to any Motor Cycle. Thick rubber pads remove all vibration.
Price **12/6** pair.
*Agents stock them or direct from the Manufacturers:*
**The Sun Cycle and Fittings Co., Ltd., Aston Brook Street, - - Birmingham.**

## CAMEO SCREEN OWNERS

You can fit a set of **Sun-o'-Rain** Adjusters in a few minutes and make your screen instantly **adjustable to any desired position**—storm position gives absolute shelter to your passenger and decreases wind resistance. Fit any "Cameo" Screen without alteration. No interference with entry or exit of passenger. No loose parts to flap about. Smartest and simplest screen fitting on the market. Price **20/-** Carriage 1/- Please pass this to your friends owning "Cameos" —They will thank you.

**A. E. TANSLEY, 162, Lenton Boulevard, Nottingham**

## COTTABUNGA

A BUNGALOW COTTAGE FOR

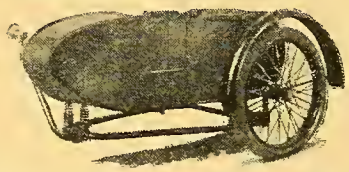
**£250**

**The most wonderful value ever offered.**

We invite inspection of a specimen "Cottabunga" now erected complete at our works.

**BROWNE & LILLY, LTD.,**
**Manufacturers & Exporters, READING.**
Write for Free Illustrated Catalogue of Bungalows, Motor Houses, Chalets, and all kinds of Portable Buildings.

## LIGHT WEIGHTS.



**Under-slung Chassis complete with 1922 body, locker at rear - - - £16**

*Trade Orders Solicited.*
Agents wanted, write for terms.
**ROBINI MANUFACTURING CO., 1 & 3, Tulse Hill, Brixton, S.W.**
Phone: Brixton 1585.

## Preserve your Cylinder.

**Withstands heat, petrol, and oil.**

Tins 1/2 and 2/- post free.

**OWEN BROS. & Co. Ltd., HULL, England.**

Spare Parts for

## *Indian* Motor Cycles

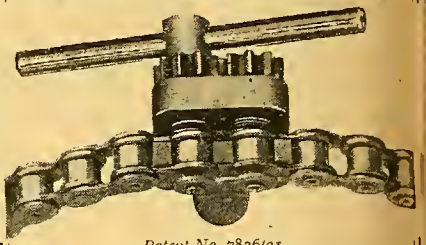
**THE DENNIS ACCESSORIES STORES,**
89, Brixton Road, London, S.W.
**Specialists in "Indian" Repairs and Overhauls.**
'Phone: Brixton 3129.

## EARNSHAW

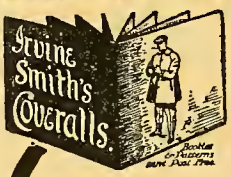
**Yorkshire service depot for Douglas, Triumph, Matchless, B.S.A., P. & M., Enfield, Rudge, Humber, Norton, Indian, Morgan, L.S.D., Coventry Premier, Raleigh, Etc., Etc.**

**HUDDERSFIELD.** 'Phone 1232.

## "R.S." Dual Chain Rivet Extractor



*Patent No. 7836/21.*
PRICE for ⅝" pitch chains blued finish **8/6** (packing and postage 6d. extra).
*Write for Leaflet.*
**Direct from the patentee—**
**G. R. SALT,** Motor Engineer, 18, Cherry St., Coventry.




*Patterns and self measurement form free*

This Book describes Motor Clothing made by a Motor Cyclist.

***Send for it!***

**IRVINE SMITH, BUTTERSHAW BRADFORD.**

## RETREADING

**MOTOR CYCLE AND LIGHT CAR COVERS.**

**RUBBER STUDDED TREADS.**

| Heavy. | Extra Heavy. |
|---|---|
| 24 in. or 26 in., **14/-** | 24 in., 26 in., or 650×65, **16/-** 28 in., **17/6** |

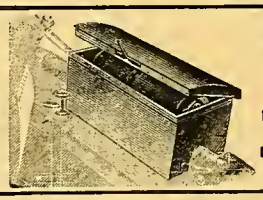
**HEAVY GROOVED CAR TREADS.**
26 in. or 650×65, **18/6** 28 in., **19/6** 700×80, **21/-**

**Cut or burst covers or tubes repaired.**

*All work promptly and efficiently executed. We have specialised in TYRE REPAIRS since 1897.*

**All particulars upon application to—**

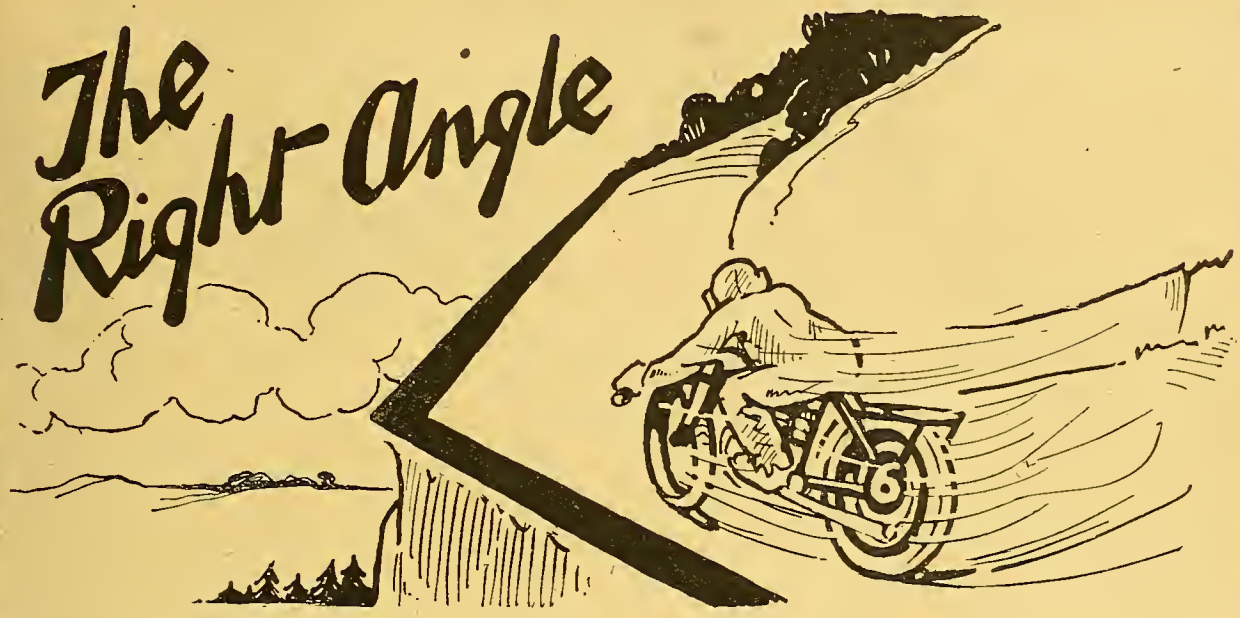
**THE EXCELSIOR TYRE & RUBBER CO., Hurst Street, Birmingham.**



**TOP RAIL TOOL BOX.**
20/- reduced **12/-**
Post Paid.
**REG. SAMSON, Ladywood Road, BIRMINGHAM.**
*Send for List.*

## METALASTENE

Tubes **1/-** & **3/-**. From **Live** Agents, all Halford Depots, *or Post Free from*
**METALASTENE CO., POULTON-le-FYLDE.**




# All the news from the right angle
# You'll find it in the "Daily Express"

"Daily Express" motor cycling notes and articles are written from the enthusiast's point of view. They get to the root of things—discuss "why's" and "wherefores"—and deal with the things you want to know.

Order the "Daily Express" from your newsagent. It gives you the right news from the right angle. It contains just what you want when you want it. And it insures you Free against illness and accident.

As a motor cyclist, you take many risks. "Daily Express" Free Insurance covers you against accident and illness. You sign—we pay.

## Daily Express

**If you want what you want when you want it, use the Want Ads. in the "Daily Express."**

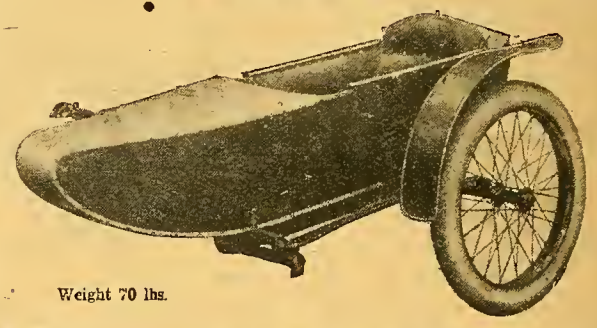
# GUARANTEED SECONDHAND MACHINES.

**Indian Scout** 1921 Electrically equiped as new £80 0s.
**Enfield** 1921 8 h.p. Combination, dynamo lighting - - - £125 0s.
**Zenith** 1921 2¾ h.p. Flat Twin, Gradua gear - £52 10s.
**Zenith** 1921 5 h.p. Sports, Gradua gear - £67 10s.
**Matchless** 1920 Model H., dynamo, hood and screen - - - £135 0s.
**Triumph** 1917-18 4 h.p., 3-speed, lamps & horn £75 0s.
**B.S.A.** 1917-18 4¼ h.p. Combination, lamps and screen - - - - £85 0s.
**Verus** 1920 2¾ h.p. Blackburne, 2-speed, k.-s. - £55 0s.
**Diamond** 1920 2¾ h.p., 2-speed, lamps and horn £42 10s.
**Douglas** 1916 2¾ h.p., 2-speed, lamps and horn £45 0s.
**Douglas** 1917 4 h.p. Combination, as new - £75 0s
**Wooler** 1921 2¾ h.p., variable gear - - £50 0s.
**Levis** 1917 2½ h.p. single speed - - £28 0s.
**Tamplin** 1920 2-seater, as new, mileage about 500 - - - - - £80 0s.
**P. & M.** 1917 3½ h.p., 2-speed - - £50 0s.

**Extended Payments from 4% extra. Full List of New and Secondhand Machines sent post free on request.**

# TORONDA SIDECARS

**POPULAR MODEL**



Weight 70 lbs.

**BODY**—
Exterior Finish. Lacquered aluminium surround panels, 3-ply sides, heavily varnished, upholstered Brown Antique Rexine, padded with Sorbo Sponge, Fibre Mat, Storm Apron.

**CHASSIS**—
3-point attachment straight axle; or under-slung axle, at an extra cost of £3. Finish, Black Enamel.

Spring. (Subject of a Patent.) Weight of Body and Passenger is applied to Springs through the medium of leverage, thereby combining great resiliency with a minimum of rebound from road shocks.

May be ridden with empty sidecar without any inconvenience to the driver resulting from rattle or bounce.

Price - - **£20**

This Sidecar is especially suitable for use with low-powered machines.

**ALLEN-BENNETT MOTOR CO., LTD., 9, 10, 11, Royal Parade, West Croydon.**
**Open Saturdays Until 7.30 p.m.** **'Buses from City and West End Pass the Door.**

**BUY YOUR MOUNT NOW AND GET IT AT TAYLORS**

**4%**
**ONLY CHARGED FOR EXTENDED PAYMENTS EXCEPT WHERE OTHERWISE STIPULATED BY THE MAKERS.**

**PAY WHILE YOU RIDE YOU CAN GET IT AT TAYLORS**

**SOLE LONDON AND DISTRICT DISTRIBUTIVE AGENTS FOR**

## A·J·S

**The famous A.J.S.,** which is now almost a household word, is available in two models only for the 1922 season—the 7 h.p Combination at £175 and the 2¾ h.p. Touring, semi-sports, or stripped sports model at £85. These prices include carriage to nearest railway station. Supplied on the "payment out of income system," ¼ down and balance spread over 12 monthly instalments. May we send you full particulars?

## "Excelsior"

**The Excelsior range for 1922 is very** comprehensive. Models are available to suit all purses and desires. The single sporting 2-stroke is priced at £39 18s. and the 8 h.p. de luxe combination costs only £155. Full particulars gladly sent on request, also deferred payment terms.

**SPECIAL BARGAIN**
First cheque secures 2¾ h.p. Zenith flat twin for £55 10s. These machines are new and carry the makers' guarantee. Usual price £98 10s.

We are Contracting Agents for all leading makes, including Matchless, Ariel, B.S.A., Triumph, Enfield, Raleigh, Quadrant, Martinsyde, Zenith, O.K., Rudge, Morgan, etc.

## DUNELT TWO-STROKE

**Efficiency, Simplicity and Economy** sum up the Dunelt, which is a combination designed specially to keep costs low. The 4 h.p. Dunelt 2-stroke makes light of hills, it is simple to drive and easy to keep in trim. The fitments are 3-speed gear, hand clutch and kick-starter, detachable and interchangeable wheels, and roomy coachbuilt sidecar. Supplied complete with spare wheel and tyre for £29 18s. 6d., deposit and balance in 12 monthly payments of £7 6s. 8d., or £113 8s. for cash. May we give you a trial run?

**H. TAYLOR & Co., Ltd.,**
Telegrams "Dynamotro, Westcent, London."

**52/53, Sussex Place, Sth. Kensington.** (*For Cars and Motor Cycles,*)
**21a, Store St., Tottenham Ct. Rd., W.C.1.** (*For Accessories & Repairs.*)
Telephones—Museum 1240 and Kensington 7260.

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

**ADVERTISEMENTS** in these columns —First 12 words 3/–, and 3d. for every additional word. Paragraphs of under 8 words are charged double rate. Each paragraph is charged separately. Name and address must be counted. Series discounts, conditions, and special terms to regular trade advertisers will be quoted on application.

Postal Orders and Cheques sent in payment for advertisements should be made payable to ILIFFE & SONS Ltd., and crossed & Co. Treasury Notes, being untraceable if lost in transit, should not be sent as remittances.

All advertisements in this section should be accompanied with remittance, and be addressed to the offices of "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. To ensure insertion letters should be posted in time to reach the offices of "The Motor Cycle," by the first post on Friday morning previous to the day of issue. Advertisements that arrive too late for a particular issue or that are crowded out will automatically be inserted in the following issue unless accompanied by instructions to the contrary.

All letters relating to advertisements should quote the number which is printed at the end of each advertisement, and the date of the issue in which it appeared.

The proprietors are not responsible for clerical or printers' errors, although every care is taken to avoid mistakes.

## NUMBERED ADDRESSES.

For the convenience of advertisers, letters may be addressed to numbers at "The Motor Cycle" Office. When this is desired, the sum of 6d. to defray the cost of registration and to cover postage on replies must be added to the advertisement charge, which must include the words Box 000, c/o "The Motor Cycle." Only the number will appear in the advertisement. All replies should be addressed No. 000, c/o "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. *Readers who reply to Box No. advertisements are warned against sending remittance through the post except in registered envelopes; in all such cases the use of the Deposit System is recommended, and the envelope should be clearly marked "Deposit Department."*

**In the case of motor cycles offered for sale under a box number, as it is unusual for these to be sold without first being inspected by the intending purchaser, advertisers will facilitate business by embodying in their advertisements some mention of the district in which the machine offered may be seen and tried.**

## ☞ DEPOSIT SYSTEM.

Persons who hesitate to send money to unknown persons may deal in perfect safety by availing themselves of our Deposit System. If the money be deposited with "The Motor Cycle," both parties are advised of this receipt.

The time allowed for a decision after receipt of the goods is three days, and if a sale is effected we remit the amount to the seller, but, if not, we return the amount to the depositor. Carriage is to be paid by the buyer, but in the event of no sale each party pays carriage one way. The seller takes the risk of damage in transit. For all transactions up to £10, a deposit fee of 1/- is charged; on transactions over £10 and under £50, the fee is 2/6; over £50 and under £75, 5/-; over £75 and under £100, 7/6; and on all transactions over £100, 1%. All deposit matters are dealt with at Dorset House, Tudor Street, London, E.C.4, and cheques and money orders should be made payable to Iliffe & Sons Limited.

The letter "D" at the end of an advertisement is an indication that the advertiser is willing to avail himself of the Deposit System. Other advertisers may be equally desirous, but have not advised us to that effect.

## SPECIAL NOTE.

**Readers who reply to advertisements and receive no answer to their enquiries are requested to regard the silence as an indication that the goods advertised have already been disposed of. Advertisers often receive so many enquiries that it is quite impossible to reply to each one by post.**

## MOTOR CYCLES FOR SALE.

### A.B.C.

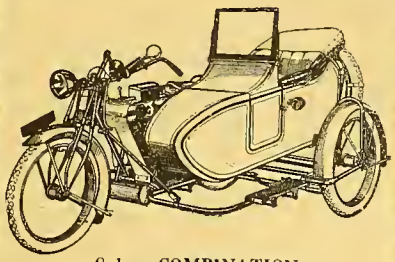
A.B.C. 1920, condition like new, Cowey horn, speedometer, electric headlamp; £70.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [2133

---

THE WONDERFUL

**Matchless**

THE PERFECT PASSENGER MOTORCYCLE



8 h.p. COMBINATION.

**£170**

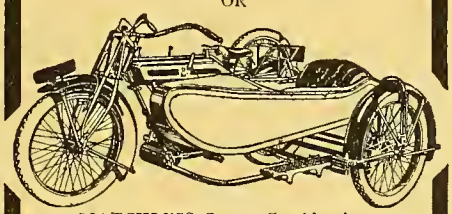
CASH

(Spare wheel - - £6 : 18 : 6 extra.)
(Dynamo lighting £20 : 0 : 0 „ )

**or £44 : 4 : 0 down and 12 payments of £11 : 1 : 0.**

*Discounts allowed if account paid in 2, 4 or 6 months.*

OR



MATCHLESS Sports Combination.

**£160**

CASH

(Spare wheel - - £6 : 6 : 0 extra.)
(Dynamo lighting- £20 : 0 : 0 „ )

**or £41 : 12 : 0 down and 12 payments of £10 : 8 : 0.**

*Discounts allowed if account paid in 2, 4 or 6 months.*

**Any make of Secondhand Machine accepted in part exchange.**

# LAMB'S Ltd.,

EUSTON ROAD, N.W.
(Opp. Gt. Portland St. Stn.). Phone: Museum 4978

WOOD GREEN, N. - - 50, High Road.
Phone: Hornsey 1956.

WALTHAMSTOW, N.E. - 151, High Street.
Phone: Walthamstow 169 (2 Lines).

---

## MOTOR CYCLES FOR SALE.

### A.B.C.

1921 A.B.C., electric lighting, speedometer, etc., excellent condition; 72 gns. Below.

1920 A.B.C., lamps, horn, splendid order; 70 gns. Edwards, 101, Great Portland St., W. [1874

1920 A.B.C., a bargain; £65.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [1681

F.O.C.H. have 1920 A.B.C., fully equipped; bargain.—5, Heath St., Hampstead. (Near Tube.) [1581

WHAT Offers: 1920¾ Sporting A.B.C., lately fitted with new cylinder, pistons, rings, and gudgeons, with improved type fastenings; seen by appointment; owner going abroad.—Chase, Pipe Gate, Shropshire. [1235

*Spare Parts:*

A.B.C. Spare Parts.—Largest stock in London.—Maudes' Motor Mart, 100, Great Portland St., W.1. [2125

### A.E.L.

BRAND New A.E.L.-J.A.P., 2¾h.p., 2-speed, clutch, kick start, uncrated, cost over £70; sacrifice, 52 gns.—37, Elmbank Gardens Barnes. [1489

SHOP-SOILED A.E.L. 2¼h.p., 2-stroke, 2 speeds, kick starter, used for one or two demonstrations only; list price £57, accept £48.—Dunwell's Garage, Wigan. Tel.: 328. [0766

### A.J.S.

1922 2¾h.p. A.J.S., touring model B; £85.—Howley, Devizes. [1682

CROSS, Effingham Sq., is Agent for A.J.S.'s for Rotherham and District. [2118

A.J.S. 1922 2¾h.p. Sports and 7h.p. Combinations in stock.—Clifford Motories, Eastwood, Notts. [8826

A.J.S.—Delivered anywhere, carriage paid.—Merrick's Stores, Sisterhills Rd., Bradford. 'Phone: 2439. [1207

1917 4h.p. A.J.S. Combination (Sporting), all accessories; £60.—1, Bellingham Terrace, Catford. [1800

STANDARD Sports A.J.S., immediate delivery from stock; exchanges.—Kent's, 417, Lord St., Southport. [1752

1921 A.J.S. Combination, as new, beautifully equipped; £125.—24, Balliol Rd., North Kensington. [1595

LONGMAN Bros., Bond St., Ealing, District Agents, all models; cash, exchange, or deferred payments. [8958

5-6 h.p. A.J.S. or Triumph, unreconditioned, but complete; machine considered.—Jobson, Netherwitton, Morpeth. [1359

A.J.S. 1920 (December) Combination, owned by engineer, exceptionally good; £100.—Bunting's Exchange, Wealdstone. [2010

A.J.S.—Immediate delivery of 1922 models. Cash! Exchanges! Easy payments!—P. J. Evans, John Bright St., Birmingham. [1409

A.J.S. 6h.p., 3-speed, luxurious sidecar, hood, screen, electric lighting, perfect order; £80.—Hammant, 63, Carlton Vale, N.W.6. [1522

A.J.S.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7235

1920 A.J.S. Combination, Lucas dynamo lighting, spare wheel; £115.—Hillier, 9, Wallingford Avenue, North Kensington. [1689

1922 A.J.S. 7h.p. combination, in stock; £175; cash exchanges or easy payments.—Premier Motor Co., Aston Rd., Birmingham. [1981

GOOD Deliveries A.J.S., 2¾h.p. and 7h.p.; cash, deferred, or exchange.—D. and S. Autocar Co., 33, The Parade, Golders Green. [1859

A.J.S. Combination, nearly new, mileage 6,000, electric light, spare wheel, etc.; £120; no dealers.—12, Greville Place. Hampstead 1819. [1155

A.J.S. Combination 1920 6h.p., dynamo lighting, spare wheel and tyre, hood, screen, luggage grid, etc.; £125.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9881

A.J.S. Combination, 1920, 6h.p., spare wheel and tyre, luxuriously equipped, open to any trial or examination; £118.—Dawe, 216, Portobello Rd., North Kensington. [1355

A.J.S. 1921 Combination, as new, spare wheel, accessories, aluminium discs, tax paid, electric light, perfect condition; £150, or nearest offer.—Frogmore, Carlton St., Sandown. [1192

WAUCHOPE'S, 9, Shoe Lane, London.—A.J.S. Combination, latest 1922 model from stock, £175; also lightweight 2¾h.p., £85; easy terms and exchange. 'Phone: Holborn 5777. [2168

## MOTOR CYCLES FOR SALE.

### A.J.S.

FOR A.J.S. 1922 models, 2¾h.p. solo, or 7h.p. combinations, get in touch with the N. London agents.—Jones Garage, The Broadway, Muswell Hill. [0785

1920 6h.p. A.J.S. Combination, as new, not done 2,000 miles, Lucas dynamo lighting set, disc wheels, Easting windscreen, speedometer, spare wheel, mechanical horn, full kit of tools; price £150.—Wheatley, Stamford. [1144

A.J.S. Combination, November, 1920, owner driven, remarkable condition and appearance, Lucas dynamo and electric horn, Binks carburetter, Tan-Sad, hood, triplex screen, detachable wheels, etc.; £165.—S. Culmer, Shaldon, Teignmouth, Devon. [1274

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3608

A.J.S. Spares; prompt delivery.—Cyril Williams, Chapel Ash Depot, Wolverhampton. T.A.: Parts. [7901

A.J.S. cylinders, 1916, 6h.p., £3 pair, H.A.H., electric lamp, complete; £2.—69, North St., Plaistow. [1368

A.J.S., 1910, 1911, 1912.—Authorised manufacturer of spares for early models.—Harry C. Boham, Penn Rd., Wolverhampton. [1730

### Alldays.

ALLON, as new, electric lighting, tax 1922; £36/10.—129, Sheen Lane, Mortlake. [1474

£28/10.—2-speed Allon, perfect order; evenings.—49, Robinson Rd., Collier's Wood, Merton. [1231

1918 Alldays Allon 2-speed, very smart, any trial, licensed; 29 gns.—67, Fernlea Rd., Balham. [2041

ALLON, unused, 1922, Watford speedometer, fully equipped; £65.—Cringles, Thicket Rd., Sutton, Surrey. [1530

1920 2¾h.p. Allon, fully equipped, licensed, insured, condition excellent; 29 gns.—Edwards, 101, Gt. Portland St., W. [1884

ALLDAYS Allon Combination 1921, ridden 300 miles, lamps, etc., worth seeing.—Wall, 104, Shardeloes Rd., New Cross, London. [1149

1921 Allon, 2-stroke, Model de Luxe, 2-speed, clutch, and K.S.; this machine is brand new; accept £50 cash.—The Layton Garages, 30, Holywell St., Oxford. [8969

ALLDAYS' Allon 1921, 2¾h.p., 2-speed, 2-stroke, kick starter, lamps, horn, tax paid; £47/10.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0075

### American X

1920 American-X 7-9h.p. Combination, 3-speed, K.S., windscreen, etc., any trial; £70; exchange.—C. S., 14, Swaton Rd., Bow. Tel.: E 3155. [2036

1921 American X 7-9h.p. Twin, 3 speeds, new but slightly shop-soiled, at a very low price to clear; an opportunity for the bargain hunter.—14, Gt. Marlborough St., W.1. [0769

### Arden.

ARDEN, 2-stroke, 2-speed, brand new, shop-soiled; best offer over £40 secures.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. 'Phone: Greenwich 751. [2081

### Ariel.

ARIEL 3½h.p., shop-soiled; £85.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9872

F.O.C.H. have 1920 3½h.p. Ariel Combination, fully equipped, bargain.—5, Heath St., Hampstead. (Near Tube.) [1574

ARIELS, all models; exchanges, highest prices given.—Harry Nash, Contracting Agent, 365, King St., Hammersmith. [9830

1919 3½h.p. Ariel, lamps, horn, belt case, heaps of spares, superb condition; 57 gns.—Edwards, 101, Great Portland St., W. [1878

ARIEL.—All models, cash or gradual payments. Spares supplied from stock.—West Central Agency, Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0704

ARIEL 1922 Sports model, 3½h.p.; delivery from stock; £87/10.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0065

WAUCHOPE'S, 9, Shoe Lane, London.—6-7h.p. Ariel Combination, 1921, new, reduced to £130; 3½h.p. Ariel, 3 speeds, clutch, £87/10; no extra charge for easy terms. [2169

ARIEL 1919, 3-speed, kick start, recently overhauled by Ariel Company, lamp, horn, no tools, new tyres, tax paid; £40, or with bulbous sidecar, £50.—Wallis, 7, Newborough, Scarborough. (D) [1820

1920 3½h.p. Ariel Combination, 3-speed, countershaft, kick start, tax 1922 paid, everything complete, faultless condition; £75; cash wanted.—J. M., Chequers Hotel, Southgate St., King's Lynn. [1757

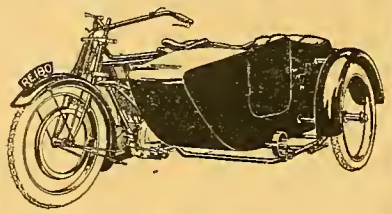
ARIELS.—Longman Bros., Bond St., Ealing. Telephone: 689.—All models obtainable from the Ariel experts. Specially tuned sports models, 3-speed, certified to have exceeded 65 m.p.h.; £92/10. Cash, exchange, or deferred payments. [5785


FROM

# STOCK

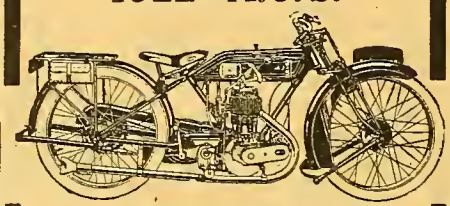
(SUBJECT UNSOLD)

## 1922 ROYAL ENFIELD



8 h.p. Combination, £140.
(Dynamo Lighting, £18 extra).

## 1922 A.J.S.



2¾ h.p. Standard Sports, £85.

| | | |
|---|---|---|
| 1922 | 7 h.p. **A.J.S.** Comb. | £175 |
| 1922 | 2¼ h.p. **ENFIELD** | £55 |
| 1922 | 2¾ h.p. **DOUGLAS** | £75 |
| 1922 | 4 h.p. **DOUGLAS** Comb. | £135 |
| 1922 | 8 h.p. **MATCHLESS** Sports | £130 |
| 1922 | 8 h.p. **MATCHLESS** Comb. | £170 |
| 1922 | 3½ h.p. **ARIEL** Sports | £87 10s. |
| 1922 | 3½ h.p. **ARIEL** Comb. | £125 |
| 1922 | 6/7 h.p. **ARIEL** Comb. | £140 |
| 1922 | 3½ h.p. **ZENITH-BRADSHAW** | £113 |
| 1922 | 4½ h.p. **B.S.A.** | £107 |
| 1922 | 3½ h.p. **NORTON** 16H. | £115 |

# WANTED.

YOUR PRESENT MACHINE IN PART EXCHANGE. HIGHEST MARKET VALUE ALLOWED.

| | | |
|---|---|---|
| 1921 | 3½ h.p. **N.U.T.**, shop-soiled | £90 |
| 1921 | 2¼ h.p. **FEDERAL**, 2-sp. | £40 |
| 1920 | 3 h.p. **A.B.C.**, dynamo | £75 |
| 1920 | 4 h.p. **NORTON**, 3-speed | £80 |
| 1920 | 4 h.p. **TRIUMPH** (Reno.) | £68 |
| 1920 | 3½ h.p. **P. & M.** 2-sp. etc. | £65 |
| 1920 | 2¼ h.p. **METRO-TYLER** | £50 |
| 1920 | 2¾ h.p. **DOUGLAS** 3-sp. | £55 |
| 1919 | 3½ h.p. **ROVER** Comb. | £80 |
| 1915 | 2¾ h.p. **DOUGLAS** Dyn. | £37 |

(MANY MORE.)

## DEFERRED PAYMENTS

## R. BAMBER & Co., LTD.

2, Eastbank Street,

Phone: 607 SOUTHPORT.


## MOTOR CYCLES FOR SALE.

### Ariel.

1920 Ariel Combination 3½h.p. 3-speed, clutch, lks., lamps, speedometer, etc., really excellent condition, licensed; 80 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1949

ARIELS, the most reliable machines on the road; all models from stock; spare parts sent anywhere; trade supplied.—F. Speakman, Ariel Expert, Ariel Garage, 7, Rochdale Rd., Harpurhey, Manchester. Tel.: 325 Cheetham Hill. [5135

*Spare Parts:*

ARIEL Spares for all models, post free. Ariel Agents, and Spares Service Depot.—Jones Garage, Broadway, Muswell Hill, N.10. [0804

### Arno.

ARNO 1913 3½h.p., top feed B. and B., new magneto, 45 m.p.h.; £22; exchange P. and M., cash adjustment.—Sawyer, 41, Wickham Lane, Welling, Kent. [1182

### Bat.

BAT-J.A.P. 5h.p. Twin, spring frame, perfect; £14/10.—17, Heston Rd., Mitcham. [1807

£20.—Offers, 4h.p. Bat-Jap, Mabon gears, perfect.—97, Hamilton Rd., West Norwood, S.E. [1338

BAT-J.A.P., 6h.p., 3-speed, sporting model, guaranteed good order, bargain; £35.—J., 46, Chancer Rd., S.E.24. [2073

BAT 1921 8h.p. Combination, spare wheel (unused); £110; exchanges.—Newham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1916

### Beardmore.

1920 (late) Beardmore Precision, spring frame, all accessories; 44 gns.; exchanges.—Kent's, 417, Lord St., Southport. [1746

BEARDMORE-PRECISION.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7227

1922 Beardmore-Precision 3h.p., brand new, now reduced to £65; lightweight 3h.p. sidecar combination, £85; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [8962

£55.—3½h.p. fully-sprung Beardmore-Precision, only 1,500 miles, written guarantee, perfect condition, powerful, built for sidecar; seen any time.—5, Cambridge Gate, Regents Park. Tel.: Museum 5619. [1152

### Blackburne.

1920 4h.p. Blackburne, as new, lamps, chain drive; 80 guineas.—Irving, Victoria House, Marlborough, Wilts. [1453

1920 4¼h.p. Blackburne, complete with all lamps, horn, and licensed to December 31st, 1922; £65; very little used.—Carnforth Motor Co., Carnforth. [9134

### Bradbury.

BRADBURY 4h.p. 1921, unused, unlicensed, a bargain; £80.—Motor Co., Hereford. [1071

1920 6h.p. Bradbury Combination, fully equipped; £90.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9878

1921 Bradbury, 4h.p., 3-speed, clutch, kick, slightly shop-soiled; £87.—Stephenson, Agent, Pembroke Dock. [1323

BEST bargain this week.—Bradbury 4h.p. coachbuilt Combination, 2-speed, perfect; £35.—1, Priory Rd., Kew. [1697

6h.p. Bradbury Combination, 3 speeds, kick start, speedometer, windscreen, lamps, horn, etc.; £57.—74, Brighton Rd., Surbiton, Surrey. [1663

BRADBURY 6h.p. 1921 new 3-speed Combination, Millford sidecar; best offer secures; or exchange entertained.—Eagles and Co., 275, High St., Acton, London. [1930

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. Bradbury, new 1921 model, reduced to £55; also 6h.p. Combination, new 1921, reduced to £130; no extra charge for easy terms. [2170

TAKEN for debt.—4¼h.p. Bradbury cb. Combination, chain drive, countershaft gears, k.s., clutch, fully equipped, as new, bargain; £75, quick sale; tax paid.—174, Vicarage Rd., Leyton. [1644

1920 Bradbury (date guaranteed), with Grindlay coachbuilt sidecar, Easting screen, 4h.p., 3-speed, clutch, kick starter, chain drive, lamps; only 79 gns.; exchanges, easy terms.—Wandsworth Motor Exchange, Ebner St., Wandsworth. (Town station.) [1567

1914 Bradbury, 4¼h.p. coachbuilt combination, 3-speed hub, clutch, kick starter, overhauled, enamelled, plated, reupholstered 1921, cost £20, speedometer, Klaxon, lamps, tools, spares, everything guaranteed perfect, any trial, fully licensed; £38; write appointment.—62, Lady Margaret Rd., Southall, W. [1463

### Brough.

BROUGH.—Don't disturb your capital; we will supply any model on our easiest of easy terms.—Holmes and Younie, Hunter's Bar, Sheffield. [2060

## MOTOR CYCLES FOR SALE.

### Brough.

**19**20 5h.p. Brough and Swan Sporting Model Sidecar, little used, condition as new, mileage under 5,000, speedometer, lamps, spares, etc., recently overhauled, tax paid 1922, any trial or examination; £95, no offers.—Box 8859, c/o *The Motor Cycle*. [1124

### Brough Superior.

BROUGH SUPERIOR 8h.p. o.h.v., Lucas Magdyno, horn, speedometer; no reasonable offer refused.—Symondson, Woodside, South Hill, Bromley, Kent. [1803

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½, o.h.v., 3-speed, clutch, and kick starter, £160; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0733

### Brown.

**3½**h.p. Brown, sporty, mechanically perfect, ride away; £15 or offer.—49, Stephendale Rd., Fulham. [1267

BROWN 2¾h.p., Bosch, B. and B., clutch, etc.; bargain, £20; accept bicycle part payment.—Fisher, Roseleigh, Heston, Hounslow. [1553

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with pleasure.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

B.S.A. 1922.—All models; immediate deliveries.—Clifford Motories, Eastwood, Notts. [8827

B.S.A. 1912, clutch, 4¼h.p., new tank, perfect solo mount; £26.—Longney, Oswestry. [1251

**19**21 B.S.A., 4¼h.p., mileage 500, as new; £80.—R. Davies, Kingcoed, Llandenny, Usk, Mon. [1306

**£**37/10.—B S.A., 4h.p., 1915 model, 3 speeds, kick starter, any trial.—8, High St., Wandsworth. [1755

B.S.A., Model K, fully equipped, perfect order; £50.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9880

**19**20 4¼h.p. B.S.A., all-chain, fully equipped, excellent order.—Edwards, 101, Great Portland St., W. [1881

**£**98.—1921 B.S.A., all chain, 1921 Canoelet touring sidecar, equipped.—100, Dudley Rd., Wolverhampton. [1532

**40** GNS.—1915 B.S.A., 3-speed, countershaft, 4¼h.p.; snip; exchanges.—Kent's, 417, Lord St., Southport. [1745

B.S.A.'s, all models; exchanges, highest prices given.—Harry Nash, Contracting Agent, 365, King St., Hammersmith. [9828

B.S.A. Combination, windscreen, hood, lamps, etc., as new, tax paid, bargain; £65.—74, Brighton Rd., Surbiton, Surrey. [1664

**19**14 B.S.A. Sports Phillipson, excellent condition, guaranteed, tax; £30.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [1996

B.S.A.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Easthank St., Southport. 'Phone: 607. [7236

**49** GNS.—4¼h.p. B.S.A. Combination, 3 speeds, K.S., all chain, hood screen, bargain.—Ewers, Newton Rd., Burton-on-Trent. [1548

B.S.A. 1920 H2 Combination, luggage grid, Lucas lamps, spares, insurance, low mileage; £80.—Eagle, 162, Uttoxeter Rd., Derby. [1319

B.S.A., 1917, 4¼h.p., 3-speed, K.S., perfect, licensed, bargain; £53, offers.—Willson, "Brentor," Shooters Hill, S.E.18. [1699

B.S.A.—1921 4¼h.p. H2 Model, all-chain drive, with coachbuilt sidecar, shop-soiled only; £120.—P. J. Evans, John Bright St., Birmingham. [1410

B.S.A. 1922 Model H.2, 4¼h.p., chain drive; £110. In stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0066

B.S.A. 3½h.p. Combination, 1915, Swan sidecar, 2-speed, clutch, good running order and condition; bargain, £39/10.—4, Austin Waye, Uxbridge. [1638

**4¼**h.p. B.S.A. Combination, all chain, 3-speed, perfect condition, electric and acetylene, tax paid; £68.—87, Smallshaw Lane, Ashton-under-Lyne. [1616

**19**20 B.S.A. Combination, 4¼h.p., Lucas, dynamo lighting, spares, in splendid order; no good offer refused.—Box No. 8966, c/o *The Motor Cycle*. [2021

**19**15 4¼h.p. B.S.A. C.B. Combination, equipped Easting, electric, perfect condition; £68; or exchange for higher h.p.—23, Shepherd's Bush Rd., W.6. [1099


# PARKER'S PERFECTED PAYMENT POLICY!

| DEPOSIT | and | 12 MONTHLY PAYMENTS. |
|---|---|---|
| £15 (B) | CLEVELAND, 1920. 3 h.p. 2-speed, K.S./C., fully equipped .. .. | £2-13-9 |
| £15 (B) | BAT, 1913. 6 h.p. C.B. Combination, 3-speed, C./K.S., hood, screen, speedometer .. | £3-11-8 |
| £17-10 (B) | RUDGE, 1919. 3½ h.p. Multi, fully equipped, tax paid | £2-13-9 |
| £25 (B) | P. & M., 1918/19. 3½ h.p. C.B. Combination (*not* ex-R.A.F.) fully equipped, Lucas accessories, fine condition .. | £3-11-8 |
| £45 (B) | INDIAN, 1921. 7-9 h.p., combination, electrically equipped, tax paid, as new. Cost £230 .. .. .. .. | £9-8-0 |
| £14 (B) | DOUGLAS, 1914. 2½ h.p., sporting combination, fully equipped, tax paid, excellent condition .. .. .. .. | £3-0-0 |
| £40 (M) | HARLEY-DAVIDSON, 1920. 7-9 h.p. C.B. Combination, electrical model, fine condition .. .. | £8-10-3 |
| £30 (M) | HARLEY-DAVIDSON, 1920. 7-9 h.p. electrical model, electric horn, new condition.. .. .. .. .. | £6-5-5 |
| £25 (B) | NORTON (1921 LATE), 3½ h.p. No. 9 Model, equipped as new.. .. .. | £4-9-7 |
| £20 (M) | P. & M., 1918. 3½ h.p., fully equipped, good condition .. | £2-18-4 |
| (B) | NEW HUDSON. 2¼ h.p., 2 speeds, fully equipped .. .. .. | 28 gns. CASH. |
| £30 | ROYAL ENFIELD, 1920. 8 h.p. Combination, Dynamo lighting, horn, speedometer, new tyre, good condition ... | £7-5-0 |

(M) = at Manchester.
(B) = at Bolton.

**IMMEDIATE DELIVERY OF 1922 MODELS BY ALL THE LEADING MANUFACTURERS.**

***Exchanges. Deferred Payments.***

**BOLTON: MANCHESTER:**

**Bradshawgate.** Tel.: 1348.

**245, Deansgate.** Tel: Cen. 864.


## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. 1920 Canoelet Combination, electric lighting, excellent order, £79. 1922 models in stock; exchanges arranged.—R. B. Clark & Co., 7, Exhibition Rd., S.W.7. [9001

B.S.A.—All 1922 models supplied; exchanges; also new 1921 4¼h.p. K2 combination, No. 2 B.S.A. side car, £114.—Eagles and Co., 275, High St., Acton, London. [1933

B.S.A. 1922 models for immediate delivery; best prices allowed on second-hand machines; distance no object.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1902

**19**19 B.S.A. Coachbuilt Combination, hood, screen, 2 new tyres, 1922 tax paid, pillion seat, condition perfect, smart appearance; accept £60.—Hurst, 26, Tulse Hill, Brixton. 'Phone, Brixton 1292. [1944

**19**21 6-7h.p. Twin B.S.A. Combination, spare wheel, D.A. lighting, Easting, speedometer, luggage grid, largest sidecar, mileage 2,500, as brand new, unscratched; cost £208, accept £135; exchange and cash.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [2045

B.S.A. 1921 6-7h.p. Twin Combination, magdyno lighting, interchangeable wheels, spare wheel, luggage grid, Cowey speedometer and horn, Easting screen, spares, in splendid order, cost £228; take £150.—Brig.-General Macpherson, 133, Sloane St., London, S.W.1. [1312

WAUCHOPE'S, 9, Shoe Lane, London.—B.S.A. 1922 models, K2, chain and belt transmission, £107; with No. 3 sidecar, £139; model H2, all chain drive, £110; fitted with B.S.A. sidecar, £142; B.S.A. 6h.p. twin motor cycle, £132; fitted with B.S.A. sidecar, £164; B.S.A. 8h.p. twin Combination, £185; easy terms and exchange; box-carrier Combinations from £139. 'Phone: Holborn 5777. [2171

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3609

B.S.A. Specialists.—All spares by return.—County Cycle and Motor Co., Broad St., Birmingham. [4677

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All B.S.A. parts in stock. No waiting. [1991

B.S.A. Spares can be had by return, post free, from Jones Garage, B.S.A. Agents and Spares Service Depot, Broadway, Muswell Hill, N.10. [0805

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all B.S.A. spare parts always in stock. Write for free spare part list, stating year of manufacture. [0750

### Calcott.

**19**15 2¾h.p. Calcott, perfect, new tyres, lamps; £18/10.—187, Elm Rd., New Malden. [2098

**2¾**h.p. Calcott, about 1916, long exhaust, splendid condition, guaranteed perfect, any trial; £20.—7, Cowdrey Rd., Wimbledon. [1538

### Calthorpe.

CALTHORPE-J.A.P. 2¾h.p., 1920, 2-speed, perfect; £45.—Clark, 7, Exhibition Road, S.W.7. [7833

CALTHORPE, 2-stroke, 2-speed, lamp, Klaxon; £22/10.—Norrington, Terrace Garage, Turnham Green Terrace, Chiswick, W. [2025

**2¾**h.p. Calthorpe, 2-stroke, 2-speed, clutch, new magneto, H.B.C., good condition; £35, offers (push bike part).—18, D4 Rd., Rosyth, Fife. [1246

**19**16 2¾h.p. Calthorpe-Jap, 2 speeds, clutch, in excellent order throughout; £25, bargain.—Maynard, 161, Bowes Rd., Bowes Park, N.11. [1541

**19**20 Calthorpe-Jap 2¾h.p., Enfield 2-speed gear, lamps, excellent condition throughout; cost £78; accept £40.—2, Providence Place, Pyrford, Surrey. [1825

**19**16 Calthorpe, 2-stroke, 2-speed, fully equipped, good running order and condition, bargain; £21/10 cash.—436, Whitehorse Rd., Thornton Heath, S.E. [1666

CALTHORPE 1921 Combination, actually in stock for immediate delivery; cash or deferred terms; place your orders with the Calthorpe specialists.—Burlington Motors, Ltd., Clapham Common, S.W.4. 'Phone: Brixton 2417. [0509

### Cedos.

FOR Sale, 2½h.p. 2-speed Sports Cedos, detachable cylinder head, very fast, fully equipped, numerous spares include: T.T. bars, footboards, undershield, set of gears for competition work, Terry's spring saddle, sprockets and piston; ride 100 miles to prospective purchaser; new March, 1921; take £45.—Jennings, St. Agatha's Vicarage, Sparkbrook, Birmingham. [1244

### Chater-Jap.

CHATER-J.A.P. Combination, 8h.p., 3-speed; £68; take lower power part.—57, Kenbury St., Camberwell, London. [1501

### Chater-Lea.

CHATER-LEA 8h.p., 3-speed, chain drive Combination; £45.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1915

## MOTOR CYCLES FOR SALE.

### Chater-Lea.

£9.—3½h.p. Chater Lea, Bosch, B.B.—Turner, 23, Roman Rd., N.7. [1669

CHATER-LEA 3h.p., Bosch, Druids, dropped frame, reliable; £12.—Saunders, 49, High St., Kingston-on-Thames. [1134

WAUCHOPE'S, 9, Shoe Lane, London.—1922 Chater Lea; agents all models; supplied on easy terms or exchange. [2172

### Cleveland.

CLEVELAND, new 3h.p., 2-speed, clutch, K.S.; £48. Drummond 3½in. treadle s.c. lathe, with g.c. attachment, and Indian "Scout" combination wanted.—70, West Hill, E. Putney. [9795

### Clyno.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. 1919 Clyno, 2-stroke; £35. [2173

CLYNO Combination, hood, screen, lamps, excellent condition, £70 or near offer.—34, Adela Ave., New Malden. [1727

39 GNS.—Clyno, 1920, 2½h.p., 2-speed, clutch, taxed, new tyre, perfect condition; offer.—180, Chase Side, Southgate, N.14. [1280

CLYNO Combination, 6h.p., 2-speed, hood, and tradesman's box; £45; good order.—5, Marine Parade, Southend, Essex. [1332

F.O.C.H. have a 1919 2½h.p. Clyno 2-speed, new condition, mileage under 300, fully equipped.—5, Heath St., Hampstead. (Near Tube.) [1577

CLYNO Lightweight, 2-speed, clutch, electric lighting, tax paid, new June, 1921; an undoubted bargain, £38.—Fleming Co., Redcar, Yorks. [1401

56 GNS.—6h.p. Clyno, 3-speed, countershaft, coach-built combination, 1916, splendid running order, any trial.—134, Earlsbrook Rd., Redhill. [1180

CLYNO Combination, 6h.p., 2-speed, kick start, splendid condition, any trial; £58; take lower power part.—57, Kenbury St., Camberwell, London. [1503

1917 Clyno Combination, 3-speed, K.S., electric lighting, windscreen, perfect; 52 gns.; evenings, week-ends.—17, Redfern Rd., Harlesden, N.W.10. [1790

1921 Clyno, 2-stroke, 2-speed, fully equipped, and in excellent condition; an unrepeatable bargain at £45 cash.—The Layton Garages, 30, Holywell St., Oxford. [7818

CLYNO Combination 1915 5-6h.p., 3-speed, foot-controlled clutch, internal expanding back brake, interchangeable quick detachable wheels, thoroughly overhauled and re-enamelled at Clyno Works, absolutely as new; what offers?—Box 8948, c/o *The Motor Cycle.* [1440

*Spare Parts:*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3610

### Connaught.

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Coonaught Motor Cycles. [2174

CONNAUGHT, 2-stroke, single speed, all accessories, good tyres; £22/10.—Owen, 59, Scholefield Rd., Upper Holloway. [2069

CONNAUGHT 1921 2½h.p., 2-speed; £40.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1923

CONNAUGHT 2½h.p. (1921), single-speed, fully equipped and licensed for 1922, splendid condition; £36; or by easy payments, £9/9 deposit and 12 monthly payments of £2/6/8.—Wm. Whiteley, Ltd., Queen's Rd., W.2. [1128

### Coulson.

COULSON-BLACKBURNE 1920-21 2¾h.p., taxed, spring frame, all accessories, perfect condition; 47 gns.—63, Devonshire Rd., Merton, S.W.19. [1571

COULSON-B. 2¾h.p., 2-speed, Bonniksen speedometer, 3in. tyres, spring frame, lamps and horn; bargain, £40.—Purser, 23, Queen St., Deal, Kent. [1147

1921 2¼h.p. spring frame Coulson, not ridden 2,000 miles, tax paid, lamps, horn, etc.; bargain, £36.—Whisstock and Lingley, Woodbridge, Suffolk. [1642

COULSON 1922 models.—Deliveries now commenced. Write for catalogues giving price and all latest improvements.—London Motors, 61, Holborn Viaduct, E.C.1. Telephone: City 4230. [2106

COULSON 1922 models.—2½h.p., £67/10; 2¾h.p., £78; 2¾h.p., o.h.v. (T.T. model), £95; 4¼h.p., £95. Cash or deferred terms. Old machines taken in part payment.—London Motors, 61, Holborn Viaduct, E.C.1. Telephone: City 4230. [2107

COULSON 1921 models.—Shop-soiled machines at greatly reduced prices. Three only left; £65, £75, £85 each. Cash, deferred terms, or old machine taken in part payment.—London Motors, 61, Holborn Viaduct, E.C. Telephone: City 4230. [2108

### Coventry Eagle.

COVENTRY EAGLE, 1920, 3½h.p., excellent condition, sound, complete, all spares, lamps, horn, tax paid; £70.—Thompson, c/o Griffin Hotel, Earlestown, Lancs. [1364

## SPECIAL OFFER TO CLEAR

**As we shall be shortly marketing a new Motor-cycle Cover of our own design, we are anxious to dispose of our present stock of various makes at the following special prices. *These covers are not old W.D. stock but special clearance lines which we have purchased at slump prices.***

| Size. | Make. | Our Price. | List Price. |
|---|---|---|---|
| 26×2 | **Englebert,** Passenger, rub. std. | 17/6 | 53/- |
| ,, | **Englebert,** Touring rub. stud. | 15/- | 46/3 |
| 26×2¼ | **Bates,** special hvy, wired-on | 30/- | 38/6 |
| ,, | **Bates,** special heavy, beaded | 28/8 | 40/- |
| ,, | **Beldam,** combination ..... | 26/- | 66/9 |
| ,, | **Clincher,** de Luxe, heavy.... | 24/6 | 35/6 |
| ,, | **Hutchinson,** T.T. rub. stud | 23/- | 36/6 |
| ,, | **Wood Milne,** or **Spencer Moulton,** ex. heavy ..... | 22/6 | 50/- |
| ,, | **Englebert,** Touring rub. stud. | 15/- | 49/- |
| ,, | **Wood Milne,** special heavy .. | 13/8 | 53/9 |
| 26×2⅜ | **Avon,** Tricar rubber stud.... | 26/- | 40/3 |
| ,, | **Hutchinson,** rubber stud .... | 25/- | 49/6 |
| ,, | **Clincher,** de Luxe, ex. heavy | 24/8 | 47/9 |
| ,, | **Avon,** Stonehenge ..... | 21/- | 33/3 |
| 26×2½ × 2¼ | **Bates,** special heavy ..... | 39/6 | 56/- |
| | **Heavy,** rubber studded..... | 27/8 | — |
| 26×2½ | **Goodrich,** safety tread ..... | 40/- | 52/6 |
| ,, | **Bates,** special heavy ..... | 28/8 | 56/- |
| ,, | **Clincher,** de Luxe, heavy.... | 25/- | 28/3 |
| 26×3 fits 650×65 rim. | **Englebert,** Passenger rub. stud | 32/8 | 64/9 |
| 28×3 | **Goodrich,** safety tread ..... | 48/- | 65/- |
| ,, | **Englebert,** Racing, ex. heavy | 36/8 | 70/6 |
| ,, | **Elite,** grooved retreads in sound casings | 17/6 | — |
| ,, | **Elite,** plain retreads | 12/8 | — |
| 29×3 oversize | **Dunlop,** extra heavy..... | 57/6 | — |
| 28×3 650×65 | **Goodrich,** safety tread ..... | 40/- | 67/6 |
| ,, | **Clincher,** de Luxe, ex. heavy | 30/- | 64/6 |
| ,, | **Soly,** rubber nonskid..... | 21/6 | 63/- |
| 700×80 | **Goodrich,** safety tread ..... | 48/- | 69/- |

**TUBES** — BEST QUALITY GUARANTEED.

| | | | | | |
|---|---|---|---|---|---|
| 24×2, | 4/8 | 26×2, | 4/9 | 26×2½, | 6/3 |
| 28×2, | 7/6 | 26×2½ ×2½, | 7/9 | 28×3, | 8/9 |
| 28×2½, | 7/9 | | | 700×60, | 10/- |

**BELTS** — IN STANDARD LENGTHS

| | ⅝ in. | ¾ in. | ⅞ in. | 1 in. | 1½ in. |
|---|---|---|---|---|---|
| Bates Avon .. etc., per foot .. | 1/- | 1/5 | 1/9 | 2/- | 2/6 |

**These Special Clearance Lines are sent on 7 days' Approval against remittance. CARRIAGE PAID.**

ORDER THE ELITE RUBBER CO LTD Tyre Specialists

*The Name* — *The Firm*

WAY

LONDON'S LEADING TYRE HOUSE

264-266, VAUXHALL BRIDGE Rd. VICTORIA, S.W.1

AND AT

44, SURBITON ROAD, KINGSTON-ON-THAMES

*Please address all letters to Vauxhall Bridge Road*

TELEPHONE—VICTORIA 6553 & 6554

OUR AGENT IS THE PILLAR-BOX.

## MOTOR CYCLES FOR SALE.

### Coventry Eagle.

1921 Coventry Eagle, 2¾h.p. J.A.P., 2-speed, Sturmey-Archer clutch, kick start, lamps, electric rear, speedometer, Klaxon, tax paid, as new; £50.—Cooper, 160, Commercial St., E.1. [1268

### Coventry Victor.

COVENTRY VICTOR.—The perfect flat twin engine. Before deciding on your new mount, get our list for 1922, showing Coventry Victor motor cycles fitted with this famous 5-7h.p. engine. Also our special offer of demonstration machine. The last word in motor cycle design and construction.—The Coventry Victor Motor Co., Ltd., Coventry. [0520

### De Luxe.

DE Luxe 2¾h.p., 2-speed, late model, perfect, tax paid; £29.—Lloyd, King's Arms Yard, High St., Wandsworth. [1465

### Diamond.

£25.—2¾h.p. Diamond, Villiers engine, top-hole condition.—King, Egrove Farm, Oxford. [1771

### Dot.

39 GNS.—8h.p. Dot-Jap coach Combination, all chain, windscreen, etc., beautiful condition, absolutely given away; one only.—Ramsden's, Maybell Av., Blackpool. [1336

### Douglas.

DOUGLAS Combination 1920; sell for £75.—63, Stewart Rd., Bournemouth. [1137

ALL Douglases.—A trial order only is requested.—Gibb, Gloucester. 'Phone: 852. [8121

1920 Douglas 4h.p. Combination, as new, done 800; bargain, £86.—Longney, Oswestry. [1256

F.O.C.H. have 1915 2¾h.p. Douglas, excellent.—5, Heath St., Hampstead. (Near Tube.) [1579

1921 2¾h.p. 2-speed Douglas, unridden, all on; £60.—77, Prince of Wales Rd., N.W.5. [1605

DOUGLAS 1916 2¾h.p., excellent condition; £45.—St. James, North Avenue, Southend-on-Sea. [1183

1917 Douglas 4h.p. Combination, beautiful condition, not rubbish, lamps, etc.; £65.—Below.

1919 Douglas 2¾h.p., 2 speeds, excellent condition, guaranteed; £38/10.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [1995

4h.p. Douglas, late model, kick starter, just delivered from factory; £67.—47, Marsham St., Westminster. [1369

£38.—1916 Douglas 2¾h.p., just overhauled, fine condition, all on.—198, Moulsham St., Chelmsford. [1798

1908 Douglas, perfect running order, new lamps; £17/10, offers.—J. Jarvis, Watermoor, Cirencester. [1887

1918 4h.p. Douglas Combination, new condition, fully equipped; £60.—Olive House, Perry Hill, Catford. [1298

DOUGLAS 4h.p. Combination, overhauled and renovated; £58.—Owen, 59, Scholefield Rd., Upper Holloway. [2070

1920 4h.p. Douglas Combination, lavishly equipped; £75.—Hillier, 9, Wallingford Avenue, North Kensington. [1687

1921 4h.p. Douglas Combination, equipped, every possible accessory; £90.—24, Balliol Rd., North Kensington. [1598

1922 Douglas 2¾h.p., only run a few miles, quite new; £10 under price, £65.—Box 8885, c/o *The Motor Cycle.* [1163

DOUGLAS.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7228

£12.—Douglas, 2¾h.p., Bosch, requires timing, otherwise sound; appointment.—Captain Collins, Sunbury Common. [1345

DOUGLAS Combination, 1920, 4h.p., fully equipped, new condition; £75.—Dawe, 216, Portobello Rd., North Kensington. [1356

1920 2¾h.p. 3-speed Douglas and accessories, in good condition; £65.—Bounds Garage, 223, High Rd., Kilburn. [1376

1914 2¾h.p. Douglas, splendid condition, all accessories; £29/10.—26, Tulse Hill, Brixton. 'Phone, Brixton 1292. [1941

£65.—1919 Douglas Aluminium Sidecar, equipped, splendid condition; must sell.—122, Lower Mortlake Rd., Richmond. [1241

THE New Six Douglas Combination, fully equipped; £165; delivery from stock.—Gibb, Douglas Depot, Gloucester. 'Phone 852. [9808

2¾h.p. Douglas, July, 1921, 2-speed, all-on model (new, used few times), tax paid; £64.—365, King St., Hammersmith. [1712

DOUGLAS, 2-speed, 2¾h.p. model, lamps, etc., excellent condition throughout; 26 gns.—Longman Bros., Bond St., Ealing. 'Phone: 689. [2014

1917-18 4h.p. Douglas Combination, lamps, horn, speedometer, screen, Tan-Sad; £65.—West Sussex Motor Co., Portland Rd., Worthing. 'Phone 272. [1301

1916 Douglas 2¾h.p., 2-speed, overhauled, re-enamelled, fully equipped, spares, bargain; £42/10.—Francis, St. Saviour's Rd. Garage, Bath. [1735

## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

1920 Harley Electric Lighting Model, sporting sidecar, condition perfect and guaranteed, sidecar changed if necessary; 110 gns.—Longman Bros., Bond St., Ealing. Tel., 689. [9910

HARLEY-DAVIDSON single-cylinder, 2-speed gear and hand-clutch, 3 lamps, low torpedo sidecar with luggage rack, tyres good, whole in running order; £35.—Leeding, High St., Sutton. [1602

1922 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices; catalogue with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5986

HARLEY-DAVIDSON Flat Twin, Sports Model, 1920, with 1922 sidecar, cape, hood, and windscreen, 3 new tyres, in excellent condition; price £120. —Ruffell's Garage, High Rd., Wealdstone, Middlesex. [1317

WE have about ten ex War Department Harley-Davidson 7-9h.p., 3-speed models, requiring overhaul, and not in running order, to clear at £58 each. Callers only.—Maudes', 100, Great Portland St., London. [2124

1921 Harley-Davidson 7-9h.p. Combination, electric model, disc wheels, 2-seater sidecar, hood, side curtains, 2 screens, Tan-Sad, spares, year's tax paid; £175; cost £279.—Packwood, Brent St., Hendon, N.W.4. [1498

HARLEY-DAVIDSON, 7-9h.p., late 1919 combination or solo, mechanically perfect, very fast, T.T. bars, lamps, horn, speedometer, Tan-Sad, licensed; any reasonable offer accepted.—22A, Belsize Sq., Hampstead, N.W. [1273

1920 7-9h.p. Harley Combination, electric model, absolutely complete, Easting screen, Tan-Sad, enamel and plating perfect, tax paid, very little used; best offer over £100.—Southorn, 44, Abbeville Rd., Clapham, S.W. [1535

HARLEY-DAVIDSON, brand new, 4h.p. flat twin motor cycle, complete with speedometer, guaranteed, exceptional opportunity to secure one of these fine machines; £105.—Colmore Depôt, 31, Colmore Row, Birmingham. [9029

BARKER'S Motors can supply all Harley-Davidson models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [1215

7-9h.p. Harley-Davidson, 3-speed, kick starter, in excellent condition, sidecar almost new, electric lights (side and tail), acetylene head lamps, Easting screen, tools, and spare tube; price £95.—Box 8811, c/o *The Motor Cycle.* [9895

1919-20 7-9h.p. Harley combination, fully equipped, electric light, etc., just completely overhauled, condition and appearance as new, insured £150 to July; any trial or examination, and will give 3 months' guarantee; £110.—Mells, Station Rd., Teynham. [1667

1921 7-9h.p Harley-Davidson Combination, electric lighting, spot lights, ammeter, speedometer, electric horn, Millford sidecar, Easting screen, splendid condition, carefully used; £120 quick sale; inspection, trial, Exeter; purchasing car.—Box 8856, c/o *The Motor Cycle.* [1121

*Spare Parts.*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3613

### Hazlewood.

1922 Hazlewood, all models, for early delivery. See the 6h.p. J.A.P. Twin Combination at £118; finest value for money to-day; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5988

H.B., 1922 Models, 2¾h.p. Blackburne engine, 2-speed Burman gear box, chain belt, C. and S., £72; with 3-speed gear box, £75; 4h.p., 3-speed, £82; 4½h.p., 3-speed model, clutch and kick start, £100; cash, deferred terms, or exchange.

H.B., 1922 Models for earliest deliveries.—Write London Motors, 61, Holborn Viaduct, E.C., sole distributing agents for the following counties:—Kent, Surrey, Sussex, Hants, Berks, Oxford, Bucks, Northants, Beds, Hunts, Cambridge, Norfolk, Suffolk, Essex, Herts, Middlesex (including London). [2110

### Henderson

IMMEDIATE Delivery.—1922 Henderson de Luxe, dynamo lighting, electric horn, etc.; £175.—Pioneer Motors, Ltd., 50, Grindlay St., Edinburgh. [1408

1920 Henderson Combination, dynamo lighting, speedometer, screen, luxurious outfit; £115, exchange lower power.—Broadway Garage, Tooting. [1653

BARKER'S Motors are agents for the luxurious 4-cyl. Hendersons; all new models at list prices supplied carry a free insurance policy against mechanical breakdown for 12 months. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [1214

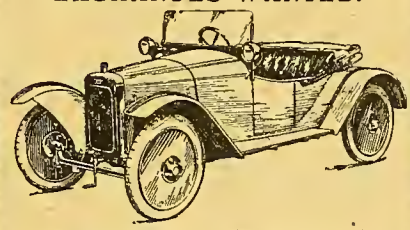
HENDERSON.—Real sporting combination, in perfect mechanical condition, disc wheels, T.T. bars, long exhaust pipe, Lucas accessories, swan torpedo sidecar; this machine is the property of Richardson, late foreman of Robertsons; £80.—5, Rosslyn Mews, under 42 Rosslyn Hill, Hampstead. [1590


# 1922 COVENTRY PREMIER

**REDUCED PRICE, £230.**

*8 h.p. W.C. 4-wheeler, dynamo lighting, spare wheel, hood, screen, speedometer, dickey seat and 12 months' insurance*

***EXCHANGES WANTED.***



***SECOND-HAND BARGAINS.***

***SOLOS.***

| | |
|---|---|
| A.B.C., 1921, 3 h.p., electric light | £87 10 |
| A.V., 1919, Monocar, 5-6 Jap. | £59 10 |
| A.V., 1920 Monocar, 8 h.p. Jap. | £75 0 |
| ARIEL, 1920, 3½ 3-speed | £72 10 |
| BRADBURY, 3½ single gear | £35 0 |
| BEARDMORE, 3½ 2-speed | £49 10 |
| DOUGLAS, 1920, 2¾ 3-speed | £65 0 |
| ZENITH, 3 h.p. Gradua gear | £32 10 |
| NEW IMPERIAL, 2¾ 2-speed | £35 0 |
| N.S.U., 3½, very good order | £16 10 |
| O.K., 1916, 2¼ 2-speed | £35 0 |
| P. & M., 1921, 3½, new condition | £82 10 |
| RUDGE MULTI, 1920, 3½ I.O.M. | £59 10 |
| RUDGE MULTI, 1916, 3½ | £49 10 |
| TRIUMPH, 3½, with clutch | £39 10 |
| WOOLER, 2¾, 1920, flat trim | £49 10 |
| PEUGEOT, 7-9, 2-speed F.E. | £37 10 |
| PREMIER, 3½, 2-speed F.E. | £35 0 |
| A.V. Monocar, 5-6 | £59 10 |
| A.V. Monocar, 8 h.p. | £75 0 |

***PASSENGER MACHINES.***

| | |
|---|---|
| MORGANS, 8 h.p. | £85, £100, £110 |
| A.J.S., 1919, 6 h.p. comb. | £125 0 |
| ARIEL, 3½ 1920, 3-speed comb. | £85 0 |
| BAT-JAP, 8 h.p. comb. | £39 10 |
| CHATER-LEA, 8 h.p. comb. | £59 10 |
| ENFIELD, 1915-16, 6 h.p. comb. | £85 0 |
| HARLEY, 1918 comb. | £105 0 |
| HARLEY, 1919, electric comb. | £115 0 |
| HARLEY, 1920 comb. | £135 0 |
| HENDERSON, 4-cyl. 1920 comb. | £145 0 |
| INDIAN, 1915, 5-6 3-speed comb. | £59 10 |
| P. & M. 1921, as new, new s-car | £95 0 |
| REX, 6 h.p., 2-speed comb. | £49 10 |
| ROVER, 5-6, 1920, unused 1920. New Rover side-car | £130 0 |
| RUDGE, 7 h.p. 1920 comb. | £97 10 |
| TRIUMPH, 3½ 3-speed comb. | £39 10 |
| SCOTT, 1920, 2-speed comb. | £95 0 |
| ZENITH, 4-5 c-shaft comb. | £65 0 |

***SPECIAL BARGAINS.***

| | |
|---|---|
| STANDARD, 11.6 bnd. new 2-sr. | £475 0 |
| FORD, 1920, 4-seater, dynamo lighting & starter, & extras | £125 0 |
| MARTINSYDE, 1921, combination. Brand New | £125 0 |

***NEW 1922 LIGHT CARS.***

**AIREDALE, CALTHORPE, COVENTRY PREMIER, LAGONDA, AND L.S.D.**

***NEW 1922 MOTOR CYCLES.***

**B.S.A., BRADBURY, DOUGLAS, ENFIELD, LEVIS, MARTINSYDE, NEW IMPERIAL, NORTON, REX, ROYAL RUBY, SCOTT, SUNBEAM and TRIUMPH.**

**Deferred payments or Exchanges.**

**The Halifax Motor Exchange, 25, Horton Street, Halifax.**

'Phone: 1400. 'Grams: "Perfection."


## MOTOR CYCLES FOR SALE.

### Henderson.

10h.p. Henderson, 1920, as new, 4 cylinders, combination, 2-seater, ride easy, sidecar, hood, screen, lamps, speedometer, 3 speeds, clutch, kick starter, tools, very little used, perfect, great bargain, cost £300; £175, nearest offer; guaranteed; appointments, no dealers.—Burchill, The Brackins, Rednal, Birmingham. (P) [1245

1920 (November) 10h.p. Henderson, Swan sporting sidecar combination, 3 speeds, complete with luggage carrier, electric lamps, dynamo, battery, switchbox, electric and bulb horns, mirror, aluminium number plates, excellent mechanical order and touring condition, enamel perfect; £125.—Cookesmith, Joan Lane, Bamford, nr. Sheffield. [9037

### Hobart.

1920 2-speed Hobart-Villiers, equipped, taxed, perfect; £32.—1, Othello St., Liverpool. [9156

### Humber.

HUMBER.—Don't disturb your capital; we will supply any model on our easiest of easy terms.—Holmes and Younie, Hunter's Bar, Sheffield. [2063

HUMBER 3½h.p., 2-speed, handle start, new cylinder, piston, connecting rod and bearings; good bargain, £25.—Box 8949, c/o *The Motor Cycle.* [1441

HUMBER Combination 1916-17 6h.p., flat twin, water-cooled, 3-speed, clutch, starter, all-chain, lamps, accessories, luggage grid, splendid condition; £70; exchanges.—63, Solon Rd., Brixton. [1833

HUMBER agents.—1922 models in stock; 4½h.p. fast sporting model, £100; 4½h.p. combination, £144; in stock; easy payment terms and exchanges arranged.—Herbert Robinson, Ltd., Green St., Cambridge. [1990

### Indian.

£50.—Electric Indian, mechanically sound, appearance as new.—18, Langham St., Liverpool. [1467

£55.—7-9h.p. 3-speed Indian Combination, electric lighting.—13, Vernon Rd., East Sheen, Surrey. [1511

1920 Indian Combination, dynamo, complete, good condition; £90, offers.—Longney, Oswestry. [1258

INDIAN 1916 5-6h.p. Combination, mechanically perfect, all on, tax paid; £65.—Motor Co., Hereford. [1073

3-Speed cycle, Indian, rigid chassis, 4-point, tyre, tube; sell, or exchange lightweight.—27, Vernon Rd., Luton. [1475

1920 7-9h.p. Indian Combination, electric lights, leg shields, and windscreen; £85.—Cubitt, Bacton, Norfolk. [1223

1915 7-9h.p. Indian road racer, clutch model, good tyres, mechanically sound; £23, nearest offer.—Appleton, 16, Ribble Rd., Blackpool. [1324

1922 Indians, immediate delivery; cash or deferred payments.—Brown (Indian Specialist), 3 and 7A, Parker Lane, Burnley. 'Phone, 1032. [8208

1915-16 Indian, 5-6h.p., clutch, k.s., 3-speed, good condition; £40; near offer would be considered. —Central Garage, Dalton Sq., Lancaster. [1720

INDIAN, powerplus 1919, 3-speeds, spring frame, etc., tyres, chains, plating, enamel, in splendid condition; £56.—Davis, 26, Muswell Hill, N.10. [1461

1920 7-9h.p. Indian Combination, November delivery, 2,000 miles, excellent condition, any trial; bargain, £100.—W. Newbury, Misterton, Somerset. [9038

INDIAN Combination, 1921, dynamo lighting, speedometer, Easting, absolutely indistinguishable from new; £90.—Dawe, 216, Portobello Rd., North Kensington. [1357

7-9h.p. 1915 Indian, spring frame, 2 speeds, K.S., electric head lamp and horn, disc wheels, very fast; £46.—Fowler, 169, Bathurst Gardens, Willesden, N.W. [1263

1914 Indian, 7h.p., overhauled, gears, clutch, spring frame, Indian sidecar, electric lighting, horn, speedometer, hood, screen, licensed; £50.—85, Deodar Rd., Putney. [1656

1921 Indian Scout, special engine, speedometer, etc., licensed for year, perfect throughout; 82 gns.; exchanges or deferred.—Edwards, 50, Harriogton Rd., South Kensington [1950

INDIAN Powerplus, 1920 Henderson Elite sidecar, electric, new tyres, chains, leg shields, handle muffs, discs, beautiful condition; £105.—Pollitt, "Sharrow," Lickey, Bromsgrove. [1782

INDIAN Chief 8h.p., T.T., 1922, mileage under 400, electrically equipped, legshields, etc., too fast for owner; tax paid; nearest £150 secures.—Peterscourt, Moor Green Lane, Moseley, Birmingham. [1109

FOR Indians, all models, new and secondhand, write, call, or phone us; 1921 new shop-soiled combinations, fully electrically equipped, at below manufacturers' cost; £140.—Jones Garage, Muswell Hill. [0787

1920 (late) 7-9h.p. Indian Powerplus Combination, dynamo lighting, speedometer, windscreen, Binks, undershield, etc., as new; cost £250; very smart outfit; £120.—58, Hassett Rd., Homerton, E.9. [1102

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue B21
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Indian.

INDIAN combination, 1920, big valve, powerplus, dynamo lighting, speedometer, ammeter, windscreen, etc., in exceptional mechanical condition; £95.—Colonial Motors, 104a, Finchley Rd., Hampstead. 7822. [1759

1915 Indian, 7-9h.p., 2-speed, clutch, kick start, electric lamps, horn, speedometer, etc., good condition; £40.—Gordon R. Croxford, The Motor Cycle House, 461, Upper Richmond Rd., S.W.14. 'Phone: Richmond 322. [1862

INDIAN 1919 7-9h.p. Powerplus, spring frame, 3 speeds, new engine, T.T. handle-bars, accessories, magnificent machine; £75; Triumph or lightweight part payment.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station), London. [1536

INDIAN Powerplus 1919, fitted with special roomy, coachbuilt, spring wheel sidecar, with dickey seat, screen, lamps, Klaxon, etc., combination painted Harley colour, and is in exceptionally fine condition; £90.—Owen, 94b, High Rd., East Finchley. [1610

INDIAN 1920 Powerplus combination, 7-9h.p., 3-speed, clutch, kick start, dynamo lighting, electric horn, speedometer, Indian Easting sliding windscreen, etc., exceptionally fast engine, practically as new; £93.—Walker, 769, Romford Rd., Manor Park, London, E. [1761

SUPERB Powerplus Indian-Swan Sporting Combination, dynamo, speedometer, ammeter, electric horn, English controls, right-hand kick starter, mud shields, loog exhaust, 1918-19, bargain, only needs seeing; 78 gns; exchanges.—Kent's, 417, Lord St., Southport. [1747

SPECIAL model Indian Scout, 1921, electric light, tyres like new, tax paid, just thoroughly overhauled by makers, do 70 m.p.h., ridden by Le Vac in many trials and competitions, winner of over 40 medals and trophies, exceptional opportunity to secure a really fast all-round machine; £90, or exchange combination.—30, Belsize Park Gdns., Hampstead. 'Phone: 5590. [1718

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3614

INDIAN.—New and second-hand spares in stock for all models.—Stamp please. Langford's, 37, Cricklewood Broadway, London, N.W.2. [1813

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Indian spare parts always in stock. Write for free spare part list, stating year of manufacture. [0752

INDIAN.—The Dennis Accessories Stores, 89, Brixton Rd., London ('Phone Brixton 3129), can supply all 7-9h.p. parts from stock, new, including all types of forks. They also specialise in Indian repairs. [1594

### Ivy.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, wholesale Ivy agents, have all models in stock, including lady's model, price £69; get list. [0710

1916 Ivy 2-stroke, 2-speed, good condition, tax paid, all accessories; £27.—26, Tulse Hill, Brixton. 'Phone, Brixton 1292. [1940

### Ixion.

IXION, single-speed, lamps, etc., perfect mount; £22/10.—Longney, Oswestry. [1253

### James.

1919 James, 2-stroke, 2-speed, equipped, exceptionally good order; £35.—Broadway Garage, Tooting. [1654

JAMES 1921, 2-stroke, speedometer, lamps, new condition; £45.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [2135

JAMES 4¼h.p. Combination, 1916, overhauled, re-enamelled, re-plated by makers, all on, tax paid; £80.—Motor Co., Hereford. [1072

1920 James Combination, 5-6h.p. Twin (new condition), windscreen, lamps, horn, tax paid, £95.—365, King St., Hammersmith. [1713

F.O.C.H. have a 1915 James 4¼h.p. Combination, Lucas dynamo set; also 1920 4¼h.p. solo.—5, Heath St., Hampstead. (Near Tube.) [1580

JAMES 5-6h.p. Combination, 1920, Lucas lamps, D.A. cylinder, speedometer, Easting, etc.; £97/10.—Whisson, Glenhurst, Linden Gardens, Leatherhead. [1452

JAMES 1920 3½h.p. Twin, original tyres, the whole in very fine order and complete with lamps, speedometer, Klaxon, tools, and spares.—Apply Leeding, High St., Sutton. [1604

55 GNS.—1919 James Combination, 4¼h.p., 3 speeds, clutch, and kick starter, fully equipped, any trial.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [2000

1919 5-6h.p. James Combination, mileage only 3,000, condition excellent throughout, as new, all accessories, 3 lamps and generators, horn, mirror, speedometer, sidecar, windscreen, etc., privately owned; £110.—Dorking Motor Co., Ltd., Dorking. 'Phone 56. [1372


# ALWAYS DEPENDABLE

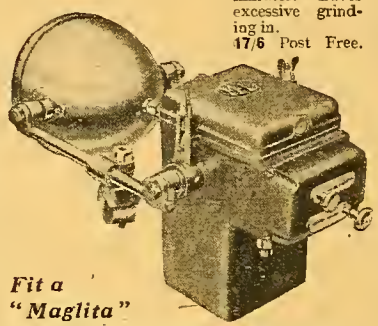
The Post Order Department of the Service Company Ltd. will never let you down. All the latest and best Accessories by return of post.

**TERRY OILCANS**

A set of two for Oil or Petrol and Oil on stout clip. 4/3 Post-Free.

**VALVE TRUER**

Pitted and Burnt Valves made like new in a few minutes. Saves excessive grinding in. 17/6 Post Free.



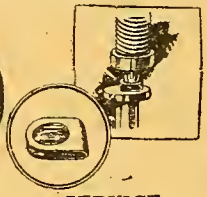
***Fit a "Maglita"***

set to your single cylinder machine (Two or Four stroke). Your old magneto taken in part payment. *Send for Descriptive Leaflet.*

Complete Set for Triumpb **£24 12 6**
(less magneto allowance).

**ALUMINIUM WHEEL DISCS.**

handsome, clean, 35/- per wheel.



**SERVICE TAPPET ADJUSTERS**

Suit most engines. Four assorted sizes. 8d. Post Free.

**SERVICE MIRROR**

Adjustable Clip Black N.P. mounts. 9/- Post Paid.

**BONNIKSEN SPEEDOMETERS**

Non-Trip Model **£4 15 0**
Trip Model **£5 5 0**
Post Free.

*The Service Company Ltd.*
(LONDON)

**289-293, High Holborn, London, W.C.1.**

*Telephone:* Holborn 6430. *Telegrams:* "Admittedly, London."


## MOTOR CYCLES FOR SALE.

### James.

*Spare Parts:*

JAMES Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [722

### J.A.P.

£14/10.—2¼h.p. J.A.P. Lightweight.—Speechley, 86 Churchfield Rd., Acton, W.3. [138

5-6h.p. Jap-Gloria Combination, splendid condition Sturmey hood, screen; £65.—Apply, 1, Ward' Terrace, Broad Lane, South Tottenham. [137

*Spare Parts:*

J.A.P. Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [722

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Complete parts for all J.A.P. models in stock. Illustrated lists free. [883

### J.E.S.

J.E.S. Lightweights.—These machines run on the smell of petrol.—Gibb, Gloucester. [812

### Kingsbury.

KINGSBURY, 2 speeds, clutch, new; 42 gns.—32 Queen's Terrace Mews, Kensington, S.W.8. [153

### Lea-Francis.

1921 5h.p. Lea-Francis Solo, perfect condition.—Evans, 125, Rugby Rd., Leamington. [189

LEA-FRANCIS 3½h.p., slightly shop-soiled; £90.—Ratcliffe Bros, 200, Gt. Portland St., W.1. [987

LEA-FRANCIS Combination 3½h.p. Twin J.A.P., countershaft gears, chain drive, excellent condition; 59 gns.—Box 8952, c/o *The Motor Cycle.* [184

LEA-FRANCIS Combination, 2-speed, K.S., 1920 indistinguishable from new, £15 worth of equipment, any trial; £70.—Dawe, 216, Portobello Rd. North Kensington. [135

### Levis.

PREMIER Motor Co. for 1922 Levis.

POPULAR 2¼h.p. single-gear Levis, £48; Model 2¼h.p., 2-speed, clutch, £58, or with kick starter, £60; easy payments 4% extra; carriage paid to any address. Buy your machine direct from the Levis specialists.—Premier Motor Co., Aston Rd., Birmingham. [896

1921 Levis 2-stroke, perfect; £30.—24, Balliol Rd. North Kensington. [159

£25.—Levis, engine perfect, equipped, licensed.—101 Railway Mews, Ladbroke Grove, W.11. [162

LEVIS, new, slightly shop soiled, 2-speed gear accept £40.—Central Garage, Southport. [189

1920 Levis, perfect condition, lamps, etc., any trial £36.—F. Luff, 9, Victoria Rd., Staines. [134

LEVIS, popular model, good condition, fully equipped; £20.—Kirk, Garage, Beckford, Glos. [182

1921 2¼h.p. Levis sports model, excellent order 37 gns.—Edwards, 101, Great Portland St., W. [167

2¼h.p. nearly new Levis, 1920, all accessories and extras; £36; tax paid.—365, King St., Hammersmith. [171

LEVIS.—All models, by one who knows them. Call write, or 'phone 852.—Gibb, 100 Northgate Gloucester. [812

2¼ Levis, all on, new Dunlop covers; £26; ex change cash and furniture.—W. E. M., 92 South St., Walworth, S.E. [145

LEVIS 2½h.p., 2-speed, all-chain drive; £40.—Newnham Motor Co., 223, Hammersmith Rd. W.6. 'Phone: Hammersmith 80. [191

LEVIS POPULAR 2¼h.p., late model, licensed lamp, speedometer, good condition; first £32.—Bonnycastle, 40, Warwick St., Oxford. [118

FOR 1922 Levis, the most reliable and neatest 2 stroke upon the road, send or call at Jones Garage, The Broadway, Muswell Hill, N.10. [078

LEVIS.—Don't disturb your capital; we will supply any model on our easiest of easy terms.—Holmes and Younie, Hunter's Bar, Sheffield. [206

LEVIS. All 1922 models. Send your orders along catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [794

WAUCHOPE'S, 9, Shoe Lane, London.—New 192 Levis 2-stroke, £48; 3-speed model, £58; kick start, £2 extra; easy terms and exchange; list on application. [217

DISTRICT Levis Agents for Clapham, Balham Streatham, Tooting, Mitcham, Wimbledon, and Wandsworth. Models in stock.—Knight Traction Co. Upper Tooting Rd., S.W. 'Phone: Streatham 2390 [077

A FEW slightly soiled 1921 Levis Models at greatly reduced prices, single gear from £42; 2-speed clutch, from £50. Write for special clearance bargain list.—Premier Motor Co., Aston Rd., Birmingham. [692

*Spare Parts:*

LEVIS Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [722

## MOTOR CYCLES FOR SALE.

### O.K.

£5 Guineas.—O.K. 2½h.p., 4-stroke, 1915, 2-speed, lamps, horn, tax paid.—Smith's, 86, Chalk Farm Rd., opposite Chalk Farm Tube Station. [1015

O.K. Juniors.—We have Mark IX., X., XI. new 1921 models in stock at greatly reduced prices. Eagles and Co., 275, High St., Acton, London. [1932

£12 down and £3 monthly buys immediate delivery of O.K.-Junior; simple and reliable; best value in trade for beginners.—Frank Whitworth, 139, New St., Birmingham. [2153

O.K.-VILLIERS, late 1921, equipped lamps, mirror, long polished exhaust, etc., enamel, plating perfect, splendid condition, cost £56; sell £35 or near offer.—Lee, 31, First Av., Plaistow, E. [1277

### Omega.

1920 Omega-Jap, 2¾h.p., 2-speed, clutch, and K.S., fully equipped; £45.—The Layton Garages, 30, Polywell St., Oxford. [2130

OMEGA.—Don't disturb your capital; we will supply any model on our easiest of easy terms.—Holmes and Younie, Hunter's Bar, Sheffield. [2064

1921 Omega-Jap 2¾h.p. engine (No. 207725), 2-speed, kick start, hand clutch, original tyres, fully equipped, enamelling, plating unscratched, good as new; £45.—128, London Rd., King's Lynn. [1525

OMEGA 1922 Models; prices from 53 gns.—Write for catalogue London Motors, 61, Holborn Viaduct, E.C. Your old machine taken in part payment, or cash, or on deferred terms. Sole distributing Agent for

NORFOLK, Northamptonshire, Huntingdonshire, Cambridgeshire, Hampshire, Rutlandshire, Bedfordshire, Berkshire, Buckinghamshire, Oxfordshire, Suffolk, Essex, Hertfordshire, Sussex, Surrey, Kent, with the exception of 20 mile' radius of London. [2105

### P. and M.

1918 3½h.p. P. and M., 2-speed, clutch, kick start; £37.—56, Park Lane, Kidderminster. [1495

P. and M., 1918, overhauled, perfect, all on, easy terms; £48.—38, Sheriff Rd., W. Hampstead, N.W.6. [1497

LATE P. and M. Combination, as new; £55.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [1680

£42/10.—P. and M. Combination, R.A.F. model, late type, fine puller.—8, High St., Wandsworth [1756

P. and M. 1918, good condition, lamps, horn, etc.; £40.—Cherriman, Dragons Green, Shipley, Sussex. [1629

P. and M. Combination, late type, good running order, needs chain guard; £45.—94b, High Rd., East Finchley. [1611

P. and M. C.B. Combination, 1918, tax, insurance paid, any trial; nearest £55.—25, Ashbury Rd., Battersea. [1784

£40.—1919 P. and M., perfect condition, equipped, as new first, licensed 1922.—122, Lower Mortlake Rd., Richmond. [1242

1916 P. and M., re-enamelled 1920 colours, absolutely as new throughout, fully insured; £55. 14, Church Rd., Hackney, N.1. [9338

P. and M. Combination, 1912, 2-speed, kick start, all on, condition excellent; £29.—Owen, 59, Cholefield Rd., Upper Holloway. [2068

P. and M. Combination, 1917, in thoroughly good condition, new sidecar body, new tyres, all round, lamps, horn, etc., £56.—60, Caithness Rd., Mitcham. [1371

TO Insure Easter Delivery order your 1922 P. and M. now from the specialist agent, Lewis M. Inman, Durham Rd., Seaforth, Liverpool. 'Phone: Waterloo 296. [5097

1921 P. and M., mileage about 1,000, enamel and plating excellent, tyres unmarked, 140 miles to gallon, perfect, seen Reading; £65.—Lavin, Old House, Tanning, Berks. [1208

P. and M. 1920 Combination, latest type, kick start, very good order; £87; exchanges.—Newnham Motor Co., 223, Hammersmith Rd, W.6. 'Phone: Hammersmith 80. [1917

P. and M. Solos, ex R.A.F., £35; Combinations, £50; the machines are late models rebuilt and guaranteed perfect.—Voltaire Motor Works, 4, Voltaire Rd., Clapham Rd. Station, London, S.W.4. [9067

1921 P. and M. combination, Lucas lamps and horn, aluminium number plates, demonstration model, absolutely as new; 109 gns; deferred payments or exchanges.—Edwards, 101, Great Portland St., W. [1883

NEW 3½h.p. P. and M., 2-speed, solo; £20 down, 12 payments of £5/10. Combination, best sidecar, £25 down, 12 payments of £7. All carriage paid. Makers' guarantee. Catalogues post free.—Rideezi Sales, Ltd., 103, Oxford St., W. [1973

1920 P. and M. combination, fully equipped, speedometer, all tools, spares, mudshields, luggage grid, etc., tax paid for 1922, perfect condition; £85.—Gordon R. Croxford, The Motor Cycle House, 461, Upper Richmond Rd., S.W.14. 'Phone: Richmond 322. [1861


# THREE STRAIGHT LINES.

TO MEET THE CUT PRICE SPIRIT OF THE TIMES.

**1 The Latest & Best**

TO SUIT ANY MACHINE.

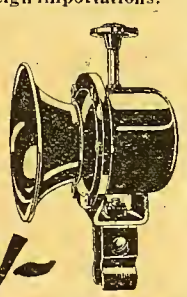
22 Gauge Adjustable Vice-Grip attachment, suitable for any machine.
TRADE MARK
Wired Valance, giving increased strength.
LEG SHIELDS
(20/-)
POST FREE
Slot adjustment to foot-board, allowing variety of positions.
All Black finish Gold Lined. 20/- Aluminium. 21/-
MONEY BACK BARGAIN

BRITISH MADE.

**2 A BRITISH PROPOSITION**

Produced to sell and compete with slump prices, disposal stock and foreign Importations.

Money Back Bargain



SPEAKS FOR ITSELF

POST FREE **25/-**

**A POCKET PROPOSITION**

**3**

UNIQUE DESIGN & INDISPENSABLE

POST FREE, MONEY BACK BARGAIN

WRITE MURDEN PAGE LTD 21 MORTIMER STREET, W.1.


## MOTOR CYCLES FOR SALE.

### P. and M.

*Spare Parts:*

P. and M. Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7219

P. and M. Spares stockist, every part stocked; cheap.—Inman, Durham Rd., Seaforth, Liverpool. [1289

P. and M. Spares.—Rims, 5/-; sprockets, 48 teeth, 3/6; brake drums, 3/6; see repairers' column.—Bert Bradford and Co., 25, Coronation Rd., Bristol. [2103

### Peugeot.

£11.—Peugeot 3½h.p., A.I.V., running order.—61, Grand Parade, Harringay. [1970

### Precision.

3¾h.p. Precision, 2-speed and sidecar, all on, running; £25. or near.—Hollaod, 74, Beaufort St., Southchurch, Southend-on-Sea. [1729

PRECISION, 3¾h.p., Bosch, Amac, variable gear, K.S., recently overhauled, good tyres, guaranteed in perfect running order; £24/10.—Cooper, Abbey Farm, Lubbesthorpe, Leicester. [1295

### Premier.

PREMIER Combination, coachbuilt sidecar, 3½h.p., new hub gears, 1914; £40.—Mitchell, Mumby Vicarage, Alford, Lincs. [1133

1913 2½h.p. Premier, in sound condition; £14/10.—26, Tulse Hill, Brixton. 'Phone, Brixton 1292. [1943

*Spare Parts:*

PREMIER Parts.—I have the original stock.—Alf. Holland, Hearsall Lane Corner, Coventry. 'Phone: 1945. [1938

### Quadrant.

QUADRANT £100 4¼h.p. Combination, delivery from stock.—Frank Whitworth, Ltd., Distributers 139, New St., Birmingham. [0767

QUADRANT 1922 models in stock. Prompt delivery, solo or combination.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0071

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Quadrant Motor Cycles, all chain solo, £85; sidecar combination, £105; easy payments and exchange; list on application. 'Phone: Holborn 5777. [2182

### Radco.

2¼h.p. Radco, as new; £25.—H. C., 14a, East St., Faversham, Kent. [1224

£19/10.—Radco 2¼h.p., 2-stroke, 1919 model, accessories, 1922 tax paid, handy little mount.—8, High St., Wandsworth. [1754

NEW 1922 Radco Lightweights, all fitted with the new 2½h.p. 247 c.c. engine, now in stock; single gear, £35/14; 2-speed, £42; 2-speed clutch, kick starter, £47/5; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [8964

### Raleigh

PREMIER Motor Co. for 1922 Raleighs.

IMMEDIATE Delivery of 5-6h.p., spring frame, detachable wheels, £130; standard sidecar, £35; De Luxe sidecar, £42; early delivery of the new Raleigh lightweight, £68; easy payments 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0626

3h.p. Raleigh motor cycle, magneto, B.B.; bargain. £7/19/6.—Littleover Works, Derby. [1275

RALEIGH.—Immediate delivery of 1922 models Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7230

RALEIGH.—Immediate delivery all models; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1954

RALEIGH 5-6h.p. Combination, late 1921, equal new, not soiled, electric lighting, licensed, equipped, any trial; £135.—Hughenden, High St., Weybridge. [1239

RALEIGH.—2¾h.p., 3h.p., and 5-6h.p. solos and combinations from £68. Cash or deferred payments; old machine taken in part payment.—London Motors, 61, Holborn Viaduct, E.C. 'Phone: City 4230. [2109

RALEIGH 5-6h.p. flat twin models in stock; £130. The most comfortable motor cycle in the world, deliveries anywhere, any time; best prices allowed on second-hand machines.—Newnham Motor Co., Raleigh Specialists, 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1904

RALEIGH 2¾h.p and 3h.p. models for immediate delivery; the finest lightweight on the market; demonstration models in stock; catalogue on request; exchanges; distance no object.—Newnham Motor Co., Raleigh Specialists, 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1903

### Reading-Standard.

READING Standard combination, 1920, dynamo lighting, sidecar repainted, engine overhauled; £80.—Colonial Motors, 104a, Finchley Rd., Hampstead. 7822. [1760

## MOTOR CYCLES FOR SALE.

### Reading-Standard.

READING STANDARD 10h.p., new March, 1920, Grindlay De Luxe sidecar, hood, windscreen, kick start, 3 speeds, dynamo lighting, speedometer, Tan-Sad pillion, many spares, in excellent condition, just overhauled, an exceptionally reliable family outfit; £110; tax paid.—40, Downscourt Rd., Purley, Surrey. [1171

### Rex.

REX 5-6h.p. Twin, Bosch magneto, perfect order; £12.—17, Heaton Rd., Mitcham. [1805

REX, 2¾h.p., magneto, B.B.; £10/10, bargain, first deposit.—179, York Rd., Islington. [1519

£16.—3½h.p. Rex, sloping tank, Grado gear, good running order.—King, Egrove Farm, Oxford. [1775

1913 6h.p. Rex coachbuilt Combination, 2-speed, engine overhauled; £42.—6, Talbot Rd., Alexandra Park. [1261

3½h.p. Rex, watertight magneto, B. and B., new T.T. bars, nearly new tyres and belt, running order; £12.—Middleton, 38, Millais St., Albany Rd., Camberwell, S.E.5.

REX Twin Combination, 7-9h.p., mechanically perfect (coachbuilt sidecar); cash, £50; owner ordered abroad.—Capt. Holdsworth, Evendon's Lane, Wokingham, Berks. [1326

1913 Rex-Jap Combination, Roe clutch, electric horn, etc., good tyres and in splendid running order; price £35, or near offer.—Dunwell's Garage, Wigan. Tel.: 328. [0764

1922 Rex-Acme; book your orders now for all models, early delivery can be given of the 8h.p. Blackburne engine, all chain drive, 3-speed, clutch, kick starter, Model G, detachable and interchangeable wheels; complete with luxurious sidecar at £150; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [2082

### Rover.

1920 5-6h.p. Rover Combination, all-chain drive; £75.—24, Balliol Rd., North Kensington. [1593

ROVER 1920 Combination, perfect condition, new tyres, equipped; £85.—Clark, 7, Exhibition Rd., S.W.7. [9002

1921 6h.p. Rover, in perfect condition, 3-speed, clutch, K.S., T.T. bars, good tyres; £95.—C. Snook, East Morden, Dorset. [1248

ROVER 1921 3½h.p., single-speed, T.T. model, new machine, slightly shop-soiled; £75.—P. J. Evans, John Bright St., Birmingham. [1413

6h.p. Rover, 2-seater, 3 speeds, reverse, hood, windscreen, excellent running order, tax paid; £20.—Sales, Oakleigh Villas, New Rd., Ascot. [1655

3½h.p. T.T. Rover 1919, Philipson, excellent condition, in perfect tune and very fast, accessories; £45.—Kinsey and Co., 350, Lower Addiscombe Rd., Croydon. [1483

ROVER, W.D. 1918, and sidecar, 5-6h.p. J.A.P., lamps, horn, mudshields, etc., in good running order, tax and insurance pair; £70.—Caldecott, 2, West Hill, Henley-on-Thames. [2055

ROVER 1921 3½h.p., chain drive, with Rover coachbuilt sidecar, new condition; £105; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1921

*Spare Parts.*

ROVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7225

### Royal Ruby.

ROYAL RUBY 1919 8h.p. Combination, splendid running order; £92.—Marshall, 126A, High St., Slough. [1299

1920 8h.p. Royal Ruby Combination, expensively equipped, as new; 86 gns.; taxed.—67, Fernlea Rd., Balham. [2040

2¾h.p. Royal Ruby, 2-stroke, nearly new condition, all on, Tan-Sad, Klaxon, tax paid; cost £75; accept £40.—4, Gaywood Rd., Walthamstow. [1197

1915 Royal Ruby, 2-stroke, 2-speed, clutch, lamps, etc., good tyres, tax paid for year, ride away, bargain; £27.—Norman, Riverside, Wilton, Nr. Salisbury. [1827

ROYAL Ruby 1920 8h.p. Combination, screen, electric light, very nice order; £115; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1914

ROYAL RUBY Combination, windscreen, speedometer, lamps, Klaxon, Tan-Sad; the whole lot new to clear for £125.—3, Eldon Villas, Brownlow Rd., Church End, Finchley. [1698

1919 Royal Ruby, 250 c.c. J.A.P., engine recently tuned by makers, 2-speed, C.S., electric lighting, fast and reliable, tax paid; £48, or near offer.—S. Blackwell, 106, London Rd., Reading. [1632

### Rudge.

RUDGE I.O.M. 1921, as new, lamps, complete; £61.—Longney, Oswestry. [1254

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. I.O.M. Rudge, 1920; £50. [2165

RUDGE I.O.M., fully equipped; £65.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9879

# SOME NEW 1922 MODELS

**In addition to the following, we have many other machines of various makes available for quick delivery. Complete list sent upon request.**

### MOTORCYCLES

| | | |
|---|---|---|
| **B.S.A.,** 4½ h.p., Model H2, all-chain | £110 | 0 |
| **B.S.A.,** 4½ h.p., Model K2, chain-cum-belt | £107 | 0 |
| **B.S.A.,** 6 h.p., Model E, Combination | £164 | 0 |
| **LEVIS,** 2¾ h.p., Model S, 2-speed, clutch | £58 | 0 |
| **MATCHLESS,** 8 h.p., Model H, Combination | £170 | 0 |
| **MATCHLESS,** 8 h.p., Model H, 2-seater | £175 | 10 |
| **MATCHLESS,** 8 h.p., Model J, Sports Combination | £160 | 0 |
| **A.J.S.,** 7 h.p., Combination | £175 | 0 |
| **N.U.T.,** 5 h.p., Model M | £110 | 0 |
| **NEW IMPERIAL,** 2¾ h.p., 3 speeds, all-chain | £73 | 0 |
| **QUADRANT,** 4½ h.p. Combination, all-chain | £105 | 0 |
| **ROYAL ENFIELD,** 2¼ h.p., Model 200 | £55 | 0 |
| **ROYAL ENFIELD,** 2¾ h.p., Model 201, with kick-starter | £57 | 0 |
| **ROYAL ENFIELD,** 8 h.p. Combination | £140 | 0 |
| **ROYAL ENFIELD,** 8 h.p. Combination, with Magdyno lighting | £158 | 0 |
| **RUDGE-MULTI,** 3½ h.p., I.O.M. Model | £77 | 0 |
| **TRIUMPH,** 4 h.p., Model H, chain-cum-belt | £105 | 0 |
| **TRIUMPH,** 4 h.p., Model S.D., all-chain | £115 | 0 |
| **TRIUMPH,** 2¼ h.p., Junior Model | £65 | 0 |
| **ZENITH-BRADSHAW,** 3½ h.p., Model A, Gradua gear | £113 | 0 |
| **B.S.A.,** 4½ h.p., Model H2, Combination | £142 | 0 |
| **METRO-TYLER,** 2½ h.p., 2-stroke, 2 speeds | £55 | 0 |
| **ALLON,** 2¾ h.p., 2-stroke, 2 speeds, clutch and kick-starter | £60 | 0 |
| **ARIEL,** 3½ h.p., Sports Model | £87 | 10 |

### LIGHT CARS

| | | |
|---|---|---|
| **ROVER,** 8 h.p., 2-cylinder, 3 speeds, dynamo lighting, hood, screen, spare wheel and tyre, horn, etc. | £220 | 0 |
| **BAYLISS-THOMAS,** 10 h.p., 4-cylinder, 3 speeds, dynamo lighting, hood, screen, spare wheel and tyre, horn, etc. | £315 | 0 |

# EXCHANGES ARRANGED

**The used machines detailed below have been carefully overhauled, and our guarantee is issued with each.**

### SECONDHAND

| | | |
|---|---|---|
| **A.J.S.,** 1921, 7 h.p. Combination, 3 speeds, clutch and kick-starter, Lucas Magdyno lighting. As new | £160 | 0 |
| **DOUGLAS,** 1918, 4 h.p. Combination, 3 speeds, clutch, and kick-starter | £85 | 0 |
| **NORTON,** 1915, 3½ h.p., Model B.S., Phillipson pulley | £55 | 0 |
| **N.U.T.,** 1920, 3½ h.p. Twin, 3 speeds, clutch and kick-starter, Lucas Magdyno lighting, Swan Sporting sidecar | £115 | 0 |
| **P. & M.,** 1920, 3½ h.p., 2 speeds, clutch and kick-starter, lamps, horn, speedometer, and new Millford Skiff sidecar | £90 | 0 |
| **DOUGLAS,** 1920, 2¾ h.p., 3 speeds, lamps, and horn | £57 | 0 |
| **RUDGE-MULTI,** 1921, 3½ h.p., lamps, mechanical horn | £63 | 0 |
| **MATCHLESS,** 1921, 8 h.p. Combination, 3 speeds, clutch and kick-starter, spare wheel, dynamo lighting, electric horn, speedometer | £150 | 0 |
| **VELOCETTE,** 1919, 2½ h.p., 2-stroke, 2 speeds, all-chain drive, lamps, and horn | £35 | 0 |
| **B.S.A.,** 1919, 4 h.p. Combination, 3 speeds, clutch and kick-starter, lamps, horn, speedometer, hood, screen, luggage grid | £90 | 0 |

# DEFERRED PAYMENTS

**With very few exceptions we can supply any machine for settlement by instalments at an extra charge of 4% only. A deposit of one-fourth is sufficient to secure delivery, and the payments can extend over a period of 12 months.**

# THE EASTERN GARAGE CO.

(Official Repairers to R.A.C., A.C.U., A.A., & M.U.)

**418 ROMFORD ROAD, FOREST GATE, E.7.**

Telephone ..... 490 East Ham.
Telegrams ..... "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### Rudge.

£22/10.—Rudge, 3½h.p., fine machine, any tri Speechley, 86, Churchfield Rd., Acton, W.3. [1

LATE 1921 Rudge-Multi, small mileage, new app ance; 60 gns; equipped.—Norton, Wall He Dudley. [2

RUDGE-MULTI I.O.M., 1921, lamps, Kla speedometer, as new; £65 offers.—84, Clar Rd., Hackney. [2

1920 Rudge, 3½h.p., in good condition, lar horn, etc.; £60, or near offer.—37, Brook High Wycombe. [1

1921 Rudge Multi, 3½h.p. I.O.M. (nearly n lamps, horn, tax paid; £67/10.—365, F St., Hammersmith. [1

1922 I.O.M. Rudge-Multis in stock at the la reduced prices, £77.—Jones Garage, Broadv Muswell Hill, N.10. [0

1914 3½h.p. Rudge-Multi, in nice condition, paid, lamps, horn; bargain, £30.—62a, St., Woodbridge, Suffolk. [1

1912 3½h.p. Clutch Rudge, tax paid, good r ning order; nearest £18/10.—Sealey, Princes Avenue, Watford. [1

3½h.p. Rudge, fixed gear, re-enamelled, first c order, tyres good; £29.—Shepherd, Enf Highway, Waltham X 31. [0

RUDGE-MULTI, brand new, unused, I.O.M. mo 69 gns.—Longman Bros., Bond St., Ealing. 'Ph 689. Exchange considered. [2

T.T. Rudge-Multi, 1919-20, special finish, I.O. tax paid December, 1922; 55 gns.—21, Mos Gardens, Kensal Rise, N.W.10. [2

3½h.p. Rudge Multi Combination, splendid c dition, any trial; £45. Seen by appointme —G. P. C., 7, Florence Terrace, Ealing, W.5. [1

I.O.M. Rudge-Multi 3½h.p. 1919, excellent c dition, recently overhauled, accessories; £45.—K sey and Co., 350, Lower Addiscombe Rd., Croydon [14

COMBINATION 5-6h.p. 1921 Rudge-Multi, Millf sidecar, fully equipped, tax, insurance, perfe £80 or near.—Woollard, 74, Minford Gardens, W.14 [15

RUDGE 1922 models for immediate delivery; changes anywhere.—Newnham Motor Co., 2 Hammersmith Rd., W.6. 'Phone: Hammersmith [19

RUDGE-MULTI 1922 3½h.p., T.T., Isle of M model. New price, £77.—Elce, Ltd., 15- Bishopsgate Avenue, Camomile St., E.C.3. 'Phon Avenue 5548. [0C

5-6h.p. Rudge-Multi Coachbuilt Combination, spl did condition, lamp sets, Klaxon, spares, engi just overhauled, guaranteed perfect throughout; £ —128, London Rd., King's Lynn. [15

WAUCHOPE'S, 9, Shoe Lane, London.—New 19 3½h.p. Rudge, sloping tank, I.O.M., £77; a model supplied; write for list; easy terms arrang second-hand machines taken in exchange. [21

RUDGE I.O.M. 1920 Combination, 3½h.p., w Montgomery 1921 sidecar, in perfect conditi lamps, Klaxon, spare tube, belt, knee grips, kit tools, in excellent order throughout; offered for qu sale, owner buying a car; £60.—Fryer, Leominster. [12

*Spare Parts.*

HERBERT ROBINSON, Ltd., Green St., Ca bridge.—All Rudge parts in stock. Compl illustrated lists post free. [88

### Scott.

SCOTTS, either model, West of England Agent Gibb, 100, Northgate, Gloucester. 'Phone: 8 [81

1922 Scott Models in stock, complete; £110; livered free.—Millard's, Scott Agents, Chest field. [42

F.O.C.H. have a 1920 Scott, brand new conditio also 1914 and 1920 combinations.—5, Heath S Hampstead. (Near Tube.) [15

BRAND New 1922 Model Scott; owing to financi difficulties, must sell at once; £95 secures.—B 8926, c/o *The Motor Cycle.* [12

SCOTT 1920 and 2-seater Sidecar, hood, scree speedometer; £85, bargain.—25, Upper Ea Smithfield, near Tower Bridge. [11

1920 Scott Combination, lamps, horn, Eastir luggage grid, perfect condition £95.—48, As ford Rd., Withington, Manchester. [13

SCOTT, 3¾h.p., running order, Bosch, Binl Renolds, lamps, etc.; £27; evenings.—8, Han gate Av., Sedgley Park, Manchester. [16

RECONDITIONED Scott Combination, 1921 ge and engine parts, lamps, generators, hor Stewart, tax paid, insured; offers.—W., 29, Wrotha Rd., Gravesend. [11

SOUTH London Scott Service Depôt.—'Phone Cro don 1129 for demonstration runs; immediate livery; prices from £105.—John R. Kinsey and C Ltd., 350-352, Lower Addiscombe Rd., Croydon. [83

## MOTOR CYCLES FOR SALE.

### Triumph.

•50 Triumph lightweight, new October 1921, not
y done 100 miles, Lucas horn, absolutely as new,
sy payments 4% extra.—Premier Motor Co., Aston
l., Birmingham. [1984

.h.p. 1914 Triumph Combination, Mills-Fulford
coachbuilt sidecar, hood, windscreen, stored
ring war, in excellent condition; highest above £60
ures.—Dodd, Stanton St. John, nr. Oxford. [1360

1h.p. Triumph, T.T. bars, new tyres and belt,
2 long exhaust, lamps, speedometer, Tan-Sad,
st overhauled and repainted, a fine reliable sporting
unt; £45.—Write R. Clarke, Victoria St., Burton-
-Trent. [1606

VAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Triumphs, 4h.p., all chain models, 3-speed, £115; .p., chain and belt, £105; 2¼h.p. 2-stroke model, 55; 4h.p. combination, £145; easy terms and exange. 'Phone: Holborn 5777. [2188

921 4h.p. Triumph, Model H., 3-speed, clutch, kick starter, full equipment, tax paid December, 1922, guaranteed perfect, late property of naval ficer; £88 or nearest.—Seen, Sam E. Clapham (Motors), , Stockwell St., Greenwich, S.E.10. [2083

RIUMPH, Model H, eng. 63,910, mileage 3,000, appearance new, perfect condition and tune, tax id to December, lamps, horn, Tan-Sad, foot clutch, exikas, tools; a machine you'll be proud to own; 7, or near.—16, Howard Rd., Penge, S.E.20. [1139

h.p. Triumph Model H (new from makers Christ- mas, 1919), engine 66585, semi-T.T. bars, Bonnik- n, Lucas lamps and horn, including large amount tools, accessories, and spares, extremely well-kept achine, in splendid condition, full tax paid and surance till December; £85; viewed after 7 p.m.— almann, Thursford, Cedar Rd., Sutton, Surrey. [1637

*Spare Parts:*

RIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

HERBERT ROBINSON, Ltd., Green St., Cambridge.—The Triumph Experts. Complete illustated lists post free. [8841

OMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richond Rd., Putney. 'Phone: Putney 2754. [1159

RIUMPH Spares in stock; illustrated list free; orders despatched by return.—W. Brandish and ns, Triumph Garage, 625, Foleshill Rd., Coventry. [1044

RIUMPH 1919, C.S. centres, perfect, £2/2/6; front forks, £3/12/6; B.B. stays, £2/5; top, /6. Tanks, equal new, £1/17/6. Quantity engine rts. Clearance.—Below.

DOUGLAS 4h.p. 1919 Engine gear, frame, new 1921 forks, wheels, tank, H bar, chassis, all rfect; £30 or separate. Quantity engine and gear rts. Clearance. State wants. letters only. All aranteed perfect.—Powell, Linslade Villas, Dorset d., Eltham, S.E.9. [2032

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor o., Aston Rd., Birmingham. [0798

RIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; ar overhaul, by specialist.—Jones Garage, Triumph gents, Broadway, Muswell Hill, N.10. [0809

RIUMPH stockists. Many cheap lines. Write for bargain list.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton. 'Phone: rixton 1292 (½ minute from Brixton Skating Rink.) [1946

PHILIPSON Pulley with handle-bar control, off Rover (as new), 90/-; another, fits 3½h.p. iumph, new back flange, 70/-; Triumph clutch heel, fitted new belt drum, new axle and cones, th stays and controls, 80/-; Triumph clutch wheel, ays, controls, brake parts, and pedalling gear, etc., /-.—Dalby, Triumph Specialist, Baker St., Sparkll, Birmingham. (D) [1373

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place new till prices drop? Half the price, satisfaction aranteed. Hundreds of testimonials. Triumph pairs and renovations a speciality, under personal pervision of our proprietor, late with Triumph and remier cycle companies: Cylinder regrinding on test machinery.—Forfield Motors, Forfield Place, eamington Spa. [7361

### Trump.

VAUCHOPE'S, 9, Shoe Lane, London.—Trumpdap, 2¾h.p. engine, £60; easy terms and change. [2187

### Velocette.

VELOCETTE 1921, dynamo lighting, etc., perfect; £45.—11, Brooksville Avenue, N.W.6. [1863

922 Velocette.—Immediate delivery of any model from Premier Motor Co., Aston Rd., Birmingm. [8965

VAUCHOPE'S, 9, Shoe Lane, London.—All 1922 Velocette models supplied on easy terms and change. [2188

921 Velocette 2¼h.p., 2-stroke, 2-speed, not done 200 miles; fully equipped and perfect in every spect; £50 cash.—The Layton Garages, 30, Holywell ., Oxford. [2132


# The Juno Cycle and Motor Co.,

*Proprietors:*
METROPOLITAN MACHINISTS Co., Ltd.
248, BISHOPSGATE, LONDON, E.C.2.

TELEPHONE: BISHOPSGATE 2195.
TELEGRAMS: QUILLS AVE LONDON.

ESTABLISHED OVER FORTY YEARS.

## The Pick of the Bunch!

**A.J.S., ARIEL, CHATER LEA, DOUGLAS, ENFIELD, INDIAN, LEVIS, MATCHLESS, RALEIGH, RUDGE, SUN.**

**Any of the above Motor Cycles or Combinations can be supplied on our well-known GRADUAL PAYMENT SYSTEM.**

**Particulars on Application.**

## FURTHER SIDECAR REDUCTIONS!

**WATSONIAN. Sidecars for Lightweights, very light and sporty. - - - £15 CASH**

**MILLS FULFORD. Corvette. A sidecar for the connoisseur! - - £24 CASH**

**All Sidecars can be supplied on monthly payments.**

**Sidecar Bodies, Sandum or Venus, from £5 15 0.**

**Underslung or step chassis from £7.**

## Accessories at Reduced Prices.

| | £ s. d. |
|---|---|
| Easting Screens | 3 18 0 |
| Cameo ,, | 2 15 0 |
| Bluemels, 1921 | 3 10 0 |
| Orto Hoods - | 3 5 0 |
| Spring Shackles, set of four - | 6 6 |
| R&H Lamp Sets | 1 12 0 |
| Fleece-lined Leather Gauntlets | 14 9 |
| W. S. R. Jets, all sizes | 8/6 & 10 6 |
| Watford Speedometers, slightly soiled, guaranteed - | 4 15 0 |
| Renolds Chain ⅜ × ½ per ft. - | 6 1 |
| all spares in stock. | |
| Tan-Sads - | 1 10 0 |
| Austin Seats - | 15 0 |
| B&B Lightweight Carburetters, window soiled - | 2 10 0 |

**FREE.** Call or write for 80 pp. Illustrated List with all latest price reductions.


## MOTOR CYCLES FOR SALE.

### Velocette.

ORDER Your Velocette from G. H. Tucker, Redcliffe Hill, Bristol, carriage paid to any address in England; your mount taken in part payment for one of these wonderful machines.—'Phone: 4042 Bristol. [5204

ASTOUNDING value.—Not shop-soiled old stock but brand new 1921 Velocette models D.2, delivered from makers' works in January, latest improvements, both brakes internal expanding, 2-speed, chain drive; £55 carries makers' full guarantee; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [1985

### Verus.

1921 Verus-Blackburne, 2¾h.p., complete, lamps, horn; £51.—Cross, Agent, Rotherham. [2123

1921 4h.p. Verus-Blackburne, 3 speeds, clutch, K.S., absolutely as new; 75 gns.—Edwards, 101, Great Portland St., W. [1882

1920 Verus 2¾h.p., 2 speeds, clutch, kick start, excellent condition, guaranteed; £38/10.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [1997

1920 2¾h.p. Verus-Blackburne, 2-speed, clutch, lamps, horn, disc wheels, etc., first-class order, tax paid; £55.—Shepherd, Enfield Highway. 'Phone, Waltham Cross 31. [0789

1921 Verus 4h.p. Blackburne 3-speed, clutch, k.s., mechanical oil pump, ace discs, etc., excellent condition; 63 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1956

1920 Verus 2¼h.p., single-speed, good as new, electric light outfit, good accessories, suit overalls (5ft. 6in.), insurance, tax paid; lot cost over £75; £45; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [1020

### Villiers.

VILLIERS 2-stroke, smart, discs, equipped; £28; part exchange Douglas or 3½h.p.—10, Plover St., Hackney Wick. [1639

### White and Poppe.

£10/10.—3½h.p. W. and P., Bosch magneto.—Speechley, 86, Churchfield Rd., Acton, W.3. [1387

### Wolf.

WOLF, believed 1916, 2¾h.p., 2-stroke, 2-speed, licensed, good running order; £19, carriage paid.—Liddell, 163, Rutherglen Rd., Glasgow. [1444

### Wooler.

£28.—Wooler 2¾h.p., 2-stroke, variable gear, lamps, splendid condition.—63, Solon Rd., Brixton. [1632

1921 Wooler, 2¾h.p., equipped, negligible mileage, absolutely as new, tax paid; £49.—Broadway Garage, Tooting. [1652

1921 Wooler Motor Cycle, shop-soiled, complete with lamps and horn; £65.—Allen and Binns, Ltd., Glossop Rd., Sheffield. [1293

### Yale.

7-9h.p. Yale Twin Combination, smartest and fastest machine on the road, perfect condition, expert examination and trial allowed; £95; new Morgan wanted.—S. C. Hudson, "St. Helier," Village Rd., Bush Hill Park, N. [1146

### Zenith.

ALLAN GRUZELIER, Specialist in Zenith Motor Cycles.

SEND me your requirements, either new or second-hand; immediate delivery can be given.

REPAIRS, overhauls, tuning, and spare parts.

ALLAN GRUZELIER, Ulster Chambers, 168, Regent St., Regent 205. Service depot and showrooms: Knight and Wheatley's Garage, Coulsdon. Purley 2377. [2117

ZENITH 5h.p., new, shop-soiled, clutch model; £85.—Smith, 18, Hardman St., Liverpool. [1131

50 GNS.—1920 5h.p. Sports Zenith, well equipped.—28, Sheen Gate Gardens, S.W.14. [1196

39 gns.—5h.p. Sports Zenith, late model, equipped, exchange.—49, Wick St., Hackney. [1735

1922 Zenith 3½h.p. Bradshaw, Gradua gear, shop soiled only; £98.—Tippen, Marden, Kent. [1570

ZENITH Model D Sports, fully equipped; £100.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [9874

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Zenith-Bradshaw, 3½h.p., £113; easy terms and exchange. [2189

5h.p. Zenith sports, brand new, with maker's guarantee; 73 gns., listed £110.—Edwards, 101, Great Portland St., W. [1875

ZENITH-BRADSHAW 1922 models in stock; £113; liberal exchanges.—Eagles and Co., 275, High St., Acton, London. [1934

ZENITH late 1919 3½h.p. Sporting Single, splendid condition, lamps and horn, any inspection; £55.—Tippen, Marden, Kent. [9064

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue A37
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH-Bradshaw, 1922, absolutely as new, not run 500 miles, very great bargain, 92 gns.—Julian, 84, Broad St., Reading. [1980

ZENITH 6h.p. Coachbuilt Combination, Gradua gear and clutch, good lamps, new tyres; £38/10.—27, Sidmouth St., Devizes. [1683

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, for immediate delivery from stock of Zenith-Bradshaw; price £119. [0711

F.O.C.H. for Zeniths.—Latest models in stock; also 1920 8h.p. countershaft combination.—5, Heath St., Hampstead. (Near Tube.) [1575

ZENITH-BRADSHAW.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7240

1921 8h.p. Sports Zenith, lamps, horn, speedometer, licensed 1922, insurance; £85.—West Sussex Motor Co., Portland Rd., Worthing. 'Phone 272. [1300

BARGAINS, 8-10h.p. o.h.v. Special Racing Zenith 1915, guaranteed, numerous extras, really hot stuff, absolutely perfect condition, like new, photo, seen, tried; 80 gns.—Below.

UNDER List Price, any model supplied, new, from Zeniths.—Write, Barton, Coln, Fairford. [9111

LONGMAN Bros., Bond St., Ealing. Tel., 689.—Sole district Zenith agents, specialists in repairs and tuning. All models for immediate delivery. Cash, exchange, or deferred payments. [9909

5h.p. Zenith, Gradua countershaft, coachbuilt combination, 1914, stored war, latest colours, electric light, excellent condition, any trial; £52.—41, Sedgemere Avenue, East Finchley. [9339

ZENITH-BRADSHAW 1922 models for immediate delivery; best prices allowed on second-hand machines.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1909

1921 Zenith Sports 5h.p., brand new and unused, maker's full guarantee, listed £110; our price 73 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1957

ZENITH Late 1921 8h.p. Combination, unscratched, 3 Lucas lamps and generators, Easting windscreen, spare belt, 1922 tax paid, mileage about 800, smart outfit.—Beecher, 5, Parade, Canterbury. [1150

1922 Zenith-Bradshaw in stock for immediate delivery; £118; cash, exchange, or extended payments.—Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0734

ZENITH 6h.p. Sports, originally 1913, all worn parts replaced, and whole recently overhauled by makers, new belt, good tyres, lamp, Binks, Bosch, licence paid; £45.—Cardew, 66, Melbury Gardens, Wimbledon. [1478

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred or exchanges.—194, Balham High Rd., S.W.12. [1210

8h.p. 1920 Zenith countershaft coachbuilt Combination, speedometer, electric lights and horn, insurance and tax paid, splendid condition, disc wheels, any trial; £105; owner buying car.—Hudson, 14, Conway Rd., Plumstead. [1341

1920 6h.p. Zenith-Gradua, mileage 2,500, Bonnikesen, Lucas lamps, spare belt and tube, all accessories, excellent condition; £80, or take 1919 Triumph in part payment.—Clarendon House, London Rd., Newbury. [1269

1921 Zenith 5h.p Sports model, fully equipped with lamps, horn, speedometer; this machine is a truly excellent specimen of this make, and is guaranteed perfect; offered at the very special price of £75 for cash.—The Layton Garages, 30, Holywell St., Oxford. [7817

MR. DEQUIN'S famous 7-9h.p. Zenith-M.A.G. for sale, 1921, in perfect condition, inside and out, complete with all accessories, full description with pleasure, cost nearly £200; accept £100 cash, or exchange 1921-22 close ratio.—Norton, Windermere, London Rd., Twickenham. [9748

ZENITH 8h.p. Countershaft late 1920 model Combination, latest Swan sports sidecar, Avro windscreen, disc wheels, long polished copper exhaust pipe, recently overhauled and guaranteed in perfect condition, new tyres and belt; bargain, £100, view and trial by appointment.—Giles, 11, Fitzroy Square, W.1 [8111

£130.—For sale, immediately after Inter-'Varsity hill climb, March 4, famous o.h.v. Zenith-Jap, built June, 1921, thoroughly overhauled, perfect condition, complete touring and racing equipmeot, aluminium pistons, Rollo valves, Middleton sprigwheel sidecar, many valuable spares.—Riddoch, Exeter College, Oxford. [1707

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7222

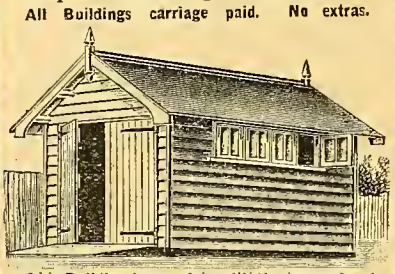
### Ladies' Motor Cycles.

LADY'S Douglas Frame, tank, dress shields, as new; £5.—134, Durham Rd., Wimbledon. [1692

# STOP

**at this and compare prices and quality. Invitation to inspect before purchasing.**

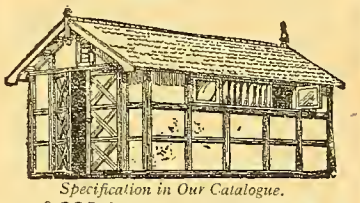
**All Buildings carriage paid. No extras.**



**This Building is complete with 1in. tongued and grooved floor, ¾in. match-boards or weatherboards, 3in. framing, strong boarded roof, best pluvex felt. Building treated with weatherproof composition. Prices, complete and carriage paid to any station in England and Wales.**

| | | | | | |
|---|---|---|---|---|---|
| 8×6 | £8 0 0 | | 16×10 | £27 0 0 | |
| 10×8 | 13 0 0 | | 18×10 | 33 0 0 | |
| 12×8 | 17 10 0 | | 20×10 | 37 10 0 | |
| 14×10 | 23 0 0 | | 20×12 | 40 0 0 | |

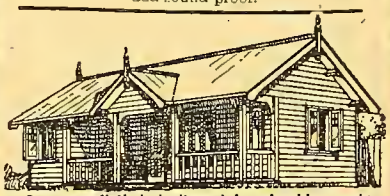
**OLYMPIA MODEL ASBESTOS BUILDING**



*Specification in Our Catalogue.*

| | | | | | |
|---|---|---|---|---|---|
| 12×8 | £23 10 0 | | 18×10 | £42 10 0 | |
| 14×10 | 32 15 0 | | 20×12 | 46 15 0 | |
| 16×10 | 37 15 0 | | | | |

Delivered with iron roof complete. Fire-proof and sound proof.



**Our unsolicited testimonials should create confidence.**

5, York Place, Mirfield, Yorks.
*Feb.* 10, 1922.

The South-Western Appliance Co., London.

Dear Sirs,—The Motor Hut I ordered from you came to hand a few days ago. I have now erected same and am pleased to inform you that it is entirely to my satisfaction. In conclusion I must say it is excellent value for money.

Yours truly, A. WALKER.

94, Eaton Road, Brynhyfryd, Swansea.
Mr. Brodrick, *Feb.* 11, 1922.

Dear Sir,—I am pleased to tell you the shed was delivered in good order and has given great satisfaction.

Yours faithfully,
JAMES BRAY.

3, Eddington Road, Fairhaven, Lytham.
*Feb.* 13, 1922.

Dear Sir,—In receipt of your letter of the 31st, I have received "Delholme" hut alright. I am pleased with same and recommend it to our friends.

Yours truly
H. NEVILLE.

**Illustrated Catalogue Free.**

**SOUTH-WESTERN APPLIANCE Co.**
**High Street, Fulham, London, S.W.**
Telephone: PUTNEY 2771.

## MOTOR CYCLES FOR SALE.

### Ladies' Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ideal daintiest of all ladies' machines; £62, complete. Send for list. [07

1921 Spring-frame P.V. Lady's Model, 2-speed clutch, k.s., lamps, hand phone, licence, new; £50.—H., Shanklin Lodge, Sydenham Park Rd., Sydenham. [17

VELOCETTE 1922, Model E.L.2, open frame, clutch, kick starter, is the ideal lady's mount; all black waterproof finish, clean to ride in all weathers; £68; easy payments 4% extra; illustrated catalogue on request.—Premier Motor Co., Aston Rd., Birmingham. [89

### Miscellaneous.

WANDSWORTH Motor Exchange.—Great Bargain Finest Selection Motor Cycles London. Easy changes. Easy terms.

WANDSWORTH.—When you buy your motor cycle from us you are dealing with an old-established firm backed by 24 years' experience; therefore you get satisfaction.

WANDSWORTH.—Easy terms. The only firm to give immediate delivery first deposit.

WANDSWORTH.—Ariel, 3½h.p., White-Poffe engine, magneto, new tyres; 22 gns.; easy terms.

WANDSWORTH.—Radco lightweight, 2½h.p., lamps, hooter, nice little machine; 22 gns.; easy terms.

WANDSWORTH.—Singer lightweight, 2½h.p., 2 speeds, powerful machine; 39 gns.; easy terms.

WANDSWORTH.—Scott, reconstructed, twin, water cooled, looks like new; sacrifice 39 gns.; easy terms.

WANDSWORTH.—Rudge, 3½h.p., 2 speeds, kick, newly enamelled, beauty; 38 gns.; easy terms.

WANDSWORTH.—Matchless-Jap, 8h.p., twin, 3 speeds, powerful machine; 39 gns.; easy terms.

WANDSWORTH.—Triumph, sporting type, late pattern frame, 3½h.p., clutch; 36 gns.; easy terms.

WANDSWORTH.—Triumph, 3½h.p., 3 speed clutch, beautiful machine; only 45 gns.; easy terms.

WANDSWORTH.—Bradbury coachbuilt combination, 4h.p., 2 speeds, lamps, screen; 42 gns easy terms.

WANDSWORTH.—Singer coachbuilt combination 4h.p., 3 speeds, countershaft, lamps; 55 gns easy terms.

WANDSWORTH.—T.M.C. coachbuilt combination 10h.p., 3 speeds, countershaft, lamps; offers; easy terms.

WANDSWORTH.—Bat-Jap coachbuilt combination 8h.p., twin, 3 speeds; 55 gns.; easy terms.

WANDSWORTH.—F.N., magnificent machine, 6h.p., 2 speeds, clutch, overhauled, newly enamelled, plated; 59 gns.; easy terms.

WANDSWORTH.—1918 Gloria Triumph combination, 4h.p., 3 speeds, lamps; 69 gns.; easy terms.

WANDSWORTH.—1918 beautiful Harley-Davidson combination, 7-9h.p., 3 speeds; 79 gns.; easy terms.

WANDSWORTH.—1920 Bradbury, lovely combination, 4h.p., 3 speeds, lamps; 79 gns.; easy terms.

WANDSWORTH.—1920 Scott, almost new combination, twin, water-cooled, lamps, 85 gns easy terms.

WANDSWORTH.—1920 Quadrant combination 4½h.p., 3 speeds, screen, lamps; 69 gns.; easy terms.

WANDSWORTH.—B.S.A. coachbuilt combination 4h.p., 2 speeds, lamps; only 43 gns.; easy terms.

WANDSWORTH.—Rex coachbuilt combination 5h.p., twin, Grado gear; sacrifice 29 gns.; easy terms.

WANDSWORTH.—Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth (town station). 'Phone: Latchmere 4686. [15

BUNTING'S Buy, Sell, or Exchange any make motor cycle. State your requirements. We undertake to do your business and give you satisfaction Distance immaterial.—Bunting's Motor Exchange Wealdstone. [69

TO clear.—Connaught 2-stroke (1919), £29/19 Enfield twin, 2¾h.p., 2-speed, £29/10; Re twin 5-6h.p., discs, etc., £47/10; Bat-Jap, 4h.p. 3 speeds, Sports model, £42/10; Indian Combination 7-9h.p., £51/10; exchanges entertained.—79a, Cla ham Rd., S.W.9. 'Phone: Brixton 3037. [16

F.O.C.H. for second-hand cycles, combinations, an runabouts at bargain prices. Exchanges a ranged. Any new cycle combination or car su plied, cash or deferred payments. Fair offer.—C House, 5, Heath St., Hampstead. (Near Tube 'Phone: Hampstead 3752. Hours 9-7, includi Saturdays. [15

## BODIES.

ENNOO Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

ENNOO Co. specialise in repairs, repainting, and upholstering.—Rennoo Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

ALIFAX.—New Perfection coach sidecars, £5.—Motor Exchange, Horton St., Halifax. [2088

ASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5131

ENUS Step Bodies, 2 dozen to clear; from 50/- each; great bargains.—Venus Sidecar Co., 694, Green Sisters Rd., Tottenham. 'Phone, 2102. [7697

VERAL really nice finished Bodies, real bargains, to make room for new stock. Call and inspect.—Edwardes, 277, Camberwell Rd., S.E. [1517

ODIES to fit any chassis; a few clearance lines in stock; call and inspect, or state requirements. Williams, Manufacturer, 9, Lower Chatham St., Oxford Rd., Manchester. [1635

THING of beauty and a joy for ever; Cobb Speedman Sports sidecar bodies; from £2/12/6, carriage paid; coachbuilt, fit any chassis.—Cobb, 18, Midland Rd., Carlton, Nottingham. [9434

OYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearing lines from £5 each; extra good value.—The Bowbrook Motor Co., Leicester. [0336

IDECAR Body Designs for the trade only. Working coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when planning new ideas.—20, Tudor St., London, E.C.4. [0004

22 Bodies, beautifully finished and upholstered, satisfaction guaranteed, complete with coverall lon; from £6/10 to £14; extended payments taken; le inquiries invited. A few 1921 models, shop-ed, complete; £6/10; send for catalogue at once. ge number of second-hand always in stock; we int, repair, and upholster bodies; low prices, iage extra.—Robini Manufacturing Co., 1 and 3, se Hill, Brixton, S.W. 'Phone: Brixton 1585. [1962

## SIDECAR ATTACHMENTS.

OR

NDHAM. the smartest sidecar specialists.

NDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

NDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

NDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold 5; send further supply." Agents, get in touch with us.

NDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

IDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

IDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, Imperials, Sunbeam, Blackburnes, etc.

DIANS with kick-starter on left present no difficulty with Middleton's special model.

IDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks neatly corrected.

ECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

IDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on roads than rigids. They give to the bumps, not into them.

IDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1684. [0522

ASTONES for Sidecars, no better or cheaper house. All latest models in stock.

ASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

ASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including Jem, all at low prices.

ASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £20/10, Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £30/10, Model de Luxe £34/10, tandem model £30.

ASTONES.—Whitley 1922 sports model in stock, £25.

ASTONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/-.—, Pentonville Rd., King's Cross, London, N.1. one: 2481 North. 'Grams: Bastones, London. [5132

NFIELD Chassis Wheel, tyre, springs; £4.—81, Dundee Rd., South Norwood. [1670

IDECAR, Gloria, sprung wheel; £5.—56, Acacia Grove, New Malden, Surrey. [1177


REGISTERED H.A.H. TRADE MARK

**H.A.H. Complete Electric Lighting Sets.**

REGISTERED H.A.H. TRADE MARK

**MANUFACTURERS OF ACCESSORIES. PATENTS. SPECIALITIES.**

GENUINE HELLESEN DRY BATTERIES.

'VICTOR' 6 volt Battery. Price 16/8

'FLASH' 4½ volt Battery Price 14/7

Fig. 350. Supplied less Bulb & Wire. Price 8/6 each

Fig. 778. **Badge Clip** as illustrated. Price 1/6 each.

Fig. 358. Supplied less Bulb & Wire. Price 7/6 each.

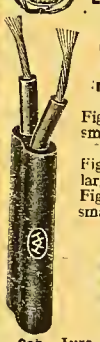


Fig. 357. **Inspection Lamp,** less Bulb. Price 6/- each.

**H.A.H. Insulating Tape.**

Fig. 455, ½ in. small roll, 7½d.

Fig. 456, ¾ in. larger roll, 1/-

Fig. 457, ½ in. small roll, 6d.

**Cab Tyre Sheathed Cable.**

Fig. 226 Twin, 1/6 yd.
Fig. 228 Single, 1/- yd.

**Workshop Flex.**

Fig. 240 Twin, 6d. yd.
Fig. 241 Single, 4d. yd.

**H.A.H. Route Card Holder.**

Fig. 150. Price 9/6 each.

Fig. 395. Price 6/- each

Fig. 161. Price 9/6 each

Fig. 160. Price 11/6 each.

*Postage extra on the above.*

**A. H. HUNT, LTD.,**
H.A.H. WORKS,
**Tunstall Road, CROYDON, Eng.**
Telephone— Croydon 2225.
Telegrams— "Keyage, Croydon.


## SIDECAR ATTACHMENTS.

SIDECARS and Chassis.—Send for bargain list.—Cadby, Ltd., Farm St., Birmingham. [9723

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [8036

RUDGE Sidecar, coachbuilt; £6/10.—77, Acre Lane, Brixton, S.W.2. [1851

WATSONIAN R34 (1921 model), Easting, lamp, apron; £18.—78, Fordel Rd., Catford. [1458

1919 Millford-Indian Sidecar, apron, good condition; £6.—Ross, 6, Glencoe Rd., Evesham. [1151

SIDECAR, Coachbuilt, underslung, all connections, new tyre; £7/10.—17, Heaton Rd., Mitcham. [1803

2¾h.p. Douglas Sidecar, coachbuilt, suit light-weight; £5/10.—105, Belmont Rd., Maidenhead. [1189

1921 Sidecar, bulbous back, underslung chassis, splendid condition; £11.—94, Amelia St., Walworth. [1389

SIDECAR, roomy, with chassis and wheel; offers; after 7 o'clock.—C., 6, St. Barnabas St., Pimlico, S.W.1. [1407

SIDECAR, coachbuilt, off Triumph, £6/10; Clyno Tradesman, £7/10.—534, Fulham Rd., Walham Green. [1711

SIDECAR, light, new condition, 26in. wheel.—Norrington, Terrace Garage, Turnham Green Terrace, Chiswick. [2024

BOOTHS Bargains.—Limited number of new coach bodies, full size, with locker; £5/12/6; usual price, £9/10.

BOOTHS Bargains.—New £9/10 coach bodies for £5/12/6. Don't miss them. Illustration free.

BOOTHS Bargains.—Quantity of new underslung chassis, 4-point attachment; £9/19/6; illustration free.

BOOTHS Bargains.—Several shop-soiled sidecars offered very cheap; send for list.

BOOTHS Bargains.—Hercules coach sidecar, £8/10/6; ditto Canoelet, £8/10/6; ditto Farlow, £8/10/6.—Booths Motories, Portland Place, Halifax. 'Phone: 1062. [1964

SWAN Sidecar, windscreen, aprons, lamp, 4-point attachment, beautiful vehicle; £11/11.—Smith, 20, Heath Drive, Hampstead. [1313

HALIFAX.—New Swan sporting and Millford De Luxe for Harley and American X.—Motor Exchange, 25, Horton St., Halifax. [2090

SIDECAR, underslung, handsome, new coach, 26×2¼ Dunlop, complete, £9; body separate, £4.—637, Seven Sisters Rd., Tottenham. [1785

CHASSIS and Sidecars.—We have 100 in stock from £2/10; write us for your wants; stamp, please.—DeCort and Flynn, 39, Essex Rd., N.1. [1705

HEAVY underslung chassis, complete with tyre, excellent condition, 4-point attachment; £8/10.—Kitson, Electricity Works, Twickenham. [1636

CANOELET Sidecar, cost £35, sell £18; Douglas sidecar, £10/10, another £6/15; heavy body, £2/10.—57, Kenbury St., Camberwell, London. [1505

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

CANOELET Minor Sidecar, excellent condition, fitted with Cameo screen and lamp; bargain, £9/10, or close offer.—Benest, 165, Walm Lane, N.W.2. [1546

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

## SIDECAR ATTACHMENTS.

HENDERSON Sports, new November, done 50 miles, perfect, all fittings, 26×2½ Dunlops, electric lamp; £20.—Thompson, c/o Griffin Hotel, Earlstown, Lancs. [1363

YOUR Sidecar renovated equal to new from £2. Damaged sidecars our speciality; send your car for repairs.—Write, Crescent Sidecar Co., 8, Blast Lane, Sheffield. [8317

LIGHTWEIGHT sidecar, new, £12/10; lightweight, bulbous bodies, £7/7, full size, suit 3½h.p.; others from £5/5; bargains.—Stock, 107, Coningham Rd., Shepherd's Bush. [1735

SIDECAR, coachbuilt, bulbous back, good condition, fits Harley, £14/10; Easting screen, with apron, celluloid torn, otherwise sound, 25/-.—94b, High Rd., East Finchley. [1612

SWAN torpedo sidecar, complete, red, off Indian Aero, windscreen, good condition; £15, exchange.—W. J. C., Motor Exchange, 5, Addison Ave., Holland Park, W.11. Park 2071. [1865

COLLINS and Son for Sidecars.—A few new bulbous back models, complete with renovated underslung chassis, tyre and tube, and coverall apron, all fittings; £12/10.—Below.

FAMILY Model Light 2-seater, built to accommodate one adult and child up to 12, with renovated underslung chassis, tyre, tube, and apron; £15.—Below.

WE have various models in stock to suit any machine.—Send for catalogue.

WE specialise in frame and chassis repairs of all kinds; all work guaranteed.—Collins and Son, rear of 84, High St., Putney, S.W. [1621

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

RIDEEZI Sidecars for all makes of motor cycles from £5/10 down and 12 payments of £1, carriage paid.—Write for full particulars, post free, to Rideezi Sales, Ltd., 103, Oxford St., W. [1974

1921 Millford Tandem Sidecar, with luggage grid and storm apron, in splendid condition, and very little used; cost over £60 when new; £25, or nearest offer.—Armstrong, Pelton Fell, Co. Durham. [1200

1,000 Douglas Underslung Chassis, suitable for any make of machine to order, absolutely complete and renovated, as new; £5 each.—Old Man Hep, 19, Wilcox Rd., South Lambeth, London, S.W.8. 'Phone, 1958 Brixton. [8822

SIDECARS.—Mead and Deakin Sporting Hammock-slung Sidecar, in new condition, £13/10; second-hand sporting body, painted Triumph grey, £1; new bodies from £4/10.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton. 'Phone, Brixton 1292. (½ minute from Brixton Skating Rink). [1945

20h.p. Douglas underslung chassis, complete, everything as new, with shop-soiled body, £14; Mills Fulford P. and M. chassis, new tyre and tube, mudguard, etc., with new bulbous back body, £12/10; new triangular chassis, complete with bulbous back or sports body, for 4h.p. machines, £20/10; lightweights, £16; extended payments taken; trade inquiries invited; carriage extra.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. 'Phone: Brixton 1585. [1961

SIDECARS! Sidecars.—Right here, every make at every price, new and secondhand, from £7/10. Swan sporting (cigar) model, £23 for Sunbeam, Rudge, Norton, Triumph, B.S.A., etc., etc.; for Indians, etc., £28; Milford Junior, £22. Don't forget our famous London-Edinburgh coachbuilt underslung touring models at £16 or £17/10, with spacious bulbous back, luggage grid, sprung, £1 extra; child's folding seat, 35/-; 1922 Montgomery sporting model, £23/10; Langford spring wheel touring De Luxe, picnic models, £30 while our stock lasts; our special lightweight underslung coachbuilt sidecars, for Douglas, etc., £14, complete, very sporty and comfortable; also heavy touring models for spring frame Indian and Harley, etc., large bulbous back bodies, 28×3 extra heavy Dunlops, £28/10 and £30; 2-seaters at £38.

HERE you are!—Special wide sidecar mudguards, with brackets for fitting to body, rattleproof and everlasting, any colour, 15/- each; sidecar wheel stands, 9/6, with clamps, 1⅛in. or 1¼in bore; Sandbums screens, 55/-; Easting, 78/-; Cameo, £2/15; fourth point attachment arms, 15/-.—Jones Garage, Muswell Hill, London, N.10. 'Phone: Hornsey 2917. [1868

## RUNABOUTS AND CYCLE CARS.

£25.—Girling 1913, box 3-wheeler, perfect, drive anywhere; view.—Frank Harris, Bulphan, Essex. [1310


# OFFICERS' ARMY TRENCH COATS

SENT ON APPROVAL. **57/6** MONEY RETURNED IF DISSATISFIED.

OILSKIN INTER-LINED & FLEECE LINED.

**THE CHEAPEST & BEST TRENCH COAT ON THE MARKET.**

IDEAL FOR MOTORING.

MOSS BROS.' ILLUSTRATED PRICE LIST SENT FREE.

MOSS BROS. SEND ALL GOODS ON SALE OR RETURN.

# LEATHER FLYING COATS 65/-

ONLY A FEW UNSOLD. CANNOT BE REPEATED AT THREE TIMES THE PRICE.

BLUE GABARDINE TRENCH COAT (Wool) 45/-

" " " " (Ditto & Inter-Lined) 52/6

LARGEST STOCK IN LONDON OF

DINNER & DRESS SUITS from 60/- to 120/-

LOUNGE SUITS (Second-Hand) 35/- " 80/-

" " (New & Misfit) 40/- " 90/-

Gents' Clothing of Every Description Bought, Sold, or Taken in Exchange.

**MOSS BROS.** ('Phone: Park 4817)

83-5, HIGH ST., NOTTING HILL GATE, & 224, HIGH ROAD, KILBURN, N.W. 6


## RUNABOUTS AND CYCLE CARS.

MORGAN No. 420.—Miss K. Burnside, Cotlei West Wickham. [2

REY'S, of Euston Rd. (Nos. 378-384), have the lowing in stock:—

MORGANS, all 1922 models, also second-hand Luxe and Grand Prixs, in good condition.

COVENTRY PREMIER, 1922, 4-wheeler mo £230; one shop-soiled only, £205.

ROVER, 8h.p. model, £220; two second-hand, g condition, £162/10.

G.N.'s, all models; also 1920 with dynamo, v good order, £132/10; one 1921, £142/10.

EXCHANGES or deferred payments arrange 'Phone: Museum 6436. [1

WAUCHOPE'S, 9, Shoe Lane, London.—5-6h Carden Monocar; £50. [21

SCOTT Sociable for 1922. The best three wheel —99, Great George St., Liverpool. [1

BLERIOT Whippet, as new throughout; £95 Mylam, 197, London Rd., Croydon. [19

HUMBERETTE, water-cooled, beautiful conditi £95; or exchange.—Bunting's, Wealdstone. [20

SMART 2-Seater Singer, recently overhauled; £1 cheap.—Newton, "Bincleaves," Westerham. [12

MORGAN, 1921, G.P., like new, all accessori £175.—Mylam, 197, London Rd., Croydon. [19

1921 Super Smart G.P. Morgan, lavishly equipp £140.—24, Balliol Rd., North Kensington. [15

MONOCAR, Cardan 1920, smart little runabout, cellent; £70.—Bunting's Exchange, Wealdstone. [20

£165.—Morris-Oxford de Luxe 2-Seater, with dick splendid order, tax £9.—King, Egrove Far Oxford. [17

MORGAN 1916, A.C., M.A.G., good condition, accessories.—Berry, R.A.F., Cattewater, P mouth. [13

CARDEN, 2-seater, late model, twin J.A.P. engi very fast; £75.—Miss Moore, 106, Acre La S.W.2. [18

8h.p. Rover.—1922 model in stock; exchanges Walbro Motor Cycle Co., Saffron Wald 'Phone: 45. [71

MORGANS Always in Stock.—The West of Engla Agent, Gibb, 100, Northgate, Gloucest 'Phone: 852. [81

MORGAN, electric lighting, speedometer, perfe all on; £75/10; exchange Douglas.—129, She Lane, Mortlake. [14

COVENTRY PREMIER.—1922 model in stock; changes.—Walbro Motor Cycle Co., Saffron W. den. 'Phone: 45. [71

G.N. 1920, dynamo lighting, engine overhauled, tachable wheels, speedometer; £125.—Jon Garage, Droitwich. [93

BLERIOT Whippet, 1920, reverse, all on, £ worth spares; £115.—Owen, 59, Scholefield R Upper Holloway. [20

MORGAN 1915 G.P., excellent, £100; an earli De Luxe, good condition, £70.—Bunting's E change, Wealdstone. [20

MORGANS, G.N.'s, and Rovers second-hand, seve in stock.—Rey's of Euston Rd. (378-38 'Phone: Museum 6436. [14

1921 Grand Prix Morgan, M.A.G., speedomet clock; £150.—Hillier (side bell), 9, Wallingfo Avenue, North Kensington. [16

PEUGEOT 2-Seater, hood, screen, lamps, perfe order, tax paid; £55; exchange combination. 259, Brownhill Rd., Catford. [13

BEDELIA-J.A.P., good running order, convertit instantly 1-2-seater; £50, or offer.—Apply, M. 1 84, First Avenue, Manor Park. [12

ROVER, 8h.p.—Your motor cycle taken in part change for new models.—Agents, R. B. Clark a Co., 7, Exhibition Rd., S.W.7. [78

1921 Coventry Premier, spare wheel, dickey, sma mileage; £150.—Hillier (side bell), 9, Wallin ford Avenue, North Kensington. [16

A.V. Monocar 8h.p. 1920, special passenger sea £60, or exchange.—For trial, write, Adeney, Gloucester Terrace, Hyde Park. [16

WAUCHOPE'S, 9, Shoe Lane, London.—Rov Light cars, £220; fully equipped; easy ter or exchange; list on application. [21

WAUCHOPE'S, 9, Shoe Lane, London.—G.N. Ca 1922, all models from stock; easy payments exchange. 'Phone: Holborn 5777. [21

WAUCHOPE'S, 9, Shoe Lane, London.—Carden Luxe 2-seater, 1921, electric lighting, ful equipped, tax paid, insured; £110. [21

1921 G.N. Touring, dynamo lighting, clock, speed meter, spare wheel; £135.—Hillier (side bel 9, Wallingford Avenue, North Kensington. [16

WAUCHOPE'S, 9, Shoe Lane, London.—New 19 Morgans supplied on easy terms or exchan 'Phone: Holborn 5777. List on application. [21

## RUNABOUTS AND CYCLE CARS.

ORGANS.—Latest models in stock; immediate delivery; exchanges, extended terms. Official nts and trade distributors.—Below.

ORGAN Grand Prix 1921, dynamo and acetylene lighting, M.A.G. engine, horn, speedometer, etc.; 5.—Below.

ORGAN De Luxe 1921, M.A.G., acetylene lighting, horn, etc.; £155.—Below.

ORGAN Grand Prix, J.A.P., W.C., lamps, horn, etc., good condition; £75.—Below.

OVER 1922 8h.p. model in stock, dynamo lighting, etc.; £220.—Below.

.N. 1922 Standard and All-weather models in stock, dynamo lighting, dickey seat, door, etc.; 5.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camore St., E.C.3. 'Phone: Avenue 5548. [0076

.N. 1921, dynamo lighting, spare wheel, etc.; also a 1920 model in the pink; both open to offers, ier cash or exchange.—Bunting's, Wealdstone. [2005

ORGANS.—1922 De Luxe, Grand Prix, and Popular models in stock; exchanges.—Walbro tor Cycle Co., Saffron Walden. 'Phone: 45. [7158

ORGAN 1921 Grand Prix, new condition, electric lighting, equipped; £135.—James, c/o Bradmore, Harrow Rd., Paddington. Telephone: Willesden 4. [1677

EW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy ments, or exchange.—Service Co., 292, High Holborn, C.1. [0673

)21 T.B. 3-wheeler, 1922 engine, demonstration model, complete with spare wheel, speedoer; £180.—Allen and Binns, Ltd., Glossop Rd., ffield. [1292

AYLISS-THOMAS, 1922 10h.p. model, 4-cyl. watercooled engine, 3 speeds, Magdyno; 300 gns.; imdiate delivery.—Godfrey's, Ltd., 208, Gt. Portland St. ndon, W.1. [0736

.p. Cycle Car, J.A.P. engine, Binks carburetter, Bosch magneto, hood, screen, electric lamps, for mbination; or sell £59.—63, Walm Lane, Cricklood, N.W.2. [2066

)20 G.N., dynamo lighting, speedometer, etc., 3 new tyres, engine overhauled at cost of £18, rything excellent; 127 gns.—Edwards, 101, Gt. tland St., W.1. [1885

ORGAN 1920 Grand Prix M.A.G., acetylene and electric, speedometer, clock, aluminium dash, lop Magnums, very smart; £145.—Clark, 7, Exition Rd., S.W.7. [9006

ALIFAX.—Morgan 8h.p. J.A.P. hood, screen, £85, £100, £110. 1919 5-6h.p. A.V. monocar, /10. 1920 A.V. Monocar, £75.—Halifax Motor hange, Horton St., Halifax. [2093

)22 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220; in stock for immediate delivery; payments only 4% extra.—The Premier Motor Co., oo Rd., Birmingham. [0773

.A.C. Monocar, 2½h.p., Villiers engine, 2-speed gear box, final chain drive, fully eqnipped; see cle, *The Motor Cycle*, Feb. 16th; £52.—Eastbourne ation Co., Ltd., Eastbourne. [1281

)20-21 Grand Prix Morgan, fully equipped, discs, etc., excellent mechanical condition and appear-e; 120 gns.; exchanges or deferred.—Edwards, 50, rington Rd., South Kensington. [1959

ORGAN Grand Prix, water-cooled J.A.P., electric lamps, speedometer, tyres equal new, new d, guaranteed thorough working order.—Beardve, 62, Holyhead Rd., Bangor. [1601

ARDEN Monocar 1918 8-10h.p. J.A.P., splendid condition, single-seater, with dickey, sporty body, ; sell for £70; exchange for 2-stroke and cash.—Reddings Lane, Tysley, Birmingham. [1186

XCHANGE your motor cycle or combination for new 1922 Coventry Premier four-wheeler, Morgan ular, or Grand Prix Rover, T.B., or New Hudson. rank Whitworth, 139, New St., Birmingham. [2148

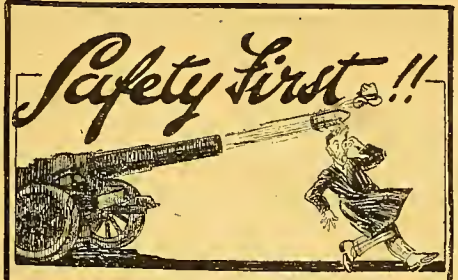
.C. Sociables, by the A.C. Co., dependable runabouts, take 2 persons anywhere, good condition appearance, fully equipped; from £50 to £85; l.—29, Allsop St., Upper Baker St., London, N.W. [7056

)21 Coventry Premier, 3-wheeler, spare wheel, dynamo lighting, dickey seat, all accessories, dition perfect; sale or exchange; tax paid; bargain, 5.—Griffiths, 7, Abbotsford Rd., Redland, Bristol. [1659

10 down and £10 monthly buys new 1922 Morgan; £65 down and £16 monthly buys four-el Coventry Premier, best of 1922 runabouts.—te Frank Whitworth, 139, New Street, Birmingt. [2149

.N. 8h.p. Standard Touring model, left works August, 1921, not used until this year, engine dly run in, full equipment, dynamo lighting, as ; £190.—Telford Garage, 47, Streatham Hill, Lon-, S.W.2. [1416

ARKER'S Motors can supply all kinds of light cars at list prices and give a free insurance cantee for 12 months against mechanical breakn. Cash, deferred, or exchanges.—194, Balham h Rd., S.W.12. [1216




# TAKE NO RISKS.

**If you want a reasonably priced used machine buy one of our overhauled and guaranteed bargains. Every 'bus which we take in exchange is "stripped to the waist," put into fit condition and tested before sale.**

## SEND FOR OUR LIST.

**It may contain the very thing you want.**

**A selection from it:—**

| | | |
|---|---|---|
| 1921 | Hill-Blackburne 2¾ h.p., 2 speed, K.S. | £52 10s. |
| | Several Nortons, 3½ and 4 h.p., solo and combination. | |
| 1920 | A.V. Monocar, accumulator lighting, horn and tools.. | £50 |
| 1921 | Brand new 7-9 h.p. Spring frame Indian, Dynamo lighting, horn and speedometer. Solo | £110 |
| | Ditto ditto Combination | £140 |
| 1914 | 8 h.p. Zenith. Solo | £65 |
| | Ditto ditto With Sidecar | £75 |
| 1918 | 4 h.p. Douglas. Solo | £66 |
| 1920 | Fixed Gear 3½ h.p. Triumph, new condition | £60 |

**If you are considering the question of a new mount, we can supply for cash, on easy payments, or will make an offer for modern machines in part exchange.**

**YOU CAN SELECT FROM QUADRANT, VELOCETTE, INDIAN, NORTON, MARTINSYDE, LEVIS, B.S.A., VICTORIA, RALEIGH, A.J.S., or a C.N. CYCLECAR.**

# VICTOR HORSMAN,

**7, Mount Pleasant, Ltd.**

# LIVERPOOL.

## RUNABOUTS AND CYCLE CARS.

**119** GNS.—G.N. late 1920, dynamo lighting, detachable wheels, spare wheel, all 5 tyres as new, hood, screen, aluminium dash, 4 lamps, horn, speedometer, Pyrene fire extinguisher, aluminium number plates, etc., tax paid.—Moss, 68a, Delancey St., Camden Town, London. [1650

COVENTRY PREMIER four-wheel runabouts. Best of their class, water-cooled beautifully finished, dynamo, dickey seat, spare wheel, insurance, speedometer; £230 complete. One slightly used one (about 200 miles only), almost new, £205.—Frank Whitworth, 139, New St., Birmingham. [2150

*Spare Parts:*

MORGAN Spare Parts. Largest stock in London.—Maudes' Motor Mart, 100, Great Portland St., W.1. [2127

MORGAN Spare Part Depot.—Spares for all models from stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0078

## TAXI-COMBINATIONS AND CABS.

"COUNTY," B.S.A., Taxis, as licensed throughout the country.—Write for full particulars, County Cycle and Motor Co., "Originators," 300, Broad St., Birmingham. [5353

## CARS FOR SALE.

COVENTRY PREMIER.

STARTLING Reduction.

**19**22 8h.p. Coventry Premier, 2-3-seater, brand new, painted grey, spare wheel and tyre, Rotax lighting set, speedometer, etc., beautifully finished; £230 cash; or by economical instalments of £57/10 down and twelve monthly instalments of £15/13/6, which includes a comprehensive insurance for twelve months, strict privacy, no unpleasant inquiries, any district; modern motor cycle or combination taken as first instalment.—Herbert Robinson, Ltd., Regent St., Cambridge. [1217

BEDELIA.—The new 1922 model, 8-10h.p., with aircooled or water-cooled engine.

BEDELIA.—Air-cooled model, £185; water-cooled model, £195. Immediate deliveries. Trial runs free.

BEDELIA.—Catalogues free from L. N. Palmer, sole concessionnaire for the British Empire.—Palmer's Garage, Tooting. [2161

STUDEBAKER 1913 privately-owned 5-seater; £75.—Bunting's Exchange, Wealdstone. [2003

ROVER 8h.p., 2-seater, hood, screen, bargain; £34.—1, Bellingham Terrace, Catford. [1799

DAIMLER 15h.p. Tourer, C.A.V., Rudge wheels; £150, or exchange.—8, Crowhurst Rd., London, S.W.9. [1856

£10 down and 12 monthly payments £3 secures good Belsize 12-14h.p. chassis.—Palmer's Garage, Tooting.

£30 down and 12 monthly payments £8/10 secures splendid Sheffield-Simplex landaulet.—Palmer's Garage, Tooting.

£25 down and 12 monthly payments £4 secures excellent Napier long chasis.—Palmer's Garage, Tooting.

£40 down and 12 monthly payments £8 secures Studebaker landaulet, dynamo lighting, self-starter.—Palmer's Garage, Tooting.

£35 down and 12 monthly payments £5 secures 12-14h.p. F.I.A.T. chassis.—Palmer's Garage, Tooting.

£40 down and 12 monthly payments £10 secures excellent Berliet touring car.—Palmer's Garage, Tooting.

£50 down and 12 monthly payments £8/10 secures magnificent Oakland 7-seater touring car, dynamo lighting, self-starter.—Palmer's Garage, Tooting.

£10 down and 12 monthly payments £3 secures Talbot 4-seater.—Palmer's Garage, Tooting. [2160

**10**h.p. Darracq, 2-stroke, overhauled, reliable; £55; exchange combination.—30, Canning Crescent, Wood Green. [1370

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

£60.—12h.p. 4-cyl. Gregoire, 2-seater, low and nice, trial any time.—Wright's Garage, Dee St., Poplar, London. [2158

FORD 2-Seater, splendid condition, and 1920 British Excelsior, K.S.; exchange Rover, etc.—7, Percy St., Rotherham. [1824

LANCHESTER, large landaulette, 28h.p., 6 cylinders, splendid order; £125.—1A, Strathleven Rd., London, S.W.2. [1854

**200**h.p. Clerget, V. engine, 8 cylinders, W.C. new and complete; £45, cost £900.—77 Acre Lane, S.W.2. [1857

MERCEDES, Grand Prix and Brooklands racer over 100m.p.h.; £150, or exchange.—Capt. Jackson 77, Acre Lane, S.W.2. [1852

£75.—9h.p. Coventry Simplex, 2-seater, fitted smart sporting body; trial any time.—Wright's Garage Dee St., Poplar, London. [2157

## CARS FOR SALE.

ROVER Cars.—The famous 8h.p. model in stock, £220; for immediate delivery.—Eagles and Co., 275, High St., Acton, London. [0761

WOLSELEY, 15.9h.p., touring, £115; Tamplin, 1920, reasonable offers; both recently overhauled; trial.—Crowte, Brixham. [1470

BRISCOE, 15.9h.p., Cloverleaf, dynamo, starter, new 1919, perfect; £150; good combination part.—57, Elmbank Gardens, Barnes. [1491

COVENTRY PREMIER, 1922, 4-wheel model; £230; immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

£95.—12h.p. Rover, 2-cyl. Silent Knight, 2-seater, 5 detachable wheels, £95; trial any time.—Wright's Garage, Dee St., Poplar, London. [2156

DAIMLER, ¾ landaulette, S.K. engine, C.A.V., Rudge wheels, a perfect carriage; £185.—Chauffeur, 14, Glenelg Rd., Brixton, London. [1853

6-CYLINDER Ford 2-seater, slightly damaged by fire, £50; or exchange combination; photo willingly.—Francis, 45, Cornwall Rd., Brixton, S.W.2. [1225

11.9h.p. Belsize 2-seater, 5966, tax paid, £9, mechanically sound and new tyres, 5 detachable wheels; Lucas dynamo, £240.—James Irving, Baker, Penrith. [1060

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0725

EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hansler Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452 [7938

MORRIS-COWLEY 1922 Standard 11.9h.p. 2-seater; 285 gns.; delivery from stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0077

WEST Norwood!—The "satisfaction" centre. Satisfaction's what you desire. When you've wasted a week inspecting the apparent and so-called bargains advertised, then visit me.

WEST Norwood!—Fifty vehicles, all types, always actually on view; all absolutely unassailable bargains.

WEST Norwood!—6h.p. De Dion 2-seater, £20; 6h.p. Rover 2-seater, dual ignition, side doors, £30.

WEST Norwood!—Baby-Peugeot, old type, £40; 1915¼ Warrick 3-wheel delivery auto-carrier, £45; 20-28h.p. Darracq chassis, 4-speed gate, £50.

WEST Norwood!—10h.p. Adams 4-seater, £60; Alldays van, £65; Indian combination, £70; steam tourer, £75.

WEST Norwood!—3-ton 1913 worm-drive lorry, £85; 4-cylinder Unic van, sump, £85; 12-15h.p. Duhanot 3-seater, dickey, monobloc, £85.

WEST Norwood!—Ford tourer, £85; 3-ton L.G.O.C. lorry, good one, £95; 8-10h.p. 1913 light car coupé, exceptionally smart, £100.

WEST Norwood!—Smart 12-15h.p. Gladiator torpedo tourer, £100; 10h.p. 1915 Whiting-Grant light car, 4-cylinder monobloc, £115.

WEST Norwood!—Here's a snip: 10h.p. 4-cylinder Swift light car, monobloc, enclosed valves, gate, Morris-Cowley radiator; £120!!!

WEST Norwood!—Herezanuther: 10h.p. I.W.K. 2-seater, exceptionally powerful one, so cumfy, bargain; £125.

WEST Norwood!—16h.p. English-make landaulet, enclosed valves, sump, gate, Zenith, side doors, smart; £125.

WEST Norwood!—15h.p. Mitchell semi-sporting 2-seater, real good, £125; 30-cwt. lorry, twin solids, £125.

WEST Norwood!—3-ton lorry, Knight-Daimler, runs splendidly, £130!!!, 12h.p. Sizaire-Naudin posh 3-seater, dickey, 4-cylinder monobloc, fast, £135.

WEST Norwood!—Maxwell tourer, £135; Renault lorry, £135; Ford 1-ton, £135; 12h.p. Humber coupé, £135; 10h.p. Singer 2-seater, good one, £135.

WEST Norwood!—12-14h.p. F.I.A.T. landaulet 4-speed, £150; Napier ex-ambulance chassis, £150; 1916 Singer, dynamo lighting, £165.

WEST Norwood!—Magnificent 25h.p. ¾ landaulet, £175; 10h.p. 4-cylinder 4-seater, £185; smart torpedo cabriolet, £185; Arrol-Johnston 4-seater, £185.

WEST Norwood!—15h.p. Coupé 2-seater, self-starter, dynamo lighting, £185; 1916 worm-drive lorry, £185; lots others, £200 to £850.

WEST Norwood!—Send post-card for complete printed list. Call any time (no business Sundays). Exchanges entertained.

WEST Norwood!—Douglas S. Cox, The Absolutely Straight Motor Man, 6c, Lansdowne Hill, West Norwood. (Established 1902.) [2138

1916 Ford Touring Car, 5 detachable, £48; 1915 2-seater Saxon, electric lighting, £80; 1915 2-seater Alldays, really nice, £135.—Whisstock and Lingley, Woodbridge, Suffolk. [1643

A GENTLEMAN has for disposal 15.9h.p. Star landaulette; £120, or near offer; snip, cash required urgent; see it.—Central Ignition Works, 14, Loughborough Rd., Brixton, London. [1161


# COLMORE DEPOT

Ask the Motor Cyclists of

BIRMINGHAM
MANCHESTER
LIVERPOOL
LEICESTER

where they go to find the

PICK OF THE WORLD'S BEST MACHINES

Ask them where they get a

REAL MOTOR-CYCLE SERVICE

in every sense of the word, and they will unanimously tell you—

# COLMORE DEPOT

*The House where the Bargains come from.*

*Depots at:*

*Birmingham: 31, Colmore Row.*
*Manchester: 200, Deansgate.*
*Liverpool: 24, Paradise Street.*
*Leicester: 62, High Street.*


## CARS FOR SALE.

SHEFFIELD-SIMPLEX, light racing 16h.p. cha 2-seater body, hnt suitable for coupé or c conversion; this high-class machine £150; or excha combination.—Bunting's, Wealdstone. [2

1913 Daimler 20h.p., dynamo lighting, elec horn, 5 detachable wheels, Barford 5-se phaeton body, new hood and side curtains; £175; exchange light car or motor cycle, cash either wa 15, Summerhill Rd., Dartford. [1

WAUCHOPE'S, 9, Shoe Lane, London.—Cove Premier, new 1922 models; £230; £46 do remainder in twelve equal monthly payments; m cycles or motor combinations taken in part paym Write, call, or 'phone Holborn 5777. [2

2-SEATER Double Dickey 1920-21 4-cyl. McKen mechanically perfect, newly painted, only d 7,000 miles, full equipment, speedometer; cost £5 sacrifice, £250; good combination taken part paym —Grimes Garage, 18, Brnton Place, Bond St., W.1 [9

## MOTOR TRANSPORT VEHICLES.

1917 Warwick Autocarrier, just overhauled repainted, splendid condition; snip, £55; change considered.—2, Oxford Rd., Finsbury P London. [1

GARNER 1917 Lorries (6), 35-45 cwt., worm dr smart 10ft. lorry bodies, coachbuilt driv cabins, repainted and retyred, fitted Zenith ca retters, doing 10-12 miles to gallon, painted and li written to purchasers' requirements, fitted pr coach finish, fitted lamps, horns, tax paid July, 19 price £200 each; several 2-2½-tonners, 12ft. bod same as above, £200 each; ideal lorries for build market gardeners, haulage contractors, etc., wonde on hills, take most top gear; seats and cushions passengers and carriers £10 extra. Extended te arrange.—See below.

GARFORDS 1916 30-cwt. Lorries (6), overh worm drive. 3 speeds, doing 12-14 miles gallon, smart 9ft. lorry bodies, repainted and retyr lined and written to purchasers' requirements, all D lop solid tyres, fitted lamps, tools, etc.; £200 eac See Below.

BRITISH ENSIGN 1916 2-ton Lorry, 25h.p., Dorm engine, 4 speeds, live axle, doing 12 miles gallon and fast, fitted hoops and sheet, tyres as n repainted and lined, smart coach finish, fitted lam tools, etc.; price £200.—Shard Garage, Shard's Peckham Park Rd., Old Kent Rd., London. [1

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, easy terms.—'Phone, Holborn 5777. [7

HALIFAX.—Secondhand models at special ra Send your requirements.—Halifax Motor change, Horton St., Halifax. [2

FOR Best Treatment and best terms for light c cycle cars, or motor cycles of any make, new second-hand, write Service Co., 292, High Holbo W.C.1. [0

HERBERT ROBINSON, Ltd., Green St., Cambrid Any make of motor cycle or light car suppl on easy terms, strict privacy, no unpleasant inquir any district, full particulars by post. [9

REY'S of Euston Rd. make a speciality of defer payments; all leading makes supplied, includi Morgan's, Coventry Premiers, Rovers, G.N.'s, a other well-known light cars.—378-384, Euston 'Phone: Museum 6436. [1

## ENGINES.

P. and M. Engine, No. S6091, complete, perfe all sprockets, £7/10; carriage forward.—Below.

DOUGLAS 8h.p. Water-cooled, C.W. radiator, pet tank, bedplate, starting handle, induction pi good condition, £11/10; thoroughly overhauled, n magneto, carburetter, guaranteed running order, £ carriage forward; make splendid light car engine large selection; stamp reply; trade supplied.—Derri on, Grafton Rd., New Malden. [2

12-14h.p. Engine, £12; 4h.p. engine and 2-spe gear box, £4.—31, Silver St., Enfield. [1

2½h.p. Engine, Minerva, mechanical valves; £4 Kennard, 78, Yerbury Rd., Holloway, N.19. [1

2¾h.p. Diamant, air-cooled, mechanical valves, co plete, pulley, magneto sprocket; £2/5, ne offer.—Below.

7h.p. Ariel Twin, water-cooled, automatic inlet £6/10.—F. Ward, Earl St., Rugby. [1

HARLEY 1918 Engine, guaranteed perfect, wi magneto; £27/10.—26, Aberdeen Rd., N.5. [1

ILLSTON Engine Unit, 2½h.p., silencer, carburette magneto, in splendid condition; £8.—18, Victor St., Goole. [1

2¾h.p. 2-stroke, roller bearings, only done fe miles; bargain, £5.—Weavers, 6, Burras Lan Otley, Yorks. [8

VILLIERS and Blackburne engine spares; any pa from stock.—Maudes' Motor Mart, 100, Gre Portland St., W.1. [2

3½h.p. Rudge Engine, magneto, carburetter, N.S. 2-speed gear; £10 or offer.—Deakin, 19, Gol smith Avenue, Acton. [1

## ENGINES.

WIN Minerva 8h.p., Bosch, complete, thoroughly overhauled; £12; exchange lower power.—135, nington Rd., Leytonstone. [1542

4h.p. Twin Brown Moiv, overhauled, and new piston, Bosch, B. and B., exhaust; £6/10.—nston, Royal Garr. Artillery, Bordon. [1544

3½h.p. Engine, a.i.v., E.I.C. magneto, B. and B. carburetter, silencer, first-class condition; bar-, £6.—Kerswell, Lawrence Hill, Bristol. [1365

.p. Bat Engine, carburetter, 2-speed pulley, etc., £2/10; V.S. clutch wheel, £1; twin C.A.V. mag-, £1/10; stamp.—Porteous, 169, Liverpool Rd., ishead. [1308

10h.p. National Gas Engine, 6½ bore, 2 flywheels, tube ignition, new liner and piston; running r; £42; exchange motor cycle or anything orish.—Norris, 7, Colville Terrace, W.11. [1191

EW 3½h.p. Sunbeam Engine crankcases, 70/-; aluminium chain covers for above, 25/-; gear box with parts, 20/-; Rudge new parts: back stands, carriers, 5/-; frames, 30/-; front wheel, 650×65, .—Burge, 36, Oak St., Southport. [2196

OSTERS.—New engine bargains: 1½h.p. (4-stroke) engines, overhead valves, aluminium cylinders pistons; special price to clear the last few of a krupt stock, £3/15, complete.—Fosters, 51, Clis-Rd., Clissold Park, London, N.16. 'Phone: ston 2526. [1403

.p. Twin L.M.C. engine, complete with magneto, silencer, exhausts, 2 driving sprockets, spare es, rings, perfect order, £22/10; also 3½h.p. mph engine, complete with magneto and silencer, nder welded, £8/10.—Duncan's, 47, Cockburn St., nburgh (minute from Waverley Station). [1394

A.P. Engines. J.A.P. Engines. J.A.P. Engines.—I have the largest stock of J.A.P. engine parts in land; over 30 engines, all in stock, to select from; the prices: 5hp. £15, and the 8h.p. at £20 and /10, and I have all parts for the 8h.p. (see acces-s for parts). I have a big twin engine £12, a 4h.p. gle engine and mag. and carburetter £15, a small oke and mag. £10; stamp reply.—South Croydon or Exchange, 22, South End, Croydon. [4765

RAND New Engines.—An exceptional opportunity. 1921 Precision, 3h.p., 2-stroke (as fitted to the rdmore motor cycle, etc.); a complete unit with mson-Bennett magneto. Cox Atmos single-lever uretter, list price over £30; limited number to r, £14. What a gift. Or, less magneto and uretter, 10 gns. Only a few left.—Marble Arch or Exchange, 135, Edgware Rd., W.2. 'Phone, dington 789. [8945

EPPELTHWAITE'S.—J.A.P.s, 5h.p., as new, £14. 5-6h.p. Fafnir (unit), £7/10. 7h.p. Aero-ist flat twin, 2-stroke (unit new), make lovely ecat set, £16. 4h.p. O.H.V.-J.A.P., £5. 3½h.p. ber (unit), £9. 3½h.p. Alldays, £4. 5h.p. and . J.A.P. spares galore. The stock of W. kins. For other spares, see Old Man Hep., in e Parts. Stamp please. 'Phone: 1958 Brixton. 9, Wilcox Rd., South Lambeth, London, S.W.8. [2137

## IGNITION, LIGHTING, ETC.

.B. I. Co.

.B. for new and second-hand magnetos; all spares stocked.

.B. Specialise in Thomson-Bennett, complete for fixing to Triumph.

M., J.A.P., Douglas, 2-stroke engines, etc.; £3.

A.V. New, twin and single, clock and anti; £3.

IXIE, Single and twin, all degrees; £2/5.

.B. Guarantee all magnetos one year.

.B. will take your old machine in part payment.

.B. Despatches all goods per return, carriage paid, on approval against cash, or through *The Motor* 'e deposit system.

.B. Ignition Co., 78, New Park Rd., Brixton Hill, London. 'Phone: Brixton 610. [0694

YNAMOS (new), 120 watts, £7; 250, £9.—Engineer, 20, Glendarvon St., Putney. [1078

IXIE Magneto, suit 2-stroke, 35/-; T. and B., suit 4h.p., 45/-.—56, Sutton St., Aston, Birmingham. [1892

OSCW and M.L. singles, 30/-; C.A.V., 37/6; variable ignition guaranteed.—84, Greenside Rd., don. [1657

GHTING Accumulator, head lamp and sidecar lamp, wiring and switch; offers.—90, Camden N.W.1. (P) [1367

AGNETO Sprocket Manufacturers.—7-tooth to 24-tooth stocked.—Ridington, 202-4, Southampton Camberwell. [6886

.L. Magnetos, new, single point, clock or anti; 28/6; secure now, stock nearly exhausted.—w.

DDCE Aero plugs, single point, new; 1/8 each, post 3d.; in makers' boxes.—A. J. Burke and 22, Pilgrim St., Liverpool. [2002

**W. Brandish & Sons**

**are all riders of Motor Cycles, and we know your wants.**

We offer you the pick of the very best Motor Cycles.

**You may select from**
**TRIUMPH A. J. STEVENS**
**SUNBEAMS NORTONS**
**ROVERS HUMBERS**
**HARLEY-DAVIDSONS**
**or any other make.**

*We supply for Cash, Easy Terms or Exchanges.*

We have designed and patented Footboards for Junior and Senior Triumphs, and have actually sold over 4,000 sets of these.

**OUR LATEST SUCCESS is with the Leg Shields, made to fit any machine.**

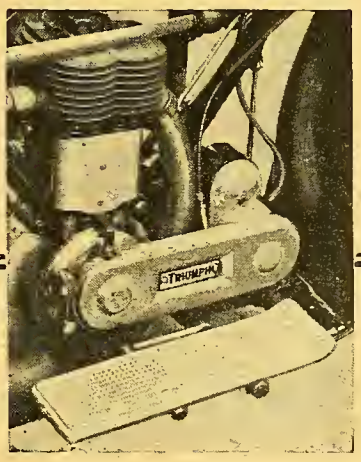
We will supply your Agent with Footboards or Leg Shields.

SEND FOR ILLUSTRATED LEAFLET.

A few shop-soiled and second-hand machines at exceptionally keen prices. Send for List.

**W. Brandish & Sons**

Works and Showrooms:
**625, Foleshill Rd. and Queen Mary's Road**
**COVENTRY**





## IGNITION, LIGHTING, ETC.

COUNTY of London Engineering Works, Ltd.

ALL Magneto Spares stocked.

GOVERNMENT Surplus Magnetos (new, unused).

BOSCH, Single, type D.A.L., variable ignition; £3/15 each.

M.L. Single Enclosed Waterproof, variable ignition, £4 each.

THOMSON-BENNETT, single, enclosed waterproof, variable ignition; £3 each.

THOMSON-BENNETT, single, enclosed waterproof, variable ignition, all degrees; £3 each.

C.A.V., single, enclosed waterproof, variable ignition; £3 each.

C.A.V., twin, enclosed waterproof, variable ignition; £3 each.

RUTHARDT, single, enclosed waterproof, variable ignition; £2/10 each.

BERLING, single cylinder, enclosed waterproof, variable ignition; £2/10 each.

SPLITDORF, single, enclosed waterproof, variable ignition; £2/10 each.

DIXIE, single, enclosed waterproof, variable ignition; £2/5 each.

DIXIE, twin, enclosed waterproof, variable ignition; £2/5 each.

ANY of the above single-cylinder Magnetos can be supplied with the special long driving spindle, suitable for Rudge.

THESE Magnetos are fitted with leads and base-plates, ready to be immediately fitted. Please state make of engine when ordering.

GUARANTEE.—We guarantee all our Magnetos for 12 months, and will willingly replace or repair any that should prove defective within that period.

SEND your repairs to us; it will pay you; all repair work guaranteed.

COUNTY of London Engineering Works, Ltd., 6, Garden Lane, Christchurch Rd., Streatham, London, S.W.

TEL.: Streatham 2898. T.A.: Ignitionac, Brixstret, London. [1848

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 877.

BOSCH 1-cyl., weatherproof, and as new, variable ignition; 57/6 delivered.

THOMSON-BENNETT and M.L.'s, of Coventry, 1 cyl. A.D.S. or P.L.R. types, 37/6 delivered, suitable for stationary engines; if variable ignition, 10/- extra.

C.A.V., as new, suitable for 2 or 1-cyl. lightweight motor bicycles, height 4½in., breadth 2⅝in., depth 4½in., variable ignition and short-circuiting terminal, guaranteed platinum points, and workmanship of the finest; 2-cyl. fires at 180°; all working parts are interchangeable with C.A.V.'s, types KU 1 and 2; 50/- delivered.

THOMSON-BENNETT, types A.M. 1 and 2, as new, variable ignition and short-circuiting terminal; A.M. 2 fires at 180°; 52/6 delivered.

THOMSON-BENNETT 4-cyl., variable ignition; £5/5 delivered.

N.B.—Any of the above magnetos supplied, clock or anti-clock. When ordering state which when looking at driving end, and whether 1, 2, or 4-cyl.

C.A.V. 2-cyl. Clockwise Aeroplane Starting Magnetos, platinum points, workmanship of the finest, and all working parts are interchangeable with C.A.V.'s, type KU2, perfect for plug testing; one carriage paid, 28/-; lots of 6, rail forward, 22/6 each; of 20 at 21/6 each; of 100 at 20/-.

MAGNETOS Leave our Works in perfect condition.

GUARANTEE.—Will replace within one month, or refund cash if unsatisfactory.

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 877. [0698

LUCAS Lighting Sets, lightweight 12v. dynamo, 12v. battery, cut-out, £6/6 set.—Jenner (Dept. M.C.), 165, Church St., Mitcham. [5401

K.L.G. W.D. Plugs, unprecedented value, 4 for 2/6, postage 9d.; immediate return of money if not satisfied.—Thompson, 59, Queen St., Wolverhampton. [8206

ACCUMULATORS.—Quality right; price right; write for list; trade supplied.—Adams Bros. (Longton), Ltd., Accumulator Manufacturers, Longton, Staffs. [1284

CHELTENHAM.—Repairs to magnetos, self-starters, lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham 'Phone: 1256. [0758

ANY Motor Cycle Magneto repaired, no matter what condition, provided complete, for 30/-; 24 hour service.—Kays, Electrical Dept., 8, Bond St., Ealing, W [7232

## IGNITION, LIGHTING, ETC.

RELIANCE Magneto Repairing Co. (the largest London repair depôt) for repairs and new magnetos.—See below.

RELIANCE guarantee to return your magneto within 3 days, if necessary 24 hours, with a 12 months' written guarantee.

RELIANCE test every magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE manufacture and stock spare parts for all magnetos. Special line, genuine platinum screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice, free of charge, upon any question concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy that we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., London, E.C.1, for new and second-hand magnetos.

THOMSON-BENNETT magnetos, new and unused, waterproof. Singles, suit any engine, price £3; twins, 45, 48, 50, 55, 60, 180 degrees, for Douglas, Clyno, etc., price £3. See our guarantee below.

C.A.V. magnetos, waterproof, new and unused. Singles and 180 degrees twins suitable for Douglas, O.K., Calthorpe, A.J.S., Enfield, Levis, New Imperial, Scott, Velocette, or any lightweight. These magnetos are of the finest workmanship throughout. Price £3. See our guarantee below.

BOSCH D.A.L. magnetos, soiled only, otherwise as new. Singles, suitable for any stationary engine or big single, £3/15; twins, any degree, ready to drop on Indian, Harley, Morgan, or any big twin, £4/5; a powerful spark at low speed, ensuring easy starting. All the above magnetos are variable ignition and fitted short-circuiting switch. In addition to above we have a complete range of 4-cyl. magnetos in stock. See our guarantee.—Below.

GUARANTEE.—Every magneto, no matter what the price or make, is guaranteed by us. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee each machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE cordially invite customers to their works to see any of the above on test. Magneto list, giving full particulars, sent upon application. It will pay you to deal with a firm of repute.—Reliance Magneto Repairing Co. (1914), 283, St John St., London, E.C.1. [162

MAGNETOS Overhauled, repaired, returned in 2 days as new, guaranteed for 12 months, from 15/-; no price exceeds 35/-.—Turner Bros., Motor and Electrical Engineers, Summerseat, Manchester. [7194

THOMSON-BENNETT Magnetos, unused, W.D., guaranteed perfect, single or 180° twin, variable ignition, switch terminal and leads, clock or anti; £2, postage 1/6; week's approval against cash.—Brockbank, 58, Lord St., Southport. [0756

CONTINENTAL Ignition Repair Co.—We repair Continental magnetos only. By specialising on Bosch, U.H., Eisemann, Mea, Splitdorf, Dixie, and Berling magnetos, we can naturally give you better service.

PRICE: Rewinding 18/-, condensers 10/-, platinum screws (Bosch standard) 6/-, remagnetising 2/6, slip rings 6/6, H.T. terminals 4/6. Our price for overhauling a motor cycle magneto ranges between 20/- and 35/-, and never exceeds the latter figure. Guaranteed for 12 months, and redespatched to you in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardwick Rd., Chiswick, London. [3758

C.A.V. Magnetos.—Extraordinary bargains.—Brand new 180 twin or single cylinder, 38/6, carriage free. Every magneto thoroughly tested before dispatch; approval against cash.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [1812

U.H. Magneto Repairs.—We specialise in these magnetos, and can be relied upon to give you good service. A1, B1, AO, KB1, KB2V, KZ2V type spares stocked; prices moderate; 12 months' written guarantee.—Charles Parker and Co., Churchfield Rd., Acton, London. [4455

TRY our 24-hour All-type Magneto Repair Service. Your old Magneto turned out indistinguishable from new by expert workmen at a reasonable charge and guaranteed for 12 months. We are contractors to some of the largest motor transport firms in Great Britain. You can rely on us for real live service. Can we do yours now?

MAGNETO and Engineering Co., Magneto House, 28, Bateman's Row, E.C.2. (one minute from Brown Bros.). [2077

LIGHTING Dynamos, contained in Government surplus mine exploders, dynamo will light seven 10-volt lamps in series, all as new and perfect, 17/6 each, or 22/- each, carriage paid passenger train; stamp for detailed particulars; three days' approval against cash.—Galpin, 35, Milton Court Rd., New Cross, London, S.E.14. [1454

# A GIFT

## BRAND NEW

SHOP SOILED.

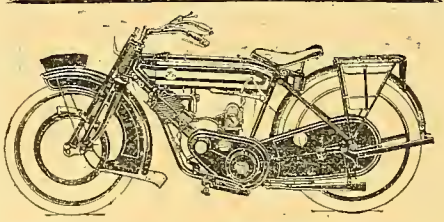
Standard **P&M** 2-Speed

**CARR. PAID**

Carr. Paid.

**SOLO**

**LAST FEW**



**MAKERS' GUARANTEE**

CATALOGUE FREE

APPROVAL.

Carriage Paid.

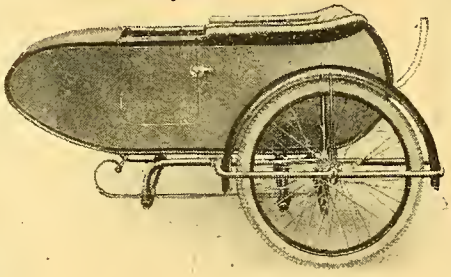
**CARR. PAID**

**£20** down

12 payments of £5-10-0, or as

# SPECIAL PRICE COMBINATION

This Sidecar.



*Colours to choice.*

**£24** down 12 payments of £7-0-0.

Sidecar may be purchased separately on H.P.

*Write for lists post free.*

## RIDEEZI SALES LTD.,

ATLANTIC HOUSE, 103 OXFORD ST., W.

## IGNITION, LIGHTING, ETC.

SURPLUS Magnetos, with written guarantee one year M-L single, 35/-; B.L.I.C. ditto, 42/-; Bosch ditto 45/-; Thomson-Bennett and C.A.V. singles and twins 50/-. We specialise in repairs and spares for all makes. Lists with pleasure. Deal with experts and avoid certain disappointment.—Whitdale Magneto Service, Cherry Orchard, Croydon. 'Phone: Croydon 1625. [934

SPLITDORF magnetos, single, Anti clock, variable ignition, and guaranteed perfect, 38/-. Please note these magnetos are not reconstructed or converted starter magnetos. They are the real thing designed for a motor cycle (not an aeroplane). If you are out to buy a magneto, buy the right thing.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone, Paddington 789. [894

THE Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can usually return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1 'Phone: Museum 1158. T.A.: Kumagnelec, Eusroad London. [2445

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos. Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repairs and spares. All repairs are tested on an approval A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock; charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034. T.A.: Magdyno, Eusroad, London. [0263

## TYRES.

**2/6** Upwards is the cost of repairs to burst covers, broken beads, etc.—Below.

OLD Covers made equal to new, extra heavy rubber studded, will do 3,000 miles; 17/6.—Phœnix Tyre Repairing Co., 224, Sherlock St., Birmingham. [1900

ALWIN Tyre Co. will send on approval against cash any of the following tyres:—

**26**×2¼ Clincher, 19/-; Palmer Cord, 21/-; Goodyear, 25/-; 26×2⅜ Clincher E.H., 26/-; Dunlop E.H., W.D. 37/-; Avon R.S., 27/6; 26×2½×2¼ Palmer cord, 32/6; Clincher, 25/6; Avon E.H., 28/6. 28×3 Fisk E.H. (splendid line), 40/-; Dunlop ribbed, 30/-; Clincher ribbed, 42/-; Clipper 3-ribbed E.H., 35/-; Dunlop E.H., 29×3½ for 28×3, 50/-; motor cycle tubes, all sizes, at 6/-.

WE also offer a splendid set of P. and H. Lamps No. 127 (5½in.), brand new (all black), at 36/6.

ANY of the above lines will be sent on 7 days' approval against cash, plus 1/6 for post.—The Alwin Tyre Co., 37, Red Lion St., High Holborn, W.C. [1055

MOTOR Cycle Tyres on Easy Terms, standard makes; list post free.—J. G. Graves, Ltd., Sheffield. [0589

CENTRAL Garage will send any of the following tyres on approval against cash, postage 1/6 extra.

**26**×2¼ Dunlop, 37/3; Goodyear E.H., 27/6; Bates, 31/6; Avon, 25/-; Clincher-de-Luxe, 21/-; Palmer cord, 22/6.

**26**×2⅜ Dunlop E.H., W.D., 37/6; Clincher E.H. (for 2¼), 27/6; Avon R.S., 27/6.

**26**×2½ Avon, 24/-; Wood-Milne, 13/3; Clincher, 30/-.

**26**×2½×2¼ Dunlop, 46/-; Avon E.H., 30/-; Hutchinson T.T., 36/-; Clincher, 30/-; Palmer cord, 32/6.

**28**×3 Wood Milne E.H., 30/-; Clincher (plain rib), 42/6; Mackintosh, 30/-; Dunlop ribbed, 32/6; Fisk, 40/-; Clipper 3-ribbed E.H., 35/6.

**650**×65 Goodyear E.H., 30/-; Dunlop S.S., 47/6.

**700**×80 Wood Milne E.H., 41/6; International grooved, 55/-; Firestone, 45/-; Englebert, 42/6.

TUBES, all sizes; 6/6 each; orders promptly executed.—Central Garage, 302, London Rd., Thornton Heath. [2017

TYRES. Tyres. Tyres.—For special bargains, see Burcroftian Co.'s advertisement under Parts and Accessories. [0769

THE Difference between a good retread and a bad one is its mileage. Try us. Watch results.—Melton Rubber Works, Melton Mowbray [0636

**24**×2¼ covers and tubes, best make, 16/3. 22/-, 31/-; Dunlop gaiters, 1/9; carriage paid; approval.—Davies, Union St., Wednesbury. [4452

JOHN BULL Rib Stud covers (manufacturers' clearance), 28×3, 55/-; 70 for 650×65, 48/-; 26×2½ for 2¼, 45/-.—Sear, Balmoral Rd., Northampton. [1589

MOTOR Cyclists.—Send your covers for retreading. 3,000 miles guaranteed. Repairs of every description; carriage paid.—Buxton Vulcanising Co., Buxton, Derbys. [4357

THE MOTOR CYCLE

ESTABLISHED IN 1903

FOR OVER SIX YEARS THE ONLY PAPER SOLELY DEVOTED TO THE PASTIME

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## Motor Cycles Overseas.

FOR many years this journal has advocated attention to overseas trade, a matter to which many of our manufacturers are now giving their serious attention. In the past, perhaps, the demand for motor cycles from riders in this country has, in certain cases, caused makers to relegate the question of overseas trade to a minor position in their annual programme.

Only by close study of conditions and careful arrangements for adequate service can we hope to make headway against world competition. The merits of a machine are sometimes negatived, as far as the overseas rider is concerned, by the difficulty of obtaining spares in a reasonable time. It is, therefore, a matter of considerable satisfaction that a few of our leading manufacturers have recently carried out or decided to make personal tours abroad with a view to obtaining first-hand experience of benefit to their firms.

Such a go-ahead policy is bound to bring its own reward, and we know that much valuable information has already been obtained. Our frequently expressed opinion of the soundness of many British machines for all kinds of hard work has received additional confirmation, but it must be realised that certain conditions uncommon, or even non-existent, in this country necessitate modifications which are vital to the interests of riders in other countries.

It is to be hoped that even when trade becomes normal once again all manufacturers will recognise the value of the overseas markets. Just now the Board of Trade returns are not excessively high, but a statement not without significance to those who aver that no real overseas demand exists is that no less than 38.4 per cent. of the British exports of motor cycles during January were the product of one important firm.

Now that a beginning has been made in the right direction we may hope for further developments, and in the course of a few months, when results become apparent, our export trade should show a material increase.

## Confusing Classification.

A NUMBER of manufacturers are, perhaps unconsciously, confusing the general public by the manner in which they classify their various models. It cannot be expected that the man in the street is able to distinguish between, say, the Y.158 pattern and the C.H.Z., or the Mark VII. against the Mark XX. Surely it is far more reasonable to classify machines as the Touring model, the Sports model, Stripped Sports model, Standard Sidecar model, or the Sidecar Outfit de Luxe! These methods of classification would certainly be far more easy to remember than a conglomeration of figures, Roman or Arabic, and letters or marks.

It would be a distinct asset if the manufacturer could classify his products in so simple a manner that the motor cyclist could carry the range of models in his mind with the greatest possible ease. No motor cyclist can be expected to memorise all the various symbols if they are complicated or unfamiliar in their application. Initials are well enough in their way if they have a clear meaning, such as T.T., which very few fail to remember means Tourist Trophy, but when the letters are absolutely meaningless they only serve to confuse, and are of use merely to the manufacturer and, perhaps, his agents. This may seem a small matter to the manufacturer, but if it aids the motor cyclist to identify his models easily, both parties should benefit. Needless to say, if further differentiation is required the model should be prefixed by the date of manufacture.

An Index to the advertisements in this issue will be found on the page facing the back cover.

## Tool for O.H.V.

NOTICING my wails about the job of manipulating the springs of overhead valves (it requires the dexterity of a conjurer, the beef of a Hackenschmidt, and the horny thumb of a navvy), a colleague on *The Autocar* staff showed me a charming little gadget patented and made for the special benefit of A.B.C. cars by Mr. C. J. Rogers, of Old Malton, Yorks. It consists of two parts. Item 1 closely resembles the valve spring clip supplied for years past with the side-valve Triumph engine. Turning the engine till the valve under treatment is fully open, you slip this clip bodily over the valve spring and its two capwashers; the engine is then turned till the rocker clears the valve stem, when the clipped spring flops loose on the valve stem, and the cotter can be tweaked out. Item 2 is a neat spring compressor, to be used in fitting a new spring. It consists merely of a cheese-headed bolt—its head drilled to take a tommy—with a wingnut on the threaded end. You thread it through the new valve spring, complete with its two capwashers, and screw it up till the spring can be inserted in the special clip (item 1, above). This has a vice and three bits of string beat to a frazzle. Why doesn't Mr. Rogers market it to suit all popular o.h.v. engines?

## Tut, Tut.

A READER signing himself "J. H. W." writes concerning speedometers and things. "J. H.W." is some lad. For him the road to ruin commenced with the purchase of a Norton—from internal evidence in his letter one imagines that it was a B.S. model. He next fitted a speedometer, and sallied forth at sunrise to discover "what she could do." After about a quarter of a mile all out, the speedometer needle was successfully whacked up to the 80 m.p.h. point. With eyes no doubt starting from his head, "J. H. W." "proceeded," as we used to say in the Army. Anon the needle remorselessly advanced to a full inch beyond the "80." Just as "J. H. W." framed rosy mental visions of Ebblewhite's dismay at the next B.M.C.R.C. meet, the speedometer suddenly repented and hastened back to zero. The pull-up safely accomplished without a wobble, "J. H. W." dismounted to readjust the drive bracket. Not a bit of it. It was the works inside the instrument which had given the Norton best. Back went the speedometer to the factory. They repaired it, and "J. H. W." tried another burst. Same result. This time the factory sent him a brand new instrument. Same result. So he now enquires whether there is any speedometer which can stand the push of a Norton. Being fundamentally a coward, I leave such gaits to people whose lives are worthless, and submit the query to a reckless public in lieu of tackling it myself.

## History Repeats Itself?

I RECENTLY provoked readers to confess their intimate experiences with various slow-speed mechanical oil pumps, and sustained a regular barrage of testimony, the whole of which redounded to the credit of the pumps concerned. One manufacturer admitted spontaneously that he had asked some of his customers to write to me, as any Sherlock Holmes could have guessed from the general tenor of the letters. But many users wrote to me quite spontaneously, and the nett effect of all the evidence is to make me expect a repetition of a previous incident in the lubrication of motor cycle engines. Readers will remember that until a few years ago the ordinary hand pump was our standard lubrication. Then a couple of accessory makers introduced the drip feed. For a time it struggled for existence as an accessory, welcomed by many keen owners, but suspected and cold-shouldered by the trade. Finally it made good, and to-day it is probably the most popular method of lubrication we possess.

At the moment such pumps as the Best & Lloyd, the Showell, and the Lamplugh are in much the same position as the drip feed occupied for a year or so after its introduction. But there are clear signs that these pumps threaten to oust the drip feed and the single-charge hand pump. For example, the Best & Lloyd pump has already been officially adopted by two such famous motor cycles as the B.S.A. and P. & M., to say nothing of such a cycle car as the G.N. In every case the writers express surprise that motor cycle designers continue to despise American practice, and cling so tenaciously to the hand pump, with or without a drip feed. They all expatiate on the relief from perpetual ransacking of their memories as to how many miles have elapsed since they last injected a charge, and especially so at night when a drip is normally invisible. One of them recommends all manufacturers to mount the oil pipe behind the cylinder. This change would usually shift the oil compartment from the front to the rear of the tank, and keep the oil from solidifying in cold weather.

Occasional Comments.—

## Preparing to Overtake.

SOME unknown reader and myself must swap mutual apologies—if we had both been killed, the correct verdict would have been manslaughter against each of us. The road was about 14ft. wide and dead straight. Just ahead of me was a cart, proceeding in the same direction as myself. I peered ahead—I say "peered," for the atmosphere was suggestive of the scene in "The Kid," where the angels pluck each other's feathers in a slum duel, and the driving sleet made exact vision difficult. The road appeared to be clear, and I went ahead to pass the cart. Just as I entered the gap between the cart and the road edge, up dashed somebody on an Indian sidecar from the opposite direction. A hectic moment, and the situation resolved itself safely. Mine the blame for not spotting him, despite the snow; and his the blame for failing to approach an obstacle on his proper side of the road.

## Out of the Mouths of Babes.

MY small son—aged three—has already begun to follow in father's footsteps. When knowledge fails to carry him any further, he speculates boldly. The advertisement columns of *The Motor Cycle* are his weekly joy, though he sometimes trips technically The other day one of our advertisers pictured a telephone receiver on his page. Junissimus had never seen a telephone, but like his papa he was not going to be beaten by a little thing like that. "You pushes down *that!*" he explained, pointing to the mouthpiece; "and the oil comes out *there*," pointing to the earpiece. Similarly with a mammoth sketch of a K.L.G. plug. "You pull down *that*," indicating the terminal clip, "and the bang comes out *there!*" pointing to the electrodes. The Editor has engaged him to undertake this column when I fill my tank for the last time.

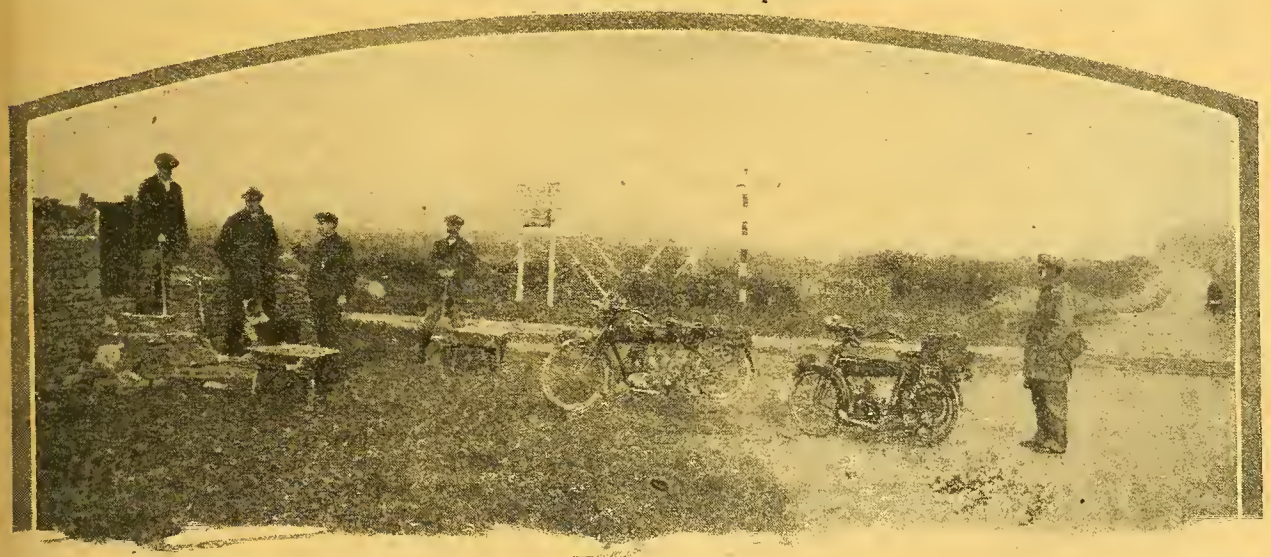
## Not the Only One.

MR. H. W. MORETON, of 59, Wood Street, Woolwich, has proved to me that the idea of using a dry battery in conjunction with a gas head lamp is less new than I fancied. Two years ago he marketed his "Aladdin" auxiliary head lamp. It is a well-made affair with aluminium body, about 3in. long, and is designed to bolt on to the top of the gas head lamp. The flex is thus removed from the heat of the acetylene flame, and from any risk of chafing which might arise from the wires being passed through the shell of the main lamp. This device is a useful alternative to the Siemens fitting which I described the other week. Its weight and cost are alike negligible. With a slight alteration in the mounting, it might easily be utilised as an inspection lamp for night repairs. At present it is rigidly mounted by means of a half-inch steel pillar pushed through a hole drilled in the top of the headlamp, and secured by a couple of nuts.

Mr. Moreton agrees with me that M.S.C. bulbs deserve more attention from firms catering for motor cyclists. But he adds that a good many commercial M.S.C. lamps take half an ampere, and that it is well to buy cannily, for a first-class example need not take more than a tenth of an ampere.

## Back to Inclined Engines?

I WONDER if our modern penchant for o.h.v. single cylinders will lead to a revival of the forwardly inclined engine. The history of the P. & M. and other machines shows that there is no serious technical obstacle to the practice, and its advantages are clear. It would give the designer an extra inch or two to play with in the layout of his valve rocker gear, facilitate the removal of the head for decarbonisation purposes, and improve access to the sparking plug. There would, of course, be no need for the engine to be used as a member of the frame.



A DANGEROUS CORNER BEING ELIMINATED. An improvement that has long been due is taking place at the junction of the London—Stratford-on-Avon and Banbury—Chipping Norton roads. Several serious accidents have taken place at this spot, and the removal of the building and the antique Chapel House steps will be appreciated by motor cyclists. A Sunbeam and Enfield are shown in the foreground

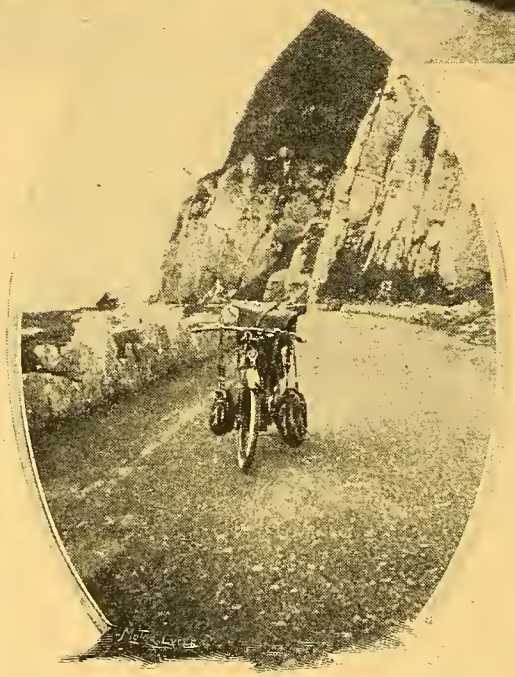
# Through Ireland on a Motor Cycle

Under Strange Conditions for the British Isles, the Writer describes an Irish Business Tour.

NOW that there seems some hope for an ultimate settlement of the Irish question it is possible to look back on a sojourn in Ireland during the truce period with a better perspective.

After the hostilities had happily abated I started out from Birmingham on a round of business calls which covered almost the whole of Ireland. My machine was a $2\frac{3}{4}$ h.p. Sirrah, and it was shipped at Fleetwood (for Belfast) without trouble, other than that the tool bags were searched for arms or ammunition.

During the crossing the sea was rough enough to make me feel quite uncomfortable, and on the following day, when I went on deck at 6 a.m. in the pouring rain, as we were steaming in, Belfast looked a very miserable place at first sight.



(Top) A bridge partly demolished near Maghera, leaving just sufficient roadway to push a machine across. (Bottom) On the wild Antrim coast road near Glenarm.

On acquaintance, however, it seemed pretty much the same as any English city, except for the curfew at 10.30 p.m. and the armoured cars, most of which were Crossleys. The first thing I had to do was to get a driving permit, which is very much like a passport. It required a photograph and description of the driver; also a full description of the machine. After putting in my application I had to wait several days for it to come through.

### Ulster's Interest in Speed Events.

My first trip commenced when I left Belfast for Portrush for the week-end; the road was very rough in parts. The people in Ulster were found to be most keen on motor cycles, and specially interested in speed.

On the following Monday I left Portrush by Coleraine, Limavady, and Dungiven, then over the Glenshane Pass to Maghera; in the Pass there were two bridges blown up, and it took me a long time to cross the rivers. These were the only destroyed bridges I saw in Ulster.

Next day I went to Larne by the Antrim coast road, surely the best in all Ireland, right by the sea all the way. The people in Ballymena are exceptionally keen on racing, and I saw some very fast machines there.

Business being completed in Ulster, Belfast was left by Lisburn and Armagh (the former was partly destroyed by fire), and then to Monaghan, where I first found trenches across the road. As a rule, it was just possible to push the machine round them, but sometimes I had to go through the fields.

Many of the cycle people on whom I had to call were in the I.R.A., and, although I am English, treated me very well, and in many cases went out of their way to help me.

The next week-end was spent at Black Rock, which is a few miles from Dundalk; it appeared to be a very miserable place. Many of the towns through which I passed were flying the Sinn Fein flag, and trenches were still fairly frequent. After going through Kells, Trim, and Navan, Dublin was reached.

### Dublin.

There were not many motor cycles to be seen on the roads, but two-strokes were more popular than in Ulster. The restrictions, however, had killed the demand for motor cycles for the time being.

After Dublin it rained heavily nearly every day, and the roads gradually got worse, but the Sirrah still ran very well. I followed a good road to Carlow, which I left for Kilkenny and Callan. Near there I saw the funeral of a Sinn Feiner—a man in the I.R.A. A long procession of men in uniform and nurses followed, and the road was blocked for two hours by the crowds.

Between Clonmel and Mitchelstown there was the heaviest rain I have ever seen. Also, two bridges were

blown up, and I had much difficulty in getting the machine over what was left of them.

From Mitchelstown to Fermoy a big military camp caused a delay while my papers were examined. I had intended to go from Mallow to Limerick, but missed my way and got absolutely lost in the hills round Kanturk and Newmarket. I finished up at Newcastle West; the next day a man took me on a fishing boat across the Shannon from Foynes to Killadysert, for which he charged 10s.

### Trenches and Mud.

The roads in County Clare were terrible—it is impossible to describe them, as they have not been touched for years. There were trenches about 3ft. deep by 4ft. broad across them every few hundred yards, and all the road was about six inches deep in mud. I was just able to crawl along in bottom gear at about 10 m.p.h. How the machine stood it I do not know. In a garage near Kilrush there were several well-known machines with broken frames. Throughout this district there was great difficulty in getting petrol, as garages are very few and far between, and all charged at a different rate. However, my luck held fairly well, and I was not stranded.

Beyond Kilkee the roads were most terrible, and at one point, coming down a hill, I suddenly saw a trench at the bottom. Violently applying the brake, the rod broke, and the machine and I fell right into the trench. I had a very lucky escape, being quite unhurt, and nothing was seriously damaged.

Trade in motor cycles was at an absolute standstill in County Clare, and even pedal cycles were not allowed on the road before the truce.

Black Head, near Ballyvaughan.

I next went to Galway by Ballyvaughan and round the coast by Black Head, where the scenery was most wild and wonderful. There were very few signposts, and the men in the R.I.C. were most kind in telling me which roads to take and where they were trenched, and bridges blown down. Galway, I found, looked almost the same as any English city, and there was very little damage done.

Mallaranny was the farthest north-west I went. The country round Westport was very wild, and motor traffic was limited to an occasional Ford. Many of the telegraph wires were cut in this district.

Turning south again to Limerick by Athenry and Ennis, the roads again became very bad. Limerick struck me as being a very depressing city. I went on to Killaloe, then along a road by Lough Derg, where there is a wonderful view of the country around.

All this time my machine gave little or no trouble, except punctures, which were not to be wondered at, taking the terrible surface into consideration. In fact, I used up all my patches, and had to wait two days to get some more at Mallaranny. The magneto was very good but by no means waterproof, and I had a little trouble in keeping it dry.

After Mallaranny I got into the Midlands, which is flat country, where the roads are mostly bordered by peat bogs; Athlone, my next place of call, proved a very bright town, and the roads were generally good.

### Poor Visibility on the Mountains.

From Athlone to Cork the road by Maryborough, Durrow, Cashel, Cahir, to Clogheen was then taken over the Knockmealdown Mountains to Lismore. This was a very stiff climb on a rough surface, and at the top the clouds came down, so it was impossible to see more than a few feet ahead, and I had very narrow escapes where two bridges were down. On several occasions I felt very glad that I had got a lightweight machine, which I could pick up and carry over rivers. On coming down the Knockmealdown Mountains on the Lismore side it was steep and deep in mud, which made driving exceedingly difficult. I was more than glad to get to Lismore, and should not care to attempt that climb again. In the hotel at Lismore there were bullet marks in the rooms and all over the walls, caused when there was a raid on the police barracks some months before.

On the way to Cork several armoured cars were met, and by this time I knew that when one comes in sight the thing to do is to pull right into the edge of the road. On arriving

Remains of the bridge which was blown up between Dungiven and Maghera.

**Through Ireland on a Motor Cycle.—**

at Cork I was astounded to see the ruined condition of the city. Patrick Street was like the towns in Northern France and Belgium. Huts had been set up on the sites of large burnt out shops. Business was practically at a standstill.

After a ten weeks' tour I sailed on the s.s. *Classic* for Fishguard. The method of getting the machine shipped is not altogether satisfactory, although mine came to no harm.

I was looking forward to the good English roads again, but the one from Fishguard to Cardigan was as bad as some of the Irish ones; there can have been no reason for this.

Although my machine was only a lightweight—a two-stroke—and the cheapest of its kind made, it could not have been put through a more severe test, and, as I have said, it proved satisfactory in every way; even the belt drive functioned well under all conditions of mud and wet.

The Irish people in both north and south were, without exception, most friendly to me, and everyone hoped for a satisfactory and speedy end to hostilities, which hope has now been fulfilled. W.H.H.

# WHY AN ENGINE ACCELERATES.

## A Simple Explanation of What Occurs when the Throttle is Opened.

NOT long ago my friend "Ixion" put forward some interesting questions, and I saw that two correspondents endeavoured to elucidate the mystery, but neither of them appeared to do so with complete success.

"Ixion" said that a reader wanted to know why an engine accelerates when the throttle is opened, and what single factor produces the initial accelerations under the circumstances outlined.

He went on to explain that the engine should inhale as big a charge when the inlet valve is open for a long period with a small throttle opening as when the engine is turning over rapidly on full throttle.

### Induction.

This is, of course, true enough, for if the inlet valve is open for a sufficiently long time, the cylinder will be completely filled, even when the throttle opening is very small. But this is the *crux* of the whole matter—the inlet valve must be open long enough, or the cylinder will not be filled, and this obviously necessitates a considerable limitation of speed.

Another point is that when the passage of the air across the jet is very slow, only a very small quantity of petrol is drawn from that jet. That is why it is so often necessary to flood the carburetter and close the air when starting. This point, however, does not materially affect the main question, for the engine is assumed to be running at the time when the throttle is further opened and acceleration produced.

### An Explanation.

My view of the case is as follows: An engine is started after the carburetter has been flooded and the air closed. The air lever is then adjusted to a suitable position, unless the carburetter is entirely automatic, and the engine quickly settles down to a certain speed which is governed by the position of the throttle. If it ran more slowly at this throttle opening, it would have time to take in more gas, and this would, with the same load, immediately tend to an increase of speed. If it ran faster, less gas would pass the throttle, it being understood that it is only partly open; the power would be less and the speed would diminish. It will therefore be seen that for a certain throttle position and load there must be a certain definite speed, which may of course vary slightly from day to day, according to the quality of the fuel and the tune of the engine.

We will now suppose the throttle to be opened, not necessarily all the way, but opened a little wider. As the speed of the engine has not yet increased, a larger charge, proportional to the increased opening of the throttle, will be drawn into the engine, and the next explosion will have more power, so also will the succeeding ones, and the speed will quickly increase until the conditions again balance each other, and the amount of gas taken into the cylinder on each induction stroke will be rather less than the first charge after the throttle was opened more widely. This, I think, answers the first two questions.

The third is "Why does a weak mixture make an engine knock?" The answer given by a correspondent is that a weak mixture burns more slowly than a correct one, and, consequently, there is still some burning gas in the cylinder while the next charge is being inhaled, and this causes a state of pre-ignition. It seems to me that such a state of things would cause a blow-back through the carburetter but not a knock, and I fancy that this question is like the ancient query, "Why does mistletoe generally grow on an oak tree?" The answer is "It does not."

### Knocking.

It is quite true that enriching the mixture will often stop knocking, but this, I take it, is a case of the correct mixture causing knocking because some condition is momentarily unfavourable, and this knocking being stopped by a slower burning mixture. Retarding the spark will also stop knocking when it is caused by the speed being too slow for the ignition timing; but if the cause is pre-ignition owing to something inside the cylinder head being heated till it becomes incandescent—the sparking plug point, for instance—then retarding the spark will have no effect because the explosion is taking place before the spark occurs.

### Atmospheric Pressure.

A correspondent says that he can understand more water running through a sluice when it is opened because of the pressure of the water behind, but he thinks that there is no pressure behind the throttle slide. Here he is wrong; there is the pressure of the atmosphere (roughly about 15 lb. to the square inch) behind it, and that, and nothing else, causes the air to flow into the cylinder, picking up petrol and mixing with it during its passage through the carburetter. AURIGA.

# Through Feminine Goggles

## A few Do's, Don'ts and Inconsequences.

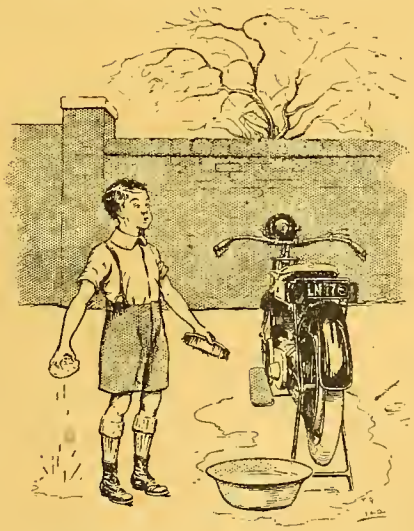
WHAT are we women going to do with 1922? In motor cycling, as in everything else, we cannot stand still. We must either go forward or go back. Since the war, when our sex proved themselves capable of driving cars and motor cycles with skill and intelligence, there has been a tremendous stimulation of feminine interest in motor cycles. Last year it steadily increased, and at last men in general and manufacturers in particular are beginning to take us seriously and study our requirements. This was very noticeable at the last Show, where many low and open frame models suitable for ladies were exhibited.

In spite of all this, we have not yet entirely won approval, especially of the masculine variety, and we must not forget that the real reason is rather a complimentary one. All men are the same in one respect—and quite rightly so—they like a girl to be feminine, to leave the heavy work to them, to be looked after, and regard herself as the weaker vessel. Therefore a nice man hates to see a nice girl wearing breeches with a mannish air, hands in pockets, and walking with Gargantuan strides. He scowls when he sees her pushing a fixed geared machine against compression, and watches with scorn if she breaks down and futilely attempts to locate the trouble herself.

### How we can Alter this Attitude.

First of all, clothes. Now breeches, as we remarked once before in these columns, are safer, warmer, and neater than skirts, particularly on a diamond frame machine. But we need not wear them unnecessarily, on, for instance, an open frame lightweight or a scooter!

"A nice man hates to see a nice girl wearing breeches with a mannish air, hands in pockets and walking with Gargantuan strides."




"Personally had I a small brother, I would probably bribe him to undertake the job."

When we don them, we must remember that it is not the *garments* that men criticise, but the way we *wear* them. We have seen girls who are self-conscious and afraid to move naturally—and others who go to the opposite extreme and stand with feet about a yard apart and wear a battered hat which might have seen service in the W.A.A.C. There is no need for either of these. Let us be sure our boots are a good fit, coat a reasonable length, no frills (mental or actual), and people will like it and agree that it is the most sensible costume to wear on practically every occasion.

### Study our Mounts.

This is a very important point. It's not much use just knowing how to steer a machine. No wonder a man says a girl shouldn't drive if he comes across a disconsolate female sitting in the hedge waiting for help with nothing worse than a choked jet or sooty plug to account for it. We do not imply that we should all take out an engineering certificate, but that we should at least purchase a good motor cycle handbook and get hold of the main principles. Then, with the assistance of an expert (not without—one always gets hit over the first time!) take the engine down and put it together again, also pay some attention to tyres and their treatment and habits! A girl will not only find this interesting and useful, but will feel so much more on a conversational level with her motor cyclist friends. And they will have much greater respect for her intelligence than they have at present.

Another point—and there are slackers of both sexes on this score—let us keep our engines clean. Of course it's just as well to keep the whole machine clean, but human nature being what it is, one must make allowances for it. The thing to remember is, when arriving home after being caught in the rain and covered with mud, although fires and tea and hot bath tempt from inside, we must not push the 'bus into the garage and rush off. A good cavalryman always looks after

**Through Feminine Goggles.—**

his horse first. A good motor cyclist looks after her mount. It is not a *virtue* to clean a machine, but a necessity, and it doesn't matter in the least who does it as long as it's done. Personally, had I a small brother, I would probably bribe him to undertake the job.

### Competitions.

There is much diversity of feeling with regard to competition work for ladies. I can see no good reason why we should not enter club competitions, hill-climbs, local reliability trials, etc. Actual racing is, of course, a different matter, though we are not without supporters in favour of even this. Lt.-Colonel Moore-Brabazon, M.P., is one of the staunchest supporters in favour of our taking part in anything and everything—in fact giving us an open field. Unfortunately, his point of view is not generally shared, but in time, when people get more accustomed to the idea, it may be.

After all, the question is really a very individual one. Some of us may be perfectly fit for ordinary riding and touring, but totally unsuited to the strain of competitions or racing. On the other hand, some of us are probably stronger and healthier than many of the men who enter for these things.

". . . our femininity is useful sometimes. A nice smile goes a long way with the arm of the law. . . ."

Risk of accident is always a big stumbling-block but I think it is exaggerated. We take risks every time we cross Piccadilly Circus.

### Conduct on the Road.

Unfortunately, we are rather inclined to have a reputation for recklessness—or at any rate foolhardiness. It is undoubtedly a temptation, on a good machine, to "let her out." But there is a time and place for everything. Carry on, by all means, on a good road where there is no traffic and not too many corners (and a dearth of policemen), but otherwise we have no right to endanger the safety and property of other people. And in these days when all the best people are "broke" and insurance premiums are high it is as well to consider the machine.

We should never claim the feminine prerogative on the road. The road belongs to *all* motorists, and even then the men had it first. So, as far as that sort of thing is concerned, we are not women—we are merely motor cyclists.

Still, our femininity is useful sometimes. A nice smile goes a long way with the arm of the law if we have been unlucky enough to be caught doing those things which we ought not to do, or *vice versa*.

M. L.-T

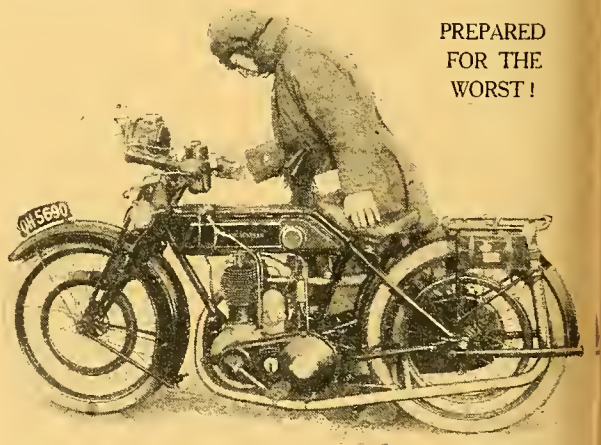
# MOTOR TAX REVENUE AND ROAD CLASSIFICATION.

## Little Prospect of an Early Revision of the Basis of Taxation.

IN the House of Commons Mr. Neal, Parliamentary Secretary to the Ministry of Transport, replying to Col. Sir A. Holbrook, said that, although the information was not yet completely available, so far as an estimate could be formed, it is anticipated that the cost of the collection of the present tax on motor vehicles would be some £400,000. The various methods of taxation by which the necessary revenue could be raised were carefully considered by a committee under the chairmanship of Sir Henry Maybury, the members of which were appointed by the late Minister of Transport from motoring bodies and the motor industry, together with representatives of the Ministry of Transport, the police, the Treasury, and the Board of Customs and Excise. This Committee, with only one dissentient, reported in 1920 against the petrol tax and in favour of the scheme which received legislative sanction in the Finance Act, 1920, and the allocation of the burden amongst the different classes of vehicle was framed by members of the Committee representing the trade and users, and was accepted by the Committee as a whole and by the Minister, unaltered. He did not think the time had yet arrived for a revision.

Replying to Major Glyn, Mr. Neal stated that the provisional classification of roads in Great Britain is now completed, and grants amounting to between £7,500,000 and £8,000,000 have been allocated to highway authorities towards the approved cost of ordinary maintenance and improvement of Class I. and Class II. roads.

The total gross collections for the motor tax account during the calendar year 1921 amounted to about £10,588,000.—*The Autocar.*




Watersplashes of considerable depth were evidently expected by this competitor—A. W. Thrush—in a recent Midland winter trial. Both the inlet and exhaust pipes of his Sunbeam have been extended upwards. Incidentally, the rear end of the tank has a neat leather cover to protect the enamel.

# DETECTING FAULTS IN A LIGHTING CIRCUIT.

## Methods of Tracing the Causes of Failure on a Typical Single-Wire Motor Cycle Electric Lighting System.

By ROAD RIDER.

MANY riders have, no doubt, made their first acquaintance with electric lighting circuits this winter, and the simplicity of the magneto ignition circuit has checked the progress of education in tracking electrical faults, which the old accumulator ignitions had commenced.

The circuits in use on the score or so of electric lighting equipments now marketed vary so enormously that practically every set requires separate treatment for a novice; but in the course of time the makers will doubtless perfect and complete their handbooks on their own productions. At present many installations are sold without any "book of the words"; and certain manuals are so vague and ill-devised that they will not save novices from resorting to professional help.

The purpose of this article is to treat a simple and popular circuit—that of the Villiers flywheel magneto lighting—as an illustration of the principles which underlie diagnosis. In actual practice, most of the faults imagined in the subjoined treatment would never occur—have not, in fact, occurred—either at the works or to private customers. But the circuit is an excellent example to take as an object lesson, for it includes three separate "loops," and is free from fuses and cut-outs, items which are invaluable on more complex circuits, but are apt to puzzle the beginner in the early stages of his study.

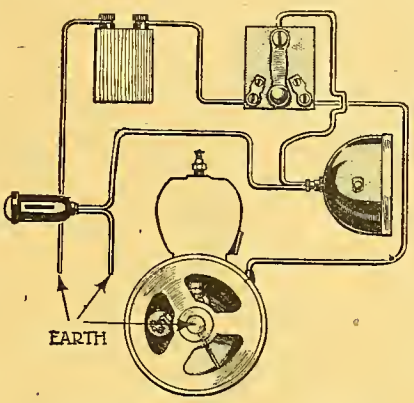
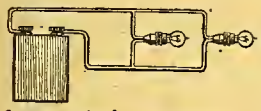


Diagram of circuit in a flywheel magneto and lighting outfit.

In this particular case, lighting current is *generated* by a simple addition to the flywheel magneto, and this current is used to light the lamps whenever the engine is running. When the engine is stopped, the flywheel immediately ceases to generate current, and the lamps are connected by a hand switch to a dry battery.

There are two points to be noted about the wiring. In the first place, it is of the *earth return* type; the frame is used for the negative portion of all three "loops," viz., battery, flywheel, and lamps; all wires contain but one cable; and the bulbs consequently have but one connecting contact on their sockets. Secondly, the head and tail lamp are wired "*in series*," and not "*in parallel*." The difference is indicated in the sketches.


Lamps wired "in parallel."

### Imaginary Troubles Diagnosed.

The following diagnosis of imaginary troubles may now be studied in conjunction with the diagram of the entire circuit:—

1. The rider is starting out. His lamps refuse to light. What is the matter?

As the engine is not running, the flywheel is not generating current. The lamps can only light off the battery.

Is the switch set to the "battery" position?

If not, turn switch to "battery." If switch is in correct position, are the lamps themselves at fault, or does the fault lie in the battery? This is easily tested by starting up the engine in neutral, and turning the switch to the "magneto" position. If the lamps now light, their previous failure depends on the battery or the battery wires. (If the lamps still do not light, we must presently start a new train of thought.)

Suppose first that the lamps light up properly with the engine running, and the switch in the "magneto" position.

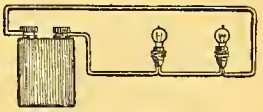
Examine (i.) wire from switch to battery, (ii.) wire from battery to frame, for bad contacts, damaged insulation, and frayed ends. If these wires are perfect, the battery is obviously exhausted, and a new one must be procured. In the meantime, it is possible to use the machine, as the flywheel will light the lamps when the engine is running.

2. The lamps will not light with the engine running.

What a machine gunner would call "immediate action," in this case hinges on whether the lamps will light with the switch at "battery" position. If they will, the lamp circuit is clearly in perfect order, and the area of research becomes very narrow. A glance at the circuit diagram will show that the fault lies along the wire from the switch to the magneto, or in the magneto itself. So the rider's action is: Examine wire from switch to magneto for bad contact, damaged insulation, and frayed ends.

If the wire is perfect, we are driven to suspect the magneto. The wire enters *via* a split brass collar. Is this making good contact? Is it shortened by mud and water? Failing such a discovery, we are driven to suppose that the ignition coil inside the flywheel has failed, and expert assistance or a spare part will be necessary.

3. But suppose that the lamps will not light either on the battery with the machine stationary or on the magneto with the engine running? It is extremely unlikely that both the battery and the magneto, or their respective circuits, should play the fool simultaneously. We are thus driven to suspect the lamp circuit. This circuit takes the following path: centre terminal of switch; wire from switch to head lamp; head lamp bulb: wire from head lamp to tail lamp; tail lamp


Lamps wired "in series."

**Detecting Faults in a Lighting Circuit.—**

bulb: earth connection between tail lamp and frame (*via* its metallic mounting). The return of this circuit is *via* the frame, and if the earth connections are clean and tight, this part of the path will be O.K.

In this circuit the two bulbs are obviously the most vulnerable items. If a good light is available, an eye test may suffice. Many bulbs discolour when they go dud, and in others the damage to the filament may be visible. If the light is poor, or for other reasons the operator cannot be confident of a test by eye, the quickest road test is to slip two spare bulbs into the sockets. If only one spare bulb is available, it may be tried in each lamp in turn, but it clearly cannot solve matters if *both* bulbs are dud, since *one* faulty bulb can interrupt the entire circuit.

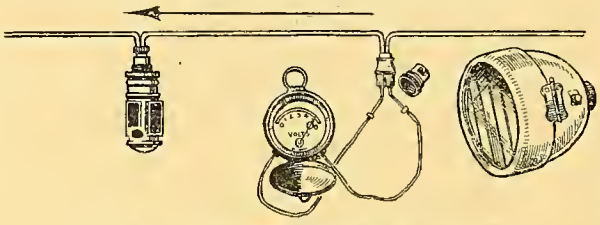
Finally, suppose that the operator possesses no spare bulb and no voltmeter? In that case, his only bulb test will take the form of earthing the wire between the two lamps by sticking a pin clean through its *cable* (not through the rubber covering), and earthing the pin to the frame by means of bare copper wire. This will cut the tail lamp clean out of the circuit, and both bulbs can then be tried successively in the head lamp. If either of them will light up, the rider can immediately proceed minus his tail lamp.

If he has a voltmeter, precise tests are possible. First switch on to "battery," and connect voltmeter from "battery" wire terminal on switch to bright metal of frame. If no current, overhaul the two short battery wires. If current is shown, fault is in lamp circuit.

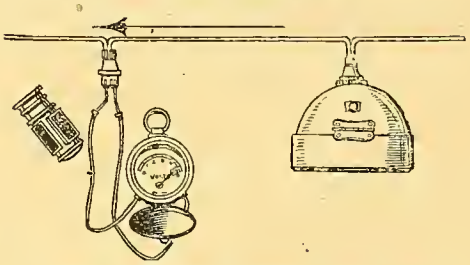
A little clear thinking is required to use the voltmeter intelligently, and the diagram will assist us. We are presuming that the lamp circuit contains a fault; we suspect the bulbs, as being the most fragile items in that circuit; perhaps only one of the bulbs is at fault, but conceivably both of them are burnt out (as might easily happen if the engine were recklessly revved in neutral). Dud bulbs are shown as gaps; the top diagram shows the lamp circuit broken by a dud head lamp filament. Remove the bulb. Connect the voltmeter to the two terminals of the head lamp. If current is shown, a new head lamp bulb will restore the circuit (use the tail lamp bulb in the absence of a spare, earthing the tail lamp wire as previously described).

The second diagram shows the circuit broken by a dud tail lamp bulb. In the previous test (substituting voltmeter for head lamp bulb) no current will be shown. The next step is to remove the tail lamp bulb and connect the voltmeter in its place, one prong to the lamp connection and the other to the body of tail lamp. If current is shown, the head lamp bulb must be O.K., and the tail lamp bulb is dud. If no current is shown, one of two faults may exist. Perhaps the earthing of tail lamp is faulty; this can be proved instantaneously by connecting the voltmeter with one prong to the tail lamp connection and the other prong to bright metal on the frame. If current is now shown, tail lamp earth connection is faulty. Otherwise, the head lamp bulb and the tail lamp bulb are both dud; no current can be obtained at the tail lamp when the head lamp bulb is dud.

VOLTMETER TESTS ON LAMP CIRCUITS.



Head lamp bulb faulty; voltmeter shows current.



Tail lamp bulb faulty; voltmeter shows current.

(If no current is shown at either holder, testing both separately and with the other bulb *in situ* in each case, it indicates that both bulbs are faulty.)

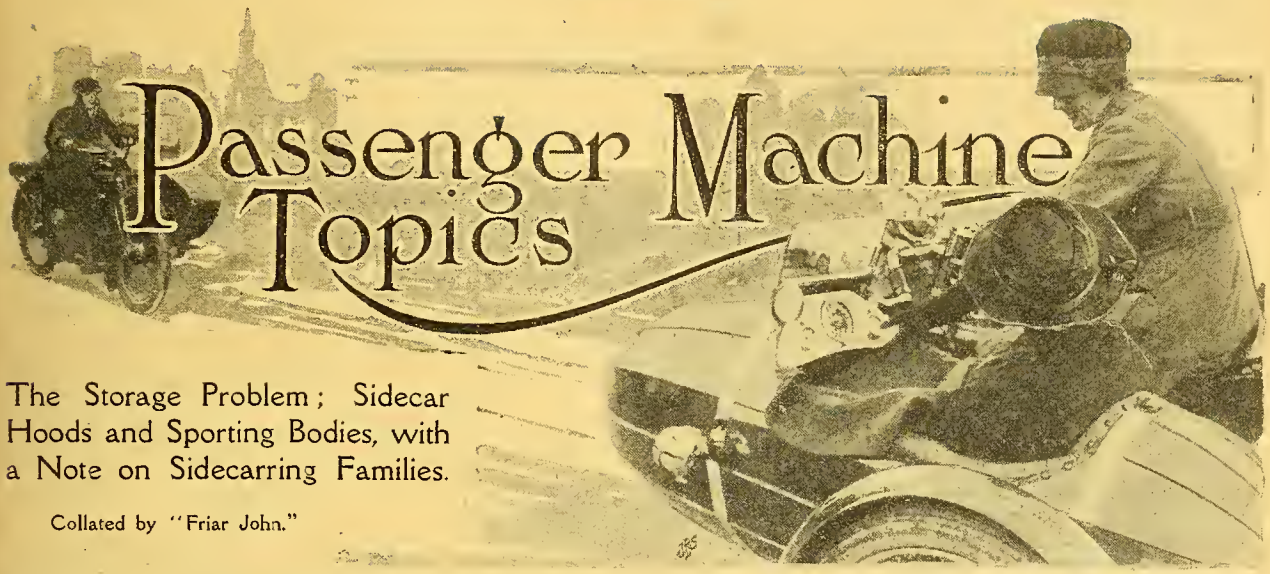
4. There is one more imaginary circumstance to be reckoned with. The rider goes out to his garage, switches on to "battery," the head lamp lights, but not the tail lamp. He starts his engine, switches on to "magneto," and obtains the same result. What is amiss? *Not* a dud tail lamp bulb, as many novices would imagine. As the diagram shows, a dud tail lamp interrupts the whole lamp circuit, and would prevent both lamps from lighting. In fact, the filament of the tail lamp bulb may be regarded as part of the earth return from the head lamp, as they are wired "in series." The fact that the head lamp lights with the tail lamp remaining dark is clear proof that there is a short to earth (*i.e.*, the frame) somewhere along the wire between the two lamps, probably a burnt or chafed patch on its rubber covering. If this short is traced and wrapped with insulating tape, the tail lamp will light up in 999 cases out of 1,000.

It need not, of course, be imagined that these troubles would actually occur even in years of riding; but knowledge breeds confidence.

## NUMBER OF MOTOR CYCLES IN GERMANY.

OUR French contemporary *L'Auto* has published some interesting figures relative to the number of motor cycles in Germany. The particulars cover the period from 1907 to 1921, and show some rather extraordinary fluctuations with a very slight increase in the number. In 1907 the number of motor cycles registered was 15,700. For the next year there was an increase of approximately 4,000. In 1909 the increase was rather over 1,000, and in 1910 there were 22,283. After this date there was a steady drop, and in 1912 there were but 19,958; 1913 and 1914 show an increase, the number registered before the war being 22,457. In 1920, after the war, there were only 9,369, but in 1921 26,729.

# Passenger Machine Topics

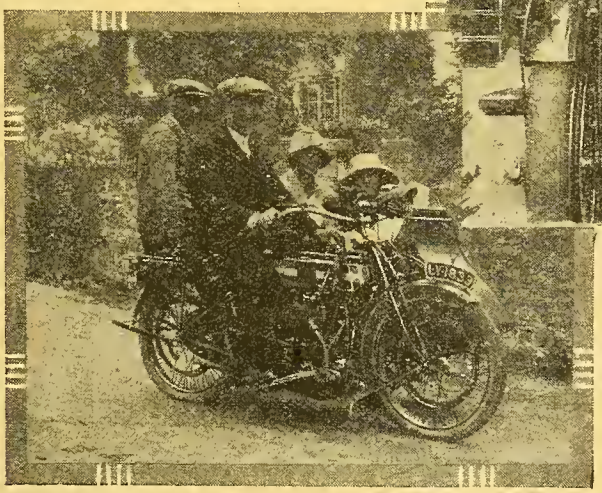


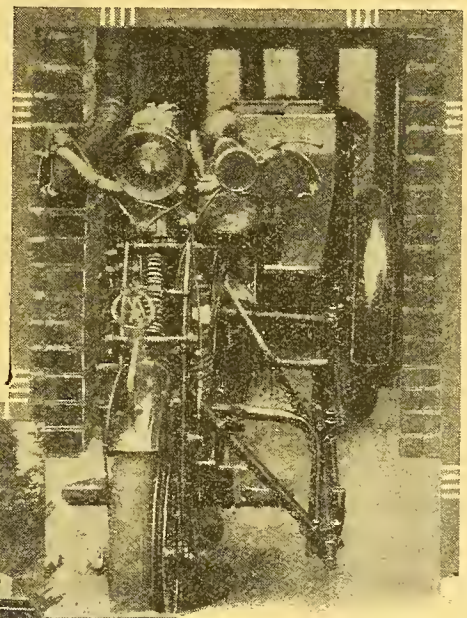
## The Storage Problem; Sidecar Hoods and Sporting Bodies, with a Note on Sidecarring Families.

Collated by "Friar John."

DURING the last month or so I have inspected some scores of new houses North, South, and West of London, with an idea of purchase, and have been astonished at builders' lack of forethought. Semi-detached villas planned to save labour, admirable in their way, but of course depressingly characterless, are still being erected without space being allowed at the side for the passing of a sidecar. And where garaging is four shillings a week or more, as it is in some of the London suburbs, this lack of ground space is a decided drawback

An obvious solution to the garaging problem is the use of a folding chassis such as the Paragon and Hopley. One user of the latter—Mr. C. H. Mauger, of New Cross, whose machine we reproduce—speaks in high praise of his outfit. His summary of its advantages is of course simply the advantages of possessing a garage at home, for he says, "You can do your own repairs in your own time, and the machine being kept cleaner and more frequently tuned up will command a better price when sold"—quite true. He says also, "If you get trouble on the near side of the machine you can remove the body in a second or two and get to work without standing on your head"—pertinent as well as an indictment. So besides adding two feet to your entrance this sidecar actually possesses other advantages over the common or garden sidecar.

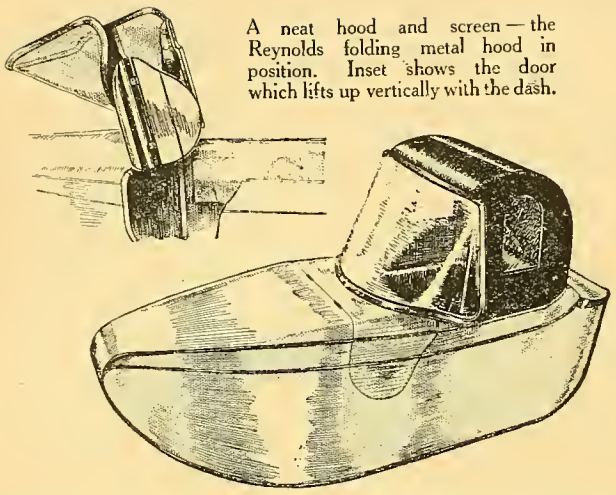




(Left.)—This illustration proves that Mr. C. H. Mauger has confidence in the folding sidecar, for journeys with a load of "four-up" are frequently undertaken on his B.S.A. (Right.)—Body detached and chassis folded back to allow exit from a 3ft. door.

One does really wonder why the good features of the folding chassis are not more widely known, for there are hundreds of sidecar owners who would not think the trouble of detaching a body too much if by so doing a saving of £10 or £12 a year could be effected.

THE sporting sidecar shown in the heading is attractive because it does not o'erleap the bounds that separate the sporting from the ordinary sidecar. I have seen a flapping hood and a large screen fitted to a "dirigible" pattern sporting body, an effort just about as incongruous as elastic side boots and mittens on a "flapper." Observe also the decorative screen, the dashboard with clock, speedometer, ammeter, and mileage recorder—a sufficient collection of instruments to amuse the passenger should conversation and the landscape pall, besides adding to the outfit's appearance.

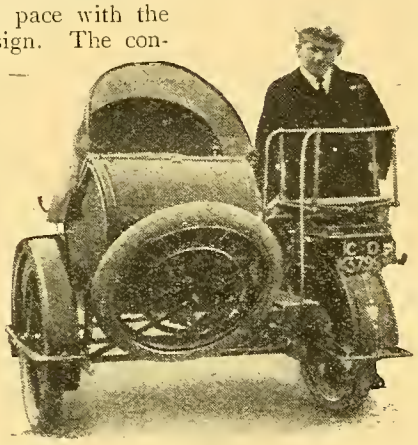


A neat hood and screen — the Reynolds folding metal hood in position. Inset shows the door which lifts up vertically with the dash.

WE have advanced a long way in sidecar comfort since the coach body was first introduced, but improvements in hoods have not kept pace with the improvements in chassis and body design. The conventional sidecar hood is usually rather an ugly, cumbersome affair restricting the entrance of rain but failing to protect completely the passenger, in the same way as a car hood fails unless well valanced.

The design shown above by Mr. S. T. Reynolds is a commendable effort to produce a combined hood and side screen, and, like the roll-blind hood shown on the Sidecar Body Co.'s stand at Olympia last November, is made of metal. Questions of rattle immediately suggest themselves, but by the provision of guides inside the body against which the hood is tightly wedged, any tendency to vibration is eliminated. No doubt the main object Mr. Reynolds had in mind was neatness of the outfit when the hood was not in use, for being hinged on the body immediately behind the screen, it folds out of sight, following the contour of the back rest.

This device in conjunction with a sporting sidecar would answer very well indeed, although compared with the standard hood the space is rather restricted; but who after all wants the standard ugly hood on a fast sporting outfit? This design provides protection which when needed is usually needed very badly, and the sacrifice of space on those occasions is not thought of. An interesting detail in connection with Mr. Reynolds's sidecar lies in the construction of the door, which is hinged to the dash and lifts therewith. Very shortly this hood and screen will be placed on the market by Mr. Alfred Goad, 122, Maida Vale, London, W.9.

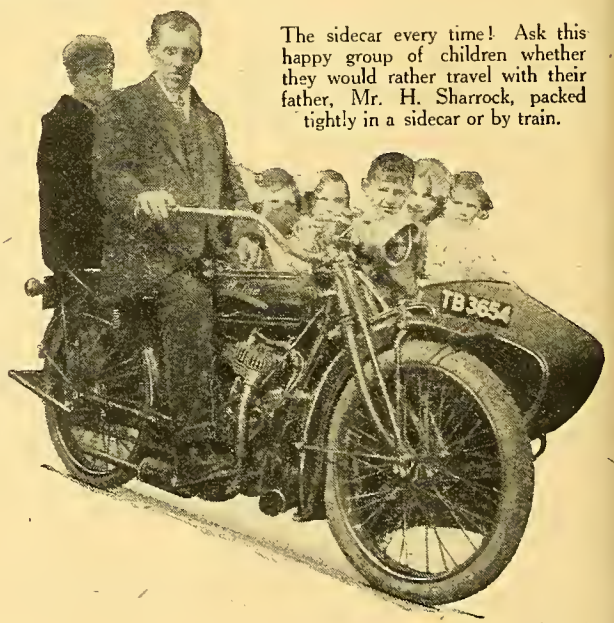


Protecting the young pillion rider. A naval officer's "safety first" device.

NO doubt Lieut. Tope was wise in railing in the Tan-Sad on his B.S.A. outfit, for it is a "safety first" precaution, and from experience "safety first" has probably been found to pay. This little device, faintly suggestive, too, of a ship's bridge, gives the youthful occupant a greater sense of security besides relieving the driver of a certain amount of anxiety, especially if the "pillionite" be a mischievous boy of nine or ten years of age. This last remark was inspired, by the way, in consequence of an incident on my last sidecar ride, when the pillion passenger (eight years old) was caught whilst at speed leaning over the rear mudguard in an effort to wear a hole in the tyre with a piece of slate pencil.

THERE is something irresistibly attractive about a sidecar full of youngsters, and I have no use whatever for the argument against such overloading, providing, of course, the sidecar connections are safe. Mr. Hugh Sharrock is to be congratulated on his happy family and also on his determination to give the kiddies sidecar fun instead of bundling them off on their holiday by train and he and his wife going by sidecar. The photograph showing the "usual complement" was taken on a holiday run last autumn.

MANY a motor cyclist can be forgiven for using words more forcible than polite when a brand new cover has been lacerated by a sharp flint. We have suffered cuts, one being an inch across and another of the same lateral dimensions but so deep that it punctured the tube in two places. The first of these cuts was filled with U-need-it, which has stayed in position for the last three to four hundred miles. The second cut has been similarly treated, but has not had such a long trial. U-need-it is very simple to use, and certainly appears to do what is claimed for it, both for cover and inner tube repairs.



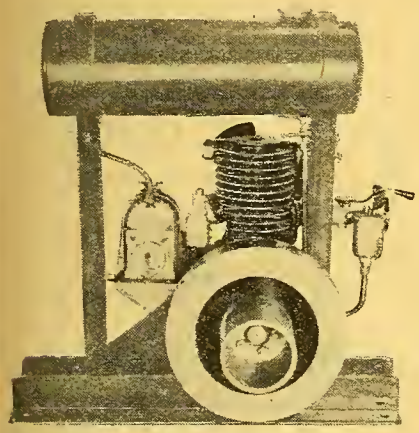
The sidecar every time! Ask this happy group of children whether they would rather travel with their father, Mr. H. Sharrock, packed tightly in a sidecar or by train.

# BRITISH INDUSTRIES FAIR.

## Interesting British Motor Cycles and Accessories Displayed for Overseas Buyers.

OPENED on February 27th and continuing till March 10th, the Birmingham section of the British Industries Fair is held at Castle Bromwich Aerodrome, where ample garage accommodation is provided for visitors.

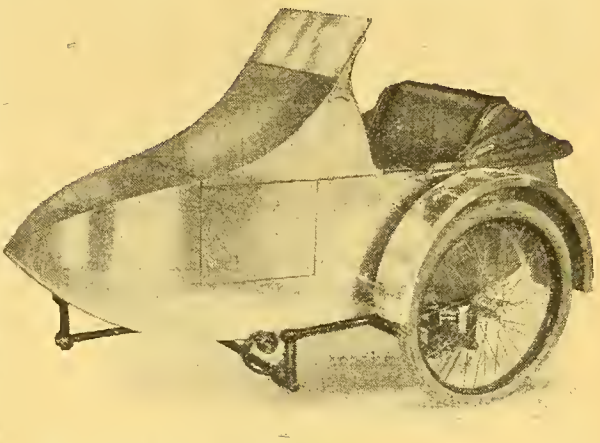
From the motor cyclist's point of view the number of exhibits is meagre, and the stands are so widely distributed and mixed amongst displays of household fittings, hardware, and machine tools, that it is difficult to obtain a fair idea of the extent to which Midland manufacturers are concerned.



An air-cooled Grigg two-stroke power unit adapted for stationary engine work.

Of complete motor cycles there is little novelty. A full range of B.S.A. machines is perhaps the most imposing exhibit. Three 4½ h.p. Quadrants are shown, two being chain-driven models with sidecars attached, the solo machine having final belt transmission. The sporting Coulson model with o.h.v. Blackburne engine is attracting some attention, and a neat coupé sidecar is exhibited on the same stand with 4 h.p. and 2¾ h.p. side valve machines.

The Grigg miniature machine is staged, but has undergone no important modifications since Olympia, though a simple and moderately priced engine unit, suitable for lighting, pumping, etc., is shown. Another neat lightweight exhibited is the Atlas, which has been already described in *The Motor Cycle*; it is manufactured by the Aston Motor and Engineering Co., Ltd., of Whetton Lane, Aston, Birmingham. Its little two-stroke engine has a bore of 55 mm. and a stroke of 60 mm. (142.5 c.c.). Chains are employed to drive the magneto and countershaft, both being protected by a common cast aluminium case. Final drive is by belt, and with 26in. × 2in. tyres the machine sells at the moderate figure of £31 10s.



Ample protection is afforded by the up-swept hinged dash of the Orion sidecar—one of the few new designs on exhibition.

### A Water-cooled Two-stroke.

A complete range of Blackburne engines is available for inspection, and Idris John Motors, Ltd., 1, Central Buildings, London, S.W.1., show the well-known 292 c.c. Union two-stroke engine, and also a 350 c.c. water-cooled model for stationary work. Complete and sectional models of the Sun-Vitesse rotary valve engine are also to be seen.

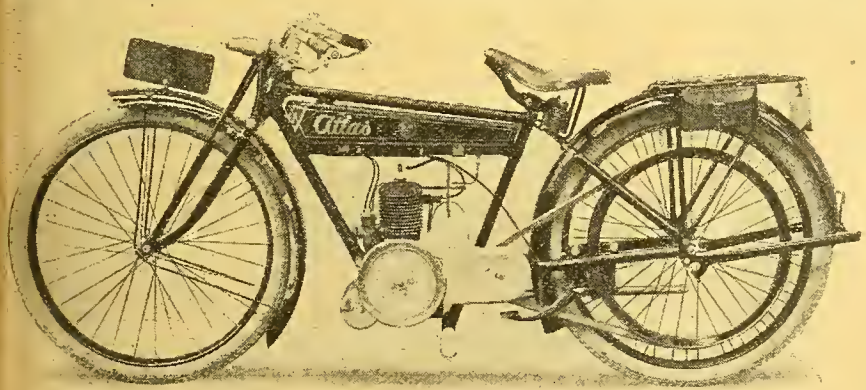
Gear boxes are represented by the Moss Gear, shown with foot or hand control, and Messrs. Accles and Shelvoke, Ltd., Talford Street, Aston, Birmingham. The latter firm show a strongly constructed three-speed box with cork clutch and spring tooth kick-starter.

A very taking polished aluminium sidecar is exhibited by the Orion Sidecar Co., of Acton, London, W.3. Access to the well-upholstered seat is obtained by raising a hinged scuttle dash—on which is mounted a Triplex screen—before opening the door. A glove and map locker is placed in the dash, and there is a very large locker in the back of the body, the opening of which is doubly protected by the lid and the hood when the latter is folded down. Somewhat unusual springing is adopted, for while coil springs support the rear part of the body, short C springs are used in front. The chassis is rectangular and is provided with four points of attachment.

### Accessories.

Amongst the accessories, Easting windscreens are so familiar as to need no description. Maplestone forks for all types of machine, Webb brakes for both front and rear wheels, and Moss gears are all shown on the same stand, together with a Sun-Vitesse machine equipped with these accessories. The Webb combined rear brake and cush drive is a very fine piece of work, the shock absorber being composed of compression and rebound springs neatly enclosed in the driving side of the hub.

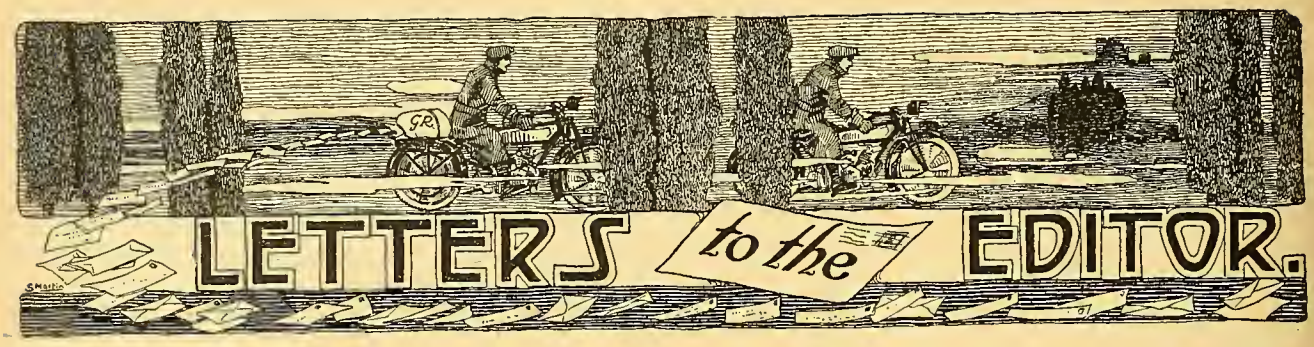
Dekla specialities, chiefly horns, lamps, and other handle-bar fittings, are on view, and the Beadless Tyre Co., Ltd., of Lloyds Bank Chambers, Jamaica Row, Birmingham, shows a simple and effective double capacity pump and the Amplokon spark intensifier. C.A.V. magnetos and dynamos and a few other useful accessories may be discovered in various parts of the three great buildings.




Introduced last autumn, the £31 10s. Atlas lightweight made its first public appearance at the British Industries Fair, Birmingham.

## TOURING IN IRELAND.

MANY inquiries have recently been addressed to the R.A.C. on the possibilities of motor touring in Ireland, and it is interesting to hear that a goodly number of American visitors have sought information as to the probable requirements in connection with the licences, Customs duties, and so on. In the present transitional stage it is not possible to give any definite information nor to predict what the licensing, Customs, and other formalities are likely to be.




The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

## *SIDECAR FUEL CONSUMPTION TESTS.*

Sir,—The correspondence between Mr. Booth, of Harrow Road, and Mr. Loughborough, of the A.C.U., is surely the most amazing thing which you have published.

What jurisdiction has the A.C.U. over the liberty of the subject, and why? Also, since when? Words frankly fail me on an occasion such as this.

On reading Mr. Loughborough's letter again I am truly thankful that my modest sidecar outfit is not painted pink, otherwise the A.C.U. might object. However, enough of this, and hats off to Mr. Booth, to whom I am writing by to-night's post promising support of his trial in spite of the complete alphabetical list of associations.

In conclusion, may I say that I was regretfully compelled to give up membership of the B.M.C.R.C. owing to the A.C.U. informing me that I could not ride in one of my own club's race-meetings unless I subscribed 5s. to its funds for some obscure purpose? I paid, but it was the first and last time. I am now my subscriptions in pocket and retain my liberty as a freelance motorist.

It is indeed a sorry thing when an association formed for the specific purpose of mutual help forsakes the path of fellowship for the sordid road of financial gain.

J. L. HENRY.

Sir,—In view of Mr. Loughborough's letter, I shall be glad to know if I may go out for a ride on my motor bicycle next Sunday morning—if it is fine?

Ilford. V. CAREFUL.

Sir,—There appears to be no reasonable objection to Mr. Booth's proposal; in fact, such a test would be most instructive to all, and especially to many, like myself, purely recruits who do not belong to the A.A. or the A.C.U. and are probably undecided which of the unions to join.

Personally I am unacquainted with the rules of either association, but if by any chance there happen to be regulations interfering with the liberty of the non-member, then my final choice will not be the A.C.U.

W. LOVETT.

Sir,—On the face of it, Mr. Loughborough's letter is rather remarkable, and if his argument is valid motor cycle clubs which hold gymkhanas, etc., open to all comers, as they often do, will have to proceed with greater caution in future. So will firms which organise little outings, sometimes naming them "trials," for riders of their particular machines. In these cases, too, the offence will be more heinous, for usually prizes are awarded. This we understand will not be done in the case of Mr. Booth's event.

Again, parties of unattached enthusiasts who foregather to make mountaineering attempts on local precipices must go warily in future if they are not to arouse the ire of the Auto-Cycle Union. In fact, if any more readers discover freak hills—a pastime which has enjoyed some popularity recently—it would seem advisable that they keep the fact a dark and deadly secret. A letter to *The Motor Cycle*, or any other publication, would apparently constitute the first steps to organising an open competition. B. ILGE.

London, W.C.2.

Sir,—I sincerely hope Mr. Booth will stand up for his suggestion, despite the views of the secretary of the A.C.U., which strike me as being absurd, considering he has no connection whatever with that body. This test, I think, should prove of use and interest to sidecar owners, and I sincerely hope nothing occurs which will prevent its taking place.

WM. A. MOSELEY.

Sir,—I am a member of the A.C.U. who, beyond paying an annual subscription, does not hear much of the workings of my society.

I should like to ask how the Union has the power, since it is neither a Government nor a police organisation, to prevent a party of motor cyclists carrying out any activity (such as a consumption test) which is within the law.

G. O. TIPPETT.

Sir,—But for the fact that your correspondent, Mr. H. S. B. Booth, definitely asks for readers' observations upon the letter addressed to him by the A.C.U. and dated February 13th, 1922, I should not presume to meddle in matters not directly any concern of mine.

However, the attitude taken up by the A.C.U. is, in my humble opinion, quite contrary to the spirit usually evinced by that hitherto broadminded body, and I regard their action as mean-spirited, entirely uncalled for, and officious to a degree. One cannot but imagine that someone has acted very hastily in paying Mr. Booth the indirect compliment of taking so much notice of what appears to be a private matter between private motor cyclists by causing such a letter to be sent.

Were the letter addressed to a person or body of people who had agreed to conform to the rules and regulations of the A.C.U., then not a word could be said, for the A.C.U. would be very much within their rights.

I imagine Mr. Booth will please himself whether he holds or promotes trials or competitions of any sort or kind, and will pursue his own course and allow the A.C.U. to pursue theirs; but I would like to draw his attention to the fact that I consider that members of the A.C.U. or affiliated clubs are likely to take the view that they are contravening the *spirit* of their membership if they support trials which the A.C.U. chooses to discourage, and this is the view that I myself should take were I interested in the objects of Mr. Booth's trial, which incidentally I am not.

The above, however, does not alter my opinion in the least of the action the A.C.U. have taken in addressing to Mr. Booth a letter which I consider is in subject matter entirely outside their rights, and officious and dictatorial in tone. If one were to concede that the A.C.U. were within their rights, which I do *not*, even then I consider that it would have been somewhat more discreet and considerably more dignified to have let the matter pass.

Lastly, let me say that no one recognises more readily than I the energy expended and the good work done on behalf of motor cyclists by the A.C.U., but I consider that in this instance they have overreached their function and behaved tactlessly.

DONALD WATSON.

Sir,—In all probability Mr. Booth is not a member of any motor cycling club, and one can imagine his surprise and comments on receiving such a letter.

A motor cycling club, if affiliated to the A.C.U., agrees by the signing of the affiliation forms to conform to the rules of the Union, one of which is to refrain from running open competitions without a permit, but surely the secretary of the A.C.U. is out of his ground when he warns a private motor cyclist, a free citizen to wit, that the A.C.U. will not allow a private competition amongst private motor cyclists which he proposes to organise to take place, simply because it does not see fit to grant a permit.

The point seems to me to be this: If Mr. Booth were acting on behalf of an organised club, the A.C.U. would have jurisdiction over the competition, but since he is a private individual who has no interest in the A.C.U., he is entirely beyond its jurisdiction, and can do what he likes.

Until such time as the A.C.U. has full control over the actions of all those who use the motor cycle, such a "mail-fisted" letter as that written to Mr. Booth can only do harm to the A.C.U., heap ridicule upon its head, and cause motor cyclists to ask, "Who are these people?"

In conclusion, I would say that, although a keen competition rider and a member of three motor cycling clubs, I have no interest in Mr. Booth's petrol consumption test, and doubt whether it will serve any useful purpose, except provide an enjoyable afternoon to those who participate in the test.

But, nevertheless, let the private motor cyclist have the right to own his own machine and control his own actions. Go ahead, Mr. Booth. RORARDO.
Romford.

[The above letters are typical of a batch received by *The Motor Cycle* on the subject. In an article in this issue, the A.C.U. secretary expounds the attitude of the governing body toward private competitions.—ED.]

### *REGARDING THE LOW TWO-STROKE.*

Sir,—I read with interest your description of the Low motor cycle, and, while appreciating the grit and resources one must have to carry through such a design, there were a number of points that immediately suggested themselves.

Firstly, to decarbonise would mean taking the whole power unit from the frame, a tremendous job in itself for any unmechanically-minded person. True, the machine scores on the grounds of cleanliness, but this is surely outweighed by the oil and petrol consumption and initial cost, not to mention weight and frictional resistances of such a design.

Are there any patented features about the design?

Personally, I think it is up to Professor Low to produce a machine which would conform more to his theories regarding simplicity and economy that he so often gives voice to in the motoring press. ANGUS McGREGOR.
Upton, Birkenhead.

Sir,—As far as I can see from your illustration, the front forks are the same as those described by me in *The Motor Cycle* of August 8th, 1918.

It is a pity Professor Low did not fit a spring frame to be able to take full advantage of the front forks.

Perhaps he will be glad to learn the forks can be improved upon by using shackles, as on the old B.S.A., and pivoting the middle of the spring to the front end of these, as Mr. Montgomery has also thought out but not yet made.

I further refer to my letter in *The Automobile Engineer* of January, 1921, under Correspondence.
A. VAN DER MEE, W.I.
The Hague.

### *MOTOR CYCLES FOR BOYS AND GIRLS.*

Sir,—As a steady, middle-aged "potterer," I have read with alarm the article, "Motor Cycles for Boys and Girls," by Lt.-Col. Brereton. Surely we motor cyclists have enough to bear from road-hogs, chars-à-bancs, etc., without our terrors being added to.

I think I can claim a greater knowledge of boys than Lt.-Col. Brereton, as in the course of my duties I come into personal contact with the boys of 500 schools every year, and my experience teaches me that the average boy of 14-16 years of age is a reckless, irresponsible dare-devil, entirely devoid of nerves. I will not accuse him of being selfish, but he is certainly thoughtless. (What boy isn't?)

It was this very recklessness, dare-devilry, call it what you will, in our young pilots (Heaven bless them!) which gained us our supremacy in the air during the war, but we don't want it illustrated on our roads.

The law which grants licences to boys of 14 must certainly be a "hass."

The motor cyclist who is shortsighted, deaf, or crippled, knows his limits, and the rest of us have little to fear from him, but the average boy of 14 wants speed, and knows no limit.

Fortunately, we see very few boy motor cyclists on the road, which makes me think that parents are evidently of the same opinion as XH 3296.
Canterbury.

Sir,—I do not at all agree with the author's conclusions. The age is far too young; seventeen is quite early enough. Why should nippers have placed in their hands such an expensive toy? Let them earn them; then they will appreciate them.

I say a pedal cycle is good enough for youths. They have the energy necessary for the propulsion, and it is better for their health in every way. MIDDLE-AGE.
Hull.

Sir,—I read with great interest your article on "Motor Cycles for Boys and Girls" and agree with what Lt.-Col. F. S. Brereton states. I am sure there are many readers like myself who are only a bare 15 years of age, and who have no chance of owning a motor cycle before they are 20 years old—and then perhaps some old model which requires "slight adjustments." L. C.
North Ashton, near Wigan.

Sir,—Your readers may have noticed the number of "junior" motor cyclists who are on the road to-day. By "junior" I mean boys of 14 to 17 (*not* the young "bloods" who sizzle by and scare our maiden aunts) and girls of 17 onwards.

Are these future supporters of the motor cycling community being neglected? Are suitable models being provided for them? Well, perhaps so on the solo side, but when one considers sidecar models, it certainly seems that this section is being let alone too much. "DIAPHANTUS."
London, N.W.7.

THE TOURIST AT BROOKLANDS. Brooklands, even in winter, is far from being a desolate, barren waste, attractive only to the speed man; as the picture conveys, beauty lurks in every corner.

### T.T. RACES FOR PRIVATE OWNERS.

Sir,—As a solution of the problem, could not the authorities be approached to allow a race of one I.O.M. lap (37.75 miles) after either (or both) of the existing races, according to number of entrants. The start could be made from the top of Bray Hill a short time after 3.15 p.m., the competitors being followed by the official car.

This would only necessitate the course being kept clear for a matter of an extra hour or 90 mins.

Lytham. T.T. O.H.V.

Sir,—This is clearly a test for the old saw, "Where there's a will there's a way." We have had some cold water and pessimism. Where are the optimists?

W. R. FIND.

### HEAVY SIDECAR FUEL CONSUMPTION.

Sir,—In reference to the letters which have appeared in your columns recently with regard to the two-seater Matchless outfit, I should like to say a word in favour of this most excellent machine. Curiously enough, my consumption figure is exactly the same as that of "A.F.S.," *viz.*, 54 m.p.g., but my usual load is heavier than his, and includes passengers (28 stone), spare tins of petrol and oil, accumulators, and full tool kit. Usual disclaimer.

Ealing, W.5. TWO-SEATER.

Sir,—Most carburetters can be tuned to give a satisfactory consumption at a given throttle opening and under particular atmospheric conditions, but few will give a satisfactory *average* consumption under varying engine speeds, road conditions, and atmospheric conditions.

One of these few instruments is the Binks, by means of which I have, during the past year, obtained an average consumption of 65 m.p.g. with an 8 h.p. Enfield-Jap outfit, with wife, two children, and a dog on board.

The essentials for a good average petrol consumption are:

(1) The correct proportions of air and petrol at all throttle openings, which means the correct ratio of choke tube to jet size, both being variable.

(2) A clean engine.

(3) No air-leaks in the induction pipe, valve caps, or sparking-plug.

(4) Properly adjusted road wheel bearings and brake shoes, so that the wheels spin quite freely; and transmission neither tight nor loose.

(5) A strictly moderate average speed.

The usual disclaimer.

NO. 861.

Colchester.

Sir,—I see that "Acme" is finding difficulty with a W.S.R. jet in conjunction with an 8 h.p. J.A.P. engine.

Now I have used one on my Matchless-Jap outfit for two years, and find it a great boon, my m.p.g. for the last 6,000 miles working out at 56, including evaporation, etc.

The fault I found with this jet—and from "Acme's" letter he is obviously up against the same difficulty—is that the thread on the needle is too coarse a pitch, so that a very small movement of the knurled disc will make a lot of difference—in fact one quarter of a revolution, *i.e.*, 90° either way of the correct setting, will stop the engine. Another point is that there is no zero point marked, so that if some curious cuss spots a new knob on an unattended machine and twiddles it, as he probably will, great difficulty may be experienced in re-starting.

The cure for both these troubles I have found is to braze a small 2in. arm made of ¼in. brass rod exactly at right-angles to the normal setting. This in my case admits of a movement of 120° before striking any obstruction. A fine setting is thus obtained, and the zero point is instantly found.

ARCHIE HANDFORD.

Sir,—I have been getting over 70 m.p.g. from my 8 h.p. Acme outfit, not on long journeys, but short trips of 20 to 30 miles. The only alteration made to my machine was the fitting of a set of Flexikas. The carburetter is the Amac 2-lever, with a 28 jet.

Northampton. ANOTHER ACME.

### STEERING BALANCE.

Sir,—I was very pleased to see the article on steering balance by "A.E.S.," as it is a point that has been sadly overlooked by a large number of designers.

I know nothing of frame design, but should like to suggest that most of the best machines in this respect carry the weight pretty far forward, and have the steering head *well over the front wheel, and not very steeply raked.*

The Indian Scout is a good example of these features, and steers particularly well, I believe.

My first machine, a 1907 Triumph, could be ridden round sharp bends with hands in pockets, while I cannot let go the bars of my present mount, a 1919 model of the same make unless the speed is over 30 m.p.h.

Is there any way of improving the steering of an existing machine? I have already tried adjusting saddle and bars.

Clare, King's Co. J.E.G.

### WHEN BORED WITH MAIN ROADS.

Sir,—With reference to the freak hill near South Harting, Sussex, I presume your correspondent means that road which ascends the N.W. side of Beacon Hill; it cannot be very steep, as I have climbed it comparatively easily on a Dunelt and sidecar; but I must own to failures with other machines in previous years. From the 1in. Ordnance map the average gradient over the worst 300yds. is 1 in 5, although the centre portion between the bends is only about 1 in 10, thus making the corners stiff.

Other interesting hills in this locality are:—

Sussex.—1. Due south of Elsted, with 200yds. 1 in 4 (Eastern slope of Beacon Hill). 2. Didling Hill, over ½ mile averaging 1 in 7. 3. Bignor Hill, south from Bignor, steep section of 1 in 3½ (?). 4. South from Heyshott, nearly ½ mile, 1 in 5.

Hants.—1. South side of Stoner Hill, N.W. from Lythe farm. 2. S.W. from Liss. Up through Oakshott Wood.

C. J. EVERSHED.

Sir,—Referring to the South Harting hill, I was so surprised to hear that it is unclimbable that I looked up my maps to make sure that it is the same. I found that it was the same hill that I have climbed and camped on at least a dozen times in the last few years. My present outfit is a 5-6 h.p. Rudge Multi, with touring sidecar.

W. CLAPHAM.

Sir,—I have been very interested in the letters re Beacon Hill off the Elsted Road, by Mr. Reg. S. Fowler and Mr. L. J. Fleming, of the West Sussex Motor Cycle Club.

On Sunday, February 12th, I, with three other friends, decided to sample this unclimbable hill. A 3½ h.p. Norton, 2¾ h.p. A.J.S. and 1914 4¼ h.p. James sidecar, with passenger, all made successful climbs, a Rudge Multi only failing.

As we are thinking of starting a motor cycle club in this district, we should be delighted to meet the West Sussex Club at this hill one Sunday afternoon, and if they are not satisfied with this hill we can show them another which will, I think, tax their machines even more.

If Mr. Fleming will write to me (c/o the Editor) and suggest a date, I will bring as many enthusiastic motor cyclists as possible. W. S. LUKER.

### GEAR QUADRANTS AND KNEE-GRIPS.

Sir,—I was interested in "Ixion's" complaint of the gear quadrant on his Sports Sunbeam being in the way of his knee. This, I notice, is a common fault on eight out of ten machines, either with the quadrant or the gear lever.

I pointed this out to one manufacturer at the Show, remarking on the impossibility of fitting knee-grips. He replied that knee-grips were useless, liable to give one about fifty compound fractures of the thigh and pelvis, and that he never used them, even for speed work; so I came to the conclusion that the people who make grips either do it for ornament or to protect the tank.

The manufacturer then went on to say that of course if I specially wanted the lever moved I could have it put anywhere! SPORTS MODEL.

*Owing to the exceptionally heavy demands on these pages, letters should be as brief as possible and, as a rule, should not exceed 200 words.*

## REAR LIGHTS FOR ALL.

Sir,—In answer to Mrs. Margaret M. Stancer, I have been motor cycling and car driving for the last fourteen years, and even in the early days did not dispense with a rear lamp on my motor cycle, as I found that at night I rode very much more slowly than in the day, a thing which does not happen to the majority of car drivers.

Until the price of petrol and the present taxation prevented me, I used to drive a 24-40 h.p. Fiat, and found that after nightfall I invariably overtook the majority of motor cyclists, who do not seem to ride after dark at a speed of more than 20-25 m.p.h. J. M. CLEMENTS.

Sir,—To my mind it is imperative that *all* vehicles, either fast or slow moving, should carry rear lights.

The condition of many of our main roads is, at present, sufficiently vile to necessitate even a fast solo rider slowing down if he wishes to retain his saddle, and it is then that he is likely to be overtaken by a car, which, on account of its size and extra springing, could hold the road at a fairly good speed.

A friend of mine was recently "rammed" in the rear owing to his rear light having "bobbed" out, and I fancy he would exhibit half a dozen red lights rather than have to again trundle his machine along with a buckled wheel and a damaged mudguard. CALTHORPE.

Liverpool.

Sir,—I, amongst hundreds more, cannot but agree with Mrs. Stancer that those who press for a new law to compel solo machines, etc., to carry a rear light are working in opposition to the interest of motor cyclists (but not in opposition to the trade).

If any motor cyclist is at all nervous, what prevents him or her carrying a rear light? But do not make it compulsory.

E. A. C. MOON.

Sir,—I am surprised that a number of your recent correspondents consider slight personal inconvenience the chief factor in the above question. Surely a broader view should be taken.

There is no doubt that vehicles without rear lights are a source of danger; the risk is, of course, greatest on wide vehicles whose front lamps are hidden from the rear, especially when these do not give an extensive ray; pedal cycles without rear lights are undoubtedly dangerous, owing to the feebleness of their front lamps (I have had several very narrow escapes from collision when overtaking such machines). In the case of motor cycles, which travel faster and are better lighted in front, the risk is much less, but it is nevertheless existent, and the presence of such machines on the roads is a source of anxiety to drivers of other fast vehicles.

The rider who says he is prepared to take the risk of travelling without a rear light, and should be allowed to please himself, must remember that, in the event of a collision, the driver of the overtaking vehicle suffers as well as himself.

Our laws are framed for the common good and the safety of the public, and all who agree with this principle should support "rear lights for all."

As regards the snag of inconvenience, this is negligible on a machine with dynamo lighting, while on motor cycles not so equipped and on pedal cycles a dry battery rear light can be easily and cheaply fitted, and will give adequate and reliable illumination at a low cost.

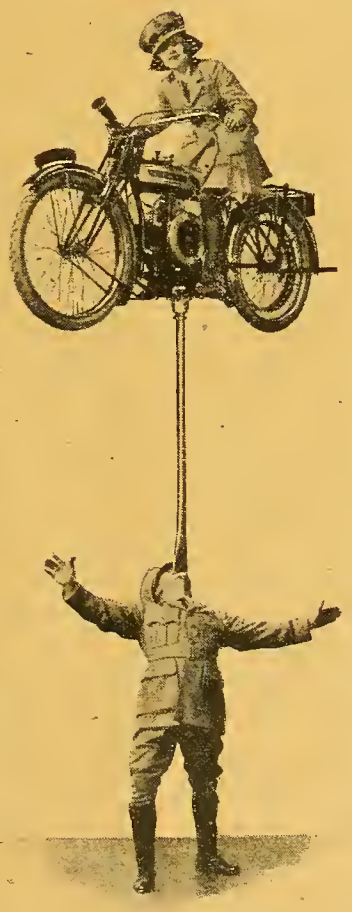
C. A. GOSLING.

Sir,—With reference to the letter over the name of Mrs. Margaret M. Stancer, we regret that she fails to see the necessity for all vehicles to carry rear lights. If she had been in the habit of doing much night riding we feel sure that she would have different views on the matter. In a brilliantly lighted town there may not be such a necessity for rear lamps as there is when one gets away from the lights, but obviously one cannot make any distinction. Considering the ever-increasing stream of traffic we come in contact with, we feel that the motto "safety first" should be the guiding principle. As motorists we belong to a large body, and we should endeavour to obtain "the greatest good for the greatest number," which often means the sinking of self. We should be ready, and willing, to suffer a little inconvenience if, by so doing, the community may be benefited.

With reference to dynamo lighting outfits, the writer, in common with many others, is not the happy possessor of one, but with a separate generator, a reliable rear lamp (such as a Lucas), and cleanliness, trouble is reduced to a minimum.

Your correspondent is of the opinion that because she has never heard of a motor cyclist being run down in the dark, such things have never, nor will ever, occur. We should like to assure her that we are out in the interests of motor cyclists every time, but in common fairness, if we claim that bicycles and other vehicles should carry rear lights (and she must admit that this is necessary), surely we should do likewise.

For the Gloucester M.C. and L.C.C.,
FRANK R. WARE,
Hon. Secretary.



BALANCING—IN A NEW SENSE.
Quite a remarkable feat of balancing a Douglas motor cycle and rider has been introduced to the music-hall stage by "The Airos." When the picture, which is quite genuine, was taken, the engine was running, albeit misfiring, at about 500 r.p.m.!

## LUMINOUS SPEEDOMETER DIALS.

Sir,—May I inform "Viz" that I find that after looking hard at a white road lit up by a large acetylene head lamp it is very difficult to see a luminous speedometer without careful examination, which takes too long for fast night work. The only satisfactory method I know of is to have a small bulb, shaded, throwing its light down on to the speedometer. The trip and total mileage can be seen this way, but I fear it would not be easy to put luminous paint on the revolving figures, and even then they would be very hard to see, owing to their comparative incarceration inside the speedometer during the day. A. O. RUSSELL.

## "GETTING A PINT INTO A QUART POT."

Sir,—"Ixion" moans about toolbags. Well, my machine has strap fasteners which, although allowing an unscrupulous garage assistant to "borrow" my patches and tools, does not come open on the road.

*But* what of their size? The near side bag is fully occupied by the tool roll. The other contains a tyre outfit, one plug in case, spare belt fastener, and a piece of rag 6in. × 6in. It wouldn't hold a collar-stud more.

Now we turn to the maker's handbook, and find the following spares suggested:

(1.) Two valves complete (inlet and exhaust).
(2.) Two plugs.
(3.) Two valve-cap washers.
(4.) One magneto carbon brush and spring.
(5.) Spare belt fastener and few short pieces of belt or complete spare belt.
(6.) Small supply of valve springs, cotters, caps, screws, and nuts.
(7.) One fork spring.
(8.) One exhaust valve rocker.
(9.) One chain (engine to camshaft), spare link and spring clip.

A regular perambulating garage; but no suggestions for carrying the goods. One of these days I shall break a valve ten miles from anywhere; then I shall get wild and buy a two-stroke. J. HEASMAN.

### UTTERLY AMAZING SPEEDS.

Sir,—I cannot waste your valuable space in quibbling over mere words, so will not refer to Mr. Harris's letter in your issue of March 2nd beyond reminding him that the quotation in my letter was from an advertising bulletin, and not from the editorial columns of the American "trade" paper, *Motor Cycling and Bicycling*, as he seems to infer. Further, it was the Henderson demonstrator who pronounced the tyres too soft for speed work, and did not do so till after he had made an unsuccessful effort to improve on Mr. Fowler's speed.

The average English motor cyclist is, unfortunately for Mr. Harris, a great sceptic where "paper" speeds are concerned, and a believer in the *Facta non verba* motto. I would therefore suggest to Mr. Harris that he take steps to allay any doubts which may exist in this country as to the veracity of the bulletin in question. In fact, I am surprised that he has not before this staged a series of tests over here on the lines of those stated to have taken place with a Henderson machine in America.

A standard machine in full touring trim is said to have been ridden some 200 miles over mountain roads, and then on arrival at its destination, when taken on the track, without any adjustments, to have reached a speed of 90 m.p.h. We have no mountains handy, but no doubt a 200 mile course in Surrey, similar to that used for the Sopwith Cup Trial last October, could be mapped out for Mr. Harris, after completing which he could proceed to show us 90 m.p.h. over the flying mile at Brooklands.

G. F. RANDALL.

[This correspondence is now closed.—ED.]

### SPEEDS OF TWO-STROKE LIGHTWEIGHTS.

Sir,—Re "Ixion Villiers'" query as to the gear used on the Portsmouth Road, it was 5—1. I must admit I had favourable conditions. It was in the late summer, there was no wind, and in the evening. As to Mr. Grubb's challenge, I accept, but would like to know whether the machines are to be tuned or as ridden every day. As to the date, I leave that to him. I will avail myself of the minute start, and then if I beat him, have an equal start.

I have stated that my speeds were by speedometer (and I have no reason to doubt its accuracy), but for a lap at Brooklands I averaged 42 m.p.h., with a flying start of 25 yards; this was by watch timing and witnessed.

W. M. COUPER.

### VARYING GARAGE CHARGES.

Sir,—Referring to the leader in your issue of the 16th ult. in which you say that seaside garages are most often complained of in regard to excessive charges, I have made inquiries as to the charges of the garages in Southport, which is one of the largest seaside resorts on the West Coast.

In none of the lists of garage charges I have obtained (and there are some of the finest garages in the North of England in Southport) can I find a charge of 1s. 6d. for a temporary storage of a sidecar outfit, or of a charge of 1s. 6d. per hour for motor cycles. The highest charge for the former is 1s. per day (and there are some garages which charge lower than this) and for the latter 6d. per day. From this I hope you will agree that, so far as Southport is concerned, the complaint of excessive charges for garage accommodation cannot be sustained.

ROWLAND HILL,
Sec. Southport Motor Club.

### THE LURE OF THE FREAK TRIAL.

Sir,—I was very pleased to see your leader of the 23rd ult. *re* freak trials, as I am greatly in favour of this type of competition.

Something like twelve years ago—after many years of hard riding—I began to find the main roads rather tedious when mounted on an ordinary touring 'bus, so took to the hills, dales, and, in fact, everywhere where I could possibly wangle my varied mounts along. Practically every week-end since ("Dora" permitting) I have been on the "rough stuff" over scores of miles where no other motor cycle ever—shall I say "trod," ridden over some most impossible-looking places when making a bee-line, but have yet to break (touch wood) a single thing on any motor when so doing.

I have only one grouse about the freak trials: the 20 m.p.h. is much too high for this class of riding. I have won premier awards over the "rough stuff," and I know risks to both neck and machine must be taken (particularly by a nervous or inexperienced rider) if one keeps up to schedule. It is utterly impossible to keep to 20 m.p.h. on some machines, and riders of the latter turn up for a competition blissfully ignorant of the fact that *they have not a sporting chance*. I shall welcome the day when the average is set to nearer 10 m.p.h. over a real freak course. We shall then draw new riders into competitions, and everyone will get a chance. After all, 10 m.p.h. is racing—on a freak course—compared with 20 m.p.h. on a main road. I belong to one club which fixes the limit at 18 m.p.h.

In conclusion, I beg to voice the opinion that cross-country riding is one of the most fascinating games extant; and if "Zenith Solo" lived nearer to our beautiful Derbyshire hills I would undertake to act as his guide to prove my contention—if he can really ride his machine.

Sheffield. AMPHISTRATUS.

### TWO-STROKE EFFICIENCY.

Sir,—In reply to "Curious," in your issue of February 23rd, perhaps I should have said "must not be much more than 250 c.c." I may point out that the volume of a cylinder varies as the square of the diameter, whilst the cooling surface only varies as the diameter. With any normal stroke-bore ratios the ratio of cooling surface to volume is therefore a constantly decreasing one with increasing capacity. There is thus an ultimate limit of size beyond which the temperature of the cylinder becomes too high. It has been proved that extensive fins have little effect in extending this limit (so far as cast-iron cylinders are concerned at any rate). This limit is at present in the neighbourhood of 250 c.c. for two-strokes. In four-stroke machines, where the frequency of working strokes is halved, the efficient limit is doubled, and becomes about 500 c.c.

"Curious" will find that all the important speed records for two-strokes are held by machines in the 250 c.c. class. Above this class the records are held by four-stroke machines of 350 c.c. and 500 c.c. (not by the 600 c.c. machines). The Sports Sunbeam and Norton are 500 c.c. (about), not 600 c.c. The above remarks apply only to machines for solo use or for speed. There is a certain field for the 350 c.c. two-stroke of lower compression for slogging work with a sidecar where a machine simple and cheap in first cost is required, and where slightly higher petrol consumption is not objected to. In the writer's opinion, however, these large single-cylinder two-strokes will soon give place to high efficiency side-by-side twin-cylinder two-strokes in the same way that the big singles (four-stroke) of 650-750 c.c. in vogue a few years ago for sidecar work have given place to V twins.

MARY C. JENNISON.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

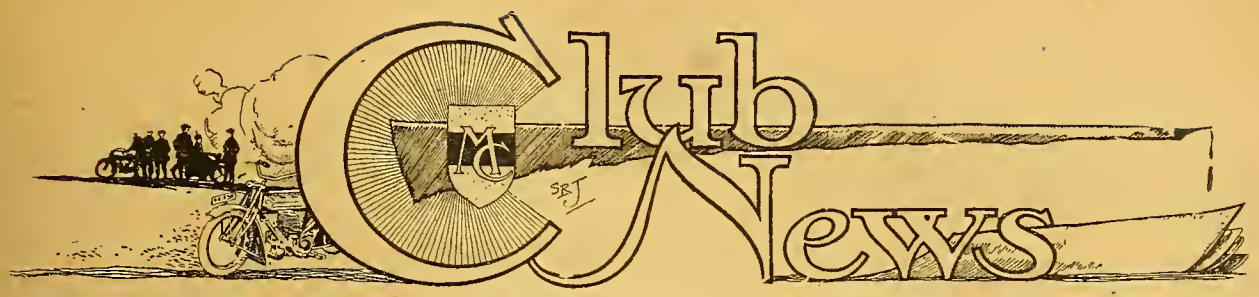
**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view.
Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.




### Stafford and District M.C.C.

About 120 members and friends attended a ball held in the Assembly Rooms, Stafford, on February 22nd. There were many novel features in the arrangements, and the event proved an outstanding success.

### North Wales M.C.C.

On the 21st ult. the club held its second annual whist drive and dance, at the County Hall, Denbigh. The event was a great success, there being over 200 present, and dancing was continued until 2 a.m.

### Preston M.C.C. (Brighton).

On the 20th ult. a club as above was inaugurated. It was in every sense a satisfactory meeting, both social and competition runs for the ensuing season being discussed. More members, however, are required.

### West Birmingham M.C.C.

There was a good attendance at the annual general meeting, held at the King's Head Hotel, Edgbaston, on the 24th ult. The fixtures for this year were discussed, and a programme, to comprise 25 runs in all, decided upon. It is intended to include an inter-club trial and an open reliability trial.

### Nottingham and District M.C. and L.C.C.

Organised for the East Midland Centre A.C.U. by the Nottingham Club, a recent night trial was voted a big success; and permission has been asked to hold a further night trial on April 1st. The route was 138 miles, and lay through many of the large towns in the district, Newark, Mansfield, Chesterfield, Matlock, Derby, Leicester, and Loughborough being visited. A 20 m.p.h. schedule was set which proved a stiff test when off the main roads. Slack Hill, N.E. of Matlock, was observed, acetylene flares being used on the worst portions, where several failures occurred. Seventeen competitors only finished the course. The following were the winners of the special awards:

Lightweight—W. G. Tollington (2½ Sun Vitesse).

Solo—S. S. Debenham (4 Campion).

Sidecar—I. Cohen (10 Campion sc.).

Gold medal certificates were awarded to:

F. Horberry (3½ Douglas).

W. Haslam (3½ Norton).

G. H. Alcock (8 Brough Superior).

F. Sissons (3½ Norton).

S. Matts (3½ Rover) (9 years old, single gear).

C. A. Clarke (3½ Sunbeam sc.).

### Bloxwich and District M.C.C.

Motor cyclists willing to act as observers in a trial to be held in the Gloucester and Stroud district on Easter Monday are asked to communicate with the hon. secretary, Mr. H. R. Millington, 29, Wallington Heath, Bloxwich.

### North London M.C.C.

Clubs which have not received a circular letter regarding the North London Rally on Whit Monday should, if they are interested, communicate with the secretary, Mr. Alan W. Day, "Claremont," Ballard's Lane, Finchley, London, N.3.

### Lewes and District M.C.C.

The annual general meeting took place on the 21st ult. at the White Hart Hotel, the Mayor of Lewes presiding over a fair attendance. The accounts showed a cash balance in hand of £3 8s. 7d. Officers for 1922 were elected. There were some changes in the committee, and two lady members were elected. Mr. E. Jenner, 57, Cliffe High Street, Lewes, is the hon. secretary.

### North-Eastern Centre A.C.U.

The first meeting was held at the Y.M.C.A., Sunderland, on Wednesday, the 22nd ult. Mr. Geo. G. Heath, of 24, Cambridge Terrace, Gateshead, was elected hon. treasurer and secretary. Delegates from seven of the eight affiliated clubs were in attendance, and arrangements were made to hold a centre team trial on May 22nd.

### North-Eastern Automobile Association.

The annual dinner, the first since the war, was held following the annual meeting in Tilley's Restaurant, Newcastle. Mr. D. Balfour took the chair, supported by Mr. J. E. Hodgkin, the secretary, Col. C. B. Palmer, C.B.E., D.L., Mr. J. F. Maling, Mr. C. V. Swan, and Mr. C. J. Dymond.

Amongst the guests were the Lord Mayor of Newcastle (Alderman R. H. Milligan), the Sheriff of Newcastle (Councillor Jas. Lunn), Mr. J. A. Bean (Northumberland County Surveyor), Mr. A. E. Brookes (Durham County Surveyor), Mr. J. Davidson (Morpeth Borough Surveyor), and Mr. F. Smillie (Tynemouth Borough Surveyor).

During the course of the evening Mr. A. E. Brookes, replying to the toast, "Local Authorities," made some interesting remarks on the local roads. Motorists, he said, desired ideal surfaces, and they would have to pay for them. Personally, he did not think that the light vehicle did the damage to the roads, and also that the heavy vehicle did not pay in proportion to the damage it did.

### Neath and District M.C.

It has been decided to hold the first speed trials on Porthcawl sands on Easter Monday, April 17th. Entries close on April 11th.

### Sale and District M.C.C.

All particulars of this newly-formed club can be obtained from the secretary, Mr. E. C. Bramley, "Landfield House," Hesketh Road, Ashton-on-Mersey.

### Proposed West Herts M.C. and L.C.C.

It is desired to form a club covering Watford, Rickmansworth and district; all interested should communicate with Mr. H. H. Lewis, 18, Church Street, Rickmansworth.

### Essex M.C.

Members are reminded that entries for the fourteenth annual hill climb close first post on Monday next. Valuable silver cups are being given on this occasion; entry forms and particulars can be obtained from the hon. secretary, Mr. Ernest J. Bass, 40, Chancery Lane, London, W.C.2.

### Horsham M.C. and C.C.C.

It has been decided to hold the opening run as a reliability trial for the president's cup on April 9th over a 70-mile course within a radius of twenty miles of Horsham. It has also been arranged to run the captain's surprise run on April 30th. The secretary is Mr. A. C. Quick, Queen Street, Horsham.

### Berwick and District M.C.

Mr. J. Elder, the treasurer, reported at the annual general meeting that the organisation had a balance in hand of £37, but when, he stated, the prizes won during the last season had been paid for, the balance left would only amount to £2.

Councillor Alex. Darling was appointed president, Mr. G. Rowley chairman, Mr. W. Dodds secretary, and Mr. F. Moon treasurer.

### Western M.C.C. (Glasgow).

At the third annual meeting held at the club headquarters, 250, Great Western Road, on February 25th, reports were submitted showing the club to be in a very prosperous condition, both financially and as regards membership. Prospects in regard to the proposed club-house are becoming definite, and an announcement may be made very soon in this connection. Last year £105 was expended in awards, besides numerous prizes donated by friends of the club, and this year it was indicated, competitions and prizes will be more numerous than ever.

*(Club News is continued on page 315.)*

# Current Chat

## Times to Light Lamps.

| | | | |
|---|---|---|---|
| Mar. | 9th | ... ... | 6.51 p.m. |
| ,, | 11th | ... ... | 6.55 ,, |
| ,, | 13th | ... ... | 6.58 ,, |
| ,, | 15th | ... ... | 7.1 ,, |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### More Daylight.

The days are drawing out rapidly. We shall soon be able to take evening runs without troubling about lamps.

### Royalty on Two Wheels.

One of the latest adherents to the scooter is H.M. the Queen of the Belgians, who has purchased one for the purpose of making short journeys.

### Universal "Safety First."

Not only in England but in other parts of the world is the racing helmet becoming compulsory in all speed events, the latest country to fall into line being Italy.

### Driving a Pair.

There is at least one advantage in the foot-controlled clutch. We recently saw a B.S.A. rider taking home his pedal cycle, which behaved quite sedately by the side of its power-propelled brother.

### To Land's End Competitors.

Considerable assistance is being given to the organisers of the London-Land's End Trial by the Slough Transport Co., Ltd. Three minutes' walk from the garage is the company's canteen, at which a special supper will be served, price 3s. 6d. Coupons for this may be obtained in advance from Mr. F. T. Bidlake (trials secretary of the M.C.C.), 84, North End Road, Golder's Green, London, N.W.11.

### Sidecar Firemen.

Paris firemen are now making use of motor cycles and sidecars for first aid in extinguishing fires. The machines are Harleys with a special two-passenger sidecar and provision for carrying hand extinguishers. At present these machines are only being used by the central brigade, and have been adopted with the object of getting firemen on the scene of an outbreak before the main engine arrives. Probably the men on the motor cycle will not often be able to extinguish the fire with the hand apparatus at their disposal, but the five or ten minutes they are expected to gain will prove exceedingly valuable in preparing the ground for the arrival of the main force.

### Consecutive Numbers.

The Committee of the M.C.C. has decided that not more than three riders riding the same make of machine in the London-Land's End run on April 14th may have consecutive numbers.

### Delivery by Aeroplane.

Sent at midday from Paris in a Goliath aeroplane, a Gnome and Rhone motor cycle was delivered to the Brussels agent within six hours, including passing through the Customs. It is stated that the cost of transport was less than by express train.

### Hard Riding.

Although the conditions of the M.C.C. Land's End to John-o'-Groat's run will not be severe, so far as the regulations are concerned, it will nevertheless be a hard ride. On main roads all the way, there will be few severe hills, Amulree being perhaps the most difficult. As a physical trial, however, the strain upon the riders will be considerable. A distance of 240 miles is to be covered on the first day, 230 miles the second, and 312 the third, which we believe is the longest day's run in any English trial yet organised.

## Special Features.

THRO' IRELAND ON A MOTOR CYCLE

DETECTING FAULTS IN A LIGHTING SYSTEM.

ROAD TEST OF SOLO "BIG TWIN."

### Motor Cycle Longevity.

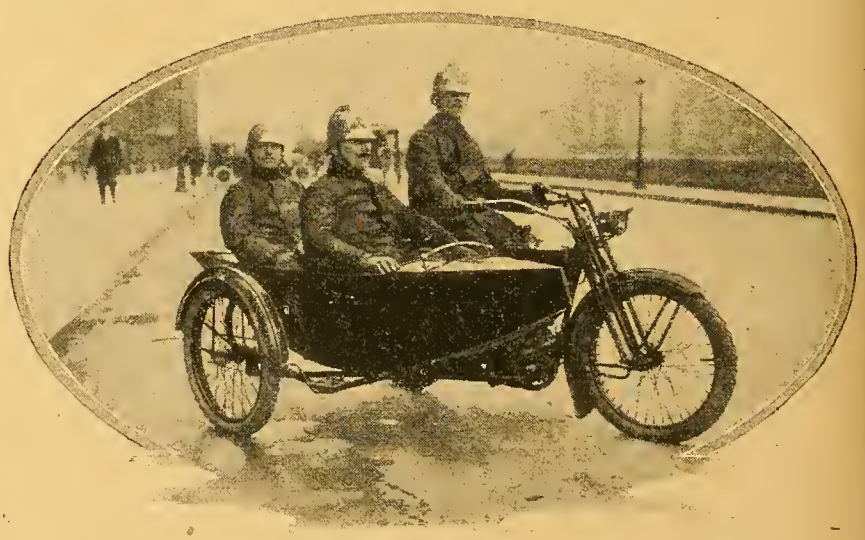
Some sensation has been caused among motor cyclists in Sweden because an important economy competition organised by a Swedish newspaper was won by a ten-year-old belt-driven American motor cycle.

### A Sign of the Times.

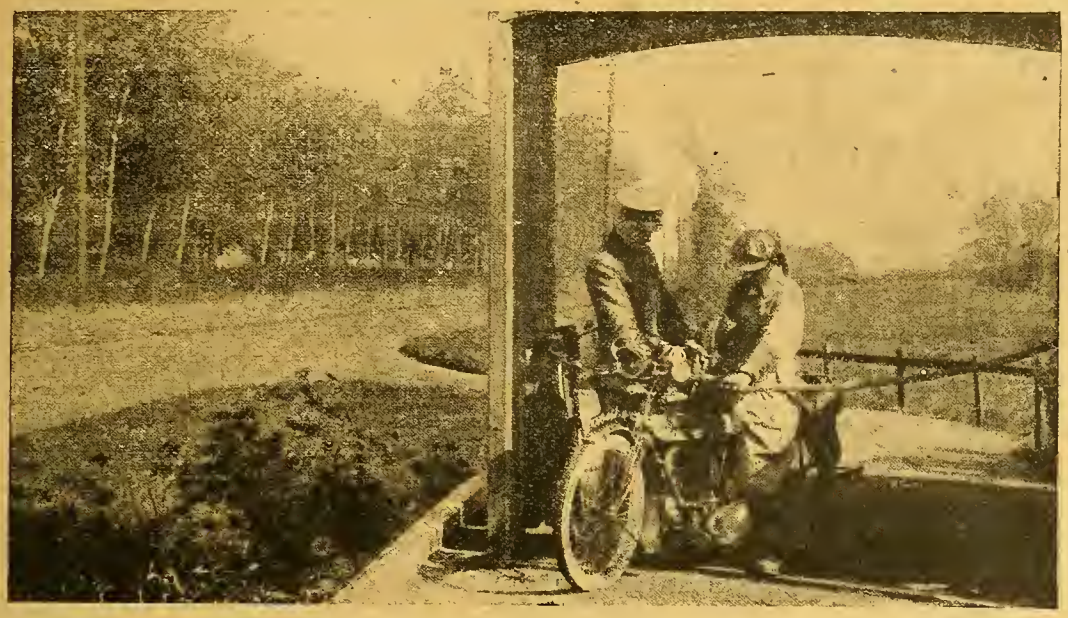
Sunday School prizes used to take the form of such high-brow literature as "The Good Boy's Reward"; it may come as a shock to some that at a recent prize distribution in a Midland Sunday School one of the books chosen was "Motor Cycles and How to Manage Them."

### Construction of Arterial Roads.

Mr. Neal, replying in the House of Commons to Sir Thomas Polson, said that the cost up to January 31st of the new arterial, circular and by-pass roads, for the construction of which the Roads Department of the Ministry of Transport was directly responsible, was £371,000. A sum of £1,261,000 was still held in reserve in the Road Fund at that date towards the cost of these works.



One of the two-seater Harley-Davidson sidecars used by the central fire brigade of Paris.



*An A.A. Member "fills up" at an A.A. Motor Fuel Station.*

**EVERY motor cyclist benefits, indirectly, from the work accomplished by the Automobile Association in safeguarding the interests of the motoring community.**

**The funds, which enable this national work to be performed efficiently, are provided by A.A. members.**

**Every non-member, therefore, owes a duty to his fellow motor-cyclists who are members. That duty is to join the A.A.**

**Send a postcard, to-day, to the Secretary, who will forward an illustrated booklet describing A.A. Road Service together with an application form for membership.**

**This will not commit you to joining the Association, but it will convince you that you are missing a good deal by not doing so.**

# ROAD SERVICE

The Road Service provided by the Automobile Association is the most comprehensive offered by any motoring organisation in the world. This Service is placed at the disposal of motor-cycle members in return for a subscription of £1.1.0 a year—less than 5d. a week.

It includes free assistance on the road by A.A. patrols, free use of roadside telephone boxes at any hour of the day or night, and free help by the A.A. men in charge of road service outfits.

Other benefits are free legal defence and advice, home and foreign touring assistance, expert engineering advice, officially-appointed repairers, A.A. hotels, etc.

This Service meets the requirements of every reasonable motorist and, to-day, satisfies more than 160,000 members.

If you are not already a member of the Automobile Association you can join with the assurance that A.A. Road Service will satisfy *You* and that full value for your subscription can be obtained in direct benefits.

## THE AUTOMOBILE ASSOCIATION,

**21, Fanum House, Whitcomb Street, London, W.C.2.**

# NATURE'S MIXTURE OF PETROL AND BENZOL

Many motorists prefer running on a mixture of petrol and benzol to using either spirit separately. "Shell" is *Nature's* mixture of petrol and benzol, perfectly combining the rapid vaporising qualities of the best petrol with the non-pinking quality of benzol. "Shell" Motor Spirit, ALONE OF ALL PETROLS, was extensively used during the war, *in precisely the same way as benzol*, for the production of those particular aromatic hydro-carbons which form the base of T.N.T. and other high explosives, hence its greater mileage and power and non-pinking quality.

# SHELL

*Protect your engine by using Shell Motor Lubricating Oils*

"EVERY DROP TELLS"

**Shell-Mex LTD.**
Shell Corner, Kingsway, W.C.

## Over 4 miles for one penny

The McKenzie Lightweight is the most economical motor cycle proposition yet formulated. Averaging 180 miles per gallon, *maintaining* 25 M.P.H. on the level, easily topping all ordinary hills, and giving sound, reliable service all round. Built at the famous Hobart Coventry factory from high-grade materials on the mass production principle. The

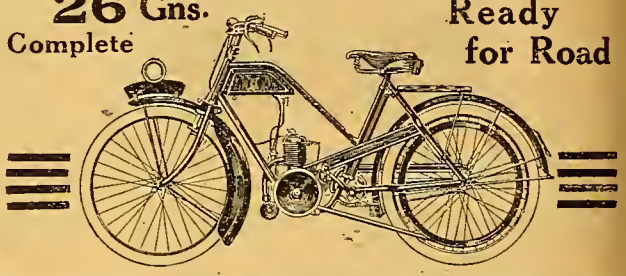
# McKENZIE

**Safety Lightweight Motor Cycle**

is the cheapest *reliable* motor cycle on the market to-day. It weighs only 75 lbs., is fitted with Fellows Magneto, "Vici" Carburetter, heavy ⅝ driving belt, Clincher tyres, etc. Costs no more than a dependable pedal cycle, yet gives ten times the pleasure and service. Ask your dealer to demonstrate the McKenzie or send a post-card to-day for full details to

G. McKENZIE, 80, FENCHURCH ST., LONDON, E.C.3

**26 Gns. Complete** **Ready for Road**



## Picking them up

WITH ROYAL "EDISWAN" AUTOMOBILE LAMPS you can drive fast with a comfortable mind, confident that your lamps will pick up everything on the road hundreds of yards before you reach it. ROYAL "EDISWAN" LAMPS for brilliance, economy, efficiency and durability have a world-wide reputation.

Ride easy at night by installing ROYAL "EDISWAN" LAMPS.

**The Edison Swan Electric Co., Ltd.,**
PONDERS END, MIDDLESEX.

ROYAL
# "EDISWAN"
ELECTRIC LAMPS
*for Automobile Lighting*

161

*Fully licensed under Patents Nos. 23499/09, 10918/13 and others.*

### Blackpool Wants a Racing Track.

At a recent meeing of the Blackpool and Fylde M.C. a resolution was passed that a concrete motor racing track would be a desirable feature to include in the plans for the proposed new local park. The South Shore Traders' Association supported the proposal.

### British Successes Overseas.

It is gratifying to note that in the acceleration test held by the East London (S.A.) M.C.C. recently two Triumphs were first and second respectively and a B.S.A. third in the solo class, while in the sidecar class a Triumph was first and a B.S.A. twin third.

### Club's Influence Reduces Ferry Charges.

After prolonged correspondence between the secretary of the Essex County and Southend A.C. (Mr. Maitland Keddie) and the manager of the Midland Railway, the charges for the transport of motor vehicles on the Gravesend-Tilbury ferry have undergone approximately a 25% reduction.

### Observers for Stock Machine Trial.

Observers are wanted on the section of the A.C.U. One-day Trial route from Long Compton to Brooklands, and motor cyclists who would care to undertake this useful work should communicate with Mr. A. J. M. Ivison, "Winton," Victoria Road, Mill Hill, London, N.W.7. The chief points at which they are needed are in the neighbourhood of Oxford, Chinnor, Great Missenden, and Amersham.

### No Wonder!

That we are not keeping in touch with motoring matters unless we subscribe to the "Dixon Hawke" library is the opinion of an anxious reader, who supports his statement with the following extract:

"Vicars got the car along for five miles somehow, anyhow. When they reached the main road, the radiator was red-hot, the piston of two cylinders had seized up, and once the engine was stopped they knew it would not move again."

If one piston attempted to use two cylinders ——!

### 1914 T.T. Winners to Compete this Year.

Six Rudge machines are to be entered by the manufacturers for this year's Senior T.T. Race.

### Inter-'Varsity Climb Postponed.

Owing to the unpropitious weather the inter-'Varsity hill-climb, to have been held last Saturday, was postponed.

### Change to a British Mount.

In Wednesday's A.C.U. Trial H. R. Harveyson, hitherto a very consistent rider of American machines, makes his *début* on a four-valve Triumph.

### Chance for Speed-men.

Speed-men will be interested to learn that a number of the actual machines entered by the B.S.A. Company in the T.T. last year are now available, completely rebuilt and renovated, at an extremely moderate figure.

COMPETITORS IN THE PARIS-NICE TRIAL.

A diminutive power plant, which the driver hopes will propel his machine from Paris to Nice.

### State of the Second-hand Market.

With the approach of longer days and possibilities of more settled weather conditions, the prices asked for second-hand machines are, inevitably, hardening. No great change has, however, taken place since we published, a fortnight ago, a comprehensive table showing the buyer approximately what was available at prices from £20 to £150. The more modern sidecar outfits of 1920 and 1921 are, however, rapidly becoming less common.

### Petrol that Will Not Drip.

"Airo," who balances a Douglas motor cycle and rider on the end of a pole which he holds in his mouth, has great difficulty in complying with the regulations of the authorities concerning the use of petrol on the stage. These regulations demand that the petrol shall not be in a liquid form, and "Airo" utilises a small tank filled with cotton-wool saturated with the fuel. Apparently a special form of wick carburetter could be adapted. Has any reader experimented in this direction? A photograph of the "Airos" appears on page 307.

### In this Issue.

Motor cycling conditions in Ireland are described in an interesting article by a motor cyclist. Page 294.

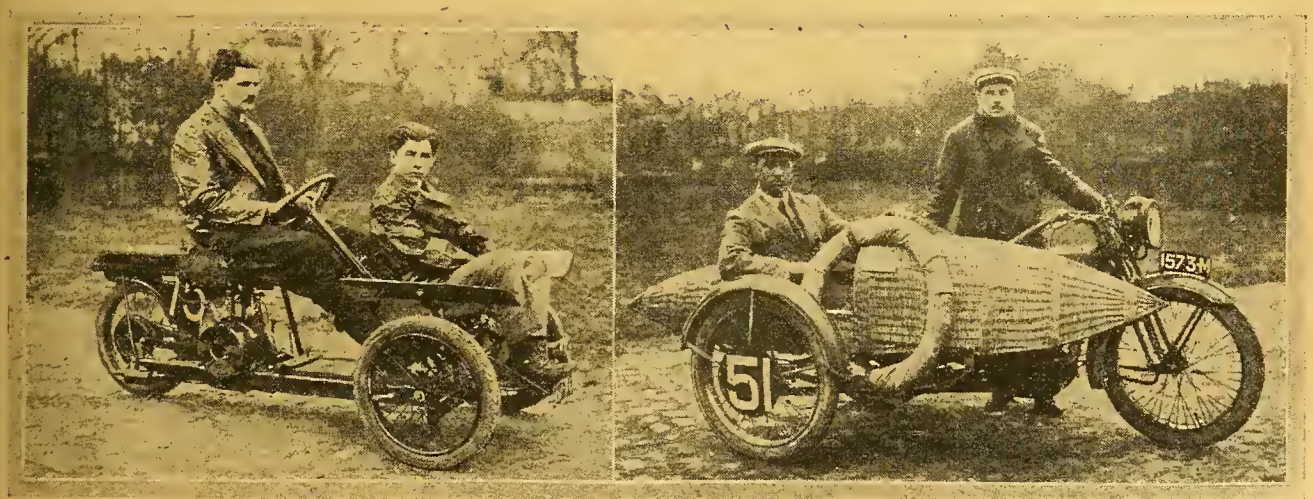
A lady contributor on page 297 deals with the eternal question among motor cyclists of the fair sex!

Detecting faults in a lighting system forms the subject of a practical article on page 299.

Topics of interest to all who own or ride in sidecars are discussed on pages 301 and 302.

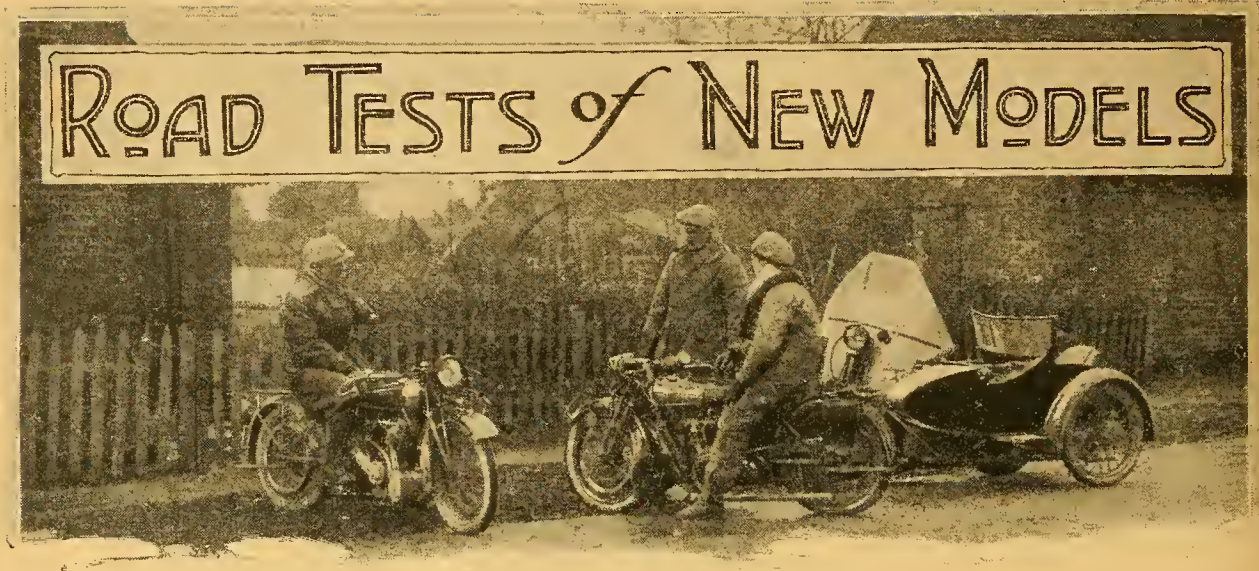
Those who have followed the correspondence on "Sidecar Fuel Consumption Records" will be interested in the several additional letters in this issue; also in the article by Mr. T. W. Loughborough, secretary of the Auto-Cycle Union, on the subject of private trials on page 315.

Following upon Lt.-Col. Brereton's article "Motor Cycles for Boys and Girls," several readers this week give their views on the desirability of young people owning machines.




Two more quaint machines in the Paris-Nice Trial, which started on Wednesday of last week. (Left.) A Monet-Goyon runabout. (Right.) A long cane sidecar attached to a Harley-Davidson.

# ROAD TESTS of NEW MODELS



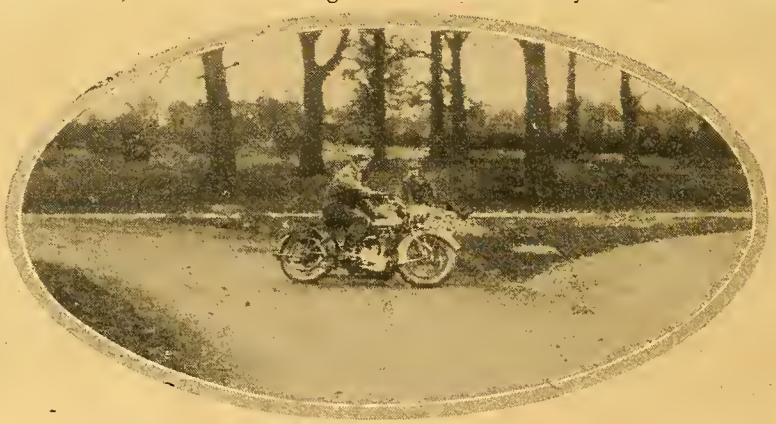
The 8 h.p. Side-valve Brough Superior.

*SPECIFICATION.*

*ENGINE: 8 h.p. side-valve J.A.P. (85·5 × 88 mm. = 965 c.c.).*
*CARBURETTER: Amac.*
*GEAR BOX: Sturmey Archer three-speed, with clutch and kick-starter.*
*TRANSMISSION: ⅝ × ⅜in. chains (protected).*
*BRAKES: Dummy belt rim, front and rear.*
*TYRES: 26 × 3in. Dunlop Magnum (light car type).*
*WEIGHT: 285lb.*
*PRICE: £150.*

QUITE a considerable number of motor cyclists may be regarded as enthusiasts, and of this number a large proportion long to possess a solo mount, well finished in all respects, and capable of high road speeds without apparent exertion. It is for such as these that Mr. George Brough has laid himself out to cater, and his wide experience in sporting trials has provided him with a valuable source of knowledge of the special requirements of this type of rider. A comparatively small output in a specialised line enables him to give personal attention to every machine turned out from the works, and the resulting product is therefore likely to be ideal for the sporting soloist or for use with a light sidecar. Price, of course, must be a secondary consideration, but the Brough Superior compares favourably with machines of its class.

The latest Brough Superior model incorporates the new 8 h.p. side-by-side valve J.A.P. engine with roller bearing crankshaft. This engine is a remarkably "clean" design, and at the outset we may state that, though the machine which we tested had a big mileage behind it, the engine was extremely quiet and was the most effortless and vibrationless V-twin that it has been our good fortune to handle. As regards flexibility and power, it is possible, on the sidecar gear of 4.28 to 1, to crawl through busy streets or to accelerate on open roads to speeds often talked of but seldom accomplished. This without touching the gear lever, and with only reasonable clutch manipulation in traffic. This is due to the wide weight-power ratio and the flexibility and power of the new side-valve J.A.P. engine.



In spite of its power the Brough Superior handles like a lightweight and can be swung round acute "hairpins" with ease.

### Breeding Confidence.

Pulling sweetly and evenly at all speeds, the engine gives one an extraordinary feeling of confidence, which is increased by the excellent balance of the machine, and though the writer had not handled a Brough Superior for over a year, he was immediately at home on the big machine. Even after a stop of some two hours in wintry weather the engine was quite free and started easily, ticking over without fuss or rattle. A thirty mile run at speeds best left to the imagination seemed to improve the general qualities of the engine

rather than otherwise, and on every occasion on which it was employed the machine behaved so admirably that our parting was regretful.

It is a difficult matter to find a hill with a gradient sufficient to test the powers of such a mount, and we had to content ourselves with intentionally placing the machine at a disadvantage with a view to discovering its true virtues. As an instance of this, the Brough Superior was driven up a slope of 1 in 9 dead slow on top gear, yet while still on the gradient a touch of the throttle caused the machine to accelerate rapidly and without a symptom of hesitation. Again on a trip through devious and twisting byways we intentionally took acute corners on greasy roads without changing gear. In every case a little clutch slip was sufficient to ensure a safe turn and rapid acceleration. If, however, under such circumstances, one drops into middle gear, as all good riders should do, the "get away" is terrific, yet perfectly smooth.

### Transmission and Gear Box.

Any tendency to harshness in the all-chain transmission is effectively damped out by the cush rear hub; and a recent modification of the front chain guard provides for the protection of both top and bottom chain runs, though the centre part is left open to facilitate adjustments or repairs. Clutch and gear box are of the usual Sturmey-Archer type, and well up to the power of the big engine.

One cannot help admiring the neat way in which so large an engine is housed in so small a frame without a suspicion of overcrowding, and on riding the big "eight" one has a sensation of bestriding a handy lightweight with the power and road-holding qualities of a big machine. The three-inch tyres attend to the rider's comfort, and are materially assisted in this respect by the Montgomery leaf spring fork and a large and comfortable saddle, while the steering angle and trail are the result of considerable experimental work.

Certainly these experiments have been worth while, for we can testify that the Brough Superior handles well in grease and over loose stones, a test which has proved too much for many an otherwise excellent machine.

### Detail Criticism.

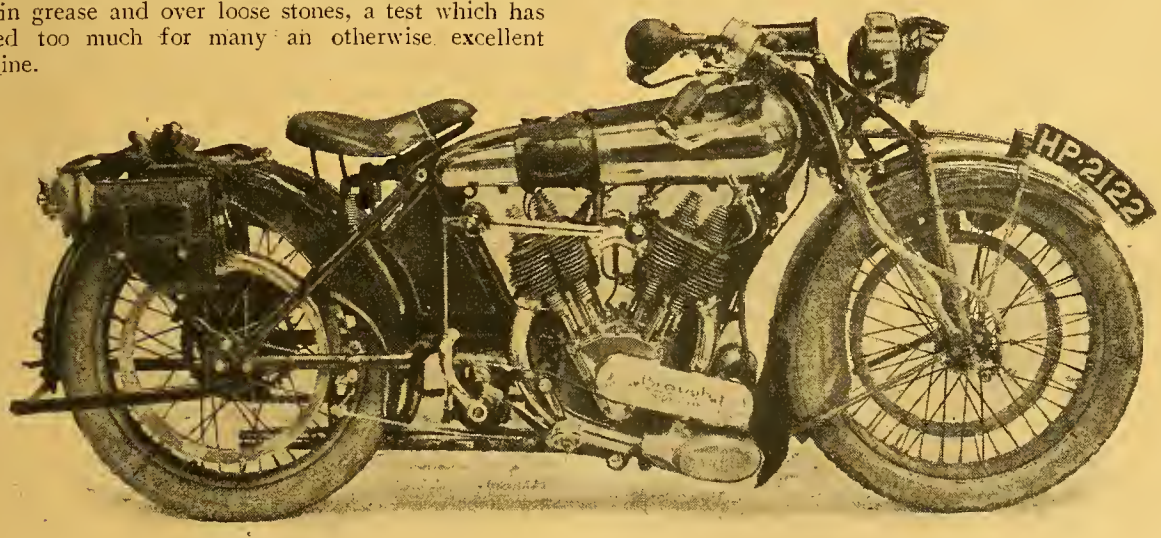
It is not only in points of major importance that the Brough Superior excels, for every detail is carried out with care, and the finish is superb. Only two small criticisms occur: (one), that the finish is a trifle showy for the every-day rider (yet the plated tank cleans up easily and satisfactorily on account of its smooth and rounded shape, and have we not already suggested that most motor cyclists are enthusiasts?); (two), that on the actual machine we tested the steering lock was rather limited. We hear, however, that this point has already received the attention of the designer, and that no future machines will suffer from this slight defect.

Mudguarding is good, the brakes are sensible—especially the parallel action rear—the tool-bag behind the saddle tube is ample in capacity, and is in the correct position, and the handle-bar operated oil pump is neat and very convenient.

### On the Smaller Model.

The fates have decreed that our road tests of this particular make shall be accompanied by snow, and the last occasion was no exception to the rule. This provided us with ample opportunities for testing the machine under all conditions of slush and slime, which it survived with credit, but the inclement weather somewhat curtailed our experiences with the smaller M.A.G.-engined model. In spite of this we were able to verify the fact that the 6·5 h.p. M.A.G. (72 × 90 mm. = 748 c.c.) is a very sweet-running engine of no mean performance, and it is sufficient to remark that the rest of the machine is almost identical with its larger brother. Its weight, however, is 25lb. less, and its price is only £125.

In conclusion, there is just one word of warning which should be issued with every Brough Superior. The comparative novice should insist on an accurate speedometer, for in spite of the fact that the machine will run slowly and steadily, so smooth is the engine and transmission, that one is more than likely to find that one's actual road speed is nearly double the intended figure.




The side-valve 8 h.p. Brough Superior. Note the Montgomery forks. The pannier tool bags are extra fittings.

# THE A.C.U. AND PRIVATE TRIALS.

## The Position of the Governing Body and Private Motor Cyclists where Unofficial Tests are Concerned.

*In our correspondence pages this week there appear several letters relating to a reader's proposed Sidecar Fuel Consumption Test. These are the outcome of correspondence, which was published in the issue for February 23rd, between Mr. T. W. Loughborough, secretary of the Auto-Cycle Union, and Mr. Booth, the self-appointed organiser. Many private motor cyclists, unattached to any club, appear to regard Mr. Loughborough's intervention with surprise, and, with a view to placing before our readers the governing body's position respecting unofficial trials, we invited the A.C.U. secretary to reply to his critics concurrently with the publication of their letters.*

THE whole of the objects for which the Auto-Cycle Union exists may be expressed in two words—the encouragement of motor cycling. The correspondence addressed to *The Motor Cycle* under the heading of Sidecar Fuel Consumption Tests indicated either that the A.C.U. has forgotten its *raison d'être* or that Mr. Booth and his sympathisers have misunderstood my letter of warning given in *The Motor Cycle* of February 23rd. In the second paragraph of that letter I pointed out that "such a competition"—an open petrol consumption test—"cannot be held without infringement of the rules of the Auto-Cycle Union." I did not say it could not be held under any conditions. The Union has no power to stop motor cyclists holding competitions, neither has it the least desire to do so. On the contrary, it welcomes the interest which Mr. Booth's proposal has stirred up.

What, then, was the object of my letter? It was written because it had been published far and wide that Mr. Booth, who had originally contemplated a private test of the fuel consumption of sidecars, had now decided to throw his competition open to all makes of sidecar outfits and a limited number of solo machines. The natural inference is that the results of such a competition might be given equal publicity, in which case Open Competition Rule No. 3a would in all probability be infringed, and it was only fair to warn Mr. Booth of the risks he might be incurring.

### Obtaining Extensive Advertisement.

This is the rule in question:—

"Any owner, manufacturer, dealer, agent, or driver, or other person taking part in or directly connected with any Trial or Competition, not being an Open Competition under these Rules, *and obtaining extensive advertisement therefrom*, shall be deemed to be guilty of a breach of these Rules."

This is a most important rule, framed by motor cyclists in their own interest. A little reflection will show that without such a rule competitions would lose most of their value, and it would be impossible for *The Motor Cycle* to write such a leading article as appeared on February 16th, when it was said, and said truly, that success in a leading British reliability trial is accepted as authentic the world over.

Every sport must have its governing body. When, as with motor cycling, there is not only the sporting interest, but also an important commercial interest attaching to the results of competitions, the necessity for a strong and impartial governing body is obvious. Motor cycling in this country is governed not by the trade, but by an association of private enthusiasts who have no axe to grind, and whose one object is the encouragement of the sport and pastime. Its authority is purely moral, and the measure of its influence is the support given it by the users—not the manufacturers—of motor cycles. The only penalties it can inflict are the withdrawal of any privileges it has been able to grant, but so loyal and far-reaching is the support given to the A.C.U. by private riders and clubs, by the Press and by the trade, that it is seldom necessary to do more than issue a warning.

### Safeguarding the Public.

Suppose Mr. Booth went ahead with his test—as he is perfectly entitled to—and the results were extensively advertised. What guarantee would the motor cycling public have that the results were authentic?

Once one opens the door to unofficial trials and tests, and permits them to be extensively advertised, not only do official trials lose in interest, but the whole tone of the sport of motor cycling becomes degraded. Furthermore, the "man in the street" loses his one authentic and acknowledged safeguard respecting the claims made by manufacturers of what their motor cycles or accessories have accomplished in open competition with their rivals. Great Britain will no longer be recognised as "*the* arena for motor cycle competitions," and their results will cease "to be reflected and to influence trade throughout the world."

(These concluding quotations are from *The Motor Cycle* leading article in the issue for February 16th.)

T. W. LOUGHBOROUGH.

## T.T. DANCE IN THE ISLE OF MAN.

THERE were nearly 800 dancers at the T.T. masked ball at Villa Marina, Douglas, I.O.M., on Tuesday evening of last week. There was no restriction as to costume to be worn, the only rule being that everyone was to wear a mask. Full advantage was taken of the liberty, and the costumes were of all sorts and descriptions, brilliant reds and yellows contrasting with the more sober, but not less attractive, blacks and whites, with every colour of the rainbow in between. There can be no doubt that this masked ball, organised by the Manx Motor Cycle Club for the T.T. Races Fund, was a brilliant success in every possible way. All but very few were in fancy costume.

# CLUB NEWS (continued from p. 309)

### Berkhamsted and District M.C.C.

April 2nd opens the season with a hill climb. There will be three classes only instead of the Easter Monday run, a 100 miles reliability test will be held on Good Friday. All particulars may be obtained from Mr. H. Mills, 158, High Street, Berkhamsted.

### Public Schools M.C.C.

After the opening run, starting from the Bear Hotel, Esher, at 12.30 p.m. on the 13th inst., the next important meeting will be the Brooklands impromptu race meeting on April 1st, for which the president, Colonel Lloyd, has presented a cup and offered the use of the track free to club members.

### Doncaster and District M.C.C.

"Without co-operation on the right lines, our club will cease to exist," said Mr. L. Callender, the secretary, at the annual meeting held recently at the Red Lion Hotel.

Mr. Callender gave a brief *résumé* of the club's activities during the past year. He referred to the sporting spirit of Mr. J. H. Wilkinson, who, though over sixty years of age, covered the half-mile course during a speed trial in 28⅘s. Under the most adverse circumstances, said Mr. Callender, the club had gone through with a varied programme, which, though successful, might have been much more so if members had supported the events more whole-heartedly.

### Essex County and Southend A.C.

Prizes amounting to £200, including thirty-three silver cups, will be awarded at the club's hill-climb to be held on May 1st. The motor cycle classes are open to members only.

### Proposed Brixton M.C.C.

A preliminary meeting regarding the proposed Brixton M.C.C. will be held at the Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, to-morrow at 7 p.m. All local riders are cordially invited to attend.

### Motor Cycling Club.

The annual committee dinner, attended by past and present members of the committee, was held at Pagani's Restaurant on Wednesday of last week. Mr. R. H. Head occupied the chair, and on his right sat Mr. J. K. Starley, the new president of the club, who, in a brief speech, referred to the true sportsmanship of the club's members.

Among the older guests present were Dr. C. B. Moss-Blundell, Messrs. J. Van Hooydonk, and F. J. Jenkins.

Mr. Van Hooydonk, in the course of an amusing speech, mentioned how the Edinburgh run had been the making of the M.C.C., and that the success of the club was due to a large extent to the fact that its original committee was composed of several members of the North Road C.C. He also paid a tribute to the memory of the late Mr. S. H. Fry.

### Glasgow University M.C.C.

On Monday of last week a hundred-mile reliability trial was held over a sporting course—Glasgow, Balloch, Arrochar, Rest-and-Be-Thankful, Cairndow, Hell's Glen, Arrochar, Drymen, Glasgow, University Union. There were thirty entries. The weather throughout was not unsatisfactory, but a violent snowstorm was encountered on Hell's Glen and the "Rest." Results: Solo (tie).—F. W. G. Penman (4 Triumph) and R. W. Bell (4½ B.S.A.). Sidecars.—N. Ferguson (4 Triumph sc.). Team prize.—Triumph team.

### Darlington District M.C.

Judging by the large attendance at the annual meeting held on Monday night of last week, the club is in a very healthy state, and promises to become one of the leading representative motor organisations in the district. During the past twelve months the membership has increased fourfold.

A comprehensive programme of social and sporting events is being arranged for the coming season, and numerous trophies and prizes are being offered for competition. An application is being made also for affiliation with the Auto Cycle Union in the case of motor cycle members.

In future the club headquarters will be at Northgate Chambers, Crown Street, Darlington, where Messrs. W. Brown and J. J. T. Whitfield, joint hon. secretaries and treasurers, will be glad to meet present and prospective members.

## LAND'S END TO JOHN O' GROATS.

AS already announced in these pages, to commemorate the twenty-first anniversary of the founding of the M.C.C., a run is to be organised from Land's End to John o' Groat's. Preliminary details concerning this are now available, but it must be borne in mind that these are not final, and that the distances mentioned are approximate.

It has been felt that the most fitting way to celebrate the club's coming of age is to confine the run to the only class of motor cycle in existence at the time of the club's foundation; consequently the run will be open to solo machines only; pillion passengers not permitted.

The conditions will be comparatively easy. There will be no hill tests and no non-stop sections, competitors being required only to see that they are not more than 30 minutes late or 15 minutes early at any control.

An innovation is to be made in the method of finding the winner of the cup to be presented by Mr. L. A. Baddeley. The organisers are well aware of the difficulty of deciding as to which is the best performance among a host of gold medal winners, and it has therefore been decided that this cup shall be awarded by vote among those qualifying for the special gold medal presented for the trip.

Order of starting will be different each morning, and no rigid adherence has been made to the classic route. Rather it has been aimed to avoid large towns as much as possible. The following is an abridged skeleton of the journey with the approximate times and distances :—

Land's End, start 6 a.m., Wednesday, July 12th; lunch, Exeter; arrive Cheltenham, 7.3 p.m.: 241 miles.

Thursday, July 13th, leave 7 a.m.; lunch, Nottingham; arrive Barnard Castle, 7.30 p.m.: 230 miles.

Friday, July 14th, leave 5.30 a.m.; lunch, Lanark; dinner, Kingussie (7.45 p.m.); arrive Inverness, 11 p.m.: 312 miles.

Saturday, July 15th, leave 9 a.m.; lunch, Golspie; and arrive at John o' Groats at 5.45 p.m.: 154 miles.

Grand total: 937 miles.

Roads in a semi-flooded state, and intermittent but heavy rain, did not deter enthusiasts of the Coventry and Warwickshire M.C. from turning up for last Saturday's opening run and paperchase.

# NEXT WEDNESDAY'S A.C.U. TRIAL.

## Sixty-two Standard Stock Machines and 52 others entered for the Auto-Cycle Union 1-day Trial.

IN addition to the 62 standard stock machines, of which a list appeared in *The Motor Cycle* of the 23rd ult., there have been further entries of 52 ordinary machines, making a grand total of 114. It will be seen, therefore, that the trial has been well supported. It takes place on Wednesday of next week, the 15th inst., starting from Birmingham (Ward End Works of Wolseley Motors, Ltd.) at 6.30 a.m., and terminating at Brooklands, where the first competitor is scheduled to arrive at 3 p.m. Lunch will be taken at Oxford (10.30 to 12 noon).

The route is given below :

| | |
|---|---|
| Ward End (Birmingham 6.30 a.m.). | Woodstock. |
| | Oxford (10.30). |
| | Wheatley. |
| Castle Bromwich. | Thame. |
| Stonebridge. | Princes Risborough |
| Kenilworth. | Kop Hill. |
| Warwick. | Amersham. |
| Kineton. | Beaconsfield. |
| Sun Rising. | Farnham Common. |
| Wichford. | Slough. |
| Long Compton. | Staines. |
| Neat Enstone. | Brooklands (3 p.m.). |

### Standard Stock Machines.

| Rider. | Machine. |
|---|---|
| 1. G. M. Townsend ... | (4½ P. and M.) |
| 2. F. W. Giles ... ... | (7 A.J.S.) |
| 3. T. C. de la Hay ... | (4¼ Sunbeam) |
| 4. S. M. Greening ... ... | (8-10 T.B.) |
| 5. G. Goodall ... ... ... | (8 Morgan) |
| 6. W. T. Woodcock ... | (3½ Ariel) |
| 7. W. H. Hadfield ... ... | (2¾ Raleigh) |
| 8. H. F. Harris ... ... | (2¾ A.J.S.) |
| 9. A. E. Rollason ... ... | (4½ Ariel) |
| 10. H. R. Davies ... ... | (2¾ A.J.S.) |
| 11. L. Newey ... ... ... | (8 Ariel) |
| 12. W. Brandish ... . . | (4½ Humber) |
| 13. Sam Jones ... ... ... | (2¼ Levis) |
| 14. W. B. Gibb ... ... ... | (4 Douglas) |
| 15. J. Donaldson ... . . | (2¾ Royal Scot) |
| 16. B. Kershaw ... ... . . | (2¼ New Imperial) |
| 17. J. Bishop ... ... ... | (2½ Sun Vitesse) |
| 18. Eric Williams ... ... | (2¾ A.J.S.) |
| 19. Alec Bennett ... ... | (3½ Sunbeam) |
| 20. L. F. Peaty ... ... | (4¼ Hawker) |
| 21. P. Pebrson ... ... ... | (4 Dunelt) |
| 22. P. Pike ... ... ... | (2¼ Levis) |
| 23. B. Bladder ... ... ... | (8 New Imperial) |
| 24. Allen Bennett ... ... | (10 Morgan) |
| 25. J. E. Greenwood ... | (4¼ Sunbeam) |
| 26. W. H. Elce ... ... ... | (10 Morgan) |
| 27. H. S. Perrey ... ... | (6 B.S.A.) |
| 28. G. Dance ... ... ... | (3½ Sunbeam) |
| 29. H. F. S. Morgan ... ... | (8 Morgan) |
| 30. C. L. Sprosen ... ... | (2¾ Connaught) |
| 31. S. McCarthy ... ... | (8 Morgan) |
| 32. L. Paynter ... ... ... | (3½ Norton) |
| 33. C. F. Nott ... ... ... | (2¾ Raleigh) |
| 34. E. A. Barnett ... ... | (2¾ Francis-Barnett) |
| 35. N. Hall ... ... ... | (2¾ O.K. Junior) |
| 36. W. H. Bashall ... ... | (6 Martinsyde) |
| 37. D. Brandish ... ... | (4½ Humber) |
| 38. H. F. Walker ... ... | (6 B.S.A.) |
| 39. W. L. Handley ... ... | (2¾ O.K. Junior) |
| 40. C. Greenwood ... ... | (3½ Sunbeam) |
| 41. E. H. Gifford ... ... | (3½ Martinsyde) |
| 42. H. Gibson ... ... ... | (5-6 Raleigh) |
| 43. L. Crisp ... ... ... | (4½ Humber) |
| 44. R. Brown ... ... ... | (4¼ Sunbeam) |
| 45. D. Prentice ... ... | (2¾ New Imperial) |
| 46. H. Hassall ... ... ... | (3½ Norton) |
| 47. H. Holmes ... ... ... | (8 Morgan) |
| 48. F. J. Johnson ... ... | (2½ Sun Vitesse) |
| 49. P. Cunningham ... ... | (4½ P. and M.) |
| 50. B. L. Bird ... ... ... | (4¼ B.S.A.) |
| 51. L. Sealey ... ... ... | (4¼ B.S.A.) |
| 52. J. P. Basball ... ... | (6 Martinsyde) |
| 53. C. Swaine ... ... ... | (8 L.S.D.) |
| 54. C. G. Pullin ... ... | (6 Douglas) |
| 55. Kaye Don ... ... ... | (3½ Norton) |
| 56. F. G. Edmond ... ... | (3½ Triumph) |
| 57. R. Lewis ... ... ... | (4½ P. and M.) |
| 58. A. G. Cocks ... ... | (4¼ Beardmore) |
| 59. F. C. Parkes ... ... | (2½ Sun Vitesse) |
| 60. J. A. Newman ... ... | (3½ Douglas) |
| 61. B. Cathrick ... ... | (4 Dunelt) |
| 62. C. W. Vallings ... ... | (4 Dunelt) |

### Non-Stock Machines.

| Rider. | Machine. |
|---|---|
| 63. A. F. Pulling ... ... | (8 Royal Enfield) |
| 64. M. O'Reilly ... ... | (5 N.U.T.) |
| 65. G. F. Francis ... ... | (2¾ Francis-Barnett) |
| 66. A. Millwood ... ... | (2¾ Wooler) |
| 67. C. Bourlet ... ... ... | (3½ Ariel) |
| 68. J. Wooler ... ... ... | (2¾ Wooler) |
| 69. V. F. Long ... ... | (8 Excelsior) |
| 70. C. R. Little ... ... | (5 Coventry Victor) |
| 71. R. Green ... ... ... | (3½ Norton) |
| 72. O. B. Smyth ... ... | (3½ Sunbeam) |
| 73. H. H. Beacon ... ... | (2¼ New Imperial) |
| 74. A. J. Rowe ... . . | (10 Morgan) |
| 75. J. F. Perrin ... ... | (3½ Zenith-Bradshaw) |
| 76. G. E. Cuffe ... ... ... | (2½ Metro-Tyler) |
| 77. H. C. Lawdham . . | (2 Young) |
| 78. A. H. S. Love ... . . | (3½ Norton) |
| 79. F. C. Townshend ... | (3½ Zenith-Bradshaw) |
| 80. R. Newitt ... ... ... | (3½ Douglas) |
| 81. W. Bucknell ... ... | (8 Matchless) |
| 82. H. R. Harveyson ... | (3½ Triumph) |
| 83. V. Gayford ... ... ... | (3½ Zenith-Bradshaw) |
| 84. D. A. Atkin ... ... | (2¾ Francis-Barnett) |
| 85. R. Charlesworth ... | (3½ Zenith-Bradshaw) |
| 86. C. Barham . . ... ... | (2¾ Warnes (B. and S.) |
| 87. W. A. Schooley ... ... | (3½ Zenith-Bradshaw) |
| 88. J. Caslake .. . . ... | (8 Brough Superior) |
| 89. S. Warne ... ... ... | (3½ Beardmore-Precision) |
| 90. E. S. Burnett ... ... | (5-6 Raleigh) |
| 91. W. King ... ... ... | (7-9 Harley-Davidson) |
| 92. F. W. Becker ... ... | (5-7 McKecknie Victor) |
| 93. L. V. Freeman . . ... | (8 Sunbeam) |
| 94. F. V. Jones ... .. | (3½ Rover) |
| 95. P. W. White . . ... | (8 Sunbeam) |
| 96. P. Platt ... ... . . | (6 Bradbury) |
| 97. G. M. Janson (Mrs.)... | (2¼ Ner-a-car) |
| 98. H. J. Stretton-Ward ... | (4 Forfield-Triumph) |
| 99. P. L. B. Wills ... ... | (3½ Rudge-Multi) |
| 100. F. J. Ellis ... ... . . | (7 Matchless) |
| 101. H. H. Robinson... ... | (2¾ Wooler) |
| 102. G. Fletcher... ... ... | (1¾ Young) |
| 103. F. S. Sprouse ... ... | (8-10 T.B.) |
| 104. B. E. Belfield ... ... | (7-9 Harley-Davidson) |
| 105. D. R. O'Donovan ... | (3½ Norton) |
| 106. P. Manifold ... ... | (2¾ A.J.S.) |
| 107. A. E. Leeding ... ... | (3½ James) |
| 108. F. W. Bates ... ... | (4¼ B.S.A.) |
| 109. H. A. Reyre ... ... | (3½ Ariel) |
| 110. F. A. McNab ... .. | (6 Trump) |
| 111. W. D. Pugh . ... | (3½ Zenith-Bradshaw) |
| 112. C. Dickinson ... ... | (3½ Ariel) |
| 113. H. H. Lawley ... ... | (— Royal Enfield) |
| 114. J. H. V. Wood ... ... | ( —— ) |

## A TALE OF A TRAIL.

FOR years past the Coventry and Warwickshire M.C. has combined a paperchase and a speed-judging contest with its opening run. Likewise, for years past clippings from *The Motor Cycle* printing establishment have denoted the trail. This year (the run was held on Saturday) some brainy individual thought of sawdust, and thereby hangs a tale—but not a trail!

The hares, R. Grindlay (7-9 Harley-Davidson sc.) and Eric Barnett (2¾ Francis-Barnett) were duly started, at which time a dark cloud foregathered overhead; the heavens opened and the trail was lost, or nearly so, before the hounds were unleashed. Meanwhile, the hares, having missed the storm, carried on with their bags in blissful unconsciousness of the "washing-out" process which was proceeding and the search with magnifying glasses at every corner by the hounds, thirty-one in number, now, more by luck than judgment, hot on the scent.

They struggled round the lanes, through gates, over cart-ruts, and through fields (the trail becoming clearer running out of the storm zone), and finally, after thirty-six miles of twisting and twirling between the main London-Holyhead road and Warwick, finished on the outskirts of that town, all very late and some very wet. After tea at the Crown Hotel, the results were announced as follows:

1st Solo Machines: Rev. J. M. Philpott (2¼ Velocette), 14 min. 7 sec. late.

1st Sidecars: G. Betteridge (4 Norton s.c.), 7 min. 20 sec. late.

Subsequently the Silver Challenge Cup offered for the club's solo championship in February was presented by the donor, Mr. J. Calcott, jun., to the winner, J. A. Watson-Bourne, who rode a Brough Superior. No one else qualified for an award.

## A NORTON GATHERING.

IN order to celebrate the safe return of Mr. J. L. Norton from his South African tour, the directors of Norton Motors, Ltd., gathered together their agents and a few other friends at the Midland Hotel, Birmingham, on Monday, February 27th. After an excellent dinner, Mr. Shelley, on behalf of the firm, welcomed Mr. Norton in cordial terms, and presented him with a handsome gold watch as a token of esteem. Speeches were limited to two minutes, but in that short time the speakers, without exception, expressed their pleasure at seeing Mr. Norton safely amongst them, and their appreciation of his plucky rides and the benefits which were likely to accrue to the British motor cycle industry as a result of his tour.

Amongst those who spoke were Messrs. Alec Ross, Teage (*The Motor Cycle*), Lycett, McMinnies, Brown, Vernon Brooke, Naylor, Lee Elliott (Norton representative in South Africa), Frank Whitworth, H. Petytt, Victor Horsman, W. H. Hassall, C. A. Vandervell, Mansell, and P. Pike.

In his reply, Mr. Norton gave a vivid idea of the difficulties and dangers with which he was faced, and thrilled his audience with interesting narratives. In addition to those who spoke, there were present such well-known people in the motor cycle world as Messrs. Dan Bradbury, D. R. O'Donovan, P. J. Evans, K. Don, J. Shaw, and L. Broadhurst.

# COLMORE CUP RESULTS.

## Twenty-three Riders make Non-stop Runs and secure Gold Medals. 105 Silver Medals, 23 Bronze Medals, 18 No Awards, 25 Retired.

AS was expected, only 12 per cent. competitors in the Colmore Cup Trial, described last week, secured gold medals. In this event, however, the wiuning of a silver medal was an honour approximating to the gold medal in a normal trial. Therefore the results may be regarded as indicating a satisfactory percentage of successes.

**THE COLMORE CUP.—T. C. de la Hay (4¼ Sunbeam sc.).**

**WATSON SHIELD** for best performance by a single cylinder sidecar.—**T. C. de la Hay (4¼ Sunbeam sc.).**

**LEVIS CUP** for single-geared solo mount.—**G. S. Davison (2¼ Levis), geared 8 to 1.**

**CALTHORPE TROPHY** for machines under 250 c.c.—**R. E. Pugh (2½ Levis).**

**P. J. EVANS CYCLE CAR TROPHY.—P. Yates (10 New Hudson).**

### ARIEL.

A. E. Rollason (3½), *Gold Medal.*
L. Newey (8 sc.), *Gold Medal.*
W. T. Woodcock (3½), *Silver Medal.*
Tom Peck (4½ sc.), *Silver Medal.*
T. F. Blumfield (8 sc.), *Silver Medal.*
C. L. Reading (3½), *Bronze Medal.*
H. Bennett (3½), *Bronze Medal.*

### A.J.S.

P. Mosedale, Jnr. (2¾). *Silver Medal.*
Eric Williams (2¾), *Silver Medal.*
H. O. Hayes (2¾), *Silver Medal.*
F. W. Giles (7 sc.), *Silver Medal.*
H. Poole (7 sc.), *Silver Medal.*
Dennis Brandish (2¾ sc.), *Silver Medal*
N. M. Bligh (6), *No award.*

### ALLON.

L. E. Clulee (2½ sc.), *Bronze Medal.*
R. C. Cooper (2½), *No award.*

### B.S.A.

H. S. Perrey (4¼), *Silver Medal.*
J. Bacon (4¼), *Silver Medal.*
B. L. Bird (4¼ sc.), *Silver Medal.*
J. H. Walker (6-7 sc.), *Silver Medal.*
F. Morrall (4¼ sc.), *Retired.*

### BROUGH SUPERIOR.

E. Arthur (6.5), *Silver Medal.*
George Brough (8), *Silver Medal.*
J. A. Watson-Bourne (8), *Silver Medal*
T. H. Richards (8), *Silver Medal.*
F. Hallam (8 sc.), *Retired.*
G. L. White (8 sc.), *Retired.*

### BROUGH.

W. E. Brough (5 sc.), *Silver Medal.*

### BEARDMORE-PRECISION.

C. S. Burney (3), *Silver Medal.*
L. A. Bees (3), *Silver Medal.*
Archie E. Cocks (4¼ sc.), *Silver Medal.*
H. Greaves (4¼ sc.), *Silver Medal.*
C. W. Lewis (4¼), *Retired.*

### BOWN-VILLIERS.

W. R. Bown (2¾), *Silver Medal.*

### COVENTRY-EAGLE.

P. L. Mayo (2¾), *Silver Medal.*
C. N. Faulconbridge (2¾), *Silver Medal*
C. Green (2¾), *Silver Medal.*
John W. Moxon (2¼), *Bronze Medal.*
A. D. Mayo (2¾), *Retired.*

### COVENTRY-VICTOR.

C. R. Little (5-7 sc.), *Silver Medal.*
G. E. Austin (5-7), *Bronze Medal.*

### COTTON.

F. G. Morgan (2¾), *Silver Medal.*
C. W. Ramstedt (2¾), *Silver Medal.*

### CONNAUGHT.

F. V. Wood (3½), *Silver Medal.*

### COVENTRY-CHALLENGE.

J. E. B. Bramley (3½), *Silver Medal.*

### CALTHORPE.

J. C. Smith (2½), *Bronze Medal.*
K. C. Bedford (2½), *No award.*
J. A. Stamps (3 sc.), *Disqualified.*

### CHATER-LEA.

J. Chater-Lea (8 sc.), *Silver Medal.*

### DOUGLAS.

A. C. Cope (3½), *Silver Medal.*
N. W. Busby (4), *Silver Medal.*
J. A. Neuman (3½), *Silver Medal.*
Gus Kuhn (4), *Silver Medal.*

### DUNELT.

P. Pehrson (4 sc.), *Retired.*

### DOT.

H. Reed (8 sc.), *Retired.*

### EXCELSIOR.

Parker Walker, Jnr. (2¾), *Gold Medal.*
C. B. Hemphill (2¾), *Bronze Medal.*
F. C. Gray (6 sc.).

### EDMUND.

J. G. Oates (3), *Silver Medal.*
Geo. W. Shepherd (4½), *Silver Medal.*
J. W. Wills (2¾), *Silver Medal.*

### FRANCIS-BARNETT.

D. A. Atkin (2¾), *Silver Medal.*
G. I. Francis (2¾ sc.), *Silver Medal.*
E. A. Barnett (2¾), *Bronze Medal.*

### HENLEY.

J. G. Orford (2¾), *Silver Medal.*

### HOBART.

E. Poppe (2½), *No award.*
F. R. Downes (2¾), *No award.*

### HUMBER.

L. Crisp (4½), *Gold Medal.*
W. Brandish (4½), *Gold Medal.*
M. G. A. Scafley (4½), *Silver Medal.*
R. R. Grindlay (4½), *Silver Medal.*
Sam Wright (4½), *Silver Medal.*

### HAWKER.

L. F. Peatty (4¼ sc.), *Silver Medal.*

### H. B.

W. E. Hill (2¾), *Silver Medal.*

### INDIAN (SCOUT).

D. H. Davidson (4), *Silver Medal.*

### IVY.

F. Whitworth, Jnr. (3), *Silver Medal.*

### JAMES.

G. Strange (3½), *Gold Medal.*
T. G. Amphlett (4¼ sc.), *Silver Medal.*
H. Boynton (7 sc.), *Silver Medal.*
R. Fowler (7 sc.), *Silver Medal.*
T. Stevens (4¼ sc.), *Silver Medal.*
H. Jennens (3½), *No Award.*
C. Fisher (5-6 sc.), *Retired.*
— Woodfield (7 sc.), *Retired.*

### LEVIS.

G. S. Davison (2¼), *Levis Cup.*
R. E. Pugh (2½), *Calthorpe Trophy.*
H. Newey (2¾), *Gold Medal.*
A. R. Edwards (2¾), *Gold Medal.*
S. H. Jones (2½), *Gold Medal.*
W. S. Hawcutt (2¾), *Silver Medal.*
H. R. Lane (2¾), *Retired.*
J. Doherty, Jnr. (2¾), *Retired.*

### MARS.

G. F. Limbird (2¾), *Retired.*

### MATCHLESS.

R. B. Clark (8), *Silver Medal.*
G. Packman (8), *Silver Medal.*
R. Simpson Harvey (8 sc.), *Bronze Medal.*

### MASSEY-ARRAN.

J. Whalley (2¾), *Silver Medal.*

### MORRIS.

A. King-Smith (2¾), *Silver Medal.*
G. S. Smith (2¾ sc.), *Bronze Medal.*

### MARLOE.

G. F. Limbird (2¾), *Retired.*

### McKECHNIE-VICTOR.

F. W. Becker (5-7 sc.), *Bronze Medal.*

### MARTINSYDE.

S. R. Philpott (6 sc.), *Silver Medal.*

### MORGAN.

H. F. S. Morgan (8), *Gold Medal.*
N. Norris (10), *Silver Medal.*
W. A. Carr (8), *Bronze Medal.*
E. W. Bewshea (10), *No award.*
C. E. Hulse (8), *No award.*
C. Hayes (10), *Retired.*
G. H. Goodall (8), *Retired.*

### NEW IMPERIAL.

Bert Bladder (8 sc.), *Gold Medal.*
D. G. Prentise (2¾), *Silver Medal.*
Bert Kershaw (2¾), *Silver Medal.*
H. G. Uzzel (8 sc.), *Silver Medal.*
G. N. Roberts (2¾), *Bronze Medal.*

### NORTON.

F. J. Adam (3½), *Silver Medal.*
W. H. W. Drew (3½), *Silver Medal.*
H. P. Cutler (4 sc.), *Silver Medal.*
Leslie Paynter (3½ sc.), *Silver Medal.*
H. V. Collins (3½ sc.), *Silver Medal.*
V. H. Smith (3½ sc.), *Silver Medal.*
W. E. Smith (3½ sc.), *Retired.*

### NER-A-CAR.

Mrs. G. M. Janson (2¾), *No award.*

### NEW HUDSON.

P. Yates (10 cc.), *Evans Trophy.*
B. Bourke (4.5 sc.), *Gold Medal.*
E. Mundey (2¾), *Silver Medal.*
W. Bell (2¾), *Silver Medal.*
W. E. Baylis (4.5 sc.), *Silver Medal.*
W. Ridley (10 cc.), *Silver Medal.*

### OMEGA.

J. Nicholson (2¾), *Retired.*

### O.K. JUNIOR.

W. L. Handley (2¾), *Gold Medal.*
L. Tonks (2¾), *Bronze Medal.*
Neville Hall (2¾ sc.), *Retired.*

### POWELL.

P. Platts (4 sc.), *Bronze Medal.*

### QUADRANT.

Clifford Wilson (4½ sc.), *Silver Medal.*

### RALEIGH.

Hugh Gibson (2¾), *Silver Medal.*
F. W. Vites (5-6 sc.), *Silver Medal.*

### REX-ACME.

F. H. Brown (6-8 sc.), *Gold Medal.*
N. Schobel (2¾), *Silver Medal.*
T. R. Gibbons (6-8 sc.), *Retired.*

### RUDGE.

J. H. Mathers (3½), *Silver Medal.*
F. T. Sibley (3½ sc.), *Silver Medal.*
W. L. Danskin (7-9 sc.), *Silver Medal.*

### RADCO.

G. A. Lovegrove (2¼), *Silver Medal.*
L. V. Bowen (2¼), *No award.*

### SUNBEAM.

T. C. de la Hay (4¼ sc.), *Colmore Cup.*
A. Bennett (3½), *Gold Medal.*
R. G. G. Beesley (3½ sc.), *Gold Medal.*
Geo. Dance (3½), *Silver Medal.*
Geoffrey R. Butcher (3½), *Silver Medal.*
Jack Bacon (3½), *Silver Medal.*
W. R. Haggas (3½), *Silver Medal.*
Wilfrid Wells (3½), *Silver Medal.*
A. R. Evans (3½), *Silver Medal.*
J. E. Greenwood (4¼ sc.), *Silver Medal*
Reg. Brown (3½ sc.), *Silver Medal.*
Alan Watson (4¼ sc.), *Silver Medal.*
A. R. Evans (3½), *Silver Medal.*
R. G. R. Smith (3½), *Silver Medal.*
A. W. Thrush (3½), *Bronze Medal.*
A. J. Dowler (3½), *Bronze Medal.*
Cecil Greenwood (3½), *Retired.*
F. W. Hughes (3½), *Retired.*

### SUN-VITESSE.

M. Bishop (2½), *Gold Medal.*
F. Jack Johnson (2½), *Silver Medal.*
H. W. Parkes (2½), *Silver Medal.*
Frank Woolley (2½), *Bronze Medal.*
E. C. Gates (2½), *Bronze Medal.*
C. W. Anderson (2½), *No award.*
F. C. Parkes (2½), *Disqualified.*

### SCOTT.

A. J. Jacobs (3¾), *No award.*
P. Worsley (3¾), *No award.*

### TRIPLE-H.

F. A. Robbins (2½ sc.), *No award.*

### TRIUMPH.

F. G. Edmond (4 sc.), *Gold Medal.*
H. J. Stretton-Ward (4), *Silver Medal.*
T. L. Williams (4), *Silver Medal.*
R. A. Wright (4), *Silver Medal.*
G. H. Kirby (3½), *Silver Medal.*
S. A. Tompson (4), *Silver Medal.*
R. C. Atcherley (4), *Silver Medal.*
H. Finch (4 sc.), *Silver Medal.*
R. W. Duke (3½), *Bronze Medal.*
T. H. Meakin (3½), *Bronze Medal.*
G. D. Johnston (4), *No award.*

### T.B.

J. H. Pedley (10 cc)., *Silver Medal.*

### VELOCETTE.

Geo. Denley (2½), *Silver Medal.*
T. C. Thacker (2½), *Retired.*

### WOOLER.

E. R. Jacobs (2¾), *Retired.*
W. N. Worthington (2¾), *Retired.*

### WOLF.

S. H. Rhodes (2¾), *Bronze Medal.*

### ZENITH-BRADSHAW.

S. E. Longman (3½), *Silver Medal.*

# IDEAS: USEFUL AND INGENIOUS.

## A Selection of our Readers' Home-made Gadgets, with some Practical Hints on Work in the Garage.

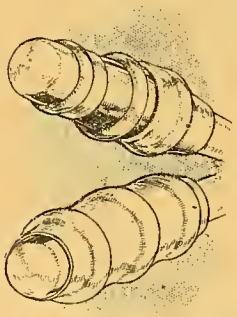
### Removing Water from the Tank.

THERE is a story of a Jewish house agent, not too familar with the English idiom and of very humanitarian tendencies, who refused to let a house to a man who objected to the size of certain rooms as being "too small to swing a cat round in." The headline to this paragraph also prompts a sort of resentment—Why should anyone want to remove water from a petrol tank? Despite the fact that a petrol tank should have no water in it to remove, occasionally in the best regulated machines the alien element is found, and to remove it without unnecessary waste and mess Mr. G. Temple, of Buckhurst Hill, says: "Obtain a medical syringe of any description, and add sufficient rubber tubing to the business end of it to just touch the bottom of the tank. Lift the front wheel, or have the machine pointing up an incline, thus allowing the water to collect where it can be seen from the filler-cap hole. Place the rubber tube on the bead of water and withdraw the syringe plunger sufficiently to suck up the water, and the thing is done. A tank can be completely cleared in a few moments with a minimum loss of petrol."

If a syringe is not available, of course, nature has provided us all with lungs and lips, and the machine probably has a bit of rubber tube on it somewhere. Suck the bead of water into the tube, nip the latter tightly, and withdraw from the tank, and *voilà!* (Even, Mr. Temple, as your Editor has done on occasion!)

### Making Rubber Handle Grips.

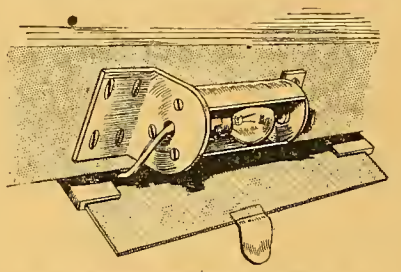
HERE is a most ingenious method of making a pair of rubber handle grips from old pedal cycle inner tubes, which, if not available, can usually be bought for about sixpence each from the cycle shops. This idea is submitted by Mr. M. H. Dawson, of Hastings, who says, "First cut six pieces of tube 2in. in length and place one of these on the handle-bar and roll it into a ring; now cut a piece 1½in. longer than the grip and draw this over the ring and turn back the loose end so that two more rings can be formed on the grip, then pull the tube back again to cover the lot."



Rubber covered handle-bar grips made from old bicycle inner tubes.

### Sidecar Dash Lamp.

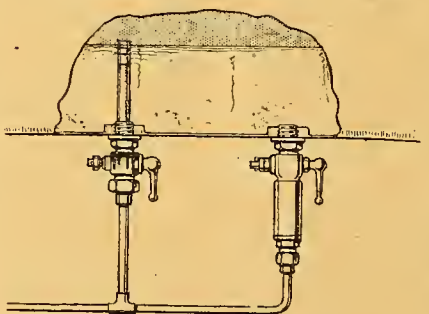
AN ordinary batten lamp-holder carrying a low power small bayonet cap bulb, a piece of brass tube, and two angle pieces made from brass plate formed this little convenience fitted to a sidecar owned by a member of *The Motor Cycle* staff. Immediately below is a flat sliding shelf on which a route card or plan may be fixed with drawing pins. Should brass be unavailable, no doubt the lamp could be made from odd scraps of tin with little detriment to the appearance if it was finally finished with dull black varnish.



For the sidecar passenger: a dashboard lamp and route card holder.

### To Prevent Running Out of Petrol.

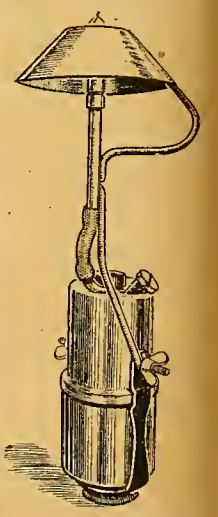
THIS particular paragraph is inserted chiefly as a warning. Our post each morning contains usually a score or more of readers' ideas—useful and ingenious. Not to make invidious distinctions, we categorise this one as "useful," but the trouble is that every other person sends it as new. The idea is to fix another tap in the petrol tank with an upwardly projecting pipe—but why explain? The drawing is quite clear. When your petrol in the tank drops below the projecting pipe your engine stops, and you lose your medal in a non-stop section; you then turn on the low level tap, and know that there is enough spirit left to get you to the "Crown and Anchor." It is a good device for forgetful riders, and fitted to a certain Grand Prix racer last year might have appreciably affected the results. A reader designated by the initials "W. D. B." is responsible for the scheme, but, lest he swells with pride, we must inform him that he is the one thousand and eighty-sixth reader who has submitted it.



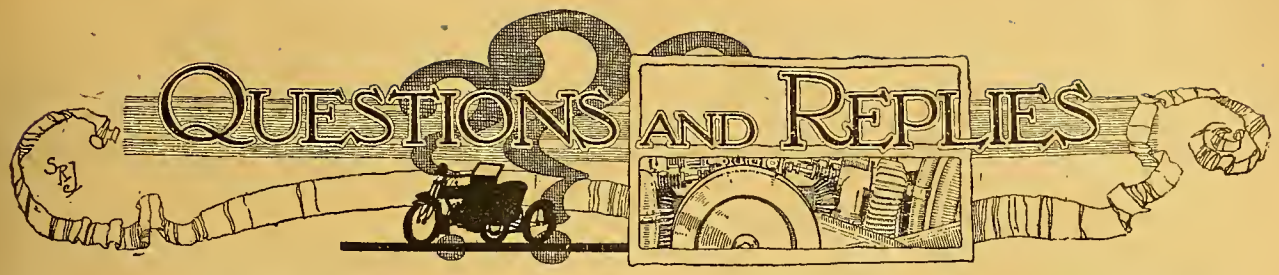
Arrangement of taps giving a reserve supply of petrol in the tank.

### Workshop Lighting.

THE title to this paragraph is a plagiarism on the title of a high-brow volume, published from the offices of *The Automobile Engineer*, dealing with the lighting of factories on the most scientific principles. However, the matter in hand is conceived on a much smaller scale. A reader who writes as "AR 8414" found the need for a portable light while repairing a clock (whether dashboard, alarm, grandfather, or village church he does not say), and having made the gadget it was promptly acquired by Mrs. AR 8414 for household purposes. He describes its making thus: "The arrangement consists of a tin shade properly shaped from a paper pattern, soldered on to a stout piece of copper wire, which in turn is fixed in the same way to a piece of brass tube of appropriate size to carry an ordinary 10-litre burner. A second piece of copper wire serves to hold the tube in position above the generator, the wing nut in the latter being requisitioned to clamp the wire at the required angle. A piece of rubber tube connects the brass tube with the generator. The whole outfit took about an hour to produce from scrap material, and has proved an an invaluable adjunct to an amateur's workshop."



Acetylene lamp for use in the workshop.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### FAULTY CONDENSER CONNECTION.

Burning at the platinum points of my U.H. magneto is becoming very pronounced, and they have to be faced up at about every 100 miles. Am I right in assuming that the trouble lies in the condenser being faulty? The condenser appears to be broken. When the platinum points are clean I get a good spark at the plugs.—G.H.

Burning of the platinum points is usually due to a fault in the condenser or to the condenser being disconnected. We think your best plan would be to return the magneto to a firm of specialists in magneto repair work as you really cannot effectively repair it yourself, and there is always a danger of damaging the insulation of the high-tension windings.

### GEAR RATIOS FOR INVALID TRICYCLES.

Being a disabled soldier, and having an invalid tricycle to which I am now having fitted an Economic two-stroke engine of 1½ h.p., I want to know what gear ratio these sprockets will give me: Engine—10 tooth to 52 tooth on countershaft; 10 tooth sprocket on countershaft to 30 tooth sprocket on differential axle; there is no clutch, and I do not want high speed. I have a friend who is also disabled, and he has an Auto-Wheel attached to his tricycle. Will you let me know what gear ratio his fixed gear gives him? The engine has a 12 tooth sprocket driving to a 30 tooth sprocket on road wheel.—W.K.

The sprockets you mention will give a gear ratio of 15 to 1. This will be rather too low for general running; moreover, sprockets with such a small number of teeth as 10 are not good practice. We would suggest that you use an engine sprocket of 15 tooth driving the 52 tooth countershaft sprocket, and a 13 tooth on the countershaft driving the 30 tooth on the differential; this will give a ratio of 8 to 1. Should this prove too high, use a 13 tooth sprocket on the engine instead of the 15 tooth; this will give a top gear of 9.2 to 1, and should be about correct. The gear ratio of your friend's Auto-Wheel is approximately 6¼ to 1, making allowance for the comparison between its 20in. wheel and the 26in. wheels of the average motor cycle

## Important Dates.

**Wed., Mar. 15th—A.C.U. One-day Trial for Stock Machines.**
**Sat., Mar. 18th—Victory Cup Trial.**
**Sat., Mar. 25th—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 mile sidecar race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish twenty-four hour Open Reliability Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**

### MATERIAL FOR BELT PULLEY.

Being tempted to construct a variable gear for rubber belts for a cycle car, could I make the pulley for the engine-shaft of hard wood, or would it be better of aluminium with bronze bushes? The reason I am having the belt pulley gear is to do away with a gear box and its attendant weight, as the car is to be only 160lb. when finished.—E.G.S.

Neither wood nor aluminium is suitable for the pulleys used on a cycle car transmission system. It will be necessary to have a cast iron pulley.

### MOTOR POWER FOR A BATH CHAIR.

Is it possible to attach an Auto-Wheel to a bath chair, and what is the best way to fit this form of power?—S.L.H.

It is quite possible to do as you suggest, but we cannot give the necessary details in a short paragraph. Any good motor cycle mechanic, however, should be able to undertake the work.

### SILENCING AND THE LAW.

What length of exhaust pipe do I require on a 3½ h.p. single-cylinder machine when not having a silencer?—M.E.M.

The legal requirement is that a machine shall be reasonably silenced by passing the exhaust gases through an expansion chamber or other "suitable apparatus." A long exhaust pipe does not usually render a machine reasonably silent, and there is no definite length of pipe legally laid down. You would be well advised to fit a proper silencer to the machine.

### A POROUS CYLINDER CASTING?

On taking off the cylinder of my 1919 4 h.p. machine, I find the inside of the cylinder minutely pitted all over to about a depth equal to the thickness of ordinary newspaper. I might add that I always use plenty of oil. I should be grateful if you could tell me the cause of it.—G C.A.

The trouble which you describe is an unusual one, and if you have been using a first-class brand of oil, we would recommend you to write to the makers of the machine asking their opinion, as it may be that the cylinder casting is at fault.

### EASILY FITTED VARIABLE GEARS.

I have an old model 3½ h.p. single-speed (no clutch) Rudge, and would like to fix it up to take a light sidecar occasionally. What style of gear could I use without having to alter the frame, as there is not much room for a gear box?—J.G.D.

The Bradbury (N.S.U.) pattern two-speed epicyclic gear and free engine, or the Philipson pulley can be recommended. Either of them will fit your engine without alteration. The former gives two speeds and free engine, and the latter, although not a free engine device, is simple in action, and does not require any controlling mechanism.

### REMOVING TRIUMPH MUDGUARD.

How is the front mudguard on a Triumph taken off? Must front forks be detached? I intend fitting a wider guard.—J.P.S.

It is necessary to remove one side of Triumph forks in order to take down the front mudguard.

### LUBRICATING THE MAGNETO.

After how many miles approximately should an M-L magneto be taken down for lubricating? I have ridden a machine thus fitted for exactly a year, covering, I should imagine, about 5,000 miles. Can I undertake this job myself, and is vaseline the correct lubricant?—J.P.S.

Your magneto should run a considerably further distance without requiring attention and we should advise you to return it to the makers for repacking the bearings with grease, as they would overhaul the magneto at the same time. However, this need not be done until you have at least covered another 5,000 miles.

### MACHINE FOR A VERY SHORT RIDER.

Is there any one machine which is exceptionally easy to start, as I am thinking of buying one, but being far from strong, and less than 5ft. in height, I have found the starting of all the machines I have tried to be rather difficult. I have thought of buying a sidecar outfit, of not more than 3½ h.p., as it is important that I should have one economical to run. I am rather attracted to the 2¾ h.p. machines fitted with a lightweight sidecar, as I should frequently use it alone, and when I had a passenger it would be one weighing 9st. Would one of these lightweights be quite satisfactory for me, and could it be used for a long journey?—A.S.G.

You should find any 2¾ to 3 h.p. lightweight of good reputation suitable for your purpose. Provided the engine is kept in good condition, there should be no trouble in starting. Bad starting is nearly always due to lack of attention, air leaks in the induction system, or some simple fault. Provided the machine is designed for light sidecar work, there is no harm in thus employing it. There are one or two two-stroke lightweights on the market which have very low saddle positions, and their possibilities for your special requirements should be considered.

## READERS' REPLIES.

### DIFFICULTIES WITH A TWO-STROKE.

With reference to your correspondent "H.L.L.'s" troubles with his Villiers engine, the following experiences with this power unit may be of use. About four months after I bought my machine the engine developed the troubles mentioned, and my petrol consumption rose to the appalling figure of 44 m.p.g. with a 27 jet in the Amac carburetter. After some weeks of most disappointing experimenting with the carburetter, I replaced the original sparking plug with a new one. The change was simply miraculous. I was able to reduce the jet size to 21, and with that I travelled from Bristol to London at an average speed of 24 m.p.h. with a petrol consumption of 96 m.p.g. Again, a few weeks ago the symptoms reappeared, but as the plug then on the machine had only done about 400 miles I scoffed at the idea that it was the cause of the trouble, until, after the engine almost stopped on a hill which it usually romps up with an 11 st. pillion passenger, I again changed the plug, and once more the machine is as good as ever.—AR 8414.

I have had "H.L.L.'s" troubles with an engine of the same make. After about 3,000 miles, popping back through the carburetter began, the machine running well for some miles, then very intermittently with much spluttering and sudden misfiring, suddenly beginning to pull well again, but it could never be depended on for any length of time. The petrol consumption ran up from a regular 104 m.p.g. to about 70 m.p.g. I tried everything I could think of to cure it. I suspected air leaks, but could locate none. I changed my plug and checked the ignition timing, also the tension of the magneto chain, but with no result. I finally came to the conclusion that the fault lay in the petrol service or carburetter. Frequent dismantling of the latter showed nothing for some time, until one day I located a minute bead of water in the jet. The cure began then, though it was slow, as the beads of water were so tiny that on the road it was impossible to find them. Let "H.L.L." carefully filter every drop of petrol he uses *for water*. I have got as much as a teaspoonful out of a fresh two-gallon tin! He will probably find an improvement; I did, and I know of other similar cases. I have now absolutely no trouble; my petrol consumption has gone back to normal; but, as a precaution, nothing but dire necessity will induce me to buy any but one particular brand of petrol which I have found to be freest from water. I am told water is present in all brands of motor spirit, especially in cans filled from the last of a storage tank, so that a proper waterproof gauze filter is a necessity.—R. F. WOODS.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"X.Y.Z." (Oxford).—7-9 h.p. ex-W.D. Harley-Davidson, 5 h.p. Sports Zenith, 3½ h.p. Rudge Multi; any other fast machine below £80; all solo: General experiences.

"P.B." (Hinckley).—2¾ h.p. A.J.S. (Model B1): General experiences; also best accumulator for, and method of carrying on, a solo machine.

"F.E." (Leeds).—Bowden extra air inlet on 6-7 h.p. B.S.A.

"J.S.L." (York).—Flexekas, F.E.W. and Ayrtite valve attachments; also W.S.R. jet adapter on 7 h.p. and 2¾ h.p. A.J.S. machines.

"H.S." (Heighington).—Morgan, family model: Efficiency on 5 and 11 to 1 ratios; advisability of four-speed gear.

"R.L." (Glasgow).—350 c.c. Beardmore-Precision, spring frame model with sidecar: Speed, economy, etc.

### Reduction in Price.

The oils marketed by Alexander Duckham and Co., Ltd., 4, Broad Street Place, London, E.C.2, have been reduced in price to the extent of 6d. per gallon.

### Essex Awards Amendment.

In the Essex one day winter trial, C. C. Labin, on a chain-driven Zenith-Bradshaw was awarded a bronze medal for second place in the 500 c.c. solo class.

### The Adelaide-Melbourne Record.

Recently C. W. Korner, a well-known South Australian motor cyclist, covered the distance between the two cities of Adelaide and Melbourne in 18h. 54m., beating the previous record by no less than 25m. 16s.

### West Midland Open Trial Awards.

Any correspondence regarding delays in receiving awards won in last November's Midland Centre Open Reliability Trial should be addressed to the Centre and not to Mr. P. W. Bischoff, who wound up his side of the work in December.

### Change of Ownership.

On February 14th the motor cycle and light car business of Coppen, Allan and Co., 89, Great Portland Street, London, W.1, came under the ownership of the late manager, Mr. W. E. Line. The distribution of Reading Standard machines and Plus One sidecars will be continued.

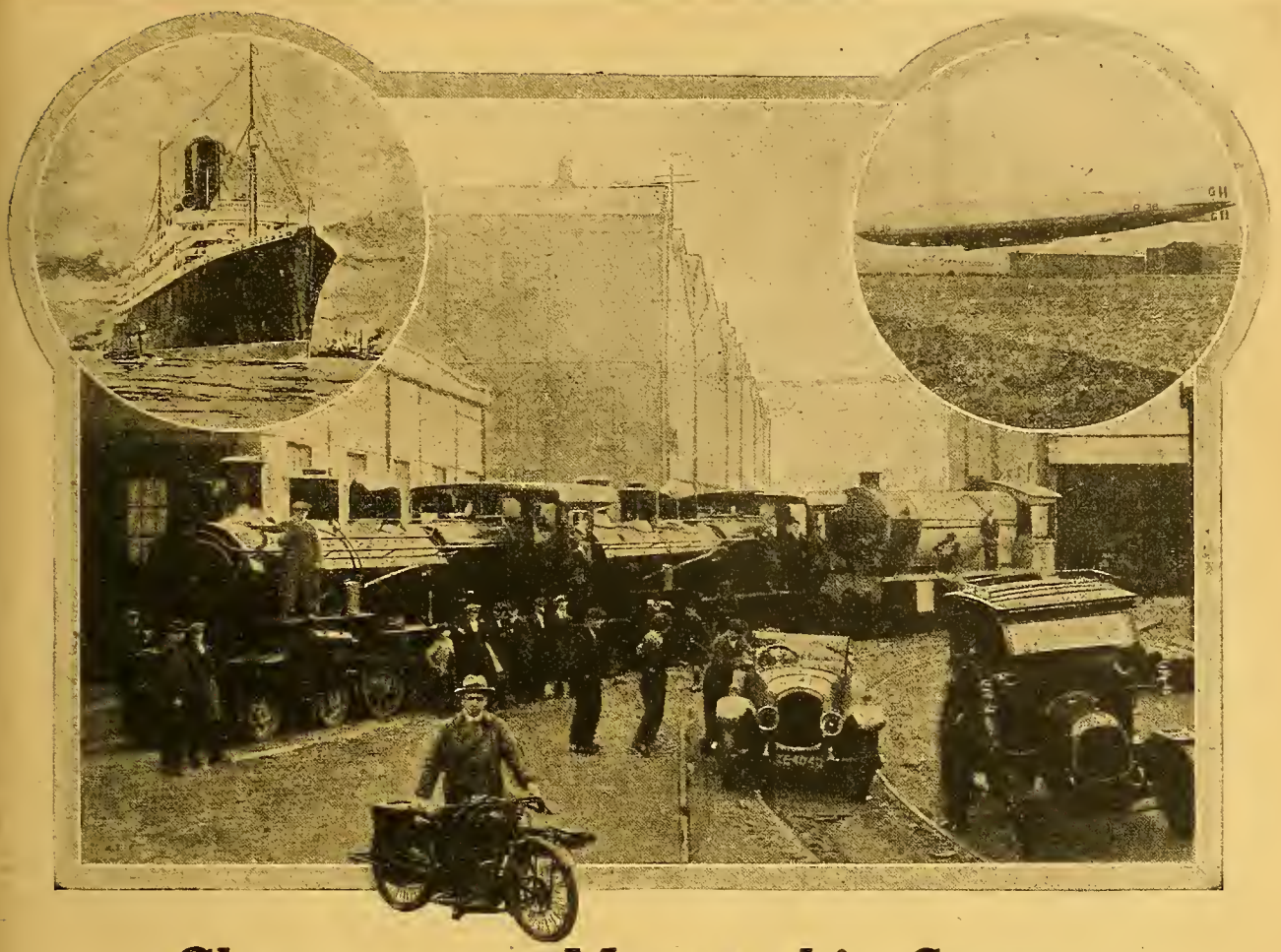
### Ariel Motor Cycles in London.

As Swift of Coventry, Ltd., no longer make a motor bicycle, their London depot, 132, Long Acre, W.C.2, has taken up an agency for Ariel motor bicycles and sidecars, and a representative stock of these machines will be held at their premises. It is not generally known that this company makes a speciality of carrying out all repairs to all makes of motor bicycles at its Long Acre depot.

### Catalogues Received.

Humphries and Dawes, Ltd., Hall Green Works, Birmingham. A very tastefully illustrated catalogue of the various model O.K. Junior motor bicycles. The illustrations are extraordinarily clear, that showing details of the O.K. compensating rear brake being well worthy of mention.

Usines Anzani, 112, Boulevard de Verdun, Courbevoie (Seine), France: Catalogue giving particulars of the French Anzani engines; single-cylinders of 2, 3, 4, and 5 h.p., 5-7 and 7-10 h.p. twin-cylinders, and the 10-12 h.p. cycle car engine with overhead exhaust valves, and cylinders set at 20°, air or water-cooled. Particulars are also given of Anzani magnetos.



# *Choose your Mount this Season*

## *from the famous BEARDMORE Stable!*

IN the 1922 race for Better Transport there are no finer entries than those from the famous Beardmore Stable.

Airships, aeroplanes, ocean liners, railway engines, motor cars, and motor cycles—in every class the Beardmore entry is a winner.

And the "breeders" are not afraid to back their own mounts. Down at King's Norton we make a strong feature of this. In commercial transactions it is called Service-after-Sale.

We stand by you when you decide to ride the Beardmore mount that's bred at King's Norton. "Baker's are nice people to deal with"—was how one delighted customer summarised in a sentence the many testimonials our Service-after-Sale has brought us. So stick to "The Old Firm"! Your mount has the right stuff in it if it has the right name on its flanks—

The picture shows some recent Beardmore contributions to the world of Transport:—the 18,000 ton liner, "Cameronia"; H.M. Airship R36; and the group in the Beardmore Locomotive Works, Dalmuir, is of 2 engines for the Nigerian Railway, one, for the East Indian Railway, a Beardmore touring car and the Beardmore taxi; in the foreground the spring-frame Beardmore-Precision.

BEARDMORE PRECISION

F. E. BAKER, Ltd. PRECISION WORKS

*(Associated with William Beardmore & Co., Ltd.)* KING'S NORTON

'Phone: King's Norton 184-5. 'Grams: "Bachuck, Kingsnorton." London Depo —112, Great Portland St., W.1. Scotland (Wholesale)—James Robertson, 48, West Nile Street, Glasgow.

# THE DANCE

## OR SOCIAL EVENING

**will lose all their charms if your passenger arrives cold, wet or dishevelled—be forearmed—employ the most efficient means of combating Nature's elements—fit the Windscreen that gives perfect protection—that prevents ruined clothes, chills and colds, and gives a touch of luxury to any sidecar.**

**Underneath its handsome streamline qualities are many mechanical refinements, providing adjustments to any position, and enabling pronounced ease of entry or exit—its well balanced design has occasioned favourable comment wherever it is seen.**

**REDUCED PRICES**

| | |
|---|---|
| ROYAL - - | £5 0 0 |
| STANDARD - | £3 18 0 |
| BABY - - | £3 0 0 |

*SPECIAL NOTE—Complete sets of Royal fittings for converting "Standard" models to "Royal," giving simplified adjustment to any position—and quick, easy entry or exit, price* **45/-.**

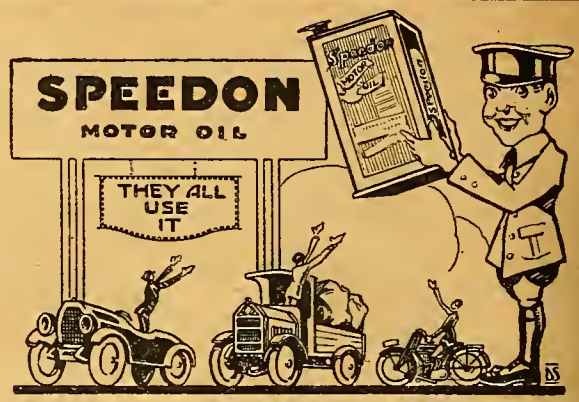
*New Celluloids can be fitted and returned in three days. Royal and Standard* **20/-**, *Baby* **16/-.**

EASTING

**EASTING WINDSCREENS LTD.,**
**132, STEELHOUSE LANE, BIRMINGHAM.**

*London Office & Service Depot*
**24, FINSBURY SQUARE, LONDON, E.C.2**
*Telephone* *Clerkenwell* 1964.

WHOLESALE STOCKISTS: AUSTRALIA—J. J. Wilkins & Sons, 586, George St., Sydney. IRELAND—C. E. Jacob, 18, Great Brunswick St., Dublin. SCOTLAND—Of all factors. Sole Manufactoring Rights in U.S.A.: Messrs. Shillan, Beck & Co., Inc., 68-72, East 131st St., New York.




**John S. Morris & Son (Oils), Ltd., Cross Lane Oil Works, Manchester.**

*Know your Speed & Mileage!*

**Model 42** *(as illustrated)*—Black finish. Nickel-plated bezel. Indicates speeds to 60 miles per hour. Total mileage counter to 10,000 and repeats. Quickly reset trip-counter.

**Price £6 5 0** (or without trip, model 40) **£5 15 0**

Back wheel drive for Triumph, **5s.** extra. Back wheel drive for Indian or Harley-Davidson, **10s.** extra.

*Manufactured by*
**NORTH & SONS, Ltd., WATFORD,** & 14, Soho Sq., London, W.1

NORTH'S BRITISH MADE
Watford
**SPEEDOMETERS** for Motor Cycles

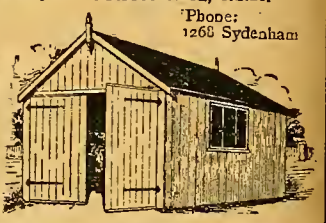
H.G.T.

## A. TURRELL & SONS, PORTABLE BUILDING WORKS, FOREST HILL, S.E.23.

'Phone: 1268 Sydenham

| Lth. ft. | Wth. ft. | Height to Ridge ft. in. | Height to Eaves ft. in. | £ | s. | d. |
|---|---|---|---|---|---|---|
| 7× | 5 | 7 0 | 5 0 | 7 | 5 | 0 |
| 8× | 6 | 7 6 | 5 3 | 9 | 0 | 0 |
| 9× | 7 | 8 0 | 5 6 | 11 | 7 | 0 |
| 10× | 8 | 8 4 | 5 9 | 12 | 19 | 0 |
| 12× | 8 | 8 4 | 6 0 | 17 | 5 | 0 |
| 14× | 8 | 8 7 | 6 3 | 21 | 0 | 0 |
| 16× | 9 | 8 9 | 6 4 | 26 | 0 | 0 |
| 18× | 9 | 8 9 | 6 4 | 31 | 0 | 0 |
| 20× | 10 | 9 0 | 6 6 | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ¾in. tongued and grooved matchboards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed 21oz. glass. Flooring: Strong joists, one inch boards. All bolts supplied for erecting house.

## A.E.L. CYCLES

**FULLY GUARANTEED.**

**GREAT REDUCTION IN PRICES**

Gent.'s Model **£6 0 0** Lady's Model **£6 10 0**

All British Material. Double Gold Lined & Guaranteed Tyres.

**NO RUBBISH.**

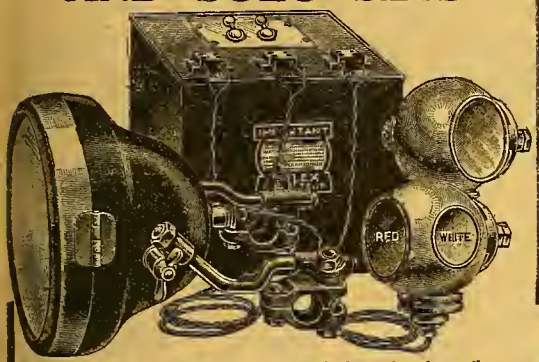
## A.E.L. LIGHTWEIGHT MOTOR CYCLES.

With Villiers or J.A.P. Engine, with 2 or 3 Speed Gear Boxes from **£57**

Villiers' Fixed Engine Model .. .. **£38**

**Order Now—COVENTRY NUT & BOLT MFG. Co., Ltd., MOOR STREET, COVENTRY.**

# VOLEX COMBINATION AND SOLO SETS




**These sets give from 9 to 12 months' service, in ordinary intermittent use, without renewal batteries.**

**Specification.**—6-volt "Volex" Dry Batteries in metal container, Switchboard, Head Lamp (5½in. front), Side and Tail Lamps, Cord and Bulbs.

No. Mc/490, as illustrated .. .. .. Price **£6 10 0**
Also supplied with "Superba de Luxe" Head Lamp (7in. front), No. Mc/450 .. .. .. Price **£8 0 0**

*Ready for immediate use.*

**SOLO SETS.**—The most efficient Dry Battery Solo Sets produced. Head Lamp is provided with 6-volt bulb giving an exceptionally brilliant light, and ample light is provided in the Rear Lamp. Complete with 6-volt "Volex" Aero Dry Battery in strong leather satchel container.

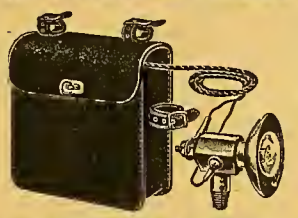
**Head and Rear Set.**
5½in. front Head Lamp, M10/10 .. .. .. **£4 10 0**
Head Lamp set only, M10/7 .. .. .. **£4 0 0**
**"Superba de Luxe" Head and Rear Set.** ..
7in. front Head Lamp, M10/11 .. .. .. **£5 7 6**
Head Lamp set only, M10/8 .. .. .. **£4 17 6**

**"Bullet" Electric Rear Lamp.**
Robust construction. Heavily nickelled. Complete with lamp-holder and Adaptor. Price **7/6.**

Rear Lamp as above with Switch Holder, **9/-**

**Volex**
**DRY BATTERY**
**Motor Cycle LIGHTING SETS**
**BEST BRITISH MAKE.**
RECOMMENDED FOR HOME & EXPORT.

**The ideal no-trouble outfits.** No other battery outfit will give equal results. In satisfactory service for over 10 years with a constantly increasing demand due to their reliability, convenience and economy in use



**ACETYLENE TO ELECTRIC CONVERSION SET.**

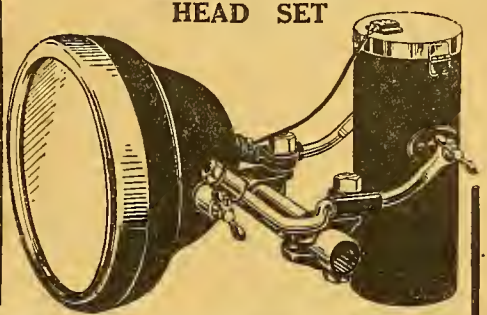
Complete Outfit as illustrated, with 4-volt "Volex" Aero Dry Battery in Leather Satchel with Conducting Cord and Bulb.

Price **31/-**

Do with 6 Volt "Volex" Aero Battery. Price **37/-**

**Ward & Goldstone** PENDLETON, MANCHESTER LTD

# RAYONITE (Volex) SELF-CONTAINED HEAD SET



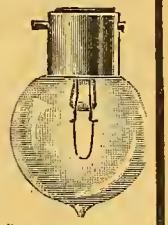
No accumulator, oil or acid required; a brilliant light obtained at will. The convenience of this self-contained set cannot be over-estimated. The pleasure of having a lamp always ready for use without preparation will be appreciated.

Set comprises Head Lamp, 5½in. front, combined with a strong metal container holding the Volex "Rayonite" Dry Battery, complete with Bulb No. M 9/1. Price **£3 10s.**

If with HEADLAMP, 7 in. front, **10/6** extra.
Spare "Rayonite" Batteries, **10/6.**

**METAL FILAMENT BULBS.**

Min. Screw Type (15mm.), 2 and 4 volts, **1/-**; 6, 8 and 12 volts, **1/10** S.B.C. Type, 2, 4, 6, 8 and 12 volts, **1/8** When ordering state whether for Accumulator or Dry Battery Service.



**Sectional List M 202 Free on request.**

**MAGNETO POCKET TOOL.**

Contains all Tools necessary for the complete adjustment of the Magneto. Price **3/-**

# Keep within the law!

*"Silence is Golden"*

**Adaptable to any H.P. Motor Cycle and car up to 12 h.p.**

**Send us outside diameter of the Exhaust Pipe.**

# The "ARGUS" SILENCER for open exhaust pipes.

THE patent silencer is made of aluminium, on account of its lightness and heat dispersing qualities. DELIVERIES can be made 7 days from receipt of order. Full satisfaction guaranteed or money returned. Guaranteed no loss of power.

Price **20/-** each *delivered.*

Silence your Engine without loss of power by purchasing one of our Patent Silencers.

*Agents wanted.*

**Copies of Testimonials received *re* PATENT ALUMINIUM "ARGUS" SILENCERS.**

"I have fitted 'Argus' Silencer to the tail pipe of a 6 h.p. V Twin the exhaust of which was very noisy. The result is perfect. The exhaust is now barely audible, being reduced to a mere puff. I consider the Silencer to be the best of its kind on the market and should supply a long-felt want. I may say that there is absolutely no loss of power—the pulling and slow running not being affected in any way."

"With reference to your Silencer delivered to me some short time ago, I wish to state that on first using I found a slight loss of power, but since receiving your letter advising me what to do in case of 'loss of power' (and doing the necessary) it is giving me entire satisfaction, and I wish to substantiate all claims made by you. Thanking you for your good business methods and prompt delivery."

"The Silencers in question have been fitted to a 1922 Model 10 h.p. New Hudson Light Car. With all cars of this type where the cylinders have independent exhausts, *e.g.*, Morgan, G.N., etc., the exhaust is apt to be a little pronounced. I find, however, that your Silencers give a pleasant and subdued 'boom,' while, as far as I can see, the 'freeness' of the exhaust is not in any way affected I notice also that they are very easily detachable for cleaning purposes."

"The patent Aluminium Argus Silencer supplied by you is entirely satisfactory. I find out that it is much more efficient than a muffle end, and practically no back pressure. It gives a very pleasing exhaust note. Wishing the 'Argus' Silencer every success."

"*Re* the Aluminium Silencer supplied to me some time ago. I must say I am more than satisfied with it, as I am the possessor of a particularly noisy type of 550 single machine and have previously experimented with numerous silencing arrangements. Except for mechanical noises, valves, c/s, chain, etc., when travelling, there is no appreciable sound at all, nor does the power appear to be in any way affected. In conclusion I must state I never got better value for my money." PORTARLINGTON

"With regard to the Argus Silencer fitted to my 2¾ h.p. Levis, I am quite pleased with this. It is the most effective silencing arrangement I have yet arrived at on this machine."

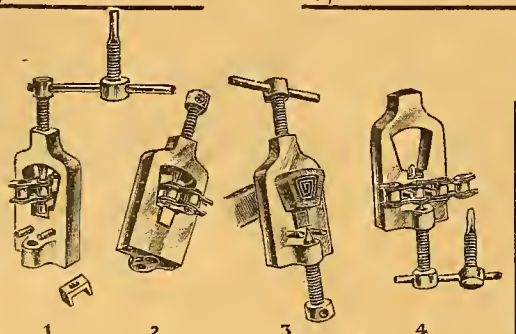
**CROOKES, ROBERTS, RITCHIE & CO., Ltd.,**
Owners of
**W. J. RITCHIE & Co.,**
**Freedom Works, John Street, SHEFFIELD.**

# THE "DAVIS" COMBINATION TOOL

Pat. No. 158394/19

**10/6** EACH POST PAID. **10/6** EACH POST PAID.

MADE OF SOLID STEEL STAMPINGS



WILL LAST A LIFETIME

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| EXTRACTING RIVET | REPLACING RIVET | BELT PUNCH | EXTRACTING RIVET WHEN BUSH IS BROKEN. |

**NO NEW CHAIN REQUIRED. REPAIRS EASILY DONE ON THE SIDE OF THE ROAD. A NOVICE CAN USE IT.**

"There are plenty of devices on the market for extracting rivets from chains, but the 'Davis' Combination Tool is unique in that it is the only one which replaces the rivet as easily as it is removed, all you need carry will be a spare piece of chain." *Extract from THE MOTOR CYCLE, 13/1/1921*

"An ingenious little accessory which should sell freely is the 'Davis' Patent Combination Tool." *Extract from THE MOTOR CYCLE TRADER, 11/2/21*

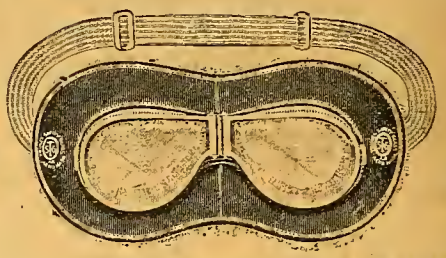
**Made in 2 sizes—No. 1 for $\frac{1}{16}$" chains. No. 2 for $\frac{1}{4}$" to $\frac{3}{8}$" chains.**

**LUTON ALUMINIUM CASTINGS CO.**
**Specialists in Motor Castings,**
**SOUTH ROAD, - - - - - LUTON**

# OFFER of 3,000 PAIRS TRIPLEX GOGGLES

**ALL FITTED WITH UNSPLINTERABLE GLASS EITHER PLAIN OR TINTED.**

*These goggles should not be confused with many offered which are fitted with dangerous sheet glass*



*Orders by post are executed in strict rotation. Postage on single pairs 3d. extra. Two sent post free.*

PERFECTLY new, unsoiled goods. Latest pattern as illustrated. With soft brown leather mask, lined nutria fur (detachable for use in warm weather). The only goggle giving perfect protection to the eyes against dust, wind and injury. Can be worn over eyeglasses and give an uninterrupted field of vision.

*Postage 3d. extra. Two pairs post free.*

**The List Price is £2-2-0**

BARKER PRICE **9/9** EACH.

# BARKERS

JOHN BARKER & COMPANY LIMITED, KENSINGTON, W.8

# ALBION LIGHTWEIGHT COUNTERSHAFT GEARS.

Three Speed with Clutch and Kick Starter.
Two Speed with Clutch and Kick Starter.
Two Speed, Plain Box.

SPECIFY ON YOUR NEW MACHINE, OR IF YOU WISH TO CONVERT YOUR PRESENT ONE SEND FOR CATALOGUE.

**ALBION ENGINEERING CO., LTD.,**
UPPER HIGHGATE STREET, BIRMINGHAM.
London Stockists: H. Taylor & Co., Ltd., Store St., W.1.

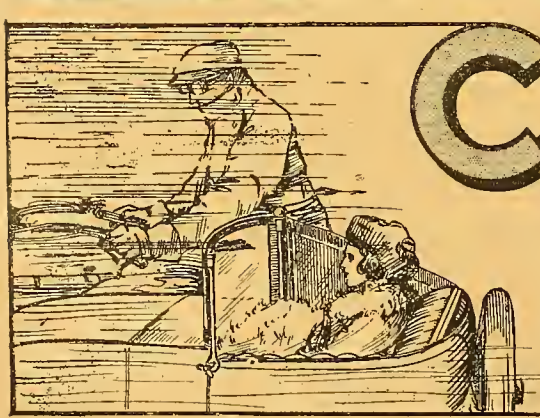
*The cure for ignition troubles*

# E·I·C MAGNETOS

Fully guaranteed. Ask your agent for prices

E·I·C MAGNETOS Ltd
Sampson Rd North,
BIRMINGHAM.

*West of England Service Depot*
W·B·CORAM
140 Victoria St. Bristol



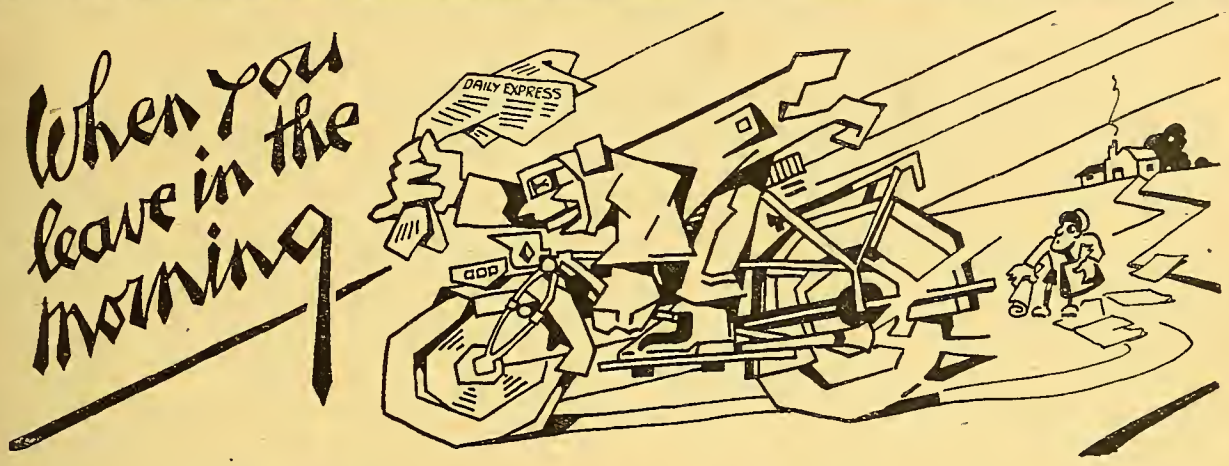
*A PERFECT WINDSCREEN*
*THE*

# CAMEO

To travel in a sidecar unprotected from the wind at even 20 miles an hour is extremely uncomfortable, but at 30 it is nothing short of torture. Why not settle the matter now, and have a "CAMEO," the Screen that fits all Sidecars, and is guaranteed to give full protection.

**OLLARD, WESTCOMBE & CO., LTD.**
**46-47, Great Charles Street, Birmingham.**

**PRICE:**
**Screen only £2-15-0**
**with valance** as illustrated, **£3-0-0**




# get the "Daily Express" from your newsagent

*Free Insurance Against Illness and Accident.*

and fill up the Free Insurance Coupon *on the spot*. You and your wife are immediately insured against sickness and accident. One coupon covers both of you.

*Interesting Articles on Motor Cycling.*

The "Daily Express" retains the services of motor cycling experts to write interesting and instructive articles on motor cycling. Thousands of motor cyclists all over the country have learned the value of these articles and know that they are *exclusive* to the "Daily Express."

*Just What You Want When You Want It.*

The "Daily Express" is the motor cyclist's daily paper. In it, you will find what you want just when you want it. Watch the "Daily Express" whenever you are on the look out for anything in connection with motor cycling.

**Daily Express**

***Tell your Newsagent to deliver it.***

**If you want what you want when you want it, use the Want Ads. in the "Daily Express."**

## NEW 1922 MODELS.

| | |
|---|---|
| **A.J.S.,** 2¾ h.p., 3-speed, Sports or Touring | £85 0 |
| **A.J.S.,** 7 h.p., Com. | £175 0 |
| **Allon,** 2¾ h.p., 2-speed and k.-s. | £60 0 |
| **Ariel,** 3½ h.p., 3-speed, Sports | £87 10 |
| **Brough Superior,** all models, from | £125 0 |
| **B.S.A.,** 4½ h.p., all chain | £110 0 |
| **B.S.A.,** 4½ h.p., Com. | £142 0 |
| **B.S.A.,** 6-7 h.p., Com. | £164 0 |
| **Calthorpe,** 2¾ h.p., 2-stroke | £36 0 |
| **Calthorpe,** 2¾ h.p. Jap, 2-speed | £65 0 |
| **Douglas,** 2¾ h.p., 2-speed | £75 0 |
| **Humber,** 4¼ h.p., Sports | £100 0 |
| **Dunelt,** 4 h.p., Com., spare wheel | £113 8 |
| **Levis,** 2½ h.p., single speed | £48 0 |
| **Levis,** 2¾ h.p., 2-speed, clutch and k.-s. | £68 0 |
| **New Imperial,** 2¾ h.p., 3-speed, all chain | £73 0 |
| **Matchless,** Sports Com. | £160 0 |
| **Matchless,** model H | £175 0 |
| **O.K.,** all models, 38 gns.–92 gns. | |
| **Rudge,** 3½ h.p. multi | £77 0 |
| **Zenith Bradshaw** | £113 0 |

## SECOND-HAND SOLOS.

| | |
|---|---|
| **Triumph,** 1919, as new | £32 10 |
| **Douglas,** 1918, 4 h.p., Solo | £70 0 |
| **O.K.,** 1921, 2½ h.p., as new | £36 0 |
| **Zenith,** 1921, Flat Twin, as new | £55 0 |
| **Ivy,** 1917, 2½ h.p. | £28 0 |
| **Rover,** 1917–18, 3½ h.p., 3-speed | £67 10 |
| **B.S.A.,** 1920, 4½ h.p., as new | £80 0 |
| **Zenith,** 1921, 5 h.p., Sports | £65 0 |
| **Verus,** 1920, 2¾ h.p., Blackburn Engine | £55 0 |
| **Douglas,** 1916, 2¾ h.p., 2-speed | £42 10 |
| **Diamond,** 1920, 2¾ h.p., 2-speed | £42 10 |
| **Enfield,** 1916, 3 h.p., 2-speed | £35 0 |
| **Coulson,** 1920, 2¾ h.p., Blackburn | £47 10 |
| **Triumph,** 1914, 3-speed, as new | £60 0 |
| **Levis,** 1916–17, 2½ h.p., single speed. | £28 0 |
| **Wooler,** 1921, 2¾ h.p., all lamps | £55 0 |
| **P. & M.,** 1917–18, 3½ h.p., 2-speed | £50 0 |
| **Rudge,** 1913–14, 3½ h.p., T.T. | £38 0 |
| **Triumph,** 1913, Clutch, T.T. | £35 0 |
| **Diamond,** 1921, 2½ h.p., as new | £32 10 |
| **Indian,** 1921, Scout, as new | £80 0 |

Over 50 new models actually in stock.
Easy payments par 4 per cent.

## SECOND-HAND COMBINATIONS.

| | |
|---|---|
| **Douglas,** 1917–18, 4 h.p. | £85 0 |
| **James,** 1921, 6–7 h.p. | £100 0 |
| **Douglas,** 1921, 4 h.p. | £105 0 |
| **Enfield,** 1919, 8 h.p. | £85 0 |
| **B.S.A.,** 1917–18, 4½ h.p. | £80 0 |
| **James,** 1915–16, 4½ h.p. | £70 0 |
| **Royal Ruby,** 1919, 8 h.p. | £95 0 |
| **Bradbury,** 1913, 3-speed | £50 0 |
| **Morgan,** 1920, de luxe | £130 0 |
| **Norton,** 1921, as new | £120 0 |
| **Ariel,** 1919, as new | £80 0 |
| **Tamplin,** 1920, 2-seater | £80 0 |
| **Douglas,** 1919, 4 h.p., not W.D. | £90 0 |
| **B.S.A.,** 1920, 4½ h.p. | £100 0 |
| **Matchless,** 1920, Dynamo | £150 0 |
| Shop-soiled Sports **Matchless** | £150 0 |
| **Ariel,** 4 h.p. | £110 0 |

**Allen-Bennett**
Motor Company Limited

9, 10, 11, Royal Parade, W. Croydon.

Open Saturdays until 7.30 p.m.

*Phone: Croydon 2450*

*Commercial Publicity.*

*Stocked in Chest sizes—*
*34, 36, 38, 40, 42, 44.*
*Any other size, 7 days.*

# "GOOD-SERVICE"
# ARMY TRENCH COATS
## AT 68/6 EACH

Made from GUARANTEED Government Materials by a former War-time Contractor.

**New Triple-Proof Gabardine, smart check permanent lining, interlined OIL SKIN, with an ALL WOOL Camel Fleece detachable lining.**

For Spring—Summer—Autumn or Winter Wear. These coats are offered in the usual civilian style. Government materials combined with the knowledge of work hands whose experience was gained in War-time production of this type of coat, and who know "what is required" in

## OFFICERS' ARMY TRENCH COATS,

are embodied in the manufacture of the "GOOD-SERVICE" Coat (illustrated). With fleece lining detached coat can be used as a smart Summer raincoat. With lining attached it gives all the advantages of an Ulster.

## 50% BELOW TO-DAY'S PRICES.

IF YOU CANNOT CALL, take advantage of our SATISFACTION GUARANTEE OFFER, which gives you an opportunity of COMPARING the value offered in the "GOOD-SERVICE" Coat against inferior garments now on the market.

**In response to numerous inquiries, we now offer similar Coats, less fleece lining,**

**AT 52/6 EACH.**

**Don't Miss this Unique Opportunity —— Call or Mail To-day.**

***OUR GUARANTEE.*** ***Should the garment purchased fail in any way to come up to expectations, WE GUARANTEE to refund remittance IN FULL without further question, provided the garment is undamaged and returned in seven days.***

*State chest (over vest) and height measurement when ordering.*

**THE SERVICE COMPANY (LONDON), LTD.,** 289–293, HIGH HOLBORN, LONDON —— W.C.1

## MOTOR CYCLES FOR SALE.

### Beardmore.

BEARDMORE, Sept., 1920, spring frame, 1922 engine and gearbox, mileage 200, almost new tyres, tax, insurance paid, any trial; £55.—Peet, Otherwick Avenue, Chorley, Lancashire. [2506

### Blackburne.

NEW 1921 Blackburne 4h.p., 3 speeds; what offers? —Percy and Co., 314, Euston Rd. [2890

1920 Blackburne 4h.p. Combination, all accessories, luggage grid, full tax paid; bargain, £75. Exchanges.—Kent's, 417, Lord St., Southport. [2662

BLACKBURNE-REX, 1921, 4h.p., genuine sports model, 3-speed, close ratio, S.A. gearbox, mileage under 1,000; £65, no offers.—Box 9079, c/o *The Motor Cycle.* [2516

BLACKBURNE 1921, condition as new, small mileage, original tyres, fully equipped, speedometer, etc.; cost £137; licensed; accept £75; owner buying car.—S., 386, Garratt Lane, Earlsfield, London. [2936

SOILED only, 2¾h.p. De Luxe Blackburne, Brooks saddle. Sturmey, kick start, clutch, racing Amac, Brampton biflex forks, lighting set, tax paid, immense bargain; £50.—191, Sweetman St., Wolverhampton. [2910

1920.—8h.p. Blackburne, Middleton spring wheel sidecar, Bluemel windscreen, Tan-Sad, Cox Atmos, speedometer, electric lighting, etc., 700×80 tyres, and spare, August 1919, fully licensed, will climb anything.—2, Buckland Crescent, Swiss Cottage, Hampstead. 'Phone, 8142. [2815

### Bown.

1916 Bown-Villiers 2-stroke, excellent order, Dixie, Amac, all on, tax paid, tyres as new; quick sale, £25.—Cundy, 111, High St., Aldeburgh. [2977

### Bradbury

BRADBURY 4h.p. 1921, unused, unlicensed, a bargain; £80.—Motor Co., Hereford. [1071

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. Bradbury, new 1921 model, reduced to £55; also 6h.p. combination, new 1921, reduced to £130; no extra charge for easy terms. [3086

*Spare Parts*

BRADBURY Spare Parts.—See our advertisements under Parts and Accessories.—Bright and Hayles, 8, Church St., Camberwell. [2771

### Brough

NEW 1922 3½h.p. o.h.v. flat twin Brough, special Sports speed model, 70 m.p.h., real hot stuff; £110.—Premier Motor Co., Aston Rd., Birmingham. [3250

1920¾ Brough 5h.p. and Henderson sidecar, perfect condition everywhere, new tyres, fully equipped, tax paid; £110; exchanges considered.—43, St. Matthews St., Ipswich. [2726

### Brough Superior.

BROUGH SUPERIOR 8h.p. o.h.v., Lucas Magdyno, horn, speedometer; no reasonable offer refused.—Symondson, Woodside, South Hill, Bromley, Kent. [1803

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½, o.h.v., 3-speed, clutch, and kick starter, £160; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon 'Phone: Croydon 2450. [0733

### Brown.

3½h.p. Brown, new Splitdorf magneto, new Triumph hub, clutch, B.B. carburetter, variable pulley, lighting set, excellent condition; 27 gns.—Box 9091, c/o *The Motor Cycle.* [3134

3½h.p. Brown, 1912, stored 5 years, Bosch magneto, B. and B., Druid forks, low, good tyres and belt and condition; £13.—Anthony, 1, Townshend Cottages, London, N.W.8. [3066

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with pleasure.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

NEW 1921 B.S.A. 4h.p. T.T. Model; what offers?—Percy and Co., 314, Euston Rd. [2899

B.S.A. 1922.—All models; immediate deliveries.—Clifford Motories, Eastwood, Notts. [8827

1921 B.S.A. Model K Combination, not done more than 500 miles; lamps and horn, etc.; £120.—Below.

1920 B.S.A., Model K, Lucas lamps and horn, guaranteed not more than 1,500 miles, perfect; £65.—Wallis and Easton, 104, Mill Rd., Cambridge. [2491

# N.B.

**N.B.** through the grace of the Classics is enabled to signify "take notice" in English.

**N.B.** also forms the initials of Napoleon Bonaparte. He used to sign letters and orders **N B.,** and, when he did, people sat up and took notice.

This is exactly what we want you to do—to sit up and "take notice" that

**Our Machines are Better,**
**Our Easy Payments are Easier,**
**Our Service is Better.**

WE ARE SOLE AGENTS for (not dealers in) the following makes. Immediate or very early delivery can be given of any model.

**ALLON**
(From £60).
**SCOTT**
(From £105).
**CEDOS**
(From £50).
**EDMUND**
(From £75).
**NORTON**
(From £80).
**INDIAN**
From £112).
**DOUGLAS**
(From £75).
**TRIUMPH**
(From £65).
**SUNBEAM**
(From 120 gns.)
**MATCHLESS**
(From £160).
**NEW HUDSON**
(From £50).
**ROYAL ENFIELD**
(From £55).
**PHELON & MOORE**
(From £95).
**HARLEY-DAVIDSON**
(From £140).

**N.B.** WE SPECIALISE ON EXCHANGES

# PARKER'S

**BOLTON:** Bradshawgate. Tel. 1348.
**MANCHESTER:** 245, Deansgate. Tel. 864 Cen.

## MOTOR CYCLES FOR SALE.

### B.S.A.

1916 4¼h.p. B.S.A., new condition, 3 months' guarantee; £56.—Ross, 86, High Rd., Lee. [2625

4¼h.p. B.S.A. Combination 1916, just overhauled, accessories; £60.—Seen at 16, Upland Rd., E. Dulwich, S.E. [2371

NEW 1921 4¼h.p. B.S.A. Combination and accessories; £130.—Bounds, Garage, 223, High Rd., Kilburn. [3055

B.S.A., 1922 patterns, cash or easy payments, immediate delivery.—Motoria, 15, Regent Parade, Tally-ho. [2959

B.S.A. 6h.p. Combination, all accessories, as new; £90; exchange.—C. S., 14, Swaton Rd., Bow. Tel.: E. 3155. [2739

£88.—1921 B.S.A. 4¼h.p., chain-cum-belt, equipped, excellent condition; seen evenings.—Dodd, 32, Bedford Place, W.C.1. [2823

B.S.A. 4¼h.p. 3-speed countershaft, late model, little used, perfect condition; 49 gns.—"Brentor," Shooters Hill, S.E.18. [2721

B.S.A.—Bambers are official agents; exchanges a speciality; deferred payments.—2, Eastbank St., Southport. 'Phone: 607. [7236

B.S.A. 1921 4¼h.p. H2 Model, all-chain drive, with coachbuilt sidecar, shop-soiled only; £120.—P. J. Evans, John Bright St., Birmingham. [2475

1921 B.S.A. Combination, Model H2, No. 3 sidecar, many spares, year's tax paid, insured; £125.—Bridger, A Flat, 3, Buckingham Kate, S.W. [2720

50 GNS.—4¼h.p. B.S.A. 3-speed countershaft combination, lamps, screen, taxed, excellent condition.—15, Elsenham St., Southfields, S.W.18. [2618

B.S.A. 1914 Coachbuilt Combination, 2-speed, kick start, lamps, horn, good condition throughout; £35, bargain.—1, Leyborne Av., Ealing, W.13. [2601

1920 B.S.A. Combination, 4¼h.p., Lucas, dynamo lighting, spares, in splendid order; no good offer refused.—Box No. 8966, c/o *The Motor Cycle.* [2021

B.S.A. 4¼h.p. Combination, 1916-17, good condition, screen, Tan-Sad, light car generator, horn, 3 lamps, 2 belts; £65.—Welney, Farnborough, Kent. [3193

B.S.A. 1922, model H2, 4h.p.; £110. Exchanges, extended terms.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0067

B.S.A. 1917 4¼h.p., bulbous sidecar, all-chain drive, speedometer, Klaxon, Cameo screen, lamps, excellent condition; £80, or offer.—20, Victoria Rd., Alexandra Park. [2434

B.S.A. 1920 Canoelet Combination, electric lighting, excellent order; £79.—1922 models in stock; exchanges arranged.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [3299

B.S.A. 1918 Coachbuilt Combination, 3-speed, clutch, kick start, in splendid condition; exchange good lightweight; Berkshire.—Box 9,087, c/o *The Motor Cycle.* [2973

B.S.A. Combination, 2-speed, countershaft, kick start, new tyres, equipped; £55; exchange higher power; offers; after 5 p.m.—18, Union Rd., Stockwell, S.W.4. [2617

B.S.A., all 1922 models supplied, exchanges; also new 1921 4¼h.p. K.2 Combination, No. 2 B.S.A. sidecar; £114.—Eagles and Co., 275, High St., Acton, London. [3129

B.S.A. Combination 4¼h.p., new July, 1920, horn and lamps, licence paid, not ridden 1,000 miles, as new in every way; £125.—E. Pollard, Broomfield Rd., Chelmsford. [2901

1914 B.S.A., 3½h.p., T.T. model, Phillipson long exhaust, lamps, tax paid, date and condition guaranteed; £30.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [3224

BRAND New B.S.A. Combination, all chain, No. 3 sidecar, all lamps, etc., never used; £120, gift.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. Tel.: Willesden 1744. [3266

1921 4¼h.p. B.S.A., all chain, Lucas horn, licensed, insured, mileage 1,000 only, equal to new; cost £120; accept £90; sidecar if required.—Searle, Burnham Market, Norfolk. [2424

B.S.A. 1920 4¼h.p. all chain Combination, Lucas lamps, screen, luggage grid, Klaxon, excellent condition throughout, trial or examination; £80.—Minchin, Shorwell, Isle of Wight. [3005

1921 B.S.A., 6-7h.p., Twin Combination, special large sidecar, interchangeable wheels, Lucas lighting, Easting windscreen, absolutely as new; £160.—143, Peckham Rye, S.E. [2548

6-7h.p. B.S.A. Combination, dynamo lighting, Easting screen, spare wheel, tax and insurance paid, spares, splendid turn-out; £170, cost £240.—Veitch, Cossington Farm, Aylesford. [2302

B.S.A. Combination 1915, H model, 4¼h.p., Easting, perfect order, no reasonable offer refused; consider lightweight part exchange.—"Studley Royal," Grove Rd., South Woodford. [3289

1921 6-7h.p. Twin B.S.A. Combination, spare wheel, every possible accessory, unscratched, as brand new; £135; exchange and cash.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [3200

## MOTOR CYCLES FOR SALE.

### B.S.A.

1919 B.S.A., 3-speed, kick start, Tan-Sad, luggage carrier, B.S.A. sidecar, speedometer, lamps, accumulator, very little used, owner unable to ride; £75.—59, Clarendon Sq., Euston, N.W.1. [3062

B.S.A. 1916, 4¼h.p., recently overhauled, new front wheel, forks, mudguard, tyres, engine rebushed, new cylinder, valve timing, splendid condition; £50.—Philcox, 14, Huntingdon Rd., Cambridge. [2250

B.S.A. 1921 6-7h.p. Twin Combination, Lucas magdyno lighting, interchangeable wheels, spare wheel, luggage grid, Cowey speedometer, Easting, Royal insurance, tax paid, splendid condition; cost £248, take £160.—S. and B. Motors, 16, King's College Rd., N.W.3, 5 minutes Swiss Cottage. 'Phone, Hampstead 6782. [2352

WAUCHOPE'S, 9, Shoe Lane, London.—B.S.A. 1922 models, K2, chain and belt transmission, £107; with No. 3 sidecar, £139; Model H2, all-chain drive, £110; fitted with B.S.A. sidecar, £142; B.S.A. 6h.p. twin motor cycle, £132; fitted with B.S.A. sidecar, £164; B.S.A. 8h.p. twin combination, £185; easy terms and exchange; box-carrier combinations from £139. 'Phone: Holborn 5777. [3087

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3509

B.S.A. Specialists.—All spares by return.—County Cycle and Motor Co., Broad St., Birmingham. [4677

SPARES.—All B.S.A. spares for Model K in stock. —Ward, 51, Upper Richmond Rd., Putney. [2559

THE Promptest Firm for B.S.A. Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3161

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All B.S.A. parts in stock. No waiting. [1991

B.S.A. Spares can be had by return, post free, from Jones Garage, B.S.A. Agents and Spares Service Depot Broadway, Muswell Hill, N.10. [0805

GODFREYS', Ltd., 203, Great Portland St., London, W.1.—Complete stock of all B.S.A. spare parts always in stock. Write for free spare part list, stating year of manufacture. [0750

### Calcott.

2¾h.p. Calcott, believed 1916, nice condition; accept 24 18 gns. quick sale.—67, Fernlea Rd., Balham. [3181

### Calthorpe.

CALTHORPE-J.A.P. 2¾h.p., 1920, 2-speed, perfect; £45.—Olark, 7, Exhibition Rd., S.W.7. [3300

CALTHORPE Junior, 2-speed, any trial, bargain; £22.—Fairhurst, behind 68, Standishgate, Wigan. [2711

1921 Calthorpe-Jap 2¾h.p., 2-speed, excellent order; first offer £45 secures.—F. Manwaring, Martins, Marden, Kent. [2453

CALTHORPE-J.A.P. 5h.p. Twin Combination, Enfield gears, taxed; £48; exchange.—121, Acton Lane, Chiswick. [2582

CALTHORPE, 1922 patterns, cash or easy payments, immediate delivery.—Motoria, 15, Regent Parade, Tally-ho. [2954

1921 Calthorpe-Jap 2¾h.p. 2-speed, clutch and kick starter, brand new, and cash exchange for good combination.—34, Manchester Rd., Liviadea. [2737

CALTHORPE-PRECISION 2¼h.p., 2-speed, overhauled and stove enamelled, climb anything; nearest £30; tax paid.—78a, Elsinore Rd., Forest Hill, S.E.23. [2256

2¾h.p. Calthorpe-Jap, 2-speed, good tyres, belt, excellent condition, and very fast; £25.—Anthony, 1, Townshend Cottages, London, N.W.8. Tel.: Hampstead 10. [3067

CALTHORPE-J.A.P. 2¾h.p., late model, 2-speed, mechanically perfect, condition as new, lamps, footboards, long plated exhaust; £28.—1, Priory Rd., Kew Green. [2786

CALTHORPE 1921 Combination, actually in stock for immediate delivery; cash or deferred terms; place your orders with the Calthorpe specialists.—Burlington Motors, Ltd., Clapham Common, S.W.4. 'Phone: Brixton 2417. [0509

### Camplon.

1920 6h.p. Campion-Jap Combination, Binks, accessories, windscreen, Tan-Sad, insured, trial; £80.—145, Parliament St., Derby. [2340

CAMPION-J.A.P. Combination, 6h.p., believed 1917, large sidecar, windscreen, hood, tyres very good, lamps, Klaxon, deliver anywhere for return expenses; nearest £80.—Cucksou, Firbeck, Rotherham. [2965

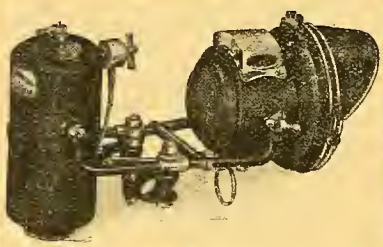
### Cedos.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Cedos; unequalled service, repairs, etc. [3149

### Chater-Lea.

WAUCHOPE'S, 9, Shoe Lane, London.—4h.p. Chater-Lea-Jap, fitted with 1918 engine; £45. [3111

Sole London and District Agents for A.J.S., Excelsior & Duncit Motorcycles.



THE LOW MOTORCYCLE LAMP SET. Price £4 10

As illustrated above, the LOW Motorcycle Lamp Set is the most perfect no-trouble acetylene lamp set on the market to-day. It comprises 6 in. head lamp, famous Low generator, with all metal connections, rubber tubing being entirely eliminated.

LOW Motorcycle Lamp Set.....£4 10
Packing and carriage, 2/- extra.
Illustrated Catalogue FREE on request.

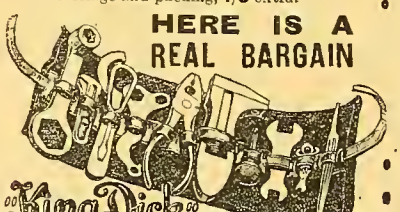
LOW Generators, Motorcycle size.....£1 19
" " Light Car size .....£4 10
Carriage and packing, 1/6 extra.

K.L.G. PLUGS 1/9.

Brand new K.L.G. Mica Sparking Plugs complete in original box, only a limited quantity available at this exceptional price. Postage 3d extra

H.T.C. MUDSHIELDS 15/6

Are by far the best value on the market. They are strong, yet light, handsome in appearance, and suitable for any make of machine. All Black finish, 15/6 per pair. Aluminium " 16/6 " "
Carriage and packing, 1/6 extra.




Genuine Abingdon, fitted with 10 King Dick Tools complete in canvas case (shop-soiled). Usual Price, 34/6; reduced to 24/-

H. TAYLOR & Co., Ltd.

Showrooms—
Motorcycles and Cars,
52-53, Sussex Place, South Kensington.
Accessories, Spare Parts and Repairs,
21a, Store Street, Tottenham Court Road, W.C.1
Wholesale—
38, ALFRED PLACE, W.C.1.
Garage—Totteham Court Road, W.1.
Phones: Accessories & Repairs, Museum 1240
Motorcycles and Cars, Kensington 7260
Telegrams: "Dynametro, Westcent, London."


## MOTOR CYCLES FOR SALE.

### Chater-Lea.

CHATER-LEA 3½h.p., 2-speed box, perfect, £1 light cane sidecar, £4.—17, Heaton R Mitcham. [28

WAUCHOPE'S, 9, Shoe Lane, London.—19 Chater-Lea; agents all models; supplied on ea terms or exchange. [30

IMMEDIATE delivery all models 1922 Chater-L motor cycles; stamp for catalogue.—H. Beardwo 147, Burlington St., Liverpool. [08

CHATER-LEA 2¾h.p., lamps, horn, accessori splendid condition, looks like new; £35 or ne offer; bargain.—Col. Fisher, Royal Dockyard, Wo wich. [28

2¾h.p. Chater-Lea 1921, disc wheels, lamp, hor all accessories, splendid condition; bargai £40; mileage 600, tax paid.—Halter, 61, Gold Lane, E.C. [31

1922 Chater-Lea, the reliable combination with reputation; catalogues; all models; send i quiries.—Sam E. Clapham (Motors), 27, Stockwe St., Greenwich, S.E.10. [32

### Clyno.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h. Clyno, 2-stroke; £35; easy terms. [30

£35.—Clyno 2½h.p. 2-speed, clutch, 1919 model, pe fect, all accessories.—8, High St., Wandsworth. [25

CLYNO 6h.p., 2-speed, kick start; £38; take Lig weight part.—57, Kenbury St., Camberwell, Lo don. [28

F.O.C.II. have a 1919 2¼h.p. Clyno 2-speed, ne condition, mileage under 300, fully equipped.— Heath St., Hampstead. (Near Tube.) [15

1916 Clyno 6h.p. 3-speed Combination, black a gold finish, splendid condition; 54 gns.; ba gain.—134, Earlsbrook Rd., Redhill. [27

CLYNO 1920, guaranteed, 2½h.p. 2-stroke, 2-spee clutch, all on, unpunctured, little used; neare £52.—Rev. Sherdley, Waltham Cross. [23

1921 Clyno, 2-stroke, 2-speed, fully equipped, an in excellent condition; an unrepeatable bargai at £45 cash.—The Layton Garages, 30, Holywell St Oxford. [78

£60.—1918 Clyno Combination, 3-speed, spare whee lamps, horn, licence, flexible exhausts, exceller condition throughout, ride 20 miles to purchaser.- "Beaulieu," Avenue Rd., St. Albans. [31

*Spare Parts*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bon St., Ealing [36

### Connaught

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. 192 Connaught, 2 speeds; £50. [31

WAUCHOPE'S, 9, Shoe Lane, London.—New 192 Connaught Motor Cycles on easy terms. [30

£19.—Connaught 2¾h.p., 3 speeds, tax paid, engin just overhauled, new back tyre; owner bough combination.—Goddard, 4, Craven Park Rd., Harle den. [26

1922 Connaught, the super 2-stroke, for sidecar o solo; cash or easy terms; inquiries invited.- Sam E. Clapham (Motors), 27, Stockwell St., Green wich, S.E.10. [32

CONNAUGHT 1921 2½h.p., 2-speed, lamps, horn accessories, spare plug and belt, tax paid, full insured; genuine bargain; inspection invited; £45.- Cycle, Westwood, Forty Lane, Wembley, Middlesex. [23

1921 Connaught Combination, new sidecar, Eastin windscreen, 2-speed, kick start, Sturmey, ne lamps, horn, mirror, spare tyre, absolutely perfect, u scratched, tax paid; £70; no exchange, special reas for giving up.—Coups, teacher, Poynton, near Stoc port. [29

CONNAUGHT motor cycles, 1922 models, sing speed, 2-stroke, £45; 2-speed, less clutch, £5 2-speed, clutch £67/10; 3½h.p., 3-speed combinatio £95; easy payments arranged.—Speechley's, The Moto House, 86, Churchfield Rd., Acton, W.3. Phone Chiswick 1902. [22

### Cotton.

COTTON-BLACKBURNE sporting and tourin motor cycles from 62 gns.; 52 recent ope awards; descriptive catalogues from agents or Cotto Motors, Gloucester. [32

### Coulson.

1919 Coulson B. 2¾h.p., spring frame, horn, pump mirror, tools, condition as new; £60.—Bar worth, Anna-Valley, Andover. 'Phone: Andover 95. [26

COULSON-B. 2¾h.p., 2-speed, Bonniksen speed meter, 3in. tyres, spring frame, lamps and horn bargain, £40.—Purser, 23, Queen St., Deal, Kent. [11

COULSON-BLACKBURNE, Patent 1922, 2¾h.p 3-speed, clutch, kick start, spring frame, tax pai December, 1922, mileage 300; 63gns.—132, Par Ave., Barking. [32

## MOTOR CYCLES FOR SALE.

### Enfield.

1920 Enfield 2-stroke, 2-speed, clutch, no trouble machine, licensed, just overhauled by makers, new tyres, lamps, etc.; best offer over £30.—K. H., 9, Parliament Hill, N.W.3. [2257

ENFIELD Combination, dynamo lighting, oversize tyres, equipped with hood, screen, milometer, etc., condition as new; £85.—Antbony, 1, Townshead Cottages, N.W.8. Tel.: Hampstead 10. [3068

ENFIELD Combination 1921 8h.p., Magdyno lighting, Lucas horn, Cowey speedometer, spare cover, tubes and spare chains, condition as new; £155.—Tryson, 136, High Rd., East Finchley, N.2. [2442

ROYAL ENFIELD 6h.p. Combination, 1921 model, Magdyno, speedometer, windscreen, mirror and all tools, in perfect condition, low mileage; bargain £110.—Write M., 40, Queen's Rd., East Grinstead. [2275

ENFIELD 1921 Lightweight Combination, specially designed sidecar, all accessories, electric lighting, perfect, little outfit, any trial; £50.—Henry, 22, Grosvenor Rd., Chiswick, W.4. 'Phone: Chiswick 186. [2860

ROYAL ENFIELD Combination 1916 6h.p., J.A.P. 2-speed, free engine, acetylene, windscreen, fully equipped, overhauled at works; accept fair price.—Full details from C. Dufty, 115, Uppingham Rd., Leicester. [2390

1921 Enfield Combination, 8h.p. J.A.P. engine, Lucas Magdyno, horn, and mirror, Dunlops, low mileage, smart, fast and powerful, tax paid December; £125. Saturday-Sunday.—40, Park Avenue South, Hornsey, N.8. [2549

1920 Enfield Combination (November) 8h.p., J.A.P., all lamps, speedometer, horn, spring links, Tan-Sad., W.R.S., screen, hood, child's seat, tyres good, any trial, any time, condition perfect; £110 lowest.—, Frobisher Rd., Green Lanes, Hornsey, N.8. [2429

ENFIELD Combination, late 1921, Vickers 8h.p. engine, Magdyno lighting, windscreen, spare detachable seat to sidecar, and spares, small mileage, and in splendid condition throughout; owner buying car; price £150.—Woodbene, Brighton Rd., Purley. [2633

ENFIELD Combination, 1916, completely overhauled by makers, 1921, splendid condition, dissolved acetylene lighting, horn, mirror, Tan-Sad, tyres as new, large sidecar, hood, Cameo screen, luggage carrier, etc.; best offer over £65.—6, Heber Mansions, Queen's Club Gardens, W.14. [2818

WAUCHOPE'S, 9, Shoe Lane, London.—1922 2¼h.p. Royal Enfield, 2-stroke, £55; 2¼h.p. Royal Enfield, with kick starter, £57; 8h.p. Royal Enfield combination, £140; dynamo lighting, £158; 8h.p. 1917-18 Royal Enfield combination, £95; easy terms and exchange; trade supplied. 'Phone: Holborn 5777. Also Enfield, 2-stroke, £42/10, 1920. [3093

*Spare Parts:*

ENFIELD Spares. — Immediate delivery. — Kays, 8, Bond St., Ealing. [7612

THE Promptest Firm for Enfield Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3162

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Enfield engine parts in stock. [8854

### Excelsior.

EXCELSIOR C.B. Combination, 4½h.p., guaranteed perfect; £80.—Taylor, Capel, Ipswich. [2307

8h.p. Excelsior Jap Combination, 1921, chain drive, equal new, tax paid; £126 or nearest.—Dowse, Hales Street, Coventry. [2268

1921 2¾h.p. Excelsior, as new, full equipment, Tan-Sad, kick start and clutch; bargain, £46.—4, Elm Gardens, Hammersmith. [2313

1922 New Villiers, single, clutch, magneto lighting, Cowey, licensed, ready for the road; 48 gns, or exchange for similar second-hand and cash.—Keen, Leominster. [3008

EXCELSIOR, 2¼h.p., 2-stroke, late 1920, just been thoroughly overhauled and in splendid condition; £42; everything on, any trial given.—24, Colvin Rd., Thornton Heath. [3155

BRITISH Excelsior, 5-6h.p., 3-speed, countershaft, chain drive, late model, with luxurious coachbuilt sidecar, mileage about 9,000; sacrifice, 58 gns.—37, Elmbank Gardens, Barnes. [2842

### F.N.

F.N. Combination, pillion seat, hood, screen, speedometer, lamps, horn, a 1914 'bus but overhauled by makers, and absolutely in the pink (3 speeds); £65, terms if desired.—Bunting's Motor Exchange, Wealdstone. [3246

5-6h.p. F.N., 4-cylinder, and coachbuilt sidecar, 2-speed, hand clutch, appearance rough but good running order; £20; or exchange lightweight; would consider push bike and cash.—Snodgrass, Ambleside Rd., Lightwater, Bagshot. [2761

*Spare Parts:*

F.N. Spares.—We can supply for all models from 1904. Prompt attention to all inquiries. Stamp please.—Langford's, 37, Cricklewood Broadway, N.W.2. [2731

## H. F. EDWARDS & CO.

## 101, GT. PORTLAND ST. W.1

Tel. Mayfair 4027.

## Some Wonderful Bargains

## Several BRAND NEW 1921 5 h.p. ZENITH SPORTS 73 gns. (listed £110)

also

## ZENITH Countershaft Model, Clutch, K.S. 85 gns. (listed £118)

MAKER'S USUAL GUARANTEE.

## 1921 3½ ARIEL, Brand New, 3 spd., K.S. 75 gns. (listed £105)

**NEW 1922 MODELS FOR IMMEDIATE DELIVERY.**

**MATCHLESS,** all Models.
**NEW IMPERIAL.**
**RALEIGH,** light weight.
**TRIUMPH,** Ricardo and Standard.

**SECONDHAND COMBINATIONS.**

| | | Guineas. |
|---|---|---|
| 1921 | 6-7 h.p. **B.S.A.** comb., Magdyno lighting, spare wheel Easting, speedometer Tan Sad, as new... | 133 |
| 1921 | **P. & M.** Demonstration Model, Lucas equipment, unscratched, mileage 200 | 109 |
| 1919 | 6 h.p. **A.J.S.** comb., Lucas equipment, speedometer, superb condition | 98 |
| 1919 | 6 h.p. **A.J.S.** comb., electric lighting, speedometer | 92 |
| 1921 | 3½ h.p. **NORTON** H 16, and Montgomery Sports s.-c., maximum band speedometer, Lucas lamps, splendid order | 107 |
| 1920 | 4½ h.p. **B.S.A.,** all chain, and No. 2 s.-c., lamps, speedometer, Easting Tan Sad, luggage grid, excellent order | 92 |
| 1920 | 6-7 h.p. **ARIEL** comb., fully equipped screen | 85 |
| 1921 | 3½ h.p. new scale **BEARDMORE,** Precision engine, 2-speed, k.-s., comb., fully equipped, fine order | 85 |

**SECONDHAND SOLOS.**

| | | |
|---|---|---|
| 1921 | 4 h.p. **VERUS BLACKBURNE,** 3-speed, mileage 200, as new | 78 |
| 1921 | 4 h.p. **VERUS BLACKBURNE,** mechanical oil pump, A.C.E. discs | 63 |
| 1921 | 2¾ **LEVIS SPORTS,** Lucas equipment | 37 |
| 1920/21 | 3½ h.p. **N.U.T,** Magdyno lighting, fine condition | 77 |
| 1920 | 3½ h.p. **ARIEL,** equipped legshields, etc. | 65 |
| 1920 | 3½ h.p. **B.S.A.,** all chain equipped | 65 |
| 1920 | **A.B.C.,** electric lighting, speedometer, perfect condition | 75 |
| 1921 | **CLYNO,** 2-stroke, 2-speed, clutch, equipped, as new | 38 |
| 1920 | **CLYNO,** 2-stroke, 2-speed, clutch, equipped, as new | 34 |
| 1920 | 2½ h.p. **METRO-TYLER,** 2-speed, good condition | 34 |
| 1920 | 2¾ h.p. **DIAMOND J.A.P.,** 2-speed clutch, equipped discs, etc. | 39 |
| 1920 | 2¾ h.p. **ALLON,** good order | 27 |
| 1921 | 2¾ h.p. **LEVIS,** 2-speed clutch, equipped | 39 |
| 1921 | **INDIAN SCOUT,** lamps, speedo, etc. | 84 |

**LIGHT CARS.**

| | | |
|---|---|---|
| 1920 | **G.N.,** dynamo lighting, 3 new tyres, overhauled at cost of £18 | 127 |
| 1916 | 10 h.p. **SINGER,** 2-seater, dynamo, double dicky, good condition | 150 |

**Deferred Payments & Exchanges on any of the above**

**WANTED—SOLOS and COMBINATIONS.**
Cash waiting.

## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; from £120.—Stacey, 12, Ecclesall Rd. [0577

1919 Harley Combination, cost £200, very smart; sacrifice.—67, Peroiea Rd., Balham. Exchange. [3180

HARLEY 7-9h.p., 1919, Henderson Elite sidecar, good condition; £85.—Buccleuch House, Thorpe Bay. [2226

1919 Harley-Davidson Combination, complete equipment, any trial; £75.—24, Balliol Rd., North Kensington. [2526

HARLEY-DAVIDSON, 1922 patterns, cash or easy payments, immediate delivery.—Motoria, 15, Regent Parade, Tally-ho. [2958

1920 7-9 h.p. Harley-Davidson Combination, electric model, only run 3,347 miles; £110. After 7 p.m.—17, Russell Square Mansions, W.C.1. [2538

1920 5h.p. Harley Flat Twin, 3-speed, speedometer, lamps, horn, mileage under 4,000; £85.—Shepherd, Enfield Highway. 'Phone: Waltham Cross 31. [0800

1919 7-9h.p. Harley-Davidson Combination, first-class condition; £100.—Blake, 4, Park Crescent Mews (East), Great Portland St., London, W.1. [2820

HARLEY Combination, 7h.p., 1918, D.A. lighting, smart, engineer owned, full equipment and spares; £79. — Smewin, 22, Cambridge Gardens, Ladbroke Grove, W.10. [2277

£89/10.—1920 (date guaranteed) 7-9h.p. Harley-Davidson and sidecar, magneto model, speedometer, lamps, mechanical horn, any trial; bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [2953

1922 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices; catalogue with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich. S.E.10. [5986

BARGAIN.—1920 7-9h.p. Harley-Davidson Combination, electric model, beautifully spruog sidecar, Easting, absolutely perfect in every respect; £130 cash.—239, Goldhawk Rd., Shepherd's Bush. [2753

HARLEY-DAVIDSON 2-Seater Combination, late 1919, electric model, charging switchboard, speedometer, hood, 2 screens, spares and tools, very fast; £125, or offer.—156, Browning Rd., East Ham. [2450

HARLEY-DAVIDSON Combination 7-9h.p., electric lights, Tan-Sad, windscreen, tools, spares, etc., just overhauled at a cost of £25, receipt given; bargain, £65.—1,238 Coventry Rd., Yardley, Birmingham. [2463

BARKER'S Motors can supply all Harley-Davidson models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [1215

HARLEY-DAVIDSON 1920-1 7-9h.p. Combination, speedometer, dynamo lighting, spare tyres, etc., cost Dec., 1920, £250, insurance policy for £250, genuine bargain; £130.—69, Upper East Smithfield, London, E. [2204

7-9h.p. Harley-Davidson, 3-speed, kick starter, in excellent condition, sidecar almost new, electric lights (side and tail), acetylene head lamps, Easting screen, tools, and spare tube; price £95.—Box 8811, c/o *The Motor Cycle.* [9895

£76/10.—Harley-Davidson 7-9h.p. Coachbuilt Combination (not W.D.), 3-speed, clutch, kick start, lamps, horn, hood, windscreen, pillion, spares, perfect throughout, any trial; offers.—Walters (top flat), 83c, Trinity Rd., Balham, S.W. [2407

89 GNS.—1919-20 De Luxe 7-9h.p. Harley Combination, electric model; 40 go. sidecar, hood, screen, luggage grid, good tyres, speedometer, tax paid, all in fine order and appearance.—Hardy, 8, Bream's Buildings, Chancery Lane. Holborn 4752. [2999

1920 (new Sept.) 7-9h.p., electrically equipped Harley-Davidson Combination, complete with Bluemel screen, Tan-Sad seat, new spare Palmer cord tyre, insurance until next Sept., tax paid, small mileage, perfect mechanical order and condition; £145, or nearest offer.—Haddon, North St., York. [2968

*Spare Parts*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3613

### H.B.

H.B., 1922 Models, 2¼h.p. Blackburne engine, 2-speed Burman gear box, chain belt, C. aod K.S., £72; with 3-speed gear box, £75; 4h.p., 3-speed, £82; 4¼h.p., 3-speed model, clutch and kick start, £100; cash, deferred terms, or exchange.

H.B., 1922 Models for earliest deliveries.—Write London Motors, 61, Holborn Viaduct, E.C., sole distributiog agents for the following counties:—Kent, Surrey, Sussex, Hants, Berks, Oxford, Bucks, Northants, Beds, Hunts, Cambridge, Norfolk, Suffolk, Essex, Herts, Middlesex (includiog London). [2110

### Hazlewood.

NEW 1921 Hazlewood Combination, 5-6h.p., 3 speeds; what offers?—Percy and Co., 314, Euston Rd. [2881

## MOTOR CYCLES FOR SALE.

### Hazlewood.

19[22] Hazlewood, all models, for early delivery. See the 6h.p. J.A.P. Twin Combination at £118; finest value for money to-day; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5988

### Henderson.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Hendersons; unequalled service, repairs, etc. [3145

HENDERSON Combination, speeds, H.S., spares, fully equipped; £70; exchange W.D. combination.—7, Linda St., Battersea. [2588

IMMEDIATE Delivery.—1922 Henderson de Luxe, dynamo lighting, electric horn, etc.; £175.—Pioneer Motors, Ltd., 50, Grindlay St., Edinburgh. [1408

19[21] electric Henderson, Swan sporting sidecar, Ace discs, Cowey speedometer, grid, fully equipped and perfect, mileage 5,000; £150.—Hutchinson, Boroughbridge. [2857

HENDERSON Combination 1921, Model K, 3-speed, reverse, dynamo lighting, Tan-Sad, Sandum 2-seater sidecar, spring wheel, V-shaped windscreen; best offer over £175.—37, Dunsmure Rd., Stamford Hill, N.16. [2377

NEW 1922 Henderson model de luxe, dynamo lighting, electric horn, etc.; £175; for early delivery of this wonderful machine place your order immediately with the Premier Motor Co., Aston Rd., Birmingham. [3251

BARKER'S Motors are agents for the luxurious 4-cyl. Hendersons; all new models at list prices supplied carry a free insurance policy against mechanical breakdown for 12 months. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [1214

### Hobart.

19[20] 2-speed Hobart-Villiers, equipped, taxed, perfect; £32.—1, Othello St., Liverpool. [9156

HOBART-VILLIERS, 1921, mag., fly-wheel, semi-T.T., brand new; £40.—Enterprise Cycle Co., Nuneaton. [2222

FOR Sale.—2¾h.p. Hobart-Jap, Feb. 1921, Sturmey-Archer 2-speed, clutch, kick start, mechanically perfect, tyres, enamel as new; £55.—Peachey, Lawford Heath, Rugby. [2452

2¼h.p. Hobart, 2-stroke, Jardine, 2 speeds, magneto overhauled at cost £1/17/6, new B. and B., lamps, horn, tax paid; £19/10, or nearest.—Pope, The Square, Boston, Lincs. [2201

### Humber.

19[15] 3-speed Humber, fully equipped, tax paid for 1922; £35.—37, Arlington Rd., Surbiton. [2746

WAUCHOPE'S, 9, Shoe Lane, London.—4½h.p. Sports Humber; £100; easy terms and exchange. [3115

HUMBER 4h.p., 3-speed, K.S., perfect, £28; nearly new sidecar, £8.—17, Heaton Rd., Mitcham. [2800

HUMBER agents.—1922 models in stock; 4½h.p. fast sporting model, £100; 4½h.p. combination, £144; in stock; easy payment terms and exchanges arranged.—Herbert Robinson, Ltd., Green St., Cambridge. [1990

HUMBER 3½h.p. 1913 or 14, Watsonian sidecar, 3-speed hub gear, clutch, kick start, windscreen, etc., handle-bars and fittings replated, in splendid condition; £37/10.—Gordon R. Croxford, The Motor Cycle House, 461, Upper Richmond Rd., S.W.14. 'Phone, Richmond 322. [3283

HUMBER 3½h.p. Flat Twin, 1918, 3-speed, clutch Combination, splendid condition, acetylene and electric double set of lighting, electric and bulb horns, handle-bar watch, speedometer, tyres practically new and one Dunlop spare, Tan-Sad, pillion seat, back and foot rests, spring luggage carrier, full set of tools, Millford coachbuilt sidecar, with windscreen; £75; no offers.—The Bungalow, Chorley Wood Rd., Rickmansworth. [2913

*Spare Parts:*

THE Promptest Firm for Humber Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3166

### Indian.

INDIAN 7-9h.p. 1914, just overhauled; £40.—Shirley, 35a, Naylor Rd., Peckham, S.E. [2350A

INDIAN Racer, 3½h.p., single, clutch model, perfect; £28.—17, Heaton Rd., Mitcham. [2799

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Indians; unequalled service, repairs, etc. [3144

19[16] 7-9h.p. Indian Road Racer, clutch; gift, 24 gns.—Claremont Garage, Blackpool. 'Phone: 350. [2415

INDIAN 1916 5-6h.p. Combination, mechanically perfect, all on, tax paid; £65.—Motor Co., Hereford. [1073

# Harrods MOTOR CYCLES

## ON EASY TERMS

All the following machines are available from stock and may be obtained on Harrods Convenient System of Easy Payments. Details and latest lists free.

## NEW SOLO MACHINES

| | | |
|---|---|---|
| 2¾ h.p. | **ALLDAYS-ALLON** ... ... | £60 |
| 4¼ h.p. | **B.S.A.**, Belt Drive ... ... | £107 |
| 2¾ h.p. | **DOUGLAS**, Two-speed ... | £75 |
| 2¾ h.p. | **DOUGLAS**, Three-speed, | £90 |
| 2¼ h.p. | **ENFIELD**, Two-speed model | £60 |
| 2¼ h.p. | **LEVIS**, Popular model ... | £48 |
| 2¾ h.p. | **NEW IMPERIAL**, 3-speed | £63 |
| 2¾ h.p. | **NEW IMPERIAL**, Clutch, etc. | £69 |
| 1¾ h.p. | **McKENZIE**, Lightweight | £27 6s. |
| 3½ h.p. | **RUDGE**, Chain Drive ... | £100 |
| 2¼ h.p. | **TRIUMPH**, Two-speed ... | £65 |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | £105 |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | £115 |

## NEW COMBINATIONS

| | | |
|---|---|---|
| 4¼ h.p. | **B.S.A.**, Belt Drive, No. 3 s/c | £139 |
| 4¼ h.p. | **B.S.A.**, Chain Drive, No. 3 s/c | £142 |
| 8 h.p. | **ENFIELD** ... ... ... | £140 |
| 8 h.p. | **MATCHLESS** ... ... | £170 |
| 6 h.p. | **HAZLEWOOD** ... ... | £118 |
| 8 h.p. | **NEW IMPERIAL** ... ... | £145 |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | £155 |
| 4 h.p. | **DOUGLAS** ... ... ... | £135 |
| 6 h.p. | **DOUGLAS** ... ... ... | £165 |
| 4½ h.p. | **HUMBER** ... ... ... | £144 |
| 3½ h.p. | **INVICTA** and Sidecar ... | £110 |

## SHOP-SOILED MODELS AT SPECIAL PRICES

| | |
|---|---|
| 2¾ h.p. **COULSON**, Spring Frame, 3-speed ... ... | £75 |
| 2¾ h.p. **BEAUMONT**, Chain Drive, Two-speed clutch and kick-starter ... ... | £69 |
| 2¾ h.p. **WOOLER**, Flat Twin, Brooklands Sports model, fully equipped ... ... | £69 |

## SECOND-HAND.

| | |
|---|---|
| 4½ h.p. **B.S.A.**, 1921. Roomy Sidecar, Speedometer, Lamps, and Horn ... ... | £110 |
| 5/6 h.p. **HAZLEWOOD** Combination Speedometer. Thoroughly overhauled ... | £90 |

**HARRODS MOTOR SALES DEPT**
**116-118 Brompton Road, London, S.W.1.**
*(Opposite the Main Building).*

## MOTOR CYCLES FOR SALE.

### Indian.

19[19] Spring Frame Indian 7-9h.p., too power for owner, as new; £50.—67, Fernlea Rd., B ham. [3

5-6h.p. Indian T.T., clutch, excellent condition, fa £33, offers; must sell, bargain.—25, Princes' A Chester. [24

£65.—Indian Powerplus, 1919, electric lighting, cellent condition.—McGregor, 177, High High Barnet. [25

NEW 1921 Indian 4½h.p., 3-speed, spring fra single cylinder; what offers?—Perry and 314, Enston Rd. [28

INDIAN 7-9h.p. Combination, 1919, will take lig weight in part exchange, or sell £65.—Wi Bentham, Lancaster. [22

£60.—Powerplus, 1918, with new £40 sidecar, quick sale.—H.C., "Tanglewood," Station R West Byfleet, Surrey. [24

19[17] Powerplus Indian Combination, 2-seater si car, lavishly equipped, discs; £58.— Balliol Rd., North Kensington. [25

7-9h.p. Indian, new last July, Model de Luxe si car, electric lighting, speedometer, with sp tyre; £145.—A. Hatswell, Wiveliscombe. [24

19[22] Indians, immediate delivery; cash or defer payments.—Brown (Indian Specialist), 3 and Parker Lane, Burnley. 'Phone, 1032. [82

19[19] Powerplus Indian, spring frame, supe countershaft, fully equipped, perfect conditio £55.—Pill, 28, Elderslie Rd., Eltham Park, S.E.9. [30

INDIAN 1921 7-9h.p. Combination, perfect throug out, dynamo lighting; £100 or nearest, m sell; call after 2.—145, Leander Rd., Brixton Hill. [23

INDIAN Combination, 1921, dynamo lighting, spe ometer, Easting, absolutely indistinguishable fr new; £90.—Dawe, 216, Portobello Rd., North Kensi ton. [13

INDIAN Combination, 3-speed, electric light, scre tools, etc., very smart, excellent condition, t paid; nearest £80.—38, Philip Rd., Peckham R S.E.15. [27

INDIAN 1919 7-9h.p., Powerplus, 3-speed, spri frame, lamps, kick start, in splendid condit licence paid; £50.—Hogg, Coney-Weston, Bury St. E munds. [24

19[14] Indian, 7h.p., overhauled, gears, clutch, spri frame, Indian sidecar, electric lighting, ho speedometer, hood, screen, licensed; £50.—85, Deod Rd., Putney. [16

19[21] Indian Scout, dynamo model, compelli engine, as new; £90, or near.—James, Bradmore's, 482, Harrow Rd., Paddington. Te Willesden 1744. [31

INDIAN Combination, 1920, Powerplus, dyna lighting, speedometer, windscreen, etc., tax pa £95.—Colonial Motors, 104A, Finchley Rd. 'Phon Hampstead, 7822. [32

19[21] Indian Scout, special engine, speedometer, et licensed for year, perfect throughout; £2 gn exchanges or deferred.—Edwards, 50, Harrington R South Kensington [19

FOR Indians, all models, new and secondhand, wri call, or phone us; 1921 new shop-soiled combi tions, fully electrically equipped, at below manuf turers' cost; £140.—Jones Garage, Maswell Hill. [07

19[21] Indian, 3-speed, clutch, K.S., dynamo lig ing, etc., perfect mechanical order, nearest £ also 1915 Indian, clutch, wants slight attenti accept £20; postcard for particulars.—Mitchell, L dens, Farnham. [26

£37/10.—1914 7-9h.p. Indian 2-speed Combinati in splendid condition, dynamo lighting, ty good, 2 head lamps, electric horn, original enam immediate clearance; worth £70.—Butler, St. Georg Rd. Bexhill-on-Sea. [2

19[16] Sports Red Indian and Sidecar, 6h.p., 3-spe clutch, kick start, disc wheels, new lamps tyres, Swan sidecar to match, all in good order; £ or nearest offer; consider Lightweight and cash.— Carter, 104, Moor St., Birmingham. [29

INDIAN 7-9h.p., 3-speed and clutch, complet equipped, winner gold medal best performance o 750 c.c. Colmore Cup, 1920, fastest time of day, W Birmingham M.C.C. hill-climb, 1920, etc.; £60.—Co 15, Upper Hagley Rd., Birmingham. [2

SUPERB Powerplus Indian-Swan Sporting Combi tion, dynamo, speedometer, ammeter, elec horn, English controls, right-hand kick starter, m shield, long exhaust, 1918-19; bargain, only ne seeing, 78 gns. Exchanges.—Kent's, 417, Lord Southport. [2

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, B St., Ealing. [3

INDIAN.—New and second-hand spares in stock all models. Stamp please.—Langford's, Cricklewood Broadway, London, N.W.2. [2

## MOTOR CYCLES FOR SALE.

### Mohawk.

OHAWK Cycles, new or second-hood, at lowest possible prices for cash or easy payments.—Mohawk Co., Ltd., Alexandra Rd., Hornsey. [4793

### Monarch.

ONARCH-J.A.P., 2¾h.p., 1920, 2-speed, clutch, kick start, discs, lamps, tax paid, date and condo guaranteed; £37/10.—Goad, 122, Maida Vale. ne, Hampstead 1353. [3225

ONARCH, 2-stroke, Villiers engine, Albion 2-speed, Tan-Sad, horn, lamps, licence, late model; exchange older machine, cash.—Wilson, Ways n, Winsford, Cheshire. [2660

### Moto-Reve.

ALIFAX.—Moto-Reve Twin Lightweight, wants attention; £14/10.—Motor Exchange, Horton Halifax. [3125

*pare Parts:*

OTO-REVE Spares for all models, also repairs, overhauls.—Motor Supply Co., Sole Concession-, 223A, High St., Lewisham, S.E. [9092

### Motosacoche.

2.—Motosacoche Lightweight, magneto ignition, splendid running order.—King, Egrove Farm, ord. [2695

### Ner-a-Car.

OP-SOILED Ner-a-Car, 2¼h.p.; £35.—Hamshaw, Humberstone Gate, Leicester. [2325

### New Hudson.

SPEED New Hudson Combination; bargain, £38. —Ross, 86, High Rd., Lee, S.E. [2630

EW HUDSON De Luxe, fully equipped; £45.—Ratcliffe Bros., 200, Gt. Portland St., W. [2686

EW HUDSON, 2¼h.p., 2-stroke, first-class condition; £25.—Miller, 5, Shepherds Place, Gros- or Square, W. [2543

21 New Hudson, 2¾h.p., unscratched, fully equipped, taxed December, 1922; 32 gns.—31, ery Row, Walworth, S.E.17. [2763

ATE 1921 New Hudson, Ace Model, 2¼h.p., done 200 miles, cost £75; sell cheap.—Write, or call r 6 p.m., 15, Compton Terrace, Highbury. [2583

EW HUDSON 1919, 2-stroke, 2-speed, specially tuned, perfect condition, new tyre, long exhaust; —R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [2134

21 New Hudson Ace, very little used, winner in several bill climbs, spares ioclude aluminium on, sprockets, etc., everything perfect; no reason- offer refused.—T. Twentyman, Pickering, Yorks. [2284

22.—New Hudson 4½h.p. Combinations, £125; 2¼h.p. 2-speed Popular, £50; 2¼h.p. De Luxe, eed, clutch, kick starter, £63. Sole agents for ibridge district.—Wallis and Easton, 104, Mill Rd., ibridge. [2490

EW HUDSON 1922 Models, 2¼h.p., Popular and Be Luxe 2-speed lightweights, 4½h.p. solo and bination, 10h.p. light car, all models in stock, ediate delivery; send for lists; deferred payments nged. All spares stocked.—New Hudson Dept., 45 y's Ion Rd., Holborn, W.C.2. [5150

### New Imperial.

EW 1921 New Imperial 8h.p., 3-speed; what offers? —Percy and Co., 314, Euston Rd. [2885

EW 1921 Imperial 2-stroke, 2-speed; what offers? —Percy and Co., 314, Euston Rd. [2883

21 New Imperial, 2¾h.p., slightly used only; £57. —Ratcliffe Bros., 200, Gt. Portland St., W. [2687

28.—2¾h.p. New Imperial, 2-speed, splendid running order, equipped.—King, Egrove Farm, Ox- l [2699

EW 1921 New Imperial Combination, 6h.p., 3 speeds; what offers?—Percy and Co., 314, Euston [2897

20-21 2¾h.p. New Imperial, fully equipped, beautiful machine; £37/10.—4, Elm Gardens, Hamsmith. [2314

HEFFIELD Agent for New Imperial Motor Cycles; all models in stock.—J. A. Stacey, Ecclesall Rd., ffield. [0813

EW IMPERIAL, all models.—Immediate delivery; exchanges or deferred.—Edwards, 50, Harrington , South Kensington. [1952

New Imperials (2¾h.p. late 1920), sporting models, in perfect order, cheap; what offers?—269, Aston e, Perry Barr, Birmingham. [2641

22 New Imperial; immediate delivery of any model; easy payments 4% extra.—Premier tor Co., Aston Rd., Birmingham. [1036

EW IMPERIAL, 1920, 2¾h.p., 2-speed, clutch and kick start, accessories, splendid condition; £40.— pe, 15, Upper Hagley Rd., Birmingham. [2790

EW IMPERIAL 1918, J.A.P. 8h.p. Combination, excellent condition; £75; no dealers; after 6.— dan, 40, Caversham Rd., Kentish Town. [2345


# TYRES

BATES ENGLEBERT HUTCHINSON CLINCHER

**As we shall be shortly marketing a new Motor-cycle Cover of our own design, we are anxious to dispose of our present stock of various makes at the following special prices.** ***These covers are not old W.D. stock, but special clearance lines which we have purchased at slump prices.***

| Size. | Make. | Our Price. | List Price. |
|---|---|---|---|
| 24 × 2 | **Palmer,** ribbed | 21/- | 29/6 |
| 24 × 2¼ | **Clincher de Luxe,** heavy | 22/6 | 35/- |
| 26 × 2 | **Englebert,** passenger, rub. std. | 17/6 | 53/- |
| ,, | **Englebert,** Touring, rub. stud. | 15/- | 46/3 |
| 26 × 2½ | **Bates,** special hvy., wired-on | 30/- | 38/6 |
| ,, | **Bates,** special heavy, beaded. | 28/6 | 40/- |
| ,, | **Clincher de Luxe,** heavy | 24/6 | 35/6 |
| ,, | **Hutchinson,** T.T., rub. stud. | 23/- | 36/6 |
| ,, | **Wood - Milne** or **Spencer Moulton,** extra heavy | 22/6 | 50/- |
| ,, | **Englebert,** Touring, rub. stud. | 15/- | 49/- |
| ,, | **Wood-Milne** special, heavy | 13/6 | 53/9 |
| 26 × 2¾ | **Avon,** Tricar, rubber stud | 26/- | 40/3 |
| ,, | **Hutchinson,** rubber stud | 25/- | 49/6 |
| ,, | **Clincher de Luxe,** ex. heavy | 24/6 | 47/9 |
| ,, | **Avon,** Stonebenge | 21/- | 33/3 |
| 26 × 2¼ × 2¼ | **Bates,** special heavy | 39/6 | 56/- |
| | **Clincher de Luxe,** ex. heavy | 39/6 | 49/- |
| | **Heavy** rubber studded | 27/6 | — |
| 26 × 2½ | **Goodrich,** safety tread | 40/- | 52/6 |
| ,, | **Bates,** special heavy | 29/6 | 56/- |
| ,, | **Clincher de Luxe,** heavy | 25/- | 28/3 |
| *26 3 | **Elite,** extra heavy, 3-rib | 56/- | 66/- |
| | **Englebert,** Passenger, rub. std. * Fits 650 × 65 rims. | 32/6 | 64/9 |
| 28 2¾ | **Goodyear,** rubber nonskid | 35/- | — |
| 28 3 | **Goodrich,** safety tread | 48/- | 65/- |
| ,, | **Englebert,** Racing, ex. heavy | 36/6 | 70/6 |
| ,, | **Elite,** grooved retreads | 17/6 | — |
| ,, | **Elite,** plain retreads | 12/3 | — |
| *29 × 3 | **Dunlop,** extra heavy. * Oversize for 28 × 3 rim. | 57/6 | — |
| 650 × 65 | **Goodrich,** safety tread | 40/- | 67/6 |
| ,, | **Clincher de Luxe,** ex. heavy | 30/- | 64/6 |
| ,, | **Soly,** rubber nonskid | 21/6 | 63/- |
| 700 × 80 | **Goodrich,** safety tread | 48/- | 69/- |

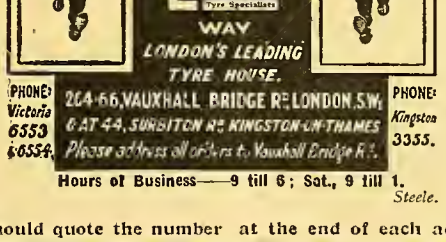
## TUBES — BEST QUALITY GUARANTEED.

| | | | |
|---|---|---|---|
| 24 × 2, | 4/6 | 26 × 2, | 4/9 |
| 26 × 2¼, | 7/6 | 26 × 2½, × 2¼, | 7/9 |
| 26 × 2½, | 7/9 | | |
| 26×2½, | 6/3 |
| 28×3, | 8/9 |
| 700×80, | 10/- |

## BELTS — IN STANDARD LENGTHS

| | | | | | |
|---|---|---|---|---|---|
| Bales Avon .. etc., per foot .. | ⅝ in. 1/- | ¾in. 1/6 | ⅞ in. 1/9 | 1 in. 2/- | 1½ in. 2/6 |

**These Special Clearance Lines are sent on 7 days' Approval against remittance. CARRIAGE PAID.**




**Hours of Business—9 till 6; Sat., 9 till 1.**

*Steele.*


## MOTOR CYCLES FOR SALE.

### New Imperial.

NEW IMPERIAL, December, 1919, 2¾h.p., 2 speed, kick starter, hand-foot clutch, Binks £40; any trial.—43, Wingfield Rd., Stratford, E.15. [2821

NEW IMPERIAL 5-6h.p. Twin J.A.P. Combination, fully equipped, every detail A1; £90, accept half down.—Bunting's Motor Exchange, Wealdstone. [3244

NEW IMPERIAL-J.A.P. 2¾h.p., 2-speed, countershaft, carefully kept, honest bargain, tax paid; 29 gns.—Lloyd, King's Arms Yard, High St., Wandsworth. [2810

1921 2¾h.p. New Imperial, 2-speed, K.S., lamps, horn, legshields, tax paid, perfect condition; cost £85; take £55.—18, Winterbrook Rd., Herne Hill, S.E.24. [2413

NEW IMPERIAL 1922, models 1 and 2; exchanges, extended terms.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0071

NEW IMPERIAL, 1920, 8h.p., Sunbeam sidecar, Easting, speedometer, D.A. lighting, completely equipped, ready for long distance touring; £97/10.—Lucking, 12, Churchfield Rd. East, Acton, W.3. [2990

WAUCHOPE'S, 9, Shoe Lane, London.—1922 New Imperial-Jap, 3-speed model, £63; 3-speed, kick start and clutch model, £69; 2¼h.p. I.O.M. sports model, all chain, 3 speeds, £80; easy terms and exchange; write for list. [3095

NEW IMPERIAL 2¾h.p., 2-speed, new, only shop-soiled, to clear, £55; 2-speed clutch model ditto, £60; or machine taken in part payment.—Edwin Knight, High St., Reigate. [2422

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All New Imperial engine parts in stock. Lists free. [8838

### Norton.

PREMIER Motor Co. for 1922 Nortons:

NO. 9, 3½h.p., belt drive, £80; 16H 3-speed T.T., £115; Big 4, 3-speed, £120; easy payments 4% extra.—Immediate delivery from the Norton Specialists: The Premier Motor Co., Aston Rd., Birmingham. [0625

NORTONS.—All models. If you require one that pulls, try Gibb, Gloucester. 'Phone: 852. [8125

NORTONS, 1922.—Immediate deliveries of all models.—Clifford Motories, Eastwood, Notts. [8828

NORTON B.R.S. 3½h.p., like new, a flier, lamps, and tools; £50.—156, Browning Rd., East Ham. [2451

1921 3½h.p. Norton, as new, Model 9, Phillipson pulley, licensed for 1922, mileage 3,800; £65.—White, Hazlefield, Hexham. [2577

NORTON Combination, 1917, horn and lamps, and in perfect running order, any trial; £90.—E. Pollard, Broomfield Rd., Chelmsford. [2902

1921 Norton 4h.p., perfect condition everywhere, fully equipped, tax paid 1922, privately owned; £95 or near.—43, St. Matthews St., Ipswich. [2725

1922 Big Four Norton Combination; £157/10; sell or take Douglas in part payment, or other good lightweight.—Fox, 12, Conduit St., Lichfield. [2991

NORTON Big Four de Luxe Combination, Easting, tax, all on, condition like new; £115.—Jeffryes, The "Nook," St. Mary's Avenue, Wanstead, Essex. [2369

NORTON 1920 Big 4, all-chain drive, complete lamps, horn, tools, etc.; bargain, £70; lovely condition.—Young, 1238, Coventry Rd., Yardley, Birmingham. [2463

NORTON 1922 3½h.p., 16H Sports model; delivery from stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

NORTON 16H, May, 1921, Canoelet sports S.C., electric light, Bonniksen speedometer, only run 2,000, all perfect; £99.—Sylvadale, Bramball Lane, Bramhall. [3269

NORTON, 1921, model 16H, lamps, horn, speedometer, tax paid. What offers? Date and condition guaranteed.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [3227

1922 Model 16H. Norton, fully equipped with lamps, horn, etc., tax paid, ridden 100 miles only, perfect; £108.—P. H. Allin and Sons, 12, Bridge St., Cambridge. [2473

1921 Norton and Nortorton Sidecar, superb outfit, Royal Easting, three Lucas lamps, Lucas horn; £195 insurance; only 115 gns. Exchanges.—Kent's, 417, Lord St., Southport. [2666

75 M.P.H.—Norton 3½h.p., 3-speed, April, 1921, under 2,000, Ricardo piston, specially balanced engine, racing gear box, silver-plated tank, tax paid; £98.—77, St. Mary's Rd., Sheffield. [3273

1921 Norton (Sept.), Big Four, Model No. 1 and sporting sidecar, Lucas lamps, Stewart speedometer and mechanical horn, perfect condition; sacrifice £135.—Full particulars, Tippett, 48, Union Rd., Exeter. [2292

## MOTOR CYCLES FOR SALE.

### Norton.

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Big Four Norton, £120; 3½h.p. sports model, £115; family sidecar combination, £153; list on application; easy terms and exchange arranged. [3096

1919 Big Four Sports Norton, countershaft, Lucas lamps, horn, Bonniksen, spare sprocket, complete set chains, spare long exhaust, standard silencer fitted, year's licence; £68.—Gale, 22, Desenfans Rd., Dulwich, S.E. [2691

1921 Norton Big Four Combination, de Luxe sidecar and Easting screen, dynamo lighting, Brooks B.600 saddle, speedometer, almost as new, mileage under 2,000, absolutely genuine; £127/10.—Capt. Hay-Will, Verona, Wilton Rd., Bexhill-on-Sea. [2978

BIG Four Norton, August, 1921, complete F.R.S. lamps, speedometer, horn, etc., licensed and insured for 1922, excellent condition and running order, owner unable to take abroad: 95 gns offers.—Letters in first instance, Treeby, c/o Fishers, 140, Shooters Hill Rd. Blackheath. [2229

TUCKERS', Redcliffe Hill, Bristol.—Big Four Norton and family sidecar, £154; 16H sports model, £115 (tuned for competition work); T.T. 3½h.p., £80; finest value in the trade; all machines delivered carriage paid from stock to any address in England.—G. H. Tucker, Norton Rider Agent and Specialist. 'Phone: 4042. [5207

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Complete Norton list post free. [8837

### N.U.T.

1920-21 3½h.p. N.U.T., Magdyno lighting, equipped, excellent condition; 74 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [3268

### O.K.

2¾h.p., 2-speed, O.K. Junior, shop-soiled; trade price, £52.—Ross, 86, High Rd., Lee. [2629

2½h.p. O.K. M.A.G. Albion, 2-speed, perfect, complete; best offer.—Write 51a, Clifton Hill, New Cross. [2252

O.K. Juniors; we have Mark IX., X., XI. new 1921 models in stock at greatly reduced prices.—Eagles and Co., 275, High St., Acton, London. [3128

OXFORD O.K. Agency.—1922 models in stock. Prices from 38 guineas. Gradual payments arranged.—27 or 38, Cowley Rd., Oxford. Telephone: 870. [2488

1919 O.K. Junior, 2½h.p., 2-speed, stored 12 months, excellent condition, all on; £35, offers.—Duggan, 9a, Belsize Parade, Belsize Park, Hampstead. [2309

£12 down and £3 monthly buys immediate delivery of O.K.-Junior; simple and reliable; best value in trade for beginners.—Frank Whitworth, 139, New St., Birmingham. [2153

O.K. Union, 2¾h.p., lamps, tax paid, condition as new; sacrifice, £35 or near; or exchange 1921 Triumph with cash adjustment.—C/o Mrs. Osbourne, Newbury, Gillingham, Dorset. [2376

### Omega.

1920 Omega-Jap 2¾h.p., 2-speed, clutch, kick starter, lamps, accessories, perfect condition throughout; £47/10.—12, Portland Avenue, Stamford Hill, N.16. [2472

OMEGA 1922 Models; prices from £39/10. Write for catalogue, London Motors, 61, Holborn Viaduct, E.C.1. Your old machine taken in part payment, for cash, or on deferred terms.

OMEGA 1922 Models for earliest deliveries. Write London Motors, 61, Holborn Viaduct, E.C.1. Sole distributing agents for:—Norfolk, Northamptonshire, Huntingdonshire, Cambridgeshire, Hampshire, Rutlandshire, Bedfordshire, Berkshire, Buckinghamshire, Oxfordshire, Suffolk, Essex, Hertfordshire, Sussex, Surrey, Kent (with the exception of 20 miles radius of London). [3316

### Orbit.

1921 Orbit 2¾h.p. 2-speed, new 1922 engine, magneto, carburetter, guaranteed; £35.—Highdene, Ridgeway, Enfield. [2575

### P. and M.

P. and M., complete, good condition; 1917 £35, 1918 £40.—7, Hereford Rd., Bayswater. [3025

£20.—3½h.p. P. and M., good condition, front lamp, Klaxon.—19, St. Saviour's Rd., Croydon. [2460

1920 P. and M. Combination, lamps, etc., guaranteed excellent; £64.—51, Upper Richmond Rd., Putney. [2556

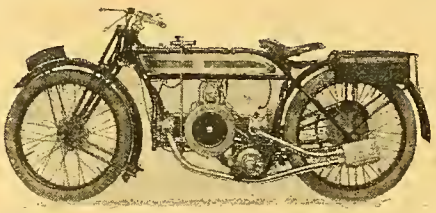
P. and M., wicker sidecar, go anywhere, licence and insurance paid; £35, lowest.—Scott, Chavey Down, Bracknell. [2235

42 GNS.—P. and M. Combination, 1918, copper exhaust, new back tyre, fast.—58, Blagdon Rd., New Malden. [3170

WAUCHOPE'S, 9, Shoe Lane, London.—4-speed 4½h.p. P. and M. Combination; £130; easy terms and exchange arranged; also 3½h.p. 1918 model; £50. [3114

# The FINEST and LARGEST DISPLAY of 1922 MODELS

outside of Olympia may now be seen at our depots in Edinburgh and Glasgow.



The following makes in great array:—

**DOUGLAS, ENFIELD, NORTON, MATCHLESS, INDIAN, P. & M., N.U.T., NEW IMPERIAL, B.S.A., LEVIS, VELOCETTE, O.K., DIAMOND, QUADRANT, ZENITH, SIRRAH, McKENZIE LIGHT-WEIGHT and MORGAN RUN-ABOUTS.**

We have still a very limited number of brand new shop-soiled models in stock. Those have been still further reduced, and we can openly say with confidence that the value is unequalled, as we have determined to clear remaining 1921 stock **REGARDLESS OF COST.**

***Send for our list, and, to save time and ensure your own satisfaction, please give us an indication of your exact requirements so that we may advise you in a selection.***

# ALEXANDER'S

**113-115, Lothian Road, Edinburgh, 272-274, Gt. Western Rd., Glasgow.**

## MOTOR CYCLES FOR SALE.

### P. and M.

P. and M. Combination, tools, Tan-Sad, driving sui etc.; lowest £45.—H. Taylor, 142, Lavender Hil Clapham Junction. [236

P. and M., late 1918, Bulbous sidecar, new Eastin windscreen, licensed, fully equipped; £50. "Bergholt," High St., Harpenden. (P) [288

P. and M., R.A.F., perfect, 2-speed, clutch, k. star sidecar machine, accessories; £45.—Top bell, p.m., 1, Tremlett Grove, Junction Rd., Highgate. [223

P. and M. Combination, 2 speeds, kick start, perfect order, as new, and fitted with aluminiu under-shield; £75.—Baker, 284, Upper Richmond Rd Putney. [236

1921 P. and M., mileage about 1,000, enamel an plating excellent, tyres unmarked, 140 miles gallon, perfect, seen Reading; £65.—Lavin, Old Hous Sonning, Berks. [120

P. and M. Combination, £48; late model, tax pai fully equipped, tyres, and mechanically exce lent; offers.—13, Somers Mews, Edgware Rd., W.2 ( Cambridge Terrace). [32

LATE 1918 P. and M. Solo, engine No. 7235S, r enamelled, mechanically perfect, 46 m.p.h., unde 200 lbs., lamps, spares; £50; exchange considered. 104, Wokingham Rd., Reading. [241

P. and M. Solos, ex R.A.F., £35; Combination £50; the machines are late models rebuilt an guaranteed perfect.—Voltaire Motor Works, 4, Voltai Rd., Clapham Rd. Station, London, S.W.4. [906

*Spare Parts:*

P. and M. Spares. Immediate delivery.—Kays, Bond St., Ealing. [721

P. and M. Spares stockist, every part stocke cheap.—Inman, Durham Rd., Seaforth, Liverpoo [128

### P. and S.

1921 Pearson and Sopwith 2¾h.p., J.A.P., 2-spee clutch, K.S., discs, lamps, all on, tax pai £47/10, nearest offer.—253, Cambridge Rd., E.2. [22

PEARSON and Sopwith 2-stroke, 3h.p. Dalm engin clutch, kick starter and 2-speed, open to an trial and examination, 1919 model, just been r painted, bought new by present owner at cost over £70; will accept best offer.—Aviemore, Monkhan Drive, Woodford Green. [230

### Peugeot.

5h.p. Peugeot Combination, 2-speed, K.S., acce sories, any trial; £18.—C. S., 14, Swaton Rd Bow. Tel.: E. 3155. [274

### Precision.

PRECISION Combination, 3½h.p., 1914, T. and engine, Sturmey-Archer 3-speed, Sandum sidecar 3 lamps, 2 generators, good running order; £40. Granville Lodge, Dorridge, Warwickshire. [221

### Premier.

£23.—3½h.p. Premier T.T. Model, £12 new part lamps, etc., splendid order; exchanges.—63, Sol Rd., Brixton. [260

2½h.p. Premier, Gradua gear, foot starter, u 2 scratched; exceptional bargain, £29; licensed.- 67, Fernlea Rd., Balham. [318

*Spare Parts:*

PREMIER Spares and Repairs.—We claim to be th most competent firm to supply spares and execut repairs to Premier motor cycles. We served in th Premier works, and know this machine from A to Z We hold the most varied stock of parts for it in th world. We are the only traders who can claim t supply every part for a Premier machine. Our price are rock bottom, and our service unsurpassable. Writ us full requirements; you will receive our reply p return.—Forfield Motors, Forfield Place, Leamingto Spa. [318

### Quadrant.

CLIFFORD WILSON Company, 16 years' experienc with Quadrants. [327

QUADRANT Combination, 1921, 5h.p., all-chain, r liable, carefully used; bargain, £80.—48, Sta bridge Rd., Crewe. [284

1922 Quadrant 4½h.p. Combinations; £100 Agents for Cambridge.—Wallis and Easton 104, Mill Rd., Cambridge. [249

QUADRANT £100 4½h.p. Combination, deliver from stock.—Frank Whitworth, Ltd., Distributer 139, New St., Birmingham. [076

QUADRANT.—Delivery of 1922 models fro stock; best value on the market.—Elce, Ltd 15-16, Bishopsgate Avenue, Camomile St., E.C. 'Phone: Avenue 5548. [007

CLIFFORD WILSON Mfg. Company can only gua antee Easter delivery for another 28 reta orders from March 2nd. Book at once.—177, Wes minster Bridge Rd., London, S.E.1. [327

CLIFFORD WILSON Mfg. Company have one out brand new 1921 Combination to clear for cas only at £90; all chain drive, 1922 engine.—17 Westminster Bridge Road, London, S.E.1. [328

## MOTOR CYCLES FOR SALE.

### Sunbeam.

SUNBEAM 1920 3½h.p. Combination, completely equipped, insured; £105. — Buccleuch House. Thorpe Bay. [2227

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Sunbeams, order now; also 3½h.p. 1917 model, £75; easy terms and exchange. [3100

1920 3½h.p. Sunbeam Combination, spare wheel, fully equipped; £100.—Hillier (side bell), 9, Wallingford Av., North Kensington. [3042

SUNBEAM 1920 3½h.p., semi-sports, very good condition, Cowey speedometer, lamps; £87.—Mansell, The Priory, Epsom Rd., Croydon. [3048

SALE or Exchange, 1921 (Sept.) 3½ sports model Sunbeam, full equipment, licence paid, practically new; £110.—137, Romford Rd., Stratford. [2552

SUNBEAM 3½h.p. 1917, coach sidecar, accumulator lighting, Dunlops, Easting, beautiful outfit; £70; good Lightweight part.—81, Rectory Lane, Tooting Sec. [2461

£59.—Bargain, 1914 3½h.p. Sunbeam Combination, 3-speed, clutch and K.S., full equipment, registered 1922, good condition.—4, Elm Gardens, Hammersmith. [2811

SUNBEAM 3½h.p., 1920, semi-sports, detachable wheels, lamps, speedometer, etc., leaf spring, new condition; £90.—Longman Bros., 17, Bond St., Ealing. 'Tele.: 689. [3222

1916 Sunbeam 3½h.p., 3-speed, clutch, kick starter, Lucas accessories, excellent condition; £65.—91, Abingdon Rd., W.8; by appointment. 'Phone: Western 4685. [2994

4h.p. Sunbeam Combination, 1919, French military model, wind screen, tools, lamps, 2,400 miles; £92/10; parted with reluctantly.—Rattray, 7, Blakehall Rd., Carshalton. [2200

SPORTING dual purpose 1921 Sunbeam, as new, interchangeable wheels, kick starter, dissolved acetylene, Fallolite, Stewart mechanical, long plated exhaust, semi-bars, foot-rests; £100.—Wilson, Oakfield, Rugby. [3039

1921 Sunbeam Sports, mileage under 1,000, enamel and plating perfect, Cowey horn, C.A.V. head lamp, rear lamp, aluminium number plates, perfect condition, seen Reading; £110.—Lavin, Old House, Bonning, Berks. [1207

SUNBEAM agents.—1922 models in stock; 3½h.p., 3-speed clutch, and kick starter, £126; 3½h.p. T.T. sporting model, £136/10; in stock; easy payment terms and exchanges arranged.—Herbert Robinson, Ltd., Green St., Cambridge. [1989

1921 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual spares, cast aluminium plates, new in April last, and in exceptionally good condition, tyres unpunctured; nearest offer to £115.—Geoffrey Smith, *The Motor Cycle*, Coventry. [X4285

SUNBEAMS (two).—Offers wanted, 1921 8h.p. Combination, Magdyno lighting, horn, Bonniksen speedometer; also July, 1920, 3½h.p. Combination, Lucas lamps, horn, machines licensed, insured 1922.—White, Architect, 40, Bennett's Hill, Birmingham. (Central 779.) [2486

1921 Sunbeam Combination, complete with Lucas lighting set and electric horn, an extra bulb horn, speedometer, watch, mirror, Tan-Sad, sidecar fitted with triplex screen, metal apron, hood, mat, and spare wheel and tyre complete, long exhaust pipe has been fitted, enamelling and plating equal to new, tyres perfect; £210.—Hammond, 9, Villa Rd., Luton, Beds. [2217

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Sunbeam parts in stock. Immediate delivery. [8840

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £105. Type SD, chain drive, £115; Type LW, lightweight, £65; sidecars from £20 to £50; easy payments 4% extra. —Buy direct from the leading Triumph agents: The Premier Motor Co. Aston Rd., Birmingham. [0627

1918 Countershaft Triumph, perfect, £48.—24, Balliol Rd., North Kensington. [2522

£55 for 1918 C.S. Triumph, lamps, horn, etc., guaranteed.—33, Hackford Rd., Brixton. [3206

TRIUMPH Combination, fully equipped; £75.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [2685

£40.—Triumph 1914, 3-speed, clutch, renovated as new, any trial.—Crisp, 74, Bromley Rd., Catford. [2400

COUNTERSHAFT Triumph 4h.p., fine condition, ride away; 49 gns.—5, Wycombe Rd., Tottenham. [2600

CROSS, Effingham Sq., is Agent for the Trusty Triumphs in Rotherham; all models in stock. [2907

TRIUMPHS.—A fine assortment of all models in stock at prices to suit all.—Ross, 86, High Rd., Lee. [5020

3½h.p. Triumph, single-gear, Bosch magneto, lamps, etc., in good running order; £18.—114, Brixton Hill. [2837


STOP & START AT WILL

FITTED WITH PULLEY OR SPROCKET

THE VILLIERS ENGINE CLUTCH ALLOWS THIS

FOR VILLIERS ENGINES WITH FLYWHEEL MAGNETO

PRICE 55/- COMPLETE

MAKERS:-

THE VILLIERS ENG CO LTD
SUNBEAM STREET
WOLVERHAMPTON


## MOTOR CYCLES FOR SALE.

### Triumph.

£18.—3½h.p. Triumph, fine running order, C.A.V. magneto, good tyres, lamp, horn.—16, York St., Dover. [2410

TRIUMPH 3½h.p., sporting appearance, guaranteed perfect, all on, tax paid; £45.—1, Julian Avenue, Acton. [2911

TRIUMPH Combination, 3-speed, clutch; £38; take Lightweight part.—57, Kenbury St., Camberwell, London. [2863

TRIUMPH, 1922 patterns; cash or easy payments; immediate delivery.—Motoria, 15, Regent Parade, Tally-ho. [2956

NEW 1921 Triumph Combination, 4h.p., chain drive, 3-speed; what offers? — Percy and Co., 314, Euston Rd. [2896

1913 Triumph Combination, 3-speed, parts new, bargain; offers.—Wright, Smallwood Cottage, Sandbach [1639

4h.p. Triumph, 1922, unpacked, owner unable to complete purchase; best offer.—Box No. 9015, *The Motor Cycle*. [2265

£52.—4h.p. Countershaft Triumph, re-enamelled and plated, handsome 'bus.—30, Canning Crescent, Wood Green. [2423

TRIUMPH Combination, Millford unused sidecar, perfect condition throughout; £70.—33, Hackford Rd., Brixton. [3208

BRANDISH and Sons, Coventry, for Triumphs.—Triumph-Ricardo in stock.—W. Brandish and Sons, Coventry. [1043

TRIUMPH Junior new 1921 model at greatly reduced price.—Eagles and Co., 275, High St., Acton, London. [3131

TRIUMPH, 1921, Model H, excellent condition, well equipped; £90 or tempting exchange.—Bunting's Motors, Wealdstone. [3082

TRIUMPH, splendid condition, take two anywhere; £28; take push cycle part.—57, Kenbury St., Camberwell, London. [2864

COUNTERSHAFT Triumph, thoroughly overhauled, perfect, all accessories; £48/10.—63, Devonshire Rd., Merton, S.W.19. [2643

T.T. Triumph, beautifully equipped, tax, etc., perfect; deliberate sacrifice, 29 gns.—Ramsdens, Maybell Avenue, Blackpool. [2498

BRAND new Sports 4h.p. Triumph, £70; two Baby Triumphs, 40 gns. each. Exchanges.—Kent's, 417, Lord St., Southport. [2663

BUY your new Triumph from an Agent who will always give you good service; delivery from stock.—Daw, Agent.—Below.

LATE 1919 4h.p. Triumph, fully equipped, £70; 1921 Gloria Combination, all chain, electric lighting, Cowey, etc., as new, £130.—Daw, Agent, 114, Brixton Hill. [2834

TRIUMPH Combination, 3-speed, 4h.p., Sept. 1920, done 800 miles, condition as new; £98.—Smyth, Manchester House, Llysfaen. [2287

CHAIN-DRIVE Triumph, Millford sidecar, luxuriously equipped; cost £200, bargain, £110.—29, Broomfield Grove, Rotherham. [2927

F.O.C.H. for Triumphs.—Latest models in stock; also 1921 solo and 1918 combination.—5, Heath St., Hampstead. (Near Tube.) [1576

3½h.p. Triumph 1911-12, good condition, new mag-neto, belt, lamp set; £23, bargain.—73, Tamworth Rd., Newcastle-on-Tyne. [3140

TRIUMPH-GLORIA Combination, late 1919, Easting, lamps, etc., original tyres, fully licensed; £75.—Wiles, Littlestone-on-Sea, Kent. [3002

BABY Triumph, 2-speed, electric and acetylene lighting, excellent condition; 33 gns.—35, Shepherds Bush Rd., Hammersmith. [2658

TRIUMPH Countershaft 1918, fully renovated with new parts throughout, guaranteed 3 months; £75.—33, Hackford Rd. Brixton. [3207

TRIUMPH Junior 1921 2-stroke, 2-speed, Lucas lamp, horn, tools, tax paid; £42/10.—Cope, 15, Upper Hagley Rd., Birmingham. [2789

£52.—Triumph, 1918-19, countershaft, condition as new, wants seeing; if with Canoelet sidecar, £59. —58, Blagdon Rd., New Malden. [3171

TRIUMPH C.S. 1920, 3-speed, etc., guaranteed in perfect condition, fully equipped; £77/10, or near offer.—33, Hackford Rd., Brixton. [3205

1920 countershaft Triumph, fully equipped, latest change speed, good condition;; £65.—Fitt, near Pike's, 102a, Church St., Chelsea. [3214

TRIUMPH 2-stroke, slightly soiled only, equipped, £45; 4h.p. sports, only run 200 miles, £58.—Clark, 7, Exhibition Rd., S.W.7. [3295

1921 Renovated 4h.p. Triumph, with Montgomery sidecar, perfect order, little used, lamps, horn, etc.; £85.—Brown and Moffat, Snettisham. [2967

TRIUMPH 1916 countershaft combination, well equipped, coach sidecar; £65, a genuine snip. —Bunting's Motor Exchange, Wealdstone. [3245

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH 3½h.p., 3-speed, clutch, lamps, horn, tax paid; £30; after 6 p.m.—Mr. G. Goodger, 8, Ladds Cottages, Park St., Southwark, S.E.1. [2416

TRIUMPH-GLORIA Combination, C.S., electric lamps, speedometer, splendid condition, trial; £70. —The Haven, 120, Sutherland Rd., Croydon. [3000

£55.—1918 4h.p. Triumph and new sidecar, speedometer, lamps, mechanical horn, any trial; a bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [2952

1920-21 Triumph Combination, practically new, owner (brother) ordered to India, any trial; £100.—Tallis, The Grange, Pontnewydd, Mon. [2213

1920 Triumph, 4h.p., model H, indistinguishable from new, fitted with Coupette all-weather sidecar, date and condition guaranteed; £100.—Below.

1920 Triumph, 4h.p., 3-speed, clutch, and kick start, lamps, tax paid; £68/10.—Below.

1921 Triumph, 2¾h.p., 2-speed, lamps, tax paid, insurance till August, date and condition guaranteed.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [3226

1921 Triumph, Model H, absolutely unscratched, and guaranteed perfect condition, lamps, horn, and licence paid; £90.—Tippen, Marden, Kent. [1569

LONGMAN BROS., Bond St., Ealing. Telephone: 689. Official district agents.—All Triumph models. Cash, exchange, or deferred payments. [5787

1920 Triumph Combination, perfect, lamps, 2 horns, Cameo screen, tax paid, leg shields, mascots, all on; £85 or nearest.—1, Park Hill Rd., Ewell. [3078

TRIUMPH 4h.p. 1914, 3-speed, kick start, Utility bulbous sidecar, speedometer, insurance, tax paid, splendid condition; £50.—1, Townley Rd., E. Dulwich. [2784

SHEFFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stacey, Triumph Service Depot, 12, Ecclesall Rd., Sheffield. [0812

1919 Countershaft Triumph, fully equipped; £50; exchange combination.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. Tel.: Willesden 1744. [3264

TRIUMPH, 3½h.p. clutch model, recently overhauled, new cylinder, piston, etc., fully equipped, good condition; £30.—Harris, Steeple Aston, Oxfordshire. [2499

£33.—1913-14 3½h.p. Triumph, stored 3 years, renovated 1920, little used since, licensed, equipped fully, owner going abroad.—14a, Parkgate Rd., Watford, Herts. [3010

1922 Triumph, all models; latest catalogue with pleasure; cash, exchange, easy terms.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3262

1919 4h.p. Triumph-Gloria Combination, tax, lamps, speedometer, condition throughout guaranteed, not W.D.; £100.—39, Warren Rd., Wanstead, Essex. [2368

LAST Year's Triumph Coachbuilt Combination, perfect throughout; cost £155; £20 worth accessories; sacrifice, £92.—Hayes, Fort Royal Hill, Worcester. [2845

TRIUMPH Countershaft Machines from £45 to £65 supplied on extended payments; call and inspect our stock.—The Hackford Eng. Co., 33, Hackford Rd., Brixton. [3209

1918 Triumph Combination, overhauled, any trial, lamps, horn, tools, etc., tax paid, good condition, deliver anywhere; offers.—R. Juby, Firbeck, Rotherham. [2964

TRIUMPH 4h.p., late 1921, not done 1,000 miles, as new, horn, lamps, etc., owner purchased cycle last December; £85, or near offer.—Box 9077, c/o *The Motor Cycle.* [2483

1918 Triumph Combination, Henderson sidecar, disc wheels, Tan-Sad, screen, lamps, beautiful condition; £69.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [3201

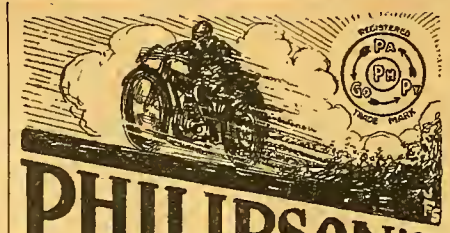
1914 Triumph Combination, Mills-Fulford sidecar, complete lamps, etc., new tyres, in excellent running order, tax paid 1922; £55.—Albany, 5, Baliol Rd., Hitchin, Herts. [2828

TRIUMPH.—1922 models in stock; immediate delivery of H. and S.D. solo or combination.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0075

3½h.p. T.T. Triumph, overhauled, Bosch, Klaxon, lamps, Dunlops, new belt, tax paid, ride 25-30 miles, bargain; £30 or near.—Brandon, North Crawley, Newport Pagnell, Bucks. [2759

1921 Triumph 2¼h.p., 2 speeds, new last August, only run 100 miles, lamps unused, tax paid 1922, Leeds district; what offers? No dealers.—Box 3083, c/o *The Motor Cycle.* [2970

BRAND new Triumph, Model H, unused, unregistered, latest enclosed spring fork and engine shock absorber, incorporated lug frame; £96/10—51, Upper Richmond Rd., Putney. [2557



# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

# Philipson's Latest!

## GOVERNOR PULLEY AND VARIABLE GEAR COMBINED WITH FLY WHEEL for all two-stroke and FOUR-STROKE ENGINES

**The Lightest, Speediest, and Simplest Gear on the market for direct belt-driven 2-stroke and 4-stroke engines.**

ONLY adds 2 lb. (approx.) to the weight of a 2-stroke machine, and 6 lb. (approx.) to the weight of a **4-stroke** machine.

**During the past week we have fitted the following machines**

**4-STROKE.**

TRIUMPH, NORTON,
ROVER, SINGER,
COULSON, BLACKBURNE.

**2-STROKE.**

VILLIERS, RADCO, O.K.

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

Our Flywheel Governor converts a single-speed 2-stroke into a speed model *—the lightest speed model on the market!*

**THE ONLY GEAR WITH NO END THRUST.**

**IMMEDIATE DELIVERY.**

*Send for Illustrated Booklet.*

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

*What is your make? Write us*

REDUCED PRICE **£7 7 0** Carriage Paid.

**Philipson & Co., Ltd.,**

**Astley Bridge, BOLTON, Lancs.**

**(Established over 50 years.)**

'Grams: "Safety, Bolton." 'Phone 147 Eagley.

## MOTOR CYCLES FOR SALE.

### Triumph.

1919 (late) Triumph combination, Millford sidecar, special body, grid, all accessories, spares, condition faultless, appearance excellent, insured for year; £73.—Seaton Cottage, Gerrards Cross. [2031

£85.—1919 Triumph Combination, Lucas horn, lamps, speedometer, mirror, leg shields, Gloria sidecar, Easting windscreen, luggage grid, splendid condition.—Standard Garage, Oxford. [2353

1914 Triumph 4h.p. Combination, C.B. green sidecar, lamps, new tyres, belt, Bosch, 3-speed, recently overhauled, good running order; £45, or offer. —Grove Cottage, Copthorne, Sussex. [2373

TRIUMPH 1921, chain-driven model, fully equipped, many spares, indistinguishable from new, mileage 250; £95, or easy payments.—Bunting's Motor Exchange, Wealdstone. [3243

TRIUMPH Combination, coachbuilt, late 1919, countershaft, 3-speed, kick start, clutch, Easting, lamps, accessories, year's licence, splendid running, bargain; £68.—128, Mackenzie Rd., Beckenham, Kent. [2750

1919 4h.p. Triumph, Model H, countershaft, 3-speed, clutch, kick starter, in absolutely perfect condition, indistinguishable from new; £58.—Clarke, 20, Oxford Mews, London, W.2 (off Edgware Rd.). [2932

BARKER'S Motors can supply all Triumph 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [1213

TRIUMPH, clutch model Combination, kick start, exceptionally fine condition, fully equipped, tax paid; £38. Exchange late solo, substantial cash adjustment, suitable machine.—121, Acton Lane, Chiswick, W.4. [2581

TRIUMPH, 1919, countershaft, only run about 6,000 miles and in same ownership throughout; winner of two gold medals; Lucas lamps, Klaxon, speedometer, kneegrips, etc.; £65.—Delancey St. Garage, Camden Town, N.W. [2636

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Triumphs, 4h.p., all-chain models, 3-speed, £115; 4h.p., chain and belt, £105; 2¼h.p. 2-stroke model, £65; 4h.p. combination, £145; easy terms and exchange. 'Phone, Holborn 5777. [3101

TRIUMPH agents.—1922 models in stock; 4h.p. belt and chain drive, £105; all-chain drive, £115; 2¼h.p. 2-stroke, £65; 3½h.p. fast roadster, £120; in stock; easy payment terms and exchanges arranged.—Catalogues and full particulars from Herbert Robinson, Ltd., Green St., Cambridge [1988

BRAND new Triumph, Model H, Montgomery £34 sidecar, largest Lucas lamps, horn, speedometer, tax paid 1922, insurance, spares, all absolutely new and unused; £142; exchange.—Heath, 168, Wellington Rd., Sth., Hounslow, Middlesex. [2812

1921 Triumph Combination, dynamo lighting, mechanical lubrication, Dunhill triangular chassis, luxurious body, Easting, etc.; £105.—S. and B Motors, 16, King's College Rd., N.W.3, 5 minutes Swiss Cottage. 'Phone, Hampstead 6782. [2853

TRIUMPH 1913, 3-speed Sturmey, clutch, fitted with latest frame and tank, re-plated, re-enamelled all black, tank lined gold; overhauled; new carburetter, nearly new tyres and belt, lamps, horn, etc.; tax paid; ready for the season; £40.—5, William's Mews, Lowndes Sq., S.W.1. [2571

TRIUMPH Junior, new June, 1921, new engine by Triumph because of small defect January last, condition now perfect, complete with all accessories, including Magdyno lighting but not speedometer; £60, not less. Can be seen by appointment any Saturday afternoon.—Thornley, 72, Streathbourne Rd., Tooting Bec Common. [2537

TRIUMPH Gloria Combination, 1921, chain drive, Gloria spring wheel sidecar, Bonniksen speedometer, Lucas electric lighting set, leg shields, only used for demonstration, in new condition throughout, original cost £220, offered for cash only £150; no exchanges or easy payments on this machine.—Premier Motor Co., Aston Rd., Birmingham. [3253

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

HERBERT ROBINSON, Ltd., Green St., Cambridge.—The Triumph Experts. Complete illustrated lists post free. [8841

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [1159

TRIUMPH Spares in stock; illustrated list free; orders despatched by return.—W. Brandish and Sons, Triumph Garage, 625, Foleshill Rd., Coventry. [1044

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; gear overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10. [0809

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

HALIFAX.—50 second-hand machines and combinations; keen exchanges; get list.—Motor Exchange, Horton St., Halifax. [3116

BARGAINS in Motor Cycles and Sidecars.—A limited number of 1920, shop-soiled models, all well-known makes; best offer secures in each case; send for list or call and inspect.—Mebes and Mebes, 144, Gt. Portland St., W.1. [2385

1920 (September) Combination Volex, electric light, engine and appearance faultless, original tyres unpunctured, Easting screen, coachwork revarnished, spares, any trial, tax paid; buying light car; best offer over £90.—Spear, 80, East Sheen Avenue. [2551

LATE Pattern Heavyweight Frame, Brampton's fittings, 3-speed, handle-bar control clutch, Brampton spring chain drive, internal expanding brake, Amac carburetter, P. and H. lighting set, mileage 500; £20, no offers.—32, Canterbury Rd., Brixton, London. [2354

12h.p. car engine with magneto, sound, £8/10; four-wheel chassis gear box, sound, £5; Indian 6-6h.p. motor cycle, sound condition, £25; 1921 New Hudson, £29; 1922 Villiers, clutch, K.S., 2-speed, £56; brand new 1922 P. and M. combination, unrated, £128; brand new tyres, 26×2¼, 23/-; 26×2¼, wheels, 45/- pair; magnetos, 15/-; heavy weight frame and tank forks, £4/15; hub clutch, 35/-, new. Stamp reply.—J. E. Andrews, Golborne, Warrington. [3287

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigden, 130, Euston Rd. [0795

## MOTOR CYCLES WANTED.

WE

ARE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination. We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 514, Euston Rd. [0815

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London Museum 391. [0332.

CASH

WAITING

COMBINATION or Solo, any make, any quantity. Best prices given.—Write, 'phone, or call, T. and S. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5564

WANTED, first-class solo up to £70 cash.—32, West St., Southport. [2670

LATE Solo or Combination; cash.—C. S., 14, Swaton Rd., Bow. Tel.: E. 3155. [2742

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer is not accepted, machine can be included in auction sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms:—Selling commission, 7½ per cent., not chargeable unless machine is sold. If no sale, a nominal auction fee charged—For motor cars, 20/-; Motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When the effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Telephone: 208 Streatham. Telegrams: Palmer's Garage, Tooting. [2679

INDIANS, Harley-Davidsons, spot cash.—Wandsworth Motor Exchange, Ebner St., Wandsworth.

MOTOR Cycles, combinations, bought spot cash.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [3152


# WATCH THIS COLUMN

EVERY WEEK FOR

# BANCROFTIAN CO.'S BARGAINS.

BY DOING SO YOU WILL SAVE MONEY.

**TYRES.**—Manufacturers' clearance stocks, not W.D., although clearance they are new and perfect. Wood-Milne extra heavy 4-ply, 26×2¼, **25/-**; 26×2⅜, **27/6**; 28×3, **30/-**; 650×65, **27/6**; 26×2¼ combination, **35/-**; all clean and wrapped in original packing. Pedley 26×2¼, 3-ribbed, **25/-**. Hutchinson extra heavy 3-ribbed, 700×65 or 750×65, for American machines, **35/-**; 650×65 steel studded car type, **65/-**; original, £6 6s. Firestone 20×2, Auto wheel, **21/-**; original, 45/-; tube, **6/6**. Palmer 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½, cord, **42/-**. Oylers 650×65 ribbed square tread, heavy, in original packing, **27/6**; original, 45/-. Clincher de Luxe, very heavy, 28×2½, **35/-**; 28×2, **32/6**; 26×2½, **37/6**; 26×2, Junior de Luxe, **22/6**; 26×1¾, **17/6**. Dreadnought Passenger A. Won. 28×3, **45/-**. Hutchinson wired edge cover, 26×2½ and 26×2¼, **30/-** each.

**TUBES.**—24×2¼, **4/6**; 24×2, **4/6**; 26×2¼, **5/6**; 26×2½, **5/9**; 28×3, extra heavy, **7/6**; 700×80, **7/6**.

**BELTS.**—Clincher clearance line, new, not W.D. ¾", 6' 6", **8/6**; 8', **10/6**; ⅞", 7' 6", **12/3**; 8' 6", **14/-**; 1", 7' 6", **18/-**; 8', **17/-**; 1⅛", 7', **18/-**; 8', **20/6**; 8' 6", **21/6**; Bates short lengths, ¾", 5', **4/6**; 5' 6", **5/-**; ⅞", 4' 6", **5/-**; 5', **5/6**; 5' 6", **6/-**; 1", 4' 6", **6/3**; 5', **7/-**; 5' 6", **7/9**; leather belts, ⅞" at **2/6** per foot; belt fasteners **9d.** and **1/-**.

**SPEEDOMETERS.**—Cowey with trip, **£4 19s. 6d.**; Stewart with trip (£6 6s. model), **£4 15s.**; Jones with trip, **£3 17s. 6d.**; all unused and perfect. All speedometer replacements in stock.

**CARBURETTERS.**—Amac and B. and B., **5S/-**, unused. Replacements in stock.

**SIDECAR BODIES.**—Few left, coach built, best quality, **£6 17s. 6d.**, original price £12 12s.

**TAN SADS,** with back seat **28/6,** original price 57/-; only limited quantity.

**WINDSCREENS.**—Actually in stock (Eastings) Baby, Standard, Royal, "Cameo," "Sandam," Bluemels 1920, **£3 10s.**, usual £4 8s.

**HOODS.**—Finest quality, waterproof, with curtains round, **£3 5s.**

**MIRRORS.**—Concave 4", **7/6**, original 12/9; British; made and very best quality.

**GOGGLES.**—Genuine Triplex, 45/- model, **10/6**; 25/- model, **9/6.** They are new and perfect.

**GLOVES.**—Leather, wool lined, to clear, **4/6,** well worth 10/6; chrome leather gauntlets with finger and thumb, wrist strap, **3/6,** worth 12/6. Only limited quantity.

**CHAINS.**—Clearance Renolds, new, ¾ by 7-16, **6/6**; ⅝×⅜, **5/3**; ⅝×¼, **5/-**; ½×¼, **4/6**; ½×3-16, **3/9** per foot.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coats with belts, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality extra heavy double texture waterproof material, dark fawn, new and fresh, only been made recently, not half perished W.D. Our price to clear, **£2 2s.** Could not be bought elsewhere under £4 10s., the greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**OIL SKIN SUITS.**—Lined, double-breasted coat, long trousers, with bib, first class quality, colour dark green, **17/6,** worth £3 3s.

**SOLDERING APPARATUS.**—A combined soldering iron and blow lamp. The most marvellous invention. Solid brass, 10" long, not a toy but a useful tool. No motorist should be without one. You can do your own soldering without any trouble—nipples to wire, and other small repairs to motor cycles. You will save time and expense. Only a limited quantity. Order now to save disappointment, as they can never be repeated again, **4/8** post free; original price 10/6.

**MOTOR CYCLES.**—Few shop soiled Allon and Radco's to clear. We can supply everything for the motor cyclist at competitive prices. On all above goods carriage extra.

## BANCROFTIAN CO.,

78, BISHOPSGATE, LONDON.

Grams: "Chaikel, London." Phone: London Wall 9897


## MOTOR CYCLES WANTED.

WANTED, Alldays' Allon 2-stroke.—Bishop, 4, Maclise Rd., Hammersmith. [2336

T.T. Scott, solo, must be cheap, in perfect order.—Box 8993, c/o *The Motor Cycle.* [2243

COMBINATION, about 4h.p., decent order, cheap for cash.—51, Ealing Lane, W.5. [2615

WANTED, Triumph, old pre-war model; about £15.—Box 8967, c/o *The Motor Cycle.* [1777

1911 Douglas, any condition, cheap.—1, Molesey Rd., Hersham, nr. Walton, Surrey. [3231

WANTED, second-hand Ner-a-Car, good condition.—Racaren, Hollydene, Westbere, Sturry. [3001

WANTED, B.S.A., countershaft model, 1914-18, cheap.—Box 9,104, c/o *The Motor Cycle.* [2702

WANTED, Harley-Davidson sidecar or chassis.—Particulars, price, Terry, 11, Arcade, Bedford. [3272

P. and M., not earlier 1918, wanted.—Write fully, E., Essex House, The Green, Southgate, N.14. [2238

WANTED, good Solo or Combination, reasonable.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [6504

WANTED, Motor Cycle, about £10; any condition.—Box No. 9041, c/o *The Motor Cycle.* [2329

WANTED, late model solo Triumph, examination, trial.—Bisit, Little Harrowden, Wellingborough. [2454

WANTED, lightweight, 5peeds, clutch; £20-£30; view here.—Booth, Paddington Infirmary, London. [3049

7-9h.p. Indian Combination Wanted, £20-£25 and Singer C.B. 3-speed combination.—78, Maury Rd., N.16. [2830

1918 Triumph Combination, must be cheap; cash waiting. — 406, Garratt Lane, Earlsfield, S.W.18. [2654

A.J.S. Combination, 1920 upwards, wanted by private buyer; no dealers.—Write, 38, Waterford Rd., Fulham. [3011

WANTED, 8h.p. Countershaft Machine, condition immaterial; about £30.—179, High St., Street, Somerset. [2408

SOLO or Combination, excellent condition, sound order.—Fullest particulars, 186 St James Rd., Croydon. [3186

COMBINATIONS wanted, not earlier 1918; callers preferred; immediate cash.—Snow, Laurel St., Dalston, E.8. [3187

PRIVATE owners.—£40 offered solo, 3½h.p. or over, not earlier 1917.—Particulars Box 9039, c/o *The Motor Cycle.* [2327

WANTED, countershaft Triumph, good condition; about £30 cash waiting.—90, Leicester Rd., Loughborough. [2208

WANTED, combination, one wanting doing up would suit if sound.—Vayro, 41, Commercial St., Scarborough. [3024

WANTED, good 1921 single or twin combination, English make.—Write Isitt, 42, Queen's Avenue, Winchmore Hill. [2332

COMBINATION, modern, cheap, wanted, not under 4h.p.; about £50.—A. D. F., 46, Arrol Rd., Beckenham, Kent. [2541

WANTED, Douglas or other good lightweight, cash waiting.—Patterson, 12, The Quadrant, Winchmore Hill, N.21. [3070

LATE 2¾h.p. Douglas, New Imperial, etc., also Morgan, 1921-22, watercooled, cheap.—H., 63, Solon Rd., Brixton. [2607

MATCHLESS, A.J.S., Sunbeam combination, single or double-seater, 1921-2. — Thompson, 253, Munster Rd., Fulham. [2780

WANTED at Once, 2-speed 2-stroke, in good condition, about £25.—Advertiser, 1, Guildford Rd., Pendleton, Manchester. [3236

TRIUMPH, free engine model, drop frame, running order, wanted, Manchester district.—Box 8783, c/o *The Motor Cycle.* [9209

WANTED, late model combination, not under 6h.p., cash waiting.—Hillier (side hell), 9, Wallingford Av., North Kensington. [3046

URGENTLY.—Modern Triumph, Norton, Sunbeam, or N.U.T.; must be cheap; cash on sight.—4, Elm Gardens, Hammersmith. [2317

WANTED, late model Solo or Combination; cheap, cash waiting.—Write appointment, 30, Crystal Palace Park Rd., Sydenham. [2931

WANTED.—Best prices given for up-to-date motor cycles.—R. Bamber and Co., Ltd., 2, Easthank St., Southport. 'Phone: 607. [1130

TRIUMPH Countershaft, 3-speed, must be in good condition; full market price given.—Pride, 156, Stockwell Rd., Brixton, S.W.9. [2651

WANTED immediately, Motor Cycles, Combinations, and Light Cars.—Seabridge, 35, Hansler Rd., East Dulwich. Telephone, Sydenham 2452. [2079

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES WANTED.

ENFIELD (Vickers) Combination, or good single, new condition; fullest particulars, lowest price.—Box 9060, c/o *The Motor Cycle*. [2378

WANTED for cash, 1919-20 Combination, must be in good condition and cheap.—Write, 12, Partridge Villas, Vine St., Uxbridge. [1397

TRIUMPH Countershaft Solo or Combination, any condition, spot cash, or part payment new 1922 A.J.S.—51, Upper Richmond Rd., Putney. [9337

WANTED, Good Solo, Combination, or Light Car, urgently.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. Tel.: Willesden 1744. [3267

CASH Waiting; solo and combinations, good prices given.—Write, 'phone, or call, Edwards, 50, Harrington Rd., South Kensington. 'Phone: Ken. 3709. [U604

TRIUMPH, Rover, any good solo, not earlier 1919, Bosch magneto system, good security, £20 down, £4 monthly, no dealers, Croydon.—Box 9044, c/o *The Motor Cycle*. [2301

WANTED, 1921 Combination, must be fully equipped, perfect condition, and first-class make.—Full particulars and lowest price, Stockwell, 6, Northdown Avenue, Margate. [2289

WANTED, your motor cycle or combination. We are buyers. Full market price given and cash paid on the spot. Write, call, or 'phone Museum 5938.—J. Smith and Co., Motor Agents, Ltd., 52-54, Hampstead Rd., N.W.1. [0768

WANTED, Indian 7-9h.p., in exchange for Ivy 2-stroke, 1916, overhauled Dec. last; on view at Palmer's Garage, Tooting; £28.—Replies, 1, Spencer St., Beverley. [3060

IF you have a Triumph or similar machine you wish to sell for spot cash, I am a buyer; top prices for good machines.—Goad, 122, Maida Vale 'Phone: Hampstead 1353. [9936

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, extended pay ments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Blenheim St.), Bond St., W.1. 'Phone: Mayfair 6559. [0772

WANTED, any number of really good Machines and Combinations; good prices paid, and a competent representative will be sent anywhere to inspect and complete transaction—Write, 'phone, or call, Longman Bros., 17, Bond St., Ealing. Tele.: 689. [3223

F.O.C.H. always have cash waiting for sound machines of all types. Highest prices and courteous treatment assured. Fair offer.—Car House, 5, Heath St., Hampstead. (Near Tube.) 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1563

SEND your motor cycle to Palmer's Garage and Motor Auction Rooms, High Street, Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address, Palmer's Garage, Tooting. [2676

## MOTOR SCOOTERS.

KINGSBURY Scooter and Spare Parts.—3, Kendall's Mews, Blandford St., W.1. [5499

SKOOTAMOTA, nearly new.—Full particulars from Scrivener, Woburn Sands, Bucks. [2829

A.B.C. Skootamota; exchange for coach sidecar and cash, or furniture.—74, Faircross Avenue, Barking. [2401

A.B.C. Skootamota, new, unsoiled, latest model; £22, sacrifice.—Frank Whitworth, 139, New St., Birmingham. [2151

NEW Shop-soiled Autoped Scooters, dynamo lighting, 1½h.p.; bargain, £12/10 cash.—Percy and Co., 314, Euston Rd. [2878

A.B.C. Skootamota, perfect goer and hill climber, just been thoroughly overhauled, decarbonised, painted, as new, accessories, shopping basket, tax paid; 25 gns.—Forbes, Gable-end, Rusthall, Tunbridge Wells. [2487

## MOTOR ATTACHMENTS.

YOUNG Attachment on ladies' bicycle, practically new; £20; cost £35.—Shirley, 35a, Naylor Rd., Peckham, S.E. [2350

YOUNG'S Attachment and Cycle, practically new, licence paid; nearest £20.—Southside, Clydesdale Rd., Romford. [2532

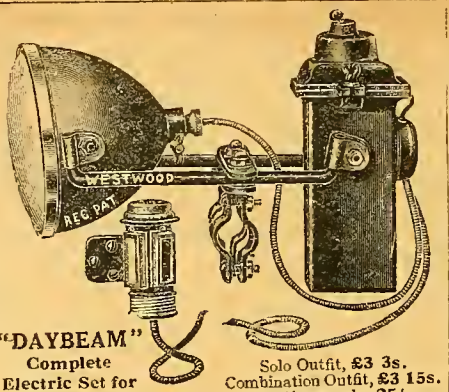
YOUNG Attachment on gentleman's cycle, new condition; £20, take good machine in part.—Bunting's Exchange, Wealdstone. [3033

## HOODS, WIND SCREENS, ETC.

V-SHAPED Screens, adjustable; £3/18.—Bright and Hayles, 78, Church St., Camberwell, London.

V-SHAPED Screens, small size; £2/15.—Bright and Hayles, 78, Church St., Camberwell. [2772

FIRST quality hoods, 40/-; with side curtains, 50/-.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [3230

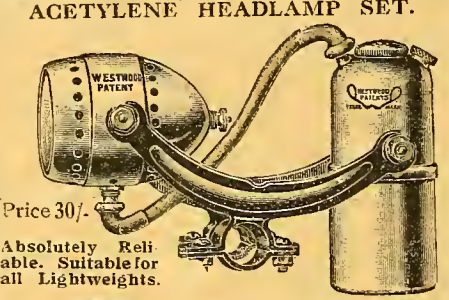



"DAYBEAM" Complete Electric Set for Lightweights.

Solo Outfit, £3 3s.
Combination Outfit, £3 15s.
Headlamp only, 25/-
Tail Lamp only, 5/-

"DAYBEAM" Heavyweight Sets.—Solo, £5 5s.; Combination, £7 7s. *Illustrated List Free.*

ACETYLENE HEADLAMP SET.

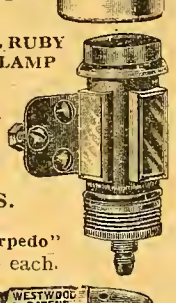



Price 30/-

Absolutely Reliable. Suitable for all Lightweights.

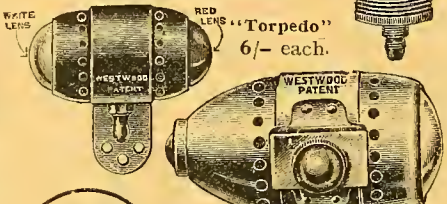
5/6 each.

ROYAL RUBY TAIL LAMP 4/- each.



"TORPEDO" TAIL LAMP.

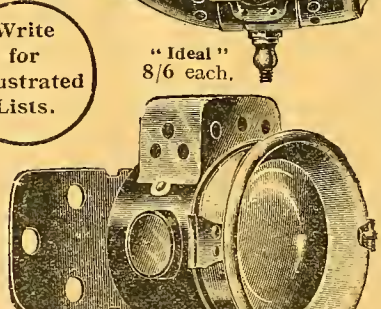
SIDECAR LAMPS.




"Torpedo" 6/- each.

"Ideal" 8/6 each.

Write for Illustrated Lists.



THE "LIFEGUARD" ACETYLENE REAR LAMP.
Price 3/- each.

MADE TO LAST.

*Westwood Special Lines are stocked by all reputable agents.*

TRADE MARK
WESTWOOD
RIM & PATENTS LTD
LAWDEN RD BORDESLEY BIRMINGHAM.

## HOODS, WIND SCREENS, ETC.

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3239

COLLINS and Son for hoods, screens, and aprons; hoods with solid brass Auster fittings, covered with double texture twill, polished sticks; 35/-; the biggest bargain ever offered.—Below.

ADJUSTABLE windscreens, complete with all fittings and apron; 30/-; celluloid panels fitted to any windscreen in a few hours; send for list.—Collins and Son, rear of 84, High St., Putney, S.W. [1619

ROBINI Manfc. Co.—The Bower adjustable windscreen, with coverall apron, 30/-, carriage paid; agents wanted. Celluloid panels fitted, Eastings, 16/6; aprons made to order, 10/-.—'Phone; Brixton 1585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [2925

## BODIES.

CAMBER Coach Bodies from £4/17/6.—Bright and Hayles, 78, Church St., Camberwell. [2774

DOUGLAS Body, second-hand; £3/10.—Bright and Hayles, 78, Church St., Camberwell. [2775

HALIFAX.—New Perfection coach sidecars; £5.—Motor Exchange, Horton St., Halifax. [3118

GLORIA Cane Body, good condition; 35/-, bargain.—Norton, 67, Middlewich Rd., Northwich. [3014

RENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2326

COLLINS and Son for bodies, new bulbous back coachbuilt models with aprons; from £6/5.

TWELVE months' guarantee given; Write for catalogue.—Below.

WE repaint, repair, and upholster bodies at very moderate charges, insurance work a speciality, estimates free.—Collins and Son, rear of 84, High St., Putney, S.W. [1620

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., Kings Cross, London, N.1. [513

GLORIA 1916 body, roomy, just enamelled blue, 2 lockers, good condition; £4/10; write or call after 7.—Hall, 157, Philip Lane, Tottenham. [223

VENUS Step Bodies, 2 dozen to clear; from 50/- each; great bargains.—Venus Sidecar Co., 694 Seven Sisters Rd., Tottenham. 'Phone, 2102. [769

ROYAL Leicester Sidecar Bodies fit any chassis, first class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [033

A THING of Beauty and a joy for ever.—Cobb's Speedman sports sidecar bodies from £2/12/6, finished any colour and upholstered ready for any chassis from £3/15; with door if desired; all coach built, first-class finish.—Cobb, 18, Midland Rd., Carlton, Nottingham. [242

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new lines.—20, Tudor St., London, E.C.4. [000

1922 Bodies, beautifully finished and upholstered, satisfaction guaranteed, complete with cover-all apron, from £6/10 to £14. Extended payments taken. Trade inquiries invited. A few 1921 models shop soiled, complete, £6/10. Send for catalogue at once. Large number of secondhand always in stock. We repaint, repair, and upholster bodies; low prices. Carriage extra. 'Phone: Brixton 1585.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [292

LIGHT Car and Motor Cycle Engineering Co., Ltd. —Comprehensive range of coachbuilt sidecars, thoroughly guaranteed and upholstered in best style. Prices from £4/10 to £11/11. Comfortable 2-seater body beautifully finished, £13. Secondhand bodies and chassis taken in part payment. Bodies made to customers' own designs, painted and upholstered in any colour. Secondhand Sandum body as new, £7/10. Secondhand Enfield body as new, £7/10.—26, Tulse Hill, Brixton (½ minute from Brixton Skating Rink). 'Phone: Brixton 1292. [294

## SIDECAR ATTACHMENTS.

CANOELET Minor, light, sound; £7; after 6.—46 Harberton Rd., Upper Holloway. [241

SIDECARS, several cheap; room wanted; fitted free —57, Kenbury St., Camberwell, London. [286

LIGHTWIGHT Sidecar C.B., 26in. wheel, complete £6/10.—15, Elthorne Rd., Upper Holloway. [242

GOOD Cane Sidecar off Triumph, strong and light £6.—Sims, 16, St. James's Terrace, Buxton. [231

1921 Roomy Lightweight Sidecar, screen, apron bargain, £8.—Schrieber, Hotel Norman, Putney [230

## SIDECAR ATTACHMENTS.

OR

ANDHAM, the smartest sidecar specialists.

ANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue

ANDUM (V-shaped) Wind Screen, a hood, screen and apron; £2/15 and £3/18. Write for list.

ANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sole ; send further supply." Agents, get in touch with us

ANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0015

IDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

IDDLETON'S Patent Unbreakable Chassis for high-powered machines; Zenith, Harleys, Indians Imperials, Sunbeam, Blackburnes, etc.

NDIANS with kick starter on left present no difficulty with Middleton's special model.

IDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks mptly corrected.

ECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

IDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on l roads than rigids. They give to the bumps, not h into them.

IDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Strond een Rd., Finsbury Park (near Tube). 'Phone: Horn 1584. [0522

ASTONES for Sidecars, no better or cheaper house. All latest models in stock.

ASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

ASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including adem, all at low prices.

ASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models stock; lightweight model £17/10, Model No. 3 .9/10, Sports model £23/10, tradesman's carrier odel £23/10, Model No. 2 £24/10, Model No. 1 8/10. Model de Luxe £34/10, tandem model £30.

ASTONES.—Whitley 1922 sports model in stock. £25.

ASTONES for Sidecar Chassis, underslung £7/19/6. tandem chassis £14/10, auxiliary arms 14/-.— 8, Pentonville Rd., King's Cross, London, N.1 hone: 2481 North. 'Grams: Bastones, London. [5132

OUGLAS Sidecar Chassis, complete; £4/10.—26, Halstead St., Brixton, S.W.9. [2798

IDECAR, coachbuilt, nearly new; £11.—Pike, 15, Gaskarth Rd., Balham Hill, S.W.12. [2728

AMBER Utility Models; £25.—Bright and Hayles, 78, Church St., Camberwell, London.

AMBER Tandem Models; £26.—Bright and Hayles, 78, Church St., Camberwell, London.

AMBER Semi-touring Models; £18/10.—Bright and Hales, 78, Church St., Camberwell. [2773

0/-.—Step type sidecar, very strong, nearly new tyre, complete.—64, Station St., Chatteris. [2980

ANOELET Touring Sidecar, 26in. wheel, complete, splendid condition; £10.—63, Solon Rd., Brixton. [2609

ENOVATE your old sidecar by fitting a sports body for £2/12/6.—See Cobb-Speedman advert. in odies. [2428

PORTING Sidecar, built for American Twin; £3. After 7 p.m.—17, Russell Square Mansions, .C.1. [2540

RAND new lightweight sidecar, fit any machine; £12/15; cost £17/10 and never used.—Durant, ourne, Farnham. [2230

ENDERSON Lightweight Sidecar, complete, nearly new, 4-point connection; £7/10.—51, pper Richmond Rd. [2558

ENUINE Bargain.—Rennoc Sidecar Chassis, 28×3 wheel, tyre, connections fit Harley; £5.—Haynes, 1, Fleet St., Swindon. [2322

ALIFAX.—New Swan Sporting and Millford de Luxe for Harley and American X.—Motor Exchange, Horton St., Halifax. [3121

920 Sidecar, 4-point, 26×2½ tyre, paint slightly damaged; £14; seen Saturdays after 12, Sundays.—H. Best, 3, Windsor Rd., Teddington. [2409

RITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

RITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

RITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

RITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'hone: 5. [3235

# The Juno Cycle and Motor Co.,

*Proprietors:*
METROPOLITAN MACHINISTS Co., Ltd.
248, BISHOPSGATE, LONDON, E.C.2.

TELEPHONE: BISHOPSGATE 2195.
TELEGRAMS: QUILLS AVE LONDON.

ESTABLISHED OVER FORTY YEARS.

## The Pick of the Bunch!

**A.J.S., ARIEL, B.S.A., CHATER LEA, DOUGLAS, ENFIELD, INDIAN, LEVIS, MATCHLESS, NORTON, RALEIGH, RUDGE, SUN.**

Any of the above Motor Cycles or Combinations can be supplied on our well-known GRADUAL PAYMENT SYSTEM.

Particulars on Application.

## FURTHER SIDECAR REDUCTIONS!

WATSONIAN. Sidecars for Lightweights, very light and sporty. - - - £15 CASH

MILLS FULFORD. Corvette. A sidecar for the connoisseur! - - £24 CASH

All Sidecars can be supplied on monthly payments.

Sidecar Bodies, Sandum or Venus, from £5 15 0.

Underslung or step chassis from £7.

## Accessories at Reduced Prices.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| Easting Screens | 3 18 0 | Watford Speedometers, slightly soiled, guaranteed | 4 15 0 |
| Cameo „ | 2 15 0 | | |
| Bluemels, 1921 | 3 10 0 | Renolds Chain ⅝ × ½ per ft. - | 6 1 |
| Orto Hoods | 3 5 0 | all spares in stock. | |
| Spring Shackles, set of four - | 6 6 | Tan-Sads | 1 10 0 |
| R&H Lamp Sets | 1 12 0 | Austin Seats - | 15 0 |
| Fleece-lined Leather Gauntlets | 14 9 | B&B Lightweight Carburetters, window soiled | 2 10 0 |
| W. S. R. Jets, all sizes | 8/6 & 10 6 | | |

**FREE.** Call or write for 80 pp. Illustrated List with all latest price reductions.

## SIDECAR ATTACHMENTS.

SIDECAR, coachbuilt, underslung, all connections, new tyre, 26×2¼; £8.—5, Conington Rd., Lewisham. [3023

MILLFORD, sporting streamline body, large locker, new 26×2½ extra Dunlop; £8/10.—153, Praed St., W.2. [3047

WATSONIAN Lightweight Sidecar, 80 lbs., as new, complete; £13.—Roberts, Staaton-by-Bridge, Derby. (D) [2917

BOOTHS Bargains.—Limited number of new coach bodies, full size, with locker; £5/12/6; usual price, £9/10.

BOOTHS Bargains.—New £9/10 coach bodies for £5/12/6. Don't miss them. Illustration free.

BOOTHS Bargains.—Quantity of new underslung chassis, 4-point attachment; £9/19/6; illustration free

BOOTHS Bargains.—Several shop-soiled sidecars offered very cheap; send for list.

BOOTHS Bargains.—Hercules coach sidecar, £8/10/6; ditto Cancelet, £8/10/6; ditto Farlow, £8/10/6.—Booths Motories, Portland Place, Halifax. 'Phone: 1062. [1964

CHASSIS, new tyre, 4-point, splendid condition; £4/10; week-end appointment.—Green, 96, Grove Park, Denmark Hill. [2719

SIDECARS, underslung, handsome, new coach, £9; body, £4/5; ditto bulbous, £5/5.—Taylor, 637, Seven Sisters Rd., Tottenham. [2724

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

COLLINS and Son for Sidecars.—A few new bulbous back models, complete with renovated underslung chassis, tyre and tube, and coverall apron, all fittings; £12/10.—Below.

FAMILY Model Light 2-seater, built to accommodate one adult and child up to 12, with renovated underslung chassis, tyre, tube, and apron; £15.—Below.

WE have various models in stock to suit any machine.—Send for catalogue.

WE specialise in frame and chassis repairs of all kinds; all work guaranteed.—Collins and Son, rear of 84, High St., Putney, S.W. [1621

COMFY Sidecars, strong underslung chassis, coachbuilt body, bulbous back with locker, quick detachable fittings, Clincher tyre; price 18 gns.—789, High Rd., Leytonstone. [3079

BARGAIN.—Red Indian Coachbuilt Sidecar, bulbous back, fitted with draw, splendid condition, all fittings; £12; cash returned if not satisfied.—Box 9095, c/o *The Motor Cycle*. [3138

GENUINE Rudge Sidecar, complete with luggage carrier, screen, and very good 650×65 tyre; £10/10.—Anthony, 1, Townshend Cottages, St. John's Wood. Tel.: Hampstead 10. [3069

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

1,000 Douglas Underslung Chassis, suitable for any make of machine to order, absolutely complete and renovated, as new; £5 each.—Old Man Hep, 19, Wilcox Rd., South Lambeth, London, S.W.8. 'Phone, 1958 Brixton. [8822

LIGHT Car and Motor Cycle Engineering Co., Ltd. —Coachbuilt bodies fitted to brand new chassis from £10 to £20. Bodies made to customers' own design. Roomy 2-seater bodies a speciality.—26, Tulse Hill, Brixton (½ minute from Brixton Skating Rink). 'Phone: Brixton 1292. [2949

## SIDECAR ATTACHMENTS.

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

20 Douglas underslung chassis, complete everything as new, with shop-soiled body, £14. Mills-Fulford P. and M. chassis, new tyre and tube, mudguard, etc., with new bulbous back body, £12/10. New Triangular chassis, complete with bulbous back or sports body, for 4h.p. machines, £19/10. Lightweights, £16. A few shop soiled, £12/18/6. Extended payments taken. Trade inquiries invited. Carriage extra. 'Phone: Brixton 1585.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. [2923

## RUNABOUTS AND CYCLE CARS.

SALE.—Several Santler 3-wheeler Cycle Cars.—Santler, Malvern Link. [2375

REY'S, of Euston Rd. (Nos. 378-384), have the following in stock:—

MORGANS, all 1922 models, also second-hand De Luxe and Grand Prixs, in good condition.

COVENTRY PREMIER, 1922, 4-wheeler model, £230; one shop-soiled only, £205.

ROVER, 8h.p. model, £220; two second-hand, good condition, £162/10.

G.N.'s, all models; also 1920 with dynamo, very good order, £132/10; one 1921, £142/10.

EXCHANGES or deferred payments arranged.—'Phone: Museum 6436. [1425

WAUCHOPE'S, 9, Shoe Lane, London.—5-6h.p. A.V. Monocar; £50. [3105

BEDELIA.—The new 1922 model, 8-10h.p., with air-cooled or water-cooled engine.

BEDELIA.—Air-cooled model, £185; water-cooled model, £195. Immediate deliveries. Trial runs free.

BEDELIA.—Catalogues free from L. N. Palmer, Sole Concessionaire for the British Empire.—Palmer's Garage, Tooting. [2674

MORGAN.—New models in stock.—Agents, Birkenhead Motor Works, 9, Hamilton St., Birkenhead. [2389

MORGAN G.P., 4-speed, o.h.v., for Scott and cash; or sell £130.—Veasey, Newport, Barnstaple. [2988

£25.—A.C. 3-wheeler, 2-seater, running order, but poor appearance.—King, Egrove Farm, Oxford. [2703

MORGANS.—Immediate delivery of latest models; exchanges, extended terms; official agents.—Below.

MORGAN de Luxe 1921 W.C., M.A.G., acetylene lighting, horn, watch, etc., excellent condition; £155.—Below.

G.N. 1922 Standard and All-weather models in stock, dynamo lighting, etc., dickey seat.—Below.

ROVER 1922 8h.p. model; £220; delivery from stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0077

A.V. Monocar, 1921½, 8h.p., fully equipped, any trial; £90, or nearest.—59, Ashburnham Rd., Bedford. [2507

8h.p. Rover.—1922 model in stock; exchanges.—Walhro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7159

MORGANS Always in Stock.—The West of England Agent, Gibb, 100, Northgate, Gloucester. 'Phone: 852. [8127

COVENTRY PREMIER.—1922 model in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7160

G.N. 1920, dynamo lighting, engine overhauled, detachable wheels, speedometer; £125.—Jones' Garage, Droitwich. [9340

MORGANS, G.N.'s, and Rovers second-hand, several in stock.—Rey's of Euston Rd. (378-384). 'Phone: Museum 6435. [1426

WAUCHOPE'S, 9, Shoe Lane, London.—G.N. cars, 1922, all models; easy payments or exchange. 'Phone, Holborn 5777. [3107

GRAHAME-WHITE 1921 2-seater, hood, screen, electric light, good condition; £55.—Gregory, Burgess St., Leominster. [2827

95 GNS.—Bleriot Whippet, bought June, mileage about 1,000, accessories.—Pearce, Surveyor, Homefields Rd., Hunstanton. [2984

A.C. Sociable, good running condition, lamps, speedometer, spare tyre; £50; trial.—G., 64, Park Rd., Dulwich, S.E.21. [2251

1919 Carden 2-seater, hood, screen, lamps, etc.; £75; or exchange combination.—Speechley, 86, Churchfield Rd., Acton, W.3. [2207

WAUCHOPE'S, 9, Shoe Lane, London.—Rover light cars; £220; fully equipped; easy terms and exchange; list on application. [3106

WAUCHOPE, 9, Shoe Lane, London.—Carden De Luxe 2-seater 1921, electric lighting, fully equipped, tax paid, insured; £110. [3108


INTEGRITY

LAYTON GARAGES

# Layton Garages

(J. W. Tollady, *General Manager*)

## *Find out for Yourself!*

¶ FIND OUT FOR YOURSELF the vital advantages of Layton's service, and what its policy of "satisfaction above all things" can achieve for *you*.

¶ FIND OUT FOR YOURSELF how Layton's advice can help you to choose the best possible machine for your purpose and purse.

¶ FIND OUT FOR YOURSELF how Layton's exceptional organisation can give you the utmost value for your money.

¶ FIND OUT FOR YOURSELF what bargains in guaranteed slightly-used machines are available at Layton's.

¶ FIND OUT FOR YOURSELF how Layton's terms for exchanges and extended payments are adapted to meet your individual needs.

¶ FIND OUT FOR YOURSELF the reason of the confidence and the friendliness that has always existed between Layton's and their customers—all over the country—BY GETTING YOUR 1922 MOTOR-CYCLE OR CAR AT LAYTON'S

**90, High Street, OXFORD, and BICESTER.**

'Phones: 581 & 784 Oxford; 35 Bicester.
'Grams: "Integrity," Oxford and Bicester.

H.G.T.


## RUNABOUTS AND CYCLE CARS.

6h.p. Twin Water-cooled 3-wheel Runabout, perfect condition, fully equipped, electric lamps; £80.—215, Gladstone St., Peterborough. [2338

1921 Morgan De Luxe, w.c., M.A.G., lavishly equipped; £140.—Hillier (Side Bell), 9, Wallingford Avenue, North Kensington. [3040

3-WHEELER, partly built, 5-6h.p. engine, Bosch, 2-speed, clutch, etc.; what offers nearest £20?—118, Cricklade Rd., Swindon, Wilts. [2215a

£50.—1916 Dunkley 3-wheeler 8h.p. Jardine, 4-speed gear, k.s., Binks hood, screen, discs, electric lighting, trial.—4, Avenham Grove, Blackpool. [2873

1921 G.H. Touring, dynamo lighting, spare wheel, speedometer, clock; £135.—Hillier (Side Bell), 9, Wallingford Avenue, North Kensington. [3041

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Morgans supplied on easy terms or exchange. 'Phone, Holborn 5777. List on application. [3109

1914-15 Singer 2-Seater, double dickey, Bosch, Hobson, 5 Sankey wheels, lighting set, all on; £115.—76, Western Rd., Southall, Middlesex. [2391

3-WHEEL Car 6-8h.p., w.c., a.i.v., 2 forward and reverse, B. and B., good tyres, needs slight repair; £45.—Macgregor, 7, St. Peter's Sq., W.6. [2743

MORGANS.—1923 De Luxe, Grand Prix, and Popular models in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7158

READING STANDARD 3-wheel chassis, 10h.p. twin, 3-speed, perfect, £45; another, £35; offers for two.—Hedges, 21 Chichester Street, Paddington. [2656

NEW 1921 Tamplio 2-seater, 8h.p., 3 speeds, all complete; £125; motor cycle or combination taken in part exchange.— Percy and Co., 314, Euston Rd. [2887

MORGAN, 1914-15, J.A.P. A.C., sporting model, hood, screen, discs, electric, everywhere perfect, mechanical order; £80.—19, Wood Lane, Shepherd's Bush. [2535

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co., 292, High Holborn, W.C.1. [0673

1921 T.B. 3-wheeler, 1922 engine, demonstration model, complete with spare wheel, speedometer; £180.—Allen and Binns, Ltd., Glossop Rd., Sheffield. [1293

A.C. Sociable, in excellent condition, for sale, or would exchange for lightweight motor bicycle.—Williams, Ltd., Wellington College Station (near Reading). [2509

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0756

RICHARDSON Light Car 1920, excellent condition, original tyres, good, electric lamps; £130; exchange good combination and cash.—Oakes, Metheringham, Lincoln. [2848

MORGAN 1920 Grand Prix M.A.G., acetylene and electric, speedometer, clock, aluminium dash, Dunlop Magnums, very smart; £145.—Clark, 7, Exhibition Rd., S.W.7. [3296

BUNTING'S can offer a Good Selection of Light Cars (3 and 4 wheelers) at knock-out prices or exchange for motor cycles; easy terms if desired.—Bunting's, Wealdstone. [3242

1921 October Carden de Luxe, spare wheel, electric lighting, perfect; exchange motor cycle or combination. 'Phone, Wanstead 403. Junction Garage, Highstone, Leytonstone. [3159

G.N. 1920, special engine, aluminium pistons, etc., laps Brooklands 60, dynamo, 5 detachable wheels, well equipped; £135; exchange motor cycle part.—Sinclair, East Molesey. [2804

1921 2¾h.p. Reynolds runabout, 2-speed, clutch and kick starter, 2 seats, lamps, horn, perfect condition; £48.—D. and S. Autocar Co., 53, The Parade, Golders Green. [3291

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220 in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0773

HALIFAX.—Morgans, 8h.p., J.A.P., hood, screen, £85, £100, £110; 1919 5-6h.p. A.V. Monocar, £59/10; 1920 8h.p. A.V. Monocar, £75.—Motor Exchange, Horton St., Halifax. [3124

E.A.C. Monocar, 2¼h.p., Villiers engine, 2-speed gear box, final chain drive, fully equipped; see article, *The Motor Cycle*, Feb. 16th; £52.—Eastbourne Aviation Co., Ltd., Eastbourne. [1281

MORGAN Grand Prix, water-cooled, very smart, fully equipped, as new throughout; £120; or combination and cash; call if possible.—436, Whitehorse Rd., Thornton Heath, S.E. [2748

MORGAN 1918 Grand Prix, w.c., M.A.G., repainted and thoroughly overhauled, as new, luxuriously equipped, any test given; £98; solo or combination part.—7, Riverdale Terrace, Richmond. [3197

A.C. Sociable, late model, good condition, fully equipped, with reverse, hood, lamps, etc., photo, £50 offer; exchange cash, combination.—Gerrard Photographer, 111, High St., Guildford. [2747

## RUNABOUTS AND CYCLE CARS.

D.V. Cycle Car, 9h.p., water-cooled, 2-seater, detachable wheels, dynamo lighting, hood, screen, speedometer, etc., low mileage, smart appearance. Photo; £60, close offer.—Bond, Brasted, Kent. [2634

MORGAN 8h.p., a.c., J.A.P. engine, disc wheels, hood, screen, electric lighting, and speedometer, tyres good, trial given, good condition; £90 or near offer.—Barksfield, Park Villas, Marlow, Bucks. [2274

EXCHANGE your motor cycle or combination for new 1922 Coventry Premier four-wheeler, Morgan popular, or Grand Prix Rover, T.B., or New Hudson. —Frank Whitworth, 139, New St., Birmingham. [2148

£40 down and £10 monthly buys new 1922 Morgan; £65 down and £16 monthly buys four-wheel Coventry Premier, best of 1922 runabouts.—Write Frank Whitworth, 139, New Street, Birmingham. [2149

A.C. Sociables, by the A.C. Company, dependable runabouts, take 2 persons anywhere, good condition and appearance, fully equipped; from £45 to £75; trial.—29, Allsop St., Upper Baker St., London, N.W. [3307

BARKER'S Motors can supply all kinds of light cars at list prices and give a free insurance guarantee for 12 months against mechanical breakdown. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [1216

NEW 1922 Morgan, 8h.p., standard model, fully equipped, hood, screen, lamps, etc., £150; Grand Prix water-cooled model, £120; immediate delivery, easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [3252

1921 Carden 2-seater, with lamps, horn, hood, screen, speedometer, spring seat, mascot, insurance, mileage about 600, like new throughout, bargain; £75, cash needed; seen Birkenhead.—Box 9038, c/o *The Motor Cycle*. [2326

1935 GNS.—1920 Merrel-Brown, water-cooled Precision, detachable wheels and spare, cantilever springs, aluminium discs, lamps, etc, very smart, not been used since 1920; or exchange Triumph and dish.—14, Felbrice Rd., East Dulwich. [2515

LATE 1921 Morgan 2-seater, fitted with speedometer, acetylene lamp and generator, Klaxon horn, etc., chassis and engine in perfect condition, coachwork practically unscratched, a genuine bargain; £150.—Full particulars by post, Herbert Robinson, Ltd., Regent St., Cambridge. [2331

COVENTRY PREMIER four-wheel runabouts. Best of their class, water-cooled beautifully finished, dynamo, dickey seat, spare wheel, insurance, speedometer; £230 complete. One slightly used one (about 500 miles only), almost new, £205.—Frank Whitworth, 139, New St., Birmingham. [2150

*Spare Parts:*

MORGAN Spare part Depot.—Spares for all models from stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0078

## TAXI-COMBINATIONS AND CABS.

"COUNTY," B.S.A., Taxis, as licensed through out the country.—Write for full particulars, County Cycle and Motor Co., "Originators." 100, Broad St., Birmingham. [5353

## CARS FOR SALE.

ROVER 6½h.p. 2-seater, hood, screen, bargain; £30. —1, Bellingham Terrace, Catford. [2693

£10 down and 12 monthly payments £3 secures good Belsize 12-14h.p. chassis.—Palmer's Garage, Tooting.

£25 down and 12 monthly payments £4 secures excellent Napier long chassis.—Palmer's Garage, Tooting.

£35 down and 12 monthly payments £5 secures 12-14h.p. F.I.A.T. chassis. — Palmer's Garage, Tooting.

£40 down and 12 monthly payments £10 secures excellent Berliet touring car.—Palmer's Garage, Tooting.

£50 down and 12 monthly payments £8/10 secures magnificent Oakland 7-seater touring car, dynamo lighting, self-starter. — Palmer's Garage, Tooting.

£10 down and 12 monthly payments £3 secures Talbot 4-seater.—Palmer's Garage, Tooting.

£125 down and 12 monthly payments £10 secures modern Peugeot 4-seater. — Palmer's Garage, Tooting.

£40 down and 12 monthly instalments £7 10 secures excellent Renault ¾ landaulet.—Palmer's Garage, Tooting.

£30 down and 12 monthly payments £5 secures splendid S.C.A.T. 12-seater wagonette.—Palmer's Garage, Tooting.

PALMER'S Garage, Tooting, will accept your old car or motor cycle as part payment for any car in stock. [2680

RICHARDSON, 1921, perfect running order; £195; tax paid.—5, Queenwood Grove, Prestbury, Cheltenham. [3035


# A habit that will *pay* you!

***Buy your 1922 Mount from The Service Co., Ltd. It will pay you to do so.***

Immediate delivery of new 1922 Models can be effected. If you are buying a secondhand machine, you may depend upon the price being the lowest possible, consistent with absolute reliability.

*All* secondhand motor-cycles are *thoroughly* overhauled in our own workshops, and are *guaranteed for three months.*

Our *Easier* easy payment system is simple and straightforward—an example of this will be found below.

## NEW 1922 MODELS.

| | Cash Price. £ s. | Deposit £ s. | 12 Monthly Payments £ s. d. |
|---|---|---|---|
| O.K.-JUNIOR 2½ h.p. | 39 18 | 8 0 | 2 16 0 |
| Ditto, 2-speed | 55 13 | 11 11 | 3 17 3 |
| TRIUMPH Model H. and Sidecar | 130 0 | 26 0 | 9 2 0 |
| B.S.A. 4¼ h.p. Model K and Sidecar | 130 0 | 26 0 | 9 2 0 |
| P. & M. 4½ h.p. 4-speed Combination | 130 0 | 26 0 | 9 2 0 |
| ENFIELD 8 h.p. Combination | 140 0 | 28 0 | 9 16 0 |
| NEW IMPERIAL 2¾ h.p. 3-speed | 69 0 | 14 0 | 4 16 0 |
| STANGER 5 h.p. 2-stroke, 3-speed, spring frame | 110 0 | 22 0 | 7 14 0 |

## NEW 1921 MODELS.

| | | | |
|---|---|---|---|
| BROUGH 6 h.p. Combination, hood, screen, lamps | 147 0 | 30 0 | 10 3 0 |
| ENFIELD 8 h.p. Combination, Magdyno and horn | 145 0 | 29 0 | 10 3 0 |
| B.S.A. 7 h.p. and Sidecar, detachable wheels | 147 0 | 30 0 | 10 3 0 |
| CLYNO 8 h.p. Combination, spring frame, spare wheel | 150 0 | 30 0 | 10 10 0 |

All orders receive prompt personal attention. We will make an exceptionally good allowance on your present machine if you wish. Write us TO-DAY

The Service Company Ltd. LONDON

**289-293, High Holborn, London.**


## CARS FOR SALE.

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

£60.—Ford 5-seater Tourer, good condition, any trial, exchange powerful combination, cash either way.—8, High St., Wandsworth. [2594

ROVER Cars.—The famous 8h.p. model in stock, £220; for immediate delivery.—Eagles and Co., 275, High St., Acton, London. [0761

HUMBER 2-seater, 10h.p., 4-cyl., water-cooled, splendid condition; £95, or exchange combination and cash.—30, Union St., Clapham, S.W. [2819

ROVER 8h.p. W.C. 2-seater and dickey, all complete, smart little car, repainted, only wants seeing; £60, bargain.—12, Lesbourne Rd., Reigate. [2912

COVENTRY PREMIER, 1922, 4-wheel model; £230; immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

11.9h.p. Belsize 2-seater, 5966, tax paid, £9, mechanically sound and new tyres, 5 detachable wheels; Lucas dynamo, £240.—James Irving, Baker, Penrith. [1060

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hansler Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452. [7938

6-8h.p. Rover Car, dual ignition, electric lighting, in very good condition; £50, or exchange 4h.p. 3-speed motor cycle, cash adjustment.—303, Clifton Rd., Rugby. [3063

WEST Norwood!—The "satisfaction" centre. Satisfaction's what you desire. When you've wasted a week inspecting the apparent and so-called bargains advertised, then visit me.

WEST Norwood!—Fifty vehicles, all types, always actually on view; all absolutely unassailable bargains.

WEST Norwood!—6b.p. De Dion 2-seater, £20; 6h.p. Rover 2-seater, dual ignition, side doors, £30.

WEST Norwood!—Baby-Peugeot, old type, £40, 1915¼ Warrick 3-wheel delivery auto-carrier, £45; 20-28h.p. Darracq chassis, 4-speed gate, £50.

WEST Norwood!—10h.p. Adams 4-seater, £60; Alldays van, £65; Indian combination, £70; steam tourer, £75.

WEST Norwood!—3-ton 1913 worm-drive lorry, £85; 4-cylinder Unic van, sump, £85; 12-15h.p. Duhanot 3-seater, dickey, monobloc, £85.

WEST Norwood!—3-ton L.G.O.C. lorry, good one, £95; 8-10h.p. 1913 light car coupé, exceptionally smart, £100; 10h.p. 1915 light car, 4-cylinder monobloc, £115.

WEST Norwood!—Here's a snip: 10h.p. 4-cylinder Swift light car, monobloc, enclosed valves, gate, Morris-Cowley radiator; £120!!!

WEST Norwood!—Herezanuther: 10h.p. G.W.K. 2-seater, exceptionally powerful one, so cumfy, bargain; £125

WEST Norwood!—16h.p. English-make landaulet, enclosed valves, sump, gate, Zenith, side doors, smart; £125.

WEST Norwood!—15h.p. Mitchell semi-sporting 2-seater, real good, £125; 30-cwt. lorry, twin solids, £125.

WEST Norwood!—3-ton lorry, Knight-Daimler, runs splendidly, £130!!! 12h.p. Sizaire-Naudin posh 3-seater, dickey, 4-cylinder monobloc, fast, £135.

WEST Norwood!—Maxwell tourer, £135; Renault lorry, £135; Ford 1-ton, £135; 12h.p. Humber coupé, £135; 10h.p. Siuger 2-seater, good one, £135.

WEST Norwood!—12-14h.p. F.I.A.T. landaulet 4-speed, £150; Napier ex-ambulance chassis, £150.

WEST Norwood!—Magnificent 25h.p. ¾ landaulet, £175; 10h.p. 4-cylinder 4-seater, £185; smart torpedo cabriolet, £185; Arrol-Johnston 4-seater, £185.

WEST Norwood!—15h.p. Coupé 2-seater, self-starter, dynamo lighting, £185; 1916 worm-drive lorry, £185; lots others, £200 to £850.

WEST Norwood!—Send post-card for complete printed list. Call any time (no business Sundays). Exchanges entertained.

WEST Norwood!—Douglas S. Cox, The Absolutely Straight Motor Man, 6c, Lansdowne Hill, West Norwood. (Established 1902.) [2138

WAUCHOPE'S, 9, Shoe Lane, London.—Coventry Premier, new 1922 models, £230; £46 down, remainder in twelve equal monthly payments; motor cycles or motor combinations taken in part payment. —Write, call, or 'phone, Holborn 5777. [3110

1922 8h.p. Coventry Premier 2-3-seater with double sunk dickey seat brand new, painted grey, spare wheel and tyre, Rotax lighting set, speedometer, etc., beautifully finished, a comfortable, convenient and dependable car, £230 cash, or by economical instalments of £57/10 down and twelve monthly instalments of £15/13/6, which includes a comprehensive insurance for twelve months; strict privacy, no unpleasant enquiries; modern motor cycle or combination taken as first instalment.—Herbert Robinson, Ltd., Regent St., Cambridge. [2330

## CARS FOR SALE.

A.B.C. Light Car, the only light car giving the performance of the high-powered twin motor cycle; £295; cash or deferred payments; motor cycles and combinations taken in part exchange.—Railton Cobham Co., 47, South King St., Manchester. [2383

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. 'Phone, Holborn 5777. [7218

HALIFAX.—Second-hand models at special rates; send your requirements.—Motor Exchange, 25, Horton St., Halifax. [2117

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1. [0672

HERBERT ROBINSON, Ltd., Green St., Cambridge. Any make of motor cycle or light car supplied on easy terms, strict privacy, no unpleasant inquiries; any district, full particulars by post. [9899

REY'S of Euston Rd. make a speciality of deferred payments; all leading makes supplied, including Morgan's, Coventry Premiers, Rovers, G.N.'s, and other well-known light cars.—378-384, Euston Rd. 'Phone: Museum 6436. [1431

EASY Payments.—Any make of motor cycle or car supplied for cash or the easiest of easy payments. Agents for all leading makes, including B.S.A., Douglas, Enfield, Matchless, Rudge, Triumph, etc., also Rover, Coventry Premier, Calcotts, Singer, Swift light cars, etc. Write or call for our terms.—Note address, Wilkins, Simpson, opposite Olympia, London. [2934

## ENGINES.

ENGINE, 3h.p. Humber, in frame, with tank, wheels, and saddle; £3/10.—24, Albion Rd., Lewisham. [3237

2¼h.p. 2-stroke, practically new; £5/5.—Seen running at 9, Raglan Rd., Cape Hill, Birmingham. [2869

1921 Blackburne 2¾h.p., new, complete, M.A.G.; must sell, £25, or offer.—Standard Garage, Oxford. [2352

BOSCH and M.L. singles, 30/-; C.A.V., 37/6; variable ignition guaranteed.—84, Greenside Rd., Croydon. [2875

6h.p. 2-stroke Engine, with frame, tank; £5; experimental engine.—Howard, 4, Ormond St., Birmingham. [2504

8h.p. Twin Water-cooled J.A.P. Engine, Bosch magneto, sound, perfect; £20.—Box 9076, c/o *The Motor Cycle*. [2482

TRIUMPH 3½h.p. 1911, No. 15319, Bosch magneto; £8/10; or exchange twin.—R. Shelton, Cookhill, Alcester, Warwickshire. [2983

2¾h.p. Douglas, W.D., stationary engine, Bosch, Amac tank, seen running; £12.—76, Western Rd., Southall, Middlesex. [2393

2¾h.p. M.O.V. Douglas engine, complete with magneto and silencer, £6/10.—Anthony, 1, Townshend Cottages, London, N.W.8. [3064

2¾h.p. Twin o.h.v. J.A.P. engine parts for sale, all parts except flywheels; special cylinders, steel pistons.—T. Twentyman, Pickering, Yorks. [2285

6h.p. P.F. Twin, in perfect condition, with induction pipe, as new, suit sporty bike or cycle car; accept £7, no offers.—15, Totteridge Lane, Whetstone, N.20. [2622

NEW 8h.p. J.A.P. Water-cooled Twin, complete with magneto, £30; 6h.p. Buchet twin, air-cooled, with magneto, £15; 4h.p. Rex, M.O.V., £10.—Murray's, 37a, Charles St., Hatton Garden, Holborn. [3275

8-10h.p. National Gas Engine, 6½ bore, 2 flywheels, tube ignition, new liner and piston, running order; £42; exchange motor cycle or anything motorish.—Norris, 7, Colville Terrace, W.11. [1191

B.S.A. 4¼h.p. engines from £10; Clyno 5-6h.p., from £12; others in stock. Drop us a line; our speciality is engines, new and secondhand.—DeCort and Flynn, 39, Essex Rd., London, N.1. [2929

BERCLEY 6h.p. (French vertical twin, like latest Blériot), M.O.I.V., Bosch magneto, Zenith carburetter, absolutely no wear whatever. Appearance as new (silencer, etc., to suit purchaser). Ready to run. £12/10, carriage paid. Photo, 6d.—Jack Aucar, 110, Williams Rd., Cannon Hill, Birmingham. [2707

DOUGLAS 8h.p. Water-cooled, C.W. radiator, petrol tank, bedplate, starting handle, induction pipe, good condition, £11/10; thoroughly overhanled, new magneto, carburetter, guaranteed running order, £21, carriage forward; make splendid light car engines; large selection; stamp reply; trade supplied.—Derrington, Grafton Rd., New Malden. [2099

HEPPLETHWAITE'S J.A.P. 5h.p., as new, £14; 4h.p. O.H.V. J.A.P., £5; 3½h.p. Humber, £6/10; 3½h.p. Alldays, £4; 3h.p. Minerva, £3/10; vertical twin 2-stroke, £5; 2h.p. Ariel, £2; and 5 h.p. and 8h.p. J.A.P. spares galore, the entire stock of W. Hawkins. For other spares see Old Man Hep. advertisement in Spare Parts. Stamp for reply, please 'Phone: 1958 Brixton.—19, Wilcox Rd., South Lambeth, London, S.W.8. [3255


An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

Insurance Policies

**IMPORTANT AGENCY EXTENSION**

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS.

Address—Agency Dept.,

The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED

Head Office:

77, Cheapside, London, E.C.2.

*Telephone: City 9831 and 9832.*

*Telegrams: "Autoinsure, Cent. London."*


## ENGINES.

J.A.P. Engines. J.A.P. Engines.—I have the largest stock of J.A.P. engine parts in England; over 30 engines, all in stock, to select from; and the prices: 6hp. £15, and the 8h.p. at £20 and £17/10, and I have all parts for the 8h.p. (see accessories for parts). I have a big twin engine £12, a 4h.p. Douglas engine and mag. and carburetter £15, a small 2-stroke and mag. £10; stamp reply.—South Croydon Motor Exchange, 22, South End, Croydon. [4765

## IGNITION, LIGHTING, ETC.

H.B. I. Co.

H.B. for new and second-hand magnetos; all spares stocked.

H.B. Specialise in Thomson-Bennett, complete for fixing to Triumph.

P.M., J.A.P., Douglas, 2-stroke engines, etc.; £3.

C.A.V. New, twin and single, clock and anti; £3.

DIXIE, Single and twin, all degrees; £2/5.

H.B. Guarantee all magnetos one year.

H.B. will take your old machine in part payment.

H.B. Despatches all goods per return, carriage paid, on approval against cash, or through *The Motor Cycle* deposit system.

H.B. Ignition Co., 78, New Park Rd., Brixton Hill, London. 'Phone: Brixton 610. [0694

MAGNETOS 50% Below List.

APPLY Vale Engineering Syndicate, 9 and 10, Brown's Buildings, St. Mary Axe, E.C.3. Tel.: Central 877. [0698

COUNTY of London Engineering Works, Ltd.

ALL Magneto Spares stocked.

GOVERNMENT Surplus Magnetos (new, unused).

BOSCH, Single, type D.A.L., variable ignition; £3/15 each.

M.L. Single Enclosed Waterproof, variable ignition, £4 each.

THOMSON-BENNETT, single, enclosed waterproof, variable ignition; £3 each.

THOMSON-BENNETT, single, enclosed waterproof, variable ignition, all degrees; £3 each.

C.A.V., single, enclosed waterproof, variable ignition; £3 each.

C.A.V., twin, enclosed waterproof, variable ignition; £3 each.

RUTHARDT, single, enclosed waterproof, variable ignition; £2/10 each.

BERLING, single cylinder, enclosed waterproof, variable ignition; £2/10 each.

SPLITDORF, single, enclosed waterproof, variable ignition; £2/10 each.

DIXIE, single, enclosed waterproof, variable ignition; £2/5 each.

DIXIE, twin, enclosed waterproof, variable ignition; £2/5 each.

ANY of the above single-cylinder Magnetos can be supplied with the special long driving spindle, suitable for Rudge.

THESE Magnetos are fitted with leads and baseplates, ready to be immediately fitted. Please state make of engine when ordering.

GUARANTEE.—We guarantee all our Magnetos for 12 months, and will willingly replace or repair any that should prove defective within that period.

SEND your repairs to us; it will pay you; all repair work guaranteed.

COUNTY of London Engineering Works, Ltd., 6, Garden Lane, Christchurch Rd., Streatham, London, S.W.

TEL.: Streatham 2898. T.A.: Ignitionac, Brixstret, London. [1848

MAGNETO and Engineering Co. for magnetos, spares and repairs.

BOSCH enclosed waterproof type D.A.L. magnetos, Government surplus, ready to fit on Indian, Harley, J.A.P., or any big single or twin, gives powerful spark at all engine speeds, makes your engine a real live engine, gives you easy starting, smooth and rapid acceleration, high speed, and low fuel and oil consumption with increased power; price only £5 each, postage 1/6 extra; a twelve months' written guarantee sent out with each magneto; we give you satisfaction or refund cash; send or call for one to-day.

MAGNETO and Engineering Co., Magneto House, 28, Bateman's Row, E.C.2 (1 minute from Brown Bros.). [2333

DIXIE, 50° Anti, good, 35/-; ⅞in. pulley, 3/6.—73, Meon Rd., Portsmouth. [2854

DYNAMOS (new), 120 watts, £7; 250, £9.—Engineer, 20, Glendarvon St., Putney. [1078

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## "Rear Lights for All."

PROBABLY no subject has aroused more bitter controversy in the past than the question of compulsory rear lights on pedal cycles. Now apparently we are in the throes of a similar discussion with reference to the solo motor cycle, which, in company with the motor-less bicycle, is now enjoying a respite from any legal obligation in the matter.

The question is a very difficult one. On one hand we have the cyclist's and, occasionally, the motor-cyclist's allegation that rear lamps are only essential to assist the inadequately lighted motor car to preserve a higher average after dusk than the two-wheeler is capable of maintaining, this, of course, applying to the motor cycle only when it is of low horse-power or on treacherous roads; and that all single track machines should be exempt. Alternatively it is postulated that since the motor bicycle is the fastest vehicle on the road it should not be compelled to conform, but that the pedal cycle should.

These are conflicting views, although each is based on a modicum of truth. At the same time pedal cyclists and those motor cyclists who at night do not exceed 15 m.p.h., cannot fairly object to other motor vehicles driving at the legal limit of 20 m.p.h. Again, the solo motor cycle, speaking generally, is the fastest machine on the road, but only in day-time, and it is obviously impossible to differentiate and procure special exemption for those riders who pride themselves that they are never overtaken after dusk.

No motor cyclist, whatever type of machine he rides, will deny that he appreciates the pedal-cyclist's rear lamp, that, in fact, he would appreciate red warning signals on all road obstructions, which, incidentally include any vehicle travelling more slowly than himself at any given time. Therefore since it cannot be arranged that all traffic travel non-stop at a constant speed, or even that all solo motor cycles maintain a speed just in excess of everything else, it seems best that motor cyclists should, even at slight personal inconvenience, support the movement calling for rear lights for all.

## Awards by Ballot.

FROM the earliest days of motor cycle competitions the difficulty of finding a winner has always been a very real and ever-present one. In times gone by the premier award has not necessarily been made to the man who had the best and most reliable mount, who had ridden it most skilfully, nor who had overcome the greatest number of difficulties, but to the man who has been most successful in speed judging, or, in other words, adhered most closely to schedule time. This has been by no means an ideal condition of things, but a winner had to be found somehow.

Now, the Motor Cycling Club, which has been responsible for quite a number of innovations as regards competitions, has struck upon an idea, not original, but one which may work perfectly well in their commemorative End-to-End run next July. In brief, the idea is taken from a practice adopted in the Navy, when in times where great bravery was displayed a number of men qualified for that most coveted medal, the Victoria Cross, and in these circumstances it was left to the men themselves to decide who among their number should receive the great honour.

This idea may work perfectly well in the End-to-End run, for in riding in close company for four days those qualifying for a gold medal will be in an excellent position to select one from among their number whose prowess in riding, whose ability to overcome difficulties, and whose super-excellent performance shines among the others. In a largely supported trial naturally the difficulties would be greater.

An index to the advertisements in this issue will be found on the page facing the back cover.

BY IXION

## I Live and Learn.

THE makers of the Aquamac waterproof suit are intensely amused at my supposing that the pneumatic pipings down the edges of their garments were intended to avert the crumpling which usually disfigures a motor cycle suit after a few trips on the road. This piping certainly helps a garment to keep its shape, but the makers fit it as a wind and rain seal, for the concealed rubber tubing is flattened out when the garments are fastened up, and so forms an impenetrable joint.

## Oiling Plugs Downhill.

MY remarks on this topic have wrung wails from a host of sufferers, mostly men whose homes are surrounded by precipices, and whose mounts are heavy sidecars, compelling the frequent use of the engine and a low gear as auxiliary brakes. Some of these victims have reached the point of desperation. The happier warriors have mostly found salvation in the Binks carburetter, which, of course, allows one to suck neat air into the cylinders with the throttle shut. But a few commend various little-known sparking plugs. There is the M.A.P., which has a bridge electrode directly beneath the gap; its theory presumably is that when a blast of oily mixture is hurtled at the points, the bridge splits the blast and saves the gap; but how about a combustion chamber with any pretensions to turbulence? Other readers applaud a plug with a hook electrode. The oil trickles down the hook clear of the gap, and hangs suspended like a ham on a farm ceiling—see previous suggestion anent turbulence. One of these Binks enthusiasts has a sports Sunbeam, on which he claims the creditable economy of 90 m.p.g. at 30 m.p.h. using jets 000,2 and 9 in summer, and 000,3 and 9 in winter.

## The Non-Stop Bike.

EXPERIENCE has taught me that a first-class British 500 c.c. machine in normal use is only capable of sustaining five types of involuntary road stoppage. They are as follows:—

i. A crash.
ii. A puncture.
iii. A dud sparking plug.
iv. A choked jet.
v. A dry tank.

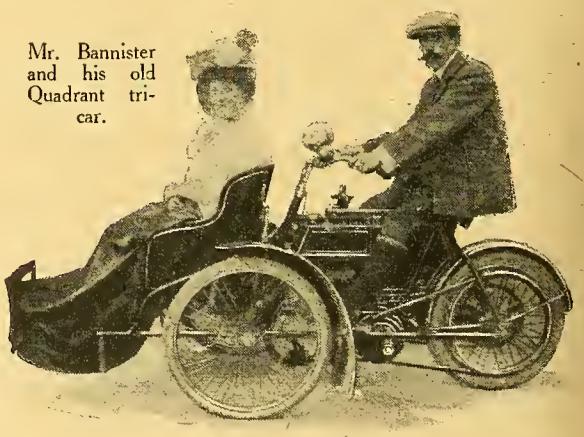
During the season of 1922 I propose to try to eliminate the lot. Here is my *modus operandi*, with what the Red Cross call the correct antidote for each hoodoo.

i. Insure for £1,000 (infallible).
ii. 3in. tyres, enclosing Challenger tubes.
iii. S.O.S. !!! * * * ???
iv. A good petrol filter (the one fitted to my Scott kept a hair-like oooooooooo Binks jet clear through a whole summer for me, and I have a B. and B. and an M.A.P. to play with as well).
v. A three-way tap—the simplest safeguard against personal carelessness.

Barring freak trial work (I *always* begin to wobble when a placard says, "Observed Hill Begins Here"), I hope to go through 1922 non-stop.

## The Double-Engined Quadrant Tricar.

MY comment on this machine has evoked a photograph from Mr. Bannister, of Midhurst. He bought one in new condition for £30, as its disgruntled owner found that a surface carburetter in combination with a lengthy Y inlet made for grievous difficulty in starting up. My correspondent overcame



Mr. Bannister and his old Quadrant tricar.

this trouble by drilling both inlet pipes close up to the valves, sealing the holes with leather-covered spring clips, and injecting warm petrol. His model used a twin belt drive to the countershaft, on which a dog clutch gear threw in a ⅞in. belt for the high ratio and a chain for the low. He does not appear to have troubled whether the two engines synchronised or not, and remarks that the exhaust note was eternally varying, accordingly as the two forward belts slipped. In his view the arrangement was so satisfactory that it is worth copying even at this date.

**Occasional Comments.—**

## The Ricardo-Triumph on the Road.

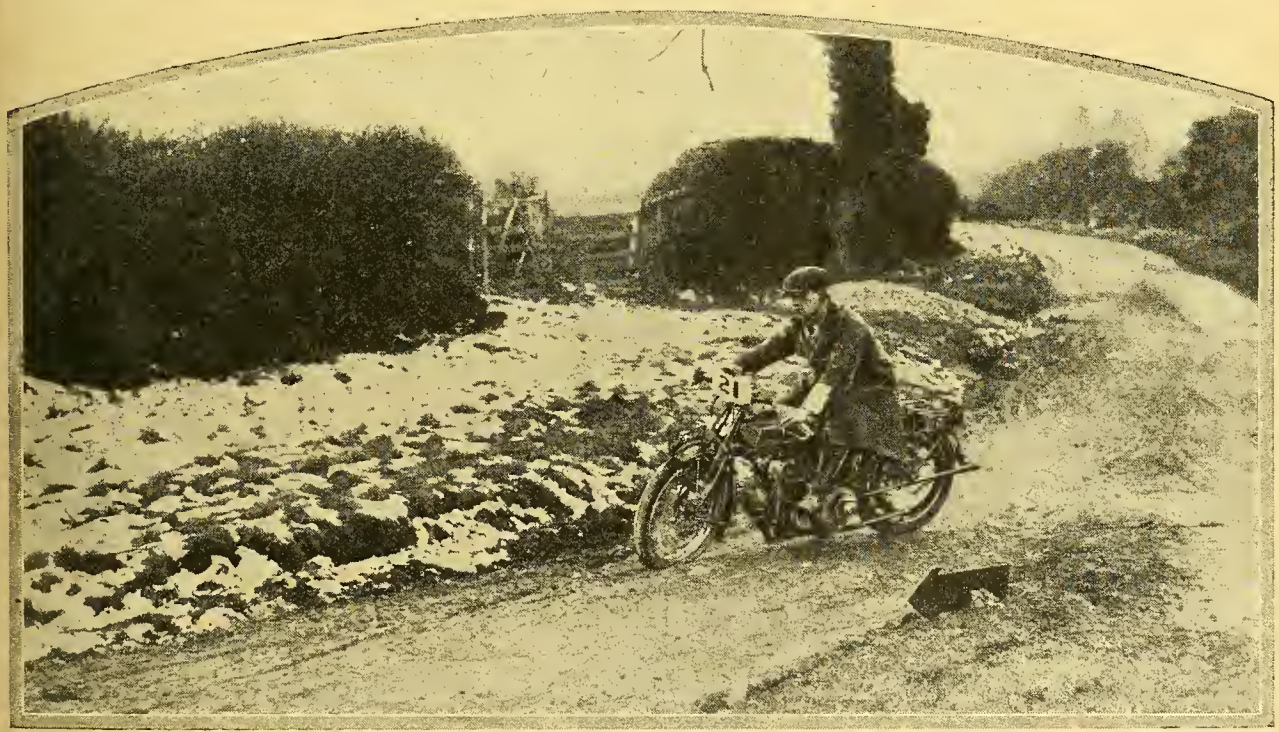
MY Ricardo is daily establishing herself more deeply in my affections. She has had about a month of daily use, is a first-time starter from stone cold, never needs anything doing to her, is very thrifty of the precious juice, and, thanks to the secluded position of her sparking plug, can be left out in the rain for hours without sulking afterwards. But when all is said and done her extreme comfort is the principal merit of a most taking layout: Druid forks, 3in. tyres (run rather floppy), a particularly steady, stiff engine, and a phenomenally smooth drive make for very pleasant riding. Incidentally, she is quite the fastest "production" 3½ h.p. which has ever been delivered to me, and I should estimate her vantage in that respect as very nearly 10 m.p.h. One pays a price for everything. In her case the price is that efficiency is obtained by a piston which is very, very sloppy until it is thoroughly warmed up. When I start out from cold I cannot use full spark advance on top gear for a distance of perhaps as much as 5 miles.

## To Beat America?

I WAS privileged recently to see the drawings of a new 1,000 c.c. racer, which is still in the egg, so to speak, but has been begotten by the right sort of people, and has all the big class Brooklands records as one of its motives. Private owners may be interested to know that they are the real obstacle which prevents the launching of several very promising 4-cylinder mounts. There is no technical difficulty whatever in the way. A shaft-driven 4-cylinder must always be fractionally more costly to build than a chain-driven twin, but really scientific production would probably permit a 4-cylinder outfit to be sold at, say, £175. Its running would be infinitely superior to that of most twins, and it would give a refined tickover in neutral. On the other hand, these are not days in which capital is sitting up and begging to be employed on uncertain enterprises, and the real question is, how far is the big-twin enthusiast enamoured of his big twin, and how quick will he be to welcome something better? If he doesn't invest for two or three seasons, whilst the other fellow is proving the merits of the new four, capital won't earn its interest. My counsel to these hesitating designers was "Full steam ahead!" I believe that motor cyclists as a class are quite rapid in recognising merits. If a new 'bus is designed by a trusted name, built by an honoured factory, and can put up a tidy show on Brooklands when it steps out of its cradle, its sales will be perfectly satisfactory right away.

## Flywheel Drag.

A "DESIGNING" friend of mine—I use the word in a good sense—finds that if he injects a charge of oil into the crank case of an engine running a bench test at full revs., the power drops by a full horse-power for three or four minutes. Consequently his next engine will not only be given a much larger flywheel clearance inside the crank case than is usual, but will also be equipped with a mechanical oil pump.



TRACTABILITY OF A SPEED MOUNT. From all indications the four-valve Triumph will be an extremely popular trials mount this year, and already privately owned examples have made their appearance in the early spring events. As the picture indicates, this newcomer to the speed world can be exceedingly controllable and docile when required.

# MODERN PRACTICE IN ENGINE DESIGN.

## A Review of the Present-day State of Motor Cycle Power Unit Construction.

IN considering the motor cycle as a whole, the engine presents most scope for improvement and individuality. In consequence it has received the most attention, and though transmission, frames, and springing are all capable of considerable improvement, it is right that the motive power should have first consideration. To the casual observer, however, there has been little change in motor cycle engines for many years, yet those who have ridden them are keenly aware of immense improvements in performance and reliability.

How, then, have these improvements been brought about? Partly they are the result of experience, partly of improved metallurgical knowledge, and partly of scientific research.

### Still Scope for Development.

Not by a very long way have we reached the limit of power output per unit of capacity, nor of thermal efficiency, but steady progress is being made, and the popularity of small engines even for long-distance touring is a sign of the efficiency of modern designs generally. The details which have brought about the increase in power and reliability are too numerous to incorporate in a single article, and we must content ourselves for the present with a general survey of development, though we propose to go more closely into details of specific engines in later articles.

First and foremost, better cooling arrangements, brought about by more scientific distribution of metal and ribs, have enabled the power output to be increased without causing undue distortion or overheating; without this basic change many modern improvements would be brought to naught.

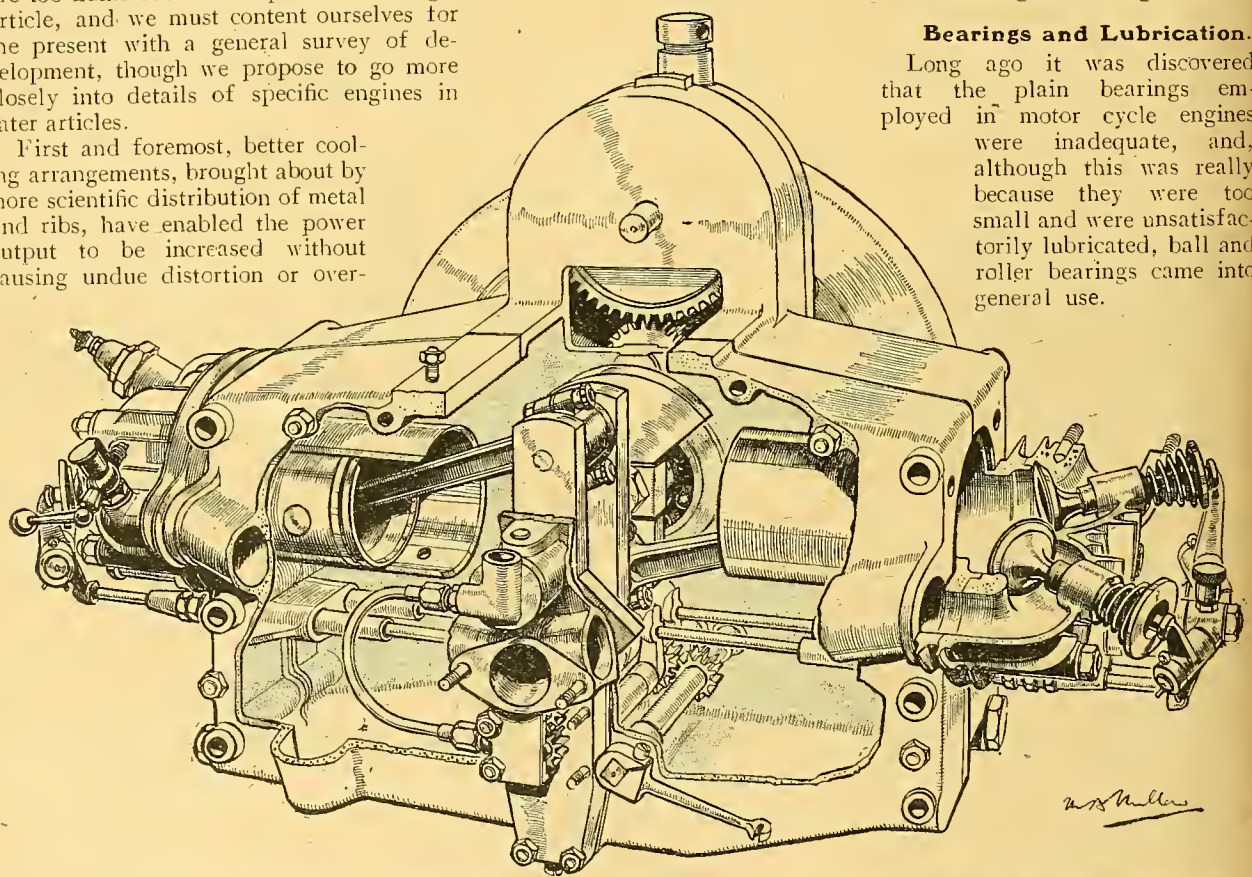
### Improved Volumetric Efficiency.

A study of the laws governing gas flow has caused port design to be modified to a very considerable degree, enabling a greater weight of charge to be induced in a given time, and avoiding obstruction to the flow of exhaust gases. This in itself tends to raise the actual compression at large throttle openings, and better cooling has also enabled even higher actual compression ratios to be employed. Easy ingress and egress of the charge brought high revolutions into the realm of possibility, but before these high engine speeds could be used to advantage it became necessary to lighten reciprocating parts so as to avoid undue bearing stress due to the rapid acceleration of masses constantly reversing in direction.

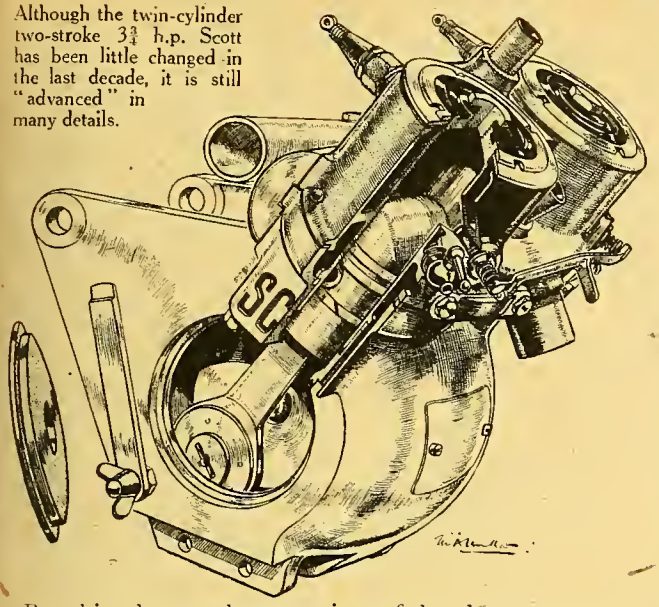
This reason has brought the aluminium piston into prominence, and though much trouble was experienced with some early designs, the type has come to stay. Not only is aluminium light, but its conductivity is high, and consequently a well-designed piston of this material sensibly improves the internal cooling of the engine.

### Bearings and Lubrication.

Long ago it was discovered that the plain bearings employed in motor cycle engines were inadequate, and, although this was really because they were too small and were unsatisfactorily lubricated, ball and roller bearings came into general use.



Inclined over-head valves and oil-cooling are distinctly modern items in the 500 c.c. Bradshaw flat twin engine. Oil spray supplied by a mechanical pump is continually splashing on to the enclosed cylinder barrels, the under-sides of the pistons, the valve-gear, etc. The inlet manifold cast with the crank case is also indicated.



Although the twin-cylinder two-stroke 3¾ h.p. Scott has been little changed in the last decade, it is still "advanced" in many details.

By this change the retention of hand pumps or drip feed oil supply became possible, and though these systems are not likely to remain on high-class machines very much longer, they have served their purpose well.

The correct location for valves is still disputed by many; but there can be no doubt that a well-designed overhead valve engine is capable of higher all-round efficiency than the side valve type, though a badly-designed overhead valve engine is a thing to be avoided at all costs. The possibilities of the overhead valve have led many designers to experiment in this direction, and the results obtained have varied with the degree of knowledge brought to bear on the subject; it is significant, however, that the majority of modern overhead valve engines have inclined valves with the inlet and exhaust ports separated as widely as possible.

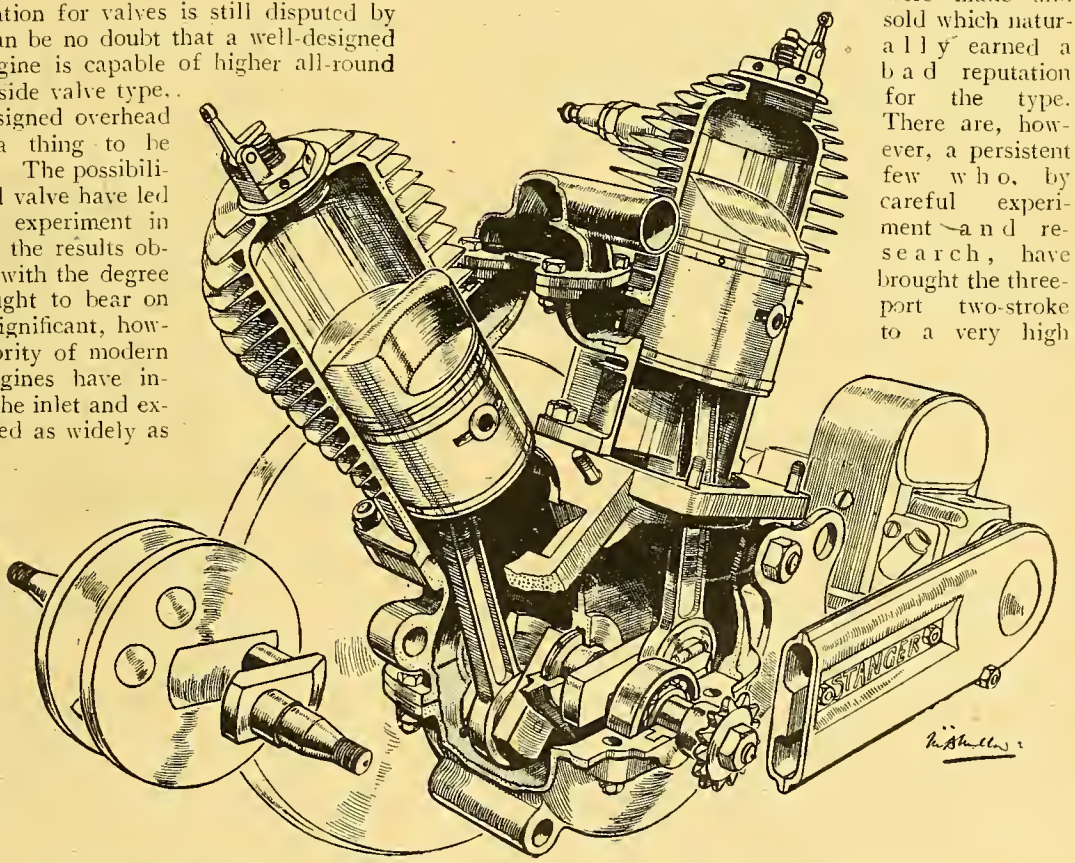
### Non-breakable Valves.

Progress in metallurgy and the heat treatment of alloy steels have together brought unbreakable valves within the range of practical usage, and this will be an additional incentive to the use of overhead valve gear. There remain the minor difficulties of housing this type of engine in a motor cycle frame, and of eliminating mechanical noise. Both these troubles have been overcome in certain instances, and there is no reason why they should not be overcome generally.

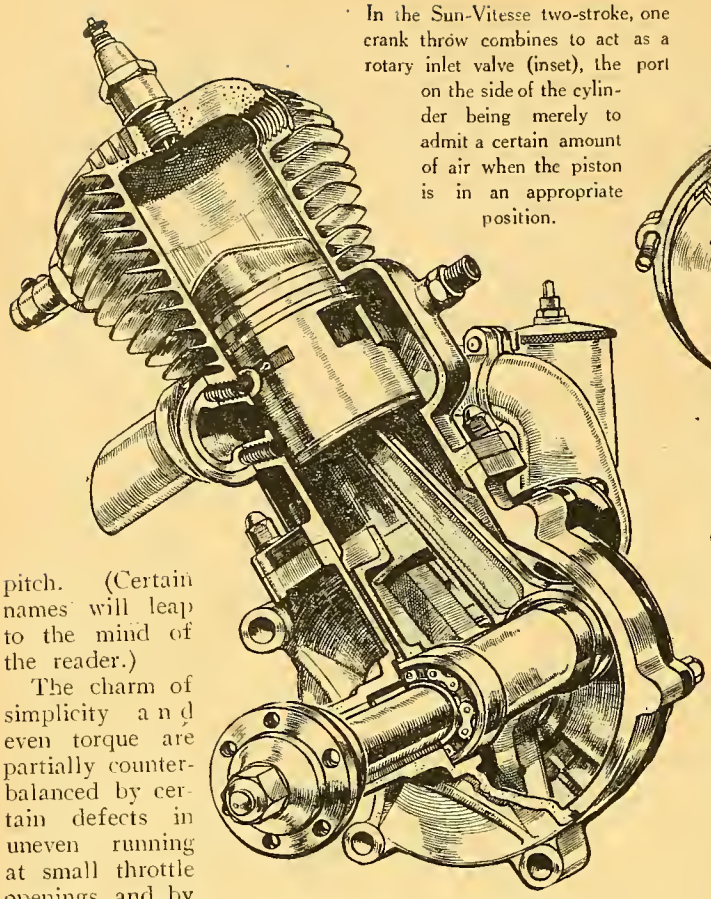
Two innovations of recent date show great promise, although they are distinctly unconventional as far as motor cycle practice is concerned. The first of these, the Bradshaw oil-cooled engine, is based on well-proved theories which came to light during research work on aero engines, and incidentally have great possibilities for all types, more especially in the case of multi-cylinder layouts, where direct air-cooling is a somewhat difficult matter. The second example of unusual practice is the adoption of the Burt single sleeve valve by Barr & Stroud, Ltd., and both bench tests and road work with the B. and S. engine have clearly demonstrated the fact that it is possible to combine very high efficiency with almost entire absence of mechanical noise. In addition to the foregoing points, simplicity and accessibility are important features of this very interesting design.

### Two-Strokes.

Progress in two-stroke design was unfortunately delayed in its early stages by the fact that almost any cylinder with holes in approximately the correct positions *will run*, and consequently many poor engines were made and sold which naturally earned a bad reputation for the type. There are, however, a persistent few who, by careful experiment and research, have brought the three-port two-stroke to a very high




Offset cylinders on the 5 h.p. V twin two-stroke Stanger permit the crank case to be partitioned into two separate compression-tight compartments, and also allow the rear cylinder to receive a fair cooling draught. Constructionally the crank case is bisected horizontally, not vertically, and the deflectors and transfer and exhaust ports are set across instead of fore and aft in the cylinders.



In the Sun-Vitesse two-stroke, one crank throw combines to act as a rotary inlet valve (inset), the port on the side of the cylinder being merely to admit a certain amount of air when the piston is in an appropriate position.

pitch. (Certain names will leap to the mind of the reader.)

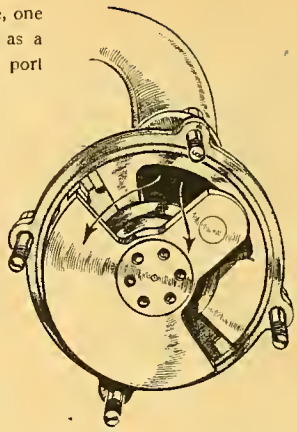
The charm of simplicity and even torque are partially counterbalanced by certain defects in uneven running at small throttle openings and by high fuel consumption. These weaknesses are, however, not essential to the two-stroke engine, and though some slight complication may be necessary to overcome them entirely, much good work has been done towards eliminating the troubles by careful port and deflector design. In the near future it is probable that the two-stroke will play an even more important part in the progress of motor cycle design than at present. There would certainly appear to be more outlets for ingenuity in two-stroke design than is the case with four-strokes, promising fields for exploration being numerous.

The simple two-stroke also lends itself to cheap production, and should materially assist to bring about the motor cycle for the million.

### Multi-Cylinder and Big Single Two-Strokes.

As yet we have only one successful two-stroke up to the 500 c.c. limit (the Dunelt), and multi-cylinder two-strokes are confined to the Scott, Stanger, and Low, though at least two successful pioneer firms, the Levis and Connaught, have experimented with flat twins. The even torque of the vertical twin two-stroke or the V twin with separate cranks provides similar power impulses to the four-cylinder four-stroke, and the engine is lighter and more compact.

All the drawings which accompany these notes were obtained by our artist direct from sectional engines, and in some cases the sectioning has been carried further in order to reveal their most interesting features.

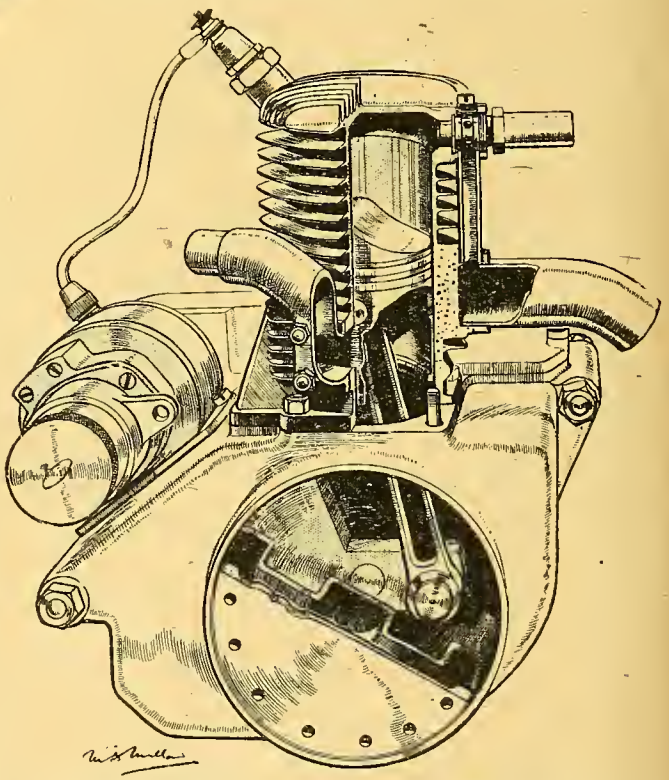


Most of the engines illustrated are chosen because special interest is centred on them at the present time as revealing tendencies in design. For example, the drawing of the Bradshaw oil-cooled engine clearly shows how the cylinder barrels are enclosed by the crank case and are cooled by oil splashed upon them by the mechanical pump. The formation of the valve pockets and the valve gear is clearly shown.

The Stanger V Twin two-stroke is another interesting example of modern design, and a study of the illustration reveals how the crank case is divided to form two separate chambers, while the drawing of the Scott shows another type of two-cylinder two-stroke, which, incidentally, has remained practically unaltered for over a decade.

That mechanically operated valves are now being considered in connection with two-strokes is indicated by the illustration of the Sun engine. The subsidiary drawing is of the rotary valve and crank throw.

Reference has already been made to the Barr and Stroud sleeve valve design, and to the Dunelt, which represents the only engine in the motor cycle field having a two diameter piston.

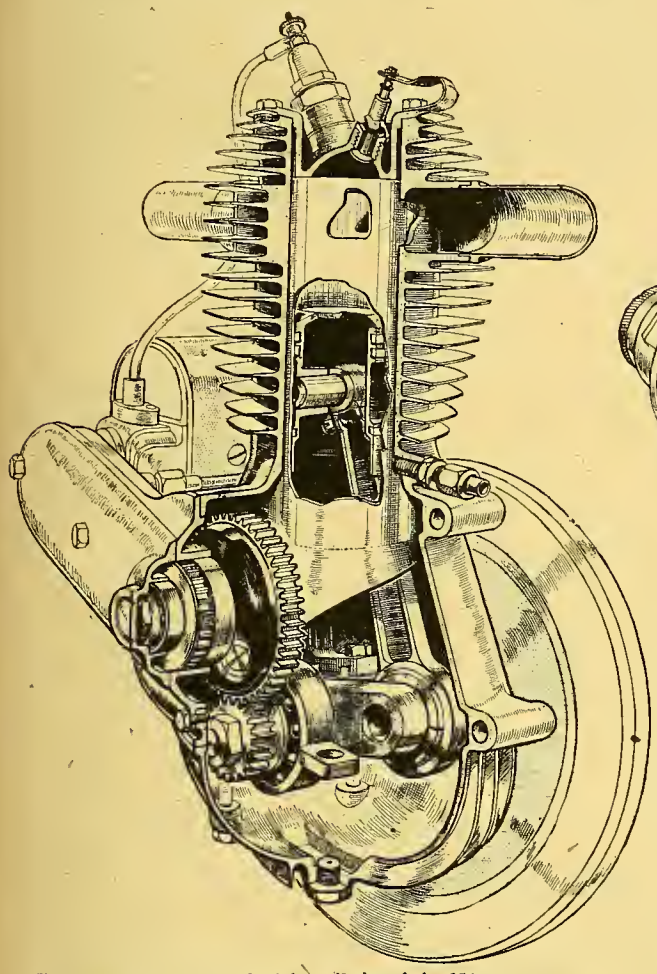


Mechanical lubrication, using a crank-case sump, leaves the Velocette two-stroke a remarkably clean exterior. As may be seen, the magneto is attached directly to the crank case, dispensing with a separate bracket.

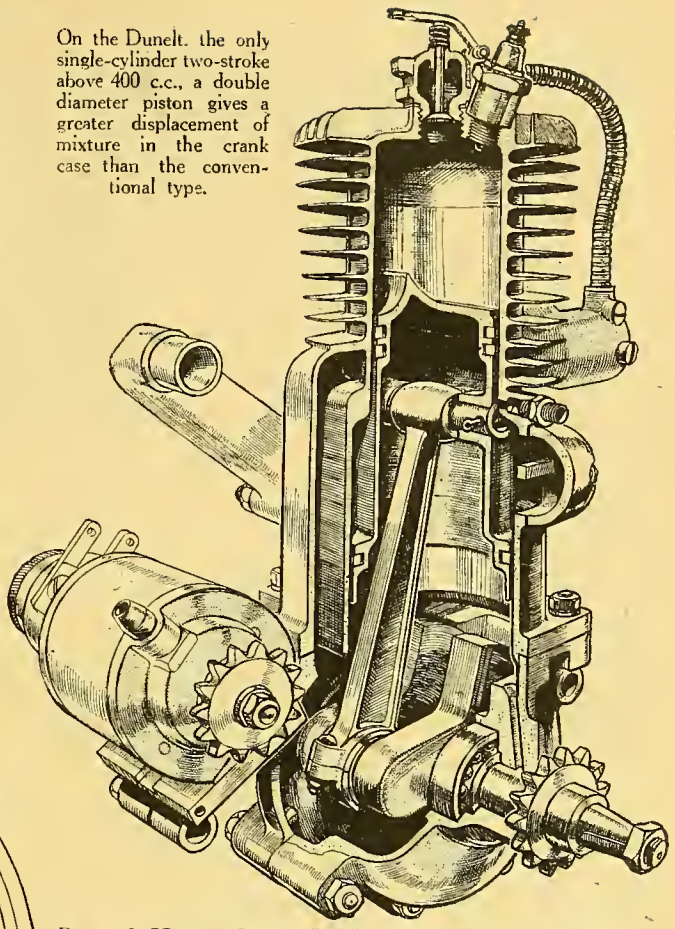
**Modern Practice in Engine Design.—**

Mechanical lubrication is not the only feature of the Velocette unit, which may be regarded as advanced when applied to a small two-stroke.

There are many others which depart from the more commonly used designs in one way or another. The Triumph four-valve single cylinder is not the least important. The o.h.v. Blackburne and the newer J.A.P. power units have points of extreme interest, while lesser known engines such as the C.A.M., the B. and H., and the British Anzani may create for themselves a place in motor cycle history before the year is out. At the present time Tourist Trophy racers are occupying the attention of many designers, and our knowledge in this direction inspires us to say that engine design is undergoing some remarkable changes. One hundred m.p.h. by a 500 c.c. engine has not yet been achieved, but we can prophesy that this is only a matter of time—and perhaps not such a very long time. This is a matter for the "tuning wizard" after the designer has completed his work, for it is certainly true—and we do not think any expert in theory will disagree—that whatever speed can be obtained by means of correct design theoretically, the rider-experts—of whom only a few exist—can improve upon it.



Extending the entire length of the cylinder of the 350 c.c. B. and S. engine is a single reciprocating and partially rotating sleeve actuated through a peg and ball joint in the large timing wheel. Slots at the top cover and uncover the inlets and exhaust ports in proper sequence.



On the Dunelt, the only single-cylinder two-stroke above 400 c.c., a double diameter piston gives a greater displacement of mixture in the crank case than the conventional type.

## BROOKLANDS AS A SOCIAL RENDEZVOUS.

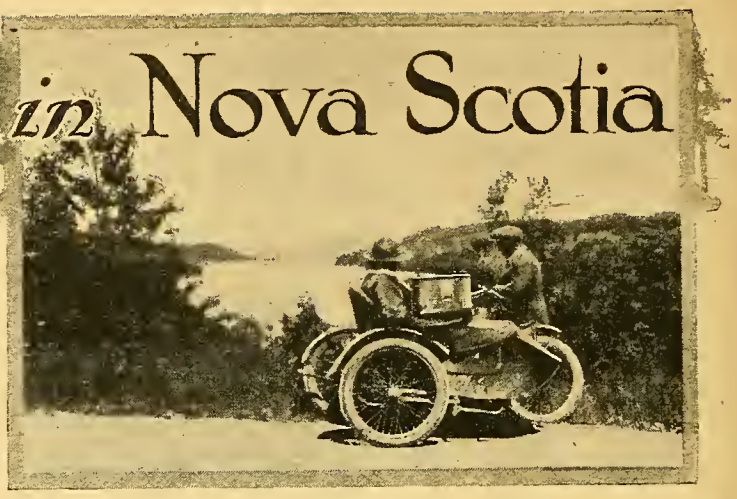
MORE than once has a motor cyclists' country club been suggested, but somehow or other the proposal never goes further than the discussion stage. Southern and London motor cyclists, however, already have an excellent week-end rendezvous in Brooklands, although the attractions of the Weybridge track are by no means generally recognised.

Full advantages, of course, of the facilities of Brooklands may only be reached by becoming a member of the British Motor Cycle Racing Club ("Bemsee" for short), which was founded in 1909 for the encouragement of motor cycle racing, and which, in future, intends, in conjunction with the B.A.R.C., to pay more attention than hitherto to the social possibilities of the picturesquely situated Surrey race-course.

For private motor cyclists the annual subscription is only £3 3s., plus 10s. 6d. entrance fee and 4s. 6d. deposit on the club badge. Trade members pay £2 2s. more. In the case of those who already belong to the B.A.R.C. the subscription is reduced to £2 2s.

Further particulars of the Club, which, incidentally, is affiliated to the A.C.U., may be obtained from the secretary, Mr. T. W. Loughborough, 83, Pall Mall, London, S.W.1.

# Touring in Nova Scotia



Bear River, looking across Annapolis Basin towards the Bay of Fundy.

## A Motor Cycle Ramble through a little-known Province of Canada.

Described by E. B. Holton (U.S.A.).

*"For to admire and for to see, for to behold this world so wide"*

KIPLING said it for us. That was the principal reason why we "cruised" through the Province of Nova Scotia last summer. You do not tour down that way, you cruise. A Nova Scotian looks to the sea for his living, therefore his speech is salty with the tang of it.

The village padre of East Pubnico wondered why we came to his bleak land when we had the White Mountains of New Hampshire and the picturesque Berkshires of Massachusetts far more lovely and nearer home.

But we had already viewed those same scenes, and, while they are magnificent, we had a yearning to go on over the hill to see what is back of beyond.

Nova Scotia is different. Therein lies the charm.

The skyline is different; rugged spire-like pines and spruces, decked in festoons of hoary moss that lend an air of age that cannot be denied. Folks and manners are different. Friendly folk drive oxen yoked to springless waggons and keep to the left. They have time to pass a little gossip with the traveller.

### Customs Formalities.

Nova Scotia is not so far from the United States, but few visit it by motor vehicles. An eighteen-hour boat trip will bridge the gap between Boston and Yarmouth. By land the journey is lengthy and tiresome. Probably the greatest barrier to touring through the maritime provinces of the Dominion of Canada is getting through the United States Customs. We blush for our national pride when we recall the yards of red tape we had to unravel both leaving and returning to the Port of Boston.

Entering the province at Yarmouth, on the southern extremity, there are two post roads that lead towards Halifax, the seat of provincial government. The highway following the Atlantic coast is not so good; still, it could be worse. The route *viâ* the Annapolis Valley and Windsor is wide, and has been improved yearly for the past decade.

Nova Scotia is fully alive to the need of good roads, and has an ambitious programme of highway construction under way. It is planned to spend over £2,000,000 on main routes in the next five years. To understand fully the courage of the citizens of the province in undertaking this constructive work one must realise that Nova Scotia is 350 miles long and 120 miles wide, and that there are but 21,000 square miles of territory, over which 500,000 people are scattered.

Large cities are few and far between, and five miles back of the sea along the Atlantic coast one finds virgin wilderness. While the good roads movement is only beginning, Nova Scotia is far advanced when it comes to highway marking.

### Novel Route-marking.

Due to a group of energetic motorists known as the Nova Scotia Motor League, all the post roads of the province have been marked from one end to the other. A simple system of coloured bands painted on poles, trees, or bridge-abutments guides the traveller on his way through towns or the wilderness. Thus we have the green-band route from Yarmouth to Halifax *viâ* the Atlantic coast, and the red-band route *viâ* the Annapolis Valley and Windsor.

Sign posts erected by the Nova Scotia Motor League, which state clearly the coloured band to follow for various routes.

There are, according to the records, but 137 motor cycles registered in Nova Scotia. This may account for the fact that our Indian and sidecar created a sensation in some localities. At Broad Cove one ancient asked us if the locomotive ever broke down. In Weymouth a man driving a yoke of oxen stopped and volunteered the information that the woman who sat in the cart had

**Touring in Nova Scotia.—**

all the comfort on that "thingamagig." Whole families swarmed out of the house and rushed pell-mell across the front yard to perch upon the fence and have a nearer view as we passed by.

Years ago Judge Haliburton, of Windsor, Nova Scotia, wrote a series of humorous papers of life in the province, and he told of how the good citizens were named Blue Noses. This was the brand of potato raised in the province, and because of its excellence was boasted of by all loyal Nova Scotians.

Leaving Yarmouth, we followed the Atlantic coast side of the province. The roads were not very good, but the charm of the scenery and the hospitality of the people made up for any bumps encountered.

### Fogs from the Icebergs.

During June and July rains are frequent and fogs sift in from the ocean, for icebergs are not far off the land in the early summer. We ran into five days of alternate rain and fog, and were marooned in Lockeport, on the shore of Ragged Island Bay. We were quartered in a hotel that had all the charm of the inns we have read about, but never encountered. The proprietor was a retired sea captain, who could spin marvellous tales of the days of sailing ships, with a delightful Scotch burr. The postmaster and the village Crœsus were nightly visitors for a friendly game of cards.

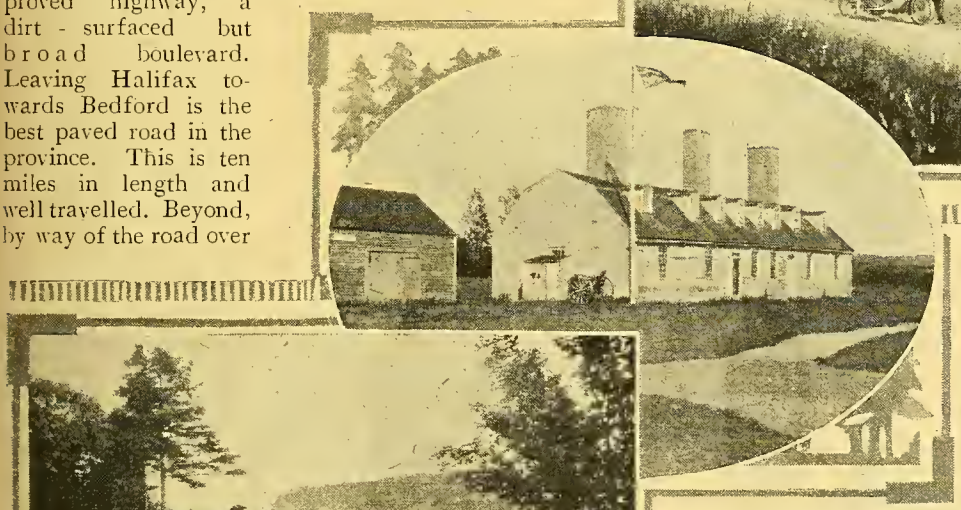
Twenty miles from Halifax we found the first bit of continuous improved highway, a dirt-surfaced but broad boulevard. Leaving Halifax towards Bedford is the best paved road in the province. This is ten miles in length and well travelled. Beyond, by way of the road over the Uniacke Mountains into Windsor, conditions are being bettered by labourers. From that point down through the Annapolis Valley to Digby the main route is good.

Around Windsor is where the highest tides of the Bay of Fundy have been recorded. In Cobequid Bay a rise of 50ft. has been measured during the spring of the year. With the water covering the rivers or bays, many pretty scenes may be noted in Nova Scotia. With the tide out and the slimy red clay exposed and glistening in the sunlight the same views are repulsive.

### A Valley of Sunshine.

On the Bay of Fundy side of the province lies the fertile valley of Annapolis, known as the Garden of Nova Scotia. This is the favoured section, for while rain and fogs envelop other localities, it is uniformly clear and temperate in the "Valley." This valley is sixty miles in length, and wonderful apple crops are picked yearly from the orchards that line each side of the highway for miles.

The Bear River district, famous for scenery and cherries.



Annapolis has been attacked 12 times by pirates, Indians, French, English and New England troops. Here are the barracks erected in 1781, now used as a museum.

Digby Gut, Annapolis Basin. By road it is 50 miles around the basin to the land on the opposite shore.

Sleepy Annapolis Royal is at the head of the vast basin of the same name. It has a history that dates back to 1604, when De Monts, a French explorer, sailed into the bay.

We gave up all hopes of visiting Cape Breton, an island at the north end of Nova Scotia and under the same Government. This section, so 'tis said, is for all the world like the Scottish Highlands.

Such names as Inverness, Ingonish, and Baddeck appear on the maps of Cape Breton—and they beckon.

# ROAD RACING IN IRELAND.

## Five Races held by Ulster Motor Cycle Clubs. Official permission granted. Over 52 m.p.h. Average Speed.

THERE has been much discussion of late regarding road races on T.T. lines, but the matter is usually dismissed as an impossibility. The chief difficulty, of course, is obtaining support from the Government to permit the roads being used as a racecourse. In Ireland this obstacle has been overcome, and during the latter half of 1921 official permission was granted to the clubs of Ulster whereby they were able to add to their programmes several road races.

In these races the starting was on the handicap principle. The reason for this was based, very wisely, on the following factors :

(1.) There were two types of entrants, trade and amateur, and it was only fair to give the latter an advantage, unless he had shown in previous events that he was no mere novice at the game.

(2.) There were machines of different engine power entered, and it was obvious to all who the winner would be if a 500 c.c. or 1,000 c.c. machine started scratch with a 350 c.c. mount. Barring accidents, it usually means a walk-over for the bigger engine.

Thus it can be seen that the handicap was fixed in accordance with the driver's ability and the cubic capacity of his engine.

In the first three of the five races mentioned below the handicapping was done according to the Ulster Motor Cycle Club laws, which club, one might mention, is one of the most up-to-date and go-ahead motor cycle organisations in Ireland.

The 5 mile course situated about 10 miles from Belfast, on which successful Irish road races, organised by the Ulster Motor Cycle Club, took place last year.

### 5 Laps of 5 Miles.

The first race took place on September 3rd of last year at The Temple, which is situated about ten miles from Belfast and about five miles from Ballynahinch. The course was roughly triangular, and was twenty-five miles in length, the laps being about five miles. About nine machines were entered for the event.

The writer was stationed at one of the corners, which was a left-hand one, with a long dropping approach and hump-backed in certain sections. The corner was on the main Belfast-Ballynahinch road, and the continuation of the approach across the main road was used only at the finish of the last lap.

The race was hotly contested, but victory finally rested with a 350 c.c. machine, owned by an amateur, who had ridden with great skill and coolness throughout. The second man home was also an amateur, well known in Ulster competition work. The results were as follows :

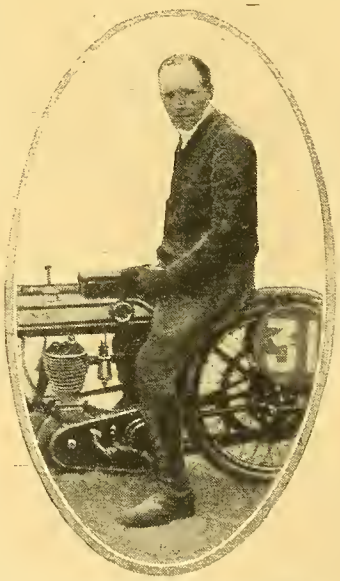
1. T. G. Lindsay (2¾ New Imperial).
2. W. J. White (3½ Norton).
3. Herbert Chambers (2¾ o.h.v. A.J.S.).
4. T. Mallon (3½ Sunbeam).

The presence of three of last year's T.T. riders in these events (J. W. Shaw, a Norton exponent, Herbert Chambers on the wonderful little o.h.v. A.J.S., and T. Mallon, the Irish Sunbeam rider) proved a great attraction. In the opinion of Shaw, the roads were kept as clear as in the I.O.M. This speaks well for the management of, and the interest taken in, the event.

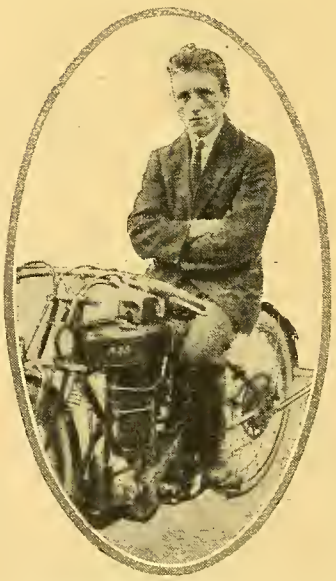
### Lessons in Cornering.

A week later (September 10th) another twenty-five miles race took place at Mill Bridge, Ballynahinch. The course was triangular, as before, in five-mile laps, and with five tricky little corners. One of these corners in particular needed great skill and judgment, as it was only the width of a cart track. The approach was by a fairly fast stretch, which terminated at this left-hand turn.

It was necessary for the riders to change down, as the bend could not be negotiated in safety at a speed of much over 15 m.p.h. Apart from this, once round the corner, the men were confronted by an up gradient, and changing down to bottom was often essential if the revs. were to be kept up satisfactorily.



J. W. Shaw (3½ Norton), winner of the 50 mile road race held on the Ballynahinch course. His average speed was 52.49 m.p.h.



Herbert Chambers (2¾ A.J.S.), who made a great fight for the premier position in the same race, but came in third

**Road Racing in Ireland.—**

I think it would be right to say that more time was lost on this corner by drivers whose skill was not of the best than anywhere else on the course. Those who took it too fast invariably found themselves thrown over to the right of the road on the up grade, and had to do some footwork to get out of the cambered portion and get straightened out again. The man who was following and who changed down, took the corner steadily, and changed up again as the engine took up the revs., gained ten or twenty yards on the man in front. This was most noticeable, and after a lap or two the lesson was learned, and the place treated with more respect.

Before coming up to this corner there was a fast section of road terminating in an extremely deceptive bend. On the approach it seemd to be an easy enough task for a skilled man to get round on half to three-quarter throttle, and it deceived some who perhaps were not too familiar with the course. This section was regarded by a rider whose opinion is not to be despised as the most difficult bit of the route.

### Danger Points Bannered.

The dangerous points were bannered about 100 yards along the approach, and on the corners themselves, as, indeed, all over the course, officials and police were stationed. This race secured twenty-four entrants, about fifty per cent. of whom were amateurs. This time, however, the trade would not be denied, and the results were as follows :

1. H. Chambers (2¾ o.h.v. A.J.S.), handicap 1m.
2. D. Hunter (3½ Scott), handicap 1½m.
3. W. C. Campbell (3½ Norton), handicap ½m.
4. J. W. Shaw (3½ Norton), scratch.

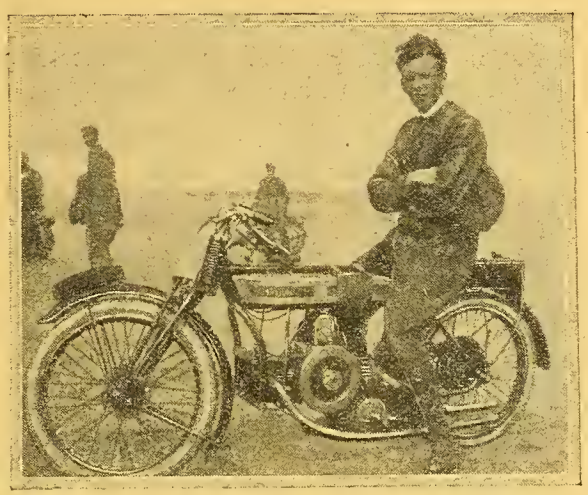
The winner gained the special prize for fastest time.

On October 15th a final road race of fifty miles, under the auspices of the Ulster Motor Cycle Club, was held over the same course as on September 10th. As before it was open to machines of unlimited c.c., and attracted a big entry. The struggle was very keen, and until within ten miles of the finish one could not guess who would get the first place.

On the 20-25 miles lap, Shaw and Chambers had a hot fight for the lead, both coming round the corner on to the up grade with hardly a wheel length between them. At the end of the lap Shaw's time was 5m. 40s. as against Chambers' 5m. 52s.

Fine performances were put up by S. A. Dale (2¾ o.h.v. New Scale) and N. O. Metcalfe (8 Enfield), an amateur. Dale had most wretched luck, as his back mudguard broke at the stand clip, with the result that he rode about twenty miles with his stand trailing. This robbed him of a possible first place, but his ride is worthy of mention as an example of dogged perseverance and pluck.

B. McGivern (3½ Norton), vice captain of the Banbridge and District M.C.C. which body organised several successful road races last year.



T. Stewart (3½ Douglas), winner of the cup given for the fastest time in the one mile open scratch road race, held by the Banbridge and District M.C.C.

R. S. Willis (3½ Norton), captain of the Banbridge and District M.C.C., winner of two of the principal cups last season and prospective amateur entrant for the T.T. races.

### Over 52 m.p.h. Average.

At forty-five miles Metcalfe was leading Shaw by 35s., and was also in the running for the premier award, but unfortunately his petrol supply gave out, and he had to finish fifth. The special prize for the best performance was won by T. Branagh, who made a splendid ride on his 2¼ h.p. Rex-Acme. The prize for fastest time fell to J. W. Shaw (3½ Norton), who made a wonderful lap record, and whose average speed for the entire course was 52.4 m.p.h. The average speed of the T.T. winner last year was 54.49 m.p.h. The results were as follows :

1. J. W. Shaw (3½ Norton), scratch.
2. S. A. Dale (2¾ o.h.v. New Scale), handicap 5m.
3. H. Chambers (2¾ o.h.v. A.J.S.), handicap 1m.
4. J. Kinney (3½ Norton), handicap 3½m.

Two other road races, at which the writer was not present, took place towards the end of the season. A fifty-mile race organised by the Banbridge and District M.C.C. was held at Loughbrickland, which is

**Racing in Ireland.—**

situated about three miles from Banbridge. The course was triangular, and in ten-mile laps. About three miles was clear open road, and the remaining seven very twisty by-roads. Results :

1. J. Finney (3½ Norton).
2. H. Chambers (2¾ o.h.v. A.J.S.).
3. J. W. Shaw (3½ Norton).
4. R. Willis (3½ Norton).

The other race was held by the South Derry M.C.C. at Desertmartin, over a very tricky twenty-one-mile course, with four corners, and laps of 4⅕ miles. After a stiff contest the following men secured the first three places :

1. Jas. Forsythe (2¾ Diamond-Jap).
2. J. W. Shaw (3½ Norton).
3. S. A. Dale (2¾ o.h.v. New Scale).

The use of crash helmets in these races was not enforced, although several of the riders wore them, and the events on the whole were wonderfully free from accidents. The roads were entirely cleared of traffic, and one cannot speak too highly of the management of the races and of the appreciation and interest taken in them by the competitors themselves and the public generally. The latter did everything possible to help the clubs, and harmony prevailed on all sides. A word of praise is also due to the police, who assisted the club officials to make the events successful.

It has been proposed that races for standard motor cycles should be organised on a course near Belfast on June 17th, subject to obtaining permission from the Northern Government. The suggestion is that the motor cycle race should be run in the morning and the car race in the afternoon. SPORTSMAN.

# BRAKING CONSIDERATIONS.

## An Advocate of the Front Wheel Service Brake states his case. Where the Internal Expanding Type Scores.

By G. L. Atkinson.

*The issue for March 2nd contained a long illustrated article on present-day braking systems. Therein the question was raised as to the desirability of having the front and rear brakes of equal power, or whether the rear wheel should be retarded slightly more than the front, or vice versa. Below we give the opinion of a designer who has specialised on motor cycle brake design for many years.*

UNTIL recently brakes have been the least considered and most poorly designed part of a motor cycle, though the necessity for powerful deceleration is of as great if not of greater importance than is rapid acceleration.

My experience proves that during the act of braking on either wheel an increased load is thrown on to the front wheel, thus enabling its tyre to bite hard (through grease) to the solid ground beneath. This increased adhesion and consequent lessened liability to skid should be taken advantage of by fixing the service brake on the front wheel, and using the rear brake in emergency only, or as assistance to the front brake.

This theory can easily be proved by riding a solo machine on a very greasy road when maximum application of a good front brake just short of locking the wheel will effectively retard the machine without skidding or wobble, whereas if the rear brake is powerfully applied, tail wag, if not a skid, will most certainly result; it will be found that the very quickest stop is made by using the front brake at its maximum, and the rear brake not so hard on. I must, however, strongly emphasise the importance of the front brake being so arranged that its maximum effect cannot lock the wheel, which would be worse than no brake at all.

### Unbalanced Thrust.

The dummy rim types have the disadvantage that they exert a heavy unbalanced thrust on the hub bearings, and they also lose efficiency after short usage, by the rim becoming untrue, thus giving a good braking effect in one position of the wheel and little effect in another, which especially on a front wheel will certainly cause a skid to commence. They also —in common with other external brakes—suffer from exposed braking surfaces.

External band brakes in their various forms, including a round section band working on a grooved drum, prove to have a variable braking effect dependent upon whether there is dry dust between the surfaces or liquid mud, mixtures varying between an abrasive and a lubricant, and it is difficult to keep the band clear of the revolving drum when the brake should be off. This type also puts an unbalanced strain on the hub and bearings, but, of course, of lesser magnitude than with the dummy rim type. Car designers used this type extensively, and have now almost abandoned it.

### Careful Design Necessary.

The internal expanding type can, however, be designed to be as powerful as may be needed, yet to be smooth and progressive in action and of constant effect; and, if the return motion is properly provided for, one can be sure it is fully "off" when it should be. It can also be arranged to be almost immediately detachable without a knock-out spindle, or separately detachable hub.

Granted, there is a slight unbalanced thrust even with this type, but it is so slight as to be of little moment, though we have a simple re-arrangement of parts practically to balance the thrust in all directions.

I believe the internal expanding principle is correct, and that this type of brake will eventually supersede all other types at present in use, as has proved the case in car practice; for the problem of effectively braking motor cycles is identical with that on cars.

Readers' experiences and views of different types of brakes should prove interesting, though I would suggest that criticisms of any type be made, not when in a new condition, but after it has been in ordinary use some few thousands of miles. Brakes should wear as well and maintain their efficiency as well as engines.

# IDEAS: USEFUL AND INGENIOUS.

## A Selection of our Readers' Home-made Gadgets, with some Practical Hints on Work in the Garage.

### Preventing Valve Stem Air Leaks.

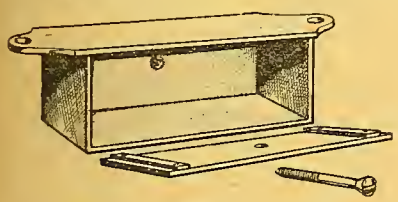
AN engineer reader, Mr. Paul Rea, of Hull, sends this scheme for a valve stem packing gland; it has the merit of simplicity and ease of application. The sketch shows the construction as applied to a 5-6 h.p. J.A.P., but it might be applied to most engines.

A simple valve stem packing gland.

Over the plain valve guide is driven a piece of light brass tubing, about ½in. longer than the valve guide. Felt packing or asbestos string with graphite is forced up for about $\frac{5}{16}$in., and this is followed by a washer which is a sliding fit in the tube. A light spring is interposed between the washer and the valve spring cup. Fresh grease and graphite will be needed every 3,000 miles, but this can be introduced on the point of a knife by pressing down the light spring with a screwdriver when the washer drops.

### Carrying Spare Bulbs.

ALTHOUGH the device submitted by "D.T." (address wanted.—ED.) is constructed of $\frac{3}{32}$in. mild steel plate, no doubt it could be carried out in wood and be equally effective. The top of the box has projecting end lugs, each drilled with a hole, and these holes coincide with the nuts underneath the seat of a Brooks' saddle. On the lid of the box are two locating strips and a screw with a coin

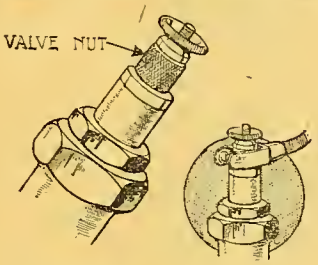


A method of carrying bulbs without risk of breakages.

slot passes through the lid and engages with a nut brazed on the back of the box. A lining of corrugated cardboard is used inside, and a snug space for three spare bulbs is provided. "D.T." does not say on what machine the bulb carrier was used, but he says that there was ample room for it below the saddle as the extreme rear of the latter touched the carrier stays before the box touched the mudguard.

### Snap-on Plug Terminal.

SCOTT machines are fitted with spark plugs having ball terminals, and they have clip-on terminals on the wires. If another make of plug is to be used, it sometimes happens that the brass ball

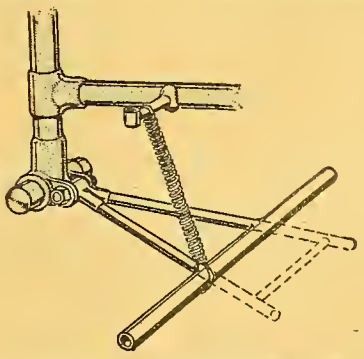



A tyre valve nut as a Scott terminal adapter.

will not screw on to the central electrode. In such circumstances, Mr. A. K. Fitton, a Scott enthusiast, of Dewsbury, uses a tyre valve top nut secured beneath the ordinary terminal nut. The snap-on clip gets a good grip on the knurled surface of the nut.

### Prop Stand for a 2¾ h.p. Douglas.

IN the A.S.C. motor cycle dumps we didn't love the Douglas front stand (did you, reader, ever *have* to drag one of these machines, with buckled wheels and

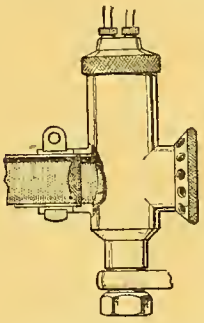


An easily constructed prop stand for Douglas machines.

shell-shattered frame, *backwards* over broken ground?). Therefore Mr. E. S. W Eardley's idea is seized on with joy, having poetic justice in it, for the stick-in-the-ground prongs of the stand are sawn off, the legs shortened, a foot or more of ¾in. tube brazed across the base of the triangle. A coil spring joins the stand cross-bar to the gear-rod bracket. In use the stand is pressed down by the left toe and the machine leaned over on to it. When starting away again bringing the machine into the vertical position allows the stand to spring up.

### Improving Vaporisation.

WITH the idea of preventing blobs of liquid petrol reaching the cylinders, Mr. R. J. Slone, a North London reader, has fitted a very cheaply made vaporising device to his air-cooled Humberette V twin engine. It consists of a piece of coarse wire gauze—taken from an old coffee strainer—cut in a circle ½in. larger than the inlet pipe carburetter stub. This gauze disc is pressed into the recess of the carburetter, where it fits on to the pipe and is dished out towards the engine, and the carburetter tightly clamped in position. This fitting has been found to help starting-up and to improve general running, so never mind the guid-wife's complaints about the coffee strainer. Anyway, gauze can be purchased.



Gauze screen in the inlet pipe to give better vaporisation.

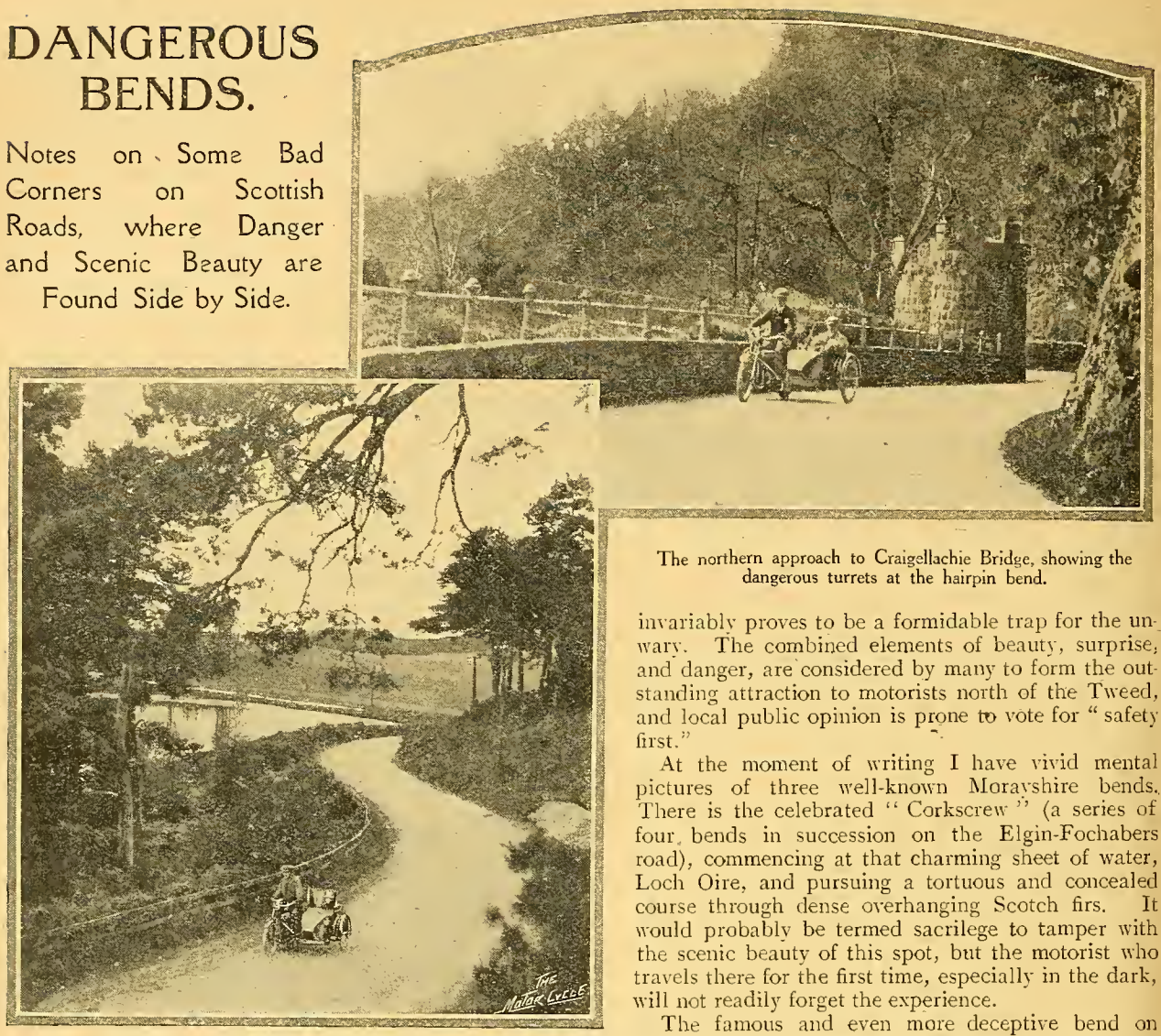
### A Makeshift Contact Breaker Cover.

HERE is a little makeshift idea which might well be adopted permanently on many machines, especially in the case of certain engines with outside flywheels where the magneto contact breaker is so close behind the flywheel rim as to be difficult of access. Our reader, Mr. F. Hoggett, may be allowed to use his own words:

"Having lost the cover for the contact breaker on my C.A.V. magneto, I hit on the idea of using a watch glass. One was chosen which had a good hollow shape. The friction of the metal spring is sufficient to retain it in position. The turning, etc., can easily be seen without removing the cover, which is very useful in wet weather."

# DANGEROUS BENDS.

Notes on Some Bad Corners on Scottish Roads, where Danger and Scenic Beauty are Found Side by Side.



The northern approach to Craigellachie Bridge, showing the dangerous turrets at the hairpin bend.

Loch Oire, Morayshire, and the road near the "corkscrew" bends.

A CAUTIOUS motor cyclist recently expressed the opinion that our official road warning signs are situated too near the points of danger. That view may not be generally accepted, but most tourists will agree that Scotland has more than its share of difficult road bends.

It is a curious coincidence that, in the Highlands in particular, danger and beauty lie side by side. In Glencoe, for example, where so many serious motor mishaps have taken place, it is suggested that the dominating power of the huge mountain masses claims the attention of the driver, it may be at the critical moment when concentration on the handle-bar is absolutely essential.

### Traps for the Unwary.

I refer more particularly, however, to that well-known type of abrupt road bend or bridge crossing entirely concealed from view by its sylvan garb, and which invariably proves to be a formidable trap for the unwary. The combined elements of beauty, surprise, and danger, are considered by many to form the outstanding attraction to motorists north of the Tweed, and local public opinion is prone to vote for "safety first."

At the moment of writing I have vivid mental pictures of three well-known Morayshire bends. There is the celebrated "Corkscrew" (a series of four bends in succession on the Elgin-Fochabers road), commencing at that charming sheet of water, Loch Oire, and pursuing a tortuous and concealed course through dense overhanging Scotch firs. It would probably be termed sacrilege to tamper with the scenic beauty of this spot, but the motorist who travels there for the first time, especially in the dark, will not readily forget the experience.

The famous and even more deceptive bend on bleak Dava Moor near Grantown-on-Spey, has at last been straightened out without materially altering the face of the landscape.

### A Drastic Improvement.

To-day a spirited newspaper controversy rages round the suggestion to remove one of the turrets of Craigellachie Bridge, that elegant and historic structure designed by Telford, and spanning one of the finest reaches of the River Spey. The trouble there takes the form of a vicious turning at the northern approach to the bridge, where one of the turrets obstructs the view of approaching traffic. Excellent arguments have been put forward in support of the removal of this obstruction, but those who advocate "no change" claim that the cure is worse than the disease, and that motorists are tempted to take undue liberties where the danger zone is exposed to view. So our careful motoring friend adds, "Better retain the charm and beauty of our hidden road bends, and encourage safe driving." ALEX. B. BEATTIE.

The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *DESIRABILITY OF A 75lb. LIGHTWEIGHT.*

Sir,—Under the heading of "Current Chat" opinions are invited as to the desirability of a miniature motor cycle, of about 75lb. weight, and selling at about £30.

As one of the public I think such a lightweight is wanted, but with the further addition of a free engine and clutch; this, with a low saddle height, say, 27in. or 28in. from the ground, would, with pedalling gear, enable the rider to start already mounted, and to stop in traffic without dismounting. I have a J.E.S. miniature, and it is a splendid little mount, but lacks a free engine, so I have to make a running mount, and this I find dangerous, especially in traffic.

To the rider advancing in years, to ladies, and to the timid, such a lightweight would be a great inducement to take up motor cycling. C. GOFF.

Sir,—I certainly think there is a big market awaiting a *real* lightweight, but I submit that on no account should a clutch be omitted. Elderly men, disabled men, and business men with numerous calls to make, and who want to start easily and quickly, are the most likely buyers. Also most of the customers for this class of machine live in small houses or flats, and "wangling" a machine into an awkward corner and getting it out again is twice as easy if the engine can be declutched. In thick traffic, too, it would be a boon to be able to declutch and pedal. Anyway, the introduction of such a machine spells progress, and should be cordially welcomed. C. G. NEW.

Sir,—I think there are thousands of men who are only waiting for such a production. If the average man who now "push-cycles" to and from work could only obtain a light power-propelled, pedal-assisted cycle, using ordinary push-cycle fittings, such as tyres, tubes, lamps, saddle, etc., especially the first two-mentioned, at a figure around £25, there would be a good market. GEO. R. WILLIAMS.

Sir,—There are no doubt a great number of working men, like myself, who have from ten to twenty miles per day to cycle the year through to and from their employment and require a reliable and trustworthy mount to knock off some of the pedal-slogging of the push cycle, at a price within the reach of one of very limited means. MECHANIC.

Doncaster.

Sir,—I have no doubt that a very large number of prospective motor cyclists will—like myself—read with much interest that a well-known firm of motor cycle manufacturers are contemplating producing a real lightweight about 75lb. in weight, with two-speed gear box, at a price somewhere in the neighbourhood of £30. Such a machine would, I feel sure, "catch on," and I believe there would be a big demand for it. Speaking from a personal point of view, I might mention that I only turn the scale at 5st. 5lb. in weight, and am not fit, physically, to handle the majority of machines at present on the market (not even a Levis), and it seems hard luck not to be able to enjoy the open road on account of the general run of machines being too heavy.

It is to be hoped—in view of the approach of better days—that the manufacturers will bring out the machine at an early date, if they finally decide to manufacture; I think there would be a good response from the public.

C. EVANS.

### *"ONE MAKE OR MANY?"*

Sir,—In the article "One make or many?" the view of the "faithful follower" is very well expressed and is almost convincing so far as it goes—but what a short distance that is!

Perhaps without undue levity we may call the man who season after season remains faithful and constant to one particular type of machine, the staid and respectable much-married member of the motor-cycling brotherhood; he has chosen his one mechanical spouse for better for worse, till death do them part; but we others, who are a little unkindly referred to as "butterflies" are in the more carefree, happy state of single bliss—we flirt and play with many makes, we will finally surrender to none.

Nor is the reason, as might at first sight be supposed, simply our fickleness and changeability; it lies a lot deeper than that. If we may borrow a term from horsemanship, there are men who possess motor cycling "hands"; that is, who have an almost indefinable sympathy with and comprehension of their machines, who can tell by the general feel and tone of an engine just how to coax and humour it, who driving under identical conditions with other riders will manage to get just that little extra power which no engine will yield up but to such as understand it. And such a rider as this can never be content to stick unchangingly to one particular type of machine; no matter that on his new 6 h.p. twin the controls open inwards, whereas on last year's 3½ h.p. single it was outwards; no matter that last season his girl sat on a Tan-sad and that this she lounges in a sidecar; no matter that it's rigid frame and acetylene this summer, perhaps next it will be spring-frame and a dynamo; flat-twins, singles, twins at 60°, chain-cum-belt, all chain, air-cooled, oil-cooled, whatever you will, we must sample them all and know that fine feeling that no matter what its make and peculiarities, we have not to be astride any engine for more than a day or two before we know it, and it knows us, and that we are getting the best out of it. LAURENCE, W. M.

London, W.C.1.

### *ROAD CAPABILITIES OF AN AMERICAN FLAT TWIN.*

Sir,—I quite agree with "Four-up-Solo" in his claim to do 60 m.p.h. on his 4 h.p. Harley-Davidson, as I have attained 55 m.p.h. with a pillion rider on a similar machine. My consumption works out at about 80 m.p.g.

I have covered a little over 12,000 miles (11,000 with a pillion rider) and have not, bar punctures, had a compulsory stop. The original Goodyears are still in service and good for another 1,000 miles. XA-6254.

Birmingham.

### *40 M.P.H., FOUR UP, SOLO.*

Sir,—While not wishing to be rude to any correspondent of *The Motor Cycle*, I really must remark on the letter from "Four-up-Solo." I submit that this writer, who talks of 50 m.p.h. with two adults on the carrier and 40 m.p.h. with three on the carrier is quite out of place on a motor cycle. An asylum is the place for him; not for his own protection but for the benefit of inoffensive taxpayers who desire to use the high road in comparative safety.

Leeds. "RUFF RHODES."

Sir,—Referring to your correspondent "Four-up-Solo," who says that by speedometer he has occasionally exceeded 50 m.p.h. "with two on the carrier" of his 1922 4 h.p. Harley, and also exceeded 40 m.p.h. "with three on the carrier," and this on a main road, will he kindly say how he arranges the straps to keep so many *parcels* on the carrier at such speeds? J. REYNOLDS.

### *THE LURE OF THE FREAK TRIAL.*

Sir,—Your leading article on freak trials will be gladly read by all colonials and touring motor cyclists who are seeking for the machine which will be as docile and reliable as a good car.

One can quite understand riders with racing machines not liking such trials, as speed takes second place.

The machine that will score in a freak trial will be one that has a controllable engine, which is necessary when picking one's way through stones and boulders, washouts, etc.

Good gears (three- or four-speed) and well-designed clutches will also help the rider in climbing sudden rises, negotiating twisty country lanes, etc. The wheel clearance must be ample to prevent wheels catching with mud, grass, etc., likewise the transmission has to be well protected to be free from the same troubles.

We then come to the well-balanced machine with a low centre of gravity and good steering which will gain marks on hairpin turns, twisty roads, etc. This machine will be easy to ride "hands off" on an ordinary road, and steer easily with one hand on rough lanes when changing gears.

Last, but not least, a freak trial is the only sure test for a spring frame or saddle. S. HENDERSON.

### *POSSIBILITIES OF THE WIMSHURST INFLUENCE MACHINE ON I.C. ENGINES.*

Sir,—As you are interested in all matters concerning the advancement of such engines, I feel that the subject of the application of such an instrument as the static electrical machine might very well engage your attention with a view to some suitable instrument being evolved for producing the spark for internal combustion engines.

I have for a very long time studied this branch of science, chiefly in connection with the generation of X-rays, so would like to state my views upon the question of its adaptability or otherwise.

In the first place, it would be quite impossible to use the static machine in its present state of development on account of its very erratic performance due to climatic conditions, but chiefly because there has been no means discovered of satisfactorily insulating the various working parts. It is because of this latter reason that when the influence machine is working at its best (and the presence of the discharge developed is really enormous) it is incapable of giving out more than 5% of its theoretical output.

Could the state of development of the static machine be brought to the same stage of perfection as, say, either the dynamo or magneto, for instance, we should undoubtedly have one of the most powerful instruments possible for obtaining a tremendous secondary or high-tension current, and that with a minimum of energy and simplicity.

The writer has often regretted that more money and time have not been expended in this branch of science, for a perfected static machine would be much superior to the induction coil for all purposes where a high-tension current is needed, and he has often demonstrated the superiority of the current obtained from the influence machine over that obtained from a very expensive induction coil for X-ray purposes, as frequently a tube which a 10in. or 12in. induction coil will not work properly can, in the writer's hands, be made to fluoresce beautifully with a static machine of only 5-6in. spark length. When one compares the effective efficiency with the above results, which is 5% in the case of the static machine and 50% in the case of an induction coil, of their theoretical output, it is surprising and disappointing to find that the work of research and development has been left so long in the hands of a very few keen individual scientific workers.

In conclusion, I would like to point out that I see no reason whatever why a static instrument for internal combustion engines cannot be made and only weigh a matter of, say, 10 or 12 ounces instead of the weighty cumbersome magneto weiging *x* lb. FREEMAN LEE, D.B.O.A.

### *GEAR CHANGING DIFFICULTIES ON A ROVER.*

Sir,—The Rover, though in many ways an excellent mount, is cursed with the dual-purpose blight. This is especially noticeable in the gear ratios employed, which are utterly ludicrous for solo work. I have only once used my first speed, and that was when starting up in the main street of Bridgnorth, halfway up the hill! It wasn't really necessary then.

Thus it is seen that I have cut the Gordian knot by starting off every time in second gear. In order, however, to avoid making a noise like a London taxi driver, I use the dog engagement of low gear to stop the countershaft dead with the clutch out, and then bring the lever smartly forward into second speed (the gear engagement). A little practice will make the change from second to top easy of operation without the use of the clutch.

Changing down to second again should not be done above 18 m.p.h., as the gap between the ratios necessitates a considerable increase in engine revolutions. Here, again, the clutch can be dispensed with. Naturally, the engine is throttled when changing up, and opened out when changing down.

If one must start off in low gear, the secret is to change up the moment the machine has started moving, and not to allow the engine to "rev." too highly before throttling to change.

In passing, I should like to ask Mr. Tourrer what his usual maximum speed is.

LINESHOOTER.

IN THE LAND OF SUNSHINE. Good and well kept roads in and around Alexandria, Egypt, have in a great measure helped to popularise the motor cycle in that city. The fine avenue of palms, with the Ariel in the foreground, is in the Nouzha Gardens.

## EXPERIENCES WITH SOLO BIG TWINS.

Sir,—In throwing myself into print about the 8 h.p. heavyweight, I suppose I ought to state my qualifications. I am an all-weather motor cyclist who has covered 8,000 miles on an 8 h.p. Sports Zenith, and 10,000 miles on a 7-9 h.p. Indian, both ridden solo. In compiling this mileage I have acted as most hard-riding men would—that is, I have given my machines plenty of petrol, oil, adjustments, and last, but not least, hard work. As an average run I might instance one on each machine—Cambridge-Felixstowe, 65 miles, in 1h. 45m. on the Zenith, and Cambridge-Hull, with two up, 120 miles, in 3h. 35m. on the Indian. The last ride was disastrous, as the luggage was carried in a cushion cover, on which 14½ stone of passenger sat, greatly to the disgust of the tooth-paste, toothbrushes, and comb.

The only similarity in the two machines is in horse-power, and in widely differing ways they are as near perfection as possible, except on a wet day, when the Zenith drops 50 per cent. in pleasure-giving, due to belt-slip. The maximum speeds are about the same—65m.p.h. when in good tune—but the methods of obtaining these speeds are at opposite ends of the scale. The Zenith ticks over with a gentle burble, and dead silence of transmission, while the Indian drones like a bumble-bee at 4,000 r.p.m. On average speed I regret to say the Yank wins by miles, owing to its superior acceleration and two excellent brakes. Why do British manufacturers fit one brake and one rim-scratcher? America wins again on steering and steadiness on grease for a reason which I give later concerning centre of gravity. Where the English machine scores is in economy—90 m.p.g. as against the American's 75 at fast touring speeds. Accessibility is also better, as the Indian is tightly packed into the frame, and requires all sorts of wangling and bad language to remove the cylinders. However, the low compression and mechanical oiling of the Indian doubles the decarbonising period, so all is well.

The replacement question, which seems to be the bogey of prospective big-twin buyers, seems to have given me a miss in baulk. They are as follows: 1 belt and 6 piston rings on the Zenith, and 1 kick-starter pinion, 12 rings, cam-wheel bush, and little end bushes on the Indian—total cost £5 7s. 6d., or about 15 miles per penny. The tyres on the Indian are still good for many more miles.

The present-day British 500 c.c. single is a marvellous machine, but having ridden an excellent sample, give me the big twin every time, as pins-and-needles are not really pleasant when having a slight speed burst. Also the real lover of his machine likes to get the best out of it, and "decoking" on the twin is not required nearly so often. I travelled once on the Indian in company with a kindred spirit on a hot-stuff "3½," who could do about five miles an hour more than I, yet he repeatedly had to ask me to slow down, as he was getting bumped to pieces on roads over which I was gliding on my 3in. tyres and spring frame. Also, he was left on every curly hill, as his acceleration was much inferior.

A point which I have not heard put forward in favour of the heavyweight is the lower *total* centre of gravity, which helps it to steer better and hold the road. Assuming the weight of a big twin to be 400lb., and its centre of gravity 15in. from the ground, and the rider's weight 150lb. and his centre of gravity in riding position 35in. from the ground, then the centre of gravity of the whole is $15+\frac{150}{400}\times 20\text{in.}=22.5\text{in.}$ from ground level. Now take a 3½ h.p. machine weighing 250lb. and having its centre of gravity 13in. from ground, while the rider's weight and centre of gravity remain as before. The centre of gravity of the whole is then $13+\frac{150}{350}\times 22\text{in}=24.2\text{in.}$ from ground, or nearly 2in. higher than the twin, although the machine's centre of gravity is 2in. lower than in the previous case. Obviously it is the total centre of gravity which comes into account, since no one wants a machine to be stable unless he is in the saddle.

In conclusion, I may say that for sheer unadulterated pleasure in long-distance high average work, with comfort thrown in, the big twin beats the hot-stuff "3½" by miles, and I hope that it is not quite so doomed as the 500 c.c. brigade would have us imagine.

Luton, Beds. VELOCITAS.

## "BRAKING SYSTEMS OF TO-DAY."

Sir,—From an illustration before me the suggested round section front hand brake mentioned on page 270 ("Braking Systems of To-day") would appear to have been in use on the Phœnix trimo. SOUTHCOMB MAY.

Sir,—I was much interested in the article, "Braking Systems of To-day," and heartily endorse the writer's misgivings about Bowden control for service brakes.

In 1920 I owned a 6 h.p. outfit on which the rear brake was actuated by a stout Bowden cable. This system appeared to be quite satisfactory, until one day, when descending a steep hill, the wire broke clean in half (inside its casing), leaving me brakeless. (The front brake was of the useless horseshoe type.) I just managed to bring the outfit to the bottom of the hill safely in low gear.

W. M. HISLOP.

Sir,—Braking is a matter which does not receive the attention which it should. Since my pedal cycle days I have had a great aversion to front-wheel braking, and my present 2½ h.p. mount has no front brake. Incidentally, but I must lower my voice, it has only one back brake; this, however, is so efficient and works so smoothly that, if it does not satisfy the law, it certainly satisfies my conscience. It is extremely difficult to get efficient and at the same time smooth braking effect on the front wheel. For really efficient braking I would advocate an inside belt-rim brake on the rear wheel and an internal-expanding one on the front wheel.

I hold that when applying both brakes at once, even on a steep gradient, the back brake should be applied more harshly than the front one. I have experimented considerably with different brakes, and I agree with the writer that a light external contracting brake of the type he mentions on the front wheel would be much more satisfactory than the —to me—abominable horseshoe design. Designers just now, I think, are too much concerned about whose production will go fastest to worry about whose machine will stop most quickly. J.M.

Edinburgh.

## REVERSING A TWO-STROKE ENGINE.

Sir,—The letter in your columns under the above heading is very interesting. Of course, any engine of the simple two-stroke type in which the reciprocating motion of the piston is utilised to serve the purpose of a valve for the ingress and egress of the gas, may be run equally well in either direction, as the "timing" of the ports is the same for either rotation.

The only factor which governs the direction of rotation is the timing of the spark. An example of this is to be found in the "Evinrude" outboard marine motor. The earlier models of this engine were fitted with battery ignition, using a plain coil and make-and-break contact breaker, sufficient range of movement being allowed to the timing lever to permit the engine to be run either forward or backward. The engine could be started up, and would continue to run equally well in either direction; it was also possible to reverse the engine direct while it was running slowly. The later models of this engine have a flywheel magneto and a reversing arrangement on the propeller, so possibly the flywheel generator does not permit the engine to be run backward. The writer has had no experience of this generator, but has experimented with an ordinary high-tension magneto, which would not allow the engine to reverse, as it would only spark when running in the direction for which it was intended.

Your correspondent refers to a Maglita set as having been fitted. It is possible that the face cam with which this instrument is fitted will allow it to spark in either direction, as the writer has a Bosch starter magneto, such as was used to start the engines on the big German aeroplanes. This is fitted with a face cam contact breaker, and will spark equally well whether rotated clockwise or anti-clockwise.

It is also mentioned that there is a slight change in the exhaust note. This is probably due to the slight difference in timing due to the contact breaker running backwards, as there does not seem any reason why the exhaust note should differ otherwise. C. E. CLARK.

Cologne.

### THE A.C.U. AND PRIVATE TRIALS.

Sir,—Mr. T. W. Loughborough in his defensive article in this week's issue of *The Motor Cycle* makes a statement that motor cycling in this country is governed not by the trade but by an association of private enthusiasts who have no axe to grind. This being his opinion, it is singular that the organisation which he represents resents the freedom of the individuals it professes to serve. Viewed with an open mind, the policy of the A.C.U. would appear to be *restriction* instead of *expansion*.

Probably 99 per cent. of the motor cycles sold in this country belong to people who are not members of any club or association, and a very small proportion of the remainder ever enter the big trials organised by the leading clubs and the A.C.U.; in fact, the majority of the entrants in these events are from the trade. The salaries, expenses, entrance fees, and other items connected with competitions from a trade point of view amount to a considerable sum in the course of twelve months, and this expense is distributed over the year's output, and eventually paid by the public. The public in turn are asking for reduced prices of machines.

It would therefore appear that there is no useful purpose to be served by the continuance of the A.C.U. in its present form. Relieve the manufacturer of competition expenses and expect a slight reduction in price. This would possibly suit everybody, as the manufacturer would be saved the trouble inseparable from these events, and at the same time would derive considerably more publicity over a larger area by the large number of local competitions held throughout the country, and participated in by people who have bought and entered their machines in events framed for their requirements, and within their capabilities. The failures would be far fewer than in the ultra severe trials of the present day, and the general public throughout the country would hear of successes everywhere. This is just what the trade wish for. Lots of publicity and no expense.

CLIFFORD WILSON.

[Our correspondent evidently uses "99 per cent." as a figure of speech. Out of 370,000 British motor cyclists, about 50,000 are members of the Auto-Cycle Union alone. —Ed.]

### "VALVE BOUNCE MADE VISIBLE."

Sir,—I read with some interest the description of the oscilloscope in your issue of February 16th.

This is surely not such a revolutionary invention as might be imagined, for it is only another phase of the Stroboscopic method.

In fact, by utilising a rotating shutter with an aperture, such as is used in a cinematograph, rotated at 101 per cent. the speed of the half-time shaft of a four-stroke engine, and constructing it so that the aperture on the rotating shutter registers with one in a stationary disc once per revolution, the necessity for introducing electricity as an agent and that for darkness are avoided.

The two discs can be incorporated in a miniature telescope on a rigid stand, and a flexible drive taken from any convenient point on the engine.

Again, by having the apparatus independent of the engine and driven by an electric motor governed by a suitable rheostat, any effect can be produced, apparent motion backwards or forwards at any speed, or a complete synchronisation when the mechanism under observation will appear to be stationary.

R. A. DENNE.

### COMPARATIVE COMPRESSION RATIOS.

Sir,—A few weeks ago a query was raised in your Correspondence columns regarding the marvellous claims *re* compression ratios made by several correspondents of the "hot-stuff 'bus" order. I believe 5.9 was claimed as being standard on the Sports Sunbeam. I was informed quite recently that the B.S. Norton had a compression space of 100 c.c., and my informant was a well-known competition rider. I hate to appear a "doubting Thomas," but these claims seem rather tall, and I was hoping that some correspondence on the subject might result from the afore-mentioned correspondence.

CURIOUS.

Petit-Quevilly.

### WHICH SIDE DO YOU FALL ON?

Sir,—Having just sustained a tumble, resulting in sundry damage to the *left-hand* side of my machine, I am reminded of the well-known fact that in nine cases out of ten it is the left-hand side of the unlucky motor cycles which needs repair after such mild accidents as skidding, falling over, etc. In support of which, note that most solo machines have all their expensive and vulnerable details attached to the right-hand side.

I have also had three sideslip tumbles on pedal cycles, a friend of mine also having three of these to his credit. In every case the fall was on the *left-hand* side.

On reflection, it would seem obvious that the camber of the road would cause a fall on the *right* side in cases of sideslip. But the usual result is just the opposite!

I suggest that involuntary, reflex, or instinctive action, as you like to call it, makes one wrench the machine over to the right to correct a left-hand slide, the result being that one has gone too far, and the fall on the left side follows.

LESLIE LYONS.

### IS THERE AN AGE LIMIT?

Sir,—I am 58 years of age, fairly active, but not very robust. I used to own a motor car before the war, but cannot afford to keep one now. I have recently come to live in the country, and badly want some mechanical means of locomotion for myself and wife, and am thinking of buying a sidecar outfit. We should not be going in for long tours, but should like to see something of the countryside. The question is, am I too old for this sort of sport? I do not want to expend £100 or more on a machine only to find that I cannot use it without getting too tired or suffering from backache.

Would some of your elderly readers advise?

R. E. PALMER.

[Fifty-eight is certainly not the age limit for motor cycling, as many of our readers can testify. A well-known rider in last year's T.T. race has nearly reached this age. —Ed.]

### SUMMARY OF CORRESPONDENCE.

Three accessories are recommended as the result of considerable experience by Capt. A. D. Pryor; they are the Cuthby tyre, the Best mechanical pump, and the Derricott spring saddle-pillar, all of which are fitted to his 3½ h.p. Sunbeam.

Referring to "Ixion's" request for a "perfect goggle," Mr. Geo. T. Dalton puts forward the claims of an article he produces. On the same subject, Mr. A. T. Perrit asks for a really satisfactory "anti-fogging" paste for glasses.

Chain troubles on a Scott, according to Mr. R. H. Playfoot, are entirely eliminated by substituting Coventry silent chains and sprockets for the standard primary drive.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

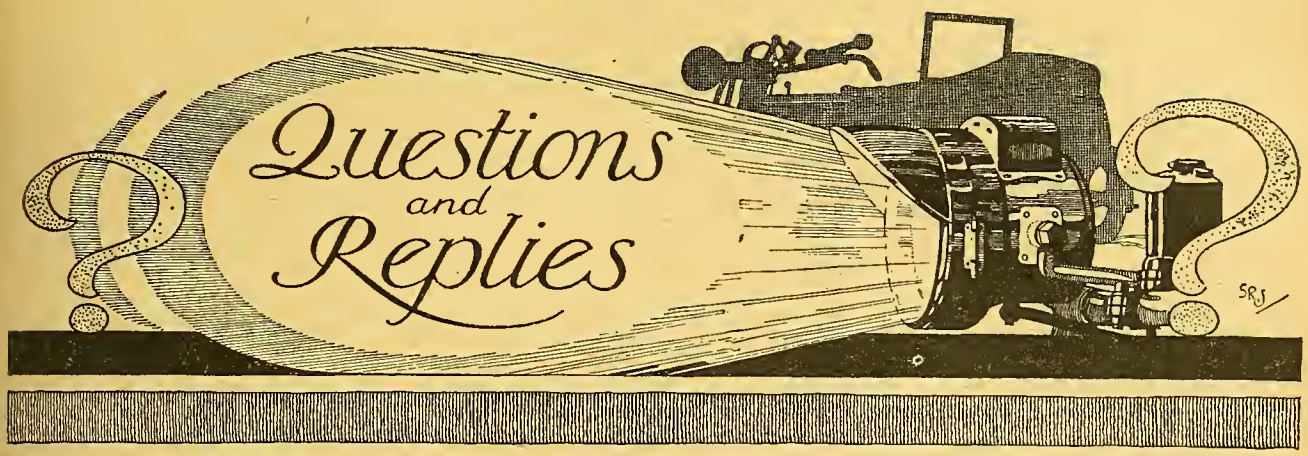
**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### TECHNICAL DATA WANTED.

What is the approximate average cubic capacity of explosive mixture burnt per explosion in a two-stroke engine of 211 c.c. gross at the following different speeds on the level: 10, 20, 30, and 40 m.p.h.?—E.H.

It is quite impossible to give you the figures which you require relating to any particular engine unless we know the gear ratio and also the volumetric efficiency of the engine at all speeds; it is doubtful if even the engine manufacturers themselves could give you the figures.

### METAL PLATE CLUTCH IN GEAR BOX.

My B.S.A. 1918 countershaft gear box, three-speed, is difficult to use in traffic, as the clutch plates do not disengage when running, and it also throws out oil.—E.H.H.

The clutch trouble may be due to wear in the operating mechanism or clutch push rod, or it may be that the splined clutch shaft has worn unevenly and so that the clutch plates bind on it. You will appreciate, however, that this type of clutch is never so free as a high-speed dry-plate clutch of large diameter, and it is specially susceptible to the gumming action of thick oils. Carefully wash with paraffin and use clean oil. Regarding the oil leakages from the gear box, we cannot ascribe a cause to this, unless, of course, the bearings are worn.

### METALLIC CLATTER IN ENGINE.

My Brown twin developed a metallic clang. I fitted a new big-end bush (there was about $\frac{1}{32}$ to $\frac{1}{16}$ play), new piston rings and balanced engine, but there is still the metallic clang. I took the engine down again and fitted washer to the driving shaft, reducing the side play to $\frac{1}{32}$. Although the engine is improved on balance and running, I still get this clang. It is more pronounced when starting up on free engine and running light, but almost disappears when taking a stiff hill at about 15 to 20 m.p.h. on top gear.—E.H.H.

From your description there is no apparent reason as to why the metallic noise arises from your engine, but such a trouble, especially when it disappears as the load on the engine increases, is usually associated with badly worn bearings, very slack fitting pistons, or some other loose or worn part in the mechanism.

## Important Dates.

**Sat., Mar. 18th—Victory Cup Trial.**
**Sat., Mar. 25th—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 mile sidecar race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish twenty-four hour Open Reliability Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**

### MAIN ROAD TRAFFIC RIGHTS.

(1.) It is generally understood that main road traffic has the "right of way." (2.) Does this mean that side road (not main road) traffic entering or crossing main roads must give way to main road traffic before doing so? (3.) In the latter case, would it be held that main road traffic has priority over side road traffic.—KNUTSFORD.

(1 and 2.) There is no legal ruling which gives main road traffic the right of way, for the very good reason that there is no universal legal definition of main roads or main road traffic. If an accident results in a legal action, the merits of the case are usually settled on local estimation of the comparative importance of the roads involved. (3.) There is no legally recognised priority, and it appears extremely doubtful that any action in which the defence was based solely upon the assumption that so-called main road traffic had a right of way would be successful.

### HUB GEAR TROUBLE.

A few weeks ago I had a new part fitted to an Armstrong hub gear, and since then I have been unable to declutch on second and bottom gears without a screeching noise proceeding from the hub. On letting in the clutch again it does not engage unless I almost stop the engine. All the parts, etc., appear to be in quite good order, and the trouble, in my opinion, lies in the clutch, for when pushing the machine with clutch out and the exhaust valve lifted, it still drives the engine. The gears act all right when the clutch is in properly, except, perhaps, for a very slight inclination to slip when running in second gear on an incline.—W.M.W.

It would appear that the trouble is due to the fact that the clutch is not completely disengaged. This may be due to faulty adjustment of the withdrawing mechanism or to excessive wear in some of the control parts. Possibly a longer push rod through the hub axle would put matters right.

### MISSING AT LOW SPEEDS.

Misfiring occurs on my 1917 5-6 h.p. Enfield. The magneto (Dixie) has been recently overhauled, the timing is correct, the plugs are both fairly new and in good condition; the trouble only occurs at low speeds on the front cylinder. When the engine is under load no misfiring occurs whatsoever.—L.A.W.

In all probability the misfiring in the front cylinder at small throttle openings is due to a small air leak either at the induction pipe joints or as a result of the inlet valve guide and stem being worn; we assume, of course, that the ignition is in perfect order.

### UNSILENCED STANDARD MACHINES.

I should be much obliged if you could tell me what is really the law regarding open exhausts on motor cycles. I understand they must be "reasonably quiet." Can one be prosecuted for riding a standard sports machine (fitted with long exhaust pipe) if the police consider it *not* reasonably quiet.—B.K.

The law requires that motor cycles shall be reasonably silenced by having the exhaust gases passed through an expansion chamber, or "other device" suitable for the purpose. If the police consider that a standard sports machine is not reasonably silent, it is quite likely that a rider of a machine of this type might be summoned on this account and lose the day. If you are involved in a case of this description, you should write to the makers of your machine, as they may have contested similar summonses previously.

### PITTED PLATINUM POINTS.

Lately my machine (1915 4¼ h.p. L.M.C.) commenced misfiring badly. Thinking that something had got into the jet, I cleaned out the carburetter, but found the engine still misfired as badly as ever. I then suspected magneto trouble, and took off the make and break of the magneto, which I thoroughly cleaned, and polished the platinum points, which were badly pitted. After replacing, the machine ran very well for about twenty miles, but at the end of this distance developed the same trouble. This time I washed out the contact breaker of the magneto with petrol, and cleaned the platinum points by putting petrol soaked rag between them. I found that this banished the trouble *pro tem.*, but at the end of another twenty or thirty miles the misfiring again caused me to examine the magneto, and I found that the platinum points were again badly pitted. (1.) Should the platinum points be pitted after this small mileage, say 100 to 150 miles? (2.) What is the probable cause of misfire?—W.T.McM.

(1.) The platinum points should show no signs of burning even after 2,000 or 3,000 miles running; therefore, 150 miles should not affect them at all. (2.) The trouble is in all probability due to the condenser of the magneto being defective in some way (it may be either internally or externally short-circuited), and your best plan is to return your magneto to the makers for examination and repair.

### RATIOS OF N.S.U. GEAR.

What gear reductions are possible on the N.S.U. or Bradbury engine shaft gears?—A.W.P.

The top gear ratio of the N.S.U. type of gear can be altered to some extent by means of the adjustable variable pulley, which is incorporated in the design. Probably the range of ratios obtained lies between 4⅜ and 5¼ to 1 with a 19in. belt drum and 1in. belt. The actual reduction of the gear is approximately 35%, so that with a top gear of 5 to 1 the low ratio is about 7 or 7¼ to 1.

### INTERMITTENT LOSS OF POWER.

My 4 h.p. Triumph (1919 model) is erratic in running. It starts easily from cold, and runs easily on middle gear, but on getting on to top gear the trouble commences. I have a light sidecar, and sometimes I can get any amount of power and speed out of the engine. After running for about a half-hour it suddenly loses power, and I have to drop into second (I am, of course, speaking about riding on a level road). After a while the engine will pick up, and is as fast and speedy as one expects. The engine has been examined, and it is in perfect condition. The valves are correctly timed and properly adjusted. The timing is correct and I get a good spark. I have fitted a new belt, which is of the correct tension. The carburetter is clean, and is fitted with a No. 26 jet. To all appearances the machine is perfect, so will you advise me as to where the fault lies?—J.W.

The trouble you describe is probably due to partial stoppage in the petrol supply, due to impurities in the petrol or an air leak in the petrol tank, or to a faulty plug which occasionally short-circuits internally, thus causing a similar effect to a retarded spark.

### VALVE LIFT.

Please inform me the correct lift for the valves of the 7-9 h.p. Indian motor cycle (1915 model), as mine lift ⅛in., and I doubt if it is sufficient.—W.H.P.

The valve lift is certainly insufficient. The correct valve lift is ¼in. for both inlet and exhaust valves. Probably the rockers are worn. This can be ascertained by removing the cam cover. It is possible, though not probable, that the cams, too, may need renewal.

### POLICE COURT PROCEDURE.

Some weeks ago I was stopped by a police constable for having the rear number-plate of my motor cycle obscured by the coat of my pillion passenger, and I also failed to produce my driving licence when asked. Three policemen came afterwards to my house to ask various questions and to examine my new licence, and in a week or so I received the summons. I replied stating that I could not appear and that I was guilty of the offences mentioned; I have not heard anything since. One of the policemen, upon hearing this, told me the other day that I had better call at the court to look into the matter, or they may issue a commitment against me. I shall be glad of your advice.—F.P.B.

It is not part of the duty of the police court officials to acquaint a person who is summoned with the result of the case, if he does not appear, as he should attend and then would know what happened. You therefore run the risk of being arrested in default of payment of the fine, and it would be wise to attend at the police court to see what it is, and to pay. Of course, you could write to the Chief Constable or Superintendent of Police, enclosing a stamped addressed envelope, and asking what the amount is.

A HAUNT OF THE GRAYLING—DOVEDALE, DERBYSHIRE. The motor cycle provides the best possible means of reaching inaccessible fishing waters or prospecting hitherto untried districts.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"J.L." (Dunstable).—Morgan, family model with air-cooled engine: Climbing, stability in grease and tyre wear.

"B.G." (Dublin).—3 h.p. 1921 A.B.C. (solo): General experiences.

"W.H.M." (Belfast).—Any make of folding sidecar.

"W.DeL." (West Green).—Any make of folding sidecar.

"F.E.B." (Newcastle).—3½ h.p. T.T. Norton: Economical jet sizes for Binks carburetter. Philipson pulley or Pneu Auto pulley.

"E.D." (Cambridge).—8 h.p. Enfield sidecar: Gear control in traffic, reliability, oiling system, sidecar comfort, etc.

"C.L." (Maghull).—7 h.p. F.N. with sidecar.

F. C. WALLIS (Ryde, I.O.W.).—3½ h.p. Rudge Multi: Hilly district; pillion passenger.

"A.W." (Cleethorpes).—3¾ h.p. Scott 1921-22: Speed, climbing, and consumption, Amac or other carburetter.

"A.J.C." (Ampthill).—4 h.p. Triumph with 28in. × 3in. cover on 26in. rim. Webb front hub brake. W.S.R. variable jet. Flexekas airtight springs.

"F.Z.E." (St. John's Wood).—4½ h.p. Quadrant: Oiling system, etc.

"R.M." (Maxwelltown).—3½ h.p. Rudge Multi and sidecar: Ease of starting, hill-climbing, belt wear, etc.

"C.H." (Wednesbury).—2¾ h.p. A.J.S. standard sports; also 3 h.p. Raleigh sports.

"G.K." (Norwich).—1¾ h.p. McKenzie.

"H.Q." (Bradford).—2¾ h.p A.J.S. standard sports model.

"G.J.G." (Cambridge). — 2¾ h.p. Douglas: Adjustments for most economical running, etc.

"C.T.F." (London N.13). — 2¾ h.p. Massey-Arran or similar machine fitted with o.h.v. Blackburne engine.

"M.M." (Merton Park).—Tube protectors, steel mail: Resiliency; possible damage to cover, etc.

"G.G.B." (Barnet).—Tynesider pillion seat, Model 64, with adjustable springs and Tan Sad: Side sway, general comfort, etc.

"E.H." (Batavia). — 4 h.p. Harley-Davidson: Speed, comfort, economy, etc.

"B.W.D.L."—W.S.R. variable jet on Amac carburetter for 8-10 h.p. twin engine.

"P.L.E." (Walton-on-Thames).—2¾ h.p. standard A.J.S. and 2¾ h.p. three-speed Raleigh: 300 miles per week all weathers.

"T.W." (Bicester).—W.S.R. variable jet on Triumph carburetter.

"E.D.H.T." (Malpas).—W.S.R. variable jet on 1920 Amac; also 3½ h.p. Rudge Multi solo.

"L.W." (Stockport). — Alldays-Allon: Maximum speed on level; petrol consumption; suitability for light sidecar.

"K.K.H." (Harrow).—W.S.R. variable jet on B. and B. carburetter, P. and M. motor cycle solo: Whether vibration tends to alter the jet.

### Prices Down.

Auto-wheels have been reduced from £35 to £30.

### Single Cylinder Sidecar in Colmore Trial.

Instead of the 6-8 h.p. Rex-Acme sidecar outfit, as in the programme, F. H. Brown rode the new 4 h.p. outfit in the Colmore Cup Trial, and was awarded a gold medal.

### A Change Over.

The well-known competition rider A. C. Robbins, who has, until recently, been associated with Wooler motor cycles, will in future be mounted on an Edmund, for which he is now London representative.

### Changed Hands.

The Birchfield Leather Co., 46, Arcade Chambers, Northampton, has bought the business of the College Leather Co., of the same town. All the latter concern's popular specialities will continue on the market.

### Adding Insult to Injury.

Driving the only air-cooled cycle car in the Colmore Cup Trial, G. W. H. Goodall (8 Morgan) claims that he was baulked on Sudeley Hill owing to the failure of another three-wheeler credited with a clean ascent.

### Makers of the Cygnet Motor Cycles.

In our issue of the 23rd ult. a motor cycle with a sheet steel frame was described, the makers concealing themselves behind the *nom de plume* of "Cygnet." They now ask us to publish the patent numbers, etc., which are: Provisional patent No. 34198, 1921; registered No. 686470. Messrs. F. Allcott and L. Jones, 14, Daniels Road, Bordesley Green, Birmingham, are the designers.

### Enterprise.

With the idea of falling into line with other places of business during the "brighter London" week, Maudes Motor Mart dressed their window so as to represent a jolly motor cycle picnic party. The two machines employed to help out the scheme were a Matchless double-seated sidecar outfit and an Ivy motor bicycle. The window succeeded in attracting quite a number of visitors.

### Goggles.

*Apropos* of letters appearing recently under the heading "Wanted: Perfect Goggles," we are informed that in all probability the Triplex Aviation Mask goggle would suit our correspondents' requirements. These goggles are no longer manufactured, but a stock of Government surplus is held by the Service Co., Ltd., 289, High Holborn, London, W.C.1, who have a limited supply to offer at 11s. 9d. The original price was 42s. 6d.

### Illumination of Speedometers.

It is often inconvenient to employ an external agent for the purpose of illuminating the speedometer dial, and it is interesting to know of a firm undertaking to render the hand, numbers, and points of the speedometer dial luminous so that they can be easily read at night, whether in twilight, moonlight, or in pitch darkness. Most makes of speedometers can be rendered luminous with the best quality paint at a cost of 10s.; this work is carried out by Stanley's Motor Cycle Co., Ltd., 173, Railway Approach, Shepherd's Bush, London, W.12.

### A New Motor Spirit.

A new brand of petrol, to be known as White Cross motor spirit, will shortly make its appearance upon the British market. It will be sold in gilded cans marked by white crosses, and a million and a quarter gallons will be delivered per month. So far as quality is concerned, it will be of from 0.725 to 0.730 specific gravity, and will compare favourably with the best known brands of motor spirit. At the present time the price to the public will be the same as for other brands of petrol. It is being handled by Mr. Howard F. Eldridge, 7, Lower Seymour Street, London, W.1.

### Catalogues Received.

Cedos Motors, Northampton: A folder describing all models of the popular Cedos lightweight two-stroke.

Dunhills, Ltd., 359-361, Euston Road, London, N.W.1.: Dunhills illustrated catalogue of motor cycle accessories.

The Toronda Manufacturing Co., Ship Yard, Weybridge: A well got up catalogue of two patterns of Toronda sidecars.

Cheltenham Works, Ltd., 86-88, Acre Lane, Brixton, London, S.W.2: A catalogue of Relmac lathes and accessories.

The Tyrus Cycle and Motor Co., Johnstone Street, Birchfields, Birmingham: A series of leaflets dealing with the firm's motor cycles.

Jeff Patent Tube, Ltd., Pembroke Road, Walthamstow, London, E.17: Folder describing and illustrating the Jeff patent puncture-proof tube.

P. L. Cearns, 8, Plaistow Park Road, Plaistow, London, E.13: Folder describing the Cearns patent aluminium non-chafe case for inner tubes.

The Coventry Victor Motor Co., Ltd., Coventry: A catalogue giving details and prices of the three Coventry Victor flat-twin engined motor cycles.

The Cleveland Motor Cycle Manufacturing Co., 90, Cannon Street, London, E.C.4.: A useful book containing a full list of parts for Cleveland machines. Parts are illustrated and numbered, so can be easily identified in the list.

Burney and Blackburne, Ltd., Atlas Works Bookham, Surrey: A folder giving a list of manufacturers of motor cycles using Blackburne engines, and a well-illustrated booklet containing a full description of the Blackburne engine.

Goodyear Tyre and Rubber Co. (Great Britain), Ltd., 162, Shaftesbury Avenue, London, W.C.2: Leaflet giving new retail prices of Goodyear tyres; two sizes (27in. × 3½in. and 29in. × 3½in.) are given as oversizes for 26in. × 3in. and 28in. × 3in. respectively.

# CURRENT CHAT

## Times to Light Lamps.

| | | | |
|---|---|---|---|
| Mar. | 16th | .. .. | 7. 3 p.m. |
| ,, | 18th | .. .. | 7. 6 ,, |
| ,, | 20th | .. .. | 7.10 ,, |
| ,, | 22nd | .. .. | 7.14 ,, |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Cheaper Petrol?

A new fuel company has been formed as a rival to the petrol combine. It is to be wondered if petrol will be cheaper in consequence—"a consummation devoutly to be wished!"

### More Firemen Motor Cyclists.

The Cape Town Fire Brigade is one of the latest to include a motor cycle among its fleet. This is a Harley-Davidson sidecar outfit with a box body, emergency fire tackle, and the usual brass bell.

### Hill Climb for Second-hand Machines.

Next Saturday second-hand machines entered for the Used Motor Vehicles Show at Crystal Palace from March 27th to April 8th will be tested under A.C.U. supervision on Fountain and College Hills, which adjoin the exhibition hall. Intending sellers who find it impossible to turn up then may do so on the following Saturday.

### An Australian Six Days.

Wet weather was experienced during the greater part of the Australian Six Days' trial organised by the Motor Cycle Club of New South Wales. In one place three miles from Bathurst, a channel was washed clean across the road. The first three in the solo class were H. Hulford (3½ Douglas), Cootamundra Club, absolute winner, 600 points; 2, F. Roberts (4 Indian), 598 points; 3, E. White (7 Harley-Davidson), 506 points. In the sidecar class P. Williams (7 Excelsior sc.), J. Miles (7 Harley-Davidson sc.), and A. J. Dennis (7 Indian sc.) tied for the first place with 600 points.

### Delay at the L.C.C. Licensing Dept.

With the removal of the L.C.C. licensing office from the makeshift premises in Charing Cross Road to the new palatial County Hall across the river, we naturally expected a little speeding up in the matter of serving out licences. It was hoped that one would obtain them with the same ease as getting a gallon of petrol. Apparently, however, it is not to be. These hopes have been severely shattered, for on Monday last, to obtain a new licence, a reader wasted an hour and three-quarters. In the room devoted to registration there are nine inquiry windows. Of these, despite the fact that there was a queue of at least forty people, only two were in use. Surely, now that the authorities have a building costing the ratepayers about £2,000,000, London motor cyclists and motorists are entitled to an improved service.

When daffodils begin to peer,
With heigh! the doxy over the dale,
Why, then comes in the sweet o' the year;
For the red blood reigns in the winter's pale
The Winter's Tale
Sydney R. Jones

### Friction-Driven Dynamos.

There have been several dynamos in the past which have been driven by a friction wheel working from one of the motor cycle tyres, but these have not been particularly satisfactory. However, the simplicity of the drive is justifying its retention, and some improved forms are being placed on the market. The modern tendency is to attach a friction plate to the rim or spokes of the wheel. One well-known Continental firm of magneto manufacturers has lately brought out a lighting set in which this system of drive has been incorporated.

## Special Features.

MODERN PRACTICE IN ENGINE DESIGN.

TOURING IN NOVA SCOTIA.

ROAD RACING IN IRELAND.

### French National Fuel.

The French national fuel, the ingredients of which have hitherto been kept secret, consists of high-grade petrol, alcohol, cyclo-hexanol, and phenol. Naturally, petrol forms the greater part of the mixture.

### The Grand Prix de France.

There are several races in France called "The Grand Prix," but what we know in England as *the* Grand Prix is the race bearing the title in the caption of this paragraph. This will take place on July 12th, and not on the 2nd, as previously announced by the organisers.

### First Brooklands Meeting.

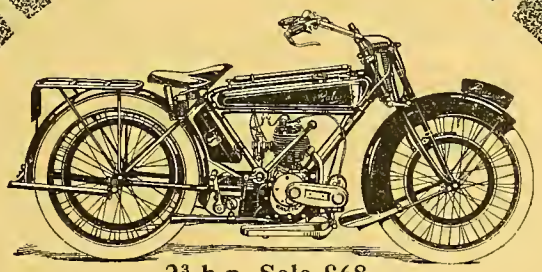
Details are to hand for the first meeting of the B.M.C.R.C. at Brooklands on Saturday, April 8th. Racing will begin at 2 p.m., and there will be five three-lap handicap races for motor bicycles up to 350 c.c., 500 c.c., and from 500 c.c. to 1,000 c.c.; also for passenger machines up to 600 c.c. and up to 1,100 c.c. There will also be three three-lap scratch races for machines up to 350 c.c. 500 c.c., and 1,000 c.c. The final event of the afternoon will be the all-comers' handicap for private owner members, who will be asked to produce their registration books at the starting line as a proof of their *bona fides*. The B.A.R.C. season opens on Easter Monday (April 17th).

### Tourist Trophy Entries.

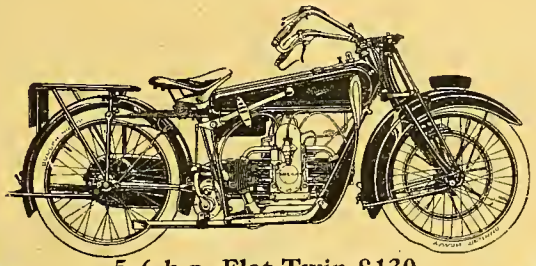
Entries are already beginning to flow in for the Tourist Trophy races. For the Senior event V. Anstice has entered a 3½ h.p. Douglas; W. Hollowell and R. M. Knowles have each entered a 3½ h.p. Norton, while Norton Motors, Ltd., will be directly represented by five similar machines. The winners of last year's race, A. J. Stevens and Co., Ltd., in addition to their Junior entry, have entered two machines for the Senior event, and Mr. W. H. Wells three 3½ h.p. Indians.

For the Junior race D. Hall will ride a 2¾ h.p. New Scale, while the A.J.S. firm will defend the Junior Trophy with six machines. In the Lightweight Race (250 c.c.) F. W. Applebee will again be riding a 2¼ h.p. Levis, C. Edwards a 2¼ h.p. New Imperial and C. W. Johnstone a 2¼ h.p. New Imperial.

Dr. Hopwood, who rode a Levis in last year's event, has again entered for the race on a similar machine. One rider, J. Joynson, has sent in an entry, but no machine is specified.



2¾ h.p. Solo £68.



5-6 h.p. Flat Twin £130.

# Do you realize why

such a mighty success has been achieved by the

# RALEIGH

## THE MOTOR-CYCLE

with Dunlop tyres and Sturmey-Archer Countershaft Gear ? There must be some reason for it. Here's one. The material for every part has been carefully selected and subjected to the most strenuous tests. For instance, the exhaust valve is made of very expensive tungsten steel and the inlet of heat-treated nickel steel—thus giving valves practically unbreakable. This is but one illustration, but notwithstanding that no question of expense has been considered, the Raleighs are sold at

**2¾ h.p. £68. 5-6 h.p. £130.**

*Send for the Raleigh catalogue. It will give you more details.*

THE RALEIGH CYCLE CO., LTD., NOTTINGHAM.

*The G.N. has won the majority of Small Car Events, including the 200 miles Race.*

## LESS SPECTACULAR, BUT JUST AS WONDERFUL.

IN THE DAILY ROUND, throughout the years, countless G.N. owners continue to be happy motorists.

FREE FROM the usual worries, they use their cars as a matter of course—like healthy men, they forget their 'insides'

THERE ARE thousands of these users, disabled men, ladies, business men, and just plain, ordinary motorists, finding happiness and fresh air in the country-side.

LOTS HAVE given up their bigger cars, others have been 'promoted' from motor cyclists.

MANY *never had anything* before.

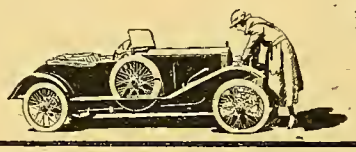
JOIN THEM, and enjoy happy, comfortable, and *economical* motoring.

A WELL ILLUSTRATED catalogue will tell you many interesting things about the G.N. It is ready to send, may we have your address?

**G.N. MOTORS, Ltd., WANDSWORTH, LONDON, S.W.18**

*WEST END SHOWROOMS AT 222*
*GREAT PORTLAND STREET, LONDON, W.1*
*Telephone: Museum 2271*

THREE MODELS
The Touring £225
All-Weather £250
Legere - - £240
All are fitted with luxurious equipment.

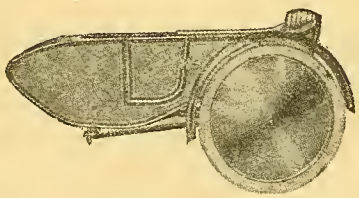


*Raymond Publicity.*

# HENDERSON SIDECARS

**For Quality and Comfort they cannot be surpassed.**

MODEL "A" (shown with disc wheel).

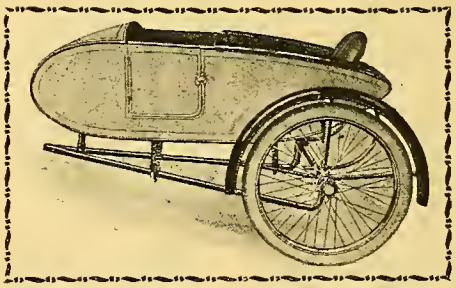


PRICE £19:10

Models to suit every taste and purpose.
Prices ranging from £19 10 to £40.
Delivery of all models can be given from stock.

*Illustrated Art Catalogue on request from:—*

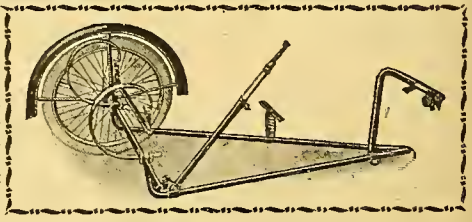
**HENDERSON SIDECARS**
**AERO WORKS, FITZWILLIAM ST., SHEFFIELD.**
'Phone: Cent. 3119. 'Grams: "Aero."



THIS is the Dunhill Featherweight, selling, less tyre, at only £16 : 16 : 0 The Chassis alone is illustrated below. It is an adaptation of the Dunhill patent Triangular-frame design which gives the safest Chassis on the road,—a chassis in which maximum strength and rigidity are combined with minimum weight. Frame distortion is totally impossible. We are the patentees of this design, correct in theory and proved in practice, and will gladly send you full details on request. If you are a present or prospective sidecar user, write us to-day.

**Dunhills Limited**
**359-361, EUSTON ROAD, LONDON, N.W.1**
**GLASGOW DEPOT: 72, ST. VINCENT STREET**

Send to-day for a catalogue illustrating and describing Dunhill Patent Chassis & Sidecars. Simply tear out and post this advertisement with your name and address written in the margin. Send to-day and make sure.



### Early Entries for Scottish Six Days.

Fifty-four entries have already been received for the Scottish Six Days' Trials, which start on May 1st, and it is confidently expected that last year's list of 130 competitors will be considerably exceeded before the closing date (April 15th). Mr. Campbell McGregor's (the secretary) address is 6, Castle Terrace, Edinburgh. The route has not yet been announced.

### Open Trial in Devon.

Signs are not lacking that the open trial to be held by the S.W. Centre A.C.U. on May 29th will be a most interesting event. Beggar's Roost and several new hills in the same neighbourhood will be included in a sporting course starting at Exeter, the lunch stop being at Barnstaple. Fuller particulars may be obtained from Mr. Herbert Pike, Taunton.

### In this Issue.

Large-scale illustrations of well-known engines in section appear on pages 324-327.

A tour in a little known province of Canada is described by an American contributor (pages 328-329).

On page 352 will be found a guide for those who are contemplating purchasing a second-hand motor cycle.

Several successful road races held in Ireland are described on pages 330 to 332.

### The Engineering Lock-out.

Owing to the unfortunate labour dispute, work in certain engineering factories is likely to be held up. Readers requiring their machines overhauled before Easter should write the manufacturers beforehand to ascertain whether the repairs can be undertaken. All motor cycle firms are not affected, however; neither are all engine and gear manufacturers. For example, the "lock-out" is not interfering with the J.A P. factory.

### One Day Trial in Worcester and Somerset.

Arrangements for the Western Centre (A.C.U.) one-day trial are in the hands of Mr. J. B. Freston, 32, Strode Road, Clevedon, Somerset, who is joint acting trials secretary for the event. Entry forms should be obtained from him and returned by Saturday, the 25th inst. The trial starts from Clent, near Stourbridge, and touches Cheltenham, Bristol, Bath, Stroud, Gloucester, Malvern, and Worcester. The course of 220 miles is to be stiff but fair. Observers are required.

### A Pioneer Passes.

It is with deep regret that we have to record the death of Mr. Charles Binks, who passed away on Tuesday, March 7th, at his home at Eccles. Mr. Binks, who is familiar to most motor cyclists, is best known in connection with his three-jet carburetter, but his activities in the engineering trade were wide, and old-time riders will remember a four-cylinder air-cooled motor cycle bearing his name.

At the time of his death Mr. Binks was 58, and carried his years lightly. He was a keen fisherman, and was apparently in good health until the Saturday preceding his death.

### A Famous Continental Rider.

Readers of *The Motor Cycle* often see the name of L. Psalty, a well-known competitor in Continental trials. Psalty is a Greek, now resident in France, who is agent for a number of well-known English motor cycles. In 1912 *The Motor Cycle* described a long Continental tour that he made on his Triumph of that year, which is acknowledged and quoted in a current issue of our contemporary *La Revue Motocycliste*.

### A New Sporting Model.

We are in a position to state that a new sporting twin will be ready for the market in the near future. Messrs. Bradbury, of Oldham, have decided to list an entirely new model, details of which are not yet available for the public. We may state, however, from a personal inspection of the detail work that the latest light twin Bradbury will be a machine in every way suited to those who require a handy twin with a high performance.

### Highland Rights of Way in Danger.

All lovers of the Scottish Highlands, especially those who ramble over the passes, will learn with something akin to consternation that an electricity company in the Grampians is seeking to obtain powers to close certain rights of way. In the plans proposed footpaths beside Lochs Ericht, Garry, and An Duin will be submerged, while roads will be closed in Glen Tilt, Glen Tromie, and the Minnikaig Pass. Mr. Percy Donald, B.Sc., A.M.I.C.E., 36, Leamington Terrace, Edinburgh, points out that similar powers granted in other parts would quickly close the Highlands entirely, and urges that deviation of rights of way only should be permitted.

### Observers Wanted on Saturday.

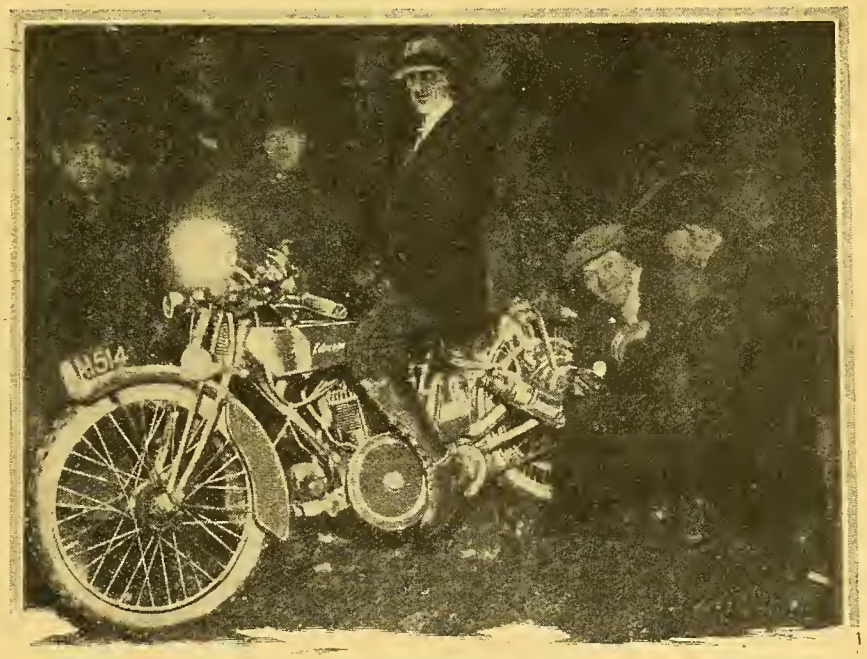
Additional observers are wanted for next Saturday's Victory Cup Trial; those willing to act in this capacity should communicate with Mr. Lawson Clarke, 43, Leyton Road, Handsworth, Birmingham.

### Trial in the Peak District.

A one-day open trial, covering about 140 miles, including the Peak District and traversing Leicester, Loughborough, Derby, and Nottingham, will be held by the East Midland Centre (A.C.U.) on Saturday, March 25th. The premier award is the £100 (pre-war) Raleigh Challenge Cup for the best individual performance. Posters will be exhibited along the route showing times of the competitors passing. Entries close on Saturday, and must be sent to Mr. H. J. Woodgate, 62, High Street, Leicester.

### Tynesiders' Premier Motoring Event.

The Travers Open Trial, which has been allocated this year to the Newcastle and District Motor Club by the newly-formed North-Eastern Centre (A.C.U.), will take place on April 22nd, and arrangements are now well in hand. The route will include part of last year's Travers course, but it is going to be a much more difficult proposition. Several new "discoveries" in the way of hills have been introduced. The principal award for the trial is the Travers Challenge Trophy valued at 200 guineas and a special prize of £50 presented by Messrs. Travers, Ltd., Newcastle. The club desires observers for the day of the trial, and anyone willing to serve in this capacity should apply to Mr. H. Gillies Wicks, c/o Coopers, Ltd., Westgate Road, Newcastle.

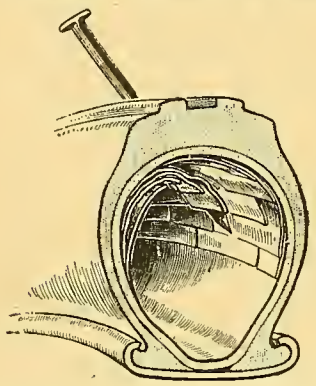


CLIMBING ALTY-BADY IN THE DARK. J. Westwood Wills, who last week ascended the notorious Welsh hill, Alty-Bady, under A.C.U. observation, twelve times on a 2¾ h.p. Edmund-Blackburne. This flashlight photograph was taken immediately after Wills' successful climbs.

# PUNCTURE PROOFING.

## Two New Tubes which are Claimed to Give Immunity from Tyre Trouble.

PNEUMATIC tyres made motor cycling possible. Unfortunately, they also made punctures possible, and, although the larger and better tyres of to-day are not so susceptible to these annoying occurrences as were the diminutive covers of yesterday, the bogey is always with us. But perhaps it will not be ever thus; for several very promising "unpuncturable" tyres (or tubes) are making an appearance. We illustrate two new inventions.



When a nail penetrates the Jeff tube it simply pushes aside the flaps which on withdrawal of the puncturing agent automatically seal up the hole.

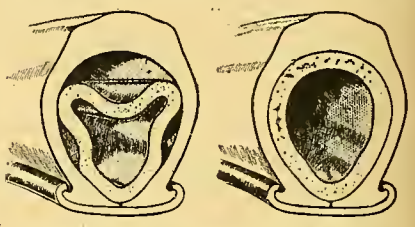
The Jeff patent tube has passed the experimental stage, and is now available to the public in the following motor cycle sizes: 26in.×2¼in., 26in.×2¾in., 26in.×3in., and 28in.×3in.—a hopeful sign for the doubters. It is quite different from anything of the kind attempted before, and consists of what externally looks like an ordinary air chamber, but inside is a series of rubber flaps overlapping one another, with the result that any foreign object which penetrates the outer cover and tube merely pushes the flaps to one side, and when this object is withdrawn the hole is immediately sealed by the flap beneath it being forced upwards by the pressure of air.

### Standing a Test.

Mr. H. F. S. Morgan, the well-known exponent of the three-wheeler which bears his name, has recently put this tube to a very severe trial, when, after driving seven nails through the cover, he found the tyre quite hard. He then penetrated the cover with several ordinary nails, a bradawl, a strong needle, a sharp scriber, and one or two blunt file ends, and the tube still retained air. The manufacturers are Jeff Patent Tube, Ltd., Pembroke Road, Walthamstow, London.

On quite another principle the Compression puncture-proof tube is of considerably greater thickness than one of standard pattern and the circumference of the outer cover which it fits. In its deflated form it is moulded with deep corrugations on the sides, but when inflated the corrugations straighten out, thus conforming to the internal contour of the cover. When inflated, instead of stretching the tube, the air pressure compresses the rubber, so that, if punctured, the holes made by nails or other puncturing agents are closed automatically.

It is claimed that it is more resilient than the ordinary tube, and requires 25% less air pressure. At the present moment it is only made in the 28in.×3in. size, but other sizes are in course of preparation, and will be ready in a few weeks' time. Bramco (1920), Ltd., St. Nicholas Street, Coventry, the concessionnaires, state that if the tubes are fitted to their Tulsa cord tyres they will be guaranteed against punctures and all defects of manufacture for 10,000 miles.



Deflated the Compression tube takes the shape shown on the left; inflated, it is forced to conform to the outer cover, the rubber being in compression.

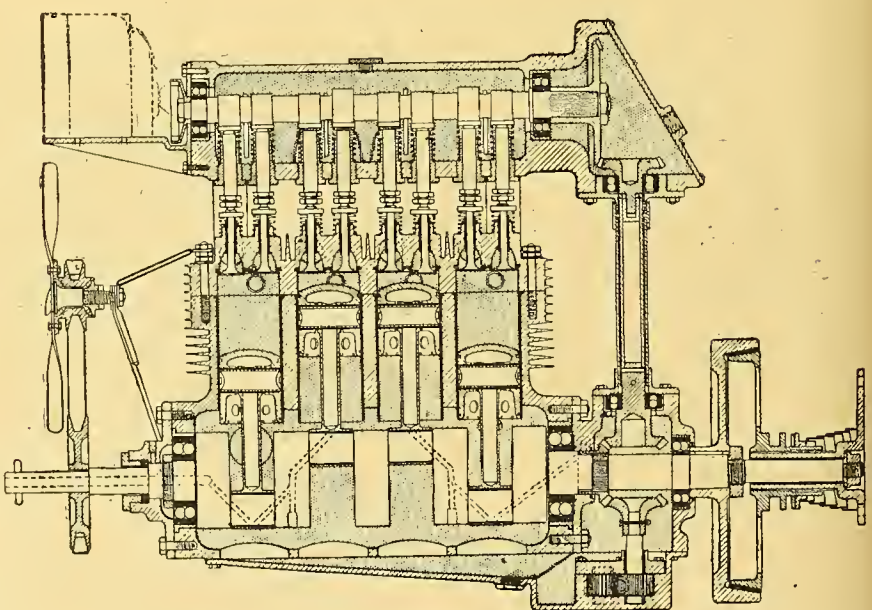
# O.H.V. FOUR CYLINDER ENGINE.

## Aluminium Monobloc Construction. Forced Lubrication. Overhead Camshaft.

ORIGINALLY designed for light car work, but suitable also for motor cycles, the four-cylinder engine which we are about to describe has been designed by Mr. A. Elverson, the originator of the Oscilloscope. Having a bore and stroke of 70 mm. (=1,077 c.c.), the cylinders are cast with the single aluminium crank case body. Steel cylinder liners are pressed in from the top, and a casting of aluminium, forming the four cylinder heads, definitely retains these liners.

Cast iron valve seats are cast into the head, and the valves, which are in line, are operated by an overhead camshaft through adjustable plunger tappets. The camshaft is driven by a vertical shaft and bevel gear from the rear end of the crankshaft, and the magneto, mounted high up, is driven from the front of the camshaft.

With the exception of the big ends, which are lubricated under pressure from a gear pump at the rear of the crank case, and the small end bearings, all bearings throughout the engine are of the Skefko double row type.



Section of the o.h.v. air-cooled Elverson four cylinder engine.

Two heavy races support the massive crankshaft, and these races are of such a diameter that the whole crankshaft can be passed into the crank case through the bearing housings.

**O.H.V. Four Cylinder Engine.—**
Aluminium pistons with very large hollow gudgeon pins and two rings in a single groove, are attached to the crankshaft by tubular connecting rods with white metal big ends. Below the crank case proper is an oil sump and pump body, which can be detached to provide access to the big ends, and this sump slopes rearwards so that the gear type oil pump is constantly flooded.

Longitudinal ribs are provided to cool the cylinder block, but the head ribs lie transversely.

The camshaft case is mounted on legs cast on the cylinder head block, and the engine is reasonably accessible. In view of the interest which is being exhibited in air-cooled four-cylinder engines at the present moment, this design is worthy of careful study.

# FOUR-SPEED CHAIN GEAR BOX.

## Great Simplicity, Minimum of Working Parts and Adaptability of the Caton Gear.

USING chains instead of pinions, the Caton gear box provides four speeds in a design as simple as the average three-speed gear. Naturally, in order to achieve this minimum of parts, all the gears are indirect, but with chains running under ideal conditions, *i.e.*, in oil and over favourably sized sprockets at close centres, the loss in transmission efficiency may be regarded as negligible.

In the gear box are two double and two single sprockets, the latter arranged at opposite corners, and all normally revolving loosely on the two shafts, one of which carries the clutch and the other the rear chain sprocket. A dog clutch on the exposed portion of each shaft is so arranged that either the single or the double wheel may be dogged to the shaft.

The various combinations of position—four in number—which these dogs may take up give the required different ratios. On three gears the drive is simply taken by one of the three chains from one shaft to another, the other two running idle. For the remaining ratio the drive crosses and recrosses the box *via all three chains*.

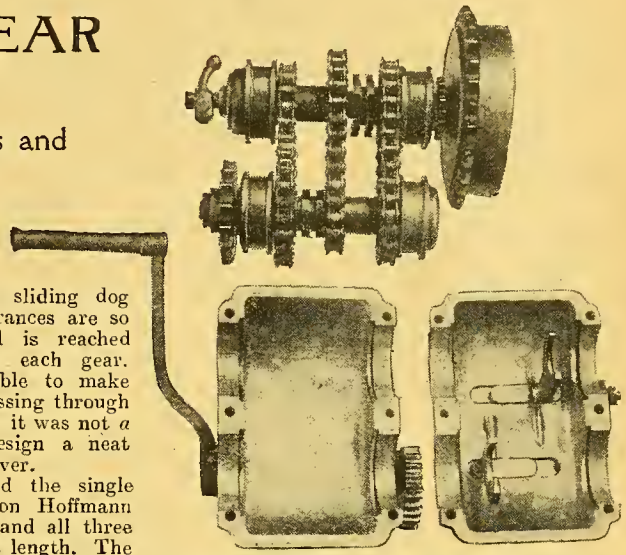
Two forks, operated by a simple arrangement on the top of the box, control the movement of the sliding dog clutches, and the clearances are so arranged that neutral is reached automatically between each gear. Since also it is possible to make any change without passing through the intermediate ratios, it was not *a* difficult matter to design a neat gate for the control lever.

Both the shafts and the single wheels are mounted on Hoffmann journal ball bearings, and all three chains are of the same length. The final drive may be changed from left to right or *vice versa* without structural alteration to the box.

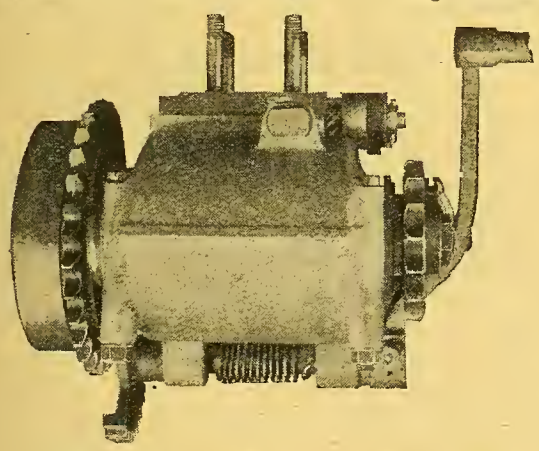
The kick-starter shaft passes under the box and acts directly on to the clutch, which itself is of conventional design.

On the whole the design is very simple, both to manufacture, and, in particular, to assemble, and once the knack of gear change has been learned must be almost foolproof. The actual ratios of the four speeds are respectively : 0.68, 1.0, 1.46, and 2.14 to 1.

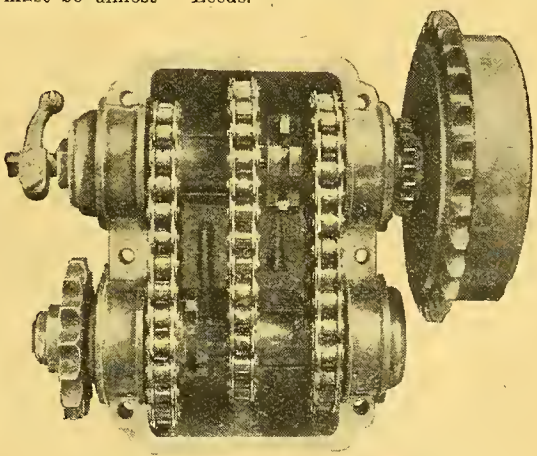
It is claimed that the box may be fitted to any machine. The designer is Mr. Chas. Caton, 6, St. Ives Mount, Armley, Leeds.



Main component parts of the gear. The actuating forks are inside the top half of box (right).



The Caton four-speed gear box. In the final model the kick-starter mechanism will be enclosed.



View of the box from below with the lower half of the casing removed.

## CONTROL OF THE SPORT IN IRELAND.

OWING to the war and the recent troubles in Ireland, there was no conference between the Ulster and Southern Centres of the Motor Cycle Union since 1915 until Saturday last, when delegates met to discuss affairs of mutual interest.

One of the most important matters to engage the attention of the conference was the question of road racing, mainly arising out of the number of road races held in Ulster last year. After considerable discussion, it was agreed that in future no permit should be issued by the Union for a speed competition on the road (other than a hill climb) unless the promoting body procure permission from the properly constituted authority.

The Southern Centre was asked to obtain from the Royal Irish Automobile Club permission for clubs holding motorcycle trials to include in such events four-wheeled vehicles with engines not exceeding 1,100 c.c.

# THE PARIS-NICE TRIAL.

## Success of British Motor Cycles. French Miniatures Complete the Course. 25 m.p.h. Schedule.

THIS year's Paris-Nice Trial attracted forty-five two-wheelers and fourteen cycle cars. On arrival at Nice the motor cycles had been reduced to twenty-five and the cycle cars were only eight in number. The trial was rendered difficult by reason of the high average of twenty-five miles an hour which had to be maintained, any rider failing to maintain this being automatically eliminated To differentiate further between the competitors, points were given for early arrival, but these were only of minor importance.

The first stage of 197 miles from Paris to Dijon proved trying for machines and riders. To avoid delay the start was given well outside the city of Paris, but the road surface proved to be very bad for the first hundred miles, and heavy rain, hail, and a gale of wind made the going exceedingly hard.

From Dijon into Lyons, a distance of 184 miles, was another hard stage, with several miles of *pavé* into the Silk City which made it impossible for a rider who had lost time to regain anything at the end.

### Better Weather Conditions.

Down the Rhone Valley, from Lyons to Avignon, a distance of 139 miles, was marked by brilliant sunshine, which came as a welcome compensation after the rain and cold of the first two days. Part of this road was excellent, and some was terrible. The easiest stage was the 164 miles from Avignon into Nice. With weather such as can only be found in the South of France in the month of March, and with excellent roads, the run was made to the mid-day stop at Brignoles without incident, and the afternoon journey over the Esterel was delightful. The climb through gorgeous scenery called for a lot of attention, while the run down the opposite side to Cannes had to be undertaken with caution by reason of the innumerable turns, but the surface being perfect, it was much preferred to the rough roads of the North.

### 25 m.p.h. Average.

Under the rules, the same average of twenty-five miles an hour had to be maintained by the motor-assisted bicycles and the scooters as by the 1,000 c.c. solo machines. The error of this was revealed by the great difficulty the small machines experienced in keeping to schedule. On two occasions it was decided to extend the time by one hour in order to make it possible for these little machines. to remain in the trial.

Even with this concession, only two motor-assisted bicycles—a Griffon, ridden by Baudelaire, and an Evans, handled by Trouche, finished within the time limits. Durand's Monet-Goyon scooter finished without penalisation, but a second machine of this make had to drop out.

The following were successful:

250 c.c. SOLO.

1. Alger (Terrot).
2. Clech (Motosolo).
3. Vachey (Terrot).
4. Dagorno (Moto-Bijou).
5. Berte (Moto-Bijou).

500 c.c. SOLO.

1. Naas (A.B.C.).
2. Borgotti (A.B.C.)
3. Chappaz (Sunbeam).
4. Zind (Motosacoche).
5. Pinney (Triumph).
6. Cuzeau (Terrot).

750 c.c. SOLO.

1. Rolly (A.B.C.).
2. De Neuville (Triumph).
3. Vattier (B.S.A.).
4. Vincotte (B.S.A.).

Two Motosacoche machines, ridden by Robert and Lapallud, finished with clean scores in the 1,000 c.c. solo class, and Guiguet on an Orial was the only one out of three 600 c.c. sidecars of the same make to reach the finishing point.

1,000 c.c. SIDECAR.

1. Verdy (Harley-Davidson)
2. Gex (Motosacoche).
3. Porci (Harley-Davidson).
4. Wood (B.S.A.)

### Few British Riders.

This year comparatively few English riders took part in the trials, although English machines with French riders were fairly well represented. In the mountains between Bourg and Lyons, Wood overturned with his B.S.A. sidecar, but the machine suffered no damage of importance, and came into Nice without the loss of points.

Immediately after arrival all the motor cycles were placed in a special exhibition hall, and there remained on view for four days.

(Left.) The Terrot team of French lightweights, two of which completed the journey within the time limits. (Right.) A motor scooter rider, Durand (Monet-Goyon), who finished without penalisation is shown in the centre of the right-hand group.

## SATURDAY'S BIG TRIAL.

NEXT Saturday's big Midland event, the Victory Cup Trial, has attracted 218 entries.

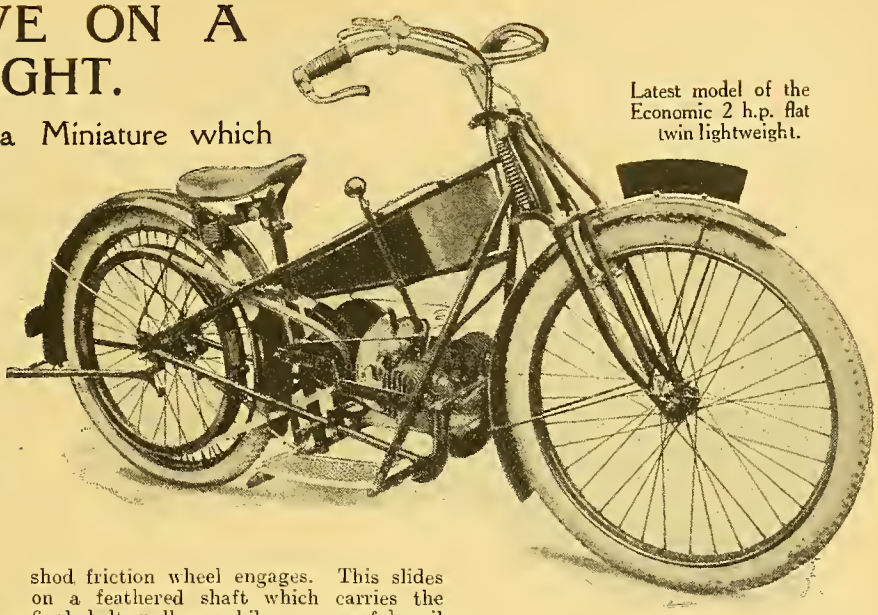
Starting at the works of the James Cycle Co., at Greet, Birmingham (first two men away at 8.1 a.m.), the route covers much new ground, but never gets far away from the starting point. For the benefit of those who desire to watch the performance of the competitors, the approximate times of the vanguard at various points of interest are appended:

Swan's Hill, 8.19 a.m.
Gravel Pit Hill, 8.24 a.m.
Bromsgrove.
(Acceleration test; venue not decided.)
Hagley Wood Hill, 9.15 a.m.
Cleut.
Holycross
Harplebury.
Stourport.
Noah's Ark Hill, 10 a.m.
Buckridge.
Clow's Top, 11 a.m.
Bickbrook.
Flagstaff Hill, 11.45 a.m.
LUNCH: The Hundred House, 12.1 p.m. (one and a half hours).
Tedstone Delamare.
Knightwich.
Alfrick.
Sandy Lane, 2.5 p.m.
Suckley Hills.
Mill Lane Hill, 2.45 p.m.
Cradley
West Malvern.
Crost's Hill.
Malvern Link
Droitwich.
Bromsgrove
Rubery
Beacon Hill, 3.50 p.m.
FINISH: Austin Works, 4 p.m.

Thus the last man should finish well before lighting-up time.

# FRICTION DRIVE ON A LIGHTWEIGHT.

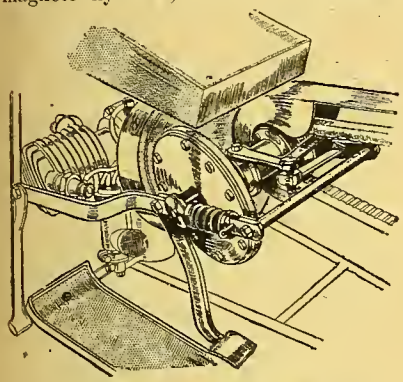
## Redesigned Transmission on a Miniature which made its Debut at Olympia.



Latest model of the Economic 2 h.p. flat twin lightweight.

IN the recently introduced 2 h.p. lightweight Economic motor cycle there is a good deal to attract those who want a small, handy machine. Since the Show in November this miniature has undergone several changes. The flat twin two-stroke engine (52.5 × 38.5 mm. = 165 c.c.) is now placed across the frame, the cylinder heads are bolted to the sub-frame, which carries engine and countershaft, and a further stay is connected from the crank case to the front transverse member of the frame.

A friction disc has been bolted to the magneto flywheel, with which a Fibrax-shod friction wheel engages. This slides on a feathered shaft which carries the final belt pulley, while a powerful coil spring serves to keep the friction wheel in close contact with the friction disc, disengagement being effected by means of a heel pedal. There is no reason why the "clutch" operation should not be from the handle-bar by means of a Bowden lever, which can be left permanently in engagement if it is desired to wheel the machine about with the engine at rest.



Details of the variable gear friction drive.

The action of this clutch pedal is to move the friction wheel about $\frac{1}{16}$in. away from the disc, and, of course, as soon as this is done the power is disconnected from the road wheels, and the friction wheel is also free to slide across the face of the friction disc, thus varying the gear ratios, which range between 6 and 19 to 1.

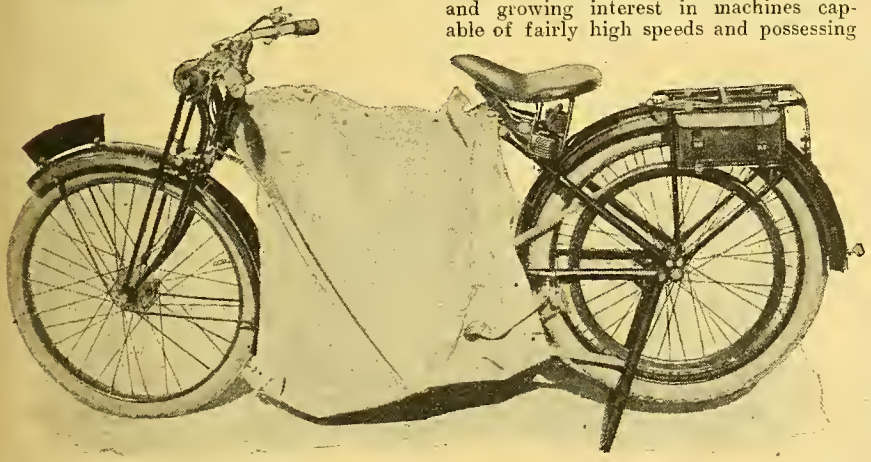
The final model will be fitted with Druid forks, a front wheel rim brake, and a belt rim brake on the rear wheel. The rider's comfort has been well studied, and 26 × 2¼in. Avon tyres are fitted.

Sold at £34, and weighing 110lb., the little five-speed Economic should be a very attractive proposition. Economic Motors, Ltd., 62, East Castle Street, London, W.1, are the manufacturers.

# THE BRUSSELS SHOW.

## Belgian, French and British Machines Staged in One Exhibition. Motor-Assisted Bicycles a Feature

MOTOR cycle manufacture in Belgium is confined to a limited number of makers, and the nature of the roads does not tend to the almost universal use of motor cycles which is apparent in this country. Nevertheless, there is a steady and growing interest in machines capable of fairly high speeds and possessing good road-holding and vibration absorbing qualities.

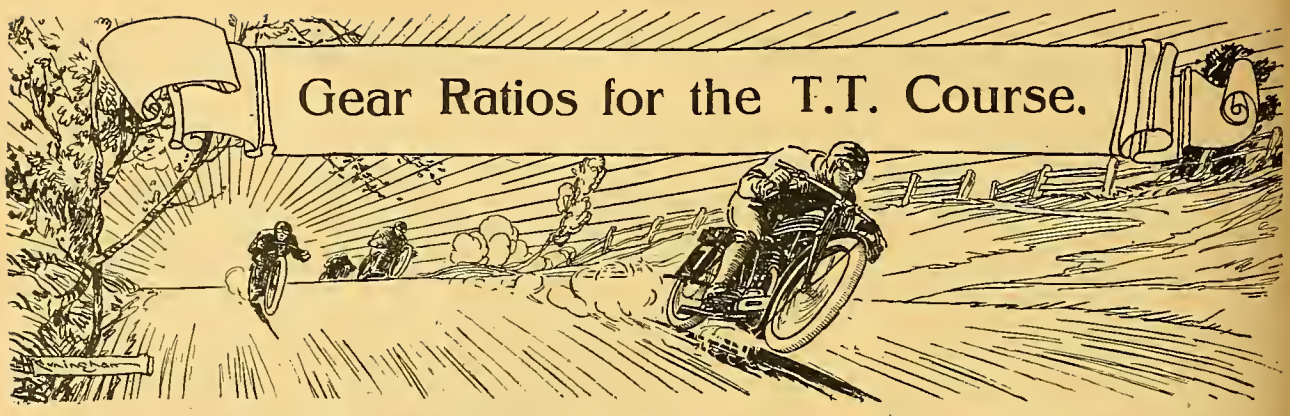


JUST AS YOU CAN BUY! A stock 2¾ h.p. O.K. Junior, which competed in yesterday's A.C.U. trial, sealed in an ex-army ground sheet. The cover envelopes the whole of the mechanism and practically every eyelet is sealed; no vital part of the machine can be touched and yet it can be conveniently wheeled from place to place.

A representative display of machines was recently staged in Brussels in a former ducal palace, and it included the principal manufactures of Belgium and France, together with a number of the leading British machines; unfortunately the construction of the building caused many exhibits to be scattered in small rooms and corridors.

### Motor-Assisted Bicycles.

Generally speaking the number of motor-assisted bicycles was the most noticeable feature of the show, the power in most cases being provided by a miniature engine of 1 or 1½ h.p. Among the bigger machines it is obvious that 6 or 8 h.p. models are preferable in Belgian eyes, and 28in. × 3in. or 27in. × 3½in. tyres and heavy frames are in demand. The Jeecy-Vea, a machine produced in Brussels, is outstanding for its finish, but the British machines which were shown were mostly at the forefront in this respect. Cycle cars, chiefly of French make, are well represented, and there appears to be considerable development in this class of vehicle.



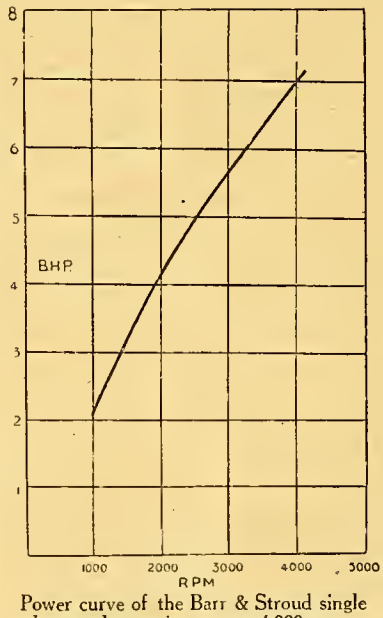
# Gear Ratios for the T.T. Course.

## Some Notes on the Importance of a Careful Selection of Ratios to Suit the Engine.

IT is a well-known fact that there is one speed, and one speed only, at which a petrol engine will give its greatest horse-power. This speed is not the same in every make of engine nor even in every individual engine of the same make and size.

A motor cycle engine owes its capacity for producing a large power output principally to its ability to revolve at a very high speed, but this is not the only thing to be taken into consideration. If it were so the highest possible speed of the engine would be also the speed at which it gave out its highest power. In actual practice the power curve rises quickly with the speed up to a certain point, then it begins to rise more slowly, and soon after reaching its critical speed it begins to drop again.

It is the ambition of designers to produce a power curve which shall approximate as nearly as possible to a straight line, and in this they have been wonderfully successful up to a certain point, but no one has yet produced an engine of which the power curve continues to rise right up to the extreme limit of its speed when running light.




Power curve of the Barr & Stroud single sleeve valve engine up to 4,000 r.p.m.

### Mean Effective Pressure.

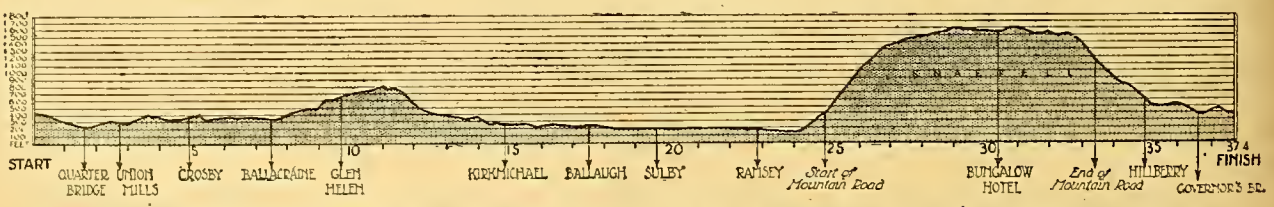
This is because r.p.m., though immensely important, are not the only *desiderata* which have to be considered in the design of a petrol engine. The mean effective pressure, sometimes known as $\eta$ (eta) P. or M.E.P. must also be taken into account, and when the engine speed increases beyond a certain point the M.E.P. begins to fall off until presently the extra power gained by the increased "revs." is more than counterbalanced by the falling off of the pressure on the piston. The cause of this is the impossibility of getting a full charge of gas into the cylinder in the very limited time during which the inlet valve is open.

It is possible to increase the mean effective pressure at high speeds by enlarging the induction passages and inlet valves, and the power curve of the Barr and Stroud engine is a very excellent one largely because the inlet and exhaust ports open very quickly, and when open are of large area in proportion to the size of the engine.

### Maintenance of Power.

For touring purposes a slight falling off of power under certain conditions of road and gradient does not very much matter so long as the rider has sufficient power at his disposal to climb the steepest hills at a reasonable pace and to indulge in an occasional speed burst when a suitable opportunity occurs. It is very seldom that a motor cyclist on tour keeps his throttle wide open for many minutes at a time or even desires to do so.

In the Tourist Trophy races, however, a different set of conditions is to the fore; the laws are, some of them, in abeyance for the time. An open throttle is then the rule rather than the exception and, other things being equal, the engine that maintains the




Contour of the T.T. course. It will be seen there is a rise to 1,600 ft. in five miles between Ramsey and the Bungalow Hotel.

**Gear Ratios for the T.T. Course.—**

greatest power will be successful. We have already seen that the extreme power output necessitates the maintenance of a certain engine speed which differs in different engines. This can only be done to perfection by the provision of an infinitely variable gear and a very skilful use of it.

Now, although a machine so fitted has won the T.T., this type of gear and transmission has lost some of its popularity; chain drives were very much in evidence last year, and no doubt will be again this year.

### Choosing the Gears.

When a manufacturer is choosing the gears for the machines, which he purposes to sell to the general public, he is beset with many difficulties. He knows, of course, the power of the engine and the weight of the bicycle, but he does not know the weight of the rider, the nature of the country in which it will be used, the steepest hill that it will be required to climb, nor even whether or not a sidecar will be attached.

With so many unknown quantities the choice of gears must be very much in the nature of a compromise. One of the gears must be low enough to climb practically anything with the machine heavily loaded. This means a really low bottom gear and large steps between the different ratios, say 15, 10, and 5 to 1. An alternative is sometimes allowed which takes the form of a gear box having closer ratios somewhere in the neighbourhood possibly of 10, 7½, and 5 to 1, and this is most certainly an advantage to the sporting solo rider who does not intend to fit a sidecar to his mount.

In the case of the T.T., however, some of these difficulties disappear. The manufacturer knows not only the power of the engine and the number of "revs." per minute at which it will develop its greatest horse-power, but he knows also the weight of the rider, the course over which the machine has to run, and the speeds which he wishes to obtain over different parts of the course, and he can therefore proceed to set out his gear ratios accordingly.

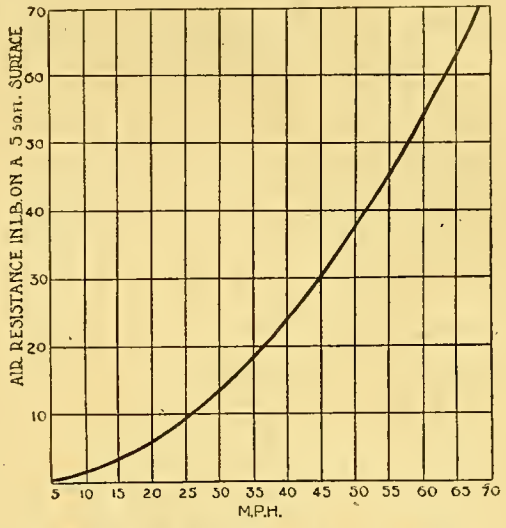
### Some Simple Calculations.

There is in "Motor Cycles and How to Manage Them" a useful and simple formula designed to give the most suitable gear ratio for a touring machine climbing a 1 in 10 gradient, which is as follows:

$$\left(3 + \frac{0{\cdot}05 \times \text{weight of machine and rider}}{\text{b.h.p.}}\right) \text{ to 1.}$$

To give an example, a 4 h.p. motor weighing 250lb. and carrying a 150lb. rider will need a gear of $3+\frac{0{\cdot}05 \times 400}{4}$ to 1, that is 8 to 1, and if the speed be 30 m.p.h. the number of "revs." per minute will be 3,120, provided that 26in. wheels are used, as can be readily obtained by reference to a table of engine "revs." and miles per hour in the same book.

The manufacturer can, however, approach this problem in a more scientific manner. We will suppose that a T.T. rider and his machine oppose about 5 sq. ft. to the resistance of the air and that the Eiffel formula $R = {\cdot}003\,AV^2$ will meet the case, as a motor cycle and its rider are not a good example of streamlining. Combining these in a single formula we get $R=\frac{3}{2}\left(\frac{V}{10}\right)^2$ which is plotted out in the accompanying graph.




Curve showing the air resistance on a surface of 5 sq. ft. to a speed of 70 m.p.h.
$\left(\text{Formula: } R=\frac{3}{2}\left(\frac{V}{10}\right)^2\right)$

Reference to this graph will show that at 60 m.p.h. the air resistance $R=54$lb. The road resistance may be taken as 50lb. per ton, and, if we again assume that the machine and rider weigh 400lb., this works out to nearly 9lb. or a total of 63lb. resistance on a level road. The power needed for this is $\frac{63 \times 88}{550}=$ 10.08 h.p., and if the engine is capable of exerting 15 h.p. at its best speed we have 4.92 h.p. available for hill-climbing. Suppose the gradient to be 1 in $x$, then $x=\frac{88 \times 400}{4.92 \times 550}=13$, and therefore 1 in 13 may be climbed at 60 m.p.h., and the gear ratio may be determined from the table to which I have referred. Supposing the critical engine speed be 3,900 r.p.m., then a 5 to 1 gear will give the required speed.

On a steeper gradient a lower gear will give a better result although a much steeper hill could be climbed on the 5 to 1 gear. It must be noted that 60 m.p.h. is not necessarily the limit of the machine's speed capabilities on the above gear, for 3,900 r.p.m. is not the limit of engine speed but merely that speed at which the greatest h.p. is developed.

The same sort of reasoning can be applied to the steeper gradients, remembering that here the greater part of the available horse-power will be required for climbing and less for overcoming wind resistance. For instance, when climbing a 1 in 4 ascent at about 40 m.p.h., 11 h.p. is needed for climbing and about 3½ h.p. for overcoming air resistance and tractive effort. On the other hand, about 70 m.p.h. will be the absolute limit of this machine on the level, and this would require a gear of 4.3 to 1. On a down grade the speed might rise to 80 m.p.h. and the engine revs. to upwards of 5,000.

### Stockport and District M.C.

The club is holding a 50-mile reliability run on Saturday, the premier award being the "Fildes" Challenge Trophy.

### East London M.C.C.

All applications for membership of this club should now be made to Mr. R. Van Boolen, 63, Baron Road, Chadwell Heath, London.

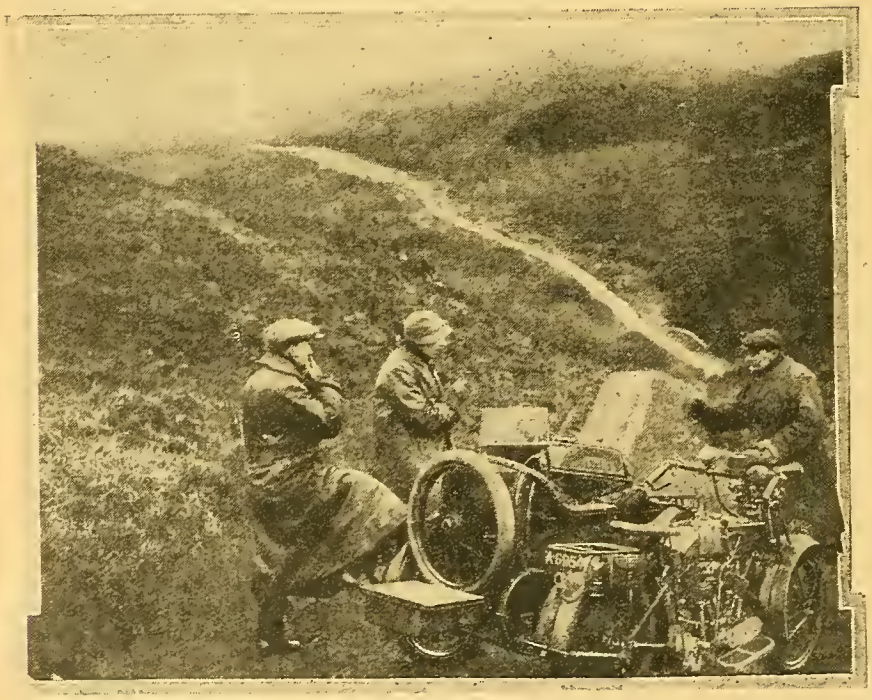
### West Kent M.C., Canterbury and District M.C.C. and Rochester M.C.C.

At a joint meeting of these clubs it was decided to combine for the purpose of holding various competitions during the coming season. The programme of fixtures includes hill climbs, reliability trials, and a race day at Brooklands, thus catering for all tastes.

### Eccles and District M.C.C.

Not often do motor cyclists enjoy punctures, but on the occasion of the recent annual dance of this club the bursting of many balloons provided considerable amusement. The event followed the annual dinner, and, altogether, the evening was a great success.

An appreciative reader of "The Motor Cycle" who appropriately disguised himself as a letter "T" to attend the recent masked ball organised by the Manx Motor Club to assist the fund for the T.T. races.



The trials committee of the Western M.C.C. (Glasgow) has spent much time arranging a route for the club's Two-Day Easter Trial. Much of the course embraces new ground. Mr. W. N. Simpson, president of the club, and two members inspecting one of their "finds."

### Western M.C.C. (Glasgow).

On April 15th and 17th the club will hold a two-day reliability trial. The course is one which has not been included in any previous reliability trial, and is through magnificent loch and mountain scenery.

### Proposed Saltash M.C.C.

Abont a dozen enthusiasts attended a meeting at the Y.M.C.A., Saltash, to form a local club. Those interested should communicate with the acting secretary, Mr. S. H. Squires, 90, Fore Street, Saltash.

### St. Albans and District M.C.C.

With headquarters at St. Peter's Institute, Hatfield Road, St. Albans, a new local club has been formed as above. Runs will be arranged for Tuesdays, Thursdays, and Saturdays. Fuller particulars may be obtained from the hon. secretary, Mr. A. Branfield, "York House," 1, Approach Rd., St. Albans.

### Larkhall and District M.C.C.

At the annual general meeting the office-bearers for 1922 were appointed as follows:—President, Mr. John Ireland, Longlea, Netherburn; vice-president, Mr. Robt. Brown, Skellyton Farm, Larkhall; captain, Mr. Robert Thomson, Cherryhill, Larkhall; vice-captain, Mr. Robert Kirkwood, Hillsview, Larkhall; secretary, Mr. W. R. Gold, Hareleeshill, Larkhall. A committee of ten was also appointed.

### Eastern Counties M.C.

Club secretaries and others interested are asked to note that at the annual general meeting Mr. J. W. Percival, 5, Ruby Road, Walthamstow, E.17, was appointed the secretary of the club. The club was founded by him and others in 1914 as a social body, the only stipulation being that for membership one is not a professional competition rider or a direct representative of the trade for advertising purposes. Lady members are also admitted.

### Cardiff M.C.C.

On Monday of last week a very successful general meeting was held at the club's new headquarters, the Motor House, Wood Street. Several new members were enrolled, and a comprehensive programme of events was arranged for the season 1922. Owing to the number of applications from members whose half-day is Wednesday, for events to suit them, a "Wednesday Sports Committee" was appointed, under the supervision of Mr. E. R. Mitchell, hon. sports organiser, 29, Llanfaen Road, Canton, Cardiff.

### Waterloo and District M.C.C.

A club, as above, has been formed in Waterloo, near Liverpool, for motor cycles and light cars. Communications should be addressed to Mr. G. Marmion, Rossie, Crosby Road, Waterloo, Liverpool.

### Burton M.C. and L.C.C.

*Broken gudgeon* fish, biscuits (*Palmer Cord*), and cheese (*U-nead-it*) were among the items on the menu of the recent annual dinner at the Queen's Hotel; the Mayor of Burton took the chair in the absence of Col. John Gretton, M.P.

### North Cheshire M.C. and L.C.C.

At a recent meeting of the members it was decided that a slight alteration be made in the name of the club, the title to be as above. Further fixtures in the way of runs and contests are to be arranged, and there is every prospect of the club having a successful season.

### Wellingborough, Rushden, and District M.C.C.

There was a good attendance, which included members of the Peterborough Club, at a recent meeting at the Exchange Hotel. The hon. secretary (Mr. W. A. Fathers) presented his annual report, which, he said, was one of which any club might be justly proud. He also introduced the matter of the formation of a county club, and explained that considerable feeling was in favour of such a step.

### Western Centre A.C.U.

Followed by the annual dinner, the annual general meeting was held at the Plough Hotel, Cheltenham, on the 4th inst. The usual routine was gone through, and officers were elected to the Centre Board for 1922.

About eighty members and friends attended the dinner, Mr. C. T. Pearce, president, being in the chair, supported by Major Dixon Spain, Major Vernon Brook, and the officers of the Western Centre Board.

### Essex County and Southend A.C.

Deplorable weather attended the opening paperchase on the 4th inst., but the majority voted against postponement.

M. Cotgrove (3½ Douglas) and G. Duncan (3 A.B.C.) were first and second respectively.

### Ilford M.C.C.

A half-day trial will be held on April 1st. The course, entirely in Essex, will be three laps of a twenty-mile route, starting and finishing at Abridge. Acceleration, slow running, and easy starting tests are included. Further particulars may be obtained from the competition secretary, Mr. A. E. Sweetingham, 25, Christchurch Road, Ilford.

### Ilkley M.C. and L.C.C.

With the elimination of the present sections into which the wide area covered is divided, a distinct change in the future policy of the club was decided upon at the annual meeting held in the Lister's Arms Hotel, Ilkley, on Monday, the 27th ult. The section system has been carried on for two years, but it has been realised for some years that it was not working out as successfully as had been hoped.

Mr. J. N. Longfield, who presided, in introducing this subject, said he was the one responsible for the idea of forming the club into districts, for he, and the committee at that time, had thought that it would lead to greater keenness in the competitions, and, by establishing district secretaries, would relieve the general secretary of much of his work. In practice, after two years' trial, they found that the system had not achieved either of these objects. Some of the district secretaries had worked very hard as members of the committee, others had not worked at all, and they had come to the conclusion that the only way to continue the club successfully was to get back to the old idea of a single club and a working committee which would do the work.

A proposal to return to the old system, made by Mr. G. Clapham, and seconded by Mr. K. Dawson, was only carried after a good deal of discussion.

### Ealing and District M.C.C.

The dates of the London-Holyhead Trial have been definitely fixed as April 21st and 22nd. This event will be open to any member of the South-eastern Centre A.C.U.

### Derby and District M.C.

An appreciative audience of nearly 200 was present at the Technical College on Tuesday, the 28th ult., to hear a lecture by Mr. R. Smurthwaite, of Binks and Co., Eccles, on "Carburation," Mr. R. W. Reid, O.B.E., M.I.Mech.E., occupied the chair.

### Wallington and District M.C. and L.C.C.

On Saturday next a half-day sporting trial will be held, starting from the Triangle, Wallington, at 2.30 p.m. Entries must be received by the trials secretary, Mr. Arthur Houghton, Woodcote Parade, Wallington, accompanied by an entrance fee of 5s., not later than to-morrow.

### Bradford M.C. and L.C.C.

Over one hundred members were present at the very cordial general meeting held at the Belle Vue Hotel, Bradford, on the 2nd inst., the President (Mr. J. E. Fearnley) occupying the chair.

Mr. T. G. Bullus (trials hon. secretary) briefly outlined the competition programme for 1922, which will comprise all the popular events, including the usual freak hill-climb at Rosedale Abbey Bank. Miss Pickles (Morecambe) will present a cup to be won outright for lady riders only in the annual London and back run, and the club will offer at least ten other trophies, to be won outright, all presented by members. A special effort will be made to cater for lady motor cyclists; the club has fourteen at present, and two, Mrs. Appleton (Bradford) and Miss D. B. Sayles (Barnsley), were enthusiastically added to the committee. The Hon. Treasurer (Mr. W. J. R. Lee) presented a balance sheet showing £300 credit, and, needless to say, all the officials, including the committee, were unanimously re-elected *en bloc*.

As this picture of the start of a recent Midland run proves, blustering March gales do not prevent the keen member from attending his club's opening event.

# MOTOR CYCLES FOR ALL PURSES.

## Second-hand Prices Arranged in Order of Value. "Bargain Sale Figures" Popular: A Curious State of Affairs.

POTENTIAL buyers of motor cycles will be interested in the following table of second-hand prices culled from the classified advertisements in *The Motor Cycle* of last week. Machines are available at prices ranging from £10 to £210, and by glancing at the subheads the reader may find out just what type (and date) of vehicle is available at any predetermined figure.

Most remarkable is the way in which practically *all* the machines priced at over £50 are offered at more than £5 in excess of round figures. Thus £55, £56, £57, £58, etc., are common, but not £51, £52, £53, etc. This would indicate that the seller who thinks his machine is worth, for example, £52, either brings it down to £50, or £48-£49, which, at a glance, looks much less, or up to £58-£59, which does not seem much more!

### £10 to £20.

| | | |
|---|---|---|
| £10 | | 3½ h.p. Minerva. |
| £12 | | 3½ h.p. Rex. |
| £16 | 1913. | 2¾ h.p. Enfield Twin. |
| £17 | 1920. | 1¾ h.p. J.E.S. |
| £18 | | 3½ h.p. Triumph. |
| £18 | | 3½ h.p. Triumph. |
| £18 | 1912. | 3½ h.p. Brown. |
| £20 | | 5-6 h.p. F.N. |

### £21 to £30.

| | | |
|---|---|---|
| £22 | 1916. | 2¼ h.p James. |
| £23 | 1911. | 3½ h.p. Triumph. |
| £25 | 1916. | 2¾ h.p. Bown-Villiers. |
| £25 | | 3½ h.p. Bat-Jap. |
| £27 | 1915. | 2¾ h.p. Allon. |
| £28 | 1915. | 2¾ h.p. Ixion. |
| £28 | 1920. | 2¾ h.p. Gamage. |
| £28 | 1912. | 5-6 h.p. Rex. |
| £29 | | 6 h.p. Matchless sc. |
| £29 | | 3½ h.p. Brown. |
| £30 | 1917. | 2¼ h.p. Royal Ruby. |
| £30 | 1914. | 3½ h.p. B.S.A. |
| £30 | 1920. | 2¼ h.p. Enfield. |
| £30 | | 4 h.p. Alldays-Matchless. |

### £31 to £40.

| | | |
|---|---|---|
| £32 | 1921. | 2¼ h.p. Verus. |
| £32 | 1920. | 2¼ h.p. Hobart. |
| £34 | 1920. | 2¼ h.p. Levis. |
| £35 | 1917. | 3½ h.p. P. & M. |
| £35 | 1921. | 2¾ h.p. Orbit. |
| £35 | 1919. | 2¾ h.p. O.K. |
| £35 | 1921. | 2¼ h.p. Ner-a-Car (shop-soiled). |
| £35 | 1913. | 5-6 h.p. Rex sc. |
| £35 | 1920. | 2¼ h.p. Enfield. |
| £35 | 1914. | 3¾ h.p. Scott. |
| £37 | 1920. | 2¼ h.p. Levis. |
| £38 | 1920. | 2¾ h.p. Monarch-Jap. |
| £38 | 1913. | 3½ h.p. Humber sc. |
| £38 | 1920. | 2¾ h.p. New Imperial. |
| £40 | 1920. | 2¾ h.p. New Imperial. |
| £40 | 1918. | 3½ h.p. P. & M. |
| £40 | 1914. | 3½ h.p. Precision sc. |
| £40 | 1921. | 2¾ h.p. Sparkbrook. |
| £40 | 1913. | 3½ h.p. Triumph. |
| £40 | 1921. | 2¼ h.p. Saltley. |
| £40 | 1921. | 2¾ h.p. Hobart. |
| £40 | 1914. | 7-9 h.p. Indian. |

### £41 to £50.

| | | |
|---|---|---|
| £42 | 1920. | 2¼ h.p. Excelsior. |
| £45 | | 3½ h.p. Ariel. |
| £45 | 1916. | 3½ h.p. Rudge-Multi. |
| £45 | 1914. | 4 h.p. Triumph sc. |
| £45 | | 3½ h.p. Ariel sc. |
| £46 | 1921. | 2¾ h.p. Excelsior. |
| £46 | 1921. | 2¼ h.p. Enfield. |
| £48 | 1920. | 2¾ h.p. Wooler. |
| £48 | 1921. | 2¾ h.p. P. & S. |
| £48 | 1918. | 4 h.p. Triumph. |
| £48 | 1920. | 2¾ h.p. Omega. |
| £48 | 1921. | 2¾ h.p. Levis. |
| £50 | 1919. | 8 h.p. Matchless sc. |
| £50 | 1918. | 3½ h.p. P. & M. |
| £50 | 1918. | 3½ h.p. P. & M. sc. |
| £50 | 1921. | 2¼ h.p. Velocette. |
| £50 | 1916. | 4¼ h.p. B.S.A. |
| £50 | 1918. | 4 h.p. Douglas sc. |
| £50 | 1919. | 7-9 h.p. Indian. |
| £50 | 1921. | 2¾ h.p. Allon. |

### £51 to £60.

| | | |
|---|---|---|
| £55 | 1921. | 2¾ h.p. New Imperial. |
| £55 | 1914. | 8 h.p. Zenith sc. |
| £55 | 1921. | 2¼ h.p. Velocette. |
| £55 | 1919. | 7-9 h.p. Indian. |
| £55 | 1920. | 2¾ h.p. Verus-Blackburne. |
| £55 | 1914. | 4 h.p. Triumph sc. |
| £55 | 1918. | 4 h.p. Triumph sc. |
| £55 | 1922. | 2¼ h.p. Metro-Tyler. |
| £56 | 1916. | 4¼ h.p. B.S.A. |
| £57 | 1921. | 2¾ h.p. New Imperial. |
| £58 | 1921. | 3 h.p. Beardmore-Precision. |
| £58 | 1919. | 4 h.p. Triumph. |
| £60 | 1921. | 2¾ h.p. Massey-Arran. |
| £60 | 1921. | 2¾ h.p. Edmund. |
| £60 | 1916. | 4¼ h.p. B.S.A. sc. |

### £61 to £70.

| | | |
|---|---|---|
| £64 | 1920. | 3¼ h.p. P. & M. sc. |
| £65 | 1919. | 3¼ h.p. Rover. |
| £65 | 1921. | 3¼ h.p. P. & M. |
| £65 | 1921. | 3¼ h.p. Norton single speed. |
| £65 | 1920. | 5-6 h.p. Zenith. |
| £65 | 1919. | 4 h.p. Triumph. |
| £65 | 1921. | 3¼ h.p. Rudge-Multi. |
| £65 | 1916. | 6 h.p. Enfield sc. |
| £65 | 1918. | 4 h.p. Douglas sc. |
| £65 | *1919. | 7-9 h.p Indian. |
| £65 | 1916. | 5-6 h.p. Indian sc. |
| £65 | 1920. | 4¼ h.p. B.S.A. |
| £65 | 1921. | 4 h.p. Rex-Blackburne. |
| £65 | 1922. | 3 h.p. Beardmore-Precision. |
| £68 | 1917. | 3½ h.p. Rover sc. |
| £68 | 1919. | 4 h.p. Norton. |
| £69 | 1920. | 3 h.p. A.B.C. |
| £69 | 1918. | 4 h.p. Triumph sc. |
| £70 | 1921. | 3½ h.p. Lea-Francis. |
| £70 | 1920. | 4 h.p. Norton. |
| £70 | 1920. | 4 h.p. Quadrant sc. |
| £70 | 1917. | 3½ h.p. Sunbeam. |
| £70 | 1916. | 3½ h.p. Sunbeam sc. |
| £70 | 1920. | 3 h.p. A.B.C. |
| £70 | 1920. | 7-9 h.p. American X. |

### £71 to £80.

| | | |
|---|---|---|
| £72 | 1918. | 8 h.p. Royal Ruby. |
| £72 | 1920. | 5-6. h.p. Zenith. |
| £73 | 1919. | 4 h.p. Triumph sc. |
| £75 | 1917. | 6 h.p. Enfield sc. |
| £75 | 1920. | 4 h.p. Blackburne sc. |
| £75 | 1920. | 4 h.p. Douglas. |
| £75 | 1919. | 4¼ h.p. B.S.A. sc. |
| £75 | 1921. | 5 h.p. Zenith. |
| £75 | 1921. | 6 h.p. Zenith. |
| £75 | 1921. | 2¾ h.p. Edmund. |
| £75 | 1920. | 5-6 h.p. Rover sc. |
| £75 | 1921. | 5-6 h.p. Rudge-Multi sc. |
| £75 | 1920. | 6 h.p. Zenith. |
| £75 | 1915. | 3¾ h.p. Scott sc. |
| £78 | 1920. | 8 h.p. Zenith sc. |
| £80 | 1921. | 4 h.p. Bradbury. |
| £80 | 1917. | 4¼ h.p. B.S.A. sc. |
| £80 | 1917. | 6 h.p. Enfield sc. |
| £80 | 1916. | 4¼ h.p. James sc. |
| £80 | 1921. | 3½ h.p. James. |
| £80 | *1920. | 3½ h.p. Lea-Francis. |
| £80 | 1920. | 3½ h.p. Rover. |
| £80 | 1921. | 4 h.p. Quadrant sc. |

### £81 to £90.

| | | |
|---|---|---|
| £84 | 1920. | 3½ h.p. Ariel sc. |
| £85 | *1920. | 3 h.p. A.B.C. |
| £85 | 1918. | 8 h.p. Enfield sc. |
| £85 | 1920. | 3¾ h.p. Scott sc. |
| £85 | 1919. | 4 h.p. Triumph sc. |
| £87 | 1920. | 3½ h.p. Sunbeam. |
| £88 | 1921. | 4¼ h.p. B.S.A. |
| £90 | 1919. | 8 h.p. Matchless sc. |
| £90 | 1920. | 7-9 h.p. Harley-Davidson sc. |
| £90 | 1921. | 4 h.p. Triumph. |
| £90 | 1919. | 3½ h.p. Sunbeam sc. |
| £90 | 1921. | 5 h.p. Zenith. |
| £90 | 1921. | 4¼ h.p. B.S.A. |

* Dynamo Lighting.

### £91 to £100.

| | | |
|---|---|---|
| £95 | 1920. | 4 h.p. Douglas sc. |
| £95 | 1921. | 3½ h.p. Scott. |
| £98 | 1921. | 4 h.p. Douglas sc. |
| £98 | 1922. | 3½ h.p. Zenith-Bradshaw. |
| £98 | 1920. | 8 h.p. New Imperial sc. |
| £98 | 1921. | 3½ h.p. Norton. |
| £99 | 1921. | 3½ h.p. Norton sc. |
| £100 | 1920. | 5-6 h.p. Zenith sc. |
| £100 | 1920. | 4 h.p. Triumph sc. |
| £100 | 1920. | 3¾ h.p. Scott sc. |
| £100 | 1920. | 3½ h.p. Sunbeam sc. |
| £100 | 1920. | 6 h.p. A.J.S. sc. |

### £101 to £110.

| | | |
|---|---|---|
| £105 | *1921. | 4 h.p. Triumph sc. |
| £105 | 1921. | 3½ h.p. Sunbeam sc. |
| £105 | 1919. | 6 h.p. Bat-Jap sc. |
| £110 | 1920. | 5-6 h.p. Rover sc. |
| £110 | 1921. | 3½ h.p. Sunbeam. |
| £110 | 1920. | 5 h.p. Brough sc. |

### £111 to £120.

| | | |
|---|---|---|
| £115 | 1920. | 6 h.p. A.J.S. sc. |
| £115 | 1921. | 3½ h.p. Sunbeam. |
| £115 | 1920. | 8 h.p. Zenith sc. |
| £115 | 1920. | 6 h.p. A.J.S. sc. |
| £115 | 1916. | 6 h.p. A.J.S. sc. |
| £115 | *1920. | 8 h.p. Matchless sc. |
| £120 | 1920. | 8 h.p. Matchless sc. |

### £121 to £130.

| | | |
|---|---|---|
| £125 | 1921. | 5-6 h.p. Martinsyde sc. |
| £125 | *1921. | 8 h.p. Enfield sc. |
| £125 | 1921. | 4¼ h.p. B.S.A. sc. |
| £125 | 1920. | 6 h.p. A.J.S. sc. |
| £128 | 1921. | 4 h.p. Norton sc. |
| £130 | *1920. | 7-9 h.p. Harley-Davidson sc. |
| £130 | 1922. | 5-6 h.p. Martinsyde sc. |
| £130 | 1919. | 4 h.p. Triumph sc. |
| £130 | *1920. | 8 h.p. Matchless sc. |

### £131 to £140.

| | | |
|---|---|---|
| £135 | 1921. | 4 h.p. Norton sc. |
| £135 | *1920. | 6 h.p. A.J.S. sc. |
| £135 | *1921. | 8 h.p. Enfield sc. |
| £135 | 1921. | 6-7 h.p. B.S.A. sc. |
| £135 | 1921. | 8 h.p. Enfield sc. |
| £140 | 1920. | 6 h.p. A.J.S. sc. |
| £140 | 1920. | 6 h.p. A.J.S. sc. |
| £140 | 1921. | 8 h.p. Matchless (2-seater) sc. |
| £140 | *1920. | 6 h.p. A.J.S. sc. |
| £140 | *1920. | 6 h.p. A.J.S. sc. |

### £141 to £150.

| | | |
|---|---|---|
| £145 | *1920. | 7-9 h.p. Harley-Davidson sc |
| £150 | 1921. | 4 h.p. Triumph sc. |
| £150 | *1921. | 10 h.p. Henderson sc. |
| £150 | *1921. | 8 h.p. Enfield sc. |

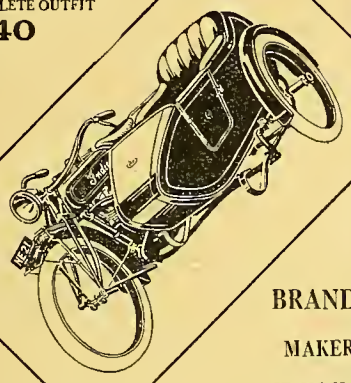
### £151 and upwards.

| | | |
|---|---|---|
| £160 | *1921. | 8 h.p. Zenith. |
| £160 | 1921. | 6-7 h.p. B.S.A. sc. |
| £160 | *1921. | 6-7 h.p. B.S.A. sc. |
| £180 | 1921. | 7 h.p. A.J.S. sc. |
| £210 | *1921. | 8 h.p. Sunbeam sc. |

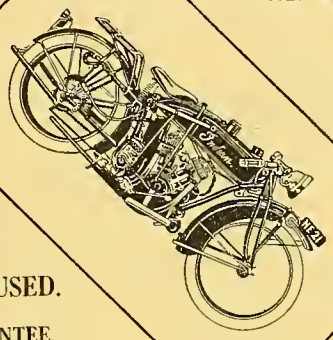
# Models of Economy

## 1921 INDIANS

1921 7 H.P. POWERPLUS INDIAN STANDARD MODEL, FULL ELECTRICAL EQUIPMENT, INDIAN DE LUXE SIDECAR, COMPLETE OUTFIT
**£140**



1921 7 H.P. POWERPLUS INDIAN STANDARD MODEL, FULL ELECTRIC EQUIPMENT
SOLO **£110**

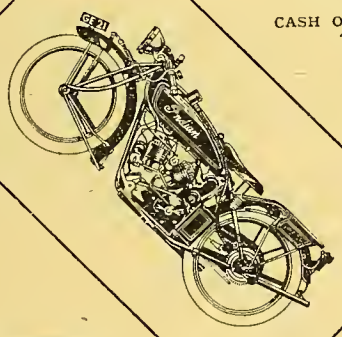


BRAND NEW & UNUSED.

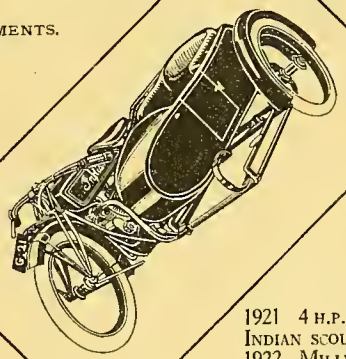
MAKER'S FULL GUARANTEE.

IF YOU WOULD HAVE ONE OF THESE BARGAINS WE ADVISE EARLY APPLICATION, AS OWING TO THE GREAT DEMAND THIS OFFER WILL BE WITHDRAWN AT AN EARLY DATE.

CASH OR DEFERRED PAYMENTS. TRADE SUPPLIED.



1921 4 H.P. POWERPLUS INDIAN SCOUT MODEL.
SOLO **£98**
WITH FULL ELECTRICAL EQUIPMENT, **£110**



1921 4 H.P. POWERPLUS INDIAN SCOUT MODEL AND 1922 MILLFORD JUNIOR SIDECAR. COMPLETE OUTFIT
**£120**
WITH FULL ELECTRICAL EQUIPMENT, **£132**

# GODFREY'S

**208, GREAT PORTLAND STREET, LONDON, W.1**

Telegrams: "Gotrabiki, London." 'Phone: Langham 1300 (2 lines.)

# If your thoughts are turning to a small car

**All types of small and economical cars** are fully and prominently dealt with in 'The Autocar.'

Not only does it give detailed illustrated descriptions of new small cars, and accounts of road tests of both new and established models, but also hints on running and maintenance, costs of running and upkeep, and news of general interest to owners or prospective buyers of light cars.

"Small Car Talk" by "Runabout" —a special article by a well-known private owner appears each week.

**you cannot do better than study the pages of**

The Autocar
FOUNDED 1895

*The Leading Motoring Journal*

"The Autocar" is the *complete* journal; it embraces every phase and aspect of motoring, dealing in an equally thorough manner with light, medium and large cars, each issue being attractively illustrated.

**EVERY FRIDAY - - 4d.**
*OF ALL NEWSAGENTS.*

PROPRIETORS: ILIFFE & SONS' LTD., DORSET HOUSE, TUDOR STREET, LONDON E.C.4

# DOME
SPARK TWIN PLUGS

**Guaranteed not to OIL UP in any circumstances.**

TESTED AND PROVED TO GIVE GREATER POWER AND SPEED.

*Mr. New, of 77, Anson Rd., Gt. Yarmouth, writes:—*

"No sign of four-stroking on my two-stroke machine. I should like every motor cyclist to know about your plug."

IT WILL PAY YOU THEREFORE TO TRY THIS PLUG WITHOUT DELAY.

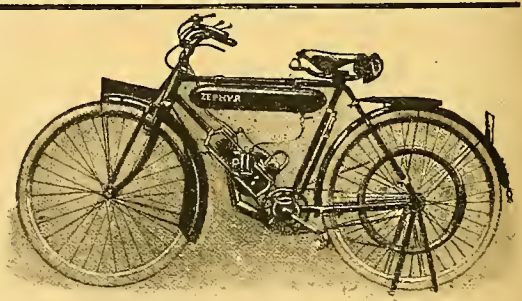
*Obtainable of Agents in many districts or write direct to—*

Price 5/6 each.

**ROTH & WEST,**
67, COWLEY RD.,
LONDON, S.W.14.

# THE "ZEPHYR" Motor Cycle

The King of Lightweights. - - - - - Weight under 70 lbs.
Strong. - Elegant. - Absolutely reliable. - Fully guaranteed.




**PRICE 25 GUINEAS**

Can be used as Pedal Cycle or Motorcycle at will. Will carry a rider of average weight up all but freak hills without pedalling, and do over 20 miles per hour on level if required.

The retention of Pedal gear gives the rider absolute confidence in traffic and when negotiating awkward corners.

Chain cum Belt drive. Ball Bearings to Crankshaft and Countershaft. Engine 1¾ h.p. two-stroke, the power of which is ample for the purpose.

"*The Proof of the Pudding is in the eating*" says "The Motor Cycle" of March 2nd, 1922, in describing a novel Tricar which has been propelled "*8,000 no trouble miles*" by one of these wonderful little Engines. Mr. H. A. D. Joseph of London and his 3 children were the passengers. Mr. Joseph is an ordinary Cyclist, not a professional rider.

SEND FOR LIST TO— **The Small Engines Company**
**131, Coventry Road :: :: Birmingham**
Telegrams .. .. .. .. "Smalleng, Birmingham."




*In answering these advertisements it is desirable to mention "The Motor Cycle."*

*Keep within the law!*

*"Silence is Golden"*

**Adaptable to any H.P. Motor Cycle and Car up to 20 h.p.**

**Send us outside diameter of the Exhaust Pipe.**

# *The* "ARGUS" SILENCER

## for open exhaust pipes

THE patent silencer is made of aluminium, on account of its lightness and heat dispersing qualities.
DELIVERIES can be made 7 days from receipt of order.
Full satisfaction guaranteed or money returned.
Guaranteed no loss of power.

Price **20/-** each *delivered.*

Silence your Engine without loss of power by purchasing one of our Patent Silencers.

*Agents wanted.*

**Copies of Testimonials received *re* PATENT ALUMINIUM "ARGUS" SILENCER.**

"*Re* the Silencer supplied to me some time ago I must say I am more than satisfied with it as I am the possessor of a particularly noisy type of 550 single machine and have previously experimented with numerous silencing arrangements. Except for mechanical noises, valves, c/s chain, etc., when travelling there is no appreciable sound at all, nor does the power appear to be in any way affected. In conclusion I must state I never got better value for my money."

"With reference to the Silencer with which you supplied me I can assure you that it has given every satisfaction. With regard to its silencing powers they are all that could possibly be wished for. The most commendable point is that there is no noticeable loss of power through back pressure."

"I am entirely satisfied with the 'Argus' Silencer you have supplied to me, and your claims as to silencing and elimination of back pressure without loss of power are quite true. The bike runs very well at high speeds—in fact better than with the Standard Silencer as supplied with my machine and there is apparently no back pressure at all. This is rather remarkable and gives much credit to the design, as with so many baffles one would expect inefficient running. The absence of noise is extremely gratifying and I am recommending the 'Argus' to my friends with every confidence." LEICESTER.

"I have fitted your Silencer to a Jap, and up to now it has given me every satisfaction. It has accounted for no loss of power—I should say it has increased the power somewhat, or it seems so. It makes quite an improvement to the machine and I shall certainly recommend it to my friends in the Motor Club. I shall probably give you an order for another Machine which I am overhauling."

LITTLE CHEVERELL.

"Referring to the 'Argus' Silencer that I ordered from you, I now take the pleasure in letting you know that it is everything in the way you claim for it, and I am highly pleased with it, and it is giving every satisfaction. I will recommend to anyone with whom I come in contact."

"HEWORTH COLLIERY."

CROOKES, ROBERTS, RITCHIE & CO., LTD., *Owners of*

**W. J. RITCHIE & Co., Freedom Works, John Street, SHEFFIELD**

# THE MOTOR CYCLIST'S "MECCA"

in THE COLMORE CUP TRIAL—Namely

**BUSHCOMBE HILL**, which WAS CLIMBED by

**TWO STANDARD CALTHORPE LIGHTWEIGHTS** (with 3-Speed Gears.)

For **£36** YOU can BUY ONE, and DO the SAME,

or with 2-Speed Gear **£45**.

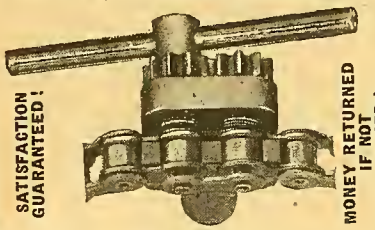
*OTHER MODELS*

| | |
|---|---|
| 3 h.p. Calthorpe 2-Stroke, 2-Speed | **£60** |
| 3 h.p. Calthorpe 2-Stroke Combination de Luxe | **£85** |
| 2¾ h.p. Calthorpe J.A.P. 2-Speed | **£65** |

*Made by:*

**THE CALTHORPE MOTOR CYCLE Co., Lion Works, Barn St., BIRMINGHAM**

## "R.S." Dual Chain Rivet Extractor



SATISFACTION GUARANTEED! MONEY RETURNED IF NOT SATISFIED!

*Patent No. 7236/21.*

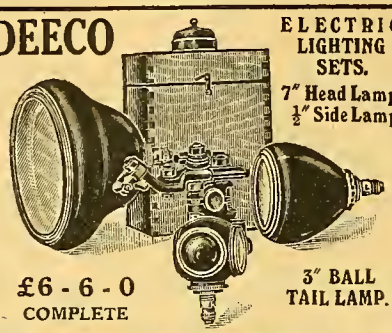
PRICE for ⅜" pitch chains blued finish 8/6 (packing and postage 6d. extra).

*Write for Leaflet.*

Direct from the patentee—

**G. R. SALT,** Motor Engineer, 18, Cherry St., Coventry.

## DEECO



ELECTRIC LIGHTING SETS.

7" Head Lamps
½" Side Lamps

£6 - 6 - 0 COMPLETE

3" BALL TAIL LAMP.

**Dean's Electrical & Engineering Co. Ltd.**
**44, Nottingham Street, Rotherham.**

## AIRMEN'S LEATHER FLYING COATS

CASH WITH ORDER. **65/=** MONEY RETURNED IF DISSATISFIED.

Only 40 left. Cannot be repeated for 4 Times the Price. All Coats have been worn but are in Good Condition.

## CLOTHING BARGAINS

REGULATION TRENCH COAT (Oilskin Inter-Lined) 55/-
" " (Ditto & Fleece-Lined) 70/-
BLUE GABARDINE TRENCH COAT (Wool) 45/-
" " " (Ditto & Inter-Lined) 52/6
DINNER & DRESS SUITS - 60/- to 120/-
LOUNGE SUITS (Second-Hand) 35/- " 80/-
" " " (New & Misfit) 40/- " 90/-

*Cash with Order. Money Returned if Dissatisfied.*

ILLUSTRATED PRICE LIST AND SELF-MEASUREMENT FORM ON APPLICATION.

Gent's Clothing of Every Description, Bought, Sold, or Taken in Exchange.

**MOSS BROS.** ('Phone: Park 4817)
83-5, HIGH ST., NOTTING HILL GATE, & 224, HIGH ROAD, KILBURN, N.W. 6

## "MAGNETOS"

By A. P. YOUNG, A.M.I.E.E.

**A Complete Treatise on Magnetos for Motor Cars, Motor Cycles, and Aeroplanes.**

Price 4/6 Net. By Post 4/10

From ILIFFE & SONS LTD., Dorset House, Tudor St., LONDON, E.C.4, and leading Booksellers.

## TRACING MOTOR CYCLE TROUBLES

A system of locating motor cycle faults *and of remedying them when found.*

Fourth Edition.
**Price - 2/-**
By Post - 2/3.

**From ILIFFE & SONS LTD, Dorset House, Tudor St., London, E.C.4.**

## *To P. & M. OWNERS.*

ALL P. & M. SPARES BY RETURN.
*Immediate delivery of all Models.*
1922 CHATER LEA MACHINES
B. & B. CARBURETTER PARTS
B. & L. DRIP FEED PARTS
BEARDWOOD
P. & M. SPECIALIST.
147, Burlington Street, LIVERPOOL.

*The Place of*

# Engineering Production

**THE future of the British Engineering Industry lies largely in the hand of the young Engineer now training for his life's work.**

For many years Great Britain was the workshop of the world, and in the height of her industrial supremacy the demand for British-made Goods came from all parts of the Globe. Quality was the secret of this success.

In the Industrial World to-day many nations have acquired special proficiency in the production of high class Engineering specialities, and it is essential for the future well-being of the British Engineering Industry that, while quality should be maintained, production costs must be reduced, in order to enable our industry to compete with the Engineering industries of other countries.

It is essential therefore that the British Engineer of to-day should be trained on two parallel lines, i.e., to realise that success comes only from maintaining quality, and to aim at producing that quality at the lowest possible cost.

**The rôle of "ENGINEERING PRODUCTION" is to indicate to the Engineer the best means of producing the highest class of goods at the lowest production cost, and, therefore, this Publication is of great value to the young Engineer.**

**By the assimilation of practical information this Engineer will acquire right ideas respecting modern Works Practice, Administration and Control. Material assistance is rendered him by this Journal in acquiring the right angle from which to look at his work.**

**"ENGINEERING PRODUCTION" is obtainable from all Bookstalls and Newsagents at 6d. weekly.**

*The rate for direct subscription is—United Kingdom 32/6; Abroad 36/10 (Canada 32/6) per annum, post free.*

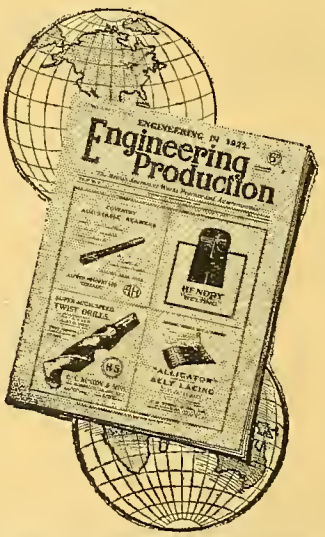
***Write for Specimen Copy, sent free on request.***

*Publishers:* **ILIFFE & SONS LTD., Dorset House, Tudor Street, London, E.C. 4.**

RECENT CONTENTS INCLUDE:

SPECIAL MACHINES FOR INTENSIVE PRODUCTION.
THE COST OFFICE AND ITS RELATION TO PRODUCTION.
GRINDING HARDENED GEAR TEETH.
ORGANISING FOR TOOL PRODUCTION.
AN EFFICIENT WORKS SYSTEM.
A MODERN WORKS POWER PLANT.
DRAWINGS AND PRODUCTION.
FACTORY ILLUMINATION.

## *in The Workshop of the World.*



GET IT AT

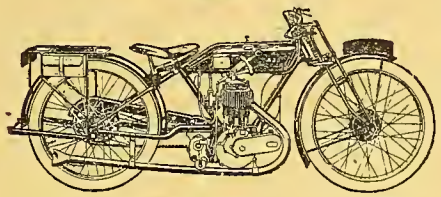
# TAYLORS

## SOLE LONDON AND DISTRICT DISTRIBUTIVE AGENTS FOR

# A·J·S

**EASTER**
**Order now if you wish to motor at Easter. Delay is dangerous.**

**4%**
**We charge only 4% extra for Extended Payments, unless makers stipulate otherwise.**



**A. J. S., 2¾ h.p. Solo .. .. £85**
**A. J. S., 7 h.p. Comb... .. £175**
**A. J. S., 7 h.p. 2-seater Comb. £185**

## NEW 1921 COMBINATIONS.

**SHOWROOM SOILED.**

| | |
|---|---|
| 1921 8 h.p. Zenith comb., clutch model | £145 |
| 1921 8 h.p. Royal Enfield comb. | £125 |
| 1921 5-6 h.p. Raleigh comb. | £145 |
| 1921 3½ h.p. P. & M. comb. | £125 |
| 1921 4½ h.p. Ariel comb. | £120 |
| 1921 2¾ h.p. Wooler (Brooklands Model) solo | £60 |
| 1921 5 h.p. Sports Zenith | £90 |
| 1921/1922 Harley Davidson De Luxe Combination, fully equipped as new | £200 |

**SPECIAL BARGAIN.**

New 2¾ h.p. Zenith Flat Twin, Usual Price £98 10 ..... £88 10

**NEW 1922 MACHINES FOR IMMEDIATE DELIVERY.**

**COMBINATIONS.**

| | |
|---|---|
| Matchless, 8 h.p. Sports | £160 0 |
| P. & M., 4 h.p., 4-speed | £150 0 |
| Enfield, 8 h.p., Standard | £140 0 |
| Enfield, 8 h.p., Dynamo | £158 0 |
| Excelsior, 8 h.p., De Luxe, dynamo | £177 10 |
| Quadrant, 4 h.p., chain drive | £105 0 |
| A.J.S., 2¾ h.p. | £110 0 |
| B.S.A., 4¼ h.p., Model H 2 | £142 0 |
| Triumph, 4 h.p., chain drive | £158 0 |
| Matchless, 8 h.p., Model H | £170 0 |
| Morgan, 8 h.p., W.G. Grand Prix | £180 0 |
| Ariel, 4½ h.p., chain drive | £140 0 |

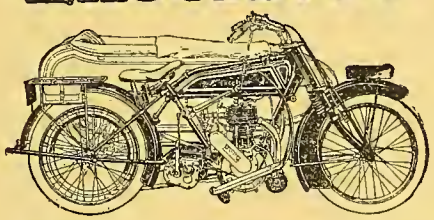
**SOLOS.**

| | |
|---|---|
| Triumph, 4 h.p., all chain | £116 0 |
| Zenith Bradshaw, chain drive | £119 0 |
| Rudge, 3½ h.p. | £77 0 |
| O.K. Junior | £39 18 |
| New Imperial, 2¾ h.p., 3 sp. cl. and k/s | £69 0 |
| Ariel, 3½ h.p. | £87 10 |
| Enfield, 2¾ h.p. | £55 0 |
| Raleigh, 2¾ h.p. | £68 0 |

**CARS.**

| | |
|---|---|
| Bayliss-Thomas, 10 h.p., All-weather Model, 2-seater and dickey | £330 0 |
| Rover, 8 h.p. | £220 0 |
| Rover, De Luxe | £245 0 |
| Belsize Bradshaw, 9 h.p., | £276 0 |
| Lagonda, 11 h.p., 4-seater, All-weather Model | £395 0 |
| Morris Cowley Car, 2-seater, self-starter | £313 19 |
| Morris Cowley Car, 4-seater, self-starter | £357 0 |

# "Excelsior"



| | |
|---|---|
| **EXCELSIOR,** 8 h.p. De Luxe Combination | £185 0 |
| **EXCELSIOR,** 6 h.p. Combination | £133 0 |
| **EXCELSIOR,** 4½ h.p. Big Single Combination | £119 0 |
| **EXCELSIOR,** 2¾ h.p., Blackburne | £75 0 |
| **EXCELSIOR,** 2½ h.p. Sports Model | £39 18 |
| **EXCELSIOR,** 2½ h.p. Sports, 2 speed cl. & k/s | £53 0 |

# DUNELT
TWO-STROKE

**Efficiency, Simplicity, and Economy** sum up the Dunelt, which is a combination designed specially to keep costs low. The 4 h.p. Dunelt 2-stroke makes light of hills. It is simple to drive and easy to keep in trim. The fitments are 3-speed gear, hand clutch and kick-starter, detachable and interchangeable wheels, and roomy coachbuilt sidecar. Supplied complete with spare wheel and tyre

**108** guineas.

**May we give you a trial run.**

*Write for Cash or Easy Payment Terms.*

## CAREFULLY USED MOUNTS.

| | |
|---|---|
| 1921 4 h.p. Douglas and sidecar complete, acetylene lamps and horn | £100 |
| 1916 4 h.p. Douglas and sidecar, acetylene lamps and horn | £80 |
| 1920* 4 h.p. Blackburne and Millford sidecar, acetylene lamps and horn | £95 |
| 1920 3½ h.p. P. & M. solo, 2-speed, fully equipped | £69 |
| 1920* 2½ h.p. Neal Dalm., 2-stroke, 2-speed, lamps, speedometer, horn | £40 |
| 1920 6 h.p. A.J.S. comb., Easting windscreen, acetylene lamps, speedometer, watch, mirror | £130 |
| 1919* 6-7 h.p. Ariel comb., screen, lamps, etc. | £95 |
| 1921 2½ h.p. Ner-a-car, 2-stroke, electric and acetylene lamps, horn, speedometer, as new | £55 |
| 1921 6 h.p. Martinsyde comb., Lucas acetylene lamps, horn | £115 |
| 1919* 4 h.p. Douglas solo, lamps and Klaxon horn | £60 |
| 1920 6 h.p. A.J.S. comb., Hunt's electric accumulator lighting, speedometer, horn | £130 |
| 1920 6 h.p. A.J.S. comb., Lucas dynamo lighting, horn, etc. | £135 |
| 1920* 6 h.p. A.J.S. comb., acetylene lighting, bulb horn, Watford trip speedometer | £130 |
| 1919 6 h.p. A.J.S. comb., acetylene lamps, horn | £117 |
| 1920* 3½ h.p. Ariel and sidecar, acetylene lamps, horn | £85 |

**SPECIAL BARGAIN IN**

## SIDECARS.

**NEW WATSONIAN, SHOP SOILED, with extra strong chassis and special fittings for Harley Davidson and Zenith Motor Cycles, painted to match**

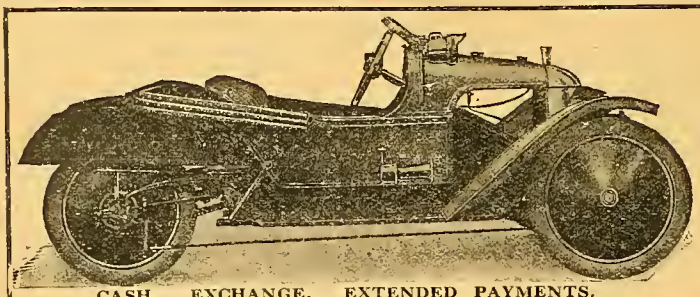
**£25**

*NOTE:—The machines marked with a * are the property of customers, and can be sold for cash only.*

## H. TAYLOR & CO., Ltd.,

**52/53, Sussex Place, Sth. Kensington.** *(For Cars and Motor Cycles.)*
**21a, Store St., Tottenham Ct. Rd., W.C.1.** *(For Accessories & Repairs.)*

Telegrams "Dynamstro, Westcent, London." Telephones—Museum 1240 and Kensington 7260.

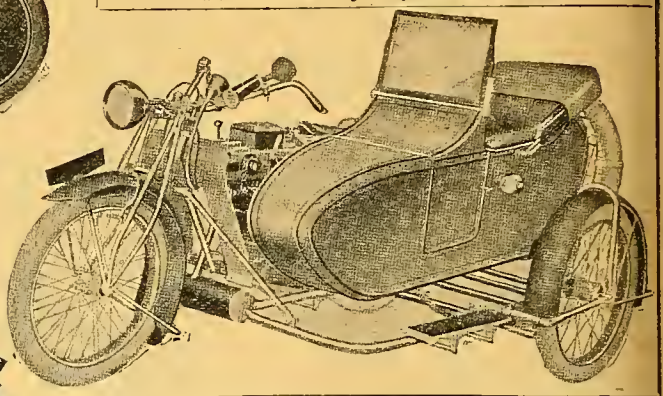


CASH. EXCHANGE. EXTENDED PAYMENTS.

## MORGAN.

PRICES INCLUDE FULL EQUIPMENT.

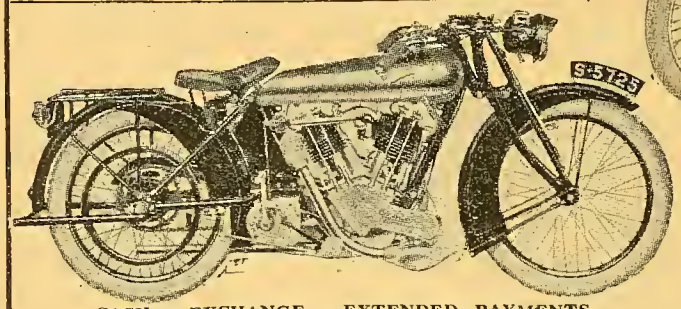
Popular, £150. *De Luxe, £175. *De Luxe, W.C., £186.
*Grand Prix, £180. Family, W.C., £191.
* In Stock.
DYNAMO LIGHTING £13 10s. extra.
Earliest Delivery any other model.



## MATCHLESS

ALL MODELS IN STOCK.

Sports, £130. Sports Comb., £160. Model H, £170.
Model H, Family, £175.
Shop Soiled 1921 Sports Combination, £145.



CASH. EXCHANGE. EXTENDED PAYMENTS.

## BROUGH-SUPERIOR.

ALL MODELS IN STOCK.
SOLE LONDON AGENTS.

**The Sportsman's Mount.**

Mark I. O.H.V. £160.
Mark I. Side Valve Combination, £180.
Mark II. 6·5 H.P., £125.
Mark II. 6·5 H.P. Combination, £150.

## ALLEN-BENNETT MOTOR CO. LTD.,

9, 10, 11, Royal Parade, WEST CROYDON.

'Phone: Croydon 2450.

# An Offer!

## We will buy your present magneto

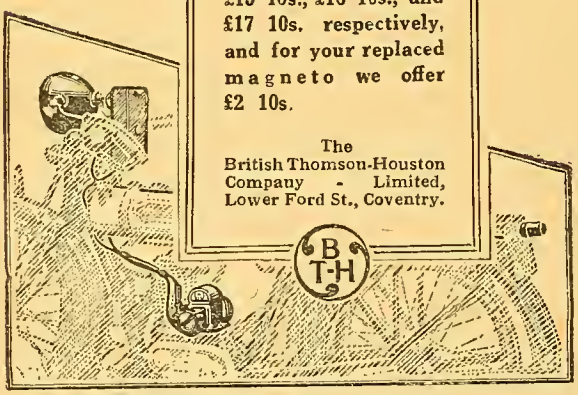
*Write for particulars of the B.T.H. "Sparklight." Quote CM163*

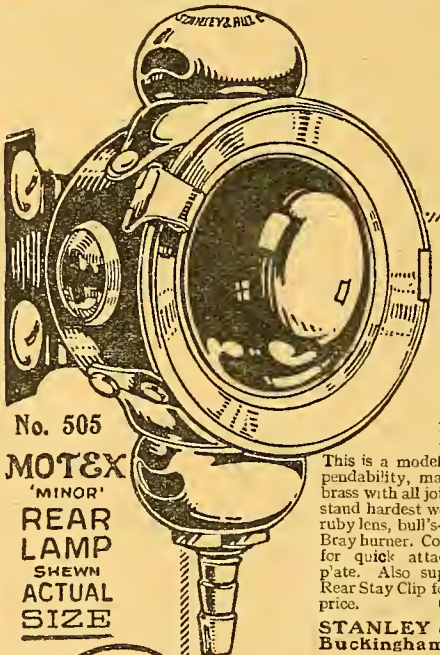
should you desire to replace it with a B.T.H. "Sparklight" combined ignition and lighting set.

"Sparklight" Sets can now be supplied in three types, for two-stroke and four-stroke single solos, and four-stroke single combinations, **complete at £13 10s., £16 16s., and £17 10s. respectively, and for your replaced magneto we offer £2 10s.**

The British Thomson-Houston Company - Limited, Lower Ford St., Coventry.

B T-H





No. 505 MOTEX 'MINOR' REAR LAMP SHEWN ACTUAL SIZE

MOTEX Specialities also include Sidecar Lamps, Generators, etc. List on request.

## A *Reliable* Rear-Lamp

Your lighting equipment is incomplete without the MOTEX Minor Rear Lamp.

This is a model of exceptional dependability, made of heavy gauge brass with all joints riveted to withstand hardest wear. Fitted brilliant ruby lens, bull's-eye lens at side, and Bray burner. Complete with bracket for quick attachment to number plate. Also supplied with special Rear Stay Clip for Cycle use at same price. Of Agents or direct.

**STANLEY & HILL, LTD. Buckingham St. B'ham.**

PRICE 3/9

*Insist on* MOTEX Specialities.

B.H.8.

## MOTOR CYCLES FOR SALE.

### Ariel.

*Spare Parts:*

ARIEL Spares for all models, post free. Ariel Agents, and Spares Service Depot.—Jones Garage, Broadway, Muswell Hill, N.10. [0804

### Arno.

ARNO 4h.p., re-enamelled and renovated, etc., all black finish, Philipson pulley, good condition; £34; must sell.—A. W. Smith, 26, Cope St., Coventry. [4318

### Autoglider.

AUTOGLIDER, £63 last August, perfect; good reasons selling, inquiries; offers invited.—Jackson, Elm Park, Shotley Bridge. (D) [3656

### Bat.

£10.—3½h.p. Bat, Bosch magneto, spring dropped frame.—King, Egrove Farm, Oxford. [4290

BAT 4h.p. Sporting Model, 1922, purchased November, going abroad; £95.—J., 46, Chaucer Rd., Herne Hill, S.E. [3764

BAT 1921 8h.p. Combination, with spare wheel, first-class order; £110; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3894

### Beardmore.

BEARDMORE brand new 1921 model; reasonable offer accepted.—S. E. Porter and Co., Whitchurch, Salop. [2468

BEARDMORE-PRECISION.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7227

BEARDMORE-PRECISION 3½h.p. 1920, spring frame, mileage 4,000, lamps, horn, insured M.U.; seen week-end by appointment; £55.—N. Jeffrey, Wilmington, Derby. [3713

1922 Beardmore-Precision 3h.p., brand new, now reduced to £65; lightweight 3h.p. sidecar combination, £85; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [8962

BEARDMORE-PRECISION, 1921 (September), mileage 450, B.T.H. electric lighting complete, Smiths trip speedometer, Lucas horn, full tax and insurance paid 1922, complete, unscratched, as new; £59/10, or exchange for good combination.—Harvey, 7, South Lambeth Rd., S.W.8. [4571

### Blackburne.

1920 4h.p. Blackburne C.B. Combination, complete lamps, horn, legshields, carefully owned; £75, offers.—7, Powderham Terrace, Teignmouth. [4337

1920 Blackburne 4h.p., 3-speed Burman gear, all chain, lamps, accessories, Bax aluminium sidecar, little used, plating and enamel as new; £85.—Williams, 28, High St., Burnham-on-Sea. [3365

### Bradbury.

BRADBURY 3-speed 4h.p. 1922, new lamps, etc.; £80.—Box 9240, c/o *The Motor Cycle*. [4345

VAUCHOPE'S, 9, Shoe Lane, London.—6h.p. Bradbury combination, new 1921, reduced to £130; no extra charge for easy terms. [4511

BRADBURY Combination 1920 4h.p., 3-speed, kick start, beautiful outfit; 78 gns.; take older lot part.—57, Kenbury St., Camberwell, London. [4388

BRADBURY Combination, C.B., 4¼h.p., fully equipped, believed 1913, renovated as new; £35 or offer; any trial.—Nye, 11, Sun St., Waltham Abbey. [3836

49 GNS.—4h.p. Bradbury Combination, sports sidecar, 3 speeds, K.S., countershaft, Sturmey box, fully equipped, tax paid.—Ewers, Newton Rd., Burton-on-Trent. [4114

BRADBURY 4h.p. C.B. Combination, 3-speed, clutch, speedometer, perfect condition, all on, any trial; £40, or near offer.—S., 9, Oppidans Rd., Primrose Hill, N.W.3. [3620

### Brough

NEW 1922 3½h.p. o.h.v. flat twin Brough, special Sports speed model, 70 m.p.h., real hot stuff; £110.—Premier Motor Co., Aston Rd., Birmingham. [3250

1921 5-6h.p. Brough Combination, 3-speed countershaft, chain drive, fully equipped, fitted new 1922 engine; £80.—37, Arlington Rd., Surbiton. 'Phone, Kingston 1274. [3924

1921 Brough 5-6h.p. Combination, done 1,500 miles, new condition, perfect throughout guaranteed, any trial, accumulator lit, all tools and spares; cost £195; sacrifice, £135; owner buying car.—Sutcliffe, Melville House, Alfreton. [4102

1920 5h.p. Brough, very silent and flexible, special show model Brough spring wheel sidecar, beautifully upholstered, mechanical condition and appearance perfect, just overhauled at Brough works, very smart and luxurious outfit, cost £196, little used; £112.—Seaton Cottage, Gerrards Cross, Bucks. [4275

### Brough Superior.

1921 late Brough Superior, o.h.v., 8h.p., Combination, fully equipped, unscratched; £135.—17, St. Charles Square, W.10. [4027


# PARKER'S PERFECTED PAYMENT POLICY!

| DEPOSIT and | | 12 MONTHLY PAYMENTS. |
|---|---|---|
| £15 | CLEVELAND, 1920. 3 h.p., 2-speed, K.S./C., fully equipped ... ... ... | £2-13-9 |
| £20 | CALTHORPE-J.A.P. Fully equipped. Shop-soiled only ... ... ... ... | £3-2-8 |
| £35 | JAMES, 1919. 5/6 h.p. Combination, fully equipped, screen, mud-shields, tax paid 1922 ... ... ... | £5-7-6 |
| £45 | INDIAN, 1921. 7-9 h.p. Combination, electrically equipped, tax paid, as new. Cost £230 ... ... | £9-8-0 |
| £25 | ALLDAYS-ALLON, 1921. 2¾ h.p., 3-speed Combination, K.S. Clutch, fully equipped, speedometer, mud-shield, screen ... ... ... ... | £4-0-9 |
| £40 | HARLEY-DAVIDSON, 1920. 7-9 h.p. C.B. Combination, electrical model, fine condition | £8-10-3 |
| £30 | HARLEY-DAVIDSON. 1920. 7-9 h.p., electrical model, electric horn, new condition. | £6-5-5 |
| £25 | NORTON (1921 LATE). 3½ h.p., No. 9 Model, equipped as new. ... ... ... ... | £4-9-7 |
| £20 | RUDGE. 1919. MULTI T.T., fully equipped. tax paid 1922, good condition | £2-9-3 |
| £30 | ROYAL ENFIELD, 1920. 8 h.p. Combination, dynamo lighting, horn, speedometer, new tyre, good condition ... | £7-5-0 |
| £40 | SUNBEAM, 1918. 3½ h.p. Combination, 3-speed, K.S. Clutch, fully equipped, good condition ... ... ... | £5-7-6 |
| £40 | BAT (I ONLY). NEW (SHOP-SOILED), 6 h.p., 3-speed, C./K.S. ... ... | £8-6-8 |
| £40 | HARLEY-DAVIDSON. 4-5 h.p. sports, Swan sporting sidecar, fully equipped, as new | £9-3-4 |
| £60 | COVENTRY-PREMIER, 1921. 8 h.p. Runabout, 3-speeds and reverse, dynamo lighting, dickey seat, tax paid 1922, absolutely as new ... ... | £9-8-2 |

**IMMEDIATE DELIVERY OF 1922 MODELS BY ALL THE LEADING MANUFACTURERS.**

***Exchanges. Deferred Payments.***

**BOLTON: Bradshawgate. Tel: 1348.**

**MANCHESTER: 245, Deansgate. Tel: Cen. 864.**


## MOTOR CYCLES FOR SALE.

### Brough Superior

BROUGH SUPERIOR 8h.p. O.H.V. 1921 Combination, acetylene lighting, speedometer, horn, etc., very fast; no reasonable offer refused.—E. Lloyd, Stonehill, Bagshot. [4081

BROUGH SUPERIOR, immediate delivery of the 6h.p. 1922 model, the prince of medium weight sports models for £125; good modern machines considered in part payment.—The Layton Garages, 30, Holywell St., Oxford. [4368

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½, o.h.v., 3-speed, clutch, and kick starter, £160; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450 [0733

### Brown.

3½h.p. Brown, Mabon clutch, low, 2½ gallon tank, 45 m.p.h., excellent climber; £18.—Griffin, 21, Versailles Rd., Anerley, London, S.E.20. [4415

3½h.p. Twin Brown, O.H.V., spring forks, footboards, legshields, perfect order, tax paid, as new, £25; with sidecar, £29.—6, Ruskin Rd., Crewe. [3776

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with pleasure.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

3½h.p. B.S.A., 2-speed, perfect, £20; sidecar, £7.—17, Heaton Rd., Mitcham. [4305

B.S.A. 1922.—All models; immediate deliveries.—Clifford Motories, Eastwood, Notts. [8827

£45.—1917 4¼h.p. B.S.A., 3-speed, clutch, K.S., splendid order.—Kiog, Egrove Farm, Oxford. [4291

1912 3½h.p. B.S.A., 2-speed, clutch, kick start, fully equipped; £27.—Box 9252, c/o *The Motor Cycle*. [4085

B.S.A., Model K, little used, perfect, taxed; 49 gns. or offer; must sell.—"Brentor," Shooters Hill, S.E.18. [3918

B.S.A., engine overhauled, makers' receipt, all-chain, condition excellent; £47/10.—65, Hindes Rd., Harrow. [4237

B.S.A., 1922 patterns, cash or easy payments, immediate delivery.—Motoria, 15, Regent Parade, Tally-ho. [3936

NEW 1921 4¼h.p. B.S.A. Combination and accessories; £125.—Bounds, Garage, 223, High Rd., Kilburn. [3921

7h.p. B.S.A., electrically equipped, complete with landaulette, seat 2; £140.—Middlefell, Penny St., Lancaster. [3322

8h.p. B.S.A. Combination in stock, all models.—Keene, 301, Goldhawk Rd., Shepherd's Bush, London, W. [3625

B.S.A. Combination, re-upholstered, chains, 3 speeds, Easting; £67/10 (new 1918), guaranteed A1.—40, Lorne Rd., Forest Gate. [3645

B.S.A. 1922 new 8h.p. Combination; £185; immediate delivery or exchange.—Harry Nash. 'Phone: 2837 Hammersmith. [3658

£40.—1915 4¼h.p. B.S.A., countershaft, good appearance; really sound bargain; exchanges.—Kent's, 417, Lord St., Southport. [3960

B.S.A. 1921 Combination, special machine, many spares, lamps, tools, very fine condition, £1 ride 50 miles; £105.—19, Edgedale Rd., Sheffield. [3752

BRAND new B.S.A. all chain Combination, No. 3 sidecar, equipped; nearest £120.—James, c/o Bradmores, 482, Harrow Rd., Paddington, W. [4181

49 GNS.—4¼h.p. B.S.A. Combination, 3-speed, K.S., all-chain, hood, screen, bargain; another, more posh, £68.—Ewers, Newton Rd., Burton-on-Trent. [4113

B.S.A. 4¼h.p. model H.2, all-chain drive, with special coachbuilt sidecar, slightly shop-soiled; £125.—P. J. Evans, John Bright St., Birmingham. [3683

1920 B.S.A. Combination, 4¼h.p., Lucas, dynamo lighting, spares, in spleadid order; no good offer refused.—Box No. 8966, c/o *The Motor Cycle*. [2021

B.S.A. 1922, brand new, 4¼h.p., Model H.2, in stock; £110; easy payments arranged. Lists free.—Wilkins Simpson, opposite Olympia, London. [4184

BRAND New latest 1922 B.S.A., Model E, 6h.p. Twin, Amac, just taken delivery, not unpacked; list price, £132; will accept £120 cash; must sell; private owner; Norfolk.—Box 9217, c/o *The Motor Cycle*. [3603

## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. 1922, model H2, £110, in stock, exchanges, extended terms.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile Street, E.C.3. 'Phone: Avenue 5548. [0067

B.S.A. 4¼h.p. Combination, 1916-17, good condition, screen, Tan-Sad, light car generator, horn, 3 lamps, 2 belts, discs; £65.—"Welney," Farnborough, Kent. [4419

B.S.A. 1921, model H2, all-chain drive, perfect, condition excellent, all accessories, licensed, small mileage; best offer secures.—Harold Hand, Odiham, Hants. [4311

B.S.A.—All 1922 Models supplied, exchanges; also new 1921 4¼h.p. K2 combination, No. 2 B.S.A. sidecar, £114.—Eagles and Co., 275, High St., Acton, London. [4146

6-7h.p. 1921 B.S.A. Combination, spare wheel largest sidecar, every possible accessory, unscratched; £130.—37, Canterbury Rd., Balls Pond Rd. Dalston, N.1. [4399

B.S.A. 1920 Canoelet Combination, electric lighting, excellent order; £79. 1922 models in stock; exchanges arranged.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [3299

1920 4¼h.p. B.S.A., all chain, and No. 2 sidecar lamps, Tan-Sad, Easting, speedometer, luggage grid, excellent condition; 92 gns.—Edwards, 101, Gt. Portland St., W. [4157

1919 type B.S.A. Combination, year's tax, hood, screen, lamps, etc., magnificent condition, 3-speed, clutch, kick start; 67 gns.—Fersfield, Westbury Rd., New Malden. [4338

B.S.A. 6-7h.p. Combination, electric lighting, speedometer, Easting, windscreen, Lucas horn, all accessories, condition as new; £140.—C. A. Blay, 192, Heath Rd., Twickenham. [4019

1914 B.S.A. 3½h.p. T.T. model, Philipson pulley, long exhaust, lamps, tax paid, date and condition guaranteed; £30.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [4560

EXCEPTIONAL Bargain.—B.S.A., Model H.2 4¼h.p., with B.S.A. sidecar, 1921, latest model combination, brand new; £125.—Wilkins Simpson, opposite Olympia, London. [4191

1921 B.S.A. 6-7h.p. Combination, Lucas Magdyno and electric horn, spare wheel, luggage grid, Easting, speedometer, and other spares; £150.—Martin, Park View, Armitage, Staffs. [4060

B.S.A. 1922 Models for immediate delivery; best prices allowed on second-hand models in part payment.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3884

B.S.A. 1921 model K.2 Combination, completely equipped, new 1922, C.B. sidecar; a combination that, accompanied by the Layton Garages guarantee, will ensure satisfaction; approval anywhere; £110, f.o.r. Oxford.

B.S.A. 1922 model K.2, with a £25 C.B. sidecar, end completely equipped with lamps and horn; cost £137; offered for cash at £120, f.o.r. Oxford; usual guarantee; approval anywhere.—The Layton Garages, 30, Holywell St., Oxford. [4369

GOING Begging, believed 1919, late, or 1920 4¼h.p. B.S.A. Combination, lamps, horn, hood, pillion seat, speedometer, etc., tax, etc., 3-speed, all chain, appearance absolutely as new; first 65 gns., no offers.—Ramsden's, Maybell Av., Blackpool. [3590

B.S.A. 4¼h.p. 1921, and Millford skiff 1921, with spring carrier, 1,500 miles only, best mechanical pump, Easting, F.E.W. valve attachments, lamps, horn, all tools, perfect mechanically, unscratched, unpunctured; £105.—Freeman, Harley Cottage, Gerrards Cross. [3549

B.S.A. 1921 6-7h.p. Twin Combination, Magdyno lighting, interchangeable wheels, spare wheel, luggage grid, Cowey speedometer and horn, Easting screen, spares, in splendid condition; cost £228, take £150.—F. Hucklebridge, 133, Sloane St., London, S.W.1. [3841

B.S.A. 6-7h.p. Twin Combination, Magdyno lighting, hood, extra accessories and spares, small mileage; £155. 1921 model K.2 Combination, Magdyno and extras; £130. 1915 Combination, overhauled; £58.—County Cycle and Motor Co., 300, Broad St., Birmingham. [4569

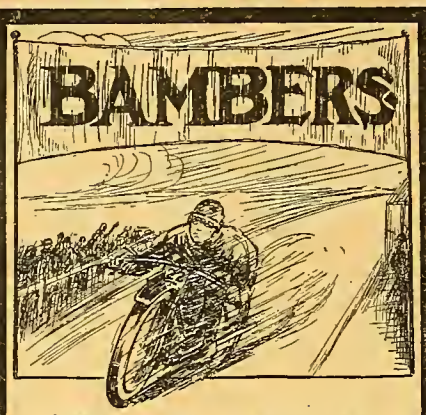
WAUCHOPE'S, 9, Shoe Lane, London.—B.S.A. 1922 models, k.2, chain and belt transmission, £107; with No. 3 sidecar, £139; model H.2, all-chain drive, £110; fitted with B.S.A. sidecar, £142; B.S.A. 6h.p. twin motor cycle, £132; fitted with B.S.A. sidecar, £164; B.S.A. 8h.p. twin combination, £185; easy terms and exchange; box carrier combinations from £139. 'Phone: Holborn 5777. [4512

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3609

B.S.A. Specialists.—All spares by return.—County Cycle and Motor Co., Broad St., Birmingham. [4677

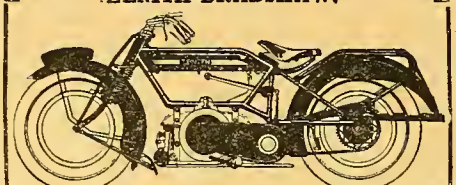
THE Promptest Firm for B.S.A. Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3161


STILL LEADING.

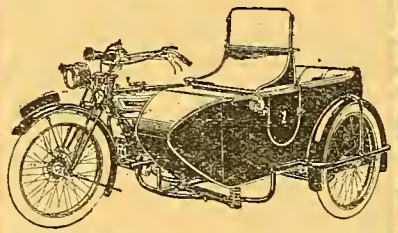
The following are actually IN STOCK.

ZENITH-BRADSHAW.



Chain Drive Model - - - £119

DOUGLAS COMBINATION.



4 h.p. Model - - - - - - £135

| | | |
|---|---|---|
| 1922 7 h.p. | A.J.S. Comb. | £175 |
| 1922 2¾ h.p. | A.J.S. Sports | £85 |
| 1922 2¼ h.p. | ENFIELD | £55 |
| 1922 8 h.p. | ENFIELD Comb. | £140 |
| 1922 8 h.p. | MATCHLESS Sports | £130 |
| 1922 8 h.p. | MATCHLESS Comb. | £170 |
| 1922 3½ h.p. | ARIEL Sports | £87 10 |
| 1922 3¼ h.p. | ARIEL | £95 |
| 1922 3½ h.p. | ARIEL Comb. | £125 |
| 1922 4½ h.p. | B.S.A. | £107 |
| 1922 3½ h.p. | NORTON 16H | £115 |

WE WANT YOUR PRESENT machine in part exchange.
HIGHEST MARKET VALUE ALLOWED.

SPECIAL OFFER.—New 1922 3½ h.p. ZENITH-BRADSHAW, shop-soiled. Bargain Price - - - - - £100

EXCEPTIONAL BARGAINS.

| | | |
|---|---|---|
| 1921 3½ h.p. | N.U.T., shop-soiled | £90 |
| 1921 2¾ h.p. | ROYAL RUBY | £50 |
| 1921 2¼ h.p. | FEDERAL, 2-speed | £40 |
| 1920 3 h.p. | A.B.C., dynamo | £75 |
| 1920 3½ h.p. | ROVER, 3-speed | £70 |
| 1920 3½ h.p. | P. & M., 2-speed | £65 |

MANY MORE.

WRITE NOW.

R. BAMBER & Co., Ltd.,
2, EASTBANK ST.,
Tel. 607. SOUTHPORT.


## MOTOR CYCLES FOR SALE.

### B.S.A.

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All B.S.A. parts in stock. No waiting [199

B.S.A. Spares can be had by return, post free from Jones Garage, B.S.A. Agents and Spare Service Depot Broadway, Muswell Hill, N.10. [080

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all B.S.A. spare parts always in stock. Write for free spare part list, stating year of manufacture. [075

### Calthorpe.

£36.—1920 3h.p. Calthorpe, tax paid.—Clapshaw, 19 Park St., London Bridge. [364

CALTHORPE-J.A.P. 2¾h.p., 1920, 2-speed, perfect; £45.—Clark, 7, Exhibition Rd., S.W.7. [330

CALTHORPE, 1922 patterns, cash or easy payments, immediate delivery.—Motoria, 15, Regent Parade, Tally-ho. [393

£17/10.—Calthorpe Junior, Precision engine, speeds, accessories, as new.—8, High St., Wandsworth. [387

£25.—1916 2¾h.p. Calthorpe-Jap, brand new tyres 2-speed, free engine, excellent condition, tax paid bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [447

CALTHORPE 3h.p. Combination, 2-speed, kick start fitted with M.L. Maglita set, slightly shop-soiled £85.—P. J. Evans, John Bright St., Birmingham. [368

CALTHORPE-J.A.P. 1921 2¾h.p. 2-speed, Enfield gear, fully equipped, aluminium footboards, new tyres, machine unscratched, mileage 800; £40.—Albert Cottages, Marlborough Rd., Old Kent Rd S.E.1. [376

CALTHORPE 1921 Combination, actually in stock for immediate delivery; cash or deferred terms place your orders with the Calthorpe specialists. Burlington Motors, Ltd., Clapham Common, S.W. Phone: Brixton 2417. [050

### Campion.

CAMPION Combination, 1920, 6h.p. J.A.P., low mileage, lamps, accessories must sell; offers. Glenholme, Salisbury Rd., Leicester. [350

### Cedos.

KICKHAM, Stokes Croft, Bristol, Sole Distributing Agent for Cedos; unequalled service, repairs etc. [31

CEDOS 2½h.p., 2 speeds, run 200 miles only mechanical horn; accept £45.—Crown Garage Weybridge. [33

### Centaur.

CENTAUR 3½h.p. 1914, excellent condition; £25 7, Exhibition Rd, S.W.7. [45

### Chater-Jap.

3½h.p. Chater-Jap, Bosch, low, fast; bargain, £1 3/2 —16, Mason St., Walworth. [37

### Chater-Lea

3½h.p. Chater-Lea, 2-speed, K.S., £20; sidecar, £7. 3/2 17, Heaton Rd., Mitcham. [43

CHATER-LEA 2-stroke, 2-speed, brand new, shop soiled; what offers?—Rose's Garage, Uxbridge. [39

WAUCHOPE'S, 9, Shoe Lane, London.—1919 Chater-Lea; agents all models; supplied on easy terms or exchange. [45

IMMEDIATE delivery all models 1922 Chater-Lea motor cycles; stamp for catalogue.—H. Beardwood 147, Burlington St., Liverpool. [08

1914 Chater-Lea Combination, 8h.p., fully equipped recently overhauled, very fast, tax paid; £5 —Cooper, 160, Commercial St., E.1. [36

CHATER-LEA Combination 8h.p., 3-speed, splendid condition, any trial; £68; take lower power pa —57, Kenbury St., Camberwell, London. [43

CHATER-LEA 2¾h.p., lamps, horn, accessori splendid condition, looks like new; £35 or n offer; bargain.—Col. Fisher, Royal Dockyard, Wo wich. [28

1922 Chater-Lea, the reliable combination with reputation; catalogues; all models; send quiries.—Sam E. Clapham (Motors), 27, Stockw St., Greenwich, S.E.10. [32

1921 8h.p. Chater-Lea Combination, new and registered, used for few demonstrations on complete with 4 detachable wheels, spring seat pill and sidecar screen; £35 below list price; £135 South Eastern Garage, Herne Hill, S.E.24. [36

### Chater-Lea-Jap.

WAUCHOPE'S, 9, Shoe Lane, London.—41 Chater-Lea-Jap, fitted with 1918 engine; £ [4

5-6h.p. Chater-Lea-Jap, 2-speed, Combination, paid; £26; must sell.—112, Gorton Rd., Coven [4

## MOTOR CYCLES FOR SALE.

### Douglas.

h.p. Douglas, 3 speeds, kick start, reconditioned machine, 50% new parts, fitted with lamp set, rn, licence holder, ready for road; £65; cosider ghtweight part.—Crown Garage, Weybridge. [3344

916 2¾h.p. 2-speed Douglas, guaranteed perfect throughout, all accessories, sacrifice, £35; any ial; also 1914 Douglas 2-speed, perfect, £30; both ery condition.—7, Cowdrey Rd., Wimbledon. [3842

DOUGLAS 2¾h.p. 1916, lamps, horn, Tan-Sad, tax paid (1922), fully insured, overhauled, and enaelled (makers), long exhaust, fast, and sporty; price 40.—Write Dell, 10 Lyncroft Gardens, Ealing. [3390

916 2¾ h.p. Douglas, Jones speedometer, large P. and M. lamps, new Thomson-Bennett mageto, licence expires December 31st; £40 or near fer.—Smith, Butts Orchard, Hanworth Middlesex. [3418

OR Douglas 1922 2¾h.p. and 4h.p. combinations, get in touch with us; we are Norto London agents d give you the best of service; all spares in stock; no D. rubbish.—Jones Garage, The Broadway, Muswell ill. [0786

PARKER'S Motors can supply all Douglas 1922 models at list prices and give an insurance policy gainst mechanical breakdown for 12 months free. ash, deferred, or exchanges—194, Balham High Rd., W.12. [1212

BIRMINGHAM and District.—For fair value exchanges, or simple and confidential instalment rrangement, write official wholesale and retail Douglas distributors, Frank Whitworth, 139, New St., irmingham. [2152

DOUGLAS 2¾h.p. 1916, painted grey, in extremely good condition, new Aug. 1919, only run 1,000 iles since, complete with lamps, horn, speedometer, nd many spares, licence and insurance paid; £45.—eeding, High St., Sutton. [3376

921 3½h.p. Douglas, sports model, large P. and H. acetylene head lamp, generator, electric rear ght, horn, knee grips, good toolkit, many spares, tax aid 1922, fully insured till end of May; £100.—Vest, 48, Springfield Rd., Linslade, Leighton Buzzard. [3763

DOUGLAS 1921, 2¾h.p., 3-speed, T.T. bars, new belt and Hutchinson Superstud back tyre, complete horn, lamps, etc., tax paid till end of year; real bargain, £70.—Wilkins Simpson, opposite olympia, London. [4192

KICKHAM, Stokes Croft, Bristol, the Douglas Agent with real experience and knowledge of a Douglas. Successes during 1920 on this mount: 38 irsts, 17 seconds, and 8 thirds, also 6 special rophies. Let me deal with your order. Unequalled ervice, repairs, etc. [3150

920 Douglas Combination, guaranteed 1920, 4h.p., 3-speed, clutch, kick start, lighting set, horn, e., most beautiful running machine, condition practically as new, seen any time; £90.—Will, 769, Romford Rd., Manor Park, London, E. [4219

UNCRATED 1920.—1916 2¾h.p. W.D. Douglas, variable jet, lamps, generator, horn, legshields, ust overhauled, mechanically perfect, appearance excellent, fast, 1922 tax paid, insured till May 20th; wner bought big combination; £50, or near offer.—Black, Sandhills House, near Walsall. [3597

4h.p. late 1919 Douglas Combination, splendid condition, Lucas lamps, horn, speedometer, hood, windscreen, luggage grid, undershield, Tan-Sad, and discs if required, tools, good tyres, tax paid, best offer over £95.—Write H. G. Miles, No. 1 Company, R.M.C., Camberley, Surrey; or 34, Lower Sloane St., S.W.1. [3408

WAUCHOPE'S, 9, Shoe Lane, London.—1922 new Douglas, £75; 2-speed 2¾h.p. 3-speed model, £90; 4h.p. solo, £110; 4h.p. sidecar combination, £135; 3½h.p. sports solo, £130; 6h.p. light sidecar combination, £165; accessories on all models, no extra; easy terms and exchange; trade supplied. 'Phone: Holborn 5777. [4518

DOUGLAS agents.—1922 models in stock, lamps, horn, licence holder, pump, tools, etc., included in following prices: 2¾h.p., 2-speed, £75; 2¾h.p., 3-speed, clutch, and kick starter, £90; 4h.p. combination, £135; 3½h.p. sports, £130; 6h.p. combination, £165; in stock; easy payment terms and exchanges arranged; write for particulars.—Herbert Robinson, Ltd., Greeo St., Cambridge. [1986

*Spare Parts:*

DOUGLAS Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3611

HERBERT ROBINSON, Ltd., Greeo St., Cambridge.—Complete illustrated Douglas lists, post free. [8833

DOUGLAS spares; large stocks of genuine Douglas spares; dealers supplied at trade rates.—Rivett, 236, High Rd., Leytonstone. [2267

DOUGLAS Spares.—We hold a complete stock for all models; post free. Douglas Agents and spare part stockists.—Jones Garage, Broadway, Muswell Hill, N.10. [0806

FRANK WHITWORTH, Ltd., 139, New St., Birmiogham.—Complete stock, genuioe, guaranteed Douglas spare parts; prompt attention, immediate dispatch, lowest cash prices. [2147

# Harrods MOTOR CYCLES

## ON EASY TERMS

All the following machines are available from stock and may be obtained on Harrods Convenient System of Easy Payments. Details and latest lists free.

### NEW SOLO MACHINES

| | | |
|---|---|---|
| 2¾ h.p. | **ALLDAYS-ALLON** ... ... | £60 |
| 4¼ h.p. | **B.S.A.**, Belt Drive ... ... | £107 |
| 2¾ h.p. | **DOUGLAS**, Two-speed ... | £75 |
| 2¾ h.p. | **DOUGLAS**, 3-sp., clutch . | £90 |
| 2¼ h.p. | **ENFIELD**, Two-speed model | £60 |
| 2¼ h.p. | **LEVIS**, Popular model ... | £48 |
| 2¾ h.p. | **NEW IMPERIAL**, 3 speed | £63 |
| 2¾ h.p. | **NEW IMPERIAL**, Clutch, etc. | £69 |
| 1¾ h.p. | **McKENZIE**, Lightweight | £27 6s. |
| 2½ h.p. | **O.K. JUNIOR** ... | £39 18s. |
| 2½ h.p. | **O.K.**, 2 sp., clutch, etc. | £60 18s. |
| 2¼ h.p. | **TRIUMPH**, Two-speed ... | £65 |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | £105 |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | £115 |

### NEW COMBINATIONS

| | | |
|---|---|---|
| 4¼ h.p. | **B.S.A.**, Belt Drive, No. 3 s/c | £139 |
| 4¼ h.p. | **B.S.A.**, Chain Drive, No. 3 s/c | £142 |
| 8 h.p. | **ENFIELD** ... ... ... | £140 |
| 8 h.p. | **MATCHLESS** ... ... | £170 |
| 6 h.p. | **HAZLEWOOD** ... ... | £118 |
| 8 h.p. | **NEW IMPERIAL** ... ... | £145 |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | £155 |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | £145 |
| 4 h.p. | **DOUGLAS** ... ... ... | £135 |
| 6 h.p. | **DOUGLAS** ... ... ... | £165 |
| 4½ h.p. | **HUMBER** ... ... ... | £144 |
| 3½ h.p. | **INVICTA** and Sidecar ... | £110 |

## SHOP-SOILED MODELS AT SPECIAL PRICES

| | |
|---|---|
| 2¾ h.p. **COULSON**, Spring Frame, 3-speed ... | £82 |
| 4½ h.p. **HUMBER**, Flat Twin; 3 sp., clutch & k.s. | £100 |
| 2¾ h.p. **WOOLER**, Flat Twin. Brooklands Sports model, fully equipped... | £69 |

### SECOND-HAND

| | |
|---|---|
| 1921 **ENFIELD** Combination, mag. dyno. lighting, speedometer, etc. (cost £190) ... ... ... | £137 10 |
| **YOUNG** Cycle and Motor Attachment .. ... | £17 10 |
| 5/6 h.p. **HAZLEWOOD**, Combination Speedometer. Thoroughly overhauled | £90 |
| 2½ h.p. **CLYNO**, 1920, Two-speed and clutch, lamps, etc. Tax paid 1922 ... | £37 10 |

**HARRODS MOTOR SALES DEPT**
**116-118 Brompton Road, London, S.W. 1.**
*(Opposite the Main Building).*

## MOTOR CYCLES FOR SALE.

### Dunelt.

**19**21 4h.p. Dunelt, electric lighting, black finish, perfect, mileage 3,000; £85.—Dashwood, 163, Denmark Hill, S.E.5. [3540

### Economic.

ECONOMIC.—We can give you early delivery of this wonderful low-priced machine, variable gear model; £34. Please send p.c. for catalogue.—South Eastern Garage, Herne Hill, S.E.24. [3700

### Edmund.

EDMUND, the great spring frame machines.—Gourlay, the Agent, Fallowfield, Manchester. [3648

EDMUND 1920 2½h.p., Enfield 2-speed gear, first-class condition; £41.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3895

EDMUND 1921 2¾h.p., spring frame, Blackburne engine, Burman 2-speed gear box, new machine, fully guaranteed; £75.—P. J. Evans, John Bright St., Birmingham. [3686

### Enfield.

TRY Julians of Readiog for Enfield lightweight or combination. [3563

NEW 1922 Enfield Combination in stock.—Bounds, Garage, 223, High Rd., Kilburn. [3919

LATE 1921 Enfield, 2-stroke, lamps, tax.—Langdale, Storeton Rd., Prenton, Birkenhead. [3951

£65.—Royal Enfield Combination, late model, excellent condition.—21a, Brent St., Hendon. [3686

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

ENFIELD, 3h.p., 2-speed, all on, running order, owner abroad; £24.—Elliot, Bocking, Essex. [3450

**19**19 8h.p. Enfield Combination, perfect condition, equipped; £80.—17, St. Charles Square, W.10. [4030

**19**19 Enfield Combination, mileage 2,000, fully equipped; £95.—Lowe, "Poplars," Heswall-on-Dee. [3639

LOOK!—Brand new Enfield lightweight, unpacked; £50; exchanges.—Kent's, 417, Lord St., Southport. [3961

**19**15 3h.p. Enfield, 2-speed, good running order, chain drive; £26.—13, New St., Wellington, Salop. [4542

ENFIELDS.—1922 Combinations and 2-speed lightweights in stock.—Clifford Motories, Eastwood, Notts. [8829

**19**18 Enfield Combination, 8h.p. Colonial model; a bargain, £85; like new.—Ross, 86, High Rd., Lee, S.E. [3481

ENFIELD 1921, exceptional bargain, 2-stroke, 2-speed; £46.—Barker, 216, Portobello Rd., North Kensington. [4215

ENFIELD, 2-stroke, new and unused; £48.—40, Replingham Rd., Southfields, S.W.18. 'Phone: Putney 1694. [3398

LONGMAN Bros., Bond St., Ealing, Official Enfield District Agents; cash, exchange, or deferred payments, 4% extra. [4485

**19**21 Enfield Combination, brand new; £129; exchange.—Shepherd, Enfield Highway. 'Phone: Waltham Cross 31. [0801

ROYAL ENFIELD, 3h.p., 1916, recently overhauled, absolute snip; £35.—Merrett, "Brackenhurst," Sunninghill. [3033

ROYAL ENFIELD 1921 8h.p. Combination, Magdyno, practically unused; £135.—132, High Rd., East Finchley, N.2. [3354

**19**14 Enfield 3h.p., M.A.G., equipped, tax paid, excellent order; 23 gns.—Edwards, 50, Harrington Rd., South Kensington. [4455

DAN GUY, Weymouth.—Enfield 1921 8h.p., Magdyno, double-seated sidecar, hood and screen, guaranteed perfect; £125. [0818

ENFIELD 1922 Combinations and Solos, cash or easy payments, immediate delivery.—Motoria, 15, Regent Parade, Tally-ho. [3932

**19**20 Enfield Combination, dynamo, windscreen, etc., as new; £100.—James, c/o Bradmores, 482, Harrow Rd., Paddington, W. [4182

ENFIELD 3h.p. twin, lamps, tax paid, condition guaranteed; £38/10.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [4563

ENFIELD 1915, electric light, 700×70, excellent condition, spares; £75, or offer.—F. K., 20, Bartholomew Rd., Kentish Town. [3611

3h.p. Enfield Twin (1918), overhauled last autumn, in good running order; £44.—Withers, 7, Montague Rd., Handsworth, Birmingham. [3532

ENFIELD, 2-stroke, 2-speed, perfect, practically new accessories, insured: £38/10.—Corney, 75, St. Leonard's Rd., Mortlake, Surrey. [3744

ENFIELD 1920 2¼h.p., 2-speed, 2-stroke, not done 300 miles, condition as new.—Copland, Springfield, Hersham Rd., Walton-on-Thames. [3804

## MOTOR CYCLES FOR SALE.
### Enfield.

ENFIELD Combination 6h.p., fully equipped, engineer owned, guaranteed mechanically perfect, any trial; £85.—23, Sydney Rd., Enfield. [2493

2¼h.p. Enfield, Oct., 1920, as new, unscratched, Lucas lamps and horn, tax paid; £38.—McKay, 5, Gleathorne Rd., Hammersmith. [3869

£28.—Enfield 3h.p. 1915, lamps, new Amac carburetter, Bosch magneto, splendid condition, any trial, no offers.—61, Grand Parade, Harringay. [4550

ENFIELD 1922, brand new, 8h.p. Combination, in stock; £140; easy payments arranged. Lists free.—Wilkins Simpson, opposite Olympia, London. [4186

ENFIELD Combination 8h.p. 1920, fully equipped, hood, screen, etc., new condition; £115.—Hellier and Co., 18, Sloane St., S.W.1. Victoria 2595. [1396

ENFIELD, August, 1921, 8h.p. Vickers engine, Lucas Magdyno lighting, Tan-Sad, Easting, tyres as new, any trial; £130.—236, Bermondsey St., S.E.1. [3956

1921 Enfield 8h.p. Combination, Lucas dynamo lighting, shop-soiled only; £137/10; approval anywhere.—The Layton Garages, 30, Holywell St., Oxford. [4371

ENFIELD Lightweight 1921, fully equipped and licensed, very fine order; £40; approval anywhere.—The Layton Garages, 30, Holywell St., Oxford. [4370

ENFIELD 1922, brand new 2¼h.p., 2-speed, kick starter, in stock; £57; easy payments arranged. Lists free.—Wilkins Simpson, opposite Olympia, London. [4185

ENFIELD Combination, September, 1920, dynamo lighting, speedometer, windscreen, splendid condition throughout, £110.—Foulkes, Wales and Co., Ltd., Shrewsbury. [3530

1922 Enfield 2-seater Combination, £145; Standard Combination, £140; easy payments, 4% extra; immediate delivery.—Premier Motor Co., Aston Rd., Birmingham. [4489

T.T. 3h.p. Enfield Twin, 1916-17, 2-speed clutch, speedometer, posh condition and appearance, snip; £40, or exchange for higher powered 'bus.—35, Upper Tooting Rd., S.W. [3454

ENFIELD, complete range of 1922 models in stock for immediate delivery. Cash! Exchanges! Easy Payments 4 per cent. extra.—P. J. Evans, John Bright St., Brimingham. [3685

ENFIELD Combination, 1920, 8h.p., 2-seater sidecar, D.A. lighting, hood, 2 screens, speedometer, full equipment and spares, new condition; £115.—7, Battledean Rd., Highbury. [4239

ENFIELD 1921 Combination, only used demonstrations, hood, screen, lamps, etc., mileage 600, tyres as new, tax paid; £125; any trial.—Taylor, 27, Oxford Rd., Windsor. 'Phone: 243. [3822

1915 Enfield Combination 6h.p., recently overhauled, excellent condition, stored three years, taxed, speedometer, insured, any trial; nearest £70; by appointment.—McOwan, Corner House, Godstone. [3391

1921 Enfield Combination, with Magdyno lighting set, horn and speedometer, cost owner over £190, small mileage; a bargain, £137/10.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [3758

ROYAL ENFIELD 6h.p. Combination, 1921 model, Magdyno, speedometer, windscreen, mirror and all tools, in perfect condition, low mileage; bargain £110.—Write M., 40, Queen's Rd., East Grinstead. [2275

ENFIELD 1922 Models for immediate delivery; best allowances on second-hand machines in part payment; distance no object.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3890

1921 (late) Enfield-Vickers Combination, Magdyno, hood, screen, spares, tax paid, low mileage, as new; £125; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11. 'Phone: Park 2071. [3911

ROYAL ENFIELD Combination 1916 6h.p., J.A.P. 2-speed, free engine, acetylene, windscreen, fully equipped, overhauled at works; accept fair price.—Full details from C. Dufty, 115, Uppingham Rd., Leicester. [2390

1921 Enfield Combination, Vickers engine, No. B/EC 1345, Lucas Magdyno set, electric horn, special saddle, all tools, mileage 3,000, appearance and condition as new, tax paid, seen any time; £125, no offers.—Greeo, The Square, Brackley. [3824

ENFIELD, September, 1920, 8h.p. Combination, mechanically perfect, Lucas dynamo lighting, speedometer, Easting screen, Tan-Sad, back and foot rest, spare driving chain, plugs, etc., spare tyre and tube, full set tools, mileage positively under 5,000; cost £225, sole reason for sale owner buying car; £135.—Vicar, Chirbury, Shropshire. [3537

WAUCHOPE'S, 9, Shoe Lane, London.—1922 2¼h.p. Royal Enfield, 2-stroke, £55; 2¼h.p. Royal Enfield with kick starter, £57; 8h.p. Royal Enfield combination, £140; dynamo lighting, £158; 8h.p. 1917-18 Royal Eofield combination, £95; easy terms and exchange; trade supplied. 'Phone: Holborn 5777. Also Enfield 2-stroke, 1920; £42/10. [4519

# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

**A sweet, silent drive is only obtainable with a**

# Philipson

**No gear box friction.**
**No grinding noises.**

**No wheels or pinions to chew up.**

**The lightest, speediest, and simplest gear on the market for direct belt-driven 4-stroke engines.**

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

## IMMEDIATE DELIVERY.

*Send for Illustrated Booklet.*

**During the past few weeks the following machines have been fitted with**

PHILIPSON Pulley

| | |
|---|---|
| Triumph | Arno, |
| Rover, | Rex, |
| Norton, | B.S.A., |
| Douglas, | James, |
| Singer, | L.M.C., |
| Bradbury, | Lincoln Elk, |
| Ariel, | N.U.T.-Jap, |
| Swift, | Humber, |
| Abingdon, | N.S.U., |
| Minerva, | Peugeot, |
| Precision, | Rudge, |
| Matchless, | Quadrant, |
| Ivy Precision, | Alldays, |

Villiers Mark IV.,
and numerous Jap engines.

*What is your make? Write us*

REDUCED PRICE **£7 7 0** Carriage Paid.

**Philipson & Co., Ltd.,**
Astley Bridge, BOLTON, Lancs.

(Established over 50 years.)
'Phone: 147 Eagley. 'Grams: "Safety, Bolton."


## MOTOR CYCLES FOR SALE.
### Enfield.

*Spare Parts:*

ENFIELD Spares.—Immediate delivery.—Kays, 8 Bond St., Ealing. [3617

THE Promptest Firm for Enfield Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3162

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Enfield engine parts in stock. [883

### Excelsior.

BRITISH Excelsior Combination, late date, 5-6h.p. all-chain drive, 3-speed countershaft, good condition; 58 gns.—47, Lyham Rd., Brixton. [3543

£37.—Excelsior 1920 2¼h.p., 2-speed, as new, lamps discs, taxed, smart machine; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11. 'Phone: Park 2071. [3916

### F.N.

2¼h.p. F.N., variable gear, good condition, running order; £11; push cycle part.—86, Florence Rd. N.4. [4243

F.N., 4-cylinder, just overhauled, new parts fitted, sporty mount, good tyres, tax paid; £25.—Barry, 44, Rodwell Rd., East Dulwich. [3453

F.N., 4-cylinder, 2-speed, M.O.V., new tyres, Sen spray, Bosch engine, overhauled, enamel good ¼ tax; £22/10.—38, Hamlet Rd., Upper Norwood. [3768

4-CYLINDER F.N. 1914, 2-speed, hand clutch, al accessories, magnificent condition; £40; no rea sonable offer refused.—365, King St., Hammersmith. [3666

F.N. 2½h.p. Lightweight Motor Cycle, 2 speeds shaft drive, engine has m.o.v. and magneto ig nition, a very fine and reliable little 'bus, good order £12/10.—Holland, Hearsall Lane Corner, Coventry 'Phone, 1945. [4278

*Spare Parts:*

F.N. Spares.—We can supply for all models from 1904. Prompt attention to all inquiries. Stamp please.—Langford's, 37, Cricklewood Broadway, N.W.2 [4227

### Francis-Barnett.

FRANCIS-BARNETT, 1921 model, shop soiled only £57/10.—Attwood's Garage, Stafford. [3693

FRANCIS-BARNETT, 1921, 2¾h.p. J.A.P., 2 speed, clutch, K.S., condition as new; £45.—B. B. F. Co., Melbourne Rd., Coventry. [3381

FRANCIS-BARNETT, 1921, 2¾h.p. J.A.P., 2-speed kick starter, lamps, horn, licensed December, seen by appointment; £65.—Danks, Westminster Rd. Coventry. (D) [4117

### Hamilton.

HAMILTON, good running order, single speed, cl but good. What offers?—23, Lexington St. Golden Sq., Piccadilly. [3867

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; from £120.—Stacey, 12, Ecclesall Rd. [0577

HARLEY 7-9h.p., 1919, Henderson Elite sidecar good condition; £85.—Buccleuch House, Thorpe Bay. [2226

1920 4h.p. Harley, speedometer, tools, full equipped; £78.—2, Fortune Gate Rd., Harlesden, N.W. [4125

7-9h.p. Harley coach Combination, 3-speed; given away, 59 gns; fully guaranteed.—Claremont Garage Blackpool. [3615

1915 Harley-Davidson Combination 7-9h.p., 3-speed Easting, lamps, etc.; £65.—97, Chesnut Rd. Plumstead. [3625

1918 Harley-Davidson Combination, fully equipped £68.—Hillier (side bell), 9, Wallingford Avenue North Kensington. [4265

1920 Harley-Davidson, electrically equipped, special sports turnout; £125.—Speechley, 86, Churchfield Rd., Acton, W.3. [4205

HARLEY-DAVIDSON, 1922 patterns, cash or easy payments, immediate delivery.—Motoria, 1 Regent Parade, Tally-ho. [3935

1920 Harley, electric model, speedometer, Million sidecar, all in excellent condition; £140.—Skinner, Mickleover, Derby. [3577

LATE 1920 Harley de Luxe Combination, mo luxurious outfit, every equipment; £105.—2 Balliol Rd., North Kensington. [3803

1915 Harley-Davidson, 7-9h.p. solo, 3-speed, clutc kick start, perfect condition; £65, near offe —60A, Malyons Rd., Lewisham. [3775

HARLEY Combination, 7-9h.p., any trial, ful equipped, spare tyre, new; £90.—Bergeron, Ho Cottage, Warsash, Southampton. [3515

7-9h.p. Harley-Davidson Combination, 1921½, electri light, complete gadgets, splendid condition; fi spot offer 100 guineas.—F., 21, Marlborough R Exeter. [3815

## MOTOR CYCLES FOR SALE.

### J.E.S.

J.E.S. 1½h.p. 1920, all on, new belt, spares; what offers?—Wattleworth, Bransty, Whitehaven. [3464

### Kenilworth.

VAUCHOPE'S, 9, Shoe Lane, London.—1¼h.p. 1921 Kenilworth motor cyclette; £37/10. [4521

### Kingsbury.

KINGSBURY, 2-stroke, new last August, used only by student during vacations, now bought car, price £30.—Dadswell, Cranston Rd., East Grinstead. [3502

BRAND New Kingsbury, 2-stroke, 2-speed, clutch, all-chain drive; listed 69 gns.; accept 40 gns.—3, High St., Clapham. 'Phone: Latchmere 4290. [4404

### Lea-Francis.

1921 5-6h.p. Lea-Francis, Milliford best sidecar, lamps, full equipment; £120.—8, Manor Rd., Coventry. [4315

LEA-FRANCIS Combination, 3½h.p. twin J.A.P., 4 countershaft gears, chain drive, excellent condition; 57 gns.—10, Belgrave Rd., Hounslow. [4137

LEA-FRANCIS 1920 3½h.p., M.A.G., not ridden 500 miles, in splendid condition; £60; Gloucestershire.—Box 9166, c/o *The Motor Cycle*. [3471

LEA-FRANCIS 1920 3½h.p. Twin, M.A.G., 2-speed, hand and foot clutch, tax paid, new condition, fully equipped; 62 gns.—6, Thurlow Rd., Hanwell, W.7. [4224

LEA-FRANCIS, 3½h.p., 1920, 2-speed, K.S., accessories, mileage only about 4,000, perfect condition; £60, cost £135.—Verrall, 32, Courtland Av., Ilford. [3741

### Levis.

LEMIER Motor Co. for 1922 Levis.

POPULAR 2¼h.p. single-gear Levis, £48; Model S 2¼h.p., 2-speed, clutch, £58, or with kick starter, £60; easy payments 4% extra; carriage paid any address. Buy your machine direct from the Levis specialists.—Premier Motor Co., Aston Rd., Birmingham. [8963

1h.p. Levis; £25; cylinder, piston, tyres new.—4 Hammond, Waterloo Rd., Shepton Mallet. [3575

LEVIS, 2-stroke, 1921, nearly new; £33.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [4361

9 m.p.h. was done by W. Julian on a Levis.—Try Julians of Reading if you require a Levis. [3564

1921 2¼h.p. Levis Sports, fully equipped, as new; 34 gns.—Edwards, 101, Gt. Portland St., W. [4163

LEVIS, 1922 patterns, cash or easy payments, immediate delivery.—Motoria, 15, Regent Parade, Ally-ho. [3935

1921 247 c.c. 50 m.p.h. Levis, mileage 4,000, condition perfect; £45.—Heath, St. John's Rectory, Coventry. [3276

LEVIS.—All models, by one who knows them. Call, write, or 'phone 852.—Gibb, 100 Northgate, Gloucester. [8123

NOR 1922 Levis, the most reliable and neatest 2-stroke upon the road, send or call at Jones Garage, The Broadway, Muswell Hill, N.10. [0788

LEVIS. All 1922 models. Send your orders along; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [7945

LEVIS, late 1921, 2-speed Sturmey-Archer, hand clutch, Miller lamps, horn, tax, tools, Saxpillion; 0; only run 70 miles.—Buxton, Dell Farm, Westerton. [3372

VAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Levis, 2-stroke, £48; 3-speed model, £58; kick start £2 extra; easy terms and exchange; list on application. [4522

A FEW slightly soiled 1921 Levis Models at greatly reduced prices, single gear from £42; 2-speed, clutch, from £50. Write for special clearance bargain list.—Premier Motor Co., Aston Rd., Birmingham. [6926

DISTRICT Levis Agents for Clapham, Balham, Streatham, Tooting, Mitcham, Wimbledon, and Wandsworth. Models in stock.—Knight Traction Co., 9per Tooting Rd., S.W. 'Phone: Streatham 2390. [0778

LEVIS, 2½h.p., 1916, Enfield, 2-speed, all chain, aluminium rims, Amac, E.I.C. magneto, mechanical horn, acetylene lamps, excellent condition, tax paid; 35 guineas.—Judge, 121, Boundary Rd., Barking. [4048

*Spare Parts:*

LEVIS Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7220

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Levis parts in stock. Complete list post free. [8856

LEVIS.—All spares or complete 1922 models from stock, carriage paid.—Jones Garage, Broadway, Muswell Hill, N.10. [0807

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Levis spare parts always in stock. Write for free spare part list, stating year of manufacture. [0753

*We are the only company reconstructing machines who have sufficient faith in the quality of their products to enter them in open competition.*

**In the recent Colmore Cup Trial, Mr. G. Kuhn, riding a Burlington Reconstructed 4 h.p. Douglas, gained a silver medal.**

*This acid test of the quality of the Burlington Douglas speaks for itself.*

*Full particulars on application.*

**CHOOSE YOUR EASTER MACHINE FROM THIS LIST.**

*We hold the following agencies, and can give immediate delivery of any model.*

**F.N.**
**T.B.**
**B.S.A.**
**WOLF.**
**JAMES.**
**VERUS.**
**EDMUND.**
**MORGAN.**
**MORRIS.**
**SIRRAH.**
**DOUGLAS.**
**STANGER.**
**TRIUMPH.**
**CALTHORPE.**
**MARTINSYDE.**
**SUN-VITESSE.**

*TRADE SUPPLIED.*

**DEFERRED PAYMENTS, 4 per cent. extra.**

**The following is an example:**
**2¾ h.p. Burlington Reconstructed Douglas, cash price, 55 gns. Deposit, £15 2 0. 12 monthly instalments of £3 15 0**

*If it's a motor cycle or part of a motor cycle—we have it. Save time by getting in touch with us now.*

**Burlington MOTOR CYCLE CO. LTD**

**7, South Side, Clapham Common, S.W.4.**

**'Phone: Brixton 2417.**
**Wires: Burlington Motors, Clapham.**

Just by Clapham Common Underground Station.

## MOTOR CYCLES FOR SALE.

### Lincoln-Elk.

LINCOLN-ELK, 2¾h.p., Dunlops, Amac, E.I.C., adjustable pulley; £20.—Jackson, Beech Cottage, Cockfosters, New Barnet. [3739

### Marlow.

MARLOW-VILLIERS.—Before deciding on your new mount, write for 1922 list of these beautiful machines.—E. S. Marlow, Emscote Rd., Warwick. [3651

### Martin.

MARTIN-J.A.P. 3½h.p., o.h. valves, perfect order, fast machine, fitted lamp, horn, speedometer; £45.—Crown Garage, Weybridge. [3342

### Martinsyde.

HALIFAX.—Martinsyde 1921 Combination, brand new; £125.—Motor Exchange, Horton St., Halifax. [3986

MARTINSYDE.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7229

F.O.C.H. have a 1921 Martinsyde Combination, completely equipped, excellent condition, bargain.—5, Heath St., Hampstead. (Near Tube.) [3976

FOR a 1922 Martinsyde 3½h.p. Sports or 6h.p. Combination get in touch with the North London agents, Jones Garage, The Broadway, Muswell Hill, N.10. [0789

1922 6h.p. Martinsyde Combination, hood, screen, little used, as new; £130; solo machine part exchange.—37, Arlington Rd., Surbiton. 'Phone, Kingston 1274. [3925

£70.—Martinsyde Combination, 1920, 6h.p., Easting windscreen, Tan-Sad, lamps, tax paid; exchange.—W.J.C. Motor Exchange, 5, Addison Avenue, Holland Park, W.11. Park 2071. [3913

MARTINSYDES.—Sports and touring models for immediate delivery; best prices allowed on second-hand machines in part payment; distance no object.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3888

### Massey-Arran.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Massey-Arrans; unequalled service, repairs, etc. [3147

### Matchless.

TRY Julians of Reading for your Matchless. Exchanges. [3568

MATCHLESS West of England Agent is Gibb, 100, Northgate, Gloucester. 'Phone: 852. [8124

CROSS, Effingham Square, is agent for Matchless motors in Rotherham. 1922 models in stock. [4356

TASSELL, 1a, Bloomfield Rd., Plumstead, for anything Matchless. Deferred payments. Spare parts. [6144

MATCHLESS, all models; exchange for anything, or deferred payments.—Edwards, 101, Gt. Portland St., W. [4173

MATCHLESS 6h.p., T.T., new Philipson, fast, climb anything; £35.—"Treviledor," Goldsworth Rd., Woking. [3582

LONGMAN Bros., Bond St., Ealing.—Official district agents, all Matchless models; immediate delivery; cash or exchange. [2015

1920 Matchless, excellent condition, spare wheel, etc.; £120, or near offer.—26, Berber Rd., Leathwaite Rd., S.W.11. [3617

MATCHLESS, May, 1921, M.A.G. Magdyno, mileage 3,900, everything on, excellent condition; £130.—Mallard, 54, Stanthorpe Rd., Streatham. [3516

1921 Model H Matchless, complete, spare wheel, speedometer, dynamo lighting, etc., done 800 miles; only £149.—Cross, Agent, Rotherham. [4359

MATCHLESS 1922 Models from stock; exchanges or easy payments; trial run any time.—Agents, R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [3297

SHEFFIELD Agent for Matchless. All models in stock. Sporting models £130, standard models £170.—A. J. Stacey, 12, Ecclesall Rd., Sheffield. [0574

MATCHLESS-J.A.P., 6h.p., T.T., kick starter, overhauled, replated as new; £35; or exchange Lightweight.—Torrome, 10, Cathcart Hill, N.19. [3978

MATCHLESS Combination, 6-8h.p., 1920, Easting screen, horn, 3 lamps, spare wheel, etc., good order; £105.—Featherstone, Woodfalls, Sidley, Sussex. [3861

MATCHLESS 1922, brand new, Model H.2, in stock; £170; easy payments arranged. Lists free.—Wilkins Simpson, opposite Olympia, London. [4187

MATCHLESS, 1920, Combination, M.A.G. engine, Magdyno, fully equipped, good condition, bargain; £112.—143, Ravensbury Rd., Earlsfield, S.W.18. [4479

MATCHLESS-J.A.P. Combination, V.S., 2-speed, Cameo windscreen, splendid order; £60; any trial.—Taylor, 27, Oxford Rd., Windsor. 'Phone: 243. [3820

## MOTOR CYCLES FOR SALE.

### Matchless.

MATCHLESS, 1921, Sports Combination, brand new, fully equipped; £140.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone: Avenue 5548. [0069

£55.—Matchless, 8h.p. J.A.P., 4 speeds, Jardine box, kick starter, clutch, sporting sidecar, screen, lamps, fast, powerful, reliable.—8, High St., Wandsworth. [3874

MATCHLESS, late 1920, cost £225, Lucas lighting and accessories, insured September; £120, or exchange.—40, Replingham Rd., S.W.18. 'Phone: Putney 1694. [3396

MATCHLESS.—Immediate delivery all models; exchanges or deferred; demonstration model for trial any time.—Edwards, 50, Harrington Rd., South Kensington. [1951

MATCHLESS 1922 Models for immediate delivery; exchanges; distance no object.—Newoham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3883

KNIGHT'S are the Authorised Matchless Agents.—All models and spares in stock; trial run with pleasure; repairs while you wait.—126, Upper Tooting Rd., London, S.W.17. [0759

VICTORY Model Matchless Combination, 1919 (Dec.), absolutely as new, fully equipped; 89 guineas.—19, Richmond Terrace, Clapham Rd. 'Phone: Latchmere 4290. [4403

MATCHLESS Combinations.—Book your orders with Ross, 86, High Rd., Lee, S.E., or 'Phone Lee Green 744 for immediate delivery of 1922 models. Exchanges and gradual payments arranged. [3480

1920 Model H Matchless, dynamo lighting, speedometer, spare wheel, screen, etc., renovated by the makers, like new, season's tax paid; £130; trial by appointment.—22, Gilmore Rd., Lee, S.E. [4256

1922 Matchless Combination, Model J., super sports J.A.P. engine, C. and M. 50 gns. sports sidecar, front hand brake, Lucas lamps, windscreen; £170; exchanges or deferred.—Edwards, 101, Gt. Portland St., W. [4160

1922 Matchless Standard Combination, Lucas magdyno lighting, windscreen, etc., not done 100 miles, indistinguishable from new; 170 gns.; deferred or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [4452

MATCHLESS Model J., brand new but slightly shop-soiled; list price, £130; special cash price, £105; exchanges impossible, offer unrepeatable; approval anywhere.—The Layton Garages, 30, Holywell St., Oxford. [4374

MATCHLESS 8h.p. 1915, Canoelet sidecar, Cox Atmos carburetter, electric lighting, speedometer, thoroughly overhauled 1921, J.A.P. engine, grand condition; owner buying car; £75, or nearest offer.—Lock, 20, Goldington Avenue, Bedford. (D) [3386

WAUCHOPE'S, 9, Shoe Lane, London.—1922 Matchless, all models, sports twin solo, £130; sports sidecar combination, £160; spring frame model, £170; sidecar combination, 2-seater, £175; 10h.p. commercial carrier combination, £170; easy terms and exchange; write for specifications. [4494

BARKER'S Motors, The South-West London Matchless Agents and Service Station.—1922 models at list prices. We give an insurance policy against mechanical breakdown for 12 months free. All Matchless spares in stock. Open from 9 a.m. until 8 p.m.—194, Balham High Rd., S.W.12. [1211

MATCHLESS Service Depôt. 'Phone Greenwich 751 Now is the time to order your new model from the agent to serve you best.—Sam E. Clapham, (Motors), Greenwich. Send your propositions along. Cash, exchange, easy terms. Agent for all leading makes. See Motor Cycling adverts.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [7942

*Spare Parts:*

MATCHLESS Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7221

MATCHLESS Spares for J.A.P. or M.A.G. by return, post free.—Jones Garage, Matchless Agent, Broadway, Muswell Hill, N.10. [0808

### Metro.

1920 2¾h.p. Metro-Tyler, 2-speed, equipped, licensed, good condition; 34 gns.—Edwards, 101, Gt. Portland St., W. [4167

2¾h.p. 2-stroke Metro-Tyler, just overhauled, complete with accessories, good tyres; £25.—1, Norwood Rd., Herne Hill, S.E.24. [3699

METRO-TYLER De Luxe model 1922, 2-speed, brand new, unridden; cost £55; will accept £45, bargain.—West, 50, Malden Rd., Acton, W.3. [4342

35 GNS.—1920 Metro-Tyler, 2-speed, clutch, K.S., disc wheels, Tan-Sad, equipped, licensed, new Clinchers, smart sporty appearance.—20, Treen Avenue, Hogger's Corner, Barnes. [3838

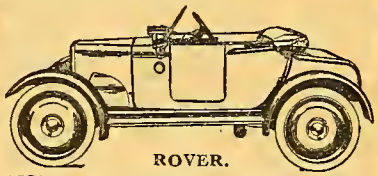
METRO-TYLER.—Several second-hand lightweights at low prices; also special demonstration 5-6h.p. model at reduced price, all guaranteed.—The Metro-Tyler Co., Ltd., Banister Rd., Kilburn Lane, W.10. [3602


# RATCLIFFE BROS.

## 200, GT. PORTLAND ST., W

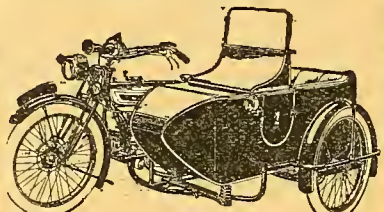
'Phone—Laogham 1704.

**Any make of machine can be supplied on our Payment out of Income Scheme. Write for full particulars, and state machine you are interested in.**



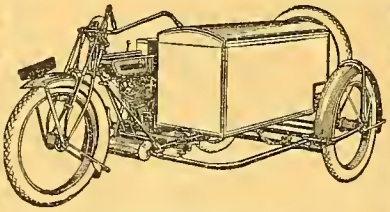
ROVER.

**£220 cash, or £57 4s. down and 12 payments of £14 6s.**



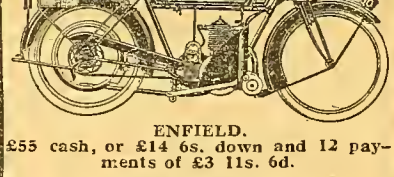
DOUGLAS 4 h.p.

**£135 cash or £33 15s. down and the balance in twelve monthly instalments of £8 18s.**



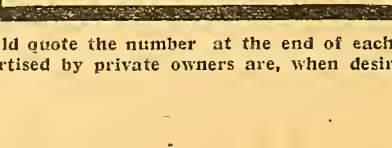
MATCHLESS 8 h.p.

**£170 cash or £42 10s. down and 12 payments of £11 4s. 2d.**



RALEIGH.

**£68 cash, or £17 down and 12 payments of £4 9s. 8d.**



ENFIELD.

**£55 cash, or £14 6s. down and 12 payments of £3 11s. 6d.**

TRADE SUPPLIED.


## MOTOR CYCLES FOR SALE.

### Minerva.

10 GNS.—2¾h.p. Minerva, M.O.V., modernised, enclosed magneto, Amac, ride away.—20, Treen Avenue, Hogger's Corner, Barnes. [3840

### Mohawk.

MOHAWK Cycles, new or second-hand, at lowest possible prices for cash or easy payments.—Mohawk Cycle Co., Ltd., Alexandra Rd., Hornsey. [4793

### Monarch.

1920 Monarch 2¾h.p. J.A.P., 2-speed, clutch and kick start, lamps, tax paid, date and condition guaranteed; £38/10.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [4562

### Moto-Reve.

*Spare Parts:*

MOTO-REVE Spares for all models, also repairs, overhauls.—Motor Supply Co., Sole Concessionaires, 223A, High St., Lewisham, S.E. [9092

### Motosacoche.

£16.—2¼h.p. Motosacoche, mechanical valves, K.S., clutch, variable gear, Bosch, tax paid, ride away.—181, Newton Rd., Burton-on-Trent. [4115

### Ner-a-Car.

SHOP-SOILED Ner-a-Car 2¼h.p.; £35.—Hamshaw, Humberstone Gate, Leicester. [3482

NER-A-CAR, new condition, fitted newest type engine, 2 lighting sets, tools, etc., clean to ride, and ideal for town; seen by appointment; £57/15.—Miss Stanton, Snelston Hall, Ashbourne. [3501

### New Hudson.

NEW Hudson 1919, 2-speed, 2-stroke, perfect; £32.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [4524

1916 New Hudson, 2-stroke, 2-speed, overhauled makers, as new.—65, Linden Av., Thornton Heath. [3610

DAN GUY, Weymouth.—New Hudson 1919 Combination, fitted with Lucas lighting, guaranteed condition; £70. [0822

2¼h.p. New Hudson Model de Luxe, 2-speed, kick start, clutch (new); 55 gns.—Hammond, Waterloo Rd., Shepton Mallet. [3576

1919 4h.p. New Hudson, excellent condition, tax paid; £60; or exchange for higher powered machine.—F. Earnshaw, Easingwold. [3451

NEW HUDSON coachbuilt Combination, 4h.p., late 1914, 3-speed, clutch, kick starter, Bosch, B. and B., excellent condition; £40.—14, Diogwall Rd., East Croydon. [3921

NEW HUDSON Combination, 4h.p., 1919, 3-speed, kick, lamp, horn, good order and appearance, any trial here; £65, nearest, bargain.—Hoyle, Gladstone St., Featherstone, Yorks. [4047

£48.—New Hudson Combination 5-6h.p., twin, Sturmey 3-speed, countershaft, clutch, kick starter, 1921 Amac, Canoelet sidecar, lamps, licence, accessories, splendid order.—63, Solon Rd., Brixton. [4053

1922.—New Hudson 4½h.p. Combinations, £125; 2¼h.p. 2-speed Popular, £50; 2¼h.p. De Luxe 2-speed, clutch, kick starter, £63. Sole agents for Cambridge district.—Wallis and Easton, 104, Mill Rd., Cambridge. [0824

### New Imperial.

3½h.p. New Imperial-Jap, sports, 2-speed, 1920 £55.—Hill, 5, Manor Rd., Walsall. [4029

1919 New Imperial Combination, 8h.p. J.A.P., perfect; £75.—9, Church Rd., Willesden. [4067

1920 8h.p. New Imperial-Jap Combination, perfect £80.—24, Balliol Rd., North Kensington. [3811

£25.—New Imperial 2¾h.p. J.A.P. 2-speed, exceptionally good condition.—4, Nelson Rd., Caterham. [3837

SHEFFIELD Agent for New Imperial Motor Cycles all models in stock.—J. A. Stacey, Ecclesall Rd., Sheffield. [0811

NEW IMPERIAL, all models.—Immediate delivery exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1951

NEW IMPERIAL 1921 8h.p. Combination, with many extras; £115; exchanges.—Newoham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3900

NEW IMPERIAL 2¾h.p. 1918, fully equipped with lamps, speedometer, Tan-Sad, just overhauled and guaranteed perfect; £34. Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [4300

1922 New Imperial Model No. 2, 2¾h.p. J.A.P. engine, 3-speed, clutch, kick-starter; £69; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [4400

NEW IMPERIAL, 1922, Models 1, £63; and 2, £69; immediate delivery.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile Street, E.C.3. 'Phone: Avenue 5548. [0069

## MOTOR CYCLES FOR SALE.

### Rex.

-6h.p. Rex, A.I.V., waterproof magneto, good tyres, running order; sacrifice, £10, carriage paid.—56, awrence Hill, Bristol. [4104

913 Rex-Jap Combination, Roc clutch, electric horn, etc., good tyres and in splendid running rder; price £35, or near offer.—Dunwell's Garage, Vigan. Tel.: 328. [0764

922 Rex-Acme; book your orders now for all models, early delivery can be given of the h.p. Blackburne engine, all chain drive, 3-speed, utch, kick starter, Model G, detachable and interangeable wheels; complete with luxurious sidecar £150; catalogues with pleasure.—Sam E. Clapham Motors), 27, Stockwell St., Greenwich, S.E.10. [2082

### Rover.

OVER, 1921 model, 3½h.p., 3-speed gear, shop soiled only; £75.—Attwood's Garage, Stafford. [3691

OVER 1920 Combination, perfect condition, new tyres, equipped; £85.—Clark, 7, Exhibition Rd., W.7. [3302

920 5-6h.p. Rover Combination, perfect, full equipment; £75.—24, Balliol Rd., North Kengton. [3807

915 Rover 3½h.p., rebuilt, all accessories, fast, good condition; £22.—Lane, 87, Salusbury Rd., ilburn. [3366

921 8h.p. Rover, 2-seater, dynamo lighting, latest colour, as new, £165.—24, Balliol Rd., North ensington. [3813

OVER 1920 3½h.p. Sporting Combination, 3-speed, all-chain drive, perfect; £95; exchanges.—Crown arage, Weybridge. [4120

915 3½h.p. Rover Combination, 3-speed, pedal start, in perfect condition; £55.—5, Norwood l., Herne Hill, S.E.24. [3701

h.p. Rover, standard equipment, electric horn, etc., perfect condition; £160.—P. R. Smith, 34, urch St., Wellingborough. [4041

920 5-6h.p. Rover, fully equipped, excellent condition throughout; bargain, £65; only used o.—Rose's Garage, Uxbridge. [3970

OVER 3½h.p. Combination, splendid condition, mileage under 5,000; £65; yearly licence.—Stan-, 10, Kimberley Rd., Cambridge. [4570

920 3½h.p. Rover Combination, 3-speed, clutch, kick starter, all-chain, Easting, perfect; any al; £85.—123a, King's Rd., Chelsea. [4032

½h.p. Rover Combination, September, 1919, fully equipped, excellent condition; £75.—Swallow, 4, fton Villas, Shenfield Rd., Brentwood. [3605

OVER 1917 3½h.p. Combination, horn, lamps, etc.; £65.—Elce, Ltd., 15-16, Bishopsgate Avenue, momile St., E.C.3. 'Phone, Avenue 5548. [0077

OVER 3½h.p., 3-speed, with coachbuilt sidecar, new machine, slightly shop-soiled, fully guaraned; £115.—P. J. Evans, John Bright St., Birmingm. [3689

921 3½h.p. Rover, special 75m.p.h. model, has been used very little, and is as new, mileage out 1,000; £67.—51, Black Bull Lane, Cadley, eston. [3950

OVER 3½h.p. 1920, 3 speeds, countershaft, clutch, kick start, condition new, guaranteed perfect, exptional bargain; £80; private owner.—Mellor, 55, indsor Rd., Buxton. [3454

OVER 1920 5-6h.p., 3-speed, with Lucas dynamo lighting, fitted with Canoelet sporting sidecar, ry sporty outfit; £105; exchanges.—Newnham Motor ., 225, Hammersmith Rd., W.6. 'Phone: Hamersmith 80. [3898

921 3½h.p. T.T. Rover, Philipson gear, Cowey, Watford speedometer, lamps, complete tools, re belts, splendid order, privately owned; sacrifice, 0 quick sale.—Wilson, Stanton, Longhorsley, rthumberland. [2470

9 GNS.—1920 5-6h.p. Twin Rover, 3-speed, clutch, K.S., enclosed chain drive, practically listinguishable from new, completely equipped; or th Swan sports sidecar, £82.—20, Treen Avenue, gger's Corner, Barnes. [3837

914 Rover 3½h.p., new tyres and tubes, every part new in engine but crank, new hub gear and tch, new belt, Bosch magneto, new head lamp, and ry fast, can be seen by appointment at any time, dal start, fully licensed; £52.—F. H. Brown, Bindds Farm, Rickinghall, Diss, Suffolk. [4557

*Spare Parts:*

OVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7225

### Royal Ruby.

922 8h.p. Royal Ruby combination, all on model, immediate delivery.—Sam E. Clapham (Motors), Stockwell St., Greenwich, S.E.10. [3256

920 8h.p. Ruby Combination, unscratched, magnificent turn out; cost over £200; bargain, quick e, 86 gns.—67, Fernlea Rd., Balham. [4429


# The Juno Cycle and Motor Co.,

*Proprietors:*
METROPOLITAN MACHINISTS Co., Ltd.
248, BISHOPSGATE, LONDON, E.C.2.

TELEPHONE: BISHOPSGATE 2195.
TELEGRAMS: QUILLS AVE LONDON.

ESTABLISHED OVER FORTY YEARS.

## The Pick of the Bunch!

**A.J.S., ARIEL, B.S.A., CHATER LEA, DOUGLAS, ENFIELD, INDIAN, LEVIS, MATCHLESS, NORTON, RALEIGH, RUDGE, SUN.**

**Any of the above Motor Cycles or Combinations can be supplied on our well-known GRADUAL PAYMENT SYSTEM.**

**Particulars on Application.**

## FURTHER SIDECAR REDUCTIONS!

**WATSONIAN. Sidecars for Lightweights, very light and sporty.** **£15** CASH

**MILLS FULFORD. Corvette. A sidecar for the connoisseur!** **£24** CASH

**All Sidecars can be supplied on monthly payments.**

**Sidecar Bodies, Sandum or Venus, from £5 15 0.**

**Underslung or step chassis from £7.**

## Accessories at Reduced Prices.

| | £ s. d. |
|---|---|
| Easting Screens | 3 18 0 |
| Cameo " | 2 15 0 |
| Bluemels, 1921 | 3 10 0 |
| Orto Hoods | 3 5 0 |
| Spring Sbackles, set of four | 6 6 |
| R&H Lamp Sets | 1 12 0 |
| Fleece-lined Leather Gauntlets | 14 9 |
| W. S. R. Jets, all sizes | 8/6 & 10 6 |
| Watford Speedometers, slightly soiled, guaranteed | 4 15 0 |
| Reeolds Chain ⅝ × ¼ perft. | 6 1 |
| all spares in stock. | |
| Tan-Sads | 1 10 0 |
| Austin Seats | 15 0 |
| B & B Lightweight Carburetters, window soiled | 2 10 0 |

**FREE.** **Call or write for 80 pp. Illustrated List with all latest price reductions.**


## MOTOR CYCLES FOR SALE.

### Royal Ruby.

ROYAL RUBY 1920 8h.p. Combination, 3-speed, accessories; £115; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3893

1921 Royal Ruby, new September, 3h.p., spring frame, 2 speeds, clutch, K.S., lamps, horn, speedometer, licensed, insured 1922; £65.—Rosebank, College Av., Slough. (D) [3495

### Rudge.

1912 3½h.p. Rudge, in fine order, £28. — Cross, Agent, Rotherham. [4360

7-9h.p. Rudge-Multwin, fully equipped, any trial; £70.—Barker, Southill, Beds. [3783

LATE 1920 Rudge-Multi, new condition, hardly used; £55.—Rose's Garage, Uxbridge. [3971

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. 1919 Rudge; £50; cash or easy terms. [4523

RUDGE-MULTI 3½h.p. Combination, perfect condition; £50.—4, Somerville Rd., New Cross. [3742

RUDGE-MULTI 3½h.p. 1920, electric light, and as new; £55.—132, High Rd., East Finchley, N.2. [3556

RUDGE-MULTI 1919 3½h.p., lamps, horn; £45; lightweight part exchange.—H. Rock, Cradley, Staffs. [4546

3½h.p. I.O.M. Rudge, 1920, little used, lamps, speedometer; £40.—C. Scrutton, Tilbury Hotel, Essex. [4416

1921½ 3½h.p. Rudge-Multi; £58; new condition; particulars with pleasure.—28, Middleton Rd., Banbury. [3760

£17 for 50 m.p.h. guaranteed Rudge, 1921 silencer, engine perfect; some bargain!—Turpington, Bickley, Kent. [3881

RUDGE-MULTI, T.T., ridden 50 miles; cost £85, accept £68; tax paid.—42, Bromley Common, Bromley, Kent. [4020

1922 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, Muswell Hill, N.10. [0791

RUDGE (I.O.M.) 1920 (Sept.), lamps, Cowey, spare piston and cam, as new; £49/10.—Allen, Ronold Rd., Llandudno Junction. [3436

3½h.p. Rudge, fixed gear, re-enamelled, first class order, tyres good; £29.—Shepherd, Enfield Highway, Waltham X 31. [0792

RUDGE 1922 Combinations and Solos, cash or easy payments; immediate delivery.—Motoria, 15, Regent Parade, Tally-ho. [3933

1921 Rudge-Multi, I.O.M. model, fully equipped, new condition; £55.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [4401

£65.—1921 I.O.M. Rudge-Multi, fully equipped, absolutely as brand new, fully taxed; exchanges.—Kents, 417, Lord St., Southport. [3965

3½h.p. Rudge-Multi, mileage 2,000, tax paid, equipped; £55; combination wanted.—11, Merthyr Terrace, Barnes, S.W.13. [3606

RUDGE-MULTI 3½h.p. and Sidecar, lamps, horn, Easting, and first-class order and appearance; £75.—132, High Rd., East Finchley, N.2. [3359

RUDGE 1922 Models for immediate delivery; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3889

RUDGE-MULTI, July, 1921, 3½h.p., I.O.M. T.T. competition machine, tax and insurance; £65.—Geiger, 24, Mansfield Rd., Gospel Oak, London, N.W.3. [4384

RUDGE-MULTI, 1922, Isle of Man T.T. model; £77; in stock.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone: Avenue 5548. [0073

1922 3½h.p., T.T. Rudge, brand new, in stock; immediate delivery; £77; cash or easy payments.—Wilkins Simpson, opposite Olympia, London. [4190

RUDGE-MULTI Combination 3½h.p. 1917, good condition, lamps, accessories, tax paid, insured; £65.—F. C. Kerr, 47, Bennetts End Rd., Hemel Hempstead, Herts. [3375

ASHGATE Garage, Edgedale Rd., Sheffield.—1922 Rudges, immediate delivery. Multis, £77; 3-speed, £94; 7-9h.p. Combination, with spare wheel, £150; send for list. [3751

1920¾ I.O.M. Rudge-Multi, unscratched, perfect condition, complete accessories; £58, or exchange sporting combination and cash.—126, Bracebridge St., Nuneaton. [3541

RUDGE-MULTI, 3½h.p., I.O.M., specially tuned and finished machine, run under 4,000 miles, full 1922 tax paid; 53 gns.—Hare, 21, Mostyn Gdns., Keusal Rise, N.W.10. [4031

5-6h.p. 1920 (late) Rudge-Multi Combination, touring sidecar, tax and insurance paid, small mileage, excellent condition, all on; £85.—A.H.D., 44, Freemantle Rd., Cobham, Bristol. [3353

## MOTOR CYCLES FOR SALE.

### Rudge.

3½h.p. Rudge-Multi, 1921, I.O.M., touring bars, 3,000, unpunctured, all tools, accessories, spares, tax paid 1922, insured July, perfect condition; £68.—Betts, Castle-Ashby, Northampton. [3957

1920 5-6h.p. Rudge-Multi and coachbuilt sidecar in beautiful condition, new belt, new 700×80 tyre on rear wheel, lamps, fully equipped; bargain, £60.—24 and 25, Brook Mews North, Lancaster Gate, W.2. [4010

5-6h.p. Rudge-Multi Coach Combination, fully equipped, also spares, smart turnout and powerful, tyres perfect, engine overhauled, faultless throughout, photo; £48; or exchange lightweight.—128, London Rd., King's Lynn. [3974

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 3½h.p. Rudge, sloping tank, I.O.M., £77; any model supplied; write for list; easy terms arranged; second-hand machines taken in exchange; also 3½h.p. 1919 Rudge, I.O.M., £57/10. [4499

GUARANTEED perfect, finest and fastest T.T. Rudge-Multi on the market, September, 1921, starter, high and low compression piston, variable jet, long plated exhaust, with detachable silencer, also standard system; lighting, Fallolite, D.A., also generator and electric; belt case, horn, tools, licence; only £68.—Maclean, "Brackenhurst," Nepean St., Roehampton, S.W.15 [4045

*Spare Parts:*

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3163

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Rudge parts in stock. Complete illustrated lists post free [8842

### Scott.

1920 Scott, perfect condition, little used, tax paid; £65.—Pinn's Garage, 12 High St., Fulham. [3595

SCOTTS, either model, West of England Agent is Gibb, 100, Northgate, Gloucester. 'Phone: 852. [8126

1922 Scott Models in stock, complete; £110; delivered free.—Millard's, Scott Agents, Chesterfield. [4276

F.O.C.H. have a 1920 Scott, brand new condition; also 1914 and 1920 combination.—5, Heath St., Hampstead. (Near Tube.) [3707

SCOTT 3½h.p., good condition throughout, fast and powerful; a bargain, £25.—G. V. Crump, 6, Semere Green, Pulham Market, Norfolk. [3338

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8352

SCOTT 1922 Squirrel models; place you order with the Layton Garages, who at the moment are in a position to offer a few specially selected and tuned examples capable of about 10 m.p.h. more than standard; Brooklands certificates if necessary; we are specialists in Scott machines generally and invite correspondence concerning them; all inquiries dealt with by our Mr. Tollady to whom the honour of riding the first Scott to victory at Brooklands belongs.—The Layton Garages, 30, Holywell St., Oxford. [4377

*Spare Parts:*

SCOTT Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7226

WARD Motors, Ltd., 32, Hustler St., Bradford, for serviceable second-hand Scott parts. Huge stock. [0739

SCOTT Service Depot, Cathedral Motor Works, 99, Great George St., Liverpool.—Scott spares, Scott repairs. [4201

SOUTH London Scott Service Depôt.—Scott Spares: Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone 1129. [8353

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list, stating year of manufacture. [0751

### Singer.

SINGER 2¾h.p., 2-speed, clutch; after 5; £20.—20, Bedford Rd., South Woodford. [3880

SINGER 2¾h.p., lamps, horn, good tyres, tax paid, fast; £25.—Wilshire, 38, Arthur St., New Village, Bentley, Doncaster. [3384

*Spare Parts.*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

### Spark.

SPARK 1922 Models, Villiers engine, fly wheel magneto, £38/18; also 2-speed kick starter models in stock, £82/10.—Eagles and Co., 275, High St., Acton, London. [4144

### Sparkbrook.

SPARKBROOK, 1921 model, 2½h.p., shop soiled only; £48/10.—Attwood's Garage, Stafford. [3694

1921 Sparkbrook 2½h.p. 2-speed, Villiers engine, Lucas lamps, horn, College mudshield, insured, licensed; £38.—40, Warley Rd., Blackpool. [4301


# THREE ATTRACTIVE VALUE-FOR-MONEY LIGHTWEIGHT PROPOSITIONS

## *The Quality Henley*

Built as it is throughout from components bearing such irreproachable names as Blackburne, Burman, and Brampton, this beautiful machine stands head and shoulders above the ordinary assembled lightweight by reason of its superb finish and detail refinement. The price too is attractive. Three-speed 2¾ Blackburne **70 Gns.**

## *The Big-Hearted Radco*

A machine of special appeal to the man who requires a sturdy, reliable machine, made by a firm with a first-class reputation, at the lowest possible price. The single-geared model at 34 gns. is the lowest priced REAL motor cycle to be bought, while you can obtain the same machine equipped with a Two-speed, clutch, and kick-starter gearbox for - - - - - **45 Gns.**

## *The Thoroughbred Excelsior*

A range of lightweights made by a firm with nearly half a century's reputation—each a leader in its particular class. Economy is a special feature of these machines—both to buy and maintain, while the finish is second to none on the road. I am in a position to supply a few only of these desirable little machines equipped with clutch and kick-start gearboxes and Villiers flywheel-magneto engines at the tempting price of - - - - - **£49 10s.**

*The only difference between these and stock machines is that 24" wheels are fitted in lieu of 26".*

WRITE, 'PHONE, OR CALL NOW.

# FRANK HALLAM

**DALTON STREET** (Two doors from Bull Street)

**And 88, Bristol Street,**

*'Phones: Central 7317 and Midland 1472* **BIRMINGHAM**

**Full market price allowed for your present machine in EXCHANGE.**

**EASY PAYMENTS direct with the purchaser only 4% extra.**


## MOTOR CYCLES FOR SALE.

### Sun.

SUN-V.T.S., perfect condition; £28, bargain.—Cobley, "Mitre," Golborne Rd., North Kensington. [3319

SUN-J.A.P. 6h.p. Twin Combination, splendid condition; £50; exchange.—Fairhurst, behind 68, Standishgate, Wigan. [4101

26 Gns., Bargain.—1919 Sun-V.T.S., 2 speeds, footboards, smart, rebushed.—Seabridge, Hansler Rd., East Dulwich. (Sydenham 2452.) [7936

SUN-VITESSE, 1922, 2¾h.p., 2-speed, 2-stroke, clutch, kick starter.—Elce, Ltd., 15-16, Bishopsgate Ave., Camomile St., E.C.3. 'Phone: Avenue 5548. [0074

SUN-VILLIERS, 1916, 2¾h.p., 2-stroke, fitted with Douglas 2-speed, Stewart road clearer, tax paid, perfect condition; price £28.—Vardy, Commercial Rd., Southampton. [3385

FOR Sun, J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., 60 gns. Send for catalogues. Trade supplied.—Jones Garage, Broadway, Muswell Hill, N.10. [0790

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Sun-Villiers and Sun-Jap engine parts in stock. [1992

### Sunbeam.

1919 8h.p. Sunbeam Combination; £85, or exchange late fast single.—Burgess, Tew, Oxon. [4324

SUNBEAM, 1921, 3½h.p. model, 3-speed gear, shop soiled only; £120.—Attwood's Garage, Stafford. [3693

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs, etc. [3143

CROSS, Effingham Square, is agent for Sunbeams for Rotherham. New 3½h.p. and 4¼h.p. models from stock. [4357

SUNBEAM 1920 3½h.p. Combination, completely equipped, insured; £105. — Buccleuch House, Thorpe Bay. [2227

SUNBEAM, 1922 model, special 3½h.p. sporting model, delivery from stock; 130 guineas.—Attwood's Garage, Stafford. [3697

1921 (Sept.) Semi-sporting Sunbeam, little mileage, full equipment; £105.—Burrows, 16, Walmer Rd., Waterloo, Liverpool. [4043

SUNBEAM Combination, 1917, good working order, windscreen, lamps, etc.; 80 gns.—Manchester, Butcher, Melton Mowbray. [3828

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Sunbeams, order now; also 3½h.p. 1917 model, £75; easy terms and exchange. [4500

1920 8h.p. Sunbeam Combination, Lucas dynamo lighting, spare wheel, etc.; £140.—Hughes, "Harwood," North Finchley, N.12. [3333

1920 3½h.p. Sunbeam Combination, spare wheel, fully equipped; £100.—Hillier (Side Bell), 9 Wallingford Avenue, North Kensington. [4262

£75.—1915 Sunbeam 3½h.p., 1919 Rennoc sidecar to match, lamps, tools, complete, excellent condition and appearance.—Roberts, Clarence St., Ulverston. [4054

8h.p. Sunbeam Combination, Dec., 1919, hood screen, discs, Lucas dynamo, extras, spares licensed; £160, or offer.—England, Tramways, Castleford, Yorks. [4065

8h.p. Sunbeam 1921 Combination, Magdyno, lamps spare wheel, hood, screen speedometer, in practically new condition; cost £290; any trial; £180, no offers.—8, Grange Rd., Ramsgate. [3407

3½h.p. Sunbeam Combination, interchangeable spar wheel, legshields, Easting's, Lucas lamps, born unscratched, unpunctured, perfect, ridden Easter to August, mileage 800; cost £230, sell £130, bargain.—Hallewell, Alexandra Rd., Lytham. [4267

1921 Sunbeam Sports, mileage under 1,000, enamel and plating perfect, Cowey born, C.A.V. beam lamp, rear lamp, aluminium number plates, perfect condition, seen Reading; £110.—Lavin, Old House, Sonning, Berks. [1207

SUNBEAM 8h.p. Combination, July, 1919, J.A.P. engine, electric lighting, hood, spare wheel, sidescreen, etc., in good condition, tax paid 1922, £1 insurance.—Offers to P. H. Jones, Lichfield St., Wolverhampton. [3837

1921 Sunbeam Sports Model, P. and H. lighting set, Harley-Davidson speedometer, horn and complete equipment, mileage under 2,000, absolutely perfect condition; £100; owner going abroad.—Lombard, The Mount, Beer, Devon. [3447

SUNBEAM agents.—1922 models in stock; 3½h.p. 3-speed clutch, and kick starter, £126; 3½h.p. T.T. sporting model, £136/10; in stock; easy payments terms and exchangos arranged.—Herbert Robinson Ltd., Green St., Cambridge. [1987

SUNBEAM 1914-15 Combination, Gloria sidecar, 3-speed countershaft, all-enclosed chain drive, hand clutch, kick starter, all tyres good, very good condition throughout; £52/10, a real bargain.—R. Watson, Victoria Rd., Aldeburgh, Suffolk. [3327

## MOTOR CYCLES FOR SALE.

### Sunbeam.

SPECIAL Bargain, 1921 Sunbeam, 3½h.p., lamps, horn, Brooks cantilever saddle, F.E.W. valve attachments, Runbaken spark amplifier, owner driven, never punctured, brand new condition; cost £165, must sell; £120.—L., Cooper's Hill, Brackoell. [3543

1921 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual tires, cost eluminium plates, new in April last, and in exceptionally good condition tyres unpunctured; nearest offer to £110.—Geoffrey Smith, *The Motor Cycle*, Coventry [X4285

SUNBEAM 1917 Military Model, enamelled green, 3½h.p. combination, late Canoelet sidecar, hulas back, 3-speed clutch, ks., Binks carburetter, leg shields, Lucas lamps, Klaxon horn, tax paid till March 1st, in good mechanical order, tyres good all round; £70.—Shaw Bros., Halesowen, Birmingham. [4467

LATE 1919 3½h.p. Sunbeam, coachbuilt sidecar with Sunbeam screen, Lucas lamps, generators horn, tyres good, new on back wheel, spare set forks and usual spares, condition equal to new, all in perfect order; awaiting removal from Sunbeam works after thorough overhaul; tax paid 1922; £120, best offer.—Bradley, Ashfield, Hartlebury. [3570

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Sunbeam parts in stock. Immediate delivery. [8840

### Swift.

12.—2¾h.p. Swift, chain drive, Bosch, very low, any trial.—76, London St., Chertsey. [4321

### T.D.C.

3h.p. Hockley T.D.C., new engine, Druids, good 4 tyres, fast; £15.—41, Regent St., Wellington, Salop. [4541

T.D.C. De Luxe, 1920, 2¼h.p., 2-stroke, 2-speed, licensed 1922; ride away; £26; evenings.—Sandia, Edgewood Hostels, Belvedere, Kent. [4258

### Triumph.

PREMIER Motor Co. for 1922 Triumphs

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £105 Type SD, chain drive, £115; Type LW, lightweight, £5; sidecars from £20 to £50; easy payments 4% extra Buy direct from the leading Triumph agents: The Premier Motor Co., Aston Rd., Birmingham. [0627

JULIAN'S, of Reading, have all Triumph models in stock. [3567

TRIUMPH 1922 Models.—Immediate delivery of H and SD and sporting model R (o.h.v.).—Below.

TRIUMPH 1920 4h.p. Combination, complete with lamps, horn, etc.; £85.—Elce, Ltd., 15-16, Shopsgate Avenue, Camomile St., E.C.3. 'Phone, Avenue 5548. [0075

1920 Triumph 4h.p., 3-speed, equipped, new condition; £75.—17, St. Charles Square, W.10. [4028

1920.—Triumph 3½h.p., Bosch, tyres good, good running order.—Seen at Lunn's Garage, Evesham. [3652

1912 Triumph T.T., good tyres, lamps, horn; £16/17/6.—Shaw, Jeweller, Wellington Salop. [4539

1918.—3½h.p. Triumph, Bosch, B. and B., splendid running order.—King, Egrove Farm, Oxford. [4294

TRIUMPHS.—A fine assortment of all models in stock at prices to suit all.—Ross, 86, High Rd. [5020

1912 T.T. Triumph, fully equipped, tax paid, perfect bargain; £28.—Griffin Church St., Lichfield. [3945

1919 Triumph and Sidecar and accessories, in good condition; £80.—Bounds, 223, High Rd., Kilburn. [3920

TRIUMPH Combination, lamps, horn, etc., 3-speed, Bosch magneto; £45.—White, Manor Rd., Walthamstow. [3509

TRIUMPH Junior new 1921 Model at greatly reduced price.—Eagles and Co., 275, High St., Acton, London. [4148

1913-14 3½h.p. Triumph, 3-speed, J.S. clutch; 32 gns.—Hammond, Waterloo Rd., Shepton Mallet. [3574

TRIUMPH, 1922 patterns; cash or easy payments; immediate delivery.—Motoria, 15, Regent Parade, Tally-ho. [3934

COUNTERSHAFT Triumph, renovated, condition guaranteed; £60.—Inman, Durham Rd., Seaforth, Liverpool. [3579

1920 Triumph Combination, as brand new, beautifully equipped; £85.—24, Balliol Rd., North Kensington. [3816

1919 (late) Triumph 4h.p., countershaft, carefully ridden, Lucas lamps; £70.—Chant, 3, Bedford St., Exeter. [3363

TRIUMPH 1911 3½h.p., single-speed, fast, reliable, Klaxon, etc.; evenings; £29.—80, Milton Avenue, East Ham. [3607

TRIUMPH 3½h.p., N.S.U., 2-speed, new cylinder, piston, etc., lamps, tax; £25.—43, Addison Rd., Keddington. [3419


# MARCH WINDS
## APRIL SHOWERS ! !
**BE PREPARED for all "bad weather" occasions.**

Fig. 1.

**WATERPROOF MOTOR CYCLE SUIT (Fig. 1)**

Fawn double texture material, interlined rubber, seams cemented and taped, wind cuffs, wind gusset in overalls, and claspfasteners. Guaranteed waterproof.

**SUIT COMPLETE 35/-**

**POST YOUR ORDER EARLY**

Any of these garments sent carriage paid. Prompt despatch.

**OUR GUARANTEE.** Money refunded in full if not thoroughly satisfied.

**Waterproof Trench Coat 25/-**

(Fig. 2) Fawn material, rubber lined wind cuffs, guaranteed waterproof.

Fig. 2

**SEAT-LESS Trousers** Fawn double texture material rubber interlined, wind gusset & clasp fasteners. All sizes.

**18/-** per pair

**WATERPROOF OVERALLS.**

Double texture material clasp fasteners, perfectly waterproof.

per **15/-** pair.

*If you cannot call, send money with breast measurement and height.*

**SEND FOR PATTERN BUNCH OF CLOTHS TO-DAY**

Actual Manufacturers:

**Martin Waterproof Co.,**

**208, Oldham Rd., New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### Triumph.

1918 Countershaft Triumph, perfect; £48.—24, Balliol Rd., North Kensington. [3814

IN Stock, Type 8 1922 Triumph; £105.—D. and S. Autocar Co., 33, The Parade, Golders Green. [4451

£25.—Triumph, 1912, N.S.U., 2-speed, thoroughly overhauled and perfect.—Pinn's Garage, 12, High St., Fulham. [3596

1920 Triumph, countershaft, extra wide tank, Lucas lamps, speedometer, variable jet; bargain, £72/10.—Below

1918 Triumph, countershaft, fully equipped, speedometer, splendid condition; £48.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [4400

BABY Triumph, 2 speeds, lamps, little used, in beautiful condition; take £30.—18, Wherstead Rd., Ipswich. [4034

BRANDISH and Sons, Coventry, for Triumphs.—Triumph-Ricardo in stock.—W. Brandish and Sons, Coventry. [1045

1921 Triumph, done 200 miles, splendid running order, with lamps; £88.—R. Daniell, 11, Cadogan Place, S.W. [3429

GENUINE 1918 Countershaft Triumph, fully equipped, condition perfect; £58.—47, Marsham St., Westminster. [3616

LATE Model Triumph Combination, mechanically perfect, mileage 3,000; offers.—31a, Fieldhouse Rd., Balham, S.W. [3667

1920 Triumph-Henderson, jolly old beast; £110, or offers.—Details, Robinson, Netherfield, Kirkburton, Yorkshire. [3487

1921 Baby Triumph, indistinguishable from new; £45/10.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [4565

BABY Triumph, late 1921, Lucas accessories, just like new; £45; ideal for lady.—Buntiog's Exchange, Wealdstone. [4140

RENOVATED T.T. Triumph, all on, tax, etc., a beauty; sacrifice, first 29 gns.—Ramsden's, Mayhell Av., Blackpool. [3588

TRIUMPH, late 1917, coachbuilt sidecar, Lucas lamps, Klaxon; £70, nearest.—34, Courland Grove, Clapham, S.W. [3339

TRIUMPH Combination, 3-speed, kick start, and trial; £38; take lightweight part.—57, Kenbury St., Camberwell, London. [4338

1919 Triumph 4h.p., countershaft, fully equipped; £52/10.—Hillier (side bell), 9, Wallingford Avenue, North Kensington. [4265

CROSS, Effingham Square, is agent for the Trust Triumph for Rotherham. All models, including Ricardo model, from stock. [4358

TRIUMPH, Mabon gear, all on, tax paid; £36; must sell, any trial Saturday or Sunday.—Webber, Cottage, Coppetts Rd., N.10. [3512

F.O.C.H. for Triumphs. Latest models in stock. Also 1921 solo and 1918 combination.—5, Heath St., Hampstead. (Near Tube.) [3705

3½h.p. Triumph, 3-speed hub, clutch, pillion seat, accessories, excellent condition; £45 or nearest.—Elliott, Golden Gates, Ascot. [1761

TRIUMPH 2-stroke, slightly soiled only, equipped, £45; 4h.p. sports, only run 200 miles, £58.—Clark, 7, Exhibition Rd., S.W.7. [3295

1920 Triumph, 3-speed, clutch, and kick start, in excellent condition; £68.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [4564

TRIUMPH 4h.p. 1914, 3-speed, excellent condition, appearance like new; £47/10; any examination.—Moseley, Kirby Muxloe, Leicester. [3943

TRIUMPH-GLORIA Combination, electric lamps, Klaxon, splendid condition; £70.—The Haven, 120, Sutherland Rd., W. Croydon. [4138

1919 Triumph 4h.p., 3-speed gear box, kick starter, lamps, speedometer; sacrifice, 59 gns.—30, Normanton Avenue, Wimbledon Park. [3424

3½h.p. Triumph, clutch, excellent condition, exceptionally fast, tax paid 1922, any trial; 35 gns.—Edwards, Nether Wallop, Hants. [3369

1919 Triumph and coachbuilt sidecar, 3 lamps, Easting, Tan-Sad, and spares; best offer.—P. Pocock, Coldash, Newbury, Berks. [3851

1914 4h.p. Triumph, 3 speeds, clutch, all on, tyres nearly new, condition perfect, any trial; £45.—Morgan, 50, Hawley Square, Margate. [4109

TRIUMPH 1921, chain belt, solo, lamps, tools, spare valve, variable jet, mudshields, as new; £79.—171, Ordnance Rd., Enfield Lock. [4033

TRIUMPH, 4h.p., Dunhill C.B. sidecar, all accessories, condition new; £100; tax paid.—Bryan, 81, Southwark St. 'Phone: Hop 2362. [3488

£25.—Triumph 3½h.p., late 1912, clutch, Bosch magneto, new Seospray, new piston and cylinder; any trial.—61, Grand Parade, Harringay. [4551

WAUCHOPE'S, 9, Shoe Lane, London.—4h.p. Triumph Combination 1921, all chain, £125; also 4h.p. Triumph Model H, 1920, £85. [4508

TRIUMPH 1918 frame, back section, mudguards, wheels, stand, etc., cheap; wanted, sidecar for Powerplus Indian.—94, Salisbury Rd., Maidstone. [4304

## MOTOR CYCLES FOR SALE.

### Triumph.

LONGMAN BROS., Bond St., Ealing. Telephone: 689. Official district agents.—All Triumph models. Cash, exchange, or deferred payments. [5787

TRIUMPH, immediate delivery of all models. Cash! Exchanges! Easy Payments! Write for catalogue.—P. J. Evans, John Bright St., Birmingham. [3690

SHEFFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stacey, Triumph Service Depot, 12, Ecclesall Rd., Sheffield. [0812

TRIUMPH Combination, 1911, 3-speed Sturmey hub, lamps, horn, splendid running order; £32; trial.—Stott, Staplehall Rd., Northfield, Birmingham. [3779

1920 Triumph Combination, speedometer, legshields, many extras, splendid condition; £85; exchange.—James, c/o Bradmaes, 482, Harrow Rd., Paddington. [4397

£38.—Triumph Junior, 1920, but absolutely unscratched, 2-3-speed, lamps, horn, tools; deliberate sacrifice.—Brockbanks, 58, Lord St., Southport. [4381

1920 4h.p. T.T. Triumph, direct drive, Lucas lamps, Cowey speedometer, mileage 3,000, in new condition; £58.—32, Winchester Rd., Colchester. [4348

TRIUMPH 4h.p. 1919, T.T., single-gear, adjustable pulley, fast but tractable, 2 up, very little used, fully equipped; £65.—Soper, 16, Cheniston Gardens, W.8. [3364

4h.p. Triumph, 3-speed, clutch, lamps and tools, tax paid; £45; or would take small 2-seater and pay cash adjustment.—East View, Maltby, nr. Rotherham. [4326

TRIUMPH Combination, 1920, fitted Montgomery touring car, Easting, all lamps, luggage grid; £90.—Barker, 216, Portobello Rd., North Kensington, W. [4213

TRIUMPH C.S. and Paragon light detachable C.B. sidecar, lamps, horn, tax paid, all new Dunlops, good going order; £70.—8, Netherton Grove, Chelsea, S.W.10. [4482

1922 Triumph, all models; latest catalogue with pleasure; cash, exchange, easy terms.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3262

TRIUMPH 1919, latest gear change, perfect condition, Lucas electric lamps, new Dunlops, year's tax paid; 55 gns., or near offer.—Box 9222, c/o *The Motor Cycle*. [3716

TRIUMPH 1913 3½h.p. 3-speed Combination, tax paid, exceptionally fine order; £45.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3897

TRIUMPH 1922 Models in stock; best allowance on machines taken in part payment.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3887

1919 Triumph, model H., and 1921 spring wheel Gloria sidecar, Lucas lamps, Lucas horn, screen, little used, wants seeing; bargain, £95.—365, King St., Hammersmith. [3662

35 GNS.—1920 Baby Triumph, excellent order, accessories; also brand new 4h.p. T.T. model, from £105 to £65, snip; exchanges.—Keat's, 417, Lord St., Southport. [3963

1918 Triumph and sporting sidecar, countershaft gears in good order, lamps, good tyres, ready to go anywhere; £57.—24 and 25, Brook Mews North, Lancaster Gate, W.2. [4011

TRIUMPH Combination, countershaft, fitted Millford sidecar, screen, all accessories, perfect mechanical condition; £75.—Richardson, 20, Heath Hurst Rd., Hampstead. [3781

LATE 1914 Triumph, T.T., 3-speed, C.B. Combination, scuttle dash and screen, lamps, horn, etc., excellent condition, any trial; £45, or offer.—Potter, 5, Bentinck Mews, W.1. [4072

TRIUMPH 1919 4h.p., countershaft, excellent order, lamps and horn; price, including £4 licence, £57/10, a real bargain.—Ross Engineering Co., Ltd., Ross, Herefordsbire. [4532

TRIUMPH 1914 (stored through war), 3-speed, clutch, and C.B. Canoelet, lamps, Klaxon, speedometer, etc., finish as new, perfect; only £39/10.—72, Devonshire Rd., Forest Hill, S.E.23. [3958

THIS week's Bargain.—Chain-drive Gloria Combination, Lucas lighting, horn, tax paid 1922, unscratched; £120, no offers.—109, Melrose Avenue, Wimbledon Park. 'Phone, Regent 3612. [3737

1918 Triumph and Swan Sporting Sidecar, 4h.p., 3-speed, clutch and lamps, speedometer, windscreen, excellent mechanical condition, tyres as new; 65 gns.—Edwards, 50, Harrington Rd., South Kensington. [4454

BARKER'S Motors can supply all Triumph 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [1213


An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

Insurance Policies

**IMPORTANT AGENCY EXTENSION**

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS

Address—Agency Dept.,

The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED

Head Office:
77, Cheapside, London, E.C.2.
*Telephone: City 9831 and 9832.*
*Telegrams: "Autoinsure, Cent. London."*


## MOTOR CYCLES FOR SALE.

### Triumph.

£35/10.—Sporting Triumph Combination, 3½h.p., 2-speed, clutch, streamline sidecar, lamps, horn, spares, semi-T.T. handlebars, long exhaust, perfect throughout, any trial; offers.—Walley, 83c, Trinity Rd., Balham, S.W. [3761

TRIUMPH 1919 Solo, complete with tools, lamp set, mechanical horn, and spares, 3-speed countershaft, perfect condition internally and externally, insured £100; any trial; sacrifice, £55.—Griffin, 97, Angell Rd., Brixton, S.W.9. [4195

1920 Triumph-Gloria Combination 4h.p., countershaft type H, splendid condition, very little used, as good as new, any trial or examination, fully licensed for 1922; £99/10, no offers; a bargain.—Hagell, 19, Union St., Maidstone. [3352

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Triumphs, 4h.p. all-chain models, 3-speed, £115; 4h.p. chain and belt, £105; 2¼h.p. 2-stroke model, £65; 4h.p. combination, £145; easy terms and exchange. 'Phone: Holborn 5777. [4501

TRIUMPH 1921 Model H. Combination, issued new November, and has had very little use; completely equipped with lamps and horn, and originally costing £135; is now offered at bargain figure of £108; exchanges impossible.—The Layton Garages, 30, Holywell St., Oxford. [4378

TRIUMPH agents.—1922 models in stock; 4h.p. belt and chain drive, £105; all-chain drive, £115; 2¼h.p. 2-stroke, £65; 3½h.p. fast roadster, £120; in stock; easy payment terms and exchanges arranged.—Catalogues and full particulars from Herbert Robinson, Ltd., Green St., Cambridge. [1988

TRIUMPH, 1922, Model H, complete with C.B. sidecar, fully equipped with lamps and horn and licensed to December 31st, 1922, cost £139; offered at £120 cash; soiling scarcely perceptible, exchanges impossible, approval anywhere, unrepeatable, bargain, only wants seeing to be jumped at, first wire secures.—The Layton Garages, 30, Holywell St., Oxford. Telegrams: Integrity, Ox. [4364

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

GENUINE Triumph Spares from Official Agents.—Longman Bros., Bond St., Ealing. Tel.: 689. [4488

HERBERT ROBINSON, Ltd., Green St., Cambridge.—The Triumph Experts. Complete illustrated lists post free. [8841

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [1159

TRIUMPH Spares in stock; Illustrated list free; orders despatched by return.—W. Brandish and Sons, Triumph Garage, 625, Foleshill Rd., Coventry. [1044

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; gear overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10. [0809

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Velocette.

£25.—Velocette 2¼h.p., 2 speeds, all chain, accessories, splendid order.—63, Solon Rd., Brixton. [4052

1922 Velocette.—Immediate delivery of any model from Premier Motor Co., Aston Rd., Birmingham. [8965

WAUCHOPE'S, 9, Shoe Lane, London.—All 1922 Velocette models supplied on easy terms and exchange. [4502

VELOCETTE, 1921, fully equipped, mileage less than 200, indistinguishable from new; £45 cash; approval anywhere.—The Layton Garages, 30, Holywell St., Oxford. [4365

VELOCETTE.—Immediate delivery of all 1922 models. The premier lightweight machine. All enquiries dealt with by our Mr. Tollady, who scored the first win at Brooklands with a Velocette. Place your order with Velocette specialists. — The Layton Garages, 30, Holywell St., Oxford. [4366

A STOUNDING value.—Not shop-soiled old stock but brand new 1921 Velocette models D.2, delivered from makers' works in January, latest improvements, both brakes internal expanding, 2-speed, chain drive; £55 carries makers' full guarantee; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [1985

### Verus.

1921 4h.p. Verus-Blackburne, 3-speed, as new, mileage 200; exchanges or deferred.—Edwards, 101, Gt. Portland St., W. [4161

## MOTOR CYCLES FOR SALE.

### Verus.

920 Verus 2¾h.p., 2 speeds, clutch, kick start, excellent condition, guaranteed; £38/10.—d, 122, Maida Vale. 'Phone, Hampstead 1353. [1997

921 4h.p. Verus Blackburne, 3-speed, mechanical oil pump, Ace discs, excellent condition; de-ed or exchanges.—Edwards, 101, Gt. Portland St., [4162

920 2¾h.p. Verus-Blackburne, 2-speed, clutch, lamps horn, disc wheels, etc., first-class order. paid; £55.—Shepherd, Enfield Highway. 'Phone, ltham Cross 31. [0799

921 Verus 4h.p. Blackburne 3-speed, clutch, k.s., mechanical oil pump, ace discs, etc., excellent dition; 63 gns.; exchanges or deferred.—Edwards, Harrington Rd., South Kensington. [1956

920 Verus 2¼h.p., single-speed, good as new, electric light outfit, good accessories, suit overalls 6in.), insurance, tax paid; lot cost over £75; ; appointment only.—Schofield, 25, Santos Rd., ndsworth, S.W.18. [1020

### Victoria.

921 4h.p. Victoria-Jap, 3-speed Sturmey, K.S., all accessories, practically new; £65.—C.S., 14, aton Rd., Bow. Tel.: E. 3155. [3953

920 4h.p. Victoria-Jap, 3-speed, Sturmey, licensed, equipped, as new; exchanges or deferred; 60 .—Edwards, 101, Gt. Portland St., W. [4170

### Villiers.

ILLIERS-GAMAGE 2½h.p., delivered 1920, condition as new, tyre on back; cost £60; £28.—ionial Motors, 104a, Finchley Rd. Hampstead 22. [4394

### Williamson.

55.—Perfect 8-10h.p. Williamson Combination, full equipment, spares, beautiful condition, just overled, costing £12; exchange considered. — 4, Elm rdens, Hammersmith. [2315

916 8-10h.p. Williamson Combination, 2-speed, kick start, good condition; £65; or exchange h.p., good make, combination.—21, Bernard Rd., exham. [4064

### Wolf.

920 Wolf (nearly new), 2¾h.p. J.A.P., Sturmey-Archer, 2-speed, hand clutch, all accessories; gain, £45.—365, King St., Hammersmith. [3663

920 2¾h.p. Wolf-Jap, Sturmey-Archer gear box, lamps, horn, tools, etc., small mileage; £30.—S.C., 166, Great Portland St., W.1. Tele.: Museum 26. [3378

3h.p. Wolf-Jap, Sturmey 2-speed, kick starter and hand clutch, 12 months old and hardly used, ps, horn, tyres as new; £38.—Anthony, 1, Townsnd Cottages, St. John's Wood, N.W.8. [4226

### Wooler.

OOLER, new condition, £48; exchange piano, furniture.—Ponter, 14, Mall Rd., W.6. [2565

920 Wooler, completely equipped, recently overhauled; £45.—2, Friern Watch Avenue, North nchley. [3422

920 2¾h.p. Wooler, fully equipped and licensed, just overhauled by makers, very smart turnt; after 4 p.m.—4, Elm Gardens, Hammersmith. [4273

UPER 2¾h.p. countershaft Wooler, spring frame, fully equipped, mileage 1,000, specially finished gine, absolutely as new, tax paid; sacrifice, 50 gns.; st double; evening.—21, Fordel Rd., Catford. [3778

EW Wooler, 2¾h.p., flat twin, Brooklands Sports model, complete with lamps and horn; reduced m £105 to £69; a bargain; easy payments.—arrods Motor Cycle Dept., 118, Brompton Rd., Lon-n. [3756

### Zenith.

TO Z. Allan and Zenith.

ALLAN GRUZELIER, Specialist in Zenith Motor Cycles.

BUY a Bradshaw Model to-day—and thank me for putting you on a good thing to-morrow.

REMEMBER.—You get After Sale Service with all Zenith motor cycles purchased from me; also immediate delivery, and deferred payments if you wish. London office: Ulster Chambers, 168, Regent St. egent 205. Showrooms and Workshops: Knight and heatley's Garage, Coulsdon. Purley 1277. [3377

919 8h.p. Sports Zenith, speedometer, lamps, etc.; £62.—186, Southgate Rd., N.1. [3770

916 Zenith Countershaft 8h.p., splendid condition; £65.—14, Phœnix St., Euston, N.W.1. [3619

919 3½h.p. twin Zenith, excellent condition; £60; exchanges.—6, Trafalgar Estate, Newport, Wight. [4252

ZENITH-BRADSHAW 1922 Models in stock; £113; liberal exchanges.—Eagles and Co., 275, High St., eton, London. [4147

912 Zenith Combination, 3½h.p. J.A.P. engine, perfect condition, all on; £25, no offers.—dwards, 105, High St., Collier's Wood, Merton. [3878


MANUFACTURERS' STOCK

MAKINCOT BRAND

*TO BE CLEARED.*

Fawn double texture, interlined rubber,

MOTOR SUITS

**THESE suits are made of Fawn double texture cloth, interlined rubber.**

**The seams are cemented, sewn and taped, making these absolutely waterproof.**

**Will stand any amount of hard wear.**

**The jackets are made double-breasted, with belts and wind cuffs.**

**The overalls are made on the trouser pattern, fastening with clips and straps, and have wind gussets in leg.**

**These suits actually cost over 30/- to manufacture without any profit, but we have several thousands to clear.**

Every suit is guaranteed absolutely waterproof and should these not meet entirely with your approval, we guarantee to return your money in full, if returned within seven days.

SPECIAL PRICE,

**29/11** Carriage 1/- extra.

We have also several thousands, heavy Twill Suits to offer. These are made of the heavy Twill used for making Motor Hoods, and are one of the finest suits made for motor cycling, interlined rubber. They are made with sewn and cemented seams, and taped, also the seams of these suits are striped, making these garments absolutely waterproof, and we are prepared to give a guarantee that these are absolutely impossible for water to penetrate through. The overalls are made in the same way with wind gussets, fastening with clips and straps. The Suits are in sizes 34, 36, 38, 40, 42 and 44 chest, lengths inside leg are 27, 29, 31. Please state when ordering by post, measurements of chest, length inside.

**Orders to be addressed—**

*The* LANCASHIRE and CHESHIRE RUBBER Co.

MAKINCOT HOUSE,

30, Thomas Street,

LIVERPOOL.

'Phone 4891 Bank, Liverpool.


## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH Brand New 5h.p. Sports Models, guaranteed; £76/13; few only left.—Clark, 7, Exhibition Rd., S.W.7. [2294

1922 Zenith-Bradshaw, lamps, horn, etc., mileage 500, perfect, 60 m.p.h.; £80.—Fryar, West Wratting, Cambs. [3472

BARGAIN.—5h.p. Zenith-Gradua, countershaft model, kick start, all on, spares; £55.—112, Clarence Avenue, Northampton. [3675

SPORTS Zenith 8h.p. 1919-20, disc wheels, accessories, perfect condition, very fast.—Klitz, 29, Kensington Park Rd., W.11. [4204

1920 2¾h.p. Zenith Flat Twin, bought Aug., 1921, D.A. lighting, as new; £52/10.—Honchin, 189a, High St., Peckham, S.E.15. [3795

F.O.C.H. for Zeniths. Latest models in stock. Also 1920 8h.p. countershaft combination.—5, Heath St., Hampstead. (Near Tube.) [3706

1920 8h.p. Sports Zenith Combination, all on, perfect, Canoelet (new); £90; would separate.—Silman, 39, High St., Baldock. [3327

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Zenith-Bradshaw, 3½h.p., £113; and all-chain models; easy terms and exchange. [4603

£49.—1919 8h.p. Sports Zenith, perfect condition latest Binks, equipped, licensed, aluminium discs; Call Sunday afternoon.—Orchardleigh, Leatherhead. [3774

ZENITH late 1920 Sporting 6h.p., discs, guaranteed perfect, accessories, small mileage; £90.—Roe, 5, Lansdowne Mews, Holland Park. Going abroad. [3592

ZENITH 1920 8h.p., countershaft, special sidecar, fully equipped, overhauled, rebushed; dealers' inspection invited; 110 gns.—10, Clarendon Rd., W.11. [2566

ZENITH 6h.p. 1919, C.B. sidecar, low mileage, excellent condition, all accessories; £75; or lightweight and cash.—224, Hale End Rd., Highams Park. [4039

1920 5-6h.p. Zenith, twin, sports model, clutch, kick start, fully equipped, new condition; £55.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [4402

ZENITH 5h.p. Sports 1917, recently re-enamelled, replated and completely overhauled, electric lighting, dual oiling; £55.—18, Chesilton Rd., Fulham, S.W.6. [4044

BARGAIN.—1920 Zenith Combination 8h.p., C.S., electric light, aluminium discs, and shields, plated tank, tax paid; first £82.—Edgeworth, Arlesey, Hitchin. [4286

1921 Sports Zenith 5h.p., brand new and unused, makers' full guarantee; listed £110, our price 73 gns.; exchanges or deferred.—Edwards, 101, Gt. Portland St., W. [4457

1919 Zenith, 8h.p. J.A.P., with Dunhill coachbuilt sidecar, hood, screen, lamps, etc., tax paid till end of year; a snip, £105.—Wilkins Simpson, opposite Olympia, London. [4203

1922 Zenith-Bradshaw, slightly used for a few demonstrations, indistinguishable from new, full guarantee; sacrifice, £95.—Frank Whitworth, 139, New St., Birmingham. [0711

6h.p. Clutch Zenith Combination, D.A. cylinder, 3 lamps, Watford, Klaxon, A.K. knee grips, in perfect condition throughout; £85.—20, Sheephouse Fields, Farnham, Surrey. [4110

8h.p. 1920 Sports Zenith, special engine, electric lighting, Klaxon, discs, knee grips, 3in. plated exhaust, extremely fast; £72, exchange.—17, Sussex Rd., New Malden, Surrey. [3518

6h.p. Zenith Sporting Combination, electric Tan-Sad, speedometer, kick starter, clutch, very fast, exceptional condition, lovely sidecar; sacrifice £65.—7, Cowdrey Rd., Wimbledon. [3843

1920 Zenith Combination, 6-8h.p., hardly used, condition, appearance as new, accessories splendid outfit, Southend district; nearest £100.—Box 9225, c/o *The Motor Cycle.* [3749

1921 Zenith Sports 5h.p., brand new and unused, maker's full guarantee, listed £110; our price 73 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1957

LONGMAN Bros., Bond St., Ealing. Tel., 689.—Sole district Zenith agents, specialists in repairs and tuning. All models for immediate delivery. Cash, exchange, or deferred payments. [9909

1922 Zenith-Bradshaw in stock for immediate delivery; £113; cash, exchange, or extended payments.—Aller-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0734

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred or exchanges.—194, Balham High Rd., S.W.12. [1210

ZENITH-BRADSHAW 1922 Models for immediate delivery; best allowances on second-hand machines taken in part payment; distance no object.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3891

## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH 5h.p. 1921 Sports Model, Gradua gear and clutch, completely equipped, P. and H. lamp set, mechanical horn, latest cantilever saddle, very wide tank. The machine is in practically new condition, and very fast, open to any trial; £65 for quick sale.—R. Watson, Victoria Rd., Aldeburgh, Suffolk. [3328

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7222

### Ladies' Motor Cycles.

LADY'S Velocette 1920 2¾h.p., 2 speeds, in splendid order; £35.—Bunting's Exchange, Wealdstone. [4139

£35.—Lady's 2¾h.p. New Imperial-Jap, 2 speeds, clutch, kick start, all on, licensed.—Box 9230, c/o *The Motor Cycle*. [4078

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

VELOCETTE 1922, Model E.L.2, open frame, clutch, kick starter, is the ideal lady's mount; all black waterproof finish, clean to ride in all weathers; £68; easy payments 4% extra; illustrated catalogue on request.—Premier Motor Co., Aston Rd., Birmingham. [8966

### Miscellaneous.

BARGAINS.—New O.K.s, Ariels, Harleys, Omegas Quadrants; exchanges entertained. — Booth Motories, Halifax.

BARGAINS.—1920 Matchless combination, detachable wheels, £130/10/6; 6h.p. Zenith combination, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6.—Booths Motories.

BOOTHS' Bargains.—1920 Sun, 2 speeds, clutch £39/10/6; 4-cyl. F.N., 2 speeds, £22/10/6.

BOOTHS' Bargains.—Harley-Davidson Combination, mileage 300, £129/10/6; 1920 Harley, £95/10/6, like new.

BOOTHS' Bargains.—1920 Wooler, £49/19/6; 3h.p. 2-speed Enfield, £29/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—6h.p. 3-speed Rudge, £35/10/6; 3½h.p. Minerva, magneto, £10/15/6.

BOOTHS' Bargains.—1921 Phelon and Moore, small mileage, £75/10/6; 6h.p. Rex combination, £27/10/6.

BOOTHS' Bargains.—Matchless Combination, 3-speed countershaft, £69/10/6; 1920 3-speed Ariel, £69/10/6.

BOOTHS' Bargains.—1919 4h.p. Douglas Combination, £79/10/6; 4h.p. late model Douglas £55/10/6; 2¾h.p. Douglas, cheap, lightweight motor cycle, £13/10/6.

BOOTHS' Bargains.—1920 8h.p. Tamplin, £79/10/6; 1920 Morgan De Luxe, £165/10/6, cost £250/10; nearly new Ariel combination, £85/10/6; new 3½h.p. 3-speed Ariel, £87/10/6; new 4½h.p. Quadrant combination, £100; several others, cheap; push cycles taken exchange.—Booths' Motories, Portland Place, Halifax. 'Phone: 1062. [1966

BRADBURY Motor Cycle, 4h.p., and C.B. sidecar, 2-speed, free engine, accessories, engine No. 9778; price £32/10 lot.

BRADBURY Motor Cycle, 4h.p., and wicker goods carrier, 2-speed, free engine, accessories, engine No. 9357; price £22/10 lot.

DOUGLAS Motor Cycle, 2¾h.p., W.D. model; price £20 lot.—Apply to the Purchasing Agent, Great Eastern Railway, Liverpool St. Station. Telephone: London Wall 3585 ex. 5. [3479

HALIFAX.—50 second-hand machines and combinations; cash or exchanges; get list.—Halifax Motor Exchange, Horton St., Halifax. [3980

£15.—From this figure upwards we can offer some good machines. We want the room. Come and see them.—Buoting's Exchange, Wealdstone. [4143

ASHGATE.—1921 B.S.A. Sporting Combination, semi T.T. bars, footrests, lamps, many spares, competition machine, perfect order throughout; £105. —Below.

ASHGATE.—1920 Matchless Combination, Magdyno lighting, speedometer, spare wheel, new tyre, excellent condition; £135.—Below.

ASHGATE.—3½h.p. Precision, single speed, recently overhauled, re-enamelled, new tank, new drip feed; bargain, £25.—Below.

ASHGATE.—1922 Rudges, immediate delivery all models; see Rudge advts.—Ashgate Garage, Edgedale Rd., Sheffield. [3750

4½h.p. Minerva engine, B. and B., Bosch magneto, tank, complete unit minus pulley, good condition; what offers?—247, Rawlinson St., Barrow-in-Furness. [4332


# Something really GOOD for you Motor Cyclists!

## REAL DUNGAREE OVERALLS

**4/6**

Pos.age 9d.

Not only will we refund the purchase money if these Overalls don't satisfy you, but also *all the postal expenses incurred by you in ordering and returning.* You won't lose a sou if they are not just what we say they are. Could anything be fairer than that?

Think a minute! When you're cleaning or overhauling your 'bus, what parts of your clothes get dirtiest? Trousers and shirt front, naturally.

**THESE OVERALLS, MADE OF REAL DUNGAREE** and *not* imitation twill, are just *the* thing for clothes protection. The trousers are ample, wide enough to slip on and off over your boots, and the six pockets, three front, two hip, and one behind the right knee, are perfect boons. They will stand any amount of wear and tear—don't forget it is *real* Dungaree—and are ideal for cleaning, overhauling, and bench work. Special Price **4/6**
Maximum waist, 38in. (postage 9d.)

**KENNARD Bros., Ltd.** 11-31, North End CROYDON.

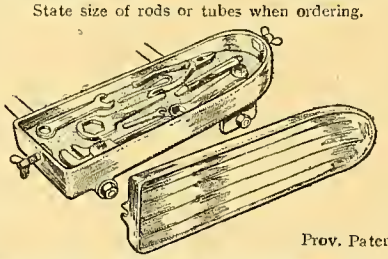


## NO MORE LOST or RATTLING TOOLS.

NEAT AND EFFECTIVE.

**PRICE £2 2s.** —— **Carriage 1/6.**

State size of rods or tubes when ordering.



Prov. Patent.

**BEAUMONT MOTORS (LEEDS), LTD., Cleopatra Works, Harehills, LEEDS.**


## MOTOR CYCLES FOR SALE.

### Miscellaneous

COMBINATION 6h.p. Twin, 2-speed, good sidecar £16.—H. R. Hall, opposite Film Studio, Wheatstone, London. [3476

ALLBER Garage, Thorosett Rd., Earlsfield, London S.W. (opposite Station, L.S.W. Railway). 'Phone Latchmere 4388. Terms no extra with good deposit Immediate delivery. No inquiries. Satisfaction guaranteed.

ALLBER.—Sun-Villiers 1916 2¾h.p., all accessories good order; £25.

ALLBER.—Ixion-Villiers 2½h.p., complete with lamps, in running order; £21.

ALLBER.—Levis 1916 2¾h.p., 2-speed, all accessories, good order; £35.

ALLBER.—B.S.A. 1914 3½h.p., 2 speeds, all accessories, beautiful order; £32.

ALLBER.—Douglas 1919 4h.p., 3 speeds, all accessories, condition as new, new tyres; £58.

ALLBER.—Enfield Combination 1916 6h.p., 2 speeds all accessories, windscreen, luggage grid, tax paid, in splendid order; £70

ALLBER.—Triumph Combination 1918 4h.p., electric lighting, speedometer, windscreen, in beautiful condition, tax paid; £75

ALLBER.—Matchless Combination 1920, Magdyno M.A.G. engine, full equipment, windscreen, spare wheel, in splendid condition; £125.

ALLBER.—P. and M. Combination 1918, 3½h.p., 2 speeds, all accessories, in good condition; £48. [4193

JARVIS Motor Cycle, 1922, 2-speed, clutch, kick start, 45 gns., list £85; Triumph 4h.p. and sidecar, 1914-15, 3-speed, clutch, ready for the road, £42 great bargains.—Fosters, Victoria Rd., Garswood Wigan. [4083

JONES Garage.—Late 1920 Henderson, 4-cylinder practically new, with extra large Canoelet sidecar would make excellent 2-seater, fully equipped, including rear drive speedometer, a magnificent outfit £127/10.

JONES Garage.—1921 Indian 7-9h.p. Combination electric lighting, Easting screen, speedometer, push drive, as new; £120. Our special offer for this week; it's the keenest bargain in London.

JONES Garage.—1919 Triumph and sidecar, fully equipped, condition first-class in every way and equal to new; £85.

JONES Garage.—1920 Quadrant 4h.p. Combination fully equipped, as new; £79.

JONES Garage.—1914 Humber Combination, 3-speed kick start, fully equipped, new sidecar, new tyres. Our special bargain of the week; £49.

JONES Garage.—1915 2¾h.p. New Imperial-Jap, 2 speed, equipped; £29.

JONES Garage.—1917 2¾h.p. Douglas 3-speed Sporting Combination, equipped, hot stuff, very neat little lot; £40. Also many others; send for list.

JONES Garage invite inquiries; exchanges specialised in, and any make of machine obtained for you at your price.

JONES Garage.—All the above machines will carry our usual 3 months' agreement.—Jones Garage The Broadway, Muswell Hill, N.10. 'Phone: 2917 Hornsey. [4463

F.O.C.H. for second-hand cycles, combinations, and runabouts at bargain prices; exchanges arranged any new cycle, combination, or car supplied; cash or deferred payments.—Fair Offer Car House, 5, Heath St., Hampstead. (Near Tube.) 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [3713

HEMSWORTH.—Alterations to premises completed; can accept a few more orders for reconditioned machines from £25 upwards; those readers residing in Yorkshire districts call, others write us at once; hire purchase from £5 down and 10 weekly. No order accepted except for April delivery too busy this month clearing arrears of orders up which we have had to hold up for alterations. We have always a light car or two in stock. Call if you require anything in this line. Renovations a speciality. Write for estimates, or entrust us with any special job you have. Large showroom to be opened shortly with stock of 1922 models, so bear in mind Yorkshire's largest motor cycle dealers, Hemsworth Motor Works Yorks. [4483

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigden, 130 Euston Rd. [0793

## MOTOR CYCLES WANTED.

WE ARE ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 314, Euston Rd. [0813

## MOTOR CYCLES WANTED.

E

WAYS Buy

LOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London ninus. We collect free and send best cash offer:— F. Dunn, Ltd., 326, Euston Rd., London. Museum 1. [0332
8.

ANT

00 COMBINATIONS and Solos, any make, guarantee top prices given.—T. and B. Motor Co., , 372, Euston Rd. Museum 6581. [5564

DWARDS and Co.,

01, Gt. Portland St., W., are cash buyers of solos, combinations, and Morgans. Highest prices n, distance no object. Call, write, or 'phone: Mayfair 4027. [0604

ATE Combination, for cash.—C.S., 14, Swaton Rd., Bow. Tel.: E. 3155. [3955

ALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

ALMER'S Garage, Tooting, will make you a cash offer at sight.

ALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

ALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

ALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every ursday at 2.

ALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

ALMER'S Garage, Tooting, will collect machines from any London railway station. The auction is held every Thursday, commencing 2 p.m.

ALMER'S Garage, Tooting.—If cash offer not accepted, machine can be included in auction sale every Thursday.

ALMER'S Garage, Tooting.—You fix the price and we do the rest.

ALMER'S Garage, Tooting.—Terms: Selling commission 7½%, not chargeable unless machine is d. If no sale a nominal auction fee is charged—for tor cars 20/-, motor cycles under £50 value 5/-, to over £50 value 10/-. When we effect a sale se charges are cancelled and commission charged.

ALMER'S Garage, Tooting.—Catalogue free. Tel.: 208 Streatham. T.A.: Palmer's Garage, Tooting. [3993

65 Offered.—1920 4h.p. chain combination.—24, North Rd., Clapham Park, S.W. [4312

1h.p. Norton C.S., incomplete, or sell engine, 1921, 2 unused.—4, Vicarage Rd., Nelson. [4105

INGLE-GEARED Norton or other fast solo, cheap, cash waiting.—110, Peel St., Derby. [4105

VANTED, 2-stroke, private buyer.—Write, Smith, 434, Garratt Lane, London, S.W.18. [3370

VANTED, good Combination for cash.—Write M. G., 107, Brantwood Lane, S.W.17. [3627

55 Offered for Triumph or similar combination; call if possible.—Snow, Laurel St., Dalston, E.8. [4423

VANTED, Solo or Combinations for cash.—Rhind and Co., Stone Place, Rusholme, Manchester. [3552

VANTED, 2¾h.p. Douglas; cheap for cash.—Maynard, 161, Bowes Rd., Bowes Park, N.11. [4272

OLO or Combination, condition immaterial if cheap.—Letters only to 1, Radnor Rd., N.W.6. [4412

NFIELD Combination wanted, about £60; cash waiting.—F.S., 91, Mapledene Rd., Dalston, E.8. [4425

VANTED, Triumph, 1920, Model H, perfect, cheap; private.—294, Kennington Park Rd., S.E.11. [4207

35-£40 for best countershaft big single, overhauled unnecessary.—26, Sunderland Rd., S. Ealing, W.5 [4094

VANTED, modern combination, cash to £120, Magdyno preferred.—14, Chipley St., New Cross. [4087

VANTED, motor cycle, 1920-21, with or without sidecar.—Particulars, 35, Neston St., Liverpool. [4128

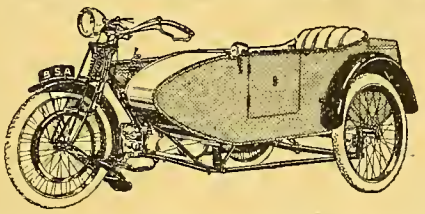
VANTED, 350 c.c. Sports, 1921; also 3½h.p. single-gear Norton.—Lamond, Brickwork, Lochgelly, fe. [3634

IGHTWEIGHT motor cycle, J.A.P. or Levis preferred, sound, cheap.—67, Birdhurst Rise, Croyn. [3624

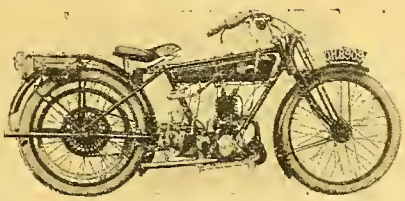
MOTOR Cycle 1914-22, cheap for cash.—1, Albert Cottages, Marlborough Rd., Old Kent Road, E.1. [3767

# PAY AS YOU RIDE

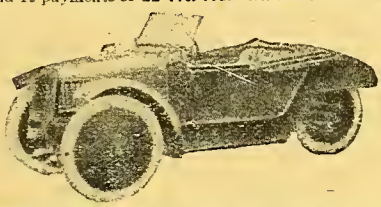
## WE GIVE DISCOUNTS



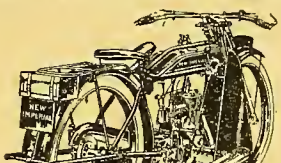
**B.S.A.**, 6 h.p. comb., **£164** cash, or **£42 12s. 9d.** down and 12 monthly payments of **£10 13s. 3d.** All models in stock.



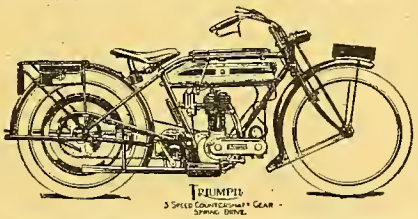
**O.K. JUNIOR**, 2¾ h.p., **38 Gns.** cash, or **£10 7s. 6d.** down and 12 payments of **£2 11s. 11d.** All models in stock.



**MORGAN "POPULAR."** **£150** cash, or **£39** down and 12 payments of **£9 15s.** All models immediate delivery



**NEW IMPERIAL**, 2¾ h.p. **£63** cash, or **£16 7s. 7d.** down and 12 payments of **£4 1s. 11d.** All models in stock.




**TRIUMPH.** Cash **£105**, or **£27 6s.** down and 12 payments of **£6 16s. 6d.** All models in stock.

**DISCOUNTS if account paid in 2, 4 or 6 months.**

# LAMB'S Ltd.

**WALTHAMSTOW, London, E.**
**151, High Street.**
'Phone: Walthamstow 169.

**EUSTON ROAD, London, N.W.**
**(Opp. Gt. Portland St. Stn.)**
'Phone: Museum 4978.

**WOOD GREEN, London, N. 50, High Road**
'Phone: Hornsey 1956.

## MOTOR CYCLES WANTED.

TRIUMPH or similar, solo or combination, earlier 1919, cheap.—Write, M., 46, Clarendon Rd., Putney. [4212

WANTED, late solo or combination, cash waiting.—James, c/o Bradmaes, 482, Harrow Rd., Paddington. [4398

CASH waiting for Douglas or other Lightweight, any condition, cheap.—61, Grand Parade, Harringay. [4552

WANTED, Triumph, Sunbeam, Enfield, A.J.S. preferred.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [4268

WANTED, Triumph, Sunbeam, or Norton; reasonable spot cash.—Paper Warehouse, West St., Southport. [3966

A.B.C. Motor Cycle wanted, any condition.—Maclean "Brackenhurst," Nepean St., Rochampton, S.W.15. [4046

COUNTERSHAFT Triumphs, any condition, £30 to £40, cash waiting.—Simpson, Engineer, Sunbury-on-Thames. [4260

4h.p. Douglas, Zenith, etc., solo or combination, immediate.—10, Selbourne Terrace, Fratton, Portsmouth. [3584

COUNTERSHAFT Combination wanted, 1918, later; cheap.—O'Shea, 171, Prince Consort Rd., Gateshead-on-Tyne. [3361

DOUGLAS, Triumph, or Sunbeam Combination, 1921 model, cheap, for cash.—Stone, Bradford-on-Avon, Wilts. [3623

WANTED, second-hand Coulson rear wheel, rear mudguard and carrier.—Box 9,237, c/o *The Motor Cycle*. (D) [4312

WANTED, late combination, reliable, handle-bar or right leg control; London, S.E.—Box 9,233, c/o *The Motor Cycle*. [4133

TRIUMPH, late Combination, reasonable price, complete with all accessories.—47, South Lambeth Rd., S.W.8. [4572

WANTED good 1921 single or twin combination, English make.—Write Isitt, 42, Queen's Avenue, Winchmore Hill. [2332

WANTED, Douglas or other good lightweight, cash waiting.—Patterson, 12, The Quadrant, Winchmore Hill, N.21. [3070

ENFIELD 3h.p. Twin 2-speed, or Humber 4½h.p. Twin, not later 1918; £30; private.—Naylor, 57, Croxted Rd., S.E.21. [3801

1921 Matchless Standard Magdyno M.A.G. Combination, cheap for cash.—1, Bentinck Terrace, Regent's Park, N.W.8. [3788

WANTED, Combination, Triumph preferred, appearance immaterial; about £40.—Buckingham, Molland, North Devon. [3631

COMBINATION Wanted, must be reasonable, Countershaft gears.—Manager, Rosebery Foundry, Rosebery Place, Dalston, E.8. [4422

WANTED, a good Combination or Solo for cash, but must be cheap.—24 and 25, Brook Mews North, Lancaster Gate, W.2. [4013

WANTED.—Best prices given for up-to-date motor cycles.—R. Bamber and Co., Ltd., 2, Eastbank St., Southport. 'Phone: 607. [1130

WANTED for cash, 1919-20 Combination, must be in good condition and cheap.—Write, 12, Partridge Villas, Vine St., Uxbridge. [1397

LATE Countershaft Triumph or good Sunbeam combination or solo, cheap for cash.—Pritchett, 19, Belgrade Rd., Hampton, Middlesex. [4117

WANTED, Triumph, countershaft model, or 2¾h.p. Douglas; cheap, cash waiting.—Write, appointment, 30, Crystal Palace Rd., Sydenham. [4335

PRIVATE Advertiser requires Triumph countershaft, late Douglas. New Imperial, or similar, for cash.—26, Bryanstone Rd., Cronch End. [3362

WANTED immediately, Motor Cycles, Combinations, and Light Cars.—Seabridge, 35, Haasler Rd., East Dulwich. Telephone, Sydenham 2452. [2079

MOTOR Cycles and Combinations bought, immediate cash.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11. Park 2071. [3912

PRIVATE.—Immediate cash for dynamo lighting A.B.C. in good condition, reasonable; also Triumph.—4, Elm Gardens, Hammersmith. [3626

WANTED, combination, also solo, any make or condition, no fancy prices.—Full details, age, condition, and price, Box 9,226, c/o *The Motor Cycle*. [3942

DOUGLAS 2¾h.p., not earlier than 1914; price must be reasonable. Write, stating full particulars.—Pride, 156, Stockwell Rd., Brixton, S.W.9. [4236

8h.p. Matchless Combination, 1921, spring frame, must be in good condition; cheap for cash.—Particulars, write Cutland, 50, King St., Southall. [2768

£75-£90 Cash for Sporting Combination, 1920 or later, Norton, Sunbeam, Zenith C.S. preferred, private purchaser.—Full details to 11, Castlemaine Av., Croydon. [4441

## MOTOR CYCLES WANTED.

MACHINES Bought for Cash.—Sunbeam, Triumph, Morgan, A.J.S., Matchless, 1920 or 1921 models.—Maudes' Motor Mart, 100, Gt. Portland St., London, W.1. [4005

WANTED, your motor cycle or combination. We are buyers. Full market price given and cash paid on the spot Write, call, or 'phone Museum 5938.—J. Smith and Co., Motor Agents, Ltd., 52-54, Hampstead Rd., N.W.1. [0768

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [0828

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

IF you have a Triumph or similar machine you wish to sell for spot cash, I am a buyer; top prices for good machines.—Goad, 122, Maida Vale 'Phone: Hampstead 1353. [993t

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Brabburys, Martinsydes, Zeniths. — Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted. —Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [4559

F.O.C.H. always have cash waiting for sound machines of all types; highest prices and courteous treatment assured.—Fair Offer Car House, 5, Heath St., Hampstead (Near Tube.) 'Phone: Hampstead 3752. Hours 9-7 including Saturdays. [3711

WANTED, any number of really good Machines and Combinations; good prices paid, and a competent representative will be sent anywhere to inspect and complete transaction—Write, 'phone, or call, Longman Bros., 17, Bond St., Ealing. Tele.: 689. [3223

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Blenheim St.). Bond St., W.1. 'Phone: Mayfair 6559. [0772

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole audress, Palmer's Garage, Tooting. [3990

## MOTOR SCOOTERS.

KINGSBURY Scooter and Spare Parts.—3, Kendall's Mews, Blandford St., W.1. [5499

A.B.C. Skootamota, new, unsoiled, latest model; £22, sacrifice.—Frank Whitworth, 139, New St., Birmingham. [2151

1920 Autoglider, little used, 2¾h.p., good condition; £15.—Geo. Siddall, Stantoo, Rowsley, Derbyshire. [3793

NEW Shop-soiled Autoped Scooters, dynamo lighting, 1½h.p.; bargain, £12/10 each. — Percy and Co., 314, Euston Rd., N.W.1. [4178

## MOTOR ATTACHMENTS.

WALL Auto-Wheel, excellent condition; £9.—3, Cardigan Rd., Richmond, Surrey. [4083

SIMPLEX Attachment late model, fitted lady's cycle, perfect order £25 or offer.—Sandford, Newick, Sussex. [3524

1921 Yonng Cycle, with motor attachment, clutch, etc.; £17/10.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [3757

NEW twin 2-stroke attachment fitted to gent.'s cycle, £25. J.E.S. attachment complete, £6.—Webber, Cottage, Coppetts Rd., Muswell Hill, N.10. [3771

## HOODS, WIND SCREENS, ETC.

BLUEMELS Windscreen, good condition, 45/-.—28, Cromwell Grove, Shepherd's Bush, W.6. [4136

CAMEO Windscreen, never used; sacrifice, 45/-.—151, Audley Rd., Hendon [3423

EASTING Screen complete (grey), new, best offer secures.—16, Beulah Rd., Tunbridge Wells. [3929

FIRST quality hoods, 40/-; with side curtains, 50/-. —Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [3230

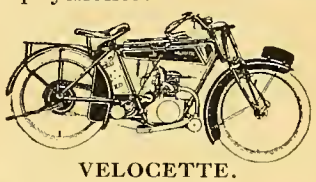
BEST Quality Hoods, fit any sidecar, complete with brackets, straps, turn-buttons and screws; 47/-.—Stewards, 101, Halton Rd., Canonbury, London. [3380

RENNOO Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list. — Rennoo Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321


# Don't lose your head!

## JUST BECAUSE YOU CAN'T SELL YOUR OLD LINES!

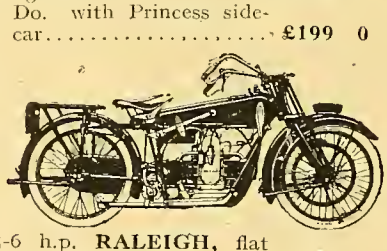
We will take any modern machine in part exchange for a new, or we will supply on the easiest of easy payments.



### VELOCETTE.

| | | | |
|---|---|---|---|
| **Model E2**, 2-speed, kick-starter and clutch..... | £65 | 0 | 0 |
| **Model E3**, 3-speed, kick-starter and clutch..... | £72 | 10 | 0 |
| **Model S2**, 3-speed, kick-starter and clutch, Sports | £75 | 0 | 0 |
| **Ladies' Models** ..... | £68 and £75 | | |

| | | | |
|---|---|---|---|
| 4 h.p. **INDIAN Scout**, twin engine ..... | £112 | 0 | 0 |
| With electric lighting and speedometer..... | £130 | 0 | 0 |
| With electric light, speedometer and sidecar ..... | £160 | 0 | 0 |
| 8 h.p. **INDIAN Chief**, with speedometer and electric light ..... | £160 | 0 | 0 |
| Do. with Princess sidecar..... | £199 | 0 | 0 |



| | | | |
|---|---|---|---|
| 5-6 h.p. **RALEIGH**, flat twin, spring frame ..... | £130 | 0 | 0 |
| 2¾ h.p. **RALEIGH**, 2-speed lightweight ..... | £68 | 0 | 0 |

**EASY PAYMENTS OR EXCHANGE**
for the above or for NORTON, LEVIS, SCOTT, MARTINSYDE, QUADRANT, MASSEY-ARRAN, VICTORIA or G.N. Cyclecars.

**VICTOR HORSMAN, Ltd., 7, Mount Pleasant, LIVERPOOL.**


## HOODS, WIND SCREENS, ETC.

BENT Hoops, hood fittings, straps, turnbuttons twills, etc.; hardwood polished wind screens 27/6.—Heary Jones, 778, High Rd., Tottenham, London. [323

COLLINS and Son for hoods, screens, and aprons hoods with solid brass Auster fittings, covered with double texture twill, polished sticks; 35/-; the biggest bargain ever offered.—Below.

ADJUSTABLE windscreens, complete with all fittings and apron; 30/-; celluloid panels fitted to any windscreen in a few hours; send for list.—Collins and Son, rear of 84, High St., Putney, S.W. [1619

ROBINI Manufacturing Co.—The Bower Adjustable Windscreen with coverall apron, 30/-, carriage paid. Agents wanted. Celluloid panels fitted Eastings, 10/6. Aprons made to order, 10/-.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W 'Phone, Brixton 1585. [444

## BODIES.

RENNOO Sidecar Bodies, actual manufacturers, 3 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repaintiog, an upholstering.—Rennoo Motors, Ltd., 155a, Marl borough Rd., Upper Holloway, N.19. [232

COLLINS and Son for bodies, new bulbous back coachbuilt models with aprons; from £6/5.

TWELVE months' guarantee given; Write for catalogue.—Below.

WE repaint, repair, and upholster bodies at very moderate charges, insurance work a speciality estimates free.—Collins and Son, rear of 84, High St Putney, S.W. [162

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [513

NOTHING Cheap about Cobb Speedman Sport bodies but the price. £2/12/6 upwards.—Cobb 18, Midland Rd., Carlton, Nottingham. [351

VENUS Step Bodies, 2 dozen to clear; from 50/ each; great bargains.—Venus Sidecar Co., 694 Seven Sisters Rd., Tottenham. 'Phone, 2102. [769

ROYAL Leicester Sidecar Bodies fit any chassis, first class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value. — The Willowbrook Motor Co., Leicester. [033

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—20, Tudor St., London, E.C.4. [000

1922 Bodies, beautifully finished and upholstered satisfaction guaranteed, complete with covered apron, from £6/10 to £14; 1922 2-seater bulbous back bodies, £10/10. Extended payments taken Trade inquiries invited. A few 1921 models, shop soiled, complete, £6/10. Send for catalogue at once Large number of second-hand always in stock. Bodies repainted; reupholstered from 30/-. We are actual manufacturers. Carriage extra.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. 'Phone Brixton 1585. [444

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shoped) Wind Screen, a hood, screen and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; send out; send further supply." Agents, get in touch with us

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [00

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, and bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [05

SIDECAR, light coachbuilt; £8;—Kennard, 78, Yorkbury Rd., Holloway, N.19. [34

## SIDECAR ATTACHMENTS.

)RIA Sidecar for Triumph, as new; £15.—Inman, Durham Rd., Seaforth, Liverpool. [3577

;OELET Sporting Sidecar, complete, with connections; offers.—42, Ladywell Rd., S.E.13. [3729

STONES for Sidecars, no better or cheaper house. All latest models in stock.

STONES.—Lightweight sidecars complete, to fit ny machine; £12/18/6.

STONES. — Sports model sidecar, complete, £17/10; several other models in stock, including m, all at low prices.

STONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models ock; lightweight model £17/10, Model No. 3 10, Sports model £23/10, tradesman's carrier £23/10, Model No. 2 £24/10, Model No. 1 10, Model de Luxe £34/10, tandem model £30.

STONES.—Whitley 1922 sports model in stock, £25.

STONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/-.—Pentonville Rd., King's Cross, London, N.1 e: 2481 North. Grams: Bastones, London. [5132

TUBE Sidecars are most unique. Scientifically esigned, made of finest materials.

TUBE Chassis, constructed of steel lugs, straight teel tubes, with welded joints.

TUBE Sidecars are light. Supplied with either porting or touring coachbuilt bodies.

TUBE Sidecars. One price, £15/10. Write for ooklet.—Davis Bros., Church St., Rickmansworth. e: 5. [3235

ACHBUILT Sidecar, good condition; £5; or exhange.—Johnson, 172, Avenue Rd., Acton. [4070

ECARS.—Several cheap; room wanted; fitted ree.—57, Kenbury St., Camberwell, London. [4390

ECAR and Chassis, large, apron, black, gold ines; £12.—East View, Maltby, nr. Rotherham. [4327

ECAR, coachbuilt, complete, new tyre, £7/10; ightweight, £7.—17, Heaton Rd., Mitcham. [4308

NOELET Minor Sidecar, £8; Watsonian wicker orting model, £5.—H. Rock, Cradley, Staffs. [4547

NOELET Touring Sidecar, Bluemels windscreen, condition as new; £15.—88, Park Rd., Dulwich. [3879

DY, Wicker, upholstered, perfect condition; cheap.—R., Heath Croft, Dartford Heath, Dart- [3533

ACHBUILT Sidecar, complete fittings; bargain, £7; exchange Swan sporting.—86, Florence Rd., [4243

FIELD Sidecar, 1921, unscratched; £6.—Biss, 44, Sun St., Waltham Abbey. 'Phone: W.C. [3835

NOELET Underslung Sidecar, good condition; £9/10; call Saturday.—118, Herbert Rd., Wool- 3458

UGLAS Chassis, complete with all fittings, springs, and new tyre; £5.—Matthews, Ockley, y. [4017

LLY Lightweight Sidecar, 1920, perfect condition; £11 or nearest.—Powell, Suburbs, Cross- Mon. [3528

OTHS Bargains.—Limited number of new coach bodies, full size, with locker; £5/12/6; usual , £9/10.

OTHS Bargains.—New £9/10 coach bodies for £5/12/6. Don't miss them. Illustration free.

OTHS Bargains.—Quantity of new underslung chassis, 4-point attachment; £9/19/6; illustrated free

OTHS Bargains.—Several shop-soiled sidecars offered very cheap; send for list.

OTHS Bargains.—Hercules coach sidecar, £8/10/6; ditto Canoelet, £8/10/6; ditto Farlow, 0/6.—Booths Motories, Portland Place, Halifax. ne: 1062. [1964

OMY Chater-Lea C.B. sidecar, 4-point, screen, excellent condition; £9/10.—Torrome, 10, Cath- Hill, N.19. [3979

ARLY new low sporting sidecar, 4-point, fit Triumph; £16.—Gray and Levin, 5, The Boule- , Balham, S.W. [3666

F-CLUTCH Triumph, £6/10; Clyno tradesman, £7/10.—534, Fulham Rd., Walham Green. Base- t only; no letters. [3938

/10.—Sidecar, light, coachbuilt, less tyre and tube; also large bulbous back body, £2.—8, St., Wandsworth. [3877

ALIFAX.—New Swan Sporting and Millford de Luxe for Harley and American X.—Motor Exge, Horton St, Halifax. [3984

0.—Millford Coachbuilt Sidecar, complete, new tyre, lamp, spare tube, very comfortable.—Wool- 74, Minford Gardens, W.14. [3959

# The BRAMPTON Bi-Flex SPRING FORK.

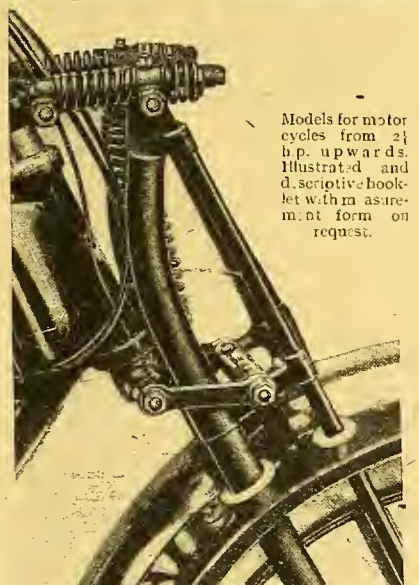
## It speaks for itself by the service it renders.

*Extract of unsolicited letter recently received from the rider of an 8 h.p. Motor Cycle fitted with the "BRAMPTON" Bi-Flex Spring Fork:*

"I may say that the Forks are the very finest I have ever ridden on, and I can keep up a higher pace on bad roads than I could on any other machine I have ever tried. When riding with friends, I have many times had to slow down owing to their inability to stand the bad roads, whereas I have considered the going quite comfortable. I shall specify your Forks on whatever machine I go in for next."

**The "BRAMPTON" Bi-Flex Spring Fork never tires—it is always instantly responsive to and completely absorbs within itself vibration and road shocks from every angle at which resistance is encountered, rendering the rider immune from discomforts which are otherwise impossible to entirely eliminate—ask a user.**

**BRAMPTON Bros. Ltd., Oliver Street,———BIRMINGHAM.**



Models for motor cycles from 2½ h.p. upwards. Illustrated and descriptive booklet with measurement form on request.

## SIDECAR ATTACHMENTS.

SCOTT Sidecar, complete, £8/10; exchange.—W.J.C. Motor Exchange, 5, Addison Avenue, Holland Park, W.11. 'Phone, Park 2071. [3909

175/-.—James Tradesman's Box, fine condition, 4-point attachment, late 1920; an undoubted bargain.—Flemings, Redcar, Yorks. [3485

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589 [2319

EXTENDED Payments accepted for sidecars; models for all makes.—Send for catalogue, etc., Rideezi Sales, Ltd., Atlantic House, 103, Oxford St., London, W.1. [0829

COLLINS and Son for Sidecars.—A few new bulbous back models, complete with renovated underslung chassis, tyre and tube, and coverall apron, all fittings; £12/10.—Below.

FAMILY Model Light 2-seater, built to accommodate one adult and child up to 12, with renovated underslung chassis, tyre, tube, and apron; £15.—Below.

WE have various models in stock to suit any machine.—Send for catalogue.

WE specialise in frame and chassis repairs of all kinds; all work guaranteed.—Collins and Son, rear of 84, High St., Putney, S.W. [1621

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

COMFY Sidecars, strong underslung chassis, coachbuilt body, bulbous back with locker, quick detachable fittings, Cluebor tyre; price 18 gns.—789, High Rd., Leytonstone. [3079

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

1,000 Douglas Underslung Chassis, suitable for any make of machine to order, absolutely complete and renovated, as new; £5 each.—Old Man Hep, 19, Wilcox Rd., South Lambeth, London, S.W.8 'Phone, 1958 Brixton. [8822

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

DOUGLAS Underslung Chassis, complete everything as new, with shop-soiled body, £14; Mills-Fulford P. and M. chassis, new tyre and tube, mudguard, etc., with new bulbous back body, £12/10; light 2-seaters, bulbous back, chassis, etc., complete, £16; new chassis, complete with bulbous back or sports body, for 4h.p. machines, £19/10; lightweights, £16; a few shop soiled, £12/18/6. We are actual manufacturers. Extended payments taken. Trade inquiries invited. Carriage extra.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W. 'Phone, Brixton 1585. [4444

LIGHT Car and Motor Cycle Engineering Co., Ltd. —Lightweight touring sidecar, specially designed for machines up to 4h.p., complete and ready for driving away, £15/10, including price of fitting standard touring De Luxe body to your own choice from our varied stock, £20. Secondhand Canoelet touring model in very nice condition, £8/15. Secondhand Empire touring model, with Easting windscreen and all fittings for Triumph, £9. Secondhand Sandum touring Elite Model, in perfect condition, body £6/10, complete with new chassis, £16/10. A large assortment of clips and fittings always in stock.—26, Tulse Hill, Brixton (2 minute from Brixton Skating Rink). 'Phone: Brixton 1292. [4395

## RUNABOUTS AND CYCLE CARS.

CARDEN 2-seater, late model; £58.—Miss Patmore, 106, Acre Lane, S.W.2 [4153

## RUNABOUTS AND CYCLE CARS.

REY'S, of Euston Rd. (Nos. 378-384), have the following in stock:—

MORGANS, all 1922 Models, also second-hand De Luxe and Grands Prix in good condition.

COVENTRY-PREMIER 1922 4-wheeler Model, £230; one shop-soiled, only £205.

ROVER 8h.p. Model, £220; two second-hand, good condition, £162/10.

G.N.'s, all Models; also 1920 with dynamo, very good order, £132/10; one 1921, £142/10.

EXCHANGES or deferred payments arranged.—Rey's, 378-384, Euston Rd. 'Phone, Museum 6436. [3996

WAUCHOPE'S, 9, Shoe Lane, London.—5-6h.p. Carden Monocar, £50. [4504

TAMPLIN, 1921, 8h.p., 3 speeds, all on, perfect; £85.—43, Avenue, Egham. [4232

GRAND Prix Morgan; £120; fully equipped, perfect order.—See, Ellam, Exchange Column. [4437

£20.—A.C. Sociable, 3-wheeler, 2-seater, good running but shabby.—King, Egrove Farm, Oxford. [4295

MORGAN.—New models in stock.—Agents, Birkenhead Motor Works, 9, Hamilton St., Birkenhead. [2389

SCOTT Sociable, delivered August, tax £4, paid.—Somerville, 30, Ormidale Terrace, Edinburgh. [3765

MORGAN Spare Parts.—Largest stock in London.—Maudes' Motor Mart, 100, Great Portland St., W.1. [4007

MORGAN De Luxe, 1917, M.A.G., lamps, Klaxon, speedometer, etc.; £105.—10, Lincoln St., Coventry. [3387

MORGAN, fully equipped, beautiful condition, any trial; £75.—Inman, Durham Rd., Seaforth, Liverpool. [3580

BEDELIA.—The new 1922 model 8-10h.p., air-cooled or water-cooled to choice. Immediate deliveries.

BEDELIA.—Air-cooled model, £185; water-cooled model, £195. Side-by-side armchair seats, 3 speeds and reverse, 5 detachable wheels, hood, screen, lamps, tools, jack and pump included. Trial free.

BEDELIA.—Cash or easy terms. Your old car or motor cycle taken part payment.

BEDELIA.—Catalogue free from L. N. Palmer, Sole Concessionaire for the British Empire.—Palmer's Garage, Tooting. [3994

8h.p. Rover.—1922 model in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7159

MORGANS Always in Stock.—The West of England Agent, Gibb, 100, Northgate, Gloucester. 'Phone: 852. [8127

GIBBONS Mark III. Cycle Car, 1921, splendid condition; £60 or nearest. — Wain, Cotton Rd., Potters Bar. [3536

COVENTRY PREMIER.—1922 model in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7160

1921 Morgan G.P., 10h.p. M.A.G. engine, most lavishly equipped; £140.—24, Balliol Rd., North Kensington. [3812

MORGAN, Grand Prix, w.c. J.A.P., hood, screen, lamps, discs, large exhausts; £95.—Swiss Cottage, Olton, Birmingham. [4340

MORGANS, New and Second-hand, always in stock; exchanges, extended terms; official agents, trade distributors.—Below.

MORGAN de Luxe 1921, w.c., M.A.G., acetylene lighting, horn, watch, etc., excellent condition; £155.—Below.

G.N. 1922, Standard and All-weather models in stock, dynamo lighting, dickey seat, etc.—Below.

ROVER 1922 8h.p. Model; £220; dynamo lighting, etc.; prompt delivery.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone, Avenue 5548. [0078

1921 De Luxe G.N., dynamo lighting, spare wheel, every accessory, any trial; £130.—24, Balliol Rd., North Kensington. [3811

1914 Duo Car, 2-seater, new hood, tyres, variable gear, completely overhauled; £45 or nearest.—Tomkins, R.A.F., Duxford. [3520

MORGAN, completely overhauled; £90; seen Thursday, 7 p.m., or appointment Sunday. — 209, Northend Rd., West Kensington. [3772

REY'S, of Euston Rd. (Nos. 378-384).—Morgans, G.N.'s, and Rovers, new and second-hand, several in stock. 'Phone, Museum 6436. [3997

WAUCHOPE'S. 9, Shoe Lane, London.—G.N. Cars, 1922, all models; easy payments or exchange. 'Phone: Holborn 5777. [4505

RITZ 10.5h.p. 4-cylinder light car, good mechanical order, 45 m.p.h., very economical, any trial; £150.—47, Hamilton Rd., Reading. [3800

# CENTRAL GARAGE

## 302, LONDON ROAD, THORNTON HEATH

*"The Fair Dealing House."*

**will send any of the following lines on 7 days' approval against cash.**

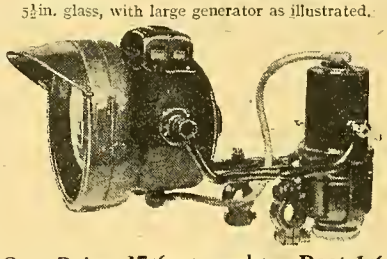
### TYRES. Post 1/6 extra.

| | | |
|---|---|---|
| 24×2¾ | **DUNLOP** Rubber Studded .... | 24/9 |
| 26×2 | **DUNLOP** Rubber Studded .... | 36/6 |
| 26×2¼ | **GOODYEAR** E.H. ..... | 26/– |
| | **CLINCHER DE LUXE** ..... | 18/6 |
| | **PALMER** Cord ..... | 22/6 |
| | **MACKINTOSH** Heavy ..... | 25/– |
| | **FIRESTONE** Non-skid ..... | 31/– |
| | **WOOD-MILNE** E.H. Comb.... | 22/– |
| 26×2⅜ | **CLINCHER** E.H. ..... | 27/6 |
| | **DUNLOP** W.D. Heavy..... | 32/– |
| | **DUNLOP** W.D. E.H. ..... | 37/6 |
| | **BATES** E.H. ..... | 31/6 |
| 26×2½ | **AVON TRICAR** ..... | 22/– |
| | **CLINCHER** E.H. ..... | 30/– |
| 26×2½×2¼ | **CLINCHER DE LUXE** ..... | 28/– |
| | **AVON** Rubber Stud Heavy.... | 25/– |
| | **AVON** Rubber Stud E.H. .... | 30/– |
| | **HUTCHINSON** E.H..... | 36/– |
| 26×3×2½ | **DUNLOP** W.D. Heavy..... | 36/– |
| 26×3 | **ENGLEBERT** Passenger ..... | 31/– |
| | **ENGLEBERT** E.H..... | 42/– |
| 650×65 | **GOODYEAR** E.H. ..... | 32/6 |
| | **DUNLOP** W.D. Steel Stud .... | 50/– |
| 700×80 | **WOOD-MILNE** E.H. ..... | 41/6 |
| | **INTERNATIONAL** Grooved ... | 55/– |
| | **FIRESTONE** Plain ..... | 45/– |
| 28×2½ | **DUNLOP** W.D. Extra Heavy . | 50/– |
| 28×3 | **CLINCHER** Plain Ribbed .... | 45/– |
| | **CLIPPER-REFLEX** ..... | 37/6 |
| | **FISK** Extra Heavy ..... | 42/– |
| | **DUNLOP** Ribbed Sidecar ... . | 32/6 |

**TUBES,** brand new, all sizes at **6/6**; 700×80 at **7/6.**

### BRAND NEW LAMP SETS.

5½in. glass, with large generator as illustrated.



**Our Price 37/6 set complete. Post 1/6.**

LAMPS ONLY, **18/6.** GENERATORS, **15/6.** BRACKETS, **8/6.** WE ALSO HAVE A SMALL LAMP AT **12/6.**

(A client writes: "I consider them wonderful value.")

### BELTS in standard sizes. Post 1/- extra.

Clipper belts, ¾in.×6ft. 6in., at 9/9; 8ft. at 11/-; ⅞in.×6ft. 6in. at 10/-; 7ft. 6in. at 13/-; 8ft. 6in. at 13/6; 1in.×8ft. 6in., 16/-. Also Dunlop belts, ¾in. at 1/7 ft., ⅞in. at 1/10 ft., 1in. at 2/2 ft.

### DO YOU RIDE A DOUGLAS?

**We have in stock all spares, from a nut to a complete engine. We also have in stock a few rebuilt machines, containing 75 per cent. new parts enamelled to any colour to suit clients. All machines sold bear a three months' guarantee. Call and see them or write for full particulars and you will agree that no better value is on the market.**

**2¾ h.p., £52 10s. 4 h.p., £65.**

### SECONDHAND MACHINES IN STOCK.

**AMERICAN EXCELSIOR,** 1920, combination, 7-9 h.p., only done 800 miles. Easting screen and all on ..... **£95**

**EXCELSIOR,** 2-stroke, 2¼ h.p., late 1920, fully equipped and in splendid condition..... **£42**

**DOUGLAS,** 2¾ h.p., 1918, just overhauled, all on, in splendid condition..... **£36**

**We are also Agents for the SILVER PRINCE. 1922 Models can be had from stock, from 42 guineas. Write for leaflet.**

## RUNABOUTS AND CYCLE CARS.

WAUCHOPE'S, 9, Shoe Lane, London.—Carden De Luxe, 2-seater, 1921, electric lighting, fully equipped, tax paid, insured; £110. [4506

G.N. 1920, dynamo lighting, detachable wheels, speedometer; £135; good combination wanted.—132, High Rd., East Finchley, N.2. [3360

1920 Scott Sociable, fitted with new 1922 bevel drive, in perfect condition throughout; offers.—Hoyland, 18, Victoria Square, Bradford. [3521

8h.p. Duo car, J.A.P., Binks, Bosch, fully equipped, good running order; a bargain, £45; appointment only.—Shaw, Jeweller, Wellington, Salop. [4543

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Morgans supplied on easy terms or exchange. 'Phone: Holborn 5777. List on application. [4507

CARDEN DE LUXE, 1921, dynamo lighting, hardly used, speedometer, any trial; £85.—Biss, 44, Sun St., Waltham Abbey. 'Phone: W.C. 299. [3834

MORGAN, 1920, Grand Prix, w.c. J.A.P. engine, just overhauled, disc wheels, fully equipped; £150.—6, St. Leonards Road, Waddon, Croydon. [3871

1921 Carden 2-seater, new August 20th, equipped, perfect, mileage 700, £80; offers considered, cash wanted.—Freeman, Union St., Winchester. [3832

MORGANS.—1922 De Luxe, Grand Prix, and Popular models in stock; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7158

NEW 1921 Tamplin 2-seater, 8h.p., all complete; £125; cycles or combination taken in part exchange.—Percy and Co., 314, Euston Rd., N.W.1. [4179

1920 G.N., dynamo lighting, speedometer, 3 new tyres, overhauled at cost of £18, excellent condition; 120 gns.—Edwards, 101, Gt. Portland St., W. [4172

MORGAN, Aero, 1922, brand new, specially made, dynamo lighting set, cost over £230, unregistered; offers.—Maskell, 5, Brixton Hill, London. [4246

CYCLECAR Bargains.—De Dion chassis, 6h.p., 3-speed and reverse, good tyres, new gears, needs magneto and carburetter, £14. Van body for above, £2.

GRAHAME-White Cyclecar complete, less engine, gear box, brand new, with tyres and tubes, £12/10.—Derrington, Grafton Rd., New Malden. [4352

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co., 292, High Holborn, W.C.1. [0673

1921 G.N. Touring, dynamo lighting, spare wheel, speedometer, clock, lovely condition; £135.—Hillier (side bell), 9, Wallingford Avenue, North Kensington. [4266

1921 Morgan De Luxe, water-cooled, M.A.G., speedometer, clock, small mileage; £150.—Hillier (side bell), 9, Wallingford Ave., North Kensington. [4267

TAMPLIN 1920, all accessories, new tyres, good condition, tax paid for year; exchange for Morgan, or sell £84.—A. W. Smith, 26, Cope St., Coventry. [4319

8h.p. Humberette, overhauled, as new, complete lamps, tax paid, £90; another, in good running order, £65.—Rhind and Co., Stone Place, Rusholme, Manchester. [3551

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0736

CARDEN 2-seater 1919, with hood, screen, lamps, etc., twin J.A.P. engine, 3 speeds; price £75, or exchange good combination.—Speechley, 86, Churchfield Rd., Acton, W.3. [4211

MORGAN 1920 Grand Prix M.A.G., acetylene and electric, speedometer, clock, aluminium dash, Dunlop Magnums, very smart, £145.—Clark, 7, Exhibition Rd., S.W.7. [3296

MORGAN De Luxe, M.A.G., water-cooled, late 1920, Lucas Magdyno, also acetylene, splendid condition, insured and tax paid; £158.—484, West Green Rd., Harringay. [3456

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220; in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0773

1921 Morgan Aero-Special, 10h.p., M.A.G., dark blue, black hood, aluminium dashboard, cost £285, do 60, really pretty; £160, offers. — 61, Netherhall Gardens, Hampstead 566. [3508

1920 Emscott 2-seater, Lucas dynamo lighting, condition as new, insurance policy, tax paid; £145, exchange for good combination.—Rhind and Co., Stone Place, Rusholme, Manchester. [3550

CARDEN 1921 de Luxe Model, Rotax Igdyno lighting, large head lamp, trip speedometer, clock, hood, screen, perfect condition; £87, or nearest offer.—4, Taunton Rd., Bridgwater. [3367

HALIFAX.—Morgans, 8h.p., J.A.P., hood, screen, £85, £100, £110; 1920 8h.p. A.V. monocar, £75; 1920 2-seater Tamplin, £99/10.—Halifax Motor Exchange, Horton St., Halifax. [3987

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines)

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## A Test or a Definition?

RATHER an unfortunate *contretemps* has marred the useful and deservedly well-supported A.C.U. one-day trial for stock machines.

Nine of the stock entries which otherwise apparently retained clean scores and in some cases made outstanding performances have not reaped full benefit because they did not comply with a regulation to the effect that front wheel stands were compulsory. Admittedly, the manufacturers concerned should have read the rules of the event more carefully, but just as surely should the A.C.U. have issued a warning before the trial started that these motor cycles, *selected from agents' or makers' stocks by the Union*, actually did not comply with the regulations. Much expense would have been saved the unfortunate makers—a stock machine trial means a greater financial expenditure than the ordinary type of event—and the public would have been better able to judge the merits of the various performances. From the official results published in this issue it is noticeable that the deficiency which caused the trouble was in every case discovered during the preliminary examination; it was therefore doubly unfortunate that the promoting body should have reserved its bomb-shell until after the event had run its course. It is doubtful, in fact, if the A.C.U. was in order at all in selecting machines which at a cursory glance did not comply with the rules.

The matter may, indeed almost inevitably will, be taken further with the assertion that the rule was quite an unreasonable one. Most of the erring nine were sports models, a title which usually implies a semi-stripped machine with many essentially "touring" features eliminated; the remainder were lightweights, which again implies an absence of weight and complication. The avowed purpose of the A.C.U. was to test the machines available for purchase by the public. Does it wish to dictate to manufacturers and the public in this matter? For, by its action, it recommends the public not to buy models which are minus front wheel stands.

The regulations referred to above are those of the F.I.C.M., but T.T. requirements omit the front stand; yet the T.T. races are to promote touring machines, and the present-day sports model is the roadster T.T. mount.

The trial as a trial was very well supported, was excellently organised, and demonstrated in a remarkable fashion the reliability of the standard motor cycle of to-day. Much of the good effect of the trial seems likely to be nullified by this eleventh-hour insistence on a regulation which certainly more nearly resembles an attempt to control design than to test existing types of machines.

This year Brooklands speeds have not been announced. The Union's reason for this omission may be perfectly justifiable, but speed figures form an item regarding which the average potential buyer positively craves information, and consequently we regret the decision.

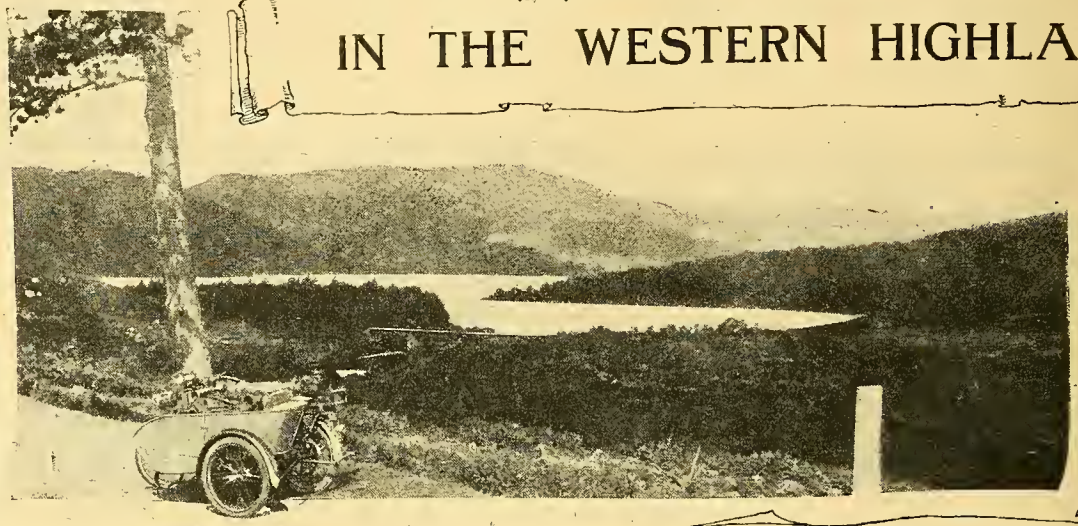
## Trials Booming.

FROM all indications, the competition side of the motor cycle movement is to enjoy an unparalleled boom this year. The two big Midland trials of early spring, the Colmore and Victory Cup events, each received over 200 entries, and in this issue we announce advance figures for the Land's End run and the Scottish Six Days Trials, which are very satisfactory, even without the last-minute additions which inevitably will come.

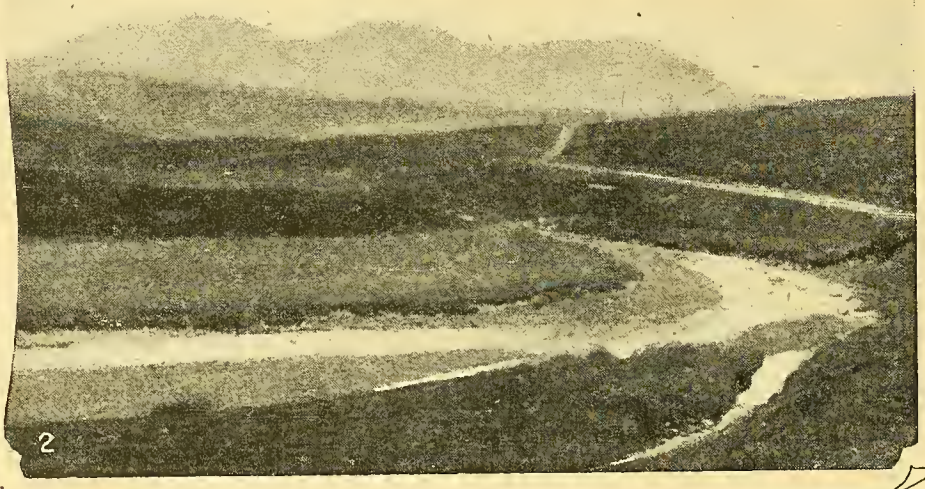
Private owners form not a small proportion of all the largely supported trials lists, and it is evident, freak hills notwithstanding, that the amateur keenly supports the sporting event.

An index to the advertisements in this issue will be found on the page facing the back cover.

# IN THE WESTERN HIGHLANDS



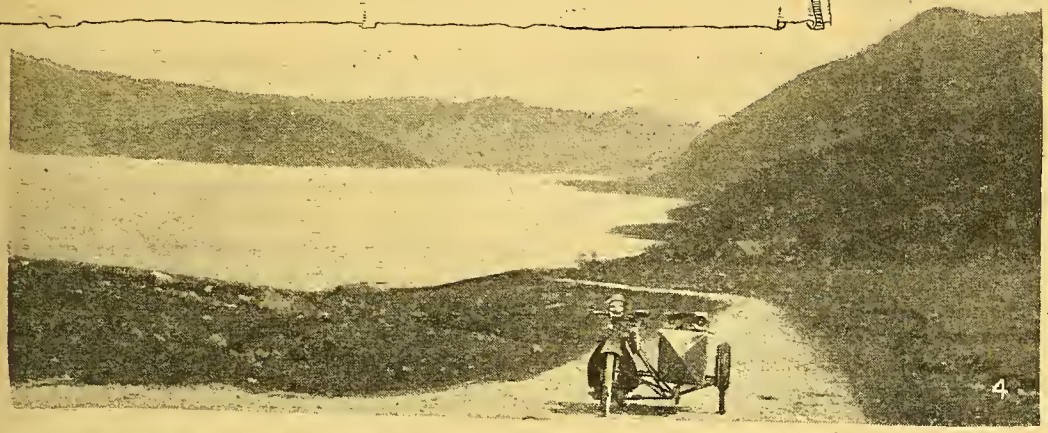
(1) Loch Garve. From this poin the traveller to the north-west bids good-bye to the railway line and branches off into one of the most remote regions of Great Britain.



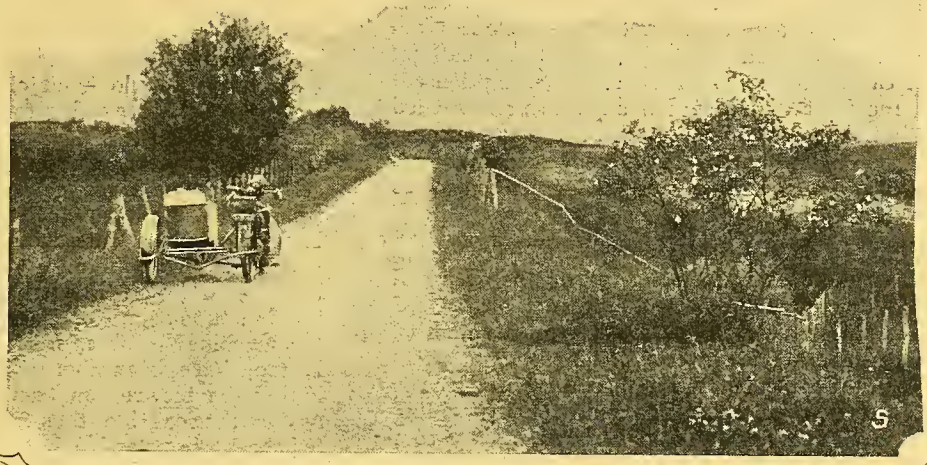
(2) The main road leads through desolate mountain and moorland scenery; habitations are few and far between. These mountains are in the heart of Ross and Cromarty, approaching the western coast, and a breakdown or accident in this district between thirty and forty miles from the rail-head, would be by no means pleasant.

(3) Rugged scenery on the coast. The small group of houses beyond the bend of the road is Dundonnel, a bleak and wind-swept hamlet, which in winter must be isolated for weeks. It nevertheless boasts one hospitable hotel.

# ITH A SIDECAR OUTFIT.

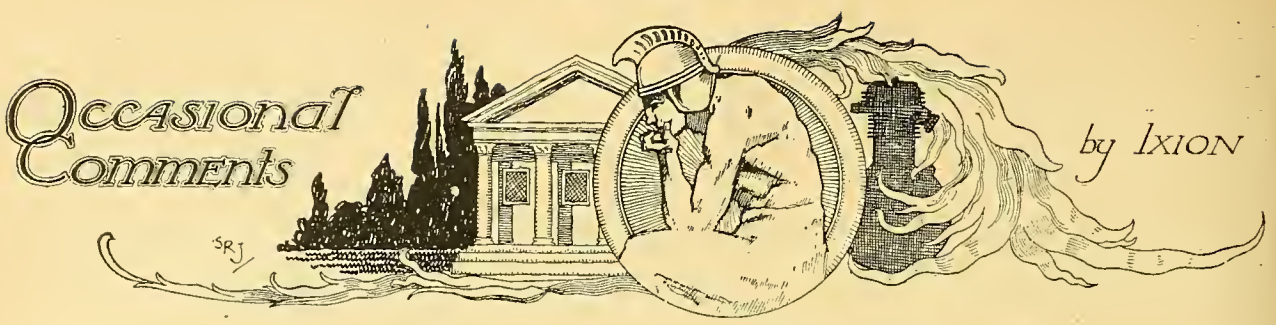


(4) Mountains and sea: another view of Little Loch Broom, on the shore of which lies Dundonnel. The few people who live beside this land-locked arm of the sea are quite forty miles from the nearest station and probably ten miles from the nearest telegraph office.



(5) This photograph, taken last June, shows wild-roses at the roadside, yet on the mountain tops were great drifts of snow (unfortunately scarcely discernible in the reproduction).

(6) On the shores of Loch Maree: one of the most famous of Western Highland lochs. The scenery is magnificent, being dominated by tremendous mountains rising from the water's edge. Maree is a fisherman's paradise.




### Jet Control.

TRUE to my principles, I have fitted a Sutton & Pocklington variable jet to my Ricardo-Triumph. The needle is calibrated to give the same range of jet openings as a full set of fixed jets varying from 28 to 36. As past experience had suggested, there are no compensating disadvantages whatsoever, the mechanism being reliable and leakproof. On the other hand, the control affords three distinct advantages on the positive side. Minor obstructions can be shifted by operating the needle violently. Maximum power and acceleration are instantly obtainable at desire. In ordinary pottering a small jet aperture can be utilised and the fuel consumption cut down. Incidentally, no special adjustment is needed to burn pure benzole, a variation of the jet opening meeting the circumstances. I am convinced that it is cost which prevents makers from fitting jet control as standard.

### An Air Cycle.

ONE of the evening papers dived off the deep end the other day with the tale of an "air cycle," in other words, an aeroplane for the man of moderate means. I let myself dream for a preparatory minute of widening the tarmac drive of Benzole Villa to serve as a landing ground, for the selling price of this 110 m.p.h. machine was only £100, and—what was more attractive to a bald old fogey like myself—the landing speed was guaranteed to be strictly moderate. Meanwhile, as I know just a trifle about costing, I wondered what engine was fitted. Towards the tail of the paragraph the mystery was solved. The engines are to be 90 h.p. R.A.F. bought up from the Disposal Board. Very nice engines, of course. But, as my typist said after she'd bought a 90 h.p. Mercédès car at an auction in the Euston Road, "It ain't so much what she cost, as the petrol she drinks." Really, these daily papers ought to keep a tame technician on their staffs.

### Strapping It On.

FROM time to time my placid soul is disturbed by a presentation trade sample of some motor cycling accessory contained in a leather case and designed to strap on to the handle-bar or carrier stays. Let me say once and for all that I will accept nothing of the kind, unless its strapping be of the order one finds on a twenty-guinea ocean trunk, and I strongly advise readers not to waste money on any motor cycling accessory disfigured by the sort of strap you see on a pedal cycle luggage carrier. Firms lacking in motor cycling experience are perpetually marketing gadgets with straps about half an inch wide and less than ⅛in. thick, composed of inferior leather, stitched with an inch or two of the flimsiest cotton, and weakened by a tiny rivet. Such attachments can be relied upon to fail within a week. The observant will notice that concerns with prolonged motor cycling experience suspect the most expensive strapping and evince a preference for metal clips.

### The Silly Season.

A MANCHESTER reader, who rides a big Yankee twin with no hand clutch, propounds the suggestion that, owing to the dry air in the States, machines weigh less there than they do here. Otherwise, he opines, nobody but Dempsey could ride certain Yankee twins on the kind of road which is freely illustrated in American motor cycle journals. His speculations date from an unintentional engine stop at a road fork on a 1 in 8 grade. One of his legs was occupied in applying the brake; the other was in action as a prop stand. Puzzle: how to restart the machine? His efforts ended in a purler. Well, I, too, have been there. I have been reduced to letting the bicycle run back and stub its rear wheel against the roadside, thus freeing a leg from the brake for the kick-starter. I have alternatively checked the machine by leaving a gear engaged whilst I put down the stand to act as a sprag during kick-starting. This is precisely why I insist on a hand clutch for all my rough-riding machines. In any freak trial one may watch weird acrobatics on the part of the foot clutch brigade when and if they get stalled on a bad grade.

### Miniature Sidecar Outfits.

LOTS of the new poor send me piteous inquiries anent 350 c.c. sidecar machines. They are unable to run to a 500 c.c. outfit, and wonder whether they can duplicate F. C. North's miraculous feats on a small two-stroke. Of course they cannot. An expert rider and tuner, handling a machine with all the resources of the factory behind it, must obviously get better results than any isolated duffer, though the results will only be fractionally better if the manufacturer is a thoroughly honest person. I always tell these inquirers that they can be very happy with a sidecarette if they are people of character. I myself prefer to lunch at the Carlton or the Ritz when I am in town, but, being an impecunious journalist, I make shift at an A.B.C. shop, and

**Occasional Comments.—**

resign myself to taking as much pleasure in deciding between poached eggs and a Welsh rarebit as the fur-coated opulents do in selecting their stewed ortolans and truffles (or whatever one gets at the Ritz). That is the whole point of these tiny outfits. They go, and go well. They are economical. They are *not* fast. They will *not* climb any hill. Years ago, *moi qui vous parle* used to drive a 2¾ h.p. tricar *avec jeune fille* (you mean *filles*?—ED.), single-geared, belt driven, automatic inlet valve, and that in one of our hilliest counties. I enjoyed it too. Just because I had enough sense not to envy too despairingly my wealthy neighbour, who ran a luxurious 7 h.p. Panhard with Roi des Belges coachwork and tulip rear seats.

## The Challenger Tube.

THANKS to a change of cover, I had a Challenger tube lying around my office last night and proceeded to demonstrate it to two incredulous visitors. The mere fact that I was prepared to inflict umpteen punctures on my own property no doubt carried a certain amount of conviction. I thought I had destroyed this by my first test, for I had such confidence in the tube that the weapon selected was the marlin-spike on a camping-knife—possibly half an inch in diameter. I thrust this well through the tread till its tip distended the inner periphery of the tube and then withdrew it. A nasty hiss followed; but even as my guests opened their mouths to crow at me, the hiss ceased, for with a vicious "plop!" a gobbet of black mastic surged up from inside the tread and sealed the hole, no material pressure having been lost. When more modest weapons, approximating to wire nails, were used, there was no hiss at all.

## Weight on Brooklands.

IT would be very interesting to know whether the secret tests of any Brooklands *habitués* have covered experiments with machines of varying weight housing similar engines. Within the last few days I have been conversing with two record-holders. One opines that weight is immaterial, except that a certain minimum is essential for comfort, as a bantamweight bounces so horribly. The other asserts that in the climb up to the back of the members' hill weight is a dominant factor; he goes so far as to prophesy that with engines capable of 6,000 r.p.m. or more it might pay to fit two close-ratio direct drives and to change gear for this ascent.

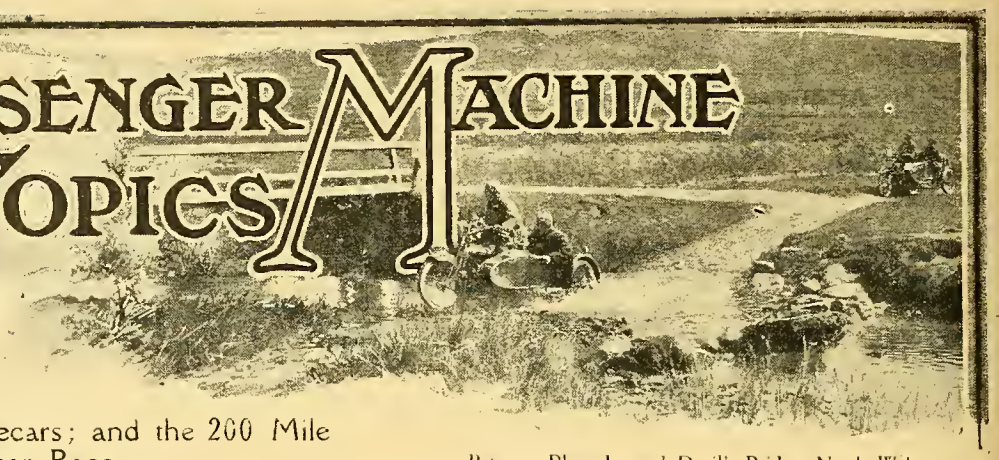
## A Very New Flat Twin.

QUITE recently I saw a new engine in a French cycle car, and for quite a time it baffled me. It was named the Kiddy—an air-cooled flat twin, on which no sign appeared either of the valves or transfer pipes. It was not a two-stroke, and how could it be a four-stroke? I had just decided it was an audacious dummy, when light dawned. It had overhead valves concealed beneath a finned aluminium cover, which looked for all the world like a pukka cylinder head. Two items which posed as mere holding-down bolts were hollow, and concealed internal push-rods. By the way, the engine of the new Crouch small car similarly hides its overhead valves under neat domed tops. Offhand, one would say that no amount of oil vapour would compensate for trapping the heat which comes off a cylinder head in such mighty lumps. So I hope that ere long the overhead valve type of air-cooled engine will have its valves enclosed as a matter of course, and then we shall be rid of the extra noise. Besides, these domed heads look far neater than a mere rocker box.

RUSSIAN PURCHASE OF BRITISH MOTOR CYCLES.

Twenty-five Matchless sidecar outfits have been purchased by the All-Russia Co-operative Society, at a price—in roubles—which defies calculation! Representatives of the Society were taken for a demonstration run over allotment ground, etc., in the neighbourhood of Woolwich.

# Passenger Machine Topics



Between Rhayader and Devil's Bridge, North Wales.

## The Question of Comfortable Seating; Petrol Consumption of Sidecars; and the 200 Mile Sidecar Race.

By "FRIAR JOHN."

NEARLY all sidecar manufacturers have succumbed to the craze for sporting and streamline bodies. Beauty and grace of outline are more easily attained in this type than in the old and more conventional pattern with the high back. On the stands at Olympia last November these "sporting" designs were dominant, and probably more attractive in appearance than any other style, but—they are neck creakers. For long journeys the lack of support for the back is felt keenly, and in cold weather they are not particularly warm. The cutting winds of spring-time whistle round the screen and catch the back of the neck and shoulders. One wishes for some sort of arrangement whereby the back of the sidecar could be lifted like that of a barber's chair. A "far-fetched" and crazy idea—but I am sure the adjustable back idea could be carried further than it has been up to the present.

OF course many firms have studied from every conceivable point of view the question of comfort, and have not fallen into the error of lowering the back of their touring models, but there are manufacturers who have done so, and the passenger's comfort has undoubtedly been sacrificed for smart racy appearance.

I have heard more than one "grouse" from purchasers of expensive cars on precisely the same point. To obtain the straight contour the height of the seat is lowered so that one is not sitting but reclining in far too recumbent a position for comfort. It is to be hoped that sidecar manufacturers won't overstep the mark in designing future models, and that in addition to their touring types particular care will be given to the contour of the passenger, as well as the contour of the sidecar.

THE question of upholstery, too, is one that needs ventilating. There is any amount of talk on chassis design, sidecar connections, and sidecar accommodation, but precious little about the inside of the body. It may not be a technical question, but after all the seat is a very important item. We pay anything up to £20 for a Chesterfield chair, and when we purchase one, we press the springs, we sit on it, the wife sits in it, we criticise its comfort, its height, length, width, and everything—but especially its comfort and the way it fits one. The salesman tells you how many springs there are in the arms—the arms, mind you, and yet when we buy a £30 or £40 sidecar, a perfunctory glance at the colour of the upholstery is all the majority of buyers give to that part of the sidecar. But they often hear about the body shape and comfort afterwards, especially if it is about the sixth outfit one has purchased. One's first sidecar is really like a first-born—it can do no wrong—it cannot be wrong. But many years' sidecarring makes one critical, and I have now a decided "grouse" about the short seat, poor finish, and faulty shape of the upholstery of many sidecars produced to-day.

I HAVE a friend living in the Midlands whose forebears must have been the hardy Norsemen. When the average sidecarist is muffled to the eyes with leather and wool, he sallies forth clad in thin, but rain-proof, clothing. How I envy him in the winter. Last week, combining business with pleasure, he started North for a little village near to Stirling. He rode a 1917 B.S.A. and sidecar carrying his personal luggage in the sidecar, together with salmon tackle and rods.

Ye gods! Salmon-fishing in the March gale. One can understand its fascination when the heather is in bloom. Yet as surely as the season opens on February 2nd are there enthusiasts ready for the opening. Yes, that old sidecar has carried some loads of fish and game in its time; the last time I rode in it the bottom was thick with jack.

A KEEN, one might almost say an acute, interest is being taken at the moment in petrol consumption of sidecars. Whenever this subject is brought up in the correspondence columns, sheaves of opinions and records follow, and the recent letters, whilst simply a recurrence of an old subject, have culminated this time in a proposed practical demonstration of the petrol economy of various sidecars. The question of legitimate or illegitimate intervention of the A.C.U. hardly enters here, however.

The great point of the whole matter is that motor cyclists should want to go to the trouble of organising such trials. That fact alone is significant, and

**Passenger Machine Topics.—**

of healthy significance, too. It is interest and enthusiasm that is wanted all the time, and the suppression of the suggested competition—even if it could be suppressed—would do no good whatever. The competitors, if members of affiliated clubs, might suffer, but that is their look-out. When Mr. A.J.S. Jones says he got 70 m.p.g. on a run down to Brighton, Mr. Two-Stroke Smith naturally wonders how it is he cannot do the same, having a smaller powered machine; he is quite willing to join in a competition if the conditions are not arduous, and he can take his wife, and possibly Jackie on the carrier. On the face of it the trial will be merely a "sporting" run of a new and interesting nature.

But when I ponder over the question I am less surprised at Mr. Loughborough's letter than I was when it first came to my notice.

◈ ◈ ◈ ◈

LAST autumn a friend, an enthusiastic sidecar owner, knowing nothing of stocks and shares, bought 5 per cent. War Loan when he sold his outfit, and so disgusted was he at the abnormal depreciation of his elaborate and expensive sidecar that he vowed he'd done with motor cycling altogether. He said he intended taking up golf instead.

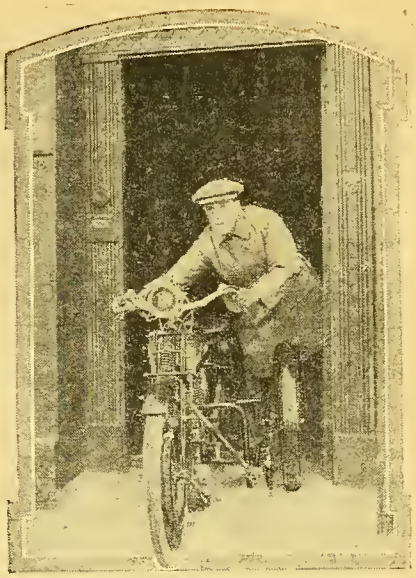
I met him, looking blithe and gay, in Great Portland Street yesterday, inspecting a second-hand sidecar outfit. Thanks to the "gilt edge" boom, he told me he had sold his War Loan at an excellent profit, but that it was no more than what ought to have happened, for he had lost pounds' worth of pleasure during the autumn and winter.

"Never again," he swore; then, as an afterthought, queried: "Ever been without a 'bus?"

"Not since 1906," I answered, "except, of course, during the——"

"Well, try it for a change; sell your 'bus and get some golf sticks. You may think you know the 'inestimable value' of the motor cycle—that's the proper touch, isn't it?—but you don't really. You know nothing whatever of the joys of possession until you are suddenly deprived of something that has become second nature to you."

JUDGING by readers' inquiries for experience with folding sidecar, greater interest is being taken in the question of storing the machine at home. On March 9th the Hopley folding chassis was shown on these pages, and probably the Paragon here illustrated is just as well known. This folding sidecar has stood the test of time and is giving satisfaction to many users. It is sold by The Wincycle Co., Ltd., 236, High Holborn, London, W.C.1.

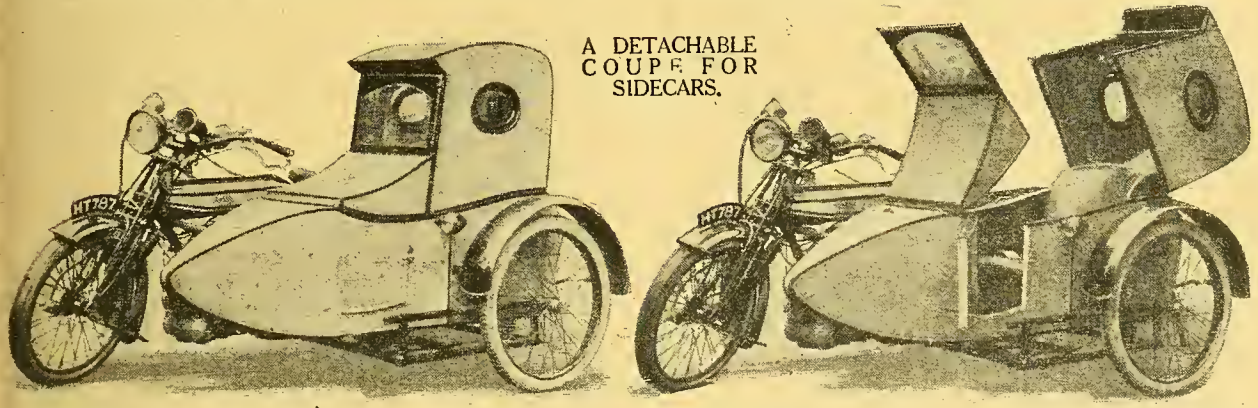


The Paragon folding sidecar attached to a 4¼ h.p. B.S.A. being wheeled through a doorway of ordinary width.

◈ ◈ ◈ ◈

ON June 17th a 200 mile sidecar race will be held at Brooklands—a race the strenuousness of which very few realise. Only a comparatively small number know what it means to ride 200 miles on end, even at ordinary touring speed, and fewer still have ever blinded 5 miles at 60 m.p.h. Many of us recollect a particular burst of speed of which we are proud, but which was probably spoilt by the fear of "something smashing," or "smashing something," or "being smashed," so besides being a great sporting event this race will be specially appreciated by the ordinary passenger machine potterer. Not only is it the first race to be held over such a long distance, but piloting a sidecar at 60 or 70 m.p.h. for 200 miles is no small feat of endurance.

## A DETACHABLE COUPÉ FOR SIDECARS.



Efficient protection for the sidecar occupant is the aim of the designer of the unusual fitting shown above. Mr. W. F. Baxter, the maker of Bax sidecars, of 14, Wells Road, Bristol, is marketing this coupé attachment, which converts a standard sidecar to a closed body in a few moments. The hinge upon which the hood turns back for entrance or egress is made with a draw bolt; on this being withdrawn the cover can be removed, the operation only taking a few moments. The cost of the coupé only, fitted and painted to match the sidecar, is from £10 to £12, according to the work involved.

# TUNING A 4 H.P. TRIUMPH.

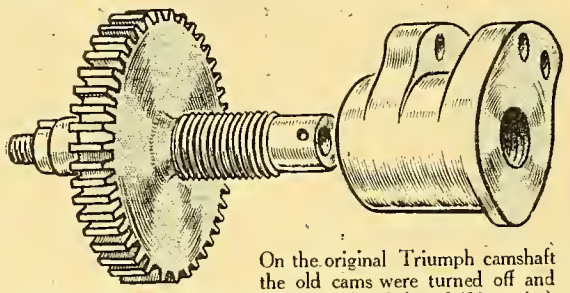
## Describing Engine Alterations which gave Speeds of 60 m.p.h. Solo, and over 50 m.p.h. with Sidecar.

(By K. H. Leech, A.M.I.C.E., B.Sc.E.)

MANY readers have from time to time requested further information of—not how the wizards of track or slide-rule tune or design for terrific velocities, but—how the ordinary private owner may succeed in adding 5-15 m.p.h. to the maximum of an ordinary touring machine. Owners of 4 h.p. Triumphs have in particular been very persistent with this query.

In February, 1920, the author purchased a W.D. Triumph, more or less renovated. The engine number was 54171, which proved that the machine was then just two years old.

A general overhaul was at once carried out, and a number of small parts were renewed. No alteration was made to the engine, and, with a sidecar, about 3,000 miles were covered before piston slap became annoying. Maximum speeds were: solo, 51 m.p.h.; sidecar, 42 m.p.h. The cylinder was re-ground, and a new piston fitted, increasing the "capacity" to 554 c.c. At the same time, the valve timing was checked over and found to be by no means efficient. Two complete sets of experimental cams were made, screwed with a left-hand thread on to the old cam wheel, from which the original cams had been turned off.



On the original Triumph camshaft the old cams were turned off and the new ones screwed on a $\frac{5}{16}$in. left-hand thread (26 per in.). Decompressor cam and lightening holes are also shown.

The relative timing of inlet and exhaust valves was varied during the experiments by "jumping up" the inlet rocker arm to a greater or a less extent. The overlap between inlet opening and exhaust closing was first made 10°, and this was gradually increased till as much as 45° was tried, *i.e.*, inlet opened 10° early, exhaust closed 35° late. This did not give quite such good results as smaller overlaps, and the final setting was fixed at 35°, the inlet opening 10° early as before.

The lift of the valves with the new cams was increased to $\frac{11}{32}$in. from $\frac{1}{4}$in., and, owing to various defects in workmanship, due to the alterations which had been made in the cam contours from time to time, the valve gear became noisy and also caused the fracture of two exhaust valve stems in rather quick succession.

The cam circles were then carefully trued up almost to the points where the "lift" of the cams started, about $\frac{1}{8}$in. being left raised about $\frac{5}{1000}$in. above the surface of the cam-circle. This was eased with a carborundum stone to form a relatively gentle "take-up" of the tappet clearance, somewhat on the lines of the Ricardo design, although the valves were in no sense "masked."

The improvement in quietness was very great, practically no tappet noise being audible over the first 1,000 miles after the alteration. However, now, after about 2,500 miles, a slight, not noisy, click has developed. The same process was tried on the standard cams of a friend's Triumph, with identical results.

Various contours were tried for the cams, and finally, after careful experiment and laying out on a drawing board, double size, profiles were obtained which gave a quick lift and fall to the valves, the rates and periods of rise and fall being identical for both valves.

This point may not be clear until it is explained that, with the Triumph design of rocker arm, an ordinary straight-faced cam will give quick rise and slow fall to the exhaust valve. The standard Triumph cam is slightly concave on the fall side, but the peculiarity mentioned can be noticed on any Triumph, nevertheless, and probably is partly the cause of the special characteristics of the Triumph engine.

The timing finally settled on, and the comparative standard Triumph figures, are as follows:—

| *Inlet.* | |
|---|---|
| New. | Standard. |
| *Open* 10° early. | Top dead. |
| *Close* 40° late. | 50° late. |
| *Exhaust.* | |
| *Open* 60° early. | 50° early. |
| *Close* 25° late. | Top dead. |

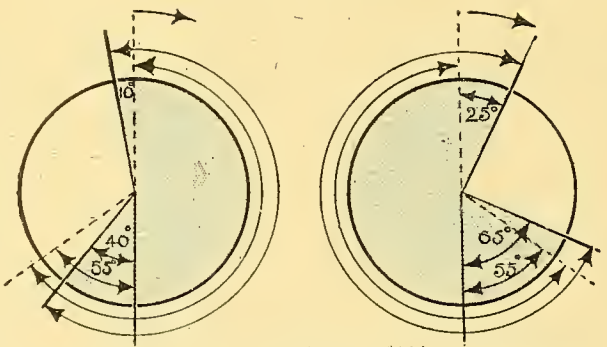



Diagram showing alterations to valve timing. The new cam periods are shaded.

These figures, of course, are only correct when tappet clearances are kept as small as possible.

The quick lift cams caused a rather objectionable "smack" in the exhaust note with the standard exhaust arrangement, and so a new long extension pipe of larger cross-section was brazed on to the silencer, the kick-starter crank being set outwards to clear the pipe.

**Tuning a 4 h.p. Triumph.—**

An experimental exhaust valve with a tungsten steel stem screwed into the head and riveted over was made and has now done over 1,200 miles without the slightest trouble, and is still in service. There is not any trace of burning visible, and the valve looks just as it did when put in.

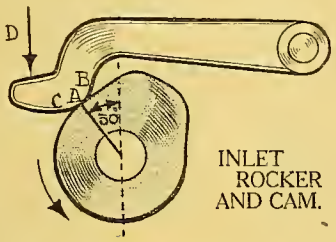
Other experimental fittings included a phosphor-bronze bush for the big end in place of rollers (but this was not satisfactory, and has been replaced by rollers and an oversize crank pin), lubricating the inlet valve stem by oil mist from the timing case (which has been entirely satisfactory) and a home-made extra air inlet, which was very useful, until the fitting of a Binks carburetter rendered it unnecessary.

One other alteration from standard is in existence on the engine, but this is not due to the author. It was noticed that the piston seemed to rise higher up the bore of the cylinder than on other Triumph engines examined, and the clearance volume was then carefully measured. This was found to be 132 c.c., giving a compression ratio of just over 5.1 as compared with the standard 4.8.

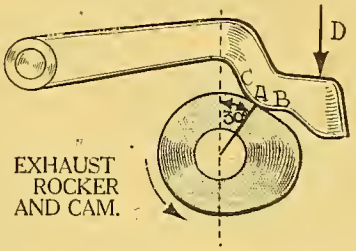
The higher compression of the author's engine renders it not very comfortable to drive on petrol, but undoubtedly improves the power output.

It is possible that someone, during the Army career of the machine, had the cylinder flange thinned down about 2 mm., or perhaps the core for the L head of the cylinder may have been misplaced during moulding.

A Binks carburetter was tried, at first experimentally, but after some trouble (and prejudice) had been overcome, the author was forced to confess that, although not quite perfect, it gave him great satisfaction, particularly as regards maximum speeds, and also from the point of view of economy and slow running.




As the rocker first is lifted by the cam the point of contact moves from A to B, slightly altering the leverage of the rocker and presenting a very unfavourable angle to lift the tappet at D; consequently the lift is at first very sudden. In descending, the action is the reverse, the point of contact moving first from A to C, and then back to A.




In this case, the point of contact in first lifting the rocker moves from A to B, and at B the angle of contact is better than at A. In descending, the point of contact moves first from A to C, and causes a quick drop.

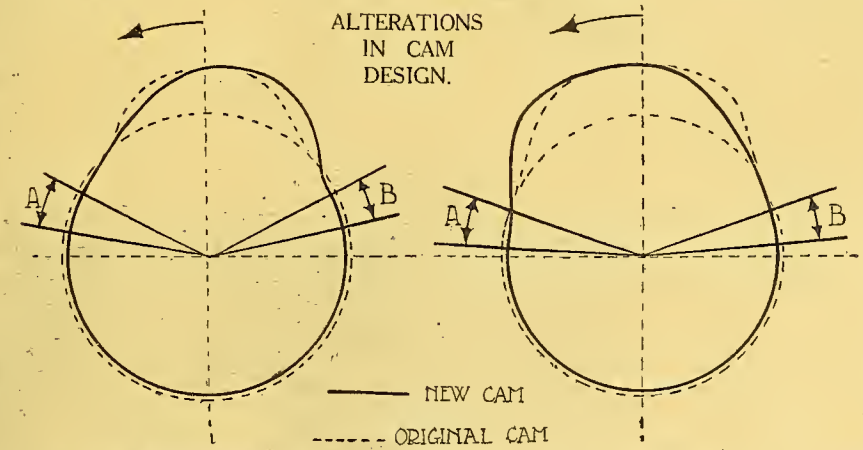
As regards the speed capacity of the machine, at present the maximum, in touring condition with a loaded sidecar, has been 51 m.p.h., this being the average of short runs with and against the wind, and being recorded by a moderately accurate Cowey speedometer; 40 m.p.h. has been obtained in second gear (8.15 to 1), also with sidecar, but usually the engine starts misfiring at 38 m.p.h., due either to the valve springs or the magneto contact breaker spring being insufficiently strong.

**60 m.p.h. Solo.**

Sixty miles per hour has been obtained solo, but no attempt has been made to exceed this speed on account of the special precautions which must be taken, although it is probable that at least another 5 m.p.h. could be obtained. However, as stated earlier, 51 m.p.h. was the maximum of the machine as it was taken over, so the modifications were responsible for a 20% improvement in speed alone.

It should be noted that it is not possible to sustain the "all-out" speeds for more than relatively short distances, or overheating occurs. This point forms the author's only serious "grouse," but in fairness to the Triumph Co. it must be emphasised that the engine runs quite satisfactorily cool under all ordinary circumstances, and that trouble of some sort must be expected if the engine is made to develop some 40% more power than the maximum it is designed for.

In conclusion, the author must confess that the task entailed in making and testing special parts and fittings, such as above described, gives him almost as much pleasure as ordinary touring, at any rate, in spite of his using a spring seat pillar and a 28in. × 3in. rear tyre, over present-day roads. He believes that there is only one other 4 h.p. Triumph in existence which actually reaches the mile-a-minute gait against the clock, and the fact is of considerable satisfaction, much more than if he had purchased a sporting model with a guarantee of express train velocities.




New inlet (left) and exhaust (right) cams showing alterations made to secure correct harmonic rise and fall.

Left: A shows the gentle rise to take up tappet clearance without opening the valve appreciably; B shows the gentle fall.

Right: Actually the exhaust is arranged to give a more rapid lift than "simple harmonic," the rocker angle permitting this.

In both cases the backing-off of the cam circle is exaggerated.

# Official Test of Stock Machines.

Two stock outfits driven by N. Hall (2¾ O.K. sidecar) and A. G. Cocks (4½ Beardmore-Precision sidecar) ascending Kop Hill—probably the worst climb in the trial.

## Out of 108 Starters only 1—a Motor-assisted Bicycle—retires. 34 Stock Machines secure Premier Awards, 33 Non-Stock Motor Cycles obtain Maximum Marks, 22 Penalised for not having Front Stands.

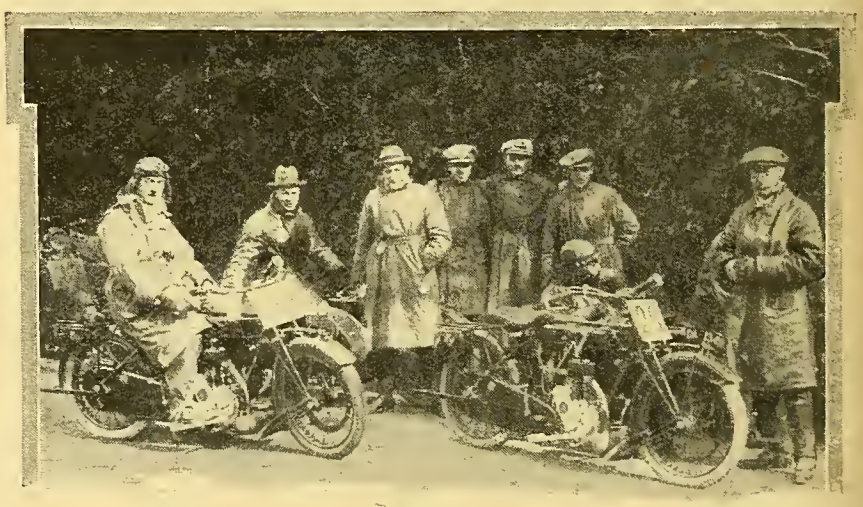
SIX-THIRTY on a cold, grey March morning is early for the start of a trial, and more than one "sluggard" among the competitors in the A.C.U. One Day Trial on Wednesday of last week was "heard to complain." Nevertheless, the immediate prospect became brighter when it was discovered that the Wolseley Motor Co., in whose Ward End (Birmingham) Works the machines had been parked overnight, had courteously opened its canteen for the benefit of competitors. An excellent hot breakfast cheered the sleepy riders, and a few minutes before the official starting time there was an air of bustle about the big shed in which the machines were stored.

On the previous day all machines had been weighed, filled up, and stored, while stock entries had been allowed an hour's testing about the Works' roads, under strict observation.

### Affected by Engineering Lock-out.

In many instances, stock machines arrived by lorry, and of these the Martinsyde contingent must have had a long journey. Amongst the non-starters one or two were members of the A.E.U., who were therefore prevented from riding on account of the engineering lock-out. No very startling features were to be found amongst the competing machines, but the modern tendency towards light sidecar outfits was well exemplified by such entries as E. Williams (stock 2¾ A.J.S. sc.), N. Hall (stock 2¾ O.K. Junior sc.), G. Francis (2¾ Francis-Barnett sc.), and G. E. Cuffe (2½ Metro-Tyler sc.). Almost a new-comer to competition work was the Barr and Stroud-engined Royal Scot, a promising performer, hailing, as might be suspected, from north of the Tweed. The 5-7 h.p. McKechnie Victor sidecar entered by F. Becker attracted considerable attention, and interest was also shown in the Zenith-Bradshaw flat twins, the o.h.v. Triumphs and Douglases, Mrs. Janson's Ner-a-car, the 4¼ h.p. Beardmore-Precision, and the plucky entered 1¾ h.p. Young cycle attachment, which, however, did not check in at Oxford.

Dry roads and an easy course favoured the chances of the small machine, but it must be remembered that the stock machine trial is intended to be within the powers of *all* classes of self-propelled motor cycles and three-wheelers.



Competitors outside the Oxford check. R. Brown (4½ Sunbeam sidecar) on the left, with J. E. Greenwood (4½ Sunbeam sidecar) on the extreme right.

**Official Test of Stock Machines.—**

The course was admirably marked with blue stain and arrows, and apart from rough surfaces there was no obstacle of note until the Kenilworth watersplash. Even here the surface has been improved quite recently, and though moderately wide, the ford is so shallow that it can be crossed with ease by the smallest belt-driven machine.

### Sunrising Easy.

On to Warwick the roads were rough, but soon a temporary improvement took place as the Gaydon and Kineton route was followed to Sunrising Hill. So well known is this hill, and so excellent the surface, that even the acute right-handed corner provides no obstacle to the modern motor cycle. There were but two failures while we were present, and these were both caused by misadventure rather than by lack of power. Greening's stock T.B. stalled momentarily when well past the worst of the hill, owing apparently to a missed gear change, and A. Cocks (stock 4¼ Beardmore-Precision sc.) failed just after the corner owing to a faulty plug. On restarting, however, he made a good climb. F. Becker (5-7 McKechnie-Victor sc.) stopped at the foot of the hill, but came up well, and C. Barham (2¾ Warnes) appeared to be in serious trouble, since he only just surmounted the gradient, and his engine sounded very "woolly." The Young attachment made a fine climb with pedal assistance. For the rest it is impossible to distinguish between many excellent ascents, especially as some riders were quite obviously saving their engines for Brooklands.

It is necessary, however, to say a word in praise of the fast, silent climbs made by the brothers Brandish, both mounted on flat twin Humbers. All the little side-car outfits climbed well, but special praise must be given to G. I. Francis (2¾ Francis Barnett sc.).

### Consistent Performances.

Towards the end of the list came the familiar figure of F. A. MacNab on the new 6 h.p. Trump, a sporting-looking twin, which made a fine climb. Three-wheelers, sidecar outfits, heavy and light, and solo machines all climbed consistently and well.

Since stops were not penalised and the time margins were reasonably wide, competitors took full advantage of the allowances. Indeed, it seemed that the regulations were too lax, for there were instances of two or three competitors stopping to assist a friend in difficulties, and on at least one occasion a competing machine emerged from a roadside workshop.

With the exception of one rough and tricky little hill near Lidstone, which was too short to cause trouble, the road to Oxford presented no difficulties. True, by-roads were the order of the day for most of the distance, and a stretch of undulating road with rutty surfaces near Hook Norton was termed by some a colonial section.

In spite of easy routes, there are always a few unfortunates, and before lunch we noticed H. Reyre (3½ Ariel), G. Francis (2¾ Francis Barnett sc.), and E. A. Barnett (stock 2¾ Francis-Barnett) all in trouble with their tyres. M. O. Reilly (5 N.U.T.) was apparently in difficulties with his clutch spring, J. Caslake (8 Brough Superior) had his tool-bag out near Chipping Norton, and G. E. Cuffe (2½ Metro-Tyler sc.) suffered continuous belt trouble, and, in consequence, ran out of petrol. A.A. and R.A.C. scouts were in evidence throughout the morning's run, and the organisation of the lunch control, carried out by the Oxford University M.C.C., was beyond criticism.

Top: Col. Lindsay-Lloyd despatching W. T Woodcock (3½ Ariel) on the track test at Brooklands, while J. Bishop (2½ Sun-Vitesse) awaits his turn. Centre: School children at Thame cheering on W. B. Gibb (4 Douglas sidecar). Bottom: An unofficial check at Oxford to F. C. Townshend (3½ Zenith-Bradshaw).

### After the Lunch Interval.

Lunch at Oxford occupied only a brief interval in the run, and before noon the earlier men were on their way again, passing through Wheatley, Thame, and Chinnor. From the last-mentioned village a detour was made to include a long by-road hill, which even without a fairly acute hairpin bend midway up was certainly not a top gear climb.

Both for sheer speed and neat driving on the corner, H. F. S. Morgan, on a stock £150 Morgan three-wheeler, was probably more conspicuous than any other entrant, but only a novice on an underpowered, out-of-condition machine might reasonably have been expected to fail entirely at this point.

Kop Hill (Princes Risborough), some six miles further on, provided considerably more incident, and quite a creditable turn-out of spectators made very interesting comparisons of the hill-climbing capabilities of the stock machines in particular.

### Performances on Kop.

The hill, it should be explained, is no longer regarded as worthy of inclusion in any modern trial in which hill-climbing failures are relied on to find a winner; it is, however, a very popular grade for speed events, and has been scaled at 60 m.p.h. on more than one occasion. The average private owner of the average 3½ to 4 h.p. solo machine nowadays would feel dissatisfied if he failed to get up on second gear. Therefore, one or two of the performances on Wednesday were by no means inspiring. W. B. Gibb (stock 4 Douglas sc.) broke his belt before reaching the most severe portion, returned to the foot, and made quite a good ascent at a second attempt. On a 3½ h.p. model of the same make, also stock, J. A. Newman, much ahead of time, made a very cautious climb. J. Donaldson's stock 2¾ h.p. Royal Scot evoked very favourable comment, especially on the score of silence, the B. and S. sleeve-valve engine being almost inaudible. Unlucky "13," S. Jones (stock 2¼ Levis) got into difficulties, and neither zig-zagging nor clutch slipping postponed the necessity for vigorous foot-slogging.

Then Eric Williams's stock A.J.S. lightweight outfit pegged up manfully, excusably with little in hand, but before the issue was decided Kaye Don (stock 3½ Norton) synchronised his 30 m.p.h. swoop past with a slight deviation from the straight path on the part of Williams; both stopped, the solo man very forcibly some dozen hectic yards higher up. He very pluckily restarted and carried on.

Next to fail was the stock L.S.D. three-wheeler driven by C. Swain. As a result, A. G. Cocks (stock 4¼ Beardmore-Precision sc.) was baulked and was quite unable to make an unaided restart on the gradient.

### Fine Climbing by Stock Machines.

The remainder of those in the stock class were all successful, particularly fine climbs being made by the three 4½ h.p. Humbers, G. Dance's Sunbeam, G. H. Kirby's o.h.v. Triumph, Bert Kershaw's 2¼ h.p. New Imperial, and the 6 h.p. Martinsyde outfit by W. H. Bashall.

At one time the track was alive with competitors, but very little racing took place. Here are shown F. W. Giles (7 A.J.S. sidecar) P. Pike (2¼ Levis), Eric Williams (2¼ A.J.S. sidecar), H. Holmes (8 Morgan), and C. F. Knott (2¾ Raleigh).

Only one of the non-stock entrants failed, H. H. Beacon (2¼ New Imperial), but on the whole the performance here by no means outshone those who were handicapped by too new engines. Two o.h.v. Triumphs, a Brough Superior, and Belfield's Harley-Davidson, and Bucknell's Matchless sidecar outfits were outstandingly fast. Mrs. Janson (2¼ Ner-a-Car) looked worried, but made a sure climb, especially commendable if the gear ratios were standard.

Perhaps owing to its moderate price, a large number of potential purchasers displayed considerable interest in the 2¾ h.p. Raleigh, the two examples of which made highly creditable ascents of Kop Hill.

The main road climb out of Great Missenden was also observed, but again spectators and observers had a tedious time, and might almost as usefully have taken up vantage points on the flat. Another rise on the Beaconsfield side of Amersham proved responsible for only one failure, L. F. Peaty (stock 4¼ Hawker), whose engine was reported to have dried up.

Thereafter it was good going to Brooklands, so good that we trust that the scores of police who lined this portion of the route held broad-minded views on speed limits! As it was, a great many of the competitors found time for a tea stop in Weybridge before entering the track.

### Too Many Punctures.

Punctures were even more common during the afternoon's run, and we can only hazard that the popular standard sizes of tyre are not up to competition work. The precautionary luxury of oversize tyres was obviously sadly missed by those who regularly ride in the conventional reliability trials.

There was too much "tinkering" on the part of competitors. Nearly all stopped at Weybridge, and in many of the towns on the routes it was no uncommon sight to see competing machines receiving attention outside garages.

### Well-organised Speed Test.

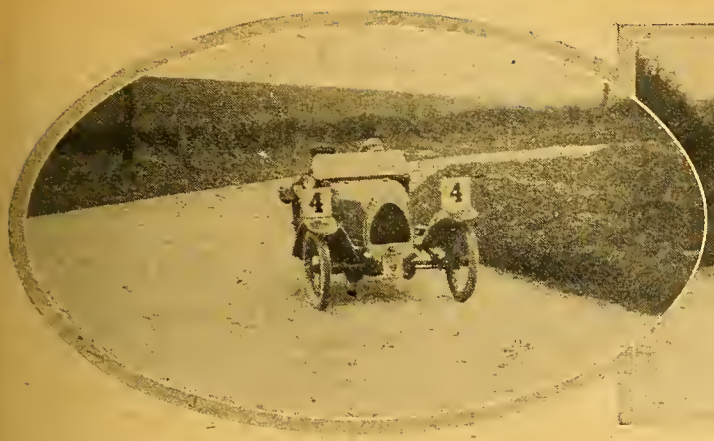
The twelve-lap speed test on Brooklands Track was very well organised, and confounded the pessimists by the regularity with which the stock entries completed the distance successfully. W. L. Handley (stock 2¾ O.K. Junior) was very unfortunate; first a link of his front forks came adrift, and, having repaired this, his belt broke on attempting to restart. Another to meet adversity on the last lap was H. R. Davies (stock 2¾ A.J.S.), who was towed into the paddock owing to an inlet valve cotter shearing.

To help the competitors to count their laps, a special tie-on label bearing twelve numbered slips was supplied to each man; but quite a number disdained any aid to memory.

The P. and M. riders, unfortunately, tore off one slip too many, with the result that they lost their awards through not having completed the twelve laps.

It was amusing to see George Dance (Sunbeam) sitting up wearing a bored expression, and doing a mere 40 m.p.h. Restraint was evident, but temptation was great.

H. W. Hassall's Norton was knocked over in the paddock before the speed test and the front wheel was buckled. Nevertheless, he pluckily carried on.



S. M. Greening (T.B.) turning off the main Oxford-London road towards Thame.

G. M. Townshend (4¼ P. & M. sidecar), the first man to start, climbing the hill into Woodstock.

# OFFICIAL RESULTS.

| Machine. | Rider. | Weight lb. | Award, etc. |
|---|---|---|---|
| **MOTOR BICYCLES.** | | | |
| 1¾ Young .. .. | G. Fletcher.. | 84 | Retired. |
| *2¾ Levis .. .. | S. Jones .. | 168 | Stopped on Kop. |
| *2¼ New Imperial .. | B. Kershaw | 203 | Special Certificate of Merit. |
| *2¼ Sun Vitesse .. | J. Bishop .. | 224 | †No Front Stand. |
| *2¼ Levis .. .. | P. Pike .. | 168 | † Do. |
| *2¼ Sun Vitesse .. | F. J. Johnson | 196 | Stopped in Speed Test. |
| *2½ Sun Vitesse .. | F. C. Parkes | 217 | †No Front Stand. |
| 2¼ New Imperial .. | H. H. Beacon | 315 | No Front Stand. Stopped on Kop. Stopped in Speed Test. |
| 2¼ Ner-a-car .. | Mrs. Janson | 238 | First Class Certificate. |
| 2¾ Velocette .. | J. H. V. Wood | 217 | Do. |
| *2¾ Raleigh .. .. | W. H. Hadfield | 231 | Special Certificate of Merit. |
| *2¾ A.J.S. .. .. | H. F. Harris | 231 | Do. |
| *2¾ A.J.S. .. .. | H. R. Davies | 217 | Stopped in Speed Test. |
| *2¾ Royal Scott .. | J. Donaldson | 231 | Special Certificate of Merit. |
| *2¾ Connaught .. | C. L. Sprosen | 203 | †No Front Stand. |
| *2¾ Raleigh .. .. | C. F. Nott .. | 213 | Special Certificate of Merit. |
| *2¾ O.K. Junior .. | W. L. Handley | 189 | No Front Stand. Stopped in Speed Test. |
| *2¾ New Imperial .. | D. Prentice.. | 217 | Stopped in Speed Test. |
| 2¾ Wooler .. | A. Millwood | 238 | †No Front Stand. |
| 2¾ Wooler .. | J. Wooler .. | 238 | † Do. |
| 2¾ Warnes .. | C. Barham .. | 224 | No Front Stand. Stopped Sunrising. |
| 3½ Beardmore .. | S. Warne .. | 238 | First Class Certificate. |
| 2¾ Coulson .. | F. V. Jones.. | 245 | Do. |
| 2¾ Wooler .. | H. H. Robinson | 238 | No Front Stand. Stopped Sunrising and Lidstone. |
| 2¾ A.J.S. .. .. | P. Manifold | 238 | First Class Certificate. |
| *3½ Ariel .. .. | W. T. Goodcock | 315 | Special Certificate of Merit. |
| *3½ Sunbeam .. | A. Bennett | 273 | Do. |
| *3½ Sunbeam .. | G. Dance .. | 245 | Do. |
| *3½ Norton .. .. | L. Paynter | 280 | Do. |
| *2¾ Francis-Barnett | E. A. Barnett | 224 | †No Front Stand. |
| *3½ Sunbeam .. | C. Greenwood | 245 | Special Certificate of Merit. |
| *3½ Martinsyde .. | E. H. Gifford | 301 | Stopped in Speed Test. |
| *3½ Norton .. .. | H. Hassell .. | 287 | Special Certificate of Merit. |
| *3½ Norton .. .. | K. Don .. | 273 | No Ft. Stand. Stpd. on Kop. |
| *3½ Triumph .. | G. H. Kirby | 266 | † Do. |
| *3½ Douglas .. | J. A. Newman | 273 | Special Certificate of Merit. |
| 3½ Ariel .. .. | C. Bourlet .. | 294 | First Class Certificate. |
| 3½ Norton .. .. | R. Green .. | 273 | Do. |
| 3½ Sunbeam .. | O. B. Smyth | 266 | Do. |
| 3½ Zenith-Bradshaw | J. F. Perrin | 273 | Stopped Chinnor Hill. |
| 3½ Norton .. .. | A. H. S. Love | 287 | First Class Certificate. |
| 3½ Zenith-Bradshaw | F. C. Townshend | 273 | Do. |
| 3½ Douglas .. | R. Newitt .. | 259 | Do. |
| 3½ Triumph .. | H. R. Harveyson | 287 | †No Front Stand. |
| 3½ Zenith-Bradshaw | V. Gayford | 287 | First Class Certificate. |
| 2¾ Francis-Barnett | D. A. Atkin | 238 | †No Front Stand. |
| 3¾ Zenith-Bradshaw | W. A. Schooley | 308 | First Class Certificate. |
| 3½ Triumph .. | H. J. S. Ward | 273 | †No Front Stand. |
| 3½ Rudge Multi .. | P. L. B. Wills | 287 | First Class Certificate. |
| 3½ James .. .. | A. E. Leeding | 273 | Do. |
| 3½ Ariel .. .. | H. A. Reyre | 301 | Do. |
| 3½ Zenith-Bradshaw | W. D. Pugh | 301 | Do. |
| 3½ Ariel .. .. | C. Dickinson | 308 | Do. |
| *4½ Ariel .. .. | A. E. Rollason | 350 | Special Certificate of Merit. |
| *4½ Humber .. | W. Brandish | 266 | †No Front Stand. |
| *4½ Hawker.. .. | L. F. Peaty | 224 | Stopped Coles Hill and Speed Test. |
| *4½ Humber .. | D. Brandish | 266 | †No Front Stand. |
| *4½ Humber .. | R. I. Grindley | 287 | Special Certificate of Merit. |
| *4½ B.S.A. .. .. | B. L. Bird .. | 301 | Do. |
| *4½ B.S.A. .. .. | L. Sealey .. | 315 | Do. |
| 5 N.U.T. .. .. | M. O'Reilley | 287 | First Class Certificate. |
| 5-6 Raleigh .. | E. S. Burnett | 329 | Do. |
| 5 Triumph .. | F. A. McNab | 287 | †No Front Stand. |
| 8 Brough Superior | J. Caslake .. | 364 | First Class Certificate. |
| **SIDECARS.** | | | |
| *2¾ A.J.S. .. .. | Eric Williams | 357 | Special Certificate of Merit. |
| *2¾ O.K. Junior .. | N. Hall .. | 301 | †No Front Stand. |
| 2¾ Francis-Barnett | G. I. Francis | 343 | † Do. |
| 2½ Metro-Tyler .. | G. E. Cuffe | 287 | Late at Oxford. Stopped on Sunrising and Lidstone. |
| *4½ P. & M... .. | G. M. Townshend | 448 | Special Certificate of Merit. |
| *4½ Sunbeam .. | T. C. de la Hay | 469 | Do. |
| *4 Douglas .. | W. B. Gibb | 455 | Stopped on Kop. |
| *4 Dunelt .. .. | P. Pehrson .. | 462 | Special Certificate of Merit. |
| *4½ Sunbeam .. | J. E. Greenwood | 511 | Do. |
| *4½ Sunbeam .. | E. Brown .. | 490 | Do. |
| *4½ P. & M... .. | P. Cunningham | 434 | 11 laps only in Speed Test. |
| *4½ P. & M... .. | R. Lewis .. | 448 | Do. |
| *4½ Beardmore .. | A. G. Cocks | 525 | Stopped on Sunrising. |
| *4 Dunelt .. .. | B. Cathrick | 378 | First Class Certificate. |
| 3½ Zenith-Bradshaw | R. Charlesworth | 469 | †No Front Stand. |
| *7 A.J.S. .. .. | F. W. Giles.. | 623 | Stopped in Speed Test. |
| *8 Ariel .. .. | L. Newey .. | 553 | Special Certificate of Merit. |
| *8 New Imperial .. | B. Bladder .. | 574 | Do. |
| *6 B.S.A. .. .. | H. S. Perry | 476 | Stopped in Speed Test. |
| *6 Martinsyde .. | W. H. Bashall | 595 | Special Certificate of Merit. |
| *6 B.S.A. .. .. | H. F. Walker | 476 | Do. |
| *5-6 Raleigh .. | H. Gibson .. | 497 | Do. |
| *6 Martinsyde .. | J. Bashall .. | 588 | Do. |
| *6 Douglas .. | C. G. Pullin | 511 | Do. |
| 8 Royal Enfield .. | A. F. Pulling | 630 | First Class Certificate. |
| 8 British Excels.. | V. F. Long | — | Do. |
| 8 Matchless .. | W. Bucknell | 588 | Do. |
| 5-7 McKechnie Victor .. | F. W. Becker | 476 | Do. |
| 8 Sunbeam .. | L. V. Freeman | 644 | Do. |
| 8 Sunbeam .. | P. W. White | 616 | Do. |
| 6 Bradbury .. | P. Platt .. | 609 | Do. |
| 7 Matchless .. | F. J. Ellis .. | 707 | Do. |
| 7-9 Harley Davidson. | B. E. Belfield | 609 | Do. |
| 8 Royal Enfield .. | H. H. Lawley | 553 | Stopped on Sunrising, Lidstone and in Speed Test. |
| **CYCLE CARS.** | | | |
| *8-10 T.B. .. .. | S. M. Greening | 945 | Stopped on Sunrising and in Speed Test. |
| *8 Morgan.. .. | G. Goodall .. | 672 | Special Certificate of Merit. |
| *10 Morgan.. .. | Allen Bennett | 602 | Do. |
| *10 Morgan.. .. | A. J. Sproston | 756 | Do. |
| *8 Morgan.. .. | H. F. S. Morgan | 686 | Do. |
| *8 Morgan.. .. | S. McCarthy | 700 | Do. |
| *8 Morgan.. .. | H. Holmes .. | 721 | Do. |
| *10 L.S.D. .. .. | C. Swaine .. | 889 | Engine over Capacity. |
| 10 Morgan.. .. | A. J. Rowe.. | 854 | First Class Certificate. |
| 8-10 T.B. .. .. | F. S. Spouse | 1,022 | Do. |

* Standard Stock Machines. Owing to the neglect on the part of many competitors to slow to 20 m.p.h. when passing the barrier during the Speed Test, individual speeds will not be published. † Otherwise qualified for maximum award will receive special certificate of performance.

# SPRING FRAMES.

## A Review of the Systems Employed in the Rear Suspension of Motor Cycles.

WHEN motor cycles are sprung more or less from end to end the springing may be divided into three classes.

(1.) That in which the whole frame except the rear wheel attachments, sometimes including the carrier, is sprung.

(2.) A method of springing applied to the driver and the principal parts of the mechanism, the rear wheel being mounted in a rigid part of the frame extending to the head.

(3.) A partly duplicated frame providing spring suspension for the saddle and footboards or footrests.

Most spring frames come into the first class, and herein they follow the lines laid down by car designers. The difficulties to be overcome lie in making the rear wheel rigid laterally and in preventing a snatch in the drive which may be caused by variation in the distance between the driving centres or a large difference in the size of the sprockets when chain drive is employed.

### Defining the "Sprung" Portion.

That part of the frame which is supported on springs must be regarded as the sprung part. This seems very obvious, but some people call this part of the frame the rigid part and refer to the wheels as sprung, a fact which has caused more than one small argument with attendants at Olympia. Incidentally, it is not strictly correct to speak of a spring wheel sidecar, for it is the sidecar chassis that is carried on a spring, but the term is well known and convenient, and for the sake of clarity it may be desirable to use it again.

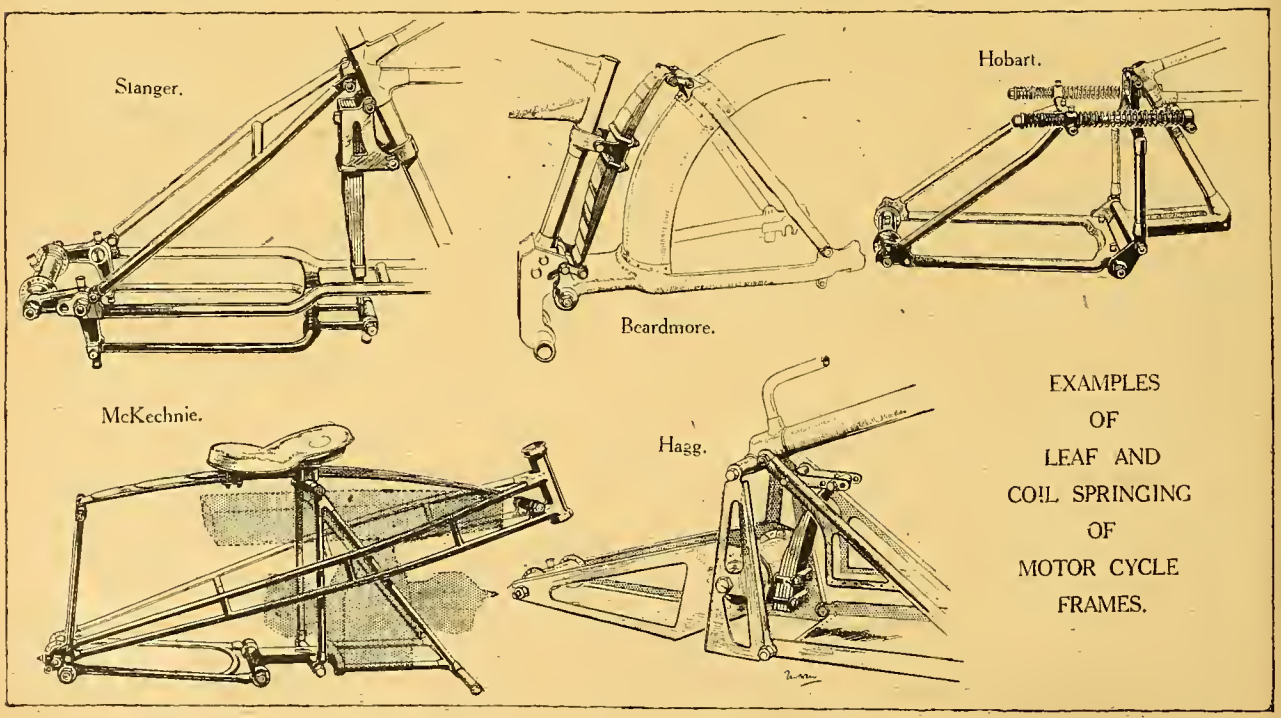
In a general way it may be stated that a spring frame is best designed as a whole with the front and rear springing on the same lines, though excellent results can be obtained by combining rear springing with a good proprietary spring fork. A good example of the first mode of construction is to be found in the Beardmore-Precision where the cantilever principle of laminated spring is used throughout. In the rear suspension of this machine the cantilever spring retains its usual form, and is hinged behind the tube from the saddle to the countershaft just below the tank; the upper end sustains the thrust from the rear wheel and supports the weight, and as the spring is in a position not far from vertical it is well placed to give lateral rigidity to the wheel.

### Quarter Elliptic Springing.

The Raleigh motor cycle has quarter-elliptic springs extending rearwards from the saddle, and is further notable for a duplex frame throughout and the very neat way in which the chain case is fitted so that it shall not interfere with the movement; the rear mudguard is in two parts, one being unsprung. The fork in this case is the Brampton Biflex.

Quarter-elliptic springs are also found both in the front and rear suspension of the Indian and the Royal Ruby. In the latter machine some adjustment is allowed for weight, and the frame can be locked rigid when required. The Indian springs terminate in curves which improve their resiliences at the expense of lateral rigidity, but doubtless this is sufficiently provided in the construction of the fork joints.

The A.B.C. method of rear springing gives a minimum number of joints, for the springs are anchored




EXAMPLES OF LEAF AND COIL SPRINGING OF MOTOR CYCLE FRAMES.

**Spring Frames.—**

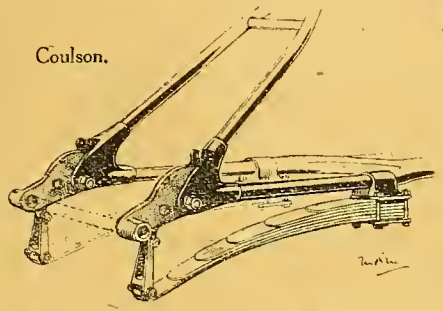
at each end, and, in fact, consist of a pair of quarter-elliptic springs joined together at the thin end to form one complete spring on each side. These in themselves would give good rigidity laterally, but the wheel is also carried in a single fork on two roller bearings placed wide apart. The other two joints are near the rear axle and have a very small movement. Front and rear springing are synchronised, and the result is a very comfortable machine.

### Coil Springs.

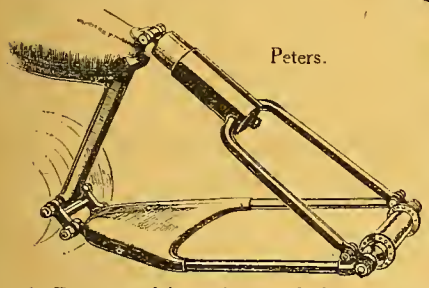
The P.V. is a well-tried device consisting of a fork carrying the rear wheel, and hinged near its ends to the back of the main frame. These ends carry the wheel, and the centre part projects into the down tube which is suitably curved and contains springs to control the movement. Adjustment for weight is possible.

The Matchless spring frame is supported on coil springs. These have the advantage of lightness, but they require the use of more jointed tubes than leaf springs. The design is, however, a very good one, and makes a fine outfit with the special sidecar provided.

Coulson.



Peters.



The Hobart and Dot machines have their rear wheels mounted in triangular frames hinged behind the countershaft and supported by coil springs. The Hobart has four springs, two to carry the weight and two to check the rebound. The Dot incorporates a curious feature in that the saddle is carried on a long semi-elliptic spring, one end of which is supported on the sprung part of the frame and the other end on the unsprung part. Proprietary forks are used on both these machines.

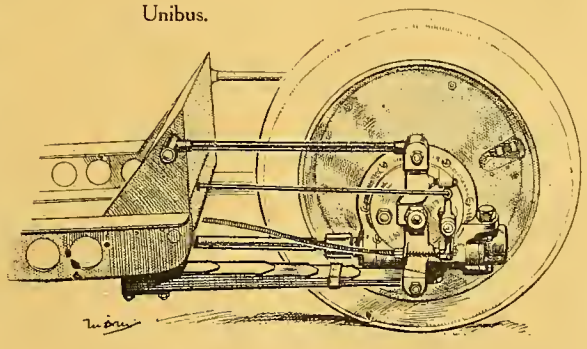
### Novel Methods.

The rear wheel of the Hagg Tandem is carried in a strong pressed steel frame hinged near the countershaft and controlled by a short stout quarter-elliptic spring. This is combined with a Brampton fork.

That new and original machine from the Isle of Man, the Peters, has forks on the "hinged" principle but controlled by an enclosed leaf spring; the rear part of the frame is carried on coil springs working inside a barrel below the saddle.

The Coulson relies for its rear springing upon a combination of links and leaf springs lying below the lower members of the rear part of the frame, and the Unibus is supported like a little car upon quarter-elliptic rear springs.

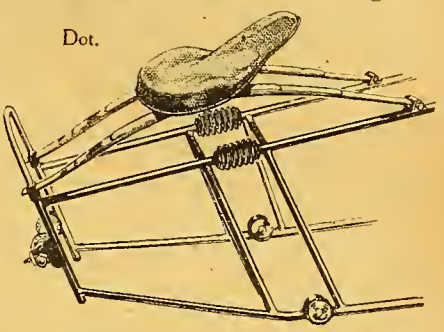
Unibus.



### The Rider and Engine Sprung.

The second method of springing is at present represented by only one machine, but that an interesting one, viz., the McKechnie. This was designed in India by Col. McKechnie, who found the Indian roads very trying when he was riding a motor cycle with a rigid frame, and a model embodying all the special points was made in Meccano.

Dot.



A duplex frame consisting of two tubes on each side extends from the rear hub to the head, where the front wheel is carried on a Brampton fork. Within the main frame is a sub-frame carrying the engine and other mechanical parts as well as the saddle and footboards. On such a frame there is more unsprung weight than is found on the usual spring frame, but it has the advantage of the lateral rigidity of a rigid frame. The sub-frame is supported on a long laminated semi-elliptic spring (3ft. 2in. × 2in., to be exact) pivoted behind the head and to a rocking bridge piece over the rear axle.

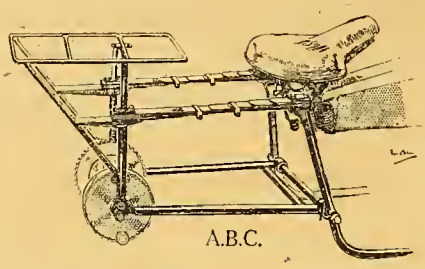
The lower part of the movable frame is carried on Skefko ball bearings, where radius rods maintain the chain adjustment with very little variation during the rise and fall of the wheel. This variation is found to some extent on all machines where the engine is sprung, but with good design it can be made very small, and on the McKechnie motor cycle it is made of still less consequence by the use of a Brampton shock-absorbing chain. The use of this chain is a proof of the care bestowed upon details by the designer, for such a chain or an efficient shock-absorber in the rear hub should be standard practice on all chain-driven spring frame motor cycles.

### Only the Rider on Springs.

On the Edmund the saddle, footboards, and top tube carrying the tank are supported on long quarter-elliptic springs and supplementary coil springs. Arrangements are made to allow of some adjustment for weight. The advantage of this method is that there can be no variation

**Spring Frames.—**
in the distance between the driving and driven sprockets, and so the tension of the chain is not affected by the roughness of the road. To set against this advantage is the need for pliable petrol and oil pipes between the tank and the engine unit, since the tank is partly sprung while the engine is not. The Bat employs a similar system but embodies coil springs.

The Kenilworth miniature is sprung somewhat in the same way, since the saddle pillar and footboards are supported on the same set of coil springs, but there is no spring fork.


A.B.C.

In spring frames of the second and third types the relative positions of handle-bar, saddle, and footrests are not maintained constant, but probably this makes but little difference in practice.

Notes on spring frames would not be complete without some reference to that very attractive machine which began life as the T.A.C. and had a spring frame, four-cylinder engine, and shaft drive. The rear springing consisted of four quarter-elliptic springs, placed in pairs, which carried the rear wheel without any radius rods. The spring forks were at first upon the same principle, but parallel link forks soon took their place. A hand- or foot-operated clutch was, I believe, first seen on the T.A.C., so also was wheel steering, but the latter was not suited to a solo machine, and was soon changed.

Another spring frame machine which never became really popular was the A.S.L. This differed from others not so much in the manner of its suspension as in the type of "springs" employed—a pneumatic system devised by Prof. Sharp. This machine was provided with a padded seat instead of a sprung saddle. Air springs have the advantage of being easily and quickly adjustable to the weight of the rider and the condition of the road by means of an inflator.

# THE TOUR DE FRANCE.

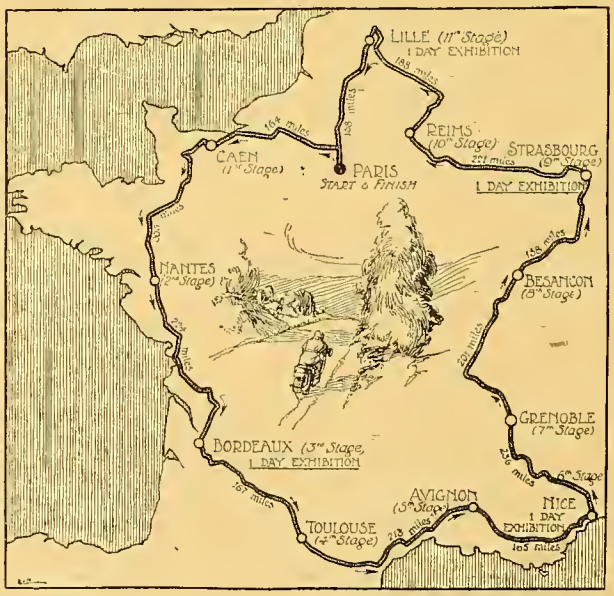
## A Journey of 2,334 Miles, embracing all Types of Scenery and all Classes of Roads.

AFTER an interval of 17 years the Tour de France is being revived on Saturday next. This is the longest reliability trial which has been held for many a long day, and will entail a journey of some 2,334 miles. Altogether there are 46 motor cycle and 32 cycle car entries. Great Britain will be represented by such well-known makes as Levis, Velocette, Sunbeam, Rover, B.S.A., and Triumph. So far as British riders are concerned, Col. McKechnie will be riding his own spring frame machine; Pinney, the French Triumph expert, is an Englishman resident in Paris, while there is a Sunbeam sidecar outfit ridden by an Englishman named White.

Naturally, America will be represented by its two principal makes, the Indian and Harley-Davidson. Among the French makes may be mentioned the Soyer, D.F.R., Gillet, Yvels, Viratelle, Rasser, Blériot, Gnome-Rhone, and Janoir.

As its name implies, the trial covers the whole of France.

Leaving Paris, the competitors make Caen in Normandy the first night. The next day Nantes is reached after passing through Brittany, while on the third day, after a run of 224 miles down the western part of France, the competitors reach Bordeaux, where an exhibition will be held. Toulouse is reached the next night, and on the following day the most southern point of the journey is reached, and after a run of 213 miles the competitors pass the night at the historical city of Avignon. The next day is comparatively easy and takes the riders over the Esterelles into Nice, where another exhibition will be held. Next follows one of the most interesting sections of the journey, from Nice to Grenoble, after which a journey of over 200 miles bring the competitors to Besançon on the edge of the Juras. The next day's run passes through re-occupied area, and the riders pass the night at Strasbourg, where for the third time a one-day exhibition of competing machines is to be held. The trial now passes through the war area, traversing Reims, where the tenth night is spent; finally Lille, where the last exhibition is held. After Lille the trial proceeds direct to Paris.



The circular route of the Tour de France, embracing in the 2,334 miles journey long straight stretches in the plains of Normandy and mountain climbing in Haute-Savoie.

The organisation is in the hands of the Moto-Cycle Club de France.

The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *TOURIST TROPHIES—EMPHASISING "TOURIST."*

Sir,—I have read with great interest the account of the origin of the Tourist Trophy races in the current number of *The Motor Cycle*. Particularly was I interested in the statement that "great care was taken to prevent any form of freak being brought into the race."

Heaton Norris. PRIVATE RIDER.

### *NAVIGATION DIFFICULTIES ON A 1910 SINGLE.*

Sir,—Will some expert please advise me on how best to manage a 1910 single gear Triumph on greasy roads? My machine persists in what I think is termed rolling, and I find it most difficult to keep a straight course. I have fixed the footrests as low as possible, and use semi-T.T. bars, and should like to know the usual procedure for driving on vile, greasy roads—whether the bars should be held firmly or otherwise, etc.? TROUBLED.

Tetbury.

### *STEAM.*

Sir,—May I be permitted to ask why it is that the steam engine as applied to motor cycles seems to be entirely ignored? I really fail to understand the absolute monopoly the really inefficient i.e. engine holds when one considers its disadvantages.

To my mind, speaking theoretically, the twin-cylindered steam engine has overwhelming superiority, *e.g.*:—

A *constant* push the *complete* length of *every* stroke!

*Self-starting* and good *silence*. W.G.E.E.

Swansea.

[Steam engines are only self-starting after a sufficient head of steam has been generated.—ED.]

### *TWO-STROKE EFFICIENCY.*

Sir,—I read with interest the remarks of Mrs. Mary C. Jennison about the cooling of two-strokes, but if this lady had been with me the other day I feel sure she would change her ideas; it opened my eyes.

I had the pleasure of seeing a 500 c.c. Dunelt outfit run up and over Hindhead. This the machine climbed all the way *on top gear*, never under 28 m.p.h. B.E.8694.

Godalming.

Sir,—Replying to the letter from Mrs. Mary C. Jennison, the temperature of the gas in a cylinder at the instant the charge is completely burnt is governed by two factors, the compression ratio and the volumetric efficiency of the engine. From this it is obvious that the maximum temperature of the gas in the cylinder is independent of the size of the cylinder. Again, as the size of a cylinder increases, the ratio of the cooling surface of the cylinder to the surface in contact with the hot gases remains constant, and thus, other things being equal, the temperature of the cylinder walls will remain constant. Consequently, if only the cylinder of an engine is considered it is obvious that there is no limit which can be imposed on the capacity of a cylinder. It is a distinct advantage, as far as thermal efficiency is concerned, to use one large cylinder for a given c.c. in preference to several small cylinders. R.T.F.

Blackpool.

Sir,—The following are some of my exploits on a 2½ h.p. Sports Velocette (two-speed): (1) Measured half-mile in 33sec. (54.5 m.p.h.) (this includes slowing down to about 35 m.p.h. for an obstruction). (2) Climbed Lytton Slack on bottom gear of 10 to 1 (the middle portion—about one-half the total length—was done in top gear of 5.7 to 1). (3) Sheffield to Axe Edge, a distance of 28 miles, with sidecar and passenger, in 1h. 10m.

All these are after about 2,500 miles running with no replacements excepting new piston rings.

Sheffield. WELLERSSET.

### *THE A.C.U. AND PRIVATE TRIALS.*

Sir,—Having read with interest the controversy between Mr. Booth and Mr. Loughborough regarding private motor cycle trials, and also having perused Mr. Loughborough's reply to his critics, I can only conclude, with due regard to Mr. Loughborough's position in the motor cycling world, that he has yet to give a clearer explanation for his attitude in interfering with a private individual's affairs. The one peg on which Mr. Loughborough hangs his reasoning, *i.e.*, "authenticity," is hardly constructed to enable the A.C.U. to question the rights of any individual or any non-affiliated club to hold any trials which they should choose within themselves. My respect for the A.C.U. as a governing body is profound enough, but let it act in its self-appointed official capacity within its limits, and it will find its prestige will be duly regarded not only in America and elsewhere but within our own portals as well.

T. ROBERTSON,
Pitlochry and District M.C.C.

Sir,—I am of the opinion that every intelligent motor cyclist will support the attitude Mr. Loughborough has taken up in regard to the "open petrol consumption test" which Mr. Booth suggested that he might organise. However much a certain type of rider may object to being dictated to in the matter of sport, it must surely be clear to every motor cyclist that the governing body, as represented by the Auto-Cycle Union, is the great safeguard which stands between private owners of machines and those who might be inclined to exploit their confidence for commercial ends. While one does not surmise, of course, that the competition suggested by Mr. Booth would have been conducted on any but proper lines, the fact remains that such a test, if carried out, would be absolutely unofficial in character, and any claims of performances made on behalf of the competing machines could not possibly have the authenticity of those recorded in the recognised A.C.U. contests.

It would surely be a bad day for motor cyclists in general were it generally accepted that private individuals could promote competitions of an unofficial character whose results might gain equal publicity with those of the official contests.

The art of the advertisement writer could undoubtedly make such results equally convincing to the uninitiated reader as those claimed for machines in the classic competitions, and we should soon arrive at a condition of affairs in which the ordinary private owner, without opportunity or inclination to investigate the claims of all and sundry, would simply be unable to come to a reliable

opinion about the performances and capabilities of any given machine.

By all means let Mr. Booth promote his petrol consumption competition if it amuses him, or interests his prospective competitors; but I hope we shall always have a governing body strong enough to maintain the attitude Mr. Loughborough has now adopted in the interests of private riders. A. E. CURTIS.

Sir,—The writer believes that he expresses the wish of many motor cyclists in saying that he hopes Mr. Booth's trial will be held and the results published. If he and his friends are free-lance cyclists then it cannot be said of them that they will have infringed the A.C.U. Rule 3a. They have not subscribed to any rule of the A.C.U.

The question must be asked—Is Mr. Booth's competition one that will be popular? Then, if so, is it filling a gap left in the programme of the A.C.U? Are the A.C.U. events filling the whole bill, or is there a desire for an event or events run on lines not covered by the official policy? ORTHODOX.

Glasgow.

*MOTOR CYCLES FOR BOYS AND GIRLS.*

Sir,—I have read with much interest the article by Col. Brereton, and am in hearty agreement with him, especially with regard to the development of the mind and the encouragement of those desirable qualities (and many others, too) which he mentions.

Now, the selection of a machine obviously calls for great care and consideration on the part of those responsible. As Col. Brereton says, there are many suitable machines on the market, which, without becoming a source of danger in the hands of an inexperienced rider, will develop his or her necessary qualities, and in doing so will produce a rider capable of using any type of machine which he or she may desire to possess.

Therefore, I say that, should the youngster of either sex show a desire for the possession of a motor cycle, this desire should be encouraged, provided that the machine selected is easily controlled, docile in running and not liable to dash away at the slightest touch of the throttle, light, and reasonably clean. FLYWHEEL.

Middlesbrough.

Sir,—May I trespass in your much-appreciated columns to thank Col. Brereton for his defence of the juvenile motor cyclist?

However, with all due respect, I must beg to protest against one or two extremely unjust remarks he made. He is surely rather hard and, in fact, he is exaggerating when he states that any boy not attracted by machinery is "sick, or dull, or unusually constructed." Were this statement true, full fifty per cent. of the boys in this country would come under this heading.

Again, when a boy has reached the age of fourteen or more, he has surely passed the stage of infancy, and will not throw his machine into a ditch, or break it to pieces with a hammer should it go wrong (as Col. Brereton suggests), even if he has an exceptionally bad temper. If, like half the number of young motor cyclists, he is not mechanically-minded, what is simpler than to take the refractory machine to the nearest garage and have it repaired? SMALL BOY.

Wellington.

Sir,—All who know boys intimately—I do not mean those who merely look down at them from their pedestal of middle-aged superiority—are well aware that an intelligent boy often, in moments of danger, gives proof of great self-possession and courage, a keen, intuitive grasp of details and possibilities, and a lightning rapidity in decision and action, which is not often equalled by the middle-aged, whether short-sighted, deaf, crippled, or suffering from nerves or other failings of advanced age.

It is, in my opinion, unfair and unsportsmanlike to make such sweeping and arrogant distinctions between boys and adults. It is impossible to generalise like that. Countless people never grow up. Many a boy of 16 is smarter and quicker, and more capable of dealing with sudden danger than many a middle-aged man, and a motor cycle is infinitely safer in the hands of an intelligent boy than in the hands of a stupid, and possibly nervy middle-aged man who, as likely as not, would flounder hopelessly when suddenly faced with a dangerous position.

We train our boys in all kinds of sport likely to develop the characteristics we admire. Why not motor cycling?

Lincoln. A PARENT.

Sir,—I would remind "XH-3296" that because boys may go fast it does not mean that they are reckless; they might be just as safe as the person that "potters" along: in fact, in some cases safer. G. V. HENDY.

Sir,—I am 15, but I cannot agree with "XH-3296" and "Middle-age," who state that the age is too young. A modern boy of 14-16 has more sense than to dash up and down at speeds dangerous to the public. A two-stroke or a light-weight four-stroke cannot reach 50 m.p.h., and what boy does one see in charge of a Sports Sunbeam or Norton? Again, concerning speed, what motor-cyclist is there who, when leaving a town and getting on to an almost deserted road, keeps inside the paltry 20 m.p.h. limit?

Wakefield. GUS.

Sir,—I am only sixteen, but am madly interested in motor cycles. Owning a machine at an early age prepares any boy to become a real upholder of the glorious sport. I have read many of Lieut.-Col. Brereton's fine books for boys, and from their tone I think he ought to know.

London, N.17. YOUNG 'UN.

Sir,—The average boy from 14-17 is not reckless: he uses his motor cycle for pleasure. The road hogs are more often riders who are getting near the "twenties." YOUTH.

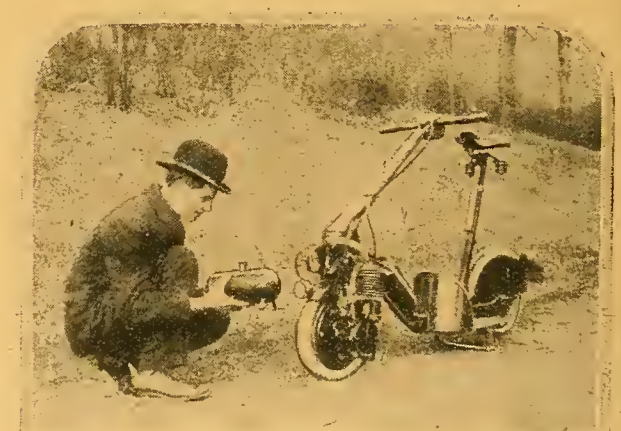
Felsted.

Sir,—I am fifteen, and own an Enfield two-stroke, and can say quite honestly that I am more dangerous on a push-bike (all necessary apologies!) than on a motor cycle. On the former I corner recklessly, steadying myself with my feet, tear through traffic, and never use a bell. On the latter I never "open out" unless the road is straight and empty, corner with perhaps exaggerated caution, and make plentiful use of my horn. PETROIL.

Elstree.

Sir,—I suppose it is permissible for juveniles to be "heard and not seen," sometimes.

Surely "XH-3296" cannot think that if a boy of fifteen owns a motor cycle he races about at all times with his throttle full open? If so, I can assure him he is mistaken. W. F. MEAD.



THE LATEST AMERICAN SCOOTER. The frame is a five-leaf spring, shaped somewhat like an open frame bicycle, affording good insulation for the rider from engine vibration as well as from road shocks. The machine is fitted with a two-stroke engine and fly-wheel magneto. A quickly detachable petrol tank is used so that it may be left out of doors when the scooter is taken inside an ordinary dwelling house.

Sir,—Apparently many middle-aged folk disagree with Lieut.-Col. Brereton's views on the subject, as they think that the boy of 14-16 is entirely irresponsible and ought not to be trusted with a motor cycle. I know a few boy riders who, although they like speed, are not so inconsiderate as many "middle-agers" in their pursuit of the goddess. Another point in the boy's favour is that, although sometimes reckless, he seldom loses his head or "gets the wind up." STARTED AT 14.
Edinburgh.

Sir,—I would like to point out that it was not boys of 14-16 that won our supremacy in the air, but young men of twenty upwards. If, in "XH-3296's" opinion, we boys should not have motor cycles, should people who are short-sighted, deaf, or crippled?

I also think that the fact that there are few boy and girl motor cyclists on the road is caused through lack of finance on the parents' part, decidedly not the reason suggested. ONLY FIFTEEN.
London, N.10.

Sir,—I entirely agree with Lieut.-Col. Brereton's article. I can ride a 2¾ h.p. machine myself as well as some people of 30-40, and am only just fifteen. Has any reader heard of a boy in Court for reckless driving? No, he is usually too careful of his first mount. W.T.
Birmingham.

Sir,—I entirely disagree with "XH-3296" and "Middle-Age." I consider that there are dozens of boys on this island capable of handling a motor cycle.

Again, the average boy does not want very much "speed," and if he does "let her rip" on a good, quiet road, what does it matter? 13-YEAR-OLD YOUNGSTER.
Hastings.

Sir,—Your correspondent "XH-3296" evidently thinks that because a boy is young he is a "reckless, irresponsible, dare-devil," and that as soon as he reaches the age of 18 or thereabouts he becomes "steady," and gives up his irresponsible habits. Surely boys of 14, who "want speed, and know no limit," are just as enthusiastic when they are three or four years older. The young pilots, whose dare-devilry invoked "XH-3296's" blessings, were hardly boys of 14 or even 16 years of age. D. M.
Harrow.

Sir,—I can hardly credit that in this enlightened age there can be anyone so narrow-minded and bigoted as "XH-3296" and "Middle-Age." I am a schoolboy of 15, and possess a light-weight motor cycle, from which I derive an infinite amount of pleasure. My only explanation of the attitude adopted by your correspondents is that when they were at the age of 14, they were "reckless, thoughtless, irresponsible dare-devils," and that they are judging others by themselves.

"Middle-Age" says a pedal cycle is good enough; I can quite picture him when a youth refusing a motor cycle until he had earned it. STANLEY F. BENNETT.

## HANDLE-BARS FOR CONTROLLABILITY.

Sir,—With regard to the question as to whether touring or semi-T.T. handle-bars are the best, it seems to me to depend entirely on the relative sizes of man and machine—a small man needing handle-bars which come further back than those of a tall man who has a longer reach. It is a well-known fact that the greater the comfort of a persou the greater his control over any machine. Therefore, let each individual decide which is the most comfortable position he can get into, and adjust handle-bars, footrest, and saddle to suit.

The vast majority of people when sitting without any support for their back, loosen the muscles in the small of their back, thus leaning forward very slightly. The most effective position of the arms is for them to be not quite straight, with the hands a little farther apart than the knees, and fairly low. This position is readily obtainable by means of an upturned handle-bar of the N.U.T. type, rather like a very broad bicycle handle-bar, only with the grips turned out at an angle of about 35° to the line of travel, and somewhat dropped. This type of handle-bar and riding position enable me to sit bolt upright with one hand on the handle-bar, but not with both. However, since one scarcely ever wishes to keep for long in what, to most people, is a distinctly tiring position, this is not a very serious drawback. Many types of touring handle-bars can be quickly bent out into this shape, my own having been produced by this method. XH-212.
Oxford.

## COMPLICATED COASTING.

Sir,—Mr. Geary comments on the saving of petrol and also the wear of the engine relative to coasting down inclines.

I have often considered the point he raises myself, and used to coast down hills with the engine shut off and gear in neutral, until I was told by one person that doing so was to ask for trouble, as the front cylinder was liable to distort owing to the rush of cold air playing on the front part of it; the same person said that it was best to run down hills with the exhaust lifter raised, but another expert tells me that to do that I will also be asking for trouble in the way of burnt valves.

I should like the opinion of some of your correspondents on this matter, as until I get a little more information I shall continue to rnn down hills with the engine ticking over, with the gear in neutral, which up to the present I have considered to be the happy medium. F. WALKER.

## THE WORLD'S WORST ROADS.

Sir,—I see in the issue of January 12th that my letter of December 22nd has put Mr. H. Beacon's back up. I regret this, because he and I are both on the same tack, he being irritated by Englishmen's abuse of their roads at home, I by their continual boasting of the appalling surfaces in the colonies, which, nevertheless, fail to damp their manly ardour. When I found that these were much better than I had been led to suppose, I succumbed to the temptation that every man has once, at least, in his lifetime, that of rushing into print.

To answer Mr. Beacon's question, rain improves sandy roads out of all recognition.

Lastly, I hope his four months on English roads included the Uxbridge and Hounslow tram routes. I should like to think they have altered. OVERSEAS TRIUMPH.
S. Rhodesia.

## TWO "BEACON HILLS."

Sir,—I note with interest the various replies to my recent letter *re* the freak hill at South Harting. Your correspondents seem to have been trying their various mounts on the wrong hill. The Beacon Hill is not exactly what one may call a road, but simply a chalk lane directly up the side of the South Downs. Mr. C. J. Evershed states he has climbed it on his Dunelt sidecar. This I beg to contradict, as it is absolutely impossible to pilot an outfit up the Beacon Hill.

I am willing to meet any of your correspondents at Easter if they will write to me (c/o the Editor) and arrange a particular time. REGINALD S. FOWLER, R.A.F.

## SHAFT-DRIVE UNPOPULARITY.

Sir,—Why are our manufacturers so terrified of shaft-drive? After hectic hours of wrestling by the roadside with slipping and breaking belts and filthy and inaccessible chains, the mere rider may be pardoned for enquiring, in language more pointed than printable, why "car-drive" is denied to him. The F.N. has employed this transmission for many years, with no apparent want of success—even on a single-cylinder lightweight—while in price these machines compare very favourably with more conventional types. One would almost be tempted to ascribe the phenomenon to sheer lack of enterprise did one not find the gifted designer of the A.B.C. (by no means a slave to convention!) carefully "turning the drive round" in order to get the "final chain"; an act (one would think) of sheer perversity, introducing an unnecessary complication for a highly undesirable end.

Will one of our authorities shed the beam of his wisdom upon the darkness of our ignorance, that we may suffer our belts or chains gladly henceforth, comforted by the knowledge that there is no practicable alternative?
CHARLES A. N. MORRIS.

THE MOTOR CYCLE
SPRING NUMBER AND BUYERS' GUIDE

*An enlarged number with seasonable features and special articles of interest to all Motor Cyclists and Potential Riders.*

**An illustrated Buyers' Guide embodying Specifications of all Motor Cycles on the British market will be a feature.**

**Thursday. April 6th.**

### *SPEEDS OF TWO-STROKE LIGHT-WEIGHTS.*

Sir,—I would like to accept Mr. Grubb's challenge to a three-lap race on Brooklands. My machine is a 293 c.c. single-speed Connaught. STEVE.
Hendon.

### *AFTER PROLONGED USE.*

Sir,—Referring to the observations by Major Willcox on the above subject, I should also like to give a few particulars of my experience over a corresponding period with a similar machine, a model H. 4 h.p. Triumph.

The machine in question is a 1919 model (August), and the total distance I have covered to date (solo only) is just over 11,000 miles. I do not use the machine for business purposes, consequently it very often remains in for a week or more at a time, especially in bad weather seasons.

I may say that the only replacements I have fitted up to the present time are :—

1 new set of wheel cones and bearings.
1 „ „ „ head races for frame and crown axle.
2 new barrel springs.
1 clutch control cable.

As regards the engine, the main shaft bearings, large and small end bearings, and transmission generally are in excellent order, no apparent wear being perceptible. I have found that by packing fine cotton waste inside the inlet valve spring and lubricating occasionally with a few drops of engine oil, adequate lubrication of the valve guide is maintained. The waste also prevents the scouring action and consequent wear caused by the suction of dirt particles into the guide.

My consumption for petrol averages 90/95 m.p.g., and for oil approximately 250 miles to the pint. With the standard jet as supplied (32) I have obtained 53 m.p.h. with a 16-tooth engine sprocket, and could no doubt "touch" 60, under very favourable conditions, but I really doubt the possibility of this model reaching some of the extraordinary speeds some of your recent correspondents claim to have attained. SATISFIED RIDER.
Bristol.

### *DEFINING A "SPORTING" MACHINE.*

Sir,—Your recent leader on the best type of sporting machine is interesting; the argument, however, is bound to be interminable unless a hard and fast definition of the word "sporting" can be agreed upon. To many people it has little meaning beyond speed and acceleration, coupled with a deafening exhaust. This is not my idea, though, of course, speed and acceleration cannot be ignored. I feel that the most sporting machine is one whose powers are such that with skilful riding and expert nursing it can just be persuaded to accomplish the most difficult tasks. I do not believe it possible for the rider of a big twin or modern 3½ h.p. ever to experience the thrill of exultation and triumph which comes to the rider of the baby—whether two or four-stroke—as he successfully tops Alt-y-Bady, or rounds the last hairpin on Tornapress. Of course, we all know the contemptuous sneers of the big twin enthusiast—that it takes a *man* to handle one in bad going, while if it is too rough for the baby you can put it in your trouser pocket and walk up, and so on. Be it so, but let the B.T.E. try to ride the baby up, for instance, Park Rash, and he will find that it is as much of a handful to control as he could wish for. And as for that "scrap" along the road, the baby may not be able to do a lot more than forty, but at the end of two or three hours it will not be such a very long way behind, particularly if it is not a straightaway main road. Anyway, I am a whole-hearted supporter of the baby as the true sporting machine. The first machine I ever owned was the biggest, and each succeeding one has been smaller, and has given me more real satisfaction than the others. The capacity of my present machine is 220 c.c., and my riding weight fifteen stone, and if I can find an appreciably smaller engine which can be persuaded to do what I ask it, I shall certainly try it. (Rev.) J. M. PHILPOTT.

### *SIX THOUSAND MILES ON A SPRING-FRAME MOUNT.*

Sir,—I have read with interest the recent correspondence concerning "Where are the Spring Frames?" The paucity of their numbers as compared with those of rigid frames doubtless accounts for the above quoted query; but when spring-frame machines for the most part have seen only a single season, one cannot expect to see their numbers compare favourably with those of rigid frames, the dates of manufacture of which vary from pre-1910 to the present day.

My experience with a spring-frame machine may be of interest. Last February I secured delivery of a 5-6 h.p. Raleigh. I was immediately captured by the comfortable sitting position and the vibrationless running of the engine. The spring frame gave one 100% more comfort than a rigid frame, so that even after a long journey over present-day roads one did not feel unduly fatigued. The one "fly in the ointment" was, "How would the spring-frame bearings wear? Would 'play' develop and make riding at speed dangerous?" Over 6,000 miles have been covered on this machine, and I can truly say that the motor cycle is as comfortable and safe to ride to-day as on the day I purchased it. The spring frame has given me the seating comfort of a car, and has given no trouble whatsoever. Without undue forcing, the machine can tick off (as per Watford) 55 m.p.h. on a level stretch of road any time, equipped, as it is, with the wide leg shields fitted as standard. On wet roads it is as steady as a rigid-frame machine—in fact, steadier than many I have known, as the weight and riding position are low. Only the deeper pot-holes are felt; the jars of the small and medium sized ones are not transmitted to the rider, and, after all, it is the continual jars from these that make motor cycling fatiguing and unpleasant to lovers of ease and comfort.

I have no connection with the Raleigh Co. other than being a thoroughly satisfied owner and user of one of their productions. D.F.C.
Tregaron, Cardiganshire.

### SUMMARY OF CORRESPONDENCE.

Mr. C. R. Haill has had very discouraging experiences with "clearance covers."

The wonderful speeds on the road periodically claimed by readers move Mr. S. G. Onseley to suggest that the police may also be readers of *The Motor Cycle*.

**Books & Maps for Motor Cyclists.**

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# K.L.G

## ONLY RESULTS COUNT.

**TOURIST TROPHY RACES**

**1921**

**SENIOR**

**1ST 2ND & 3RD**

**JUNIOR**

**1ST 2ND & 3RD**

**and**

**"THE MOTOR CYCLE" CUP.**

## ALL ON K.L.G. PLUGS

TYPE G.1. FOR ALL AVERAGE ENGINES

**6/-**

*NOTICE.*

*A number of "K.L.G." Plugs, originally supplied to the Government, for aeroplane engines for which they were specially designed, are being offered at low prices. It is desired to warn motor cyclists and others that such plugs were not designed for use in, and they are not suitable for, average engines, and the Robinhood Engineering Works Ltd. can take no responsibility respecting them.*

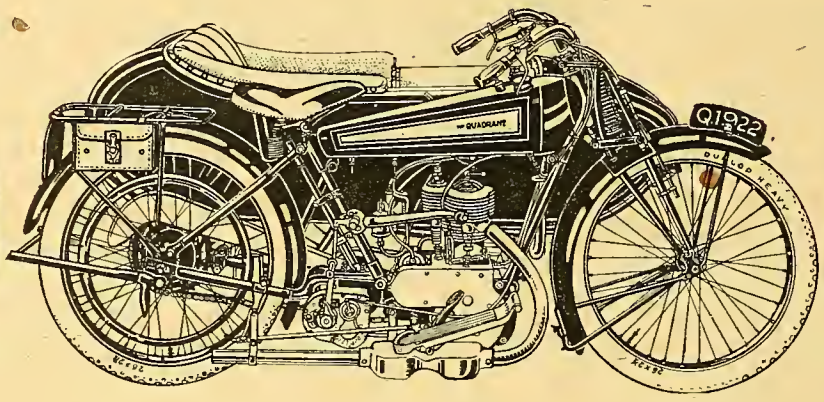
TYPE H.S.1. FOR TWO STROKE AND HOT ENGINES

**6/6**

# The QUADRANT

CHAIN CUM BELT

ALL CHAIN DRIVE




£100 COMBINATION

£105 COMBINATION

*Catalogues from*—

**MARCH, NEWARK & Co., Ltd., Quadrant Works, Birmingham.**

London Agency: CLIFFORD WILSON Mfg. Co., 177, Westminster Bridge Road, S.E.1.

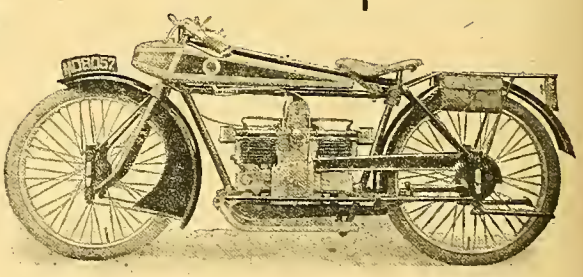
THE DEDERICH-WOOLER ENGINEERING Co.

The School of the Open Road — Practical Application

PRICES from £65

Originality of Design — Careful Workmanship

TRADE ACCESSIBLE MARK




## OUR TRADE MARK.

A trade mark should be the first cousin of the goods it represents.

The WOOLER trade mark has a very real connection with WOOLER MOTOR CYCLES.

The little set-spanner reproduced above is certainly closely related to the design of the WOOLER.

Only two sizes of Nuts and Bolts on the whole machine!

This is not a pleasant dream, but an accomplished fact.

With the exception of the nuts on either end of the crankshaft, this little spanner and a screwdriver will enable you to take down completely and re-assemble your WOOLER engine and gear.

Mudguards, tank, brakes, steering, any detail you can think of will bow to the spell of this little spanner.

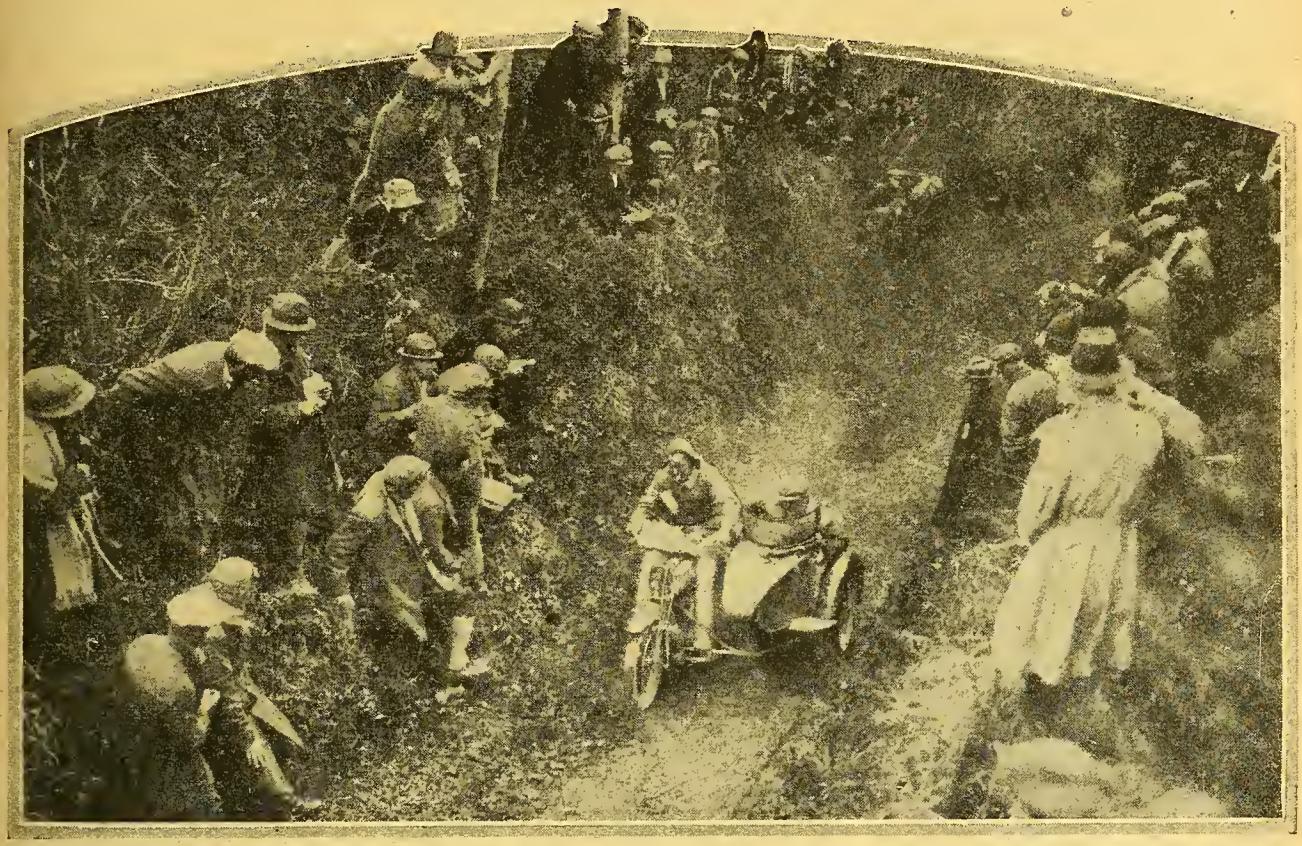
In addition the word ACCESSIBLE means what it says.

*Write for particulars.*

**ALPERTON, LONDON**

# "VICTORY" OVER FREAK HILLS.

## One Hill only—a new discovery—Causes Real Trouble in Saturday's Birmingham M.C.C. Classic Trial.



On Sandy Lane, B. L. Bird (6 B.S.A. sidecar) charged up at speed until he met his Waterloo in the shape of one of the banks within a few yards of the summit.

WITH the exception of one hill, the course of last Saturday's "Victory" Reliability Trial was nearly ideal for such an event; it was quite fair, yet reasonably sporting. The inclusion of Sandy Lane, a sadly misnamed wet, earthy gutter up a hillside near Alfrick village, was undoubtedly a mistake.

At 2.30 p.m. "No. 1" registered a failure here, and it was three and a half hours later before the last of the 210 starters did not get up. The fact that there were one or two clean climbs proved that it was not an impossible task, but unfortunately the successful riders gain no advantage in marks over those who sprawled up with legs trailing in an erratic and inelegant fashion, providing, of course, they did not actually come to a stop.

There were twelve other non-stop hills and two observed "colonial" sections.

### From Birmingham.

Starting at the James Cycle Works, Greet, Birmingham, competitors found little difficulty with Swan's Hill or Gravel Pit Hill, but muddy Fordrough required careful negotiation. On an even worse section following quite a few of the early men had an uneasy suspicion that they had run off the course—so thoroughly vile were the red clay tracks—but they picked up the arrows again in due course. For the rest the route-marking was exemplary.

Very good times were recorded in the acceleration test by B. Kershaw and J. N. Roberts (New Imperials), A. R. Evans, and A. W. Thrush (Sunbeams), E. Spencer (3½ Douglas), L. Newey (8 Ariel sc.), G. E. Austin (5-7 Coventry Victor), M. G. Scalley (4½ Humber), A. Watson (3½ Sunbeam sc.), H. Stretton-Ward (3½ Triumph), R. Brown (3½ Sunbeam sc.), B. L. Bird (6 B.S.A. sc.), and G. Dance and A. Bennett (Sunbeams). W. E. Smith (3½ Norton), broke a front chain.

Lower Walton and Hagley Wood Hills were taken on the run by most. P. L. Mayo (2½ Coventry Eagle), W. E. Smith (3½ Norton), carburetter trouble, and F. C. Gray (8 Excelsior sc.), with a stone wedged in his mudguard, were the only stops on the latter grade. Not until Noah's Ark Hill, beyond Stourport, came into view was there much incident for observers or Press men. The alarmist rumours regarding the last mentioned climb were, however, mainly unfounded, and the majority of the failures were due to belt slip developed in a miniature river-bed approach.

### Belt Slip Troubles.

E. H. Broughall (3½ Coventry-Challenge) and E. Gates (2½ Sun) both stopped for this reason; E. Poppe, on a very fast White and Poppe two-stroke, was also unfortunate, but re-started well after he had shed his silencer. Very fast climbs were made by R. W. Duke (3½ Triumph), Bert Kershaw (2¾ New Imperial), W. B. Gibb (3½ Douglas)—until he all but missed his gear-change—and Eric Barnett (2¾ Francis-Barnett). A. King Smith (2¼ Morris) combined considerable speed with as much noise.

The descent of High Oak Hill was, in the words of the route card, a natural brake-test, and a rocky water-splash at the foot, plus the immediate ascent of Liveridge Hill, called for careful driving. Belt-slip was again prevalent, A. D. Mayo (2½ Coventry Eagle), W. T. Woodcock (3½ Ariel), W. Bell (2¼ New Hudson), P. Sadler (2¾ Connaught), E. H. Broughall (3½ Coventry Challenge), J. E. Bramley (3½ Coventry Challenge), H. Bennett (3½ Ariel), R. A. Weeks (2¾ Sirrah), L. G. Green (2¾ Verus), and

Thick layers of extremely glutinous red clay formed the surface for several hundred yards after Hagley Wood Hill. S. H. Jones (2¼ Levis) manfully keeps his equilibrium while R. E. Pugh on a sister mount "foots."

G. L. Reading (3½ Ariel) being the chief sufferers. Clifford Wilson (4½ Quadrant sc.) charged through the splash and up the hill in striking contrast to M. G. Scally (4½ Humber), who came through at less than a walking pace. Three of the most striking climbs were made by R. G. G. Beesley (3½ Sunbeam sc.), B. L. Bird (6 B.S.A. sc.), and H. J. Stretton Ward (3½ Triumph). Having "lost" his low gear, G. E. Austin (5-7 Coventry-Victor) returned to the foot and announced his intention of retiring. Great caution failed to prevent J. Westwood Will's new Powell outfit from almost overturning in the water.

### An Old Favourite Revisited.

Buckeridge, the next official climb, was child's play, and it remained for Abberley Hill to tarnish further clean sheets before the lunch stop, which it did most effectively, but withal fairly.

Rushing tactics were impossible on account of a fairly acute right-hand turn at the foot, and the following failures were recorded :—F. W. Viles (2¾ Raleigh), punctured; E. Gates (2½ Sun), dry-skidded; F. Wood (3½ Connaught sc.), turned turtle; A. Rollason (3½ Ariel); Bert Bladder (8 New Imperial sc.); W. H. Fortington (3½ Sunbeam sc.), ran to a standstill causing clever driving in the rough by S. Judge (2¼ Velocette); F. A. Robbins (2½ Triple-H.) and H. W. Parkes (2¾ Sun-Vitesse); Mrs. Jauson (2¼ Ner-a-Car), clutch slip, almost baulking F. T. Sibley's and W. L. Danskin's 7-9 h.p. Rudge outfits; A. L. Mould (3 A.B.C.), skidded and fell, being almost run over by H. V. Collins's very fast Norton outfit; S. E. Longman (7-9 Harley-D. sc.), burnt out his clutch, baulking G. W. Shepherd (2¾ Edmund sc.); S. G. Neal (2½ Neal-Dalm); R. G. Spainforth (2¼ Ner-a-Car), skidded into ditch; L. Heller (4 Douglas), charged into bank for no apparent reason; and S. R. Philpott (6 Martinsyde sc.).

T. Blumfield (8 Ariel sc.) just clambered up, being hampered by a broken throttle wire; and A. Fisher (4 James sc.) and H. K. Prosser (3½ Ariel sc.) both bounced violently, perchance needlessly, in their saddles. Wonderful climbs were made by George Dance and Alec Bennett on long-stroke Sunbeams, and by J. A. Watson-Bourne on a brand new Brough Superior. Fractionally less excellent were J. W. Moxon (3½ Monopole), F. J. Price (2¾ Diamond), Gus Kuhn (4 Douglas), F. Giles (7 A.J.S. sc.), H. R. Davies (2¾ A.J.S.), who was almost baulked, C. Greenwood (4¼ Sunbeam sc.), T. C. de la Hay (4¼ Sunbeam sc.), G. Sharrat (T.G.S.), G. S. Smith (2½ Morris sc.), who seemingly sat in mid-air, Sam Wright (4½ Humber sc.), "revving" at a terrific rate, and J. H. Mathers (7-9 Rudge).

### At the "Hundred House."

Lunch at the "Hundred House" was followed by mixed and often tortuous going *via* Clifton Hill, unworthy of observation, and a much bungled stop and restart test on Telegraph Hill to the now famous Sandy Lane. We noted the performance of every competitor at this point, and at the outset would emphasise that the glorious failures who kept their feet firmly on the rests until they fell off deserve more commendation than many who lost no marks by the expedient of keeping moving somehow.

### Four Outstanding Climbs.

By magnificent riding four, only four, solo men made absolutely clean ascents; they were J. S. Bacon (3½ Sunbeam), W.

B. Bourke (4½ New Hudson sc.), followed by F. Wood (3½ Connaught sc.), in the river-bed approach to much over-rated Noah's Ark Hill.

**"Victory" over Freak Hills.—**

Braudish (4½ Humber), H. J. Stretton-Ward (3½ Triumph), and G. Dance (3½ Sunbeam).

Seventeen passenger machines succeeded in reaching the top without stopping and without external assistance; they were: P. Pehrson (4 Dunelt sc.), his passenger lying so far back that the sidecar body tipped up backwards; A. Watson (3½ Sunbeam sc.); Reg. Brown (3½ Sunbeam sc.), who came up most of the way in middle gear; B. Bourke (4½ New Hudson sc.), slow but sure; Bert Bladder (8 New Imperial sc.), amid a stream of sparks from a steel-studded rear tyre); H. G. Uzzel (8 New Imperial sc.), "only just" from the spectators' viewpoint; G. W. Shepherd (2¾ Edmund sc.); H. V. Collins (4 Norton sc.), very fast; T. C. de la Hay (4¼ Sunbeam sc.), very spectacular; F. W. Giles (7 A.J.S. sc.), ditto; J. J. Lloyd (7-9 Harley-D. sc.), strenuously bouncing; H. B. Denley (10 Rhode four-wheeler), slow (with Parsons chains); F. S. Spouse (8 T.B.); P. Yates (10 New Hudson three-wheeler); W. Ridley (10 New Hudson three-wheeler); J. Allday (10 Rhode); and A. Fraser Nash (8 G.N.), who hurtled up nearly 10 m.p.h. faster than anything else on two, three, or four wheels.

Competitors were sent up Sandy Lane singly, but for some unknown reason W. B. Gibb (3½ Douglas) was despatched before A. B. Jannet (3½ Norton) was clear. Gibb has just cleverly avoided a baulk, but he, too, stopped a few yards higher up.

**Creditable Failures.**

Particularly creditable failures were registered by W. B. Gibb (3½ Douglas), who cleverly avoided a baulk only to stop higher up, F. A. Longman (3½ Ariel), A. Bennett (3½ Sunbeam), who only just failed to emulate Dance's dash up, H. R. Davies (2¾ A.J.S.), A. S. Smith (2½ Calthorpe), J. A. Watson-Bourne (8 Brough Superior), and J. F. Parker (J.F.P.).

Humorous relief was not lacking. When L. Newey's Ariel outfit overturned, some personal luggage was spilt, including what looked from higher up very like a pack of cards. When C. Wilson's Quadrant sidecar was being pushed up the exhaust pipe muffler fell off; forgetting that it would be hot, an obliging spectator picked it up; he had to repeat the operation six times before he finally succeeded in dumping it into the sidecar.

One particular section of the bank became very popular with the B.S.A. sidecars, several charging for the same spot.

Again, Paynter (3½ Norton sc.) forgot to stop bouncing until quite some time after his engine had stopped. T. H. Bonham's passenger (2¾ Calthorpe sc.) made a great effort to assist the little outfit up by turning the sidecar wheel by hand.

Typical of three-quarters of the route, this photograph shows C. Wilson (4½ Quadrant sidecar) approaching one of the lesser test hills, the Gutter.

**Thus Are the Mighty Fallen!**

Some of the failures were surprising, but none more so than H. F. S. Morgan's; he did not use non-skid chains, however.

Amongst the best of the leg-waving solo climbs were: D. A. Atkin (2½ Coventry Eagle), S. G. Orford (2¾ Henley-Blackburne), W. T. Woodcock (3½ Ariel), A. Rollason (3½ Ariel), B. Riley (2¾ A.J.S.), a youngster of 15 or 16, A. W. Thrush (3½ Sunbeam), E. Mundey (2¼ New Hudson), E. A. Barnett (2¾ Francis-Barnett), W. R. Bown (2¾ Bown), E. Gates (2½ Sun), L. G. Green (2¾ Verus), J. A. Newman (3½ Douglas), after a stop with petrol tap turned off, J. Whalley (2¾ Massey-Arran), P. H. Johnson (7-9 Rudge), G. L. Reading (3½ Ariel), G. F. Hollyoak (2¾ Federal), G. J. Baragwanath (2¾ A.J.S.), K. G. Bedford (2¾ Calthorpe), J. Gardiner (2¼ Levis), R. R. Grindlay (2¾ Francis-Barnett), H. R. Harveyson (4 Harley-Davidson), G. A.

**"Victory" over Freak Hills.—**

Strange (8 Brough Superior), and G. H. Kirby on a four-valve Triumph, the last mentioned two being particularly fine and all but clean.

Steep, narrow, but dry, Mill Lane Hill caused only one failure amongst the first sixty or so, E. Smith (2¾ Connaught), who momentarily grounded on a projecting boulder.

**Home in the Darkness.**

Near to the finish the competitors were sent on a detour to Beacon Hill, where a huge crowd watched a series of monotonously successful ascents. It was long after lighting-up time before the last man passed, but the police in the neighbourhood were thoroughly sporting and directed the lampless unfortunates with great impartiality.

The organisation was good, but the main idea of the organisers seemed to be to make the competitors so dizzy that when they came to a stretch of good, straight road they would automatically fall off!

Out of 208 starters, 168 signed in at the finishing point, which in itself indicates the nature of the day. There will not be many gold medalists.

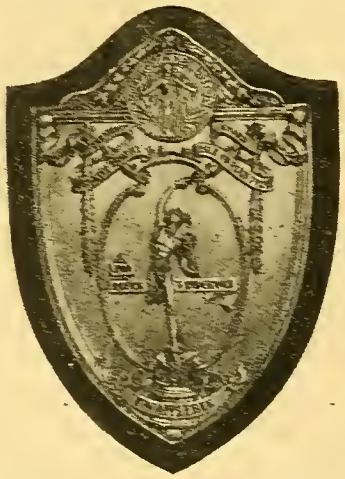
## OPENING RUN OF THE M.C.C. TO BRIGHTON.

FROM the road point of view there is not the excitement about the M.C.C. opening run there was in the early days of the club now the rendezvous at Purley has been abandoned, and all members go down independently. However, there was a very happy gathering at the Royal Albion Hotel, Brighton, on Saturday last. An excellent dinner was served under the chairmanship of Mr. J. K. Starley, the president, who made a witty speech, while speeches were also made by the chairman of the club, Mr. Robert Head, and Mr. W. H. Wells, the club's captain. In the course of the dinner the medals won in the London-Exeter run were presented by Mrs. Starley.

## TAXATION REFERENDUM.

THE A.A. contends that the experience of 1921 has forcibly demonstrated the unreasonableness and grave anomalies of the system which became operative last year, and is urging the Government to remedy this at the earliest date by introducing a method of taxation graduating the individual tax in proportion to the extent to which the vehicle uses the road. A *questionnaire* is being circulated to all members and to as many other motor cyclists as possible, with the object of obtaining the results of practical experience on the road during 1921, *e.g.*, total annual mileage, average fuel consumption, amount of tax paid, extent to which car or motor cycle was laid up, and any difficulties in obtaining registration book or licence.

PATIENCE REWARDED.



The Nisbet Award. Just received by F. W. Applebee for his plucky ride against time and adversity in the 1920 T.T. race.

## IMPORTS AND EXPORTS.

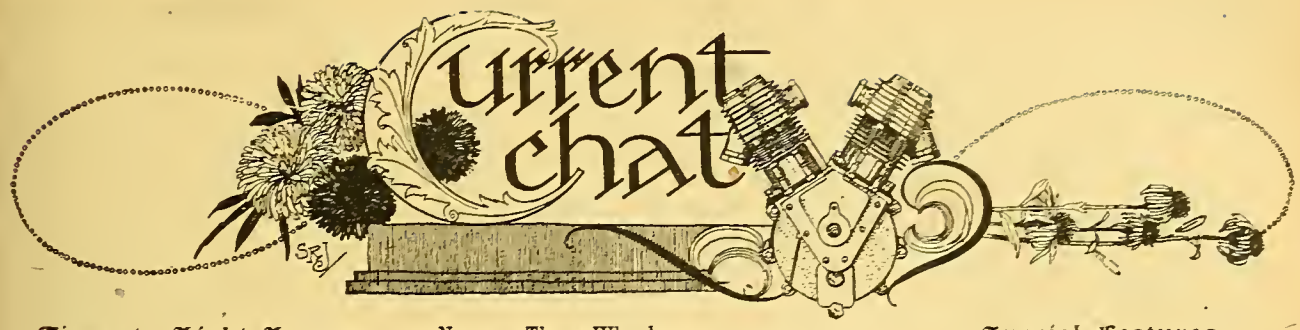
COMPARED with January's importation of motor cycles, last month's figures show a fairly big reduction, being only £7,297, as against £11,958. Exports, however, remain nearly at the same comparatively low level, a slight reduction in value (£2,334) being registered, although there were forty-six more machines exported.

Figures from the Board of Trade Return are given below :—

| | Jan., 1922. | Feb., 1922. |
|---|---|---|
| *Imports.* | | |
| Number of motor cycles | 128 | 75 |
| Value of machines and parts | £11,958 | £7,297 |
| *Exports.* | | |
| Number of motor cycles ... | 501 | 547 |
| Value of motor cycles ... ... | £35,245 | £38,903 |
| Value of parts ... ... | £21,940 | £15,946 |
| | £57,153 | £54,849 |

NO SPEED LIMIT. COMPETITORS AT BROOKLANDS IN THE A.C.U. STOCK MACHINE TRIAL.

It is a severe test for a new machine to indulge in a prolonged speed burst, but the majority of the entries stood up very well.




## Times to Light Lamps.

| | | | |
|---|---|---|---|
| Mar. 23rd | .. | .. | 7.16 p.m. |
| „ 25th | .. | .. | 7.19 „ |
| „ 27th | .. | .. | 8.22 „ |
| „ 29th | .. | .. | 8.25 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Put Your Clocks On.

Summer Time comes into force at 2 a.m. on Sunday next.

### Scottish Trials Leader.

This year, No. 1 in the Scottish Six Days will be Rex G. Mundy, who will be at the wheel of a B.A.C. light car.

### An Early Bird.

To ensure that he should obtain an early number A. G. Cocks, the Beardmore-Precision rider, entered the Scottish Trials on January 1st.

### Beware Road Repairs.

A Northern reader sends a warning regarding repairs which are being effected to the main road between Durham and Barnard Castle, about 2½ miles from the latter place. Only half the road is available, and there is a considerable drop from the edges.

### The Popularity of the Motor Cycle.

There is no question about the popularity of the motor cycle in England, but in America it would be useless to claim that motor cycles find universal favour. An American journal just received is using great efforts to show the wide use of the motor cycle in England by every class of rider, from the highest in the land to the lowest.

### Hill Climbing at Pretoria.

British machines scored in a hill-climb organised by the Pretoria M.C., C. B. Bower (Norton) being first, P. C. Flook (Norton) second, and A. V. Baker (Armis) third. In the sidecar class on formula, two American machines, a Harley-Davidson and Indian respectively, occupied the first and second places, while an Enfield ran third.

### Carelessness.

Many manufacturers entering the A.C.U. Stock Machine Trial evidently did not read the regulations, or twenty odd machines would not have been penalised for not complying with them. Most of the motor cycles which were penalised through not having front stands were sporting models, the present-day T.T. type. Incidentally, the A.C.U. regulations for the last T.T. did not demand front stands.

### Now on Three Wheels.

Mr. O. D'Lissa, the veteran Motosacoche exponent, is to be seen these days driving a New Hudson three-wheeler, which incidentally is fitted with a M.A.G. engine.

### Lightweight Sidecars.

A topic of conversation on the track last week was Eric Williams' astounding speed on Brooklands with a 2¾ h.p. A.J.S. sidecar at the conclusion of the Stock Machine Trial. He doubled the legal limit for 12 laps.

### Why?

Since most of the penalised machines in the Stock Machine Trial were chosen from stocks by the A.C.U., and also were examined prior to the start, why were they allowed to start when the officials must have known that there was no chance for a premier award?

## Special Features.

TUNING A 4 h.p. TRIUMPH.
SPRING FRAMES.
OFFICIAL TEST OF STOCK MACHINES.

### Longer Days.

Next week we shall have one more hour of daylight.

### English Princes through American Glasses.

In an American motor-cycling contemporary there is an (unintentionally) amusing article on the use of motor cycles in the British Universities. Undergraduates are called "students," and the following sentence is typical: "Americans . . . may fancy that Prince Albert and Prince Henry were driven to school in the Royal Rolls-Royce until they acquired their own Sports Models to use at Eton or Hanover (*sic*) and Oxford or Cambridge. But they don't."

THE SIDE-WHEEL. An outfit in use in Germany wherein the sidecar body is dispensed with. A framework is fitted over the "sidecar" wheel to which is fixed an ordinary bicycle saddle and fixed handle bars. On this device the passenger is even more exposed than the driver. A similar attachment was marketed in England during 1912-13.

### 1922 Records.

Last week saw the first successful attempt on records this year.

### Mounting Entry List for the Scottish Six Days.

Seventy entries have now been received for the Scottish Six Days' Trials, which take place on May 1st-6th.

### Entries for Land's End.

One hundred and seventy entries have already been received for this year's Land's End run.

### Amendments in Stock Trial Results.

Certificates of performance have now been awarded to A. Milwood and J. Wooler, who both rode 2¾ h.p. Woolers.

### Staxton Hill Climb.

First held in 1909, an Easter Monday hill climb will be run this year for the ninth time at Staxton by the Scarborough and Dist. M.C.C.

### Expenses of End-to-End Run.

It is estimated that £25 will cover the expenses of a competitor in the M.C.C. commemorative Land's - End—John - o'-Groat's run.

### To Ride T.T. Triumphs.

Four riders have now been chosen to carry the Triumph colours in the T.T., F. G. Edmond, H. R. Harveyson, F. B. Halford, and W. Brandish. G. H. Kirby will act as a reserve.

### Team Trial for Private Owners.

For the third year the Surbiton Motor Club will hold its inter-club team trial for the Maude Challenge Shield for clubs affiliated to the A.C.U. The date is fixed for April 22nd, and is open to teams of six, consisting of three solo and three sidecar competitors. No trade riders are allowed. The start, as in previous years, will be from Ripley, Surrey, at 12 noon. The present holders of the trophy are the Oxford M.C.

Thursday. April 6th.
THE MOTOR CYCLE
SPRING NUMBER AND BUYERS' GUIDE.
*Special articles and illustrations will be included.*

### Stock Machine Trial Trifles.

The course was too easy, but Brooklands was a severe test for new machines.

Airmen's suits are very popular among competition men.

Most of the more experienced trials riders of both passenger and solo machines cruised up Kop on middle gear.

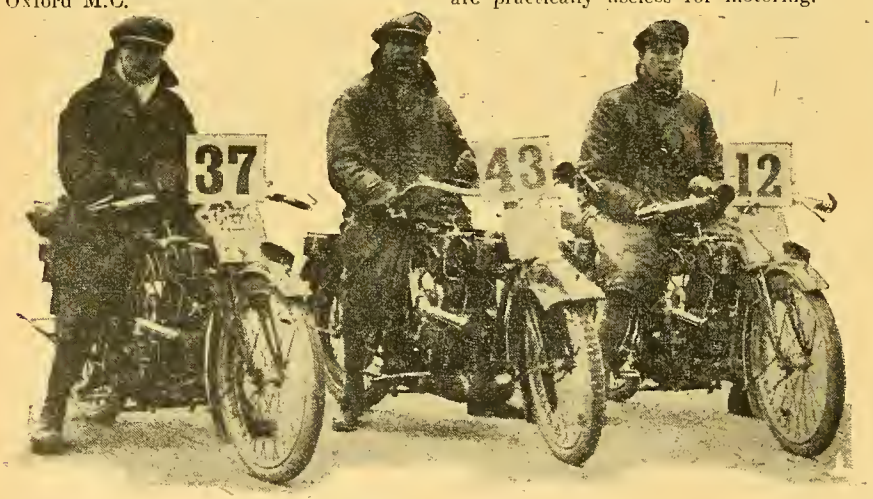
H. R. Davies (A.J.S.) went round the track as if out for a record—and paid the penalty. He was towed in with a bent valve due to a cotter coming adrift.

It was very sporting of the competitors to help one another, but in a 140-mile run there should have been no cause for so much "tinkering."

Several competitors remarked that the trial was the nearest approach to the Scottish Six Days' event the A.C.U. has ever done, inasmuch that there was an absence of irritating tests and checks and "interference."

### In Wales.

A Neath (Glam.) reader sends a cutting from the *Western Mail* whereon it is reported that a Calvinistic Methodist meeting at Porthcawl resolved to petition the County Council to issue only six days' licences to motorists. Incidentally, from central Wales comes a report that the roads between Llandovey and Lampeter and between Cardigan and Aberystwyth are practically useless for motoring.




EQUAL PERFORMANCE BUT NOT EQUAL AWARD. Stock Humbers in the A.C.U. trial. The brothers Brandish rode sports models and were penalised because the standard specification does not include a front stand. R. Grindlay (centre) rode the touring type solo, and secured a special certificate of merit.

Forming a great contrast to the old fashioned sign posting, this guide post, erected by the Ministry of Transport, is situated on the main Birmingham and Stratford-on-Avon Road at Robin Hood. The main arms depict the class and number of the road.

### Police Activity.

It is reported that on two occasions, at least in the early part of the month, a police trap has been worked in the ten mile limit in Radlett on the main London—St. Albans road.

### Saturday's Big Trial.

Although not comparing with the so-called "closed" "Victory" Trial in the matter of entry figures, the open event of the East Midland Centre A.C.U., to be run by the Leicester and District M.C. on Saturday, has received excellent support. There are eighty-one solo, thirty-one sidecar, and ten three- or four-wheeled cycle car competitors.

### The International Six Days.

This year the International Six Days' Trials start on Wednesday, August 2nd, while the Sunday, August 6th, will be a day of rest at Lugano. So far as the actual regulations are concerned, these are very much the same as in the English Six Days, the effect of the F.I.C.M. regulations being to place all Six Days' Trials rules, no matter in what country, on practically the same basis. There will, of course, be hill climbs and a kilometre speed trial at the conclusion of the contest, in which the usual set speeds will have to be maintained by the different classes.

# CLUB NEWS.

### Prestwich and District M.C.C.

About forty new members were enrolled at a very successful recruiting meeting on February 22nd.

### Leeds and District M.C.

Country headquarters have been fixed at the Black Horse Hotel, Otley, and they will be officially opened with a house warming (supper and social evening) on Monday next, at 7.30 p.m.

### Coventry Triangle M.C.

At the annual general meeting, Mr. W. Vice, 58, Argyll Street, Coventry, was elected secretary, Mr. J. Peplow social secretary, and Mr. J. Yardly chairman. The annual subscription is 5s.

### Coatbridge, Airdrie and District M.C.C.

Membership now stands at 60, but, according to the secretary, Mr. W. A. Muir, Carradale House, Coatbridge, there is room for 600; all local motor cyclists are invited to join.

### Worcester and District M.C.C.

Among the many interesting events in the 1922 summer programme are social runs with definite objects in view, such as visiting motor factories, etc., and evening main-road trials for amateur riders exclusively.

### Reigate, Redhill and District M.C.C.

In conjunction with the Woolwich, Plumstead and District Club, an opening run was made from Green Street Green on March 12th. Several freak hills were visited before going to Wrotham, where tea was taken at "The Bull."

### Rugby M.C.

On the 12th inst. the club held a most successful reliability trial over a sporting course of 84 miles. There were only five survivors, the winner being M. G. A. Scally (4½ Humber). Victor Miller (4¼ B.S.A.) was second.

### Southport M.C.

The opening social run was held on the 12th inst. to Clitheroe, and was favoured with ideal weather; upwards of thirty-five members started. After lunch an impromptu hill climb was held on Pendle Hill.

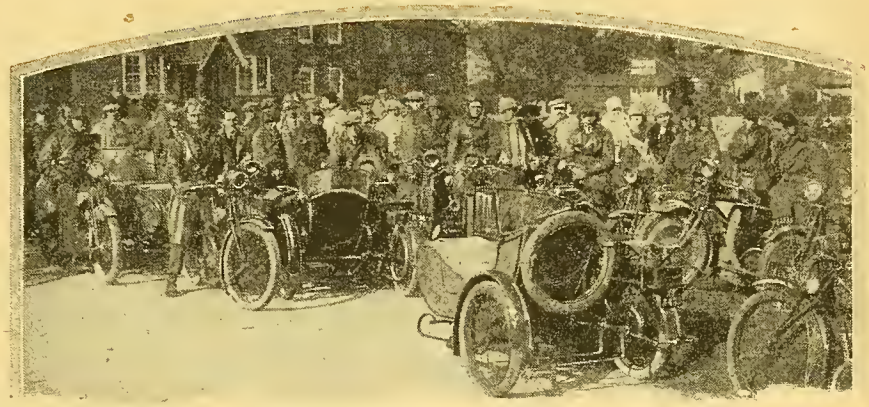
### Blackpool and Fylde M.C.

At a "hot-pot" and smoker at the Queen's Hydro, South Shore (the club's headquarters), the new president, Mr. E. H. Altman, was introduced to the members. Mr. Altman announced his intention of presenting a cup for the reliability trial to be held on the 26th inst.

### Surbiton M.C.

On Saturday, April 1st, a one day reliability trial will be held for the Mellano 100-guinea Challenge Trophy. Entries close on Saturday next.

On the evening of March 16th a successful carnival dance was held at the Vaudeville Club, Thames Ditton. The opening run will take place this week-end, the Talbot Hotel, Ripley, will be the venue.



A group of Woolwich and Plumstead club enthusiasts on the occasion of the recent opening run. It is manifest that interest in social runs will this year be as great as ever.

## Week-End Club Events.

*Mar. 25.—Essex M.C. Hill-climb.*
*Mar. 25.—Bristol M.C. and L.C.C. Mystery Trial.*
*Mar. 25.—Coventry Triangle M.C. Paperchase.*
*Mar. 25.—Worcester and District M.C.C. Evening Main Road (Reliability) Competition.*
*Mar. 25.—Essex County and Southend A.C. Fuel Economy Trial.*
*Mar. 26.—Ipswich and District M.C.C. Opening Reliability Tour.*
*Mar. 26.—Westmorland M.C.C. Social Run.*
*Mar. 26.—Blackpool and Fylde M.C. Reliability Trial.*
*Mar. 26.—Brighton and Hove M.C.C. Hill-climb.*
*Mar. 26.—Eccles and District M.C. Opening Run.*
*Mar. 26.—Stalybridge and District M.C. Reliability Trial.*
*Mar. 26.—Eccles and District M.C. Hidden Route Competition.*
*Mar. 26.—Coventry and District Works Motor Association. Social Run to Henley-in-Arden.*

### Stalybridge and District M.C.

A short reliability trial in the Ashopton—Glossop district will be held on the 26th inst. as an opening run. Members should note that the secretary is now Mr. T. W. Hamer, Hare and Hounds, Mottram Road, Stalybridge.

### Neath and District M.C.

The speed trials which are being held on Porthcawl Sands on Easter Monday are open to all members of the S.W. Wales A.C.U. Centre. All classes will be catered for, and ladies may compete free of charge. Entries close April 11th. The hon. secretary is Mr. Haydn Evans, 9, Windsor Road, Neath.

### West Kent M.C.

The club will meet at the Bull Hotel, Chislehurst, at 10.45 a.m. on the 26th inst. for the purpose of holding a new style of speed-judging contest. Members are particularly requested to be present themselves and to bring motor cyclist friends with them. An important announcement will be made.

### Redditch and District M.C.C.

An attractive programme has been arranged for the coming season, and five cups are being offered for competition amongst the members, including the B.S.A. and Terry Challenge Trophies.

The opening run is fixed for Saturday, and will be a half-day reliability trial under touring conditions.

### Lewes and District M.C.C.

In glorious weather on the 12th inst. the opening run to Godstone took place. The party, numbering nearly forty, were entertained to tea at Ye Claytone Hotel by their president, the Mayor of Lewes, Ald. C. Patrick, J.P., who journeyed there on his 2¼ h.p. Royal Enfield machine. The event was voted one of the most enjoyable the club had ever held.

### Mexboro' and District M.C.C.

On March 9th the club held its first whist drive and dance, which proved a huge success, over 200 persons being present. Great credit is due to the ladies attached to the club for the catering arrangements.

New members are joining each week, and a good programme of sporting and social events is being prepared. All motorists in the district are invited to join. The secretary is Mr. J. E. Major, 42, Temperance Street, Swinton.

### Bradford M.C. and L.C.C.

The first trial of the year (for novices) was to Richmond (Yorks) and back, and of 37 entrants five were non-starters and seven failed to finish. There were four lady competitors—Mrs. Appleton and Miss Barker, both driving P. and M. sidecars, Miss D. Sayles (Barnsley), (Scott sc.), and Mrs. F. W. Wood.

Result: 1st, Triumph Cup (held for one year) and gold medal, H. Barker (4 Triumph), error 52s. 2nd, silver medal, H. R. Humphries (Salmson car), error 53s.

### Manchester M.C.

A reliability trial was held in glorious weather on the 12th inst. The start was from the Nag's Head Hotel, Bucklow Hill, and 103 competitors were despatched at half minute intervals over an interesting course, the vicinity of the start being crowded with spectators. Results: 1, B. Duncan (3½ Norton); 2, C. Stevenson (Indian); 3, A. Allbone (4 Triumph).

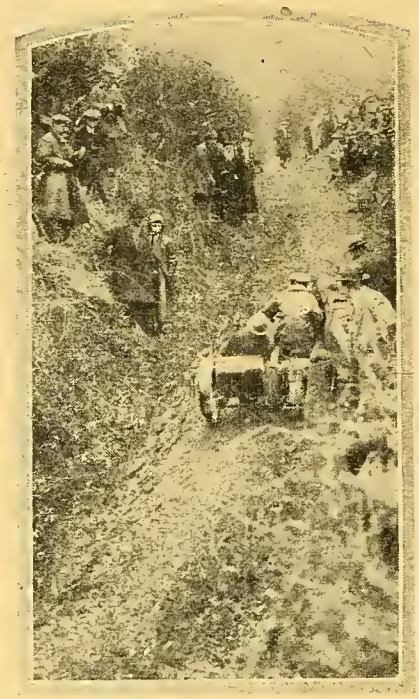
Particulars of the next event, a reliability trial for the Blake Challenge Cup, to be run on April 2nd, may be obtained from Mr. S. J. McCann, Beech Terrace, Heaton Park.

### Manx M.C.C.

The club did not receive sufficient entries for its hill climb, and in its place an open friendly competition was held. J. S. Mylchreest, with a 3½ h.p. Norton, made the fastest time, riding the two miles uphill and against the wind in 2m. 9s.

### Dublin and District M.C.C.

Taking advantage of the fact that St. Patrick's Day (last Friday) was a bank holiday in Ireland, the club ran off the first of its reliability trials. The course selected for the event lay for the most part in County Wicklow, the two chief test pieces of the day being the ascent of Annacreevy Hill, near Enniskerry, and Red Lane, leading from the seaboard to the Calary plateau. The weather conditions were extremely favourable, and with most of the roads in good condition the trial was deprived of a good deal of its terrors. Out of a field of thirty-two the following twenty completed the course: J. Browne (3½ Douglas), A. Carton (3½ Norton), F. O'Connor (3½ Douglas), H. Sinclair (8 Diatto), T. Sleyin (2¼ Velocette), Ed. McGuire (8 Enfield sc.), Richard Murphy (4 Triumph), H. W. Nesbitt (3½ Norton), J. A. Carville (4¼ B.S.A.), P. Grimes (8 Ariel sc.), J. Healy (4¼ Ariel sc.), A. A. Wayte (3½ Sunbeam), G. A. Daly (4 Triumph), R. Humphries (2¼ Velocette), L. McCullagh (3½ Norton), T. E. Green (3½ Douglas), D. Tyson (2¾ A.J.S.), F. J. McMullen (6 Campion), W. Burney (7.5 Deemster), and H. McAlister (2¾ A.J.S.).



IN THE "VICTORY" TRIAL. Not many of the sidecars reached as far as W. E. Bayliss's New Hudson outfit, which is on one of the critical patches of Sandy Lane.

### Reigate, Redhill and District M.C.C.

On Wednesday, April 5th, a paper-chase will be held, entries (2s.) closing on the previous Monday.

### Barrow and District M.C.

The club is holding a reliability trial on April 9th over a course including Coniston, Red Bank (down), Ambleside, Kirkstone Pass, Windermere, and Kendal. Any local motorists who would act as checkers or observers should communicate with the hon. secretary, Mr. W. B. Wilson, 6, Brown St., Barrow-in-Furness.

### Beds. Auto Club.

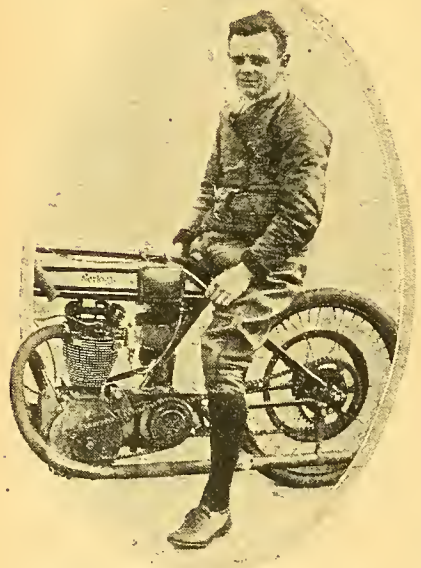
The above club has recently been formed with town headquarters at The Fountain Hotel, Bedford, and country headquarters at Hexton. A lengthy and interesting programme of social events, reliability and speed trials, has been arranged. All interested should apply to Mr. C. Whitworth, 11, St. Andrew's Road, Bedford.

### Herts M.C. and L.C.C.

An attractive programme has been arranged for 1922, and the membership now totals about 115, and is steadily increasing. The opening run, which will incorporate a distance-judging competition, has been arranged to start from headquarters at 3.30 p.m. on March 26th, finishing at the same place. Tea, followed by a lecture by Mr. C. F. Plowman on "Mountain Climbing," will be taken at Little Gaddesden

# OVERHEAD VALVE NORTONS AT LAST!

## Mean Speed Records Broken at First Appearance.



R. N. Judd and the o.h.v. Norton machine, on which he broke the international mile record; his mean speed was 88·39 m.p.h. for the two runs.

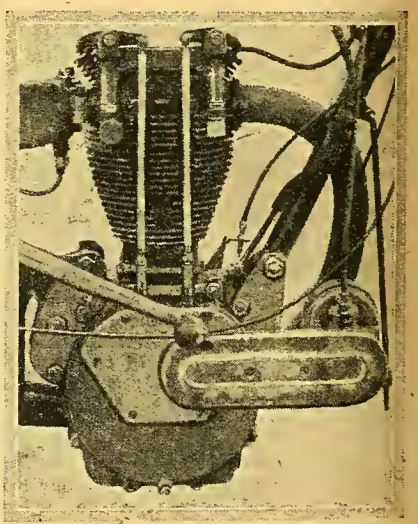
RECORD breaking in 1922 has been opened.

Riding a new o.h.v. 3½ h.p. Norton (70 × 100 mm. = 490 c.c.), R. N. Judd lowered the international mean speed figures for the kilometre and mile on March 15th. Over the kilometre in the ordinary direction the time taken was 23.96 secs., and the time in the reverse direction was 25.79 secs., the mean time being 24.87 secs., equalling 89.92 m.p.h. The two times for the mile were 39.48 secs. and 41.98 secs. respectively, the mean being 40.73 secs., equalling 88.39 m.p.h.

Judd's previous speed for the kilometre, attained a year ago, was 86.37 m.p.h., while the speed of the last holder of the international one mile record, E. B. Halford (3½ o.h.v. Triumph), was 83.91 m.p.h.

### Will One-way Records Fall?

Although the overhead valve Norton has been something of an open secret for quite a while past, this is its first official appearance in the public eye, and no doubt, ere long, it will be a formidable contestant in the lists for the kilometre and mile British records. At present the ultimate speed in the 500 c.c. class appears to be G. Dance's 93.99 m.p.h. over the flying kilometre with the 3½ h.p. Sunbeam.



An experimental Norton racing engine of 490 c.c. with overhead valves, which made its successful *début* at Brooklands on Wednesday of last week. This model is for the track only, and is not available for the market.

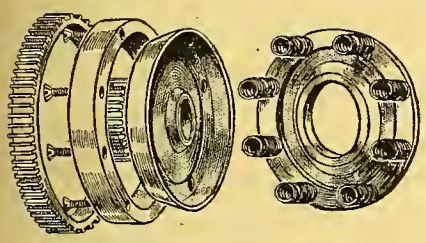
# A FLAT TWIN WITH ENGINE-GEAR UNIT.

## The Chain-driven Wooler Revived with many Improvements and Detail Refinements.

IN view of the recent revival of its manufacture, details concerning the new model chain-driven 2¾ h.p. Wooler are of interest.

One of the latest innovations is the fitting of a handle starter, which is applied directly to the engine-shaft and enables the engine to be pulled over compression from the saddle. As small engines of the flat twin type are usually easy starters, one pull up is generally sufficient.

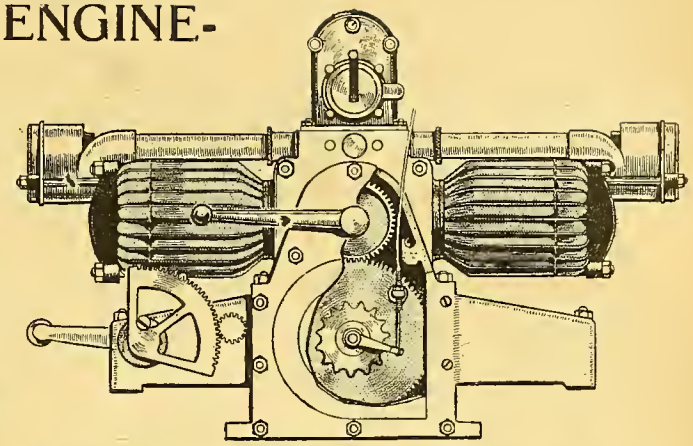
Another practical feature is a chamber screwed on to the bottom of the crank case for carrying the spare chain. It is retained by a single bolt, the chain reposing in the chamber between two thick pieces of felt; in this position it remains undamaged and cannot rattle.



Simplicity is the keynote of the 2¾ h.p. Wooler. The metal-to-metal cone clutch in the chain-driven model is shown with its component parts.

### Foot Control of Change Speed.

Among the peculiarities of the machine may be mentioned the method of changing gear by means of the foot, which is quite easy after a little practice.



Features of the 2¾ h.p. Wooler engine. Note the handle starter, which is an innovation, also the foot-controlled change speed gear. Oil is carried up on the two transmission gear wheels and splashed into the trough shown to the right of the clutch control cable, whence it is conducted to the principal moving parts of the engine.

The whole engine has been carefully thought out from start to finish, and particular attention has been paid to the lubrication. Oil is carried in a large sump at the base of the engine, and is taken up by means of gear wheels through a trough, whence it is conducted to the main bearings. The oil mist which escapes through the crank case breather is carried up into the frame tubes, trapped in the horizontal and saddle tubes, and allowed to drain from the latter back into the sump. This careful arrangement of the release, which is of the timed variety, keeps the crank case perfectly clean, and the whole system is most economical in oil consumption.

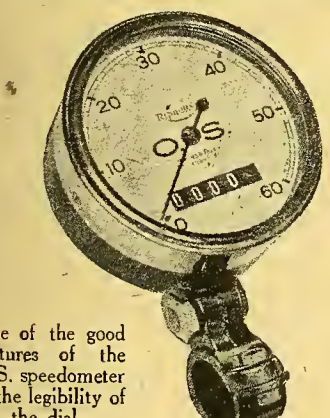
Though the bulk of our experience has been with the chain-driven Wooler, the belt-driven model is also a very practical mount, having a variable belt drive. It is worth mentioning that the Dederich-Wooler Eng. Co., Alperton, will sell this attractive little mount at £65. The chain-driven model, which is geared 5½, 8¾, and 16 to 1, is priced at £78.

---

# A MAGNETIC SPEEDOMETER.

## Simplicity, Sturdiness, and Legibility of Dial Features of the O.S. Instrument.

TO be added to the list of those speedometers which work on the magnetic principle is the O.S., an instrument of French manufacture, and popular among car owners before the war, but hitherto practically unknown to motor cyclists.




One of the good features of the O.S. speedometer is the legibility of the dial.

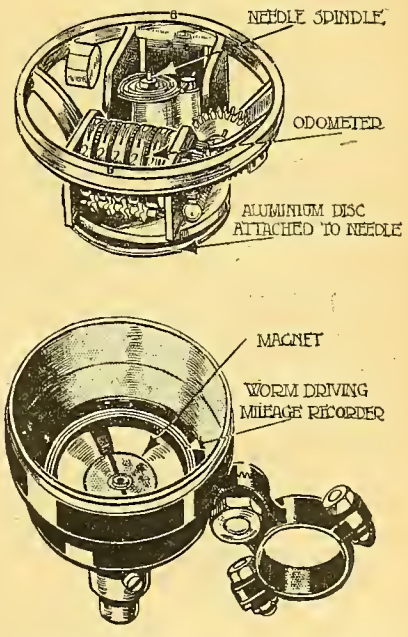
The outer casing is a die casting enamelled black, the rim which secures the glass only being plated. This rim is attached to the instrument by means of screws, is rendered dustproof by a rubber ring, and can easily be removed in the unlikely event of such a procedure being necessary.

### A Circular Magnet.

A circular magnet embedded in an aluminium cup is driven by flexible shafting from one or other of the motor cycle wheels. Immediately above it is an aluminium disc to which the spindle carrying the needle is attached. On the cup carrying the magnet being rotated, the eddy currents set up tend to carry round in the same direction the disc to which the needle spindle is attached. The system renders the instrument very sensitive and the reading of the hand quite steady.

On the outer edge of the cup carrying the magnet a screw thread is cut which meshes with the worm wheel driving the distance-recording mechanism.

There are dog couplings at either end of the flexible cable, and the small driven wheel is of fibre, consequently silent running is assured. The O.S. speedometer is sold by Messrs. Ripaults, 1, King's Road, St. Pancras, London, N.W.1.




Interior mechanism of the speedometer.

# SALES BY SIDECAR.

## How a 1914 Outfit with Special Tradesman Carrier Box aids a Vendor of ex-W.D. Goods.

MANY uses are made of the sidecar outfit as a business vehicle, and it is by no means surprising that its sphere should now include the door-to-door selling of the multitudinous surplus Government clothing, etc., at present on the market. Illustrated is the 1914 Matchless sidecar used by the Government Surplus Stores Co., Brighton Road, Croydon, regarding which the proprietor, Mr. Jupp, gives us some interesting particulars.

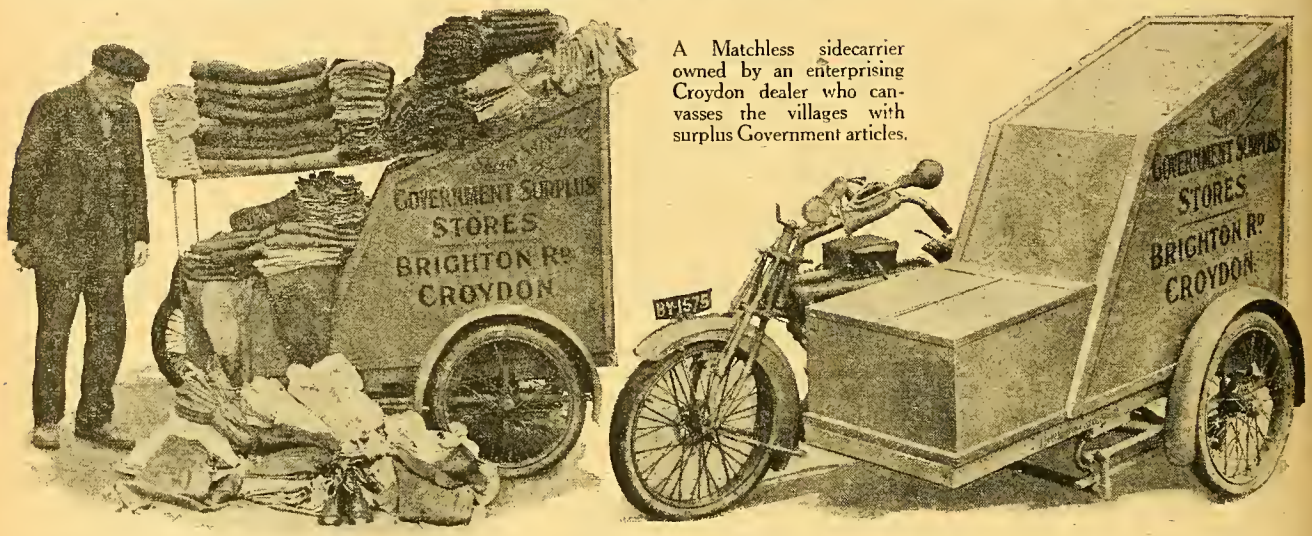
Covering about fifty miles per day, the outfit has been in use for two years without the slightest mechanical trouble. During week-ends an ordinary sidecar is substituted to provide transport for the owner's family.

Several features of the huge box carrier itself are not uninteresting. Its capacity is fairly obvious from the photographs, the floor dimensions being 6ft. by 2ft. If required, the box portion, which is made of three-ply on an angle iron frame, may be removed and the platform only used. The front compartment is generally used for small parcels and samples, while that in the rear carries goods in bulk for supplying village shops. One of the photographs shows the outfit laid out as a retail "shop."

Operating in the hilliest districts of Kent, the average petrol consumption works out at 48 m.p.g., the normal running speed being 30 m.p.h.

Mr. Jupp, who has registered the design, has found the carrier much preferable to the cheapest car on the following counts:

Lower fuel consumption,
Less running costs,
Greater speed,
Greater mobility, and
Less garaging difficulties.




A Matchless sidecarrier owned by an enterprising Croydon dealer who canvasses the villages with surplus Government articles.

# IRISH OLYMPIC GAMES.

## Two Road Races to be held under Government Auspices in Phœnix Park.

THE promoters of the Irish Olympic Games, which are to be held in Dublin in August next, have decided to include in the programme of events a course of motor cycle races, and have secured the co-operation of the Southern Centre of the Motor Cycle Union in the running of the events. As the games are being held under the auspices of the Government, there will be no difficulty in securing permission to close the roads, both for the races and the preliminary practising. The committee of the games has accepted the suggestion of the Union that the races should be held in Phœnix Park, where a circuit of nearly five miles is available. The proximity of the park to Dublin, and the excellent condition of its roads, should make the venue a particularly suitable one.

It is proposed to hold two races—one of twenty-five miles, with separate classes for 250 c.c. and 350 c.c. machines, and one of fifty miles for 500 c.c. machines. The races will be open to any person of Irish birth, and as quite a number of well-known figures in the English competitive world can claim that distinction, we have no doubt there will be a good many entries for the races from this side of the Channel.

Meantime, it may be added that the proposal to hold light car and motor cycle races in the South of Ireland, a suggestion which was urged on the Royal Irish Automobile Club by the trade, seems at the moment to hang fire, and the general impression is that the events are not likely to take place. On the other hand, the trade in the North of Ireland have made considerable progress with the light car and cycle races which they propose to hold on June 17th. A circuit of fifteen miles has been selected in Co. Antrim for the events. It does not seem to commend itself to those interested in light cars, but is regarded as not unsuitable for motor cycle racing.

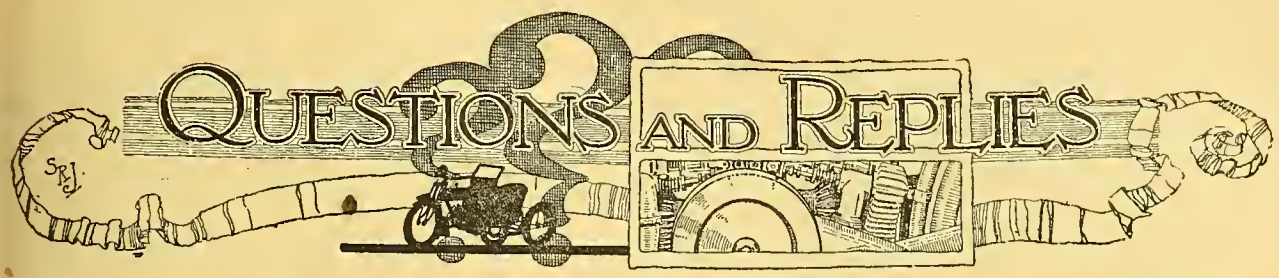
# FUEL CONSUMPTION TESTS.

MR. H. S. B. BOOTH, whose proposed private fuel consumption test has aroused such a storm of controversy, now replies to the A.C.U.'s statement of its position as outlined by Mr. Loughborough on page 314 of *The Motor Cycle*. He writes:

"I fear the A.C.U. *has* in some respects forgotten its *raison d'être*, and does not fully appreciate what the motor cycling public desire. If the A.C.U. *does* give authentic information (which Mr. Loughborough says is desirable), why did it not reply to the leader in *The Motor Cycle* of September 8th last when the published results of the A.C.U. Six Days' Trials (petrol and oil consumption tests) were described as 'Artificial in the extreme. . . . Competitors free-wheel down hills. . . . The figures for lubricating oil are in some cases unbelievable.'

"No criticism of a test could be more severe than that quoted above, and until the 'man in the street' feels convinced that he can get information that is authentic he will hold his private trials.

"My test will take place on April 29th."




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### VALVE OPERATION.

Has the usual method of operating poppet valves by cams always been used? If some other method was used at any time, why was it discontinued?—C.D.C.

Some form of cam mechanism has been used in the case of all motor cycle engines having poppet valves, although, of course, the cams may take widely different forms. For example, the early single-cylinder Motosacoche engines had a system of valve operation by means of a slipper running in a special track machined in the face of the flywheel. Probably manufacturing costs accounted for the discontinuance of this type.

### BURNT-IN PISTON RINGS.

With a Binks carburetter on a 1920 Triumph two-stroke I average 125 m.p.g. The machine runs well, except that I get the piston rings stuck up. When I first decarbonised after 1,000 miles I found the two top rings stuck fast on the exhaust side, the same thing happened at the end of the next 800, the next time after only 460. Up to that time I had been using heavy oil, mixing according to instructions (four measures of oil to one gallon of petrol, which works out at two-third pints to one gallon, or 1 in 12). I was advised by a motor cyclist having a Royal Enfield two-stroke to try another brand of rather lighter body. I have just completed 620 miles on this oil, and find that two top rings are stuck fast again on the exhaust side. The rings are a good fit both in the grooves and the cylinder. Would you advise a different brand of oil or, say, a smaller quantity of this, as I find a good deal of oil deposited in the silencer pipe. I do not overdrive, and very seldom exceed 20 m.p.h.—B.C.M.

The trouble you describe is common to many forms of two-stroke engines, and it is unlikely that any difference will be made by changing the brand of oil; a slightly smaller quantity of oil might improve matters to a certain degree, and it might be as well to increase the vertical clearance of the rings a little. As your rings appear to get stuck up rather more frequently than should be the case, you will be well advised to apply to the manufacturers, as they may be able to supply a set of rings having greater clearances than those fitted.

## Important Dates.

**Sat., Mar. 25th—East Midland Centre A.C.U. Open Reliability Trial.**
**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**
**Fri., Mar. 31st, to Thur., April 6th—Amsterdam Show.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 6th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 mile sidecar race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish twenty-four hour Open Reliability Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Reliability Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### AN UNUSUAL CONNECTING ROD.

The connecting rod big end of my 2½ h.p. four-stroke engine is L shaped, *i.e.*, the big end bearing is off set from the connecting rod centre line. In which way should the rod be assembled in relation to the direction of rotation, and what would be the result if it went the reverse direction? Would it affect the balance of the engine?—T.R.

A connecting rod of the type you describe is very unusual in a single-cylinder engine, though it is not uncommon in V twins, where it is used to avoid the forked rods fouling. It should make practically no difference which way the rod is erected, since it is merely a means of connecting the gudgeon pin and crank pin, the relative positions between which cannot be altered by the shape of the rod.

### FITTING MAGNETO CUT OUT.

Can I tap the low-tension current of my Bosch magneto in order to fit a cut-out switch by fitting an insulated bolt in the centre of the contact breaker cover, and arranging thereon a spring blade to make contact with the contact breaker centre screw? There is a hole in the contact breaker cam ring, but I cannot make out what it is for?—A.H.C.

The device you suggest would be quite satisfactory. The hole you mention was probably used at one time for the same purpose, a pin passing through an insulated bush in this hole, with an L shaped spring leading to the nut forming the low-tension contact to which the switch wire would be connected.

### TIMING A.I.V. TWIN.

How should my Rex be timed? It is an old machine of 6 h.p. with automatic inlet valves, and what I should like to know is how to set the cams, as they are separate. When I get one exhaust valve full open where should the other one be?—J.R.C.

Set the timing of both your cylinders separately. The exhaust valve should close when the piston is on top dead centre. If this is set correctly for the rear cylinder, the crankshaft should then be turned a complete revolution, and a part of a revolution more until the front cylinder is at the top of its stroke. The exhaust valve in this cylinder should then be just closing.

### TIME LIMIT FOR POLICE SUMMONS.

I have received a summons for driving a motor cycle without a registration licence four months ago. Is this summons in order, as I am under the impression that if notice is not given within twenty-one days from the alleged occurrence it is invalid?—S.D.

The summons may be issued any time after the infringement of the law to which it refers.

### REPAIRER'S RESPONSIBILITY FOR DAMAGED ENGINE.

Recently I had the misfortune to break the gears of my cycle car, which I left at a garage for repairs. Learning that the machine was ready, I went for it, but on arrival found that in trying the engine to test the job one of the cylinders had blown clean off, also smashing the piston and bending the connecting rod. The garage people state that they cannot accept any liability for the damage, and maintain that the cylinder had previously been welded, of which I have no knowledge. They propose to charge me for the cost of the new parts, and I should be glad if you would inform me if I have any legal redress.—F.M.

If you can show by means of expert evidence that the damage which was done at the garage was due to the negligent way in which the repairers were carrying out the work, then you can insist upon such damage being made good free of charge. In a case like the one you describe, however, it might be argued that a cylinder may blow off at any time, for although it is unusual, it nevertheless does happen at unforeseen times.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"C.H.S." (Finchley).—3 h.p. N.U.T. Speed on hills, etc.; stability.

"A.R." (Manchester).—4½ h.p. Quadrant sidecar: Consumption, etc., and ground clearance.

"R.F.B." (Wymondham). — 2¾ h.p. Raleigh: Power, speed, most suitable carburetter for sports model.

"W.H.J." (Market Drayton).—2¾ h.p. chain-drive New Imperial, 2¾ h.p. Diamond-Jap, and Raleigh.

"J.C.C." (India).—5-6 h.p. Raleigh and 8 h.p. Excelsior-Blackburne sidecars.

"W.B.-S." (Lancaster).—Scott Sociable in rough, hilly country; front wheel drag on hills.

"N.C.D." (Richmond). — Blériot-Whippet belt-driven model.

"W.F.Y." (Holytown).—8 h.p. Rex-Acme sidecar, Model G.

"H.R.T." (Bristol).—2¾ h.p. two-speed Excelsior-Jap.

"J.D.M." (Edinburgh).—4-5 h.p. New Hudson sidecar.

"C. La C." (Streatham).—2¼ h.p. Royal Enfield: Suitability for pillion riding.

"C.H.G.G." (Battersea).—Suitable free-engine clutch for J.E.S.

"K.W.F." (Walsall).—2¾ h.p. three-speed Raleigh, 2¾ h.p. three-speed Excelsior-Blackburne, and 2¾ h.p. New Imperial.

"C.S.B." (Leicester).—2¾ h.p. Coulson-B.

"T.R.H." (Brixton). — Indian, 1916 speed model. Single gear Norton with or without Philipson pulley.

"N.J." (Willington).—P. and M. renovated W.D. model with sidecar.

"J.W.H." (Bakewell).—Starting tips for 1919-20 4¼ h.p. B.S.A.

"W.F.T." (Morpeth).—2¾ or 3 h.p. Raleigh.

"A.B.C." (Cheshire).—Any folding sidecar on 2¾ h.p. machine.

"R.C.C." (Berkeley).—Hints on overhauling and maintenance of 3½ h.p. 1914 Sunbeam engine gears and clutch.

"J.J.J." (Shotley Bridge). — Motor-assisted bicycles.

"G.T.G." (Cheltenham).—8 h.p. L.S.D.

"A.L." (Brighton).—Philipson pulley on 2¾ h.p. O.K.

"D.R." (Tollington Park).—4½ h.p. Quadrant sidecar.

"JEB" (Stockton-on-Tees). — W.S.R. adapter on 2¾ h.p. Douglas; or other Amac carburetter.

"A.H.S." (Tonbridge).—2¾ h.p (Model B1) A.J.S. or 2¼ h.p. sports Velocette.

"SUNBEAM" (Bristol).—Johnson's Wax on Sunbeam tank: Effect on gold lining. Also Sparxekas.

"S.J.P." (Cambridge).—L.S.D. three-wheeler.

"PRECISION" (Worcester). — Highest speeds obtained with Precision two-stroke: Gear ratio used and plug.

## READERS' REPLIES.

### GEAR RATIOS FOR INVALID TRICYCLES.

A reader, "R.F.G." (Weymouth), points out that the Auto-Wheel camshaft only runs at quarter engine speed, therefore the actual ratio is 10 to 1, and the ratio in relation to a 26in. wheel is about 12½ to 1, or double the figure given on p. 319 of our issue of March 9th.

### MOTOR CYCLES AND NERVES.

With reference to "H.S." and Mr. S. R. Giddings' letters on the above subject, I should like to state my experiences and ask your readers' opinion. I have possessed nine motor cycles since leaving the Army from 2¾ h.p. to 8 h.p., all solo. These I could drive at their top speed without feeling any ill-effects, but on attempting to drive with a sidecar attached (I have made three attempts—4¼ h.p. B.S.A., 6 h.p. Rex, and 3½ h.p. Premier) I have crashed every time, as I shoot off to the right after about the first twenty yards. This may be explained by the fact that I still carry a small portion of Krupps' output in my head; but I have done 50 m.p.h. solo, so *pourquoi?*—NOT YET BEATEN.

### DIFFICULTIES WITH A "TWO-STROKE."

In my opinion it is not the carburetter that is the cause of the "popping back," etc., but the magneto. If "H.L.L." will closely examine this unit he will find that the loose fibre roller has become worn (due to coming into constant contact with the spring) to such an extent that the spring catches the roller and hinders it on its course. I have experienced the same trouble with a similar machine, which absolutely refused to run easily, but on engaging bottom gear would pick up. The reason for this was when going slowly on top the spring would catch the roller, causing misfiring, but on engaging bottom gear and increasing the revs. the roller would force its way. With regard to "H.L.L." using a 34 jet, this also accounts for the consumption. I use a 27 with excellent results.—OWEN E. JONES.

### Successful Small Two-stroke.

In the Colmore Cup Trial, the 2¾ h.p. Allon sidecar, driven by L. E. Clulee, was the only two-stroke passenger machine of its power to gain an award.

### A British Win in Spain.

At a recent hill-climb near Madrid a Gradua-geared Zenith-Bradshaw is reported as winner in the 500-600 c.c. class at 84 km.p.h. (approx. 52 m.p.h.).

### Long Connection Severed.

The position of managing director of F.N. (England), Ltd., has been relinquished by Mr. A. E. Gelder; he held the post before the war, and resumed it immediately after the Armistice.

### For Home-made Screens and Hoods.

Celluloid sheet, in any size up to 56in. × 24in., is supplied by Conpé Windscreens, 28, Middle Street, Portsmouth, at 3s. per square foot. The same concern also markets waterproof twill at 12s. 6d. per yard (72in. wide), and cloth-to-cloth press-studs with celluloid tops at 1s. 10d. per dozen.

### Catalogues Received.

The Firestone Tyre and Rubber Co., Ltd., 216, Tottenham Court Road, London, W.1.: A folder giving the latest prices of Firestone motor cycle tyres. Firestone prices have been considerably reduced.

Massey-Arran Motor Co., Ltd., Bordesley Street, Birmingham: The models described are the popular Blackburne, B., the Brooklands sports J.A.P., the Brooklands sports Blackburne, and the T.T. type with overhead valve Blackburne engine. All are of 2¾ h.p.

Leicester Rubber Co., Ltd., Post Office Place, Leicester: Catalogue of John Bull motor cycle tyres, belts and such accessories as belt punches, knee grips, tubing for acetylene lamps, footrest rubbers, rubber handle-bar grips, horn bulbs, repair outfits, and motor cycle clothing.

Whitley Manufacturing Co., Ltd., Charterhouse Mills, London Road, Coventry: A folder giving particulars of Whitley sidecars and accessories, including a luggage carrier, pedal clutch control for Sturmey-Archer gear boxes, and chain adjuster for use with the same component.

SEAMS ARE CEMENTED, DOUBLE STRIPED, RUBBERIZED, PROTECTED AND SEWN

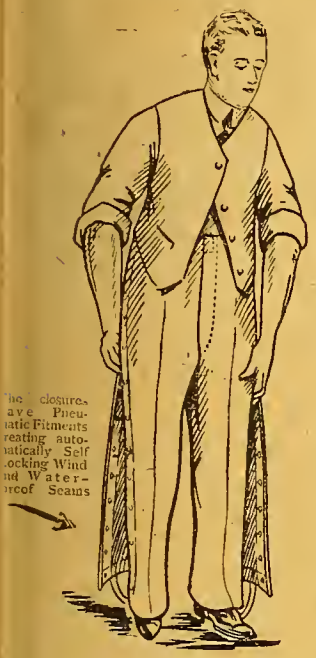
# A REAL WATERPROOF SUIT AT LAST
# THE "AQUAMAC"

ABSOLUTELY IMPERVIOUS TO THE HEAVIEST DOWNPOUR OR GALE

Patent No. 173993/21. **Guaranteed for 3 Years.** Trade Mark No. 413317.

## INVENTED—PATENTED—MANUFACTURED

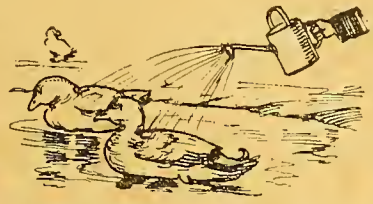
by a Motor Cyclist, who knows by actual experience what is required by riders who have to face all elements. **THE ONLY** Waterproof Motor Suit with **TRIPLE FLY FRONTS.** Fly Side Seams with **PNEUMATIC FITMENTS** and many other novel, useful, distinguishing advantages over and above **ANY** suit ever yet sold. Untearable large pockets, with "right through" opening to all pockets of your ordinary attire.



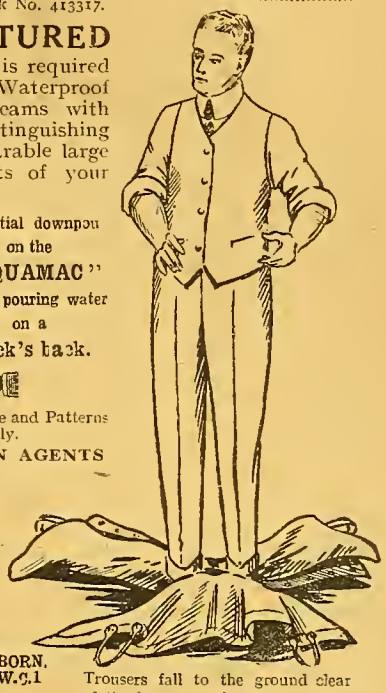
...closures have Pneumatic Fitments creating automatically Self Locking Wind and Waterproof Seams

Just a few pul's at the side seams, as illustration.

Torrential downpour on the "AQUAMAC" is like pouring water on a duck's back.



Torrential downpour on the "AQUAMAC" is like pouring water on a duck's back.



Trousers fall to the ground clear of the boots, as above.

**SEND NO MONEY** Just write for descriptive Catalogue and Patterns at once. Order Book filling rapidly.

**This Suit can be inspected at the Showrooms of our LONDON AGENTS**
**OTHER AGENTS NOW BEING APPOINTED.**

**Special Terms for Traders, Factors, and Trade Riders.**

*The Aquamac Suit is exclusively the invention of the actual Manufacturers*

**THE EXPRESS MANFG. CO. (M/C.), LTD.**
*Manufacturing Waterproof Motor Clothing Experts,*
AQUAMAC WORKS,
**431-7, ROCHDALE ROAD, MANCHESTER.**
*Sole London Agents. Traders and Retail.*
**The SERVICE COMPANY LONDON, LTD.,** 289-293 HIGH HOLBORN, LONDON ——— W.C.1
The Motor Cycle Specialists.

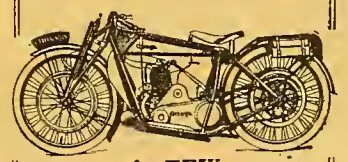


# In these hard times you've no money to waste——

You must buy keenly and carefully. That new motor cycle must be low priced, cheap to run — its depreciation figure must be low, its efficiency high. It must be simple and sure, and good for three hundred and sixty-five days' running per year for a good many years.
In fact

*it must be an*

# OMEGA



**A FEW OMEGA VALUES.**

3 h.p. Two Stroke, Single speed = = = £39 10 0

Ditto, with Duplex Frame, 2-speed Clutch, Kick-starter = £69 10 0

2½ J.A.P. Engine, with 2-speed Clutch, Kick-starter = £66 0 0

2¼ J.A.P. Sports Model, 3-speed Clutch, Kick-starter = £78 10 0

5/6 J.A.P. Twin Sports Model, 3-speed Clutch, Kick-starter = £120 00

W. J. GREEN, LTD.,
Omega Works,
COVENTRY.
London: Bartletts, 93 Gt. Portland St.
Birmingham: Goughs, 183a Broad St.

# COX "ATMOS" CARBURETTER

## NEVER FALTERS!

A FURTHER PROOF OF ITS

## CONSISTENT EFFICIENCY

IS PROVIDED IN THE RESULTS OF THE

# COLMORE CUP

RELIABILITY TRIAL HELD ON 22nd FEBRUARY, 1922

IN THIS TRIAL 214 COMPETITORS TOOK PART, 30 RIDING MACHINES FITTED WITH COX "ATMOS" **GAINING 24 AWARDS.**

THE COX "ATMOS" WAS USED ON THE FOLLOWING MAKES OF MACHINES :—

Ariel, A.J.S., B.S.A., Coventry-Victor, Douglas, James, Levis, Morgan, New Hudson, New Imperial, Norton, O.K.-Junior and Rhode Lightcar.

## THE CALTHORPE 100 GUINEAS TROPHY and GOLD MEDAL

won by Mr. R. E. Pugh on a 2¼ h.p. Levis fitted with Cox "Atmos," for best performance on a machine under 250c.c.

## THE P. J. EVANS CYCLECAR TROPHY and GOLD MEDAL

won by Mr. P. Yates on a 10 h.p. New Hudson fitted with Cox "Atmos," for best performance on a cyclecar.

## STAR CLIMB OF BUSHCOMBE HILL (only 8 competitors made clean ascents.)

Mr. N. Hall, on a 2¾ h.p. O.K.-Junior and sidecar fitted with a Cox "Atmos," made not only a clean ascent, but the most remarkable climb of the day. The carburetter used has been in constant use for upwards of two years.

**COX CARBURETTERS, Ltd.,** Lower Essex St., Birmingham.

IT WILL BE WORTH YOUR WHILE TO KNOW THE COX "ATMOS."

## ALBION LIGHTWEIGHT COUNTERSHAFT GEARS.

Three Speed with Clutch and Kick Starter.
Two Speed with Clutch and Kick Starter.
Two Speed, Plain Box.

SPECIFY ON YOUR NEW MACHINE, OR IF YOU WISH TO CONVERT YOUR PRESENT ONE SEND FOR CATALOGUE.

**ALBION ENGINEERING CO., LTD.,**
UPPER HIGHGATE STREET, BIRMINGHAM.
London Stockists: H. Taylor & Co., Ltd., Store St., W.1.

*The cure for ignition troubles*

# E·I·C MAGNETOS

Fully guaranteed. Ask your agent for prices

E·I·C MAGNETOS Ltd
Sampson Rd North,
BIRMINGHAM.

*West of England Service Depot*
W. B. CORAM
140 Victoria St. Bristol

# SPEEDON MOTOR OILS

HIGH GRADE AND UNEXCELLED FOR CYCLES.

John S. Morris & Son (Oils), Ltd., Cross Lane Oil Works, Manchester

*Know your Speed & Mileage!*

**Model 42** (*as illustrated*)—Black finish. Nickel-plated bezel. Indicates speeds to 60 miles per hour. Total mileage counter to 10,000 and repeats. Quickly reset trip-counter.

**Price £6 5 0** (or without trip, model 40) **£5 15 0**

Back wheel drive for Triumph, **5s.** extra. Back wheel drive for Indian or Harley-Davidson, **10s.** extra.

*Manufactured by*
**NORTH & SONS, Ltd., WATFORD,** & 14, Soho Sq., London, W.1

NORTH'S BRITISH MADE
Watford
**SPEEDOMETERS** for Motor Cycles

H.G.T.

DON'T

# PAY TAXI FARES

## EQUIP YOUR COMBINATION FOR ANY WEATHER.

To-day "Eastings" represent the maximum efficiency in protection from Wind, Rain, Dust, Cold or Broken Glass.

The more acute the weather conditions, the more its perfect protection is appreciated. Judge your sidecar by the comfort it gives, know more about passenger comfort—ask your dealer for full details or write for latest list.

**REDUCED PRICES**

| | |
|---|---|
| ROYAL - - | £5 0 0 |
| STANDARD - | £3 18 0 |
| BABY - - | £3 0 0 |

*SPECIAL NOTE—Complete sets of Royal fittings for converting "Standard" models to "Royal," giving simplified adjustment to any position—and quick, easy entry or exit, price* **45/-**.
*New Celluloids can be fitted and returned in three days. Royal and Standard* **20/-**, *Baby* **16/-**.

Trade EASTING Mark

**EASTING WINDSCREENS LTD.,**
**132, STEELHOUSE LANE, BIRMINGHAM.**

*London Office & Service Depot*
**24, FINSBURY SQUARE, LONDON, E.C.2**
*Telephone* *Clerkenwell* 1904.

WHOLESALE STOCKISTS: AUSTRALIA—J. J. Wilkins & Sons, 586, George St., Sydney. IRELAND—C. E. Jacob, 18, Great Brunswick St., Dublin. SCOTLAND—Of all factors.
Sole Manufacturing Rights in U.S.A.: Messrs. Shillan, Beck & Co., Inc., 68-72, East 131st St., New York.

REGISTERED.

# IMPORTANT ANNOUNCEMENT

## REDUCTION IN PRICE OF THE FAMOUS

# CAMEO

## —WINDSCREEN—

**NEW PRICES.**

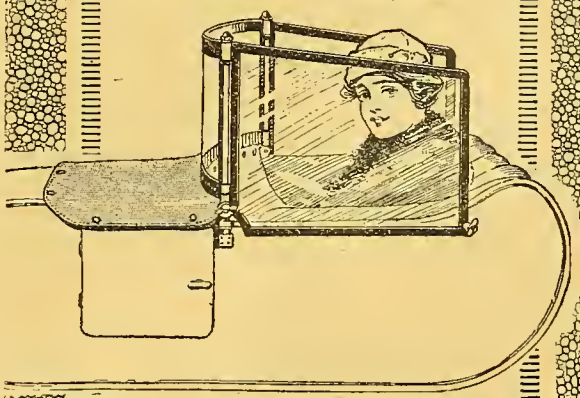
| | |
|---|---|
| Screen only .. .. .. | £2 10 0 |
| With Side Valance .. | £2 15 0 |
| Side Panels, as illustrated, ea. | £1 0 0 |
| Front Apron .. .. | 7 6 |

*The side panels are adaptable to all Cameo Screens, and can be supplied separately.*

**TO USERS.**
Order at once, and avoid disappointment for the holiday.

**TO GARAGES.**
If your stock is low, send an order to-day. There will be a big demand for Easter.

**Ollard, Westcombe & CO., LTD.,**
46-47, Great Charles Street,
BIRMINGHAM.
Central 682. "Ollard, B'ham.'



**LOOK AFTER HER COMFORT.**

Matchless
THE PERFECT PASSENGER MOTORCYCLE

**Sports Model J Combination.**

This model has been introduced to meet the growing demand for a sporting s/c machine. The Sidecar is readily detachable so that machine can be used Solo when desired .. .. .. **£160**

Model H, Spring Frame .. **£170**

Family 2-seater s/c .. **£175**

or **£52** down, the balance in 12 monthly instalments of **£10 16s. 8d.**

Over 50 Guaranteed S.H Machines in Stock

Your present Machine in part exchange.

**NEW 1922 MODELS.**

| | |
|---|---|
| **A.J.S.,** 2¾ h.p., 3-speed, Sports or Touring | £85 0 |
| **A.J.S.,** 7 h.p., Com. | £175 0 |
| **Allon,** 2¾ h.p., 2-speed and k.-s. | £60 0 |
| **Ariel,** 3½ h.p., 3-speed, Sports | £87 10 |
| **Brough Superior,** all models, from | £125 0 |
| **B.S.A.,** 4½ h.p., all chain | £110 0 |
| **B.S.A.,** 4½ h.p., Com. | £142 0 |
| **B.S.A.,** 6-7 h.p., Com. | £164 0 |
| **Calthorpe,** 2¾ h.p., 2-stroke | £36 0 |
| **Calthorpe,** 2¾ h.p. Jap, 2-speed | £65 0 |
| **Douglas,** 2¾ h.p., 2-speed | £75 0 |
| **Humber,** 4¼ h.p., Sports | £100 0 |
| **Levis,** 2¼ h.p., single speed | £48 0 |
| **Levis,** 2¾ h.p., 2-speed, clutch and k.-s. | £68 0 |
| **New Imperial,** 2¾ h.p., 3-speed, all chain | £73 0 |
| **Triumph,** 4 h.p., 3-speed | £105 0 |
| **Norton,** 3½ h.p., 3-speed, Sports | £115 0 |
| **O.K.,** all models, **38 gns.—92 gns.** | |
| **Rudge,** 3½ h.p. multi | £77 0 |
| **Zenith Bradshaw** | £113 0 |
| **Morgans,** all models, from | £150 0 |

Over 50 new models actually in stock.
Easy payments from 4 per cent.

DUNELT
TWO-STROKE

**500 c.c. Interchangeable Wheel Combination.**

The Ideal Family Outfit. In its road performance it resembles a 5/6 H.P. Twin. On hills the Dunelt pulls where the majority of 4-stroke singles would knock and konk out. Complete with spare wheel .. .. .. **£113 8s.** or **£30** down and 12 monthly instalments of **£7 6s. 10d.**

Overhauls and Repairs by Motorcycle Experts.

Allen-Bennett
Motor Company Limited

9, 10, 11, Royal Parade, W. Croydon

Open Saturdays until 7.30 p.m

*Phone: Croydon 2450.*

*Commercial Publicity.*

**TESTED—PROVED—TRUSTED**

**For 1922 T.T. RACES.**

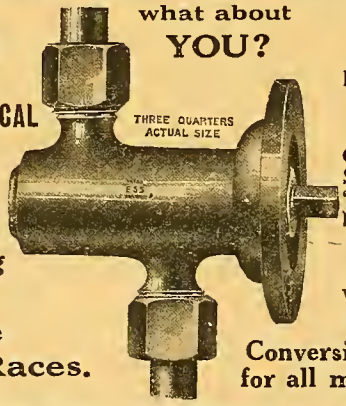
**SHOWELL'S ROTARY PUMP**

has been selected by some of the leading firms and has solved the problem of automatic lubrication for this VITAL TEST.

**SHOWELLS ROTARY PUMP is good enough for them.**

"E.S.S." FITTINGS ARE ECONOMICAL SIMPLE SAFE.

what about YOU?




Pump only **11/6** each.

Conversion Sets for "Best" Lubricators, **16/6** each.

WHY PAY MORE?

Doing Duty in the T.T. Races.

Conversion sets for all machines.

SEND FOR FREE DESCRIPTIVE CATALOGUE.

**EDWIN SHOWELL & SONS, Ltd.,**

"E.S.S." FITTINGS. 14, NEW STREET, BIRMINGHAM. WORKS: STIRCHLEY.

**38 AND 75 GUINEAS.**

**WHY PAY**

these amounts for a machine,

**WHEN YOU CAN BUY AN**

**INDIAN PRINCE MOTOR CYCLE**

for **42 GNS.** and a

**SILVER PRINCE**

for **46 GNS.,**

which are acknowledged to be the **FINEST VALUE IN THE WORLD,** and **FINISH** is up to any **100 GUINEA Model SHOWN** at **OLYMPIA. SEND** direct to **US** for **LISTS** if no **LIVE** agent in your district. **ALWAYS insist upon having SPECIFICATION before BUYING and SEE THAT EVERYTHING CORRESPONDS.**

*MANUFACTURERS:*

**TRYUS CYCLE CO.,**

**Johnstone Street, Birchfields, BIRMINGHAM.**

## MOTOR CYCLES FOR SALE.

### Bat.

BAT-J.A.P. 6h.p. Combination, countershaft, all chain, fully equipped; slump price, £55.—179, Catfield Rd., St. Albans. [4895

BAT-J.A.P. 8h.p. Combination, new Magdyno, oversize tyres, spare wheel; £165. — Edoaville, Park Rd., Farnborough, Hants. [5175

4h.p. Sporting Bat-Jap, very fast, perfect, photo; nearest £35; exchange machine with gears.—Williams, 17, Glanmor Crescent, Swansea. [4750

1920 Bat, 8 h.p., spring frame, Sunbeam sidecar, Dunlops, unpunctured, negligible mileage, practically unscratched; £102, offers.—"Mendip," Queen's Rd., Cheltenham. [5441

BAT 1921 8h.p. Combination, with spare wheel, first-class order; £110; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3894

### Beardmore.

1921 Beardmore, spring frame, guaranteed perfect and unscratched; £68, or offers.—Culpan, Lentonville," Castle St., Cambridge. [4625

BEARDMORE-PRECISION.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7227

BEARDMORE-PRECISION Combination 3½h.p. 1921, spring frame, electric lighting, excellent condition and appearance; £80.—Chirney's Garage, Harpenden. [4651

1922 Beardmore-Precision 3h.p., brand new, now reduced to £65; lightweight 3h.p. sidecar combination, £85; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [8962

### Blackburne.

1920 4h.p. Blackburne Combination, in excellent condition, and as new; £85.—Sibley's Garage, Martock, Somerset. [4918

BLACKBURNE-HOSKISON, August, 1921, 4h.p., 2-speed, hand clutch, kick starter, electric lighting set (accumulator), tyres as new, tax paid. Any trial. Owner giving up for health reasons. What offers.—Dobson, 55, Marchmont Rd., Edinburgh. [4978

8h.p. Blackburne, August 1919, Middleton spring wheel, touring sidecar 1921, windscreen, Cox Atmos, Tan-sad, D.A. lighting, speedometer, etc.; tax paid; stiff test gladly; £90 or exchange solo A.B.C., etc. 'Phone: Hampstead 8142, or p.c., for details.—3, Buckland Crescent, Swiss Cottage, N.W.3. [5730

*Spare Parts:*

BLACKBURNE Engines—All spares in stock; delivery on receipt of order.—D.R. Engineering Co., Ltd., Dunfermline. [5862

### Bradbury.

4h.p. Bradbury, 1921; £65.—Wauchope's, 9, Shoe Lane, London. [5856

BRADBURY, 1920, 4¼h.p., 3-speed, K.S., all on, perfect condition; £75.—Ingle, Hilton, Hunts. [5368

BRADBURY 3½h.p., 2-speed gear box, kick start, Binks, Bosch lamp, licensed, ride away; first £28.—90, Church St., Preston. [5310

BRADBURY 4h.p. Combination, as new, C.S. gears, clutch, K.S., all-chain drive, tax paid; £65.—174, Vicarage Rd., Leyton. [5037

WAUCHOPE'S, 9, Shoe Lane, London.—6h.p. Bradbury combination, new 1921, reduced to £130; no extra charge for easy terms [4511

4h.p. Bradbury, fully equipped, 2-speed, K.S., Binks, guaranteed mechanically perfect; genuine sacrifice, first 26 gns.—Ramsden's, Maybell Av., Blackpool. [4839

BRADBURY 4h.p., Bosch magneto, variable gear, Druid spring forks, good tyres, perfect order, and coachbuilt sidecar; £25; bargain.—Box 9361, c/o *The Motor Cycle.* [4967

1921 5-6h.p. Bradbury and sidecar, complete with screen and lamps, perfect condition, unscratched; £125.—Claremont Garage Co., Ltd., 38, High St., Shrewsbury. [4783

1921 Bradbury Combination 6h.p., Grindlay cantilever sidecar, lamps, Easting windscreen, guaranteed condition; £105; Montgomeryshire.—Box 9345, c/o *The Motor Cycle.* [4757

1921 (June) Bradbury, Stanford Classic S.C., 4¼h.p., 2-speed, chain drive, clutch, K.S., fully equipped, mileage 500 guaranteed; £85, or near offer.—Rose, North St., Droitwich. [4855

*Spare Parts:*

BRADBURY Spare Parts; see our advertisements under Parts and Accessories.—Bright and Hayles, 78, Church St., Camberwell. [5480

### Brough.

NEW 1922 Brough 3½h.p. flat twin, o.h.v., 3-speed Sports model actually in stock for immediate delivery, exceptional value; £110.—Premier Motor Co., Aston Rd., Birmingham. [5878

# THREE WEEKS!

**And EASTER will be upon us. Be assured of an enjoyable holiday by purchasing a machine from us, either New or Second-hand.**

## CASH or DEFERRED PAYMENTS

| DEPOSIT and | | 12 MONTHLY PAYMENTS. |
|---|---|---|
| £15 | **CLEVELAND, 1920.** 3 h.p., 2-speed, K.S./C., fully equipped ... ... ... ... | £2-13-9 |
| £20 | **CALTHORPE-J.A.P.** Fully equipped. Shop-soiled only ... ... ... ... | £3-2-8 |
| £35 | **JAMES, 1919.** 5/6 h.p. Combination, fully equipped, screen, mud-shields, tax paid 1922 ... ... ... | £5-7-6 |
| £25 | **ALLDAYS-ALLON, 1921.** 2¾ h.p., 3-speed Combination, K.S. Clutch, fully equipped, speedometer, mud-shield, screen ... ... ... ... | £4-0-9 |
| £40 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p. C.B. Combination, electrical model, fine condition | £8-10-3 |
| £30 | **HARLEY-DAVIDSON. 1920.** 7-9 h.p., electrical model, electric horn, new condition. | £6-5-5 |
| £25 | **NORTON (1921 LATE).** 3½ h.p., No. 9 Model, equipped as new. ... ... ... ... | £4-9-7 |
| £20 | **RUDGE, 1919.** MULTI T.T., fully equipped, tax paid 1922, good condition | £2-9-3 |
| £30 | **ROYAL ENFIELD, 1920.** 8 h.p. Combination, dynamo lighting, horn, speedometer, new tyre, good condition ... | £7-5-0 |
| £40 | **SUNBEAM, 1918.** 3½ h.p. Combination, 3-speed, K.S. Clutch, fully equipped, good condition ... ... ... | £5-7-6 |
| £40 | **BAT (1 ONLY).** NEW (SHOP-SOILED), 6 h.p., 3-speed, C./K.S. ... ... | £8-6-8 |
| £40 | **HARLEY-DAVIDSON.** 4-5 h.p. sports, Swan sporting sidecar, fully equipped, as new | £9-3-4 |
| £60 | **COVENTRY-PREMIER, 1921.** 8 h.p. Runabout, 3-speeds and reverse, dynamo lighting, dickey seat, tax paid 1922, absolutely as new ... ... | £9-8-2 |
| £30 | **A.J.S. 1918 COMBINATION** LUCAS accessories, spare wheel, screen, speedometer, tax paid ... ... ... ... | £6-5-5 |
| £25 | **INDIAN SCOUT, 1920.** Speedometer, fully equipped, new condition ... ... ... | £5-7-6 |
| £15 | **INDIAN.** T. T. Clutch model, fully equipped, very fast ... ... | £2-13-9 |

# PARKER'S

## BOLTON: MANCHESTER:

**Bradshawgate.** Tel: 1348.

**245, Deansgate.** Tel: Cen. 864.

## MOTOR CYCLES FOR SALE.

### Brough Superior.

BROUGH SUPERIORS.—Order your new mount from us. We are the Brough experts. Specially tuned to order. Mark I., 8h.p., side valve, £150; sporting combination, with screen, step, mat, and apron, £180; Mark I., 90mm. bore, o.h.v., £160; Mark II., 6.5h.p. M.A.G. engine, £125; Mark II. combination, £150. Special Service Agents; lists.—G. and J. Dawson, The Ideal Garage, Cambridge. 'Phone: 993. [0834

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½, o.h.v., 3-speed, clutch, and kick starter, £160; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0733

*Spare Parts:*

SPARES.—All engine, gear box, and frame spares for Brough Superior in stock; write for lists.—G. and J. Dawson, The Ideal Garage, Cambridge. [0835

### B.S.A.

B.S.A. 1922 Models in stock; catalogue with pleasure.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

B.S.A. 3½h.p., free engine, perfect condition; £36.—Steer, 67, Balmoral Rd., N.W.2. [4745

1921 4¼h.p. B.S.A., chain drive, brand new; £105.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [4712

NEW 1921 4¼h.p. B.S.A. Combination and accessories; £125.—Bounds Garage, 223, High Rd., Kilburn. [5389

8h.p. B.S.A. Combination in stock, all models.—Keene, 301, Goldhawk Rd., Shepherd's Bush, London, W. [3625

1913 B.S.A. 3½h.p., all chain, kick start, lamps and horn, all in good condition; £30.—Walbro, Ely, Cambs. [4939

B.S.A. 4¼h.p., 3-speed, countershaft, wide tank, new condition; 43 gns.—Willson, "Brentor," Shooters Hill, S.E.18. [5115

B.S.A. Combination (late 1920), in new condition and guaranteed. Insured until August; £95.—Stanbridge, Cranbrook. [5755

B.S.A. and sidecar, a most reliable combination, fully equipped, new tyres, etc.; offers wanted.—Sibley's Garage, Martock, Somerset. [4917

B.S.A. 1922 new 8h.p. Combination; £185; immediate delivery - or exchange.—Harry Nash. 'Phone: 2837 Hammersmith. [3658

B.S.A. 1922.—Brand new 4¼h.p., model H2, in stock; £110; easy payments arranged; lists free.—Wilkins Simpson, Opposite Olympia, London. [5409

1915 4¼h.p. B.S.A. Combination, lamps, horn, etc., in splendid condition £70.—D.R. Engineering Co., Ltd., Hospital Hill, Dunfermline. [5859

42 GNS.—Sacrifice! B.S.A. Combination, 4¼h.p., 3-speed, lamps, windscreen, excellent order.—15, Elsenham St., Southfields, S.W.18. [5070

B.S.A. 1916 4h.p., chain, 3-speed, Middleton sidecar, hood, screen, tax, insurance paid, lamps, horn; £68.—122, Dalston Lane, Hackney. [5500

BARGAIN.—New B.S.A. Combination, all chain, No. 3 sidecar, equipped; £120.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [5206

B.S.A. 1921 Combination, special machine, many spares, lamps, tools, very fine condition, £1 ride 50 miles; £105.—19, Edgedale Rd., Sheffield. [3752

£55.—B.S.A. Combination, 1916, luggage dickey, hood, screen, Tan-Sad, electric, mechanically perfect.—31, Holmesdale Avenue, East Sheen, S.W. [5004

B.S.A. 1921 4¼h.p., Model H.2, all-chain drive with special coachbuilt sidecar, slightly shop-soiled; £120.—P. J. Evans, John Bright St., Birmingham. [4910

1920 B.S.A. Combination, 4¼h.p., Lucas, dynamo lighting, spares, in splendid order; no good offer refused.—Box No. 8966, c/o *The Motor Cycle.* [2021

B.S.A., all 1922 models supplied; exchanges; also new 1921 4¼h.p. K.2 Combination, No. 2 sidecar; £114.—Eagles and Co., 275, High St., Aston, London. [5797

B.S.A. 4¼h.p., purchased new February, 1921, mechanical oiling, lamps, horn, copper exhaust, done 600 miles, as new; £85.—Milne, 8, Wetherby Terrace, Earls Court. [5052

B.S.A. 1920 Canoelet Combination, electric lighting, excellent order; £79. 1922 models in stock; exchanges arranged.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [3299

## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. 1922.—All models; immediate deliveries.—Clifford Motories, Eastwood, Notts. [8827

1922 6h.p. B.S.A. Combination; £162.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [4707

B.S.A. Combination, all chain, Swan sporting side-car, all lamps, 2,000 miles; only £95.—The Winstan-Henney Motor Co., 63, South End, Croydon. 'Phone 2451. [5739

1919 4¼h.p. B.S.A. Combination, tank, handle-bars, etc., re-enamelled, plated, mechanically perfect; 68 gns.; appointment.—Root, 79, Huntingdon Rd., East Finchley. [5531

1920 4¼h.p. B.S.A., all chain, and No. 2 sidecar, lamps, Tan-Sad, Easting, speedometer, luggage grid, excellent condition; 92 gns.—Edwards, 101, Gt. Portland St., W. [4157

B.S.A. 1920 4¼h.p. all-chain Combination, splendid condition, electric lighting, Easting, luggage grid; £115; or exchange Morgan.—Cross, 5, Chatsworth Rd., Brondesbury. [5054

B.S.A. Combination Machine 1918, sidecar 1921, fully equipped, cameo screen, perfect condition; £60.—Biss, 44, Sun St., Waltham Abbey. 'Phone, Waltham Cross 299. [5445

B.S.A. 4¼h.p. 1916 C.S. Combination, 3 speeds, clutch, K.S., lamps, fully equipped, Easting wind-screen, runs splendid; sacrifice, £60.—143, Ravensbury Rd., Earlsfield, S.W.18. [5604

B.S.A. 1920 4¼h.p. all-chain Combination, Lucas lamps, screen, luggage grid, Klaxon, excellent condition throughout, trial or examination; £80.—Minchin, Shorwell, Isle of Wight. [5312

B.S.A. 1920 4¼h.p. Combination, lamps, speedo-meter, Easting and luggage grid, plenty spares and tools, low mileage; £95.—Young, 22a, Hillside Gardens, Highgate, N.6. [5696

EXCEPTIONAL Bargain.—B.S.A., Model H2, 4½h.p., with B.S.A. sidecar, 1921 latest model combination, brand new; £125.—Wilkins Simpson, Opposite Olympia, London. [5417

B.S.A., 1917, 4¼h.p., 3-speed clutch and sidecar, with child's seat, in splendid condition, little used; £75, genuine lot. After 6 o'clock.—42, Oxford Rd., Kilburn. Photo sent. [4987

1921 6-7h.p. Twin B.S.A. Combination, spare wheel, D.A. lighting, speedometer, etc., condition as brand new, unscratched; £128.—37, Canterbury Rd., Ball's Pond Rd., Dalston, N.1. [5866

B.S.A. 1922 Models for immediate delivery; best prices allowed on second-hand models in part payment.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3884

B.S.A.-PRECISION 4h.p., Bosch, perfect order; great bargain, £30; private owner; appointment; 'phone 217 Chiswick, or Sunday.—H. S. S. Young, 11, Marlborough Crescent, Bedford Park, W. [5306

B.S.A., 1915, 4¼h.p., 3-speed, countershaft K.S., Cancelet K4, Easting, luggage grid, all lamps, spares, tyres excellent; £65, or exchange for new Morgan, cash balance.—Pond, 7, High St., Slough. [4991

1920 B.S.A. Combination, all chain, 1921 sidecar, screen, hood, Tan-Sad, fully equipped, very little used, new April, 1921, trial or inspection by appointment; £100.—Dease, 57, Earls Court Sq., S.W.5. [4829

B.S.A. 1922, all models.—It should be noted that the Plus One sidecar body at £27 is suitable for fitting to these machines; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5819

1921 B.S.A. Combination 4¼h.p., all chain, fully equipped, tax paid, insured, indistinguishable from new; bargain, £115; must sell quick, room wanted for car; after 2 p.m. only.—Evans, 369, High Rd., Leyton, E. [4647

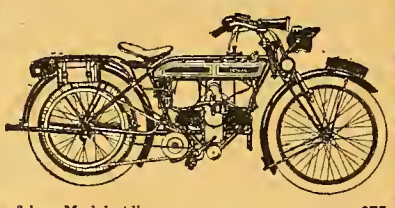
1919 (late) B.S.A. 4¼h.p. chain-cum-belt, Hopley folding sidecar, excellent condition; only used Wednesday afternoons during summer; Easting, lamps, speedometer, etc.; £85, or near offer.—Overy, Windmill St., Gravesend. [5533

PUBLIC Official has 4½h.p. All-chain Model H B.S.A., No. 2 sidecar, absolutely faultless, unscratched, fully taxed, insured, 100 miles to bona-fide purchaser; £75; just bought motor car.—Account-ant, 277, Chiswick High Rd. [5022

B.S.A. 4¼h.p. all chain 1920, Milford sidecar, Orto Triplex screen, horn, lamps, grid, tyres, and general condition excellent, spare chains, valve, tubes, carefully driven; first owner, always reliable; £80.—Topliss, 89, Fotheringham Rd., Enfield. [5181

B.S.A. 4¼h.p. 1921, and Millford skiff 1921, with spring carrier, 1,500 miles only, best mechanical pump, Easting, F.E.W. valve attachments, lamps, horn, all tools, perfect mechanically, unscratched, unpunctured; £105.—Freeman, Harley Cottage, Gerrards Cross. [5549

## DOUGLAS.



2¾ h.p. Model, All on ..... £75
4 h.p. Combination, All on ..... £135

## A. J. S.

2¾ h.p. Sports Model ..... £85
7 h.p. Combination ..... £175

## ROYAL-ENFIELD.

2¼ h.p. Model ..... £55
8 h.p. Model Combination ..... £140
8 h.p. Model Dynamo Combination ..... £158

## MATCHLESS.

8 h.p. Sports Model ..... £130
8 h.p. Combination ..... £170

## ARIEL.

3½ h.p. Sports Model ..... £87 10
3½ h.p. Combination ..... £125
6-7 h.p. Combination ..... £140

## ZENITH-BRADSHAW.

3½ h.p. Chain-drive Model ..... £119

## ANY MAKE SUPPLIED.

## EXCHANGES A SPECIALITY.
## DEFERRED PAYMENTS.

## SECONDHAND BARGAINS.

1922 3½ h.p. **ZENITH BRADSHAW,** shop soiled ..... £100
1921 3½ h.p. **N.U.T.,** shop soiled ..... £90
1921 2¾ h.p. **ROYAL RUBY** ..... £50
1921 2¼ h.p. **FEDERAL,** 2-speed ..... £40
1921 2¾ h.p. **DOUGLAS,** All on ..... £55
1920 4 h.p. **HARLEY DAVIDSON,** Combination ..... £110
1920 3½ h.p. **A.B.C.,** dynamo ..... £75
1919 8 h.p. **SUNBEAM,** Combination .... £112
1919 3½ h.p. **ROVER,** Combination ..... £80
1916 4½ h.p. **B.S.A.,** Combination ..... £65
1915 2¾ h.p. **DOUGLAS,** dynamo ..... £37
1914 2¾ h.p. **A.J.S.** ..... £42
2½ h.p. **CALTHORPE,** bargain ..... £17

MANY MORE.

## SEND FOR FULL LIST.

## R. BAMBER & Co., Ltd.,
## 2, EASTBANK ST.,
'Phone 607. SOUTHPORT.


## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. 1921 6-7h.p. Combination, B.S.A., sidecar Lucas Magdyno, fully equipped, spare whee Cowey speedometer, Easting Royal, insurance, ta paid, low mileage, splendid condition, cost £26 accept £155 cash.—Underwood, 7, King's Colleg Rd., S. Hampstead. [539

B.S.A. 1921 6-7h.p. Twin Combination, Lucas ma dyno lighting, interchangeable wheels, spa wheel, Watford speedometer, Cowey horn, coachbui dashboard with screen attached, hood, luggage carri covers for sidecar and spare wheel, complete set spares; a perfect outfit, condition as new; £165.- Jeffreys, 25, London Rd., Maldon, Essex. [51

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bor St., Ealing. [360

B.S.A. Specialists.—All spares by return.—County Cy and Motor Co., Broad St., Birmingham. [467

THE Promptest Firm for B.S.A. Spares.—Forfie Motors, Forfield Place, Leamington Spa. [31

HERBERT ROBINSON, Ltd., Green St., Car bridge.—All B.S.A. parts in stock; no waiting [49

B.S.A. Spares can be had by return, post fre from Jones Garage, B.S.A. Agents and Spar Service Depot Broadway, Muswell Hill, N.10. [08

GODFREYS', Ltd., 208, Great Portland St., Londo W.1.—Complete stock of all B.S.A. spare pa always in stock. Write for free spare part list, stati year of manufacture. [07

### Calcott.

2¾h.p. Calcott, believed 1916, Bosch, new B. a 4 B., tyres, re-enamelled, equipped; barga £18/10.—67, Fernlea Rd., Balham. [56

### Calthorpe.

CALTHORPE Junior, 2-speed, perfect order; £ —Tucker, 56, Lordship Lane, Tottenham. [55

CALTHORPE 2-stroke 2¾h.p., splendid conditi £28/10.—277, Garratt Lane, Earlsfield. [5

CALTHORPE-J.A.P. 2¾h.p., 1920, 2-speed, fect; £45.—Clark, 7, Exhibition Rd., S.W.7. [3

1921 Calthorpe-Jap 2¾h.p., 2-speed, clutch and k starter, brand new, and cash exchange for g combination.—34, Manchester Rd., Swindon. [2

£25.—Calthorpe-Jap 2¾h.p. 1915, Enfield 2-spe clutch, recently overhauled, tax paid, all ac sories.—23, Glenlyon Rd., Eltham Park, S.E.9. [5

1920 2¾h.p. Calthorpe-Jap, 2-speed, electric li ing, horn, tools, not run 500 miles, per running order; reason selling, owner injured at wo £50.—44, Bath St., Ilkeston. [5

CALTHORPE-J.A.P. 2¾h.p., Enfield 2-speed g clutch, engine overhauled by makers; £30 c seen Saturday afternoon; write first.—Millingt Homedale, Clarence Rd., Wallington. [4

CALTHORPE 5h.p. 1920 (Oct.), 2-speed, lan Klaxon, accessories, Tan-Sad, tax and insura covered to end of current year; little used; in per condition; £42.—Underwood, 6, Druce Rd., Dulw S.E.21. [5

CALTHORPE 1921 Combination, actually In s for immediate delivery; cash or deferred ter place your orders with the Calthorpe specialis Burlington Motors, Ltd., Clapham Common, S.W 'Phone: Brixton 2417. [C

### Cedos.

KICKHAM, Stokes Croft, Bristol, Sole Dis Agent for Cedos; unequalled service, rep etc. [

CEDOS Bargains.—Standard 2¼h.p., 2-speed, b new, £49; also K.S. model, 2½h.p., 2-speed, b new, £57 or offer.—Frank Palmer, Hyde Park, L [

### Centaur.

CENTAUR 3½h.p. 1914, excellent condition; £ 7, Exhibition Rd, S.W.7. [

£20.—3½h.p. Centaur, 2-speed, clutch, fine o appearance, trial; exchange 1914 Douglas; 6.—37, Leamington Rd. Villas, W.11. [

### Chater-Jap.

CHATER-J.A.P. Combination 8h.p., 3-speed, any load; £68; take lower power part.—57, bury St., Camberwell, London. [

### Chater-Lea.

IMMEDIATE delivery all models 1922 Chate motor cycles; stamp for catalogue.—H. Beard 147, Burlington St., Liverpool. [

CHATER-LEA 8h.p. Tandem, sidecar will ho adult and 2 children; hood, lamps, speedom tax and insurance paid; £80.—141, Tufnell Park Holloway, N.7. [

3½h.p. Chater-Lea, Antoine engine, M.O.V., E 32 Amac, N.S.U. 2-speed, P.H. lamp set, horn, tyres, sporting sidecar, wicker; bargain, £15 Ford, Sotwell, nr. Wallingford, Berks.

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Douglas.

h.p. T.T. Douglas, specially tuned, very fast, long copper exhaust, Lucas accessories, not appearance and mechanical condition perfect; —1, College Lane, Church End, Finchley. [5196

R Douglas 1922 2¾h.p. and 4h.p. combinations, get in touch with us; we are North London agents give you the best of service; all spares in stock; no rubbish.—Jones Garage, The Broadway, Muswell [0786

ARKER'S Motors can supply all Douglas 1922 models at list prices and give an insurance policy ast mechanical breakdown for 12 months free. , deferred, or exchanges—194, Balham High Rd., .12. [1212

21 Douglas 2¾h.p., 2-speed, all on, mileage under 900, newly decarbonised, tyres as new, Sterling shields, Beacon oilskin suit, fur-lined helmet. ders Green.) £65.—Box 9359, c/o *The Motor* e. (D) [4964

OUGLAS 1921 2¾h.p., 3-speed, T.T. bars, new belt and Hutchinson superstud back tyre, com- horn, lamps, etc., tax paid till end of year; a bargain, £70.—Wilkins Simpson, Opposite Olym- London. [5418

15 (not W.D.) 2¾h.p. Douglas, speedometer, lamps, horn, Tan-Sad pillion, tyres unpunc- d, perfect condition, just overhauled and re- nelled; sacrifice £35.—34, Amwell St., Hoddes- Herts. [5564

IRMINGHAM and District.—For fair value ex- changes, or simple and confidential instalment agement, write official wholesale and retail Doug- distributors, Frank Whitworth, 139, New St., ningham. [2152

16 2¾h.p. Douglas, 2-speed, discs, lamps, knee grips, etc., tax paid to December, £56; or model, 3-speed, clutch, kick starter, lamps, Cowey, practically new, £70. Many others to choose .—Below.

19 4h.p. Douglas Combination, fully equipped, unscratched; £75.—Daw, Douglas Agent, 114, ton Hill. [5244

21 Douglas 2¾h.p., 2-speed, all on, delivered July, mileage under 2,000, privately owned, only week-ends, perfect condition; £55, no offers; be seen Saturday after 3.—Heard, 43, Horseferry Westminster. [4881

OUGLAS 4h.p. Combination, 1920, purchased brand new January, 1921, Easting, lamp set, ford, horn, tax paid, beautiful condition, un- ctured, low mileage, any trial; £110.—R. Cutchee, dock Rd., Oxhey, Herts. [5147

OUGLAS 2¾h.p. 1921, as new, 2-speed; a genuine offer, including speedometer, Cowey, Klaxon, -Sad, tax paid, insured, tools, lamps, etc.; £60, or offer. 'Phone: Chingford 113, or write—Durs- , Eglington Rd., Chingford. [5639

21 Model Douglas 2¾h.p., 3 speeds, complete with lamps, etc., fitted with Mills-Fulford hbuilt sidecar, hood, windscreen with side wings, ect condition, tax paid to Dec. 31st; £85, a real aio.—19, Mersea Rd., Colchester. [5112

NCRATED 1919-1916 2¾h.p. W.D. Douglas, lamps, generator, Cowey horn and speedometer, s; etc., just overhauled, mechanically perfect, ap- ance excellent; £40.—Write, Diprose, 7, Grove nue, Church End, Finchley, N.3. [5684

ICKHAM, Stokes Croft, Bristol, the Douglas Agent with real experience and knowledge of a glas. Successes during 1920 on this mount: 38 s, 17 seconds, and 8 thirds, also 6 special dies. Let me deal with your order. Unequalled ice, repairs, etc. [3150

h.p. Douglas, 2-speed, clutch and kick starter, Lucas lamp (unused), horn, speedometer, knee s, new tools, spare new belt and chain, new valise, Amac carburetter, just overhauled by makers, ect condition, total mileage 3,400; deposit and run; £50.—Habershon, Cave, Erith, Kent. [4739

19 (late), date guaranteed, fitted 1920 clutch, 4h.p. Combination, electric light, speedometer, or, mechanical horn, screen, hood, not done 1,800 s, engine just decarbonised, one owner's hands, ything perfect and looks like new, genuine bar- , owner buying car; first 75 gns.—W. J. C. or Exchange, 5, Addison Avenue, Holland Park, 1. Park 2071. [5257

RE you looking for a Douglas? If so, have you heard of our reconditioned machines, from /10, built up of 75% new parts, new tyres, etc., special copper exhaust, a really posh 'bus; but, t is more, we give a 3 months' guarantee. Book or order for Easter and prevent disappointment.— or write for particulars to Central Garage, 302, don Rd., Thornton Heath. [5254

OUGLAS Agents. All 1922 Models in stock. 2¾h.p. 2-speed, all on, £75; 2¾h.p. 3-speed ch, all on, £90; 4h.p. 3-speed clutch, all £110; 3½h.p. fast sports, all on, £130; Combination, all on, £135; 6h.p. Combin- n, all on, £160. Exchanges, extended pay- t terms to suit individual requirements. Cata- es on application.—Herbert Robinson, Ltd., Green Cambridge. [5714

# THREE WEEKS TO EASTER!

In view of the approach of the Spring holidays we have secured a large and varied stock of new motor cycles to enable us to execute quickly the large number of orders that are placed at this time of the year. At present we can supply from stock most models of the following popular makes and you will be well advised to inform us of your requirements without delay.

## NEW 1922 MODELS OFFERED.

| | |
|---|---|
| A.J.S. | N.U.T. |
| ALLON. | NEW IMPERIAL. |
| ARIEL. | QUADRANT. |
| B.S.A. | ROYAL ENFIELD. |
| HAWKER. | RALEIGH. |
| INDIAN. | RUDGE. |
| LEVIS. | SCOTT. |
| MATCHLESS. | SUNBEAM. |
| MARTINSYDE. | TRIUMPH. |
| METRO-TYLER. | ZENITH-BRADSHAW. |

ROVER LIGHT CARS.
BAYLISS-THOMAS LIGHT CARS.

## EXCHANGES ARRANGED.

The selection of used machines below carry our guarantee of perfect mechanical condition.

## SECONDHAND.

**A.J.S.**, 1921, 7 h.p. Combination, 3 speeds, clutch and kick-starter, Lucas Magdyno lighting. As new ..... £160

**DOUGLAS**, 1918, 4 h.p. Combination, 3 speeds, clutch and kick-starter ..... £85

**RUDGE-MULTI**, 1921, 3½ h.p., lamps, mechanical horn ..... £63

**DOUGLAS**, 1916, 2¾ h.p., 2 speeds, lamps, horn, tax paid ..... £38

**ROVER**, 1919, 3½ h.p., 3 speeds, clutch and kick-starter, lamps, horn, and Millford sidecar ..... £76

**TRIUMPH**, 1920, 4 h.p., 3 speeds, clutch and kick-starter, lamps, horn, speedometer, and Canoelet sidecar ..... £90

**RUDGE**, 1920, 5-6 h.p. Combination, Multi gear, clutch, foot-starter, lamps, horn, tax paid .. £85

**VELOCETTE**, 1919, 2¾ h.p., 2 stroke, 2 speeds, all chain drive, lamps, and horn ..... £35

**B.S.A.**, 1919, 4½ h.p. Combination, 3 speeds, clutch and kick-starter, lamps, horn, speedometer, hood, screen, luggage grid ..... £90

**RUDGE**, 1921, 3½ h.p., I.O.M. model, Multi gear and clutch, tax paid ..... £63

**ROVER**, 1920, 5-6 h.p. countershaft, 3 speed gear, all chain drive, lamps, horn, speedometer, windscreen, Tan-Sad seat, and Millford Empress sidecar ..... £185

## DEFERRED PAYMENTS

Both new and secondhand machines can be purchased under our Credit Scheme at an extra charge of 4 per cent. only, except in a few cases where the manufacturers have stipulated other rates.

## THE EASTERN GARAGE CO.

(Official Repairers to R.A.C., A.C.U., A.A., & M.U.)

**418 ROMFORD ROAD, FOREST GATE, E.7.**

Telephone ..... 490 East Ham.
Telegrams ..... "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### Douglas.

*Spare Parts:*

DOUGLAS Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3611

1911 Douglas Spares, Repairs.—Write or call, F. W. Allsopp, 35, Clifford St., Manchester, S.E. [5436

HERBERT ROBINSON, Ltd., Green St., Cambridge, the Douglas Specialists.—Lists free; the trade supplied. [4945

DOUGLAS spares; large stocks of genuine Douglas spares; dealers supplied at trade rates.—Rivett, 236, High Rd., Leytonstone. [2267

DOUGLAS Spares.—We hold a complete stock for all models; post free. Douglas Agents and spare part stockists.—Jones Garage, Broadway, Muswell Hill, N.10. [0806

FRANK WHITWORTH, Ltd., 139, New St., Birmingham.—Complete stock, genuine guaranteed Douglas spare parts; prompt attention, immediate dispatch, lowest cash prices. [2147

### Edmund.

EDMUND, the great spring frame machines.—Gourlay, the Agent, Fallowfield, Manchester. [3648

EDMUND 1920 2½h.p., Enfield 2-speed gear, first-class condition; £41.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3895

EDMUND 1921 2¾h.p., spring frame, Blackburne engine, Burman 2-speed gear, new machine, fully guaranteed; £75.—P. J. Evans, John Bright St., Birmingham. [4912

### Enfield.

ENFIELD, new 1922 models in stock. 2-stroke and Combinations.—Moss, Wem. [5744

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

NEW 1921 Enfield Combination and accessories; £130.—Bounds Garage, High Rd., Kilburn. [5388

NEW 1921 Enfield Lightweight and accessories; £50.—Bounds Garage, 223, High Rd., Kilburn. [5392

£48.—Brand new Enfield Lightweight unpacked! Exchanges.—Kent's, 417, Lord St., Southport. [5584

BRAND New Enfield, 2-stroke, 2-speed, full equipment; £45.—4, Balliol Rd., North Kensington. [5081

ENFIELD Combination 1920, as new, speedometer; £100.—Tucker, 56, Lordship Lane, Tottenham. [5570

ENFIELD Combination 1914; £55; perfect order, trial.—Tucker, 56, Lordship Lane, Tottenham. [5568

1919 Enfield Combination, splendid condition; £75, or near offer.—64, Church St., Edgware Rd., W. [5659

ENFIELDS.—1922 Combinations and 2-speed lightweights in stock.—Clifford Motories, Eastwood, Notts. [8829

ENFIELD, 1921, 8h.p. Combination, Magdyno, Binks, windscreen; £135.—23, Hamilton Rd., Reading. [5013

1918 Enfield Combination, 8h.p. Colonial model; a bargain, £85; like new.—Ross, 86, High Rd., Lee, S.E. [3481

1916-17 T.T. 3h.p. Twin Enfield, 2-speed, clutch, splendid condition; £38.—35, Upper Tooting Rd., S.W. [5039

NEW 1922 Enfield Combinations in stock.—Bounds Garage, 223, High Rd., Kilburn. 'Phone: Hampstead 1863. [5387

ENFIELD 1921 Lightweight, 2-speed, k.s., all on, tax paid, perfect order; £42.—90, Elmbourne Rd., S.W.17. [5178

1922 8h.p. Royal Enfield Combination, Magdyno, horn; £158.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [4708

LONGMAN Bros., Bond St., Ealing, Official Enfield District Agents; cash, exchange, or deferred payments, 4% extra. [4485

1921 Enfield Combination, brand new; £129; exchange.—Shepherd, Enfield Highway. 'Phone: Waltham Cross 31. [0801

ENFIELD 1916 Combination, excellent condition, Bluemel screen; £72.—71, St. John St., E.C. 'Phone: City 6961. [4630

1922 2¼h.p. Royal Enfield, 2-stroke 2-speed, kick starter, £57.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [4709

ENFIELD, 1921; exceptional bargain; 2-speed, 2-stroke, £46; tax paid.— Barker, 216, Portobello Rd., North Kensington. [5600

1914 Enfield 3h.p., M.A.G., equipped, tax paid, excellent order; 23 gns.—Edwards, 50, Harrington Rd., South Kensington. [4455

8h.p. Enfield Combination, 1920 (August), hood, screen, licensed, insured; £100 or offer.—Bradley, East Grinstead. [5193,

## MOTOR CYCLES FOR SALE.

### Enfield.

ENFIELD Combination 1916 6h.p., splendid running order, accessories; best offer.—2, Palmerston Rd., Southfields, S.W.18. [4817

DAN GUY, Weymouth.—Enfield 1921 8h.p., Magdyno, double-seated sidecar, hood and screen, guaranteed perfect; £125. [0818

ENFIELD 6h.p. Combination, splendid condition, overhauled; £70; seen any time.—"Carlton," Crook Log, Bexley Heath. [4810

1916 8h.p. Enfield Combination, electric lighting, windscreen, good condition; 62 gns.—Edwards, 101, Great Portland St., W. [5888

6h.p. Enfield Combination, speedometer Easting, lamps, complete outfit as new; bargain, £95.—Rigby, 335, Blackburn Rd., Bolton. [4800

ENFIELD, 2-stroke, 2-speed, perfect, practically new accessories, insured: £38/10.—Corney, 75, St. Leonard's Rd., Mortlake, Surrey. [3744

£130.—1921 Enfield (Vickers) 8h.p. Combination, Magdyno, all accessories, perfect condition.—8A, Culverden Down, Tunbridge Wells. [5448

ENFIELD Combination 6h.p., fully equipped, engineer owned, guaranteed mechanically perfect, any trial; £85.—23, Sydney Rd., Enfield. [2493

1920 Enfield Dynamo Combination, condition guaranteed, Easting, etc.; £116, near.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [5205

ENFIELD 2-stroke, 2-speed, late 1920, condition and appearance as new, Lucas lamp set, tax paid.—White, 437, West Green Rd., Harringay. [5303

1920 Enfield Combination, Easting, equipped, spares, special tyres, new, any freak test, tax paid; £105.—Steele, Enfield Test Shop, Redditch. [4740

ROYAL ENFIELD, 2-stroke, 1922 model, 2-speed, licence paid, lamps, horn, tools, done 100 miles; £50.—S. Hallworth, Midway, Poynton, nr. Stockport. [4796

ROYAL ENFIELD Combination 6h.p., perfect condition, lamps, horn, tools, etc.; bargain, £75.—Seen Ward's Yard, 471A, Holloway Rd., London, N. [4664

ENFIELD 1922—Brand new 2¼h.p., 2-speed, kick starter, in stock; £57; easy payments arranged; lists free.—Wilkins Simpson, Opposite Olympia, London. [5410

ENFIELD 1922—Brand new 8h.p. Combination in stock; £140; easy payments arranged; exchanges; lists free.—Wilkins Simpson, Opposite Olympia, London. [5411

1918 Enfield Combination, lavishly equipped, small mileage, perfect condition, any trial; £90; or exchange family Morgan.—23, Sotheby Rd., Highbury. [4818

6h.p. Enfield Combination, speedometer, lamps, accessories, hood, Easting windscreen, good tyres, tax paid 1922; £75.—Warriner, Herd, Builders, Loughton, Essex. [5338

1922 Enfield 2-seater Combination, £145; Standard Combination, £140; easy payments, 4% extra; immediate delivery.—Premier Motor Co., Aston Rd., Birmingham. [4489

ENFIELD Combination, September, 1920, dynamo lighting, speedometer, windscreen, splendid condition throughout, £110.—Foulkes, Wales and Co., Ltd., Shrewsbury. [3530

1921 Enfield (Oct.) 8h.p. Vickers engine, Lucas Magdyno lighting, hood, screen, mileage 600; £120.—Hillier (side bell), 9, Wallingford Avenue, North Kensington. [5274

A 6h.p. Enfield Combination, late 1917, Magdyno, screen, licence, insurance, just overhauled, perfect, any trial; £95.—Wallace, 39, Old Deer Park, Richmond, Surrey. [4894

1921 Enfield Combination 8h.p. Vickers, Lucas Magdyno, windscreen, spares, excellent condition, tax paid 1922; £120.—Young, 33, Queen's Av., Muswell Hill, N.10. [4840

ENFIELD, complete range of 1922 models in stock for immediate delivery. Cash! Exchanges! Easy payments 4 per cent. extra.—P. J. Evans, John Bright St., Birmingham. [4911

ROYAL ENFIELD 1919, 2-stroke, 2-speed, clutch, chain drive, lamps, Klaxon, tools, pump, good tyres, fully taxed; £33.—Lawson, 66, Perry Vale, Forest Hill Station, S.E. [5093

ENFIELD Combination 1920 8h.p., Magdyno, Easting, insurance, speedometer, unused since car bought last June; £110; condition perfect.—Boot, 1, Berridge Rd., Nottingham. [4578

6h.p. Enfield Combination, all lamps, rather ugly Sidecar, otherwise perfect condition; bargain; £45.—The Winstan Henney Motor Co., 63, South End, Croydon. 'Phone: 2431. [5742

ENFIELD 1916 8h.p. Combination, new J.A.P. engine, 1921 cylinders, hood, Cameo, just enamelled and brought up to new condition at cost of £30, tax paid 1922; £88; would exchange for late Scott combination.—Chamberlain 686, Garratt Lane, Tooting, S.W.17. [5180


# The Effra Motor Works

# DOUGLAS

## Motor Cycles & Spares

**Having purchased the entire stock of Douglas Motor Cycles and Spares from Messrs. Crabtree & Son, Ltd., of Wisbech, we are in a position to re-sell at most attractive prices.**

**These machines are entirely re-built and finished as new. Over 75% of brand new parts on every machine and fully guaranteed for 3 months.**

## Cash Prices.

*(Trade Supplied)*

2¾-h.p. two-speed, fully equipped ... ... ... **£47-10-0**

4-h.p. three-speed, kick start and clutch, fully equipped **£68-0-0**

4-h.p. ditto and sidecar, with new body finished in "DOUGLAS" Saxe Blue, and fully equipped as above **£80-0-0**

CARRIAGE EXTRA IN EACH CASE

2¾ Douglas Frames, £4 10s.; Carriers, 15/-; Footbrake mounting, 7/6; Forks, 16/6 (enamel soiled); Springs, 2/-; Bars, 15/- (plated); Bushes, 2/-; Small, 1/6; Gudgeons, 1/-; Pistons, 7/6; Tappets, 2/-; Guides, 1/6; Rings, 1/3; Wheel spindles, 3/6; Silencers, 12/6; Petrol filters, 2/9; Flywheel sprockets, 3/-; Non-return valve, 1/9; Valve guides, 2/-; Crankshafts, 32/6; Fork spindles, 1/6; Shackles, 1/6; Stand clip, 2/-; Head clips, 5/-; Secondary shafts, 12/6; Sprocket, 5/-; Cam wheels, 12/6; Petrol pipes, 2/9; Keys, 6d.; Valve caps, 3/9; Belt rims, 10/-; Seat pillar, 3/6; Magneto wheels, 5/-; Inlet rockers, 3/-; Exhaust, 3/6; Tanks (genuine maker's colours), 45/-; in fact, everything.

4 h.p. Douglas Frames, £5; Carriers, 22/6; Tanks, 60/- (maker's colours); Pistons, 10/-; Rings, 1/6; Gudgeons, 1/-; Tappets, 3/6; Valve guides, 2/6; Sleeve nuts, 5/6; Drawbolts, 2/6 (complete); Fork spindles, 3/6; Silencers, 10/-; Crankshafts, 60/-, etc., carriage extra.

Telephone: Brixton 1115. Telegrams: "Efframota, Clapcom., London."

## The Effra Motor Works

LIMITED,

59, 61 & 63, HIGH STREET, CLAPHAM, S.W.4.


## MOTOR CYCLES FOR SALE.

### Enfield.

ENFIELD 1922.—Brand new 8h.p. Combinat Magdyno lighting; £158; in stock; easy ments arranged; exchanges; lists free.—Wilkins Si son, Opposite Olympia, London. [5

1919 late 8h.p. Enfield Combination, first re tered and used Jan. 20; seen any afterno in constant use; offers over £80.—Tromans, Bell Makers, Black Heath, Birmingham. [4

LATE 1916-17 3h.p. Enfield, 2 speeds, speedome lamps, etc., in good condition; £30; or excha for Douglas 2¾h.p., 2 speeds, 1919 or 1920; c adjustment.—Curry, 31, Gordon Rd., Chingford. [4

LATE 1921 8h.p. Royal Enfield Combination, c plete with Lucas Magdyno lighting set, hood screen, not done 1,000 miles, perfect condition, new; price £145.—Underhill, Callington, Cornwall [4

ROYAL ENFIELD 6h.p. Combination, 1921 mo Magdyno, speedometer, windscreen, mirror all tools, in perfect condition, low mileage; barg £110.—Write M., 40, Queen's Rd., East Grinstead [2

ENFIELD 1922 Models for immediate delivery; allowances on second-hand machines in part ment; distance no object.—Newnham Motor Co., Hammersmith Rd., W.6. 'Phone: Hammersmith [3

ROYAL ENFIELD Combination 1916 6h.p., J.A 2-speed, free engine, acetylene, windscreen, fu equipped, overhauled at works; accept fair pric Full details from C. Dufty, 115, Uppingham R Leicester. [2

1920 (November) Enfield Combination, 8h speedometer, horn, all lamps, spring fr Tan-Sad, hood, screen, child's seat, several ot extras, tyres and condition perfect, any trial; £11 5, Frobisher Rd. Green Lanes, Hornsey. [5

*Spare Parts:*

ENFIELD Spares. — Immediate delivery. — Kays, Bond St., Ealing. [3

LONGMAN BROS., 17, Bond St., Ealing.—Offi agents Royal Enfield spares. [5

THE Promptest Firm for Enfield Spares.—Forf Motors, Forfield Place, Leamington Spa. [3

HERBERT ROBINSON, Ltd., Green St., C bridge.—All Enfield engine parts in stock; waiting. [4

### Excelsior.

£18. — Excelsior, Ruthard mag., overhaul enamelled as new, snip. — 179, York R Islington. [5

BRITISH Excelsior Combination, late d 5-6h.p., all-chain drive, 3-speed countersh good condition; 57 gns.—47, Lyham Rd., Brixt [5

EXCELSIOR 2¼h.p. 1921 Motor Cycle, o frame, perfect condition, pillion seat, new sp belt; £34.—3, Burton St., Loughborough, Leices shire. [5

1921 British Excelsior Combination 8h.p. J.A Lucas Magdyno lighting, 4 interchangea wheels, speedometer, legshields, discs, perfect co tion; cost £200; must sell, £125, near offer.—Hngl 95, Fernhead Rd., Paddington, W.9. [4

### Fafnir.

3½h.p. Fafnir, free engine, mag., Senspray huretter; £15/10.—10, Ellesmere Rd., Ron Rd., London, E. [5

### F.N.

F.N., 4-cylinder, overhauled, new tyre; £20, or offer.—Arnold, St. Thomas St., Lymington. [4

F.N., 2½h.p., 2-speed, clutch, etc., good condit must sell; £15.—G. E. C. Chappell, 6, The St., Bishops Stortford, Herts. [5

F.N., the wonderful £95 model; one actually stock. 'Phone, Hampstead 2012, wire or ca Delancey St. Garage, Camden Town, N.W.1. [5

F.N., 2¼h.p., 2-speed, clutch, shaft drive, 1 Binks, engine renewed 1921, perfect order; nearest.—Martin, Moreton Pinkney, Northants. [5

*Spare Parts:*

F.N. Spares.—We can supply for all models f 1904. Prompt attention to all inquiries. St please.—Langford's, 37, Cricklewood Broadway, N.W [5

### Francis-Barnett.

2¾h.p. Francis-Barnett, new, in stock; price £7 4 Everest, Newport Garage, Newport, Salop. [5

1921 2¾h.p. Francis-Barnett, lamps, horn, spe meter, perfect condition; £45.—D.R. Engir ing Co., Ltd., Hospital Hill, Dunfermline. [5

FRANCIS-BARNETT, 1921, 2¾h.p. J.A.P., speed, clutch, K.S., condition as new; £4 B. B. F. Co., Melbourne Rd., Coventry. [3

1920 Francis-Barnett, 2¾h.p. J.A.P., 2-speed, starter, hand clutch, appearance and condi as new; £50.—Hucklebridge, 133, Sloane St., Loo S.W.1.

## MOTOR CYCLES FOR SALE.

### Rover.

OVER, 1919, 5-6h.p. Combination, Cowey, Brooks' cantilever saddle, Cameo screen, grid, Lucas ps, mileage under 5,000; £90; appointment only. Hayward, "Eastwood," King Edward Rd., New rnet. [4995

OVER 1920 5-6h.p., 3-speed, with Lucas dynamo lighting, fitted with Canoelet sporting sidecar, y sporty outfit; £105; exchanges.—Newnham Motor , 223, Hammersmith Rd., W.6. 'Phone: Hamrsmith 80. [3898

1919 Rover Combination, countershaft, 3-speed gear box, clutch, kick start, silent chain transsion, tyres good, licensed and equipped, excellent dition, guaranteed sound order; 68 gns.—186, St. nes Rd., Croydon. [5680

1919-20 5-6h.p. Twin Rover Combination, 3-speed, foot clutch, kick start, lighting set, horn etc., tank, , unscratched, condition practically like new, trial time; £78.—Walker, 769, Romford Rd., Manor rk, London, E. [5142

1h.p. Rover (countershaft), 3-speed, kick start, 2 clutch, Lucas lamps and generator, Tan-Sad, tyre and belt, tax paid till 1923, in excellent dition; for quick sale £55; no offers.—22, Whitese Rd., Croydon. [5336

*ware Parts:*

OVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing [7225

### Royal Ruby.

3h.p. Royal Ruby, 1914, single, lamps, shields, tax paid; £28, good condition; offer.—Box 9372, *The Motor Cycle.* [5029

20 Royal Ruby, magnificent turnout, large bulbous sidecar, as new; 87 gns.—67, Ivanhea , Balham. [5671

OYAL Ruby 2¾h.p., 2-stroke, splendid condition, all accessories, discs; nearest £22; must sell.—34, gdala Rd., London, N.19. [5403

20 3h.p. Royal Ruby, spring frame, first-class condition, fully equipped; nearest £57/10.—e, 87, Salusbury Rd., Kilburn. [5212

18 Royal Ruby 8h.p. Combination, fully equipped, sidecar, windscreen, hood, perfect dition; £65.—204, Ladbroke Grove, W.10. [5361

OYAL RUBY 1920 8h.p. Combination, 3-speed, accessories; £115; exchanges.—Newnham Motor 223, Hammersmith Rd., W.6. 'Phone: Hammerh 80. [3893

22 8h.p. Royal Ruby—the spring frame combination par excellence—fitted with interchangeable spare wheel, luggage and petrol carrier, Easting dum screen, lamps, horn, etc., all on, at £185; ediate delivery from the agent for all high-class es, as usual.—Sam. E. Clapham (Motors), 27, kwell St., Greenwich. 'Phone, 751. [5893

### Rudge.

22 Rudge-Multi in stock, for cash or exchange; £77.—Below.

19 Rudge-Multi, fully equipped; £55.—Daw, Rudge Agent, 114, Brixton Hill. [5246

h.p. Rudge-Multi 1920; £62/10.—Wauchope's, 9, Shoe Lane, London. [5851

UDGE-MULTI 1918, perfect order; £40.—Tucker, 56, Lordship Lane, Tottenham. [5566

22 3½h.p. Rudge-Multi; £77.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [4711

UDGE-MULTI 3½h.p., clutch, foot oiler, all on; snip, £38.—266, Friern Rd., Dulwich. [4610

5.—Rudge, T.T., Bicks, discs, perfect, 180lbs.—Holloway, 68, Julian Ave., Acton. [5325

UDGE, good condition, all on, new tyres, Tan-Sad; £32. — Wolforth, 11a, Blithdale Rd., nstead. [5535

UDGE-MULTI 3½h.p. 1914-15, fully equipped, pillion seat, tax; £35.—9, Lampmead Rd., Lee o, S.E.12. [5543

21½ Rudge-Multi, I.O.M., 3½h.p., equipped, 2,500, licensed 1922, new condition; £63.—29, Lower ton Rd., E.5. [5101

22 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, well Hill, N.10. [0791

UDGE-MULTI, T.T. bars, as new, mileage 300; going cheap.—9, Havana Rd., Wimbledon Park 1868 Putney. [4677

h.p. Rudge-Multi Combination, as new, equipped, trial, guaranteed, £50; sacrifice — Melrose, ery Walk, Worcester. [5528

h.p. Rudge, fixed gear, re-enamelled, first class order, tyres good; £29.—Shepherd, Enfield way. Waltham X 31. [0792

7 is the price of a new Rudge. Get it from the Agents; in stock; cash or payments.—Knight's, Upper Tooting Rd., S.W.17. [0836

14 Rudge 3½h.p., lamps, horn, etc., good condition, running order; £35.—Beagley, 2, Winter St., Farnborough, Hants. [4836


# WATCH THIS COLUMN
EVERY WEEK FOR
# BANCROFTIAN CO.'S BARGAINS.

**Advertisers in "The Motor Cycle" from its first publication.**

**TYRES.**—Manufacturers' clearance stocks, not W.D. Although clearance they are new and perfect. Wood-Milne extra heavy 4 ply, 28×3, **30/-**. 650×65, **27/6**. 26×2¼ combination, **35/-**; All clean and wrapped in original packing. Pedley 26×2¼, 3-ribbed, **25/-**. Hutchinson 26 by 2⅜ heavy T.T. **27/6**; Passenger 26×2½ for 2¼ **39/6**. 700×80 to fit 650×65 small car heavy **49/6**. 24×2 T. T. heavy **25/-**, extra heavy 3 ribbed 700×65 or 750×65 for American machines **35/-**. 650×65 steel studded car type, **65/-**, original, £6 6s. Firestone 20×2, Auto wheel, **21/-**; original, 45/-. Tube, **6/6**. Palmer 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½, cord, **42/-**. Oylers 650×65 ribbed square tread, heavy, in original packing, **27/6**; original, 45/-. Clincher de Luxe, very heavy, 28×2, **32/6**; 26×2½, **37/6**; 26×2, Junior de Luxe, **22/6**; 26×1¾, **17/6**. Dreadnought Passenger A. Won 28×3, **45/-**. Hutchinson wired edge covers, 26×2¼ and 26×2½, **30/-** each.

**TUBES.**—24×2¼, **4/6**; 24×2, **4/6**; 26×2¼, **5/6**; 26×2½, **5/9**; 26×2⅜, **5/6**; 28×3, extra heavy, **7/6**; 700×80, **7/6**.

**BELTS.**—Clincher clearance line, new, not W.D. ⅜", 6' 6", **8/6**; ⅜", 7' 6", **12/3**; 8' 6", **14/-**; 1", 7' 6", **16/-**; 8', **17/-**; 1⅛", 7', **18/-**; 8', **20/6**; 8' 6", **21/6**; Bates short lengths, ⅜", 5', **4/6**; 5' 6", **5/-**; ⅝", 4' 6", **5/-**; 5', **5/-**; 5' 6", **5/6**; 1", 4' 6", **6/3**; 5', **7/-**; 5' 6", **7/9**; leather belts, ⅜" at **2/6** per foot; belt fasteners, **9d.** and **1/-**.

**SPEEDOMETERS.**—Cowey with trip, **£4 19s. 6d.**; Stewart with trip (£6 6s. model), **£4 15s.**; Jones with trip, **£3 17s. 6d.**; all unused and perfect. All speedometer replacements in stock.

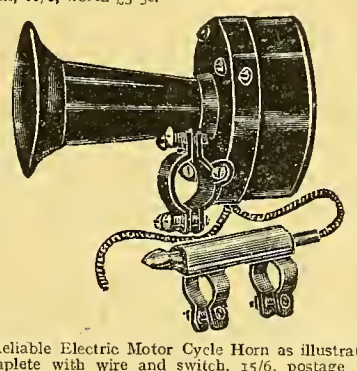
**TAN SADS,** with hack seat **28/6,** original price 57/-; only limited quantity.

**GOGGLES.**—Genuine Triplex, 45/- model, **10/6**; 25/- model, **9/6**. They are new and perfect.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined 7/11; lined 10/6; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, 3/6. Gloves leather wool lined 4/6; Above lines worth more than double. Limited quantities only. Order at once.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coats with belts, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality extra heavy double texture waterproof material, dark fawn, new and fresh, only been made recently, not half perished W.D. Our price to clear, **£2 2s.** Could not be bought elsewhere under £4 10s., the greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**OIL SKIN SUITS.**—Lined, double-breasted coat, long trousers, with hib, first class quality, colour dark green, **17/6**, worth £3 3s.



Reliable Electric Motor Cycle Horn as illustrated, complete with wire and switch, 15/6, postage 1/3. Usual 29/6.

We can supply everything for the motor cyclist at competitive prices. On all above goods carriage extra.

**BANCROFTIAN CO.,**
**78, BISHOPSGATE, LONDON. E.C.**
Grams: "Chaikel, London." Phone: London Wall 9897


## MOTOR CYCLES FOR SALE.

### Rudge.

£25.—Clutch Model Rudge, 3½h.p., overhauled and in good running order.—Smith's, 86, Chalk Farm Rd., Opposite Chalk Farm Tube Station. [5895

3½h.p. Rudge-Multi Combination, splendid condition, any trial; £45; seen by appointment.—G. P. C., 7, Florence Terrace, Ealing, W.5. [5301

RUDGE 1921 3½h.p. Multi, in splendid condition; £55, a real bargain.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5831

1919 Rudge-Multi 3½h.p., lamps, horn, tax paid, overhauled, re-enamelled, spares; full particulars, stamped address.—Bath, Bulkington, Devizes. [5598

RUDGE 1922 Models for immediate delivery; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3889

ANY model Rudge Multi supplied on extended payments. Send for catalogue and terms.—The Hackford Eng. Co., 33, Hackford Rd., Brixton. [5027

TWO 3½h.p. Rudge-Multis, spares; £35 each; seen daytime, evening, by appointment; owner going abroad.—Dyson, Hedgis Yard, North End, Croydon. [5034

RUDGE-MULTI 3½h.p., I.O.M., specially finished deep red, ridden 3,000 miles, unscratched; 49 gns.—Hare, 21, Mostyn Gardens, Kensal Rise, N.W.10. [5550

1922 3½h.p. T.T. Rudge, brand new, in stock; immediate delivery; £77; cash or easy payments; exchanges.—Wilkins Simpson, Opposite Olympia, London. [5416

ASHGATE Garage, Edgedale Rd., Sheffield.—1922 Rudges, immediate delivery. Multis, £77; 3-speed, £94; 7-9h.p. Combination, with spare wheel, £150; send for list. [3751

RUDGE-MULTI, 1919, clutch, pedal-starter, just overhauled, tax paid, lamps, etc., any trial; £45.—44, Sun St., Waltham Abbey. 'Phone: Waltham Cross 299. [5446

RUDGE-MULTI, 1921 (August), 3½h.p., touring model, 1,500 miles, complete with tools, lamps, Klaxon, mirror, spare belt case, and belt; £65.— 3, Selborne Rd., Sidcup. [5268

RUDGE-MULTI, 3½h.p., touring model, clutch, starter, Seaspray carburetter, lamps, horn, speedometer, exceptionally fine condition; £45 or near offer.—156, Ribblesdale Rd., Streatham. [5501

3½h.p. Rudge, single-gear, overhauled and re-enamelled, lamps, horn, etc., hack tyre and belt new, new adjustable pulley; bargain, £29/10.—Muncaster, 12, Cringlethwaite, Egremont, Cumberland. [4659

RUDGE 1922.—All models of this popular mount. The 3½h.p. Multi at £77 is competitive with anything in its class; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5830

7-9h.p. 1921 Rudge-Multwin Combination, in perfect condition, fast and economical, mileage under 3,000, complete with electric lighting, speedometer, horn, and tools; 100 gns.—Noble, 89, Kensington Garden Sq., London, W.2. [4908

*Spare Parts:*

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Rudge spares. [5710

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3163

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Rudge parts in stock; illustrated list post free. [4951

### Scott.

JOHN R. KINSEY & Co., Ltd.—Croydon—for Scotts. [5149

SCOTT Service Depôt, 99, Great George St., Liverpool.—Scott motor cycles. Scott Sociables. [5438

SCOTTS, either model, West of England Agent is Gibb, 100, Northgate, Gloucester. 'Phone: 852. [8126

1922 Scott Models in stock, complete; £110; delivered free.—Millard's, Scott Agents, Chesterfield. [4276

F.O.C.H. for a 1920 Scott, brand new condition; also 1914 combination.—5, Heath St., Hampstead. (Near Tube.) [4927

SCOTT Combination in first-rate condition, with lamps, tools, and luggage carrier; £45.—Stanbridge, Cranbrook. [5754

1914 Scott 3½h.p., water-cooled twin, 2-speed, and free engine, fitted with coachbuilt sidecar; £45. Wauchope's, 9, Shoe Lane, London. [5849

1920 Scott, mileage only 1,100, Binks, speedometer, lamps, horn, perfect order; £80; licence paid.—13, Clifton Crescent, Folkestone. [4747

SCOTT 3½h.p. 1920 model, now at works being overhauled by makers; what offers; must sell.—Hardieg, Glenfarne, Co. Leitrim. [5398

SCOTT 1914-15 Combination, in thorough running order, lamps and spares; a bargain, £45; any trial.—220, High St., Stoke Newington. [4653

## MOTOR CYCLES FOR SALE.

### Scott.

60 M.P.H. guaranteed.—Scott, November 1919, run 8,000 miles, perfect condition, double pole ignition, Squirrel footrests, new racing pattern, Cox-Atmos; £65.—Giddy, Ditton Hill, Surbiton. [5067

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8352

*Spare Parts:*

SCOTT Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7226

SOUTH London Scott Service Depôt.—Scott Spares: Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone 1129. [8353

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list, stating year of manufacture. [0751

### Silver Prince.

SILVER PRINCE, exceptional bargain.—New 1922 Lightweight Combination for £85, J.A.P. engine, Sturmey gear box, Brampton forks, Canoelet sidecar with screen.—Chinery, 1, Hammersmith Rd., Kensington. 'Phone: Western 4140. [5285

### Singer.

19 14 3½h.p. Singer, 3-speed, licensed for year; 18 gns.—Edwards, 101, Gt. Portland St., W. [5886

29 GNS.—Singer 2½h.p., 2-speed, countershaft, enclosed mechanical valves, good tyres; exceptional bargain.—53, Swafield Rd., Wandsworth. [5344

SINGER 3½h.p. T.T. model, racing cams, Bosch magneto, special Senspray, lamps, horn, tax, etc., fast, mechanically perfect, splendid appearance and condition; £35; private owner.—H., 173, King's Rd., Kingston. [4681

*Spare Parts:*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

### Spark.

SPARK 1922 models, Villiers engine, flywheel magneto, £39/18; also 2-speed kick starter models in stock, £52/10.—Eagles and Co., 275, High St., Acton, London. [5791

### Sparkbrook.

19 21 Sparkbrook 2½h.p., 2-speed, Villiers engine, Lucas lamps, horn, College mudshield, insured, licensed; cost £68, guaranteed; £38.—40, Warley Rd., Blackpool. [5431

### Sun.

19 21 (October) Sun-Vitesse, equipped, done 400 miles; 30 gns., bargain; exchanges.—Kent's, 417, Lord St., Southport. [5587

26 Gns., Bargain.—1919 Sun-V.T.S., 2 speeds, footboards, smart, rebushed.—Seabridge, Haosler Rd., East Dulwich. (Sydenham 2452.) [7936

SUN-VITESSE, kick starter, 2-speed, band clutch, horn, lamps, all accessories, as new; £45.—C. A. Blay, 192, Heath Rd., Twickenham. [5776

FOR Sun, J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., 60 gns. Send for catalogues. Trade supplied.—Jones Garage, Broadway, Muswell Hill, N.10. [0790

### Sunbeam.

3½h.p. Sunbeam 1919 Combination; £95.—Wauchope's, 9 Shoe Lane, London. [5855

CROSS, Effingham Sq., is Agent for Sunbeams in Rotherham; new models in stock. [5330

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs, etc. [3143

SUNBEAM 1915 3½h.p. Combination, very good order, fully equipped; £65.—Allin, 12, Bridge St., Cambridge. [4778

SUNBEAM 1919, 3½h.p., 3-speed, clutch, kick starter, equipped, perfect; £70.—5, Victoria Avenue, Surbiton. [5334

SUNBEAM Twin Combination, 1915-1919, exceptionally good condition; offers.—Jones, 11, Hawkshead St., Southport. [5453

3½h.p. Sunbeam Combination, Sept., 1920, complete, tax paid, perfect condition; £160.—Cranmer, 8, Salop Rd., Oswestry. [5469

19 19 3½h.p. Sunbeam Combination, in good condition, lamps, horn, etc.—Vincent, Hemsworth Lane Ends, nr. Wakefield. [4848

SEMI-SPORTS Sunbeam, 1919, 3½h.p., appearance and running order as new, lamps, etc.; £80.—Loweth, 6, Mount Pleasant Rd., Ealing. [5263

3½h.p. Sunbeam, 1920, complete with lamps, horn, Binks, detachable wheels, splendid condition; £85.—Gore, Wickfield, Hungerford. [4791

SUNBEAMS 1922.—Order now; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5832


## Three Attractive Value-for-Money LIGHTWEIGHT PROPOSITIONS

**THE QUALITY HENLEY**

Built as it is throughout, from components bearing such irreproachable names as Blackburne, Burman, and Brampton, this beautiful machine stands head and shoulders above the ordinary assembled lightweight by reason of its superb finish and detail refinement. The price, too, is attractive. Three-speed 2¾ h.p. Blackburne engine .. .. **70 Gns.**

**THE BIG-HEARTED RADCO**

A machine of special appeal to the man who requires a sturdy, reliable machine, made by a firm with a first-class reputation at the lowest possible price. The single-geared model at **34 Gns.** is the lowest-priced REAL motor cycle to be bought, while you can obtain the same equipped with a two-speed clutch and kick-start gearbox for .. **45 Gns.**

**THE THOROUGHBRED EXCELSIOR**

A range of lightweights made by a firm with nearly half a century's reputation—each a leader in its particular class. Economy is a special feature of these machines—both to buy and maintain—while the finish is second to none on the road. The 2½ h.p. Excelsior Villiers two-speed Sturmey Archer clutch and k.s. at **£53** is outstanding value. Complete with electric lighting set and lamps **£57 10**

**FRANK HALLAM,**
**Dalton St.** (two doors from Bull Street) **Birmingham**
and 88, BRISTOL ST. ('Phone: Midland 1472).

Full Market Price allowed for your present machine in exchange. Easy payments direct with the purchaser only 4 per cent. extra.


## MOTOR CYCLES FOR SALE.

### Sunbeam.

19 20 (late) 3½h.p. Sunbeam, electric lighting Binks, speedometer, etc., perfect condition; £90 —Box 9349, c/o *The Motor Cycle.* [4826

19 21 Sports Sunbeam, Lucas head lamp, horn, etc. new condition; £106; year's tax paid.—Rose 80, Cluntergate, Horbury, Wakefield. [5123

SUNBEAM Combination 3½h.p. late 1919 model condition as new; first offer £90.—Write, Davies "Lynton," Tottenham Lane, Hornsey, N. [4665

SUNBEAM Combination 3½h.p., 1916, fully equipped, splendid condition, very little used £70.—Southern, 386, Heneage Rd., Grimsby. [5308

SUNBEAM 1919 3½h.p. Combination, lamps, horn long exhaust, sidecar re-painted, all in splendid order; £75.—Allin, 12, Bridge St., Cambridge. [4778

SUNBEAM Combination, 6h.p., as new, wonderfully reliable, large body, with child's seat, trial £120.—64, Forthbridge Rd., Clapham Common, S.W.4 [5451

19 21 Sunbeam 3½h.p. Combination, all wheel interchangeable, equal to new, fully equipped £137, or nearest.—Sheppard, Benton Hill, Horbury Wakefield. [5220

19 19 Sunbeam 3½h.p., 3-speed, all chain, Lucas accessories, exceptionally fine condition; £65 —Hillier (side bell), 9, Wallingford Avenue, North Kensington. [5274

19 20-21 Sunbeam, fully equipped as new, inter changeable wheels, small mileage, guarantee perfect every respect; £96.—Everald Sexty, Pool Farm Tibberton, Glos. [4774

SUNBEAM, 1919, 3½h.p., Mills-Fullford sidecar mileage under 4,000, lamps and all tools; £90 Appointment only.—Hayward, "Eastwood," Kin Edward Rd., New Barnet. [4994

19 19 3½h.p. Sunbeam and brand new Sunbeam Sidecar de Luxe, fully equipped, perfect con dition; £90.—Hillier (side bell), 9, Wallingfor Avenue, North Kensington. [5274

4h.p. French Military Model Sunbeam Combination recently thoroughly overhauled and repainted, an trial given; £95, or near offer.—Apply, before 2 p.m 1, St. John St., Smithfield, E.C. [4654

19 19 8h.p. Sunbeam Combination, Lucas lamps hood, screen, detachable spare wheel, speedo meter, clock, licensed, condition excellent; 105 gns.- Edwards, 101, Gt. Portland St., W. [5884

19 21 3½h.p. Sports Sunbeam mileage 2,500, lamp horn, 80 m.p.h., speedometer, spare sprocket very fast, and in perfect condition; £115; tax paid.- D.R. Engineering Co., Ltd., 113, George St., Edinburgh. [5854

19 21 Sunbeam Sports, mileage under 1,000, enamel and plating perfect, Cowey horn, C.A.V. hea lamp, rear lamp, aluminium number plates, perfec condition, seen Reading; £110.—Lavin, Old Hous Sonning, Berks. [1204

19 20 3½h.p. Sunbeam and Sidecar, Lucas acetyler lighting, horn, tools and spares; cost £210, i splendid condition; £140, or nearest offer; owne going abroad.—Webster, "St. Malo," Oakhill Garden Woodford Green. [4664

19 21 Sports Sunbeam, little used, absolutely new, fully insured, Bonniksen, Lucas lamp numerous extras and spares, exceptionally fast nearest £127; without accessories if desired.- 51, Wilberforce Rd., Finsbury Park, N.4. [4894

3½h.p. Sunbeam, 1918-19, Henderson sidecar, Eas ing, very fully equipped, D.A. lighting, Bonni sen, special valve covers, etc., gold medal winner, ju plated, enamelled, insured, year's tax, clean, reliabl 98 gns.—130, London Rd., Kingston-on-Thames. [94

19 21 3½h.p. Sporting Model 8unbeam Motor Cycl complete with lamp, generetor, horn, and usu spares, east aluminium plates, new in April last, and exceptionally good condition tyres unpunctured; nearest offer to £110.—Geoffrey Smith, *The Motor Cycl* Coventry. [X428

SUNBEAM Combination 8h.p. 1921, engine N 8/72389, run 1,245 miles and in perfect co dition, tank and all paint-work unscratched, and a fittings as new, equipped with Lucas Magdyno lighting, Bonniksen, Cowey horn, H.B. mirror, sc. ho and windscreen, Tan-Sad, all tools; £210.—Box 939 c/o *The Motor Cycle.* [56

SUNBEAM Agents.—All 1922 models in stock 3½h.p. Touring model, £126; 3½h.p. Sup Sports model, £136/10; 3½h.p. Light Touring mod £136/10; 4¼h.p. Combination, £182/14; 8h.p. Co bination, £217/7. Exchanges, extended payme terms to suit individual requirements. Catalogu on application.—Herbert Robinson, Ltd., Green S Cambridge. [57

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Ca bridge.—All Sunbeam parts in stock; no wa ing. [49

### Swan.

7-9h.p. Swan Sporting Combination, E.L., T handles, tools and accessories, lots spares, l 1920; £90.—Owner, 25, York St., W.1. [45

## MOTOR CYCLES FOR SALE.

### Verus.

1921 4h.p. Verus-Blackburne, 3-speed, as new, mileage 200; exchanges or deferred.—Edwards, 1, Gt. Portland St., W. [4161

1920 Verus 2½h.p., 2 speeds, clutch, etc., excellent condition; £37/10.—Goad, 122, Maida Vale. Phone: Hampstead 1353. [5635

1921 Verus, 2-speed, clutch, K.S., aluminium discs and legshields, equipped; £32/10; exchange combination.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [5208

1920 2¾h.p. Verus-Blackburne, 2-speed, clutch, lamps horn, disc wheels, etc., first-class order throughout; paid; £55.—Shepherd, Enfield Highway. 'Phone Waltham Cross 31. [0799

1920 Verus 2¼h.p., single-speed, good as new, electric light outfit, good accessories, suit overalls (lt. 6in.), insurance, tax paid; lot cost over £75, sell £5; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [1020

### Villiers.

VILLIERS-GAMAGE 2½h.p., delivered 1920, condition as new, new tyre on back, cost £60; £28.—Colonial Motors, 104a, Finchley Rd. Hampstead, N.W.3. [5765

### Werner.

WERNER 4h.p. Twin, splendid condition; £22; take push cycle part.—57, Kenbury St., Camberwell, London. [5475

### Wooler.

£25.—Wooler 1915 2¾h.p., 2-stroke, variable gear, clutch, lamps, etc., splendid order; exchanges.—, Solon Rd., Brixton. [5199

WOOLER, 2¾h.p., 1921, with lamps; £48/10. Klaxon, speedometer, extra.—Write, 6, Stockwell Park Crescent, S.W.9. [5694

WOOLER 1920 2¾h.p., 9 speeds, clutch, equipped, tax paid, as new; £43; or exchange 1920 Douglas.—18, Marlborough Rd., Old Kent Rd., S.E.1. [6309

1920 Wooler, fully equipped and licensed, recently overhauled by makers, very smart appearance; 70 gns.; after 4 p.m.—4, Elm Gardens, Hammersmith. [5351

1921 Wooler, done 2,500 miles, excellent appearance and mechanical condition, lamps, horn, Hampshire district, cheap for quick sale.—Box 558, c/o *The Motor Cycle*. [4864

### Zenith.

A TO Z. Allan and Zenith.

ALLAN GRUZELIER, Specialist in Zenith Motor Cycles.

BUY a Bradshaw Model to-day—and thank me for putting you on a good thing to-morrow.

REMEMBER.—You get After Sale Service with all Zenith motor cycles purchased from me; also immediate delivery, and deferred payments if you wish. London office: Ulster Chambers, 168, Regent St. Regent 205. Showrooms and Workshops: Knight and Wheatley's Garage, Coulsdon. Purley 1277. [3377

1922 Zenith-Bradshaw, Gradua gear, shop soiled only; £98.—Tippen, Marden, Kent. [5076

£55.—1919 8h.p. 90-bore Sports Zenith, excellent condition, equipped.—186, Southgate Rd., N.1. [5499

1922 Zenith Bradshaw, beautiful machine, shop-soiled only; £105.—Downing and Donovan, Clyde. [5440

1922 3½h.p. Zenith-Bradshaw, S.A., 3-speed; £119 —Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [4710

ZENITH 1920 8h.p. Sports, Swan sidecar, fully equipped; £78, bargain.—Clark, 7, Exhibition Rd., S.W.7. [5898

8h.p. Sports Zenith, late 1920, lamps, horn, tools, tax paid, just overhauled; £65.—French, 1, Bedford St., Oxford. [4943

ZENITH Brand New 5h.p. Sports Models, guaranteed; £76/13; few only left.—Clark, 7, Exhibition Rd., S.W.7. [5294

ZENITH-BRADSHAW 1922 models in stock; £113; liberal exchanges.—Eagles and Co., 275, High St., Acton, London. [5794

ZENITH Twin J.A.P. 6h.p. Combination, Easting, lamps, handle start; 50 gns.; not taxed.—131, Bouchurch Rd., Brighton. [4605

1920 6h.p. Zenith, mileage 2,500, Bonniksen, Lucas lamps, all accessories, excellent condition; £70. —Clarendon House, Newbury. [5447

£45.—6h.p. Zenith Sports 1913, Binks, 1921 rod brake, equipped, taxed, insured, seen, tried.—Farquhar, 4, Eaton Ter., S.W.1. [4586

ZENITH, new March, 1921, 6-8h.p., sports, electric lighting, electric horn, speedometer; offers.—157, Lordship Lane, Wood Green. [5019

F.O.C.H. for Zeniths, latest models in stock; also 1920 8h.p. countershaft combination.—5, Heath St., Hampstead. (Near Tube.) [4923


# The Juno Cycle and Motor Co.,

*Proprietors:*
METROPOLITAN MACHINISTS Co., Ltd.
248, BISHOPSGATE, LONDON, E.C.2.

TELEPHONE: BISHOPSGATE 2185.
TELEGRAMS: QUILLS AVE LONDON.

ESTABLISHED OVER FORTY YEARS.

## The Pick of the Bunch!

**A.J.S., ARIEL, B.S.A., CHATER LEA, DOUGLAS, ENFIELD, INDIAN, LEVIS, MATCHLESS, NORTON, RALEIGH, RUDGE, SUN.**

**Any of the above Motor Cycles or Combinations can be supplied on our well-known GRADUAL PAYMENT SYSTEM.**

**Particulars on Application.**

## FURTHER SIDECAR REDUCTIONS!

**WATSONIAN. Sidecars for Lightweights, very light and sporty. - - - £15 CASH**

**MILLS FULFORD. Corvette. A sidecar for the connoisseur! - - - £24 CASH**

**All Sidecars can be supplied on monthly payments.**

**Sidecar Bodies, Sandum or Venus, from £5 15 0.**

**Underslung or step chassis from £7.**

**RUDGE MULTI 1920. In perfect condition, £55; or £10 12 0 deposit and 12 payments of £3 18 0.**

## Accessories at Reduced Prices.

| | £ s. d. |
|---|---|
| Easting Screens | 3 18 0 |
| Cameo " | 2 15 0 |
| Bluemels, 1921 | 3 10 0 |
| Orto Hoods - | 3 5 0 |
| Spring Shackles, set of four - - | 6 6 |
| P. & H. Lamp Sets - | 1 12 0 |
| Orto Hood for Sidecar - | 3 15 0 |
| W. S. R. Jets, all sizes | 8/6 & 10 6 |

| | £ s. d. |
|---|---|
| Watford Speedometers, slightly soiled, guaranteed - | 4 15 0 |
| Renolds Chain ⅝ × ¼ per ft. - | 6 1 |
| all spares in stock. | |
| Tan-Sads - | 1 10 0 |
| Austin Seats - | 15 0 |
| B & B Lightweight Carburetters, window soiled - | 2 10 0 |

**FREE.** Call or write for 80 pp. Illustrated List with all latest price reductions.


## MOTOR CYCLES FOR SALE.

### Zenith.

WRITE for photo and particulars of the most sporty and best equipped Zenith combination on the road.—Walbro, Ely, Cambs. [4942

5-6h.p. Sports Zenith, late type; £55, no offers; 60 m.p.h.; exchange Harley.—W. Bennett, 19, Ferrard St., Bermondsey, S.E.1. [4808

ZENITH and sidecar, 5-6h.p., countershaft gear and kick start, engine overhauled, any trial; £45.—Sibley's Garage, Martock, Somerset. [4916

1921 Zenith 8h.p. clutch Combination, all Lucas accessories, equal and looks like new, licence paid; £105.—Harris, 14, Gt. Marlborough St., W.1. [5120

6h.p. Zenith Combination, 2-seater sidecar, fully equipped outfit for small family, good running order; £80; seen any time.—Baker, High St., Ealing. [5179

ZENITH 1920 8h.p. countershaft, kick start, Henderson Elite sidecar, lamps, Bonniksen, speedometer, excellent condition; £105.—5, Heathcote Rd., Epsom. [5117

1920 Zenith 8h.p., clutch, Henderson Elite sidecar, new condition, only ridden 800 miles; sacrifice £105.—Elms, 433, Brixton Rd., S.W. 'Phone, Brixton 704. [4960

ZENITH 8h.p. countershaft Combination, splendid condition, lamps, windscreen, Tan-Sad, etc.; £75; exchange for 6h.p. combination.—46, Fairfield Rd., Edmonton. [5241

90-BORE Twin Side-valve Zenith, direct drive, excellent appearance and condition, fully equipped; seen London; £60.—Box 9347, c/o *The Motor Cycle*. [4787

ZENITH 8h.p. Sporting Combination, 2,500 miles, delivered May, 1921; £105; all lamps, etc., in perfect condition.—Shuter, Greville House, Raynes Park, S.W.20 [5534

1921 Sports Zenith 5h.p., brand new and unused, makers' full guarantee; listed £110, our price 73 gns.; exchanges or deferred.—Edwards, 101, Gt. Portland St., W. [4457

1921 8h.p. Sports Zenith, new August, stored since November, mileage 1,300, condition as new throughout; £85, no offers.—127, Midland Rd., Wellingborough. [4692

1922 Zenith-Bradshaw, slightly used for a few demonstrations, indistinguishable from new, full guarantee; sacrifice, £95.—Frank Whitworth, 139, New St., Birmingham. [0711

ZENITH 1919 8h.p. J.A.P., with Dunhill coach-built sidecar, hood, screen, lamps, etc., tax paid till end of year; a snip, £105.—Wilkins Simpson, Opposite Olympia, London. [5421

1921 Zenith Sports 5h.p., brand new and unused, maker's full guarantee, listed £110; our price 73 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1957

LONGMAN Bros., Bond St., Ealing. Tel., 689.—Sole district Zenith agents, specialists in repairs and tuning. All models for immediate delivery. Cash, exchange, or deferred payments. [9909

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred or exchanges.—194, Balham High Rd., S.W.12. [1210

1921 Zenith 8h.p., o.h.v., sporting aluminium torpedo sidecar, all lamps, spares, etc., Bonniksen, bought June; cost over £200; unused since September, mileage 1,000; accept nearest £150.—Mitchell, Lindens, Farnham. [4730

ZENITH-BRADSHAW 1922 Models for immediate delivery; best allowances on second-hand machines taken in part payment; distance no object.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3891

ZENITH 1920, countershaft, 8h.p., nearly new, special Rennoc roomy sidecar, hood, cameo, Cowey speedometer, horn, electric, gas, excellent order throughout, trial (reasonable distance); 105 gns.—10, Clarendon Rd., W.11. [5565

ZENITH 1920 8h.p. Combination, countershaft, kick start, clutch, Millford sidecar, F.R.S. electric lighting, speedometer, disc wheels, condition as new; £105.—Smith, 9, Johnson St., Notting Hill Gate, London. 'Phone: Park 3447. [5813

1920 8h.p. Twin Zenith-Jap Countershaft Combination, kick starter and clutch, luxurious Sandum sidecar, cameo windscreen, lighting set, horn, etc., in practically new condition throughout, seen any time; £98.—Sidney, 769, Romford Rd., Manor Park, London, E. [5141

ZENITH 1920 8h.p. Sports Combination, countershaft, Swan sporting sidecar, Avro windscreen, long copper exhaust, aluminium discs, speedometer, lamp set, Klaxon, new belt, in new condition, the smartest outfit on the road; £90; seen any time Exeter Rd. Garage, Brondesbury, Met. Station.—Bresler. 'Phone: City 8575. [6489

*Spare Parts:*

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Zenith spares. [5706

## MOTOR CYCLES FOR SALE.

### Zenith.

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing [7222

### Ladies' Motor Cycles.

2½h.p. Ladies' Royal Ruby, 2-stroke Villiers, 2 speeds, accessories, perfect condition; £34.—McKie, Lodge 145, Preston Rd., Brighton. (P) [5096

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

LADIES' Douglas 1914 2¾h.p., 2-speed, kick starter, clutch, fully equipped, perfect order, small mileage, tax paid; £32; appointment.—S., 53, Lawrie Park Rd., Sydenham, S.E. 'Phone: 1402. [4827

A MOST suitable mount for a lady is the open-frame Reynolds Runabout, 2¾h.p., 2-stroke, with 2-speed and kick starter.—Get details from Frank Whitworth, Ltd., 139, New St., Birmingham. [5900

VELOCETTE 1922, Model E.L.2, open frame, clutch, kick starter, is the ideal lady's mount; all black waterproof finish, clean to ride in all weathers; £68; easy payments 4% extra; illustrated catalogue on request.—Premier Motor Co., Aston Rd., Birmingham [8966

### Miscellaneous.

REX, £13; Precision, £16; Fafnir, offers; must sell.—441, Seven Sisters, Tottenham. [5007

2¾h.p. motor cycle, running order, tax paid; going abroad; £20.—Perry, 47, Huddersfield Rd., Elland. [5542

2¾h.p. Kerry, engine, frame, wheels, £5; also 3½h.p. Bat, slightly incomplete, £4/10.—King, Ecrove Farm, Oxford. [5227

BARGAINS.—New O.K.'s, Ariels, Harleys, Omega Quadrants; exchanges entertained. — Booths' Motories, Halifax.

BARGAINS.—1920 Matchless combination, detachable wheels, £130/10/6; 6h.p. Zenith combination, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6.—Booths' Motories.

BOOTHS' Bargains.—1920 Sun, 2 speeds, clutch, £39/10/6; 4-cyl. F.N., 2 speeds, £22/10/6.

BOOTHS' Bargains.—Harley-Davidson Combination, mileage 300, £129/10/6; 1920 Harley, £95/10/6, like new.

BOOTHS' Bargains.—1920 Wooler, £49/19/6; 3h.p. 2-speed Enfield, £29/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—6h.p. 3-speed Rudge, £35/10/6; 3½h.p. Minerva, magneto, £10/15/6.

BOOTHS' Bargains.—1921 Phelon and Moore, small mileage, £75/10/6; 6h.p. Rex combination, £27/10/6.

BOOTHS' Bargains.—Matchless Combination, 3-speed countershaft, £69/10/6; 1920 3-speed Ariel, £69/10/6.

BOOTHS' Bargains.—1919 4h.p. Douglas Combination, £79/10/6; 4h.p. late model Douglas £55/10/6; 2¾h.p. Douglas, cheap, lightweight motor cycle, £13/10/6.

BOOTHS' Bargains.—1920 8h.p. Tamplin, £79/10/6; 1920 Morgan De Luxe, £165/10/6, cost £250/10; nearly new Ariel combination, £85/10/6; new 3½h.p. 3-speed Ariel, £87/10/6; new 4½h.p. Quadrant combination, £100; several others, cheap; push cycles taken exchange.—Booths' Motories, Portland Place, Halifax. 'Phone: 1062. [1966

1915 Road Racer, very exceptional condition, very hot, will tick over; 35 gns.; exchanges.—Kent's, 417, Lord St., Southport. [5585

ASHGATE.—1921 B.S.A. Sporting Combination, semi T.T. bars, footrests, lamps, many spares, competition machine, perfect order throughout; £105. —Below.

ASHGATE.—1920 Matchless Combination, Magdyno lighting, speedometer, spare wheel, new tyre, excellent condition; £135.—Below.

ASHGATE.—3½h.p. Precision, single speed, recently overhauled, re-enamelled, new tank, new drip feed; bargain, £25.—Below.

ASHGATE.—1922 Rudges, immediate delivery all models; see Rudge advts.—Ashgate Garage, Edgedale Rd., Sheffield. [3750

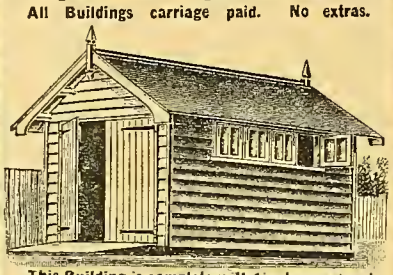
BRADBURY Motor Cycle, 4h.p., and wicker goods carrier, 2-speed, free engine, accessories, engine No. 9357; price £22/10 lot. Apply to the Purchasing Agent, Great Eastern Railway, Liverpool St. Station. Telephone: London Wall 3585 ex. 5. [3479

F.O.C.H. for second-hand cycles, combinations, and runabouts at bargain prices; exchanges arranged; any new cycle, combination, or car supplied; cash or deferred payments.—Fair Offer Car House, 5, Heath St., Hampstead (near Tube). 'Phone: Hampstead 3752. Hours, 9-7, including Saturdays. [4934


# STOP

**at this and compare prices and quality. Invitation to inspect before purchasing.**

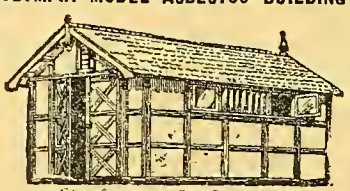
**All Buildings carriage paid. No extras.**



**This Building is complete with 1in. tongued and grooved floor, ¾in. match-boards or wea herboards, 3in. framing, strong boarded roof, best pluvex felt. Building treated with weather-proof composition. Prices, complete and carriage paid to any station in England and Wales.**

| | | | | | |
|---|---|---|---|---|---|
| 8×6 | £8 0 0 | | 16×10 | £27 0 0 | |
| 10×8 | 13 0 0 | | 18×10 | 33 0 0 | |
| 12×8 | 17 10 0 | | 20×10 | 37 10 0 | |
| 14×10 | 23 0 0 | | 20×12 | 40 0 0 | |

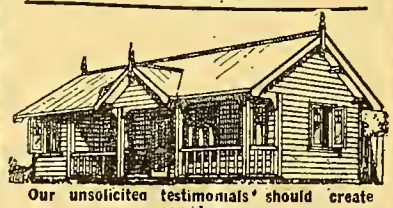
**OLYMPIA MODEL ASBESTOS BUILDING**



*Specification in Our Catalogue.*

| | | | | | |
|---|---|---|---|---|---|
| 12×8 | £23 10 0 | | 18×10 | £42 10 0 | |
| 14×10 | 32 15 0 | | 20×12 | 46 15 0 | |
| 16×10 | 37 15 0 | | | — | |

Delivered with iron roof complete. Fire-proof and sound proof.



**Our unsolicited testimonials should create confidence.**

5, York Place, Mirfield, Yorks.
*Feb.* 10, 1922.

The South-Western Appliance Co., London.

Dear Sirs,—The Motor Hut I ordered from you came to hand a few days ago. I have now erected same and am pleased to inform you that it is entirely to my satisfaction. In conclusion I must say it is excellent value for money.

Yours truly, A. WALKER.

94, Eaton Road, Brynhyfryd, Swansea.
Mr. Brodrick, *Feb.* 11, 1922.

Dear Sir,—I am pleased to tell you the shed was delivered in good order and has given great satisfaction.

Yours faithfully,
JAMES BRAY.

3, Eddington Road, Fairhaven, Lytham.
*Feb.* 13, 1922.

Dear Sir,—In receipt of your letter of the 31st, I have received "Delholme" but alright. I am pleased with same and recommend it to our friends.

Yours truly
H. NEVILLE.

**Illustrated Catalogue Free.**

**SOUTH-WESTERN APPLIANCE Co.**
**High Street, Fulham, London, S.W.**
Telephone: PUTNEY 2771.


## MOTOR CYCLES FOR SALE.

### Miscellaneous.

WANDSWORTH Motor Exchange.—Great bargains; finest selection motor cycles London; exchanges; easy terms.

WANDSWORTH.—Easter bargains. Easter bargains. Now's the time to buy real good motor cycle at your own price and be ready for your Easter holidays.

WANDSWORTH.—Easy terms. The only firm to give immediate delivery first deposit.

WANDSWORTH.—Gregoire 3½h.p., magneto, good tyres, runs splendidly; sacrifice, 19 gns.; easy terms.

WANDSWORTH.—Condor 3½h.p., T.T. type, magneto, very fast; cheap, 22 gns.; easy terms.

WANDSWORTH.—Motosacoche 2½h.p., magneto, variable gear, nice little machine; 23 gns.; easy terms.

WANDSWORTH.—Tourist 3½h.p., magneto, 2-speed gear box, low built; 28 gns.; terms.

WANDSWORTH.—Peugeot 3½h.p., magneto, good tyres, nice machine, licensed; 26 gns.; easy terms.

WANDSWORTH.—Singer 2½h.p., 3 speeds, clutch, almost new tyres; 29 gns.; easy terms.

WANDSWORTH.—Rover 3½h.p., clutch model, Bosch, kick, fine machine; 33 gns.; easy terms.

WANDSWORTH.—Rudge 3½h.p., 2 speeds, kick, newly enamelled, special; 36 gns.; easy terms.

WANDSWORTH.—Henderson clutch model 8h.p., 4 cyls., chain drive, lamps; 39 gns.; easy terms.

WANDSWORTH.—Humber, almost new, 3½h.p., 2 speeds, lamps, booter; 46 gns.; easy terms.

WANDSWORTH. — F.N., magnificent machine, 5-6h.p., 2 speeds, clutch newly enamelled, plated; 59 gns.; easy terms.

WANDSWORTH.—Triumph 4h.p., 3 speeds, clutch, fine machine; only 46 gns.; easy terms.

WANDSWORTH.—Bradbury coachbuilt combination, 4h.p., 2 speeds, lamps, screen; 42 gns.; easy terms.

WANDSWORTH.—Wolf coachbuilt combination, 3½-4h.p. J.A.P., 3 speeds, countershaft; 49 gns.; easy terms.

WANDSWORTH.—Triumph (late) Gloria combination, 4h.p., 3 speeds, countershaft; 69 gns.; easy terms.

WANDSWORTH.—T.M.C. coachbuilt combination, 8-10h.p., 3 speeds, shaft drive, spring frame, water-cooled, lamps, screen, speedometer; 59 gns.; easy terms.

WANDSWORTH.—1920 Triumph coachbuilt combination, 4h.p., 3 speeds, lamps; 89 gns.; easy terms.

WANDSWORTH.—1920 Scott sporting coachbuilt combination, water-cooled, almost new; 85 gns.; easy terms.

WANDSWORTH.—1920 P. and M. combination, 3½h.p., 2 speeds, kick, lamps; 79 gns.; easy terms.

WANDSWORTH.—Harley-Davidson (late) combination, 3 speeds, lamps, screen; 89 gns.; easy terms.

WANDSWORTH.—1921 Velocette 2¼h.p., 2 speeds, chain, practically new; offers; easy terms.

WANDSWORTH. — 1918 Levis 2¼h.p., lamps, licensed, nearly new machine; 35 gns.; easy terms.

WANDSWORTH. — Scott coachbuilt combination, 3¾h.p., water-cooled, 2 speeds, lamps; 49 gns.; easy terms.

WANDSWORTH.—F.N. coachbuilt combination, 5-6h.p., 2 speeds, clutch, lamps; 49 gns.; easy terms.

WANDSWORTH.—Triumph coachbuilt combination, 3½h.p., 2 speeds, lamps; bargain, 48 gns.; easy terms.

WANDSWORTH.—Triumph, almost brand new machine, 4h.p., 3 speeds; offers; easy terms.

WANDSWORTH.—Douglas, almost brand new, unscratched, 2¾h.p., 3 speeds; 58 gns.; easy terms.

WANDSWORTH. — Triumph 3½h.p., magneto, spring forks, drive away; only 22 gns.; easy terms.

WANDSWORTH.—F.N. 4½-5h.p., 4-cyl., magneto, 2 speeds, wants attention; gift, 17 gns.—Below.

WANDSWORTH.—Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686. [5249

CLEARANCE Sale.—Several new complete 2½h.p. 2-strokes, Villiers engine, 2-speed countershaft gears, £45. Motor cycle frames for Lightweights, complete with stand and carrier, £4/15; ditto less mudguard and carrier, £3/17/6. Motor cycle lug sets for 2½h.p., 3½h.p., and 6h.p., 17/6.—J.H. Motor Engineering Works, Castle Mill St., Oldham. [5577

## BODIES.

SIDECAR bodies, brand new, all colours, £4/15; spring back and cushion.—Edwardes, 277, Camberwell Rd., S.E. [5138

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5131

SIDECAR Bodies, several secondhand, bulbous back, Matchless, etc., low prices.—Edwardes, 277, Camberwell Rd., S.E. [5139

PLUS One Bodies are the best 2-seaters. See Sidecar Attachments.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5839

THERE'S still time before Easter to fit a Cobb Speedman sports body at from £2/12/6, finished £5/15, carriage paid.—Vernon Cobb, 18, Midland Rd., Carlton, Nottingham. [5030

ROYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [0336

LIGHT Car and Motor Cycle Engineering Co., Ltd.—We hold a large stock of all types of bodies; these bodies are all coachbuilt and beautifully finished; light touring, £4/10; medium touring, £7 and £7/10; sports model, £8; heavy touring, with bulbous back, £10/10; heavy touring de luxe, £11/11.—Below.

SECOND-HAND Bodies.—Sandum touring model as new, £6/10; 1919 Rover body, slightly damaged, 1; step body, in sound condition, £1/10.—26, Tulse Hill, Brixton (½ minute from Brixton Skating Rink). Phone: Brixton 1292. [5761

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—20, Tudor St., London, E.C.4. [0004

1922 Bodies, beautifully finished and upholstered, satisfaction guaranteed, complete with coverall apron, from £6/10 to £14; 1922 2-seater bulbous back bodies, £10/10; extended payments taken. Trade enquiries invited. A few 1921 models, shop-soiled, complete, £6/10. Send for catalogue. Bodies repainted, repaired, etc.; reupholstering from £2. We are actual manufacturers. Carriage extra.—'Phone: Brixton 585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [5630

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM the smartest sidecar specialists

SANDUM Sidecars.—Our pre-war prices were the talk of the show: £14 to £50. Write for new catalogue

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; send further supply." Agents, get in touch with us

SANDHAM Engineering Co., Ltd., 336, Grey's Inn Rd., W.C.1. 'Phone: Museum 3427 [0019

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584 [0522

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. Phone: 5. [3235

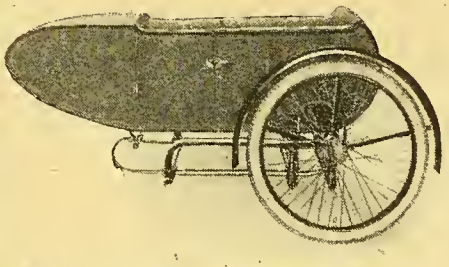
2-SEATER Rennoc coachbuilt Sidecar, hood, screen, grid, 28in. wheel.—Diver, Marple. [5110

SIDECARS, several cheap, room wanted; fitted free. 57, Kenbury St., Camberwell, London. [5473

DOUGLAS Sidecar and chassis, complete; accept £10—7, Clarence St., Southall, W. [4687

SIDECAR, underslung, new coachbuilt body; £10; after 7.—1, Greenhill Rd., Willesden. [5554

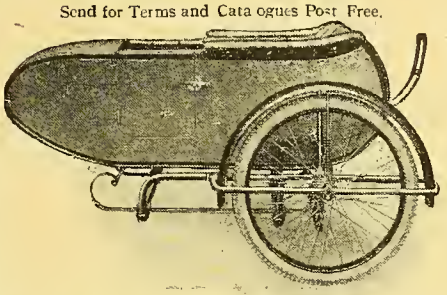
# RIDEEZI
## Sidecars.



**£16 10 0 or £5 10 and 12 Monthly Payments of £1.**

# PAYEEZI

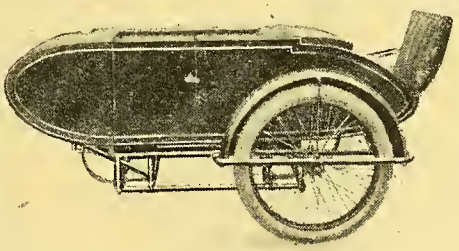
Send for Terms and Catalogues Post Free.



**£24 or £6 4 0 and 12 Monthly Payments of £1 11 3.**

# FEELEEZI

We finance ourselves. All Goods Carriage Paid.

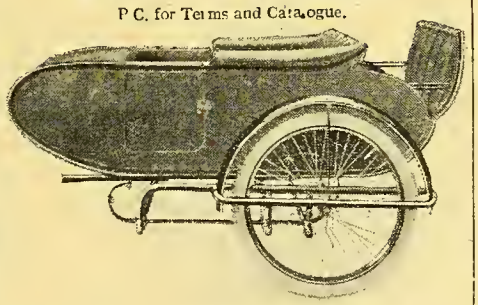


**Two-Seater.**

**£37 or £9 15 0 and 12 Monthly Payments of £2 8 11.**

# HOWEEZI

P.C. for Terms and Catalogue.



**£26 10 0 or £7 0 0 and 12 Monthly Payments of £1 15 0.**

# 'TISEEZI

APPROVAL. Colours to choice.

We will quote you 12, 15 or 18 months' credit for any new Machines, any Sidecar with any lamps, any accessories. Insurance and Licence and Carriage paid.

## RIDEEZI SALES LTD.,
**5, VICTORIA STREET, S.W.1.**
(NOTE NEW ADDRESS)

## SIDECAR ATTACHMENTS.

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

BASTONES. Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £19/10, Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £28/10, Model de Luxe £34/10, tandem model £30.

BASTONES.—Whitley 1922 sports model in stock. £25.

BASTONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/-.—228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. Grams: Bastones, London. [5132

SIDECAR, coachbuilt, all connections, wheel, less tyre; £5.—249, Goldhawk Rd., W.6. [5451

CAMBER Utility Models; £25.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Utility Tandems; £27.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Semi-touring Models; £18/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Bulbous Back Models; £19/12/6.—Bright and Hales, 78, Church St., Camberwell.

CAMBER Lightweight Models; £16/10.—Bright and Hayles, 78, Church St Camberwell.

CAMBER Hexagon Sports Model; £25/17/6.—Bright and Hayles, 78, Church St., Camberwell [5485

CANOELET Sports, excellent condition; £10.—57, Falmouth Avenue, Highams Park, E.4. [4806

10 GNS.—Swan Sports Sidecar, off Triumph.—20, Treen Avenue, Hoggers Corner, Barnes. [5430

SIDECAR Chassis off Triumph, 4 points, good tyre; £5; after 6 p.m.—75, Lavender Hill, Battersea. [5050

3½h.p. Raglan, Torpedo Sidecar, running order; £27; offer.—106, Camberwell New Rd., S.E.5. [4842

£5.—Coachbuilt Sidecar, new tyre, off Triumph.—Knowles, 14, Roydene Rd, Plumstead, S.E. [5649

ONE Bramble Sidecar, good condition; £10.—Geiger, 24, Mansfield Rd., Gospel Oak, London, N.W.3. [5767

MONTGOMERY No. 1 Sidecar, 1921, complete, off Triumph; £7/10.—Prout, Canon St., Taunton. [5505

MILLFORD Sidecar, 4 point, Easting standard, splendid condition; £16.—116, Inchmery Rd., Catford [4811

INDIAN Phœnix Sidecar, red, electric lamp, hood, couplings; £10.—67, Little Heath, Charlton, S.E.7. [5537

COACH Sidecar, underslung, 4 point attachment, smart; £9/10.—Higby, Manor Estate, Hemel Hempstead [5152

DOUGLAS Sidecar and Chassis, complete, like new, underslung, new tyre; 10 gns.—R.A., 50, Church Rd., Acton [5104

SPORTING Coachbuilt Sidecar, royal blue, very posh, suit 4-8h.p., as new; £11/10.—7, Cowdrey Rd., Wimbledon. [5495

BOOTHS Bargains.—Limited number of new coach bodies, full size, with locker; £5/12/6; usual price, £9/10.

BOOTHS Bargains.—New £9/10 coach bodies for £5/12/6. Don't miss them. Illustration free.

BOOTHS Bargains.—Quantity of new underslung chassis, 4-point attachment; £9/19/6; illustration free

BOOTHS Bargains.—Several shop-soiled sidecars offered very cheap; send for list.

BOOTHS Bargains.—Hercules coach sidecar, £8/10/6; ditto Cancelet, £8/10/6; ditto Farlow, £8/10/6.—Booths Motories, Portland Place, Halifax. 'Phone: 1062 [1964

MILLFORD Family Sidecar, hood, screen, apron, luggage grid, lamp; £20 or near offer.—4, Herbert Rd., Southall. [5284

2-SEATER Sidecar on Clyno chassis, complete with fittings less apron; £10; stamp.—R. Skipper, Gt. Ryburgh, Fakenham. [4860

UNDERSLUNG Sidecar, small aluminium body; £4; wanted, lightweight, Amac or Binks.—3, Nightingale Rd., Hanwell [5536

COACHBUILT Sidecar, 26×2½ new tyre, windscreen, lamp, etc.; £18, or near offer.—Arnold, St. Thomas St., Lymington. [4884

COUPETTE Sidecars with rigid disappearing hood for the man who wants the best and latest in sidecars.—Particulars, Gead, 122, Maida Vale, W.9. 'Phone: Hampstead 1353. [5636

## SIDECAR ATTACHMENTS.

FOR Sale.—1921 Scott Sidecar, tyre as new, in first-class condition, £16; also Easting windscreen, £1/5.—Hasquencort, Neath. [4643

HALIFAX.—New Swan Sporting and Millford de Luxe for Harley and American X.—Motor Exchange. Horton St., Halifax. [5784

MILLFORD Sidecar, underslung, 4 pt. attachment, Otto windscreen, 28×3in. Dunlop; £12.—406, Garratt Lane, Earlsfield, S.W. [5340

MILLFORD Corvette Body with springs, £4; Easting windscreen, £2; both nearly new.—Howard, 4, Fitzjohn's Avenue, N.W.3. [5108

WATSONIAN Featherweight, new tyre, good condition, £7/10; also Tan-Sad, complete, 30/-.—60, Bingham Rd., Addiscombe. [4649

M.P. Cantilever Sidecars, 6 only left, in various colours; £27/10 each.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5837

A.B.C. Special Gracemill polished aluminium sidecar, complete good tyre, electric lamp, cover, as new; £25.—Robertson, R.A.F., Henlow, Beds. [4695

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers through out. Send for our catalogue, 32 pages, 80 illustrations

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOO Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock out prices. Note: Write for special clearance list.

RENNOO Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of side car; repainting and reupholstering a speciality

RENNOO Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N 19 'Phone: Hornsey 1589 [2319

SWAN Sports Sidecar, triplex screen, underslung step chassis, 26×2½, Dunlop heavy new, cost £28; sacrifice £18.—Parsons, 1, Acton Lane, Chiswick. [5470

EXTENDED Payments accepted for sidecars; models for all makes.—Send for catalogue, etc., Rideezi Sales, Ltd., Atlantic House, 103, Oxford St., London, W.1 [0829

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

SUNBEAM Coachbuilt Sidecar, complete with fittings, hood, apron, luggage grid, good condition, bargain; £7/10; after 4 p.m.—4, Elm Gardens, Hammersmith. [5354

COLLINS and Son for sidecars, new bulbous back models, complete with renovated underslung chassis, coverall apron, all fittings for any machine from £12/10.—Below.

COLLINS and Son.—2-seater bulbous back coachbuilt models with underslung chassis, all fittings, from £15.—Below.

COLLINS and Son have various models in stock to suit any machine; few secondhand sidecars in stock, cheap.—Below.

COLLINS and Son specialise in frame and chassis repairs; special chassis built to order; work guaranteed. Send for catalogue, or call. Open till 8.30 p.m., Saturdays till 5 p.m., Sunday mornings 10 to 12.—Collins and Son, rear of 84, High St., Putney, S.W. [5322

NEW HUDSON (Speedwell), 1914, coachbuilt sidecar, 4 point, with luggage carrier and screen, good condition; £6/10.—Wright, Avon House, Whitnash, Leamington. [5114

COMFY Sidecars, strong underslung chassis, coach built body bulbous back with locker, quick detachable fittings. Clincher tyre; price 18 gns.—789, High Rd., Leytonstone. [3079

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester [0335

PLUS One Sidecars are supplied in any colours for fitting to any make of machine; Millford chassis if desired; bodies only are supplied, and fit A.J.S., New Imperial, Royal Ruby, B.S.A., James, Indian, Excelsior, Harley, Reading-Standard, Henderson. Do not forget one of these outfits carried 2 fully grown adults through the London-Exeter run.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5836


An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

Insurance Policies

IMPORTANT AGENCY EXTENSION

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS

Address—Agency Dept.,

The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED

Head Office:

77, Cheapside, London, E.C.2.

*Telephone: City 9831 and 9832.*

*Telegrams: "Autoinsure, Cent. London."*


## SIDECAR ATTACHMENTS.

SIDECARS, underslung, handsome coach, n throughout, £11/10; bulbous, £12/10; s Triumph; similar heavy twins, £16/10; bodies fr £4/5; no junk.—Taylor, 637, Seven Sisters Rd., T teuham. [51

1,000 Douglas Underslung Chassis, suitable for a make of machine to order, absolutely comple and renovated, as new, £5 each.—Old Man Hep, 1 Wilcox Rd., South Lambeth, London, S.W.8. 'Phoo 1958 Brixton. [88

PARAGON (patent) Folding Sidecar saves storag has 7 years to its credit, and has proved itse absolutely reliable. Fits any make of motor cycl and, when folded, combination will pass through 30in. doorway. Call and see it demonstrated.—Wineyc Co., Ltd., 236, High Holborn, W.C.1 [03

LICHT Car and Motor Cycle Engineering Co., Ltd.— Light touring body, with new chassis, £1 medium touring body, with new chassis, £14/10; fr fitting, coachbuilt touring-de-luxe sidecars, specially d signed for Triumph riders, £20. Second-hand sidecars Empire sidecar, in good condition, with Easting win screen, £8/10; Canoelet touring, £8/10; Scott sid car £5; Canoelet touring sidecar, £5/10.—26, Tul Hill, Brixton (½ minute from Brixton Skating Rink 'Phone: Brixton 1292. [57

DOUGLAS Underslung Chassis, complete everythin as new, with bulbous back body, £14; Mills-Fu ford P. and M. chassis, new tyre and tube, mudguar etc., with new bulbous back body, £12/10; light seaters, bulbous back, chassis, etc., complete, £1 new chassis, complete with bulbous back or spor body, for 4h.p. machines, £19/10; lightweights, £1 a few shop-soiled, £12/18/6. We are actual manu facturers. Extended payments taken. Trade enquiri invited. Carriage extra.—'Phone: Brixton 1585.— Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W [56

SIDECARS! Sidecars.—Right here, every make every price, new and second-hand, from £7/1 Swan sporting (cigar) model, £23 for Sunbeam, Rudg Norton, Triumph, B.S.A., etc., etc.; for Indians, etc £28; Millford Junior, £22. Don't forget our famou London-Edinburgh coachbuilt underslung touring models at £16 or £17/10, with spacious bulbous back luggage grid, sprung, £1 extra; child's folding sea 35/-; 1922 Montgomery sporting model, £23/10; Lan ford spring wheel touring De Luxe, picnic models, £3 while our stock lasts; our special lightweight unde slung coachbuilt sidecars, for Douglas, etc., £14, com plete, very sporty and comfortable; also heavy touring models for spring frame Indian and Harley, etc., larg bulbous back bodies, 28×3 extra heavy Dunlop £28/10 and £30; 2-seaters at £38.

HERE you are!—Sandhums screens, 55/-; Easting 78/-; Cameo, £2/15; fourth point attachmen arms, 15/-.—Jones Garage, Muswell Hill, Londo N.10. 'Phone: Hornsey 2917. [56

## RUNABOUTS AND CYCLE CARS.

REY'S, of Euston Rd. (Nos. 378-384), have the fo lowing in stock:—

MORGANS, all 1922 Models, also second-hand D Luxe and Grands Prix in good condition.

COVENTRY-PREMIER 1922 4-wheeler Mode £230; one shop-soiled, only £205.

ROVER 8h.p. Model, £220; two second-hand, goo condition, £162/10.

G.N.'s, all Models; also 1920 with dynamo, ver good order, £132/10; one 1921, £142/10.

EXCHANGES or deferred payments arranged.— Rey's, 378-384, Euston Rd. 'Phone, Museum 6436. [399

WAUCHOPE'S, 9, Shoe Lane, London.—5-6h.p Carden Monocar, £50. [450

A.V. Monocar, 6h.p. J.A.P. engine, perfectly new £60.—Progress Garage, Nuneaton. [476

MORGAN 1921, G.P., fully equipped and as new £165.—Mylam, 197, London Rd., Croydon. [542

MORRIS-OXFORD 2-seater; take good combination part, or sell £150.—King, Egrove, Oxford. [522

1921 De Luxe G.N., dynamo lighting, any trial £128.—24, Balliol Rd., North Kensington. [507

1921 S.P. Morgan, most lavishly equipped, as new £140.—24, Balliol Rd., North Kensington. [507

MORGAN.—New models in stock.—Agents, Birkenhead Motor Works, 9, Hamilton St., Birkenhead [238

1921 G.N., popular model, tax paid; £135; ex changes.—Smith's, 86, Chalk Farm Rd., N.W.3. [536

MORGAN Runabouts, immediate delivery, Standard and Grand Prix models in stock.—Moss, Wem. [574

BLERIOT Whippet 1920, as new; exchange good solo and cash.—Mylam, 197, London Rd., Croydon. [542

WEST Norwood.—Absolute bargains procurable in cycle cars and runabouts at Douglas S. Cox's (see Cars). [587

8h.p. Rover.—1922 model in stock; exchanges.— Walbro Motor Cycle Co., Saffron Walden 'Phone: 45. [715

## MOTOR TRANSPORT VEHICLES.

TRAKER-SQUIRE 30-cwt. Lorry, 1916, worm drive, steel wheels, all new tyres, smart coachbuilt body driver's cabin with side doors, lamps, horn, jack, is, etc.; price £220.—See below.

ELDEN 1916 2-ton Lorry, fitted large covered top, suit furniture remover or contractor, all new es, recently thoroughly rebuilt engine, tax paid, dy for instant work, all lamps, etc.; price £200.—ird Garage, Shards Sq., Peckham Park Rd., Old nt Rd., London. [4620

EST Norwood.—Absolute bargains (few samples): 3-ton 1913 worm-drive De Dion lorry, enclosed es, £75; 3-ton L.G.O.C. lorry, live axle, good one, irt, £95; 30-cwt Gobron platform lorry, all solid, 20; 3-ton Knight-Daimler platform lorry, £130; eptionally good 4-ton Kelly-Springfield, £150; practly new 1921¾ Ford ton van lorry, £185; 1-ton .C., £185; 2-ton 1916 Vinot, £185; overhauled, red 3-ton Belsize, £250; 2-ton worm-drive Leyland, 35; others (see Cars).—Douglas S. Cox, West Nord. Extended payments accepted. [5874

## ENGINES.

LACKBURNE and Villiers Spares, any part from stock.—Maudes' Motor Mart, 100, Great Portland W.1. [5459

ETRO 2¾h.p. 2-stroke engine in perfect order; £5.—Auto Engineering Co., Edgwick Mill, ventry. [5509

EW 5h.p. J.A.P. engine, complete, unused, any examination; £15/10.—179, Earlsfield Rd., adsworth. [4733

3h.p. 2-stroke engine, complete with magneto, any examination; £5.—17, Little Ealing Lane, ling, W.5. [5292

h.p. Alldays, new, but run in, T.B. magneto, complete unit; £12/10.—Jones, Post Office House, wport, Salop. [4638

3h.p. Precision 4-stroke, No. 6638A, pulley, carburetter, good condition; £6.—Turner, 17, Sandyd Place, Glasgow. [5574

h.p. Blackburne engine, B. and B., Bosch, magneto, £15; with Sturmey 3-speed gear box, £25.—27, dge St., Northampton. [4875

3h.p. 2-stroke (1922), brand new, eminent make, guaranteed perfect, latest type; £8/10.—Grant, Gosta Green, Birmingham. [5109

921 Precision 3½h.p., 2-stroke, with Cox Atmos carburetter, Thomson-Bennett magneto, complete, brand new, £14.—Below.

OUGLAS 8h.p. Water-cooled, C.W. radiator, petrol tank, bedplate, starting handle, induction pipe, d condition, £11/10; thoroughly overhauled, new gneto, carburetter, guaranteed running order, £21, riage forward; make splendid light car engines. ge selection: stamp reply; trade supplied.—Derring , Grafton Rd., New Malden. [5752

OVENTRY Simplex engine, 10h.p., with magneto and clutch, suit light car or boat, £25; or would change motor cycle; cash adjustment.—West, 50, ldon Rd., Acton, W.3. [5221

1-4h.p. New Hudson, 1914 engine, complete with magneto case, silencer, and exhaust e, good condition; £8.—Wright; Avon House, Whitsh, Leamington. [5113

1h.p. 1919 B.S.A. engine, complete chain, sprocket, spring drive, magneto, carburetter, ncer, only done 1,000 miles; boxed, carriage paid, 7, bargain.—166 Eldon-st., Sheffield. [5324

LAT Twin Engines (Levis 2-stroke), 4½h.p. and 6h.p., guaranteed perfect, and with carburetters magnetos; price £10 and £12 each.—Write, Cole, 7, Rathgar Rd., Loughborough Junction, S.W.9. [3336

BRAND New Engines.—An exceptional opportunity; 1921 Precision 3h.p. 2-stroke (as fitted to the ardmore motor cycle, etc.), a complete unit, with homson-Bennett magneto, Cox Atmos single-lever carretter, list price over £30; limited number, to clear 4. What a gift, or, less magneto and carburetter, gns.; only a few left.—Marble Arch Motor Exange, 135, Edgware Rd., W.2. 'Phone: Pado. 789 [5688

EPPELTHWAITE'S.—5h.p. J.A.P.s, £14; 1915, 5h.p. J.A.P., £11; 5-6h.p. Fafnir (unit), £7/10; 6h.p. Alldays, £4; 4h.p. O.H.V. J.A.P., £5; twin stroke (vertical), £4. Lovely cyclecar flat twin unit, most new, £13/10. Also 5h.p. and 8h.p. J.A.P. ares galore, the entire stock of W. Hawkins, York l. For other spares, see Old Man Hep. advertisement in Spare Parts and Accessories. Stamp for ply please. 'Phone: 1958 Brixton.—19, Wilcox Rd., outh Lambeth, London, S.W.8. [5844

.A.P. Engines, J.A.P. Engines, J.A.P. Engines.—I have the largest stock of 8h.p. J.A.P. engines and rts in England; over 30 engines in stock to select om at £18 each, and all parts for 8h.p. New linders, 50/- each; new pistons complete, 20/- each; w connecting rods, 50/- pair; crank case, 35/- pair; lves complete, 4/- each; exhaust caps, 4/- each; m levers, 3/- each; gear cover, 17/6; chain cover, 6; exhaust box and pipes, 15/- each; stamp reply, South Croydon Motor Exchange, 22, South End, roydon [3677


# OFFICERS' ARMY TRENCH COATS

*Sent on Approval* **57/6** *Money Returned if Dissatisfied*

OILSKIN INTER-LINED AND DETACHABLE FLEECE-LINED

**The Cheapest and Best Trench Coat on the Market**

MOSS BROS.' ILLUSTRATED PRICE LIST SENT FREE

MOSS BROS. SEND ALL GOODS ON SALE OR RETURN

*Ideal for Motoring*

**BLUE TRENCH COAT (Woollen Gabardine) 45/-**
**" " " and Interlined .... 52/6**
**LEATHER FLYING COATS (only a few left) 66 -**
**DINNER AND DRESS SUITS.....60/- to 120/-**
**LOUNGE SUITS (Second-hand) ....35/- " 80/-**
**" " (New and Misfit) ..40/- " 90/-**

**ALL GOODS SENT ON SALE OR RETURN. CASH RETURNED IN FULL IF GOODS NOT APPROVED OF.**

**Gents' Clothing of Every Description Bought, Sold, or Taken in Exchange.**

**MOSS BROS.** ('Phone: Park 4817)
**83-5, High St., Notting Hill Gate & 22-4, High Rd., Kilburn, N.W.6**


## ENGINES.

B.S.A. 4h.p. 1914, good condition, 1920 Fellowes magneto, Capac carburetter; £10 or nearest offer.—Briersfield, Dartmouth, Devon. (D) [4595

EXCHANGE 10h.p. 4-cylinder La Ponette 2-seater for Combination and cash, or Morgan.—Terrace Garage, Turnham Green Terrace, Chiswick. [5638

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. 'Phone, Holborn 5777. [7218

WEST Norwood.—Cars on extended payments, absolutely cash bargain prices.—Douglas S. Cox (see Cars). [5873

HALIFAX.—Second-hand models at special rates; send your requirements.—Motor Exchange, Horton St., Halifax. [5781

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1 [0672

HERBERT ROBINSON, Ltd., Green St., Cambridge, will supply any make of motor cycle or light car on easy terms; strict privacy, no unpleasant inquiries. Full particulars by post. [4957

ANY make of cycle or any combination completely equipped; licensed, insured on 12, 15, 18 months' extended payments system.—Write for particulars, Rideezi Sales, Ltd., Atlantic House, 103, Oxford St., London, W.1. [0830

REY'S, of Euston Rd. (Nos. 378-384) make a speciality of deferred payments; all leading makes, including Morgans, Coventry-Premiers, Rovers, G.N.'s, and other well-known light cars; used cars taken in part payment. 'Phone, Museum 6436. [4002

EASY Payments.—Any make of motor cycle or car supplied for cash or the easiest of easy payments. Agents for all leading makes, including B.S.A., Douglas, Enfield, Matchless, Rudge, Triumph, etc; also Rover, Coventry Premier, Singer, Calcott, Swift, Humber cars, etc.—Note address: Wilkins Simpson, Opposite Olympia, London [5420

## IGNITION, LIGHTING, ETC.

H.B. I. Co.

H.B. for new and second-hand magnetos; all spares stocked.

H.B. Specialise in Thomson-Bennett complete for fixing to Triumph.

P.M., J.A.P., Douglas, 2-stroke engines, etc.; £3.

C.A.V. New, twin and single, clock and anti; £3

DIXIE, Single and twin, all degrees; £2/5.

H.B. Guarantee all magnetos one year.

H.B. will take your old machine in part payment.

H.B. Despatches all goods per return, carriage paid, on approval against cash, or through *The Motor Cycle* deposit system.

H.B. Ignition Co., 78, New Park Rd., Brixton Hill, London. 'Phone: Brixton 610. [0694

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3.

C.A.V. Magnetos, 1- or 2-cylinder, clock or anti, variable ignition, with short-circuiting terminal and platinum points; price 50/- each; all working parts are standard, and interchangeable with C.A.V. types KU1 and 2.

THOMSON-BENNETT, types A.H.1 and 2, variable ignition, clock or anti, fitted with short-circuiting terminal and platinum points; price 52/6 each.

THOMSON-BENNETT, and M-L's of Coventry, 1-cylinder, types A.D.S. or P.L.R., especially suitable for stationary engines, price 35/- each; fitted with variable ignition, 10/- extra.

THOMSON-BENNETT 4-cylinder, variable ignition, clock or anti, fitted with short-circuiting terminal; price £4/10.

BOSCH, D.A.L., waterproof, variable ignition, 1-cylinder, clock or anti, with short-circuiting terminal; price £3 each.

GUARANTEE.—All magnetos are guaranteed to give satisfaction, and are despatched in perfect working order; any machine not in accordance with our guarantee will be replaced or money refunded, if returned to us as sent, and within 30 days of receipt.

TERMS.—Net cash with order; samples sent on approval against cash; all goods carriage paid.

BEFORE ordering elsewhere, write for samples, and compare our quality and finish with other supplies.

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. 'Phone: Central 877. [0698

DIXI Mag. for sale, single; 25s.—L. Raxworthy, 1, Pembroke Rd., Walthamstow [5005

APOLLO Plugs, new; 10/6 dozen, sample 1/3; trade supplied.—Holland and Day, Chelmisford. [3506

## IGNITION, LIGHTING, ETC.

BROWN, Gardiner and Co.

C.A.V. 2-cylinder, clockwise, aeroplane starting magnetos, platinum points, guaranteed unused, all working parts interchangeable with C.A.V. type KU2.

THESE Magnetos can be converted for use on any 1- or 2-cylinder engine of less than 5h.p.; 25/- each, carriage paid.

SPECIAL Prices for quantities.

CASTINGS and brass armature ends; 10/6 per set.

LONG Cams necessary for single cylinders; 3/- each.

SAMPLES sent on approval against cash.

BROWN, Gardiner and Co., 8, Bevis Marks, E.C.3. [0826

COUNTY of London Engineering Works, Ltd.

ALL Magneto Spares stocked.

GOVERNMENT Surplus Magnetos (new, unused).

BOSCH, Single, type D.A.L., variable ignition; £3/15 each.

M.L. Single Enclosed Waterproof, variable ignition, £4 each.

THOMSON-BENNETT, single, enclosed waterproof, variable ignition; £3 each.

THOMSON-BENNETT, twin, enclosed waterproof, variable ignition, all degrees; £3 each.

C.A.V., single, enclosed waterproof, variable ignition; £3 each.

C.A.V., twin, enclosed waterproof, variable ignition; £3 each.

RUTHARDT, single, enclosed waterproof, variable ignition; £2/10 each.

BERLING, single cylinder, enclosed waterproof, variable ignition; £2/10 each.

SPLITDORF, single, enclosed waterproof, variable ignition; £2/10 each.

DIXIE, single, enclosed waterproof, variable ignition; £2/5 each.

DIXIE, twin, enclosed waterproof, variable ignition; £2/5 each.

ANY of the above single-cylinder Magnetos can be supplied with the special long driving spindle, suitable for Rudge.

THESE Magnetos are fitted with leads and base-plates, ready to be immediately fitted. Please state make of engine when ordering.

GUARANTEE.—We guarantee all our Magnetos for 12 months, and will willingly replace or repair any that should prove defective within that period.

SEND your repairs to us; it will pay you; all repair work guaranteed.

COUNTY of London Engineering Works, Ltd., 6, Garden Lane, Christchurch Rd., Streatham, London, S.W.

TEL.: Streatham 2898. T.A.: Ignitionac, Brixtret, London. [1848

THE Magneto and Accessories Co. carry spares for your magneto.—Below.

PLEASE make a note of the following Government surplus magnetos, which are new, unused, and carry our written guarantee for 12 months.—Below.

BOSCH, single or any degree, twin (enclosed waterproof), £5 each; very powerful spark.—Below.

THOMSON-BENNETT, single or any degree, twin (enclosed waterproof), £3 each.—Below.

C.A.V. single or 180° flat twin (enclosed waterproof). The magneto for any Lightweight. Ball races, new, Fafnir, ¼×¾×¼, 1/ each.—Below.

ALL magnetos are supplied ready to bolt on your machine, fitted with variable ignition and short-circuiting terminal. Please state make of engine. Send us your inquiries, whether it is for one or one thousand (trade please note this), we have the goods.

ANY magneto sent on approval against cash, carriage paid. Write or 'phone—Magneto and Accessories Co., Cromwell House, Fulwood Place, High Holborn, W.C.1. Phone: Chancery 7054-5. [5687

BOSCH and M.L. singles, 30/-; C.A.V., 37/6; variable ignition, guaranteed.—84, Greenside Rd., Croydon. [5135

MAGNETO Sprocket Manufacturers.—7-tooth to 24-tooth stocked.—Ridington, 202-4, Southampton St., Camberwell. [6886

ROTAX Igdyno, 6-volt, 5-amp., complete with coil, also switchboard with ammeter, dimmer, and cut-out; offers invited.—188, Farebrother St., Grimsby. [5041

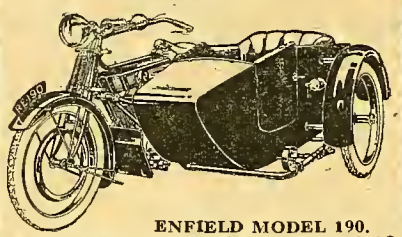
K.L.G. W D Plugs, unprecedented value, 4 for 2/6, postage 9d.; immediate return of money if not satisfied.—Thompson 59, Queen St., Wolverhampton. [8206


# RATCLIFFE BROS.

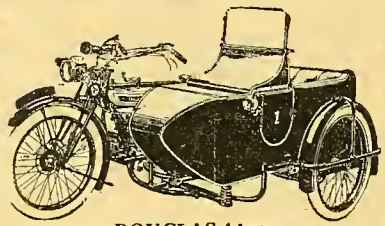
## 200, GT. PORTLAND ST., W

'Phone—Langham 1704

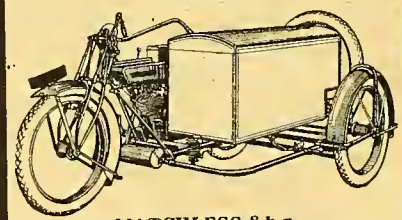
**Any make of machine can be supplied on our Payment out of Income Scheme. Write for full particulars, and state machine you are interested in.**



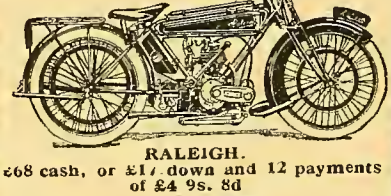
**ENFIELD MODEL 190.**
**£158 cash or £39 10s. down and 12 monthly payments of £10 8s. 4d.**



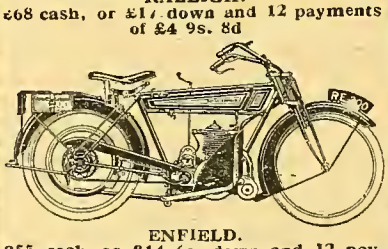
**DOUGLAS 4 h.p.**
**£135 cash or £33 15s. down and the balance in 12 monthly instalments of £8 18s.**



**MATCHLESS 8 h.p.**
**£170 cash or £42 10s. down and 12 payments of £11 4s. 2d**



**RALEIGH.**
**£68 cash, or £17 down and 12 payments of £4 9s. 8d**



**ENFIELD.**
**£55 cash, or £14 6s. down and 12 payments of £3 11s. 6d.**

TRADE SUPPLIED


## IGNITION, LIGHTING, ETC.

RELIANCE Magneto Repairing Co. (the larg London repair depot) for repairs and new m netos.—See below.

RELIANCE Guarantee to Return your magn within 3 days, if necessary 24 hours, with a months' written guarantee.

RELIANCE Test Every Magneto after repair un all running conditions, and, as we contract many of the largest concerns, you need have no he tation in placing your repairs and orders with us.

RELIANCE Manufacture and Stock Spare Parts all magnetos. Special line, genuine platin screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice, free charge, upon any question concerning igniti troubles, as we place our long-standing experience your disposal, and old and new customers may be c tain of getting the usual promptness and courtesy have always endeavoured to give.—Reliance Magn Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. Jo St., London, E.C.1, for new and second-ha magnetos.

THOMSON-BE NETT Magnetos, brand new, closed waterproof type, singles, suit any engi price £3; twins, 45, 48, 50, 55, 60, 180 degre for Douglas, Clyno, etc., price £3. See our guaran below.

C.A.V. Magnetos, waterproof, new and unus singles and 180 degrees twins, suitable Douglas, O.K., Calthorpe, A.J.S., Enfield, Levis, N Imperial, Scott, Velocette, or any lightweight. Th magnetos are of the finest workmanship throughou price £3. See our guarantee below.

BEFORE Sending Elsewhere, send a P.C. for small interesting booklet showing a full range magnetos to suit every engine, with full particula and prices.—See below.

GUARANTEE.—Every magneto, no matter wh the price or make, is guaranteed by us. N merely a guarantee that same is in good order at ti of sale, but a plainly written statement that guarantee each machine against all defects for a peri of 12 months. This, we maintain, justifies us charging a few shillings more than certain of o competitors.

RELIANCE Cordially Invite Customers to the works to see any of the above on test. Magne list, giving full particulars, sent upon application. will pay you to deal with a firm of repute.—Relian Magneto Repairing Co. (1914), 283, St. John St., Lo don, E.C.1. [38

LUCAS Dynamo Lighting Set, complete, su A.J.S., 10 gns.; M-L magneto, 50°, £6.—Cros Agent, Rotherham. [53

MAGNETO Contacts re-tipped, pure platinum, fi weight; 12/6 per pair; return post.—Venimo 31, Court Oak Rd., Harborne, Birmingham. [46

MAGNETOS and Dynamos overhauled and repaire moderate charges; all work guaranteed.—Leona G. Bourne, 8, West Hill Av., Hednesford, Staffs. [47

DYNAMOS.—Twenty new E3 6-volt, 5-amp., £5/1 M5 switchbox, 42/6; 12-volt accumulators, £ —Jenner (Dept. M.C.), 165, Church Street, Mitcha [54

ACCUMULATORS.—Quality right; price righ write for list; trade supplied.—Adams Bro (Longton), Ltd., Accumulator Manufacturers, Longto Staffs. [12

ANY Motor Cycle Magneto repaired, no matt what condition, provided complete, for 30/-; 2 hour service.—Kays, Electrical Dept., 8, Bond St Ealing, W. [72

CHELTENHAM.—Repairs to magnetos, self-starter lighting plants, etc.; London experts employed. Norwood Magneto Works, 95, Bath Rd Cheltenham Phone 1256 [07

DASH Switchboards, 4-way, with ammeter, 20/- with ammeter and voltmeter, 35/- each nett.— Leslie Dixon and Co. (Dept. H.1), 9, Colonial Av Minories, E.1 [07

C.A.V. Singles and Twins, suitable for Lightweight up to 4h.p., £2/10; 1/6 extra for postage satisfaction or money returned.—Bennett, 3, Gorring Park Parade, Tooting Junction, S.W.17. [48

JEBRON Contacts, used by Messrs. Collier Bros platinum, for blades, screws, etc., cures misfiring Jebron screws, fit Bosch mag., 10/6 pair; old screw any make, Jebronised, 4/9 each, return post.

JEBRON Contacts, used by Messrs. Collier Bros Colver, Martin, making world's records.—Jebron 38, Herbert Rd., Woolwich, London, S.E.18. [00

CONTINENTAL Ignition Repair Co. We repa Continental magnetos only. By specialising o Bosch, U.H., Eisemann, Mea, Splitdorf, Dixie, an Berling magnetos, we can naturally give you bett service.

PRICE: Rewinding 18/-, condensers 10/-, platino screws (Bosch standard) 6/-, remagnetising 2/6 slip rings 6/6, H.T. terminals 4/6 Our price fo overhauling a motor cycle magneto ranges betwee 20/- and 35/-, and never exceeds the latter figur Guaranteed for 12 months, and redespatched to yo in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardwic Rd., Chiswick, London. [37

## IGNITION, LIGHTING, ETC.

THOMSON-BENNETT Magnetos, Type A.M., new, guaranteed perfect, waterproof, singles, flat twins, twins, any angle 42° to 55°, clock or anti; week's proval against cash.—Brockbanks, 58, Lord St., uthport. [0756

A.V. Magnetos.—Extraordinary bargains.—Brand new 180° twin or single cylinder, 38/6, carriage e. Every magneto thoroughly tested before dis-tch; approval against cash.—Langford's, 37, Crickle-od Breadway, London, N.W.2. [5645

J.H. Magneto Repairs.—We specialise in these mag netos, and can be relied upon to give you good rvice. A1, B1, AO, KB1, KB2V, KZ2V type spares ocked; prices moderate; 12 months' written guaran-e.—Charles Parker and Co., Churchfield Rd., Acton, ndon. [4455

PLITDORF Magnetos, Model EU, single, anti-clock, variable ignition, 38/-; large type Dixies, single, ck or anti, 30/-, 50°; 55-180°, 38/- All above are new and guaranteed perfect. None of these mag-tos are converted starter magnetos they are the uine article.—Marble Arch Motor Exchange, 135, lgware Rd., W.2. 'Phone: Padd. 789. [5689

URPLUS Magnetos, with written guarantee one year: M-L single, 35/-; B.L.I.C. ditto, 42/-; sch ditto, 45/-; Thomson-Bennett and C.A.V. sin-s and twins, 50/-. We specialise in repairs and ares for all makes; lists 2d. stamp. Deal with ex-ts and avoid certain disappointment.—Whitdale gnete Service, Cherry Orchard, Croydon. 'Phone: oydon 1625. [3642

HE Magneto Repairing and Winding Co. (estab-lished 1912), contractors to H.M. Government, d officially appointed by the R.A.C. Magneto re-irs of every description; all repairs at lowest pos-le prices, and strictly guaranteed. We can mostly ure them within 24 hours. We have several new d second-hand single and 2-cyl. magnetos in stock, guaranteed.—The Magneto Repairing and Winding ., 78, Hampstead Rd., Euston, London, N.W.1 hone: Museum 1158. T.A.: Kumagnelec, Eusroad, ndon. [2445

USTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; litdorf and Dixie specialists; official Indian elec-cal service station; Thomson-Bennett repairs and ares. All repairs are tested on an approval A.I.D. t bench before despatch, and therefore carry our arantee for 12 months. We hold the largest stock guaranteed magnetos in London, twins all degrees; re parts for all makes in stock; charged accumu-ors, all voltages, always ready in stock; plugs, oles, ½-watt and vacuum bulbs, all voltages. We e you real live service always.—Euston Ignition Co., 9, Euston Rd., London, N.W.1. 'Phone: Museum 34. T.A.: Magdyno, Eusroad, London. [0263

## TYRES.

ENTRAL Garage for fair dealing.

6×2¼ Dunlop, 37/3; Goodyear E.H., 26/-; Bates, 31/6; Avon, 25/-; Clincher-de-Luxe, 21/-; mer cord, 22/6.

6×2⅜ Dunlop heavy, 32/-; E.H., W.D., 37/6; Clincher E.H. (for 2¼), 27/6; Avon R.S., /6.

6×2½ Avon, 24/-; Wood-Milne, 13/3; Clincher, 30/-.

6×2½×2¼ Dunlop, 46/-; Avon E.H., 30/-; Hutchinson T.T., 36/-; Clincher, 30/-; Palmer d, 32/6.

8×3 Clincher (plain rib), 42/6; Dunlop ribbed, 32/6; Fisk, 40/-; Clipper 3-ribbed, E.H., 35/6. s also have a special line of Macintosh bargains, /6.

50×65 Goodyear E.H., 30/-; Dunlop S.S., 47/6; Wood-Milne E.H., 19/-.

00×80 Wood-Milne E.H., 41/6; International grooved, 55/-; Firestone, 45/-; Englebert, /6.

UBES, all sizes, 6/6 each; 700×80, 7/6.

ENTRAL Garage will send any of the above lines on 7 days' approval on receipt of cash plus 1/6 stage.—302, London Rd., Thornton Heath [5252

LWIN Tyre Co. will send on approval against cash any of the following tyres:—

6×2¼ Clincher, 19/-; Palmer Cord, 21/-; Fire-stone, 30/-; Goodyear, 26/-; 26×2⅜ Clincher H., 26/-; Dunlop heavy, 31/-; E.H., W.D., 37/-; von R.S., 27/6; 26×2½×2¼ Palmer cord, 32/6; lincher, 25/6; Avon E.H., 28/6; 28×3 Fisk E.H., 0/-; Dunlop ribbed, 30/-; Clincher ribbed, 42/-; Mac-tosh special, 28/6; Clipper 3-ribbed E.H., 35/-; 00×80 Wood-Milne E.H., 41/6; Firestone, plain, 5/-; motor cycle tubes, all sizes, at 6/-.

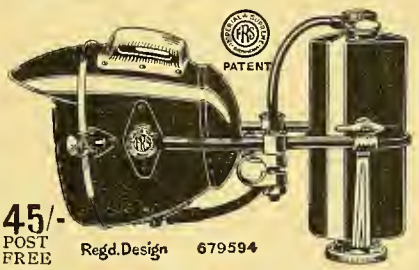
NY of the above lines will be sent on 7 days' ap-proval against cash, plus 1/6 for post.—The lwin Tyre Co., 37, Red Lion St., High Holborn, .C. [5251

WOOD-MILNE 26×2¼-2½-650×65; 15/8, carriage 1/6.—417a, Brighton Rd., Croydon. [5044

HE Difference between a good retread and a bad one is its mileage. Try us. Watch results.—Melton ubber Works, Melton Mowbray. [0636

# F.R.S. ACCESSORIES

You'll want accessories for EASTER—order NOW from F.R.S., the only firm who can equip you completely. You can have any article on APPROVAL against cash—carefully examine it and if you are not satisfied, return it and we will refund your money.




**45/-** POST FREE Regd. Design 679594

## HERE is the LAMP

### —the famous F.R.S. Streamline Projector Set

—recommended and accepted by experienced motor cyclists and leading manufacturers as the standard lighting equipment for 1922. Unequalled for beauty, quality, and value—its scientific construction is patented, therefore cannot be imitated—and its superior light-giving power is never questioned. Comparison will prove our claims but—when comparing, bear this important point in mind, that the body diameter of the smallest size is 5 inches.

5" **45/-** 6" **66/-** 7" **99/-**
POST FREE.

**10/6** POST FREE.

## HERE is the HORN

—as supreme as the lamp—handsome in appearance, distinctive in tone. Has no equal for absolute quality and finish, even at 20 per cent. more in price The special bulb and strengthened neck ensures greater durability.

13" **10/6** 15" **18/6** POST FREE.

## HERE is the HOLDER

—another example of F.R.S. supremacy. Has no loose nuts and bolts, sharp edges or ugly clips. Secured together by ONE patent binding rim and ONE large nut. Absolutely watertight, adjustable to any angle, made of BRASS throughout. Supplied in any finish. **5/-** POST FREE.

Our guarantee of "Satisfaction or money refunded" is your safeguard in buying—order NOW while we can give immediate delivery. Complete List on request.

**F.R.S. LAMPS, Vere St., BIRMINGHAM**

**LONDON:** **GRAPE STREET,** (off Shaftesbury Av.)

**Glasgow:** H. R. Woodside, 65, West Regent St.
**Belfast:** G. Beers. 11. Bedford Street.

*Clinton-Watt.*

## TYRES.

LOOK!—We still lead the way to tyre bargains. Wood-Milne, guaranteed brand new. Net clearance or blemished.

26×2¼, 26×2½ o.s., 650×65, special three ply, 13/6.

26×2½, extra heavy 4-ply 16/6.

26×2½, to fit 2¼ rims, greeved and ribbed, best English make, 24/9.

26×2¼, Moseley heavy ribbed (W.D.), 19/6.

26×2⅜, Dunlop retreaded greeved covers on Dunlop casings, 19/6.

29×3½, to fit 28×3 American rims, Dunlop extra heavy rubber non-skid, 57/6.

28×3 Dunlop sidecar, ribbed to fit American rims, 34/6.

28×3 Mackintosh Chain, heavy tread, 28/8.

NEW Tubes (in all sizes), 7/-. 1/- extra carriage paid, passenger train. Other tyre bargains. Price list on application.

MOTOR Cycling Helmets (1922 patterns). Illustrated list on application.

NEW Rubber Thigh Boots, 12/-, carriage 1/- extra. —H. Emanuel and Co., Tyre Factors, 27, Belgrade Rd., Stoke Newington, N.16. Stores: 37A, Balls Pond Rd., Dalston, London, N. Telephone: Dalston 3161. [0832

ECONOMIC Tyre Co.—Special Bargains in clearance and surplus stock covers. All goods sent on seven days' approval, carriage paid, against remittance.

ECONOMIC.—24×2¼ (also oversize for 2in. rims) Clincher Heavy De Luxe Junior, 20/-; extra heavy, 27/6.

ECONOMIC.—26×2¼ Dunlop heavy, warranted, 37/3; Bates special heavy, 28/6; Wood-Milne extra strong, 20/-; special heavy tubes, 6/-.

ECONOMIC.—26×2⅜ Dunlop heavy, warranted, 41/6; Hutchinson T.T., 29/-; special heavy tubes, 6/6.

ECONOMIC.—26×2½×2¼ Dunlop heavy, warranted, 46/-; Goodyear Diamond, 42/6; Clincher extra heavy Dreadnought, 37/6; heavy, 30/-; Avon rubber-stud, extra heavy, 30/-.

ECONOMIC.—28×3 Fisk extra heavy, 42/6; Beldam, all rubber, 40/-; tubes, 6/6.

ECONOMIC.—650×65 Goodyear Diamond, 30/-; special heavy tubes, 7/-; 700×80 Goodyear Diamond, 50/-; tubes, 6/-.

ECONOMIC.—Fully warranted Dunlop Rubberstud, 24×2, 22/6; 24×2¼, 24/9, 26×2, 24/6; 26×2¼, 25/9.

ECONOMIC Tyre Co., 314, New Cross Rd., S.E.14 (near Town Hall). 'Phone: New Cross 1393. [4549

28×3 Wood-Milne Extra Strong, 25/-; Kempshall, 22/6.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd. 789. [5691

SCOTTISH readers will find it advantageous to purchase their tyres from McArthur, Hill and Co., new address: 436, Argyle St., Glasgow. Lists post free. [4983

MOTOR Cyclists.—Send your covers for retreading. 3,000 miles guaranteed. Repairs of every description; carriage paid.—Buxton Vulcanising Co., Buxton, Derbys. [4357

RETREADING Diamond Nobby, grooved and ribbed treads, 7 patterns, American and H.F. process; tubes repaired.—Midland Tyre Werks, Green Lane, Walsall. [3320

MISS DOOLEY.—28×3 New Dunlop E.H., 35/-; each; Moseley, heavy, 30/- each, and Wood Milne extra strong, 30/- each. Carriage extra. Immediate delivery.

MISS DOOLEY.—Tubes. New 28×3 Dunlop, butt ended, or Palmer endless, at 5/- each. 26×3 Dunlop, butt ended, 5/- each. Immediate delivery. —Please apply for above tyres and tubes to Miss E. Dooley, 33, Killyon Rd., Clapham, S.W.8. [5626

BURST Motor Cycle Tyres, chafed beads, remoulded, made perfect, tube vulcanising, butt-ends fitted, retreading; send for list.—Melton Mewbray Rubber Works, Melton Mewbray [0347

TYRE Repair Specialists.—H.F. process throughout, including retreading burst covers. Every kind of repair to tyres and tubes in 24 hours, retreads in 4 days.—The Motor Tyre Co., 66, High St., West Bromwich. [3852

26×2½ (for 2¼ rim) Clincher De Luxe Stud, 25/-; 26×2¼, 16/-; 28×3in., Fisk R.N.S., 40/-; post paid. These covers are guaranteed by us and are not W.D.—Maudes' Motor Mart, 100, Great Portland St., W.1 [5460

DON'T miss last few carriage paid bargains.—26×2⅜ heavy Dunlop, 26/6; 26×2½, for 2½ rims, heavy Dunlop, 30/-; ditto, E.H. Clincher, 26/6; sound new tubes, 26×2⅜, 4/6; 26×2½, butt or endless, 5/-.—58, Blagdon Rd., New Malden. [5778

## TYRES.

SPECIAL Offer, guaranteed new and unsoiled, 26×2⅜ Dunlop heavy studded, 29/6; Wood-Milne heavy, 26×2¼, 26×2½, 650×65, 15/-; Goodyear Clearance diamond extra heavy, 26×2¼ 23/6, 650×65 28/6; Dunlop tubes, 6/6.—Harvey and Co., 47, South Lambeth Rd., S.W.8. [0816

GOOD Second-hand Covers, all sizes, 12/6 each; New Beldam covers, 26×2⅜ for 2¼, 26×3 for 2½, 25/- each; 28×3, 35/- each; 650×65, 40/- each; 700×80, 45/- each; new Avon steel studded covers, W.D., 700×65, 35/- each; steel tow ropes, complete, 10/- each.—Homerton Rubber Works, Brooksby's Walk, Homerton, E.9. [0331

IF you have any old tyres, why not have them made equal to new again at a low cost? We guarantee every job. Send your old covers to us for re-reading with rubber studs; prices 10/6, 12/6, 15/6, 17/6, and 20/-; repairs from 2/6.—Phœnix Tyre Repairing Co., 224, Sherlock St., Birmingham. [5814

## TANKS.

TANKS for B.S.A., new, 38/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [1421

TANKS for Triumph, new, 38/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [1422

TANKS Re-enamelled, makers' colours; 15/6.—Bright and Hayles, 78, Church St., Camberwell. [5481

I SPECIALISE in Repairs, Rebuilds, etc., to any pattern; first-class enamelling; reasonable charges.—Day, 27, St Luke's Rd., Birmingham. [8245

COVENTRY Tankers, Ltd., makers to the principal manufacturers; petrol tanks for any style supplied, extra capacity.—Hearsall Works, Coventry. [1423

TANKS of every description replaced, repaired, and re-enamelled. Quick service, moderate charges.—Herbert Robinson, Ltd., Green St., Cambridge. [4955

TANKS Made or Repaired, re-enamelled, lined, transferred; handle-bars, etc., plated. Established 30 years.—Attwood's, 86, Rosebery Av., London, E.C.1. [7073

TANKS re-enamelled to pattern; high-class work only.—D. Jenkins and Sons, 6, Richard St., Atkinson St., Deansgate, Manchester. Established 25 years. [2245

ASHTON Bros.' 40/- Tanks, made of 20-gauge tin-plate, in most standard designs, to fit any frame.—Further particulars from 14, Market Place, Manchester. [3601

TANKS Re-enamelled, makers' colours, designs, and transfers guaranteed, from 11/6, partition leakage, dents, fastenings, and all repairs undertaken; lists.—Park Tank Works, 1a, Paradise Rd., Highbury, N.5. [2764

TANKS of every description replaced, repaired, and re-enamelled at our own works; all kinds of fittings stocked; quick service and reasonable charges. Illustrated list free.—A. Green, Water St., Chapel St., Salford, Manchester. Tel.: 2191 Central. [0256

AVERY'S Stock Tanks for Douglas, Hazlewood, B.S.A., Triumph, Omega, enamelled makers' colours, plated fittings, 40/-, complete; other design or shape to order. 12 months' guarantee with every tank.—Gordon Street Tank Works, Coventry. 'Phone: 1774. [0770

TANKS Renovated in makers' colours and transfers, 14/6; renovated 2¾h.p. Douglas tanks, slightly soiled, 35/-; Triumph tanks, £2/10; carriage extra.—'Phone: Brixton 1585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [5628

TANKS.—All kinds made to order, 32/6 each, including 2 plated fillers, 2 taps. Delivery 14 days, carriage paid. Satisfaction guaranteed or money returned. Enamelling, one colour, 10/6; two colours, 17/6.—Order forms from H. Peel, The Liverpool Tank Hospital, 5, Smithdown Lane, Paddington, Liverpool. [4959

## BELTS.

BELTS, best make, clearance, ⅞in., 1in., 1¼in., cheap; size 10 Pedley horn bulbs, 1/6.—Davies, Union St., Wednesbury. [4452

BRAND New Clearance Belts ¾×6ft. 6in., made by Palmer; 8/- each.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd. 789. [5690

DOUGLAS 2¾h.p., complete length, 6ft. 6in., brand new, 9/-; postage, 9d.—W.J.C. Motor Exchange, 5, Addison Avenue, Holland Park, W.11. Park 2071. [5259

BRAND new Dunlop belting in standard sizes sent on approval against cash, plus 1/- postage. ¾in., 1/7 foot; ⅞in., 1/10 foot; 1in., 2/2 foot; 1⅛in., 3/2 foot.—Central Garage, 302, London Rd., Thornton Heath. [5253

BALATA and Chrome Combination V Belts, suitable for all classes of motor cycles, ¾in., 1/4; ⅞in., 1/6; 1in., 1/9; 1⅛in., 2/- per foot. Fasteners 9d. each. Postage 1/-.—W. Pollin & Son, Hollingtom, St. Leonards-on-Sea [6656

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All brand new and guaranteed. Dunlop round top, ¾in., 1/10 ft.; ⅞in., 2/2 ft.; 1in., 2/8 ft.; 1⅛in., 3/2 ft.; John Bull, ¾in., 1/11 ft.; ⅞in., 2/3 ft.; 1in., 2/8 ft.; 1⅛in., 3/2 ft. Any length cut. Clearance belts, 6ft. 6in.×¾in., Pedley or Bates, 10/-. [4954


1922
VALUE
£85
OMEGA
COMBINATION
Complete as follows:
3 h.p. 348 c.c.
3 SPEEDS,
CLUTCH, KICK STARTER,
TOURING or SPORTS SIDECAR,
LAMPS, HORN, Etc.
READY TO RIDE.
OTHER
Omega Models
from £39-10-0
WATSONIAN SIDECARS
SPORTING—TOURING—COMMERCIAL.
ROYAL RUBY 8 H.P.
SPRING FRAME COMBINATION.
SCREEN, LAMPS
SPARE WHEEL £185
2 Seater £197
DEFERRED PAYMENTS.
BARTLETTS
93, Great Portland Street,
Phone:
LANGHAM 1271. London, W.


## BELTS.

BASTONE'S for new belts.—John Bull, ¾in., 1/ ⅞in., 2/3; 1in., 2/8; 1⅛in., 3/2 per foot. P ley, ¾in., 1/9; ⅞in., 2/-; 1in., 2/6; 1⅛in., 3/- foot. Buffalo hide and chrome, ⅞in., 1/9; 1in., 2 1⅛in., 2/3 per foot.—228, Pentonville Rd., Kin Cross, London, N.1. [1

## CARBIDE.

CARBIDE, 20/- cwt., f.o.r., c.w.o., depôts all pa —Hedge and Co., Warwick Rd., Bristol. [5

BEST Quality Carbide, 28lbs., 8/6, drum free; quantity supplied from ½lb. tins to 2cwt. dru only the best brands stocked; trade inquiries invit —Dargue, 57, Grey St., Newcastle-on-Tyne. [9

CARBIDE.—Immediate delivery of all sizes in 1 2 lb., 4 lb., and 7 lb. lever lid tins, and 2 c drums, labelled or plain for retailers' own labels, qua guaranteed, and all standard sizes supplied by cheapest firm in the trade.—The Premier Lamp Engineering Co., Ltd., Moorfield Works, Armley, Le [3

## PATENTS.

WE Buy, Sell, and Finance Inventions and Pate and advise on their marketing.—Send postcard full particulars to Dept. C, Inventors' Sales Age 22-24, Spencer Av., Coventry. [1

WONDERFUL "Mag-Dyne," provisionally tected, for sale; full-size working model av able for inspection and trial; cash or royalty.—C rugh Engineering Works, Shirley Rd., Croydon. [2

## PATENT AGENTS.

FREE, 100 Page Patent Guide, postage 6d.—T Consulting Patent Agency, 253m, Gray's Rd., London. [2

PATENTS Advice, handbook free.—King, Registe Patent Agent, 146a, Queen Victoria St., E 35 years' references. [0

W. BRYSON, B.Sc., Assoc.M.Inst.C.E., Charte Patent Agent, 29 Southampton Buildi Gordon. W.C.2 'Phone Museum 3851 9

H. N. & W. S. SKERRETT (H. N. Skerrett, Fell of the Chartered Institute of Patent Age A.I.Mech.E., A.I.A.E., Associate I.E.E., etc.; W. Skerrett, A.I.E.E., Registered Patent Agent).—Pate designs, and trade marks.—24, Temple Row, Birmi nam. Tel.: Central 1038. T.A.: Skerrett, Birmi ham. [1

## AGENCIES.

REPRESENTATIVES required by leading ma facturers of lubricating oils and greases; ex tent opportunity to push high-grade and competit products.—Write, giving full particulars, Box 16 Sells Advertising Offices, Fleet St., E.C.4. [4

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at comp tive rates.—Ernest Bass, 40, Chancery La W.C.2. Phone: Museum 2234. [0

ROYS, LTD., Insurance Brokers.—Agents for companies and Lloyd's.—Competitive rates motor insurance.—170, Gt. Portland St., London [0

THE Motor Cycle" Insurance Policy is the pol authorised by "The Motor Cycle," and cov motor cycles or cycles and sidecars used for priv purposes. Complete comprehensive cover. Maxim benefits, minimum rates. Full particulars and p spectuses on application.—The Autocar Fire and A dent Insurance Co., Ltd., 77, Cheapside, London, E.C [0

## SITUATIONS VACANT.

REQUIRED, immediately, man with first-cl knowledge and experience of repairs to all ma of motor cycles, including magnetos, lighting sets, tuning up.—Apply, giving full particulars, experien wages required, to Box No. 9402, c/o *The Mo Cycle.* [5

## SITUATIONS WANTED.

SUCCESSFUL Competition Rider offers servi Junior T.T.; exchange expenses.—Box 9197, *The Motor Cycle.* [3

ADVERTISING specialist desires engagement; pert in printing, design, sketches, etc. — 9380, c/o *The Motor Cycle.* [5

YOUNG Man, 26, requires situation, salesm demonstrator, mechanic. Fully trained mo engineer (practically, technically), good driver rider; southern or eastern counties preferred.—9279, c/o *The Motor Cycle.* [4

KEEN young experienced Amateur Motor Cyc desires engagement for 1922 T.T., Brooklan Reliability Trials, etc., car or motor cycle; pu nominal fees.—Will firms interested kindly write 9360, c/o *The Motor Cycle.* [4

## BUSINESSES AND PROPERTY FO SALE, TO BE LET, OR WANTED.

CYCLE and Motor Cycle Business for Sale, g going concern, main road; hire car; price, all £400 for quick sale.—Box 9377, c/o *The Motor Cy* [5

MOTOR and motor cycle business in prosper town; 30 miles London, spacious premises sound connection; all at £350.—Box 9397, c/o *Motor Cycle.* [5

THE MOTOR CYCLE
ESTABLISHED IN 1903
· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).
BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.
MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## 100 Miles an Hour!

BROOKLANDS track has only recently been reopened for 1922 racing, but already one of the outstanding achievements of motor cycle history has been accomplished thereon—a 500 c.c. machine has been officially timed to attain a speed of 100 m.p.h. over a distance of half a mile.

Although this short distance is not recognised for official record purposes, its merit is undoubted, since much discussion of late has centred around the possibility of a 500 c.c. machine attaining three-figure speeds during the present year. It must be remembered that at the close of 1921 the greatest speed to the credit of any 500 c.c. machine was 93.99 m.p.h., and to increase that figure by 6 or 7 m.p.h. seemed to be a matter of at least a season's careful tuning and testing, for the addition of even one mile an hour at these almost phenomenal speeds is a prodigious task when it is remembered that wind resistance (the greatest force the speedman has to overcome) increases as the square of the speed. Nevertheless, no sooner was the track available than the speed leapt up almost at once to 98.11 m.p.h., almost immediately afterwards raised to 98.50 by a rival machine—the contestants being flat twin and single respectively.

### A Success for the Flat Twin.

Ultimately the former type attained the signal honour of topping the 100 m.p.h. mark over an officially timed distance. It is little more than six months ago that the three-figure speed was reached by an American 1,000 c.c. machine, yet to-day we have British 500 c.c. machines creeping up in close pursuit. It now only remains for a Class C mean speed international record to be brought up to the same level, to mark another epoch in the development of the motor cycle.

Students of engine design will not fail to notice that all the machines which have recently raised the sprint speeds of the 500 c.c. class have been engined with units of the overhead valve type, and although the general tendency of racing men has been to favour the single cylinder engine, it has remained for a horizontally opposed twin to show that over 100 m.p.h. was attainable by a 500 c.c. unit. Whether this type of engine can prove its staying power to the extent of converting 100 m.p.h. into an international mean speed record, and incidentally proving its independence of such adventitious aids as favourable winds and gradients, remains to be seen. Perhaps, in a few days or weeks, or may be even as we write, the "$3\frac{1}{2}$" single will demonstrate its ability to record this achievement. It must not be overlooked, however, that it is a feat the accomplishment of which is beset with many difficulties.

### What International Records Mean.

These sprint performances which astonish everyone from time to time are largely made possible by the astute selection of the opportune moment. Having developed the engine to its maximum state of efficiency it is difficult to keep it in tune for more than the concentrated effort which will carry it over the sprint distance. To qualify for an international record, which involves a run *both* ways, with and against the wind (should the atmosphere not be calm at the moment) demands the possibility of much higher speed under favourable conditions than the ultimate mean speed often implies. In securing an international record, all the help gained by swooping down the banking with the generous help of a 60 m.p.h. following wind is eliminated on the backward journey; it follows, therefore, that for mean speed records a calm day is essential.

Meanwhile, all honour to the first man and machine to bring a three-figure speed with a 500 c.c. engine into the realm of accomplished fact.

An index to the advertisements in this issue will be found on the page facing the back cover.

# 100 m.p.h. with a 500 c.c. ENGINE

C. G. Pullin (3½ o.h.v. Douglas): 100·06 m.p.h.
R. N. Judd (3½ o.h.v. Norton): 98·50 m.p.h.

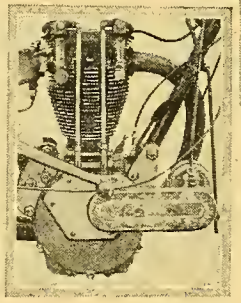
## Remarkable Speeds at Brooklands. A Landmark in Progress. History of 500 c.c. class Speed Records.

TWELVE months ago 100 m.p.h. on a motor cycle of any power had yet to be accomplished in this country; last week a 500 c.c. machine, of the popular "3½ h.p." class, attained the magic figure, the honour of being first going to C. G. Pullin on an o.h.v. flat twin Douglas.

Several people were known to be in the running for some time past—George Dance on a new o.h.v. Sunbeam, F. B. Halford on a four-valve Triumph, R. N. Judd in combination with D. R. O'Donovan and the o.h.v. Norton, and C. G. Pullin and his Douglas—but actually the tussle resolved itself into a duel between the Norton and Douglas camps to be settled before the other two made an official reappearance on the track

### A Flat Twin Triumphant.

The game was opened on Tuesday of last week by C. G. Pullin (T.T. winner of 1914), who succeeded in sending up Dance's (Sunbeam) 93.99 m.p.h. for the flying kilometre nearly 5 m.p.h. to 98.11 m.p.h., and Halford's 87.89 m.p.h. to 93.26 m.p.h for the mile. Hand timing was employed in this instance.



490 c.c. o.h.v. Norton.

On the very next day, however, incidentally a bitterly cold one, Judd decided that the o.h.v. Norton had already proved fast enough to better these amazing speeds. Accordingly an attempt was made, this time with electrical timing attended to by Col. Lindsey Lloyd himself, for it was recognised that an error of a fraction of a second might mean the difference between success and failure.

At first ill-luck attended him, and a broken inlet valve spring caused some delay.

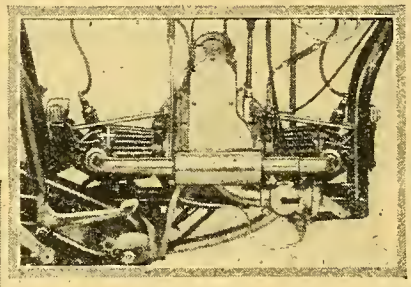
It was nearly lunch time before the overhead Norton was lovingly pushed half-way up the test-hill—to ensure a certain start—but once going it was only a matter of seconds before it was all over. At his first run he lifted the mile and kilometre speeds to 97.35 m.p.h. and 98.50 m.p.h.

The figures were:

| Classes C and D. | | |
|---|---|---|
| Kilometre ... | 22.71 sec. | 98.50 m.p.h. |
| Mile ... ... | 36.98 sec. = | 97.35 m.p.h. |

Equipment used included: Dunlop tyres; Binks carburetter; C.A.V. magneto; Speedwell oil; and Pratt's spirit.

Col. Lloyd was obliged to leave the track immediately, and consequently the machine was locked up until it could be officially measured. But not before Mr J. L. Norton, who had witnessed the attempt, had demonstrated to our representative how remarkably cool the engine had kept. It was possible, less than five minutes after, to keep the ungloved hand against the cylinder, then barely warm.

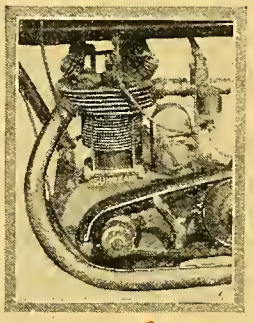


494 c.c. o.h.v. Douglas.

Three 500 c.c. o.h.v. engines which have been instrumental in forcing up the short distance speeds at Brooklands. Douglas holds the coveted honour of being the first "3½ h.p." machine to accomplish 100 m.p.h. The Norton and Sunbeam were runners up.

### The High Efficiency Single

As we indicated last week, this design is in a very experimental stage; so much so that lugs are cast in the cylinder head for one type of valve rocker gear, while an entirely different type is used. Speaking generally, the most striking points visible to the eye are (1) the massive nature of the valve gear and (2) the depth of the radiating fins—incidentally always a Norton feature.



499 c.c. o.h.v. Sunbeam.

Asked how it was done, Mr. Norton would volunteer no further information than "careful consideration of the effect of one thing upon another." A Ricardo piston was used, but we were assured that none of the reciprocating parts are lighter than on the standard B.S. engine.

All the Norton people were confident that they had by no means reached their limit, and that even more startling speeds would be reached very shortly.

All this time, however, Pullin had been working steadily in an endeavour to extract an extra ounce or two of power from his Douglas, and it is said that not before two o'clock on the following morning did he cease from this labour of love.

**100 m.p.h. with a 500 c.c. Engine.—**

His industry was rewarded, for a few hours later, on Thursday, there fell to him the signal honour of being the first man to be timed officially on a 500 c.c. machine at 100 m.p.h., and also to regain the flying mile and kilometre records.

Pullin's figures are doubly remarkable in that his speed for the mile, 99.98 m.p.h., is faster than that for the kilometre, 98.76 m.p.h. This is explained by the fact that he only gained the full benefit of the wind towards the end of the measured section. (It is only fair to add that Judd, the brilliant Norton exponent, was similarly helped on the previous day.)

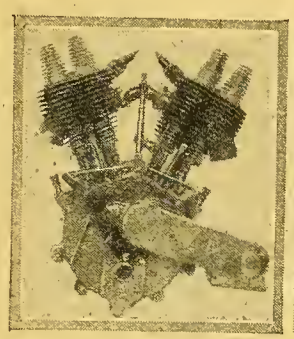
### Wonderful Speed of Pullin's Douglas.

Pullin's 100 m.p.h. was accomplished over the second measured half-mile, his exact time being 17.89 sec. = 100.06 m.p.h. The first half-mile was traversed in 18.26 sec. = 98.57 m.p.h.

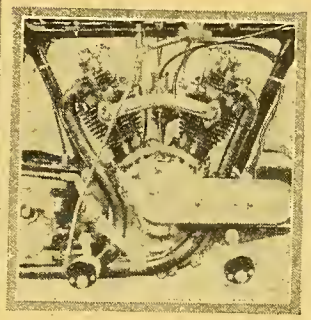
His record figures were:

Kilometre.
22.69 sec. = 98.76 m.p.h.
Mile.
36.15 sec. = 99.98 m.p.h.

Equipment used included: Hutchinson tyres; Amac carburetter; E.I.C. magneto; Lodge plugs; Renold chains; Castrol oil; and Pratt's spirit. Although Pullin was officially timed, a half mile is not a recognised "record" distance.



Side-by-side valve J.A.P.



Overhead exhaust valve Martinsyde.

Two varying types of twins which have also made good performances on the track.

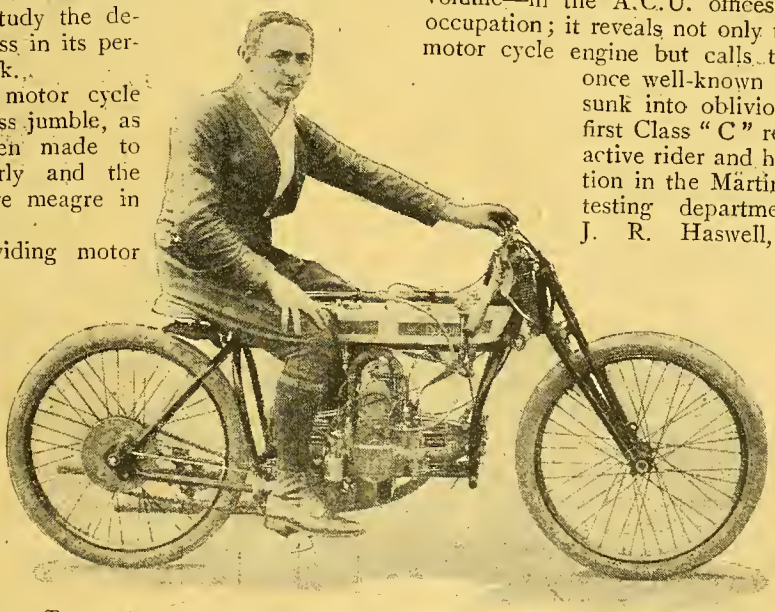
## Looking Back—500 c.c. Records from 1909 to 1921.

In view of the marvellous speeds which have been attained by the 500 c.c. machines, it will repay us to study the development of this class in its performances on the track.

Previous to 1909 motor cycle records were a hopeless jumble, as no attempt had been made to classify them properly and the details published were meagre in the extreme.

The credit of dividing motor cycles into classes was due to the enterprise of the British Motor Cycle Racing Club, for in 1909, the first year of its foundation, in the second race meeting reported, there were two classes in the hour race—"A" for machines up to 500 c.c., and "B" for machines up to 1,000 c.c.

The next meeting of the B.M.C.R.C. marked the foundation of the classes as we now know them, which were finally adopted by the A.C.U., though, of course, many others have been added. Their first appearance in print is in the announcement of the third members' meeting, event 4, record time trials, in which the classes stood as follows:—Class "A," 275 c.c.; "B," 350 c.c.; "C," 500 c.c.; "D," 750 c.c.; and "E," 1,000 c.c. No records were made during the meeting, and it was not until the next one that H. H. Bowen, 3½ h.p. Bat-Jap, covered the kilometre in 36.40 sec. (65.02 m.p.h.) and the mile in 56 sec. (64.28 m.p.h.). This was on July 14th, 1909.



To the 3½ h.p. o.h.v. Douglas has fallen the honour of being the first machine in the 500 c.c. category to attain a speed of 100 m.p.h. It was ridden by C. G. Pullin at Brooklands on March 23rd.

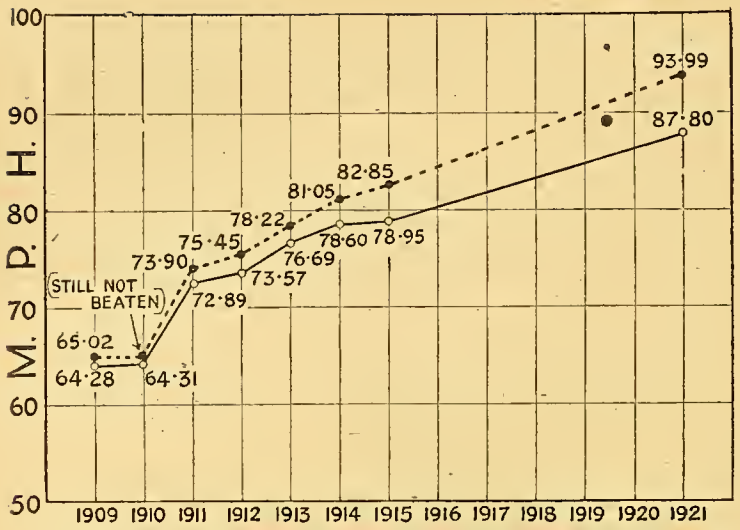
### The Keenly Contested Class "C."

For many years "Class C" motor bicycles—3½ h.p. (500 c.c.) machines have been looked upon as general utility mounts. They were not too heavy, were fast enough for high speed touring, and when provided with suitable change-speed gears, capable of taking a sidecar anywhere. This, then, was the type of machine which received the greatest encouragement, and for fourteen years has marked the largest engine size permitted in Tourist Trophy races. What remarkable developments have been made in the last twelve years! Between Bowen's successful attempt in 1909, and Dance's achievement at the end of last year there is a difference of nearly 29 miles an hour, a 44.57 per cent. increase.

Perusal of the great record book—a really ponderous volume—in the A.C.U. offices is a most interesting occupation; it reveals not only the development of the motor cycle engine but calls to mind the names of once well-known riders which have now sunk into oblivion. While Bowen, the first Class "C" record holder, is still an active rider and holds an important position in the Martinsyde experimental and testing departments, enthusiasts like J. R. Haswell, the private owner Triumph rider, whose records are in the list before us as we write, and G. Lee Evans, the brilliant Indian exponent, are no more seen on the track, and younger riders know them not.

### Singles Pre-eminent in 500 c.c. Class.

It is worth noting that few records have been made with machines fitted with multi-cylinder en-




Annual progress of the flying mile (full line) and kilometre (dotted line) records from 1909 to 1921. Last week 99·98 m.p.h. was attained over the flying mile.

gines, only three makes figuring in the Class "C" list, these being a Martin-Jap, an A.B.C., and a Douglas.

### Flying Kilometre Speeds.

Looking over the records of past years, we see remarkable increase in speed, and although Bowen's record stood till the following year, it was then beaten by Martin in 1911, the date from which our graphs start. Here, it will be noticed, is the first twin-cylinder machine entered, and over the flying kilometre the victorious rider's speed was 73.90 m.p.h. The 80 miles an hour mark was not reached until Emerson, on the old A.B.C., covered 80.47 m.p.h. in 1914; but he was beaten by D. R. O'Donovan on a Norton, who held the record for the same year with a speed of 81.05 m.p.h. In 1915 O'Donovan again bettered his own record by covering 82.85 miles an hour, only to be outclassed by George Dance on a Sunbeam in November last year (93.99 m.p.h.).

### The Coveted Mile Record.

As regards the mile, the late J. Gibson only managed to beat Bowen's 1909 record in the following year by 0.3 miles an hour, but Martin, on the same machine as referred to above, beat the record easily in 1911, and the speeds gradually crept up until 1915, when O'Donovan did 78.95 m.p.h., a record which he held until F. B. Halford, on the o.h.v. Triumph, wrested it from him last year, accomplishing a speed of 87.80 m.p.h.

### Over Longer Distances.

Regarding the history of the flying 5 miles, it was not until 1911 that any speeds were recorded, and the first was by Stanhope Spencer (Rudge), who opened the ball with 65.79 m.p.h. This was beaten by G. E. Stanley (Singer) in 1912, and again in 1913, in the former year by 5 miles an hour, and by rather over 2 miles an hour the following year. O'Donovan again triumphed in 1914, covering the distance at the rate of 75.88 m.p.h., a record which he held until last year, when Halford (o.h.v. Triumph) handsomely beat it with a speed of 81.78 m.p.h.

The flying 10 miles has only two entries in its history: 1913, when Stanley, on a Singer, did 70.39 m.p.h., and in 1921, when Dance, on the Sunbeam beat his record by 12.30 miles an hour (82.69 m.p.h.).

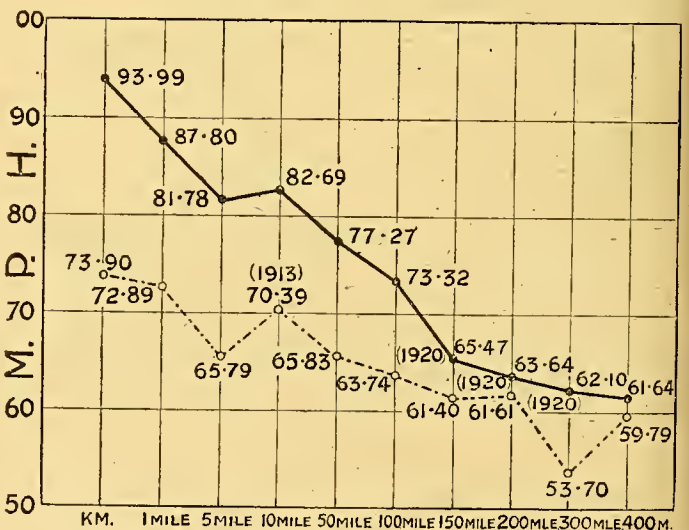
The 50 miles record dates from 1909, when G. Lee Evans, on an Indian, put up the speed of 51.42 m.p.h., a record which stood for two years until Spencer, on a Rudge, raised the speed to 65.83 m.p.h. The wizard, Stanley, again figures in the list in 1912, putting up a speed on the Singer of 69.43 m.p.h., a record which held until last year, when it was decisively beaten by Halford's Triumph with a speed of 77.27 miles an hour.

### Long Standing Figures.

Naturally, in the long distances the average speeds were comparatively small until modern times. For example, in 1909, the first year of the 100 miles record, G. Lee Evans, on the single-cylinder Indian, averaged 52.48 m.p.h. This was soundly beaten by Spencer on the Rudge two years later with a speed of 63.74 m.p.h., while J. L. Emerson, on the Douglas, last year beat the record, his speed being 73.32 m.p.h., surely a wonderful average for so long a distance.

In the 150 miles, McNab, on the Trump, first appeared on the list in 1910, making a speed of 52.54 m.p.h. This, Haswell took away from him the following year on his Triumph, covering the distance at a speed of 61.40 m.p.h. Haswell's record stood for nine years, and was not beaten until 1920, when V. Horsman (Norton) averaged 65.47 m.p.h.

In the 200 miles there are only two entries in the list: the redoubtable Haswell, again on his Triumph, in 1911, his speed being 61.61 m.p.h.; and D. R. O'Donovan (Norton), who beat him in 1920 by 2.3 m.p.h. (63.91 m.p.h.).




1911 (dotted line) and 1921 (unbroken line) records showing comparative speeds in the 500 c.c. class.

**00 m.p.h. with a 500 cc. Engine.—**

**Three, Four and Five Hundred Miles.**

The 300 miles has likewise only two entries; in 1912 V. L. Rhys, on a Rudge, put up an average of 53.70 n.p.h., which was not beaten until 1920, when J. L. Emerson, on a post-war A.B.C., accomplished 62.10 n.p.h., a record which still stands.

The year 1911 also marked the first entry in the ecord list of 400 miles, which was held jointly for en years by C. G. Pullin and T. E. Greene (Rudge), he speed being 59.79 m.p.h., and this was not beaten until 1921, when Horsman, on a Norton, put up a speed of 61.64 m.p.h.

A two-stroke heads the list in the 500 miles, this being the first appearance of its type in the Class "C" records. The rider was S. Gill (345 c.c. Alecto), and his speed was 41.71 m.p.h., but this was soundly beaten by Horsman (Norton), who put up a speed of 62.31 m.p.h. the following year—1921.

In the longest distance record of all—600 miles—in this particular class, the Norton again triumphs, ridden by D. R. O'Donovan and H. H. Beach, who in 1920 accomplished a speed of 54.40 m.p.h.

# A STUDY FOR PESSIMISTS.

RACING a motor cycle engine whilst on the stand is a detestable habit. It is tolerated in a garage, or under special circumstances on the road, but when an individual persists in stopping and starting his engine twenty times in the course of a quarter of an hour for no apparent reason, one does begin to feel one's nerves fray. The obvious course was for me to quit the place I had chosen for my lunch, but being such a delectable spot I hated to leave it.

A narrow grassy lane led past the rose-embowered cottage and on to undulating tilth and pasture. The setting of the little house was perfect. Nothing marred the harmonious whole except the tinkering motor cyclist. Fleecy clouds drifted across a blue sky, and a faint smell of burnt wood bark and peeled willow pervaded the air.

A moment's cessation, a moment of heavenly silence, when the bees could be heard buzzing from flower to flower. I filled my pipe, and thanked Providence that the fellow with the machine had by this time ceased to tinker. Ordinary tuning I could have understood, but what tuner would allow his engine to rev. appallingly for minutes on end?

The spell of silence was short, however, and once again the din started. This time I decided to investigate, and approached the cottage, where I saw a youth of twenty or so in a red blazer and white trousers standing in a curiously intent attitude listening to the beat of the engine. Occasionally he shifted the lever and allowed the engine to tick over. To be just, it must be admitted that the engine appeared to be in perfect tune. He throttled it down until it just tickled over, then opened out to a lively, healthy roar. Somehow the noise did not seem half so bad when the machine was in sight. But why didn't the fellow try it on the road?

I stood in full view expecting him to speak, seeing that I could not be mistaken for anything but a motor cyclist. Such was my conceit that I felt piqued at his indifference, and prepared to move away. An indifferent unsociable sort of a bounder, thought I. Yet, why should he, at home in his own garden, turn to accost a perfect stranger? I should not. But a strange feeling compelled me to remain where I was, and at last he straddled the machine and dragged at the stand.

The engine was just ticking over as he paddled it down the miniature drive. I had just moved aside when a matron rushed from the house in apparent alarm.

"Dick!" she cried, hurrying after him. "What are you doing? You must be mad."

The boy smiled, and waved a reassuring hand. "Don't alarm yourself, mater," he laughed, "I'm only going to feel the road, just *feel* what it is like."

The lady in grey stood in the pathway, the picture of nervous apprehension, and watched the youth pass through the gateway.

The scene is fixed vividly in my mind, although at the time I had no notion of its significance. The grey lady, the little drive lined each side with green velvet and Mrs. Simkins pinks, the white-washed cottage in the background, and the indifferent youth.

He looked directly at me, but my presence created no more interest than a mere handcart would have done. Straddling the machine he let in the clutch and the machine moved a yard or two on low gear towards the hedge. Directly the wheel touched the grass he stopped the engine, and wheeled the machine back towards the gate. Curiously enough, the lady in grey did not show any surprise, but opened the gate for him to enter and helped him through. It was just after he had pushed the 'bus back on the drive that a thought occurred to me, and I strode to the gateway.

"Anything wrong?" I asked. "Perhaps I can give you a hand."

I was quite close to the lady in grey, but the response came quickly from the youth. He turned, and, with a flushed but smiling face, "It's all right—thanks, thanks."

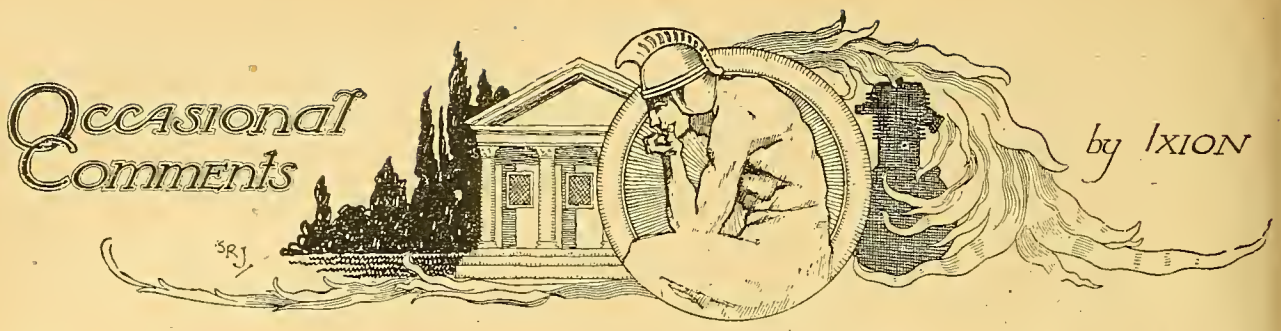
And as he moved away the lady turned to me.

"He'll never ride again," she said quietly.

There was a moment of silence, then she added with a break in her voice:

"He was blinded in France—no, he will never ride again, the doctor says so."

FRIAR JOHN.




## New Lighting Laws.

THE forecast—semi-official, doubtless—of the new lighting laws includes a return to sanity in respect of rear lights. But there is no mention whatsoever of a reform which has long struck me as most profoundly necessary. Anybody who has ever resided off the beaten track knows that the lighting laws are observed only in cities and towns. In the neighbourhood of Little Slushington very few people (excepting only motorists) pay any serious attention to the regulations. Just as a dog is theoretically allowed one free bite, so carters and cyclists are never prosecuted for the first offence against the lighting laws unless they happen to have a personal quarrel with the policeman involved; and feminine road users, especially if youthful and attractive, are permitted quite a number of "first" offences. Such misdemeanours are not very serious when committed by cyclists on lonely roads, for the rider generally has the sense to hop off and squeeze into the hedge at the approach of another vehicle. But heavy unlighted carts come in quite a different category. Agricultural people take out broad conveyances on narrow roads without lamps in the most light-hearted fashion if they know that the chance of their meeting a policeman is small. This offence is potentially far more serious that the vast majority of offences against the speed limit, but conviction seldom entails a fine of more than 5s. The new lights Bill will tempt all road users to depend more than ever on the lighting of other vehicles; indeed, it is doubtless designed to speed up, as well as to safeguard, our night traffic. In that case heavier penalties are needed against any persons importing serious danger into night traffic.

## Aluminium Pistons.

I STILL receive many rather timid enquiries about the reliability of aluminium pistons. If I had to sum up my personal experiences of them, reliability is an idea which would hardly occur to me, for they have never yet let me down. At the same time I should not recommend them broadcast, because their special advantage (a trifle of extra horse-power) is hardly needed by the average rider. They probably economise oil. They certainly get less gummy when cold than is the way of a tight-fitting cast-iron piston. Neither of these merits is enormously valuable. On the other hand, they still "slap" a little till the engine has warmed up, and in short-distance, multi-stop work the slap is an ever-present annoyance, albeit of a purely sentimental kind. Finally, they will give serious trouble under a degree of under-lubrication at which a cast-iron piston would probably smile; and the average duffer under-lubricates his engine for a few miles three or four times in a season. There is, therefore, nothing to be afraid of in an aluminium piston; on the other hand, as trade policies indicate, it is questionable whether they yet offer any very immense attraction to an owner of the pottering type. I must confess that I have not yet tested one on a low-powered outfit, which is slightly nervous about really fierce climbs or apt to run rather hot on a gruelling drive with the wind astern. Possibly their technical merits may be of great avail under such conditions. For me, the question of aluminium *v.* cast-iron resolves itself into a question of whether that extra 3 or 4 m.p.h. is worth the "cold slap" or not.

## Our Lost Simplicity.

YESTERDAY I was poised in dumb adoration before an ultra-modern outfit with instrument board, interchangeable wheels, spring frame, hood, screen, and several billion gadgets (note the diminutive, implying the presence of a cigar lighter, variable jet, mechanical oiler, and all the other small fry). My agile brain fled back at a tangent to A.D. 1902 or so, when I used to transport my particular packet of fair femininity in a forecar, scaling about 180lb. all on. It had a 76 × 80 mm. engine with automatic inlet, direct belt drive, accumulator ignition, 2in. Clincher tyres, and brakes consisting of a Bowden horseshoe astern, and two bands in front with the circumference of a florin apiece. Yet "Me and ma Gal" actually toured Devon in this outfit. What's more, my taste in gals ever inclined—like the Kaffirs, I believe—to plumpness. What's more, we never had any serious trouble with that outfit, though we reeled off 15,000 miles on it. Punctures were our one real foe, with belts in the background. Hills? Well, we dodged the worst ones; and the others we took in three charges: charge 1, "Ixion" and Miranda seated; charge 2, Miranda unloaded for a walk, "Ixion" descending and making a fresh rush; charge 3, "Ixion" and Miranda running alongside, with "Ixion" pushing and Miranda pretending to push.

Naturally, there is no real comparison between the 1922 super sidecar at 8cwt. and £225 and my own tricar at 180lb. and—was it £90? Still, I daresay there is still a market for the economy two-passenger motor cycle, and a few specifications like the Harper indicate that some designers have long memories.

**Occasional Comments.—**

## A Novelty in Dud Bulbs.

NOT hyacinths, of course; I refer to an electrical bulb. Our contributor "Road Rider" is a canny lad. As I perused his recent article on detecting faults in a lighting circuit, I thought I should catch him tripping, for that very week I had been mentally tortured by just such a circuit as he described, viz., with a head lamp and tail lamp wired in series. The symptoms were that my head lamp burnt brilliantly but my tail lamp remained as black as ink. Obviously, methinks—and even as "Road Rider" laid down—a short circuit along the wire connecting the head to the tail. The first snag was that I could find no sign of a short in the required position. The second snag was that when in desperation I inserted a spare bulb in the tail lamp, it immediately lit up. Still more surprising was the fact that close examination in a good light at home showed that the filament of the original tail lamp bulb was intact. I was driven to the conclusion that this bulb had developed an internal short across the insulation inside its socket. If this be so, it is the first time I have struck a bulb with this fault. But I get nothing back on "Road Rider," who had safeguarded his statements as cautiously as any politician; in "999 cases out of 1,000," quoth he, such symptoms indicate a short along the between-lamps wire.

## Live and Learn.

YE novices with a superficial smattering of electrical knowledge and a fair stock of assorted bulbs, try the experiment of inserting bulbs of assorted wattage and ohmage and candle-power and all the rest of it in the sockets of two lamps wired in series, and then watch the results. You will be endowed with enough matter to furnish unlearned argument over a week-end. Since I perforce experimented in this direction, I have been peculiarly careful to keep the correct bulb at hand for all my lamps.

## Was It In Malice?

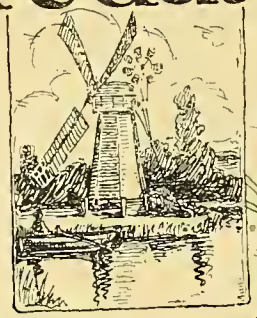
MR. K. D. MORGAN, of 27, Dartmouth Road, Chorlton-cum-Hardy (by the way, who or what was "Hardy"?), may be variously regarded as a philanthropist, or as a person with murderous designs against young England. He posted a small jeweller's box to my private address, and I tore open the box before I read the covering letter. Out fell a delightful little pocket knife, adorned with two spring knobs and two tiny levers. The eyes of the table were instantly fixed upon this attractive toy.

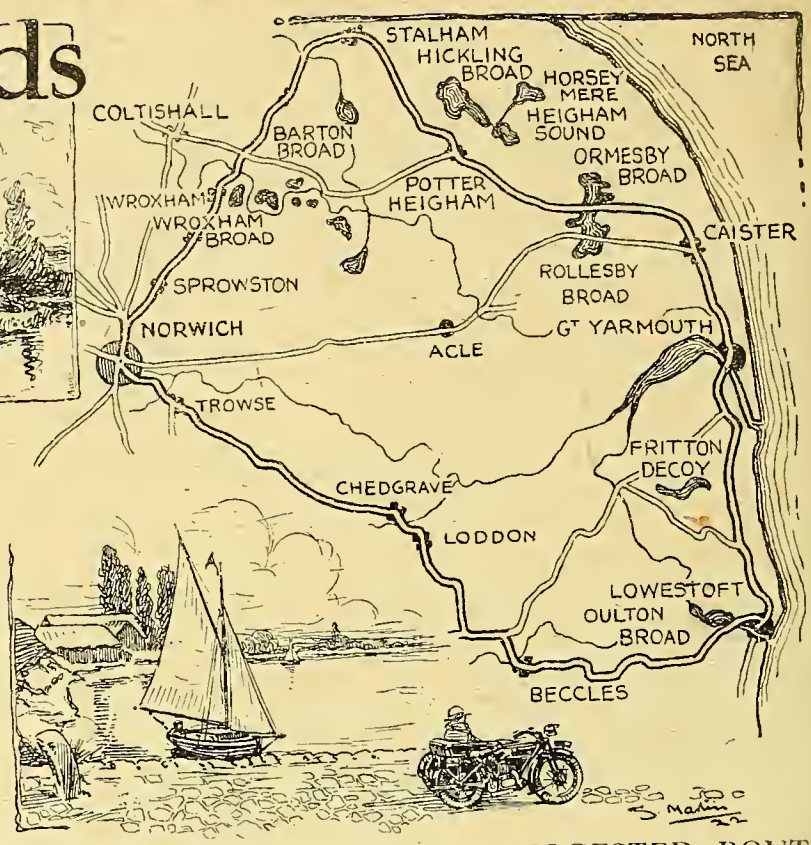
Then I read the letter. Mr. Morgan knows what it is to sit in a puddle and hold the two ends of a tense but disconnected belt together, what time he prays for a third hand to open his knife and saw off the unwanted inch of rubbered canvas. So he now markets this patent spring pocket knife. So far, so good. But as I laid the toy down beside my porridge plate, I espied an unholy glitter in the eyes of all the "Ixionettes." By hook or crook they intend to get hold of that knife; and they will infallibly guillotine their fat little fingers with it, bless 'em. So I am not quite sure that I regard Mr. Morgan gratefully. But from a purely motor cycle standpoint, his knife is, of course, just "it." Personally, I am more interested in bisecting chains than belts, but I shall retain the tool.

THE TRIAL FOR STOCK MACHINES. Scenes during the recent A.C.U. One Day Trial. (Left) B. Bladder (8 New Imperial sidecar) and Allen-Bennett (10 Grand Prix Morgan) rounding the hairpin bend on Chinnor Hill. (Right) G. H. Kirby (3½ Triumph) and J. T. Bashall (6 Martinsyde sidecar) nearing the top of Kop Hill, Princes Risborough.

# The Broads

## The "Lakes" of East Anglia; a District of Distinctive Beauty and Diverse Attractions.






A DISTRICT saturated with sunshine; a country of shimmering waterways, luscious foliage, and crooked roads which never reach to the place one wants to reach—so the Broads appear to many. At least they never lead to the particular Broad one can see in the distance and that, on a first visit, is somewhat of a grievance. Local advice, however, soon puts that matter right, and the banks of most of the Broads can usually be reached without much difficulty.

### For the Leisurely Tourist.

If you are a motor cyclist whose sole ambition is mile-eating, and who detests stopping for a pipe here and there; who thinks nothing of punting, sculling, "houseboating," fishing, sailing, there are places where you might be happier. The Broads is a district where one can laze to the heart's content, and in some of the villages there are men—men, be it observed—who could give a beachcomber points in the gentle art of existing with the minimum amount of exertion.

Whether it is the motor cyclist's intention of spending a lazy fortnight or so in this district, or simply to pass along and be satisfied with a general impression, East Anglia offers everything he wants except hills. The roads are on the whole excellent; sinuous, true, in many districts, as are all the by-roads from the Humber to the Ouse, but one is not bothered by charabancs.

A glance at the accompanying map will show how easy the Broads can be surveyed. One can make it a week-end run from town, or embrace the district in a more comprehensive tour, say of Eastern England. Although definite directions have been given for motor cyclists who like riding to a pre-determined route, probably the most interesting way is to wander just where fancy takes one, staying overnight at some of the small inland hotels or at the seaside, which is only an hour or two's run from the farthest Broad.

### The Sportsman.

The fisherman will find roach, bream, rudd, perch, and pike plentiful—the latter running up to 30lb.—and the cost of angling is insignificant. Yachting can be had at all prices, and the motor cyclist interested in the hire of a wherry for a party will get all the information on this subject from the Norfolk and Suffolk Broads Yacht-owners' Association. What finer fortnight's holiday for a party of four than the run down to Breydon Water, Barton, Wroxham, or Oulton Broads, spend a week or so in a houseboat (which can be hired cheaply), a day or two motor cycling round East Anglia, and finish up with a short time at Lowestoft, Hunstanton, or Cromer. One would indeed get the fullest benefit out of the treasured fortnight's holiday. Such an itinerary is easy to arrange, and what is more, the consideration of h.p. of the machine does not matter in the least, for the oldest of crocks or smallest of engines will accomplish a tour in this delightful district which should really be much better known to motor cyclists than it is at the present time.

## A SUGGESTED ROUTE.

NORWICH is the most convenient place from which to start a round tour of the Broads, besides being an interesting city where excellent accommodation can be found.

A circular route embracing most of the well-known yachting and fishing districts, avoiding as much as possible the most winding roads, is given below.

**NORWICH — GREAT YARMOUTH (via STALHAM) 32 miles.**

Norwich, New Catton, Rackenheath, Salhouse, Haverton (*Broads near*), Wroxham 7¼ (*Wroxham Broad*), Stalham, Catfield (*Hickling Broad and Heigham Sound near*), Potter Heigham, Rollesby, pass Ormesby Broad and Rollesby Broad on to Caister, Great Yarmouth—32¼ miles.

**YARMOUTH to NORWICH by LOWESTOFT—37 miles.**

Gorleston, Hopton (*Fritton Lake on right*), Lowestoft (*Oulton Broads near*), Beccles (*very picturesque*), Stockton Inn, Loddon, Trowse, Norwich—37¼ miles.

**DISTANCES OF THE BIG TOWNS FROM NORWICH.**

| | miles. |
|---|---|
| From London to Norwich ... | 119½ |
| ,, Southampton to Norwich | 189 |
| ,, Bristol to Norwich ... | 216½ |
| ,, Birmingham to Norwich | 162 |
| ,, Nottingham to Norwich | 123½ |
| ,, Manchester to Norwich | 201½ |
| ,, Leeds to Norwich ... | 182 |
| ,, Newcastle-on-Tyne to Norwich ... ... | 263 |
| ,, Sheffield to Norwich ... | 163 |

# ROAD TESTS of NEW MODELS

The 2¾ h.p. Raleigh.

*SPECIFICATION.*

*ENGINE: Raleigh; single cylinder, side-by-side valves, outside flywheel. 71 × 88 mm. (348 c.c.)*
*GEAR BOX: Sturmey-Archer, three speed, kick-start and hand clutch.*
*TRANSMISSION: Enclosed chain and final belt.*
*BRAKES: V type on belt drum; dummy drum on front wheel.*
*TYRES: 26in. × 2⅜in.*
*FRAME: Rigid; Brampton forks.*
*WEIGHT: 198lb.*
*PRICE: £68.*

IN looking back over the years one now sees that in 1911, say, it would have been a very safe prediction to have anticipated a great future for the sound, sturdy, and well-made 3½ h.p. single-cylinder, which was then really coming into its own.

That we are on the eve of another similar epoch is felt by most of those who are in close sympathy with the motor cycle movement. To-day, however, the decade on which we are opening will assuredly be the decade of the 2¾ h.p. single.

Typical 3½ h.p. machines have outgrown themselves and developed into heavy mounts far more suitable for sidecar work than for even merely occasional solo riding. True a sports type of "3½" has developed, but it is the result of the demerits of its overgrown parent, and for the average rider it remains a type that novices still regard as being too weighty, too fast, and too powerful.

### The Ideal Solo Size.

A machine for the man who invariably rides solo, yet who yearns not habitually for the joys of freak hill conquering nor for the thrill of ultimate speed, need have no greater cylinder capacity than 350 c.c. Such an engine will give all reasonable speed, may indeed give more speed than many roadster 4 h.p. models, will climb any reasonable hills, and most unreasonable ones, and, finally, will provide *occasional* transport for two, either by pillion or by sidecar. Just as the 4 h.p. has become a passenger model used for occasional solo work, so has the 2¾ h.p. single stepped up to take the vacated place as the ideal solo mount which at the same time is quite suitable for occasional passenger work.

For pillion riders the lightweight Raleigh provides efficient transport for two. On country rambling expeditions it is an extremely handy mount, for when a stop is made it can be dropped on its footrest without fear of overbalancing.

### From the General to the Particular.

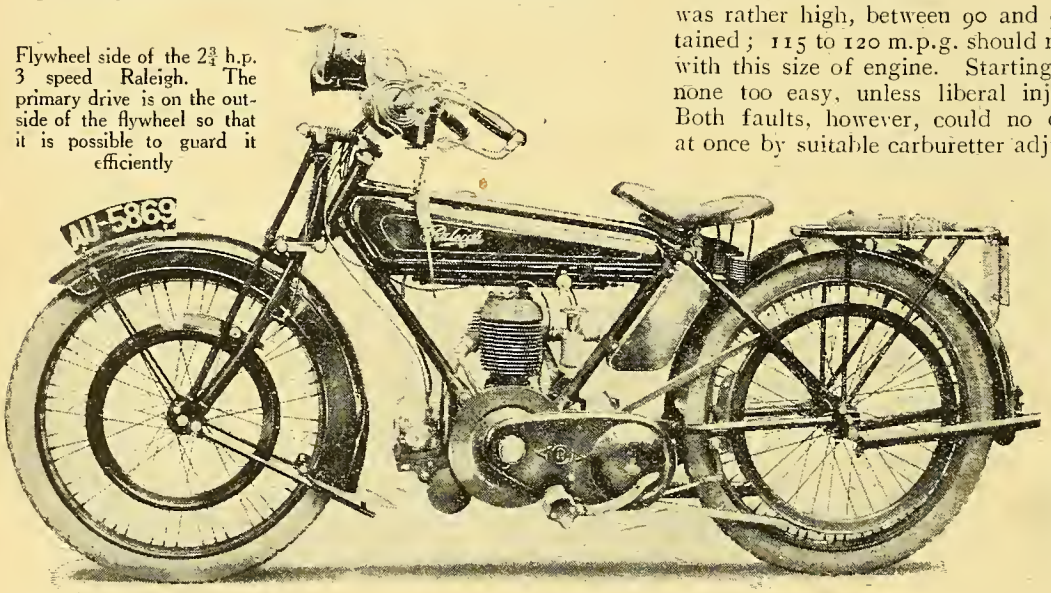
That the foregoing thoughts were inspired by the use we recently enjoyed of a 2¾ h.p. three-speed Raleigh may be taken as greater commendation of the machine than anything we might say of the actual machine's performance under this, that, or the other circumstance.

**Road Tests of New Models.—**

Handed over to us almost immediately after the A.C.U. stock machine trial, the machine under review was in the condition in which it finished that event wherein it gained a special certificate of merit as a standard stock machine. Without any chance to become familiar with it, it was driven straight into the densest London traffic, and subsequently used for running in and out to business and a week-end's pottering, as well as subjected to tests on rough surfaces and hills. In all respects it gave good results such as one would expect from a machine bearing the distinguished name it carries and finished so handsomely as it appears to be.

### With a Pillion Passenger.

Ridden solo the machine's performance on ordinary hills was such that no use of the gears was called for on Surrey main roads, but departures into by-tracks occasionally demanded second, and on one occasion even produced knocking on that ratio, which caused a further drop to low; this, however, was due to a combination of mishandling and very low speed. A pillion passenger's extra weight on one jaunt proved that the machine was not appreciably slowed on hills by the double load, but, of course, the ability to climb hills slowly on top gear was reduced.




Flywheel side of the 2¾ h.p. 3 speed Raleigh. The primary drive is on the outside of the flywheel so that it is possible to guard it efficiently

### Smooth and Quiet Running.

Owing largely, no doubt, to its outside flywheel, the 2¾ h.p. Raleigh engine pulls exceptionally well at low speeds and in moderate traffic; its top gear of 5½ to 1 (roughly measured) is all that is needed in conjunction with the lightly-operated clutch. In very dense traffic middle gear was advisable and a smooth restart, even on gradients, could be made. Low gear was found to be too low for convenient handling of the machine in traffic on level roads, and should never be needed except on single figure hills.

Maximum speed is not abnormal, but it has a useful pace, and at 38-40 m.p.h. engine vibration is not unpleasantly discernible. Riding position (and steering) is excellent, and both feet may remain firmly on the rests, even when the heel-brake pedal is in use on the near-side. The top gear position of the gear-control lever is rather out of reach, and might be higher with advantage.

On the actual machine we tested petrol consumption was rather high, between 90 and 95 m.p.g. being obtained; 115 to 120 m.p.g. should normally be obtained with this size of engine. Starting from cold was also none too easy, unless liberal injections were made. Both faults, however, could no doubt be eradicated at once by suitable carburetter adjustments.

To sum up in a sentence, we consider that the 2¾ h.p. Raleigh, without being superlative in any one direction, combines as many sound and workmanlike qualities as one would wish to find in a mount; withal the value for money is good, for it is sold at a competitive price.

## THE GRAND PRIX OF FRANCE.

IN our issue of the 16th inst. we referred to the Grand Prix, mentioning that the date officially decided for this important Continental fixture, was July 12th. Preliminary particulars, views of Strasbourg, and a map of the course appeared in *The Motor Cycle* of February 9th, p. 196.

### 500 c.c. the Capacity Limit.

We have now received an official communication from the organisers, the Union Motocycliste de France, the national body controlling the sport of motor cycling in France, which informs us that the race will be open to motor cycles of 250 c.c., 350 c.c., and 500 c.c., and of these the smallest machines must make 20 laps of the 8⅛ mile circuit, making a total of approximately 162½ miles, the 350 c.c. machines 25 laps, a distance of approximately 208⅜ miles, while the 500 c.c. machines will cover 30 laps, approximately 243¾ miles.

Entry fees cost £4 6s. 8d. English money, and must be sent to the secretary of the A.C.U., 83, Pall Mall, London, S.W.1. Entries close at ordinary fees on May 15th, and at double fees between May 15th and June 15th.

The Grand Prix of the U.M.F., usually known as *the* Grand Prix, to distinguish it from other events bearing the same title though of less importance, is the blue riband speed event on the Continent.

# SIDECARS FOR MOTOR BUS INSPECTORS.

## A Novel Service Instituted for the Purpose of Checking on Country Bus Routes.

The Bristol Tramways & Carriage Co.'s fleet of sidecar-mounted bus inspectors. Five B.S.A. machines are shown, the sixth being in process of overhaul. Observe that all the sidecars are fitted with Easting screens.

MOTOR cyclists, generally, have only one attitude towards the motor omnibus—they dislike it; but, despite its roadbreaking tendency and bulkiness, it is undoubtedly of the greatest service to the inhabitants of districts hitherto untouched by any form of passenger transport, and therefore to be considered as a very important item in road travel.

Those who can put aside any prejudice and consider the traffic from a commercial standpoint will soon realise that one of the problems, and by no means a minor one, is how best to keep a definite check on the running times, fares, and general conduct of the staff when the vehicles are out on many different routes miles away from their depots. It is not that the company suspects its staff of dishonesty or irregularity—that usually brings its own reward very quickly, but there must be a constant organised supervision to keep the whole service working sweetly. Timetables in particular must be adhered to or a bad name results.

### Mobile Motor Cyclist Inspectors.

The ordinary inspection by officials who board the bus, ride with it for a while, leave it to board another in the opposite direction, with frequent long waits, must mean a deal of waste time, and the duties of such men being known, there is always the loophole for irregularities when they have been passed.

The reader may be forgiven for thinking that so far this article appears more suitable for the pages of our sister journal *Motor Transport*, but here comes the point of interest to motor cyclists.

The Bristol Tramways and Carriage Co., Ltd., one of the largest companies in the motor coach world, has solved the problem by the use of the sidecar outfit. A special staff is kept for the duty of, what amounts to, secret checking on its extensive series of routes in the West of England.

This staff is equipped with 6-7 h.p. B.S.A. sidecar outfits, absolutely to catalogue specification.

The magnitude of the task may be gathered from the following figures:

The company has a fleet of 150 motor buses working.

There are 50 separate routes.

The total length of all routes worked is 700 miles.

The area covered from Bristol as a centre includes Bridgwater (32 miles), Cheltenham (42 miles), and Swindon (50 miles).

There are six outfits in use, and their weekly travel varies round about 700 miles. Duties are regular and constant, that is to say, except for periodical overhaul the machines are in constant daily use; thus we have the interesting fact that six British-made big twin outfits have reeled off nearly 5,000 miles per week since the fall of last year, doing all that was asked of them efficiently and satisfactorily in every way. And, further, at the present time they appear to be in such good condition that one might suppose they had just completed their first 1,000 miles.

It should be noted that they run very little on main roads; when a bus has been checked according to the schedule for the day the next check may be on another route, say at a point ten miles away, only reached by narrow lanes. Quite 75% of their work is on cross-country jaunts over second and third-class roads; thus the mileage standing to the credit of these outfits is of a more arduous nature than ordinary main road travel.

### The Working System.

This company is noted for its method in management, and the daily routine mapped out for the sidecar check department is unusually well thought out. As in a certain degree this work is secret, it is not advis-

**Sidecars for Motor Bus Inspectors.—**

able to give definite details, but generally the duties are arranged in two shifts, three inspectors going on from 6 a.m. to about 2 p.m., and the other three from 2 p.m. until 8 or 10 p.m.

On reporting for duty the managing officer hands each a leather wallet containing typed instructions for the day together with a half-inch scale map or maps to cover the district. The checks are arranged to allow a reasonable time for travelling between points, and on arriving at a check point a short waiting period may be necessary; the inspector boards the bus and the sidecar follows up until the inspector is ready to transfer to the sidecar again, when they turn away to the next point. Herein lies the reason for the use of sidecar outfits as against mounting the inspector on a solo machine; obviously the latter would mean much greater economy, but it would necessitate a bus stopping whilst the check was taken; this would take some time where there are twenty or so sets of tickets to examine, as is the case on some routes.

### No Fixed Routine.

The daily schedules are made out afresh for each day, there is no regular sequence of checks and the districts touched are very varied. An inspector may start out south of the city, go west, then east, and, working round to the north, may finish his duty on the opposite side of the town, having travelled in three counties—Somerset, Wilts and Gloucester; also the number of checks taken on one run vary from, say, ten to thirty or more.

### Incidental Usefulness.

Another side to the activities of this staff is that each carries a box of spares for the "Bristol" bus, in addition to its own motor cycle spares; the bus spares include such items as a contact breaker, valves, springs, etc., electric light bulbs, and a number of other useful parts. No spares are carried on the buses; since it is clear that with over 100 buses in commission, to supply each with a set of parts would mean a large outlay on spares which would be floating around deteriorating, with constant waste.

Efficient repair breakdown gangs are sent out if required, but frequently an inspector can be diverted to a stranded coach, and, being a skilled driver and mechanic can render mechanical first aid.

### How the Mounts Behave.

The behaviour of these big twin outfits has been remarkably good; no serious trouble has been experienced, a few instances of broken balls in the back hubs being the chief failure.

Petrol consumption is 55 m.p.g., which, having regard to the varied character of the work, may be considered excellent.

Oil consumption works out from 700 to 1,000 m.p.g., a reasonable result with a powerful twin cylinder sidecar machine.

The Bristol Tramways and Carriage Co. are to be congratulated upon the successs of a most interesting experiment and the formation of a new commercial sphere for the motor cycle.

WESTERNER.

---

# ON THE HILLS OF THE WEST.

## Impressions of Three Famous Gradients in Somerset and Devon. Inclusion of Beggar's Roost in the Land's End Run at Eastertide.

WITH the annual advent of the M.C.C. London-Land's End Trial attention is re-directed to the so-called "Devonshire terrors," Porlock and Lynton—so-called at any rate is the first-named, for it is well inside the Somerset boundary.

In the last Land's End run a 20 m.p.h. average was demanded from Porlock village to the summit of Lynton Hill, a requirement which called for unseemly speeds on the narrow moorland roads and on the dangerous descent of Countisbury, in order to regain the time lost in climbing Porlock and Lynton. This year, however, the climbing of these hills will be separately timed as a means of differentiating the performances of the competitors without putting a premium on recklessness between the two points.

### Speed Requirements on Porlock.

Solo machines of above 350 c.c. capacity will be required to average 18 m.p.h. up the first mile of Porlock. The speed for solo lightweights and big sidecars is 15 m.p.h.; for 500 c.c. sidecars 12 m.p.h., and 1,100 c.c. cycle cars 15 m.p.h. As the hill is now in excellent condition as regards surface, the solo men should experience no trouble whatever, but the dead load to be lifted up the long gradient will tax the smaller sidecars fairly severely, not to mention some of the bigger outfits and the cycle cars. Unless very heavy rains immediately precede the run, wheel slip should not cause any failures on Porlock.

The timed section on Porlock is the first mile, which covers the worst gradient, measuring from the Ship Inn in the village at the foot.

### Lynton in Poor Condition.

Between Porlock and Lynmouth much road improvement has been effected, but this notwithstanding, the road is in a shocking state. The descent of Countisbury has been rendered safer by widening the road and easing the bend near the foot, but the new surface is composed of loose metal, which will slide if wheels are locked by down-coming drivers.

Lynton Hill is in its usual state, having a narrow and firm path on the right-hand side, the middle and left being a mass of earth and stones. Wheel slip will be the deterrent feature here, and woe to the machine which cannot keep its driving wheel on that narrow right-hand strip. Three- and four-wheeled cycle cars will be at a disadvantage on Lynton.

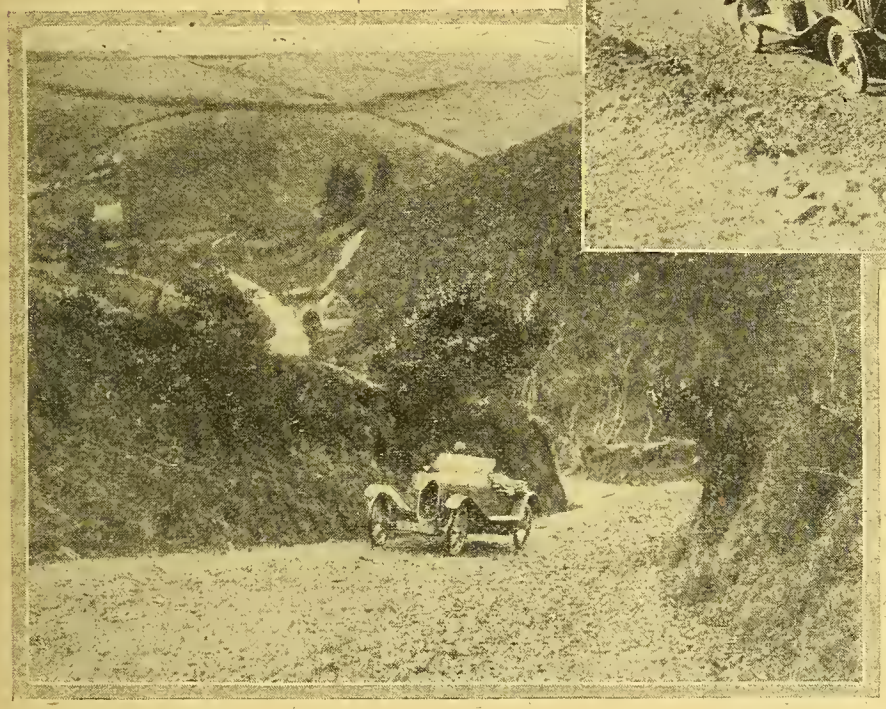
### Will Beggar's Roost be Included?

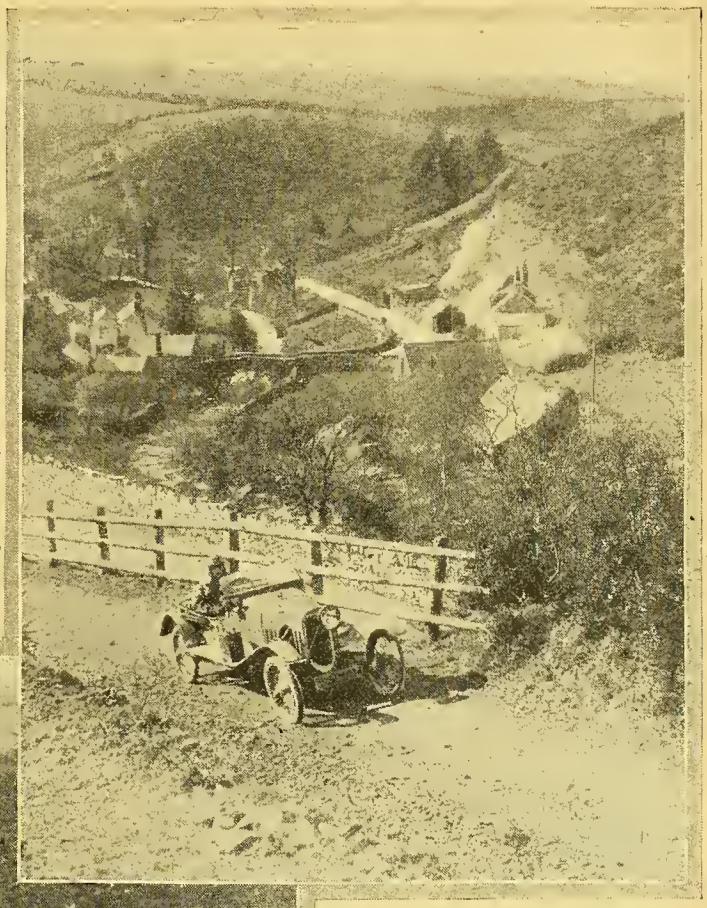
Officially, no one is supposed to know the hill to be included in the Land's End run after Lynton, but

**On the Hills of the West.—**

*The Autocar* definitely announces that Beggar's Roost has been selected. This hill is merely a steep winding lane, now generally neglected since the excellently-engineered avoiding road was constructed; it rises almost immediately from the village of Barbrook, less than a couple of miles from Lynton, and the approach from the village permits a rush at the lower slopes, which are the worst. The hill is about half-a-mile in length, and has a maximum gradient of 3 in 10, according to the A.A. notice at the top. When surveyed for *The Motor Cycle* some years ago it was 1 in 3.6, which is much the same.

Speaking generally, the surface is better than that of Lynton, albeit somewhat similar; there is a smooth, right-hand path and a loose section on the left. After heavy rain, however, there is a continuous flow of surface water down the hill which renders wheel slip inevitable unless chains are fitted. If the first three hundred yards can be surmounted, however, the rest of the hill, although steep, is comparatively easy. Having





TWO VIEWS ON BEGGAR'S ROOST. On the right is the first portion almost parallel with the main road (Barbrook village in the distance). The left-hand photograph was taken on the worst portion (1 in 3·6 gradient) where the surface is rough and loose except on the extreme right of the road. A powerful machine can get up to this point "on the rush," but, if the surface is at all wet, wheel slip is almost inevitable. The bad gradient continues for about 50 yards above this point, and thereafter the hill becomes an easy climb.

no bad hairpin in its approach, as is the case at Lynton, Beggar's Roost is actually an easier ascent, and if the writer were out to see the fun in the Land's End run he would certainly take his stand just about the bend of the former.

### State of the Devonshire Roads.

After the competitors leave the summit of Beggar's Roost behind them, their difficulties will be by no means at an end. Supposing that their course then leads them to Simonsbath, the road surfaces encountered are wicked in the extreme. Almost immediately after the top of the hill is a fairly severe descent with a clayey surface and a bad hairpin; within a couple of miles is an extremely dangerous bridge where the road doubles back at the other side of the stream, and thereafter is a long, winding gradient to the upper levels of Exmoor. The road over the moors is in a very poor state, and deteriorates as Simonsbath is neared. Under adverse weather conditions the crossing of Exmoor is a miserable journey, especially if one is pressed for time; without shelter the undulating road when swept with rain borne by the unfettered wind can produce untold discomfort.

The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *RAIL CHARGES FOR MOTOR CYCLES.*

Sir,—Surely the time has come to make an effort to obtain a better classification of rail charge on motor cycles.

A 2¼ h.p. cycle is in the same class as an 8 h.p. machine.

What are the views of lightweight owners on this subject?

WORTHING.

### *WHICH SIDE DO YOU FALL ON?*

Sir,—I quite agree with Mr. Leslie Lyons when he states that in nine cases out of every ten a tumble or sideslip results in the machine being damaged on the near side.

I myself can call to mind three instances at least where I have had a fall. The first was while taking a right-hand bend at speed. I skidded in about three inches of sand, tumbled over on to the offside footrest, righted the machine, and then came off on the left-hand side. The second occasion was while trying to avoid a child running from an entry; then also I found myself lying on the near side of my machine after skidding on the wet tram lines.

The third was similar to the second, and each time my left-hand footrest has told the tale by either being bent or beyond adjustment.

DIAVILLE.

Wolverhampton.

### *IS THERE AN AGE LIMIT?*

Sir,—Perhaps the opinion of one who is near Mr. Palmer's age—*i.e.*, 56—and "still going strong" may be of use.

I have been a motor cyclist for about twelve years—with a gap of three years during the war—and have had various makes of machines. I can emphatically say that 56 at least is not too old. For an "elderly" person, or one not very robust, I think the whole matter is summed up in one item, and that is: *Easy starting from cold*—easy starting first, last, and always. The only possible exhausting thing about the premier pastime is starting a cold engine, and that must be guarded against when purchasing and by ordinary care of the engine afterwards. Assuming that a modern machine of good make is obtained, and that by preference a single-cylinder, I do not see anything to prevent Mr. Palmer enjoying motor cycling for another ten years at least.

F. J. HASWELL.

Sir,—I am 60 years of age. My wife and I have travelled over 3,000 miles with a motor cycle and sidecar during the last twelve months.

It all depends upon: (1) Physical fitness; (2) type of machine; (3) road sense

I began my cycling career on a boneshaker in 1879. I have ridden almost every make of safety bicycle and innumerable tricycles, and spend all my holidays on the open road.

I should recommend Mr. Palmer to get a Scott and sidecar. He will then get easy running, smoothness and freedom from vibration.

Bridgnorth. VERITAS.

Sir,—From my own experience I strongly advise Mr. R. E. Palmer to harden his heart, take the plunge, and invest in a reliable family bus.

I am well on the wrong side of 60, and pretty well crocked at that, but my wife and I get wonderful pleasure out of our outfit, a 6 h.p. Royal Enfield. I also find that driving is a splendid cure for insomnia, and a general refresher all round.

Of course I do not indulge in speed bursts, anything from 10 to 15 m.p.h. on "so, so" roads and 20 to 25 on good roads. We always take lunch and tea with us; any beauty spot about lunch time makes an excellent dining-room; a laze and a smoke and then on to a tea-time nature haven; another rest, and then to one's destination. Travelling thus, one can take in all the beauties of the open road, and it is wonderful the distance that can be traversed without any sense of tiredness other than a comfortable desire for bed when the proper time comes. Long tours are quite simple if carried out on these lines and no attempt is made to do too great mileage in any one day.

Breakdowns on the road are very rare with a good machine nowadays, but should they unfortunately occur I have always received unvarying courtesy and help from the "brethren of the road," whether they be cyclists or the tradesmen's vans one meets so continually these days. Should Mr. Palmer care to write to me, c/o the Editor, I shall be very pleased to answer any questions that may occur to him.

Tunbridge Wells. T.A.C.

### *VALVE BOUNCE MADE VISIBLE.*

Sir,—I am very much interested in this matter, and appreciate the view of Mr. Denne as to the use of a device with rotary shutter, arranged on a stand with a form of telescopic observation tube; as a matter of fact, this form of device has been on paper for a considerable time, and but for the fact that my time has been taken up in other directions, would possibly have been introduced at the end of last year.

As it would appear that Mr. Denne has already given that matter some consideration, it would be interesting to know if any instrument has been made on these lines, and if so what difficulties, if any, were experienced in maintaining complete synchronisation, or the required percentage reduced or increased speed.

It would appear that for high-speed work the use of an independent drive would render it impossible to examine a phase of movement with any accuracy.

A great deal of work in this direction has been done, but in most cases the apparatus is of a complex nature, and any remarks tending to render the device more simple and portable would be very welcome.

Possibly some of your readers with experience of the stroboscopic or oscilloscope methods will give their views.

C. E. NOEL-STORR.

Sir,—Mr. R. A. Denne is obviously interested in stroboscopic devices. I would like to take this opportunity of supplying him with a very little gratuitous information on the subject.

*Firstly*, on a purely technical point the 101% ratio recommended by the letter would enable the observer to see the valve gear actuating *backwards*, which is not the desired result.

*Secondly*, I have proved on practical considerations, through bitter personal experience in years gone by, that the shutter method is very far from being a practical one for even moderately accurate results, both for technical and practical reasons.

The technical reasons for its actual impracticability as determined experimentally are due to the following considerations:

(1.) It is impossible to get clear definition in practice because of (*a*) halation effects of holes in rotating shutters; (*b*) the angle, the diameter of the hole in the rotating disc subtends at the centre of that disc, necessary to give sufficient illumination at high speeds, is too great to give good "persistence of image" at low speeds, the one being the converse of the other.

(2.) Flexible drives are completely out of the question due to periodic cyclic hunting in the sense of angular displacement within the flexible shaft itself. This nasty effect entirely precludes even moderately accurate results.

(3.) The electric motor method also suffers from the same defects, because it is impossible to prevent relative hunting between the electric motor and the engine under examination, due to cyclic aberrations in both the engine and the electric motor in actual practice, and the oscilloscope is *primarily* a practical instrument.

I should very much like to invite Mr. Denne to a demonstration of the oscilloscope either in London or, if he happens to be in the Manchester district during the first few weeks of April, he will find the oscilloscope being demonstrated at the Manchester School of Technology from March 27th till just about Easter.

A. J. H. ELVERSON.
Oscilloscope Syndicate.

### *ANTI-FOGGING OINTMENT.*

Sir,—In reply to Mr. A. T. Perrit's inquiry for an anti-fogging paste for glasses, I would suggest that he need not go to such an expense as to buy patent pastes. I have for some time been in the habit of anointing mine with clear apple-juice applied with a soft cloth, which does not leave fibres behind on the glass. This prevents, to some extent, the annoying fog which hides the road—and frequently the hedge!

Melton. LUNETTE.

### *"DUAL-PURPOSE BLIGHT" AND GEAR-CHANGE TROUBLES.*

Sir,—Disregarding "Lineshooter's" remarks on the "dual-purpose blight," which, of course, were really unnecessary and quite out of place, since the Rover Company supply a T.T. machine for purely solo riding, and it is obvious to the youngest of your readers that a dual-purpose machine cannot possibly ideally satisfy both uses, his remarks concerning gear changing difficulties are common to every dry clutch gear box, the correct manipulation of which is purely a matter of personal efficiency.

His advice concerning the correct procedure of changing gear does not seem to be sound practice. No experienced rider who drives his own machine would deviate from the correct method of changing gear, *i.e.*, to declutch.

J. ADAM HILGER.

### *ON LUBRICATORS AND GREASERS (IF FITTED).*

Sir,—On the average 'bus, 2-stroke or otherwise, for which a "fat" price has been paid, one finds that the lubricators and greasers (if fitted) are often totally inadequate in size, and are awkwardly placed.

When are we going to have large, adequate lubricators fitted? It does not encourage one to take care of the machine by oiling it. BULL-DOG.

London, S.W.19.

### *GRINDING THE PISTON.*

Sir,—Whilst riding a 1913 2¾ h.p. Douglas I noticed a peculiar knock coming from the engine. As the machine was badly in need of decarbonisation, and retarding the spark cured this complaint, I thought nothing of it. As I was climbing a fairly steep hill about a quarter of a mile from home, there was a noise like a jazz band from the engine, which ceased suddenly, leaving only one cylinder firing. I decided to run home on one cylinder, and investigate the trouble there.

I found the front cylinder was the culprit, and having in vain examined all exterior causes of defects, I removed the cylinder. Imagine my surprise when I found that a perfectly circular hole about 2in. in diameter had been punched in the head of the piston, the fragments being ground to powder in the crank case. The extraordinary part of the whole proceedings was the fact that, barring, of course, the piston, not the slightest damage was done to the engine, a new piston being the sole item of my repair bill. Considering the fact that I rode about 400 yards with the engine in this condition I consider it marvellous that no more damage was done.

London. DOUGLAS.

### *HIGH TENSION OVERALLS!*

Sir,—My overalls, being ex-W.D. stock, are distinctly "haggy," and at times touch the plug. Thus, when they are thoroughly soaked with water, a circuit is formed along the overalls, through my hands on to the handle-bars giving an unpleasant shock.

Have any of your readers been troubled in the same way?

SIVEL.

### *REAR LIGHTS FOR ALL.*

Sir,—Your leader strikes the right note. As a driver of cars, motor cycles, and also as one who occasionally rides a pedal cycle, I am convinced that rear lights are absolutely necessary. On my "push bike" one lamp set low down on the front fork spindle, with red glass reflector back, answers the purpose well. The small Lucas motor cycle rear lamp is reliable, and rear lamps on all vehicles should be compulsory.

Birmingham. F. C. C.

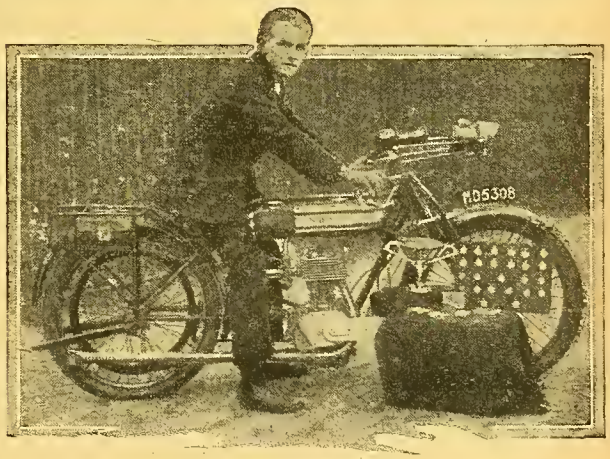
Sir,—The driver of an overtaking vehicle who is unable to see a motor cycle or the light thrown on the road by the motor cycle's headlamp is a danger on the public road, and, in my opinion, should not be allowed to drive.

In this part of the country (the Highlands of Scotland) he would invariably drive into a stray horse, or cow, or a herd of cattle being driven by men not carrying a light in front, or behind, and so become a constant danger.

ANGUS MACDONALD.

Sir,—Might I suggest that the fitting of "red reflectors" to both cycles and motor cycles would be a good solution to this obviously important question.

These reflectors are both cheap and efficient. Once fitted there is no further bother or expense. Very little light is required to obtain a really good reflection. E. C. BROOKS.




A SUCCESSFUL TRIALS COMPETITOR. A young club enthusiast, F. A. Medcalf, of the Colchester and District M.C., is on the road to success in the big motor cycle events. During the past eighteen months Medcalf has been awarded a challenge cup, fourteen firsts and twelve seconds in various club events.

Sir,—I quite appreciate your point of view as regards rear lamps on motor and pedal cycles, but from the soloist's and "pedal cyclist's" point of view there is the continual anxiety as to whether their ruby light is out or not. In the case of a motor cycle the head lamp shows up sufficiently from behind, while anyone riding a push-bike is able to hear motor or other traffic coming, and is enabled to pull in to the side. It is surely no more dangerous for a fast car to overtake a cycle than overtake foot passengers, as it will be noticed that there is hardly ever a footpath in the country, therefore pedestrians are compelled to use the road, and they do not even carry head lamps.

Westcliff. SOLOIST.

Sir,—I can picture Mr. Frank R. Ware, hon. secretary of the Gloucester M.C. and L.C.C., projecting his tongue playfully into his cheek as he composed that delicious passage in his most recent letter: "As motorists we belong to a large body, and we should endeavour to obtain 'the greatest good for the greatest number,' which often means the sinking of self. We should be ready, and willing, to suffer a little inconvenience, if, by so doing, the community may be benefited."

I should like to know who are the "community" whom I shall benefit by carrying a rear lamp on my Baby Triumph. I can imagine, with difficulty, the example of a private car owner whose electrical equipment has failed, and who, while compelled to use his emergency oil lamps, finds it imperative to maintain a speed of, say, 40 m.p.h. for the purpose of fetching a doctor to attend an urgent case. Such a driver, perhaps, is the "community" alluded to, but even he ought to see the flood of light from my Lucas acetylene head lamp, visible across the full width of the road and on both hedges. If he cannot see that how is he to see a red light?

The fact is, as Mr. Ware discloses in the latter part of his letter, we motor-cyclists are being used as tools in the campaign to compel pedal cyclists to carry rear lamps. We are being asked, "in common fairness," to do something that is absolutely unnecessary merely in order to assist a movement aimed at another class of road users; and I think it is time to protest. What benefit will the motor cycling "community" gain by having another crime (that of the rear lamp accidentally going out) added to the catalogue of offences for which they may be fined?

(Mrs.) MARGARET M. STANCER.

[Several readers have written pointing out that Mrs. Stancer is the wife of the secretary of the Cyclists' Touring Club, a body notorious for its persistent opposition towards the red rear light.—ED.]

Sir,—I quite agree with Mrs. Margaret M. Stancer regarding rear lights. There has not yet been made an absolutely reliable rear lamp, and, before the war, these useless articles were never dreamt of; so why worry about them now?

LIONEL E. B. WARRILOW.

### *STEERING BALANCE.*

Sir,—I notice in "J E. G.'s" letter that he attributes the good steering of his old Triumph to lack of head rake. I should like to suggest that trail, and not rake, has more bearing on the matter. The modern 3 h.p. A.B.C. has as much head rake as any machine on the market, except perhaps the 5 h.p Zenith, but I can guarantee to ride any specimen of this machine standing erect on the footboards with my hands above my head. On my own A.B.C. I can do this with a passenger on the carrier. I do not think I have ever ridden, nor am I likely to ride, a more stable machine. JO-5.

Chatham.

### *MOTOR CYCLES FOR BOYS AND GIRLS.*

Sir,—As the frequent rider of my father's two-stroke, I entirely agree with the article by Lieut.-Col. Brereton.

"XH-3296" in his letter says that "the average boy of fourteen wants speed, and knows no limit." In reply to this, I may say that I know a fair number of fifteen-year-old riders—seven to be exact—and their mounts range from an Enfield two-stroke to a 7-9 h.p. Indian, but none of them ride solely for speed, and only one could be called an irresponsible daredevil.

I think "XH-3296" and "Middle-age" both write in rather a narrow-minded strain: after all, how many of the accidents of which one reads are caused by the boys to whom they seem to have such a great dislike?

Weston-super-Mare. JUNIOR TWO-STROKE.

Sir,—Here in Switzerland one is not allowed to drive cars and motor cycles when under 18, and even when under 21 one must have a written permission from one's parents. I think this limit could be brought down to 16, as there is an official test to pass before the licence is delivered. Motor cycling is one of the healthiest sports for young boys.

Zurich. 677.A.

Sir,—"XH-3296" touches on road hogs, but a road hog is a person who wants all the road to himself, and this seems to be the desire of "XH-3296"!

Motor cycling is a healthy sport, enjoyed best by the young—not, as "XH-3296" seems to imagine, by the short-sighted, deaf, or crippled. But then of course motor cycles were not even thought of in his youth.

Hertford. FIFTEEN-YEAR-OLD.

### *EXPERIENCES WITH A LIGHTWEIGHT SIDECAR OUTFIT.*

Sir,—As no one has yet given their experience with a lightweight sidecar outfit, perhaps I can start the ball rolling by stating mine.

The outfit, a New Comet, is fitted with a two-stroke engine of 293 c.c., having internal flywheels, C.A.V. magneto, Amac carburetter and Albion two-speed, gear box, with chain-cum-belt drive.

I purchased the machine last July, and have used it regularly in all weathers since, covering an average of 140 miles per week. Carrying a passenger half the time, the machine averages 80 m.p.g., which seems very good. Having driven several cars and motor cycles for some years, I am surprised at its power, as it will climb ordinary hills on a 5.75 to 1 top gear, and anything but a freak on bottom. A three- or four-speed gear would be exceedingly useful on hills when the bottom speed is too low, the machine being naturally slow then. Its maximum speed on the level with no wind is approximately 32 m.p.h. Of course, wind affects its speed greatly.

The sidecar itself is really comfortable and well sprung, much more than many heavier makes, and carries a 12st. person easily. The back is also high enough to prevent fatigue on long journeys. Owing to the lightness of the body, it is free from bounce when minus the passenger, neither does it lift on corners so easily as one would imagine.

The adjustments that have been necessary have been no more than for a heavyweight, and were greatly facilitated by the absolute simplicity of the outfit. In fact, decarbonising can be done in three-quarters of an hour. The most troublesome part of the machine is the clutch control (hand), although the adjustment of the contact breaker once caused queer running which took a fortnight to fathom, and only then after dismantling the whole engine.

Summing up, after 3,500 miles of hard riding, it appears quite a substantial and reliable bus, and of sufficient power for all normal riding. Usual disclaimer.

HAROLD WILSON.

### *ULTRA-RAPID AMERICAN TWINS.*

Sir,—I am the owner of a particularly hot 4 h.p. single, and on a recent Saturday afternoon I took a run down to Folkestone from Kensington. When on a fast stretch of road between the villages of Sw-ly and F-rn-n-ham I chanced to overtake an elderly blue 7-9 h.p. Indian. I am bound to admit that when I passed the machine I was topping the fifty mark, but, to my surprise, the Yankee had repassed me in a few seconds!

I opened my throttle full out, and gave chase, but found it absolutely impossible to keep up with him. Yet my speedometer (Bonniksen) registered 64 m.p.h. during this blind, and the Indian was travelling "two up," and was handicapped by "discs." (The wind was strong.)

Can any reader name an English twin which after several years' work is capable of putting up the same speed (probably 65 or 66 m.p.h.) with the same load? TRIUMPH.

Southend-on-Sea.

### TUNING A 4 H.P. TRIUMPH.

Sir,—Referring to the article by Mr. K. H. Leech on the tuning of a 4 h.p. Triumph for speed, I beg to state that I own a 1920 Model H of this make, and have been timed (electrical) over a flying half-mile in 27s. (approximately 66 m.p.h.). The only alterations from standard were an aluminium piston, Binks three-jet carburetter, and straight through exhaust pipe. The ignition timing was well advanced, but the valve timing was standard. A top gear ratio of 5 to 1 was used. TRIUMPH 4.

Peterborough.

Sir,—In the second column on page 360 about half-way down, occurs the sentence, "An ordinary straightfaced cam will give quick rise and slow fall to the *exhaust* valve."

Reference to the diagram on page 361 will show that "inlet" should be substituted for "exhaust."

Incidentally, experiments with a lower top gear ratio (5.4 to 1) seem to show that the engine "peaks" at about 3,400 to 3,600 r.p.m., and that the power falls off at above this speed, due largely to the valves not following the cams, with the standard valve springs

From Mr. Heather's formula, the horse-power developed would be about 12-14, probably nearer the lower figure.

K. H. LEECH.

### A TEST OR A DEFINITION?

Sir,—Referring to the leading article in your issue of last week, we are pleased that you have taken up the question of the "front stand ruling" in the A.C.U. Stock Trial.

We, as manufacturers, entered this trial on the understanding that it was purely and simply a test for *stock machines* as supplied to the public. Whilst we agree that the condition specifying a front stand was laid down in the official rules and was also noted by us, we would not, on principle, enter anything in this trial other than machines to standard specifications as supplied to the public.

If the A.C.U. continue to dictate to manufacturers and the public in these matters, we shall expect a demand for special gear ratios, special shape handle-bars, brakes, silencer, etc.

Manufactures should nip this in the bud, and in future refuse to enter a stock trial with anything but *standard machines*.

It would be interesting to know how many manufacturers of lightweights fit front stands.

THE BORDESLEY ENGINEERING CO., LTD.,
W. A. DISNEY.

### REVERSING A TWO-STROKE ENGINE.

Sir,—My machine is of 2¼ h.p. and has a sidecar attached; I am able to take the machine with passenger normally seated in sidecar backwards up the most severe hill in London, viz., Muswell Hill.

Those readers who are familiar with this hill will agree it is quite a novel performance.

I am curious to know whether any of your readers can claim the same experience. CURIOUS.

London, N.10.

### SIDECARS ON FREAK HILLS.

Sir,—As a simple soloist, I may be "rushing in, etc.," in venturing to address you on the subject of sidecar driving. If, in your opinion, this is so, please save me by not publishing this! After watching several recent trials including the Sandy Lane *fiasco* in the "Victory" Cup trial, I have come to the conclusion that the majority of sidecar drivers tackle these freaks in the wrong way. One sees machine after machine (I am speaking of sidecar outfits only), charge at it at (more or less) speed and end up by butting the bank on the left-hand side of the road, with an occasional clean climb to vary the monotony. The clean climb, however, is not confined to any particular make or type, nor is it simply a matter of choosing the right line or even of wheel grip, though it is true that many failures are due simply to wheel spin. But in a number of cases it is due, I believe, to the driver being so occupied in thinking of his back wheel that he forgets all about front wheel grip. He gets all the weight he can on the back wheel (do petrol cans on the carrier ever hold anything more solid than spirit?), and opens his throttle wide on bottom gear, with the result that, with so little weight remaining on the front wheel and the push of a roaring engine to the left, the machine refuses to obey the handlebars, and the whole outfit sidles into left bank of the road. I think I remember reading Frank Smith's advice years ago which modern riders might copy with success, "If you cannot get the machine to go to the right, cut out and steer, cut out and steer." No one who has watched critically can deny that, in climbing freak hills, brains go much further than brute force, and if competitors realised this we should not see nearly so many failures; route organisers suffer much abuse simply because there is so much hideously bad driving. J. M. PHILPOTT.

### CENTRES OF GRAVITY EXPLAINED.

Sir,—In your issue of March 16th your correspondent "Velocitas" uses an extremely novel method of arriving at the combined centre of gravity of a rider and a motor bicycle. Using his method of calculation, he could have made his figures much more striking by mounting his 150lb. rider on an ultra-lightweight weighing 75lb. If the centre of gravity of such a machine is 13in. from the ground and the centre of gravity of the rider seated on the machine is 35in. from the ground, then, according to "Velocitas" their combined centre of gravity will be $13 + \frac{15.0}{7.5} \times 22 = 57$in. from the ground, that is to say, *nearly five feet*, or somewhere about the rider's head. If "Velocitas" will look at any elementary book on statics he will find that the centres of gravity of the two examples he gives are really 20.45in. and 21.25in. above the ground.

I might also suggest from a slight consideration of rotational dynamics, that the speed, the virtual centre about which the machine is turning, the apex of the virtual cone developed by the steering head, and the radius of gyration of the machine and rider about the wheelbase, are all far more important factors affecting stability than the position of the centre of gravity. DE 2928.

Tenby.

### DESPITE DISABILITIES.

Sir,—I read with interest your leader entitled "Despite Disabilities" in a recent issue.

While agreeing in part that a rider who has lost a leg should not attempt to "perform" on a solo machine in sporting trials, I should like to have seen it more clearly stated that the loss of a lower limb is by no means an insuperable obstacle to the management of a solo machine under ordinary touring conditions, providing a suitable mount is selected.

I may mention that although I have lost my left leg at the hip-joint and do not wear an artificial limb, I have no difficulty whatever in the management of a single-speed lightweight (two-stroke); in fact, I was surprised to find that I felt safer in the saddle than when walking with crutches. C. L. HAWTHORN.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

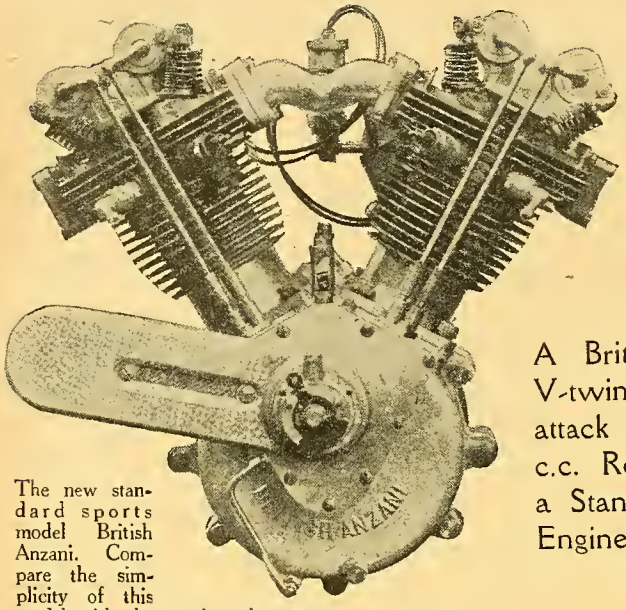
**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

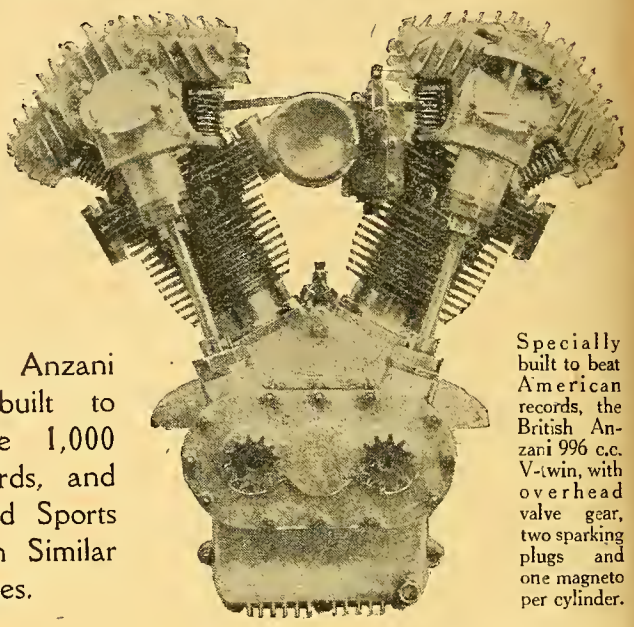
Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# TWO HIGH-EFFICIENCY ENGINES.




The new standard sports model British Anzani. Compare the simplicity of this model with the purely racing type.

A British Anzani V-twin, built to attack the 1,000 c.c. Records, and a Standard Sports Engine on Similar Lines.



Specially built to beat American records, the British Anzani 996 c.c. V-twin, with overhead valve gear, two sparking plugs and one magneto per cylinder.

SPECIALLY built to win for England the high speed records at present held by America, the British Anzani racing engine (83 × 92 mm. = 996 c.c.) is a unit which promises to give an excellent account of itself as soon as it is ready for the track.

There are four valves in each cylinder, and these are actuated by means of a special cam gear in an oil-tight heavily ribbed aluminium case situated above the cylinder heads, each pair of camshafts being driven by two vertical shafts and bevel gearing. Universal joints of the pin type are provided at each end of these driving shafts.

In the case of the right-hand cylinder a Best mechanical oil pump is situated horizontally over the bevel gear camshaft driving case.

### Aluminium Bronze Cylinder Heads.

In the racing engine aluminium bronze is the material used for the cylinder head, which is carefully machined internally, and is provided with ports of enormous size. Particular attention has been given to lubrication, oil being delivered by the Best pump to the oil-tight overhead valve gear case and to a Y-shaped union between the cylinders. The big ends and roller main bearings are lubricated by splash.

Side thrust on the valve stems has been eliminated by the insertion of a small separate tappet rod to take the thrust. Each valve gear casing is provided with an internal exhaust valve lifter, while each cylinder has two plugs fired by its own double-spark magneto.

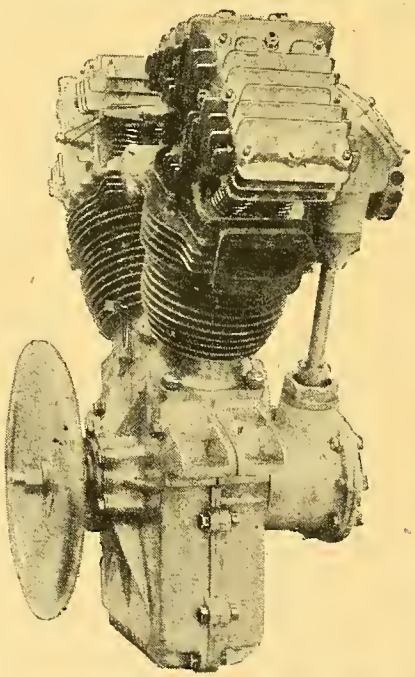
An induction pipe of large size is bolted on to the cylinders and attached to it is a triple venturi tube Zenith carburetter of large dimensions. An external flywheel is employed. Altogether the engine is a very fine piece of design, and should be highly efficient.

This engine, it is claimed, has already developed 46 h.p. at 4,000 r.p.m., but even better results are expected.

### A Standard Sports Model.

Of the same dimensions as the engine just described, the 8-10 h.p. sports model is built on somewhat similar lines to the special racing engine, but is a commercial proposition.

On each head there is a bracket supporting the rocker shafts, which run on ball bearings packed with grease; like the racing engine it has four inclined valves to each cylinder. Adjustment for the tappet clearance is provided, but the rods actuating the valve gear are not adjustable. The detachable heads, which are of the same design as those fitted to the racing engine, are in this case of cast iron, the valves opening into common ports, but being fitted with a baffle in between the two.



Three-quarter view of the racing engine, giving some idea of the size of the valve ports.

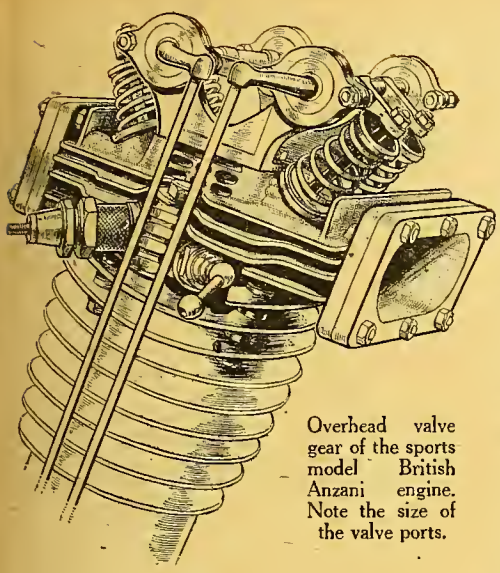
Differing from the racing model, which has a large ribbed sump at the bottom of the crank case, no oil is carried in the crank case of the sports engine, oil being delivered by a Best mechanical lubrication pump from the oil compartment in the main tank to the Y-connection between the two cylinders. This oil pump is situated on the magneto chain case. There is only surplus oil in the crank case, the Y-pipe delivering lubricant to a space round baffles on the top of the crank case, whence it is picked up by the piston, the moving parts being lubricated by oil mist.

### Aluminium Pistons.

Die cast aluminium pistons fitted with a scraper ring and strengthened by internal ribs are employed, while there is a groove below the third ring which is drilled to prevent oil reaching the combustion chamber. The gudgeon pins are a driving fit in the pistons, the cylinder walls being protected by brass pads.

The main shaft runs on ball bearings, while the big ends are an interesting piece of design. The forked big end is strengthened by means of a strap at its base preventing the fork from splaying, and quadruple roller bearings are employed—two for each bearing.

Reverting to the lubrication system, there is a deflector plate at the base of

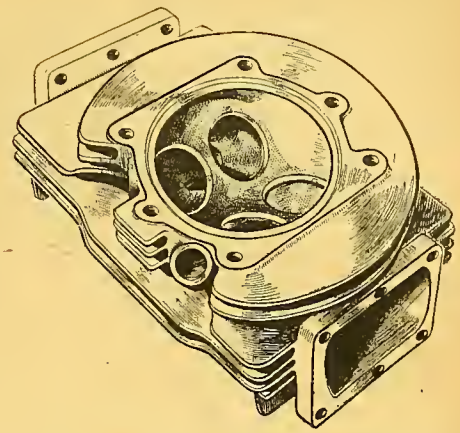


Overhead valve gear of the sports model British Anzani engine. Note the size of the valve ports.

the crank case which forces the oil through a lug in the crank case base, up a short pipe into the timing case. Here it is picked up by a thrower ring and distributed over the timing gears.

So far as bearings are concerned, practically the same arrangement for the cam rockers is adopted as on the connecting rods, one of these being forked, a long bush being used, the centre rocker running on the centre of the bush and the forked rocker bearing running on the outside of the bush. The point of contact with the cam is provided with a single Hoffmann roller, these rollers being kept in by shroud plates adjacent to the cams, and they should go far towards reducing friction.

We are naturally looking forward to seeing the performances of these engines on the road and track. From the ingenuity displayed in their design and the excellence of the workmanship, they will, no doubt, give an excellent account of themselves. These engines are manufactured by the British Anzani Engine Co., Ltd., Anzani Works, 30 Scrubbs Lane, Willesden, London, N.W.10.



Symmetry of design is a feature of the British Anzani combustion head, which tends to the utmost efficiency being attained.

# SUPER-SPORTING TRIALS.

## The Man, Not the Machine Nor the Nature of the Trial, the Most Important Factor.

IN *The Motor Cycle* not long ago, a leaderette drew attention to the fallacy that a motor cycle used in freak trials of necessity depreciates abnormally in second-hand value. In the opinion of the writer, neither the nature of the trial nor the machine used is the most important factor. All of us have seen in freak trials the type of rider for whom such events are utter folly. I recollect one of these participants in last year's Scott trial. Prior to the start he was racing his engine with the machine on the stand in a way which gave one headache and heartache. He was mounted on a brand new machine, the exhaust pipe of which was hardly blue, but he must have "done it in" literally during the event. His riding consisted of a series of blinds, heedless of surface, till he fell.

Certainly the machine which has been ridden in ultra-sporting events by a participant of this sort may prove a bad speculation for the second owner, but I agree entirely with the editorial view that (barring exceptions) a modern machine suffers no ill-effects whatever in a modern freak trial, such damage as occurs, if any, being of a very superficial kind, which a few cheap renewals set right.

### In Skilled Hands.

In support of this I would like to say that during the season 1920 my two team mates and myself rode the same machines in all the important trials, including the A.C.U. Six Days, the Scottish Six Days and Two Days, the Scott trial, and many others. At the end of the summer my own machine might almost have sold as new, and, in point of fact, I sold it to a friend, and it has given unqualified satisfaction ever since.

The foregoing is not written with any idea of self-commendation (and at all events the name hereafter is not my own), but simply to show that the folly of the freak trial is a matter of personal folly, *i.e.*, that the rider who is going to damage his machine by riding is certainly foolish to ride. To talk about fatigue of frame members through riding at excessive speeds over appalling surfaces is absolute nonsense to any old trials rider, for surely the whole art of trials riding lies in avoiding such things?

### Freak Trials for Sport.

Machines are to-day so perfect that I regard any kind of trial barring the freak as deadly dull, and certainly I do not think that last year's A.C.U. Six Days was in any sense to be compared with the one preceding it. Moreover, the previous trial was absolutely fair. I personally lost several marks on the freaks, yet because my machine was a good one, and did not crumple up or develop some mechanical defect, I came out with a gold.

When ultra-sporting trials cease to be, I for one shall lose all interest in motor cycle events, and shall confine myself to the less varied thrills of Brooklands on four wheels.

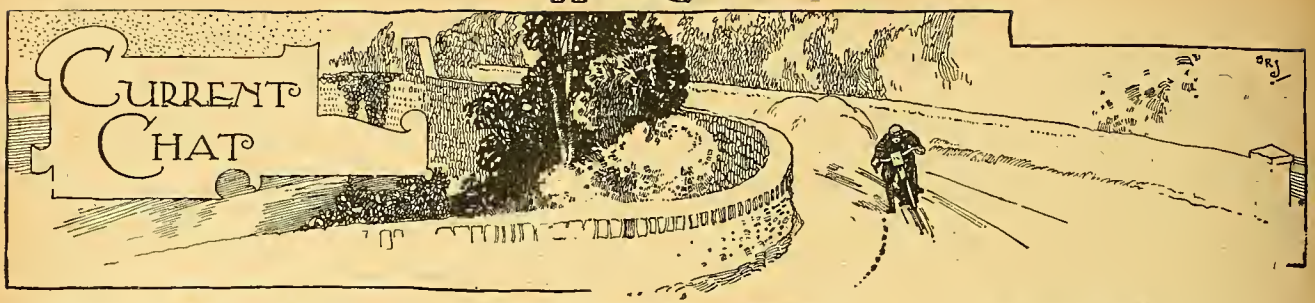
STAG MOSS.

NEXT WEEK!

THE MOTOR CYCLE

SPRING NUMBER AND BUYERS' GUIDE

*AN ENLARGED ISSUE WITH MANY SPECIAL FEATURES.*




## Times to Light Lamps.

| | | | |
|---|---|---|---|
| Mar. 30th | .. | .. | 8.27 p.m. |
| April 1st | .. | .. | 8.30 „ |
| „ 3rd | .. | .. | 8.33 „ |
| „ 5th | .. | .. | 8.36 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### South African Imports.

Imports of motor cycles into South Africa for November last amounted to 91 complete machines, value £7,847; 47 sidecars, value £1,497, and £2,523 of parts.

### Every Machine on the Market.

Next week's issue of *The Motor Cycle* will contain amongst many topical and entertaining features a completely illustrated Buyer's Guide, giving brief specifications and prices of all makes of machines.

### The Youngest French Motor Cyclist.

Wilfrid Dupuy, who last week won his class in the Cœur-Volant hill climb, is the youngest French motor cyclist to possess a driving licence. He is 12 years of age, and had to compete with 50lb. ballast. He is the son of a director of the *Petit Parisien*.

### "The Motor Cycle" Film in Sheffield.

Vickers Institute, Don Road, Sheffield, has been secured by the Sheffield M.C.C. for the display of *The Motor Cycle* film on Saturday. The chair will be taken by Mr. Evans, J.P., of Messrs. Vickers, Ltd., at 7.30 p.m. A grand organ is installed, and an organist and vocalists will be present. In addition some Vickers works and aviation films will be shown. All motor cyclists are invited.

### Clubs and Taxation.

At a meeting of the Portsmouth M.C. & L.C.C. the subject of taxation was discussed, and it was unanimously agreed to ask all motor cycling clubs to support the following resolution, with a view to making a united protest:—"The Portsmouth and District M.C. & L.C.C. are of the opinion that the unfair tax on motor cycles should be reduced, taking into consideration that the income of the owners of these vehicles has been considerably reduced, and that the tax should at least be reduced in proportion." Other club committees might do well to bring this important matter before their members.

KNIFE GRINDING UP TO DATE. This busy ex-Service man was recently snapped in Bristol by one of our photographers. An Autowheel unit supplies the power for the perambulating grinding bench, and its owner was loud in his praises of the engine's cool and steady day-long running

## Special Features.

**100 M.P.H. ON A "3½." ON THE HILLS OF THE WEST. THE NORFOLK BROADS.**

### Questions of Balance.

It may interest many of our readers to learn that frame design plays an important part in balancing an engine. For example, a M.A.G. fitted in a Morgan has to receive treatment different from that necessary with a similar engine fitted in a Matchless.

### A Spanish Cycle Car Race.

Among countries where motoring and motor cycling are intensely popular is Spain and many sporting events have been organised in that country. We have received particulars of the Armangué trophy, to be competed for in a cycle car race organised by the Real Moto-Club of Catalunya. The event will be run under F.I.C.M. rules, and will conform to the regulations of the Royal Spanish A.C.

### Ambitious.

A motor cycle club has been formed in Worthing and an open trial from Worthing to John o' Groats, thence to Land's End and finally back to Worthing, figures on its fixture card. Whether this event has received a "permit" we are unaware, but apparently the Worthing worthies believe in tempting Providence, for the club flag is to be blue with a white circle, "inscribed with the figures thirteen in red."

### Stolen Machines.

Recently a well-known Midland manufacturer had his sidecar outfit stolen while it remained outside an hotel; now we learn that a four-speed P. and M. outfit, belonging to Mr. B. Marians (of Phelon and Moore, Ltd.), was stolen from outside his house about 2 p.m. on Monday, March 13th. In this case the machine may be identified by its having a 3½h.p. 1922 engine and an experimental type of four-speed control.

### A Buyer's Guide of Cars.

The Spring Number of *The Autocar*, which will be on sale all over the country to-morrow, price 4d., contains within its attractive coloured cover, not only the usual popular features, but also an illustrated Buyer's Guide to the cars of 1922. This enlarged issue of the representative automobile journal is one which should be filed by all interested in contemporary automobile design, whether they are prospective buyers or not.

# WHILE YOU SLEEP THIS MAY HAPPEN to YOUR MACHINE

The ONLY POSITIVE SAFEGUARD against this and other Accidents is FULL INSURANCE with a SOUND COMPANY.

*—The—*

# AUTO-CYCLE UNION

recommends every motorcyclist to insure.

**The A.C.U. POLICY gives complete protection against every contingency.**

NO OTHER POLICY OFFERS ARBITRATION by a COMMITTEE of PRACTICAL MOTOR-CYCLISTS in case of dispute.

*Apply for full particulars without delay to The SECRETARY.*

AUTO-CYCLE UNION, 83, Pall Mall, London, S.W.1.

Telephone—Regent 5350-5351.
Telegrams—" Autocycle, Londoo.

**EVERY THINKING MOTORCYCLIST JOINS THE**

# A.C.U.

# WESTALL CUP

## *General Efficiency Trial.*

In the competition for the Westall Cup, run by the J.C.C. on Saturday last, Mr. H. R. Godfrey, on a G.N., was 1st.

The award was made in consideration of all-round performance, including reliability, speed, acceleration, flexibility, silence, economy, hill-climbing, manœuvrability, springing, braking, cooling efficiency, and, in fact, all the qualities which are important to the private owner.

**G.N. MOTORS, Ltd., Wandsworth, London, S.W.18.**
**Showrooms at 222, Great Portland Street, London, W.1.**

G.N. Cars, fully equipped, from £225

*Raymond Publicity.*

## The Swan — The Spring

*O'er rolling down,*
*Thro' Valley gay,*
*And fragrant wood,*
*Away, away.*

*Spring's here to-day,*
*Away with Care—*
*Sunlight and Shadow play—*
*The Motor purrs,*
*The Gleaming Sidecar waits—*
*It calls—away, away.*

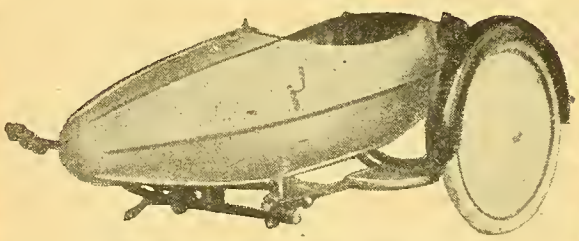


Illustration shows Disc and Step, which are extra.

**PRICES**

To fit ZENITH, TRIUMPH, NORTON, SUNBEAM, RUDGE, B.S.A., HUMBER — **£23**

To fit
Spring Frame INDIAN, £28
SCOUT INDIAN, £25 10s.
HARLEY-DAVIDSON, £27 10s.
HENDERSON, 4-Cyl., £28
A.B.C. (Special frame) £24 10

Specification as List — Other Machines on request

*WRITE:*
**SIDECARS (Oxford) LTD., OXFORD.**

*For the HIGHWAY, the BYWAY, The AIRWAY, and the FAIRWAY*

## The Colmore Cup Winner

WAKEFIELD Castrol Regd. MOTOR OIL

***It sells because it excels***

Castrol Oil was used by Mr. T. C. de la Hay, the winner of the "Colmore Cup" Trial, riding a 4¼ h.p. Sunbeam and sidecar.

The "Watson Shield" and the "P. J. Evans Cyclecar Trophy" were also won by competitors using this oil.

*Write for pocket lubrication index and price list.*

**C. C. WAKEFIELD & CO., LTD.,**
*Specialists in Motor Lubrication,*
**Wakefield House, Cheapside, E.C.2.**
'Phone . . . . . Central 1156 (3 lines).
Wires . . . "Cheery, Cent. London."

**ALL BRITISH FIRM.**

### Thanks Tendered.

The committee of the Birmingham M.C.C. wishes to convey its most sincere thanks to the unknown owner of the Swift car who carried F. P. Andrews to hospital after the latter's accident in the recent Victory Trial.

### Only Open Hill Climb of 1922.

So far the only hill climb of the year for which an open permit has been granted is that of the S. Midland Centre (A.C.U.) on April 29th; the venue will be Kop Hill at Princes Risborough. Entries, sent to Mr. W. Mathews, 6, St. Aldgates, Oxford, close on April 15th.

### Next Saturday's Twelve-Hour Run.

One hundred and two motor cycles and three-wheeled passenger machines have been entered for next Saturday's twelve-hour open trial of the Western Centre A.C.U. There are also twelve four-wheelers, ranging from G.N.'s to 20 h.p. cars.

### Amateur Rider Joins J.A.P.'s.

Formerly secretary of the Oxford University M.C.C. and the first private owner home in last year's 500 Miles Race, Mr. J. E. G. Harwood has joined J. A. Prestwich and Co., Ltd., as chief correspondence clerk. He still hopes to go in for a certain amount of competition work.

### Travers Trial Rules.

Regulations and entry forms are now available for the Travers Trophy Trial, the North-Eastern Centre open event to be organised by the Newcastle and District M.C. on the 22nd inst. Mr. H. Gillies Wicks, c/o Coopers, Ltd., Westgate Road, Newcastle-on-Tyne, is the secretary.

### "Palman Qui Meruit Ferat."

Entitled "Pointed Facts," a striking little folder has been issued by the Publicity Department of the Edinburgh and District M.C. regarding the advantages of competing in—or watching—the forthcoming Scottish Six Days Trials. It is an excellent effort, although probably the event needs this sort of thing less than any of the big 1922 competitions.

### Insurance Premiums Raised.

Motor cyclists will receive with mixed feelings the news that insurance premiums have received a general increase, taking effect from April 1st. For a comprehensive policy for a 2¾ h.p. machine only an additional 10s. is required on the £4 rate, but the other changes are proportionately heavier, being: 4 h.p. from £4 10s. to £6 10s.; 5 h.p. from £5 to £7 10s.; 10 h.p. from £6 to £9.

### Riding Against Time!

Owing to the fact that there is no telephone in Ottery St. Mary, Devonshire, a motor cyclist had to ride nineteen miles into Exeter to summon the fire brigade on the occasion of a fire which threatened to assume serious proportions. The gallant driver, Mr. Brian Baker, to save time started off in pyjamas and mackintosh, and although he borrowed a pair of trousers on the way he was completely exhausted with the cold when he reached his destination.

### Date of the Anglo-Dutch Trial.

This year the Anglo-Dutch trial will take place in Holland, the date fixed provisionally being July 28-30th.

### A Welcome Mite.

No class of people in the Isle of Man benefit more from the T.T. races than the hotel and boarding house keepers. Mr. T. Aylen, of the Hydro, Queen's Promenade, Douglas, has just presented a cheque for £5 5s. to the Manx M.C.C. for the T.T. Fund.

### MOTOR CYCLE QUARTERLY LICENCES.

*Many motor cyclists are in doubt as to when to pay their licences, and also exactly how long these are available. Quarterly licences expire on March 24th, June 30th, September 30th, and December 31st. If a licence is taken out before any of these dates of expiry the full unexpired quarterly licence must be paid. Example: For a licence taken out in respect of one lightweight on June 29th, 10/–, one full quarter's licence must be paid for one day's use. For a motor cycle over 200 lb., to which a sidecar is attached, licensed on June 29th and retained by its owner till the end of the year three successive quarterly licences of 25/– each are necessary. The three remaining quarterly licence rates are:—Lightweight and sidecar, 15/–; Motor bicycle over 200 lb., 20/–; and Three-wheeler, 25/– (the same as a heavy motor cycle and sidecar).*

### Single *v.* Twin.

In the history of the 500 c.c. class it is remarkable that the single-cylinder has far more records to its credit than the multi-cylinder. Of the whole list quoted in the current issue on page 387 only one V and two flat twins make their appearance. Notwithstanding, the first machine to attain 100 miles an hour was equipped with a flat twin engine.

### Motor Cycle Driving Lessons.

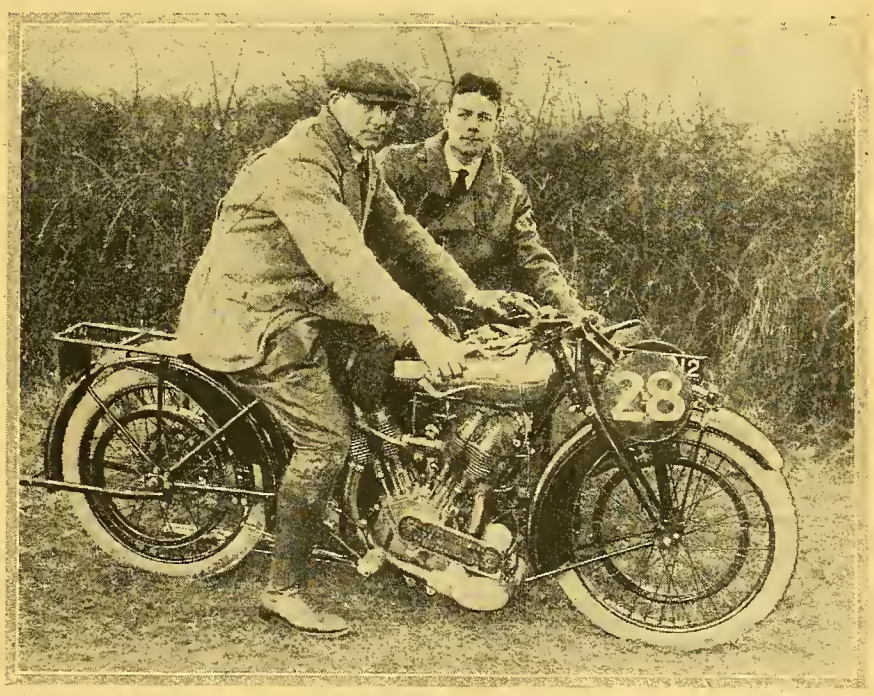
While there are plenty of schools of good standing where motor car driving is taught, one very rarely hears of people professing to teach motor cycle driving. This is in itself a tribute to the efficiency of the motor cycle. It is usually only necessary to explain the controls and the tyro rides away. After that Experience, the best tutor, finishes his education.

### The Freemasonry of the Road.

Years ago a motoring acquaintance of ours bought his first car, and after being taught to drive was told always to stop and offer assistance to anyone stranded by the roadside. Soon afterwards he came upon a stranded motor cyclist and courteously offered his aid. The motor cyclist held up an inner tube rent in twain, and remarked, "What can you do with this . . . thing?" The motorist, who is the very best of fellows, now never offers assistance, though he gives it to all and sundry when they ask for it.

### Watch Your P's and Q's in I.O.M.

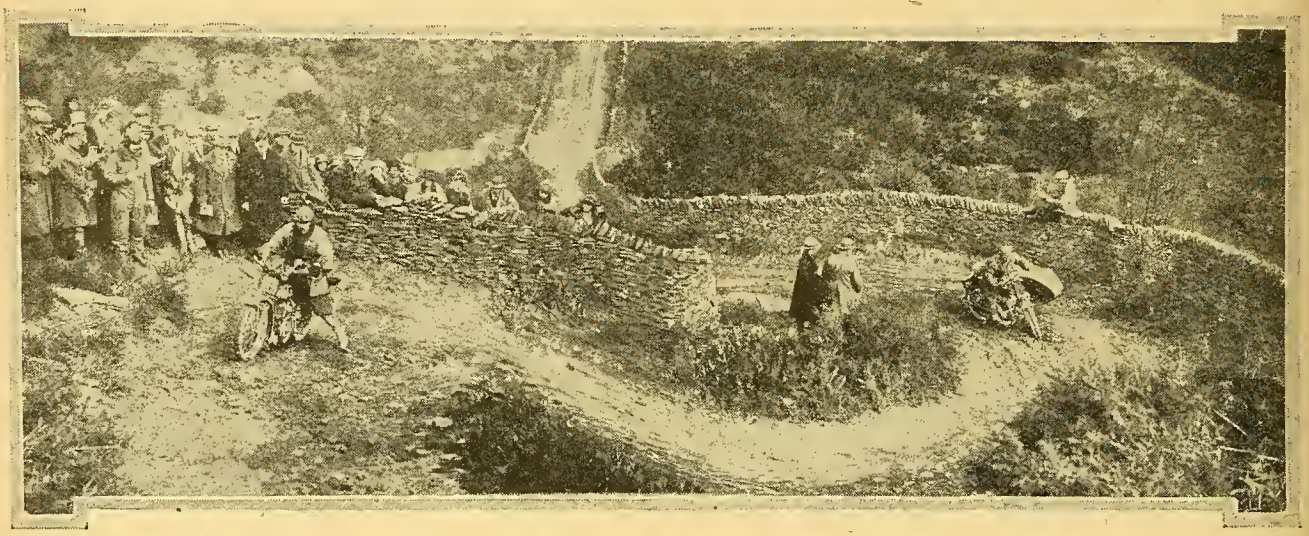
Whilst it is not obligatory for a motor cyclist in England or Scotland to exhibit a rear light on his mount when indulging in night riding, by a peculiar twist of a twenty-five-year-old Manx law, which had not previously been enforced, the rear light is a legal requirement in the I.O.M. One can only characterise the initial prosecution as a vexatious proceeding. The innocent "offender" was a young clergyman, who, when he arrived in the Island, enquired, and was told that a rear light was not necessary. Then the awful majesty of law descended upon him. The police intended the case to be a warning to other motorists, they said.




H. Le Vack, who has hitherto performed so conspicuously on American machines, is now associated with the makers of J.A.P. engines. He is here shown mounted on an 8 h.p. Brough-Superior-Jap.

# OVER DERBYSHIRE BOULDERS AND CLAY.

## Mixture of Fair and Unfair Tests in East Midland Centre A.C.U. Open Trial.



Hunger Hill's flattened S bend is well portrayed in this fine composite picture of W. H. Hardman (3½ Wilkin) and F. H. Brown (4 Rex-Acme sidecar) on the most difficult stretch.

AMONG those who took part there were two distinct verdicts on last Saturday's East Midland Centre Open Trial: either it was a very sporting and enjoyable outing of concentrated but not insuperable difficulties or it was quite absurd. The latter view was more general.

We cannot subscribe unreservedly to either opinion. Two of the hills were artificial to an extreme degree. Had a tar-macadam surface replaced the existing litter of six-inch boulders, sand, and rock on "Lapidosa" and "Little Eaton Quarry," an out-of-tune, single-geared lightweight might reasonably have been expected to scale both these inclines; for, in each case, the rise is perfectly straight, quite short, and of no particular steepness. For the rest, the observed tests—hills, colonial sections, and watersplash—admittedly severe, cannot be designated as unfair.

Considering that, without Lapidosa and Little Eaton Quarry there would still have been no difficulty in weeding out 75% of the entry from the ranks of the gold medal winners, it is to be feared that trials organisers have not yet learned where to draw the line.

### Were they Reasonable?

Hunger Hill and Gorsey Bank watersplash also came in for much criticism; the former is perhaps on the border line of the doubtful, but its acute "S" bend and severe gradient were responsible for lost marks to an almost equal degree as its loose and uneven surface; the splash was such that it could be negotiated cleanly by a standard machine without any special preparation. Therefore the common allegation that it had been dammed for the event does not seem to carry much ground.

Starting at Leicester, the route kept to main roads as far as Derby, but a few miles further on these deteriorated into thickly mud-coated by-lanes, and thereafter until the lunch stop at Matlock Bridge, less than forty miles further on, the only variations in surface were for the worse. First, "a grass section (observed)," which was all the words imply, then a slippery hair-pin bend (also observed), then five miles of semi-snow-bound roads over the moors brought the 130 odd competitors to the first check.

Turning off *Via Gellia* was a new, and as yet unnamed, hill, with a consistently bad but hardly freakish surface for perhaps half a mile of steady climbing. Near the summit was a 60° grassy bend, and here were lost the first marks of the day. G. Brough (8 Brough Superior) footed, as did several other solo men.

Worse followed—in the shape of an extended colonial section ziz-zagging over almost impossible grass-grown cart tracks. Gradually the official observers became more widely spaced, and toward the end there were many quite unregistered falls. For five miles this sort of thing continued, and several riders were not ashamed to confess to as many falls before the next check. Full 20 m.p.h. was required between the two near by controls; "more haste, less speed," was the motto of the moment.

### Few Failures on Birchover.

Birchover Hill was wet and steep, but the mud had a bottom, and there were comparatively few failures. Among the early unfortunates were H. Greaves (2¾ Beardmore-Precision B. and S.), and R. M. Knowles (3½ Norton), who failed to rush the "sticky" stretch fast enough, and was consequently bogged. J. Cooke (3½ Sunbeam) also failed. During the first half-hour good climbs were made by J. N. Roberts (2¾ New Imperial), W. L. Handley (2½ O.K.), A. E. Salway (2½ O.K.), J. A. Newman (3½ Douglas), H. F. Harris (2¾ A.J.S.), L. A. Bees (3½ Beardmore-Precision), J. H. Simpson (3¾ Scott), P. L. Mayo (2¼ Coventry Eagle), W. H. Hadfield (2¾ Raleigh), Hugh Gibson (2¾ Raleigh), G. S. Boston (3½ Scott), and George Dance (3½ Sunbeam), the last-mentioned two being particularly sure, and, incidentally, well ahead of time. Several machines bore visible traces of earlier spills, bent mudguards, and number-plates; lamp sets slung over riders' shoulders being not uncommon.

There was quite a number of spectators on Rowsley Bar, drawn there probably by memories of the havoc which its deceptive double bend had wrought in pre-war trials. It did not count for much on Saturday; unrolled macadam, if bad for tyres, provides tolerably efficient wheel grip, and, on the whole, the rutted but dry colonial section which followed caused greater anxiety than the hill itself.

### Lunch-hour Hill Climbing.

There now remained only Hunger Hill between the buffeted riders and lunch at Matlock. The name of this precipice proved most appropriate, for it was well after two o'clock before those carrying three-figure numbers were allowed to attempt the climb. To prevent baulking the last check of the morning was located before the hill, and competitors were sent up singly in their own (lunch) time. This process was not a swift one, and for the tail-enders a two-hour interval dwindled to a matter of minutes.

There were about 80 soloists still in the running, but only four made non-stop ascents without foot-waving or touching. One was George Dance (3½ Sunbeam), who raised an ovation by the wonderful way in which he corrected an almost broadside skid just round the second bend; another was Bert Kershaw (2¾

**Over Derbyshire Boulders and Clay.—**

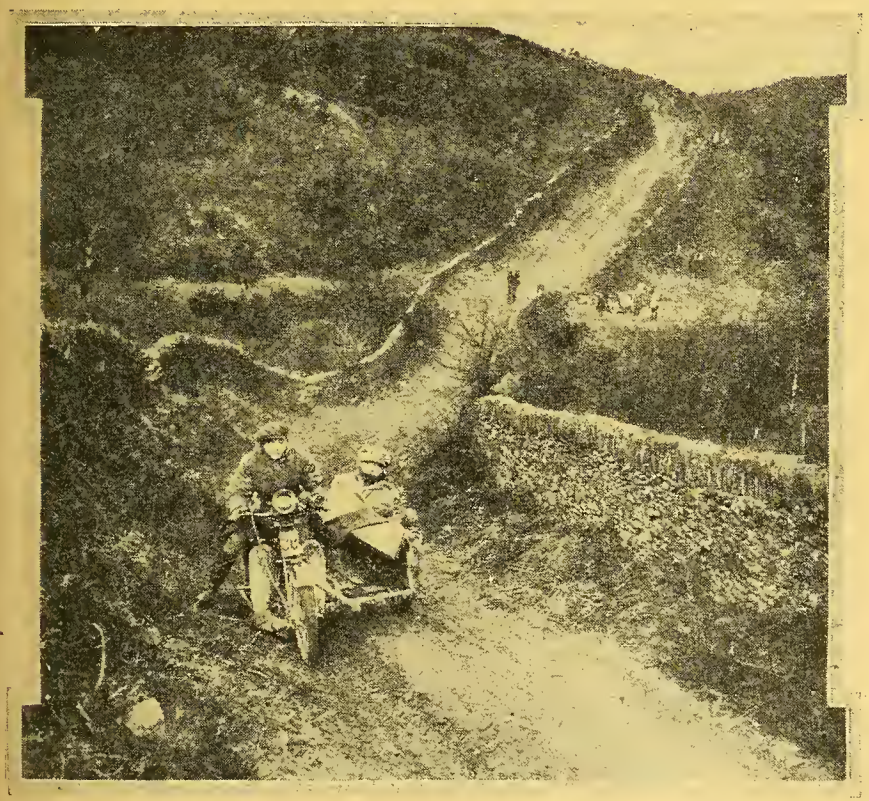
(New Imperial), who was steady and sure; the third, V. Gayford (3½ Zenith-Bradshaw), faster than Kershaw but less spectacular than Dance; and the fourth, W. R. Haggas (3½ Sunbeam), a North-country rider, whom none of Saturday's terrors seemed to perturb very much.

Sheer bad luck attended one or two of the others, who deserved to retain full marks. On one occasion R. A. Thacker (3½ Beardmore-Precision), who wore a bowler hat, was seen unconcernedly touring up the lower reaches in a gait and manner in keeping with the semi-dignified nature of his headgear. There was some laughter, and the opinion was expressed that he would not even reach the bends. But to the general surprise he rounded both faultlessly, picked his way daintily up the following straight, and was on the point of disappearing over the summit amid ringing cheers when—he rammed the bank!

### Nearly Successful.

J. A. Watson-Bonrne (8 Brough-Superior) made an impressive climb, marred only by one "dig"; C. J. Wilcox (6 Hazelwood), P. L. Mayo (2½ Coventry Eagle), W. F. Waddington (3 Ivy), H. S. Bemister (2¾ o.h.v. Coulson), who broke a belt, and P. G. Boult (2½ Connaught) were others whose attempts drew a succession of "hard lines" from the onlookers.

Leading up through the woods from *Via Gellia*, the first observed climb was not severe. The riders are W. L. Fincher (3½ Norton) and A. D. Mayo (2½ Coventry Eagle).



There was a treacherous loose patch at the commencement of Hunger Hill, where many followed A. Nott's example and gave slight foot assistance. Nott's machine is a 5–6 h.p. Raleigh sidecar.

Before commencing to list those who climbed well with an occasional touch mention must be made of F. Wooley (2½ Sun-Vitesse); his feet left the rests occasionally, but he did not once actually touch the ground.

Only four marks were, or should have been, lost by the following, who are arranged in rough order of merit:—G. Brough (8 Brough Superior), J. A. Newman (3½ Douglas), W. L. Fincher (3½ Norton), A. Bennett (3½ Sunbeam), W. Hadfield (2¾ Raleigh), G. Hope Wilson (2¾ Barr and Stroud)—took the inside of the hairpin, but pulled out with ample power to spare—D. A. Atkin (2½ Coventry Eagle), W. H. Hardman (3½ Wilkin), H. J. Stretton Ward (3½ Triumph), P. W. S. Hartwell (8 Brough Superior), H. Greaves (2¾ Beardmore B. and S.), G. H. Smith (4 Triumph), and F. Wallis (2¼ Velocette), a long-legged rider who almost walked his little mount up. Perhaps half a dozen other solo men made less inspiring but officially non-stop ascents.

Both the lady competitors, Mrs. O. M. Knowles (3½ Norton) and Mrs. Janson (2¼ Ner-a-car) had to receive assistance.

### Unavoidable Failures.

Several of the solo failures appeared quite unavoidable. For instance, P. Walker (2½ Excelsior) found himself at one time "see-sawing" on his crankcase, A. D. Mayo (2½ Coventry Eagle) grounded on his long exhaust pipe, while his wheel proceeded to dig itself in, and R. Lucas (3½ Scott) discovered that the low gear of the Squirrel is too high to take any clutch-slipping liberties on 1 in 5. The youngest competitor, A. Bowerman (2¼ Velocette), although not wholly successful,

Reg. Brown (3½ Sunbeam sidecar) breasting Lapidosa at a good speed

received much vocal encouragement for his plucky effort.

As usual on such hills, the chief problem of the sidecar drivers was to prevent their rear wheels from spinning. Experience tells in such cases, as witness F. W. Giles' (7 A.J.S. sc.) fast, clean climb in contrast to W. Chapman's several stormy failures on a similar outfit. Others to force passenger machines to the summit non-stop included: B. L. Bird (6 B.S.A. sc.), G. M. Townshend (4¼ P. and M. sc.), his passenger hurtling on to the carrier just in the nick of time, B. Bourke (4½ New Hudson sc), with front wheel 12 inches in the air at one time, and George Denley (2¼ Velocette sc.), who, however, after a wonderful climb met his Waterloo almost at the top, to everybody's disappointment.

F. O'Brien, driving an Anzani-engined Matchless, was baulked by a low petrol level in his tank, as apparently was F. J. Ellis on a standard sister mount.

### In the Afternoon.

Steep and twisting, but dry, Riber Hill, just over a mile on the return journey, was taken on the run by most. J. Cooke (3½ Sunbeam) footed, Mrs. Knowles (3½ Norton) simply stopped, D. H. Jones (3½ Beardmore-Precision), and A. J. Rayner (3½ Rudge-Multi), both ran alongside, were the exceptions.

More "colonial section" and an observed hairpin followed, and then the boulder-strewn cutting yclept Lapidosa.

The following soloists, in many instances more by luck than judgment, made commendably clean ascents:—H. V. Harris (2¾ A.J.S.), J. A. Watson-Bourne (2¼ Coventry Eagle), W. R. Haggas (3½ Sunbeam), J. Whalley (2¾ Massey-Arran), S. Lawrence (3½ Sunbeam), P. Walker (2¾ Excelsior), G. S. Boston (3½ Scott), L. Nicholson (2¾ Coulson), H. S. Bemister (2¾ Coulson), and V. Bourlet (3½ Ariel).

Those who failed were comforted later by the news that George Dance was numbered in their ranks.

### Sidecars Score.

The sidecars scored more heavily this time, and of twenty non-stops F. O'Brien (8 Matchless-Anzani sc.) was generally considered best, although it is difficult to give a definite verdict on the point.

More rutted, grass-grown tracks led to Gorsey Bank, the descent of which was by no means easy, through a splash at which 26 lost marks, and up a series of observed grades of varied surface and severity, terminating with Bream Fields Lane.

Quite a number of the sidecar passengers were becoming so suspicious by now that as soon as they saw a red flag they took up strategic positions on their carriers. N. Hall (2¾ O.K. sc.) and A. G. Cocks (4¼ Beardmore-Precision sc.) were the only failures, though several slogged.

### Little Eaton Quarry.

Little Eaton Quarry we have already referred to; before attempting to differentiate the performances we may qualify our remarks by pointing out that there was slightly more room to get up here than on Lapidosa. Luck again entered the game, but F. T. Hatton (3½ Douglas) and G. Dance (3½ Sunbeam) made very fine climbs without any aid from the fickle goddess.

Others deservedly "O.K.-ed" were:—H. V. Harris (2¾ A.J.S.), J. Simpson (3¾ Scott), W. H. Hadfield (2¾ Raleigh), A. Bennett (3½ Sunbeam), P. W. S. Hartwell (8 Brough-Superior), H. J. Stretton-Ward (3½ Triumph), H. S. Bemister (2¾ Coulson), and practically all the sidecars.

Of the three-wheeled cyclecars, P. Yates (8 New Hudson) and N. Norris and H. F. S. Morgan (Morgans) stormed up as if nothing else mattered.

So extensively strung-out were the competitors by now that some time before the late men put in an appearance there was a continual stream of motoring spectators making their way along the rough and narrow track *away* from the "hill," to the general discomfiture of those approaching.

*Viâ* Nottingham to the late finish (8 o'clock) at Leicester it was main road going; there was certainly no need for further obstacles.

Whoever wins the Raleigh Cup (the premier award) will have thoroughly earned that valuable trophy.

Some idea of the absurdity of Lapidosa may be gathered from this view, which shows Sam Wright (4½ Humber sidecar) endeavouring to pick his way where no alternative track was possible!

# ENCIRCLING FRANCE IN TWELVE DAYS.

## Start of the Tour de France Reliability Trial of 2,300 Miles.

Trials in France usually secure a good deal of popular attention, especially so because the starting and finishing points are almost always arranged within easy reach of the general public. This picture shows competitors starting on the twelve days Tour de France, under cold and wet weather conditions.

THIRTY-EIGHT motor cycles, divided into seven different classes, and 30 cycle cars of 750 and 1,100 c.c., started in the Tour de France trials on last Saturday morning.

The event, which comprises a distance of 2,300 miles to be covered in twelve stages, at a fairly high average speed, is undoubtedly the most difficult competition of its kind ever held in France, and is one which had aroused an unusual amount of interest. The presence of cycle cars with the motor cycles is explained by the fact that in France four-wheelers of not more than 1,100 c.c. capacity and 771lb. weight come under the control of the motor cycle authorities.

### Marks on Mechanical Condition.

Before starting from Paris the competing machines were weighed and sealed, for in addition to an average speed to be maintained throughout the trip, marks are deducted for the breakage or replacement of any essential part. Beginning with 100 marks for a broken frame, a front or rear fork will cost 50 marks, a broken handle-bar 30 marks, a broken rim or mudguard 20 marks, 10 marks are deducted for a spring, stand, luggage carrier, exhaust pipe, and change speed or brake control mechanism.

The average speeds, which begin at 24⅘ m.p.h. for the 1,000 c.c. solo machines, are : 21 7/10 m.p.h. for the 350, 500, 750 c.c. solos as well as for the 1,000 c.c. sidecars, and 18⅗ m.p.h. for the 250 c.c. solos and for the 600 c.c. sidecars. One mark for each minute late will be deducted. It is considered by all that the average speeds are very high, in view of the length of the trip and the nature of the roads to be covered; the jury has the right, indeed, to lower the average if considered necessary on such difficult stages as the Nice to Grenoble run over the Alps, or the stage through the Vosges mountains.

### Police Assistance.

The start of the first stage, which was from Paris to Caen, via Rouen, a distance of 163 miles, was given at the Porte Maillot. It is significant of the attitude adopted by the French authorities towards these events that all traffic was diverted from the main road for a distance of two miles from the starting point, and for the first thirty miles out of Paris local police were on duty at frequent intervals to keep the road free for the competitors.

In the 250 c.c. class there are four competitors, among them being a Levis and a Velocette, with French riders. The 350 c.c. solos are nine in number, and comprise a Calthorpe, the new Belgian Gillet two-stroke with aluminium cylinder head, a couple of water-cooled Viratelles, and the Rasser, a rather curious machine with a double-channel section frame.

### Machines in the Trial.

In the 500 c.c. solo class two of the new Gnome and Rhone machines are entered. These mounts, which are designed by an Englishman, are just about to come on the market, and are the product of one of the biggest concerns in France. Naas remains true to the twin A.B.C., which is also built by the Gnome and Rhone Co., and the English machines in this class are a Sunbeam and a Rover, both with French riders. In the 750 c.c. section Lt.-Col. McKechnie's spring frame machine, with Coventry Victor engine, attracted a lot of attention, but was withdrawn on the first day. Others in this section are a vertical twin water-cooled Viratelle, a couple of Triumphs, Rover, B.S.A., Indian, and Harley-Davidson. Dubost is alone in the 350 c.c. sidecar class, his machine being a single cylinder two-stroke. J. Sykes on a Sunbeam and Leroux on a B.S.A. are the only competitors in the 600 c.c. sidecar class. In the 1,000 c.c. sidecar class the competitors are three Harley-Davidsons, a Blériot, a water-cooled Viratelle and a Sunbeam, this latter being handled by an Englishman (White).

DO NOT MISS "THE MOTOR CYCLE" SPRING NUMBER AND BUYERS' GUIDE.

*ON SALE ALL OVER THE COUNTRY, THURSDAY, APRIL 6th.*

# UP KOP HILL AT "70."

## Essex M.C. Hill Climb; Big Twin Makes Fastest Time. Consistent Running by 250 c.c. Lightweights.

O. L. de Lissa (8 Motosacoche-Mag sidecar) ran away with the passenger machine class. His time for the 903 yds. of Kop Hill was 39 secs.; 24 secs. faster than the next man.

IN conjunction with, and preceding, the open hill-climb for cars on Saturday last, the Essex M.C. ran off ten classes for members' motor cycles.

A large entry did not materialise, but some exceptionally fine climbs were made, and the star ascent of the afternoon, by Kaye Don (7-9 Indian) at a speed slightly over 70 m.p.h., was nothing short of marvellous. (Incidentally, the fastest ascent in the open car classes, done by Count Zborowski on a 4,500 c.c. Ballot, was $\frac{4}{5}$ of a second slower.)

### A Healthy "Baby."

Another outstanding machine was S. M. Greening's 2¼ h.p. Francis Barnett with the 250 c.c. J.A.P. engine. This machine made five ascents of the 903yd. climb, and its speed was 38⅜, 39⅖, 39⅕, 38⅕, 38⅕secs. respectively, a wonderfully consistent performance, the average time representing approximately 48 m.p.h.

C. G. Pullin, fresh from his 100 m.p.h. efforts on Brooklands, was competing, but his Douglas was firing irregularly, and in consequence he did not come into great prominence.

Only one untoward incident occurred, this being a fall sustained by T. C. de la Hay (3½ Sports Sunbeam), which put the machine out of action with a buckled front wheel. In a subsequent class on a 3½ h.p. o.h.v. racing Sunbeam, de la Hay made the second fastest and fastest single cylinder climb of the day, despite a bad wobble near the top.

Results were on time and formula, *The Motor Cycle* formula $\frac{C \times t^2}{W}$ (C = c.c., $t$ = time and W = weight) being used. The results, subject to confirmation, were :—

CLASS 1. (TOURING MACHINES UP TO 250 C.C.)

| | Secs. |
|---|---|
| S. M. Greening (2¼ Francis-Barnett-Jap) .. | 38⅜ |
| J. V. Prestwich (2¼ J.A.P.) .. .. .. | 44⅖ |
| F. W. Applebee (2½ Levis) .. .. .. | 45⅕ |
| E. J. Anderson (2¼ New Imperial-Jap) .. | 48⅗ |

On Formula: Greening (123·1), Applebee (162), Prestwich (169·8), Anderson (196).

CLASS 2. (TOURING, UP TO 350 C.C.)

| | |
|---|---|
| S. M. Greening (2¼ Francis-Barnett-Jap) .. | 39⅗ |
| J. V. Prestwich (2¼ J.A.P.) .. .. .. | 44 |
| E. J. Anderson (2¼ New Imperial) .. .. | 46 |
| F. W. Applebee (2¼ Levis) .. .. .. | 47 |

On Formula: Greening (128·2), Prestwich (164·1), Applebee (174·9), Anderson (175·2).

CLASS 3. (TOURING, UP TO 500 C.C.)

| | |
|---|---|
| T. C. de la Hay (3½ Sunbeam) .. .. | 31⅘ |
| S. M. Greening (2¼ F.-Barnett-Jap) } A. C. Rhodes (3½ o.h.v. Triumph) } .. | 39⅕ |
| S. J. Bassett (3 A.B.C.) .. .. .. | 40⅕ |
| J. V. Prestwich (2¼ J.A.P.) .. .. .. | 42⅖ |
| C. G. Pullin (3½ Douglas) .. .. .. | 44⅗ |
| E. J. Anderson (2¼ New Imperial) .. .. | 45⅘ |

On Formula: Greening (127), de la Hay (130·8), Prestwich (152·5), Anderson (166·5), Rhodes (179·5), Bassett (247), Pullin (261).

CLASS 4. (TOURING, UP TO 750 C.C.)

| | |
|---|---|
| S. M. Greening (2¼ Fr.-Barnett-Jap) .. | 38⅕ |
| A. C. Rhodes (3½ o.h.v. Triumph) .. .. | 38⅖ |
| J. V. Prestwich (2¼ J.A.P.) } T. R. Allchin (4 Harley-D.) } .. .. .. | 41 |
| F. W. Applebee (2½ Levis) .. .. .. | 44⅗ |

On Formula: Greening (120·5), Prestwich (142·8), Applebee (157·8), Rhodes (172·2), Allchin (237·5).

CLASS 5. (TOURING, UP TO 1,000 C.C.)

| | |
|---|---|
| G. J. Read (8 Enfield) .. .. .. | 30⅗ |
| C. G. Pullin (6 Douglas) .. .. .. | 32⅖ |
| C. F. Temple (7-9 Harley-D.) .. .. .. | 35⅗ |
| S. M. Greening (2¼ Fr.-Barnett-Jap) .. | 38⅕ |
| J. V. Prestwich (2¼ J.A.P.) .. .. .. | 41⅘ |

On Formula: Greening (120·5), Prestwich (145·5), Pullin (190·5), Read (193·1), Temple (239).

CLASS 6. (ANY MACHINE, UP TO 500 C.C.)

| | |
|---|---|
| T. C. de la Hay (3½ o.h.v. Sunbeam) .. | 27⅖ |
| C. G. Pullin (3½ Douglas) .. .. .. | 35 |
| E. A. Marshall (3½ Matchless) .. .. | 38⅗ |
| J. V. Prestwich (2¼ J.A.P.) .. .. .. | 41⅕ |

On formula: de la Hay (118·8), Prestwich (144), Pullin (161·3), Marshall (192·5).

CLASS 7. (ANY MACHINE, UP TO 1,000 C.C.)

| | Secs. |
|---|---|
| K. Don (7–9 Indian) .. .. .. .. | 26 |
| T. C. de la Hay (3½ o.h.v. Sunbeam) .. | 28⅕ |
| G. J. Read (8 Enfield) .. .. .. .. | 28⅘ |
| E. A. Marshall (3½ Matchless) .. .. | 34⅕ |
| C. F. Temple (7-9 Harley-D.) .. .. .. | 36⅗ |
| J. V. Prestwich (2¼ J.A.P.) .. .. .. | 42⅖ |

On formula: de la Hay (124·3), Marshall (155·2), Prestwich (167·3), Don (169), Temple (252).

CLASS 9. (TOURING PASSENGER MACHINES, UP TO 1,000 C.C.)

| | |
|---|---|
| O. L. de Lissa (8 Motosacoche-Mag sc.) .. | 39 |
| C. F. Temple (7-9 Harley-D. sc.) .. .. | 63 |
| E. A. Bridgman (7-9 Indian sc.) .. .. | 72⅕ |
| W. H. Browning (7 A.J.S. sc.) .. .. | 81 |

On formula: de Lissa (184), Temple (471), Browning (567), Bridgman (694).

CLASS 10. (TOURING THREE-WHEELERS UP TO 1,100 C.C.)

| | |
|---|---|
| E. B. Ware (8 Morgan-Jap) .. .. .. | 46⅗ |
| O. L. de Lissa (10 New Hudson-M.A.G.) .. | 73⅕ |

On formula: Ware (196), de Lissa (457·5).


THE MOTOR CYCLE

**T.T. TELEGRAMS.**

*To those unable to visit the Isle of Man, "THE MOTOR CYCLE" telegrams, displayed in Agents' windows, have told the progress of the classic races lap by lap. Again this popular service is to be continued, and as the postal authorities cannot deal with more than a certain number of telegrams, firms desirous of displaying the wires in their showrooms should make immediate application for the service to the Advertising Manager, "THE MOTOR CYCLE," Dorset House, Tudor Street, London, E.C.4.*

# CLUB NEWS.

Some idea of the strenuous nature of the recent 24 hours trial organised by the Bath and West of England Motor Club will be gathered from the illustration, which shows several tired and dishevelled finishers immediately after their long ride through the night from Land's End.

*Photo: Bath Chronicle.*

### Coventry and Warwickshire M.C.

Regulations are now available for the Cole Cup Trial, to be held on April 8th. Entries close this morning.

### North Eastern Centre A.C.U.

Headway is being made by this newly formed centre and it now boasts a membership of nine clubs, the latest addition being the Newcastle M.C.

### Wensleydale M.C.

At a general meeting it was decided to alter the title of the club from the Leyburn M.C.

All motorists in this area are cordially invited to join. Full particulars from the hon. secretary, Mr. F. J. Wilson.

### West Kent M.C.

The club has considerably increased its activities this year, and consequently has vacancies for several new members. Affiliation to the A.C.U., a comprehensive fixture list, and arrangements to combine with the other Kent clubs for competition purposes, all contribute to provide a programme to suit every sporting and sociable motor cyclist. The meeting place is the "Bull Hotel," Chislehurst, where a warm welcome is promised to prospective members on club days. The subscription is 10s. 6d., and the hon. secretary Mr. H. J. Cox, Holly Mount, Blackheath Hill, S.E.10.

### Pendle Forest M.C.C.

Being situated near the notorious Pennine Range, this newly-formed club has considerable scope for running competitions, and a varied programme has been arranged for 1922. Mr. C. Dyson, Cherry Tree Cottage, Higham, Burnley, Lancs., is the hon. secretary.

### Sheffield and Hallamshire M.C. & L.C.C.

Over 100 machines turned up for the opening run held on the 19th inst. The pretty Derbyshire village of Castleton was the objective, and members and their friends spent an interesting afternoon in attempting to climb the old Winnats Pass, the surface of which was in a very greasy condition. Some good ascents were made, although the sidecar machines suffered from wheel slip.

### Cork and District M.C.C.

Results are now available of the reliability trials held on the 17th inst. from Cork to Killarney and back. The chief award, a cup and medal presented by the New Hudson Co., was won by R. H. Good (3½ Norton sc.). E. B. Russell (5 Brough sc.) and R. S. Russell (3¾ Scott) were second and third, and S. Coleman (3½ Norton sc.) fourth. The novices prize was won by J. O'Sullivan (2¾ A.J.S.), and the "first-time-out" prize by J. McCartney (8 Bat).

### Ealing and District M.C.

Entries for the annual London-Holyhead trial, which is open to clubs in the South-Eastern Centre A.C.U., close definitely on April 10th. The chief award is the Maudes Challenge Shield. Mr. F. A. Longman, 17, Bond Street, Ealing, London, W.5, is the honorary secretary, from whom any further particulars may be obtained.

### Ashford M.C. and L.C.C.

With Brig.-Gen. Pitt as president, a club has been formed at Ashford. Seven vice-presidents were also elected, and other officers as follows: Chairman, Mr. H. C. Pendleton; secretary, Mr. T. Bullen; treasurer, Mr. E. Tanton, with two ladies and twelve gentlemen for the committee; an inaugural run was arranged for April 2nd at 2 p.m.

### Dublin and District M.C.C.

The awards in connection with the St. Patrick's Day trial, described last week, have been announced as follows:—

GOLD MEDALS (100%).—A. Carton (3½ Norton), F. O'Connor (3½ Douglas), J. Healy (4¼ James sc.), R. Murphy (4 Triumph), P. Grimes (8 Ariel sc.), H. McAlister (2¾ A.J.S.), J. Browne (3½ Douglas), J. A. Carville (4¼ B.S.A.), W. H. Nisbett (3½ Norton), A. A. Wayte (3½ Sunbeam), E. McGuire (8 Enfield), G. A. Daly (4 Triumph), T. E. Greene (3½ Douglas).

SILVER MEDALS.—T. J. Slevin (2¼ Sun) 99%, R. Humphreys (2¼ Velocette) 99%, L. McCullagh (3½ Norton) 99%, D. Tyson (2¾ A.J.S.) 96%.

### North Derbyshire M.C.

The opening run will he to Castleton on April 9th, starting from headquarters, Hotel Portland, at 2 p.m. The president, Capt. H. D. Orr has invited the members to be his guests on this occasion.

### Yorkshire Centre A.C.U.

At a meeting of the Centre Board held in Leeds on Monday of last week the Darlington Club was formally elected to membership. In future the headquarters of the Centre will be the Guildford Hotel, Guildford Street, Leeds.

### Coventry Triangle M.C.

In spite of the rain and snow a good muster of members turned out to compete in the club's first sporting event—a paper-chase through the winding lanes of Warwickshire. 1, E. Prossor (4 Douglas), 16 marks lost; 2, J. Hudson (3½ Triumph) 19 marks lost.

### South-west Wales Centre A.C.U.

A Reliability Run will be held by the above centre on April 8th, starting from Ammanford at 9 a.m. Route: Carmarthen, Lampeter, Llangybi, Pumpsaint, Caio, Cynchordy, Llandovery (lunch), Llangadock, Trecastle, Cray, Pontardawe, Ammanford (fiuish). Distance, 130 miles. Entry fees, 7s. 6d. plus 2s. 6d. for those entering for centre championship. Entries to be sent to Mr. H. Graham ' Church, Glamorgan Hotel, Neath, before April 1st.

## Week-End Club Events.

*April 1st.—Surbiton M.C. One Day Mellano Trial.*
*April 1st.—Sale and District M.C.C. Invitation Reliability Trial.*
*April 1st.—Coventry Triangle M.C. Chairman's Run.*
*April 2nd.—Coventry Triangle M.C. Run to Fenny Compton.*
*April 2nd.—Sheffield M.C.C. Run to Southwell Cathedral.*
*April 2nd.—Southampton M.C.C. Run to Hindhead.*
*April 2nd.—Eccles and District M.C.C. Trial.*
*April 2nd.—Featherstone and District M.C.C. Opening Run to York Minster.*
*April 2nd.—Eastbourne and District M.C.C. Opening Run to Crowborough.*
*April 2nd.—Essex M.C. Run to Southend.*
*April 2nd.—Woolwich, Plumstead, and District M.C. Wilmot Cup Trial.*
*April 2nd.—Ashford M.C. and L.C.C. Opening Run.*
*April 2nd.—Eastern Counties M.C. Opening Run to Epping.*
*April 2nd.—N.W. London M.C. Opening Run to Tring.*
*April 2nd.—Bridgnorth and District M.C.C. Opening Run to The Wrekin.*
*April 2nd.—Darlington and District M.C. Reliability Trial.*
*April 2nd.—Rochester, Chatham, and District M.C. and L.C.C. President's Cup Competition.*
*April 5th.—Reigate, Redhill, and District M.C.C. Paperchase.*

### Preston M.C.C. (Brighton).

Taking the form of a paper-chase, the opening run was held on the 12th inst. in glorious weather. The "hares" only just succeeded in elnding capture in an exciting finish.

Application for membership to the club should be made to the secretary, Mr. H. J. Bridger, 44, London Road, Brighton.

### Bath and West of England M.C.

Nineteen competitors started for the twenty-four hours trial to Land's End and back, and the run—quite a formidable one as a club event—was a decided success. Lynmouth, Porlock, and Countisbury, with its 1 in 5 gradient, were included, the atrocious surface of the latter accounting for many failures and lost marks. The results are as follows:

SOLO CLASS.

Taylor Cup.—L. G. Williams, 3½ h.p. Norton.
Gold Medal—Cox, 3½ h.p. Norton.
Silver Medal.—E. C. Collins, 3½ h.p. Nortoo.
Bronze Medal.—E. Colmer, 2½ hp. Levis.

A remarkable feature of the trial was the five ties for the Catley Cup for sidecars. These five all completed the course without losing a single mark throughout, and it is a tribute both to the endurance of the riders and the qualities of the machines.

SIDECAR CLASS.

Catley Cup.—P. Difazio, 6-7 h.p. B.S.A.; C. H. Tucker, 4 h.p. Norton; F. G. Mann, 6-9 h.p. Harley; K. J. Woods, 3½ h.p. Wilkin; H. C. Walters, 8 h.p. Ariel (tied).

# VICTORY TRIAL RESULTS.

SINCE it was decided that marks lost on Sandy Lane should not be forfeited, there are considerably more gold medal winners in the Victory Trial, described last week, than were at first anticipated.

A bonus of two marks was awarded to all who made non-stop ascents, this decision being made before the observers' sheets were scrutinised.

**Bert Kershaw** (2¼ New Imperial) added to his long list of honours by gaining the premier award, the Victory Cup; the full official results are appended.

VICTORY CUP (for best performance).—**B. Kershaw** (2¼ New Imperial).

MIDLAND CUP (for best performance by a passenger machine).—**Reg. Brown** (3½ Sunbeam sc.).

DUKE CUP (for best performance by a solo machine over 275 c.c.).—**F. J. Price** (2¾ Diamond).

PREMIER CUP (for best performance by a solo machine under 275 c.c.).—**B. Kershaw** (2¼ New Imperial).

JENNENS CUP (for best performance by an amateur).—**Reg. Brown** (3½ Sunbeam sc.).

THE KNUTS TROPHY (for best performance by a team).—1st: B.S.A. team. (**B. L. Bird** (6 B.S.A. sc.), **J. H. Walker** (6 B.S.A. sc.), **H. S. Perry** (6 B.S.A. sc.). 2nd: Duke Triumph team. (**R. W. Duke** (4 Triumph). **R. T. Cooke** (4 Triumph sc.), **G. H. Kirby** (3½ Triumph).

GOLD MEDALS.

B. Kershaw (2¼ New Imperial),
J. N. Roberts (2¼ New Imperial),
S. G. Orford (2¾ Henley-Blackburne),
R. W. Duke (3½ Triumph).
A. Rollason (3½ Ariel),
T. Peck (3½ Ariel),
B. Riley (2¾ A.J.S.),
E. Mundey (2¼ New Hudson),
E. A. Barnett (2¾ Francis-Barnett),
W. Wells (3½ Sunbeam),
C. S. Burney (3 Beardmore),
W. Brandish (4½ Humber),
C. Spencer (3½ Douglas),
W. R. Bown (2¼ Bown),
L. G Green (2¾ Verus),
H. Gibson (2¾ Raleigh),
H. R. Fowler (5-6 James sc.),
L. Newey (8 Ariel sc.),
P. Perhson (4 Dunelt sc.),
R. T. Cooke (4 Triumph sc.),
L. F. Peatty (4¼ Hawker sc.),
C. Wilson (4½ Quadrant sc.),
T. H. Featherstone (2¾ A.J.S.),
A. Watson (3½ Sunbeam sc.),
R. G. Beesley (3½ Sunbeam sc.),
C. Hemphill (2¾ Excelsior),
Reg. Brown (3½ Sunbeam sc.),
B. L. Bird (6 B.S.A. sc.),
H. S. Perry (6 B.S.A. sc.),
J. H. Walker (6 B.S.A. sc.),
G. F. Bedell (2¾ Francis-Barnett sc.),
B. Bourke (4½ New Hudson sc.),
W. Brooke (2¾ Cotton),
H. P. Cutler (4 Norton sc.),
V. Hawkins (2¼ Excelsior),
J. W. Wills (4 Powell sc.),
J. H. Wood (2¼ Velocette),
S. H. Jones (2¼ Levis),
R. E. Pugh (2¼ Levis),
A. B. Edwards (2¼ Levis),
J. A. Newman (3½ Douglas),
T. Weaver (2¾ Sirrah sc.),
S. Wright (4½ Humber sc.),
J. H. Ross (3½ Sunbeam sc.),
A. King Smith (2½ Morris sc.),
R. C. Cooper (2½ Allon),
S. E. Longman (7-9 Harley-Davidson sc.),
H. V. Collins (3½ Norton sc.),
J. Whalley (2¾ Massey-Arran).
G. Dance (3½ Sunbeam),
E. J. Henson (2¾ Federation),
J. E. Greenwood (3½ Sunbeam),
T. C. de la Hay (4¼ Sunbeam sc.).
C. Greenwood (3½ Sunbeam sc.),
F. Giles (7 A.J.S. sc.),
H. R. Davies (2¾ A.J.S.),
W L. Handley (2½ O.K.),
G. Denley (2¼ Velocette),
H. Poole (2¾ A.J.S.),
G. J. Baragwanath (2¾ A.J.S.),
R. W. Lovegrove (2¼ Ner-a-Car),
G. Povey (2¼ Velocette),
J. J. Lloyd (7-9 Harley sc.),
G. A. Strange (8 Brough),
J. A. Watson Bourne (8 Brough),
A. Smith (2½ Calthorpe),
H. B. Denley (Rhode l.c.).
A. F. Nash (G.N. l.c.),
F. S. Spouse (T.B.),
J. W. Meredith (T.B.),
F. S. Morgan (Morgan),
F. J. Price (2¾ Diamond),
W. Ridley (9 New Hudson),
W. A. Carr (Morgan),
J. Allday (Rhode l.c.),
W. Moore (3¾ Scott).
J. F. Parker (7-9 J.F.P.),
G. H. Kirby (3½ Triumph),
A. W. Newman (7 James sc.),
A. E. Phillips (2¼ James),
H. J. Stretton Ward (3½ Triumph)

SILVER MEDALS.

A. D. Mayo (2¼ Coventry-Eagle), W. T. Woodcock (3½ Ariel), A. W. Thrush (3½ Sunbeam), W. Bell (2¼ New Hudson), L. A. Bees (3 Beardmore), A. Jarett (3½ Norton), H. Broughall (3½ Coventry Challenge), J. E. Bramley (3½ Coventry Challenge), S. Butcher (3½ Sunbeam), A. Weeks (2¾ Sirrah), E. Gates (2½ Sun), E. Smith (2¾ Connaught), T Richards (8 Brough), H. Boynton (7 James sc.), P. Mosedale, jun. (2¾ A.J.S.), M. Scatty (4½ Humber), T. Blumfield (8 Ariel sc.), R. Walker (2¾ Excelsior), P. H. Johnson (3½ Rudge), C. L. Reading (3½ Ariel), A. Cocks (4¼ Beardmore sc.), C. Ramstedt (2¾ Cotton), H. Greaves (4¼ Beardmore sc.), J. H. Mathers (7-9 Rudge), H G. Uzzel (8 New Imperial sc.), J. Dallison (2¾ Wooler), B. Bladder (8 New Imperial sc.), S. Judge (2¼ Velocette), W. H. Fortington (3½ Sunbeam sc.), A. Robbins (2½ Triple H.), W. Parkes (2¼ Sun), F. T. Sibley (3½ Rudge sc.), W. L. Danskin (7-9 Rudge sc.), F. A. Longman (3½ Ariel), F. Guest (3½ Humber), W. Shepherd (4¼ Edmund sc.), S. G. Neal (2¼ Neal-Dalm), F. Bicknell (2¼ Royal Enfield), C. Little (5 Coventry Victor sc.), F Brown (4 Rex Acme sc.), T. R. Gibbons (4 Rex Acme sc.), A. Bennett (3½ Sunbeam), N. Hall (2½ O.K. sc.), F. Harris (2¾ A.J.S.), Gus. Kuhn (2¾ Douglas), L. Poynter (4 Norton sc.), F. F. Downes (2¾ Hobart), P. Yates (9 New Hudson), J. Moxon (2¾ Monopole), R. C. Bennett (2¾ Federation), F. C. Boddington (8 Morgan), F Morrall (4¼ B.S.A. sc.).

# HILL CLIMBING IN THE RIVIERA.

## La Turbie Hill Climb at Nice. Records Broken.

Richard, an Indian rider, who despite a fall made the five mile ascent in 7m. 29s.

A TURBIE hill climb is one of the most popular events amongst French motor cyclists, and as a fixture it is historic, for the first speed contest up this mountain-side was held 5 years ago.

The hill, which is in the suburbs of Nice, is five miles long, perfectly surfaced, very winding, and being cut on the flank of the mountain presents not a few danger spots. The scenery is beautiful beyond description, particularly near the top, where there is a wonderful panorama over the Mediterranean coastline and the natural harbour of Villefranche.

Fastest time in the recent climb held here at the close of the Paris-Nice trial was made by Richard, a Marseilles rider, who climbed the hill on an Indian in 7m. 29s. This time is all the more remarkable in view of the fact that Richard fell on one of the turns. The second man in this class was Unia on a Harley-Davidson.

In the 500 c.c. class Pardon on an overhead valve Koehler-Escoffier was the winner in 8m. 17 1-5s., beating Dawson, the only English rider in the race, on a P. and M.

In the sidecar class Harley-Davidsons got the first three places. Cycle car races, in France, are always organised by motor cycle clubs, and in this class a very fine performance was made by Agnero, on a water-cooled Morgan, who climbed the hill in 7m. 27s., breaking the record by the substantial margin of 1m. 8s.

The following are the times by classes :—

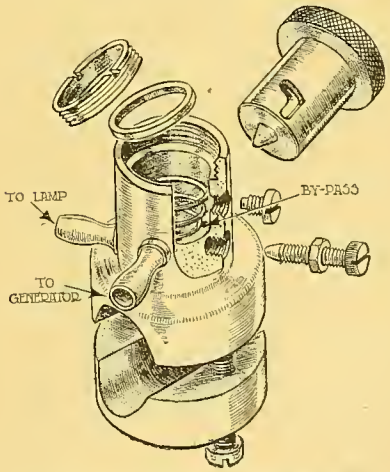
| | | |
|---|---|---|
| 250 c.c. : | | |
| 1. Sazias (Terrot) | ... .. ... | 17.33 2/5 |
| 350 c.c. : | | |
| 1. Gaudet (Terrot) | ... ... ... | 7.46 |
| 500 c.c. : | | |
| 1. Pardon (Koehler-Escoffier) | ... | 8.17 1/5 |
| 2. Dawson (P. and M.) | ... ... | 8.48 2/5 |
| 3. Lena (Magnat-Debon) | ... ... | 20.41 1/5 |
| 750 c.c. : | | |
| 1. Vattier (B.S.A) | ... ... ... | 9.47 1/5 |
| 1,000 c.c. : | | |
| 1. Richard (Indian) | ... ... ... | 7.29 |
| 2. Unia (Harley-D.) | ... ... ... | 7.33 3/5 |
| Sidecars, 1,000 c.c. : | | |
| 1. Verdy (Harley-D.) | ... ... | 7.58 2/5 (record) |
| 2. Porsi (Harley-D.) | ... ... ... | 8.40 |
| 3. Bricchi (Harley-D.) | ... ... | 8.48 2/5 |
| 4. Roux (Motosacoche) | ... ... | 9.20 2/5 |
| 5. Muraire (Indian) | ... ... ... | 9.25 4/5 |
| 6. Bellone (Harley-D.) | ... ... | 9.30 2/5 |
| 7. Sartorio (Harley-D.) | ... ... | 11.48 |

## DIMMING GAS LAMPS.

DIMMING of glaring head lamps is a courtesy which every road user appreciates; and the owner of an acetylene-lighted vehicle feels at a considerable disadvantage because he cannot return the compliment. The little device illustrated, however, puts him on an equality with the electricity user.

Intended to clip on to the handle-bar, the device, when out of action, allows the acetylene gas a clear passage. When the cylindrical valve portion, which works in a bayonet clip, is pushed right home the main pipe is closed and the gas diverted through a small bore by-pass, capable of regulation by the screw and lock nut on the left. It is claimed that the resultant increased pressure in the generator automatically cuts down the water supply without any alteration to the water valve setting. It is essential that a rubber gasbag be used between the generator and the dimmer.

The dimmer is sold at 12s. by Buckland and Burrell, Foots Cray, Kent.

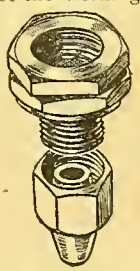



Part-sectional view of the Buckland and Burrell dimmer dissected. Pressure on the knurled topped plunger immediately dims the head lamp.

## PETROL FILTERING.

MUCH carburetter trouble would be avoided, in the opinion of C. Binks (1920), Ltd., Eccles, if two petrol filters were standardised—one to cover the jet itself, and the other to trap any impurities which might upset the working of the float needle. According to them, the slightest foreign body—a hair or a piece of fluff—causes the valve to be ineffectively closed, with resultant flooding and general inefficiency, which, on the face of it, is a very plausible theory.

To overcome this, they have marketed a special fine gauze filter, readily fitted under the tank without breaking the petrol pipe. It is neat, simple, and well finished.



Binks petrol filter, intended for attachment between the tank and petrol pipe.

A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### WEAK MIXTURE AT LOW SPEED.

My mount is a 1920 J model Harley-Davidson, and when I have been running at about 35 to 40 m.p.h. and I slacken down to about 10 m.p.h. I am then troubled with spitting at the carburetter. What is the cause of this?—D.A.

It would appear that you are getting too weak a mixture at low speeds. If you are using a Schebler carburetter the fault can be corrected by modifying the needle setting.

### A WIND WAGGON.

Would it be practicable to make a "wind waggon" using an air-cooled engine of about 5½ h.p. out of an A.C. Sociable; if it is, will you tell me if a propeller about 4ft. 6in. would do, and about what speed it would have to run? Would the machine go up the hills in West Yorkshire satisfactorily?—J.H.

The speed of the propeller would depend upon its pitch and diameter, and it would be necessary to get the information from the makers, as propellers are designed to run at one particular speed. It is extremely doubtful if the machine would climb the average hills in your district with an engine of such low power.

### TWO PROBLEMS.

(1.) What causes the splutter in the carburetter on a four-stroke engine when a weak mixture is given? (2.) What causes an explosion in exhaust pipe after several attempts at starting when engine is cold?—G.T.

(1.) The splutter or blow-back in the carburetter caused by the very slow burning nature of the flame associated with a weak mixture. The residual gases are still burning in the combustion chamber when the inlet valve opens on the next cycle, and, consequently, they escape along the induction pipe to the carburetter. (2.) The most common cause of an explosion in the exhaust pipe when starting a cold engine is due to a sticking exhaust valve caused by congealed oil on the stem. A temporary ignition fault (*e.g.*, stuck rocker arm) may have the same effect, as the first explosion will fire the unburnt gas which has been pumped into the silencing system.

## Important Dates.

**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**
**Fri., Mar. 31st, to Thur., April 6th—Amsterdam Show.**
**Sat., April 1st—Western Centre A.C.U.—Open Reliability Trial.**
**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**
**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 15th, and Monday, April 17th—Western M.C.C. (Glasgow) Two Day Trial.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 6th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 mile sidecar race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### TWIN REAR WHEEL ON TRI-CAR.

Some time ago an illustrated article appeared in *The Motor Cycle* on a type of three-wheeler with a twin rear wheel, or perhaps, to be more accurate, two wheels running on the same shaft (axle) placed very close together without a differential. As far as I know, the machine was not marketed, and it would be interesting to know why? If I remember rightly, the question arose as to whether the machine would be taxed as a three-wheeler or a four-wheeler, and I should be very glad if you would let me know what decision the taxation authorities arrived at.—B.C.

The machine to which you refer was no doubt the Merrall-Brown. This machine was certainly marketed during 1920, but we believe has since been discontinued in favour of a four-wheeler. There do not appear to be any serious disadvantages connected with the special form of duplex back wheel which was used. Incidentally, a twin rear wheel was used on Rex motor cycles about 1907-8. So far as the three-wheeler is concerned, when the treads of the twin rear tyres are not more than 6in. apart, we understand that, in the legal view it was not required to register as a four-wheeled vehicle.

### AN ENGINE KNOCK.

My machine, a 4 h.p. Blackburne, which has run perfectly for 4,000 miles, has developed the following trouble. After about five miles a faint knock occurs, which intensifies with every symptom of overheating. If I allow the engine to cool down it again runs perfectly for a few miles and the knock then re-occurs. The magneto may require adjustment, but as the engine starts perfectly at the first kick and runs well for a few miles, it appears nothing much can be wrong. Valves and ignition timing are in accordance with makers' recommendations, and compression is perfect. I have just decarbonised, and the engine is clean, and there seems no appreciable wear in big or little ends.—F.O.L.

The knock which you mention, providing it is not a mechanical knock due either to worn bearings or to the piston, is probably traceable to pre-ignition caused either by a defective sparking plug or to a faulty adjustment of the contact breaker. Examine

the plug, and, if at all doubtful, replace. See that the plug points are not more than $\frac{1}{16}$in. apart. The contact breaker points should not open more than 1-64in., or according to the gauge which the magneto makers will supply.

### A CYCLE CAR SILENCER.

Being desirous of making a silencer for my three-wheeler, so as to reduce the noise and vibration (8 h.p. twin engine), I propose using a tube 16in. x 4in. diameter. Would this do? Also, could you tell me if an ordinary open chamber would answer, or should I have to fix "baffle plates" (perforated) inside; if so, how many and how spaced? The exhaust pipes ($1\frac{1}{8}$in. outside diameter) meet at 9in. below the cylinder ports in a Y-piece, and there is no silencer on the extension. Would it be an improvement if I had two pipes separate, both direct into the silencer?—C.H.

A silencer 16in. x 4in. should be large enough to give reasonable silence; there should be no need to fit baffle plates unless the outlet is larger than $1\frac{1}{2}$in., as quite a reasonable degree of silence should be obtained. It would be preferable to lead a separate pipe from each cylinder into the silencer as you suggest, but an additional silencer on the extension pipe should not be necessary.

### REMOVING A CONTACT BREAKER.

I wish to clean and adjust the points of the contact breaker on a T.B. magneto. To do this, it seems necessary to remove the rocking arm; but this presents difficulties to me. Beyond the flat retaining spring the rocking arm is fixed by the curved spring, secured with grub screws to the rocking arm itself, and to a stud on the contact breaker. The heads of these screws are covered by the end plate of the magneto (the end plate having a projecting circular flange into which fits the circular strap carrying the cam which separates the points.) Can I remove the rocker arm without previously removing either the contact breaker or the magneto end plate? And if one of these must be removed, which is the better way?—F.O.L.

You will have to remove either the contact breaker casing or the contact breaker itself. To do either is quite simple, although in the case of the former it may be necessary to disconnect the control wire. Having done so, merely withdraw the casing, taking care not to twist it at the same time, otherwise it will bind in its housing and be difficult to move. When the casing is off it is quite easy to remove the contact breaker. Unscrew the centre bolt and carefully prise the contact breaker away from the magneto, using a screwdriver or preferably two screwdrivers, diametrically opposed to each other, between the back plate and the armature and plate. (Proceed carefully, and do not use unnecessary force.) When replacing the contact breaker, make sure that the small key on the back is correctly engaged with the keyway on the armature spindle, and do not over-tighten the centre screw. Do not attempt to remove the rocker arm unless the points obviously need trimming. If you can clean them by inserting a petrol soaked rag or a piece of cardboard between them, or even a slip of fine emery cloth, so much the better. If you have to remove the rocker arm the curved spring must be released at one end. Hold this very carefully when withdrawing the small grub screw, as these springs have a nasty habit of projecting the screw with tremendous force if they are carelessly released as the screw leaves its thread, the screw being then almost invariably lost.

### BADLY WORN PISTON RINGS.

My 1915 single-geared Villiers-engined two-stroke will not take much air without popping back. It starts all right cold, but after about a quarter to half a mile the explosion develops from a clear "ponk" to a horrible "fluff," and compression disappears. It will now run for a *short* time if I inject oil very liberally. When the fluffiness starts throttle and air alterations hardly make any appreciable difference. A curious metallic rattle also develops with the fluffiness. I removed the cylinder, and all was in order, all bearings were sound and without wear, there was no appreciable carbon deposit. The piston rings have considerable play, about $\frac{1}{16}$in. to $\frac{1}{8}$in. *vertically*. Would wider rings do any good?—A.L.G.

You should certainly attend to the piston rings if the play is anything like as great as you suggest. It is most unusual, even with very long wear for piston rings to develop more than $\frac{1}{32}$in. vertical play.

### WEIGHT OF NEW PISTON.

I recently had a new piston fitted to an old h.p. Rover, but find the engine vibrates somewhat when running free. The new piston weighs 4lb. and the old one only 3lb. I find after placing the main shaft with flywheel across a bench, resting level upon two pieces of smooth $\frac{1}{4}$in. steel, and the connecting rod attached, that it takes just 2lb. $7\frac{1}{2}$oz. additional weight to make it balance with the balance weights on the opposite side. What weight should the piston be? I could get it lightened by drilling.—W.N.C.

The figures you give are insufficient to enable the balancing of the engine to be worked out, but if the old piston weighed 3lb., it should have been replaced with a new one of the same weight, providing, of course, that the machine was previously reasonably free from vibration.

### GETTING THE MOST FROM AN OLD MACHINE.

I have a 1913 $3\frac{1}{2}$ h.p. Triumph with three-speed hub clutch, and have just fitted a Douglas sidecar. The sidecar seems fairly heavy, and I should be much obliged if you will kindly let me know: (1.) What is the best gear ratio? (I have it at 5 to 1 on top gear.) (2.) What do you consider the best size jet to use? (Triumph 1913 carburetter.) (3.) The sidecar is sprung on a leaf spring across the width of the car, over the axle. (It seems to jolt, and I wondered if I could fit two coil springs in any position to obviate this?) (4.) The engine seems to become very hot. Would a smaller jet do any good to this? The machine is in excellent condition, not having been used for some years.—W.Y.

(1.) The gear ratio is rather high for the machine mentioned with a heavy sidecar, and you would certainly do better with a $5\frac{1}{4}$ to 1 gear. (2.) Probably a jet of about 32 would be correct. (3.) It is not clear whether you mean that the sidecar springing is too rigid, whether it "bottoms" or whether it throws upwards. No doubt shock-absorbing springs could be fitted with advantage. (4.) A lower gear ratio would probably get over the trouble of overheating, and it is more than probable that a slightly *larger* jet would improve the running.

CHAIRING A RECORD BREAKER. R. N. Judd being carried off the Brooklands track by his enthusiastic colleagues after breaking the 1 mile mean speed record on the new o.h.v. Norton. Mr. J. L. Norton will be observed wheeling the machine.

## READER'S REPLY.

### INTERMITTENT LOSS OF POWER.

I have had precisely the same trouble as "J.W." with a similar machine, which, in my case, was due to defective piston rings. Presumably, when there was a good supply of oil round the piston, it held compression until the oil was distributed or burnt, when the power fell off until the next charge of oil was given. Of course, "J.W." may have inspected his rings, particularly as he says the engine is in perfect condition, which is rather strange in view of his opening remark.—W. G. DIXON.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"E.G.J." (Greenwich).—7-9 h.p. Harley-Davidson sidecar, 8 h.p. Brough Superior sidecar, 8 h.p. Henderson sidecar, also Challenge inner tubes.

"W.H." (Ashton-under-Lyne).—2¾ h.p. A.J.S. (Model B1): Consumption, comfort, acceleration on hills.

"F.F." (London, S.W.4).—2¾ h.p. Raleigh.

"A.H." (Leicester).—370 c.c. Connaught: Lubrication, pillion riding.

"NOVICE" (Grimsby). — 4½ h.p. Quadrant sidecar.

"F.T.H." (Whitstable).—3 h.p. Beardmore-Precision two-speed sports model.

"P.G.D." (Dovercourt).—Indian Scout, electrically equipped model.

"F.A.C." (Leeds).—4¼ h.p. Coulson, with sidecar.

"H.H.K." (Edington).—1920 American X sidecar: Consumption, tyres, clutch, speed.

"E.A.M." (Gravesend).—1920 4 h.p. Bradbury, three-speed.

"E.B.K." (Bowes Park).—2½ h.p. Metro-Tyler, enclosed model: Oiling system, maximum speed, drying up on full throttle.

"F.R.B." (Dover). — Adjustments of Binks carburetter on 6 h.p. A.J.S.

"J.T." (Shirebrook).—4½ h.p. Quadrant sidecar.

"P.V.J." (H.M.S. *Warwick*).—A.V. two-seater: Comparisons with 8 h.p. outfit.

"R.H.C." (Kingston-on-Thames.)—Fallolite lamp: Durability of pastille.

"A.E." (Maidenhead).—S.A. Impulse starter: On 8 h.p. J.A.P.-engined machine without kick-starter.

"A.R.M." (Rutherglen). — 2¾ h.p. standard sports A.J.S.

"R.F." (Windsor).—1920 A.B.C.: Consumption, speed, etc.

"R.E.P." (Nottingham). — 4½ h.p. Quadrant sidecar: Power and long distance runs (chain and belt model).

"F.C." (Mansfield).—6.5 and 8 h.p. Brough Superior, solo: Speed, comfort, consumption.

"G.M." (Windsor). — 3 h.p. A.B.C., solo or sidecar: Climbing, springing, etc.

"E.C.P." (Ealing).—Morris tube protector.

## SPARKLETS.

### A Price Reduction.

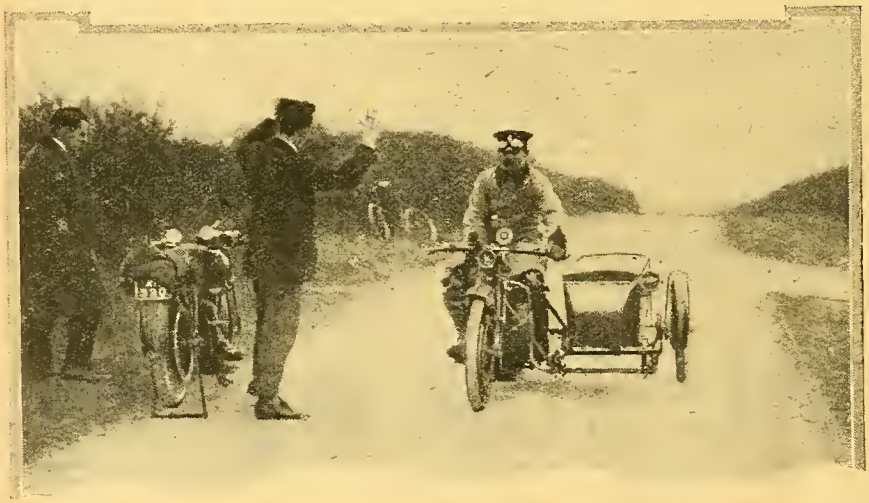
Single speed 2¾ h.p. Connaught machines are reduced in price from £45 to £39 18s.

### Spare Parts.

Readers in need of spares for Coulson-B. machines will be glad to know that the H.W.H. Engineering Co., 40, Old Town, Clapham, London, S.W.4, are manufacturing spares for this make.

### Free Maintenance.

Cash purchasers of new motor cycles, cycle cars, and cars from Collett's Engineering and Motor Works, Station Road, South Norwood, London, S.E.25, will receive the benefit of a free maintenance arrangement whereby carburetter, magneto, valve, and cycle part adjustments, and the fitting of any new part supplied under maker's guarantee will be carried out free of charge.



ROADSIDE AID. The R.A.C. has now introduced the sidecar as a means of enlarging the guide's field of usefulness. P. & M. outfits have been selected for the purpose.

### Carrying On.

In view of the recent sad death of Mr. Charles Binks, it may be stated that the carburetter manufacturing business of C. Binks (1920), Ltd., of Eccles, will be carried on by his eldest son, Mr. Harold Binks.

### Saddle and Tank Covers.

Change of address to 25, Deyncourt Gardens, Upminster, Essex, is announced by Mr. G. J. Coverly, whose combined saddle and tank cover we illustrated on page 265 of the issue of March 2nd. Deliveries will be available shortly.

### Spares by Air.

Urgently needed Zenith spares in Madrid were recently expeditiously delivered by the following method: The parcel (28lb.) was taken by motor cycle to Croydon, thence by air to Paris, and finally to Madrid by train. Carriage and insurance to Paris was only 10s. 10d.

### Ralphite Celluloid Reviver.

A sample of Ralphite Celluloid Reviver has reached us from Moss's Agencies of 20, Regent Street, Leamington Spa. It is claimed for this preparation that it restores celluloid to its original transparency, filling up the scratches without damaging the material in any way.

### Service Agencies.

With the growth of the motor cycle movement, improved methods of business relating thereto steadily develop. One strongly marked feature in this connection is the recognition by the best agents of the value and importance of service; there is now no room for the agent whose conception of business is to dispose of a machine and think no more about it or its purchaser. A trader who is endeavouring to extend service of his agencies is Mr. F. S. Whitworth, of Frank Whitworth, Ltd., New Street, Birmingham.

### Catalogues Received.

Burman and Sons, Ltd., Ryland Road, Birmingham: Leaflet describing the Burman countershaft gears in detail, and giving instructions and hints to users.

Barr and Stroud, Ltd., Anniesland, Glasgow: A leaflet giving an illustration of the Barr and Stroud sleeve valve engine and a reprint of a letter to the Editor of *The Motor Cycle* written in praise of this interesting engine.

The Astra Dynamo Co., Ltd., 110, Victoria Street, London, S.W.1: Catalogue listing Astra dynamos, lamps, accumulator cases, dynamo brackets, pulleys, dimmer switches, cut-outs, and horns, together with wiring diagrams.

Veloce, Ltd., Victoria Road, Six Ways, Aston, Birmingham: "The World's Appreciation of the Velocette." An interesting series of testimonials which testify to the reliability, economy, "go-anywhere" capabilities, simplicity, utility, and safety of the Velocette.

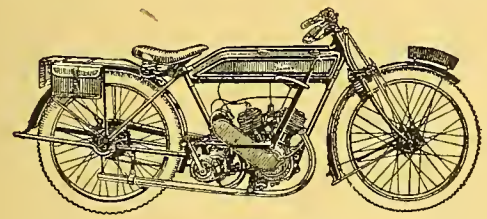
The Rex Motor Manufacturing Co., Ltd., Earlsdon, Coventry. Rex-Acme motor cycles: One of the most attractive features is an illustration showing a Rex-Acme sidecar outfit on *The Motor Cycle* Screw hill.

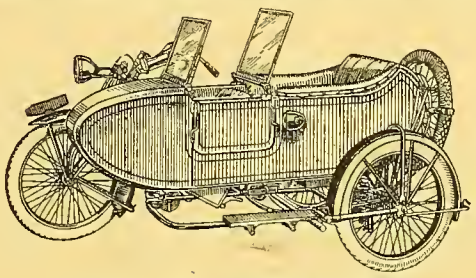
# *Buy on Deferred Terms from the great Store of*

# WHITELEYS

**The selection of Motor Cycles at Whiteleys is the best in London, and includes Triumph, B.S.A., Enfield, James, Martinsyde, New Imperial, O.K., Matchless, Blackburne, Lea-Francis, Douglas, Levis, Hazlewood, New Hudson, P. & M., Quadrant, Raleigh, Rudge, Sun, Zenith and Ner-a-Car—all side by side for critical examination.**

***Deferred Terms:*** 4% extra on the Cash Price is all that Whiteleys ask for the convenience of Deferred Payments. Whiteleys Motor Sales and, more important still, the Deferred Payment Plan (a system that Whiteleys originated) are entirely under the control of Whiteleys and free from outside influence of any kind.





## 1922 MODELS—SOLO

| | Deposit, | Cash |
|---|---|---|
| JAMES, 3½ h.p., 3-speed, C/K.S., as illustrated. £21 16s. and 12 monthly payments of £7 5s. 8d. | | £105 |
| LEVIS, 2¾ h.p., single-speed | | £48 |
| LEVIS, 2¾ h.p., 2-speed, with clutch and K.S. | | £60 |
| DOUGLAS, 2¾ h.p., 2-speed, fully equipped | | £75 |
| DOUGLAS, 2¾ h.p., 3-speed, C/K.S. | | £90 |
| NEW IMPERIAL, 2¾ h.p., 3-speed, C/K.S. | | £69 |
| NEW IMPERIAL, 2¾ h.p., all-chain, 3-speed, C/K.S. | | £73 |
| O.K. VILLIERS, 2-stroke | | £39 18s. |
| O.K. MARK XII, 2-speed, C/K.S. | | £60 18s. |
| ENFIELD, 2¼ h.p., 2-speed, 2-stroke | | £55 |
| ENFIELD, 2¼ h.p., 2-speed, C/K.S. | | £57 |
| RUDGE, 3½ h.p., 3-speed, all-chain, C/K.S. | | £94 |
| TRIUMPH, 4 h.p., Model H | | £105 |
| TRIUMPH, 4 h.p., Model SD | | £115 |
| B.S.A., 4½ h.p., Model K2 | | £107 |
| B.S.A., 4½ h.p., Model H2 | | £110 |
| JAMES, 3½ h.p., twin, Model 7 | | £105 |
| JAMES, 4½ h.p., Model 6 | | £105 |
| NEW HUDSON, 2¼ h.p., 2-speed, all-chain model | | £63 |
| MARTINSYDE, 3½ h.p., sports model | | £110 |
| JAMES, No. 8, 2¼ h.p., 2-speed | | £55 |
| JAMES, No. 8a, 2¼ h.p., 2-speed, 2-stroke, C/K.S. | | £60 |
| SUN, 2¼ h.p., 2-speed, C/K.S. | | £57 15s. |
| SUN, 2¼ h.p., J.A.P. 2-speed, with clutch and K.S. | | £63 |
| RUDGE, 3½ h.p., multi gear | | £77 |
| ZENITH-BRADSHAW, 3½ h.p., variable gear | | £113 |
| LEA-FRANCIS, 3½ h.p., 3-speed, C/K.S. | | £110 |
| O.K. Mark VI, 2-speed | | £55 13s. |
| TRIUMPH, 3½ h.p., 4 valve Sports Model | | £120 |

## 1921 SHOP-SOILED—SOLO

| | |
|---|---|
| TRIUMPH, 2¾ h.p., 2-stroke, 2-speed | £57 |
| NEW HUDSON, 2¼ h.p., 2-stroke, single-speed | £45 |

## 1922 COMBINATIONS

| | Cash |
|---|---|
| MATCHLESS COMBINATION, 8 h.p., with two screens spare wheel and tyre, as illustrated. Deposit £37 19s. and 12 monthly payments of £13 | £186 10s. |
| TRIUMPH, 4 h.p., Model SDC, coachbuilt Sidecar, petrol-tin carrier, etc. | £155 |
| TRIUMPH, 4 h.p., Model HC | £145 |
| B.S.A., 4½ h.p., Model K2, with No. 3 Sidecar | £139 |
| B.S.A., 4½ h.p., Model H2, with No. 3 Sidecar | £142 |
| P. & M., 4½ h.p., 4-speed, C/K.S., coachbuilt Sidecar | £150 |
| JAMES, 4½ h.p., Model 6, with coachbuilt Sidecar | £135 |
| DOUGLAS, 4 h.p., coachbuilt Sidecar | £135 |
| QUADRANT, 4½ h.p., 3-speed, C/K.S., coachbuilt Sidecar | £100 |
| JAMES, 7 h.p., Model 10, coachbuilt de luxe Sidecar | £160 |
| ENFIELD, 8 h.p., coachbuilt Sidecar | £140 |
| MATCHLESS, 8 h.p., Model H2, coachbuilt Sidecar, luggage carrier | £170 |
| BLACKBURNE, 8 h.p., 3-speed, C/K.S., coachbuilt Sidecar | £131 5s. |
| HAZLEWOOD, 5-6 h.p., 3-speed, C/K.S., coachbuilt Sidecar | £118 |
| B.S.A., 6 h.p., with No. 3 Sidecar | £164 |
| MARTINSYDE, 6 h.p., 3-speed, C/K.S., coachbuilt Sidecar | £160 |
| NEW HUDSON, 4½ h.p., 3-speed, C/K.S., coachbuilt Sidecar | £125 |
| RUDGE, 3½ h.p., all-chain, coachbuilt Sidecar | £120 |

## 1921 SHOP-SOILED COMBINATIONS

| | |
|---|---|
| P. & M., 3½ h.p., coachbuilt Sidecar | £116 |
| QUADRANT, 5 h.p., 3-speed, C/K.S., coachbuilt Sidecar, screen | £99 |
| ROYAL RUBY, 8 h.p., coachbuilt Sidecar, luggage carrier, Lucas lighting, windscreen, spare wheel, spring frame | £179 |
| READING STANDARD, 3-speed, C/K.S., Plus one single or double Sidecar, electric lighting, etc. | £182 10s. |

**EXAMPLE OF TERMS.**

**NER-A-CAR**—a unique all-weather utility machine for lady's or gent's use—easy to handle, non-skidding, efficient, and reliable ..... **66 Guineas,**

or **£14-10-0** deposit and 12 monthly payments of **£4-16-0** (4% extra for 12 months' credit accommodation.)

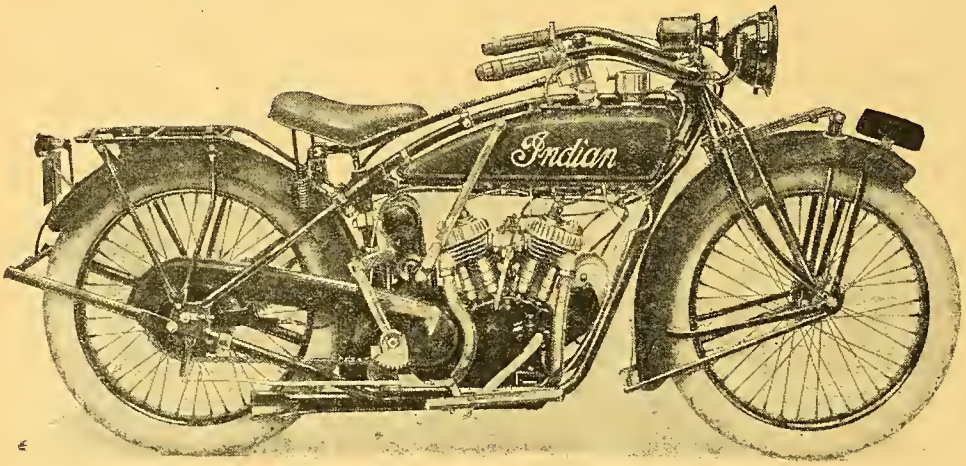
## WM. WHITELEY LTD., QUEENS ROAD, LONDON, W.2

# ALEXANDER'S

**113-115, LOTHIAN ROAD, EDINBURGH** FOR **272-274, GT. WESTERN ROAD, GLASGOW**

## Indian Motocycles

This week we illustrate two of the Indian Range of Models, and we would draw special attention to the fact that those two models are fully equipped like the most luxurious car, with dynamo electric lighting, ammeter, speedometer, electric horn, etc. *THERE IS NOTHING EXTRA TO BUY.*



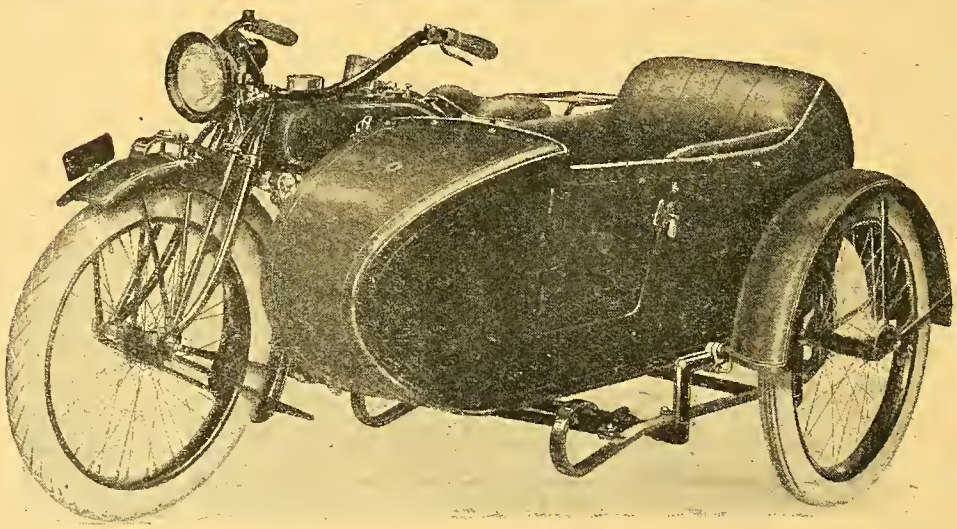

**4 h.p. Indian Scout**

3-speed gear, clutch, kickstarter.

Every part of this machine fulfils its purpose in the most faultless manner. Study the elaborate specification.

**£130**

**CARRIAGE PAID**



**7h.p. Standard de Luxe Sidecar Combination**

Cosy Comfort and Elegance are exemplified in this magnificent passenger outfit, with all its 1922 refinements and improvements.

**£175**

**CARRIAGE PAID**

***Away like a bird goes this INDIAN thoroughbred at the slightest twist of the wrist. Through verdant lanes, o'er rolling hills — it carries you comfortably, speedily, surely, and brings you back delighted and refreshed.***

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

DVERTISEMENTS in these columns rst 12 words 3/–, and 3d. for every ad- tial word. Paragraphs of under 8 words e charged double rate. Each paragraph is ged separately. Name and address must unted. Series discounts, conditions, and eal terms to regular trade advertisers will loted on application.

stal Orders and Cheques sent in payment for tisements should be made payable IFFE & SONS Ltd., and crossed & Co. ury Notes, being untraceable if lost in it, should not be sent as remittances.

dvertisements in this section should be npanied with remittance, and be addressed ie offices of "The Motor Cycle," Dorset se, Tudor Street, London, E.C.4. To re insertion letters should be posted in to reach the offices of "The Motor Cycle," he first post on Friday morning previous to day of issue. Advertisements that arrive late for a particular issue or that are ded out will automatically be inserted in following issue unless accompanied by uctions to the contrary.

l letters relating to advertisements should the number which is printed at the end of advertisement, and the date of the issue hich it appeared.

e proprietors are not responsible for clerical inters' errors, although every care is taken oid mistakes.

## NUMBERED ADDRESSES.

the convenience of advertisers, letters may be ssed to numbers at "The Motor Cycle" Office this is desired, the sum of 6d. to defray the cost of ration and to cover postage on replies must be added e advertisement charge, which must include the Box 000, c/o "The Motor Cycle." Only the numbe ppear in the advertisement. All replies should b ssed No. 000, c/o "The Motor Cycle," Dorset House Street, London, E.C.4. *Readers who reply to Box No isements are warned against sending remittance throug st except in registered envelopes; in all such cases the the Deposit System is recommended, and the envelop l be clearly marked "Deposit Department."*

he case of motor cycles offered for sale under a bo er, as it is unusual for these to be sold without firs inspected by the intending purchaser, advertisers wil ate business by embodying in their advertisement mention of the district in which the machin d may be seen and tried.

## DEPOSIT SYSTEM.

sons who hesitate to send money to unknown person deal in perfect safety by availing themselves of ou sit System. If the money be deposited with "Th r Cycle," both parties are advised of this receipt. e time allowed for a decision after receipt of th is three days, and if a sale is effected we remit th nt to the seller, but, if not, we return the amoun e depositor. Carriage is to be paid by the buyer, bu e event of no sale each party pays carriage one way seller takes the risk of damage in transit. For al actions up to £10, a deposit fee of 1/- is charged; o actions over £10 and under £50, the fee is 2/6; ove nd under £75, 5/-; over £75 and under £100, 7/6 on all transactions over £100, 1%. All deposi ers are dealt with at Dorset House, Tudor Street on, E.C.4, and cheques and money orders should b payable to Iliffe & Sons Limited.

e letter "D" at the end of an advertisement is a tion that the advertiser is willing to avail himself o Deposit System. Other advertisers may be equall ous, but have not advised us to that effect.

## SPECIAL NOTE.

eaders who reply to advertisements and receive no r to their enquiries are requested to regard the e as an indication that the goods advertised have ly been disposed of. Advertisers often receive so enquiries that it is quite impossible to reply to one by post.

## MOTOR CYCLES FOR SALE.

### A.B.C.

.C. 1921 3h.p., 4-speed, spring frame, lamps, orn, tools, very fast, cost £143, mechanical con- perfect; £72/10 or near offer.—Carter, 2a, am St., Southwark Bridge Rd., S.E.1. [7114

# BARGAINS

## SPECIAL PURCHASES.
## CANNOT BE REPEATED.

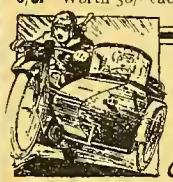
These lines have been snapped up at astonishingly low prices and are offered to you at bargain rates. Once the stock is exhausted there is not the remotest possibility of repeating any offer—therefore take the opportunity while you may.

### SPARKING PLUGS.

Two point. Steatite insulation. Metric thread. Guaranteed. X.P. 3020. **2/1.** Four for **7/3.** Worth 4/- each.

### AVRO WINDSCREENS.

Polished aluminium frames—adjustable fittings. **Triplex** Glass. 12in. × 6in. for sidecars, Morgans and sporting cars. Ex R.A.F. surplus. X.S. 3174. **8/3.** Worth 30/- each.



AVRO WINDSCREENS
ROYAL .... £5·0·0
STANDARD .. £3·18·0
BABY ..... £3·0·0
*Comfy always – all ways!*

### SPRING WASHERS.

Single Coil. 144 assorted sizes—unsoiled. X.W. 3051. **1/9.** Worth 5/6.

### SILENCERS for TRIUMPHS.

Fit any model. Belt drive. 1915–1922. Complete with exhaust pipe and nut. X.S. 3178. **16/-.** Worth 30/-.

### CUSHIONS.

Spring well upholstered in very dark blue waterproof material. Three-ply base board, for sidecar use. Two make excellent cushions for light cars. 16in. wide, 19in. back to front, 3½in. deep. **9/6** each. Worth 19/-.

### GREASE GUNS.

Screw for Grease, can also be used as oil squirt. Steel body, 1¼in. diameter, 9in. long. Brass nut and plug. Steel **T** handle. 6in. flexible grease spout with end screwed ⅛ in gas. 4in. bent brass oil spout, **4/9** each. Worth 12/6.

### HEADLAMPS.
MEDIUM SET.

British, **All Black Finish.** 3¾in. Front Glass Lamp, 5in. across front. Anti-Glare Hood. 3½in. Reflector. Rattle-proof front. Generator 7in. high. Butted ends to gas tubing. Absolutely new and unsoiled. Worth 35/-. X.L. 3381. **21/-.**

### SPEEDOMETERS.
BRITISH;

Aluminium plated mounts. Speed 5 to 60 m.p.h. Mileage to 9999 and repeat, also tenths. Rubber protected cable, for 24–26in. or 28in. wheels. X.S. 427. **78/-.** Worth 100/-.

### HEADLAMPS.
LARGE SET. BRITISH.

All Black, plated mounts. 4½in. front glass, 5½in. across front. Anti-Glare Hood. 3½in. Reflector. Rattle-proof front. Generator 8in. high. Butted ends to gas tubing. Heavy brackets. X.L. 3380. **25/-.** Worth 45/-.

### BELTING.

Service Leather, in two or three pieces, offered at specially low prices. Any length supplied, joined together with our special fasteners.
¾in., **1/10**; ⅞in., **2/4**; 1in., **2/9**; 1¼in., **3/1** per foot.

ALL CARRIAGE PAID.
CAREFULLY PACKED.

*The Service Company Ltd.* (LONDON)

**289-293, High Holborn, London, W.C. 1.**

*Telephone: Holborn 6430.*
*Telegrams: Admittedly, London.*

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C. 1920-21, equipped, new condition; 60 gns.; would exchange.—37, Elmbank Gardens, Barnes. [6630

A.B.C., perfect condition, D.A. lighting, unscratched; £70.—Brockbank's, 58, Lord St., Southport. [6067

1922 A.B.C., tax paid, brand new, A.B.C. sidecar, with hood, screen, extras; £115.—Box 9448, c/o *The Motor Cycle.* [6016

A.B.C., dynamo model, tax paid, specially tuned, spares, etc.; £85, lowest, or exchange Scott Squirrel.—21, Monarch Rd., Northampton. [7194

1920 A.B.C., lamps, horn, unridden for last 12 months, splendid condition; £70, or near offer. —Lieut. James, H.M.S. Warwick, Devonport. [5955

A.B.C. (August, 1920), Lucas dynamo lighting set and electric horn, insurance and tax paid; bargain, £70.—Harris, Three Crowns, Redfield, Bristol. [6884

LATE 1920 A.B.C. Combination, dynamo lighting, speedometer, Canoelet sidecar with luggage grid, had little use, splendid condition throughout; £95 or near offer; must sell.—Osbaldstone, Chalvey Rd., Slough, Bucks. [6547

3h.p. A.B.C. Combination, late 1921, not done 600 miles; smart appearance, perfect condition mechanically, speedometer, horn, lamps (electric), with pilot lamp, also 6-volt accumulator and 6-volt dry battery; sidecar as new, with Easting windscreen; taxed 1922; fully insured till September; £95. After 6.30.—Steele, 19, Baldry Gardens, Streatham. [6593

*Spare Parts:*

A.B.C. Spares.—Largest stock in London; trade supplied.—Maudes' Motor Mart, 100, Gt. Portland St., W.1. [6924

### Abingdon.

3½h.p. Abingdon, good running order, tyres, fast, tax paid; £35.—2, Wynberg Cottages, Rotherfield, Sussex. [6772

ABINGDON King Dick Combination, 2-speed and clutch, handle start, perfect condition; £30.—Rohini, 1, Tulse Hill, Brixton, S.W. [7079

### Ace.

A.C.E. 1922 8-10h.p., standard machine with M.P. cantilever sidecar; £149; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5813

### A.J.S.

A.J.S. 7h.p. Combination in stock.—Pilling, Rock St., Bury. [6242

A.J.S. Motor Cycles.—Good delivery from Courlay, Fallowfield, Manchester. [3846

A.J.S. 2¾h.p., Model B, touring, in stock; £86.—Taylor's Garage, Wednesbury. [6722

£20.—2¾h.p. A.J.S., single speed, splendid running order.—King, Egrove Farm, Oxford. [6485

1921 A.J.S., Lucas dynamo lighting, spare wheel, perfect; £135.—17, St. Charles Sq., W.10. [623?

A.J.S. 1915 Dynamo Lighting Combination; £75; lightweight part.—187, Elm Rd., New Malden. [7066

A.J.S. 1922 2¾h.p. Sports and 7h.p. Combinations in stock.—Clifford Motories, Eastwood, Notts. [8826

A.J.S.—Delivered anywhere, carriage paid.—Merrick's Stores, Sisterhills Rd., Bradford. 'Phone: 2439. [1207

1921 new 7h.p. A.J.S. Combination, with spare wheel; £165.—Carnforth Motor Co., Carnforth. [6949

1920 A.J.S., electric lighting, spare wheel, good order; £107/10.—Welford's Motors, Brighton. [6794

DAN GUY, Weymouth.—1922 7h.p. A.J.S. Combination, £175; in stock. Dorset trade supplied [0817

1915 2¾h.p. A.J.S., 2-speed C.K.S., good throughout; offers.—Shaw, Regent St., Wellington, Salop. [7189

1918 A.J.S. Combination, perfect order, cheap. £37/10. — Byrom, 16, Great John St., Lancaster. [6935

A.J.S. 1919 (Sept.) Combination, excellent order, any trial; £100.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7196

A.J.S.—All models from stock. Official Agents. deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6288

A.J.S. 2¾h.p. 1915, 3-speed, good mechanical condition, comparatively small mileage, accessories, spares; £45.—Beveridge, Pitreavie, Dunfermline. [6117

## MOTOR CYCLES FOR SALE.

### A.J.S.

LONGMAN Bros., Bond St., Ealing, District Agents, all models, B1 model in stock; cash, exchange, or deferred payments. [8958

A.J.S. 1920 Combination, dynamo lighting, spare wheel, speedometer, licence paid; £125.—Ratcliffe Bros., 200, Gt. Portland St., W. [7046

FOR A.J.S. 1922 models. 2¾h.p solo, or 7h.p. combinations, get in touch with the N. London agents: —Jones Garage, The Broadway, Muswell Hill. [0785

1922 A.J.S. 7h.p. Combination in stock for immediate delivery; £175; cash or easy payments.—Premier Motor Co., Aston Rd., Birmingham. [7242

A.J.S. 1922 2¾h.p.; place your order now; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5817

A.J.S. 7h.p. Combination, latest 1922 model; immediate delivery.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0065a

1922 A.J.S.—All models. Immediate delivery 2¾h.p. Model B1. Catalogues with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5892

A.J.S. 1922 7h.p., with Plus One body on A.J.S. chassis; £186; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5816

1916 A.J.S. Coachbuilt Combination, recently overhauled, owner buying car; £60. View before 6.—Hoargraves Garage, Marylands Rd., Harrow Rd., Paddington. [6463

A.J.S. Combination, M.M., new 1920, mileage 3,000, 2-seater sidecar, tax and insurance paid, hood, screen, spares; £100.—265, High Rd., Kilburn. Hampstead 3011. [6661

A.J.S. Combination, 1915, stored 3 years, new tyres, hood, etc., everything guaranteed perfect order; £85; or exchange for Rover 8h.p.—30, Archibald Rd., Tufnell Park, N.7. [4738

1922 A.J.S. Sports Model, Lucas lamps, Klaxon horn, tax paid till 1923, mileage under 200; only £80; owner buying combination.—French, 1, Bedford St., Oxford. [5988

A.J.S. 1920 Combination, perfect order, owner driven, complete, spare wheel, horn, speedometer, usual tools, tax paid; price £115.—Pye, Warwick House, Moreton-in-Marsh. [6583

A.J.S. 1919-1920, 6h.p. Combination, Magdyno, speedometer, screeo, spring saddle pillar, excellent order, gold medal winner; £115.—Powell, Holbeton Vicarage, Plymouth. [6604

1920 6h.p. A.J.S. Combination, Lucas dynamo lighting, speedometer, spare wheel with cover, two windscreens, excellent coudition, spares; £130.—435, City Rd., Birmingham. [6439

A.J.S. 1922 7h.p. Combination; £175. Secure delivery for Easter by placing your order now. Cash! Exchanges! Easy payments!—P. J. Evans, John Bright St., Birmingham. [6297

A.J.S. 1915 6h.p. Combination, interchangeable wheels, lamps, speedometer, glorious outfit, good as new, mileage 8,000; £85; after 7.—Wilkin, 13, Belmont Rd., Wallington, Surrey. [7115

LATE 1920 A.J.S. Combination, hood, screen, speedometer, electric lighting, Cowey horn, condition as new; 130 gns.—91, Abingdon Rd., W.8. Appointment. 'Phone: Western 4685. [6649

A.J.S. 1920 6h.p., with double-seater sidecar, all accessories, tax paid, new condition; £150; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7027

1920 A.J.S. 6h.p. Combination, electric lighting, screen, hood, spare wheel, speedometer, Tan-Sad, etc., inspection by appointment; £130.—Goldstone, 123, Brownlow Rd., New Southgate, N.11. [6221

A.J.S. 1914 6h.p. Combination, hood, screen, speedometer, spring seat pillar, Terry's links, all in excellent condition; £75.—Barton, 32, Hexham Rd., Lancaster Rd., West Norwood, S.E.27. [6327

1921 (late) A.J.S. Combination, 7h.p., electrically equipped, spare wheel, hood, screen, speedometer, tax paid, superb condition; £145.—Hillier (side bell), 9, Wallingford Av., North Kensington. [6642

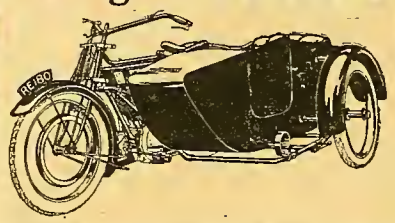
A.J.S. Combination 6h.p. 1919, recently overhauled, good tyres, spare wheel, Triplex windscreen D.A lighting set, hood and speedometer, excellent condition; £140.—Apply, Baker, Bell Farm, Walton-on-Thames. [6115

1921 7h.p. A.J.S. Combination, perfect every way, spare wheel, speedometer, windscreen, side-screen, hood and cover, F.R.S. Combination lighting set, mileage 2,800; £150.—Readett, Hand Lane, Leigh, Lancs. [6479

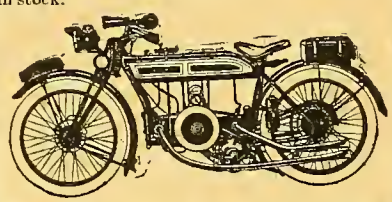
6h.p. Twin A.J.S. Combination, 3-speed and kick starter, late 1920 model, fitted with hood, windscreen, luggage carrier, spare wheel and other necessary extras, guaranteed perfect condition, slightly used only; offer invited.—Bridges, Ltd., Cirencester. [5326


# Pay as you ride

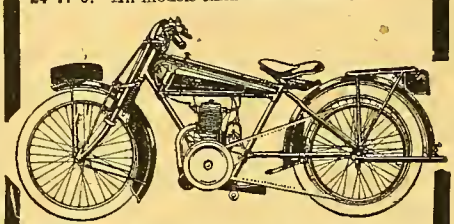
## We give discounts



**ENFIELD** 8 h.p. Comb. **£140** cash or **£36 8 0** down and 12 payments of **£9 2 0.** All models in stock.



**DOUGLAS** 2¾ h.p. "All on." **£75** cash or **£19 10 0** down and 12 monthly payments of **£4 17 6.** All models immediate delivery.



**CALTHORPE** 2¾ h.p. **£35** cash or **£9 7 3** down and 12 payments of **£2 6 10.**

**DISCOUNTS ALLOWED if account be paid in 2, 4 or 6 months.**

*Selection from our shop-soiled and second-hand stock.*

| | | |
|---|---|---|
| 1922 | **CONNAUGHT** 2-spd., clutch, k-str., a real bargain | £52 10 |
| 1922 | **CONNAUGHT** 2-spd., ridden 50 miles | £42 10 |
| 1921 | **CONNAUGHT** 2-spd., shop soiled | £49 10 |
| 1921 | **ARIEL** 6-7 h.p. comb. standard, quite new | £137 0 |
| 1920 | **P. & M.** 3½ h.p., quite new | £100 0 |
| 1920 | **JAMES** 4½ h.p. standard comb., quite new | £120 0 |
| 1922 | **COVENTRY PREMIER,** only ridden 100 miles | £220 0 |
| 1920 | **HARLEY-DAVIDSON** special HD, s-c., sports model, discs, spdr. F.R.S. elec. | £130 & £135 0 |
| 1920 | **MATCHLESS,** dynamo lighting | £130 0 |
| 1920 | **MATCHLESS** plain mod., single-str. | £115 0 |
| 1920 | **MORGAN** Family model, and access. | £150 0 |
| 1918 | **DOUGLAS** 4 h.p. comb., 2 lps., horn | £69 10 |
| 1920 | **ENFIELD** standard comb., gas lamps | £100 0 |
| 1920 | **ENFIELD** standard comb., gas lamps | £95 0 |
| 1921 | **ENFIELD** standard comb., gas lamps | £115 0 |
| 1920 | **RUDGE** 7-9 h.p. and Canoelet Sptg. sidecar | £85 0 |
| 1915 | **LEVIS** "all on" | £24 10 |
| 1915 | **FORD VAN,** special large body, as new | £65 0 |
| 1916 | **DOUGLAS** W.D. | £45 0 |
| 1916 | **DOUGLAS** W.D., disc wheels | £35 0 |
| 1921 | **OMEGA** 2¾ Villiers, 2-spd., clutch, k-str. | £42 10 |
| 1920 | **SUN VITESSE** 2-spd., clutch, k-str. | £32 10 |

# LAMB'S Ltd.

ESTABLISHED 1906.

**WALTHAMSTOW, LONDON, N.E. 151, High St.**
'Phone—Walthamstow 169 (2 lines).

**WOOD GREEN, LONDON, N. 50, High Road.**
'Phone—Hornsey 1956.

**EUSTON ROAD, LONDON, N.W.** (Opp. Gt. Portland Street, Station). 'Phone—Museum 4978d.


## MOTOR CYCLES FOR SALE.

### A.J.S.

A.J.S. 1922 7h.p. Standard Combination; cas terms; exchanges.—W. E. Line, late Co Allan, 89, Gt. Portland St. Langham 1601. [

A.J.S. 1920 Combination, extra interchang wheel, hood, screen, Klaxon, speedometer, horn, 2 new spare tyres 700×80, new spare cha lamps, acetylene cylinder, tools, splendid run order; 125 gns., no offers; buying car.—23, Blon Court, Maida Vale. [

A.J.S. Combination, November, 1920, except condition and appearance, Lucas dynamo electric horn, Binks, Tan-Sad, hood, screen, detac wheels; £165, or part exchange for brand new Cowley or Jowett car.—Advertiser, Culmer, Sha Teignmouth, Devon. [

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, St., Ealing. [

LONGMAN BROS., 17, Bond St., Ealing.—O agents A.J.S. spares. [

A.J.S. Spares; prompt delivery.—Cyril Will Chapel Ash Depot, Wolverhampton. T.A.: I

A.J.S., 1910, 1911, 1912.—Authorised manufac of spares for early models.—Harry C. Bc Penn Rd., Wolverhampton. [

### Alldays.

1915 Allon 2¾h.p., splendid running order; £ Ockenden, 13, Westmoorland Rd., Barnes. [

1917 Allon, 2-speed, discs; real bargain, sale, £30 secures.—Fiske, Hopton, Thetfo [

KICKHAM, Stokes Croft, Bristol, Sole Di Agent for Allons; unequalled service, re etc.

35 GNS.—Alldays' Allon, 2-speed, K.S., c equipped, 1920-21, taxed.—Claremont Ga Blackpool.

1921 Allon, 2-speed, clutch, kick starter, W jet, legsbields, lamps, etc., perfect condi £47/10.—Railton, 47, South King St., Manch City 2417.

ALLDAYS' Allon, new condition, perfect run order, Harley-Davidson Tan-Sad; £37/10 near offer; any time after 2 o'clock, Saturc H. C. Martin, 39, Ossington St., Bayswater, W [

### American X.

AMERICAN X 7-9h.p., 3-speed, hand and clutch, Combination, fully equipped; £55.- lier, Side Bell, 9, Wallingford Av., North Kensin

1921 American X 7-9h.p. Twin, 3 speeds, new slightly shop-soiled, at a very low price to c an opportunity for the bargain hunter.—14, Gt. borough St., W.1. [

AMERICAN X, late 1921, blue finish, 7- 3-speed, magdyno, luxurious semi-sporting car, finished aluminium, windscreen, voltmeter, board lamp, watch, switchboard, 2 electric horns, over £200, mileage 3,000; sacrifice, 98 gns.- South Lambeth Rd., Stockwell.

1921 American X 7-9h.p., 3-speed, at enorm reduced price; only slightly shop-soiled; ford coachbuilt sidecar in stock to suit; if you re a powerful high grade combination at little second-hand price write for our special clearance —Premier Motor Co., Aston Rd., Birmingham.

### Antoine.

ANTOINE 3½h.p. U.H., Senspray; sacrifice, Confectioner, 179, York Rd., Islington, N.

### Ariel.

ARIEL 3½h.p. Combination 1920; bargain, £ 81, Backett Rd., Doncaster.

1922 3½h.p. Sports Ariel, just delivered, imme delivery; £87/10.—Dan Guy, Weymouth.

F.O.C.H. have 1920 3½h.p. Ariel Combination, equipped; bargain.—5, Heath St., Hamp (Near Tube.)

BRAND new 1922 unused 3½h.p. Ariel, 3- K.S., etc.; deliberate sacrifice, 75 gns.—Rams May Bell Avenue, Blackpool.

ARIEL.—All models, cash or gradual payn Spares supplied from stock.—West Central A Wincycle Co., Ltd., 236, High Holborn, W.C.1.

1915 Ariel Motor Cycle and Sidecar, 3-speed tershaft, kick start, good condition; £45.—A. G. Ellingham, Swan Hotel, Newport nell.

1914 Ariel 3½h.p., 2-speed, S.C., coachbuilt, and condition of machine excellent, al seldom used, trial appointment; £45, nearest.— 54, Nichols Sq., E.2.

3½h.p. Ariel Combination, 1916, perfect cond engine recently overhauled by makers, horn, tools, and numerous spares, any trial; bargain, 65 gns.—Wray, King's Bridge, Canterb

## MOTOR CYCLES FOR SALE.

### Chater-Lea.

VAUCHOPE'S, 9, Shoe Lane, London.—Chater-Lea and sidecar, 4h.p. 1918, J.A.P. engine, 5. [6998

CHATER-LEA 1914 8h.p. Combination, nearly new coach body; £70 or near offer.—859, Old ant Rd., London. [5976

IMMEDIATE delivery all models 1922 Chater-Lea motor cycles; stamp for catalogue.—H. Beardwood, 7, Burlington St., Liverpool. [0814

CHATER-LEA 8h.p. Combination, chain drive, 3-speeds, fully equipped, tax paid; £65, arest offer.—20, Walpole Rd., New Cross. [6333

CHATER-LEA Combination, 5-6h.p., 2-speed, E.L., all on, very fast, good tyres, also spare parts; 3 or offer.—12, Barbot St., Lower Edmonton, N.9. [7166

CHATER-LEA Combination 8h.p. J.A.P., 3-speed, clutch, splendid condition, take any load; £68; ce lower power part.—57, Kenbury St., Camber-ll, London. [6860

CHATER-LEA 8h.p., 3-speed, handle start, black tank, bulbous back, underslung C.B. sidecar with ild's detachable seat, also Tan-Sad, all in fine ndition; £67/10; after 7.—4, Gosberton Rd., Bal-m, S.W. [5923

1921 8h.p. Chater-Lea Combination, new and unregistered, used for few demonstrations only; mplete with 4 detachable wheels, spring seat pillar, d sidecar screen; £35 below list price; £135.—uth Eastern Garage, Herne Hill, S.E.24. [6285

### Chater-Lea-Jap.

h.p. Chater Lea-Jap late model frame, Triumph tank, fitted with brand-new Burman 2-speed ar with clutch and kick starter, new Dunlop back, sch magneto; £25.—Walbro Motorcycle Co., Saf-on Walden. 'Phone: 45. [7212

### Chater-Villiers.

CHATER-VILLIERS 2-stroke, engine nearly new; £16.—8, Ray St., Farringdon Rd. [7152

### Clyno.

1917 2½h.p. 2-stroke Clyno; £15.—Carnforth Motor Co., Carnforth. [5948

VAUCHOPE'S, 9, Shoe Lane, London.—Clyno 2½h.p. 1919; £37/10. [7002

CLYNO Combination, 3-speed, K.S., overhauled, re-enamelled, as new; £60, or exchange.—Below.

CLLON 2¾h.p., 2-speed, 1921, used only for de-monstration, as new; £40, or exchange.—85, evelstoke Rd., Wimbledon Park, S.W.18. [7111

CLYNO 8h.p. Combination 1918, excellent condition; bargain, £85.—Bunting's Exchange, Weald-one. [7060

1921 8h.p. Clyno Combination, complete, spare wheels, shop-soiled; £135.—Taylor's Garage, ednesbury. [6720

19 GNS.—1916 Clyno 6h.p. 3-speed Combination, all chain drive, splendid order.—134, Earlsbrook d., Redhill. [6519

1921 Clyno 2¾h.p., 2-speed, clutch, reliable, small mileage, equipped for touring; £38/10.—84, eston Park, Crouch End, N.8. [5939

CLYNO 1920, 2 speeds, 2-stroke, lamps, horn, etc.; £37/10.—Elce, Ltd., 15-16, Bishopsgate Avenue, momile St., E.C.3 'Phone: Avenue 5548. [0075

CLYNO-J.A.P., 8h.p., 1918-19 model, handsome 2-seater sidecar, finished black and gold, suit mily man; £75.—Snow, Laurel St., Dalston, E.8. [7141

CLYNO Combination, late 1918, spare wheels, lamps, etc., excellent condition; £85; or exchange r light van, machinery, etc.—Urquhart, 371, Earls-eld Rd., London, S.W. [6106

CLYNO (May, 1920) 2¾h.p., 2-speed, clutch, tools, lamps, condition as new, mileage 1,000; £40, or arest offer; seen any time.—C. Dunham, 65, Vic-oria St., St. Albans, Herts. [5994

CLYNO Combination, 1917, Binks, Easting, Cowey, spare wheel, good tyres, Lucas horn, spares, ex-ert mechanical examination invited; £70; tax paid 922.—Lawson, 19, Hindmans Rd., East Dulwich, E.22. [5921

MISS DOOLEY. — 5-6h.p. 1916-17 3-speed K.S. Clynos, in perfect mechanical order and renovated ke new, complete with tradesman's carrier; price 55 each.—Please apply to Miss E. Dooley, 33, Killyon d., Clapham, S.W.8. [6948

CLYNO.—5-6h.p. 1916-17 models, rebuilt, replated, enamelled black, 3 speeds, kick start, foot clutch, terchangeable wheels, chain drive, aluminium cases, idecars coach painted, in excellent condition, lamps mplete, machines as new; solo, £57; combinations, 68.—Hearn Bros., 94, Brixton Hill, S.W.2. 'Phone, rixton 2888. [6282

*Spare Parts:*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [3610

# Harrods MOTOR CYCLES ON EASY TERMS

All the following machines are available from stock and may be obtained on Harrods Convenient System of Easy Payments. Details and latest lists free

## NEW SOLO MACHINES

| | | |
|---|---|---|
| 2¾ h.p. | **ALLDAYS-ALLON** ... ... | **£60** |
| 4¼ h.p. | **B.S.A.**, Belt Drive ... ... | **£107** |
| 2¾ h.p. | **DOUGLAS**, Two-speed ... | **£75** |
| 2¾ h.p. | **DOUGLAS**, 3-sp., clutch . | **£90** |
| 2¼ h.p. | **ENFIELD**, Two-speed model | **£60** |
| 2¼ h.p. | **LEVIS**, Popular model ... | **£48** |
| 2¾ h.p. | **NEW IMPERIAL**, 3-speed | **£63** |
| 2¾ h.p. | **NEW IMPERIAL**, Clutch, etc. | **£69** |
| 1¾ h.p. | **McKENZIE**, Lightweight | **£27 6s.** |
| 2½ h.p. | **O.K. JUNIOR** ... | **£39 18s.** |
| 2½ h.p. | **O.K.**, 2 sp., clutch, etc. | **£60 18s.** |
| 2¼ h.p. | **TRIUMPH**, Two-speed ... | **£65** |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | **£105** |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | **£115** |

## NEW COMBINATIONS

| | | |
|---|---|---|
| 4½ h.p. | **B.S.A.**, Belt Drive, No. 3 s/c | **£139** |
| 4½ h.p. | **B.S.A.**, Chain Drive, No. 3 s/c | **£142** |
| 8 h.p. | **ENFIELD** ... ... ... | **£140** |
| 8 h.p. | **MATCHLESS** ... ... | **£170** |
| 6 h.p. | **HAZLEWOOD** ... ... | **£118** |
| 8 h.p. | **NEW IMPERIAL** ... ... | **£145** |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | **£155** |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | **£145** |
| 4 h.p. | **DOUGLAS** ... ... ... | **£135** |
| 6 h.p. | **DOUGLAS** ... ... ... | **£165** |
| 4½ h.p. | **HUMBER** ... ... ... | **£144** |
| 3½ h.p. | **INVICTA** and Sidecar ... | **£110** |

## SHOP-SOILED MODELS AT SPECIAL PRICES

| | |
|---|---|
| 2¾ h.p. **COULSON**, Spring Frame, 3-speed ... | **£75** |
| 4½ h.p. **HUMBER**, Flat Twin, 3 sp., clutch & k.s. | **£100** |
| 2¾ h.p. **WOOLER**, Flat Twin, Brooklands Sports model, fully equipped... | **£69** |

## SECOND-HAND

| | |
|---|---|
| 1921 **ENFIELD** Combination, mag. dyno. lighting, speedometer, etc. (cost £190)... ... | **£137 10** |
| 2¼ h.p. **LEVIS**, Popular Model... ... ... | **£45** |
| 5/6 h.p. **HAZLEWOOD**, Combination, Speedometer. Thoroughly overhauled ... ... | **£90** |
| 2½ h.p. **CLYNO**, 1920, Two-speed and clutch, lamps, etc. Tax paid 1922 ... ... ... | **£37 10** |

**HARRODS MOTOR SALES DEPT**
**116–118 Brompton Road London SW1**
*(Opposite the Main Building).*

## MOTOR CYCLES FOR SALE.

### Connaught.

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p Connaught, 2 speeds, 1921, £45. [699

CONNAUGHT Single-speed 2¾h.p.; £22.—8, New Villa, Pottery Rd., Brentford, Middlesex. [6076

1916 Connaught, 2-speed, 2-stroke, new tyres, new magneto, guaranteed perfect; £30 or offer.—Rees, Semley Rectory, Shaftesbury. [3655

£18.—Connaught 2¾h.p., splendid condition throughout, lamps, horn, tools, tax paid; offers. —Miller, Victoria House, Potterne, Wilts. [6376

1922 Connaught, the super 2-stroke, for sidecar or solo; cash or easy terms; inquiries invited.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3259

CONNAUGHTS, 1922.—2-stroke, £45; 2-speed model, £54; 2-speed, clutch and kick starter, £57/10; 3-speed 3½h.p. combination, £95; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5820

### Coulson.

COULSON-BLACKBURNE 2¾h.p., 2-speed, lamps, horn, tax paid; £50.—35, Courthill Rd., Lewisham. [6836

1921 Coulson 3½h.p. o.h.v. Twin J.A.P., last year's 200 miles race winner; £85.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [6877

COULSON-BLACKBURNE, Patent 1922, 2¾h.p., 3-speed, clutch, kick start, spring frame, tax paid December 1922, mileage 800; 63 gns.—132, Park Av., Barking. [7231

1921 Coulson-Blackburne 4h.p., 3-speed, electric light, small mileage, just overhauled, excellent condition, stored during winter; £70.—Hood, 24, Shepherds Bush Green. [6419

COULSON 1922 models.—Deliveries now commenced. Write for catalogues giving price and all latest improvements.—London Motors, 61, Holborn Viaduct, E.C.1 Telephone: City 4230. [7096

NEW Coulson, 2¾h.p., spring frame, Blackburne engine, 3-speed clutch and kick starter; (reduced from £117/12), £75; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [6360

COULSON 1922 models.—2¼h.p., £67/10; 2¾h.p., £78; 2¾h.p., o.h.v. (T.T. model), £95; 4¼h.p., £95. Cash or deferred terms. Old machines taken in part payment.—London Motors, 61, Holborn Viaduct, E.C.1. Telephone: City 4230. [7097

COULSON 1921 models.—Shop-soiled machines at greatly reduced prices. Three only left; £65, £75, £85 each. Cash, deferred terms, or old machine taken in part payment.—London Motors, 61, Holborn Viaduct, E.C. Telephone: City 4230. [7098

£45.—1920 Coulson-Blackburne 2¾h.p., 2-speed, semi-T.T. bars, Brampton biflex forks, spring frame, lamps, etc., smart sporting machines; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11. Park 2071. [7081

### Coventry Eagle.

1918 4h.p. Coventry Eagle Combination, 3-speed countershaft, splendid condition, fully equipped; £55; exchange entertained.—37, Arlington Rd., Surbiton. 'Phone, Kingston 1274. [6730

2¾h.p. 1920 J.A.P.-engined Coventry Eagle, Sturmey-Archer countershaft, clutch, kick starter, thoroughly done up, brand new tyres, lamps, 150 m.p.g.; £48.—Coxon, Huntingdon. [6094

### Coventry Regent.

COVENTRY-REGENT 1921 5-7h.p., flat twin, Sturmey countershaft, luxurious coachbuilt sidecar, perfect order; cost £190; sacrifice, 68 gns.; would exchange.—37, Elmbank Gardens, Barnes. [6631

### Coventry Victor.

COVENTRY VICTOR.—The perfect flat twin engine Before deciding on your new mount, get our list for 1922, showing Coventry Victor motor cycles fitted with this famous 5-7h.p. engine. Also our special offer of demonstration machine. The last word in motor cycle design and construction. — The Coventry Victor Motor Co., Ltd., Coventry. [0520

### Diamond

£26/10.—2¾h.p. Diamond, Villiers engine, beautiful condition, taxed.—King, Egrove Farm, Oxford. [6487

DIAMOND-J.A.P. 1920-21 2¾h.p., 2-speed, clutch, equipped; 39 gns.—37, Elmbank Gardens, Barnes [6632

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Diamonds; unequalled service, repairs, etc. [3146

1921 2¾h.p. Diamond-Jap, 2-speed Enfield gear, all lamp sets and horn; used few times and is as new; £40.—Walbro Motorcycle Co., Saffron Walden. 'Phone: 45. [7209

DIAMOND-J.A.P. (May, 1921) 2¾h.p., 2 speeds, S.A. countershaft gear, clutch, kick start, belt guard, lamps, tools, complete, splendid condition, licensed 1922; £58.—Horne, 166, Chancery Lane, St. Helens, Lancashire. [6127

## MOTOR CYCLES FOR SALE.

### Douglas.

2¾h.p. Douglas, single speed, new magneto; £21.—Hankin, Alresford, Hants. [6756

DOUGLAS 2¾h.p., perfect condition, 1918; £36.—102, Trafalgar Rd., Peckham. [6025

DOUGLASES, 2¾h.p., a few left, as new; £38/10. 417a, Brighton Rd., Croydon. [5043

F.O.C.H. have a 2¾h.p. Douglas, excellent.—5, Heath St., Hampstead. (Near Tube.) [4928

DOUGLAS 2¾h.p. 1913, perfect running order; £21.—17, Heaton Rd., Mitcham. [6560

1916 2¾h.p. 2-speed Douglas, perfect; £30.—24, Balliol Rd., North Kensington. [6503

28 GNS.—2¾h.p. Douglas, 3-speed, first cash secures.—Claremont Garage, Blackpool. [6144

59 GNS.—1921 Douglas, 3-speed, spotless condition.—Claremont Garage, Blackpool. [6149

ALL Douglases.—A trial order only is requested.—Gibb, Gloucester. 'Phone: 852. [8121

1918 4h.p. Douglas, 3-speed, clutch, K.S.; £47.—56, Park Lane, Kidderminster. [6699

1916 2¾h.p., 2-speed, all on, guaranteed condition; £33.—23, Barratt Av., Wood Green. [6681

DOUGLAS, Douglas, Douglas.—Gourlay, the Great Douglas Agent, Fallowfield, Manchester. [3647

1919 4h.p. Douglas Combination, equipped, beautiful condition; £70.—17, St. Charles Sq., W.10. [6236

1916 Douglas 2¾h.p. (new 1920), excellent condition, all on; £40.—5, Elmfield Av., Hornsey. [6656

DOUGLAS, late 1916, excellent condition, new tyres.—23, Milton Grove, Upper Holloway, N. [6349

1914 2¾h.p. Douglas, 2-speed, clutch, taxed, perfect; £35.—Collins, 69, Argyle Rd., Ealing. [6599

DOUGLAS 1921 2¾h.p. fully equipped, licence paid; £65.—Ratcliffe Bros., 200, Gt. Portland St., W. [7048

1920 4h.p. Douglas Combination, perfect, full equipment; £75.—24, Balliol Rd., North Kensington. [6507

DOUGLAS 2¾h.p 1917. 2-speed, discs, perfect order; £30.—Parker, Boston Manor Stn., Brentford. [6096

DOUGLAS 2¾h.p. 1915, 2-speed, lamps, horn, tax paid, good condition; £25.—Gifford, Overton, Hants. [6743

DOUGLAS 2¾h.p., wants tuning up; £12 or nearest. — Horrell, 2, The Green, High St., Ealing. [6570

DOUGLAS 2¾h.p., 1918, all on, tax paid, recently overhauled; £42.—89, Richmond Rd., Kingston, Surrey. [6538

DOUGLAS Combination 4h.p. 1918, splendid condition; £65.—Wilson, 2, Park Rd., Dulwich, S.E.21. [6079

DOUGLAS 2¾h.p., 2-speed, perfect condition, ride away; £30.—76, Latchmere Rd., Battersea, S.W.11. [6781

1911 Douglas 2¾h.p., overhauled, lamp, horn, tax paid; £23; after 2 p.m.—12, Rodwell Rd., E. Dulwich. [5919

DOUGLAS Combination, electric lighting, Watford speedometer; £100.—Escott, 39, Spratthall Rd., Wanstead. [6485

1918 Douglas Combination, lamps, licensed for year, hood, and screen; £55.—Welford's Motors, Brighton. [6795

DOUGLAS 2¾h.p., 1920, 3-speed, K.S., clutch, all on, excellent condition; £60.—21, West Hall, Sydenham. [7163

£25. — Douglas 2¾h.p., mechanically perfect, equipped, licensed.—35, Clifford St., Oxford Rd., Manchester. [6557

DOUGLAS 2¾h.p., 2-speed, good condition, fully equipped; £31.—Cope, 15 Upper Hagley Rd., Birmingham. [6531

1913 2¾h.p. Douglas, Colonial Model; £25.—Kinsey and Co., Ltd., 350, Lower Addiscombe Rd., Croydon. [6885

DOUGLAS.—35 gns., 1915 Douglas, 3-speed, accessories, bargain; exchanges.—Kent's, 417, Lord St., Southport. [6706

2-SPEED 2¾h.p. Douglas, colonial model, equipped, good condition; 38 gns.—30, St. George's Rd., Gt. Yarmouth. [6526

£28.—2¾h.p. 2-speed Douglas, genuine good condition, spares, etc.; after 6 p.m.—59, Sumatra Rd., W. Hampstead. [6215

2-SPEED 2¾h.p. Douglas, fully equipped, Colonial model, good condition; 33 gns.—42, Ruckledge Av., Harlesden. [6110

1921 2¾h.p. Douglas, fully equipped, excellent condition; £54.—Patterson, 12, The Quadrant, Winchmore Hill. [6069

# HERE IT IS!

## THE FOLLOWING ARE FOR IMMEDIATE DELIVERY FROM STOCK.

## EXCEPTIONAL BARGAINS

| | | | |
|---|---|---|---|
| 1921 | 2¾ | h.p. **ROYAL RUBY**, 2-speed | £50 |
| 1921 | 2¼ | h.p. **FEDERAL**, 2-speed | £40 |
| 1921 | 2¾ | h.p. **DOUGLAS**, 2-speed | £55 |
| 1921 | 8 | h.p. **ENFIELD** Comb. | £135 |
| 1921 | 4½ | h.p. **HUMBER** Comb. | £127 |
| 1920 | 4 | h.p. **HARLEY-DAVIDSON** Comb. | £110 |
| 1920 | 2¼ | h.p. **METRO-TYLER**, 2-speed | £50 |
| 1920 | 2¼ | h.p. **LEVIS** | £29 |
| 1919 | 3½ | h.p. **ROVER** Comb. | £80 |
| 1919 | 8 | h.p. **SUNBEAM** Comb. | £112 |
| 1916 | 4¼ | h.p. **B.S.A.** Comb. | £65 |
| 1915–16 | 7-9 | h.p. **HARLEY-DAVIDSON** Comb. | £75 |
| 1915 | 2¾ | h.p. **DOUGLAS** | £37 |
| 1914 | 2¾ | h.p. **A.J.S.**, 2-speed, k.s. | £40 |
| 1913–14 | 3½ | h.p. **TRIUMPH** Comb. | £45 |
| | 2½ | h.p. **CONNAUGHT** | £17 |
| | 3½ | h.p. **BRADBURY**, 2-speed, k.s. | £25 |

**WANTED** your present machine in part exchange.

HIGHEST MARKET VALUE ALLOWED.

## DEFERRED PAYMENTS

### COMBINATIONS.

| | | | |
|---|---|---|---|
| 1922 | 7 | h.p. **A.J.S.** | £175 |
| 1922 | 8 | h.p. **ENFIELD** | £140 |
| 1922 | 8 | h.p. **ENFIELD** dynamo | £158 |
| 1922 | 4 | h.p. **DOUGLAS** all on | £135 |
| 1922 | 8 | h.p. **MATCHLESS** | £170 |
| 1922 | 3½ | h.p. **ARIEL** | £125 |
| 1922 | 6 | h.p. **B.S.A.** | £164 |
| 1922 | 4¼ | h.p. **B.S.A.** | £142 |

### SOLO.

| | | | |
|---|---|---|---|
| 1922 | 2¾ | h.p. **ENFIELD**, 2-speed | £55 |
| 1922 | 2¾ | h.p. **DOUGLAS** all on | £75 |
| 1922 | 2¾ | h.p. **DOUGLAS** all on, k.s. | £90 |
| 1922 | 8 | h.p. **MATCHLESS** Sports | £130 |
| 1922 | 3½ | h.p. **ARIEL** | £95 |
| 1922 | 4½ | h.p. **B.S.A.**, chain drive | £110 |
| 1922 | 3½ | h.p. **NORTON** 16H | £115 |
| 1922 | 2¾ | h.p. **RALEIGH** | £60 |

**ANY MAKE SUPPLIED.**

CALL AND INSPECT.

# R. BAMBER & Co.,

LIMITED,

## 2, EASTBANK STREET, SOUTHPORT.

**'Phone 607.**

## MOTOR CYCLES FOR SALE.

### Douglas.

1918 Douglas 4h.p. Combination, good condit must sell; bargain, £55.—Jeavons, Dra Lye, Stourbridge. [7

1915 Douglas 2¾h.p., lamps, tax paid, good dition; £33.—Goad, 122, Maida Vale. 'Ph Hampstead 1353. [6

DOUGLAS 1916, 2¾h.p., 2-speed, fully equip perfect condition; £32.—30, Belsize Park dens, Hampstead. [5

DOUGLAS.—1922 models for immediate deliv Cash, exchange, or deferred payments.—Kays, Bond St., Ealing. [7

1916 2¾h.p. Douglas, purchased 1920, new, bu head, dependable, tax paid; £40.—55, Ball Rd., West Ealing. [5

£36.—Douglas 2¾h.p., excellent order, rear la horn, little used, tax paid.—3, Ladysmith Aver Seven Kings, Essex. [6

1920 2¾h.p. 3-speed Douglas and accessories, good condition; £60.—Bounds' Garage, High Rd., Kilburn. [6

DOUGLAS, 2¾h.p., 1918, 2-speed, splendid dition, all on, tax paid; £45.—2, Aboyne L. Tooting, S.W.17. [6

1921 2¾h.p. Douglas, 2-speed, equipped, licen Brooks' saddle, fine condition; £61.—1 Keighley Rd., Colne. [6

1911 2¾h.p. Douglas, lamps, horn, and new t on rear, in good running order; £20.—T. H son, Kirk Rd., Shotts. [6

DOUGLAS Combination, 1918, with 1920 side electric lighting; £65.—Reynolds, 15, Staff Mews, Kilburn, N.W.6. [7

£32.—Douglas 2¾h.p., 1916, 2-speed, very sm fully equipped; seen any time.—Pride, Stockwell Rd., Brixton. [6

DOUGLAS 1916 2¾h.p., 2-speed, fully equipp bargain, £28.—28, Woodford Rd., Forest G 'Phone: Stratford 2598. [6

2¾h.p. Douglas, 2-speed, lamps, horns, tax p good running order; £35.—Moore, Sunnys Kingsley, Bordon, Hants. [6

DOUGLAS.—All models from stock. Official Age deferred payments.—Bambers, 2, Eastbank Southport. 'Phone: 607. [6

DOUGLAS Combination, excellent order; £60, change solo 4h.p., single.—Hollinghurst, Burnt Ash Rd., Lee, S.E. [6

£33.—1916 2¾h.p. Douglas, 2-speed, lamps, h long exhausts, licensed 1922, 2 new tyres.—Be lieu, Avenue Rd., St. Albans. [6

DOUGLAS Combination 1917 4h.p., 3-speed, clut kick start, disc, splendid machine; 50 gns.— Turnham Green Terrace, Chiswick. [6

DOUGLAS 2¾h.p., believed 1917, licensed, ac sories, footboards, long exhaust; nearest £3 Parr, 45, Hazelbank Rd., Catford. [6

DOUGLAS 1922.—All models; cash or terms; changes.—W. E. Line, late Coppen Allan, Gt. Portland St. Langham 1601. [5

DOUGLAS 4h.p. 1919, electric lights, Tan-Sad, insurance, in excellent condition; £62, offe Jones, 6, Alexandra Rd., Bedford. [6

DOUGLAS 1916 2¾h.p., lamps, tax paid, date condition guaranteed; £35.—204, Ladbr Grove, W.10. 'Phone: Park 5541. [6

1916 2¾h.p. W.D. Douglas, long exhaust, h grips, rear lamp set only, no tax; £30, offers.—1, Ombensley Rd., Worcester. [6

HALIFAX.—Douglas 1922 models; cash or change. Note Brooklands performances.—Hali Motor Exchange, Horton St., Halifax. [6

1919 4h.p. Douglas, 3-speed, reconditioned like n and unregistered; £55.—28, Woodford Forest Gate. 'Phone: Stratford 2598. [6

DOUGLAS 4h.p. Combination 1918, perfect ning order, Montgomery sidecar, fully equipp £68.—64, Framfield Rd., Hanwell, W.7. [6

£17.—Douglas 1911 2¾h.p., 2 lamp sets, horn, boards, tax paid, just been re-enamelled.— Marlborough Rd., Old Kent Rd., S.E.1. [6

DOUGLAS 4h.p. Combination, electric, spe meter, screen, tax, nice condition, reasona offer.—13, Radley Rd., Tottenham, N.17. [6

DOUGLAS, late model, 2¾h.p., 2 speed, f equipped, tax, good condition, insured S tember; £40.—145, Leander Rd., Brixton. [6

1916 2¾h.p. Douglas, W.D., not renovated, 1920, all accessories, in splendid order; £4 Bedwell Lodge Farm, nr. Hatfield, Herts. [6

BIRKENHEAD, Douglas Agents.—All new mo in stock, solos and combinations.—Birkenh Motor Works, 9, Hamilton St., Birkenhead. [2

DOUGLAS 2¾h.p., 3-speed, clutch and K.S., 19 tax paid, completely equipped, as new; £6 Cope, 15, Upper Hagley Rd., Birmingham. [6

BIS All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Excelsior.

1920 Excelsior, 2-stroke, Burman 2-speed, equipped, taxed, perfect; £35.—Partlo, Codsall, Staffs. [6000

QUICK Sale, 3½h.p. Excelsior and sidecar, 3-speed.—Guard Room, 6 Camp, Perham Down, Ludgershall. [6202

### Federation.

FEDERATION-J.A.P. 2¾h.p. 1916, all on, little used, splendid condition, 2-speed, footboards, just overhauled with new parts at cost of £7/10, 110 m.g., 50 m.p.h., spares, including new belt, tyres excellent, tax paid; nearest £34 secures.—Rev. Brown, 1, Congleton Rd., Sandbach, Cheshire. [6167

### F.N.

F.N. 4-cylinder, shaft drive, good tyres and tubes, very low frame;; £25, or exchange 2-stroke.—Somerfield Lodge, Capel, Surrey. [6175

F.N., the wonderful £95 model; one actually in stock. 'Phone, Hampstead 2012, wire or call.—Lancey St. Garage, Camden Town, N.W.1. [5063

EXCELLENT mechanical condition, 4-cylinder F.N., 2 speeds, clutch, new tyres, tubes, £5 spent on magneto, bearings right; £21/10.—Pickering, Longton. [6183

F.N. 2½h.p., touring Model A, 2-speed, handle-bar control clutch, kick start, new; £55. — Croydon and District Agents, Pulling's Garage, London Rd., Croydon. 'Phone: 1619. [6954

*Spare Parts:*

F.N. Spares.—We can supply for all models from 1904. Prompt attention to all inquiries. Stamp please.—Langford's, 37, Cricklewood Broadway, N.W.2. [6578

### Gamage.

GAMAGE 1920, Villiers engine, Albion, 2-speed, lamp, horn, speedometer, licensed; nearest £30. Howard, 4, Fitzjohn's Avenue, N.W.3. [6693

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; from £120.—Stacey, 12, Ecclesall Rd. [0577

1915.—Harley, perfect condition, copper exhaust 13¾in., any trial.—Povey, Ham Common, Surrey. 'Phone: 1663 Kingston. [6006

1920 H.C.H. have 7-9h.p. Harley Combination, electric model, beautiful condition, bargain.—5, Heath St., Hampstead (near Tube). [6304

1918 GNS.—7-9h.p. Harley-Davidson, 3-speed, luxurious C.B. sidecar, tyres as new, real smart lot.—Tremont Garage, Blackpool. [6141

1920 H.C.H. have 7-9h.p. Harley Combination, electric model, beautiful condition; £75, bargain.—5, Heath St., Hampstead (near Tube). [4931

1915 Harley-Davidson, 3-speed, Rennoc sports sidecar, accessories, good condition, ride 100 miles; £5.—Dickinson, Thorne Rd., Doncaster. (P.) [6591

1915.—1917 Harley 7-9h.p., 3-speed, accessories, brand new Model De Luxe Millford sidecar; a bargain. Premier Motor Co., Aston Rd., Birmingham. [7246

HARLEY-DAVIDSON Combination 1919, 1922 tax paid, all on, better than new; £125; very smart. 4, Stratford, 203, Junction Rd., London, N.19. [5235

HARLEY Combination 1918, magneto, Royal Eastling windscreen, electric lighting, Disc wheels, legfields, very smart.—Railway Hotel, Egham, Surrey. [6201

HARLEY-DAVIDSON 7-9h.p., 1915, electric, 2-seater sidecar, hood, screen, speedometer, leg fields, Tan-Sad, evenings; £75.—78, Croydon Rd., Penge. [6438

7-9h.p. Harley-Davidson, electric model, Mills-Fulford double sidecar, all splendid condition, any trial; price £135.—Gibbs, Hollies, Ash Vale, Surrey. [8614

1918-19 Harley-Davidson, sporting torpedo sidecar, re-painted, discs, beautiful condition; 80 gns.; evenings, week-end.—17, Redfern Rd., Harlesden, N.W.10. [6745

1920 7-9h.p. Harley-Davidson Combination, electric model, fully equipped, and absolutely perfect throughout; £130.—239, Goldhawk Rd., Shepherd's Bush, W.12. [6515

1919 Harley Combination, just overhauled by makers, electric and D.A. lighting, fully equipped; £105.—Morriss, 8, Victoria Rd., Finsbury Park, N.4. [6312

1920 Harley-Davidson 7-9h.p., new 2-seater Millford tandem sidecar, lamps, speedometer, Jaxon, tools, excellent condition; £135.—Mason, 45, Preston Rd., Brighton. [6020

1919 Harley, 7-9h.p., and almost new Henderson Elite sidecar, windscreen, Tan-Sad, all accessories, condition perfect, smart outfit, bargain; £110.—19, Hill St., Richmond, Surrey. [7106

1920 7-9h.p. Harley-Davidson Combination, new 2-seater body, speedometer, hood, windscreen, lamps, horn, guaranteed absolutely perfect; £120.—20, Warley Rd., Blackpool. [6436

GOING cheaply, first reasonable offer taken.—1919 Harley, with Langford 45-guinea sidecar; overhauled; smart machine, screen, and accessories; any trial; must sell.—56, Tollington Park, N.4 (14 houses). [6602


# EASTER OFFER

## 35/= ONLY

MOTOR CYCLE SUIT

GUARANTEED WATERPROOF

Fawn double texture material, rubber interlined, cemented seams and taped, wind cuffs, double-breasted, all-round belt, wind gusset and patent spring clasp fasteners in overalls.

THE SUIT FOR THE MOTOR CYCLING SEASON

JACKET and OVERALLS COMPLETE 35/-

JACKET only - - 25/-
OVERALLS only - 15/- per pair
SEATLESS TROUSERS 18/- per pair
JACKET with ALL FITTINGS AS ABOVE, COMPLETE WITH SEATLESS TROUSERS - - 42/-

*Send for our free pattern Bunch of Cloths.*

NOTE

MONEY REFUNDED IN FULL IF NOT SATISFIED.

**These Suits are made in our own factory, and are newly manufactured. Hundreds are being sold every week to satisfied riders through the medium of *The Motor Cycle*.**

*If you cannot call, send money with breast measurement and height.*

Actual Manufacturers:

**Martin Waterproof Co., 208, Oldham Rd., New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

HARLEY-DAVIDSON 7-9h.p., electric, Watsonian, windscreen hood, pillion seat, rear chain enclosed, rev. counter, tools, spares; £70, or near offer. —7, George St., Huntingdon. [6553

HARLEY-DAVIDSON, Special machine, dynamo lighting, painted red and gold lines, with copper fittings, smartest machine on road; 90 gns.—43, Turnham Green Terrace, Chiswick. [6967

1922 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices; catalogue with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10 [5986

HARLEY-DAVIDSON 7-9h.p., plated tank and controls, electric light set, 9in. head lamp, new oversize back tyre, spares, clubman's mount; £105.—"Roydene," The Drive, Sidcup, Kent. [6222

AUGUST, 1920, Harley-Davidson 7-9h.p. electric combination, luxuriously equipped, new tyres, Tan-Sad, discs, hood, screen fully insured; £125.—4, North Side, Wandsworth Common, S.W.18. [6882

BARKER'S Motors can supply all Harley-Davidson models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash deferred, or exchanges.—194, Balham High Rd., S.W.12. [7089

LONGMAN Bros., Bond St., Ealing, Official Harley District Agents; cash, exchange, or deferred payments. Buy from the racing specialists, and have the advantage of their experience. Repairs and tuning a speciality. [4486

TWO 1920 Harley-Davidsons; £130 and £145 cash, or £25 down and 18 monthly payments.—Lamb's, Ltd., 151, High St., Walthamstow, E.17; 50, High Rd., Wood Green, N.22; and 387, Euston Rd., London, N.W.1. [6937

HARLEY 1920 electric model (July), 7-9h.p., fine coachbuilt sidecar, locker at back, Easting screen, Tan-Sad, spare tyre, tools, etc., any trial, in perfect mechanical order; £115.—A. Southorn, 44, Abbeville Rd., Clapham, S.W. [6854

SPORTING Harley 7-9h.p. and Swan sidecar, electric model, fully equipped, Zenith carburetter, discs all round, T.T. bars, long exhaust, exceptionally speedy, geared 3½-1 on top, a sportsman's mount and equal to new; £125, or near.—Gunn, King's Ride, Camberley. [6121

1917-9h.p. Harley-Davidson Combination, disc wheels, aluminium number plates, Zenith carburetter, oversize tyres, nearly new, brass exhaust, leg shields, windscreen, tax paid, has been completely overhauled and is in top hole condition; £70.—Hankin, Alresford, Hants. [6759

EASTER Bargain.—1921 Harley, C. and M. sidecar, dynamo lighting, speedometer, disappearing hood, screen, barely 2,000, discs, tools, insured, licensed, coat £275, magnificent turnout, absolutely as new; £165; trial by appointment.—Private owner, c/o 89, East Hill, Wandsworth. [6767

1920 7-9h.p. Harley-Davidson Combination, dynamo lighting, electric horn, discs, speedometer, Tan-Sad, mudshields, comfortable Patey sidecar, locker, screen side wings, hood, excellent condition, equal new, hardly used, tyres good, any trial, any time; £175, or offer.—103, Balham Park Rd., Balham. Latchmere 4441. [4841

1920 Harley-Davidson and de Luxe sidecar, Auster triplex screen, hood, side curtains, two luggage grids, large pan saddle, electric and mechanical horns, double accumulator, electric lighting, large brass car lamps, oversize hack tyre; has been little used, almost pass for new; in perfect condition in every way; cost £260; bargain, £140; seen by appointment.—Harris, 14, Alexander Sq., S.W.3. [6590

*Spare Parts:*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing [3613

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Harley-Davidson spares. [5711

### Hazlewood

1921 Hazlewood Combination 6h.p., J.A.P., Sturmey-Archer 3-speed gear box, good as new; £90.—Wilshaw, Lythalls Lane Garages, Foleshill, Coventry. [7051

1920 Hazlewood Combination, 5-6h.p., just thoroughly overhauled and complete with speedometer and horn; £90; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [6359

1922 Hazlewood, all models, for early delivery. See the 6h.p. J.A.P. Twin Combination at £118; finest value for money to-day; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10 [5988

### H.B.

H.B., 1922 Models, 2¾h.p. Blackburne engine, 2-speed Burman gear box, chain belt, C. and K.S., £72; with 3-speed gear box, £75; 4h.p., 3-speed, £82; 4¼h.p., 3-speed model, clutch and kick start, £100; cash, deferred terms, or exchange.—Below.

H.B., 1922 Models for earliest deliveries.—Write London Motors, 61, Holborn Viaduct, E.C., sole distributing agents for the following counties:—Kent, Surrey, Sussex, Hants, Berks, Oxford, Bucks, Northants, Beds, Hunts, Cambridge, Norfolk, Suffolk, Essex, Herts, Middlesex (including London). [7100

## MOTOR CYCLES FOR SALE.

### Henderson.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Hendersons; unequalled service, repairs, etc. [3145

IMMEDIATE Delivery.—1922 Henderson de Luxe, dynamo lighting, electric horn, etc.; £175.—Pioneer Motors, Ltd., 50, Grindlay St., Edinburgh. [1408

HENDERSON 1920, 4-cylinder, disc, speedometer, lamps, handsome machine; £78, or exchange for lower power and cash.—43, Turnham Green Terrace, Chiswick. [6968

1920 (late) Henderson Combination de Luxe, luxurious sidecar, equipped regardless of cost; £125, or exchange.—Scott, 18, Clifton Gardens, Maida Vale, after 5 p.m. [6335

HENDERSON 10h.p. 4-cylinder Combination, clutch; £55; exchanges; good running order.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7030

1920 4-cylinder Henderson, coachbuilt, bulbous, sporting sidecar, dynamo lighting, 2 horns, Tan-Sad, tax paid, excellent condition; £130, or offer; must sell.—Junr., 126, High St., Croydon. [6098

4-CYLINDER Henderson 1920 Electrical and Side-car, hood, screen, carrier, fine outfit, trial by arrangement; no reasonable offer refused.—Hayter, "Aspenden," Manor Park Crescent, Edgware. [6089

BARKER'S Motors are agents for the luxurious 4-cyl. Hendersons; all new models at list prices supplied carry a free insurance policy against mechanical breakdown for 12 months. Spare Parts supplied. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [7088

1922 Henderson de Luxe, dynamo lighting, electric horn, full equipment, £175; Mills-Fulford Model de Luxe, bulbous back sidecar, enamelled to match, specially made to fit Henderson frame, 27× 3½in., Firestone tyre; £35; easy payments, only 4 per cent. extra.—Premier Motor Co., Aston Rd., Birmingham. [7247

### Hobart.

HOBART-VILLIERS, indistinguishable from new; bargain, £27/10.—47, Leigh Rd., East Ham. [6671

HOBART 2-stroke, lamps, and licensed for the year, nice order; £18/10.—Welford's Motors, Brighton. [6797

HOBART-VILLIERS, 1921, 2½h.p., all acces-sories, perfect condition, not ridden 500 miles; accept £28.—25, Willoughby Rd., Hampstead, N.W.3. [6329

### Humber.

£15.—Lightweight 3-speed and clutch Humber, enamel, tyres, etc., as new.—Golding, 20, Ospringe Rd., Tufnell Park. [6688

3½h.p. Humber Combination, recently overhauled; first £25 secures; 2 new tyres.—Campion, Hamilton Rd., Chorley. [6555

HUMBER 3½h.p., Bosch, B. and B., runs well, good condition, worth modernising; £8/10.—Box 9503, c/o *The Motor Cycle*.- [6907

HUMBER 4½h.p. sports model; £100; immediate delivery.—D. J. Shepherd and Co., Enfield Highway. Tel.: Waltham Cross 31. [0842

HUMBER 3½h.p., flat twin, 1917-18, large Swan sidecar, apron, guaranteed splendid condition and appearance; £79.—Cullen, 51, Harrowby Rd., Grantham. [6033

HUMBER 4½h.p. 1922, Flat Twin Sports; £100, wonderful value; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5822

HUMBER Combination 1916-17 6h.p. Flat Twin, water-cooled, 3 speeds, clutch, starter, all-chain, lamps, accessories, luggage grid, splendid condition; £70; exchanges.—63, Solon Rd., Brixton. [6466

NEW Humber Flat Twin, slightly shop soiled, 4½h.p., 3-speed clutch and kick starter, £100; also Combination, £130; easy payments.—Harrods Motor Cycle Dept. 118, Brompton Rd., London. [6363

1915 3-spced Humber, tax paid 1922, fully equipped, appearance as new, guaranteed mechanically sound; £35; exchange lightweight.—37, Arlington Rd., Surbiton. 'Phone, Kingston 1274. [6729

1920 Show model Humber, small mileage, 4½h.p. flat twin combination, Easting windscreen, speedometer, Brooks cantilever saddle, very fine machine; any trial; £85.—Jeffs, High St., East Grinstead. [6313

JULY, 1921, 4½h.p. Flat Twin Humber, De Luxe touring sidecar, ample luggage accommodation, Easting Royal, Bonniksen, Lucas horn, Brooks cantilever saddle, acetylene head, electric side tail, mechanical lubrication, powerful, silent, perfect, mileage 1,950; nearest £120.—Borrowdale, Groveland Rd., Wallasey. (D) [6053

### Indian.

1915 7-9h.p. Indian Combination, good condition; £65, offer.—97, Colyer's Lane, Erith. [5992

INDIAN, 7-9h.p., 1914, just overhauled; £40.—Shirley, 35a, Naylor Rd., Peckham, S.E. [6397

# DELIVERY GUARANTEED BEFORE EASTER

of the following

# NEW 1922 MODELS

| | |
|---|---|
| **A.J.S.,** 7 h.p., Model D Standard Combination | £175 |
| **A.J.S.,** 7 h.p., Model D Combination, with dynamo lighting | £195 |
| **ALLON,** 2½ h.p., 2-stroke, 2 speeds, clutch and kick-starter | £60 |
| **ARIEL,** 3½ h.p., Sports Model | £87 10 |
| **B.S.A.,** 4½ h.p., Model H2, all chain | £110 |
| **B.S.A.,** 4½ h.p., Model H2 Combination | £142 |
| **B.S.A.,** 4½ h.p., Model K2, chain-cum-belt | £107 |
| **B.S.A.,** 4½ h.p., Model K2 Combination | £139 |
| **B.S.A.,** 6 h.p., Model E, all chain | £132 |
| **B.S.A.,** 6 h.p., Model E Combination | £164 |
| **LEVIS,** 2½ h.p., 2 speeds, clutch, and kick-starter | £60 |
| **MATCHLESS,** 8 h.p., Model H2 Standard Combination | £170 |
| **MATCHLESS,** 8 h.p., Model H2 Combination, with dynamo lighting | £188 |
| **MATCHLESS,** 8 h.p., Model J Sports Combination, with dynamo lighting | £160 |
| **MATCHLESS,** 8 h.p., Model H 2-seater Combination, with dynamo lighting | £193 10 |
| **NEW IMPERIAL,** 2¾ h.p., Model No. 2, chain-cum-belt | £69 |
| **NEW IMPERIAL,** 2¾ h.p., Model No. 3, all chain drive | £73 |
| **N.U.T.,** 3½ h.p. Twin, Model M, chain-cum-belt | £100 |
| **N.U.T.,** 5 h.p., Model M, all chain drive | £120 |
| **RALEIGH,** 2¾ h.p., 2 speeds, clutch, and kick-starter | £68 |
| **ROYAL ENFIELD,** 8 h.p., Model 180 Standard Combination | £140 |
| **ROYAL ENFIELD,** 8 h.p., Model 190 Combination, with dynamo lighting | £158 |
| **ROYAL ENFIELD,** 2¾ h.p., Model 200 | £55 |
| **ROYAL ENFIELD,** 2¾ h.p., Model 201, with kick-starter | £57 |
| **ROYAL ENFIELD,** 2¾ h.p., Sports Model | £55 |
| **RUDGE-MULTI,** I.O.M. Model | £77 |
| **RUDGE-MULTI,** 3½ h.p., I.O.M. Model, with foot-starter | £77 |
| **TRIUMPH,** 4 h.p., Model H, chain-cum-belt | £105 |
| **TRIUMPH,** 4 h.p., Model S.D., all chain | £115 |
| **TRIUMPH,** 2¾ h.p., 2-stroke, 2 speeds | £65 |
| **ZENITH-BRADSHAW,** 3½ h.p., Model A, Gradua gear | £113 |

## LIGHT CARS.

| | |
|---|---|
| **ROVER,** 8 h.p., 2 cylinders, 3 speeds, dynamo lighting, hood, screen, spare wheel and tyre, horn, etc. | £220 |
| **BAYLISS-THOMAS,** 10 h.p., 4 cylinders, 3 speeds, dynamo lighting, hood, screen, spare wheel and tyre, horn, etc. | £315 |

# EXCHANGES AND DEFERRED PAYMENTS ARRANGED.

With each of our secondhand machines we give an exactly similar guarantee to that issued by the manufacturers when new. We shall be pleased to send you our stock list embracing the following makes:—

| | |
|---|---|
| A.J.S. | ROVER. |
| CLYNO. | RUDGE. |
| INDIAN. | VELOCETTE. |
| JAMES. | B.S.A. |
| DOUGLAS. | ROYAL ENFIELD. |

NEW IMPERIAL.

# THE EASTERN GARAGE CO.

(Official Repairers to R.A.C., A.C.U., A.A., & M.U.)

**418 ROMFORD ROAD, FOREST GATE, E.7.**

Telephone ..... 490 East Ham.
Telegrams ..... "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### Indian.

1921 Indian Scout, as new, dynamo £83.—J c/o Bradmores, 482, Harrow Rd., Paddin

KICKHAM, Stokes Croft, Bristol, Sole D Agent for Indians; unequalled service, re etc.

INDIAN 7-9h.p., 3-speed, clutch, K.S., spring f condition as new; £65 or near.—670, Ho Rd., N.

7-9h.p. Indian Combination, very good cond seen Saturday-Sunday; £75.—15, Acre Merton.

7-9h.p. Indian Racer, as new, 65 m.p.h.; £ offer.—Williams, 22, St. Martin's Rd., well, S.W.

INDIAN 4h.p. Scout Model, G.21, new ma fully guaranteed; £98.—P. J. Evans, John St., Birmingham.

1916 7-9h.p. 3-speed Indian Combination, sp order; £55.—28, Woodford Rd., Forest 'Phone: Stratford 2593.

7-9h.p. Indian 2-speed clutch Combination, 40 another clutch model single speed solo, Hankin, Alresford, Hants.

INDIAN Scout, 1921, fully equipped, new car, mileage 1,400; £87/10.—R. B. Clar Co., 7, Exhibition Rd., S.W.7.

BARGAIN at £49/10.—1919 7-9h.p. Powerpl dian, 3 speeds, clutch, kick starter, any t Smith's, 86, Chalk Farm Rd., N.W.3.

1922 Indians, immediate delivery; cash or d payments.—Brown (Indian Specialist), 3 a Parker Lane, Burnley. 'Phone, 1032.

1915 Indian 5-6h.p., sidecar for adult and splendid condition, Royal Easting, lamp spares.—15, Kelvin Av., Palmers Green.

INDIAN 1920 7-9h.p. Coachbuilt Combi spring frame, electric lighting, sporty, perfec dition, any trial; £70.—1, Priory Rd., Kew.

1920 Powerplus Indian Combination, 7,000 overhauled, sound condition, screen, etc.; —Wilkinson, 160, Shirebrook Rd., Sheffield.

1920 Powerplus Indian Combination, Mills-F sidecar, year's tax paid, equipped, perfec dition; 82 gns.—13, Vambery Rd., Plumstead.

INDIAN 1919 Powerplus Solo, 3-speed clutch start, good condition, run under 1,000. £60.—L. D., 18, Hosack Rd., Balham, S.W.17.

£75.—7-9h.p. Indian Combination, late mo speeds, clutch, and kick start, tax paid, machine, or exchange.—198, King St., Hammer

BARGAIN.—Indian Combination 7-9h.p., horn, good tyres, new sidecar, motor cycle vated last March.—Parker, 72, Enfield Rd., Cr

INDIAN Combination 1916, 2-speed, clutch, smart and genuine, overhauled; £65; or so cash.—Green, 54, Minet Av., Harlesden, Lond

INDIAN Road-racer.—7h.p., Indian, 1915, superb condition, accessories, tick over hot; 35 gns.; exchanges. — Kent's 417, Lo Southport.

INDIAN 1920 Powerplus Combination, d speedometer, windscreen, etc., tax paid; £ offers.—Colonial Motors, 104a, Finchley Rd. stead 7822.

1914 Indian, 7h.p., overhauled, gears, clutch, frame, Indian sidecar, electric lighting, speedometer, hood, screen, licensed; £50.—85, Rd., Putney.

INDIAN Combination,—June, 1920, mileage electric lighting, condition as new; £115. ager, "Cabinet" Whisky Stores, Birkbeck Rd ston, London.

INDIAN Powerplus Combination, 1918, no before 1920, electric lights, large sidec paid, splendid condition; £80.—120, Estcour Woodside, S.E.25.

1920 Indian Powerplus, spring frame, dynam ing, speedometer, splendid condition, gre gain; £70; seen Westbourne Park.—Billingsley, House, Wormley, Herts.

1920 Indian Combination 7-9h.p. Powerpl namo lighting, splendid condition; 7 exchange for Triumph or other machine and 43, Turnham Green Terrace, Chiswick.

INDIAN 1919 7-9h.p., spring frame, 3-spee starter, T.T. handlebars, new engine, sories, exceptional condition; £69/10; excha Smith's, 86, Chalk Farm Rd., N.W.1.

FOR Indians, all models, new and secondhand call, or phone us; 1921 new shop-soiled c tions, fully electrically equipped, at below n turers' cost; £140.—Jones Garage, Muswell Hil

1920 Powerplus Indian Combination, 7-9h.p Fulford sidecar, 3-speed, clutch, kick dynamo lighting, electric horn, speedometer, fi condition, 1922 tax paid; £110.—168, High S lesden, N.W.



Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Matchless.

MATCHLESS (1921) Combination, the finest turn-out on the road; dynamo lighting, Easting windscreen, spare wheel and tyre, and every conceivable accessory, cost over £275, tax paid till end of year; greatest bargain ever offered at £150.—Vanderpump, 199, Piccadilly, W.1. Gerrard 562. [6293

PARKER'S Motors, The South-West London Matchless Agents and Service Station.—1922 models at list prices. We give an insurance policy against mechanical breakdown for 12 months free. Matchless spares in stock. Open from 9 a.m. till 8 p.m.—194, Balham High Rd., S.W.12. [7085

MATCHLESS Combination Model H, 8h.p., in perfect condition, as good as new, dynamo lighting, A.G. engine, Bonniksen, speedometer, electric horn, Hiduum discs to all 4 wheels, special coachbuilt wear enamelled to match, spare bulbs, tools, pump, at £256; sacrifice, £155.—Wiggin, The Bungalow, Orton Rd., Wembley, London. [6894

MATCHLESS Combination 8h.p., M.A.G. engine, 3-speed gears, Lucas dynamo, electric lighting, Bowey speedometer, electric and bulb horns, hood, Easting windscreen, excellent condition, guaranteed mechanically perfect, fully insured, any trial given; £155. Can be seen at Mitcham Garage, 19-21, The Grade, Mitcham.—C. R. Nunn, 62, Albert Rd., Mitcham. [6495

1922 Matchless.—All models. 'Phone, Greenwich 751. Immediate delivery. Sam. E. Clapham, the agent that gets there. Why? Ask my clients the reason my sales of the popular Matchless combination increase weekly. Give Sam. E. Clapham a trial. My reputation depends upon your satisfaction. Always at your service. Cash, exchange, or easy terms. Agent for all the world's best motor cycles. See displayed advertisement, *Motor Cycling*. Note address.—Sam. E. Clapham (Motors), 27, Stockwell Rd., Greenwich, S.E.10. [5894

*Spare Parts:*

MATCHLESS Spares. Immediate delivery.—Kaye, 8, Bond St., Ealing. [7221

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Matchless spares. [5707

MATCHLESS Spares for J.A.P. or M.A.G. by return, post free.—Jones Garage, Matchless Agent, Broadway, Muswell Hill, N.10 [0808

### Maxim.

MAXIM-DALM 3h.p., 2-stroke, E.I.C. magneto, Amac carburetter, Hutchinson tyres, Albion 2-speed, complete with accessories, guaranteed new; bargain, £46/10.—224, Pentonville Rd., N.1. [6456

### Metro.

METRO-TYLER 2½h.p., 2 speeds, lamp, etc., fast; £25.—13, Reservoir Rd., Hartley, Plymouth. [6424

GENUINE Bargain.—Famous Stype Metro Tyler, 2 speeds, hardly soiled, indistinguishable from new, fully licensed, Klaxon, real Easter bargain; 39 gns.—3, East Hill, Wandsworth. [6769

### Minerva.

£18.—Racing Minerva, dropped frame, T.T. bars, new tyres, hot stuff.—King, Egrove Farm, Oxford. [6489

£14.—4h.p. Minerva, waterproof magneto, Saxon spring forks, dropped frame, good tyres, smart, fast, reliable.—Bacon, Offington Lane, Worthing. [6443

### Mirus.

3½h.p. Twin Mirus, B. and B., Bosch, running order; £26.—23, Ondine Rd., S.E.15. [6750

### Mohawk.

MOHAWK Cycles, new or second-hand, at lowest possible prices for cash or easy payments.—Mohawk Cycle Co., Ltd., Alexandra Rd., Hornsey. [4793

### Monarch.

1920 Monarch 2¾h.p. J.A.P., 2 speeds, clutch, kick start, just overhauled, tax paid; £37/10.—Broad, 122, Maida Vale. 'Phone, Hampstead 1353. [6873

### Moto-Reve.

*Spare Parts:*

MOTO-REVE Spares for all models, also repairs, overhauls.—Motor Supply Co., Sole Concessionaires, 223A, High St., Lewisham, S.E. [9092

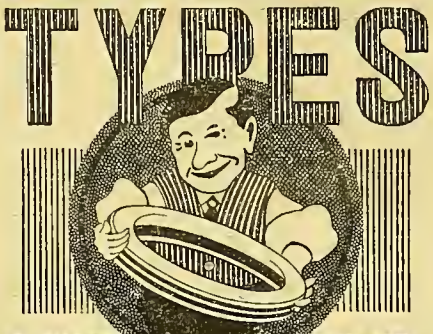
### Motosacoche.

£18.—Motosacoche, 2½h.p., tax paid, 2-speed, ride away; after 6 p.m.—Crabb, 106, Ritherdon Rd., Balham. [6308

£14, near.—2¼h.p. Motosacoche, mechanical valves, K.S., clutch, variable gear, Bosch, tax paid, ride away.—181, Newton Rd., Burton-on-Trent. [6415

### Ner-a-Car.

NER-A-CAR.—Showroom model used for demonstration only; £58/10, bargain.—Endrick, 26, Water Lane, Watford. [4616




**THE PRICE YOU PAY**
***for the price of Perfection.***

**As we shall be shortly marketing a new Motor-cycle Cover of our own design, we are anxious to dispose of our present stock of various makes at the following special prices.** ***These covers are not old W.D. stock, but special clearance lines which we have purchased at slump prices.***

| Size. | Make. | Our Price. | List Price |
|---|---|---|---|
| 24×2 | **Palmer,** ribbed | 21/- | 29/6 |
| 24×2¼ | **Clincher de Luxe,** heavy | 22/6 | 35/- |
| 26×2 | **Englebert,** Touring, rub. stud. | 15/- | 46/3 |
| 26×2¼ | **Bates,** special hvy., wired-on | 32/6 | 38/6 |
| ,, | **Bates,** special heavy beaded. | 28/6 | 40/- |
| ,, | **Dunlop,** heavy rub. stud. | 28/6 | 37/3 |
| ,, | **Clincher de Luxe,** heavy | 24/6 | 35/0 |
| ,, | **Hutchinson,** T.T., rub. stud. | 23/- | 36/6 |
| ,, | **Wood - Milne** or **Spencer Moulton,** extra heavy | 22/6 | 50/- |
| ,, | **Englebert,** Touring, rub. stud. | 15/- | 49/- |
| ,, | **Wood-Milne** special heavy | 13/6 | 53/9 |
| 26×2⅜ | **Dunlop,** heavy, rubber stud. | 29/6 | 41/6 |
| ,, | **Avon,** Tricar, rubber stud. | 26/- | 40/3 |
| ,, | **Hutchinson,** rubber stud. | 25/- | 49/6 |
| ,, | **Clincher de Luxe,** ex. heavy | 24/6 | 47/6 |
| 26×2½ / ×2¼ | **Clincher de Luxe,** ex heavy | 39/6 | 49/- |
| ,, | **Heavy,** rubber studded | 27/6 | — |
| 26×2½ | **Goodrich,** safety tread | 40/- | 52/6 |
| ,, | **Bates,** special heavy | 29/6 | 56/- |
| ,, | **Clincher de Luxe,** heavy | 25/- | 28/3 |
| *26×3 | **Elite,** extra heavy, 3-rib | 56/- | 66/- |
| ,, | **Englebert,** Passenger, rub. std. * Fits 650×65 rims. | 32/6 | 64/9 |
| 28×2¾ | **Goodyear,** rubber nonskid | 35/- | — |
| 28×3 | **Goodrich,** safety tread | 48/- | 65/- |
| ,, | **Englebert,** Racing, ex. heavy | 36/6 | 70/6 |
| ,, | **Elite,** grooved retreads | 17/6 | — |
| 650 65 | **Goodrich,** safety tread | 40/- | 67/6 |
| ,, | **Clincher de Luxe,** ex. heavy | 30/- | 64/6 |
| ,, | **Soly,** rubber nonskid | 21/6 | 63/- |
| 700 80 | **Goodrich,** safety tread | 48/- | 69/- |

**BELTS** IN STANDARD LENGTHS

| | ½ in. | ¾ in. | 1 in. | 1½ in. |
|---|---|---|---|---|
| Bates Avon etc., per foot | 1/- | 1/5 | 1/9 | 2/- 2/6 |

**These Special Clearance Lines are sent on 7 days' Approval against remittance. CARRIAGE PAID.**

**TUBES** BEST QUALITY GUARANTEED.

| | | | | | |
|---|---|---|---|---|---|
| 24 × 2, | 4/9 | 26 × 2¼, | 5/3 | 26×2½, | 5/6 |
| 26 × 2, | 4/9 | 23 × 2½ / × 2¼ | 5/6 | 29×3, | 6/- |
| 26 × 2½, | 5/- | | | 700×80, | 6/- |

Post 9d.

YOU CANNOT BUY FROM A BETTER FIRM

ORDER THE ELITE WAY

LONDON'S LEADING TYRE HOUSE.

PHONE: Victoria 6553 & 6554. 264-66, VAUXHALL BRIDGE Rd. LONDON. S.W. 6 AT 44, SURBITON Rd. KINGSTON-ON-THAMES. Please address all orders to Vauxhall Bridge Rd. PHONE: Kingston 3355.

Hours of Business—9 till 6; Sat., 9 till 1.

*Steele*

## MOTOR CYCLES FOR SALE.

### Ner-a-Car.

NER-A-CAR in stock; 66 gns.—Taylor's Garage, Wednesbury. [6725

### New Hudson.

4h.p. 1916 New Hudson, 3-speed clutch, coachbuilt sidecar, perfect order; £45.—Hankin, Alresford, Hants. [6763

NEW HUDSON, 1920, Lightweight de Luxe, mileage 700, as new; £37.—66, Alfriston Rd., Clapham Common. [7110

DAN GUY, Weymouth.—New Hudson 1919 Combination, fitted with Lucas lighting, guaranteed condition; £70. [6322

1914 New Hudson 6h.p. Combination, Bosch, K.S., 2 spare tyres; £37/10 for quick sale.—13, Hamilton Rd., Reading. [6429

NEW Hudson, 1919, 2-speed, 2-stroke, specially tuned, new tyre; £32.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7199

1919 New Hudson Combination 4h.p., licensed, insured, very comfortable sidecar, Easting, splendid condition, cheap; £65.—168, High St., Uxbridge. [6178

NEW HUDSON 5-6h.p., 3-speed, coachbuilt sidecar, hood, windscreen, electric light, splendid running order; £45, bargain.—J. Ragsdale, 182, Stockwell Rd., Brixton, S.W. [6065

NEW HUDSON 3½h.p., 3-speed countershaft combination, exceptionally fine condition; £65; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7043

£48.—New Hudson Combination 5-6h.p. Twin, Sturmey countershaft, 3-speed, clutch, kick starter, 1921 Amac, cancelet sidecar, lamps, accessories, splendid condition; exchanges.—63, Solon Rd., Brixton. [6467

1922.—New Hudson 4½h.p. Combinations, £125; 2¼h.p. 2-speed Popular, £50; 2¼h.p. De Luxe, 2-speed, clutch, kick starter, £63. Sole agents for Cambridge district.—Wallis and Easton, 104, Mill Rd., Cambridge. [0824

NEW HUDSON 1922.—2-Speed lightweight, £50; 2-speed, clutch, kick starter, all-chain drive, £63; 4½h.p., all chain, 3-speed, combination, £125; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5824

### New Imperial.

NEW IMPERIAL Combination 5-6h.p., a beautiful turnout; £80.—Bunting's Exchange, Wealdstone. [7058

1920 New Imperial-Jap Combination, as new; any trial; £85.—24, Balliol Rd., North Kensington. [6508

SHEFFIELD Agent for New Imperial Motor Cycles; all models in stock.—J. A. Stacey, Ecclesall Rd., Sheffield. [0813

NEW IMPERIAL 2½h.p., 2-speed, clutch, K.S., fully equipped, lamps, speedometer, etc.; £35.—Fairlight, Brookwood. [6850

NEW IMPERIAL, all models.—Immediate delivery; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1952

NEW IMPERIAL-J.A.P. 2¾h.p., 1916, 2-speed, nearly new Dunlop tyres and belt; £32.—G. Mitchell, Rose Cott., Balcombe. [6595

NEW IMPERIAL 1920 6h.p. Combination, large roomy sidecar, fully equipped; sacrifice, £70.—Allin, 12, Bridge St., Cambridge. [4780

1917-18 New Imperial-Jap, 2¾h.p., 2-speed, completely re-enamelled, new tyres, equipped; 36 gns.—14, Goodmayes-av., Ilford. [6344

BRAND new 1922 unused 2¾h.p. New Imperial-Jap, 2-speed, K.S., etc.; deliberate sacrifice, 55 gns.—Ramsden's, May Bell Avenue, Blackpool. [6153

NEW IMPERIAL.—Immediate delivery of 1922 models. Cash! Exchanges! Easy payments!—P. J. Evans, John Bright St., Birmingham. [6302

1921 2¾h.p. New Imperial, 2-speed, clutch, k.s., all on, Tan-Sad, only done 250; £55.—Write, Jackson, 268, Amesbury-av., Streatham Hill. [6346

1920 New Imperial 2¾h.p., 2-speed, clutch, K.S., completely equipped, 45 m.p.h., 120 m.p.g., guaranteed; £48, offer.—Bradbrooke, Bletchley. (P) [6392

2¾h.p. New Imperial-Jap 1919 (unverified), overhauled, perfect order, appointment; £35.—Ashby, c/o Chambers, Betsham, Southfleet, Gravesend. [6374

NEW IMPERIAL 1922; Models 1, £63, and 2, £69, in stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0069

NEW IMPERIAL-J.A.P. 6-8h.p., B.S.A. sidecar, not done 3,000 miles, guaranteed perfect, everything on, tax paid, beautiful condition; £100.—207, Railton Rd., Herne Hill. [6030

NEW IMPERIAL 1922.—The Plus One sidecar body fitted to the 8h.p. model is the cheapest family outfit; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5825

## MOTOR CYCLES FOR SALE.

### New Imperial.

8h.p. New Imperial, Sunbeam sidecar, screen, hood, speedometer, electric lamps, spare tyres, tubes, etc., mileage 6,000, perfect; £95, offer. — Simmons, 14a, North Rd., Richmond, S.W. [6667

1922 New Imperial actnally in stock for immediate delivery; Model No. 2, £69; Model No. 3,—£73; 8h.p. Combination, £145; easy payments, 4 per cent. extra.—Premier Motor Co., Aston Rd., Birmingham. [7251

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All New Imperial parts in stock; no waiting. [4949

### New Ryder.

2¾h.p. New Ryder, 1916, 2-speed; £26.—Gill, 51, Nassington Rd., Hampstead, N.W.3. [6679a

### New Scale.

BRAND new New Scale, unregistered, fitted famous 3½h.p. Precision engine, 2-speed, clutch, and K.S.; £57/10.—J. J. Crawford, Harvey St., Consett. [6090

1922 3½h.p. New Scale, sidecar, Beardmore-Precision engine, automatic lubrication, 2-speed, clutch, kick starter, the whole combination is absolutely new, owner must realise, unregistered; £65.—Railton, 47, South King St., Manchester. City 2417. [6919

### Norton.

PREMIER Motor Co. for 1922 Nortons:

NO. 9, 3½h.p., belt drive, £80; 16H 3-speed T.T. £115; Big 4, 3-speed, £120; easy payments 4% extra.—Immediate delivery from the Norton Specialists: The Premier Motor Co., Aston Rd., Birmingham. [0625

NORTON 3½h.p., just overhauled; £35.—Howes, 5, The Terrace, Bray, Berks. [6464

NORTONS.—All models. If you require one that pulls, try Gibb, Gloucester. 'Phone: 852. [8125

NORTONS, 1922.—Immediate deliveries of all models.—Clifford Motories, Eastwood, Notts. [8828

DAN GUY, Weymouth.—Norton 1921, absolutely new, Big Four Combination, fitted De Luxe sidecar, oversize tyres, sacrifice; £130.

ABSOLUTELY new 1921 Sports Model, 17C, oversize tyres, to clear, £98/10. [0821

HALIFAX.—Norton 1922 models. Note Brooklands record.—Halifax Motor Exchange, Horton St., Halifax. [6981

1920 3½h.p., single gear T.T. Norton, accessories, perfect condition; £60.—Premier Motor Co., Aston Rd., Birmingham. [7252

1921 Big Four Norton, sporting sidecar, electric lighting, windscreen, 2,000 miles; £120.—Brook, Didsbnry College, Manchester. [6609

1921 Colonial Model 3½h.p. Norton, fully equipped, very fast, condition as good as new; £85; after 4 p.m.—4, Elm Gardens, Hammersmith. [7145

NORTON 1921 16H 3½h.p., 3-speed, sporting combination, absolutely as new; 110 gns.; would exchange.—37, Elmbank Gardens, Barnes. [6629

LATE 1919 Big 4 Norton, 3-speed, fully equipped, 74 gns.; with Canoelet sporting sidecar, 83 gns.—35, Shepherd's Bush Rd., Hammersmith. [6853

LONGMAN Bros., Bond St., Ealing, Official Norton District Agents, immediate delivery; cash, exchange, or deferred payments, at 4% extra. [4487

BROOKLAND Special Norton, late 1916, large lamps, Klaxon, knee grips, guaranteed perfect; reasonable offer accepted.—Green, Grocer, Reigate. [6497

WAUCHOPE'S, 9, Shoe Lane, London.—Norton 3½h.p. Brooklands racing model, £57/10, 1920; also 1921 B.R.S. model, licence paid; offers. [6995

NORTON Big 4, Rear Stand, footboards, chain guards, Bluemel's windscreen, and rubber grips, good second-hand.—Charles Osborne, 264, Main Rd., Darnall, Sheffield. [4606

AUGUST, 1920, Four Norton, sidecar, scuttle dash, V screen, all accessories, spares, oversize tyres, legshields, pillion, any severe trial; 100 gns.—36, Meadway, Gidea Park, Essex. [7128

1921 Norton 16H, speedometer, lamps, new October small mileage, specially tuned; £95; exchange for Triumph and cash.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [6872

UNIQUE Opportunity to speedmen and others, 1921 3½h.p. Norton, special competition model, fitted Ricardo racing piston and close ratio 3-speed gear box, in new condition throughout, winner of many prizes in open competitions; 95 gns. or near offer for quick sale.—Joseph Hackney, Wolvey, Hinckley. [6103

TUCKERS', Redcliffe Hill, Bristol.—Big Four Norton and family sidecar, £154; 16H sports model, £115 (tuned for competition work); T.T. 3½h.p., £80, finest value in the trade; all machines delivered carriage paid from stock to any address in England.—G. H. Tucker, Norton Rider Agent and Specialist. 'Phone: 4042. [5207

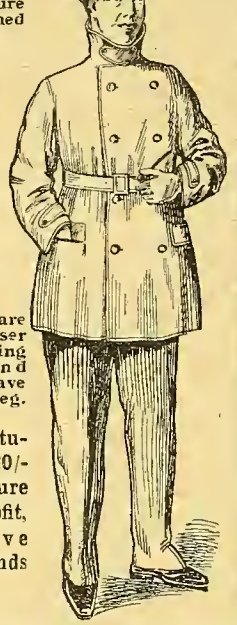

MANUFACTURERS' STOCK

MAKINKOT BRAND

*TO BE CLEARED.*

Fawn double texture, interlined rubber,

MOTOR SUITS



THESE suits are made of Fawn double texture cloth, interlined rubber.

The seams are cemented, sewn and taped, making these absolutely waterproof

Will stand any amount of hard wear.

The jackets are made double-breasted, with belts and wind cuffs.

The overalls are made on the trouser pattern, fastening with clips and straps, and have wind gussets in leg.

These suits actually cost over 30/- to manufacture without any profit, but we have several thousands to clear.

Every suit is guaranteed absolutely waterproof, and should these not meet entirely with your approval, we guarantee to return your money in full, if returned within seven days.

SPECIAL PRICE,

29/11 Carriage 1/- extra.

We have also several thousands, heavy Twill Suits to offer. These are made of the heavy Twill used for making Motor Hoods, and are one of the finest suits made for motor cycling, interlined rubber. They are made with sewn and cemented seams, and taped, also the seams of these suits are striped, making these garments absolutely waterproof, and we are prepared to give a guarantee that these are absolutely impossible for water to penetrate through. The overalls are made in the same way with wind gussets, fastening with clips and straps. The Suits are in sizes 34, 36, 38, 40, 42 and 44 chest, lengths inside leg are 27, 29, 31. Please state when ordering by post, measurements of chest, length inside.

50/- Carriage 1/- extra.

Orders to be addressed—

*The* LANCASHIRE and CHESHIRE RUBBER Co.

MAKINKOT HOUSE,

30, Thomas Street,

LIVERPOOL.

'Phone 4891 Bank, Liverpool.


## MOTOR CYCLES FOR SALE.

### Norton.

NORTON 4h.p. Special Royal Blue Combinati July, 1920, dickey seat, dash, Triplex scre legshields, engine overhauled works; £106.—Sm "Westhaven," Broad Rd., Acocks Green. [5

IDENTICAL machine referred to in testimonial serted Norton Motors, *Motor Cycling*, Ma 8th, 1921, 17C. Norton, 3-speed, picked engine, 1 Utility 2-gallon tank, 650×65 tyres; £90.—Wils Oakfield, Rugby. [6

NORTON 1921 16H, delivered July, little mile speedometer, lamps, Bosch magneto, copper haust, splendid condition, tax paid; any trial; no offers.—Colonial Motors, 104a, Finchley Hampstead 7822. [7

1921 Norton H16, Montgomery sports sidecar, f equipped, maximum hand speedometer, licen for year, excellent mechanical condition; £107; changes or deferred.—Edwards, 50, Harrington South Kensington. [7

A REAL Bargain, 1921 Big Four Norton Combi tion, complete with all lamps, Easting scre spare long plated exhaust, etc., guaranteed per condition in every way, only run 2,000 miles; barg £115, no offers.—Brown, 71, Higher Albert Chesterfield. [6

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., C bridge.—Complete Norton list post free; supplied. [4

### N.S.U.

N.S.U., in good running condition; £17.—Apply to 6 p.m., 31, Rodwell Rd., E. Dulwich. [5

### N.U.T.

6h.p. N.U.T. Combination, 3 speeds, clutch; or exchange.—198, King St., Hammersmith. [6

1920 (October) Standard N.U.T. 3½h.p., lac Brooks cantilever excellent condition; £8 Boulton, Saffron Walden. [6

1921 5h.p. N.U.T. Corobination, Lucas Magdy electric horn, speedometer, Grindlay sport sidecar, splendid condition, seen Bristol district; £1 —Lieut. James, H.M.S. Warwick Devonport. [5

### O.K.

1915 2¾h.p. O.K., 2-speed, in good running or £23.—Carnforth Motor Co., Carnforth. [5

2½h.p. O.K., 2-speed, practically new engine, fectly good; 33 gns.—Hankin, Alresford, Ha [6

1921 O.K. 2½h.p., 2-speed, all on, oct done 1,0 £40, no offers.—28, Beaufoy Rd., Tottenh N.17. [6

1921 (November) O.K. Junior, all on, mileage 4 perfect condition; £33.—"Newport," Woodbe Way, North Finchley. [6

OXFORD O.K. Agency.—1922 models in stock; to 92 gns.; gradnal payments arranged.—27 38, Cowley Rd., Oxford. Tel.: 870. [5

2½h.p. O.K., single speed, demonstration mo ridden about 500 miles, complete with la tax paid; £35.—Hankin, Alresford, Hants. [6

O.K. Juniors.—We have Mark IX., X., XI. new 1 models in stock at greatly reduced price Eagles and Co., 275, High St., Acton, London. [7

1919 O.K. Junior, 2½h.p., 2-speed, stored 1 y overhauled, excellent condition, pillion, all £35. Offers.—Duggan, 9A, Belsize-parade, Bel Park, N.W.3. [6

£12 down and 50/- monthly buys immediate deliv of O.K.-Junior; simple and reliable; best va in trade for beginners.—Frank Whitworth, 139, St., Birmingham. [2

### Omega.

OMEGA-J.A.P. 2¾h.p., 1920, 2-speed, K.S., clut engine thoroughly overhauled, new valves, tapp guides, rings, etc.; best offer.—Williams, North E Felstead. [6

1919 2¾h.p. Omega-Jap, 2 speeds, lamp sets horn, good tyres, in nice running order appearance; £40.—Walbro Motorcycle Co., Saff Walden. 'Phone: 45. [7

1920 Omega-Jap, 2¾h.p., 2-speed, clutch, k starter, lamps, accessories, perfect condit throughout, mileage 1,800; £47/10. — 12, Portl Avenue, Stamford Hill, N.16. [7

OMEGA 1922 Models; prices from £39/10. W for catalogue, London Motors, 61, Holborn duct, E.C.1. Your old machine taken in part ment, for cash, or on deferred terms.

OMEGA 1922 Models for earliest deliveries. W London Motors, 61, Holborn Viaduct, E. Sole distributing agents for:—Norfolk, Northamp shire, Huntingdonshire, Cambridgeshire, Hampsh Rutlandshire, Bedfordshire, Berkshire, Buckingh shire, Oxfordshire, Suffolk, Essex, Hertfordshire, sex, Surrey, Kent (with the exception of 20 m radius of London). [7

### P. and M.

P. and M. late Combination, good order; £35. Springfield Park Crescent, Catford, S.E.6. [6

## MOTOR CYCLES FOR SALE.

### Rudge.

DGE-MULTI 1921 (June), lamps, Klaxon, fully sured; £60 or offer.—349, Essex Rd., N.1. [6223

DGE 1914 3½h.p., clutch, good going order; £30.—Evans, Draper, Harlington, Middlesex. [5974

2 I.O.M. Rudge-Multi from stock; £77; exchanges.—Kent's, 417, Lord St., Southport. [6713

4 3½h.p. Rudge-Multi, all on, tax paid, climb anything; £40.—218, Croydon Rd., Caterham. [6348

Rudge, electric lamps, discs, perfect; £40, or exchange for sidecar machine.—Mulley, Builder, ag. [6742

.p. Rudge-Multi Combination, good order; £80; any examination.—Tyler, Scalford Rd., Melton ray. [6620

DGE-MULTI 1920, little used, tax paid, fully equipped; £51.—Cope, 15, Upper Hagley Rd., ngham. [6529

DGE-MULTI, 11 months old, as new, fully equipped, tax paid; £54.—Cope, 15, Upper Hagley Birmingham. [6530

22 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, ell Hill, N.10. [0791

TE 1914 3½h.p. Rudge-Multi, overhauled by makers; £25; wicker sidecar, £3.—Comyns, ist, Carshalton. [6676

.7 3½h.p. Rudge-Multi Combination, lamps, horn and hood, in first-class condition; £50.—nes Rd., Acton. [6319

DGE 3½h.p. Combination; £58.—Newnham Motor Co., 223, Hammersmith Rd., W.6. e: Hammersmith 80. [7032

..p. Rudge-Multi Combination, good order, Canceet sidecar, electric light; £50.—Beal, 149, Rd., Brighton, Sussex. [5909

DGE 7-9h.p. Twin 1920, with Mills-Fulford De uxe sidecar, speedometer, etc.; £90.—Ratcliffe 200, Gt. Portland St., W. [7049

..p. 1921 Rudge-Multi, touring sidecar, tax and insurance paid, all on, small mileage; £90.—rds, 77, Rotherfield St., N.1. [6157

21 I.O.M. Rudge, low mileage, lamps, horn, spare belt, knee grips, insurance; £60.—" Home-" Shrewsbury Lane, Woolwich. [5930

20 I.O.M. Rudge-Multi, Lucas accessories, mileage 2,000, perfect condition; £60.—Premier r Co., Aston Rd., Birmingham. [7255

DGE-MULTI, fast sporting model, complete with lamps, horn, speedometer; £35; baigain.—St. s House, Holbrook Lane, Coventry. [6669

'DGE-MULTI, 3½h.p., 1921, 3,000 miles, no breakdown, speedometer, pumps, etc; nearest offer -Bucknall, Shotwick Aerodrome, Chester. [6522

DGE-MULTI 3½h.p. 1919 Combination, original yres, electric light; any trial; £55, no offers, ll solo.—6, Eversholt St., Camden Town. [6393

21 (October) Rudge-Multi and sporting sidecar, all accessories, tax paid, as new, any trial; £60. Swaton Rd., Bow. Tele.: E. 3155. [7148

DGE 1921 3½h.p. Multi, in splendid condition; £55, a real bargain.—W. E. Line, late Coppen , 89, Gt. Portland St. Langham 1601. [5831

17 Rudge-Multi 5.6h.p., with Rudge sidecar, excellent condition, tax paid, seen by appoint-; £60.—Cooper, 28, Birch Grove, Acton, W.3. [6219

DGE-MULTI 1922 I.O.M. T.T. model in stock; iew price, £77.—Elce, Ltd., 15-16, Bishopsgate ue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0071

21 Rudge-Multi, I.O.M., clutch, starter, fully equipped, licensed, brand new condition; £55. Canterbury Rd., Balls Pond Rd., Dalston, N.1. [7158

'DGE-MULTI 3½h.p. I.O.M., specially finished deep red, ridden 3,000 miles, unscratched; 48 -Hare, 21, Mostyn Gardens, Kensal Rise, N.W.10. [6665

20 Rudge Multi Combination, 5-6h.p., fully equipped, original tyres, equal new; £90.— , Lower House, Clunton, Aston-on-Clun. [7182

'DGE 1922 3½h.p., I.O.M. model, in stock for immediate delivery; £77.—Newnham Motor Co., Hammersmith Rd., W.6. 'Phone: Hammersmith [7017

GNS.—1920 3½h.p. I.O.M. Rudge-Multi, speedometer, lamps, licensed, excellent con-n.—Remington, Chalet, Sanderstead Hill, Croy- [6357

22 Rudge, ridden from depot few days ago, owner unfit, fully taxed and insured, lamps, r's guarantee; £75.—51, Upper Richmond Rd., ney. [6323

21 Rudge-Multi I.O.M., fully equipped, insured to September, as new; £60; with splendid sidecar, —" Crys-Pal " Garage, 86, Church Rd., Upper wood, S.E.19. [6783


# WATCH THIS COLUMN
EVERY WEEK FOR
# BANCROFTIAN CO.'S BARGAINS.

**Advertisers in "The Motor Cycle" from its first publication.**

**TYRES.**—Manufacturers' clearance stocks, not W.D. Although clearance they are new and perfect. Wood-Milne extra heavy 4 ply, 650×65, **27/6**. 26×2½ combination, **35/-**; All clean and wrapped in original packing. Macintoch 28×3 rubber non-skid heavy W.D. in original packing, quite fresh, price **39/-**. Pedley 26×2½, 3-ribbed, **25/-**. Hutchinson 26×2⅜ heavy T.T. **27/6**; Passenger 26×2½ for 2½ **39/6**. 700×80 to fit 650×65 small car heavy **49/6**. 24×2 T.T. heavy **25/-**, extra heavy 3 ribbed 700×65 or 750×65 for American machines **35/-**. 650×65 steel studded car type, **65/-**, original, £6 6s. Firestone 20×2, Auto wheel, **21/-**; original, 45/-. Tube, **6/6**. Palmer 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½, cord, **42/-**. Oylers 650×65 ribbed square tread, heavy, in original packing, **27/6**; original, 45/-. Clincher de Luxe, very heavy, 28×2, **32/6**; 26×2½, **37/6**; 26×2, Junior de Luxe, **22/6**; 26×1¾, **17/6**. Dreadnought Passenger A. Won 28×3, **45/-**. Hutchinson wired edge covers, 26×2½ and 26×2¼, **30/-** each.

**TUBES.**—24×2¼, **4/6**; 24×2, **4/6**; 26×2½, **5/6**; 26×2¼, **5/9**; 26×2⅜, **6/6**; 28×3, extra heavy, **7/6**; 700×80, **7/6**.

**BELTS.**—Clincher clearance line, new, not W.D. ¾", 6' 6", **8/6**; ¾", 7' 6", **12/3**; 8' 6", **14/-**; 1", 7' 6", **16/-**; 8', **17/-**; 1¼", 7', **18/-**; 8', **20/6**; 8' 6", **21/6**; Bates short lengths, ¾", 5', **4/6**; 5' 6", **5/-**; ¾", 4' 6", **5/-**; 5', **5/-**; 5' 6", **5/6**; 1", 4' 6", **6/3**; 5', **7/-**; 5' 6", **7/9**; leather belts, ¾" at **2/6** per foot; belt fasteners, **9d.** and **1/-**.

**SPEEDOMETERS.**—Cowey with trip, **£4 19s. 6d.**; Stewart with trip (£6 6s. model), **£4 15s.**; Jones with trip, **£3 17s. 6d.**; all unused and perfect. All speedometer replacements in stock.

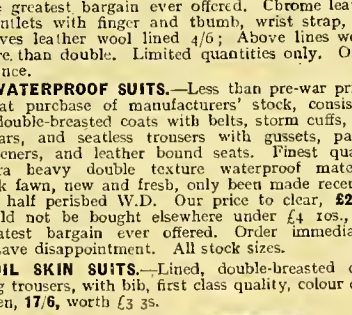
**TAN SADS,** with back seat **28/6,** original price 57/-; only limited quantity.

**GOGGLES.**—Genuine Triplex, 45/- model, **10/6**; 25/- model, **9/6**. They are new and perfect.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined 7/11; lined 10/6; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, 3/6, Gloves leather wool lined 4/6; Above lines worth more than double. Limited quantities only. Order at once.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coats with belts, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality extra heavy double texture waterproof material, dark fawn, new and fresh, only been made recently, not half perished W.D. Our price to clear, **£2 2s.** Could not be bought elsewhere under £4 10s., the greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**OIL SKIN SUITS.**—Lined, double-breasted coat, long trousers, with bib, first class quality, colour dark green, **17/6**, worth £3 3s.



Reliable Electric Motor Cycle Horn as illustrated, complete with wire and switch, 15/6, postage 1/3. Usual 29/6.

We can supply everything for the motor cyclist at competitive prices. Ou al ab ive goods carriage extra.

**BANCROFTIAN CO.,**
**78, BISHOPSGATE, LONDON. E.C.**
Grams "Chaikel, London." Phone: London Wall 9897


## MOTOR CYCLES FOR SALE.

### Rudge.

RUDGE, 1912, clutch, lamps, horn, knee grips, spare tyre, etc., new tyres, completely overhauled, excellent appearance, mechanically perfect, fast; 24 gns.—74, Victoria Rd., Stretford, Manchester. [6445

RUDGE 1922.—All models of this popular mount. The 3½h.p. Multi at £77 is competitive with anything in its class; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5830

RUDGE-MULTI 1921 Combination 5-6h.p., Tan-Sad, Easting Royal screen, W.S.R. jet, done about 2,000 miles, just fitted new exhaust valve and piston ring, ride 50 miles to certain buyer; £110; East Herts district.—Write, F. M., c/o Vickers, 5, Nicholas Lane, E.C.4. [6062

1916 6-8h.p. Rudge-Multi, just fitted following new parts:—Cylinder, piston, connecting rod, crank pin, all engine bearings, silencer, foot-rests, 1 new tyre, other in good condition, Triumph bars, very powerful, fast, enamel indifferent; £38, offer.—Parham, Norrington, Salisbury. [6031

5-6h.p. Rudge-Multi Combination, 1919-1920, just overhauled by Rudge, new piston, etc., hood, windscreen, legshields, Tan-Sad complete, speedometer, lamps, tax paid for 1922, insured, 4 gallons of Shell oil, 8 lbs. of carbide, 3 new tyres, back oversize, 1 spare cover and tube; best offer over £80; seen any time.—J. E. Rogers, Flint Wall Cottage, Farnham Royal, Slough. [5922

*Spare Parts:*

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Rudge spares. [5710

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3163

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Rudge parts in stock; illustrated list post free. [4951

### Scott.

JOHN R. KINSEY and Co., Ltd., Croydon, for Scotts. [6884

SCOTT Squirrel Combination or Solo in stock.—Pilling, Rock St., Bury. [6244

25 GNS.—Scott, 2-speed, K.S., smart little bus.—Claremont Garage, Blackpool. [6150

WAUCHOPE'S, 9, Shoe Lane, London.—3¾h.p. Scott and sidecar, 1914-15 model; £45. [6993

SCOTT Service Depôt, 99, Great George St., Liverpool.—Scott motor cycles. Scott Sociables. [5438

SCOTTS, either model, West of England Agent is Gibb, 100, Northgate, Gloucester. 'Phone: 852. [8126

1922 Scott Models in stock, complete; £110; delivered free.—Millard's, Scott Agents, Chesterfield. [4276

F.O.C.H. for a 1920 Scott, brand new condition; also 1914 combination.—5, Heath St., Hampstead. (Near Tube.) [4927

SCOTT Combination in first-rate condition, with lamps, tools, and luggage carrier; £45.—Stanbridge, Cranbrook. [5754

£29.—1914 Scott, 2 speeds, clutch, new oversize tyres, lamp, tax paid, ride away.—Ewers, Newton Rd., Burton-on-Trent. [6416

SCOTT 3½h.p. 1920 model, now at works being overhauled by makers; what offers; must sell.—Harding, Glenfarne, Co. Leitrim. [5393

SCOTT Sports, 1921, July, mileage 1,500, lamp, generator, 1922 type oiling, appearance as new; £85.—16, Grecian Rd., Tunbridge Wells. [6342

1920 Scott Combination, lamps, horn, Easting, windscreen, in fine condition, ready to ride away; £85.—Bolton, 2, Rodney St., Wigan. [6024

SCOTT 3¾h.p., newly overhauled, guaranteed in perfect mechanical condition, K.S., Binks; £45.—Haworth, 73, Scotland Rd., Nelson, Lancs. [6102

SUPERB 1919-20 Scott Combination, Suzanne maroon and nickel finish, Lucas accessories; 80 gns.; exchanges.—Kent's, 417, Lord St., Southport. [6709

SCOTT Combination, electric horn, dynamo lighting, speedometer, almost as new, run only 3,125 miles; £115.—J. S. Horsfall, Motor Engineer, Nelson. [6072

1914 Scott and sidecar, engine bushed, new chains and sprockets, plated and enamelled by Scott Co., new 3in. tyre; £55.—Bridge, Henfold, Tyldesley. [5964

SCOTT and Sidecar, late 1920, 2,000 miles, condition first-class; all tools, accessories, and spares (including tyres); £110.—Mirrey, Sunderland Rd., East Boldon, near Sunderland. [6741

SCOTT Combination (July, 1919), electric lamps, horn, overhauls, etc.; owner giving up riding; will ride 50 miles to genuine offer; privately owned; £92.—King St. Garage, Watford. [5927

1920 3¾h.p. Scott Combination, as new, mileage under 1,000, complete with Miller lamps, tool kit, and Cowey horn, licensed December, 1922; what offers?—Partridge, Flour Mills, Pershore. [6132

## MOTOR CYCLES FOR SALE.

### Scott.

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8352

SCOTTS.—All models in stock. I can quote you promptly for anything in the Scott line. Overhauling and tuning a speciality.—Taylor, Scott Specialist, 74, Stony Lane, Smethwick, Birmingham. [7271

SCOTT 1920, kick starter, Klaxon horn and all accessories, disc wheels, in perfect running order; 62 gns.—The Lancaster Motor Co., 158, Norwood Rd., West Norwood, S.E.27. 'Phone: Streatham 2541. [5982

SCOTT Squirrel, January, 1922, picked engine, standard mudguard, carrier, perfect condition, licensed; buying Scott combination; would exchange; £95.—Williams, 2, Hermitage Rd., Upper Parkstone, Dorset. [5903

*Spare Parts:*

SCOTT Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7226

SOUTH London Scott Service Depôt.—Scott Spares: Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone 1129. [8353

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list, stating year of manufacture. [0751

### Scout.

1921 purchased, 3h.p. R.W. Scout, 2-stroke, Union engine, Albion 2-speed, E.I.C., B. and B., cost £73/10 without accessories (receipt shown), quite new, never used; accept £43, lowest, great bargain.—Write, Weaver, 11, Church Rd., Erith. [7136

### Silver Prince.

SILVER PRINCE, exceptional bargain.—New 1922 Lightweight Combination for £85, J.A.P. engine, Sturmey gear box, Brampton forks, Canoelet sidecar with screen.—Chinery, 1, Hammersmith Rd., Kensington. 'Phone: Western 4140. [5285

### Singer.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. Singer 1910, N.S.U. gear; £25. [7006

*Spare Parts:*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

### Spark.

SPARK 1922 Models, Villiers engine, flywheel magneto; £39/18; also 2-speed kick-starter models in stock; £52/10.—Eagles and Co., 275, High St., Acton, London. [7167

### Sparkbrook.

2¾h.p. Sparkbrook, 2-speed, fully equipped, like new; 38 gns.—51, Garden Avenue, Mitcham. [6226

SPARKBROOK-VILLIERS, 2-speed, lamps, horn, spares, splendid condition; £52.—73, Southlands Rd., Bromley, Kent. [6082

1921 Sparkbrook 2½h.p., 2-speed, Villiers engine, Lucas lamps, horn, College mudshield, insured, licensed; cost £68, guaranteed; £33.—40, Warley Rd., Blackpool. [6437

### Sun.

1921 Sun-Vitesse, brand new, never used; to clear, £35.—Welford's Motors, Brighton. [6796

1921 (Oct.) Sun-Vitesse, done 400 miles, full tax; 30 gns.—Kent's, 417, Lord St., Southport. [6712

SUN-J.A.P. 6h.p. Combination, splendid condition; £50, exchange.—Fairhurst, Behind 68, Standishgate, Wigan. [6616

SUN-V.T.S. 2½h.p., 2 speeds, discs, long exhaust, fully equipped and licensed, sound condition; £25.—35, Marlow Rd., Anerley, S.E.20. [6465

SUN-VITESSE 1922 2¾h.p., clutch, K.S. model, new, in stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3 'Phone: Avenue 5548. [0072

SUN-VILLIERS 1919 2¾h.p., 2-speed, new Dunlop, lamps, Klaxon; 30 guineas; appointment Saturday or Sunday.—Pearson, 14, Clanricarde Gardens, W.2. [6830

SUN-VITESSE 1920 2½h.p., 2-stroke, recently overhauled, not run over 1,000 miles, ready to ride away; owner bought car.—Apply Box 9505, c/o *The Motor Cycle*. [6905

FOR Sun, J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., 60 gns. Send for catalogues. Trade supplied.—Jones Garage, Broadway, Muswell Hill, N.10. [0790

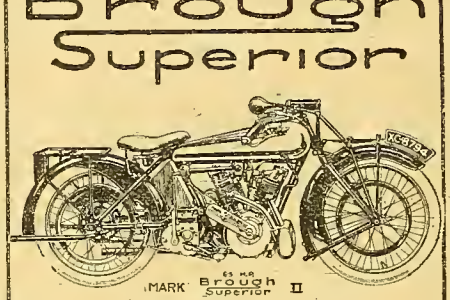
### Sunbeam.

1920 3½h.p. Sunbeam, beautiful condition; £85.—17, St. Charles Sq., W.10. [6239

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs etc. [3143


# Your new mount for the Spring must be a

# Brough Superior




**The Rolls-Royce of the Motor Cycle World. 8 h.p. the super twin, £150. 6-5 h.p. light sports model, £125. Special Brough Superior Sidecar, £30, including screen and step.**

For the Rider who studies initial outlay and economy in running costs the new improved 1922 model RADCO will make a special appeal.

Single speed ... 34 Gns.

2-speed K.S. clutch 45 Gns.

Other Agencies include—

| | |
|---|---|
| A.J.S. | Humber. |
| Ariel. | Norton. |
| Brough Superior. | Radco. |
| Excelsior. | Raleigh. |
| Harley-Davidson. | Scott. |
| Hobart. | Velocette. |
| Henley. | |

Specialities. Exchanges (full market value allowed for your present mount in part exchange). Easy terms direct with the purchaser at only 4% extra.

# Frank Hallam,

**Dalton Street,**

**And 88, Bristol Street,**

**BIRMINGHAM.**

PHONE: MID. 1472.


## MOTOR CYCLES FOR SALE.

### Sunbeam.

1919 3½h.p. Sunbeam; speedometer and all accessories; £79.—Elmes, 22, York Rd., West Norwood. [6726

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. 1919 Sunbeam Combination, £95; also Solo Sunbeam, £75. [6996

SUNBEAM 1915 3½h.p. Combination, very good order, fully equipped; £65.—Allin, 12, Bridge St., Cambridge. [4778

SUNBEAM Twin Combination, 1915-1919, exceptionally good condition; offers.—Jones, 11, Hawkshead St., Southport. [5452

1919 3½h.p. Sunbeam Combination, perfect, fully equipped, licence paid, Easting; £95.—182 Grove Rd., Balham. [5971

1919 3½h.p. Sunbeam, Lucas accessories, condition perfect; £65.—Hillier (side bell), 9, Wallingford Av., North Kensington. [6644

1921 Semi-sports Sunbeam, interchangeable wheels —£115; as new, mileage 400, tax paid, insured —247, Green Lanes, London, N. [6163

1919 Sunbeam and Brand New Sunbeam de Luxe Sidecar, unscratched; £90.—Hillier (side bell), 9, Wallingford Av., North Kensington. [6646

1915½ Sunbeam Combination, fully equipped, very little used; bargain, £77, or nearest offer.—Taylor, "Rowans," Milton Rd., Cambridge. [6386

SUNBEAM 1919 3½h.p. Combination, lamps, horn, long exhaust, sidecar re-painted, all in splendid order; £75.—Allin, 12, Bridge St., Cambridge. [4779

1921 Sunbeam Combination, 3½h.p., Lucas equipment, Cowey speedometer, like new, perfect condition; £135.—Engineer, Waterworks, Royston, Herts. [6566

1919 3½h.p. Sunbeam Combination, excellent condition, windscreen, side curtain, Cowey speedometer; £90.—Dodge, 1B, East Dulwich Rd., S.E.22. [6423

1920-21 8h.p. Sunbeam Combination, hood, screen, spare wheel, new condition; £130; electric light.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [6466

1921 (August) 3½h.p. Sunbeam Combination, standard model, windscreen, mileage 500, all accessories; £140.—Burrows, 16, Walmer Rd., Waterloo, Liverpool. [6194

SUNBEAM 1920 Combination, mechanically perfect, Cowey speedometer, mechanical horn, spares, nice condition and low mileage; bargain, £100.—269, Rye Lane, S.E. [6206

SUNBEAM 3½h.p. 1916, special engine, very fast, engine good condition, accessories, spares, comparatively small mileage; £70.—Beveridge, Pitreavie, Dunfermline. [6116

1919 Sunbeam 3½h.p. Combination, Mills-Fulford sidecar, Tan-Sad, accumulator lighting, Easing; £100 or near offer.—1, Beaumont Terrace, Glamis St., Bognor. [6106

8h.p. 1921 Sunbeam Combination, Magdyno, interchangeable spare wheels, screen, hood, speedometer, etc., excellent condition, mechanically perfect; £180.—8, Grange Rd., Ramsgate. [6046

1919 Sunbeam, 3½h.p., only run 4,500 miles, electric lighting, Bonniksen speedometer, legguards, and luggage box, engine just overhauled; £75.—E. Rotherham, 27, Spon St., Coventry. [7186

LATE 1919 8h.p. Sunbeam Combination, dynamo lighting, speedometer, electric horn, screen, spare wheel and cover, in excellent condition; bargain, £125.—Tilleys, The Esplanade, Weymouth. [6886

1921 3½h.p. Sunbeam Combination, detachable wheels and spare wheel, lamp sets and horn, and tax paid; in very nice condition; £140.—Walbro Motorcycle Co., Saffron Walden. 'Phone: 4 [721

1921 3½h.p. Sports-Sunbeam, delivered June, 1921, mileage under 2,000, fully equipped, in perfect condition, any inspection or trial; £105.—Barber, Leinster Gardens, Bayswater, London. 'Phone: Pad 4674. [597

SUNBEAM (October) 1919, 3½h.p., black and gold 3-speed, kick starter, had little use and practically indistinguishable from new, accessories; full year's tax paid; £85.—Smith's, 86, Chalk Farm Rd., N.W.1. [675

8h.p. Sunbeam Combination, August, 1920, hood screen and spare wheel, Lucas lighting set, Cowey horn, in splendid condition, mileage under 3,000, £150, or near offer.—Lloyd, Abbey View, Hexham, Northumberland. [606

1919 8h.p. Sunbeam Combination, Lucas lamps and horn, speedometer, spare wheel, windscreen, etc., condition guaranteed, £112; 1914 3½h.p., be carefully used, lamps, speedometer, Tan-Sad, £55.—"Crys-Pal" Garage, 86, Church Rd., Upper Norwood, S.E.19. [67

1921 3½h.p. Sporting Model Sunbeam Motor Cycle complete with lamp, generator, horn, and useful spares, cast aluminium plates, new in April last, and in exceptionally good condition, tyres unpunctured; near offer to £110.—Geoffrey Smith, *The Motor Cycle*, Coventry. [X42

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH, October 1919, engine 65926, 4h.p., chain-cum-belt, and Millford skiff sidecar, acetylene lamps, horn, speedometer, insured to October, 22, done 9,000 miles, in generally good condition, privately owned; £85.—Cook, Lyncroit, Mornington Road, Woodford Green. [6663

1921 Type S.D.C. Triumph-Gloria Combination, Lucas accumulator, electric lighting, Bonniksen speedometer, Lucas horn, Stirling legshields, specially picked machine, used for demonstration only; guaranteed as new throughout; £150 cash.—Premier Motor Co., Aston Rd., Birmingham. [7256

5h.p. Countershaft, entirely renovated 1922, complete with lamps and horn; £60. We have a number of 4h.p. Countershaft Triumphs from £40.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Ulse Hill, Brixton. 'Phone: Brixton 1292. (½ minute from Brixton Skating Rink.) [727

1920 Triumph-Gloria outfit, electric lights, spares, disc wheels, just delivered from makers after 5 overhaul, re-hored cylinder, oversize piston, tax paid, fully insured, any trial four up; 115 gns. or nearest offer.—Jack Wheeldon, Princess Mary's Conservescent Centre, Rednal, nr. Birmingham. [6447

1921 Triumph Combination, practically new, Lucas dynamo lighting, mechanical oiling, Dunhill angular chassis, large comfortable body, Easting, perfect condition; £100 cash secures.—S. and B. Motors, King's College Rd., Hampstead; 5 mins. Swiss Cottage, M.E.T. 'Phone: Hampstead 6782. [6826

1921 All-chain Triumph Combination, shown at Olympia, just returned from makers' complete overhaul, perfect condition and order, magdyno, Bonnik-, Easting, Lucas horn and mirror, all spares and tools, tax and insurance paid, any examination; best offer secures.—Box 9495, c/o *The Motor Cycle*. 'Phone, Chelsham 22. [6274

1918 4h.p. Triumph, 1920 Henderson sidecar, overhauled September by makers, Coventry, all worn parts replaced, sidecar has 4-point attachment, bolt 80-amp. accumulator let in seat, equipment includes Lucas electric lamps and horn, Bonniksen speedometer, Easting windscreen, college leg shields, knee grips handle-bar muffs, Tan-Sad with foot-rests, spare valves, tubes, chains, all tools, enamel and plating like new, tyres all unpunctured, 40 m.p.h., about 70 m.p.g., licensed 1922; owner guarantees combination in first-class condition in every way; £88.—Godfrey, 21, Woodland Rise, Muswell Hill, London, N.10 [6100

*Spare Parts:*

TRIUMPH Spares; immediate delivery.—Kays, 8, Bond St., Ealing. [3615

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Triumph spares. [5709

TRIUMPH Spares.—Woodrow and Co., 5-7, Castle St., Salisbury; trade supplied. [5946

HERBERT ROBINSON, Ltd., Green St., Cambridge, the Triumph experts.—Complete illustrated list post free [4953

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney 'Phone: Putney 2754. [1159

TRIUMPH Spares, large stock.—For details see Parts and Accessories column.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton [726f

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; for overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10. [0809

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and other motor cycle companies Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place,

### Velocette.

PREMIER Motor Co. for 1922 Velocettes.

IMMEDIATE delivery of Model E.2, 2-speed, £65; E.2, 3-speed, £72/10; all with clutch and kick starter; easy payments, 4 per cent. extra, carriage paid to any address.—Premier Motor Co., Aston Rd., Birmingham. [7257

1925.—Velocette 2¼h.p., 2 speeds, all-chain, accessories, splendid condition.—63, Solon Rd., Brixton. [6468

1921 Velocette, 3-speed, internal expanding brakes, unpunctured and unscratched, 140 m.p.g., lamps, horn, etc any trial; £60.—Mann, Armley, Leeds. [6044

VELOCETTE 1921, equipped, mileage 600, absolutely as new in every respect, fast and very economical; £47; would exchange combination.—18, Tilley Rd., Edgbaston, Birmingham. [6552

# OF PARTS FOR 4 H.P. DOUGLAS.

**GEAR BOX PARTS FOR 4 H.P. "DOUGLAS."**

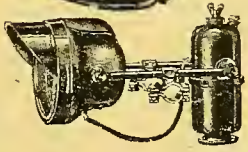
Gear Box half, Chain Side, **£1**; Pulley Side, **15/-**; Gear Box Bolts, **6d.**; Front Bolts for Clutch Arm, **4/-**; Rear Bolts for Clutch Release Arm, **5/6**; Clutch Release Bridle, **6/6**; Drawbolt complete, **3/-**; Ball Races for Back Clutch Plate, **1/-**; Ferodo Rings for Clutch, **4/6**; Clutch Screwdriver, **3/9**; Kick-start Support Arm, **4/-**; Screwed Sleeve Pinion, **9/6**; Plain Sleeve Pinion, **5/-**; Main Operating Fork, **5/8**; Bronze Forks for Operating Dog, **5/6**; Front Clutch Plate, **8/6**; Loose Clutch Plate, **5/6**; Screws for Back Plate to carry small Ball Bearings, **3d.**; Compression Springs for Clutch, **6d.**; Studs fixing Back Plate, **6d.**; Nuts for same, **2d.**; Adjustable Pulley Flange plain, **10/6**; Pulley Flange fixed to Main Shaft, **14/6**; Locking Cap for same, **4/9.**

**FRAME PARTS FOR 4 H.P. "DOUGLAS."**

Frame new, **£10**; repaired, re-enamelled and guaranteed, **£4**; Head Lug only, steel stamping, **15/-**; Y Lug for Down Tubes, **12/6**; Back Stay, straight, **7/6**; cranked, **8/-**; Fork Sides, late pattern, left or right, **15/-**; Fork Spring, **2/6**; Head Ball Races, **1/6**; Rear Stand, **7/6**; Bolt for same, **6d.**; Clip for same, **1/3**; Front Stand, **12/6**; Footboards, **12/6** per pair, complete with Clips; Front Brakes complete, **£1**; Belt Guards, **5/-**; Front Mudguard, late pattern, **17/6**; Back Mudguard, **£1 2s. 6d.**; Undershields complete with Clips, **5/-**; Front Wheel Rim, **7/6**; Back Wheel Rim, **8/6**; Belt Rim, **10/6**; Handlebars, semi T.T. pattern, **£1**; Tank only, **£3 5s.**; Carriers, **17/6**; Long armoured Toolbag, trap fastening, **11/6.**

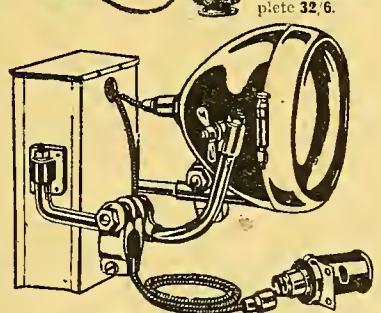
**STREAMLINE SIDECAR LAMP.**

Ebony with N.P. mounts, with special bracket to attach to sidecar body or mudguard. Price **13/3.**



**LARGE HEAD-LAMP SET.**

Of handsome and distinctive design with large capacity generator. Price complete **32/6.**



**ELECTRIC LIGHTING SET.**

Spun Brass 6 in. Head Lamp and Tubular Tail. Finish Black and Nickel. Pressed Steel Box, Accumulator, Bulbs, Wiring. Lamps fitted with independent Switch and Focus Holders.

Price complete, **£4 17 6.**

TRADE SUPPLIED.

**BURLINGTON**

**MOTOR CYCLE CO., LTD.,**

**7, South Side, CLAPHAM COMMON, S.W.4**

*'Phone: Brixton 2417. Wires: Burlington Motors, Clapham*

Just by Clapham Common Underground Station.


## MOTOR CYCLES FOR SALE.

### Velocette.

1921 Velocette, 2-speed, lamps, horn, tools, as new; £40; exchange higher power.—2, Madrid Rd., Barnes. [6624

ASTOUNDING value.—Not shop-soiled old stock but brand new 1921 Velocette models D.2, delivered from makers' works in January, latest improvements, both brakes internal expanding, 2-speed, chain drive; £55 carries makers' full guarantee; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [1985

### Verus.

4h.p. Verus, Blackburne, 3-speed, clutch, mileage 200; nearest £70.—Letters only, 87 Cathay's Terrace, Cardiff. [6737

VERUS 1920 2-speed, clutch, K.S., legshield, discs, etc.; £35; new condition.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [6460

1920 Verus 2¼h.p., 2 speeds, clutch, kick start, just overhauled, tax paid; £37/10.—Goad, 122, Maida Vale. 'Phone, Hampstead 1353. [6875

VERUS 1920 2¾h.p., Blackburne engine, Burman 2-speed, clutch and kick start; £50.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7033

1920 Verus 2¼h.p., single-speed, good as new, electric light outfit, good accessories, suit overalls (5ft. 6in.), insurance, tax paid; lot cost over £75; £45; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [1020

### Victory.

VICTORY 1920-21 2-stroke, 2-speed, clutch, kick start, lamps, horn, tools, smart appearance, take 2 anywhere, tax paid; £40, bargain.—143, Ravensbury Rd., Earlsfield, S.W.18. [5605

### Villiers.

VILLIERS 2½h.p., 2-stroke, Bosch, new Dunlop, tax paid, lamps, accessories, good running order; £28.—Kerry, 31, Thorndon, Eye, Suffolk. [6636

### Vindec.

2¾h.p. Vindec-Jap 1921, in excellent condition, for sale, or part exchange for a 4h.p. Sunbeam and sidecar, in good condition.—Box 9497, c/o *The Motor Cycle*. [6276

### Williamson.

WILLIAMSON Combination 1921 6h.p., J.A.P., Sturmey-Archer gear box, fully equipped; £90.—Cope, 15, Upper Hagley Rd., Birmingham [6533

### Wolf.

WOLF-J.A.P. 2¾h.p., nearly new, 1920, Sturmey-Archer 2-speed, clutch and kick starter, lamps, etc.—365, King St., Hammersmith. [6817

2¾h.p. Wolf, o.h.i.v., Gradua gear, new tyres, lamps, licence, perfect order, trial; £31; exchange higher power.—Wilson, Ways Green, Winsford, Cheshire. [6698

2¾h.p. Wolf-Jap, 1920, Burman 2-speed, kick starter, clutch, Cowey speedometer, Miller lamps, like new.—After 5, 30, Brechin Place, South Kensington. Tel. Ken. 6249. [6320

### Wooler.

1920 Wooler 2¾h.p., lamp, horn, aluminium footboards, just overhauled, little used; bargain, £40.—3, King's Av., Eastbourne. [6123

WOOLER 2¾h.p., new May 1921 (invoice), unused since September, accessories, perfect; accept £42.—18, Carminia Rd., Balham, S.W. [6848

£37 Bargain.—1920-1 Wooler, hardly used, licensed, spring frame, original tyres, absolutely perfect, any trial, reliable, fast, 3h.p., 9 speeds.—Parwood, 89, East Hill, Wandsworth. [6768

NEW Wooler, 2¾h.p., flat twin, Brooklands Sports model, complete with lamps and horn; reduced from £105 to £69, a bargain; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [6361

### Zenith.

ALLAN GRUZELIER, Zenith Specialist.

SPARE Parts, overhauls, new and second-hand machines.

BRAND new 1921 5h.p. Sports Models, £75; countershaft, £85.

1922 Bradshaw Models.—Belt, £113; touring chain, £119; sports, £127.

BEHIND every Zenith purchased from Allan Gruzelier, you have a specialised service. Write for particulars now, Easter is very near.—London office, Ulster Chambers, 168, Regent St. Regent 205. Workshops and showrooms, Knight and Wheatleys Garage, 4, The Pavement, Coulsdon. [6287

ZENITH 6h.p. Sports, discs, fully equipped; £44.—114, Brixton Hill. [6819

6h.p. Sporting Zenith; a bargain; £45.—14, Phœnix St., Euston, N.W.1. [6408

1922 new 3½h.p. Zenith-Bradshaw; £115.—Carnforth Motor Co., Carnforth. [5950

ZENITH 5h.p. Sports, wide tank, fast; £46; exchange.—49, Well St., Hackney. [6891

## MOTOR CYCLES FOR SALE.

### Zenith.

1922 Zenith-Bradshaw, Gradua gear, shop soiled only; £98.—Tippen, Marden, Kent. [5076

1920 Zenith 8h.p., Swan sidecar, ridden 5 months; £105.—Park Lane Garage, Waltham Cross. [6026

ZENITH-GRADUA 5h.p. Sports, fully equipped, perfect order; 48 gns.—37, Elmbank Gardens, Barnes. [6628

ZENITH 1920 8h.p. Sports, Swan sidecar, speedometer, lamps; £78.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7201

BARGAIN.—4h.p. Zenith, sporting sidecar, excellent condition, lamps, tools, etc.; £43 or nearest.—144, Clarence Rd., Wimbledon. [6224

ZENITH-BRADSHAW 1922 Models in stock; £115. Liberal exchanges.—Eagles and Co., 275, High St., Acton, London. [7169

1920 Sports Zenith 5h.p., little used, lamps, tools, spares, Tan-Sad; £90.—Mathias, 12, Townshend Terrace, Richmond, Surrey. [6259

F.O.C.H. for Zeniths, latest models in stock; also 1920 8h.p. countershaft combination.—5, Heath St., Hampstead. (Near Tube.) [49

8h.p. Sports Zenith, 1920 Henderson featherweight sidecar, mileage under 2,000, practically as new; offers.—Chattan House, Harrogate. [6231

ZENITH 8h.p. Combination, late 1920, very little used, well equipped, and equal new; bargain, £90. —Bunting's Exchange, Wealdstone. [7057

1920 2¾h.p. Zenith Flat Twin, bought August, 1921, D.A. lighting, perfect; £52/10.—Houchin, 189A, High St., Peckham S.E.15. [6434

ZENITH 1921 5h.p. Sports Models, brand new, guaranteed, few only left; 76 gns.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7202

1921 Zenith Sports 8h.p., pillion, speedometer, etc.; £80; exchange Triumph combination, 1921.—Hazell, c/o Carpenter, Holyport Rd., Fulham. [5925

1920 Zenith 8h.p., clutch, Henderson Elite sidecar, new condition, only ridden 800 miles; sacrifice £105.—Elms, 433 Brixton Rd., S.W. 'Phone, Brixton 704. [4960

1922 Zenith-Bradshaw, slightly used for a few demonstrations, indistinguishable from new, full guarantee; sacrifice, £95.—Frank Whitworth, 139, New St., Birmingham. [0711

8h.p. Zenith Combination, new Aug. 1921, insured, tax paid, hood, windscreen, Cowey, lighting, etc., excellent condition; £120.—Smith, Laburnum Cottage, Hurstmonceux, Sussex. [6040

LONGMAN Bros., Bond St., Ealing. Tel., 689.—Sole district Zenith agents, specialists in repairs and tuning. All models for immediate delivery. Cash, exchange, or deferred payments. [9909

4h.p. Zenith-Gradua Combination, in splendid order, recently overhauled, accessories, licensed 1922, ride away; £57/10.—Mealand, 23, Clarendon Rd., Putney, S.W.15. 'Phone, Western 291. [6536

1921 Zenith 6h.p Sports, done about 1,000 miles, tuned for speed Zenith specialists, electric lighting, mechanical horn, licensed; £85.—Naylor, Eaglescliff, Station Rd., Birchington. [6029

1921 Zenith Sports 5h.p., brand new and unused, maker's full guarantee, listed £110; our price 76 gns.; deferred payment or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [7239

1920 6h.p. Zenith Sporting Combination, top-hole condition throughout, electric outfit, speedometer, windscreen, all accessories, tax paid; £75.—35, Eton Av. 'Phone: Hampstead 2542. [5989

ZENITH 1920 8-10h.p., countershaft, coachbuilt sidecar, lamps, speedometer, horn, whistle, ex-competition machine, 7,000 miles only, fast sporting; £90, or best offer.—Hildacot, Hildenborough, Kent. [6131

ZENITH-BRADSHAW 1922 3½h.p., 3-speed, chain drive model in stock for immediate delivery; £119; cash or exchange.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7019

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred or exchanges.—194, Balham High Rd., S.W.12. [7084

ZENITH 1920 8h.p. Countershaft, nearly new special roomy sidecar, hood, screen, Cowey speedometer, horn, electric, gas, excellent order throughout; 98 gns.; deferred payment arranged.—10, Clarendon Rd., London, W.11. [5565

ZENITH Combination, Millford family sidecar, 1920 J.A.P. 6h.p., countershaft, kick starter, Easting windscreen, speedometer, horn, P. and H. lamps, spare belt, chains, and tyres, consumption 65 to 70, any trial; £90.—16, Burns Rd., Battersea, S.W.11. [6177

1921-22 8h.p. Zenith Combination, countershaft clutch, only ridden 900 miles, perfect condition throughout, tax fully paid, and over £20 accessories included; nearest £130 accepted.—Seen 2, Argyle St., King's Cross. 'Phone Owner, Museum 5357. 9-30—11 or 4—5. [6262


# FINCHLEY
AND
# GOLDERS GREEN

Motorists can get everything at

# MOTORIA

**15, Regent's Parade, TALLY-HO!**

SOLE DISTRICT AGENTS:
Harley-Davidson, Enfield, Rudge, Triumph, Levis, B.S.A., Calthorpe, McKenzie.

1922 MODELS IN STOCK.

*CASH, EXCHANGE OR DEFERRED PAYMENTS.*

ACCESSORIES, TOOLS, ETC.
Vast Selection in Stock.

# REPAIRS

The most up-to-date plant and most skilled labour only.

NOTHING TOO DIFFICULT.
Open till 8. Saturdays 9.



# REYS

**173, Gt. Portland Street.**
*Telephone—Langham* 1257

***Open till 7.30 w'kdays. 4 o'clock Saturdays.***

# HIRE

Motor Cycles and Combinations.
Any period from one day.

A GOOD SELECTION OF 1922
**MODELS IN STOCK**
*Easy Payments taken on New Machines, and Exchanges Entertained.*

SECOND-HAND MACHINES.
1919 **ZENITH**, sports, 6 h.p., with Sidecar and all accessories ..... £85
1921 **MARTINSYDE** Combination, all acces. £110
1920 **HARLEY-DAVIDSON**, electric model and new £40 Sidecar complete ..... £115
1920 **HENDERSON** and Sidecar all acces. £110
1920 **P. & M.** and Canoelet Sporting sidecar complete ..... £60

**And many others. Call and Inspect.**

G.N.'S, COVENTRY PREMIERS, MORGANS, and ROVERS IN STOCK.
**REPAIRS.**

**Good Machines taken in for Sale on Commission**

***New Imperial Spare Parts Stockists***


## MOTOR CYCLES FOR SALE.

### Zenith.

1914 Zenith 5-6h.p. J.A.P. Cycle and Sidecar speedometer, Easting, re-enamelled and engine thoroughly overhauled by makers, insured up to July £100; price £55 for immediate sale; spares, tools, etc. included.—Apply Mason, 31, Upper Brook Mews Craven Rd., Lancaster Gate, W. [680

ZENITH 1920 8h.p., countershaft, clutch model kick starter, streamline Millford sidecar, lamps Tan-Sad pillion, luggage grid, Easting windscreen Cowey speedometer, full equipment, in splendid condition, tax paid; £110, or near offer; can be seen by appointment.—Cuff, 75, Cambridge Rd., W. Wimbledon, S.W.20. [604

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 1 Bond St., Ealing. [722

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Zenith spares. [570

### Ladies' Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [072

A MOST suitable mount for a lady is the open frame Reynolds Runabout, 2¾h.p., 2-stroke, with 2-speed and kick starter.—Get details from Frank Whitworth, Ltd., 139, New St., Birmingham. [590

VELOCETTE 1922, Model E.L.2, open frame clutch, kick starter, is the ideal lady's mount all black waterproof finish, clean to ride in all weathers; £68; easy payments 4% extra; illustrated catalogue on request.—Premier Motor Co., Aston Rd. Birmingham. [896

### Miscellaneous.

2¾h.p. 2-stroke Druids, Amac, good tyres; £14.—Shaw, Jeweller, Wellington, Salop. [719

BARGAINS.—New O.K.s, Ariels, Harleys, Omegas Quadrants; exchanges entertained. — Booths Motories, Halifax.

BARGAINS.—1920 Matchless combination, detachable wheels, £130/10/6; 6h.p. Zenith combination, £49/10/6.—Booths' Motories, Halifax.

BARGAINS.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6.—Booths Motories.

BOOTHS' Bargains.—1920 Sun, 2 speeds, clutch £39/10/6; 4-cyl. F.N., 2 speeds, £22/10/6.

BOOTHS' Bargains.—Harley-Davidson Combination oilleage 300, £129/10/6; 1920 Harley, £95/10/6 like new.

BOOTHS' Bargains.—1920 Wooler, £49/19/6; 3h.p 2-speed Enfield, £29/10/6; 1914 Phelon and Moore, £35/10/6.

BOOTHS' Bargains.—6h.p. 3-speed Rudge, £35/10/6 3½h.p. Minerva, magneto, £10/15/6.

BOOTHS' Bargains.—1921 Phelon and Moore, small mileage, £75/10/6; 6h.p Rex combination, £27/10/6.

BOOTHS' Bargains.—Matchless Combination, 3-speed countershaft, £69/10/6; 1920 3-speed Ariel, £69/10/6

BOOTHS' Bargains.—1919 4h.p. Douglas Combination, £79/10/6; 4h.p. late model Douglas, £55/10/6; 2¾h.p. Douglas, cheap, lightweight motor cycle, £13/10/6.

BOOTHS' Bargains.—1920 8h.p. Tamplin, £79/10/6; 1920 Morgan De Luxe, £165/10/6. cost £250/10; nearly new Ariel combination, £85/10/6; new 3½h.p. 3-speed Ariel, £87/10/6; new 4½h.p. Quadrant combination, £100; several others, cheap; push cycles taken exchange.—Booths' Motories, Portland Place, Halifax. 'Phone: 1062 [1966

JONES Garage.—1919 Triumph and sidecar, fully equipped, condition first-class in every way and equal to new; £85.

JONES Garage.—1919 P. and M. and new sidecar, fully equipped, tax paid, as new, a very posh outfit; £67/10.

JONES Garage.—1914 Humber combination, 3-speed, kick start, fully equipped, new sidecar, new tyres.

JONES Garage.—1919 8h.p. New Imperial-Jap Combination, fully equipped, as new, our special bargain this week; £85.

JONES Garage.—Here you are, lads, 1914 6h.p. Sports Zenith Combination, electric lamps, red cigar sidecar, Zenith gear, very fast, general condition excellent, requires touching up, tax paid 1922; £30.

JONES Garage.—1920 Radco, 2-speed, equipped, tax paid, as new, £35. Lots of others; send for big list, or call, 'bus from Highgate and Finsbury Park passes the door. Open all Saturday, close at 1 p.m. Thursdays.

JONES Garage invite inquiries; exchanges specialised in and any make of machine obtained for you at your price.

JONES Garage.—All the above machines will carry our usual 3 months' agreement.—Jones Garage, The Broadway, Muswell Hill, N.10. 'Phone: 2917 Hornsey. [6949

## MOTOR CYCLES FOR SALE.
### Miscellaneous

920 5-7h.p. Coventry Victor, perfect condition, Sturmey 3-speed, Binks, tophole machine; £70. Below.

1h.p. Humber, 2-speed, free engine, sporty; £30; 2 bargain.—Below.

h.p. Douglas Combination 1920, perfect condition, re-enamelled and plated, Binks, electric lighting; irest offer to £100. All three machines recently rehauled by makers.—Jones, Brondeg, Newtown. [6154

VANDSWORTH Motor Exchange.—Great bargains. Finest selection motor cycles London; changes; easy terms.

VANDSWORTH.—Easter bargains. Easter bargains. Now's the time to buy real good motor cle at your own price and be ready for your Easter lidays.

VANDSWORTH.—Easy terms. The only firm to give immediate delivery first deposit.

VANDSWORTH.—Indian 4h.p. clutch model twin, drive away; cheap, 25 gns.; easy terms.

VANDSWORTH. — Triumph 3-3½h.p., magneto, spring forks, ride away, licensed; 22 gns.; easy rms.

VANDSWORTH. — Gregoire 3½h.p., magneto, dropped frame, good tyres, licensed; 19 gns.; sy terms.

VANDSWORTH.—Bradbury coachbuilt combination, 4h.p., 2 speeds, lamps, screen; 42 gns. sy terms.

VANDSWORTH.—Wolf coachbuilt combination 3½-4h.p. J.A.P., 3 speeds, countershaft; 49 s.; easy terms.

VANDSWORTH.—Triumph-Gloria combination, 3 speeds, countershaft, everything fitted; 69 gns.; sy terms.

VANDSWORTH.—F.N. (late) coachbuilt combination, 7h.p., 3-speed gear box, speedometer nps; 68 gns.; easy terms.

VANDSWORTH.—Indian beautiful coachbuilt combination, 7h.p., 3 speeds, lamps; 69 gns.; easy rms.

VANDSWORTH.—Indian, T.T. type 7h.p., 2 speeds, nice machine; 49 gns.; easy terms.

VANDSWORTH.—Humber, almost new, 3½h.p., 2 speeds, lamps, unscratched; 46 gns.; easy terms.

VANDSWORTH.—Scott, fine machine, twin, water-cooled, runs beautifully; only 39 gns.; easy rms.

VANDSWORTH.—Triumph splendid coachbuilt combination, 4h.p., 3 speeds, lamps; 49 gns.; sy terms.

VANDSWORTH.—Rover 3½h.p., clutch model, kick, nice machine; only 33 gns.; easy terms.

VANDSWORTH.—Singer 3¼h.p., clutch model, Bosch, kick, drive away; 22 gns.; easy terms.

VANDSWORTH.—F.N. 2¾h.p., magneto, 2 speeds, runs splendidly; cheap, 25 gns.; easy terms.

VANDSWORTH.—Zenith, 4h.p. J.A.P., Gradua gear, beautiful condition; only 39 gns.; easy rms.

VANDSWORTH.—B.S.A. coachbuilt combination, 4h.p., 2 speeds, lamps; clearance, 45 gns.; easy rms.

VANDSWORTH. — Rex 3½h.p., magneto, disc wheels, wants attention; first offer accepted.—low.

VANDSWORTH.—Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town ation). 'Phone: Latchmere 4686. [7092

LLBER Garage, Thornsett Rd., Earlsfield, London, S.W. (opposite Station, L.S.W. Railway). 'Phone, tchmere 4388. Terms no extra with good deposit. mediate delivery. No inquiries. Satisfaction guaranteed.

LLBER.—Sun-Villiers 1916 2¾h.p., all accessories, good order; £25.

LLBER.—Ixion-Villiers 2½h.p., complete with lamps, in running order; £21.

LLBER.—Levis 1916 2½h.p., 2-speed, all accessories, good order; £35.

LLBER.—B.S.A. 1914 3½h.p., 2 speeds, all accessories, beautiful order; £32.

LLBER.—Enfield Combination 1916 6h.p., 2 speeds, all accessories, windscreen, luggage grid, tax paid, splendid order; £70.

LLBER.—P. and M. Combination 1918 3½h.p., 2 speeds, all accessories, in good condition; £48.

LLBER.—B.S.A. 1915 Combination 4¼h.p., 3-speed, all-chain model, all accessories, in good condition; £55.

LLBER.—1920 New Hudson, 2-stroke, 2 speeds, all accessories, in new condition, tax paid; £35.

LLBER.—1919 New Imperial Combination 8h.p. J.A.P., 3 speeds, clutch, kick, complete with all accessories, tax paid, in splendid order; £80. [6842


REGISTERED H.A.H. TRADE MARK

**H.A.H. Complete Electric Lighting Sets.**

REGISTERED H.A.H. TRADE MARK

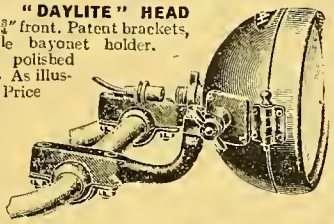
Manufacturers of
ACCESSORIES, PATENTS, SPECIALITIES.
POWERFUL LONG RANGE LAMPS.
November 15th, 1921.

**1922 PRICE GUARANTEED.**

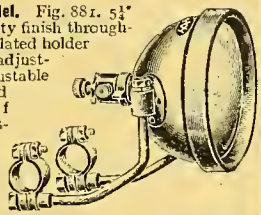
No alteration will be made in Current List Prices FOR ONE YEAR FROM THIS DATE.

**H.A.H. MOTOR CYCLE HEAD LAMPS.**

Fig. 805. **"DAYLITE" HEAD LAMP,** 6¾" front. Patent brackets, adjustable bayonet holder. Highly polished reflector. As illustrated. Price Nickel 80/- ea. Black 65/- ea.



**Medium-sized Model.** Fig. 881. 5½" front. Best quality finish throughout. Totally insulated holder with switch and adjustable focus, adjustable brackets, dust and weather-proof front. As illustrated. 36/- ea. Nickel. 39/- ea. Black.



**H.A.H. REARLAMPS.**

Fig. 576 to take B.C. Bulb Supplied less bulb and Wire. **Price 4/9 each.**

Fig. 347.

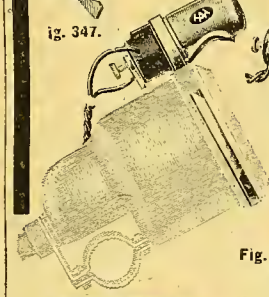


Fig. 574. Supplied with screw-in Bulb and Wire. **Price 5/9 each.**

Fig. 347. Speedolite. **Price 7/6 each.**

**H.A.H. Insulating Tape.**
Fig. 455. ½" small roll, 7½d. each.
Fig. 456. ½" large roll, 1/- each.
Fig. 457. ¼" small roll, 6d. each.

Fig. 410. Cut-out. **Price 2/- each.**

Fig. 449. 2-way. **Price 3/- each.**

Fig. 428. 1-way **Price 2/- each.**

**A. H. HUNT, LTD.,**
H.A.H. WORKS,
Tunstall Road, CROYDON, Eng.

Telephone— Croydon 2225.
Telegrams— "Keyage, Croydon."


## MOTOR CYCLES FOR SALE.
### Miscellaneous.

COMBINATION Twin, running order, £16; Rudge solo, 3-speed, £23.—H. R. Hall, opposite Film Studio, Whetstone, London. [6037

HALIFAX.—50 second-hand machines and combinations; cash or exchanges; get list.—Halifax Motor Exchange, Horton St., Halifax. [6971

BARGAINS in Motor Cycles and Sidecars.—A limited number of 1920 and 1921 shop-soiled models, all well-known makes; best offer secures in each case; send for list or call and inspect.—Mebes and Mebes, 144 ,Gt. Portland St., W.1. 'Phone: Langham 2230. [6133

F.O.C.H. for second-hand cycles, combinations, and runabouts at bargain prices; exchanges arranged; any new cycle, combination, or car supplied; cash or deferred payments.—Fair Offer Car House, 5, Heath St., Hampstead (near Tube). 'Phone: Hampstead 3752. Hours, 9-7, including Saturdays. [4934

TWIN Minerva, 6h.p., m.o.i.v.'s, overhead, £11/10; 2½h.p. Premier, m.o.i.v., £15; 1911 twin Douglas, £12/10; 2¾h.p. 2-stroke Royal Ruby, £24; 1920 Triumph combination, £98; 2-stroke Hobart, £12/15; 1¾h.p. A.J.S.-engined motor, a.o.i.v., £9.—Syd. Pearson, Gate House, Cheylesmore, Coventry. 'Phone: 1639. [6910

SOME Show. No charge for looking.—Norton, £40; Royal Enfield, £15; Indian, £66; A.S.L., £26; Precision, £30; New Hudson 3-speed combination, £36; No. 9 Norton, £70; Triumph, £16; Douglas, £7; Mote-Reve, £16; 3½h.p. 2-speed Hmmber, £20; Scott and sidecar, £9; 4h.p. J.A.P., £12; 4h.p. Arno, £13; 3½h.p. Rex, £11; 4¾h.p. Minerva, £16; 6h.p. J.A.P., £9; cheap Scott, £4; P. and M., £8; 9h.p. Lawton, £15; 8h.p. Rene, £11; 4h.p. Rex, £15; 3½h.p. Bradbury, £18; 3h.p. Jigsaw, £9; cheap scrap machine, £1; 4h.p. Rover, £12; 16h.p. Shooting Star racer, will do 100 miles per hour, £14; 9h.p. Indian, £18; 9h.p. J.A.P., £10; 8h.p. Rex combination, £8; Brough, £16; new 6h.p. and 9h.p. Indian, £18; 9h.p. J.A.P., £10; 8h.p. Rex combination, £8; Brough, £16; new 6h.p. and 3½h.p. frames, £1 each; magnetos, 7/- each; leg vice, 10/-; sidecar body, 10/-; 26×2¼ inner tube, 3/6; knee grips, 3/-. Cars: Stoddard-Dayton 40h.p., £100; Ford van, £80; Ford chassis, £60; 24h.p. Panhard 4-cyl. 3-speed chassis, £9; sack of garage scrap, 5/-. Wanted, 1,000 motor cycles or cars. Exchanges; honest dealing. Big show on Saturday. Every accommodation for motorists, and biggest show you ever saw.—Stamped envelope for big lists from Queen's Rd. Garage, Bradford. [7177

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigden, 130, Euston Rd. [0795

## MOTOR CYCLES WANTED.

H

F

EDWARDS and Co.,

101 Gt. Portland St., W., are cash buyers of solos, combinations, and Morgans. Highest prices given, distance no object. Call, write, or 'phone: Mayfair 4027. [0604

WE

ARE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination. We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 314, Euston Rd. [0815

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391. [0332

T.B.

WANT

500 COMBINATIONS and Solos; any make, guarantee top prices given.—T. and B. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5564

LEVIS, late model, must be perfect; full particulars. —Mercer, Thurso. [6668

T.T. Norton, any model; full particulars.—Reg. 32, High St., Reigate. [6754

WANTED, Combination, 4h.p. or over.—Robertson, Urquhart St., Ferres. [5941

TRIUMPH or Enfield Combination wanted.—Snow, Laurel St., Dalston, E.8. [7142a

LATE Model Combination for cash.—14, Swaton Rd., Bow. Tel.: E. 3155. [7150

TRIUMPH Solo 1918-19; £60 or near (Sunday).—England, Kingsland Rd., Boxmoor. [6686

## MOTOR CYCLES WANTED.

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted, machine can be included in auction sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling commission, 7½ per cent., not chargeable unless machine is sold. If no sale, a nominal auction fee is charged. For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Telephone: 208 Streatham. Telegrams: Palmer's Garage, Tooting. [6988

F.N., perfect condition; full particulars; spot cash.—Box 9301, c/o *The Motor Cycle*. [4640

2¼h.p. Levis or Enfield wanted, in exchange for 4-seater.—109, Clapham Park Rd. [6011

DOUGLAS or Lightweight, late, any condition; very cheap.—162, Wellholme Rd., Grimsby. [6093

WANTED, Motor Cycles, any condition, Indians; cash waiting.—17, Heaton Rd., Mitcham. [6563

WANTED, Late Solo or Combination; cash at sight.—2, Fortune Gate Rd., Harlesden, N.W. [6674

HIGH-POWERED Sporting Combination; about £80.—528, Hertford Rd., Enfield Highway, N. [0844

COMBINATION, modern, limit £70, stiff test insisted on.—Details, 56, Dulwich Rd., Herne Hill. [6206

WANTED, Norton 3½h.p. Sports, late model; must be cheap.—Derrett, Orwell Rd., Clacton-on-Sea. [6394

WANTED, Triumph Countershaft or Douglas Combination; cheap.—151, Turners Rd., Bow, E.3. [6075

B.S.A. or other good Combination (late); no dealers. Write, 31, Langdon Rd., Upper Holloway, N.19. [6691

LATE Sunbeam, Triumph or Norton wanted.—Full particulars, 45, Knighton Rd., Forest Gate, E.7. [6337

WANTED, good second-hand 7-9h.p. Indian, Harley, or Zenith, cheap.—35, Upper Tooting Rd., S.W. [6411

8h.p. Sidecar outfit, not earlier than 1920; cash down.—Particulars, Jarvis, 20, Walcot Parade, Bath. [67

MODERN 8h.p. Combination; must be cheap; damaged immaterial.—93, Sheldon Rd., Chippenham. [6778

WANTED, Modern Solos or Combinations for cash.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [719

WANTED, Triumph, Sunbeam, Enfield, A.J.S. preferred.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6. [4268

VELOCETTE Ladies' kick start model wanted cheaply.—Bowen, Whites Green, Charlwood, Surrey. [6544

A.J.S., Norton, Sunbeam, Triumph, Scott, etc., Sports machine; cash waiting.—88, Lord St., Southport. [6711

WANTED, Countershaft Triumph, good condition; about £30 cash waiting.—Staunfield, Woodhouse, Stone, Staffs. [6703

REQUIRED, 1921 Harley-Davidson Combination or Solo; no dealers.—"Oaklands," The Grove, Finchley, N.3. [6334

WANTED, A.B.C. or machine with dynamo lighting, 1921 model; cash waiting.—17, The Park, Golders Green. [7104

WANTED, 1917 3h.p. Royal Enfield, good condition and reasonable.—Ash, 26, Thornfield Rd., Shepherd's Bush. [6470

WANTED, Douglas or other good lightweight, cash waiting.—Patterson, 12, The Quadrant, Winchmore Hill, N.21. [6070

SOLO, any condition, not earlier than 1917; full particulars.—Write, The "Cottage," Lord's Cricket Ground. [6898


WHAT O'DONOVAN SERVICE MEANS...

# FIRST RECORDS

of the Season fall to

## 3½ h.p. NORTON

¶ On March 16, R. N. Judd, of O'Donovan Motors,

**BROKE THE WORLD'S RECORDS**

for 1 kilo, also 1 mile, by covering the kilometre at the mean speed of 89.92 m.p.h., and the mile at 88.38 m.p.h.

(subject to confirmation by F.I.C.M.)

He also broke the 1 mile British Record by covering the distance at a speed of 91.3 m.p.h.

(subject to confirmation by A.C.U.)

*These figures beat all previous Records in classes C. and D, by about 5 m.p.h.*

¶ On March 23, at Brooklands, same rider and same machine broke the *kilo* record by covering the distance at 98.5 m.p.h. and the *mile* at 97.35.

(subject to confirmation by A.C.U.)

Previous best speed

For kilo was 93.44 m.p.h.
For mile 91.3 „

*All these Records were ELECTRICALLY, not hand, timed.*

¶¶ O'Donovan's service made these records possible. Concentrated mainly on the Norton machine, it can enable you to get the utmost out of *your* machine, whether new or already used.

¶ We tune up new machines for competition work free of charge.

*Write now for full details.*

O'DONOVAN MOTORS

(D. R. O'Donovan and H. H. Beach),

76a, GREAT PORTLAND ST., W.1.

Odonomonto Westdo, London.
Museum 589).


## MOTOR CYCLES WANTED.

WANTED, 5-6h.p. Martinsyde Combination or similar; give fullest particulars.—Box 9511, c/o *The Motor Cycle*. [696

£60 offered for Modern Combination. Send particulars with engine number.—Snow, 91, Mapledene Rd., Dalston, E.8. [712

LADIES' Lightweight motor cycle, good make, as guaranteed condition.—Cricklewood, Bray Hill, Douglas, Isle of Man. [597

WANTED, Sunbeam, Triumph, Douglas Combination, recent model.—Stone, Motor Engineer, Bradford-on-Avon, Wilts. [617

FIRST-CLASS late Solo Sports, condition perfect; leather coat, thigh boots.—Letters to L. Fawcett, 41, Cobden Place, Leeds. [685

WANTED, 4-6h.p. Combination, up to £60 for cash, late model, perfect order and condition.—Nunn, Boughrood, Radnor. [622

GOOD Secondhand Combination up to £200 as part exchange for Bianchi 4-seater.—12, Grevill Place, Hampstead 1819. [497

WANTED, 1920-21 Combination; spot cash waiting for good outfit.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [664

WANTED.—Best prices given for up-to-date motor cycles.—R. Bamber and Co., Ltd., 2, Easthan St., Southport. 'Phone: 607. [113

5-6h.p. Shaft-driven F.N., cheap, appearance and material, good running order essential.—Price, Dewhurst, Carr Lane, Shipley. (D) [658

COMBINATION wanted, must be reasonable, not earlier than 1918.—George, "The Captain Cook," Howard Rd., Stoke Newington. [714

SCOTTS Wanted.—Bought for cash, or taken in part exchange; also Scott Sociables.—Kinsey and Co., Ltd., 350, Lower Addiscombe Rd., Croydon. [688

WANTED immediately, Motor Cycles, Combinations and Light Cars.—Seabridge, 35, Hansler Rd., East Dulwich. Telephone, Sydenham 2452. [207

WANTED, Lightweight 4-stroke, Coventry-Eagle or Diamond-Jap preferred, guaranteed condition.—Pope, "Ingham," Holland Av., Cheam, Surrey. [649

COUNTERSHAFT Triumph; price must be reasonable; write appointment, or call evenings; cash waiting.—Oakdene, Anerley Park, London, S.E.20. [683

WANTED immediately, Matchless Victory Combination, reasonable condition, must be cheap.—1, The Nooks, Dorset Rd., Mottingham, Eltham, S.E.9 [617

A FAIR Price paid for good used machines, preferably not earlier than 1920.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601 [583

WANTED, Combination, also solo, any make or condition; market value paid; profiteers please don't waste stamps.—Box 9504, c/o *The Motor Cycle* [690

MATCHLESS, A.J.S., or Sunbeam Combination, magdyno, 1921, new or nearly new.—Full particulars to Turner, 27, Blackburn Rd., Church, Lancashire. [640

DOUGLAS wanted, about 1918, 3-speed for preference; £30-£35 waiting; no dealers. Saturday afternoon or Sunday morning only.—84, Nelson Rd., Wimbledon. [638

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [082

WANTED, your motor cycle or combination. We are buyers. Full market price given and cash paid on the spot. Write, call, or 'phone Museum 5938.—J. Smith and Co., Motor Agents, Ltd., 52-54, Hampstead Rd., N.W.1. [076

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Gluss, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [037

WANTED to Purchase outright, for cash, bankrupt stocks; W.D. spares, miscellaneous spares, motor cycles, any make.—Send full particulars, McNeille and Platt, 57, Great George St., Liverpool. 'Phone: 1092 Royal. [606

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Bradburys, Martinsydes, Zeniths.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [455

F.O.C.H. always have cash waiting for sound machines of all types; highest prices and courteous treatment assured.—Fair Offer Car House, 5, Heath St., Hampstead (near Tube). 'Phone: Hampstead 3752. Hours, 9-7, including Saturdays. [493

## MOTOR CYCLES WANTED.

WE are requiring immediately a number of second-hand machines and combinations for cash. Good ices paid and a representative sent to inspect and gotiate purchase after preliminary description. Write, hone, or call.—Longman Bros., 17, Bond St., Ealing. hone: 689. [7229

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover other light car. Best prices allowed, extended pay-ents arranged.—Vivian Hardie & Lane, Ltd., 23/24, oodstock St. (off Blenheim St.), Bond St., W.1. hone: Mayfair 6559. [0772

END Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash er telegraphed immediately on receipt. Nearest ation, Wimbledon. We will collect from any Lon-n station. Machine can be included in auction le, if desired.—Sole address, Palmer's Garage, ooting. [6985

## MOTOR SCOOTERS.

KINGSBURY Scooter and Spare Parts.—3, Kendall's Mews, Blandford St., W.1 [5499

SKOOTAMOTA, in good running order; £25.—Clapham, Troutbeck, Windermere. [4667

AUTOGLIDER, 1921, Villiers 2¼h.p., magneto, fly-wheel, clutch, perfect; £20.—Rice, Amwell, Ware. [6034

AUTOGLIDER, 2¾h.p., carry two anywhere, in per-fect condition; £25.—Fox, Distington, Cumber-nd. [5929

A.B.C Skootamota, new, unsoiled, latest model; £23, sacrifice.—Frank Whitworth, 139, New St., Bir-ingham. [2151

FEW Shop-soiled Autoped Scooters, dynamo light-ing, 1½h.p.; bargain, £12/10 each. — Percy and 314, Euston Rd., N.W.1. [4178

HIGH-CLASS Scooter, Mobile, Stafford Motor Co., Palmer's mechanical mag., ride away; £10/19/6, st £40.—Thomas Butler, Littleover, Derby. [0000

A.B.C. Skootamoto, absolutely as new, £15; or ex-change, with cash, for solo or combination.—ewnham Motor Co., 223, Hammersmith Rd., W.6. hone: Hammersmith 80. [7044

## MOTOR ATTACHMENTS.

AUTO Wheel, good condition; £6/15.—L. Hodges, High St., Ewell. [5913

NEW Economic Motor Attachment; cost £25, accept £12.—106A, Gt. Moor St., Bolton. [6425

YOUNG motor cycle, lamps, new, nearest £17.—Woad, 14, Dulverton Rd., Aigburth, Liver-ool. [6564

YOUNG Special Cycle, extra stout spokes, lamps, year's tax paid; £22/10.—Payne, 81, Greyhound d., N.17. [6120

1920 Auto Wheel, not been 100 miles, guaranteed as new; £15.—Walbro Motorcycle Co., Saffron aldeo. 'Phone: 45. [7221

WALL Autowheel, with or without tandem bicycle, no reasonable offer refused, tax paid to end of ar.—Dolton, 82, Wormholt Rd., Shepherd's Bush. [6241

1920 Young Cycle with motor attachment, clutch, etc., only run a few miles, perfect order; £20. D. and S. Autocar Co., 33, The Parade, Golders reen. [5800

## HOODS, WIND SCREENS, ETC.

COLLINS and Son for hoods, screens, and aprons; hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreens, com-plete with apron, 22/6, as sold elsewhere at 0/-; other screens at 30/- and 35/-; any screen on pproval. Celluloid panels fitted to any windscreen a few hours. Open Sunday mornings, 10 to 12, eekdays till 8.30 p.m. Saturdays till 5 p.m.—Collins nd Son, rear of 84, High St., Putney, S.W. [5320

EASTING Standard Windscreen, brand new; £3, all complete.—114, Osborne Rd., Sparkhill, Birming-am. [7272

FIRST quality hoods, 40/-; with side curtains, 50/-.—Hercules Hood Co., 698, Seven Sisters Rd., ottenham. [3230

HOOD side-curtains, covers complete, off A.J.S. sidecar, condition perfect, 50/-.—Chauffeur, The Touot Garage, Harewood Rd., Croydon. [6573

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 7/6.—Henry Jones, 778, High Rd., Tottenham, Lon-on. [3239

RENNOC Co.—We are actual manufacturers of hoods screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway 19 [2321

1921 Coupé Hood, perfect, £2/5; detachable scuttle, windscreen and apron, 1921, for Gloria, as new, £2/5; exchange complete Easting.—Hurt, South Darley, Matlock. [6003

ROBINI Manfc. Co.—The Bower adjustable wind-screen, with coverall apron, 30/-, carriage paid. Beware of imitations. This is the standard price for this screen. Agents wanted. Celluloid panels fitted, Easting, 16/6; aprons made to order, 10/-.—'Phone: Brixton 1585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. [7077

# 2 WEEKS TO EASTER!

**But there is still time for you to obtain the machine you fancy. We made early allowance for possible labour troubles, and can now offer our retail customers the following splendid selection of:**

## NEW 1922 MODELS READY FOR IMMEDIATE DELIVERY

### *SOLO MACHINES*

| | |
|---|---|
| **RADCO,** 2¾ h.p., single gear | £35 |
| **LEVIS,** 2¾ h.p., "Popular" | £48 |
| **LEVIS** Model "S" 2-speed | £58 |
| **VELOCETTE** E2, 2-speed | £65 |
| **NEW IMPERIAL,** 2¾ h.p., 3-speed | £69 |
| **VELOCETTE,** E3, 3 speed | £72 |
| **VELOCETTE** "Sports," 3-speed | £75 |
| **NORTON** No. 9, 3½ h.p. | £80 |
| **TRIUMPH,** 4 h.p., chain-cum-belt | £105 |
| **TRIUMPH,** 4 h.p., chain drive | £115 |
| **BROUGH,** 3½ h.p., "Sports" | £110 |
| **NORTON** 16H, 3½ h.p., 3-speed | £115 |

### *SIDECAR COMBINATIONS*

| | |
|---|---|
| **BEARDMORE,** 3 h.p., chain drive | £85 |
| **TRIUMPH** "H," Millford | £127 |
| **TRIUMPH** "S.D.," Montgomery | £138 |
| **ENFIELD,** 8 h.p. | £140 |
| **ENFIELD,** 8 h.p., 2-seater | £145 |
| **ENFIELD,** 8 h.p. Magdyno | £158 |
| **TRIUMPH** "H.C.," Gloria | £155 |
| **NORTON** "Big-4," de Luxe | £159 |
| **RALEIGH,** 5-6 h.p., Standard | £160 |
| **RALEIGH,** 5-6 h.p., de Luxe | £172 |
| **A.J.S.,** 7 h.p., spare wheel | £183 |

### *CYCLECARS*

| | |
|---|---|
| **MORGAN** "Popular" | £150 |
| **MORGAN** "Grand Prix" | £180 |
| **MORGAN,** "Family" water-cooled | £191 |
| **ROVER** "8" | £220 |

**Write for full list — over 50 machines in stock, all First-raters and all**

**NEW 1922 MODELS.**

*Machines despatched by road or rail—delivery free.*

## THE PREMIER MOTOR COMPANY

**ASTON ROAD, BIRMINGHAM,**

Telegrams: "Primus, Birmingham." Telephone: Central 7367 (2 lines).

## BODIES.

NEW C.B. Body, Douglas pattern; £5.—Reynolds, 15, Stafford Mews, Kilburn, N.W.6. [7137

RENNOC sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marl-borough Rd., Upper Holloway, N.19. [2320

MATCHLESS sidecar body, cheap, £2/10.—Marsh, 34, Yerbury Rd., Mercers Rd., Holloway. [6378

COACH Sidecar Body; £4; suit 4h.p. machine.—Bright and Hayles, 78, Church St., Camberwell. [5482

COLLINS and Son.—Bodies, new bulbous back coachbuilt at £6/5; 2-seater bulbous back, £9.—Below.

COLLINS and Son are actual manufacturers, and give twelve months' guarantee with every body; over 200 in stock. Large number of secondhand in stock.—Below.

COLLINS and Son repair, re-paint, and upholster at moderate charges; all work guaranteed. Esti-mates free. Send for catalogue.—Collins and Son, rear of 84, High St., Putney, S.W. [5321

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5151

LIGHT sporting bodies, £5/10; light bulbous back bodies, £6/10; chassis from £7/7.—Stock, 107, Coningham Rd., Shepherds Bush. [6675

SIX Scott Sidecar Bodies, equal to new, re-phol-stered and painted, £3/10 each.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [6610

VENUS Step Bodies, 2 dozen to clear; from 50/- each; great bargains.—Venus Sidecar Co., 694, Seven Sisters Rd., Tottenham. 'Phone, 2102. [7227

1921 Gloria No. 5, as new, complete coupé hood, apron, mat, detachable scuttle, windscreen, £17; exchange sporting body and Easting.—Hurt, South Darley, Matlock. [6004

ROYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clear-ance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [0336

BODIES, 1922 production, complete with coverall apron, from £6/10; 2-seaters, £10/10; shop-soiled bodies from £6/10; wonderful bargains; write for catalogue; we are actual manufacturers.—Robini Manfc. Co., 1 and 3, Tulse Hill, Brixton, S.W. 'Phone: Brixton 1585. [7076

WHAT a customer says about Cobb Speedman sidecar bodies:—"My agent was staggered when I told him what I had paid for the body, and he asked for your address." Cobb Speedman bodies cost from £2/12/6, carriage paid.—Vernon Cobb, 18, Midland Rd., Carlton, Nottingham. [6369

SIDECAR Body Designs for the trade only. Work-ing, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Ltd., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—20, Tudor St., London, E.C.4. [0004

LIGHT Car and Motor Cycle Engineering Co., Ltd. —Every type of body kept in stock or designed to customers' own design and requirements. Light-weight, £4/5; medium touring, £7 and £7/10; heavy touring, £10/10; heavy touring De Luxe, £11/11; Grand Prix sports model, £9.—26, Tulse Hill, Brixton (half minute from Brixton Skating Rink). 'Phone, Brixton 1292. [7268

## SIDECAR ATTACHMENTS.

SEE FOR SANDHAM the smartest sidecar specialists

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd. W.C.1. Phone: Museum 3427 [0019

LIGHT Sporting Sidecar, coachbuilt; £5.—26, Aber-deen Rd., N.5. [5966

CHASSIS, fit spring frame Indian; £5/15.—27, Vernon Rd., Luton. [6899

SIDECAR, Gloria, sprung wheel, £5.—56, Acacia Grove, New Malden, Surrey [5979

FULFORD Indian Sidecar, hood, screen; £10.—70, Baring Rd., Lee Kent. [6735

SIDECAR, complete, good condition; £4/15.—51, Upper Richmond Rd., Putney. [6324

2-SEATER Rennoc coachbuilt Sidecar, hood, screen, grid, 28in. wheel.—Diver, Marple. [5110

## SIDECAR ATTACHMENTS.

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

BASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £19/10, Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £28/10. Model de Luxe £34/10, tandem model £30.

BASTONES.—Whitley 1922 sports model in stock, £25.

BASTONES for Sidecar Chassis, underslung £7/19/6. tandem chassis £14/10, auxiliary arms 14/.—228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. 'Grams: Bastones, London. [5132

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. Phone: 5. [3235

SPORTING Sidecar, good condition, complete; £10; after 6.—70, Newlands Park, Sydenham. [6692

CAMBER Utility Models; £25.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Utility Tandems; £27.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Semi-touring Models; £18/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Bulbous Back Models; £19/12/6.—Bright and Hales, 78, Church St., Camberwell.

CAMBER Lightweight Models; £16/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Hexagon Sports Model; £25/17/6.—Bright and Hayles, 78, Church St., Camberwell. [5485

SIDECARS.—Several cheap, room wanted, fitted free.—57, Kenbury St., Camberwell, London. [6862

GRINDLAY C.B. Sidecar, spring chassis, splendid condition; £7.—48, Elmwood Rd., West Croydon. [6198

LIGHTWEIGHT Sidecar, perfect condition, 26in. wheel; £6.—15, Elthorne Rd., Upper Holloway. [6194

C.B. Sidecar, locker, tyre, connections suit any machine; £5/16.—85, Clifton Rd., Darlington. [6623

£7.—Green coachbuilt Sidecar, with luggage carrier, fine condition.—Brett, High St., Cheshunt, Herts. [5940

B.S.A. No. 2 Chassis, unused; £12; or offers for sidecar complete.—210, Lower Addiscombe Rd., Croydon. [7166

PHŒNIX Sidecar Chassis and Springs, good tyre; £2/15.—Ross, 6, Glencoe Rd., Evesham, Worcestershire. [6061

SIDECAR, coachbuilt, new body, suit 4h.p. over, £10; trip speedometer, £3.—76, Dalling Rd., Hammersmith. [6751

SWAN Sidecar, new, shop-soiled, painted red, special fittings for spring frame Indian; one only, £19/15.—Below.

CANOELET Sidecar, new, shop-soiled, painted khaki, special fittings for American X; one only, £19/15.—J. Blake and Co., 110-112, Bold St., Liverpool. [6938

BULBOUS Back C.B. Sidecar Body, locker, perfect condition, fit any chassis; £4/17.—9, Swinburne Rd., Darlington. [6622

1921 Sporting Henderson Sidecar, practically new, lamp, and storm apron; £14 to clear.—Carnforth Motor Co., Carnforth. [5951

# BASTONES

*No Better or Cheaper House*

## SPECIAL LINE.

### USCO RUBBER NON-SKID COVERS

Manufactured by the United States Rubber Co. Ltd.

| | List Price | Our Price |
|---|---|---|
| 26×2½ to fit 26×2¼ } Heavy | 63/- | 28/6 |

### COVERS.

| | | |
|---|---|---|
| 24×2¼ | Clincher de Luxe Junior | 20/- |
| 26×2 | Englebert Passenger, rub. std. | 17/6 |
| „ | Bergougnan, Heavy, 3-ribbed | 18/6 |
| „ | Clincher A Won | 16/- |
| 26×2¼ | Wood-Milne, Special Heavy | 13/6 |
| „ | Bergougnan, Heavy, 3-ribbed | 20/- |
| „ | Hutchinson T.T., rub. std. | 23/- |
| „ | Goodrich, Ex. Heavy, safety tread | 28/- |
| „ | Goodyear, All Weather tread | 26/- |
| „ | Rom, Heavy, rub. non-skid | 29/- |
| 26×2½ | Clincher de Luxe, Extra Heavy | 24/6 |
| „ | Hutchinson T.T., rub; std. | 25/- |
| 26×2¼ to fit 26×2½ | Clincher de Luxe (Heavy) | 27/- |
| | Hutchinson T.T., ribbed | 35/- |
| | Goodrich Safety Tread, ex. Heavy | 36/- |
| 26×2½ | Wood-Milne, Extra Heavy | 16/6 |
| „ | Skew Rubber, non-skid | 35/- |
| „ | Michelin, Fine Ribbed | 21/- |
| „ | Goodrich Safety Tread, ex. Heavy | 35/- |
| „ | Englebert, (Wired Edge) | 25/- |
| „ | Bergougnan Heavy, 3-ribed | 23/6 |
| 650×65 | Clincher Dreadnought, 3-ribbed | 39/- |
| „ | Goodrich Safety Tread, ex. Heavy | 40/- |
| „ | Wood-Milne Special Heavy | 13/6 |
| 28×2 | Clincher A Won, Wired Edge | 20/- |
| 28×3 | Clincher de Luxe, ex. Heavy | 37/6 |
| „ | Goodrich Safety Tread, ex. Heavy | 48/- |
| „ | Hutchinson Super-studded | 64/3 |
| 700×80 | Goodrich Safety Tread, ex. Heavy | 48/- |
| „ | Clincher de Luxe, ex. Heavy | 48/- |

### TUBES.

Goodrich, Clincher and Hutchinson.

| | |
|---|---|
| 24×2 or 2¼ | 4/3 |
| 26×2¼ or 26×2½ | 5/9 |
| 26×2½×2¼ or 650×65 | 6/3 |
| 700×80 or 28×3 | 7/6 |

The above New Clearance lines are sent on approval against remittance. Carriage paid.

### SIDECARS.

| | | | |
|---|---|---|---|
| Complete Sidecars from | £13 | 16 | 0 |
| Coach Built Bodies from | £4 | 6 | 6 |

### MONTGOMERY SIDECARS.

| | | | |
|---|---|---|---|
| 1922 Models in stock, from | £17 | 10 | 0 |
| Whitley Sidecars, Sports Model | £25 | 0 | 0 |

### MISCELLANEOUS.

| | | | |
|---|---|---|---|
| Bowden Front Brakes | 11/- | | |
| Bowden Magneto Controls | 11/- | | |
| Sidecar Auxiliary Arms | 14/- | | |
| Montgomery Bo-Peep Screen | £3 | 10 | 0 |
| Easting Standard Screen | £3 | 18 | 0 |
| Sandum V Screen | £2 | 15 | 0 |
| Blackburne 8 H.P. Twin Engine | £27 | 0 | 0 |

**Hours—9 till 6; Sat., 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

'Phone: 2481 North. 'Grams: 'Bastones, London'

## SIDECAR ATTACHMENTS.

BOOTHS Bargains.—Limited number of new coach bodies, full size, with locker; £5/12/6; usual price, £9/10.

BOOTHS Bargains.—New £9/10 coach bodies for £5/12/6. Don't miss them. Illustration free.

BOOTHS Bargains.—Quantity of new underslung chassis, 4-point attachment; £9/19/6; illustration free

BOOTHS Bargains.—Several shop-soiled sidecars offered very cheap; send for list.

BOOTHS Bargains.—Hercules coach sidecar, £8/10/6; ditto Cancelet, £8/10/6; ditto Farlow, £8/10/6.—Booths Motories, Portland Place, Halifax. 'Phone: 1062. [1964

HALIFAX.—New Swan Sporting and Millford de Luxe for Harley and American X.—Motor Exchange, Horton St., Halifax. [6975

1921 Watsonian Sidecar, Monarch, fitted child's seat in dickey, Easting, new condition; £19.—138, Bingham Rd., Croydon. [6837

LIGHTWEIGHT coachbuilt Sidecar, perfect, Scott purple, Dunlop, apron, luggage grid; £10, 56c, Birmingham Rd., W. Bromwich. [5931

SWAN Sports Sidecar, grey, 10 gns.; also old chassis, complete, sound, 30/-.—Letters, Rogers, Jun., 194, Southgate Rd., Islington, N.1. [6855

MILLS-FULFORD Coachbuilt Sidecar, Easting screen, luggage grid, lamp; £10; excellent condition.—51, Kendall Rd., Beckenham, S.E. [6635

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar, repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589 [2319

1919 Sunbeam Sidecar, C.B., complete with windscreen, hood, lamp, grid, good condition; £25.—Craswell, Wolsey Rd., Ashford, Middlesex. [6901

B.S.A.'s.—4-point coach sidecar; 2-speed clutch wheel, perfect; exhaust box, long nickled extension; offers.—143, St. Margarets Rd., Twickenham. [6420

£19/10.—Sandum 2-seater, bulbous back, 28×3 wheel, windscreen, apron, two electric lamps and switchboard.—Smith's, 86, Chalk Farm Rd., N.W.1. [6800

EXTENDED Payments accepted for sidecars; models for all makes.—Send for catalogue, etc., Rideezi Sales, Ltd., Atlantic House 103, Oxford St., London, W.1. [0829

TRIUMPH Gloria sidecar, new, not been used, fitted with hood, screen, and apron; price £38/10.—G. H. Layne and Co., Triumph Agents, Brigg. [6068

1919 Burbury, 2-seater sidecar, with windscreen, all quite new, Dunlop heavy tyre just fitted; £25.—Walbro Motorcycle Co., Saffron Walden. 'Phone: 45. [7219

COLLINS and Son for sidecars, new bulbous back models, complete with renovated underslung chassis, coverall apron, all fittings for any machine from £12/10.—Below.

COLLINS and Son.—2-seater bulbous back coachbuilt models with underslung chassis, all fittings, from £15.—Below.

COLLINS and Son have various models in stock to suit any machine; few secondhand sidecars in stock, cheap.—Below.

COLLINS and Son specialise in frame and chassis repairs; special chassis built to order; work guaranteed. Send for catalogue, or call. Open till 8.30 p.m., Saturdays till 5 p.m., Sunday mornings 10 to 12.—Collins and Son, rear of 84, High St., Putney, S.W. [5322

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

1,000 Douglas Underslung Chassis, suitable for any make of machine to order, absolutely complete and renovated, as new; £5 each.—Old Man Hep. 19 Wilcox Rd., South Lambeth, London, S.W.8. 'Phone. 1958 Brixton. [8822

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## Freak Hills in Trials.

RECENT trials indicate how important it is for the organisers to give full consideration to every detail of the route beforehand. There are two distinct and widely differing ideals to bear in mind, either a trial should be organised as propaganda for the motor cycle movement, in which case only such surfaces as would be traversed by the normal motor cyclist should be included, or the event may be of a sporting nature, when hills with freak surfaces and reasonably deep water splashes may be included without hardship or complaint.

In the event of a sporting course being chosen, intending competitors should be made aware of the fact before entering, and this precaution should prevent much of the grumbling which is too frequently heard at the present time.

Whatever the nature of the trial, however, the course which is chosen should be upheld, and it should be clearly understood that no amount of complaints will procure a modification of the published rules. There is plenty of room for trials of all descriptions, for, while the sporting element are apt to consider a straightforward trial a rather dull affair, it must not be forgotten that a long list of failures on a freak hill conveys to the minds of the buying public an entirely erroneous idea of the dependability of the modern motor cycle. Less than 10 per cent. of this public realise the nature of the surfaces included in some modern trials, and they are apt to be prejudiced against a perfectly sound machine which has failed to negotiate some obstacle which ordinary riders would scorn. The East Midland Centre, A.C.U., in particular, cannot have studied its trials route carefully, and the reported action of officials placing boulders on already ridiculous test hills requires prompt explanation. One wonders whether the A.C.U., as the governing body, is exercising its jurisdiction in the matter of freakish test hills. Experiences in the last three trials certainly indicate that it is time to call a halt.

Skilful riding plays an enormous part in modern competition work, a point which must be obvious to any spectator, and it seems hardly just to the manufacturers to place a premium on a commodity which cannot be bought by the prospective purchaser. But even skill plus a first-rate mount have proved insufficient lately, for luck, pure and simple, has been the governing factor when successes at all have been achieved.

## An Amateur Race in the I.O.M.

AS announced elsewhere in this issue, an amateur road race is likely to materialise. Due to the enthusiasm displayed by readers of *The Motor Cycle*, the Manx Motor Cycle Club has approached the Auto Cycle Union for permission to hold a two-lap race on the Wednesday between the junior and senior races in the Isle of Man, which has been sympathetically received.

Although full particulars of the race cannot yet be announced, the definition of an amateur will be based upon the article written by a member of *The Motor Cycle* staff which appeared in the issue for February 23rd, and a trophy has been offered by the proprietors of this journal.

Barely six weeks remain before the Tourist Trophy Races, which means that amateur speedmen who have sponsored the idea will have to decide at once whether they can support this event; but we have no doubt that among the 370,000 odd motor cyclists in this country there will be sufficient to make an interesting race. In the Isle of Man the project is being keenly supported.

An index to the advertisements in this issue will be found on the page facing the back cover.

# In the Centre of Paradise

Where all the Beauty of North Wales is Concentrated.

Llyn Ddinas, looking south—one of the most beautiful spots in Wales.

TO name one gleam of sunlight as fairer than the rest were perilously near attempting the impossible; so to choose one spot in any earthly Paradise for supreme commendation might expose one's selection to the criticism of the world; yet in all that wondrous wealth of wild glory that spreads about the hills and moors of Snowdonia our hearts are ever lured by an almost irresistible impulse to the lonely hotel standing at the foot of the Llanberis Pass.

Pen-y-Gwryd forms as choice a centre for rambles and explorations, for great climbs and roadway excursions, as one would wish to find.

Eastward the road winds and undulates through a four-mile valley to Capel Curig, with the hills piling themselves over green moors to right and left and in the valley bed the stream that, after many a musical waterfall and many a spreading pool, swells into the broad waters of Llyn Mymbyr at the Royal Hotel. Still further the road drops by graceful curves through wooded ways into the beautiful tree-clad hollow of Bettws.

### Grandest Pass in Wales.

Westward from Pen-y-Gwryd the road climbs steeply to the summit of the great pass, the wildest, weirdest, grandest pass of Wales; and from the top of Llanberis the footpath breaks away to the three lakelets and the summit of Snowdon. On this upward climb there are glorious visions of the lower hills to the east and the bare ridges and beetling crags across the Cwm; while, continuing the roadway, one enters the loneliness of the Llanberis Pass. Loneliness? Yes, for one only sees the Pass at its best in days of solitude and under threatening skies, when the winds are wild and the dark clouds hang about the frowning precipices. Spring and autumn are excellent for this mountain region, when the multitude is at home, and one is left alone to enjoy the mountains to their full and see the choicest visions that the land can give.

At the very door of the hotel the long descent southward into the Ddinas valley begins, surely the most beautiful mountain roadway in Wales, with a fall of 700ft. in three miles. This road is finely engineered and the gradient is never severe, while the way bends in graceful curves round the irregularities of the mountain slopes, presenting fresh aspects of the scenery at every turn. Across the green valley Snowdon stands serene and grand, its rugged peaks rising nobly above the scarred and broken crags and screes, while, lower down, the hillsides are cut and grooved with the flowing of the streams into countless shallow defiles.

The Afon Glaslyn flows from the llyn high up in the heart of the peaks, and passing through Llyn Gwynant traces the verdant valley almost at the roadside to join the waters of the lovely Llyn Ddinas.

A lake more exquisitely situated and more beautifully encircled with hill and forest and distant peaks it would be difficult to find.

### The singing Afon Glaslyn.

But the beauty of this way is far from exhausted at the shores of Llyn Ddinas, for the Afon Glaslyn, singing its way over a rocky bed, by ruined watermills, and under picturesque bridges, washes the walls of Beddgelert's houses, and then falls through the matchless splendour of the Aberglaslyn Pass.

The felling of many trees in the war years has not lessened the beauty of this pass; but on the other hand

**n the Centre of Paradise.—**

as made possible certain visions that were obscured efore.

Aberglaslyn is always beautiful, but the early spring nd late autumn with their wondrous colouring en-ich this glen with a magnificence not seen at other easons of the year; moreover, there is greater likeli-ood of heavy rains in these months, and, to be seen t its best, there must be the raging torrent working iiracles of power mong the great oulders of the river ed.

These are the oadways radiating rom this central pot, but the rambles ver the moors and ills are infinite in heir variety and harm, and the ombre scenery round the secluded wm-y-ffynnon away ehind the hotel and nder the shadow f the Glyders is ittle less than an nspiring revelation o those who see it or the first time nder propitious cir-umstances.

On the banks of Llyn Ddinas, a small but exquisite lake in the Snowdon range.

Across the lofty ridge of the Glyders lies the Ogwen valley with its wonderful views and its alluring climbs, with its wealth of solitary tarns hidden in the recesses of the hills, and its serpentine roadway trailing west to Bangor, the gateway to the Isle of Anglesey, and east to Capel Curig.

To have seen this district in the tourist season may be to have gained a deep respect for it, and a longing to return; and if the return be in golden autumn or in the gales of November, if it be when the world is silent under its white mantle of snow, or when the fresh life of spring is adorning hill and dale, that return will multiply enormously the sense of admiring appreciation; but one will be lingering merely along the threshold until at all seasons and under all conditions one has had the privilege of making acquaintance with what the writer firmly believes to be the most beautiful spot in the land.

# WEARING LEATHER.

## A Defence of the Leather-clad Misnamed Super-Knut.

FROM time to time there appear in print indictments against what it pleases certain writers to term the "super-knut."

They tell us he bestows lavish care upon his person, bedecking himself in much earnest in helmet, goggles, nd generally conspicuous clothing, while in many ases his mount is obviously lacking the most elemen-ary attention. That he may be recognised in any rowd as a motor cyclist, they would have us believe, s a crime in itself. They draw for themselves pic-ures of this indelicately equipped person, generally, e it said, grossly exaggerated, and then we are treated o a long dissertation on "making the countryside ideous with dense volumes of smoke and ear-splitting eports—all part of a plan to attract attention."

### T.T. Bars and Open Exhausts.

The necessary connection between wide T.T. handle-ars and a riding helmet, or even between an open xhaust and blue smoke, is hard to see. That nuis-nces do exist is not to be denied, and much to be egretted, but I very much doubt if the abandonment f the riding helmet, brightly hued scarf, etc., would roduce a wonderful change in the countryside.

Take the ordinary family man, who, far from being road-hog, is content, perhaps, with a comparatively ncient machine, and whose use of the roads is limited to week-ends. After his first two or three ventures in true November weather he decides that the ordinary cap, or soft felt, leaves much to be desired in the way of comfort when riding; that an upturned coat collar is hardly proof against the cold winds he is going to contend with; and again that something to augment the so-called freedom from mud which his machine affords, and at the same time maintain as warm limbs as possible, is very desirable.

### Leather the Most Suitable Wear.

For this man, if he is to equip himself for his job, as all other sportsmen do, naturally turns to articles specially designed and sold to meet his need, so we find him wearing leather fleece-lined helmet, woollen scarf, and leather knee-boots—and arrayed thus he becomes, automatically, a super-knut so called.

How would the sight of Tottenham Hotspur playing football in dancing-pumps or a cricket team playing in boxing-gloves appeal to these critics of ours? And yet the motor cyclist, because he is such, is to be precluded from equipping himself in accord with the requirements of his sport.

Again I say that the riding helmet does not have such a deleterious effect on the brain of the wearer as to compel him to ride a real hog-bus, famous for noise, smoke, and finding the killjoys. RENEVE.

# Complementary Pastimes

## Instances of the manner in which Motor Cycling Blends with other Sports and Recreations

WHILE participation in present-day motor cycle competitions may be regarded as sport—often very exciting sport, too—while evening runs or week-end rambles with no more definite object than "a breath of fresh air" in themselves form an engrossing pastime, and while to the mechanically inclined the very ownership of a motor cycle is a fully satisfying hobby, there are some who are motor cyclists mainly to aid their participation in some other entirely different form of recreation.

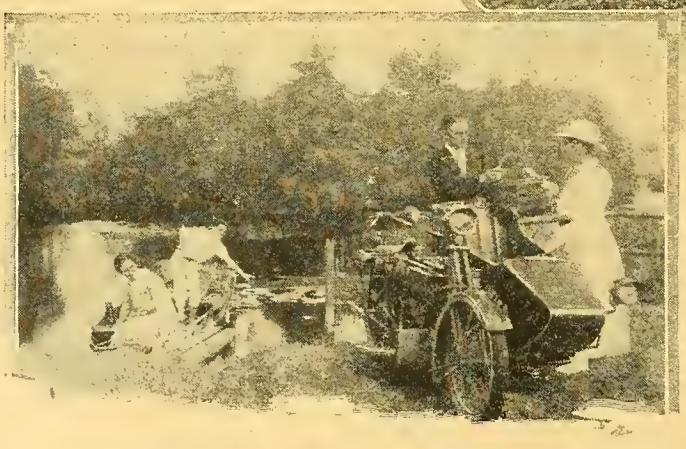
In the same way, many already enthusiastic devotees of the self-propelled two-wheeler eventually discover how simple it is to add yet a further interest, previously impracticable, to their spare-time occupation.

As a means of transport the motor cycle combines mobility with an extremely wide range of action to a greater extent than is in any other way possible. Therefore it would be surprising if it did not become the most popular help to the sportsman and the outdoor hobbyist in almost all his guises.

Whether the true motor cyclist needs another means of diversion is a matter upon which opinions no doubt differ. Probably it depends on the mentality of the rider.

The keener type of amateur who tunes his own machine and gains infinite pleasure from the task will scoff at the suggestion of a complementary pastime. Should he desire to vary his alternate spells of "tinkering" and testing the results of his labours on the road, he finds the acme of enjoyment in competing against his kind and even against the factory-assisted professional in his club's reliability trials or speed events. His literature is almost confined to *The Motor Cycle* and a bundle of well-thumbed motor cycle catalogues. There are thousands in this class; it would be a poor motor cycle club which could not boast a dozen or more.

Again, the family sidecarist or solo "potterer" often finds that the open road provides



River and sea cannot as yet be traversed by the motor cycle (although in the upper picture the sidecar body may also be used as a canoe), but the handy outfit often contributes its aid toward the enjoyment of a day afloat.

**Complementary Pastimes.—**

all the variety of scene and action and all the health-giving qualities which should form the basis of any outdoor amusement. Where the previous type is numbered in thousands, the present category runs into tens of thousands in Great Britain alone.

Some of us, however, perhaps inheriting Scotch blood, are attacked by the golf virus; others discover that the only "she" is a budding Suzanne Lenglen; or perchance we fall to fishing's quiet fascination—no matter which, or many more, the faithful mechanical steed remains a friend and quarrels not with the newer fad. Why? Because so adaptable is the motor cycle that it enhances the pleasures of any outdoor sphere of action.

Taking, as a typical example, the game which developed the "Plus Four" and enlarged our unwritten vocabulary, the convenience of being whisked back to civilised regions after a tiring eighteen holes instead of pedalling or tramping has to be experienced to be realised. And only a very small minority of the country's golfers live within two miles of their favourite links.

To a lesser degree this applies to tennis, football, hockey, or any other like athletic games for which Britain is so justly noted.

In the same way shooting—rabbit, pheasant, or clay-pigeon—may be more readily enjoyed by the town or city dweller if he possesses a handy means of transport for self and dog and gun to the country lanes. Which incidentally reminds us to deplore the fact that occasionally a motor cyclist brings his brethren into disrepute by practising that ever rampant vice, poaching.

MOTOR CYCLISTS AS ALL-ROUND SPORTSMEN.

Fishing and bathing are often inaccessible to those who most desire to participate. Happy solutions are suggested above, and, as a curiosity, the lower picture shows how two of the greyhounds were conveyed to a recent coursing meet.

**Complementary Pastimes.—**

In winter, speaking, of course, of winter as it should be—as favoured by the Christmas-card artist—the motor cyclist, and the sidecarist in particular, gets to the skating pond or toboggan run before the thaw sets in; in summer he arrives at the swimming beach or boating river before the rain. Ever-ready transport is invaluable in both cases.

The naturalist, the artist, and the photographer, too, enlarge their fields of action to limits bounded only by our island coast if they are fully mobile in the most convenient and least expensive way. There are ways and means for accommodating all the paraphernalia which participants in these hobbies find necessary to obtain the desired results.

In the left-hand bottom corner of this animated picture of a somewhat rare winter scene is the clue to how to get there.

Even the airman may make good use of the speedy road-machine as a tender to his official "bus," and, indeed, there is no reason why he should not ship it on his flights, as one or two have already done, and have a ready means of completing his journey wherever he lands.

To instance further cases would savour of repetition; enough has been said to prove that motor cycling may be complementary to 90% of the other outdoor recreations, whilst retaining all the fascinations of its own.

The modern motor cycle is so reliable and comfortable that its use in no way interferes with the "form" of the athlete, the tennis or cricket player, and anyone who has hesitated on this account should hesitate no longer.

# HIGHER PREMIUMS.

## Reasons for the Increased Cost of Motor Cycle Insurance discussed by an Insurance Official and Motor Cyclist.

THE announcement in our last issue that still higher premiums are to be charged by the leading insurance offices transacting motor cycle business came no doubt as an unwelcome surprise to most riders. I believe it was very unexpected by most motor cyclists, a reduction in premiums being looked for owing to the decrease in the cost of labour and materials, but they have the meagre satisfaction of knowing that were this not so the increases would be still heavier.

### Cost Based on Experience.

During the last year the collective experience of the offices has been bad, and business has been run at a loss. It is, of course, not to be expected that the companies will carry on any class of business at a loss, so the premiums have been advanced.

Many people do not quite realise the principles of insurance, strange though it may seem. The basic idea is, of course, that all who wish to be protected against monetary loss in the happening of a certain event or events pay into a common fund, which is to be *equitably* administered for the benefit of those who suffer. If certain of the insured are unscrupulous, and make bogus or inflated claims, or do not take reasonable care of the property they insure, then the amount in the pool will have to be larger than would otherwise be necessary, and if it is insufficient, then each person will have to pay a little more, and the fair suffer for the benefit of the unfair.

### A Mistaken Notion.

There are a number of people who imagine that insurance companies are little less than huge swindling institutions, and that anyone who can get the better of them by fair means or foul is doing a service to the community; but as a matter of fact, in normal years, after claims and administrative expenses have been paid, a very small proportion of the premiums received is available as trading profit and as reserve for bad years.

It should be the aim of every motor cyclist to take the greatest precautions against loss of or damage to his machine, and if everyone did so premiums would be reduced by reason of a less amount having to be expended in settlement of claims, to the mutual benefit of all concerned. The man who carelessly exposes his machine to fire, theft, or damage, saying, "It doesn't matter, it is insured," is doing himself and others a great disservice.

XYZ.

(15-16) **SOME BUYERS "GUYED."**—FURTHER SPRING FOOLISHNESS BY GORDON CROSBY. b 13

# OCCASIONAL COMMENTS

BY IXION

## "Daylight Screens" for Headlamps.

IT appears that Kodak, Ltd., of Kingsway, are the actual producers of the Wratten and Wainwright screen to which I was recommended for correcting the colour values distorted by the glare of our headlamps at night. A number of riders have complained to me that this colour distortion troubles them, especially when they are travelling over wet, tarred roads at night. The Kodak people explain that their screens are designed to correct acetylene or electric light for photographic purposes, and stop a great deal more of the light value than would be necessary with a screen designed for motor headlamps. The firm seems to be rather coquettishly inclined towards marketing a special motor cycle screen, and if anything materialises in that direction, I will give due notice. Short-sighted riders undoubtedly find night driving more exhausting since our roads were tarred.

## The Dry Sump.

I DON'T know who is to blame. Perhaps the war, with all its aero engine research. Perhaps that busy brainster, Granville Bradshaw. But anyhow, the dry sump type of motor cycle engine seems to be occupying a number of drawing offices. I don't suppose that many riders care a split-pin what sort of a sump their engines have, but the people who ought to know say that a dry sump engine will keep as cool as a cucumber up Applecross, will never gum up, and will run 5,000 miles before carboning becomes apparent. Personally, I relish one day's rest in seven, though I seldom get it; and I can quite understand that any self-respecting lubricant lasts longer if it is given an occasional holiday outside the warmish hurly-burly of the crank case. I only hope that the dry sump engine won't make any addition to the corrugated items which we have to clean at regular (or irregular) intervals; there are quite enough of them on my machines already.

## Easy.

REALLY, motor cyclists have the faculty of observation keenly developed—they must all have been boy scouts in their youth. If one person has asked me outside my favourite—er—garages, what happens when one valve of either pair on my o.h.v. Triumph gets ground in deeper than the other, seeing that there is no separate clearance adjustment in the operating gear, this query has been put by twenty riders. The answer is, of course, childishly easy. After grinding the valves you measure them; if one projects further from the head than the other, shorten its stem to suit. It seems to me that somebody must be trying to crab this very excellent engine. Next, please? The sparking plug? Ah, yes. Just a little patience; and mind you don't lend or otherwise lose the two special spanners. But personally, I consider that the ideal position for a sparking plug is as this one, jammed right under the top tube guarded by four valves. Why? Certainly; because you can leave the machine out in the rain all night, and not a drop will get on the plug, while you can't oil it up if you use a B. and L. mechanical pump instead of the old-fashioned hand type.

## Stagnation in Carriers.

WHEN I buy a three-and-sixpenny carrier for my pushbike, I find it ready fitted with straps passing through slots in the metal; the straps may often be of a deplorable quality, but at least it is possible to attach luggage rapidly and securely, and the substitution of a pair of good saddler's straps puts me at peace with all the world. On the other hand, when I pay upwards of £100 for a motor bicycle, I find that the manufacturer is usually a generous fool. Generous, because he throws in a carrier free, gratis, and for nothing. Foolish, because he carefully designs that carrier to give me the maximum amount of exertion and annoyance in the using thereof. I use it firstly and most frequently to haul my ponderous mount upwards and backwards on to its stand; but there is seldom a nice grip anywhere on the tailbar of the carrier, and I abrade my delicate fingers on the sharp edge of a number-plate or the bolts securing the same. I use the carrier, secondly, to transport luggage. It has no straps. It has no slots or cleats to take straps. There is seldom any clearance (worth mentioning) between the panniers and mudguard on the one hand, and the carrier tubes on the other hand. Supposing I succeed in finding a strap as thin as court plaster and as tough as rhinoceros hide, and coax it into position, the bare tubes of the carrier provide no longitudinal stops to hold the straps nicely spaced apart. They gravitate towards the centre of the platform, and make my modest Japanese basket look like a Christmas cracker with two waists. Then my flapper . . . but here Tan-Sad comes to the rescue. In the other items, may we have a little more ingenuity?

## Use or Ornament?

I ALWAYS feel rather shamefaced when I attach certain items to a motor bicycle designed to be as much a thing of beauty as the Arab steeds which scorchers of a previous epoch scared pedestrians

**Occasional Comments.—**

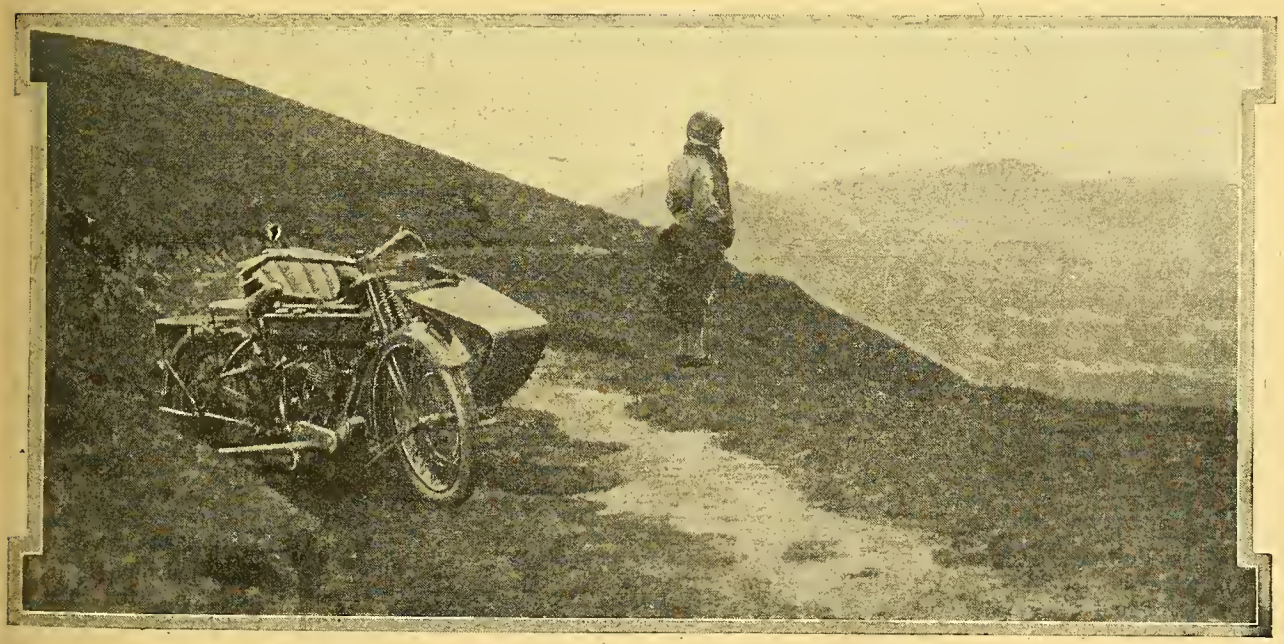
with. For example, it is an insult to a Norton to strap a Japanese basket full of underclothing to its carrier. So it was not without compunction that this winter saw a pair of John Bull-handle-bar muffs fixed to my handle-bar. Their undeniable ugliness is more than balanced by their extreme efficiency. Weighing under 2lb. the pair, they are very easily installed, and permit such a chilly mortal as myself to ride bare-handed in quite severe weather, and to find light gloves really cosy in a snowstorm. They are a fine instance of that rare article, a pluperfect accessory. Two wire-rimmed cylinders, covered with waterproof leather, they are big enough in the bore to allow easy operation of the control levers, with rubber ends flexible enough to slide over the grips, yet locking the muff firm in position, and forcing it to keep its shape. Incidentally, the lining has given a notion for making money. It is of blanket, camouflaged to look like leopardskin. I understand that the modern Kaffir is a degenerate individual, eager to swank in a leopardskin, but too timid to adventure himself in the jungle. I shall hie me to Africa, and enrich myself by selling sham leopardskin to degenerate Kaffirs.

### "Obsolete" in 18 Months.

A PARTICULARLY short-sighted and scandalous instance of bad trading methods has just been brought to my notice by a Sunningdale reader. He bought a new lightweight of reputable make in September, 1920. In February, 1922, an overhaul revealed that the flywheel half of the crankshaft was seriously damaged, either by the fracture of a roller or through some hard foreign substance entering the race. He applied to the makers for a spare, and under date of February 28th, 1922, received a letter from the manager of the repair department to the effect that his crankshaft was "obsolete" (!), and suggesting the purchase of a new model shaft, complete with crank pin, both halves of shaft, and rollers, for £3 5s. As 15s. is approximately a normal charge for half a crankshaft, it will be seen that this firm's failure to maintain a proper supply of spares has cost my correspondent a sum of 50s. The firm's letter contains no apologetic matter whatsoever, and adds insult to injury by admitting that the "probable" cause of the crankshaft trouble was a faulty roller. I need hardly say that under similar circumstances most British firms would instantly offer free replacements, and that the more churlish catchpenny type of concern would at least apologise for their inability to supply spares and forward the new model shaft complete at the figure chargeable for the old pattern. It is the worst case of silly and mean trading which I have encountered in my long experience. If this paragraph comes to the attention of the firm concerned, I trust they will even now make amends.

### Mending Unpuncturable Tubes.

NO, I'm not Irish. But I suppose that when an inventor terms his patent tube "unpuncturable" he doesn't necessarily mean that an I.R.A. bullet or a broken beer bottle on the road might not administer a temporary quietus. Anyhow, several readers enquire whether the Jeff and Challenger tubes can be mended if the incredible occurs and some fearsome puncturing instrument should get them where the hair is short, so to speak. The Jeff is repairable in exactly the same manner as an ordinary tube. The original pattern of the Challenger tube was, I believe, not very difficult to mend by hand, but awkward to vulcanise. The current edition has a thickened outer skin of red rubber on the tread side, and can be patched like any other tube.



WHERE THE WESTERN WINDS DO BLOW. An early spring scene on the breezy slopes of the Malvern Hills, Worcestershire, where an error of judgment in steering up the narrow pathways might lead to dire results.

# The Cheapest Transport for TWO

by Road Rider

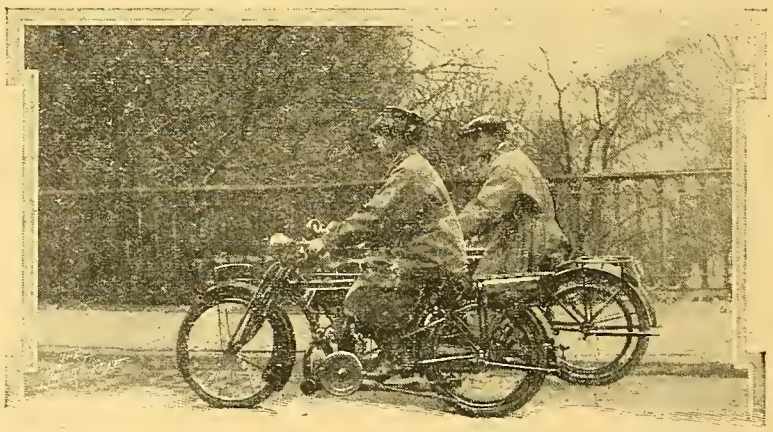
## Discussing the Most Economical Methods of Providing for Two People—with one Revolutionary Solution to the Problem.

Three most economical methods of transport for two: Pillion riding, the lightweight outfit, and the "big single" sidecar.

PASSENGER motor cycling on limited means is the thorniest of all the perplexities which beset the intending purchaser at this time of the year, and a few notes may enable worried readers to cut their Gordian knot. The choice—at what motor cyclists would regard as a really low figure—is as follows:—

(1) Pillion (new or second-hand bicycle).
(2) Bijou sidecar (second-hand outfits scarce, but sidecar may be attached to second-hand bike).
(3) 500 c.c. sidecar (new or second-hand).
(4) Second-hand high-powered sidecar or cycle car.
(5) Two two-stroke solo mounts.

The first alternative takes us down to extremely low figures. For about £45 it is possible to get a really first-class lightweight with two- or four-stroke engine, clutch, kick-starter, and two- or three-speed gear, and the second-hand market provides plenty of choice. The question of new *v.* second-hand bobs up thus early for consideration. There are only two methods by which a novice should approach the purchase of a second-hand machine. The first is to buy a mount from a skilful friend, when its whole history is known to the buyer. The second is to trust an honest dealer, if identifiable. It is curious that a man who is ignorant of horses or cattle would not dare to buy a beast from a stranger, trusting to his personal acumen, whilst breeders and farmer often insist on a vet.'s guarantee; but lots of people will buy complex machinery from entire strangers in simple faith.

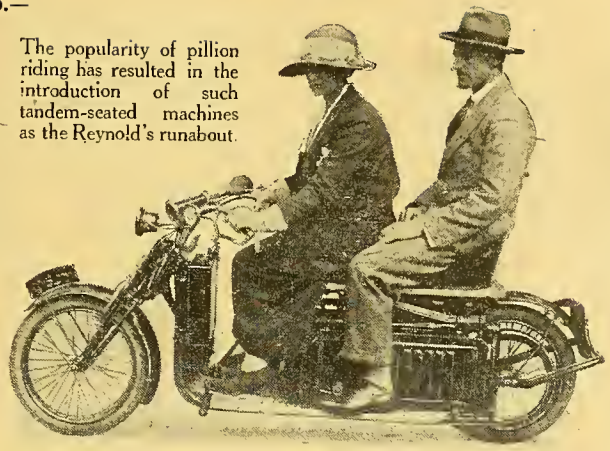


Many couples prefer separate solo mounts to using one sidecar, and there are not a few points in favour of the idea.

Taking the wise precautions for granted, what is to be our verdict on a 250-350 c.c. pillion mount? According to the wiseacres, pillion riding is the most dangerous form of motor cycling. It is seen at its worst when a light machine is in question, for the tail leverage reaches its maximum when the bicycle is very small and light.

**The Cheapest Transport for Two.—**

On the other hand, many riders cover a big mileage without accident. It is obviously the least comfortable mode of transport for a woman, although I expect that this will be denied. Technically, pillion riding is less severe on the engine than even a miniature sidecar, and permits the couple to travel almost anywhere. Lightweight machines, ridden solo, will go anywhere; with an extra passenger, the worst that can happen is for the passenger to walk a very severe hill once or twice in the season.

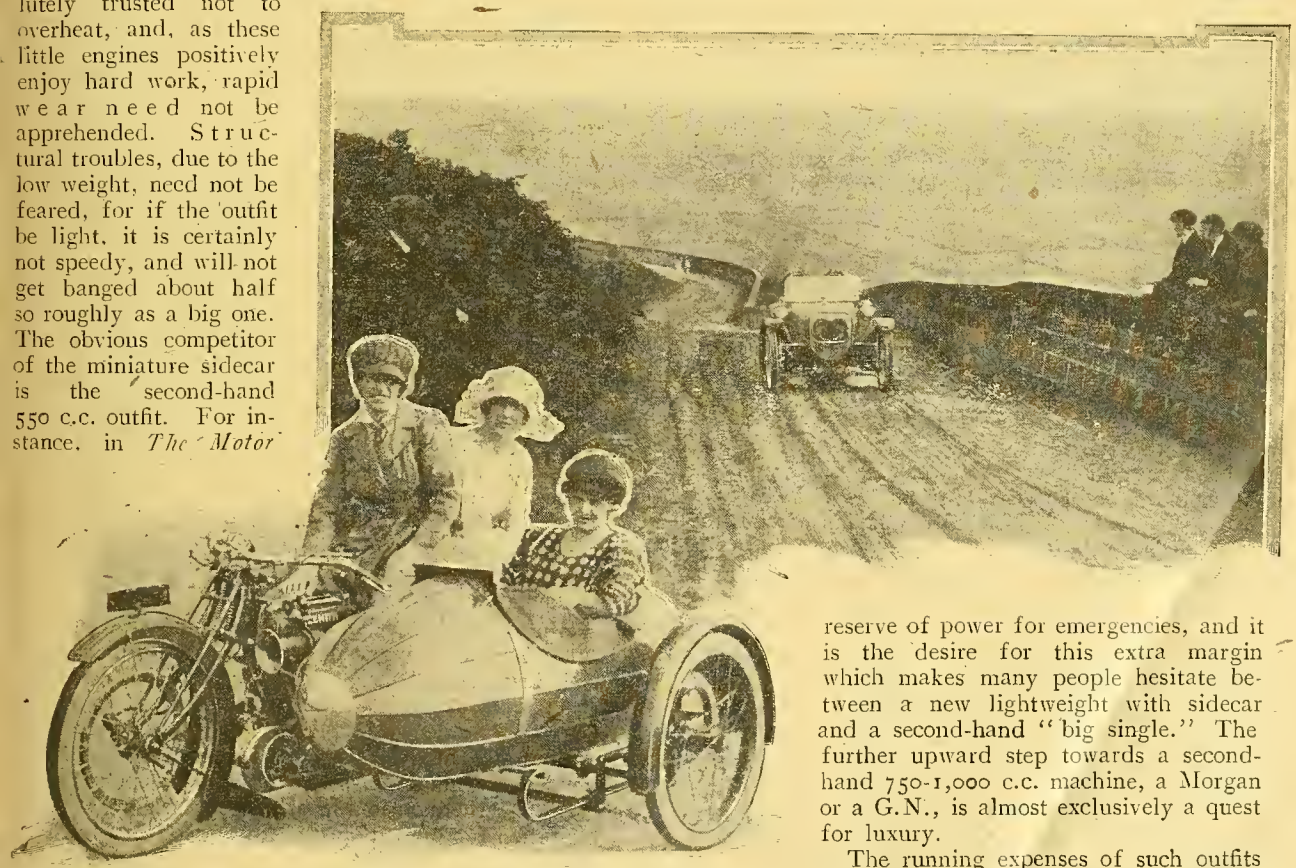


The popularity of pillion riding has resulted in the introduction of such tandem-seated machines as the Reynold's runabout.

The bijou sidecar plainly promises far more comfort than any pillion seat, and, theoretically, is safer. It will be slow. Its climbing limit in ordinary hands is probably represented rather by a hill like Dashwood than by Sutton Bank; but there are very few Sutton Banks on main roads, and they can always be dodged by a detour. Air-cooling is so efficient nowadays that the little sidecar machine can be absolutely trusted not to overheat, and, as these little engines positively enjoy hard work, rapid wear need not be apprehended. Structural troubles, due to the low weight, need not be feared, for if the outfit be light, it is certainly not speedy, and will not get banged about half so roughly as a big one. The obvious competitor of the miniature sidecar is the second-hand 550 c.c. outfit. For instance, in *The Motor Cycle* of February 2nd I find that the average price put on a 1920 Triumph sidecar is £87, whilst 1921 models average £110. If these outfits are fully equipped and in sound order, they are as cheap to buy as almost any smaller sidecar, are not vastly more costly to run, and are more adequate for touring purposes. The tax is a little higher, but the depreciation will be, if anything, rather less, and the loss of interest on capital will be similar. Insurance will be slightly heavier. The second-hand 550 c.c. is really the better proposition from a technical standpoint, and the bijou sidecar exists, first, because so many people prefer something which is brand new, and, secondly, because some buyers lack the confidence or skill to adventure their cash amid the pitfalls of the second-hand market.

The second-hand high-powered outfits and cycle cars present rather a different problem. As soon as 500 c.c. is reached, the rider will possess a reasonable reserve of power for emergencies, and it is the desire for this extra margin which makes many people hesitate between a new lightweight with sidecar and a second-hand "big single." The further upward step towards a second-hand 750-1,000 c.c. machine, a Morgan or a G.N., is almost exclusively a quest for luxury.

The running expenses of such outfits are quite appreciably heavier than those of the simpler specifications, and I do not advise any impecunious person to



One obtains more comfort and a greater reserve of power with a fully equipped 8 h.p. sidecar or three-wheeler; but naturally one has to pay for these advantages in increased upkeep costs.

**The Cheapest Transport for Two.—**

plunge on unnecessary horse-power. The extra horse-power is, however, hardly a luxury where really heavy loads are concerned. If it is vital that two children or a third adult, probably *plus* luggage, should be carried on occasions, 750 c.c. or even more is distinctly desirable. A prohibitive load robs a 550 c.c. sidecar of all its life on the flat, slows it down terribly on the level, especially against a head wind, and makes all the difference between success and failure on crucial hills.

**Upkeep of Big Machines.**

At the same time, it must never be forgotten that any machine with a 1,000 c.c. engine is getting perilously near the small car scale of maintenance charges, and that between the more economical forms of motor cycling and owning a car there is fixed a great financial gulf. It is very rare for any man of moderate means to wish he had bought a more extravagant vehicle. It is common for people to sell motors because the running expenses are too heavy a tax. Every temptation is in the direction of buying something too big for one's purse. It is astonishing what pleasure a contented mind can extract from a simple motor which is not very "posh," not very big, and not very fast.

**And now the Modern Way.**

A few owners are adopting quite a novel policy this last year or so. They have noticed that the lightweights are becoming very good indeed. It is possible to buy two first-rate second-hand solos with liberal specifications for about £75, and a brace of good new examples for £100 or very little more. Quite a number of young couples have purchased two small bicycles instead of one big bicycle and a sidecar. Such a pair of machines makes an excellent stud for conjugal touring, and in local work round the home it is infinitely more convenient than any one-piece two-passenger outfit. What husband is not weekly victimised by having to ferry his wife to attend dull functions or visit dull people? The brace of two-strokes permits man and wife to go their several ways on such petty occasions, and to travel together when so inclined. Of course, you cannot very well convey small olive branches on the pillion, and the luggage accommodation is none too good. But I know many young couples who consider that a pair of bikes is easily the best solution of a harassing problem.

# RADIATION OF HEAT.

## Notes on the Cooling Effect of Black Paint on Air-cooled Cylinders.

"WHY is blacklead advocated for cylinders? Why not white or aluminium paint?" asks a reader.

If my memory is not at fault, the cylinders of the T.T. A.J.S.'s were copper-plated and finally blackened. This question is fully explored in that branch of physics called heat.

Heat can be transmitted in three different ways: (1) By conduction. If one end of a poker is put in a fire, the other end will also become hot. This is conduction, as the heat is literally "conducted" along the poker. (2) Convection. In the case of convection, however, the actual substance which is being heated moves, carrying the heat with it. An example of this is central heating. Water is heated in a boiler, and flows through the various pipes and radiators, carrying heat with it. (3) Radiation. If we hold our hands below a red-hot bar of iron, we feel the heat from it. The heat has reached our hands without the aid of any exterior means.

In motor cycle engines of the air-cooled variety heat is carried by conduction from the interior of the cylinder to the outside wall, and there dissipated to the surrounding air by radiation.

**Simple Experiments.**

As the following simple experiments will show, much depends on the surface of the radiator.

Take a piece of sensitised paper, and in the centre of the unsensitised surface paint a square of a dull black colour. The rest of the paper paint an aluminium colour. When quite dry, bring it near a source of heat. It will be noticed that that part of the sensitive paper directly behind the dull black colour becomes much darker than that behind the aluminium surface. This shows that the dull black colour is a better absorber of heat than the aluminium. The following experiments will prove that good absorbers of heat are also good radiators.

The first experiment is performed with an instrument known as "Leslie's Cube." This is merely a cubical tin in which the four vertical sides are prepared as follows: (1) covered with lampblack; (2) polished grey; (3) painted white; and (4) brightly polished. A thermopile is placed about 18 inches from it. The thermopile consists of several pairs of rods of the metals antimony and bismuth, arranged alternately. If the ends of the series of rods are joined by a wire and the junctions are heated, a current of electricity is generated. A sensitive galvanometer detects the passage of the electricity, and by its deflection the relative amount of radiant heat falling on the junction is measured. The cube is kept at a constant temperature by passing steam or hot water through it, and the different surfaces are tested. It will be found that the polished tin radiates the least, the painted white next, then the polished grey, whilst the surface covered with lampblack is by far the best radiator.

Perhaps the following is a more conclusive experiment. Two tin castors of equal size are taken, and one is brightly polished and the other thickly coated with lampblack. A thermometer is placed in each, through a wooden lid. Pour an equal amount of boiling water in each tin, and at the end of a short time, say ten minutes or so, note the thermometer readings. The thermometer in the lampblacked tin will have fallen far lower than that in the polished tin.

From the preceding experiments it is fairly evident that a dull black surface radiates heat far quicker than a polished one, therefore we need have no fear about blackleading our cylinders. E. N. J.

# The Real Worth of the Motor Cycle.

Fallacy of Always Counting the Cost in £ s. d. and Letting Good Times Go By.

THERE are many people reading *The Motor Cycle* who are like David Harum when he was a youth. They don't possess a sidecar outfit, but they want to own one badly. David wanted a silver tobacco box badly, but he kept on waiting and waiting. No doubt everybody who appreciates humour will have read his discourse on the subject of waiting too long before buying a much-desired article.

David, after taking twenty years to make up his mind to buy a silver tobacco box, says:—"I don't mean to say that I didn't spend the wuth of it foolishly time over an' agin, but I couldn't never make up my mind to put that amount o' money into that pertic'ler thing. I was always figurin' that some day I'd have a silver tobacco box, an' I sometimes think the reason it seemed so extrav'gant an' I put it off so long was because I wanted it so much. Yes, sir," says David, "I never spent a small amount o' money but one other time an' got so much value, ony *I alwus ben kickin' myself to think I didn't do it sooner.*"

When it is suggested that David probably enjoyed it all the more for waiting so long he says:—"No, it wa'n't that—I dunno—twas the feelin't I'd got there at last, I guess. Fur's waitin' fer things is concerned, *the' is such a thing as waitin' too long. Your appetite 'll change, mebbe.*"

### Procrastination.

And so it is with the man or woman who reads religiously the big advertisements of *The Motor Cycle*, then scans the "Smalls," picking out the bargains. But he doesn't buy. He keeps waiting, week by week, month by month, not thinking that his "appetite 'll change, mebbe." Sometimes the waiting is inevitable, just as it was in that blissful age when we lost interest in stamp collecting and push bicycles and succumbed for the first time to a fuller passion for the petrol engine, longing, as we have never longed for anything before—or since—to possess a machine. The waiting in those days, as I have said, was inevitable, but we appreciated their worth well enough.

But there are readers who this very moment desire to buy and who have the money to buy, yet refrain from doing so from mercenary motives. These people think that prices will drop, and are waiting for that time. But they do not appreciate the fact that they are failing to take advantage of one of the greatest health-producing devices invented by man. That is saying a great deal, but it is undoubtedly true. Owners of machines who have always possessed abounding vitality may say the statement is *probably* true, for, motor cycle or no motor cycle, these lucky people always feel fit, motor cycling not adding to their well-being except to give more exhilaration and excitement to their lives. There are those, however, who seldom feel fit, whose general condition is C3, and who, before taking up the motor cycle, ambled through life with the doubtful aid of pills and capsules, spending enough on these nerve tonics and revivers to run a motor cycle.

### Value.

The real worth of the motor cycle cannot be measured by pounds, shillings, and pence, and if one's nature is so constituted that every farthing spent must return its full value in something tangible, then the only pastime to be recommended to these people is walking, and even then there is boot leather to be considered.

Take it that a man is able to afford £100 to £150 for an outfit or solo machine, and that the general upkeep will not affect him appreciably. What does he and his family stand to gain or lose by the purchase?

Although a chartered accountant might not pass the following balance sheet, I think the items are fairly represented, although there is a big blank on the debit side that augurs badly for that side of the column.

| *Debit.* | *Credit.* |
|---|---|
| Interest, running costs, and depreciation of a 5-6 h.p. sidecar, 15s. PER WEEK. | Freedom of the "Great gay road." |
| N.B.—Details need not be given, the figure being near enough to the mark for an average rider. | Access to the beauty spots of Great Britain which otherwise might be missed on the score of railway and travelling expenses. |
| | Feeling of independence in travel. |
| | The possession of a vehicle ready to travel any distance. |
| | A greater appreciation of one's own beautiful country. |
| | The health-giving propensities, which are unquestioned. |
| | Always something to look forward to. Anticipation, inspired by thoughts of the next drive. |
| | An interest in life that must be health-giving—a stimulant that doesn't let one down. |

One could add indefinitely to the credit side, but the specifications given are sufficient to show that those who hesitate buying on the score that it won't "pay them" are labouring under a fallacy, even though the machine be purchased purely for pleasure. FRIAR JOHN.

# PASSENGERS, FAIR AND OTHERWISE.

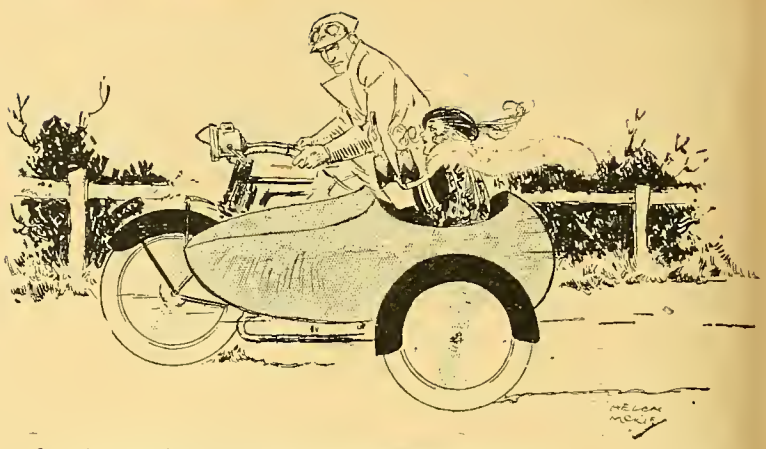
## Our Partners, Active and Passive, in the Joys of the Road.

By Ixion (Illustrations by Helen McKie).

HE was one of those benevolent gentlemen who attend the principal motor cycle trials and present free tins of Somebody's oil to any competitor who will sign a bond to use no other. It fell to my lot to arrange transport for him over the route (I didn't quite see why he need cover the course at all, but perhaps he was afraid one of his riders might seize his engine, and that help might be needed to frame a cause wholly divorced from lubrication). Anyway, I told him ruefully that all the cars were full; but perhaps I might find him a seat in a sidecar. "I am very particular," quoth the oily one, "whose sidecar I ride in." I warned the intended driver that the passenger was fastidious. "Yes," roared the angry driver, "and I am —— particular who rides in my sidecar."

I quite agreed with the driver. My sidecars have conveyed all sorts and conditions of men and women. I will not generalise dogmatically about the ideal passenger. Dirt, as the poet said, is matter out of place. On a sunny day in August, when one is trying to make all other motor cyclists Castrol colour with envy by driving a Brough Superior outfit (o.h.v., of course) up and down the front at Brighton, Miss Tottie Plantagenet, of the Frivolity *revue*, attired as only she can attire herself, is unquestionably the goods. So, too, when the latest 1922 outfit is being photographed for our "Road Test" series (unless, indeed, Mrs. Ixion has any evidence that I executed the particular road test concerned). But in a London-Exeter, Miss Tottie Plantagenet would be—well, matter out of place. I have the warmest possible memories of my passengers in trials. Dear old Bill, for example, bless his heart. When two of the sidecar connections fractured near the Cockbridge Ladder in the 1888 Scottish Six Days, did not Bill manfully volunteer to carry the sidecar wreckage across six moors and three lochs to the nearest railway station whilst I rode the rest of the "bus" solo, completing the course and duly securing my gold? There was one brief but awful period during which the A.C.U. got too big for its boots and actually forced all trials entrants of passenger machines to put the second seat at the Union's disposal, and they filled it with nasty hybrid creatures resulting from the cross between a theoretic engineer and a female spy—William le Queux brand. These noisome reptiles strolled up to us in the official garage at the start, ignored us as if they were duchesses and we were hired chauffeurs at a society wedding, deflated all our natural pride in our mounts by remarking audibly that they would jolly well see the secretary put them on something decent next time, waited expectantly till our inevitable troubles began, and then made voluminous and damaging notes in a fat journal, standing in attitudes of detached and dispassionate observation whilst we sweated in the sun to coax a bang out of the silent engine.

"One of those benevolent gentlemen who attend the principal motor cycle trials and present free tins of Somebody's oil."



"In a London-Exeter run Miss Tottie Plantagenet would be . . . out of place."

### The Perfect Passenger.

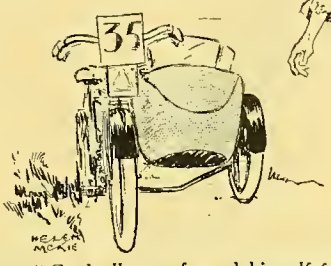
Contrast the behaviour of dear old Bill. My engine had hardly conked in a big trial before he was overboard, ripping out the tools. The repair complete, Bill performed feats of legerdemain as I tore along at 40 miles an hour. First of all he would carefully pack up all the kit again. Then he would gradually transform himself from a cursing, shirt-sleeved fiend into a respectably camouflaged motor cyclist, complete with helmet and goggles. At the next check Bill would convince the most flinty hearted checker that the official watch had gained ten minutes; whilst I replenished the tank; and as soon as we were off, I would feel a nudge in my ribs, and there would be Bill holding up a *pâté de foie gras* sandwich and a bottle of Bass, incredibly commandeered whilst a hundred hungry men were threatening to pull down the hotel or lynch the head waiter. Pushing; co-operative; energetic. Bill was the man to have aboard in any emergency. If I'd ever run over a policeman, Bill would have disposed of the carcase inside ten minutes, and even the Big Four of the Yard would never have solved the disappearance.

**Passengers, Fair and Otherwise.**—

Ginger, now flying near Bagdad, was equally great in a very different way. His *forte* consisted of monosyllabic inspirations, for he was a taciturn lad whose brain moved slowly but surely. For example, one day he and I were burbling down the Great North Road. Something was amiss somehow. The sun was balmy. The 'bus was running like a clock. There were no police about. Our Edinburgh medals were safe in our pockets forty-eight hours before. Yet, like the fabled person seated at the organ, I was weary and ill at ease. Some *je ne sais quoi* disturbed my interior peace. Though I had miles of straightish billiard-table surfaces before me, I felt too low to open the throttle.

### Monosyllables.

Suddenly Ginger elbowed me in the ribs. He pointed to the left with his other hand, and ejaculated the one word "Golf!" I spied to the left a board with the legend "Doncaster Golf Club." We swung in, hired two sets of mouldy old clubs from the local marker, and when we emerged two hours later, the haunting *malaise* was gone—I could open my throttle with a glad heart. Or, again, one evening we were halfway through a hundred-mile spin, when rain began to fall heavily. I cursed and Ginger grunted sympathetically. In a mile or so we approached a potty little village, unknown to me. Again that inspired elbow in my ribs. "Beer!" he murmured. Beer it was. A well-known authority has publicly stated that there is no bad beer; but if there can be degrees in perfection, the beer of that unknown village came nearest the nectar of ancient fable. Ginger was a man of acute understanding. The only time we came near a quarrel was on another cold night—too cold for beer, and I thought he had said "Beer." It turned out that he had really said "Beef!" which was correct under the circumstances; we turned into the little inn, and got two fillets of undercut, all pink and oozy.



"Gradually transformed himself from a cursing shirt-sleeved fiend into a respectably camouflaged motor cyclist."

One of my colleagues, X, has never really loved sidecars since a side wheel became detached under him some years ago; it ran on ahead, and hit the fence not quite hard enough to make a gap for the sidecar, which fetched up at the same point a few seconds later. Since then my colleague has been a somewhat queasy person to have on board one's outfit. So I was all the more pleased when his solo mount let him down in a big trial last year. We begged a seat for him in a sidecar driven by Jones, a stranger to him, but not to us. I rode behind the pair to mark the progress of the conversation by the elevation of X's back hair. Jones's opening never varied that summer. It ran as follows—

Jones: I haven't driven a sidecar since 1914.

X: Indeed? (tail of his cap rises ¼in.).

Jones: No; I stopped one at Aubers, and I've got shell-shock.

X (gurgles unintelligibly; peak of cap lifts perceptibly).

Jones: It brought on neurasthenia, and the doctors seem to think I get worse every day.

X: Would you like me to drive for you? (his cap blows right off).

Jones: It doesn't matter. I think I see a pub. I shall be better when I've had a glass and a chaser. (N.B.—Jones has had umpteen "glasses and chasers" already.)

### Talkative Ones.

I particularly detest talkative passengers. Of course, it depends what they say. One day at a big meet somebody asked me to give a lift to a nice little thing who lived a mile or two down the road. At the first blind corner a motor coach nearly juggernauted us. I did rather a nice there-and-back skid, and just as I cleared the great lumbering obstruction I said something rather pointed—no swear-words, you know, just a few cutting words about prehistoric hearses. Presently a silvery little voice tinkled in my ear, "Mr. Ixion?"

I gazed down into two large pools of delphinium blue.

"I do *so* admire presence of mind!"

I never saw her again.

But some talkative people are the limit. Once in a Scottish with a bent fork and rather rickety sidecar connections I was negotiating that nasty road along Loch Lomond. My exhaust was practically open, and the idiot I had aboard had evidently seen *The Motor Cycle* for the first time the night before. He was trying to impress me with his technical knowledge. Indecipherable bellow from him. I shut off the engine, and daringly take my eyes off the narrow twisty road for a second. "Wh-a-a-at?" Repeat eight or ten times on both sides. Finally I elicit that he wants to know if my engine is fitted with drilled steel pistons. Being a single-cylinder, it only has one piston, which happens to be cast-iron, and has a large piece jagged out of the skirt, so that the less I am reminded of it, the better I am pleased. Presently we interchange a further series of muffled bellows. It transpires anon that he considers my brakes excellent. I lose my temper and untruthfully remark that I've only got one, and that its thread is stripped. More bellows. Apparently he wants to know if that isn't rather dangerous. "Very," I retort briefly. Conversation closed *pro. tem.*

Lady passengers vary from the sublime to the ridiculous. The parcel lady is the type which all good motor cyclists most abhor. She may be an aunt. In that case, excessive opulence is her sole justification. She may be Juliet's mother—none but the brave deserve the fair. But she is never a likeable person. She usually giggles. She considers the chair is so small. "Can't you leave those funny hard things in

**Passengers, Fair and Otherwise.—**

the bottom behind?" (how can one go out minus a tyre pump and a jack?). Are we sure it is clean—these motor cycles are so often oily? Why hasn't our sidecar got a dinky little hood, like young Jacomb's? Do we know Mr. Ambler? He has a *car*. It is a Rolls-Royce. She often goes in it. It doesn't bump. It is as quiet as an electric launch. It doesn't sway round corners. There is room in it for seven persons.

### Unwelcome Oddments.

When she gets out courage is required to investigate the sidecar. She has probably left a paper bag of over-ripe plums or tomatoes in the footwell. Never turn your back whilst such a person is fussing round the sidecar. The mother—I think it was—of quite a nice girl once put six bloaters wrapped in newspaper in the well under my sidecar seat, and forgot them. I did not find them till I had a puncture some weeks afterwards. So, on the whole, it is best to investigate as soon as you have disposed of the passenger.

It is popularly supposed that the ripening flapper is the genuine *raison d'être* of the popularity of the sidecar. The unripe flapper goes, of course, on the carrier. Two or three years later one's salary is rising, matrimony is on the horizon, and a fractionally more mature flapper rightly merits better sitting accommodation. Well, I share the universal weakness for—something frilly, it was a few years ago; now, I suppose one must say, leggy objects with incredible figures, jumpered in impossible colours. But you know that when that mood is on us, we temporarily cease to be worthy members of the motor cyclists' fraternity. Speed, the road, sport, and scenery temporarily lose all their magic for us. During this mad moment the centre of the universe for us is a female thing whose most pronounced faculties are a greed for indigestible confectionery, a capacity for spending more than anybody ever earned, and a rapacity for admiration. In my private opinion a second-hand American car is good enough transport for such. An honest British sidecar deserves an honest British passenger. It should not be degraded by the transport of man-eating blood-suckers. Whoever occupies it, whether clad in trousers or petticoats, should be a comrade. Comradeship in life is compounded of too many ingredients to admit of definition. On the road it is a simpler matter. He—or she—must love the road as you love it; be ready to share foul or fair weather with you; take speed and trouble as the journey brings them; approve the inns that you approve, and joke with you over the inns that both of you must disapprove; love your mountains and flats, your rivers and your sea; potter when the potter-mood is on you; and trust you when the inevitable tight corner looms up. You will find few such passengers. Treasure them when they come.

"Commandeered whilst a hundred hungry men were threatening to lynch the head waiter."

# EASY STARTING FROM COLD.

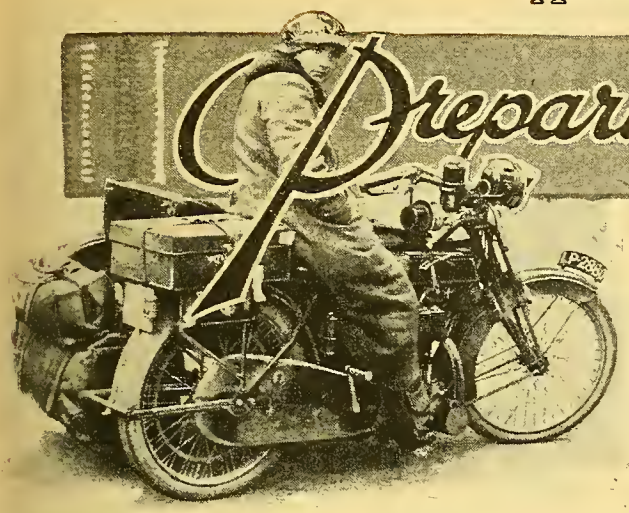
THE successful starting of a motor cycle engine depends on many things; but assuming that a machine is in tune, in the more general sense of the term, the three vital points in the matter are:—(1) The introduction of a good explosive charge into the cylinder; (2) the easy ignition of that charge; and (3) the correct use of the kick-starter. These may be dealt with in turn.

(1) When an engine is cold, a large proportion of petrol in the mixing chamber of the carburetter is necessary to produce the explosive charge, owing to the fact that only a portion of the petrol is vaporised. So if the carburetter is not fitted with a slide that completely shuts off the air, when in the closed position, it is as well to close the air intake by means of a cork, rag, or similar device.

(2) Assuming the magneto and plug to be in order, this matter really resolves itself into the setting of the plug points. Now it is generally advocated that these be set a little wider than a magneto point gauge, but it would appear that if the rider sets his points to this gauge exactly, a spark is more likely to jump the small gap than a larger one at very slow revolutions. The points must of course be clean *and dry*.

(3) Perhaps this point is the most important of the lot. To make an engine start it is imperative that it should revolve over compression, since mixture is not in the least likely to explode unless first compressed. Also, while the exhaust valve is being held open, very little, if any, mixture is being drawn into the cylinder, as air is being easily drawn in through the open valve. So, when using the kick-starter, *always drop the lifter in the middle of the kick and not at the end*, as is done by nine people out of every ten.

One word of caution:—Directly the engine has started, remove the temporary block from the air intake, or the mixture will become too rich to fire.

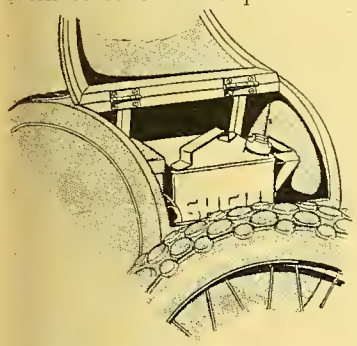


# Preparing for the Tour

## Spares to Take, Attention to the Machine before Starting, and Packing the Equipment.

WHEN a machine is used by that conscientious type of rider who never permits anything to remain undone nor any fault to remain unrighted, it is no doubt always ready for a thousand-mile tour at no longer notice than is needed to fill the tanks and strap on the luggage.

Fortunately, to add spice and variety to our otherwise monotonous existence, such machines are rather the exception than the rule, and a mount which is in daily use, on business journeys or the workaday rounds of trade, as well as the machine which is ridden hard at week-ends by a man too busy during the week to give it attention, will need some kind of cursory overhaul so that the pleasure of its owner (and his family mayhap) shall not be jeopardised during the annual holiday, which is usually all too brief.



If the locker is filled by a petrol tin, the stowage of luggage is difficult. A petrol tin carrier on the chassis is advisable.

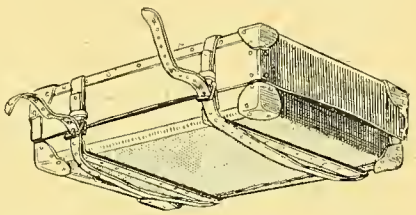
### The Spares Question.

Two considerations differing from the normal conditions of running at once arise before the motor cyclist planning his first long tour. The first is that the machine will be away from its garage for a trip which may run into a thousand miles or more, and the second is that it must carry an extra amount of equipment—in the case of a passenger machine, and depending on the sex (and age if the sex be fair) of the passenger, an extraordinary amount of equipment in all probability.

First, as to the machine. The writer is a "spares fiend," and believes in carrying everything which might be needed—he is an unlucky man and therefore pessimistic. Other riders will indulge the spares-carrying habit to the extent warranted or demanded by experience and temperament. Beginners would be well advised to take a spare inner tube, patching material, an engine valve (complete), a few odd nuts and bolts, a plug or two, copper wire and insulation tape, and transmission spares. If visiting the north-west of Scotland, sidecar and fork springs are advisable.

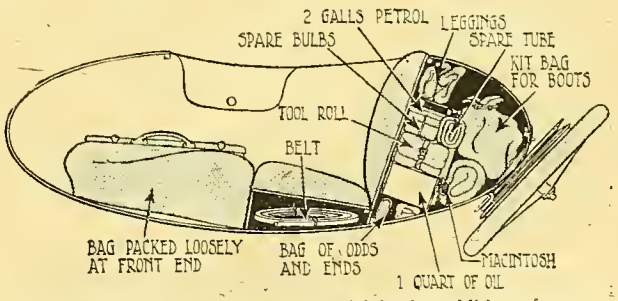
### A Thought for the Machine.

Before starting out, it is as well to recollect that as the machine will be away from headquarters some time, a thorough run round the details requiring lubrication should be given. Oil slopped liberally over fork, frame and control joints—in fact, anywhere where movement takes places—will lubricate and help to keep out the wet. Grease packing in the hubs will relieve anxiety on that score. Oil-bath chains need no special care, but exposed chains are a curse. Graphite grease is good, but often troublesome to apply, and the writer's practice is to save old engine and gear box oil and brush this thickly over the chains before each long journey.



Fibre cases, if made of the right material, are better than leather, for they are waterproof and not so easily ruined by exposure. This is a good specimen, having wood and aluminium battens to prevent chafing on the carrier. It is known as the Wearprufe.

No self-respecting machine should need more attention than outlined in the foregoing. If bigger things are found necessary, it is obviously in want of careful scrutiny, and in any case the job should be done well. To start a holiday tour with a stretched chain, a hook-toothed sprocket, shaky forks, a pulled belt, a wobbly sidecar wheel, a cover showing its

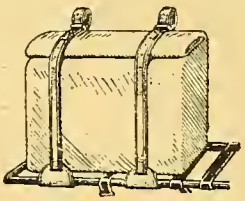



Packing a sidecar for a long trip. With the addition of case on the carrier of the motor cycle and a haversack of oddments, equipment for two people for two weeks may be carried.

**Preparing for the Tour.—**

canvas, or a sidecar arm joined with Meccano strips is asking for a spoilt trip.

Spares and tools should be packed so as to avoid, as far as possible, the unshipping of personal kit or the disturbing of the passenger if trouble is encountered.



A handy receptacle for packing heavy clothing, boots or other awkward articles; the Lycett Swagbag for the carrier.

### On the Solo Mount.

The solo man has few worries, or else leaves them at home. He can pack a week's kit in a rucksack and sling it on his shoulders or dump the lot in a valise securely strapped on the carrier. It is a good plan to fix the straps securely to the carrier by means of wire or string lashings, as by so doing endless trouble due to the load shifting endways, back over the number plate, or forwards into the small of the back, under the agency of rough roads, can be prevented.

No solo man of experience needs to be told that to travel light is to travel light-heartedly.

### Luggage on the Passenger Outfit.

Much-married men need no advice on the subject of what to take on a tour. The responsibility is taken from them—theirs but to pack, theirs but to do or die. On the subject of packing and what "simply cannot be done without," they know the whole truth. Youth, however, is optimistic, and those who tour in double harness for the first time should take the advice of one to whom packing has been, and is, a nightmare. Take the old solo kit in a haversack, and leave the luggage grid, the carrier, the locker behind the cushion, the locker under the seat, the locker in the dash, the well in the floor of the sidecar, and everything that therein is, to the passenger. Even then she will want to put the soap and sponge in your haversack.

There are motor cycle tourists, of course, who send their luggage on by rail. These people are not worthy of the name of motor cyclists, however, for if one cannot travel "self-contained," one admits the limitation of the motor cycle—besides, some of the best touring grounds are far away from railways.

### Final Hints.

Because our weather is usually so mixed, it is advisable to protect the luggage, usually carried in an exposed position, as much as possible from rain. Suit cases, being designed primarily for railroad travel, seldom stand a day's soaking without looking the worse for the exposure, even if the contents remain undamaged. A good leather case is usually ruined in appearance by one tour, a cheap fibre case has no appearance to ruin, but it kinks in wonderful ways when soaked and may let water in. In consequence, the best plan is to wrap up each case in waterproof sheeting—ex-W.D. rubber ground-sheets are "the goods"; they are cheap and good and serve a multitude of purposes.

WHARFEDALE.

# SUCCESSFUL NOVELTY CLUB EVENT.

NOT the least difficult part of a club secretary's duty is to devise events in which all members, sporting and touring, can take part. "The Snakes and Ladders Race" has been very successful in the writer's club. No skill is required, it being quite a matter of luck who wins.

The start is from the headquarters town, and the finish at some suitable rendezvous for tea. Competitors are despatched at minute intervals, and are told that they will probably meet observers who will turn them back, or in some cases allow them to go on if they accept a ticket. Observers are stationed on various roads in such a way that competitors have to go some way round to reach the rendezvous. The "snake" observers should be stationed at the ends of roads with few turnings, so that competitors have to come back some distance after being stopped. The "ladder" observers are provided with a bundle of coloured tickets (about six different colours). Plain cards endorsed with the club rubber stamp will suffice. Each competitor who comes their way is stopped and given a ticket. He is told that it represents marks added or deducted, but no one knows which, and that he must hand it to the timekeeper at the finish. He feels bound to do this, as, if he does not, he may be giving away marks. The sports secretary should write numbers on one set of tickets as follows:—

+5, +10, +15, −5, −10, −15,

and seal these in an envelope. The timekeeper at the rendezvous checks in the competitors and takes particulars of the cards they have collected.

### Ensuring a Social Success.

During the tea stop the envelope is opened and the times are corrected according to the bonus and penalty cards, and the winner is the competitor with the shortest nett time. It adds considerably to the gaiety of the affair if a club official acts the part of a policeman and makes charges of various motoring offences against competitors. These can be tried by a mock court after tea. There is generally an easy-going clubman who does not mind having his leg pulled for the sake of the club. It is a happy idea to make the prizes small, and give a fairly large number, all prizes going to the ladies, except perhaps a booby prize to the last man. This ensures the social success of the run, and brings out the ladies.

The secretary is advised to cook the results a bit to ensure the right member receiving the booby prize. In the writer's club this event is used as the opening run of the season, the club possessing a "valuable" silver cup, one inch high, which is the premier award held for one year. Although not a sporting event in the usually accepted term, it is one of the most popular events of the season. The event outlined above is capable of many variations, which secretaries can make for themselves.

M. J.

# THE MOTOR CYCLE BUYERS' GUIDE OF 1922 MODELS

## SPECIFICATIONS (ALPHABETICALLY ARRANGED) AND ILLUSTRATIONS OF MOTOR CYCLES AT PRESENT ON THE BRITISH MARKET.

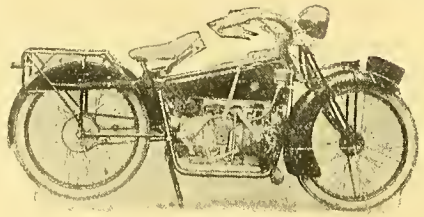
THIS Guide, first published in 1906, has become a regular and popular feature of "The Motor Cycle." The possession of this issue will enable readers to make a close study of the various motor cycles now available. A straight edge or a piece of folded paper renders the line more easy to follow. In the case of lightweights made in different forms, the prices given are for two-speed models with clutch and kick-starter where such models are included in the respective ranges. All information has been supplied by the makers, and every effort has been made to avoid inaccuracies, but we cannot hold ourselves responsible for any errors which may have occurred.

KEY TO ABBREVIATIONS.

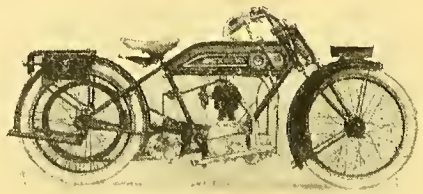
**VALVES:** S.S., side by side; O.H., both overhead; I. over E., inlet over exhaust; E. over I., exhaust over inlet. **LUBRICATION:** Auto., automatic. Mech.: Mechanical. **TRANSMISSION:** Ch., chain; B., belt. **ENGINE:** T.S., two-stroke; F. twin, Flat twin. Where no type is indicated: single cylinder four-stroke.

| Name of Machine and Model. | H.P., Name, and Type of Engine. | C.C. | Bore and Stroke. | Valves. | Lubrication. | Change Speed. | Transmission. | Size of Tyres. | Weight Unladen, lb. | Carburetter. | Price. Solo. | Price. With S/car. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A.B.C. | 3 A.B.C., F. twin | 398 | 69×54 | O.H. | Drip | A.B.C. 4, K.S. | Chain | 26×2½ | 243 | Claudel Hobson | £98 0 | £133 0 | Dynamo £20 extra. |
| Abingdon* | 6-7 K. Dick, V twin | 795 | 73×95 | S.S. | Drip | 3-speed, K.S. | ⅜″ chains | 26×3 | 320 | B. & B. | £110 0 | — | —— |
| A.J.S. | 7 A.J.S., V twin | 799 | 74×93 | S.S. | Drip | 3-speed, K.S. | ⅜″ chains | 700×80 | 336 | Amac | £134 10 | £175 0 | Magdyno £20 extra. |
| A.J.S.* | 2¾ A.J.S. | 349 | 74×81 | S.S. | Drip | 3-speed, K.S. | ⅝″×½″ ch. | 26×2¼ | 212 | Amac | £85 0 | £110 0 | —— |
| Alecto* | 3½, 2-stroke | 345 | 76×76 | — | Drip | Burman 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 180 | Amac | £65 0 | * | —— |

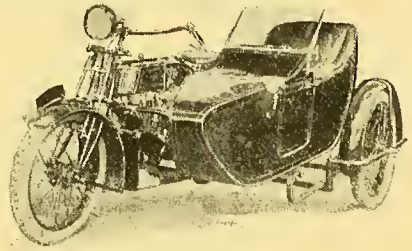
*Abingdon, 3½ h.p. model, single gear, B drive, £70; 3-speed, C/B drive, £85; 4¼ h.p. model, 3-speed, all chain, £110. *A.J.S., sporting model and stripped model without K.S., same price. *Alecto, heavier model for sidecar work, 2-speed, £70 solo, £85 sidecar; 3-speed, £92, with sidecar.



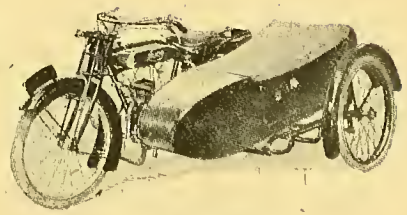
3 h.p. A.B.C.



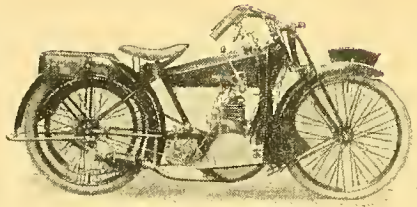
4¼ h.p. ABINGDON.



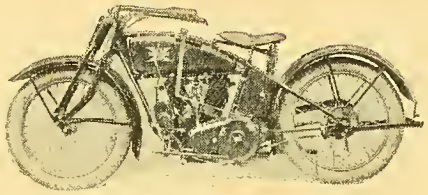
7 h.p. A.J.S.



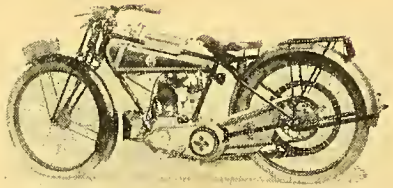
3½ h.p. ALECTO.



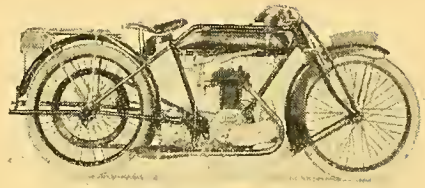
2½ h.p. ALLDAYS.



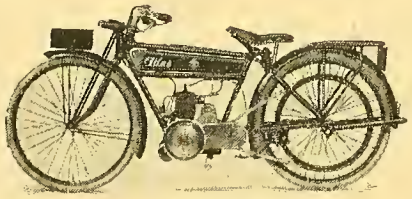
7-9 h.p. AMERICAN X.



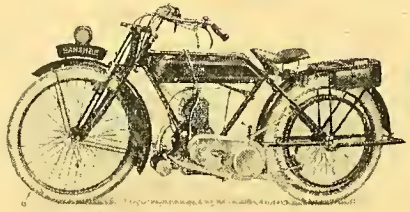
2¾ h.p. ARMIS.



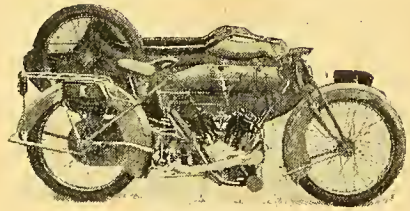
3½ h.p. ARIEL.



1¾ h.p. ATLAS

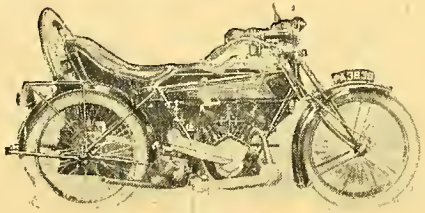


2½ h.p. BANSHEE.

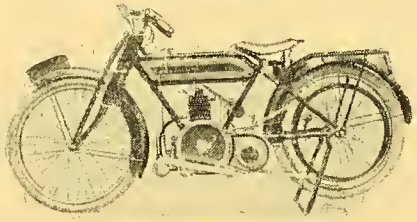


8 h.p. BAT.

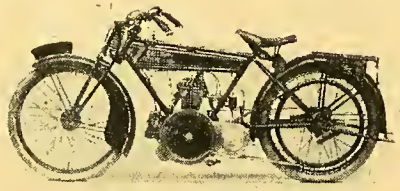
4½ h.p. BEARDMORE-PRECISION.



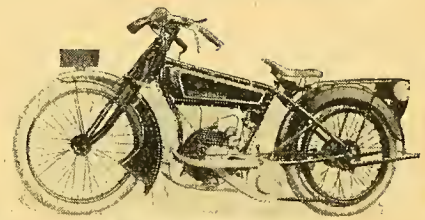
8 h.p. BLACKBURNE.



2½ h.p. BOWN VILLIERS.



2¾ h.p. BRITISH STANDARD.



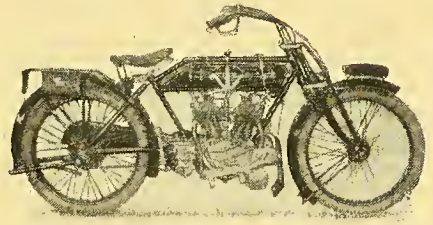
3 h.p. BRITISH RADIAL.

| *Machine.* | *Engine and h.p.* | *c.c.* | *Bore. Stroke.* | *Valves.* | *Lub'tion.* | *Change Speed.* | *Transmission.* | *Tyres.* | *lb.* | *Carburetter.* | *Solo.* | *Sidecar.* | *Remarks.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allon | 2¾ Allon, T.S. | 292 | 70×76 | — | Drip | 2-speed, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | 186 | Amac | £60 0 | £85 0* | *With 3-speed. |
| American X | 7-9 X., V twin | 999.5 | 84.5×88.9 | I. over E. | Mech. | X. 3, K.S. | ⅜″ chains | 27×3½ | 360 | Schebler | — | — | —— |
| Ariel* | 3½ Ariel | 498 | 86.4×85 | S.S. | Drip | Ariel 3 | ¼″ ch. & 1″ B. | 26×2⅜ | 235 | B. & B. | £87 10 | £112 10 | No kick-starter. |
| Ariel | 4¼ Ariel | 665 | 92×100 | S.S. | Drip | Ariel 3, K.S. | ¼″ & ⅜″ ch. | 28×3 | 318 | B. & B. | £105 0 | £140 0 | —— |
| Ariel* | 6-7 Ariel, V twin | 796 | 73×95 | S.S. | Drip | Ariel 3, K.S. | ¼″ ch. & 1″ B. | 26×2½ | 300 | Cox-Atmos | £110 0 | £140 0 | —— |
| Ariel | 8 M.A.G. | 994 | 82×94 | I.over E. | Drip | Ariel 3, K.S. | ¼″ & ⅜″ ch. | 28×3 | 335 | Cox-Atmos | £125 0 | £160 0 | —— |
| Atlas | 1¾ T.S. | 142 | 55×60 | — | Petroil | —— | 5/16″ ch. & ¾″ B. | 26×2 | 95 | Amac | £31 10 | — | —— |
| Armis | 5 J.A.P., V twin | 654 | 70×85 | S.S. | Drip | Burman 3, K.S. | ¼″ ch. & 1″ B. | 26×2½ | 260 | Cox-Atmos | £115 0 | £135 0 | —— |
| Armis* | 2¾ J.A.P. | 293 | 70×76 | S.S. | Drip | Burman 2, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | 180 | Cox-Atmos | £68 0 | — | —— |
| Armis | 2¼ M.A.G. | 248 | 64×77 | I. over E. | Mech. | Burman 3, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | 170 | Cox-Atmos | £85 0 | — | —— |
| Banshee | 2¾ T.S. | 269 | 70×70 | — | Drip | Albion 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 163 | B. & B. | £55 0 | £78 0* | Electric lighting |
| Bat* | 6 J.A.P., V twin | 770 | 76×85 | S.S. | Drip | Sturmey 3, K.S. | All chain | 28×3 | 325 | Amac | £135 0 | £170 0 | Magdyno £22 10s. |
| Bat | 4 J.A.P., V twin | 499 | 64.5×76 | S.S. | Drip | Sturmey 3, K.S. | All chain | 28×3 | 220 | Amac | £115 0 | — | —— |
| Beardmore | 4¼ Precision | 598 | 89×96 | S.S. | Mech. | 3-speed, K.S.* | ⅜″ chains | 26×3 | 296 | B. & B. | £105 0 | £135 0 | Elec. lighting £10. |
| Beardmore | 3½ Precision, T.S. | 350 | 74×81 | — | Mech. | 2-speed, K.S.* | ¼″ chains | 26×2¼ | 228 | Amac | £65 0 | £85 0 | —— |
| Beardmore | 3 Barr & Stroud | 350 | 70×90.5 | Sleeve | Splash | 3-speed, K.S. | 5/16″ ch. & ¾″ B. | 26×2¼ | 210 | Senspray | £90 0 | — | —— |
| Blackburne | 8 Blackburne, V twin | 998 | 85×88 | S.S. | Drip | 3-speed, K.S. | ⅜″ chains | 28×3 | 330 | Any | — | — | —— |
| Bown | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | 2-speed, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | — | Amac | — | — | —— |
| British Radial | 3 3-cyl. Radial | 309 | 50.8×50.8 | S.* | Drip | Sturmey 2, K.S. | ¼″ ch. & ¾″ B. | 26×2½ | 185 | Vici | £75 0 | — | Gas lamp set ine. |
| British Standard* | 2¾ Blackburne | 349 | 71×88 | S.S. | Drip | Moss 2, K.S. | ⅜″ ch. & ¾″ B. | 26×2¼ | 187 | Senspray | £65 0 | £83 18 | —— |

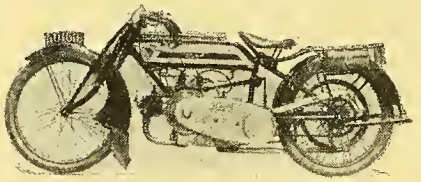
*Ariel, with kick-starter, £90 solo; 3½ h.p. Touring model, £95 solo, £125 sidecar; 6-7 h.p. Twin model, all chain, 28×3 tyres, £117 solo, £152 10s. sidecar. *Armis, with 4¼ h.p. J.A.P. engine, all chain, £90 solo, £115 sidecar; 3 h.p. (350 c.c.) J.A.P. engine, £85 solo, £105 sidecar. *Banshee sidecar has 3-speed gear. Single speed model, £43; plain 2-speed, £52. *Bat, 8 h.p. model, same price. *Beardmore, engine and gear-box unit construction. *British Radial valves on each side of cylinder. *British Standard, 2¾ h.p. model, with 3-speed gear, £88 18s.; O.H.V. model, £92; 4 h.p., 3-speed model, £85 solo, £105 sidecar; 2½ h.p. 2-stroke, 2-speed, £53 solo, £72 sidecar.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Single-sp. counter-shaft model, £50. With 2-sp. K.S. £60 |
| Bradbury* | 6 Bradbury, V twin | 749 | 75.5×86 | S.S. | Drip | 3-speed, K.S. | ⅜″ chains | 28×3 | 332 | B. & B. | £117 0 | £152 10 | | —— |
| Brough* | 3½ Brough, F. twin | 496 | 70×64.5 | O.H. | Mech. | 3-speed, K.S. | ¼″ chains | 26×2⅜ | 196 | Amac | £115 0 | — | | —— |
| Brough | 5 Brough, F. twin | 692 | 70×90 | S.S. | Drip | 3-speed, K.S. | ¼″ chains | 650×65 | 255 | Amac | £115 0 | £150 0 | | Spring wheel sc. |
| Brough Superior* | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Drip | Sturmey 3, K.S. | ⅜″ chains | 26×3 | 285 | Amac | £150 0 | £180 0 | | —— |
| B.S.A. | 4¼ B.S.A. | 557 | 85×98 | S.S. | Drip | 3-speed, K.S. | ⅜″ ch. & 1″ B. | 26×2½ | 276 | B.S.A. | £107 0 | £139 0 | | Chain drive model, £110 solo, £142 sc. |
| B.S.A.* | 6 B.S.A., V twin | 770 | 76×85 | S.S. | Mech. | 3-speed, K.S. | ⅜″ chains | 26×3 | 320 | B.S.A. | £132 0 | £164 0 | | —— |
| Campion* | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Drip | 3-speed, K.S. | ⅜″ chains | 28×3 | 320 | B. & B. | £135 0 | £160 0 | | Sp. wheel, £8. |
| Carfield* | 2¾ Villiers, T.S. | 269 | 70×70 | — | Drip | Albion 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 180 | Amac | £63 0 | — | | —— |
| Calthorpe* | 3 Calthorpe, T.S. | 350 | 75×79 | — | Drip | Burman 3 | ¼″ ch. & ⅞″ B. | 26×2¼ | 180 | Amac | £70 0 | £85 0 | | —— |
| Calthorpe | 2¾ J.A.P. | 293 | 70×76 | S.S. | Drip | Enfield 2 | 3/16″ ch. & ¾″ B. | 26×2 | 148 | B. & B. | £65 0 | — | | —— |
| Cedos | 2¼ Cedos, T.S. | 211 | 62×70 | — | Drip | Cedos 2, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | 138 | Cedos | £58 0 | — | | Lady's model, £60. |
| Chater-Lea* | 8 Chater, V twin | 976 | 85.5×85 | S.S. | Drip | Chater 3, K.S. | 7/16″ chains | 700×80 | 315 | B. & B. | — | £147 0 | | —— |
| Chater-Lea | 2¼ Chater, T.S. | 269 | 70×70 | — | Drip | Chater 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 160 | B. & B. | £73 10 | — | | —— |
| Cleveland | 3 Cleveland, T.S. | 269 | 70×70 | — | Petroil | 2-speed | ⅜″ chains | 26×3 | 197 | Cleveland | £82 10 | — | | —— |
| Clyno | 8 Clyno, V twin | 925 | 76×102 | S.S. | Mech. | Clyno 3, K.S. | ⅜″ chains | 28×3 | 350 | Amac | — | £180 0 | | Spring frame. |
| Clyno | 2½ Clyno, T.S. | 269 | 70×70 | — | Petroil | Clyno 2 | ⅜″ B. | 26×2 | 140 | Amac | £75 0 | — | | —— |
| Connaught | 2¾ Connaught, T.S. | 293 | 73×70 | — | Petroil | Burman 2 | 3/16″ ch. & ¾″ B. | 24×2¼ | 155 | Amac | £54 0 | — | | Single-speed, £45. |
| Connaught | 3½ Connaught, T.S. | 370 | — | — | Mech. | Burman 3 | ¼″ chains | 26×2½ | 196 | Amac | £75 0 | £95 0 | | 26×2¼ tyre front. |

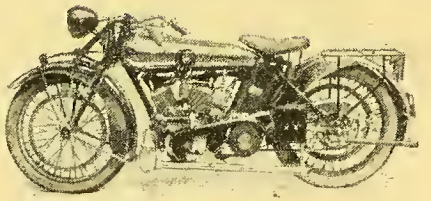
*Bradbury, 4 h.p. model, £92 solo, £124 12s. 6d. sidecar. *Brough Sports model, £110. Touring model, with sidecar, £135. *Brough Superior, O.H.V. model, £160 solo; 6 h.p. M.A.G. model, £125. *B.S.A., 8 h.p. sidecar, with spare wheel and tyre, £185. *Campion, 6 h.p. model, £120 solo, £140 sidecar; 4 h.p. J.A.P. model, £95; 2¾ h.p., £66; 2½ h.p., T.S., £58. *Carfield, single-speed, £50; plain, 2-speed, £58; 2¾ h.p. Blackburne, 2-speed, £70, with K.S., £75, with 3-speed, £79. *Calthorpe, 2½ h.p., T.S., Enfield 2-speed, £60; single speed, £36. *Chater-Lea, 4 h.p. model, £105.



6 h.p. BRADBURY.

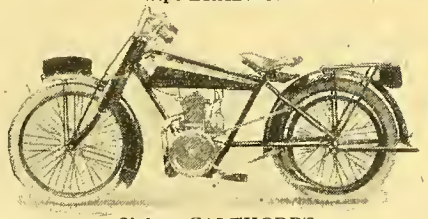


3½ h.p. BROUGH.

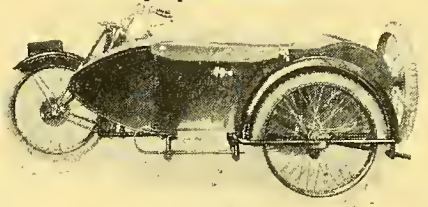


8 h.p. BROUGH SUPERIOR.

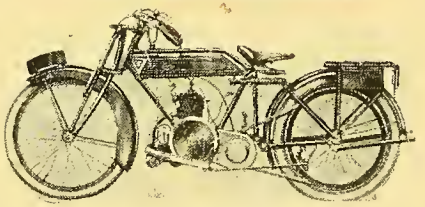
6 h.p. B.S.A.



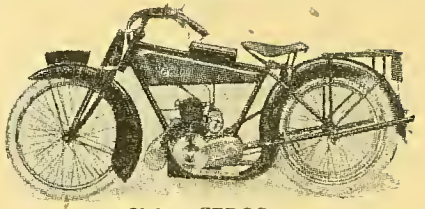
2½ h.p. CALTHORPE.



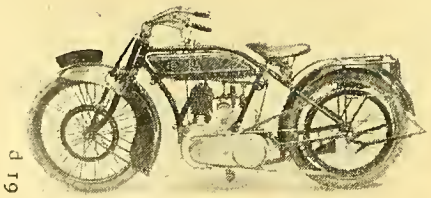
6 h.p. CAMPION.



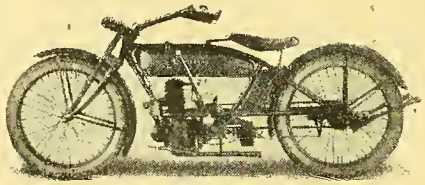
2¾ h.p. CARFIELD.



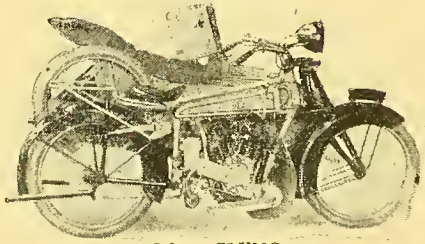
2¼ h.p. CEDOS.



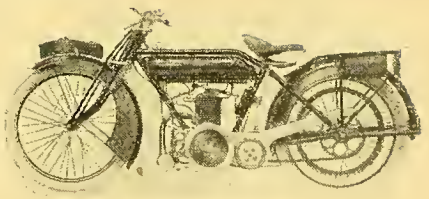
4 h.p. CHATER-LEA.



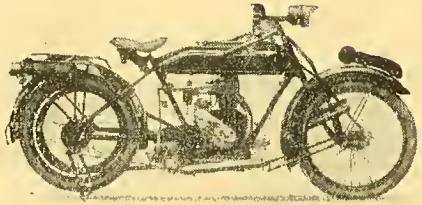
3 h.p. CLEVELAND.



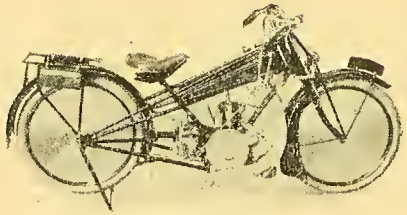
8 h.p. CLYNO.



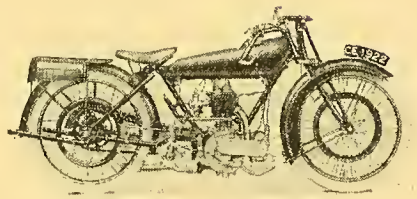
2¾ h.p. CONNAUGHT.



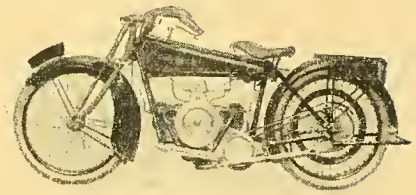
3½ h.p. CORONA.



2½ h.p. COTTON.

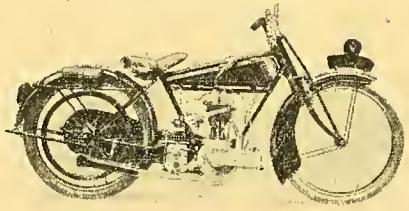


3½ h.p. COVENTRY EAGLE.

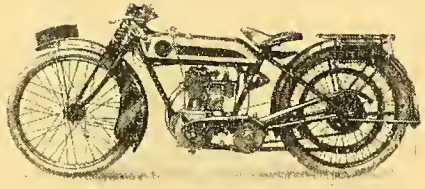


5–7 h.p. COVENTRY VICTOR.

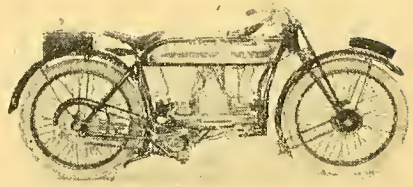
2¼ h.p. COULSON.



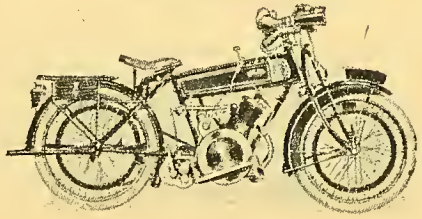
2¾ h.p. DIAMOND.



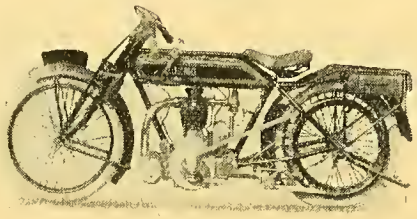
2¾ h.p. DOT.



3½ h.p. DOUGLAS.

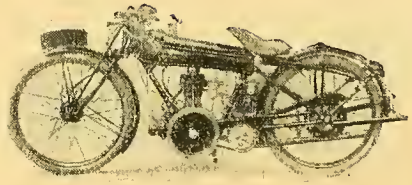


4 h.p. DUNELT.



3½ h.p. DUZMO.

2¾ h.p. ECONOMIC.



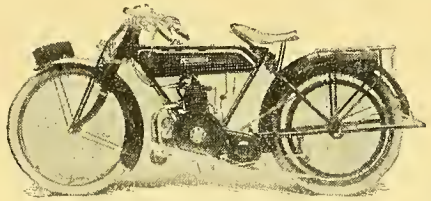
2¾ h.p. EDMUND.

| *Machine.* | *Engine and h.p.* | *c.c* | *Bore. Stroke.* | *Valves.* | *Lub'tion.* | *Change Speed.* | *Transmission.* | *Tyres.* | *lb.* | *Carburetter.* | *Solo.* | *Sidecar.* | *Remarks.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Corona | 3½ Corona | 450 | 72×110 | S.S. | Mech. | Sturmey 3, K.S. | 3″ ch. & 1″ B. | 26×2½ | 200 | Amac | £70 0 | £90 0 | Equipped with l'ps |
| Cotton* | 2¾ Blackburne | 348 | 71×88 | S.S. | Drip | Sturmey 2, K.S. | ¼″ ch. & ⅞″ B. | 26×2¼ | 180 | Amac | £68 2 | — | Plain, 2-sp., £65 2s. |
| Coventry Eagle | 2½ Villiers | 269 | 70×70 | — | Drip | Sturmey 2, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | 160 | Amac | £58 16 | £75 12 | —— |
| Coventry Eagle* | 2¾ J.A.P. | 293 | 70×76 | S.S. | Pump | Sturmey 2, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | 187 | Amac | £69 6 | — | —— |
| Coventry Eagle | 5-6 J.A.P. | 550 | 85×95 | S.S. | Pump | Sturmey 3, K.S. | ¼″ chains | 26×2½ | 276 | Amae | £125 0 | £150 0 | —— |
| Coventry Victor* | 5-7 Victor, F. twin | 688 | 75×78 | S.S. | Mech. | Sturmey 3, K.S. | ⅜″ chains | 28×3 | 270 | Cox-Atmos | £115 0 | £145 0 | —— |
| Coulson* | 2¼ Blackburne | 349 | 71×88 | S.S. | Drip | Sturmey 3, K.S. | ¼″ ch. & ⅞″ B. | 26×2½ | 218 | Cox-Atmos | £78 0 | — | Spring frame. |
| Dene | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Drip | Sturmey 3, K.S. | ⅜″ chains | 28×3 | 220 | Amac | £120 0 | £165 0 | Magdyno. £25. |
| Diamond* | 2¾ J.A.P. | 350 | 70×90 | S.S. | Drip | Sturmey 2 | 3/16″ ch. & ¾″ B. | 26×2¼ | 178 | Amac | £69 6 | — | All chain, £84. |
| Dot* | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Drip | Sturmey 3, K.S. | ⅜″ chains | 28×3 | — | Amac | £145 0 | — | 8 h.p. se. outfit, £175 |
| Douglas | 2¾ Douglas, F. twin | 348 | 60.5×60 | S.S. | Drip | Douglas 3, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | 175 | Amac | £90 0 | — | Plain, 2-speed, £75. |
| Douglas | 4 Douglas, F. twin | 595 | 74.5×68 | S.S. | Mech. | Douglas 3, K.S. | ¼″ ch. & ⅞″ B. | 26×2⅜ | 252 | Douglas | £110 0 | £135 0 | —— |
| Douglas | 3½ Douglas, F. twin | 494 | 68×68 | O.H. | Drip | Douglas 3, K.S. | ⅜″ chains | 650×65 | 246 | Amac | £135 0 | — | 6 h.p. mod., £165 sc. |
| Dunelt | 4 Dunelt, T.S. | 499 | 85×88 | — | Drip | Sturmey 3, K.S. | ⅜″ ch. & 1″ B. | 28×3 | 275 | Amac | £86 2 | £110 5 | Sp. wh., £3 3s. extra |
| Duzmo* | 3½ Duzmo | 496 | 89×79 | O.H. | Mech. | Sturmey 3, K.S. | ⅜″ chains | 650×65 | 258 | Amae | £115 0 | — | Single-speed, £80. |
| Economic | 2, T.S., F. twin | 165 | 52.5×38.5 | — | Petroil | Friction | ⅜″ B. | 26×2¼ | 110 | — | £34 0 | — | —— |
| Edmund* | 2¾ J.A.P. | 292 | 70×76 | S.S. | Drip | Burman 2 | 3/16″ ch. & ¾″ B. | 26×2¼ | 190 | Amac | £75 0 | — | —— |

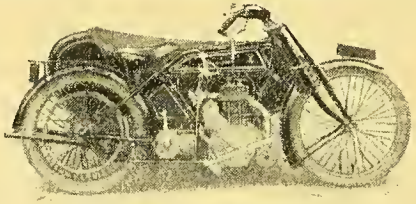
*Cotton, 3-speed, £71 12s., Sporting model, O.H.V., £87 3s.; Villiers model, plain, 2-speed, £52 10s., with K.S., £55 10s. *Coventry Eagle, 2¼ h.p., O.H.V. Sporting model, £105; 350 c.c. J.A.P., £88 10s.; 500 c.c. J.A.P., £110; 4¼ h.p. J.A.P., £110 solo, £135 sidecar. *Coventry Victor Sports model, £110. *Coulson, 3-speed, £82 10s.; O.H.V. model, £95; 4¼ h.p. 3-speed, £95 (sidecar £125); lightweight, Liberty two-stroke, £67 10s. *Diamond Villiers T.S. model, £42 single-speed, £56 14s. 2-speed; 293 c.c. J.A.P. model, £57 15s.; 350 c.c. Barr & Stroud engine, £86 4s.; 2¾ Blackburne, £69 6s. *Dot, 350 c.c. J.A.P. model, £85; 293 c.c. J.A.P. model, £65. *Duzmo, 8 h.p. model, £110 single-speed, £140 3-speed. *Edmund, 2¾ h.p., Blackburne model, £79; 3 h.p. Barr & Stroud, £96; O.H.V. Blackburne, £110; 4¼ h.p.

| Machine. | Engine and h.p. | c.c. | Bore & Stroke. | Valves. | Lub'tion. | Change Speed. | Transmission. | Tyres. | lb. | Carburetter. | Solo. | Sidecar. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Endurance | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | 2-speed, K.S. | 3/16" ch. & 3/4" B. | 26×2¼ | 198 | Amac | £48 18 | — | —— |
| Excelsior* | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Sturmey 2, K.S. | 3/16" ch. & 3/4" B. | 26×2¼ | 165 | B. & B. | £53 | — | Single-sp., £39 10s. |
| Excelsior | 4½ Excelsior | 650 | 86×112 | S.S. | Drip | Burman 3, K.S. | ¼" chains | 28×3 | 286 | Amac | £89 | £119 | —— |
| Excelsior* | 6 J.A.P., V twin | 770 | 76×85 | S.S. | Drip | Burman 3, K.S. | ¼" chains | 28×3 | 300 | Amac | £103 | £133 | —— |
| Francis-Barnett* | 2¾ J.A.P. | 346 | 70×90 | S.S. | Pump | Sturmey 3, K.S. | 3/16" chains | 26×2¼ | 190 | B. & B. | £85 | £104 | —— |
| F.N. | 3 F.N. | 286 | 65×86 | S.S. | Pump | 2-speed | Shaft | 26×2¼ | 185 | Amac | £72 | — | 2½ h.p. model, £55 |
| F.N. | 8 F.N., 4-cyl. | 748 | 52×88 | I. over E. | Mech. | 3-speed | Shaft | 26×3 | 300 | Amac | £135 | £174 | —— |
| Gamage* | 2½ T.S. | 348 | 71×88 | — | Drip | Burman 2, K.S. | 3/16" ch. & 3/4" B. | 26×2¼ | 175 | Amac | £85 | £82 10 | Single-sp., £48 10s. |
| Grigg | 1¾ T.S. | 161 | 57×63 | — | Drip | Sturmey 2, K.S. | 3/16" ch. & 3/4" B. | 24×2 | — | Amac | £50 8 | — | Single sp., £37 16s. |
| Hack | 1¼ T.S. | 103 | 52×52 | — | Petroil | Single-speed | 3/16" chains | 20×1¾ | 75 | Amac | £42 | — | —— |
| Hawker | 2¾ Hawker, T.S. | 292 | 72×76 | — | Drip | Hawker 2 | 3/16" ch. & 3/4" B. | 26×2¼ | 160 | Amac | £52 10 | — | —— |
| Hawker* | 2¾ Blackburne | 348 | 71×88 | S.S. | Drip | Burman 3, K.S. | ¼" chains | 26×2¼ | 205 | Amac | £84 | £107 10 | O.H.V. Sports model, £99 15s. |
| H.B.* | 2¾ Blackburne | 348 | 71×88 | S.S. | Pump | Burman 2 | ¼" ch. & 3/4" B. | 26×2½ | 197 | Amac | £72 | — | —— |
| Haden | 3 Precision, T.S. | 350 | 74×81 | — | Mech. | Albion 2 | 3/16" ch. & 3/4" B. | 26×2½ | 168 | Amac | £52 12 | £80 17 | —— |
| Harley-Davidson | 7-9 Harley, V twin. | 998 | 84.1×88.9 | I. over E. | Mech. | Harley 3 | 3/8" chains | 28×3 | 330 | Schebler | £149 | £188 10 | —— |
| Harley-Davidson | 4 Harley, F. twin. | 584 | 69.8×76.2 | S.S. | Mech. | Harley 3 | 3/8" chains | 26×3 | 250 | Schebler | £140 | £160 | —— |
| Hagg | 3 B. & S. | 350 | 70×90.5 | Sleeve | Drip | 2-speed, K.S. | ¼" ch. & 3/4" B. | 26×2½ | 250 | Cox-atmos | £95 | — | —— |

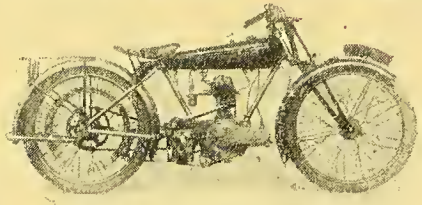
* Excelsior, Lady's model, £55; 2¾ h.p. Blackburne model, £75; 8 h.p. model, with interchangeable wheels, £155 sidecar. * Francis-Barnett, 293 c.c., J.A.P. engine, 2-speed, £73; Villiers, T.S. model, 2-speed, £62. *Gamage 4-stroke model, £60. *Hawker, 4¼ h.p. model, £89 5s. solo, £112 5s. sidecar. *H.B., 3-speed model, £75; 4 h.p., 3-speed model, £82; 4½ h.p. model, £100; 2¾ h.p. O.H.V. model, £95.



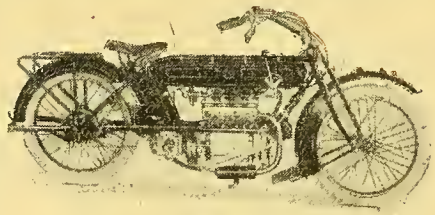
2½ h.p. ENDURANCE.



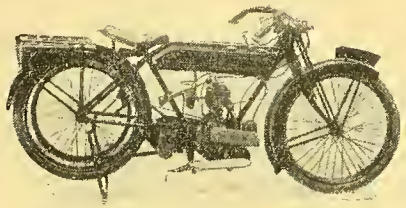
4½ h.p. EXCELSIOR.



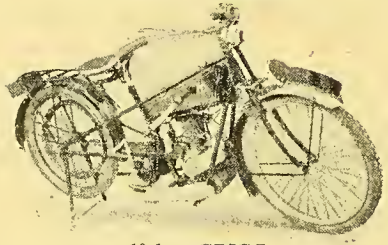
2¾ h.p. FRANCIS-BARNETT.



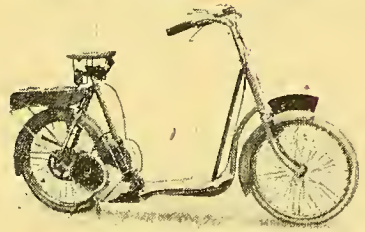
8 h.p. F.N.



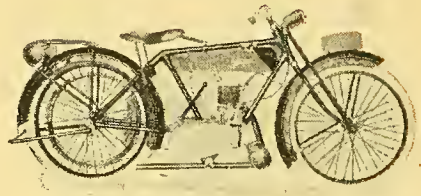
2¾ h.p GAMAGE.



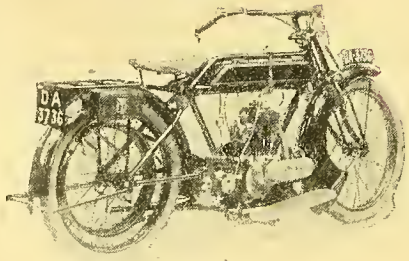
1¾ h.p. GRIGG.



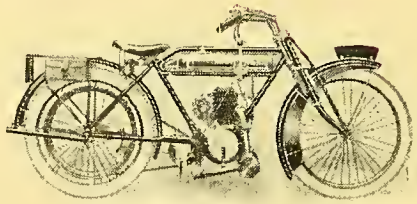
1¼ h.p. HACK.



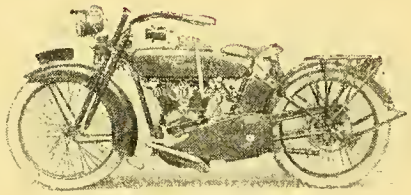
2¼ h.p. HAWKER.



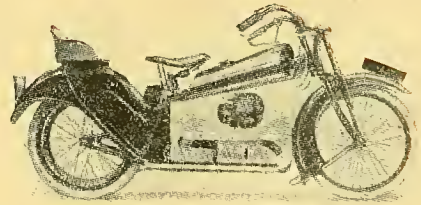
2¾ h.p. H.B.



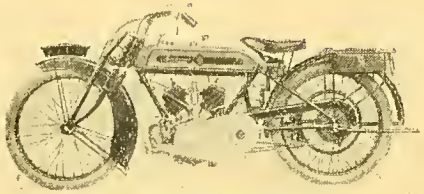
3 h.p. HADEN-PRECISION.



7-9 h.p. HARLEY-DAVIDSON.

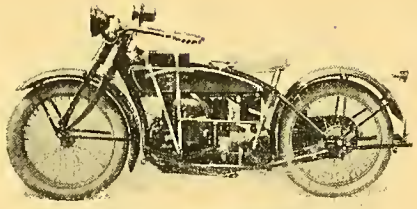


3 h.p. HAGG.

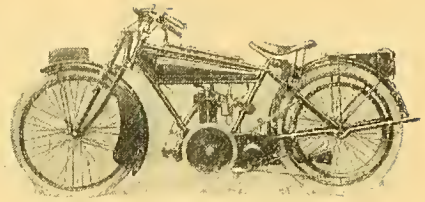


6 h.p. HAZLEWOOD.

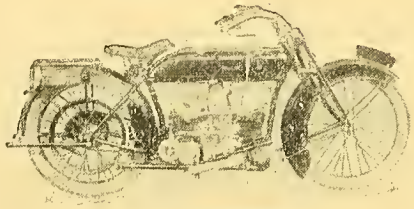
2¾ h.p. HENLEY.



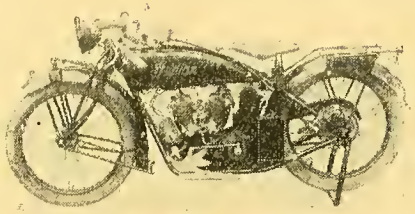
11.5 H.P. HENDERSON.



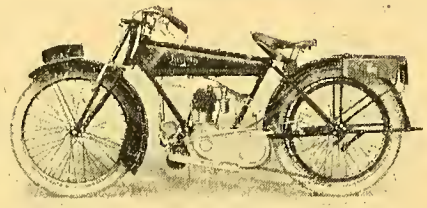
2¾ h.p. HOBART.



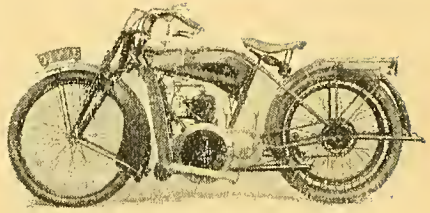
4½ h.p. HUMBER.



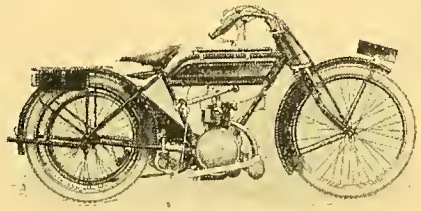
4 h.p. INDIAN.



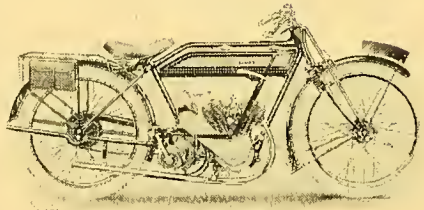
2¾ h.p. INVICTA.



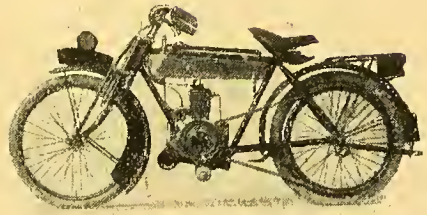
2½ h.p. IVY.



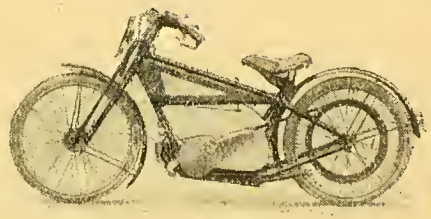
2½ h.p. IXION.



3½ h.p. JAMES.



1¾ h.p. J.E.S.



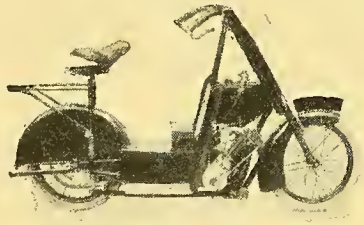
1½ h.p. KEMPTON.

| *Machine.* | *Engine and h.p.* | *c.c.* | *Bore. Stroke.* | *Valves.* | *Lub'tion.* | *Change Speed.* | *Transmission.* | *Tyres.* | *lb.* | *Carburetter.* | *Solo.* | *Sidecar.* | *Remarks.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hazlewood* | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Drip | Hazlewood 3 | ⅜″ chains | 28×3 | — | B. & B. | — | £176 0 | 5-6 h.p. md.,£118sc |
| Henley | 2¾ Blackburne | 349 | 71×88 | S.S. | Drip | 3-speed, K.S. | ¼″ ch. & ⅞″ B. | 26×2¼ | 180 | B. & B. | £73 10 | £95 0 | All chain, £78 10s. and £99 15s. |
| Henderson | 11.5 H'nders'n,4-cyl | 1301 | 68.3×89 | S.S. | Mech. | 3-speed | ⅜″ chains | 27×3½ | £420 | Zenith | £175 0 | — | Reverse if required. |
| Hobart | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Chater 2 | 3/16″ ch. & ¾″ B. | 26×2¼ | 156 | Amac | £50 0 | — | Single gear, £42. |
| Hobart* | 2¾ J.A.P. | 293 | 70×76 | S.S. | Drip | Sturmey 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 180 | Amac | £67 15 | — | —— |
| Humber* | 4½ Humber, F. twin | 600 | 75×68 | S.S. | Mech. | Humber 3, K.S. | ¼″ chains | 26×2½ | 275 | Claudel-Hobs'n | £110 0 | £144 0 | —— |
| Indian | 4 Indian, V twin | 596 | 70×78 | S.S. | Mech. | Indian 3, K.S. | Gear & ch. | 26×3 | — | Schebler | £112 0 | £142 0 | —— |
| Indian | 7 Indian, V twin | 998 | 79×100 | S.S. | Mech. | Indian 3, K.S. | Chains | 28×3 | — | Schebler | £122 0 | £157 0 | Spring frame. |
| Indian | 7 Indian, V twin | 998 | 79×100 | S.S. | Mech. | Indian 3, K.S. | Gear & ch. | 28×3 | — | Schebler | £140 0 | £199 0 | Indian Chief. |
| Invicta* | 2¾ J.A.P. | 350 | 70×90 | S.S. | Pump | Sturmey 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 196 | B. & B. | £76 10 | £97 10 | Sidecar with 3-sp. |
| Ivy* | 3 Ivy, T.S. | 348 | 75×79 | — | Drip | Sturmey 2 | 3/16″ ch. & ¾″ B. | 26×2¼ | 185 | Amac | £69 0 | — | 2¼ h.p. model, £62. |
| Ixion | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Sturmey 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 185 | Amac | — | — | —— |
| James | 7 James, V twin | 749 | 73×89.5 | S.S. | Drip | James 3, K.S. | ⅜″ chains | 28×3 | 325 | Cox-Atmos | £125 0 | £160 0 | 4½ h.p. md., £105 solo, £135 sidecar. |
| James | 3½ James, V twin | 500 | 64×77 | S.S. | Drip | James 3, K.S. | ½″ chains | 26×2¼ | 230 | Cox-Atmos | £105 0 | — | —— |
| James | 2¼ James, T.S. | 239 | 66×70 | — | Drip | James 2 | ¼″ ch. & ¾″ B. | 26×2¼ | 150 | —— | £55 0 | — | Cl. & K. model, £60. |
| J.E.S. | 1¾ J.E.S., T.S. | 169 | 60×60 | — | Auto. | J.E.S. 2 | ⅝″ B. | 24×2 | 100 | J.E.S. 1-lever | £44 5 | — | —— |
| J.N.U.* | 2¾ Dalm, T.S. | 318 | 73×76 | — | Drip | Albion 2 | 3/16″ ch. & ¾″ B. | 26×2¼ | 182 | Amac | £49 0 | — | —— |
| Kempton | 1½ A.B.C. | 124 | 60×40 | O.H. | Pump | 2-speed | 3/16″ ch. & ¾″ B. | 26×2¼ | 120 | Willis 1-lever | £36 15 | — | —— |

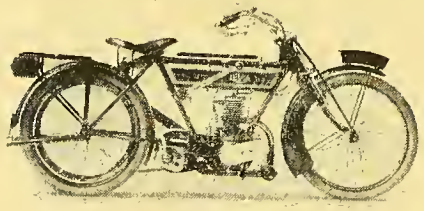
*Hazlewood, 4 h.p. J.A.P. model, £108 solo; 2¾ h.p. J.A.P. model, £67. *Hobart, 2¾ h.p. Blackburne model, £69 15s. solo, £88 sidecar; 350 c.c. J.A.P. model, £77 10s. solo, £95 15s. sidecar. *Humber Sports model, £100. *Invicta, 293 c.c., J.A.P. model, £68; 3½ h.p. model, £96 solo, £126 sidecar; 5-6 h.p. J.A.P. model, £121 solo, £147 sidecar; Villiers T.S. model, £51 10s. *Ivy, 3-speed, £77; Moss, 3-speed, £81 solo, £107 sidecar. *J.N.U., kick-starter model, £53

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kenilworth | 1½ Normat | 142 | 55×60 | O.H. | Drip | Single-speed | 3/16″ chains | 16×2 | — | Vici | £48 6 | — | Clutch. |
| Lea Francis | 5 M.A.G., V twin | 592 | 64×92 | I. over E. | Drip | L.-F. 3, K.S. | ¼″ chains | 26×3 | 290 | Amac | £125 | £157 10 | —— |
| Lea Francis | 3½ M.A.G., V twin | 496 | 44×77 | I. over E. | Drip | L.-F. 3, K.S. | ¼″ chains | 26×2⅝ | 240 | Amac | £110 | — | —— |
| Levis* | 2¼ Levis, T.S. | 211 | 62×70 | — | Drip | Sturmey 2 | 3/16″ ch. & ¾″ B. | 24×2¼ | 135 | —— | £58 | — | £2 extra for clutch and kick-starter |
| Levis* | 2½ Levis, T.S. | 247 | 67×70 | — | Drip | —— | —— | —— | 140 | —— | £66 | — | |
| Lincoln Elk | 6 Elk, V twin | 770 | 76×85 | S.S. | Drip | Burman 3 | ⅜″ ch. & 1″ B. | 650×65 | 285 | B. & B. | £90 | — | 4½ h.p. model, £70. |
| Lincoln Elk | 2¾ Elk | 349 | 76×77 | S.S. | Drip | 2-speed, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 155 | B. & B. | £50 | — | Single gear, £40. |
| L.M.C.* | 8-9 L.M.C., V twin | 960 | 79×98 | S.S. | Drip | Sturmey 3 | ⅜″ chains | 28×3 | 290 | B. & B. | £120 | £150 | 6-7 h.p. model, £105 and £130. |
| Martinsyde* | 6 Martinsyde, Vtwin | 678 | 70×88 | E. over I. | Drip | A.J.S. 3 | ⅜″ chains | 26×3 | 290 | Amac 1-lever | £130 | £160 | Magdyno, £20. |
| Martinsyde | 3½ Martinsyde, Vtwin | 496 | 60×88 | E. over I. | Drip | A.J.S. 3 | ⅜″ chains | 26×3 | 290 | Amac 1-lever | £110 | — | —— |
| Massey Arran* | 2¾ Blackburne | 349 | 71×88 | S.S. | Drip | Sturmey 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | — | Amac | £72 10 | — | J.A.P. model £83 10s. |
| Matchless* | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Drip | Matchless 3 | ⅜″ chains | 700×80 | 336 | B. & B. | £130 | £160 | Rigid frame. |
| Matchless* | 7 M.A.G., V twin | 993 | 82×94 | I. over E. | Drip | Matchless 3 | ⅜″ chains | 700×80 | 336 | Amac | — | £170 | Spring frame. |
| Marlow* | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Burman 2 | ¼″ ch. & ⅞″ B. | 26×2¼ | 150 | B. & B. | £54 | — | K.S., £6 extra. |
| Mars* | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Burman 2 | ¼″ ch. & ¾″ B. | 26×2¼ | 150 | Amac | £54 | — | Single-gear model, £42. |
| Metro-Tyler* | 2½ Metro, T.S. | 269 | 70×70 | — | Drip | Metro 2 | 3/16″ ch. & ⅞″ B. | 26×2¼ | 189 | Amac | £55 | — | £45 single gear. |
| Monopole* | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Sturmey 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 162 | Amac | £57 15 | — | Single gear, £45 3s. |
| Mohawk* | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | 2-speed, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 172 | B. & B. | £57 15 | — | Single gear, £45 3s. |

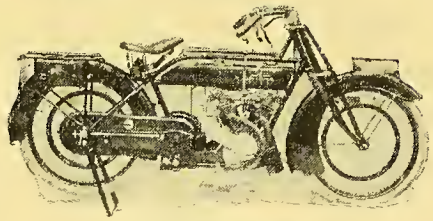
* Levis, single gear, 2¼ h.p., £48; 2½ h.p., £56. * L.M.C., 6 h.p., chain-cum-belt model, £100 solo, £120 sidecar. * Martinsyde, 6 h.p. Sports model, £120 solo, £155 sidecar. * Massey Arran, O.H.V. model, £99 15s. * Matchless, with 7 h.p. M.A.G. engine, same price; spring frame model, with J.A.P. engine, same price. * Mars, 293 c.c. J.A.P. engine, £57, plain 2-speed, £62, K.S., 2¾ h.p. Blackburne model, £63 and £68; 4 h.p. J.A.P. model, £74 and £91. * Metro-Tyler, 2¾ h.p., Blackburne model, £65; 5-6 h.p. J.A.P. model, £125. * Monopole, 2¾ h.p. J.A.P. model, £68 5s.; 350 c.c. model, £76 13s.; 3½ h.p. model, £96 12s.; 5-6 h.p. J.A.P. model, £123 18s. * Mohawk, 2¾ h.p. J.A.P., £68 5s.; 350 c.c. J.A.P., £76 13s.; 3½ h.p., £96 12s.; 5 h.p., £123 18s.



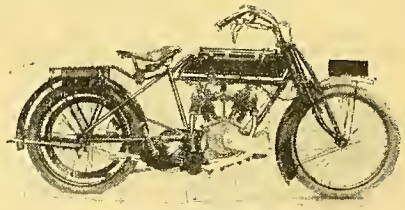
1½ h.p. KENILWORTH



h.p. LEVIS.

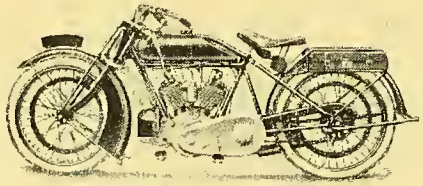


3 ½h.p. LEA FRANCIS

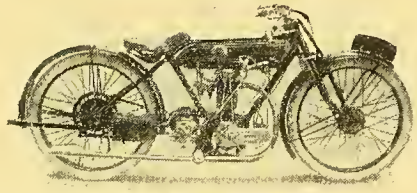


6 h.p. LINCOLN ELK.

8 h.p. L.M.C.

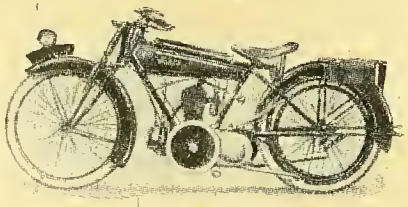


6 h.p. MARTINSYDE.

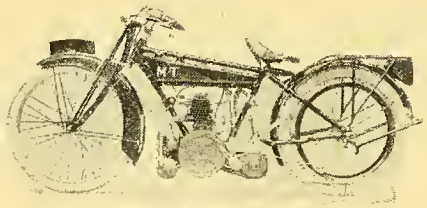


2¾ h.p. MASSEY ARRAN.

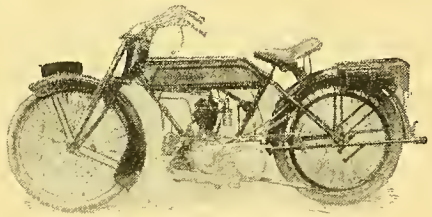
8 h.p. MATCHLESS.



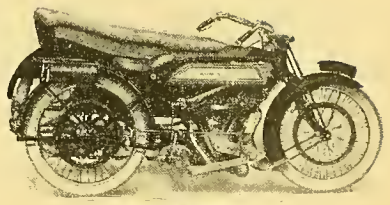
2¾ h.p. MARS.



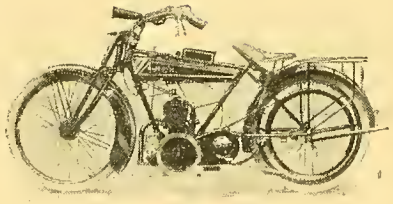
2½ h.p. METRO-TYLER.



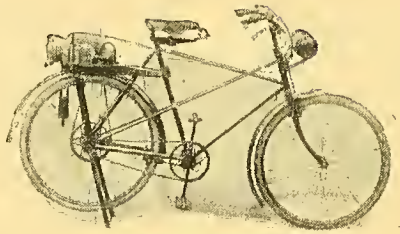
2¾ h.p. MONOPOLE.



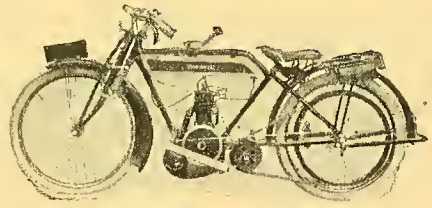
5-6 h.p. MOHAWK.



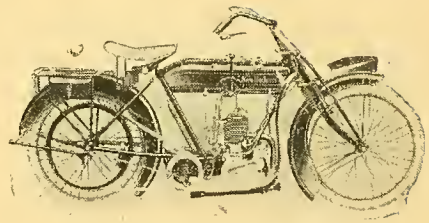
3½ h.p. M.P.H.



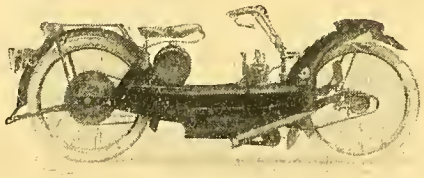
1¾ h.p. MOTORPED.



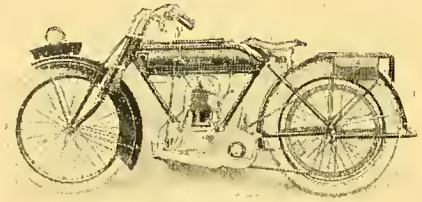
2½ h.p. MOUNTAINEER.



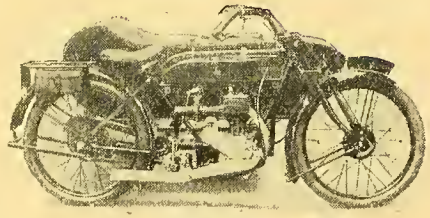
2¾ h.p. NEW HUDSON.



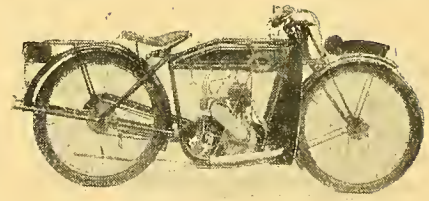
2¼ h.p. NER-A-CAR.



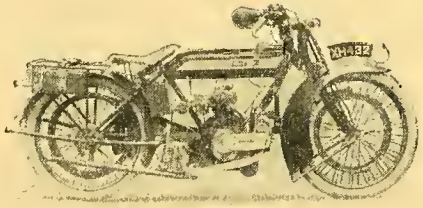
2½ h.p. NEW COMET.



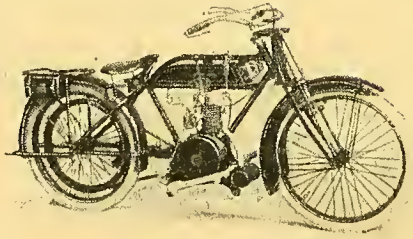
4½ h.p. NEW HUDSON.



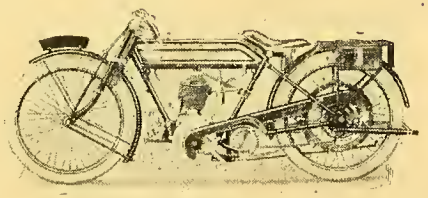
2¾ h.p. NEW IMPERIAL.



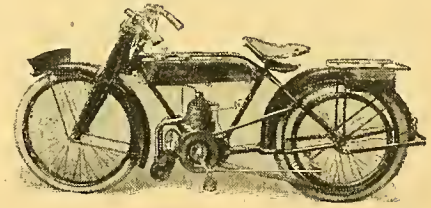
3½ h.p. NEW SCALE.



2¼ h.p. NICKSON.



3½ h.p. NORTON.



2½ h.p. NORBECK.

| *Machine.* | *Engine and h.p.* | *c.c.* | *Bore. Stroke.* | *Valves.* | *Lub'tion.* | *Change Speed.* | *Transmission.* | *Tyres* | *lb.* | *Carburetter.* | *Solo.* | *Sidecar.* | *Remarks.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M.P.H.* | 3½ Broler, T.S. | 348 | 75×79 | — | Drip | Albion 2, K.S. | 3/16″ ch. & 3/4″ B. | 26×2¼ | 184 | B. & B. | £60 0 | £80 0 | 3-sp., £3 10s. extra. |
| Motorped | 1¾ Simplex, T.S. | 105 | 52×52 | — | Petroil | —— | ⅛″ chains | 26×1¾ | 70 | Amac | £30 10 | — | Lady's mo., £31 10s. |
| Mountaineer* | 2½ T.S. | 269 | 70×70 | — | Petroil | Albion 2, K.S. | 3/16″ ch. & 3/4″ B. | 26×2½ | 170 | B. & B. | £58 0 | £80 0 | 3-sp. sidecar, £85. |
| Neal-Dalm | 3 Dalm, T.S. | 318 | 73×76 | — | Drip | Burman 2, K.S. | 3/16″ ch. & 3/4″ B. | 26×2¼ | 180 | Amac | £66 10 | — | Single-speed, £52. |
| Ner-a-Car | 2¼ Sheffield Simplex T.S. | 211 | 62×70 | — | Petroil | Friction | 3/16″ chains | 26×2¼ | 190 | B. & B. | £69 6 | — | Including electric lighting. |
| New Comet | 2½ Climax, T.S. | 293 | 70×76 | — | Petroil | Albion 2 | 3/16″ ch. & 3/4″ B. | 26×2¼ | 163 | Amac | £60 18 | £70 17 | Single gear, £44 2s. |
| New Hudson | 2¼ N. Hudson, T.S. | 211 | 62×70 | — | Drip | Sturmey 2, K.S. | 3/16″ chains | 24×2¼ | 150 | B. & B. | £63 0 | — | Plain, 2-speed, £50. |
| New Hudson | 4.5 N. Hudson | 595 | 87×100 | S.S. | Drip | Sturmey 3, K.S. | 3/8″ chains | 26×3 | 284 | B. & B. | £100 0 | £125 0 | —— |
| New Imperial* | 2¾ J.A.P. | 293 | 70×76 | S.S. | Forced | N. Imp. 3, K.S. | ¼″ chains | 26×2¼ | 183 | B. & B. | £73 0 | — | 2¼ h.p. model, £80. |
| New Imperial | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Forced | N. Imp. 3, K.S. | ½″ chains | 28×3 | 600* | B. & B. | £145 0 | — | —— |
| New Scale* | 4¼ Blackburne | 550 | 85×96 | S.S. | Drip | Sturmey 3, K.S. | ⅝″ chains | 650×65 | 225 | Amac | £100 0 | £133 0 | —— |
| Nielson* | 2¾ Blackburne | 348 | 71×88 | S.S. | Drip | Burman 2, K.S. | ¼″ ch. & 3/4″ B. | 26×2¼ | 196 | Amac | £75 0 | — | 4 h.p., £85. |
| Norton | 4 Norton | 633 | 82×120 | S.S. | Drip | Sturmey 3, K.S. | ⅜″ chains | 700×80 | 287 | B. & B. | £120 0 | £154 0 | Magdyno, £20. |
| Norton* | 3½ Norton | 490 | 79×100 | S.S. | Drip | Sturmey 3, K.S. | ⅜″ chains | 650×65 | 265 | B. & B. | £117 0 | — | Single gear, £80. |
| Norbeck* | 2½ T.S. | 293 | 70×76 | — | Petroil | Moss 2, K.S. | 3/16″ eh. & 3/4″ B. | 26×2¼ | 180 | Amac | £49 10 | — | Lady's mo., £5 extra. |
| N.U.T. | 3½, V twin | 500 | 64.5×76 | S.S. | Mech. | Sturmey 3, K.S. | ¼″ ch. & 1″ B. | 26×2½ | 235 | Amac | £100 0 | £130 0 | Sports, £115. |
| N.U.T. | 5, V twin | 678 | 70×88 | S.S. | Mech. | Sturmey 3, K.S. | ¼″ eh. & 1″ B. | 26×2½ | 245 | Amac | £110 0 | £140 0 | All chain, £10 extra. |

*M.P.H., single gear, £49; plain, 2-speed, £56. *Mountaineer, single gear, £49. *New Imperial, 350 c.c. J.A.P. model, £84; 8 h.p. model, weight includes sidecar.

## RACING & HILL CLIMBING.

**ANOTHER RECORD MADE!**

**Mr. JUDD on his O.H.V. NORTON uses the Mousetrap Carburettor for the Flying Kilo 89.92 m.p.h. mean speed Flying Kilo 88.38 m.p.h.**

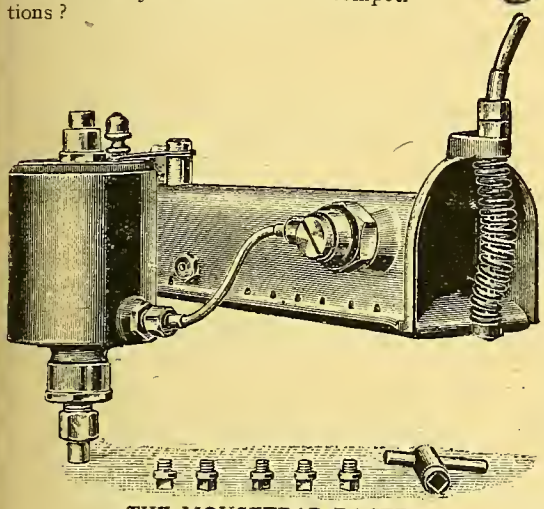
This Carburettor must be of interest to Professional and Amateur sportsmen, because it WINS.

To compete against a man who has a Mousetrap Carburettor is courting defeat unless you have one yourself.

As there is no throttle the construction gives a clear way through, and by natural forces the gas cannot help cramming itself into the cylinder through the scientifically shaped venturi tube in a way no other Carburettor permits.

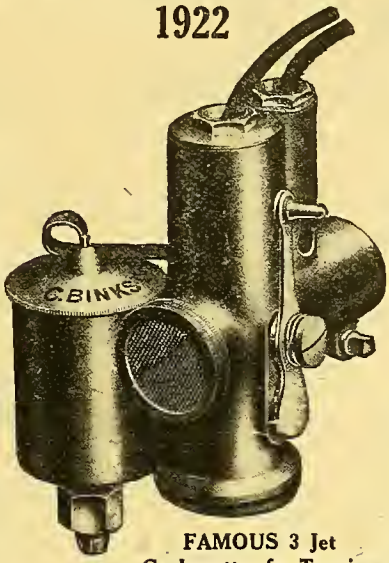
The control wire seen on the illustration governs the strength of the mixture by varying the area around the diffuser jet. This you control from the handlebar.

PRICE **£5 5s.** ex stock for single and twins. Will you order one for competitions?



THE MOUSETRAP RACER.

## NEW CARBURETTORS 1922




**FAMOUS 3 Jet Carburettor for Touring.**

This is an illustration of a TRANSPARENT SIDE SCREEN on a Motor Car, which shields the passenger from wind which eddies round the front screen.

This comfort can be imparted to your Sidecar if it has a flat screen, and your passenger can ride, shielded from wind, rain and mud which is splashed up by passing cars.

Possibly it may be your particular delight to make your passenger as cosy as possible, and this is one way in which you can help to do so.

Delivery in 3 days certain.

PRICE **30/-** pair.

## TOURING & TOWN DRIVING.

This Carburettor is the finest instrument made, and you can buy it on approval for one month. PRICE **£3 15s.**

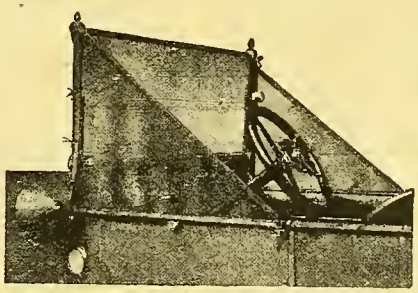
**ECONOMY** is really extraordinary, and is obtained not by a fluke or special driving, but by reason of its construction. The main jet is only brought into operation when power is wanted, otherwise it is sealed by a damper and waste prevented.

**AUTOMATIC.** The three jets give a perfect range and can be tuned to suit individual engines. Once set you cannot get a bad mixture.

**EXTRA AIR LEVER** (independent) is incorporated so that you can coast down hill without oiling your plugs, and use your engine as a brake.

**DRIVING** is easy, as the flexibility is smooth and certain. You can tick along on top gear, and by moving a single lever make the engine do just as you please, and avoid all tearing and racing.

Guaranteed saving, 20 per cent. to 75 per cent. in petrol. Please write for lists and Book on Carburation, and approval terms.



**How to order** a pair of Screens. They are fastened by a hook at the top and turn buttons on the coachwork. Cut out a template in brown paper to fit down the front edge of the screen and hang over 1 in. below the upholstery, cutting out a hole where the screen hinge handle comes through, and send this to us.

Mr CHARLES L. BINKS.

## AN OPEN LETTER TO MOTOR CYCLISTS.

*April, 1922.*

*Gentlemen,*

*You will no doubt have heard of our great loss by the death of Mr. Charles Binks, our governing Director, to whose credit and honour stands our firm and its valuable productions.*

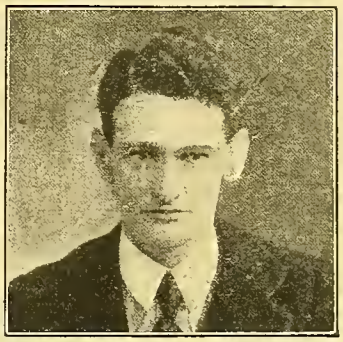
*The Board of Directors intend to carry on the business on the same lines as adopted by Mr. Binks, and will endeavour to serve you courteously and quickly and place their experience of Carburation and Motor Cycles entirely at your service should you ask their advice.*

*The business has lost a personality yet it will not lose the personal element. Mr. C. Binks' two sons, who have been trained in the firm for 12 years, will continue to take an active part in the management and personally supervise the designing, developments and relations with customers.*

*If you will call at the works we shall be glad to see you.*

*Yours sincerely,*
*Harold Binks.*

Mr. HAROLD BINKS.



# C. BINKS (1920) Ltd., ECCLES, nr. MANCHESTER.

# POWER AND—COMFORT

**Lots of both—go to make the "big single" spring-frame Beardmore-Precision a challenge to the cyclecar.**

**The Design is simple, sound and strong throughout. It is a motor bicycle which anyone can drive with ease and *enjoyment* because of the ample power and supreme comfort.**

EXCLUSIVE FEATURES OF THE 4¼ h.p. BEARDMORE-PRECISION.

Full Cantilever Spring Frame and 700×80 mm. (26"×3") light car tyres. 598 c.c. 4½ h.p. Precision single-cylinder four-stroke engine, *with detachable head.*
Automatic and Mechanical Lubrication.
Sturmey-Archer 3-speed gear, clutch and kick-starter, *built-in to engine unit.*
All-steel frame of battleship strength, embodying pressed steel petrol tank (holding 2 gallons), large mudguards and tool-case *as parts of the frame.*
Band brakes to *both* wheels.

OTHER POINTS.

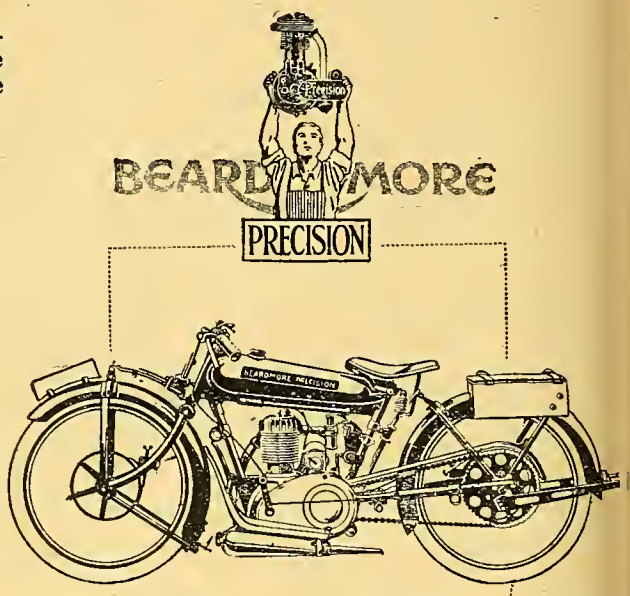
All-chain drive with shock-absorbing hub. Sensible leg-shields. All-black finish. **Price £105**

**Sports Touring & Two-Seater Sidecars at £25, £30 and £35.**

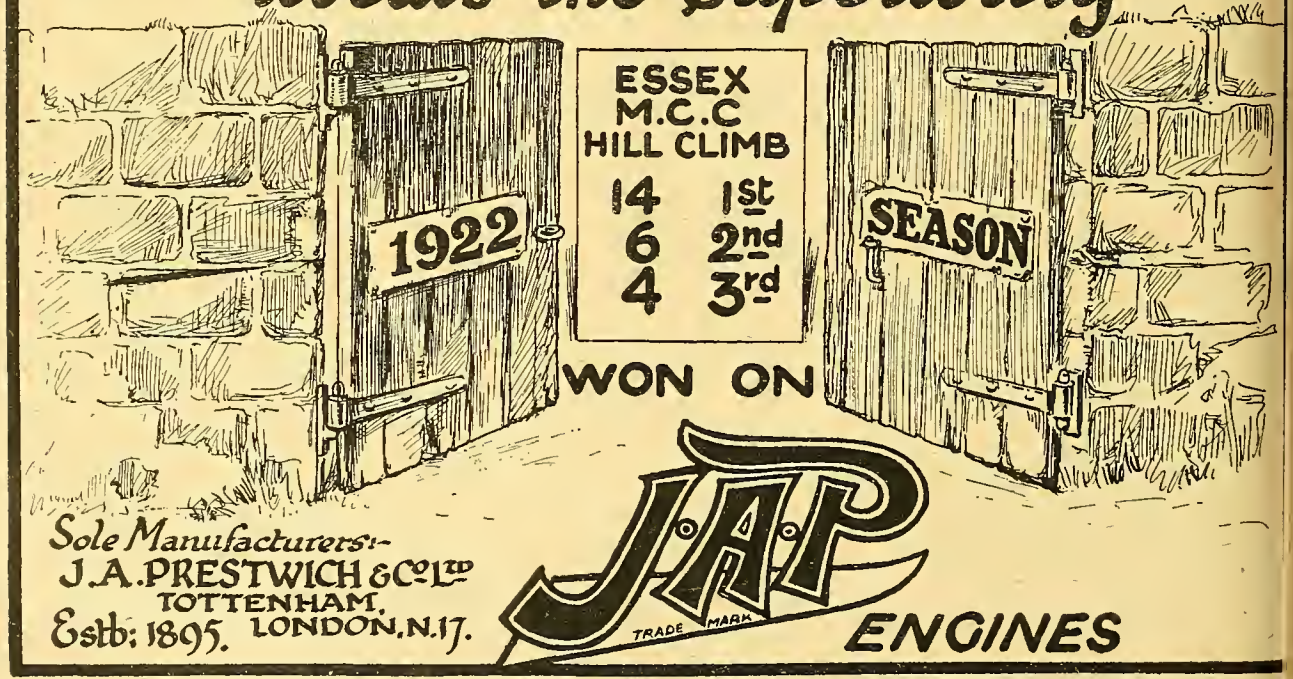
F. E. BAKER, LTD.,
*(Associated with William Beardmore & Co., Ltd.),*
PRECISION WORKS, KING'S NORTON.

'Phone: King's Norton 184-5. 'Grams: "Bachuck, Kingsnorton."
London Depot—112, Great Portland St., W.1. Scotland (Wholesale)—James Robertson, 48, West Nile Street, Glasgow.

**COLMORE CUP—5 Beardmore-Precisions entered; 4 Silver Medals.**



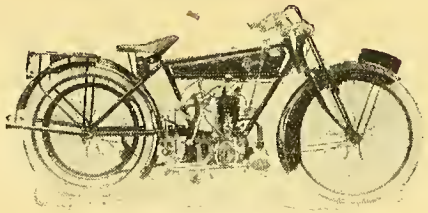

# The opening of 1922 Season reveals the Superiority



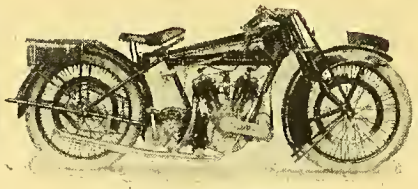

Sole Manufacturers:-
J.A.PRESTWICH & Co Ltd
TOTTENHAM,
Estb: 1895. LONDON, N.17.

| Machine. | Engine and h.p. | c.c. | Bore. Stroke. | Valves. | Lub'tion. | Change Speed. | Transmission. | Tyres. | lb. | Carburetter. | Solo. | Sidecar. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| O.K. | 2¼ Villiers, T.S. | 269 | 70×70 | — | Drip | Albion 2, K.S. | 3/16″ ch. & 3/4″ B. | 26×2¼ | 158 | Amac | £60 18 | — | Single gear, £39 18s. |
| O.K. | 2¾ O.K., T.S. | 292 | 70×76 | — | Drip | Moss 3, K.S. | 3/16″ ch. & 1/4″ B. | 26×2½ | 212 | Amac | £71 8 | £96 12 | —— |
| Omega* | 3 Omega, T.S. | 348 | 71×88 | — | Drip | Burman 2, K.S. | 1/2″ chains | 26×2¼ | 190 | Amac | £69 10 | — | Duplex frame. |
| Omega | 5-6 J.A.P., V twin. | 680 | 70×88 | S.S. | Drip | Burman 3, K.S. | 1/2″ chains | 26×3 | 260 | Amac | £120 0 | — | —— |
| Paragon | 3 P.H.G., T.S. | 349 | 76×79 | — | Drip | Albion 2 | 3/16″ ch. & 3/4″ B. | 26×2¼ | 170 | B. & B. | £58 16 | — | Single gear, £39 18s. |
| Pax* | 2¾ Blackburne | 348 | 71×88 | S.S. | Drip | Sturmey 2, K.S. | 3/16″ ch. & 7/8″ B. | 26×2¼ | 196 | Amac | £72 0 | — | All chain, £80. |
| Peters | 3½ Peters, T.S. | 347 | 77×77 | — | Pres. | Variable | 7/8″ B. | 26×2½ | 145 | Cox-Atmos | £63 0 | — | Fully equipped. |
| Powell | 4 Powell | 547 | 85×96.5 | S.S. | Drip | Sturmey 3, K.S. | 3/8″ ch. & 1″ B. | 26×3 | 265 | Binks | £98 0 | — | All chain, £100. |
| Priory | 2¾ Union, T.S. | 292 | 70×76 | — | Drip | Burman 2, K.S. | 1/4″ ch. & 7/8″ B. | 26×2½ | 170 | B. & B. | £50 0 | — | Single gear, £39 18s |
| P.V.* | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Burman 2, K.S. | 1/4″ ch. & 3/4″ B. | 26×2¼ | 155 | Mills | £55 0 | — | Single gear, £45. |
| P.V.* | 4-5 J.A.P., V twin. | 496 | 64.5×76 | S.S. | Drip | Burman 3, K.S. | 1/4″ ch. & 7/8″ B. | 26×2½ | 230 | Senspray | £100 0 | £120 0 | 5-6 h.p. model, £115 |
| P. & M. | 4½ P. & M. | 555 | 84×100 | S.S. | Mech. | P. & M. 4 | 1/4″ chains | 26×2½ | 280 | B. & B. | £115 0 | £150 0 | Cheaper models, £102, £130. |
| Quadrant | 4½ Quadrant | 654 | 87×110 | S. & R.* | Pump | Sturmey 3 | 1/4″ ch. & 1″ B. | 26×2½ | 280 | Amac | £80 0 | £100 0 | All chain, £5 extra |
| Radco | 2½ Radco, T.S. | 247 | 67×70 | — | Petroil | Burman 2, K.S. | 3/10″ ch. & 3/4″ B. | 24×2 | 137 | Mills | £47 5 | — | Single gear, £35 14s. |
| Radco | 2½ Radco, T.S. | 247 | 67×70 | — | Drip | Burman 3, K.S. | 3/10″ ch. & 3/4″ B. | 24×2 | 166 | Amac | — | £86 2 | Lady's model, £57 15s. |
| Raleigh | 2¾ Raleigh | 348 | 71×88 | S.S. | Drip | Sturmey 3, K.S. | 1/4″ ch. & 7/8″ B. | 26×2¼ | 196 | Amac | £68 0 | £93 0 | —— |
| Raleigh | 3 Raleigh | 398 | 76×88 | S.S. | Drip | Sturmey 3, K.S. | 1/4″ ch. & 7/8″ B. | 26×2¼ | 196 | Amac | £73 0 | £98 0 | —— |
| Raleigh | 5-6 Raleigh, V twin | 698 | 77×75 | S.S. | Drip | Sturmey 3, K.S. | 1/4″ chains | 650×65 | 300 | Amac | £130 0 | £165 0 | —— |

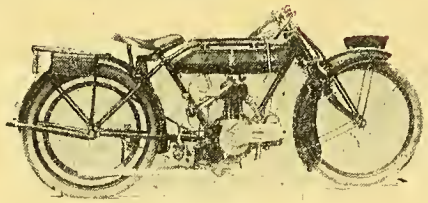
* 2¾ h.p. J.A.P. model, £66; 2¼ h.p. J.A.P. model, £78 10s. * Pax O.H.V. model, £95. * P.V. spring frame, 2¾ h.p. J.A.P. model, £62; 350 c.c. J.A.P. model, £85.
* Quadrant, S. & R.: valves at side and rear of cylinder.



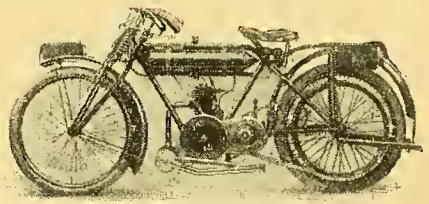
2½ h.p. O.K.



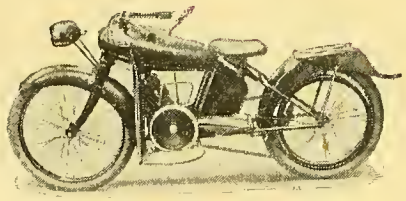
5-6 h.p. OMEGA.



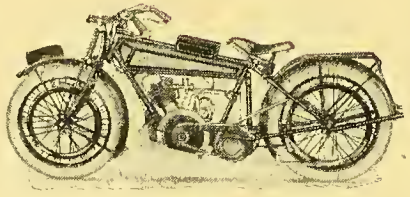
2¾ h.p. PAX.



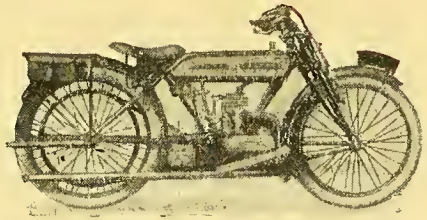
2½ h.p. PARAGON.



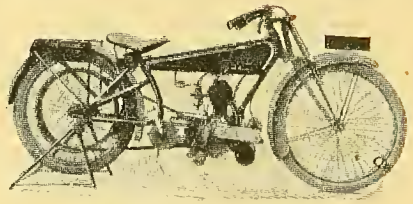
3½½h.p. PETERS.



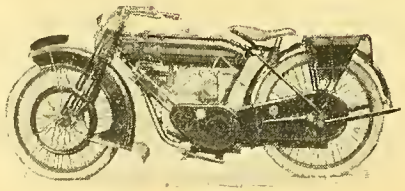
4 h.p. POWELL.



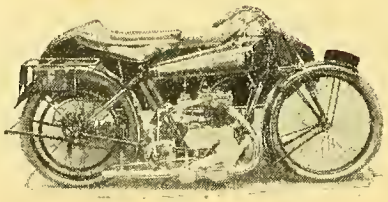
2½ h.p. PRIORY.



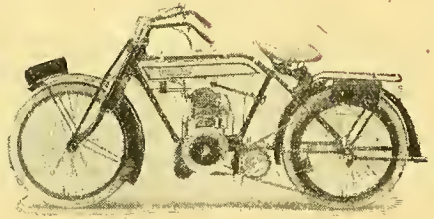
2¾ h.p. P.V.



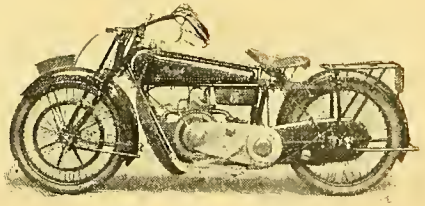
4½ h.p. P. and M.



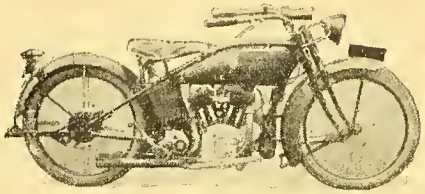
4½ h.p. QUADRANT.



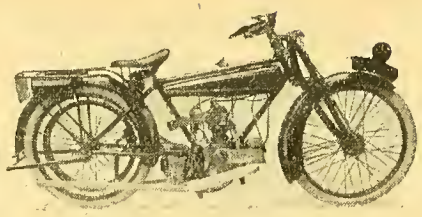
2½ h.p. RADCO.



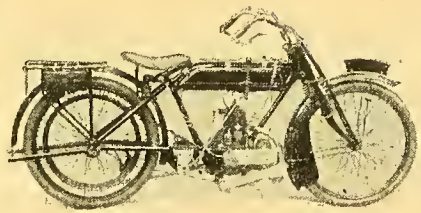
5-6 h.p. RALEIGH.



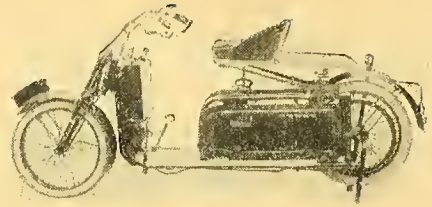
10 h.p. READING STANDARD.



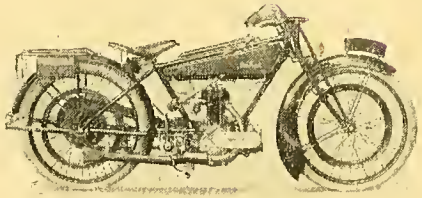
2¾ h.p. READY.



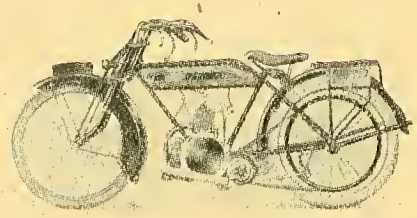
2½ h.p. REVERE.



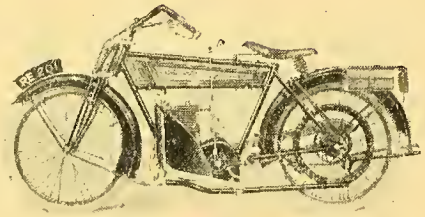
2½ h.p. REYNOLDS.



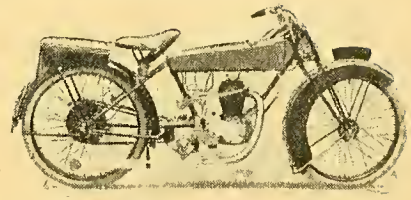
2¾ h.p. REX-ACME.



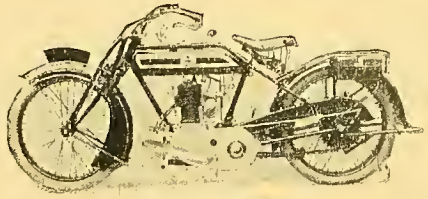
2½ h.p. ROCKSON.



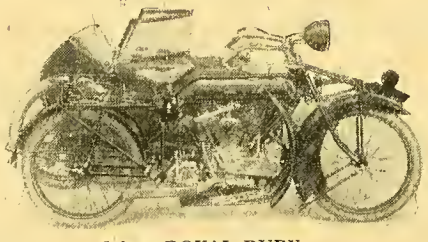
2¼ h.p. ROYAL ENFIELD.



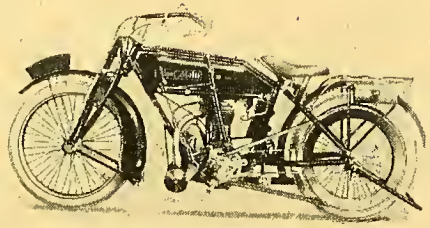
3 h.p. ROYAL SCOT.



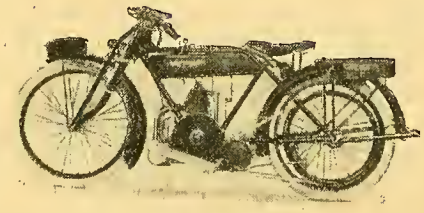
4 h.p. ROVER.



8 h.p. ROYAL RUBY.



3½ h.p. RUDGE-MULTI.



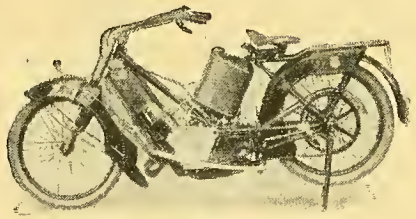
2½ h.p. SARCO.

| *Machine.* | *Engine and h.p.* | *c.c.* | *Bore. Stroke.* | *Valves.* | *Lub'tion.* | *Change Speed.* | *Transmission.* | *Tyres.* | *lb.* | *Carburetter.* | *Solo.* | *Sidecar.* | *Remarks.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ready | 2¾ J.A.P. | 292 | 70×76 | S.S. | Drip | Burman 3, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 172 | Amac | £66 0 | £83 0 | 2-speed, £63. |
| Ready | 2¾ Blackburne | 348 | 71×88 | S.S. | Drip | Burman 3, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 182 | Amac | £69 0 | £86 0 | 5-6 h.p. model, £90. |
| Reading Standard | 10 R.S., V twin | 1170 | 85.5×101.6 | S.S. | Mech. | R.S. 3, K.S. | ⅜″ chains | 28×3 | — | Schebler | £135 0 | £175 0 | Dynamo inel. |
| Revere | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Sparkbrook 2 | ⅜″ ch. & ¾″ B. | 26×2 | 152 | B. & B. | £57 0 | — | Single gear, £45. |
| Reynolds | 2½ Liberty, T.S. | 269 | 70×70 | — | Drip | 2-speed | ¼″ ch. & ¾″ B. | — | — | Cox Atmos | £78 15 | — | Open frame. |
| Rex-Acme* | 2¾ Blackburne | 348 | 71×88 | S.S. | Drip | Sturmey, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | 186 | —— | £69 15 | £88 0 | All chain, £75. |
| Rex-Acme* | 8 Blackburne | 998 | 85×88 | S.S. | Drip | Sturmey, K.S. | ¼″ chains | 28×3 | 360 | —— | — | £150 0 | J.A.P. mo. same pr. |
| Rockson | 2½, T.S. | 269 | 70×70 | — | Drip | Burman 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2 | 152 | Amac | £55 13 | — | Single gear, £44 2s. |
| Royal Enfield | 8 Enfield, V twin | 976 | 85.5×85 | S.S. | Mech. | Enfield 2 | ¼″ chains | 700×80 | 280 | Amac | — | £140 0 | —— |
| Royal Enfield | 2¼ Enfield, T.S. | 225 | 64×70 | — | Petroil | Enfield 2 | 3/16″ chains | 24×2½ | 151 | B. & B. | £55 0 | — | K.S. model, £57. |
| Royal Scot | 3 B. & S. | 349 | 70×90.5 | Sleeve | Pump | Burman 3, K.S. | 5/16″ chains | 26×2½ | 215 | Vici | £85 0 | £105 0 | Spts mo. same pr. |
| Rover | 4 Rover | 499 | 85×88 | S.S. | Pump | Rover 3, K.S. | ⅜″ chains | 650×65 | 265 | B. & B. | £100 0 | — | Sports model, £110. |
| Rover | 5 J.A.P., V twin | 654 | 70×85 | S.S. | Pump | Rover 3, K.S. | ⅜″ chains | 28×3 | 290 | Amac | £120 0 | £155 0 | —— |
| Royal Ruby | 3 Ruby | 375 | 74.5×86 | S.S. | Drip | Ruby 3, K.S. | 3/16″ ch. & ¾″ B. | 26×2½ | 235 | Amac | £90 0 | £105 0 | 349c.c. model, two-speed, £72. |
| Royal Ruby | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Drip | Ruby 3, K.S. | ⅜″ chains | 28×3 | — | B. & B. | — | £185 0 | Including spare wh. |
| Rudge-Multi | 3½ Rudge | 499 | 85×88 | I. over E. | Pump | Variable | 1″ B. | 650×65 | 236 | Senspray | £77 0 | — | —— |
| Rudge | 3½ Rudge | 499 | 85×88 | I. over E. | Pump | Rudge 3 | ⅜″ chains | 650×65 | 241 | Senspray | £94 0 | £114 0 | —— |
| Rudge | 7-9 Rudge, V twin | 998 | 85×88 | I. over E. | Pump | Rudge 3 | ⅜″ chains | 700×80 | 303 | Senspray | £113 0 | £143 0 | —— |
| Sarco Reliance | 2¾ J.A.P. | 293 | 70×76 | S.S. | Drip | Albion 2 | 3/16″ ch. & ¾″ B. | 26×2¼ | 180 | B. & B. | £60 0 | — | Villiers model, £50. |

*Rex. 2¾ h.p. model, with C.A.M. engine, £73 15s.; 4 h.p., J.A.P. engine, £110 solo, £135 sidecar.

| Machine. | Engine and h.p. | c.c. | Bore. Stroke. | Valves. | Lub'tion. | Change Speed. | Transmission. | Tyres. | lb. | Carburetter. | Solo. | Sidecar. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Scott | 3¾ Scott, T.S. twin. | 532 | 73×62.5 | — | Drip | 2-speed | ⅜ & ¼″ chains | 26×2½ | 227 | Amac | £110 0 | £145 0 | —— |
| Scott | 3½ Scott, T.S. twin. | 481 | 70×62.5 | — | Drip | 2-speed | ⅜ & ¼″ chains | 26×2½ | 198 | Amac | £105 0 | £135 0 | —— |
| Skootamota | 1½ A.B.C. | 124 | 60×40 | O.H. | Pump | 2-speed | ⅜″ ch. & ¾″ B. | 26×2¼ | 120 | Willis | £36 15 | — | —— |
| Silver Prince | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | 2-speed, K.S. | ⅜″ ch. & ⅞″ B. | 26×2¼ | 178 | Amac | £66 3 | — | J.A.P. model, £73 10s. |
| Sirrah | 2¾ Blackburne | 349 | 71×88 | S.S. | Drip | Burman 2 | ⅜″ ch. & ¾″ B. | 26×2¼ | 180 | Amac | £67 0 | £84 0 | 2¾ J.A.P. model, £58. |
| Sirrah | 2½ Verus, T.S. | 292 | 70×76 | — | Drip | Burman 2 | ⅜″ cb. & ¾″ B. | 26×2¼ | 160 | Amac | £50 0 | £67 0 | —— |
| Sirrah | 4¼ Blackburne | 550 | 85×96 | S.S. | Pump | Burman 3, K.S | ⅜″ chains | 26×2½ | 265 | Amac | £105 0 | £130 0 | 5-6 h.p. model, £120 |
| Slade | 2¾ J.A.P. | 293 | 70×76 | S.S. | Drip | Albion 2, K.S. | ⅜″ ch. & ¾″ B. | 26×2¼ | 162 | B. & B. | £52 0 | — | —— |
| Sheffield Henderson | 2¾ Blackburne | 349 | 71×88 | O.H. | Pump | Sturmey 3 | ¼″ chains | 26×2¼ | 195 | Amac | £110 0 | £130 0 | S.S. valve model, £83. |
| Southey | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Sturmey 2, K.S. | ¼″ ch. & ¾″ B. | 26×2¼ | 176 | B. & B. | £58 0 | — | 3-speed, £60. |
| Sparkbrook* | 2½ Villiers, T.S. | 269 | 70×70 | — | Drip | Sparkbrook 2 | ⅜″ ch. & ¾″ B. | 26×2¼ | 146 | B. & B. | £57 15 | — | Sturmey gear, £63. |
| Stanger | 5 Stanger V twin, T.S. | 538 | 70×70 | — | Drip | Sturmey 3, K.S. | ⅜″ ch. & 1″ B. | 26×2½ | 240 | Mills | £97 0 | £123 0 | Spring frame. |
| Sun-Vitesse* | Vitesse, T.S. | 247 | 64×70 | — | Pump | Sturmey 3 | All chains | 26×2¼ | 172 | B. & B. | £57 15 | — | 3-speed, £72 9s. |
| Sunbeam | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Drip | Sunbeam 3, K.S. | ⅜″ chains | 28×3 | 325 | Amac | £168 0 | £217 7 | 4½ h.p. mo., £141 15s. |
| Sunbeam | 3½ Sunbeam | 499 | 85×88 | S.S. | Drip | Sunbeam 3, K.S. | ⅜″ chains | 650×65 | 264 | Amac | £126 0 | £166 19 | Light solo, £136. |
| Sunbeam | 3½ Sunbeam | 492 | 75×105.5 | S.S. | Pump | Sunbeam 3 | ¼″ chains | 26×2⅜ | 225 | Amac | £136 0 | — | No kick-starter. |
| Supremoco* | 4¼ Blackburne | 550 | 85×96.8 | S.S. | Drip | Burman 2 | ¼″ ch. & ⅞″ B. | 26×2½ | 220 | Vici | £90 0 | — | 2¾ h.p., £80. |
| Trump* | 2¾ J.A.P. | 292 | 70×76 | S.S. | Drip | Chater 2 | ¼″ ch. & ¾″ B. | 26×2¼ | 140 | Wex | £60 0 | — | Clutch model, £65. |

* Sparkbrook, 350 c.c. J.A.P. model, £78 15s. * Sun J.A.P. model, 2-speed, kick- starter, £66 3s.; 3-speed, £78 15s. * Supremoco, Dalm model, £58; Villiers model, £50.
* Trump, 350 J.A.P., £78 10s.; 3½ h.p. model, £105; 6 h.p. J.A.P. model, £130; 8 h.p. model, £140.

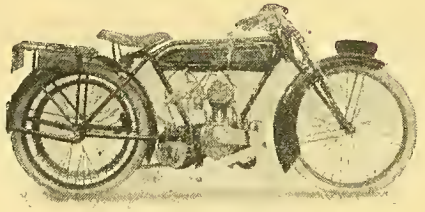


3¾ h.p. SCOTT.

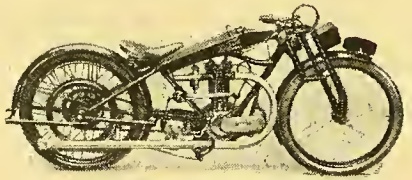
1½ h.p. SKOOTAMOTA.

2¾ h.p. SILVER PRINCE.

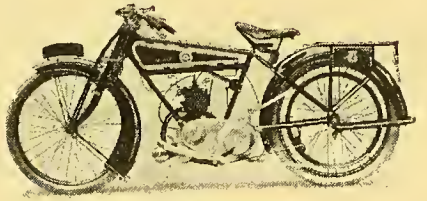
5-6 h.p. SIRRAH.



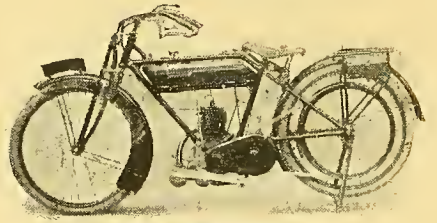
2¾ h.p. SLADE.



2¾ h.p. SHEFFIELD HENDERSON.

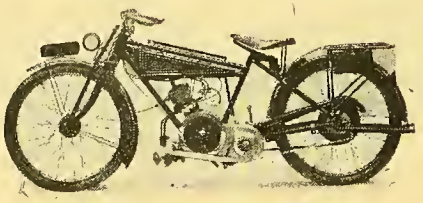


2½ h.p. SOUTHEY.

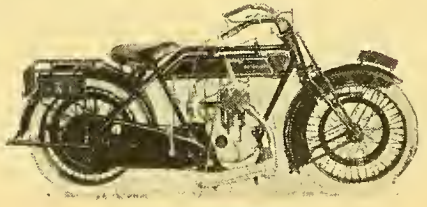


2½ h.p. SPARKBROOK.

5 h.p. STANGER.

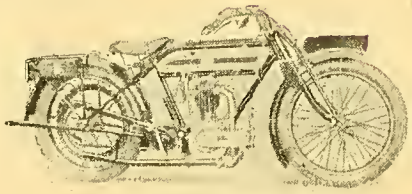


2¾ h.p. SUN VITESSE.

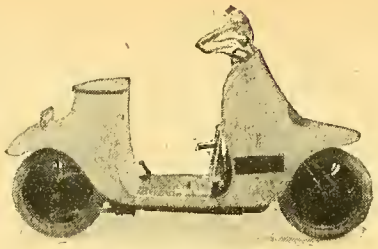


3½ h.p. SUNBEAM.

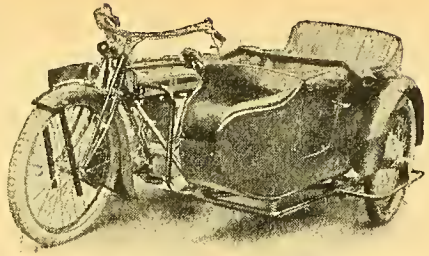
3½ h.p. TRUMP.



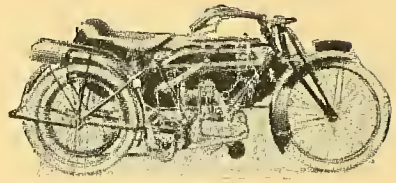
3½ h.p. TRIUMPH.



2½ h.p. UNIBUS.

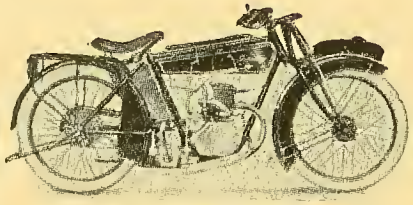


4 h.p. TRIUMPH.

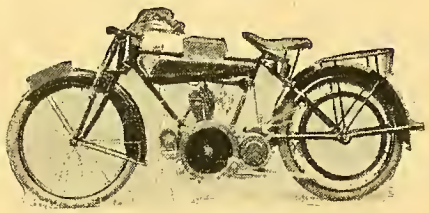


4½ h.p. VICTORIA.

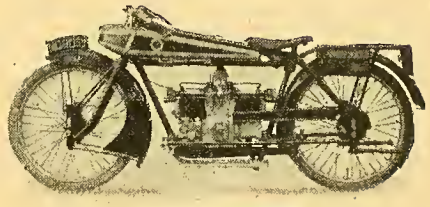
8 h.p. VINDEC.



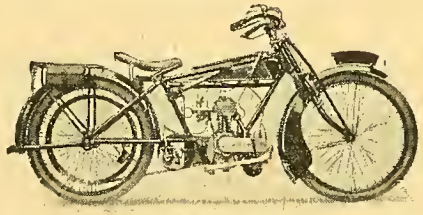
2¼ h.p. VELOCETTE.



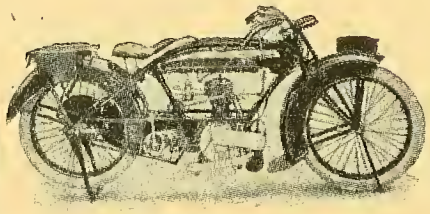
2¾ h.p. VERUS.



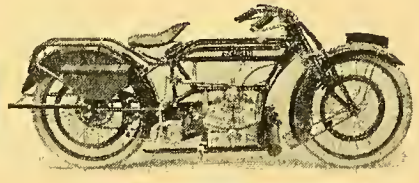
2¼ h.p. WOOLER.



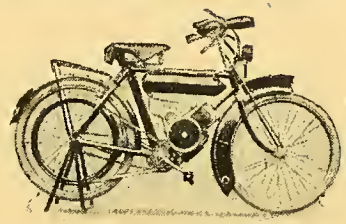
2¾ h.p. WOLF.



4½ h.p. X.L.



3½ h.p. ZENITH BRADSHAW.



1½ h.p. ZEPHYR.



| *Machine.* | *Engine and h.p.* | *c.c.* | *Bore. Stroke.* | *Valves.* | *Lub'tion.* | *Change Speed.* | *Transmission.* | *Tyres.* | *lb.* | *Carburetter.* | *Solo.* | *Sidecar.* | *Remarks.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Triumph | 4 Triumph | 550 | 85×97 | S.S. | Pump | Triumph 3 | ½″ chains | 26×2½ | 242 | Triumph | £115 0 | £155 0 | — |
| Triumph | 4 Triumph | 550 | 85×97 | S.S. | Pump | Sturmey 3 | ⅝″ ch. & 1″ B. | 26×2½ | 229 | Triumph | £105 0 | £145 0 | — |
| Triumph | 3½ Triumph | 499 | 80×97 | O.H. | Pump | Triumph 3 | ½″ chains | 26×3 | 240 | Triumph | £120 0 | — | — |
| Triumph | 2¼ Triumph, T.S. | 225 | 64×70 | — | Petroil | 2-speed | Ch.-c.-belt | 24×2¼ | 129 | Triumph | £65 0 | — | — |
| Unibus | 2½, T.S. | 269 | 70×70 | — | Drip | 2-speed | Shaft | 16×2½ | — | B. & B. | — | — | — |
| Verus | 2¾ Blackburne | 349 | 71×88 | S.S. | Drip | Burman 2 | 3/16″ ch. & ¾″ B. | 26×2¼ | 180 | Amac | £77 0 | £94 0 | — |
| Verus | 2¾ Blackburne | 349 | 71×88 | S.S. | Drip | Sturmey 3, K.S. | ½″ chains | 26×2¼ | 200 | Amac | £90 0 | £107 0 | — |
| Verus | 2½ Verus, T.S. | 269 | 70×70 | — | Drip | Burman 2 | 3/16″ ch. & ¾″ B. | 26×2¼ | 180 | Amac | £60 0 | — | — |
| Victoria | Villiers, T.S. | 269 | 70×70 | — | Drip | Albion 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 150 | Amac | £50 0 | — | J.A.P. model, £65. |
| Victoria* | 5-7 C. Victor, F.twin | 688 | 75×78 | S.S. | Drip | Sturmey 3 | ¼″ ch. & 1″ B. | 650×65 | 240 | B. & B. | £115 0 | £150 0 | — |
| Vindec | 8 J.A.P., V twin | 976 | 85.5×85 | S.S. | Drip | Sturmey 3 | ¾″ ch. & 1″ B. | 28×3 | — | Amac | — | £160 0 | — |
| Vindec | 2¼, T.S. | 226 | 64×70 | — | Drip | 2-speed | ¼″ ch. & ¾″ B. | 26×2¼ | — | Amac | £60 0 | — | — |
| Velocette* | 2¼ Velocette, T.S. | 220 | 62×73 | — | Mech. | 2-speed, K.S. | 3/16″ chains | 24×2¼ | 160 | B. & B. | £65 0 | — | 3-sp. model, £72 10s. |
| Velocette | 2¼ Velocette, T.S. | 249 | 63×80 | — | Mech. | 2-speed, K.S. | 3/16″ chains | 24×2¼ | 160 | B. & B. | £68 0 | — | 3-speed model, £75. |
| Wolf | 2½ Villiers | 269 | 70×70 | — | Drip | Sturmey 2, K.S. | 3/16″ ch. & ¾″ B. | 26×2¼ | 168 | Amac | £55 0 | — | Single gear, £40. |
| Wolf* | 4¼ Blackburne | 548 | 85×96.8 | S.S. | Drip | Sturmey 3, K.S. | ⅜″ ch. & 1″ B. | 26×2½ | 224 | Amac | £92 10 | — | — |
| Wooler* | 2¾ Wooler, F. twin | 349 | 60.5×60 | I. over E. | Mech. | Wooler 3 | ½″ chains | 26×2¼ | 185 | B. & B. | £78 10 | £98 0 | Spring frame. |
| XL | 4¼ J.A.P. | 550 | 85×95 | S.S. | Drip | Sturmey 3 | ⅜″ chains | 26×3 | 245 | Amac | £110 0 | £140 0 | — |
| Zenith | 3½ Bradshaw, F. t'n | 498 | 68×68 | O.H. | Pump | Sturmey 3 | ½″ chains | 650×65 | 254 | Claudel Hobs'n | £119 0 | — | Gradua model, £113. |
| Zenith | 5 J.A.P. | 650 | 70×88 | S.S. | Pump | Gradua | 1″ B. | 650×65 | 290 | Amac | £118 0 | £147 0 | 8 h.p. model, £125. |
| Zephyr | 1½ Simplex | 105 | 52×52 | — | Petroil | — | All chain | 26×1¾ | 70 | Amac | £30 10 | — | Lady's mo., £31 10s. |

*Victoria, 350 c.c., J.A.P. model, 3-speed, £70 solo, £85 sidecar; 4¼ h.p. model, £90 solo, £110 sidecar. *Velocette, Lady's model, 2-speed, £68; 3-speed, £75. *Wolf, 4¼ h.p. J.A.P. model, £92 10s.; 2¾ h.p. Blackburne model, £70; 2¾ h.p. J.A.P. model, £55; Special single gear, two-stroke, £39 18s. *Wooler, variable speed, belt drive model, £65.

# AIR INLETS: UNCONTROLLED AND CONTROLLED.

## Explaining how the Admission of Pure Air to an Engine is Beneficial—at the Right Time and Place.

ELIMINATION of air-leaks in an engine results in a longer life for the wearing parts, economy in fuel, increased power, and, above all, docility at all speeds. There are only two serious causes of uneven firing. One is uneven sparking, and we are here presuming it non-existent. The other—the *bête-noire* of the conscientious—is nothing more nor less than "atmospheric interference." It may be due to leaks at the induction pipe or carburetter joints, which are easily cured by a spanner, or, if that fails, some packing or a length of homely insulating tape. But far more often the cause is worn inlet valve stems and guides.

To begin with, the manufacturer (*i.e.*, his designer) should provide means of lubricating the valve stems. Most engines do not have provision for lubrication at this important point. Therefore, in the opinion of the writer, a new engine should be fitted immediately on receipt with one or other of the several excellent valve stem lubricating sleeves now on the market.

### Worn Valve Guides.

What of the second-hand machine with valves already far gone in the guides? If it can be afforded, new valve guides (if not valve gear complete) should be fitted, and the above-mentioned valve stem lubricators added to the inlet guides before taking the road again.

A mushroom head valve is so designed as to come down with deadly even accuracy on its entire face each time, and to do so any number of times up to two or three thousand per minute.

How can it keep its head if its tail is wobbling about? So distortion, perhaps ending in breakage at the neck, is the first result. Then premature pitting (in the case of the exhaust, perhaps actual burning) of the face of both valve and seat. Then leaks.

Exhaust valve stem leakage matters little. Often, indeed, *e.g.*, on twins, the position and function of this valve ensure it a liberal dose of oil. On many used engines, therefore, it will be found that the exhaust valve guide is less worn than the inlet. But ideally no oil should pass the piston head; such leakage is often due to careless over-lubrication of the engine, and is another instance of providence turning folly to good account. So the main results of a worn exhaust valve guide are reduced to a mere two: strain, leading to distortion, and premature pitting—so premature that it may be called burning.

A loose inlet valve guide, on the other hand, means the presence of a permanent extra air inlet—an ever-open door which will make starting difficult and slow running impossible. On a "single" it is bad enough. On a twin it is very bad—a constant curse to the disciplinarian who values control over every functional process in his engine. How many "twin" owners have spent hours on plugs or magneto, because "that back cylinder goes out" at low speeds or will not "chip in" at starting—when all the time its inlet valve guide is just admitting a little unwanted air?

No carburetter can be designed to cope with the subsequent admission of unauthorised "atmosphere" as well as to function on a new engine with air-tight passages. I firmly believe pilot jets would never have been brought into use on motor cycles—certainly they would have been unnecessary—if valve guides had been assured of efficient lubrication from the start, either by the designer or by the owner.

### Extra Air Inlet.

With all leaks stopped, then, the rider is controlling every c.c. of incoming gas by means of the usual carburetter lever or levers. Supposing fuel economy is desired, he may fit a smaller jet, but he will lose power. He returns to the old jet—the maker knew best!—and thinks.

It is a curious fact that when an engine refuses to take more air through the carburetter, in 99% of cases it will take it *if admitted to the mixture later on—on the way up the induction pipe—after* the petrol has been broken up. The amount which can be admitted differs, of course, with the engine and the speed; but I have never yet come across an engine which refused to gulp it in through some such secondary inlet when it had said "thank you, no," to one's efforts with the orthodox air lever acting at the carburetter. The air admitted at the carburetter is meant to vaporise the fuel. Apparently, it cannot efficiently both do this and make the best explosive mixture. So when the carburetter air has vaporised it, more air is needed to "explosivise" it. And to vaporise fuel the air should be as hot as possible, yet the later-admitted air should be cold.

An extra air inlet on the induction pipe is therefore necessary to get the best results from an engine at speeds of above 15 m.p.h. on top, or *pro rata* on other gears. It may be in the crude form of a one and sixpenny compression tap (with a large and easily found lever), or one of the variously controlled special makes on the market.

It is not the fault of the carburetter designers that such an extra air inlet remains essential in this year of grace. It is the fault of a fact with which they could only begin to cope by making the whole induction pipe with this secondary inlet arranged to open with the throttle. Since it should be fitted as far along the induction pipe (away from the carburetter) as possible this would be difficult. And then it could not function efficiently at all speeds and in varying barometric condition; nor is it easy or desirable to use it much in traffic. It is essentially an extra—a "gadget," in the original sense of that useful word—for use on the open road by an enthusiast, who is sufficiently repaid for his trouble by the certain knowledge that his engine is getting the best chance in the world.

E. M. WRIGHT.

### Hinckley and District M.C.C.

Members are asked to note that the new address of the hon. secretary, Mr. H. A. Gutteridge, is 37, Park Road, Hinckley.

### North Shields and District M.C.

Recently formed, with headquarters at the Railway Hotel, North Shields, the club has arranged an interesting programme of social events and reliability trials. All interested should apply to the secretary, Mr. Geo. Wood, 9, Railway Street, North Shields.

### Kilmarnock and District M.C.C.

Although scarcely a month old the club has been moving along at great strides, and has had no occasion "to change down." The flag is to be Kilmarnock's coat-of-arms with the club's lettering and colours (blue and gold). The club will have numerous trophies to be contested for annually. The headquarters are The Ossington, Kilmarnock, and the hon. secretary Mr. H. W. Jones, 11, Wilson Avenue, Kilmarnock.

### North Cheshire M.C. and L.C.C.

Although those taking part did not arrive at their objective, the run intended for Monsal Dale on the 25th ult. was a great success. After a strenuous journey across the Cat and Fiddle road through deep snow, tea was taken in Buxton, after which there was a most enjoyable run home through Whaley Bridge and Disley, during which some of the "speed merchants" tried different gadgets in anticipation of the hill climb which will take place on April 9th at Axe Edge.

### Slough and District M.C. and L.C.C.

Results of the very successful hill climb at Kop Hill on the 11th ult. were as follows :—

350 c.c.—On time: 1, F. L. Hall (2¾ Douglas), 57½ secs.; 2, E. A. Cullum (2¾ Douglas), 58 1-5 sec. On formula: 1, E. A. Cullum (2¾ Douglas); 2, F. L. Hall (2¾ Douglas).

500 c.c.—On time: 1, F. L. Hall (2¾ Douglas), 56 secs.; 2, G. W. Lacey (3½ Rudge), 58½ secs. On formula: 1, F. L. Hall (2¾ Douglas); 2, E. A. Cullum (2¾ Douglas).

750 c.c.—On time: 1, F. I. Moore (4 Triumph), 49 secs.; 2, R. Tuddenham (5 Zenith), 54 secs. On formula: 1, A. Andrews (3½ Rover); 2, D. Power (3 A.B.C.).

1,000 c.c.—On time: 1, E. Finch (8 Zenith), 34 2-5 secs. On formula: E. Finch (8 Zenith).

1,000 c.c. SIDECAR.—On time: 1, E. Finch (8 Zenith sc.), 47 1-5 secs. On formula: E. Finch (8 Zenith sc.).

FASTEST TIME.—E. Finch (8 Zenith), 34 2-5 secs.

Although the weather was perfect the surface of the hill was rather bad on account of rain followed by frost during the previous week.

### York and District M.C.

Open to any Yorkshire Centre A.C.U. clubs, the annual hill climb at Sutton Bank will be held on April 22nd.

### Worcester and District M.C.C. and Worcester M.C.

On Good Friday the two clubs will hold a joint half-day reliability trial. The trials secretary is Mr. J. C. Gibbs, 25, Albany Terrace, Britannia Square, Worcester.

### Ilkley M.C. and L.C.C.

For the second year in succession the club has nominated Geoffrey Clapham, of Keighley, the well-known Scott rider, as its entrant in the Tourist Trophy Race. He will ride a 3½ h.p. Scott Squirrel.

A special general meeting on Monday of last week approved an excellent list of fixtures, in which considerable attention was paid to the social side.

### Colchester and District M.C.

An inter-club hill climb with the Bury St. Edmunds Club will be held on Easter Monday, April 17th, starting at 2 o'clock. The usual classes will be run under A.C.U. competition rules. Bounstead Hill, which is about two miles out of Colchester, has been chosen for this event. Particulars may be obtained from Mr. L. C. Solomon, hon. secretary, 121, High Street, Colchester.

### Darlington and District M.C.

If the enthusiasm displayed at recent meetings can be maintained, 1922 will prove a record year; the membership is already rapidly approaching one hundred. Excellent affiliation arrangements have been made—in the first place with the N.E.A.A., whereby all members secure, among other benefits, free legal defence and the advantage of the popular "get you home" scheme; and by its affiliation to the Yorkshire Centre A.C.U. the club caters fully for its sporting members.

### South-West London M.C.C.

With headquarters at 26 Tulse Hill, a club has been formed at Brixton, named as above. Mr. W. T. Carpenter is the honorary secretary.

An invitation run has been arranged to take place on April 9th. The venue will be the Huts Hotel, Hindhead, where lunch will be served at 1.30 p.m. From there a run will be made in the afternoon to Ripley for tea at 5.30 p.m. All intending visitors are asked to write to the secretary at 26, Tulse Hill, and inform him as soon as possible, so that arrangements can be made for meals.

### Brixton M.C. and L.C.C.

Only formed in the middle of March, the club has already become affiliated to the A.C.U. Local motor cyclists who are interested should communicate with the hon secretary, Mr. H. Claude Hughes, 80, Barnwell Road, Brixton, London, S.W.2. (Telephone: Brixton 2771.)

### Maldon and District M.C.C.

A club has recently been formed at Maldon, and motor cyclists in the neighbourhood are invited to join. The entry fee is 1s., and annual subscription 5s. Headquarters, The Chequers Hotel: Hon. Sec., H. Knightsbridge, 55, High Street, Maldon.

### Bulwell M.C.

Thirty-two members entered for the recent opening event, a 50 miles speed-judging contest. Twenty-two finished the course. W. Bales, on a 2¼ h.p. Royal Enfield, was the winner of the solo class, and G. W. T. Hartwell (8 Brough Superior), carried off the prize for passenger machines.

### Berwick and District M.C.

At the annual dinner and presentation of prizes held in the King's Arms Hotel, Berwick-on-Tweed, on the 24th ult., the Mayor and Sheriff of the town and Mr. J. E. Hodgkin, secretary of the North-Eastern Automobile Association, were amongst the guests. There was a large attendance of ladies and gentlemen interested in the club, and the president, Councillor Alex. Darling, was in the chair.

### Ipswich and District M.C.C.

In the form of a 97 mile reliability trial under touring conditions, the opening event of 1922 took place on the 26th ult. A good entry was obtained.

Secret checks were made en route by non-competing members, the journey having to be accomplished at the running speed of 20 m.p.h., non-stop. Riding was very consistent throughout. Special credit is due to Miss L. K. Evans for riding as leader on a solo machine throughout the course without having to register a stop, which, considering the state of the weather and roads during the latter half of the run, was very remarkable. Results :—

Outstanding for lady's performance: Miss L. K. Evans (Triumph).

SOLO MACHINES.—1, K. Fish (Chater-Lea); 2, J. C. Lingley (Triumph); 3, W. B. Kirk (Triumph).

SIDECARS.—1, H. O. Goldsmith (6 Brough sc.); 2, R. Revett (3½ Rudge-Multi sc.); 3, J. W. Pretty (4 Triumph sc.).

### Berwick and District M.C.

The second annual dinner was held in the "King's Arms" Hotel, on the 23rd ult. The president, Alex. Darling, Esq., J.P., presided over a company of 52, and the guests included His Worship the Mayor and the Sheriff of Berwick, Mr. H. Philipson of London, and Mr. J. E. Hodgkin, hon. secretary of the N.E.A.A.

### South East Durham M.C.

On the 22nd ult. the club held a whist drive and dance at Wingate, which proved a huge success, over 200 persons being present. New members are joining each week, and at the moment the membership is 100. All motorists in the district are invited to join. The secretary is Mr. W. H. Armstrong, 9, Cemetery Road, Wheatley Hill, Co. Durham.

### Coatbridge, Airdrie and District M.C.C.

On the 17th ult. the club held a most successful lecture and social evening in the Y.M.C.A. Rooms, Bank Street, Coatbridge. The chairman, Mr. Wm. Mair, opened the proceedings, and introduced the lecturer, Mr. D. Black, of Bates Tyres, Ltd., who gave an exceedingly interesting lecture on tyres.

### Ealing and District M.C.C.

On Saturday last the club held its annual trial for the Longman Cup. The route was mainly over slimy Surrey lanes, and two circuits of a 30-mile course had to be covered non-stop. In the stopping and re-starting test, M. Pearson (Triumph) put up the best performance, crossing the second tape in 4 secs. The Longman Cup was won by W. G. Boyer (Norton), whose total time error over the two circuits was 19 secs. only. The only other competitors to complete the course non-stop were Nias (Ariel), Giladjean (Wooler), Noble (Hawker), and two light cars.

### Westmorland M.C.C.

When the arrangements of the club were formulated for the season a strong desire was expressed in the committee that every opportunity possible should be given for the novice riders. Happily the ambition of the committee and officials has been realised at the very first run, for in a speed-judging contest a young rider who had never previously been in a competition, and who, in fact, had only ridden a machine for about a fortnight, carried off the first prize. The full results were as follows :—

1, J. Bland (Velocette), 25 secs. out; 2, J. H. Hall (Velocette), 50 secs.; 3, W. Hutchinson (Bat-Jap), 1 min. 20 secs.

The following also finished in order of merit: F. Brennand (Triumph), W. Westwood (Triumph), A. Snaith (Triumph sc.), W. A. Carter (3½ Ariel sc.), B. Turner (Velocette), J. Atkinson (Velocette), W. Kendall (8 Acme sc.), R. M. Chaplow (Scott), P. Hoggarth (2¾ A.J.S.), H. Longmire (2¾ Raleigh) and R. R. Rothwell (Triumph) tied, W. Killingbeck (Triumph), T. E. K. McNaughtan (Morgan), E. A. Earl (Sunbeam) and B. Hill (Velocette) tied, A. J. Miles, M. Sedgwick (Sunbeam), S. Bewsher (Francis-Barnett), P. M. Rheam (Scott), and A. Anderson (7 A.J.S. sc.).

## Week-End Club Events.

*April 6th.—North Wales M.C.C.—Reliability Trial.*
*April 8th.—Coventry Triangle M.C.—Run to Maxstoke Priory.*
*April 8th.—Coatbridge, Airdrie and District M.C.—Opening Social Run.*
*April 8th.—Essex County and Southend A.C.—Surprise Run.*
*April 8th.—Coventry and Warwickshire M.C.—Cole Cup Reliability Trial.*
*April 8th.—Liverpool M.C.—Club Run.*
*April 8th.—Redditch and District M.C.C.—Flexibility Test.*
*April 9th.—Eastern Counties M.C.—Run to Watton.*
*April 9th.—Eccles and District M.C.—Tour.*
*April 9th.—Coventry Triangle M.C.—Run to Edge Hill.*
*April 9th.—Featherstone and District M.C.C.—Run to Harrogate and Knaresboro'.*
*April 9th.—Sheffield M.C.C.—Run to Normanton Inn.*
*April 9th.—Rugby M.C.—Hill Climb.*
*April 9th.—Barrow and District M.C.—Reliability Trial.*
*April 9th.—Rochester, Chatham and District M.C. and L.C.C.—Run to Hawkhurst Green.*
*April 9th.—Halifax and District M.C. and L.C.C.—Run to Alderley Edge.*
*April 9th.—Colne and District M.C.—Run to Whitewell.*
*April 9th.—Bradford M.C. and L.C.C.—"Dispatch Riders'" Trial for Sidney Cup.*
*April 9th.—Brighton and Hove M.C.C.—Picnic Run to Leith Hill.*

### Public Schools M.C.C.

A successful Brooklands meeting was held last Saturday before a goodly crowd of spectators. The various events were well supported, and an excellent afternoon's sport was enjoyed. Col. F. Lindsay Lloyd, the president of the club, by whose courtesy the meeting was able to be held, was a tower of strength, officiating as starter, judge, time-keeper, and in various other capacities.

The club, as a matter of international courtesy, invited M. Péan, the Peugeot expert, to become an honorary member for the day, and compete in the various events, but he decided that it would be unfair to compete against amateur riders.

The results were as follows :—

GENERAL HANDICAP.

| | Secs. |
|---|---|
| 1. J. B. Browning (3½ Sunbeam) | 49 |
| 2. J. C. Watson (4 Harley) | 20 |
| 3. Col. R. N. Stewart (6 Trump-Jap) | scr. |

Won by 100 yds. Speed 52.8 m.p.h.

HANDICAP FOR 500 c.c. MACHINES.

| | |
|---|---|
| 1. W. H. Sheraton (3½ Norton) | 14 |
| 2. G. J. Thompson (3½ A.B.C.) | scr. |
| 3. E. O. Mizen (3½ Norton) | 34 |

Sheraton in spite of starting 9 secs. late, won by 50 yds. Speed 59.3 m.p.h.

GENERAL HANDICAP.

| | |
|---|---|
| 1. J. C. Watson (4 Harley) | |
| 2. Col. R. N. Stewart (6 Trump-Jap) | |
| 3. C. C. Labin (3½ Zenith-Bradshaw) | 40 |

Won by 150 yds. Speed 61.92 m.p.h.

TEST HILL (Standing Start).

| | |
|---|---|
| 1. W. H. Sheraton (3½ Norton) | 11⅘ |
| 2. J. B. Browning (3½ Sunbeam) | 11⅘ |
| 3. H. B. Browning (2¾ A.J.S.) | 12⅘ |

KILOMETRE SCRATCH RACES.

Class I. Col. R. N. Stewart (6 Trump-Jap).
Class II. C. C. Labin (3½ Zenith-Bradshaw).
Class III. H. B. Browning (2¾ A.J.S.).

GENERAL HANDICAP.

| | |
|---|---|
| 1. J. B. Browning (3½ Sunbeam) | 40 |
| 2. W. H. Sheraton (3½ Norton) | 10 |
| 3. Col. R. N. Stewart (6 Trump-Jap) | scr. |

Won by 60 yds. Speed 55.59 m.p.h.

3-LAP MATCH (level).

Captain A. G. Miller (Wolseley car) beat Co. R. N. Stewart (6 Trump-Jap) by 10 yds. Speed 72.18 m.p.h. Miller's fastest lap 77.2 m.p.h.

### Redditch and District M.C.C.

In the form of a sporting half-day reliability trial the opening run was held on the 25th ult.

Twenty-six members faced the starter and 16 finished the course, which included two water-splashes and numerous boggy lanes. The best individual performance was made by H. Ward (4¼ B.S.A.) Results :—

250 c.c. SOLO.

1. W. Brown (2¼ Velocette).
2. E. Radnall (2½ Radco).

600 c.c. SOLO.

1. H. Ward (4¼ B.S.A.).
2. J. Weller (3½ Norton).

OVER 600 c.c. SIDECARS.

F. Jakeman (8 Matchless sc.).

350 c.c. SOLO.

F. Robbins (3½ Beardmore-Precision)

600 c.c. SIDECARS.

1. R. Nicholls (4¼ B.S.A. sc.).
2. E. Smith (3½ Norton sc.).

# OVER KIRKSTONE PASS AGAIN.

## M.C.C. London-Edinburgh Run to follow the 1920 Route. Starting Point at Hendon.

FEATURES of the 1922 London-Edinburgh run will be a new starting-point and the adoption of the 1920 route (embracing Kirkstone Pass, from Ambleside), with slight modifications.

For the first time for many years the starting place outside the Gate House Hotel, Highgate, will be abandoned. This is a great pity, as the Highgate starting point, first used sixteen years ago, has always been most popular, and the enormous crowd orderly and well behaved. Notwithstanding, it is felt that it would be more convenient to start from a more secluded spot where the competitors could be handled with greater ease, and on Friday, June 2nd, this popular run to the north will start from outside the London Country Club, Hendon. Negotiations are already in progress between this club and the Motor Cycling Club, and no doubt satisfactory arrangements will be made.

### A Circuitous First Stage.

Leaving Hendon the competitors will traverse a hilly and rather complicated piece of country lying between the two main roads, the Edgware Road and the western branch of the Great North Road. They will pass through Mill Hill, Highwood Hill, Arkley, to Barnet, where they will join the Great North Road.

The course will be the same as utilised in 1920, over Kirkstone Pass from Ambleside, but a slight alteration will be made at Kendal, the twelve miles' approach to which will be by the shorter and more hilly road.

Entries close on May 15th, and the latest date for receiving applications for membership for the purpose of this trial will be April 29th. Members are reminded that subscriptions must be paid before entries are accepted, and that competitors desiring to ride together will be limited to groups of three, while all members of intending groups must send in their entries at the same time.

# EXTRAORDINARY TRIAL CONDITIONS.

## Deep Snow Causes Curtailment of Western Centre Trial.

Never one to hesitate at obstacles, H. F. S. Morgan (8 Morgan) did the work of a snow-plough on several occasions. In this picture his three-wheeler is recovering from a slight skid.

THERE are some who may criticise the organisers of the A.C.U. Western Centre trial for arranging an event scheduled to cover 230 miles so early in the year. Nevertheless, they can hardly be blamed for the extraordinary conditions which prevailed on Saturday last.

Starting from Clent in the early morning, the roads were frozen and dusty, and though an icy wind was blowing there was every prospect of the hills being in dry condition. Before reaching Cheltenham the roads were covered with snow, and only a few miles further on the route was blocked by four-foot drifts, no traffic being possible in places. A detour was made, but for a matter of 35 miles progress was but little more than a fast walk, and near Warmley the roads were again impassable. Conditions improved on nearing Bristol, but so great was the delay that the stewards wisely decided to conclude the trial at Clevedon—originally intended as the lunch stop.

### Medals for the Hardy Ones.

After a stewards' meeting it was announced that all solo riders who reached the finish, and all drivers of passenger machines to check in either at Tetbury or Clevedon, would be awarded a special silver medal, to rank as a first-class award, and to be engraved with the words "Western Centre Arctic Trial." This decision was received with cheers by the assembled competitors, and certainly anyone who reached the finish, by whatever means, richly deserves his medal.

Never before have we seen anything to equal the snowbound roads in the West of England, and it is many years since such a snowfall has occurred in these parts. Falls were frequent, and it was not uncommon to find an exhausted solo rider lying where he fell, after struggling through the drifts, while drivers of passenger machines took it in turns to lift, push, and man-handle each other's vehicles through masses of snow at least two feet deep in places.

### On the First Stage.

From the starting point at Clent, near Stourbridge, the soloists were sent away at the rate of two per minute, while passenger machines left at minute intervals.

Only three miles from the start came Shut Mill Hill, a rough lane with a deep central gully, which was robbed of its terrors owing to a night's frost, which had solidified the greasy patches. The early solo riders performed uniformly well, and in its existing state the hill was too easy for detailed performances to be of interest. A few, however, touched with their feet, and at least two sidecar outfits failed owing to the engine hitting the ground.

Beacon Hill also, though rough, is a simple climb when dry. There followed a check at Bromsgrove, only 11 miles from the start, and a second check at Evesham after a further uneventful 20 miles.

### First Ice—then Snow.

Just before Winchcombe the roads became coated, first with ice, which made solo work a little tricky, and then with a thin layer of snow. This snow became thicker on the heights of Cleeve Hill, and soon after joining the Cheltenham tramlines a sharp descent led to the foot of Gambles Lane. This steep hill has been so frequently mentioned that it needs no description, but its snow-covered surface gave an air of novelty to the ascent and caused an unusual amount of wheel slip. Particularly good climbs were made by W. B. Gibb (3½ Douglas), E. A. Barnett (2¾ Francis-Barnett), M. Bishop and S. Gill (2½ Sun-Vitesses), and F. G. Morgan (2¾ Cotton).

### Up Birdlip in the Snow.

There was a third check at Cheltenham, and passing out of the town Leckhamton Hill was ascended; then came the first taste of deep snow. Two miles from Birdlip summit the road was blocked with a drift reputed to be four feet deep. This necessitated a descent to the foot of the well-known hill and a subsequent ascent.

The climb presented no difficulty to solo riders until the last few yards, where deep snow covered a frozen surface and rider after rider fell; many passenger vehicles had trouble with wheel slip at the same point.

A sharp right-hand turn led along the top of the ridge of hills, where constant deep drifts of virgin snow pulled up the early arrivals. J. A. Newman led on a 3½h.p. Douglas, and after forcing his way through a number of deep snow banks he collapsed for a time and others took up the duties as snow-plough. Constant changes in leadership were necessary to relieve the pioneers, but it was no uncom-

**Extraordinary Trial Conditions.—**

mon event to count thirty competitors held up while the leaders were pushed and carried clear of the deepest snow. This kind of progress continued for mile after mile, and it was seldom that one could get into top gear for 100 yards at a time. Falls were frequent, but after a while one became accustomed to the conditions and the average pace improved a little. Chances were taken, of course, and often they came off; when they did not the rider did.

**Clean Climbing Almost Impossible.**

Knapp Hill is not easy at the best of times, but with a snow-covered surface it became a terror. The long, steep climb alone is sufficient to account for weaklings, but the right-hand hairpin near the top defeated the majority. At this point we saw very few really clean climbs, but the following ascents were noticeable :—W. Brandish (4½ Humber), R. Grindlay (4½ Humber), A. E. Rollason (3½ Ariel), M. Bishop (2¼ Sun-Vitesse), who was baulked), H. Stretton-Ward (3½ Triumph), H. Greaves (3 Beardmore), A. R. Edwards (2¼ Levis), E. J. Henson (2½ Allon), R. W. Duke (3½ Trimmph), W. H. Bashall (6 Martinsyde sc.), F. T. Sibley (3½ Rudge sc.), L. Clulee (2½ Allon sc.), F. W. Giles (7 A.J.S. sc.), A. Watson (4¼ Sunbeam sc.), G. H. Goodall and H. F. S. Morgan (8 Morgans), and J. W. Meredith (8 T.B.). There was a good deal of baulking at this point and many failed and ran back into the hedge. Near this point Mrs. D. V. Cocks, who sportingly attempted the course on a brand new 3 h.p. Beardmore and sidecar, disappeared from the trial with clutch trouble. P. Pehrson (4 Dunelt sc.), who looked like making a clean climb, broke a belt just as he was over the worst part. W. F. Scott (3⅜ Scott sc.) made a very fine attempt and only just failed. The following made good attempts and only steadied slightly :—V. C. Anstice, F. G. Ball, and P. Phillips (Douglases), G. Tucker, F. Adam, and H. Collins (4 and 3½ Nortons), A. Paley and B. Butcher (3½ Sunbeams), H. Greathead (3 Ivy), and E. Cope (Raleigh).

Further on, the roads, which at first showed signs of improvement, got worse and worse, and both motor cycles and cars were constantly held up, lifted, and

A. G. Cocks (4¼ Beardmore-Precision sidecar) negotiating a tricky section near Brimscombe.

Even Birdlip caused several to foot-slog, although the lower reaches (shown) were climbed with ease.

Fortunately the snow on Knapp Hill did not make it quite impossible; F. T. Sibley (3½ Rudge sidecar) is shown making good progress.

**Extraordinary Trial Conditions.**—carried. A certain well-known racing rider showed a Napoleonic genius for circumventing obstacles which appeared to be insuperable. Where the road was impassable, he made a detour across the fields, and other competitors followed his lead.

Most of the solo riders short circuited the route near Old Sudbury and took the lower road to Bristol. This was a wise move, since the passenger machines and a few solo men who attempted to follow the route were finally held up after Herculean labours short of Warmley by a wall of snow. These unfortunates were forced to retrace their steps and follow the lead of the early solo motor cycles.

Thereafter the warm sun and traffic made the road rideable, and ten miles before Bristol a snow plough had done good work.

### Any Way to the Finish.

The rest of the journey became a "go as you please" event, and only one rider, G. Tucker (4 Norton), attempted Rectory Lane, the last bad hill before the "lunch" check. Indeed, some ten or a dozen riders remained at Kingswood, and rumour had it that they were enjoying hot baths as the remaining heroes passed on, determined to reach the half-way mark at all costs.

The first man was due at Clevedon pier at 12.48, but actually the first batch were timed in at 3.15, and consisted of J. Whalley (2¾ Massey-Arran), J. Roberts (2¼ New Imperial), A. Bennett and G. Dance (3½ Sunbeams), B. Butcher (3½ Sunbeam), and W. Moore (3¾ Scott). E. A. Barnett (2¾ Francis-Barnett) was officially timed in some minutes later, but appeared to arrive with this batch.

The following officially finished the course :—

COMPETITORS WHO QUALIFY FOR THE SPECIAL "ARCTIC" MEDAL.

*Arrived Clevedon.*

J. A. Newman (3½ o.h.v. Douglas).
V. C. Anstice (3½ o.h.v. Douglas).
A. Colcombe (4 Indian).
J. Whalley (2¾ Massey-Arran).
B. Kershaw (2¼ New Imperial).
J. N. Roberts (2¼ New Imperial).
E. W. Spencer (3½ o.h.v. Douglas).
W. J. L. Paynter (3½ Norton).
A. Bennett (3½ T.T. Sunbeam).
G. Dance (3½ T.T. Sunbeam).
W. B. Gibb (3½ o.h.v. Douglas).
F. G. Ball (2¾ Douglas).
P. B. Phillips (2¾ Douglas).
C. G. Pullin (2¾ Douglas).
S. M. Greening (2¾ Coventry Eagle).
E. A. Barnett (2¾ Francis-Barnett).
K. J. Davis (3½ Sunbeam).
A. E. Rollason (3½ Ariel).
W. T. Woodcock (3½ Ariel).
L. Newey (3½ Ariel).
W. H. D. Drew (3½ Norton).
M. Bishop (2¼ Sun-Vitesse).
F. J. Johnson (2¼ Sun-Vitesse)
B. Butcher (3½ Sunbeam).
A. W. Thrush (3½ Sunbeam).
F. J. Adam (3½ Norton).
C. W. Ramstedt (2¾ Cotton).
F. Ferriday (2¾ Omega).
H. Greaves (3 Beardmore).
A. E. Paley (3½ Sunbeam).
F. W. Hughes (2¾ Rex-Acme).
N. W. Smith (4 Triumph).
W. Moore (3¾ Scott).
R. Sadler (3 Ivy).
H. Gibson (2¾ Raleigh).
H. J. Greathead (3 Ivy).
W. H. Hadfield (2¾ Raleigh).
C. F. Nott (2¾ Raleigh).
A. R. Edwards (2¼ Levis).
E. F. Cope (5-6 Raleigh).
R. C. Cooper (2½ Alldays Allon).
C. W. J. Bushy (2¾ New Imperial).
R. C. Bennett (2¼ Federation).
L. R. J. Blick (7-9 Harley-Davidson sc.).
H. S. Perrey (6 B.S.A. sc.).
B. Bladder (8 New Imperial sc.).
T. H. Weaver (2¾ Sirrah sc.).
P. T. Sibley (3½ Rudge sc.).
W. L. Danskin (3½ Rudge sc.).
A. G. Cocks (4¼ Beardmore sc.).
F. W. Giles (7 A.J.S. sc.).
F. W. Becker (5-7 McKechnie).
H. O. Walters (8 Ariel sc.).
W. F. Scott (3¾ Scott sc.).
G. H. Goodhall (8 Morgan).
J. W. Meredith (8 T.B.).
W. A. Carr (8 Morgan)

*Arrived Tetbury.*

J. T. Bashall (6 Martinsyde sc.).
W. H. Bashall (6 Martinsyde sc.).
E. H. Gifford (6 Martinsyde sc.).
B. L. Bird (6 B.S.A. sc.).
J. H. Walker (6 B.S.A. sc.).
P. Pehrson (4 Dunelt sc.).
N. Hall (2¾ O.K. Junior sc.).
L. E. Clulee (2½ Alldays Allon sc.).
H. G. Uzzell (8 New Imperial sc.).
V. H. Smith (3½ Norton).
A. Watson (4¼ Sunbeam).

---

### ASTERISKS.

Seven Douglases started and seven finished. Three of these were standard 2¾ h.p. three-speeds. All the Raleighs finished.

* * *

The only lightweight sidecar to reach Clevedon was T. H. Weaver's 2¾ h.p. Sirrah.

* * *

Not a few machines showed signs of their hard work and many falls. On the whole, however, snow is soft to fall on, though a motor cycle would be an uncomfortable companion even on a feather mattress.

* * *

After the finishing check closed we noticed B. L. Bird (6 B.S.A. sc.), T. H. Walker (6 B.S.A.), H. G. Uzzell (8 New Imperial sc.), and A. Watson (4¼ Sunbeam sc.) nearing Clevedon.

* * *

Even in the Scott trial we have never witnessed, nor experienced, so many falls per mile, yet the greater the difficulties the more the riders became obsessed with the idea of reaching Clevedon.

* * *

Of 127 entrants, 43 solo men reached Clevedon and 39 sidecars, three-wheelers, and cars reached either Tetbury or Clevedon, thus qualifying for medals.

Left: Other competitors lend a hand in lifting J. T. Bashall's Martinsyde outfit over a snow drift. Right: Solo riders following the leader who has forced his way ahead. Each man took his turn as pioneer.

# AN AMATEUR ROAD RACE.

## Manx M.C.C. Proposes to Organise a Two-Lap Race for Private Owners over the I.O.M. T.T. Course. "The Motor Cycle" to Present a Trophy.

*The proposition of the Manx M.C.C. to organise an amateur road race was sympathetically received and fully discussed by the A.C.U. Competitions Committee. Permission was granted for the Club to apply for a permit, and the Club was instructed that full details as to the proposed race must be furnished at the same time, when the matter would be further considered at the Competitions Sub-committee's next meeting. —A.C.U. communiqué.*

### For Amateur Speedmen Only.

KEEN private owners have long desired a road race for themselves, and it is with much pleasure that we announce the likelihood of a wish so often expressed in these columns becoming an accomplished fact.

Provided that A.C.U. permission is granted, and that sufficient support is received, the I.O.M. Club will run a two-lap race for amateurs over the famous T.T. course, on the Wednesday between the junior and senior events proper—*i.e.*, May 31st. That this should be done was suggested in *The Motor Cycle* of February 23rd (page 231), where also were given proposed regulations to eliminate the trade rider, the "shamateur," and the specially factory-tuned machine. These suggestions, which are recapitulated below, will form the basis of the rules now being drafted to govern the new amateur race.

It is unfortunate that longer notice of the event could not have been given, but we feel confident the sporting private rider will recognise the necessity of making this year's race a success in order to ensure that the fixture becomes an annual.

Whether three capacity classes will be included is uncertain, and it may be that, for the present, the one limit of 500 c.c. will be made to suffice.

Therefore owners of o.h.v. Douglases, Rudges, Scotts, Sunbeams, o.h.v. Triumphs, and such-like machines should at once get into communication with the Secretary of the Manx M.C.C. (Mr. H. Rogers), Douglas, I.O.M., in order that some idea may be formed of the support which the event will receive. It is anticipated that the entry fee will be £10, and, after expenses have been paid, 50 per cent. of any surplus will be returned to the entrants.

The proprietors of *The Motor Cycle* will present a silver cup to the winner, but whether this will be a perpetual trophy or one to be won outright has not yet been decided.

It therefore only remains for the enthusiastic amateur rider to support the scheme *at once*. If he owns a reliable machine which will reach 60 m.p.h. against the clock, neither make nor date matter much; he will have a chance of winning what should become the most thoroughly sporting event of the motor cycle year. For, as was pointed out in a previous article, the best rider who makes a non-stop run should win, not the man on the super-tuned machine.

The general regulations will probably be on the lines summarised below (a *précis* of the article of February 23rd):

Entry is prohibited to those who are engaged in the manufacture, sale, exhibition or exploitation of motor-cycling goods or accessories.

No entrant shall be eligible who accepts or has accepted any monetary benefit or consideration or the equivalent from a person or firm trading in the manufactnre or sale of motor cycles or motor cycle components or accessories.

No entrant shall be eligible who has previously gained a gold medal in any Tourist Trophy race, or who is already entered for this year's Tourist Trophy race. (N.B.—This rule may seem hard to many, but it must be remembered that the event is intended to attract the rider who has previously stood out on the quite reasonable score that the odds against him were too great. Of course any private owner who rides in this year's T.T. race proper and fails to gain a gold medal would be eligible for next year's amateur event.)

Each machine must be wholly the entrant's *bona fide* property, and must have been in the owner's possession for at least three months prior to the announcemeat of the race. (N.B.—This rule may be modified this year on account of the short notice of the event); it must be, or have been, a listed model to catalogue specification, and must have been offered to the public in its present form for at least six months prior to the date of the race.

Each entrant must sign a declaration that these particulars are complied with and that he has received no help or assistance from any manufacturer.

### To Find the Best Amateur Rider.

Further regulations will probably provide for supervision of the machines during the practising period, including replacements and spares.

The main principle upon which the rules will be based is that the race is intended to find the best amateur rider; all endeavours will be made, therefore, to ensure that every entrant shall have an equal chance. If factory assistance of any description is rendered impossible this should not be difficult.

# RATIONAL RATING OF ENGINES.

## Suggested Official Ruling Based on Cylinder Capacity. 100 c.c. to the Horse Power.

IT will be remembered that at the Bournemouth general committee meeting of the A.C.U., held at the end of last year, a special sub-committee was appointed to go into the question of horse-power rating, the A.C.U. being well aware that the present rating of motor cycle engines was misleading and absurd. That this is so has long been the opinion of *The Motor Cycle*, which has dealt with the matter not only before the war but recently, and in the issue of December 15th published an article entitled "Misleading Horse-power Ratings," which went very closely into the matter.

The sub-committee consisted of Prof. A. M. Low, in the chair, Major S. R. Axford, Messrs. E. M. P. Boileau, E. B. Ware, and S. L. Bailey. The only absentee at the recent meeting was Mr. S. L. Bailey. After some discussion it was finally agreed "that for the purpose of the classification of motor cycles according to their power the A.C.U. shall in future describe them by their cubic capacity expressed in cubic centimetres divided by 100, such rating to be known as Horse-power A.C.U. Rating. For instance, an engine with 499 c.c. capacity would be described as 4.99 h.p. A.C.U. rating; a 980 c.c. engine as 9.8 h.p. A.C.U. rating, etc., etc."

This new rating, if universally adopted, will upset a good many of the anomalies to which our article of December 15th referred: for example, it is interesting to note that the 350 c.c. Beardmore-Precision will be rated at 3.5 h.p., or, in other words, 3½ h.p., exactly what it is now called, while the Barr and Stroud engine of the same capacity, now rated at 3 h.p. by its manufacturers, will become 3½ h.p.; the 996 c.c. M.A.G. engine on the 7 h.p. Matchless will agree with the 8 h.p. J.A.P. engine of 976 c.c., the engines being rated at 9.96 and 9.76 h.p. respectively. Again, the absurdity of calling both 293 c.c. and 350 c.c. engines 2¾h.p. will be abandoned, the 293 c.c. engine being rated at 2.93 h.p. and the 350 c.c. at 3.5 h.p.

The recommendations of the sub-committee, before being definitely put into practice, are, we understand, first of all to be submitted to the Manufacturers' Union, and must finally be passed by the general committee of the A.C.U.

# A TRIAL THROUGH BELGIUM AND FRANCE.

IT is not often that a competition passes through more than one country, but an ambitious trial is to be organised by the Royal Moto-Club of Liége from May 17th to 26th, under F.I.C.M. rules, starting in Belgium and traversing practically the whole length of France. This competition is open to all types of motor cycles, is to be an international one, and open to all countries and clubs attached to the F.I.C.M.

It will be run under touring conditions, and the journey will be accomplished in three days. The first stage is from Liége to Dijon, 306¼ miles, the second from Dijon to Digne, 288⅛ miles, and the third from Digne to Nice, 95 miles. There will be one day's rest at Nice, and the competitors will return in three days to Liége by the same route. The total length of the double journey will be 1,378¾ miles. Information concerning this event can be obtained from the secretary, The A.C.U., 83, Pall Mall, London, S.W.1.

# A SPORTING TRIAL IN THE SNOW.

## Surbiton Club's Successful Event for the Mellano Cup.

TO obtain an entry of 55 for a purely club one-day event argues well for the enthusiasm and sporting spirit of the Surbiton Motor Club members. True, the prize at stake was the Mellano Cup, a trophy well worth the winning; nevertheless, the large entry is indicative that club trials are exceedingly popular

In fine but very cold weather the first man was started from the Talbot Hotel, Ripley, to Guildford; here Bright Street Hill, a favourite test hill with Surrey clubs, was climbed

A few miles of main road work brought the competitors to a five miles colonial section, very rough, muddy, and made more severe by an overnight fall of snow. Consequently to the first men the course marked by blue dye was somewhat difficult to find. This occasioned several deviations from the route.

On most colonial sections a hard riding track can usually be found somewhere, but with snow totally obscuring the road surface one can imagine it was somewhat of a lottery as to where one would land.

The gyrations of some of the competitors were distinctly amusing, and falls were numerous, thereby depriving the unfortunates of any chance of lifting the cup. For good driving on this section particular mention should be made of F. M. Gwyne on a 1¾ h.p. Young Attachment; to the ordinary machine it was mostly middle gear work, however, Gwyne, with much lusty big work on the pedals, got through.

Following the colonial section was the hill of the day, Glenlea; this, again, was only difficult by reason of the snow; those that failed were unlucky; under normal conditions it would present no difficulty.

In front of B. S. Allen's 8 h.p. Matchless sidecar will be seen the skid-marks left by the luckless solo men.

Excellent climbs were made by W. C. Hemy (2¾ A.J.S.), F. E. Salter (2¾ Zenith), B. S. Allen (8 Matchless sc.), and A. E. Bridgman (7 Indian sc.). The unfortunates were W. R. Preston (Sunbeam), A. E. Leeding (James), C. E. Taylor (3 Vasco), A. S. Richardson (6 Trump), V. H. C. Gayford (3½ Zenith-Bradshaw), and C. H. O. Allwork (6 Martinsyde sc.).

From Glenlea the route lay through Haslemere, Milford, Godalming, Shalford, Guildford, all main road work, and back to Ripley for lunch.

Numbers were considerably depleted for the afternoon run, as most of those who recorded stops decided not to restart.

White Downs was considered to be the tit-bit of the afternoon, the Ford car which arrowed the course the previous afternoon having to negotiate it on its reverse gear. However, the strong winds of the morning had practically dried the chalky surface, and as wheel slip and not gradient was its chief terror, all difficulty was removed, everybody sailing up with plenty of power in hand.

In all 30 competitors checked in at the finish, a goodly number, considering the severity of the morning section. The committee are to be commended for working out the results that evening; it adds to the enjoyment of an event for competitors to know their award before leaving.

RESULTS.

Mellano Cup and Gold Medal, A. E. Bridgman (7 Indian sc.); 2nd Gold Medal, F. E. Salter (2¾ Zenith); 3rd Gold Medal, L. B. Clark (3½ Zenith-Bradshaw). Silver Medals: A. A. Symes (6 Martinsyde), B. S. Allen (8 Matchless sc.), H. E. K. Sawtell (10 Morgan). Bronze Medals: A. O. Gruzelier (3½ Zenith-Bradshaw), S. R. Axford (3½ Zenith-Bradshaw sc.), F. A. McNab (6 Trump-Jap), G. E. Cuffe (5-6 Metro-Tyler), W. H. Wells (6 A.J.S. sc.), C. H. Mocatta (2¾ A.J.S.), Mrs. Hardee (8 Matchless sc.), F. W. Carryer (4 Hawker), R. Charlesworth (3½ Zenith-Bradshaw), J. L. Boxall (3½ Sunbeam), and A. E. Leeding (3½ James).

# PROGRESS OF THE TOUR DE FRANCE.

## Thirty-two Motor Cycles out of Thirty-eight Starters Complete a Third of the 2,300 Miles Course.

WHEN one-third of the *Tour de France* trials had been run, and the competitors were at Bordeaux, six of the 38 motor cycles had been eliminated and seven others had been penalised for either late arrival or the breakage of sealed parts. L. Psalty (2¼ Levis) lost ten points on the run from Caen to Nantes, while Mineur, on one of the two-stroke 2¾ h.p. Gillets, collided with a cycle car, the damage being such that he had to withdraw. Renier, on another Gillet, lost ten points on the first stage from Paris to Caen, and Dyon, on the water-cooled Viratelle, was penalised five points. Rasser, who was riding one of the two-stroke machines of his own make, lost points on each of the first three stages.

The 500 c.c. solo class made a very fine showing, the six machines, comprising a Blériot, an A.B.C., the two Gnome and Rhône, a Sunbeam, and a Rover, covering the 591 miles without the loss of a single mark.

Among the 750 c.c. solo machines, the first to drop out was Lt.-Col. McKechnie's spring frame motor machine. For some unknown reason the rider failed to reach Rouen in time, and abandoning the trials, turned round and was in Paris the same evening. J. Psalty (4 Harley-Davidson), suffered a bad fall on the road to Nantes, and had to be taken to hospital to be operated on. Another Harley-Davidson, ridden by Smeets, dropped out on this stage; De Neufville's Triumph suffered 20 marks loss, and Arnaud, on an Indian, lost 21 points on the first day

In the sidecar section Dubost on his 350 c.c. D.F.R. sidecar, was the only one to lose point but he was still running at the end of the Bordeaux stage. Sykes (3½ Sunbeam sc.), and Leroux (4¼ B.S.A. sc.), the only two in the 600 c.c. class, had to retire before reaching Rennes. The sidecar attachment broke on the Sunbeam, and being irreparable, Sykes continued solo until notified that this was contrary to the rules. The six men in the 1,000 c.c. sidecar class all covered the first three stages without the loss of points. These machines comprised three Harley-Davidsons, a Blériot, a Viratelle, and a Sunbeam.

# ENTRIES FOR THE T.T. RACES.

## 135 Entries Received at Ordinary Fees. Senior Event Attracts 66. Junior 34 and Lightweights 29. 6 Entries Race Not Specified.

SENIOR RACE, THURSDAY, JUNE 1ST.

| | Entered by makers. | Other entries. | Total. |
|---|---|---|---|
| A.J.S. ... | 2 | 1 | 3 |
| Triumph ... | 4 | 0 | 4 |
| Douglas ... | 0 | 4 | 4 |
| Sunbeam ... | 5 | 7 | 12 |
| Rudge ... | 7 | 1 | 8 |
| Norton ... | 5 | 9 | 14 |
| Indian ... | 4 | 0 | 4 |
| Scott ... | 3 | 2 | 5 |
| N.U.T. ... | 1 | 0 | 1 |
| New Hudson ... | 2 | 0 | 2 |
| New Imperial ... | 1 | 0 | 1 |
| Sheffield-Henderson ... | 2 | 0 | 2 |
| Beardmore ... | 3 | 0 | 3 |
| Massey-Arran ... | 1 | 0 | 1 |
| Duzmo ... | 0 | 1 | 1 |
| Not specified ... | 0 | 1 | 1 |
| Totals | 40 | 26 | 66 |

JUNIOR RACE, TUESDAY, MAY 30TH

| | Entered by makers. | Other entries. | Total. |
|---|---|---|---|
| A.J.S. ... | 7 | 0 | 7 |
| Edmund ... | 3 | 0 | 3 |
| Dot ... ... | 2 | 0 | 2 |
| Ivy ... ... | 1 | 3 | 4 |
| Sheffield-Henderson ... | 2 | 0 | 2 |
| New Scale ... | 2 | 2 | 4 |
| New Comet ... | 1 | 0 | 1 |
| Douglas ... | 0 | 2 | 2 |
| Blackburne ... | 1 | 0 | 1 |
| Raleigh ... | 0 | 1 | 1 |
| Massey-Arran ... | 1 | 1 | 2 |
| Cotton ... | 2 | 1 | 3 |
| H.B. ... ... | 1 | 0 | 1 |
| Coulson ... | 1 | 0 | 1 |
| Totals | 24 | 10 | 34 |

250 c.c. LIGHTWEIGHT RACE, TUESDAY, MAY 30TH.

| | Entered by makers. | Other entries. | Total. |
|---|---|---|---|
| Levis ... | 3 | 1 | 4 |
| Velocette ... | 3 | 0 | 3 |
| New Imperial ... | 0 | 3 | 3 |
| Invicta ... | 0 | 1 | 1 |
| New Hudson ... | 1 | 0 | 1 |
| Hobart ... | 0 | 1 | 1 |
| Diamond ... | 4 | 0 | 4 |
| Sheffield-Henderson ... | 2 | 0 | 2 |
| Francis-Barnett ... | 0 | 1 | 1 |
| Massey-Arran ... | 0 | 1 | 1 |
| Sun-Vitesse ... | 3 | 0 | 3 |
| O.K. ... ... | 3 | 0 | 3 |
| Coulson ... | 2 | 0 | 2 |
| Totals | 21 | 8 | 29 |

OTHER ENTRIES. TOTAL.
RACES NOT SPECIFIED.

| | |
|---|---|
| New Imperial ... ... ... | 5 |
| Reg. Lucas ... ... ... | 1 |
| Total for three races ... | 135 |

### Notes.

Last year's senior winner on a 2¾ h.p. A.J.S., H. R. Davies, will defend his title on a similar machine.

Major Halford, holder of the 500 c.c. hour record, will ride a Triumph.

W. Brandish, who last year rode a Rover in good style, will this year be mounted on a Triumph, as will H. R. Harveyson.

F. G. Edmond last year made the fastest lap. He is again entered on a Triumph, and is one of the favourites.

T. C. de la Hay, Geo. Dance, A. Bennett, C. Greenwood, and Reg. Brown are the Sunbeam riders nominated by the makers.

J. A. Watson-Bourne will ride a Rudge with Danskin and Sibley. Altogether there are seven Rudges entered.

A. Alexander has entered a 3½ h.p. Douglas.

Victor Horsman will ride a Norton in the senior and a Raleigh in the junior race.

D. S. Alexander is to be one of the Indian team.

H. Le Vack is down to ride a New Imperial in both the senior and the junior events.

J. Whalley will again be mounted on a Massey-Arran.

For the first time since pre-war days New Hudsons will figure in the senior race.

Three 3½ h.p. Beardmore-Precisions are entered.

Geo. Grinton is one of the A.J.S. seven in the junior race.

Judd and Denley will again ride Velocettes in the lightweight class.

F. W. Applebee, P. Pike, and G. S. Davison constitute the Levis trade entry.

Dr. Hopwood has again entered himself to ride a Levis.

# EXTENDING THE ORGANISATION OF MOTOR CYCLISTS.

## The A.C.U. Offers Prizes for Original Ideas.

THERE are still a great number of motor cyclists who do not realise the desirability of joining an organ-ation.

Frequently there are brought to our nowledge cases of riders who, through fault of their own, or through, per-aps, a little thoughtlessness or careless-ess, are brought into contact with the w, and are put to heavy and unneces-ry expense. Take the case of the motor clist on holiday on the South Coast ho hails from the Midlands. For all he nows his registration numbers are of the rrect size and are accurately spaced, t perhaps while he is in an hotel a eddlesome constable measures the letters d figures and finds they are 1-16in. out. he motor cyclist is then warned, and ally receives a summons at home to pro-ed down to some South Coast bench to fend his case. Membership of an or-nisation would provide for his being represented and defended free of charge. Again, there is the importance of motor cyclists combining to fight offensive legislation. It is only by sheer weight of numbers that objectionable legal enactments can be combated.

### To Awaken Fresh Interest.

Now the A.C.U., which is in its twentieth year, has laid itself out to do all it can for motor cyclists, but its membership is not yet large enough. Its committee has therefore decided to run a competition which will help to bring home to every individual motor cyclist the necessity of joining the Union, both for his own personal profit and in order to augment the great national body that all must recognise as a necessity.

To the motor cyclist who suggests to the Secretary of the A.C.U. the best method of inducing 250,000 motor cyclists to enrol in the A.C.U. by September 30th will be awarded a prize of £100; the second prize will be £50, and the third prize £10, while there will be twenty consolation prizes of £1 each.

The entrant must express his scheme in 500 words, giving the method to be employed in operating it. These suggestions must be accompanied by 1s., so as to rule out other than serious competitors, and must reach the secretary not later than May 15th. The judges will be the members of the committee of the A.C.U., assisted by Commander F. P. Armstrong, R.N.V.R., acting-secretary of the R.A.C., and others. The committee reserves the right to use or adopt any scheme or part thereof, whether or not a prize has been awarded, but in the event of such use a special honorarium will be granted to any competitor who is not actually a prize-winner. The results of the competition will be announced on or before July 15th this year.

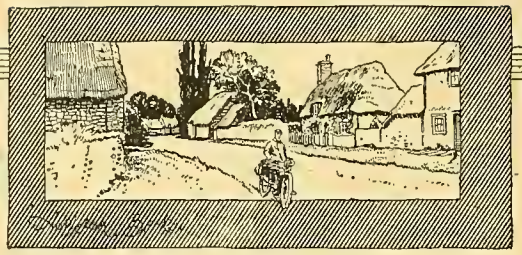
# ROUTE OF THE SCOTTISH TRIALS.

MUCH new ground, for English competitors anyhow, is being broken in the route of the Scottish Six ays Trials, which start on May 1st. The course for five of the six days has w been approved as follows:

1. Edinburgh, Stirling, Crieff, Kenmore, Dalnacardoch, Pitlochry, Kenmore, Perth Cross. 173¾ miles.
2. Perth, Forfar, Laurencekirk, Banchory, Ballater, Corgarff, Grantown. 142⅞ miles.
3. Grantown, Farr House, Inverness, Drummardrochit, Fort Augustus, Inverfarigaig, Kyllachy, Grantown. 139¼ miles.
4. Grantown, Braemar, Strathdon Road End, Calrach Top, Oyne, Aberdeen. 150 miles.
5. Aberdeen, Forfar, Perth, Dollar, Falkirk, Edinburgh (West Mains Road). 162 miles.

The remaining day will be an out-and-home run from Edinburgh, details of which are not yet available.

# CURRENT CHAT



## Special Features.

THE CHEAPEST TRANSPORT FOR TWO.

ILLUSTRATED BUYERS' GUIDE.

PASSENGERS—FAIR AND OTHERWISE.

COMPLEMENTARY PASTIMES.

## Times to Light Lamps.

| | | | |
|---|---|---|---|
| April | 6th | .. .. | 8.38 p.m. |
| „ | 8th | .. .. | 8.41 „ |
| „ | 10th | .. .. | 8.44 „ |
| „ | 12th | .. .. | 8.48 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Repairing the T.T. Course.

Sixty men are now engaged in putting the Isle of Man course in order.

### 40 Years' Service.

Mr. H. J. Spooner, C.E., for 40 years head of the Engineering School at the Polytechnic, is retiring. A presentation is to be made by his many admirers.

### Governor's Bridge Improvements Delay.

The improvement to which we have recently referred in the dangerous Governor's Bridge will, we hear, not be ready in time for the 1922 T.T. races.

### O.h.v. Nortons to be Marketed.

It will be pleasing news for Norton enthusiasts to hear that Judd's record-breaking o.h.v. machine is the experimental model of a design which will be added to the standard range as soon as it is fit for production.

### London-Land's End Run at Easter.

A magnificent entry has been received for the London-Land's End run, totalling 322 competitors in all, composed of 122 motor bicycles, 98 sidecar outfits, 9 cycle cars, and 93 cars. A full list of the motor cycle entries will be published in next week's issue of *The Motor Cycle*, together with a map of the course. Details of the car entries will be found in *The Autocar*.

### A Badger Badgered.

Some excitement was recently caused in the vicinity of Regent's Park by the escape of a wild badger from the London Zoological Gardens. After remaining at large for some time, during which period it was seen by various policemen and chased by a taxicab, the whereabouts of the animal was betrayed by the yowling of cats on the licensed premises of the "Yorkshire Stingo" Police investigations resulted in the animal being cornered until keepers arrived from the Zoo.

This badger was presented to the Society by our contributor H. Mortimer Batten, in whose Scott Sociable it was conveyed from its native quarters to its home in Yorkshire, and subsequently to the railway station for transportation to the Zoo. The badger made no attempt to escape while in the Scott Sociable, so evidently he appreciated good springing! It is significant that its final round up should be at the "Yorkshire Stingo"!

### Licences in London.

In future all communications to the London County Council relating to taxation licences should be addressed: The Chief Officer, Public Control Department (Local Taxation Licences), The New County Hall, London, S.E.1.

### Road Books and Maps.

Now is the time to overhaul road books and maps, and in this connection *The Motor Cycle* series is bound to be of interest. *The Motor Cycle* Route Book (2s. 6d.) and the set of maps which our publishers supply in waterproof case (4s. 6d. and 5s. 6d.) will no doubt be found in many sidecar pockets this year, for their popularity among riders continues to increase.

### Victory Trial Hill Ruled Out.

The many complaints made by competitors in the Victory Cup trial with regard to marks lost on Sandy Lane, has resulted in the Trial Committee of the Birmingham M.C.C. deciding that the penalty of four marks for failure on the hill be cancelled, and that a bonus of two marks be awarded to all who climbed the hill. The decision was made before the committee analysed the checking sheets relating to this particular hill.

### Spring!

Spring and snow! Competitors in last Saturday's trials found conditions more winterly than in any London-Exeter run.

### Brooklands Racing Restarted.

Saturday next will see the first motor cycle meeting of 1922 at Brooklands, racing starting at 2 p.m. Six handicaps, including one for private owners, and three scratch races, constitute the programme.

### French Attempt on the Flying Kilometre.

As soon as it was known in France that Judd, the Norton rider, had beaten the kilometre record last month, Péan, the famous Peugeot trade exponent, expressed his intention of coming over to England to try to beat it on Brooklands track. The news had not then reached him that the record had been further beaten by Pullin on the Douglas. However, Péan has postponed his attempt until the end of this month owing to the inclemency of the weather. It will be most interesting to see how the Peugeot will perform, as it seems that Péan has a great deal of speed to add to his machine before attempting to beat the magnificent British records already standing.

AT THE BOAT RACE. Motor cyclists found that their mounts made excellent grandstands from which to view last Saturday's event on the river.

### New President on the A.C.F.

The president of the Automobile Club of France, the Baron de Zuylen, has occupied the post of office since its foundation in 1895, but he has now retired for reasons of ill-health. The new president is Baron Robert de Voguë.

### No Privilege for the Pedestrian.

In the neighbourhood of the Saint-Lazare station (Paris) a foot passenger was summoned by the police and fined a franc for persisting in remaining in the roadway after the driver of a motor vehicle had blown his horn, and for becoming a hindrance to the rest of the traffic.

### International Six Days' Trials.

July 16th is the closing date for the entry of national teams. Machines entered for these teams must be manufactured in the country they represent. A national team must consist of three solo machines and one sidecar outfit or cycle car. One of the motor bicycles must belong to either Class A, B or C, while the others may be in any class. In the case of two national teams qualifying for the trophy it will be awarded to the team with the smallest total cylinder capacity.

### Amalgamation of Newcastle Club.

Interest is being aroused in Tyneside motoring circles by an effort that is being made towards amalgamation by two Newcastle organisations, the Northern and the Newcastle Motor Clubs. According to reports, there is a great probability, even should no actual amalgamation take place, of a working arrangement being arrived at that will suit everybody.

Some months ago a similar scheme including the Newcastle and District Motor Club came to nothing. On that occasion Mr. H. Wilkinson, the local representative of the R.A.C., had a great deal to do with bringing the clubs together.

### More Motor Cycle Police.

The motor cycle penetrates into the farthest corners of the earth, where its utility is appreciated as much as at home. Fourteen patrol men of the Honolulu police are now to be mounted on motor cycles.

The United States of America was the pioneer country of motor cycle police. They were first adopted by the City of Chicago in 1910; there were 25 motor cycle police in 1913, and now 50 new Hendersons have been supplied to the force. This is irrespective of others allotted to various parks in the city.

### The Broken Promise.

One of the conditions of the A.C.U. consenting to run the T.T. races in the Isle of Man this year was that an electric crane should be erected on Douglas quay. Now the I.O.M. people say that such a crane cannot be erected; a story we have heard before, but where there's a will . . . . !

### Commercial Instinct!

It cannot be said that the average young motor cyclist has a commercial mind, but the exception proves the rule, and the following small advertisement makes interesting reading:—"Experienced motor cyclist in London, N.W. district, offers sporting ladies or gentlemen desiring exhilarating country rides the comfortable pillion seat on his special solo motor cycle; 6d. per mile; distance no object; passenger weight limit 9 stones."

### Motor Cycle Locks.

Frequent motor cycle thefts have compelled owners to purchase locks and chains for the better security of their machines. One extra cautious rider recently chained his machine to some railings in London. The lock was of the snap-on type, and when he came to take the machine away he found he had forgotten the key! He lived miles away, and by the time he had returned home and got back to his machine it was lighting-up time. He then discovered that his lamp set was out of order.

### High Tension Overalls.

A correspondent complains of getting shocks through his overalls when they touch the plug and are soaked with water. He is evidently not one of the pioneers who rode the 1903 Ormonde. This machine carried the engine behind the saddle tube. In those days pedal assistance on hills was frequently required, and when indulged in considerable skill had to be exercised so as not to suffer from a shock through the back of the leg, which was as painful as disconcerting when violent pedalling was necessitated.


## EASTER HOLIDAYS.

### Publishers' Announcement.

*Readers who desire to insert Miscellaneous Advertisements in "The Motor Cycle" dated April 20th should note that instructions must be in our hands by first post Wednesday, April 12th.*

*ILIFFE & SONS LTD.*


### Evening Runs.

Immediately daylight saving came into force there was a marked increase of motor cycles on the road in the evenings.

### Swiss Passports.

Visitors from Great Britain to Switzerland must have passports, but the necessity for a visa has been discontinued, notwithstanding the fact that Swiss visitors to England must undergo this formality.

### State of the T.T. Course.

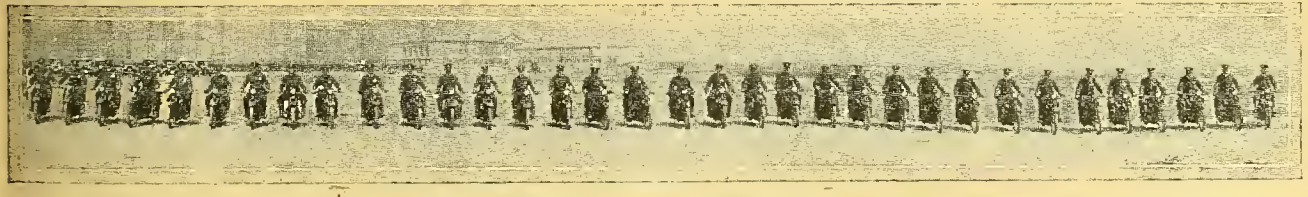
A report has just been received to the effect that the T.T. course is in an appalling condition in parts, the mountain road being badly cut up by the haulage of loads of stones by means of steam wagons. The matter has been brought to the notice of the Highway Board, who are giving it their immediate attention, and we understand a large staff has been engaged to put the roads into a thorough state of repair.

### Italian Road Racing.

Eight laps of 17.4 kilometres comprised the first Italian road race in 1922, and this was won by Mario Cavedini (3½ Norton), who covered the total distance of 139.200 km. (86 miles approx.) in 1h. 33m. 10⅗s., at an average speed of 89.637 k.p.h. (55½ m.p.h.). The second man was Mario Nardelli, also on a Norton, in 1h. 40m. 12⅕s., average speed 83,350 k.p.h. (51½ m.p.h.). Piero Ghersi (3½ Borgo) was third, time, 1h. 42m. 31s., speed 81.469 k.p.h. (50½ m.p.h.). The remainder of the competitors were mounted on Freras, Motosacoches, and Gileras.

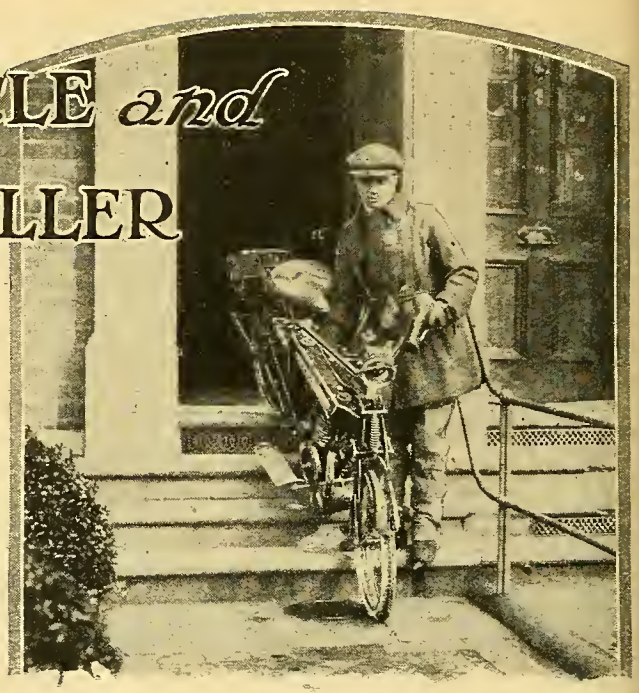
### Solo and Sidecar Race in Switzerland.

Speed events are rare in Switzerland, but this year the Motosacoche Club of Geneva has decided to hold a Grand Prix race for motor cycles and sidecars round the picturesque Lac de Joux, situated among the Jura mountains. The course encircles the lake, and the distance is 21.5 kilometres (approx. 13¼ miles); it must be covered ten times by the 250 c.c. machines, 12 times by the 350 c.c., 14 times by the 500 c.c., and 16 times by the 1,000 c.c. class, while the 1,000 c.c. sidecars will make 9 circuits and 600 c.c. sidecars 7 circuits. Valuable awards are offered as well as class prizes. Entries, which close on May 31st, cost 30 Swiss francs. British entries must be sent to the Secretary of the Auto-Cycle Union, 83, Pall Mall, London, S.W.1. The date of the race is July 2nd.



In Chicago fifty of the local motor police are mounted on four-cylinder Henderson machines. Thirty-four are shown above, making an imposing sight on the parade ground.

# The Motor Cycle and the City Dweller



## Motor Cycling under Difficulties. Handicaps that Add Relish to the Joys of the Open Road.

AS one who was born in the greatest city in the world and lived half his life therein, much of the time as a motor cyclist, the writer feels he is qualified to voice the views of the motor cyclist town-dweller.

We are not all constructed alike. Some prefer the gaiety and hum of city life, while others rejoice in the calm of the country, the song of the birds, and the views of hill or wold. Probably the motor cyclist belongs mostly to the latter category.

### The Rider par Excellence.

What a fine fellow is the motor cyclist who keeps his machine in the centre of one of our great industrial cities. How proudly can he hold up his head and look down upon the ordinary citizen tied down to the crowded train, the bumping bus, or the ever-stopping tram! Never was there such a rider. Grease holds no terrors for him. Necessity has made him skilful. No one would ride wet traffic-bethronged roads for choice, but the town-dweller must perforce traverse them on occasions to reach the country and again to reach home. See him thread his way through the densest traffic; spurting ahead through the narrowest opening, stern of face and yet happy, ready to check at a moment's notice, and wary lest aught meet him from the side street or crossing. He is not to be caught napping. Ever alert, he becomes immune from accident, since caution combined with skill prove to be his sure protection.

### True Lovers of the Country.

Doubtless he envies his country friend who has his own private motor house, where he can tinker o' nights and at week-ends, slip on to the great highway, and cover half of England before he sees a tramline. But he has not the joy of reaching the country after miles of traffic and rough roads. Once the unpleasantness is over the open road is all the more appreciated. We are all better suited to enjoy our pleasures if we do not attain them without a little trouble, and the breath of the sea is all the sweeter to him whose lungs mostly inhale a less pure atmosphere.

That spare valve so badly needed, that piece of copper pipe so urgently required for the week-end job are not to be had for the asking by the country resident. Here the town-dweller scores. All that he needs is at hand, and any repair that has to be done is quickly executed.

There is yet another direction in which the rider who lives in a large town becomes extraordinarily skilful, and this is in *avoiding* traffic. Naturally London offers the greatest scope in this respect. Years ago, when police-trapping was at its height, it was possible to dodge practically every control (and slip clear of the great city, incidentally never touching a tramline except to cross it at right angles) and escape practically every ten-mile limit.

### Conducive to Health and Contentment.

To the city-dweller the motor cycle is an untold blessing. By its possession he owns his own railway train to take himself or his belongings where he will and in his own time. What this means to the health of the nation the Government was forced to realise during the height of the war. Obviously good health and fitness were needed to get the best out of everyone, and when others could not get it the munition worker was allowed a small dole of petrol, not only to enable him to reach his work with comfort and expedition, but to allow him to get clear of the towns at week-ends for the benefit of his health. The late Mr. A. W. Torkington, chairman of the Auto Cycle Union, founded the National Motor Cyclists' Fuel Union for this object, and to the day of his death believed that the motor cycle was a valuable antidote to many evils to which the city dweller is subject. He was of the opinion that it went far towards solving the problem of overcrowding, it enlarged the minds of all who used it, dissipated discontent, and produced that admirable state of affairs—*mens sana in corpore sano*—a healthy mind in a healthy body.

There are few more interesting studies of the town motor cyclist than to see him issuing in his hundreds along the great arteries radiating from the industrial centres at the week-ends. Young men on their motor

**The Motor Cycle and the City Dweller.—** cycles or sidecar outfits with their sweethearts or wives, and the older men on their family buses. All with the same happy if tense look, bent on taking their meal on the wind-swept common, on the wooded hill-top, or by the silver sea, or perhaps on visiting some distant relative or friend. No nation has learned the joys of the motor cycle better than Great Britain, and it is curious indeed that other countries have not even commenced to realise its advantages.

Come, fill the tank with petrol
And fill the flask with tea,
Pack up the food in the old tin box
And leave the town with me.
Soon we've left the tramlines,
The air blows sweet and free,
And we'll sail o'er the hill to the field by the mill
Where the stream flows down to the sea.
And then in the shade of the ev'ning,
Back to our home we'll ride,
To sleep and dream of the swift-flowing stream
And the joys of the country ride.

ON THE PORTSMOUTH ROAD.

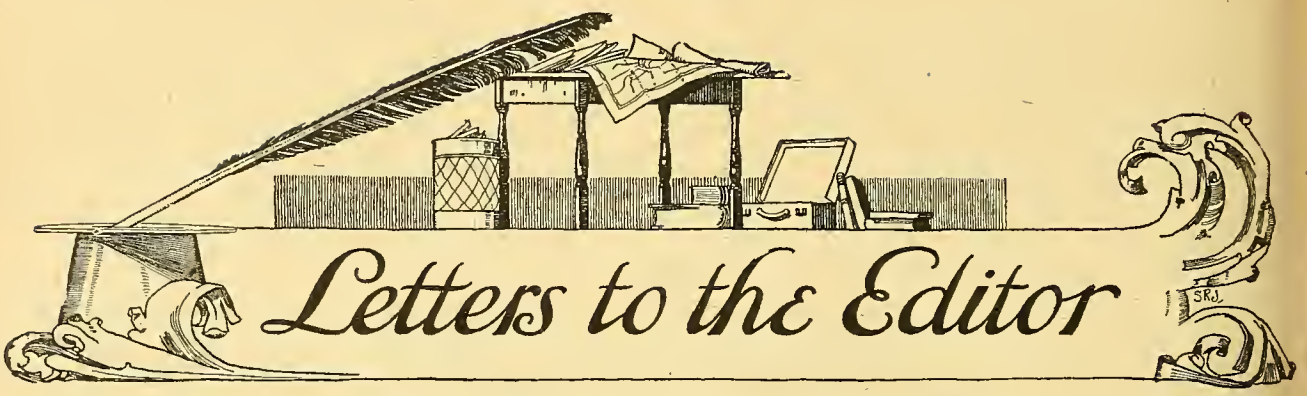
These photographs convey more eloquently than words why the motor cycle is such a popular vehicle with the city dweller, who, independent of train, tram or bus, is enabled to reach the open country with the minimum of effort.

# A MOTOR SHOW IN HOLLAND.

ON Friday last (March 31st), the Amsterdam Motor Show was opened by His Royal Highness the Prince of the Netherlands, and thousands of motorists, motor cyclists, and motor traders have already visited the exhibition. Besides the 51 cars of international makes a good number of motor cycles are on view, the Humber, Sunbeam, Arrow, Triumph, Peugeot, Quadrulet, Bleriot, Ace, Cleveland, Briggs and Stratton, Harley-Davidson, F.N., Rudge, Victoria, Matchless, Blackburne, Bianchi, Royal Enfield, New Hudson, Abingdon King-Dick, B.S.A., N.S.U., James, Levis, Hardy, Sarolea, Henderson, Douglas, Edmund, Eysink, Raleigh, Simplex, Ivy, Opal, Cedos, Wooler, Norton, A.J.S., and Reading Standard being represented. Among the 39 makes mentioned there are 22 of British origin, which shows how popular and how well represented our machines are in Holland.

The only entirely new machine on view is the Dutch 9 h.p. Simplex sporting model. It is of the same type as the 5 h.p. machine which did so well in the last Anglo-Dutch trial, only it is heavier and has a 9 h.p. M.A.G. engine and the Bosch lighting system.

A new local make in which British components are used is the De Anstel. It is a two-stroke of $2\frac{3}{4}$ h.p., and a two-speed gear, and kick-starter.



# Letters to the Editor

The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *OIL COOLING AND WORN PISTON RINGS.*

Sir,—I am very interested in the method of cooling an engine by oil, but I take it for granted that such engines are only intended to be used with absolutely tight and efficient piston rings, for if the rings are allowed to be worn and leaky, the plugs are, especially when placed in an exposed position in overhead valve engines, in my opinion, more or less bound to be fouled by the excessive amount of oil circulated. SWEDISH ENTHUSIAST.

### *IN-TOLL-ERABLE!*

Sir,—Some time ago I saw in your excellent paper a growl about the tolls on the Southampton road. These, like other evil things in life, we must I suppose bear with, even if we do not grin when paying; but the limit is reached, I think, when, in addition to being robbed without violence, you are also grossly insulted.

On a recent Sunday I pulled up with a grand sweep and a bang at Woolston floating bridge, with a sidecar outfit bearing a name almost supreme in the motor cycle world—a name which, but two short days before at Brooklands, was on the machine which broke many world's records—removed my fur gloves, raised my triplex goggles, "dropt my nimble saxpence," and received in return a ticket which in cold print described my machine and self as a "Donkey cart and driver." BIG FOUR.

Gosport.

### *MOTOR CYCLES FOR BOYS AND GIRLS.*

Sir,—I was most interested in the letters from your various schoolboy correspondents, and must say I am all for them! I am a rider of the fair sex, and had my first motor cycle in 1913, directly I left school, and I have owned a machine ever since.

To my mind it is not the boys of 14-20 who drive "all out"; they take pride in their mounts, and are careful with them; but I find the road hogs are almost invariably men of about 20-26. I am not by any means a slow rider myself, but—there are road hogs, and road hogs!

I think why so few boys have machines is, principally, lack of finance on the parents' part, and, as for girls, the same reason applies; also, I think they must have gone to schools with "home comforts," or else been "governessed"!

I do not agree with "Gus" that no four-stroke lightweight will do "50." I was timed to do 53 m.p.h. on my 1913 Douglas (standard model).

Here's good luck to the schoolboys! I'm with them every time! 1922 TRIUMPH 4 h.p. SOLO.

Kent.

Sir,—As an elderly motor cyclist and owner of a 1910 sidecar outfit, I should like to say a few words against the wholesale issue of licences to juveniles.

There are many ways of contracting a sudden death. One of these is heart failure. Although an aged man, I do not yet wish to die. But I fear that I may do so quite soon if I am again nearly run down by a headstrong child on a high-powered motor cycle.

Only the other day one of these embryo road hogs flashed past me on an 8 h.p. Sports Zenith, narrowly missing an apple-cart in his headlong rush. He could not have been more than 16 years of age, and must have been doing quite 70 m.p.h.

It is time that a stop was put to these infantile monomaniacs. I cannot speak too strongly against motor cyclists under 20 years of age. N. QUESTON GRAVES.

Sir,—At present I own an old 2½ h.p. Fafnir, about 1909, with a.i.v., to which I fitted a magneto in place of the battery, and I think every boy should learn on an old machine, not later than 1912, to let him see what real motor cycling is. Nowadays it has become merely a matter of changing gear and opening the throttle to climb any reasonable hill, but with an old single speeder of low power it is a very different thing. The original carburetter is a 1909 B. and B., and is very sensitive, and unless the engine is well cared for and well tuned it soon becomes a case of push.

I am 18 years of age, and have been motor cycling for the last four years. "GOOD OLD DAYS."

Falkirk.

[Above are three representative letters from a further large batch on this subject, mainly supporting the schoolboy motor cyclist.—ED.]

### *ARTIFICIAL OBSTACLES IN AN OPEN TRIAL.*

Sir,—Would any person or persons who were actual witnesses of the following occurrences, or any one of them, in the East Midland Centre A.C.U. Open Trial on March 25th, kindly send particulars to me (c/o the Editor), together with their names and addresses, the place referred to in the trial, the time of the occurrence, and if possible the names of those responsible? The occurrences were:

*Lapidosa Hill* (known by another name locally).—Placing of large boulders taken from the road so as to stop up the clear, normal path.

*Gorsey Bank Watersplash.*—Damming the stream (2in. to 3in. deep overnight) to a considerable depth. Throwing in of a fair-size tree branch to drive competitors into the deeper water.

*Little Eaton Quarry Hill.*—Placing large boulders on the only practicable path. Names of those actually responsible for throwing additional boulders while the competitors were actually going up.

I take this opportunity of thanking all those who have already given me their names, etc., and no one need hesitate to write me for fear of publicity, because any information, names, etc., will not be used without the consent of the person giving it. J. A. NEWMAN.

## 12,000 MILES WITH A CHAIN-DRIVEN TRIUMPH.

Sir,—I think the following notes may be of interest as showing what may be expected of a modern high-class machine.

About the first half of the distance was covered solo, the latter half being with a Triumph standard sidecar. The machine has been used every day of the week for short business runs, and during the week-ends for purely pleasure purposes Several trips over some of the Welsh mountain tracks have been made, including towing another machine up part of the famous Bwlch-y-Groes. The machine has, therefore, not been nursed.

*Engine.*—The only replacements have been two piston rings, which, as a matter of fact, were not really required. I have used a K.L.G. and a Lodge plug, putting the Lodge in when I suspected the K.L.G., and *vice versa.* This is the cheapest solution I have come across of the plug changing craze. I have had no valve trouble, but the mechanism is very noisy, and the tappets run dry and squeak. I thought this was an unknown fault. The cylinder and piston have been decarbonised about every 800 miles.

*Sidecar.*—This is, on the whole, beautifully finished, but has some poor detail work. The door handle and the cupboard door constantly rattle. The spring wheel is good, but I think the springs are too strong. The leaf springs have no lubricators at the shackles, and the pivoting at the fore end chatters. The luggage carrier creates such a noise at certain engine speeds that I have removed it. The petrol tin carrier is good, but allows the tin to "drum" in a most unpleasant manner.

The bearings are apparently perfect. I do not like roller big ends, but must admit mine have been excellent so far. A lubricating system and split bearings give much sweeter running.

*Gear box.*—My machine has one of the earlier boxes, which are far from perfect on the change down. The only other trouble has been the breakage of the selector rod plunger spring. This, curiously enough, resulted in the gear shaft sticking. I had a thrilling run home on top in hilly country on a foggy night. After a good deal of search I located the trouble. Why don't manufacturers send out proper drawings so that one can tell what procedure to adopt to get at a part?

The gear box *is* oil tight.

The clutch slips slightly, and I have had no less than three new Bowden control wires. This is not Bowden's fault, as the control is very inaccessible.

*Tyres.*—I have had the most satisfactory results, having bought only one new one, which has just been fitted.

*Spare Parts Service.*—One gets what one wants within a week, but this is surely not prompt enough.

*Petrol and Oil.*—I have not measured the petrol consumption accurately, but it works out at about 60-65 m.p.g. The machine solo would do over 100 m.p.g. Oil works out at about 700 m.p.g.

*Brakes.* — Front doubtful; rear excellent. The method of adjusting the latter is not very safe. The pivot pin slides in a slotted lug and is held in position by friction. The sides of the lug should be serrated, as if one is not careful to do the adjustment up very tightly the pivot slips, and one has no brake at all.

*Wheel Bearings.*—I have had three new sets of front bearings, and one sidecar set. The rear wheel bearings, which are better proportioned, have required no attention.

It will be seen that, on the whole, the troubles mentioned are of a minor nature, and it must be admitted that the behaviour of the machine has been most satisfactory. As far as my experience goes, there is only one car made which would have given less *road trouble*, and many would have given much more.

C. H. STEPHENSON.

## INSTALLING A COMPASS.

Sir,—Losing utterly my sense of direction on a foggy night (20.00 hours) in the back lanes of Hounslow on a non-stop run Torquay-Harrow, I found myself at Kew Bridge instead of Greenford, and vowed solemnly to provide my P. and M. sidecar with an oil compass. I have been experimenting with an ordinary prismatic, and find two probable positions: (*a*) On an aluminium or wooden bar extending upwards 2ft. from the tank so that the compass is under the chin; or (*b*) on the sidecar centrally and in line with the steering head. In these positions the influence of the iron mass of the machine is at a minimum compatible with visibility; but my experiments show error up to 30 degrees when heading north or south. Probably there is some method of compensation, and I should be very glad to hear from any of your readers who have successfully installed a compass on their machines, or to receive advice from your staff.

K. N. HOWARD.

## THE MORE RESPONSIVE RIGHT LEG.

Sir,—I am an all the year round motor cyclist, riding solo through miles of traffic every day; the brake is on the left side of the machine I have used for about three years. I have now got an Indian sidecar, and intend to use both. The Indian foot brake is on right side, and I knew that to use both machines in their ordinary condition was looking for trouble; so, on looking at the solo machine, I saw that I could fit a pedal to the brake which would bring it to the right side, and in the same position as the Indian.

On the first run it was strange for about five minutes, and, after that I felt as if I had always had it there, and that it was, in fact, far more convenient than on the left side. Now the point is this. On looking over *The Daily Mail* recently I read a short article headed, "The Brain in Action," by a Doctor. The following is an extract:—

"As well as being right-handed, we are also right-legged.

"As the muscles of the right arm and leg are more constantly employed and more quickly respond to orders which we know come from the *left* side of the brain, it is fair to assume that the 'centres' there that control them are more highly developed, and in that limited sense we are left-handed."

As this is a matter of fact, I think it should decide once and for all where the most important control (the brake) should go. It should be where the limb best suited to use it is. Another point is that most motor cyclists hope to own cars some time or other, and they will have nothing to unlearn when they get them.

R. L. BOYD.

Fastest single cylinder time on Kop Hill in the recent Essex M.C. hill climb was made by T. C. de la Hay (3½ o.h.v. Sunbeam).

### A RISKY PRACTICE.

Sir,—In answer to Mr. J. Reynolds and "Ruff Rhodes," I should like to say that owing to the perfect balance and the exceptional steering qualities of the 4 h.p. Harley, the control of the machine, with four up, solo, at 40 m.p.h., is very nearly as easy as with only one person on the carrier.

The danger of anything "giving" with such a weight on board I think is very remote, as the 4 h.p. Harley frame is as strong as that of any big twin.

As regards keeping so many "parcels" on the carrier at the speed, I sat on the tank, one sat on the saddle, the other two on the carrier, and no straps or insulating tape were needed.

The original Goodyear tyres are still going strong, and only one, that on the rear wheel, has ever punctured.

Newport, Salop. "FOUR-UP-SOLO."

### TUNING A 4 H.P. TRIUMPH.

Sir,—As a rider of a Triumph, the article by K. H. Leech, B.Sc., has greatly interested me. I'm sure many Triumph riders besides myself would very much like to know

(1) His petrol consumption (with his cam) at about 35-40 m.p.h.
(2) Behaviour of the engine at slow speeds, and
(3) His top gear ratio.

As one who has done 55-60 m.p.h. on a Triumph many times, I think Mr. Leech should have sounded a note of warning as to the danger of speeding on an absolutely standard bike. The riding position, even with T.T. bars, is of the "sit up and beg" variety, and the front forks, though excellent for the purpose for which they were designed, are thoroughly dangerous at speed. Some painful experience has taught me that the first thing to be done before endeavouring to get speed out of a Triumph is to fit "Druids."

If Mr. Leech has ridden at 60 m.p.h., on several occasions, a Triumph with flexible Triumph forks, I raise my hat to him. LLEWELLYN H. BARKER, J.I. Mech.E.

### NON-SKID BIG TWINS.

Sir,—Whilst agreeing with "Velocitas'" conclusions regarding the superior stability on grease of heavy twins, I must beg to disagree with the accuracy of his calculations dealing with the centres of gravity of his examples.

Taking the same two machines, *i.e.*, (1) Big twin, weight 400lb., centre of gravity of machine 15in. from ground, and rider, weight 150lb., centre of gravity in riding position 35in. from ground; (2) 3½ h.p. single, weight 250lb., centre of gravity 13in. from ground, rider's weight and position same as in (1).

Taking moments about the ground line, let $x$ = height of centre of gravity of machine and rider combined.

In (1) $550x = (400 \times 15) + (150 \times 35)$, $\therefore x = 20.45$in.
In (2) $400x = (250 \times 13) + (150 \times 35)$, $\therefore x = 21.25$in.

It will be seen from this that the difference of 2in. arrived at by "Velocitas" is reduced to just over three-quarters of an inch, and in my opinion this is not sufficient to account for the undoubted superiority of the heavier machine.

It is more likely, I think, that the cause is to be found in the greater inertia of the heavy machine.

So long as a motor cycle pursues a straight and undeviating course there is no tendency to skid; as soon, however, as this straight course is altered by however small an amount, forces tending to make the machine skid make their appearance. Of course the larger the deviation the larger the force.

The greater inertia of the heavy machine helps to prevent inequalities of the road surface, etc., having such an effect on the machine's course as they do on that of the lighter machine, and so renders it less liable to skid.

This theory also explains the success of those people who, having nerves of iron, on sighting a patch of particularly greasy-looking surface open the throttle half an inch or so and proceed to cross it at speed, holding the bars absolutely rigid, and apparently experiencing no difficulty whatever, while the ordinary mortal like myself shuts down and takes it slowly, and possibly has to steady with the feet also.

A. R. TURNER.

### FROM HUB TO COUNTERSHAFT GEAR.

Sir,—On the Coventry road at Stone Bridge on a recent Sunday I noticed that I was not by any means the only one who has fitted an old Triumph with an Albion 3-speed countershaft gear. I should like to know the experience of other riders. I have received excellent service from mine, and can thoroughly recommend the conversion. H.A.P.

Birmingham.

### COMPLICATED COASTING.

Sir,—With reference to Mr. Walker's query on the subject of coasting, I consider the following is the best and simplest method:

Lift the exhaust valve lifter and close the throttle; this will enable the engine to cool reasonably, and will facilitate starting by just dropping the exhaust valve lever. Experience has taught me that no trouble will arise through burnt valves, providing they are of good quality. I can assure Mr. Walker that this is the most popular method of coasting the average hill. G. S. THIRSK.

### UNWRITTEN ROAD LAWS.

Sir,—Referring to the paragraph entitled "Preparing to Overtake," by "Ixion," surely, if "Ixion" was overtaking the cart, and the unknown Indian rider coming towards them, the latter was on his right side, viz., left.

Should not one give way in such a case, when, of course, the obstacle is seen? E. SEYMOUR.

[Our correspondent is correct in his general assertion, but in this case the unknown rider had apparently cut across the front of the cart, from his wrong side, at the last moment.—ED.]

### TWO-STROKE EFFICIENCY.

Sir,—In regard to the letter of "R.T.F.," may I point out that the statement that "the temperature of the cylinder walls will remain constant" is incorrect.

Since the ratio of volume of the cylinder to surface exposed to the flame is greater in larger cylinders than in small ones, the heat flow, per unit area, through the walls will be larger also (assuming a constant maximum temperature). Thus, the wall temperature will be higher, since

$$\text{temperature drop through walls} = \frac{\text{heat flow per unit area} \times \text{thickness of wall}}{\text{coefficient of conductivity}}$$

This is the reason why large cylinders are more difficult to design than smaller ones, and why there is a limit to cylinder size with present-day metals and lubricating oils

Newcastle-on-Tyne. H.V.S.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

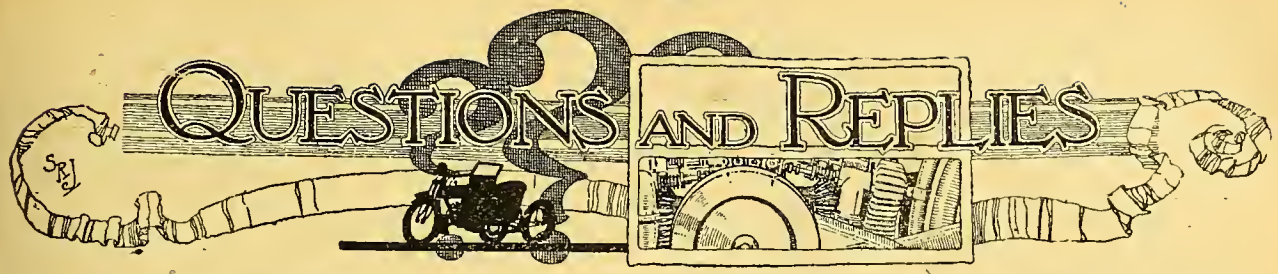
**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle*.
Price net, 5/-. By post, 5/3.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### CHARGING ACCUMULATORS WHEN NOT IN USE.

Does an accumulator run down when out of use if not constantly recharged?—D.C.

Yes; they become discharged gradually. Accumulators should be charged at least once every six weeks even when not in use.

### OILING AND SOLO GEAR RATIOS.

Please enlighten me on the following points in connection with my 1920 4¼ h.p. B.S.A. motor cycle: (1.) How often should I oil with the drip feed? I am giving about one pump per five miles solo and four sidecar (the engine seems to carbon up very quickly). (2.) What maximum speed solo can I expect? My gear is 5 to 1. (3.) Would a slightly higher gear be more comfortable for solo riding?—A.P.F.P.

The frequency of lubrication is a matter of experience; it would appear, however, that you are giving rather too much. One pumpful per ten miles solo and one in five to seven with sidecar should be sufficient. You should obtain about 45 m.p.g.; though the machine might be geared 4¾ to 1 for solo work, it is doubtful if you would obtain much advantage from the change.

### NO ACCELERATION OVER 20 M.P.H.

My 1918 4 h.p. Douglas runs with delightful smoothness up to about 20 m.p.h., and runs smoothly down to 6 or 7 m.p.h. on top gear, but when the throttle is opened to increase speed or on a hill the engine appears to be choked, fires irregularly, and shows scarcely no increase of power. The petrol level and carburetter appear to be correct, with 28 jet; the trouble is just the same with 30 jet. Engine starts very easily.—F.K.R.

The symptoms you describe are consistent with bad carburation, and it is possible that the carburetter is apt to flood at high speeds owing to the needle valve being worn. A partial obstruction of the petrol supply or an air lock in the petrol tank would have a similar effect. It is also possible that your magneto is timed too late. The usual setting is to fix the magneto with the points just breaking, the ignition control being two-thirds retarded and the piston on top dead centre.

## Important Dates.

**Sat., Mar. 25th, to Sun., April 9th—Tour de France.**

**Sat., April 8th—B.M.C.R.C., Members' Meeting at Brooklands.**

**Fri., April 14th—The Richmond Meet (Yorks.).**

**Fri., April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**

**Sat., April 15th, and Monday, April 17th—Western M.C.C. (Glasgow) Two Day Trial.**

**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**

**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**

**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**

**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**

**Sat., May 6th—B.M.C.R.C. Members' Meeting at Brooklands.**

**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**

**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**

**Tues., May 30th—Junior Tourist Trophy Race.**

**Thurs., June 1st—Senior Tourist Trophy Race.**

**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**

**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**

**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**

**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**

**Sat., June 17th—Ealing and Dist M.C.C. 200 Mile Sidecar Race, Brooklands.**

**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**

**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**

**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**

**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**

**Wed., July 12th—French Grand Prix.**

**Sun., July 23rd—Belgian Grand Prix.**

**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**

**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**

**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**

**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**

**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**

**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**

**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### A CHASSIS REPAIR THAT FAILED.

Last month I had the misfortune to break one of the tubes on the chassis of my sidecar. This was repaired by inserting a liner in the tubing and brazing. On the journey home, before I had proceeded twenty miles, the repair gave way, necessitating my shedding my passengers, and sending them home by rail. I was naturally annoyed, and on reaching town stopped the cheque given in payment for the repair, and I have had to purchase a new sidecar chassis. The repairers now threaten me with proceedings, and I would be glad to know whether I am within my rights in refusing to meet this cheque.—W.G.

In order successfully to resist the payment you would have to show that there was actual negligence on the part of the repairer; this is a practical point on which you should get the opinion of an expert. The repairer would be able to take out a County Court summons in his district, and having regard both to the time which you would have to spend in defending the case and to the smallness of the amount, it might be simplest to pay the claim or to try to effect a compromise. On the other hand, if you can clearly show that there was absolute negligence on the part of the repairer, and that the repairer well knew when he entered into the contract that he was repairing the tubing in order that you and your family might return home, then there would be a counter-claim for the damage sustained. However, you should bear in mind that it is quite possible that the repairer did what he considered his best for a temporary repair, and he may have had some grounds for considering that it was reasonable to expect that it would last for your journey.

### SHAFT DRIVE.

Is there any drawback to shaft-driven motor cycles, as I do not see many on the road in our part of the country (Staffs.)? What is the reason for there being so few of these machines on the road?—J.K.

There is no particular drawback to shaft drive, and in many ways it has decided advantages over all other methods of transmission; but there is only one make of motor cycle on the market on which it is employed (the F.N., made in Belgium).

With the average big single-cylinder or V twin machine the fluctuations in torque impulses necessitate the transmission details being unduly heavy with such a rigid form of drive as shaft and gearing, hence it is chiefly suitable for use with engines having particularly smooth torque, such as three- or four-cylinder units or two-cylinder two-strokes.

## READER'S REPLY.

### MOTOR CYCLES AND NERVES.

In answer to "Not yet Beaten's" inquiry in the issue of March 23rd, I think that, if he will make inquiries of other motor cyclists who have taken to sidecar driving after riding solo for some time, he will find most of them have experienced the same trouble. Before I tried my first ride on a sidecar I had been warned not to try to balance it, but in the excitement of the moment this good advice was thrown to the winds, and consequently I promptly "shot off to the right," and incidentally into the kerb. Next time, however, having learned a lesson, I managed quite well. Perhaps, if your correspondent will give up all inclination to balance the outfit and steer, say, as if it were a car, he may be attended with like success. Anyhow, I wish him the best of luck as company on tour greatly enhances the pleasure.—XF61.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"H.J.H." (Reading).—1920-21 8 h.p. countershaft model, Zenith sidecar.

"H.P.E." (Bedford).—2¾ h.p. sports model A.J.S.

"J.B." (Leith).—4¼ h.p. Beardmore-Precision.

"W.S." (Sheffield).—Binks & Atmos carburetters on 8 h.p. Enfield-Jap: Jet sizes and settings.

"W. M." (Fife).—3½ h.p. Norton and 3½ h.p. Zenith-Bradshaw: General comparisons.

"Beam" (Yeovil.—3½ h.p. sports Sunbeam: Consumption, advantage of W.S.R. jet adapter, petrol-benzole mixture; any other hints and tips.

"C.D.W." (Finchley).—2¾ h.p. Wooler, chain drive model: General performance, special tips, eliminating oil leak behind engine sprocket.

"T.E.S." (Sandycroft).—Jet sizes for Binks carburetter on 2¾ h.p. Douglas: Consumption and speed.

"L.S.J." (Aldershot).—Best non-skid tyres on chain-drive Triumph; advisability of 28×3in.; hints on rendering brake less fierce.

"C.R.P." (Doncaster).—3½ h.p. Brough; A.B.C.; and Scott Squirrel.

"C.N." (Seven Kings).—W.S.R. adapter on pilot jet B. & B. carburetter, also best carburetter on 1921 Matchless-Mag.

## SPARKLETS.

### In Belgium.

One of the first trials in Belgium during this year for the Coupe de la Meuse took place last month, and the award was carried off by M. Tayman (4 Triumph sc.).

### Motor Cycles beat Car Uphill.

At the conclusion of a recent hill-climb at Pretoria, several Norton riders anxious to try their pace organised an impromptu time trial over the course, which was rough and had a stiff gradient. The fastest speed was an average of nearly 48 m.p.h. The times were: Dr. A. L. du Toit, 37⅘s.; P. Flook, 38⅘s.; L. van Bergen, 40⅗s.; C. W. Bower, 42⅘s. These riders were all mounted on Norton machines. The fastest time in the car class was made by a Vauxhall in 41s.

### Found on the Road.

The finding of a tool roll on the old Birkenhead-Chester road on March 12th is reported by Mr. W. K. Woodward, Moor Cot, Tower Road S., Heswell, Cheshire. He believes that it fell from a Norton machine.

### Motor Cycles for R.A.C. Guides.

In the windows of Stratton & Instone, Pall Mall, London, S.W.1., are to be seen two 4¼ h.p. B.S.A. motor cycles enamelled in R.A.C. blue, with the club's initials on the side of the tanks. They are for use by R.A.C. road guides.

### Spare Valves.

Those who require spare valves for old engines should get into touch with the Leamington Valve Co., of Clinton Street, Leamington Spa. This old established company can supply any design of valve and will use material to a given specification.

### A New Make Foreshadowed.

Having severed his connection with the Massey-Arran Motor Co., Ltd., Mr. A. Massey, in association with several people well known in the motor cycle trade, will shortly commence to market a range of machines known as the Massey motor cycles.

### Echoes of Recent Trials.

K. Don (3½ Norton) has had his protest upheld regarding his stop on Kop Hill in the Stock Machine Trial, and is therefore awarded a special certificate of merit (his machine was equipped with a front stand). G. H. Kirby (3½ Triumph) was not amongst those who stopped on Kop in the same trial—his only shortcoming was the absence of a front stand.

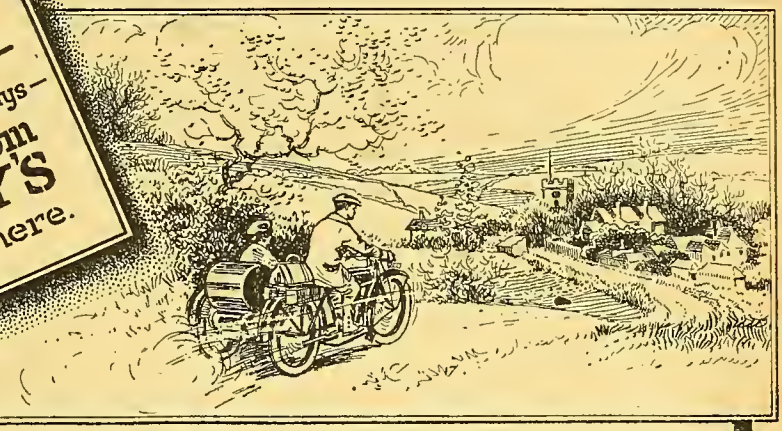
In the Victory Cup trial J. A. Newman (3½ Douglas) claims that his stop on Sandy Lane was not due to petrol tap being turned off but to an air lock in the tank; the same rider gained a gold in the Colmore Cup Trial and not a silver as first announced.

SCENES ON THE *TOUR DE FRANCE* TWELVE DAYS' TRIAL.

How the French say "au revoir." Bergen (Velocette) on the right receiving a salutation before starting out one morning.

Two Harley-Davidsons passing through the historic town of St. Germain in the early stages of the trial.

# At Easter —as always— A Machine from GODFREY'S will take you anywhere.



THE FOLLOWING 1922 MODELS ARE AVAILABLE FOR IMMEDIATE DELIVERY. WHETHER YOU ARE A BUYER AT THE MOMENT OR NOT, WE SHALL BE PLEASED FOR YOU TO CALL & INSPECT OUR WONDERFUL SHOW OF MACHINES. IF YOU CANNOT CALL WE SHALL BE ONLY TOO PLEASED TO SEND YOU FULL LISTS ON HEARING FROM YOU.

**CASH. GRADUAL PAYMENTS. EXCHANGES.**

**A.J.S.**
7 h.p. Comb. Std. £175
7 do. do. Magdyno £195
Spare Wheel £8 extra.

**ARIEL.**
3½ h.p. Sports Model £75

**B.S.A.**
4½ h.p. Model K2 .. £107
4½ ,, ,, H2 .. £110
6 ,, ,, E .. £132
Magdyno £18 14s. extra.

**B.S.A.**
4½ h.p. K2 Combn. £139
4½ ,, H2 ,, £142
6 ,, E ,, £164
Magdyno £20 6s. extra.

**Coventry Eagle.**
4½ h.p. All on .. £110

**Douglas.**
2¾ h.p. 2-sp. All on .. £75
2¾ h.p. 3-sp. K.S. .. £90

**Excelsior.**
2½ h.p. Sports Mod. £39 18

**Hawker.**
2¾ h.p. Mod. "A" £52 10
4¾ h.p. Mod. "D" £89 5

**Indian.**
4 h.p. Scout .. £112
4 h.p. do. Combn. £134
Dynamo £18 extra.

**Indian.**
7 h.p. Stand. Combn. £175
7 h.p. Chief Combn. £189
Dynamo Lighting included.

**Levis.**
2½ h.p. Popular .. £43
2½ h.p. Model S .. £58
2½ h.p. ,, G2 .. £68
Kick Starter £2 extra.

**Matchless.**
8 h.p. Mod. H2 Combn. £170
8 ,, ,, ,, 2-str. £175 10
8 ,, Model V Combn. £160
Dynamo £20 extra.

**Morgan.**
8 h.p. Popular .. £150
8 h.p. Grand Prix .. £180

**New Imperial.**
2¾ h.p. Model 1 .. £63
2¾ h.p. ,, 3 .. £73

**N.U.T.**
3½ h.p. Chain & Belt £100
5 h.p. All Chain .. £120

**Royal Enfield.**
8 h.p. Mod. 180 Comb. £140
8 h.p. ,, 190 ,, £158
2½ h.p. ,, 201 £57

**Rudge.**
3½ h.p. 3-speed .. £94
3½ h.p. T.T. I.O.M. .. £77

**Scott.**
3¾ h.p. Standard .. £110
3½ h.p. Squirrel .. £105
Standard Sidecar .. £35
Squirrel Sidecar .. £30

**Triumph.**
4 h.p. Type H .. £110
4 h.p. ,, S.D. .. £115
2½ h.p. ,, L.W. .. £85
Triumph Sidecar .. £40

**Zenith.**
3½ h.p. Bradshaw All Chain .. £119
5 h.p. Sports .. £110

**B.S.A. Car.**
10 h.p. 2-seater .. £340
Dickey, Dynamo Lighting and Starter.

**Rover Car.**
10 h.p. Standard Model .. £220

**B.T. Car.**
10 h.p. Standard Model 2-seater .. £315
Magdyno.

**Millford Sidecars.**
ALL MODELS.
From £22.

**Spare Parts.**
FULL STOCKS FOR INDIAN, SCOTT, B.S.A., LEVIS.

# GODFREY'S LTD.,
## 208 GREAT PORTLAND ST., LONDON, W.1

Telegrams: GOFRABIKE, LONDON. 'Phone: LANGHAM 1300 (2 Lines).
REPAIR DEPOT: 14, MILLER ST., CAMDEN TOWN, N.W.

# It's three horse power, and the price is only £39 10 0

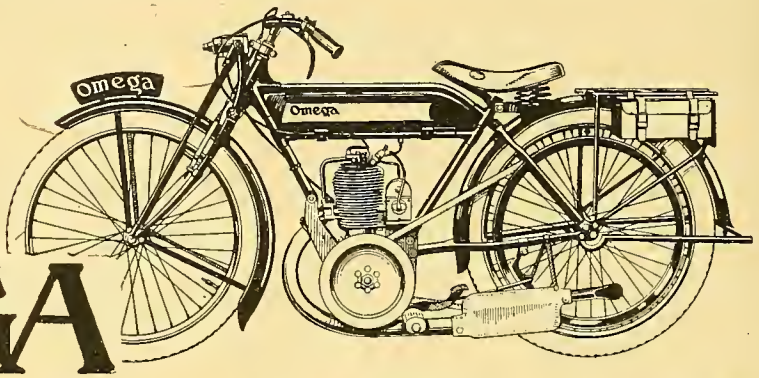
**Specification—Model 6.**

Engine: 3 h.p. two-stroke, 71×88 mm. made and designed in our own works.
Lubrication: Petroil system.
Magneto: Fellows.
Carburetter: Amac.
Silencer: Long pipe with aluminium silencer.
Spring Fork: Gosport or Omega.
Finish: Throughout of the very best.

SINGLE GEAR .. £39 10 0
TWO SPEED .. £45 10 0
TWO-SPEED, CLUTCH & KICK-STARTER £51 0 0

*Send for List.*

ONE of the many factors which should induce you to buy the Omega is that it has a full-sized grown up Engine, big and powerful enough to take you anywhere at any time over the worst of country, the steepest of gradients, without a grumble. Exhaustive tests have proved it to have wonderful pulling powers, a good turn of speed, great flexibility and silence. Moreover—look at the price!




# OMEGA

**W. J. GREEN, LTD., Omega Works, COVENTRY.**

London: BARTLETT'S, 92, Gt. Portland St., W.
Birmingham: GOUGH'S, 183a, Broad Street.

# APOLLO REG'D
## tubular box spanners.

**The motor cycle set No. M.C. 23.**

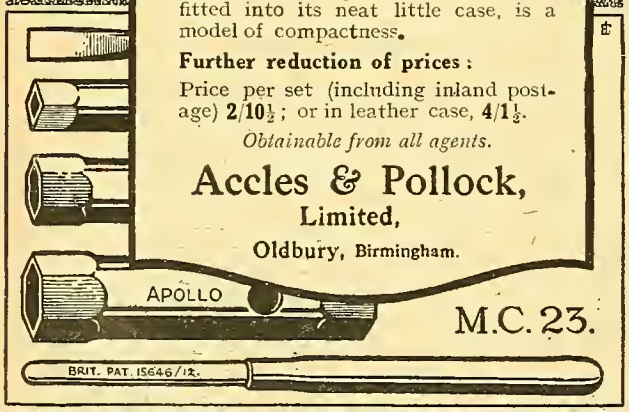
This handy little set, ready for immediate use, makes small adjustments a pleasure.
Consisting of three spanners to fit six sizes of nuts, a screwdriver, and a telescopic tommy-bar; the set, when fitted into its neat little case, is a model of compactness.

**Further reduction of prices:**

Price per set (including inland postage) **2/10½**; or in leather case, **4/1½**.

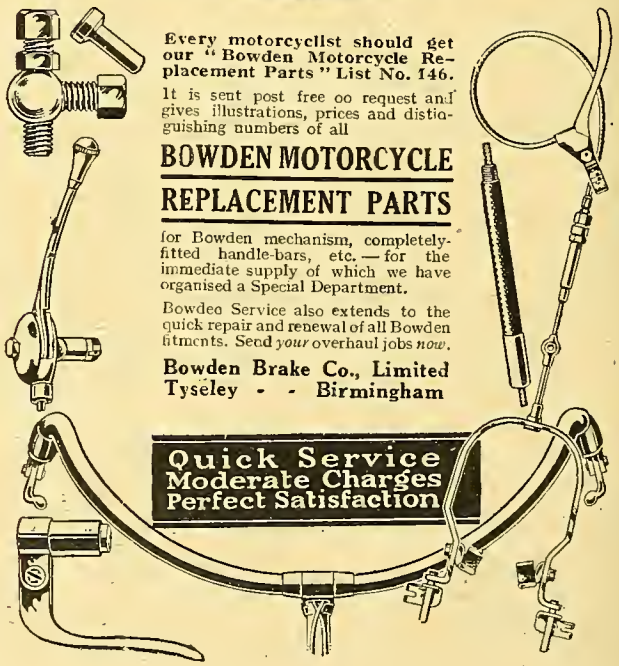
*Obtainable from all agents.*

**Accles & Pollock, Limited,**
**Oldbury, Birmingham.**




M.C. 23.

# Bowden Service



**Every motorcyclist should get our "Bowden Motorcycle Replacement Parts" List No. 146.**

It is sent post free on request and gives illustrations, prices and distinguishing numbers of all

**BOWDEN MOTORCYCLE REPLACEMENT PARTS**

for Bowden mechanism, completely-fitted handle-bars, etc. — for the immediate supply of which we have organised a Special Department.

Bowden Service also extends to the quick repair and renewal of all Bowden fitments. Send *your* overhaul jobs *now*.

**Bowden Brake Co., Limited**
**Tyseley - - Birmingham**

**Quick Service**
**Moderate Charges**
**Perfect Satisfaction**

R.H.S

# OFFICERS' ARMY TRENCH COATS

## AT 70/- EACH

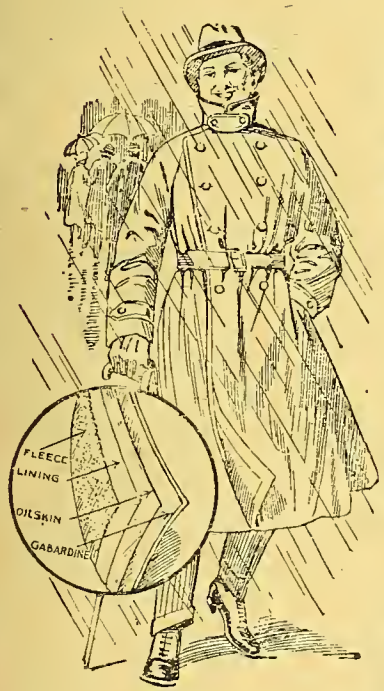
## (Without Detachable Fleece Lining 55/- each.)

*Carriage Paid in United Kingdom.*

## Reduced from 75/-, at which price over 25,000 have been sold in the last 5 months.

On January 16th we announced a special sale of our Officers' Army Trench Coats at 70/-. So great was the success of this sale that although the individual profit was less, the aggregate profit was greater than formerly. We have therefore decided not to revert to the old price but to continue to sell this magnificent coat at 70/-, thus acting in accordance with the spirit of the times and carrying out our business principle of giving the public the utmost value for money.

**Quite 60% below present-day prices.**
**These goods can never be duplicated at the price.**




Brand New. Triple-proof Gabardine, Check Lining, OILSKIN *INTERLINING*, and with detachable ALL-WOOL fleece lining. FOUR COATS IN ONE. These Coats are made from guaranteed Government materials, by Contractors who made thousands of Officers' Army Trench Coats during the war. This is the only Coat made THROUGHOUT with Surplus Government materials **which we control.**

**When existing stocks of Government material are exhausted (which at the present rate of sale will be in from 3 to 4 months), it will be impossible to buy a genuine officer's army trench coat at anything like this price. There are no REAL Officers' Army Trench Coats on the market approaching it.**

### POINTS FOR TRENCH COAT BUYERS.

1. A Genuine Officer's Army Trench Coat made THROUGHOUT with Government Surplus materials will last for years. An inferior one will "crock up" in a few months.
2. See that the fleece lining is ALL WOOL.
3. See that the fleece lining extends down the sleeves to the wrist.
4. See that the interlining is oil skin or oil cotton and not a rubber solutioned fabric which is perishable.
5. See that you deal with a "MONEYBACK" Firm, so that if the coat does not meet with these requirements you can demand a refund.

### OUR GUARANTEE.

We guarantee this coat to be as described above, and that the description is in no way exaggerated. If the customer is not satisfied with his purchase we guarantee to return his money in full without question, provided the coat is returned undamaged within seven days of purchase.

### MONEYBACK PRINCIPLE.

All our business is conducted on the "Moneyback" principle. Inasmuch as a Mail Order Customer has no opportunity of inspecting his goods before purchasing, this is the only fair and satisfactory way of conducting a Mail Order Business. Mail Order Customers should always insist on a "Moneyback Guarantee" before parting with their money. An announcement such as ours forms a legal contract between the Seller and the Purchaser, and therefore fully protects the latter.

THE PRESENT WHOLESALE PRICE OF COATS EQUAL TO THESE, FROM CONTRACTORS NOT IN POSSESSION OF THE SURPLUS GOVERNMENT MATERIAL IS 105/- EACH.

When ordering, state height and chest measurement *over waistcoat*. CHEST SIZES 34, 36, 38, 40, 42, 44 ins. Also state whether coat is required in Military style or adapted for civilian wear. In the latter case, shoulder straps and brass D's on belt are omitted.

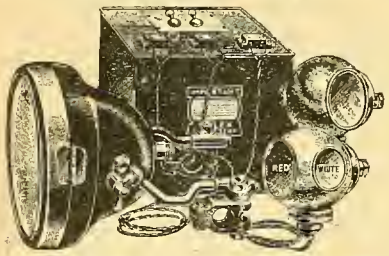
*Cheques, Money Orders, and Postal Orders should be crossed Barclays Bank, Limited. Treasury Notes should be registered.*

# GEORGE WESTON & CO.

***Clothing Contractors, "Moneyback" Merchants (Dept. M.C.),***

Offices . . . 1 Bath Road }
Warehouse & Stores : Inverness Rd. } HOUNSLOW, MIDDLESEX.

COMBINATION SETS.



**These sets give from 9 to 12 months' service, in ordinary intermittent use, without renewal batteries.**

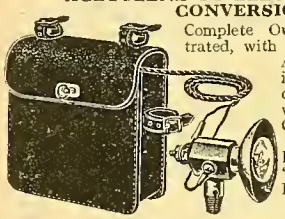
**Specification.**—6-volt "Volex" Dry Batteries in metal container, Switchboard, Head Lamp (5½in. front), Side and Tail Lamps, Cord and Bulbs.

No. Mc/490, as illustrated ..... Price **£6 10 0**

Also supplied with "Superba de Luxe" Head Lamp (7in. front), No. Mc/450 Price **£8 0 0**

*Ready for immediate use*

ACETYLENE TO ELECTRIC CONVERSION SET.

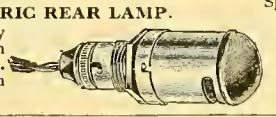


Complete Outfit, as illustrated, with 4-volt "Volex" Aero Dry Battery in Leather Satchel container with conducting Cord and Bulb, **31/-**.

Do. with 6-volt "Volex" Aero Dry Battery, **37/-**.

"BULLET" ELECTRIC REAR LAMP.

Robust Construction, heavily nickelled. Complete with Lampholder and Adaptor, **7/6**. Rear Lamp as above with Switch Holder, **9/-**.



**Volex**

**DRY BATTERY LIGHTING OUTFITS for Motor Cycle and Sidecar.** British Made.

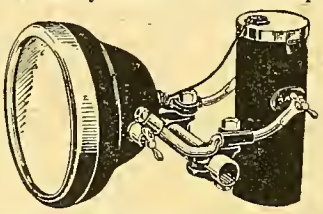
Recommended for Home and Export.

**"Volex"** Dry Batteries have been in use for over 15 years. Owing to their reliability and extreme convenience the Motor Cyclist enjoys the advantages of Electric Lighting without the disadvantages of Accumulator charging and its attendant complications.

**The Ideal No-Trouble Outfits.**

See Sectional List M203A for full particulars

The "RAYONITE" Self-contained Motor Cycle Electric Head Lamp.



The pleasure of having a lamp always ready for use will be appreciated.

Set comprises Head Lamp, 5½in. front, combined with a strong metal container holding the Volex "Rayonite" Dry Battery, complete with Bulb No. M 9/1. Price **£3 10s.**

Supplied also with Accumulator instead of Dry Battery, **14/-** extra.

Complete Head and Rear Set, **£4 12s. 6d.**

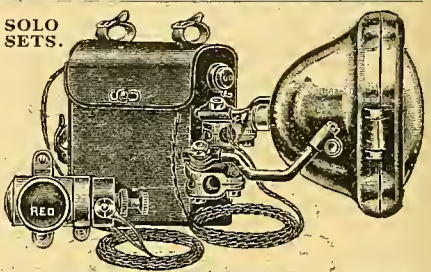
If with HEADLAMP 7in. front, **10/6** extra.

Spare "Rayonite" Dry Batteries, **10/6.**

Can be fitted in a few moments.

**Ward & Goldstone** PENDLETON. MANCHESTER LTD.

SOLO SETS.



**SOLO SETS.**—The most efficient Dry Battery Solo Sets produced. Head Lamp is provided with 6-volt bulb giving an exceptionally brilliant light, and ample light is provided in the Rear Lamp. Complete with 6-volt "Volex" Aero Dry Battery in strong leather satchel container.

**Head and Rear Set.**

5½in. front Head Lamp, M10/10..... **£4 10 0**

Head Lamp set only, M10/7..... **£4 0 0**

**"Superba de Luxe" Head and Rear Set.**

7in. frnnt Head Lamp, M10/11..... **£5 7 6**

Head Lamp set only, M10/8..... **£4 17 6**

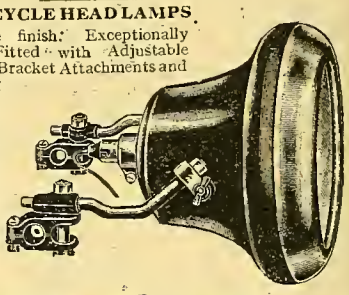
MOTOR CYCLE HEAD LAMPS.

High grade finish. Exceptionally efficient. Fitted with Adjustable Handle Bar Bracket Attachments and focussing Type Holder. Complete with Lampholder and Adaptor.

5in. front, **24/-**.

5½in. front, **40/-**.

7-in. front, **50/-**.



**Sectional List M203A free on request.**

**Grindlay**

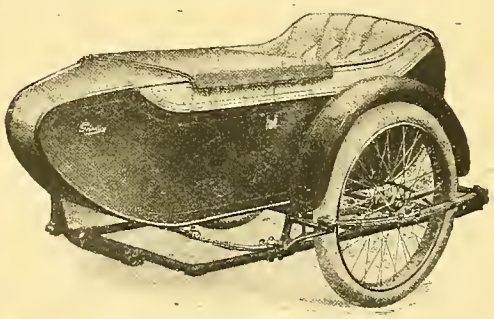
*"For the Rider who will have the best."*

The sidecar SUPREME in appearance and comfort.

Eight Models to choose from, for machines from 2¾ h.p. to 10 h.p.

Prices to suit all purchasers, from £17 to £38.

*A copy of our latest illustrated catalogue mailed free anywhere upon request.*



GRINDLAY (Coventry), Ltd., Melbourne Works, COVENTRY.

**X-L-ALL SADDLES**

**EXCEL ALL OTHERS IN COMFORT**

BECAUSE OF

**PARALLEL SPRINGING, LATERAL RIGIDITY, ADJUSTABLE SPRINGS.**

**40/-**

**MODEL X 30.**

READ WHAT A USER SAYS:—

"It's the finest thing I've struck in the way of Saddles for absolute comfort."

Signed:— T. F. S., Stoke Newington.

WHEN ORDERING YOUR NEW MACHINE SPECIFY AN X-L-ALL SADDLE & ENSURE A LUXURIOUS SEAT.

**JOHN LECKIE & Co., Ltd., WALSALL.**

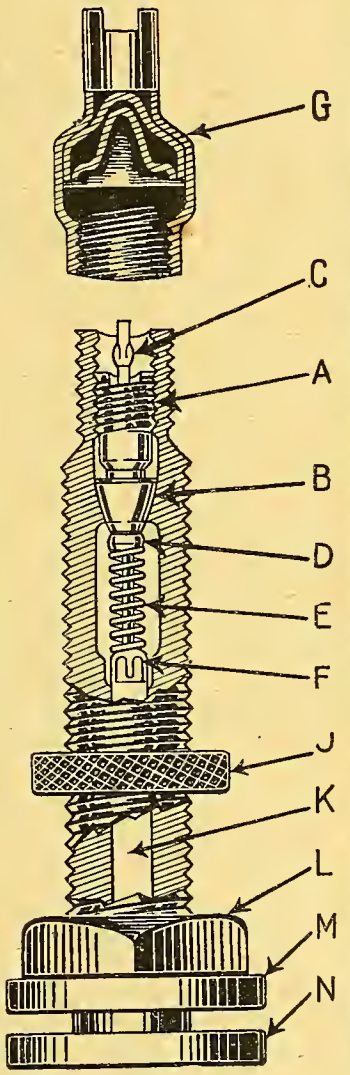
**LONDON: 84, Fore St., E.C.2.**

# Schrader Universal

BRITISH MADE **TYRE VALVE**

## Everything a tyre valve should be

The "Schrader Universal" is everything a tyre valve should be. Airtight; easy to pump; the air inflated stays in, therefore less work than with the old type valve. Simplicity; no joints to leak and no nuts to screw on. The valve proper—the inside—is self-sufficient. Reinforced and kept clean by the patent doubly-crowned valve cap. Fitted as standard by the leading Tyre Manufacturers of Great Britain and U.S.A, Spares and replacements from all good dealers.




*Sectional View of the "Schrader Universal" Motor Cycle Tyre Valve.*

G.—Valve cap. Slotted end is used for removing or screwing down valve "inside." C.—Central Pin of inside to which "D" is attached. A.—Screwed locking plug, with lugs for slots of valve cap. B.—Rubber-faced seating cone. D.—Cup seating for "B." E.—Spring. F.—Spring abutment. J.—Rim nut. K.—Air passage in body. L.—Locking nut. M.—Ring washer. N.—Head of valve stem.

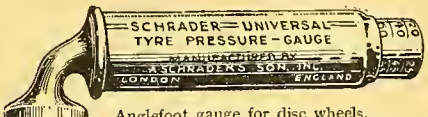
## TYRE PROTECTION

The life of your tyres depends on their inflation pressures. Comfort in riding depends on inflation pressures. There is a mean between these two figures which will achieve both economy and comfort. Pressures cannot be guessed. The little sturdy

**"Schrader Universal" Tyre Pressure Gauge**

will record exactly the air contents of your tyres—pounds per square inch—and so insure that you inflate correctly.

For "Schrader Universal" Valves, price 7/2.
With adapting footing for other valves, 7/9.




Anglefoot gauge for disc wheels.
For "Schrader Universal" Valves, price 8/3.
With adapting footing for other valves, 8/10.
High Pressure Anglefoot, 10/7.

**POST FREE**

*Our "Table of Correct Air Pressures" gives tyre pressure for all standard sizes from information supplied by the World's Leading Tyre Manufacturers. It will be sent post free on request. Write TO-DAY for it.*

**A. SCHRADER'S SON, INC.**

*British Factory:*

**Victoria Rd., Willesden Jnc., London, N.W.10.**

Manufacturers of the "Schrader Universal" Tyre Pressure Gauge.

**Be sure it's a "SCHRADER" — Look out for the name.**

# CHEMICO

**CHEMICO REPAIR OUTFITS**

PUNCTURES are like accidents, they *will* happen, even with the best of tyres, and it is when they have happened that you generally remember you left the remedy at home. Carry a CHEMICO Repair Outfit in your pannier, and be sure of having everything necessary for tyre repairs with you, neatly packed in a strong metal case. There are several styles to choose from, and at Chemico 1922 reduced prices, all represent the best value for your money that you can obtain.

**Be on the Safe side!**

**CHEMICO BLOWOUT PATCHES**

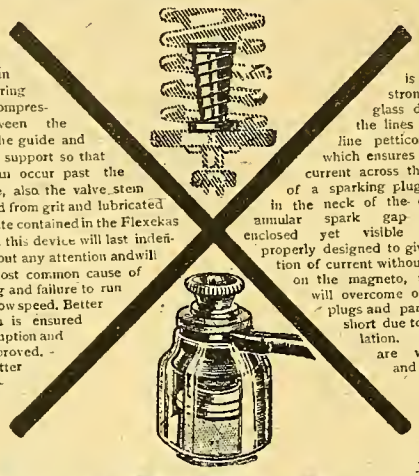
CARRIED in your pannier will save a tyre. They are simplicity itself and can be fixed by a novice without any trouble, by following the directions given on every patch. Once fixed, no load is too heavy, no strain too great, to test a repair effected with a CHEMICO Blowout Patch. The Patches are obtained in four sizes at most Garages, no other emergency device for tyres is so simple or so cheap —get YOUR supply to-day.

*THE COUNTY CHEMICAL CO., LTD. BRADFORD STREET. BIRMINGHAM.*

*Highest Quality & Value*

# FLEXEKAS

Flexekas is simply an airtight spring fitted in compression between the bottom of the guide and the spring support so that no leak can occur past the valve guide, also the valve stem is protected from grit and lubricated with graphite contained in the Flexekas Once fitted this device will last indefinitely without any attention andwill cure the most common cause of bad starting and failure to run evenly at slow speed. Better carburation is ensured and consumption and power improved. Valve clatter is also eliminated.



Sparxekas is a dome of strong tempered glass designed on the lines of an H.T. line petticoat insulator which ensures no leakage current across the insulator, of a sparking plug. Embodied in the neck of the dome is an annular spark gap completely enclosed yet visible externally; properly designed to give amplification of current without any strain on the magneto, this device will overcome oiling up of plugs and partial internal short due to dirty insulation. Sparxekas are very neat and give a striking effect.

# SPARXEKAS

**FLEXEKAS fit any engine and are supplied with special heatproof graphite paste at 2/6 per valve. Extra cartons of paste to be used when overhauling are 1/6 each.**

**SPARXEKAS fit any plug and are supplied complete and ready for fitting under existing terminal nut at 2/6 per plug.**

*If your dealer does not stock send direct to the patentee and sole manufacturer—*

**CLIFFORD PRESSLAND, A.M.I.E.E.,**
**Engineer, HAMPTON-ON-THAMES.**

# ALBION LIGHTWEIGHT COUNTERSHAFT GEARS.

Three Speed with Clutch and Kick Starter.
Two Speed with Clutch and Kick Starter.
Two Speed, Plain Box.

**SPECIFY ON YOUR NEW MACHINE, OR IF YOU WISH TO CONVERT YOUR PRESENT ONE SEND FOR CATALOGUE.**

**ALBION ENGINEERING CO., LTD.,**
**UPPER HIGHGATE STREET, BIRMINGHAM.**
**London Stockists: H. Taylor & Co., Ltd., Store St., W.1.**

# Agricultural Gazette

*Established 1894.*

AN ILLUSTRATED PAPER FOR THE FARM.

**DEALS fully with all technical questions relating to Farming, Stock-Breeding, the Dairy, Poultry, and gives the latest and most complete information regarding**

**FARM MOTOR MACHINERY—tractors, ploughs, cultivators, etc.**

**Obtainable of all Newsagents.**

**EVERY FRIDAY. PRICE TWOPENCE.**

*Specimen copy sent post free on request to the Publishers:*

ILIFFE & SONS LTD., Dorset House, Tudor St., London, E.C.4

THE FAMOUS

"JAMES"

STILL MORE SUCCESSES.

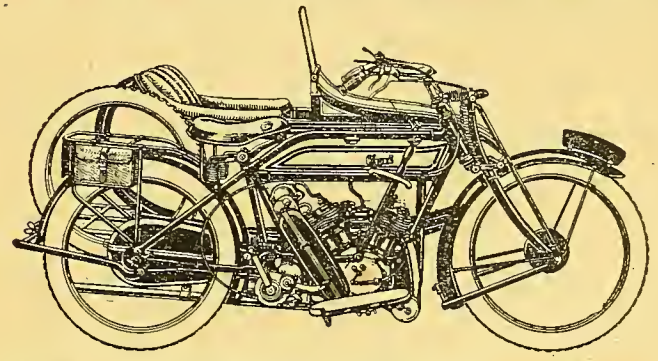
VICTORY CUP TRIAL.
3 GOLD MEDALS
1 SILVER MEDAL

THE JAMES CYCLE CO., LTD.
GREET, BIRMINGHAM.
London Showroom:
22, HOLBORN VIADUCT, E.C.1.

"THE BEST YOU CAN BUY."

MODEL No. 10. 7 H.P.
COMBINATION DE LUXE. £160

All-enclosed chain drive. 3-speed countershaft gear.
Hand and Heel Clutch. Interchangeable wheels, etc.



Write for full Catalogue of this and other James Models.

IMMEDIATE DELIVERY——NO WAITING.

Millford

See what you save!

A Millford Sidecar costs from £22. You know what your favourite solo machine costs. Add the two and see what you save compared with the price of a Combination.

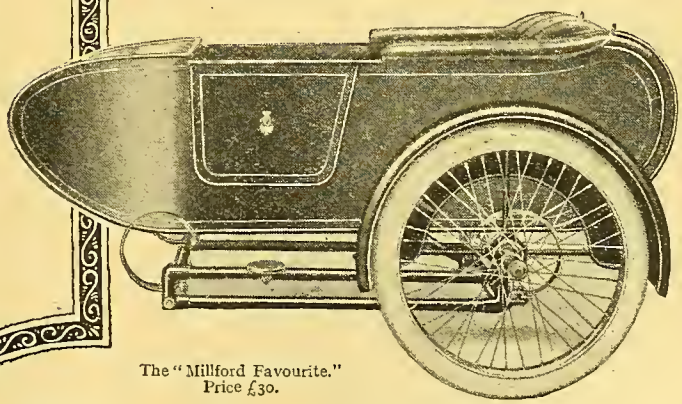
There are 8 models for 1922.

The "Favourite" has a bulbous back Body with ample luggage accommodation. Suitable for attachment to medium and high power machines.

*Write for Folder "B."*

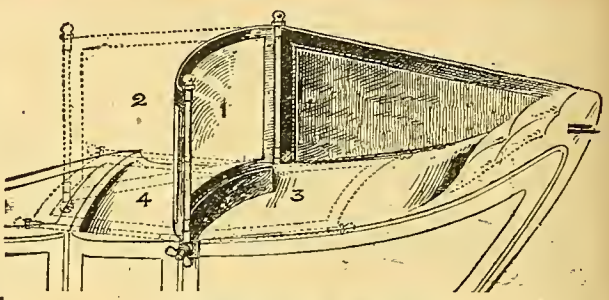
MILLS-FULFORD LIMITED, COVENTRY.
The *ORIGINAL* Sidecar Makers.
(*Established* 1899.)

Quality and Comfort



The "Millford Favourite."
Price £30.

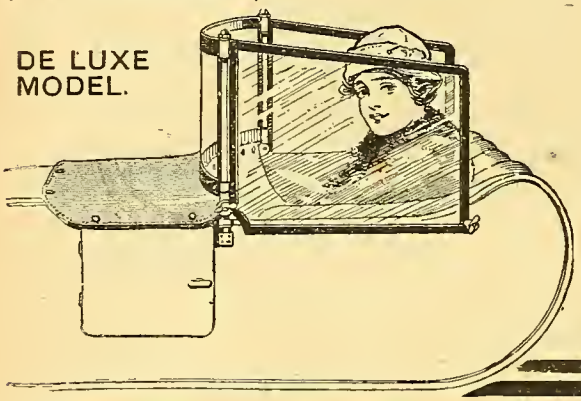
# CAMEO
## Windscreens
## Double the pleasure for your Passenger!




STANDARD MODEL.

The ease with which it is manipulated, its fine workmanship, splendid material, and simplicity make it the most attractive of all windscreens.

DE LUXE MODEL.



REGISTERED.

## Important Announcement
## REDUCTION IN PRICE

| | | |
|---|---|---|
| Screen only ... ... | £2 | 10 0 |
| With valance (as illustrated) | £2 | 15 0 |
| Side Panels „ each | £1 | 0 0 |
| Front Aprons ... ... | | 7 6 |

IMMEDIATE DELIVERY.

**OLLARD, WESTCOMBE & CO., LTD.,**
46-47, Great Charles Street, BIRMINGHAM.
'Phone—Central 682. 'Grams: "Ollard, Birmingham."

*Know your Speed & Mileage!*

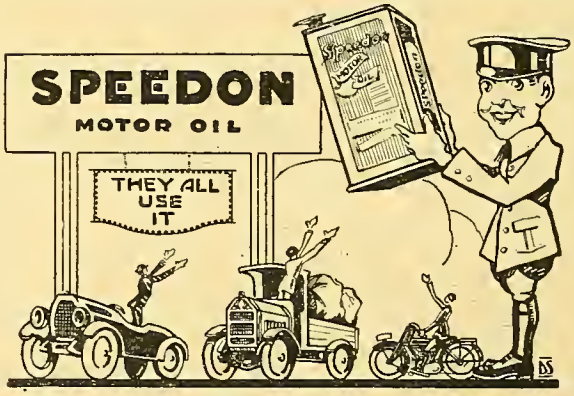
Model 142 (*as it is rated*—Black finish Nickel-plated bezel. Indicates speeds to 60 miles per hour. Total mileage counter to 10,000 and repeats. Quickly reset trip-counter.
**Price £3 5 0** (or without trip model 40) **£5 15 0**
Back wheel drive for Triumph, **5s** extra. Back wheel drive for Indian or Harley-Davidson, **10s.** extra.
*Manufactured by*
**NORTH & SONS, Ltd., WATFORD,** & 14, Sho-q., London, W.1

NORTH'S BRITISH MADE Watford

**SPEEDOMETERS** for Motor Cycles

H.G.

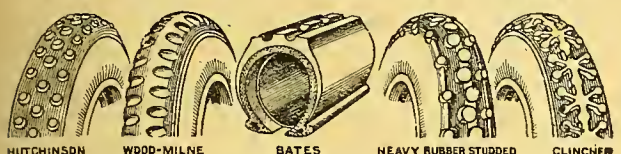
TO MOTOR CYCLE MANUFACTURERS and ENGINEERS
**CLIMAX TWO-STROKE ENGINES.**
A unique opportunity occurs for a Motor Cycle Firm desirous of taking up the manufacture of their own proprietary engine, to acquire the Design, Patterns, Dies, etc., for the production of this most successful Two-stroke Engine.
The sound mechanical construction of these engines has been demonstrated in many important Trials and Races. We have had NO MECHANICAL FAILURE in any competition.
The high efficiency to which this engine has been brought is proved by the fact that we hold **MORE LONG DISTANCE RECORDS AT BROOKLANDS than all other two-stroke engines together.**
Mr. J. F. NEWEY, the designer, will, if desired, place his valuable experience and research with two-stroke engines at the service of the purchaser.
To a firm out for a leading position with this type of engine, and able to develop the same commercially, this is undoubtedly a most favourable proposition.
THE NEWEY ENGINEERING CO.,
36, Ashted Row, Birmingham.




**John S. Morris & Son (Oils), Ltd., Cross Lane Oil Works, Manchester.**

# Equip Now for Easter at BENETFINKS

*"The CITY'S OWN STORE"*




## Look to Your TYRES!

**Do not let a "groggy" Tyre, Tube or Belt spoil your Easter touring while Benetfinks offer their reliable**

**CLEARANCE TYRES AT PRE-WAR PRICES.**

*REMEMBER BENETFINKS STAND BY ALL THEY SELL.*

| Size. | Make. | Price. |
|---|---|---|
| 24×2 | PALMER, 3 Ribbed | 15/6 |
| 24×2 | WOOD-MILNE | 15/- |
| 26×2 | PALMER, 3 Ribbed | 16/6 |
| 26×2¼ | MACKINTOSH Rubber Non-Skid | 25/- |
| „ | AVON, 3 Ribbed | 15/- |
| „ | BATES, Special 3 Ribbed | 27/6 |
| 26×2⅜ | PALMER Cord | 30/3 |
| „ | AVON Tricar | 26/9 |
| 26×2½ to fit 2¼ | PALMER Cord | 34/6 |
| | EXTRA HEAVY, Rubber Studded | 25/- |
| 26×2½ to fit 2⅜ | CLINCHER, Extra Heavy de Luxe | 18/9 |
| | WOOD-MILNE, 3 ply | 13/9 |
| „ | „ „ 4 „ | 16/3 |
| 650×65 | „ „ 3 „ | 14/- |
| „ | „ „ 4 „ Ex. Strong | 25/- |
| 26×3 | ENGLEBERT Passenger | 27/9 |
| 28×2½ | CLINCHER Dreadnought | 21/6 |
| 28×3 | CLIPPER Reflex, Very Heavy | 38/9 |
| 700×80 to fit 650×65 | EXTRA HEAVY, Rubber Studded, New | 42/6 |

Post free.

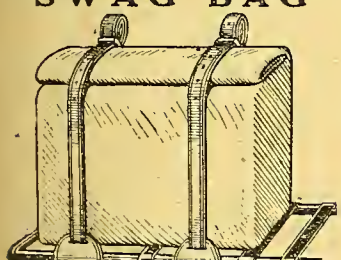
## NEW INNER TUBES

Made of finest quality **Extra Heavy** Red Rubber, GUARANTEED to give trouble-free service for 3000 miles. Specially manufactured for us by one of the biggest tyre makers in the Country. Fitted with standard valves and bolt valve plate, complete in box. Give one a trial. You will be surprised at their strength and good value.

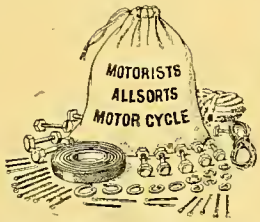
| Size | OUR PRICE | Other Makers | Size | OUR PRICE | Other Makers |
|---|---|---|---|---|---|
| 24×2 | 4/9 | 7/6 | 26×3 | 6/- | 10/6 |
| 26×2 | 4/9 | 8/- | 26×3×2½ | 6/- | 10/- |
| 26×2¼ | 5/- | 8/3 | 28×2½ | 5/9 | 10/6 |
| 26×2⅜ | 5/3 | 9/- | 28×3 | 6/- | 11/- |
| 26×2½×2 | 5/6 | 9/6 | 650×65 | 5/6 | 10/- |
| 26×2½ | 5/6 | 9/6 | 700×80 | 6/- | 10/6 |

Post 9d.

### The Famous LYCETT SWAG BAG



Made of stout mail canvas, thoroughly waterproof. Best quality leather straps. An ideal "hold-all" for motorcyclists. Can be carried quite flat when not in use. Size 11×8 Price **9/6** Post free. Size 17×8 Price **15/-**

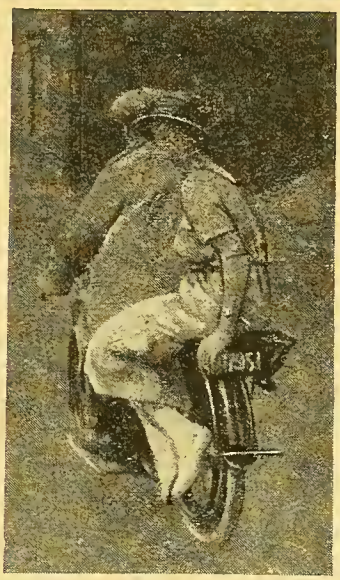



**No Kit is Complete Without Motorcyclists' "ALL SORTS"**

This bag contains assorted Bolts and Nuts, Spring Washers, Split Pins, Copper Wire, Asbestos String, Adhesive Tape. Complete in bag. Reduced Price **4/-** Post 9d.

**BENETFINKS, CHEAPSIDE, LONDON, E.C.2.**

# PILLION RIDING SNAPSHOTS ON THE ROAD



This Girl had

## NO Tan-Sad

Look at the **Pained Back.**

Look how the **Feet can catch in the Wheel—**

*That is why other Insurance Companies charge* **50%** *extra for Pillion Riding.*

How many miles could she do in such a strained position?

**This Girl HAS A TAN-SAD**

and shows

**SUPREME COMFORT, Every Confidence of Safety.**

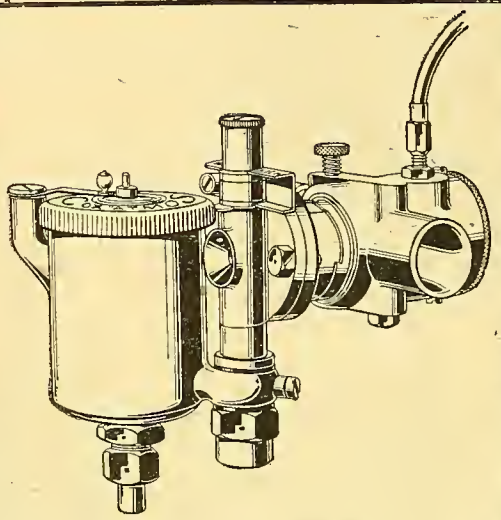
That is why

The GENERAL ACCIDENT and TAN-SAD issues an **Insurance Policy Covering Pillion Riding, FREE.**

Why not buy one NOW, and have this comfort ALL THROUGH SPRING AND SUMMER!

**TAN-SAD Ltd.** Freeman St., BIRMINGHAM.

# THE COX "ATMOS" CARBURETTER



AND THE **VICTORY CUP** TRIAL

**RIDERS OF THE FOLLOWING MACHINES USED COX "ATMOS."**
Ariel, Alldays Allon, B.S.A., Brough-Superior, Coventry-Challenge, Coventry-Victor, Excelsior, Humber, James, Morgan, New Imperial, New Hudson, O.K. Junior, Rhode and Sunbeam—

**WINNING**

## VICTORY CUP
Mr. B. Kershaw on a 2¼ New Imperial.

## PREMIER CUP
Mr. B. Kershaw on a 2¼ New Imperial.

## KNUTS' TROPHY
Team Prize—Mr. Perrey and Mr. Walker used Cox "Atmos" on B.S.A's.

**16 GOLD MEDALS**
**8 SILVER MEDALS**

TO GET DOWN TO REAL ENGINE TUNE—
**POWER, SPEED AND EFFICIENCY—FIT A COX "ATMOS."**
Price £4 10 0. Write for particulars of 60 days' trial.

**COX CARBURETTERS, LTD.,**
LOWER ESSEX STREET,
BIRMINGHAM.

# BIKE BUYERS LISTEN HERE!

It is safer for you to purchase in

**18 MONTHLY PAYMENTS**

We give a

## DISCOUNT

if you pay off the Instalments in a less number of months.

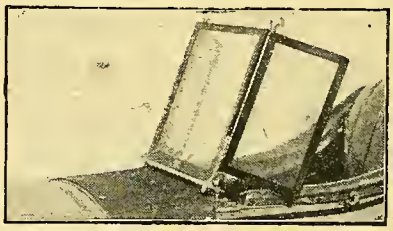
We will supply you with a Solo or Combination with any equipment that you desire, fully Insured, Licensed and delivered Carriage Paid.

You only pay our Deposit, and have no further cash to lay out.

*Send for Application Form. It places you under no obligation, and please note that we FINANCE OURSELVES.*

**RIDEEZI SALES LIMITED,**
5, VICTORIA STREET, LONDON, S.W.1.

**PENETRATING POINTS of the ORTO WINDSCREENS**



Automatic in action.
No lifting or undoing to get out.
Gives perfect protection.
Always gives a perfectly clear view.
Can be folded out of sight when not in use.
Does not cause eyestrain.
Adjustable in every possible way.
Can be fitted with Triplex Glass.
Always has a smart and neat appearance.
No fitting required—fixed in 5 minutes.

Price £3 12 6. Triplex Glass 24/- extra.

Adjustable Side Screens for Matchless 14/6 each, for Morgans, 32/6 each.

**ORTO HOODS**

Complete with Curtains and all fittings £3 to £4.

Two-seater Hoods, £4 to £5.

30 different models in stock to fit all the leading makes. Lists free.

**ATKINSON'S,** 306, Uxbridge Road, Shepherd's Bush, W.
'Phone - - - - - - - Hammersmith 140

# Julian's of Reading

## ARE YOU REQUIRING A LIGHT WEIGHT?

The fastest speed ever officially recorded on a Levis was accomplished by W. JULIAN :: on Brooklands. ::

LEVIS TWO STROKE

| | |
|---|---|
| Single Speed . . . | £48 |
| Two Speed . . . . | £58 |
| Kick Start £2 extra. | |
| Model G1 . . . . | £58 |
| Two Speed . . . . | £66 |

## ARE YOU REQUIRING A MEDIUM WEIGHT?

Norton — MODEL 16 H—£115.

TRIUMPH — RICARDO—£120.

A·J·S — 2¾ h.p. SPORTS—£85.

## ARE YOU REQUIRING A COMBINATION?

The most wonderful value in the world.

Matchless — THE PERFECT PASSENGER MOTORCYCLE

MODEL "J"
Touring Combination
**£150**

## ARE YOU REQUIRING A SPEED MOUNT?

ORDER NOW.
Early Delivery 70 m.p.h.
Squirrel
**£105**

Scott

FOR EARLY DELIVERY.
Specially Tuned 70 m.p.h.
Squirrel
**£105**

*W. JULIAN has secured Gold Medals in London—Exeter 1920, London—Land's End 1921, London—Edinburgh 1921, London—Exeter 1921, a feat unequalled by any other rider of a sidecar machine.*

## DEAL WITH THE RIDER-AGENTS.

*In London—Exeter Trial the brothers S. and W. JULIAN each obtained Gold Medals.*

*DEEDS NOT WORDS ! PERFORMANCES NOT PROMISES ! ! EXPERT ADVICE ! SERVICE ! ! SATISFACTION ! !*

## H. JULIAN, 84, Broad Street, READING

'Phone: 1024. BIGGEST DEALERS IN THE SOUTH.

## Genuine Bargain Offer

or our No. 38 SUPERIOR

**MOTOR CYCLE HOUSE.**

**Must not be confused with inferior buildings now being so freely offered by some Makers.**
**Ours is the best value for money in the kingdom.**

**Larger sizes suitable for motor car.**

| Size. | Height to eaves. | Height to ridge. | Reduced price. | Floor & sloping platform. | Treating. |
|---|---|---|---|---|---|
| 8'×6' | 6' | 8' | £9 12 6 | £2 0 0 | 9/6 |
| 9'×7' | 6' | 8'3" | 10 18 6 | 2 7 6 | 11/- |
| 10'×8' | 6' | 8'6" | 12 15 0 | 2 15 0 | 12/- |
| 12'×8' | 6' | 8'6" | 14 5 0 | 3 2 6 | 12/6 |
| 14'×8' | 6' | 8'6" | 16 0 0 | 3 10 0 | 15/- |
| 14'×10' | 7' | 10'3" | 20 7 6 | 5 7 6 | 17/6 |
| 16'×12' | 7' | 10'3" | 24 12 6 | 6 15 0 | 20/- |

Carriage paid to stations in England and Wales for cash with order. PROMPT DESPATCH. Made in complete sections to bolt together, of SEASONED BEST QUALITY Swedish Red Deal, planed, tongued and grooved from ⅞in. boards on strong framing, mortised, tenoned, and pinned together. Roof of matchboards covered with superior waterproof felt. Tongued and grooved FLOOR AND SLOPING PLATFORM made from ⅞in. boards. Two larger sizes 1in. floor and platform. Bolts and nuts for erection supplied. **Satisfaction guaranteed.** Write for Free List No. 88 for Bargains in Portable Buildings, or No. 7 for Motor Houses.
Estimates free to customers' own requirements.
The principal and best Makers at lowest prices of portable wood and iron buildings, poultry houses, etc.

**J. T. HOBSON & CO., BEDFORD.**
Established 80 years. Works 9 acres.

## E. T. MORRISS & Co.,
LIMITED,
**139, Finchley Road, N.W.3.**
Agents for :—

RALEIGH, TRIUMPH, ZENITH, MARTINSYDE, ROYAL ENFIELD, B.S.A., RUDGE-WHITWORTH, ECONOMIC, and A.J.S. Motor Cycles. Solo or Combination.

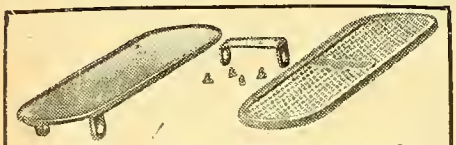
HILLMAN, ROVER, BELSIZE, and COVENTRY PREMIER CARS. ECONOMIC BUCKBOARD, any other make of Car or Cycle supplied.

ENFIELDS, TRIUMPHS, RUDGE, ZENITH BRADSHAW, B.S.A., and MARTINSYDE from stock.

BRADSHAW BELSIZE 9 h.p., from stock, £275.

HILLMAN, all accessories, repainted, bargain, £285.

Deferred payments, exchanges and Insurance.



## S. V. FOOTBOARDS

can be fitted by any rider to any Motor Cycle. Thick rubber pads remove all vibration.
Price **12/6** pair.
*Agents stock them or direct from the Manufacturers:*
**The Sun Cycle and Fittings Co., Ltd, Aston Brook Street, - - Birmingham.**

## STANLEY BELTS AND FASTENERS.

**MILLIONS ordered and in use by H.M. WAR OFFICE and our ALLIES.**

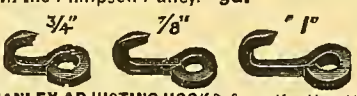
A BOX OF STANLEY SPARES is a complete belt equipment outfit—the best and cheapest insurance you can effect against belt trouble on the road. It contains

**The STANLEY FASTENER with the BEND that NEVER BREAKS, the BEST at any price. Hardened & tempered hook and flanged pins**

1/1

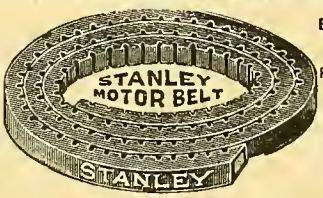
**The STANLEY SPARE LINK which is the best belt length adjuster yet invented. Saves time, trouble & money. Saves the cost of a new belt.**

**The STANLEY SHIELD, which protects the belt fastener, prevents wear of the pulley, and conserves power. Specially designed for use with the Philipson Pulley. 9d.**




**STANLEY ADJUSTING HOOKS, for adjusting the length of your belt in one second. Set of 3, 6d**

*"Never be without a box of Stanley Spares."*
*Price 3/6 post free. Send size of belt when ordering.*
**The LION FASTENER, guaranteed for 5,000 miles—11d.**
**Our Goods are World-renowned for their Reliability.**
**A STANLEY FASTENER free with each belt.**




**Belt Punches 1/6**
**Adjustable Punches 2/-**

| Per ft. | |
|---|---|
| ½" | 1/6 |
| ¾" | 1/7 |
| ⅞" | 1/10 |
| 1" | 2/2 |
| 1⅛" | 2/8 |

**Stanley Motor Belts & Fasteners Co.,**
BRITISH THROUGHOUT
**(STANLEY WEBB, inventor of the original Hook Belt Fastener and other Practical Belt Aids.)**
**32, London Road, BROMLEY, KENT.** 'Phone. Bromley 806

BE FREE FROM BURSTS, PUNCTURES, AND DELAYS. FILL YOUR TYRES WITH **SUPERPHILLING**

The only Filling equal to air. For Commercial and Touring Cars and Motor Cycles Full particulars from sole agents for England and Wales

**The R.F.D. CO., Queen's Road, Walton-on-Thames.**
Telephone—Esher 365. Trade enquiries invited.

## SIDECAR CHASSIS REPAIRS *to the* Trade

REPAIRS to all types and makes of sidecar chassis and frames quickly and efficiently carried out. First-class workmanship and material. Up-to-date plant. Quick delivery. Work done for the Trade. Send us your next repair job.

*List of lugs, wheels, springs, mudguards, etc.—all parts for building up chassis—sent to the Trade post free on request.*

**Dunhills** Limited
SPECIALISTS IN SIDECAR CHASSIS.
359 361, EUSTON RD. LONDON N.W.1

The man who rides knows what is wanted. Sixteen years' riding experience. Get this Book.

*Patterns Post Free.*

**SEND A CARD TO**
***IRVINE SMITH,***
***BUTTERSHAW, BRADFORD.***

## DRIVE AT NIGHT?

FIT one of our **LIGHTING DYNAMOS** and do away with acetelyne lamp troubles. These are very strongly made ball bearing machines, and can be run satisfactorily for head, side and tail lamps, either driven by friction or belt. Output 8 watts. **Easily fitted.**
**Only £1 7s 6.** Post 1/6.
W. H. TINDALL, King's Rd., Sunninghill, Ascot

## PULLEYS FOR ANY MOTOR

fixed to 4¼ in. dia., **9/-**
Adjustable plated, 5 in. dia., **15/6**; 6 in. dia., **21/6**
Countershaft Pulleys from **9/-**
All known makes stocked. Guaranteed. Post free.

**J. PERKINS,**
**455, High Road, LEYTON.**
'Phone: MARYLAND 1878.

## Reliable Oil Engines

For running small workshops and garages P.B. Gas or Oil Engines are ideal—Economical and Reliable, & inexpensive POWERS—from 1 h.p. to 10 h.p. Simply send postcard to-day asking for price and Booklet E.F.45

**FREE**
**P. B. LTD., Cambrian Works, WREXHAM.**

## MOTOR CYCLE MASCOTS

From 6/- upwards.
**Send for Illustrated List of NYMPHS, DEVILS, ANIMALS, etc.**
**NORTH LONDON CARRYING CO., Ltd., Carlton House, Regent St., W.1.**
Tel.: Gerrard 5186.
Telegrams: "Speednymfy, Piccy, London."

# REDUCED PRICES

## of "The Coventry" Cycle & Motor Cycle Chains

came into operation on the 1st instant, and these popular Chains may now be obtained from any dealer at the following prices :—

**MOTOR CYCLE CHAINS.**

| $\frac{3}{8}\times\frac{1}{8}$ | $\frac{1}{2}\times\frac{3}{16}$ | $\frac{1}{2}\times\frac{1}{4}$ | $\frac{5}{8}\times\frac{1}{4}$ | $\frac{5}{8}\times\frac{3}{8}$ | $\frac{3}{4}\times\frac{5}{16}$ | $\frac{3}{4}\times\frac{3}{8}$ | $\frac{3}{4}\times\frac{7}{16}$ |
|---|---|---|---|---|---|---|---|
| 3/7 | 4/5 | 4/10 | 5/6 | 5/10 | 6/2 | 6/6 | 7/- |

*The above prices are per foot.*

**"THE COVENTRY" CYCLE CHAINS.**

| | "3 Spires" | "O.A." | "Elite" |
|---|---|---|---|
| $\frac{1}{2}\times\frac{1}{8}$ & $\frac{1}{2}\times\frac{3}{16}$ ... | 5/10 | 7/- | 9/6 |
| Other sizes ... | 6/5 | 7/9 | 10/6 |

*Prices for Chains not exceeding 5 feet long.*

There is just time to fit "The Coventry" Chains to your mount for Easter, to ensure a tour free of all transmission troubles.

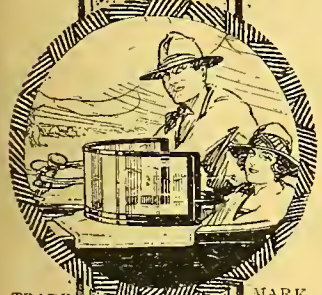
**"The Coventry" Chain Co. Ltd., Spon End Works, Coventry.**

LONDON MANCHESTER. GLASGOW. BIRMINGHAM. NEWCASTLE. NOTTINGHAM. BELFAST.

---

# Protection!

## FROM THE PASSENGER'S POINT OF VIEW.



The finest Combination is not the best Motor Cycle and the best Sidecar—but—the best Sidecar and an "EASTING."

An Easting Windscreen gives the utmost protection from any weather conditions—Wind, Rain, Dust, and Cold. It makes a Sidecar as cosy as a Coupé.

Judge your Sidecar by the comfort it gives; know more about passenger comfort; ask your dealer for full details, or write for latest list.

**ROYAL, £5; STANDARD, £3 18s.; BABY, £3**

TRADE MARK.

EASTING

**EASTING WINDSCREENS**

LIMITED.

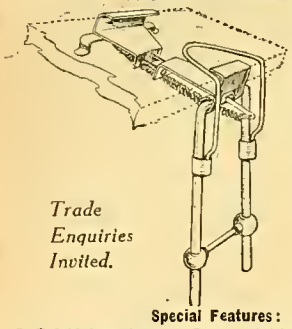
132, STEELHOUSE LANE, BIRMINGHAM.

*Stocked by all Agents, Garages, and Factors.*

*Sole Manufacturing Rights in U.S.A.:*

*SHILLAN, BECK & CO., INC.*

THE LAST WORD IN
# PROP-STANDS
*Patent applied for.*
**Fixed in a few seconds**



PRICE
**12/6**
EACH.

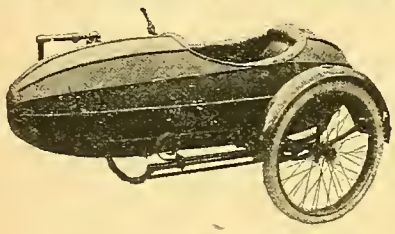
*Trade Enquiries Invited.*

Weight 16 ozs.

**Special Features:**
CONVENIENCE, SIMPLICITY, STRENGTH, EFFICIENCY.

*Write at once to:—*
**MOWBRAY BELLAIRS & CO.,**
**21, Little Chester Street, Belgrave Square, London, S.W.1.**
*Telephone: Victoria 5012 & 1280.*

# RENNOC SIDECARS

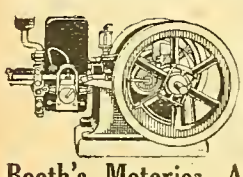


**Model 36. Immediate Delivery.**
*Send for Catalogue.*
24 Models to suit all makes of motor cycles.
Also we have a large stock of Clearance Sidecars and Bodies at cut prices.
**RENNOC MOTORS, LIMITED,**
**Progress Works, 155a, Marlborough Road,——Upper Holloway, N19**
'Phone: Hornsey 1589.

NO MORE AIR LEAKS
MAKE YOUR ENGINE JOINTS WITH
# METALASTENE

Tubes 1/- & 3/-

## ALUPOL
The Perfect Polish for all ALUMINIUM metalwork, wheel discs, bodies, etc. Imparts a brilliant lustre with a minimum of effort.
**Large Tubes, 1/3.**
*From* **Live Agents, Halford Depôts, J. Grose, Ltd., London,** *or post free from*
**METALASTENE CO., Poulton-le-Fylde**



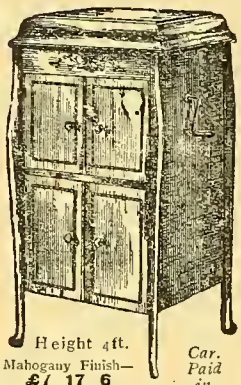
**1½ h.p., 2½ h.p., & 3 h.p. Petrol-Paraffin Engines**
For Farm or other stationary work. Hopper cooled, magneto ignition-governed. Easy to start. Sent out complete, ready to run. Send for list.
*Delivery from Stock.*
**Booth's Motories, A.C., Portland Place, HALIFAX.**

# GRAMOPHONE BARGAINS
## AT ONE THIRD OF COST.

HAVING purchased the entire stock of one of the largest Gramophone Cabinet Manufacturers in England, we are selling this exquisite Hornless Beautifully Figured Solid Oak Jacobean Cabinet, including Record Compartment which holds 100 records.

Beautifully Figured Solid Oak Jacobean Gramophone,
Height 3 ft.
Length 3 ft.

**£10 : 10 : 0**



Height 4ft.
Mahogany Finish—
**£7 17 6**
Solid Mahogany—
**£9 19 6**
*Carr. Paid in U.K.*

Also this Pedestal Model in Solid Mahogany and Mahogany Finish. Height 4 ft. All Gramophones are fitted with a powerful double spring, worm-driven Standard motor, 12 in. turntable, Swan neck tone arm, needle cups, etc. All wearing parts are fully guaranteed. Visit our show-rooms or, if preferred, we will send to any part of the United Kingdom packed free, carriage paid.
We guarantee to refund money in full if not entirely satisfied.
Write for Illustrated Catalogue.

**GRAMOPHONE MANUFACTURING Co.**
(DEPT. M C.)
**52, Tottenham Court Rd., London, W.1.**
*Telephone: Museum 3772.*

# Petrol & Oil Tanks

Tanks any shape to order. Repairs and re-enamelling from 15/6. Illustrated List free.

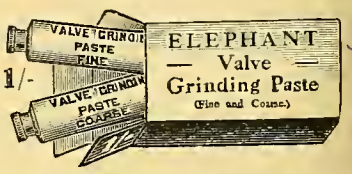
Auxiliary tanks, with filler, tap, T piece, piping, clips, complete, always in stock.

**A. GREEN, Water St., off Chapel St., Salford, Manchester**

# SLADE JAP 2¾ h.p. .. £52
**2-Speed, Kick Start, etc.**
Send for Specification and Photo.
# WHITTLE'S
**The last word in Lightweights.**
8, SLADE LANE, LONGSIGHT, MANCHESTER.

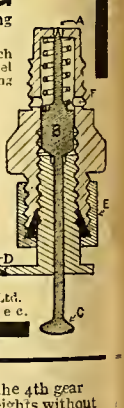
Also Licence Holders in Aluminium, Brass, Plated or Black Screw-on Front, 3/6 each.
4 alternative clips extra.
Adjustable Luggage Carrier, 37/6 each.
**PENNANT UTILITIES**
**"The Better Make."**
Aluminium Fionet Valve Caps, 4/6 each. Obtainable of all Agents or direct,
**Pennant Mfg. Co., Ltd. Watery Lane, B'ham.**

WHEN PREPARING YOUR MOTOR CYCLE FOR THE ROAD, YOU NEED




AND FOR CLEANING THE HANDS AFTER TAKING DOWN YOUR ENGINE,
## KLEENITOFF
IS THE CREAM OF HAND CLEANERS.
**1/- Tins. 2/- Hand-cleaning Outfits.**
ASK YOUR GARAGE FOR IT.
**THE ELEPHANT CHEMICAL CO., LTD., Neate St., Camberwell, LONDON, S.E.5.**

# EASY STARTING
**and Better Running is Assured by Fitting a "PROUD" Variable Jet.**




For **Starting,** press knob "C" smartly, which raises Plunger "B," forcing a spray of fuel through Jet "A" at high pressure, causing instant vaporisation.
**Choked Jets** are cleared in the same manner while riding.
**The Size of Jet** is also varied while riding by moving lever "D," allowing you to get the best results from your engine at all times.
For AMAC, B. & B. and SENSPRAY **8/4**
(Post free by return.)
*When ordering send old Jet and Holder as pattern, and give name and address of your Motor Agent.*
**PROUD-AUTOBITS, 20, Gosforth Rd., SOUTHPORT.**
*London Stockists:* Maude's Motor Mart, Gt. Portland St.; James Grose Ltd. Old Jewry; Service Co., Ltd. High Holborn; etc.

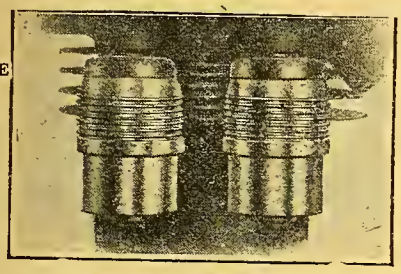
**Juckes' Patents** gears can have the 4th gear added at any time to light or heavyweights without alteration to the box, an
# IMPORTANT
**Feature, also 3 Speeds and Reverse.**
EFFICIENT MOTOR AND ENGINEERING CO., Bilston Road, Wolverhampton.
Stamp for List. Mention Paper.

**When tuning up for the coming season it would be a great mistake to omit fitting the**

# F.E.W. VALVE ATTACHMENT

**THE MAXIMUM EFFICIENCY DEVICE.**

J.A.P.
A.J.S.
BLACKBURNE
NORTON
B.S.A.
ROVER
SUNBEAM
TRIUMPH
DOUGLAS,
4 h.p.
ARIEL
BRADBURY
Etc., Etc.



Note the clean, neat exterior given to usually grimy, grit-covered valves.

**ADVANTAGES GAINED**

1. Complete Protection of Valves from Road Filth.
2. Perfect Lubrication of Valves and Guides.
3. Automatic Sealing Up of Inlet Valve Guide Air Leaks.
4. Easy Starting—Even Running.
5. No Sticking Valves.
6. More Miles per Gallon—10 to 25%.
7. Valve Noise Reduced to a Minimum.
8. A Dirty Spot cleaned up.
9. A Great Improvement in Appearance.
10. Increase in all-round Efficiency.

*For full particulars write to:—*

**F.E.W. PATENTS Co.,** 217 Gordon Road, Peckham, LONDON ——— S.E.15

# MOTEX Generators

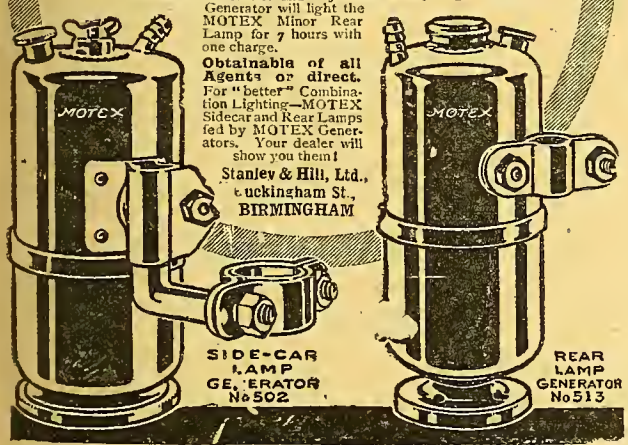
**Don't risk spoiling the night ride through having to "tinker" with your Generators—fit the MOTEX make, the Generators you can rely upon at all times!**

**No. 502, Sidecar Model Reduced Price 8/-**
—a strong efficient Generator which fits on Sidecar Chassis by means of strong bracket with universal movement.

**No. 513, Rear Lamp Model Reduced Price 6/-**
fits on Back Carrier and adjustable to any angle. This Generator will light the MOTEX Minor Rear Lamp for 7 hours with one charge.

**Obtainable of all Agents or direct.**
For "better" Combination Lighting—MOTEX Sidecar and Rear Lamps fed by MOTEX Generators. Your dealer will show you them!

Stanley & Hill, Ltd.,
Buckingham St.,
BIRMINGHAM




R.H.S.

# BRICO

TRADE MARK

**BRICO PISTON RINGS prevent the sooting of sparking plugs—and loss of POWER.**

A sparking plug taken from a BRICO equipped engine speaks volumes for the efficiency of BRICO Rings

It is always tinged with that light, reddish deposit which indicates perfect combustion and no leakage of oil—never, when BRICO Rings are used, will there be thick grease due to leaking oil, unless the cylinders are scored. BRICO Rings fit tight between the piston and the cylinder walls, leakage isimpossible.

Perfect compression and maximum power go hand in hand with BRICO Piston Rings

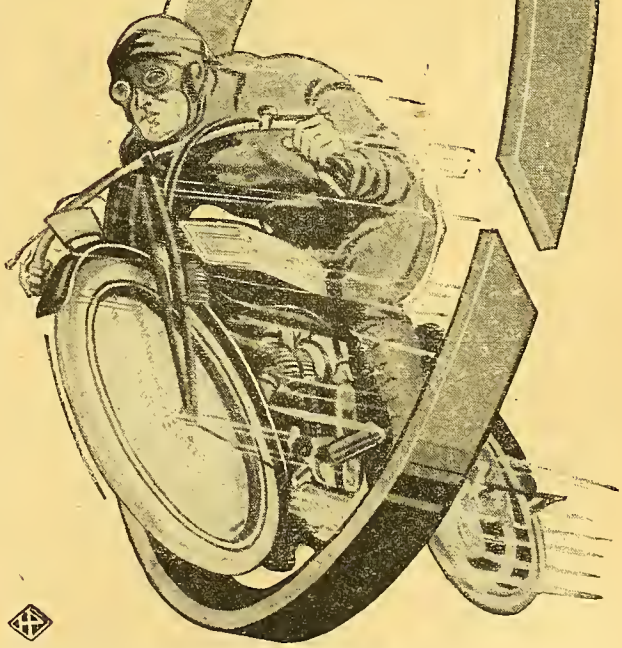
All A.J.S. T.T. WINNERS USED BRICO RINGS

*There is a BRICO Ring for every Engine* in stock at all Dealers, Agents, and Garages. Let BRICO Rings 'ginger up' your Engine.

*Don't just ask for a Piston Ring —— Ask for a BRICO and get the BEST.*

Pronounced "BRYCO"

THE BRITISH PISTON RING CO., LTD.
COVENTRY.



GET YOUR TYRES AT THE

# TYRE HOUSE

## SPECIAL BARGAINS IN BRAND NEW COVERS CLEARANCE.

*Quality counts as well as price.*

**24×2¼ for 24×2 Rim.**

| | |
|---|---|
| Clincher Junior De Luxe | 18/6 |

**26×2.**

| | |
|---|---|
| Clincher Ar Ribbed | 17/6 |
| Rodace Fluted Tread | 16/6 |

**26×2¼.**

| | |
|---|---|
| Wood-Milne Keygrip 3-Ply | 15/– |
| Wood-Milne Keygrip 4-Ply | 22/6 |
| Wood-Milne Combination | 25/6 |
| Rom Rubber Non-Skid | 27/6 |
| Pedley 3-Ribbed Medium | 33/– |
| Pedley 3-Ribbed Ex. Heavy | 37/6 |
| Hutchinson Passenger Rubber Stud | 37/6 |
| Goodrich Safety Tread | 33/– |
| Hutchinson Super Stud Strong | 36/6 |
| Hutchinson Super Stud Ex. Strong | 47/– |

**26×2¾ to fit 2¼ Rim.**

| | |
|---|---|
| Heavy Rubber Non-Skid, leading make | 35/– |
| Hutchinson 3-Ribbed | 31/– |
| Hutchinson Passenger Rubber Stud | 37/– |
| Hutchinson Super Stud | 41/6 |
| Hutchinson Super Stud Ex. Heavy | 49/6 |

**26×2½ to fit 2½ Rim.**

| | |
|---|---|
| Englebert Touring Rubber Stud | 39/6 |
| Hutchinson Rubber Stud | 38/6 |
| Dunlop Heavy | 46/– |
| Dunlop Ex. Heavy | 55/3 |
| Hutchinson Super Stud Ex. Heavy | 55/3 |

**26×2½ for 2½ Rim.**

| | |
|---|---|
| Clincher Sidecar Ribbed | 18/3 |
| Skew Rubber Non-Skid | 19/6 |
| Skew Ex. Heavy Rubber Non-Skid | 22/6 |
| Wood-Milne Combination | 25/6 |

**26×3 for 2½ Rim.**

| | |
|---|---|
| Hutchinson Rubber Stud | 51/6 |

**28×3.**

| | |
|---|---|
| Englebert Extra Heavy | 42/6 |
| Goodrich Safety Tread | 48/– |
| Firestone Non-Skid | 72/3 |
| Goodyear Diamond | 72/3 |
| Dominion Traxion Tread | 72/9 |
| Dunlop Ex. Heavy | 65/3 |

**28×2½.**

| | |
|---|---|
| Clincher Ribbed Sidecar | 23/6 |

**650×65.**

| | |
|---|---|
| Light Weight Fluted | 25/6 |
| Wood-Milne 3-Ply | 35/– |
| Wood-Milne 4-Ply | 38/6 |
| Clincher De Luxe | 39/6 |
| Hutchinson 3-Ribbed | 59/6 |

**700×80.**

| | |
|---|---|
| Heavy Rubber Stud | 39/6 |
| Avon Square Tread | 39/6 |
| Clincher Fluted | 41/3 |
| Firestone Non-Skid | 69/6 |

***All Goods sent Carriage Paid on 7 days' approval against remittance.***

## PIKE TYRE & RUBBER CO., LTD.,

THE TYRE HOUSE,

**83, Theobald's Rd, Holborn, W.C.1.**

'Phone: Museum 1543.



# A FEW SPECIAL BARGAINS

**left over from our clearance. Hurry up and secure one of those, which cannot be repeated after sold.**

Brand New 1922 7 h.p. **INDIAN**, Powerplus, spring frame, electrically equipped, speedometer, with new shop-soiled 1921 sidecar.....£150

Brand New 1921 6/7 h.p. **B.S.A.** Twin Combination, wide mudguards, list price £175.....Sale Price £148

Special Offer in New 8 h.p. 1922 **MATCHLESS—J.A.P.** Combination, 3-speed, detachable and interchangeable wheels, touring sidecar body.....£150

1919 8 h.p. **SUNBEAM** Combination, 3-speed, fully equipped, lamps, horn, hood, screen, etc. Perfect running order.....£125

1920 4 h.p. **TRIUMPH** Combination, fully equipped, tax paid till end of June, sidecar almost new. Perfect running order.....£95

1920 7 h.p. **MATCHLESS — M.A.G.** Combination, detachable wheels and spare wheel, dynamo lighting. Excellent condition.....£120

1921 4 h.p. **NORTON** Combination, fitted with lamps, horn, numerous spares. A splendid outfit in perfect order.....£115

Very special chance of almost brand new 1922 3½ h.p. **SUNBEAM**, fitted with Lucas dynamo electric lighting, Lucas horn, and tax paid till end of year. New and perfect condition in every way. Used about 50 miles. (You would not know it.) Cost £162....Sale Price £140

## A few cheap mounts all guaranteed in good running order.

2¾ h.p. **NEW IMPERIAL**, 2-speed, tax paid.....£35

2½ h.p. **COVENTRY EAGLE**, 2-stroke, 2-speed.....£35

2¼ h.p. **SUN VITESSE**, 2-speed.....£25

## SPECIAL BARGAIN TO AN AMATEUR MECHANIC

7 h.p. **INDIAN** Road Racer, free engine, clutch, wants overhauling. Very fast and powerful machine.....£15

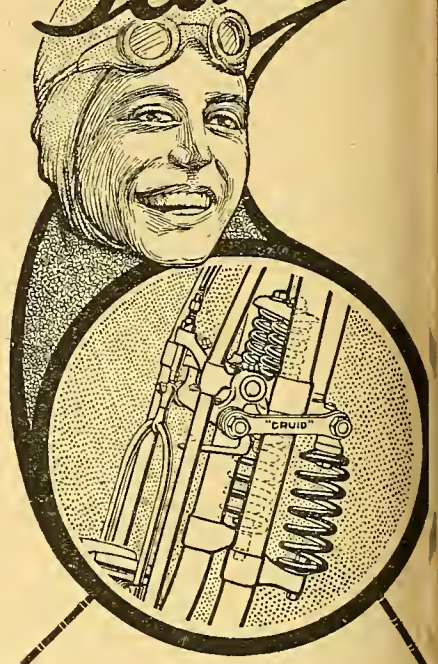
# ALEXANDER'S

**113-115, Lothian Rd., Edinburgh**

**272-274, Gt. Western Rd. Glasgow**



# Compelling Features




## "Self-contained"

The DRUID Fork is "Self-contained."

This means that all shocks encountered are completely absorbed within the fork itself—none being transmitted to any other part of the frame.

DRUID Springs are not anchored to any member of the frame, but ONLY to the unsprung portion of the fork itself—therefore any vibration which the springs do not take up returns to the front portion.

Illustration shows this principle as applied to the DRUID Mark II—the model with dual springing for vertical and horizontal shocks.

## Prompt Deliveries

The Season's motorcycling will be safer and more enjoyable if your machine is DRUID-equipped.

**A. DREW & CO., Limited, Leopold Street, Birmingham.**

# DRUID FORKS

R.H.S.

# READY FOR IMMEDIATE USE

**All the machines listed here, both new and secondhand, are actually in our Showrooms and are available for use at once. Those that are not already "tax paid" can be registered and provided with licence and number plates written within two or three hours. We can also issue immediate insurance cover and can supply and fit from our own comprehensive stock all accessories such as Lamps, Horns, Speedometers, Hoods, Windscreens, etc., etc.**

## NEW 1922 MODELS.

J.S., 7 h.p., Model D Standard Combination £175
J.S., 7 h.p., Model D Combination, with dynamo lighting £195
LLON, 2½ h.p., 2-stroke, 2 speeds, clutch and kick-starter £60
RIEL, 3½ h.p., Sports Model £87 10
S.A., 4½ h.p., Model H2, all chain £110
S.A., 4½ h.p., Model H2 Combination £142
S.A., 4½ h.p., Model K2, Chain-cum-belt £107
S.A., 4½ h.p., Model K2 Combination £139
S.A., 6 h.p., Model E, all chain £132
S.A., 6 h.p., Model E Combination £164
OUGLAS, 2¾ h.p., 2 speeds, "All on model" £75
OUGLAS, 6 h.p., Combination, detachable wheels, lamp, horn, windscreen £165
CCELSIOR VILLIERS, 2½ h.p., 2-stroke, Sporting model £39 18
AWKER, 2¾ h.p., 2-stroke, Model A £52 10
EVIS, 2½ h.p., 2 speeds, clutch, and k.s. £60
EVIS, 2½ h.p., Popular model, single speed £48

**LEVIS,** 2½ h.p., Model S, 2 speeds and clutch. £58
**MATCHLESS,** 8 h.p., Model H2 Standard Combination £170
**MATCHLESS,** 8 h.p., Model H2 Combination, with dynamo lighting £188
**MATCHLESS,** 8 h.p., Model J Sports Combination £160
**MATCHLESS,** 8 h.p., Model H 2-seater Combination, with dynamo lighting £193 10
**NEW IMPERIAL,** 2¾ h.p., Model No. 2, chain-cum-belt £69
**NEW IMPERIAL,** 2¾ h.p., Model No. 3, all chain drive £73
**NEW IMPERIAL,** 2¾ h.p., Model No. 1 £63
**N.U.T.,** 3½ h.p. Twin, Model M, chain-c.-belt £100
**N.U.T.,** 5 h.p., Model M, all chain drive £120
**ROYAL ENFIELD,** 8 h.p., Standard Comb. £140
**ROYAL ENFIELD,** 8 h.p., Combination, with dynamo lighting £158

**ROYAL ENFIELD,** 2½ h.p., 2 speeds £55
**ROYAL ENFIELD,** 2½ h.p., 2 speeds, with k.s. £57
**ROYAL ENFIELD,** 2½ h.p., Sports Model £55
**RUDGE,** 3½ h.p., 3 speeds, chain drive £94
**RUDGE-MULTI,** I.O.M. Model £77
**RUDGE-MULTI,** 3½ h.p., I.O.M. Model, with foot-starter £77
**SCOTT,** 3¾ h.p., Squirrel Model £105
**TRIUMPH,** 4 h.p., Model H, chain-cum-belt £105
**TRIUMPH,** 4 h.p., Model S.D., all chain £115
**TRIUMPH,** 2½ h.p., 2-stroke, 2 speeds £65
**TRIUMPH,** 4 h.p., Model S.D., with Gloria de Luxe Sidecar £157
**ZENITH,** 5 h.p., Sports Model C £110
**ZENITH-BRADSHAW,** 3½ h.p., Model A, Gradua gear £113
**ZENITH-BRADSHAW,** 3½ h.p., 3 speeds, all chain drive £119

## LIGHT CARS AND RUNABOUTS.

**AYLISS-THOMAS,** 10 h.p., 4-cylinder, 3 speeds, Lucas dynamo lighting set, hood, windscreen, detachable wheels and spare wheel, complete £315

**B.S.A.,** 10 h.p., water cooled, 3 speeds, self starter, Lucas dynamo lighting set, windscreen, hood, detachable wheels and spare wheel, complete £340

**MORGAN,** Popular model, 2-speeds, lamps, horn, hood and windscreen ... ... ... £150

**EXCHANGES** form a prominent part of our business as we replenish our second-hand stock by accepting used machines in part payment for new models.

## SECONDHAND MOTOR CYCLES.

**Every secondhand machine we offer is completely and thoroughly overhauled in our works and we give with it an exactly similar guarantee to that issued by the manufacturers when new.**

**OUGLAS,** 1917, 4 h.p., Combination, 3 speeds, clutch and kick starter £85
**OUGLAS,** 1916, 2¾ h.p., 2 speeds, lamps, horn, tax paid £38
**OVER,** 1919, 3½ h.p., 3 speeds, clutch and kick starter, lamps, horn, and Millford Sidecar £76
**OVER,** 1920, 5-6 h.p., countershaft, 3-speed gear, all chain drive, lamps, horn, speedometer, windscreen, Tan-Sad seat, and Millford Empress Sidecar £115
**NFIELD,** 1915, 3 h.p., 2 speeds, clutch and kick starter, lamps, speedometer, tax paid £35

**ENFIELD,** 1921, 8 h.p. Combination, 2 speeds, clutch and starter, Lucas Magdyno lighting, horn, screen and side curtains, tax paid £125
**ARIEL,** 1919, 3½ h.p., 3 speeds, clutch and kick starter, with Canoelet Touring Sidecar £76
**COULSON,** 1920, 2¾ h.p., Blackburne engine, 2 speeds, tax paid £52
**NEW IMPERIAL,** 1919, 2¾ h.p., 2 speeds, lamps, and horn, tax paid £38
**CLYNO,** 1918, 6 h.p. Combination, 3 speeds, clutch and kick starter, detachable wheels £95
**NEW IMPERIAL,** 1918, 8 h.p. Combination, 3 speeds, clutch and kick starter, speedometer, lamps, horn, hood, screen £75

**BROUGH,** 1920, 5 h.p., 3 speeds, clutch and kick starter, lamps, horn, speedometer, Henderson Elite Sidecar, Easting screen, tax paid £110
**P. & M.,** 1920, 3½ h.p., 2 speeds, clutch and kick starter, lamps, horn, speedometer, and Millford Sidecar, tax paid £80
**MATCHLESS,** 1921, 8 h.p. Combination, lamps, horn, hood, and screen, spare wheel, tax paid £140
**JAMES,** 1919, 4½ h.p. Combination, 3 speeds, clutch, and kick starter, lamps, horn, de Luxe Sidecar £80

**OUR DEFERRED PAYMENT SYSTEM** provides for delivery of the machine selected upon payment of a quarter of the purchase price, the balance can be divided into twelve equal monthly instalments and the extra charge is only 4%, except in a few cases where, the manufacturers have fixed a higher rate for their new models.

# THE EASTERN GARAGE CO'Y.

**(Official Repairers to R.A.C., A.C.U., A.A. and M.U.)**

**418, ROMFORD ROAD, FOREST GATE, E 7.**

**Telephone: 490 East Ham.** **Telegrams: "Egaraco, London."**

*In answering this advertisement it is desirable to mention "The Motor Cycle."* C15

## SOLOS.

| | £ | s. |
|---|---|---|
| **A.J.S.,** 2¾ h.p., Sports | 85 | 0 |
| **ALLON,** 2¼ h.p., 2-speed | 60 | 0 |
| **ARIEL,** 3½ h.p., 3-speed | 87 | 0 |
| **B.S.A.,** 4½ h.p., all chain | 110 | 0 |
| **CALTHORPE,** 2½ h.p. | 36 | 0 |
| **CALTHORPE,** 2½ h.p., 2-speed | 45 | 0 |
| **CALTHORPE J.A.P.,** 2¾ h.p. | 65 | 0 |
| **DOUGLAS,** 2¾ h.p., all on | 78 | 0 |
| **DOUGLAS,** 3½ h.p., O.H.V. | 130 | 0 |
| **DUNELT,** 4 h.p., 3-speed | 86 | 2 |
| **HUMBER,** 4½ h.p., Sports | 100 | 0 |
| **LEVIS,** 2½ h.p. | 48 | 0 |
| **LEVIS G.,** clutch and k.-s. | 68 | 0 |
| **MASSEY-ARRAN,** 2¾ h.p. | 72 | 10 |
| **MATCHLESS J.,** 8 h.p. | 130 | 0 |
| **NEW IMPERIAL,** 2¼ h.p. | 73 | 0 |
| **NEW IMPERIAL,** 350 c.c. | 84 | 0 |
| **NORTON,** 3½ h.p., 16H. | 118 | 0 |
| **O.K.,** 2¾ h.p. | 39 | 18 |
| **O.K.,** 2-speed | 55 | 13 |
| **O.K.,** 2-speed, clutch and k.-s. | 60 | 18 |
| **RUDGE,** 3½ h.p., I.O.M. | 77 | 0 |
| **SCOTT,** 3¾ h.p. | 105 | 0 |
| **SHEFFIELD HENDERSON,** O.H.V. | 110 | 0 |
| **SUNBEAM,** 3½ h.p. | 126 | 0 |
| **TRIUMPH,** 4 h.p. | 105 | 0 |
| **TRIUMPH,** all chain | 115 | 0 |
| **ZENITH-BRADSHAW** | 113 | 0 |
| **ZENITH,** 5 h.p., Sports | 110 | 0 |

## COMBINATIONS.

| | £ | s. |
|---|---|---|
| **A.J.S.,** 7 h.p. | 175 | 0 |
| **ARIEL,** 7 h.p. | 160 | 0 |
| **B.S.A.,** 4½ h.p., all chain | 142 | 0 |
| **B.S.A.,** 7 h.p. | 164 | 0 |
| **DOUGLAS,** 4 h.p. | 135 | 0 |
| **DUNELT,** 4 h.p., spare wheel | 113 | 0 |
| **HARLEY-DAVIDSON,** 7-9 h.p. | 185 | 0 |
| **ENFIELD,** 8 h.p. | 140 | 0 |
| **HUMBER,** 4½ h.p. | 140 | 0 |
| **MATCHLESS** Sports | 160 | 0 |
| **MATCHLESS** Special Touring | 150 | 0 |
| **MATCHLESS,** H2 | 70 | 0 |
| **MATCHLESS,** H2, 2-seater | 175 | 0 |
| **NEW IMPERIAL,** 8 h.p. | 145 | 0 |
| **NORTON** Big Four | 153 | 0 |
| **O.K.,** 3 h.p. | 96 | 10 |
| **P. and M.,** 4½ h.p., 4-speed | 130 | 0 |
| **SCOTT,** 3¾ h.p. | 140 | 0 |
| **SUNBEAM,** 4½ h.p. | 175 | 0 |
| **TRIUMPH,** 4 h.p. | 140 | 0 |

## BROUGH-SUPERIOR.

The Sporting Rider's Ideal.

| | £ | s. |
|---|---|---|
| Mark I., 8 h.p. | 150 | 0 |
| Mark I., Combination | 180 | 0 |
| Mark II., 6.5 h.p. | 125 | 0 |
| Mark II., 6.5 h.p. Combination | 150 | 0 |

**Book your order now to secure Delivery for Easter.**
**Sole London Agents.**

## LIGHT CARS.

### MORGANS.

We specialise in these wonderful Runabouts. Immediate delivery of most models.

| | £ | s. |
|---|---|---|
| **POPULAR** | 150 | 0 |
| **DE LUXE** A.C. | 175 | 0 |
| **DE LUXE** W.C. | 186 | 0 |
| **GRAND PRIX** | 180 | 0 |
| **FAMILY** W.C. | 191 | 0 |

Prices include lamps, horn, hood, screen, mats.

| | | |
|---|---|---|
| **BAYLISS-THOMAS,** 10.5 h.p., 4-cyl., W.C. dynamo | 315 | 0 |
| **ROVER,** 8 h.p., dynamo | 220 | 0 |
| **ROVER,** 8 h.p., De Luxe | 245 | 0 |

Earliest Delivery.

## SIDECARS.

### SWAN SPORTS (6 only).

**Slightly shop-soiled to clear, 20 guineas each.**
**HARLEY MODEL 25 guineas.**

### HENDERSON.

**Slightly shop-soiled at 10% off maker's prices.**
**Fitted while you wait.**

## SECOND-HAND MODELS. 3 MONTHS' GUARANTEE.

| | £ | s. |
|---|---|---|
| **TRIUMPH,** 1920, Baby 2½ h.p., 2-speed, completely equipped and in new condition throughout | 45 | 0 |
| **TRIUMPH,** 1919, 4 h.p., 3-speed clutch and k.-s., all lamps, horn and tools; run under 2,000 miles; semi-T.T. bars | 82 | 10 |
| **TRIUMPH,** countershaft, just been entirely rebuilt with new parts, re-enamelled and plated, makers' colours, new tyres, tubes, carburetter, chain and belt, etc.; indistinguishable from new in every respect | 85 | 0 |
| **TRIUMPH,** 1917-18, 4 h.p., 3-speed, clutch and k.-s., thoroughly overhauled, tank re-enamelled; in splendid condition | 75 | 0 |
| **TRIUMPH,** 1914, 4 h.p., 3-speed, entirely rebuilt, 50 per cent. new parts, re-enamelled and plated, as new, fully equipped, new tyres | 57 | 10 |
| **TRIUMPH,** 1913, 3½ h.p., T.T. clutch, lamps and horn | 35 | 0 |
| **DOUGLAS,** 1920, 4 h.p., and 1921 sidecar, fully equipped, unscratched; rare opportunity | 95 | 0 |
| **DOUGLAS** (two), 1919, 4 h.p., combinations, fully equipped, not W.D., in splendid condition throughout | 82 | 10 |
| **DOUGLAS** (three), 1917-18, 4 h.p., combinations, fully equipped and thoroughly overhauled | 77 | 10 |
| **DOUGLAS** (two), 1916-17, 2¾ h.p., 2-speed, fully equipped, in splendid condition | £47 | 10s. and |
| **DOUGLAS,** 1917-18, 4 h.p., solo, thoroughly overhauled, new tyres | 65 | 0 |
| **P. and M.,** 1919, 3½ h.p., 2-speed clutch and k.s., and Canoelet sports sidecar, fully equipped, all lamps, horn, speedometer, not W.D.; as new throughout | 77 | 10 |
| **P. and M.,** 1917, 3½ h.p., coach-built combination, 2-speed clutch and k.-s., windscreen; very sound | 62 | 10 |
| **RUDGE,** 1920, 3½ h.p., Multi, I.O.M., lamps and horn, in new condition | 60 | 0 |
| **RUDGE,** 1913, T.T., 3½ h.p., lug exhaust; very fast | 38 | 0 |
| **JAMES** (two), 1915-16, 4½ h.p., combinations, all enclosed chain drive, lamps and horn; can be thoroughly recommended | 67 | 10 |
| **LEVIS** (two), 1917, 2½ h.p., single speed, tanks re-enamelled and fully equipped; lovely little machines | 32 | 10 |
| **ALLON,** 1920, 2¾ h.p., 2-speed clutch, nearly new, hardly used, completely equipped | 48 | 0 |
| **A.B.C.,** 1921, 3 h.p., 4-speed, semi-T.T., practically new, splendid machine, very fast, all lamps | 77 | 10 |
| **NORTON,** 1921 (late), Big Four, and new 1922 Montgomery sidecar, brand new Lucas lamps, unscratched and indistinguishable from new | 120 | 0 |
| **ROVER,** 1917 (late), semi-sports, 3½ h.p., 3-speed clutch and k.-s., wide tank; very smart and fast | 67 | 10 |
| **ZENITH,** 1920, 8 h.p., Sports, exceptionally well kept, and in new condition throughout | 75 | 0 |
| **RUDGE,** 1921, I.O.M. Multi, as new, unscratched | 65 | 0 |
| **RUDGE,** 1917, I.O.M. Multi, very fast | 45 | 0 |
| **MATCHLESS,** Victory model combination, Lucas M.A.G. engine, dynamo lighting, electric horn, Easting screen, Watford speedometer, spare wheel, luggage and petrol, can carrier | 90 | 0 |

| | £ | s. |
|---|---|---|
| **B.S.A.,** 1917-18, 4½ h.p., all-chain drive, 3-speed clutch and k.-s., all lamps and horn | 65 | 0 |
| Or with sidecar | 77 | 10 |
| **NEW IMPERIAL,** 1917, 2¾ h.p., J.A.P., 2-speed; very carefully used | 38 | 0 |
| **HUMBER,** 1919, 4 h.p., flat twin, 3-speed clutch, all-chain drive; as new | 70 | 0 |
| Or with new sidecar | 87 | 10 |
| **ENFIELD,** 1917-18 combination, fully equipped, been stored for 18 months, new condition | 85 | 0 |
| **ARIEL,** 3½ h.p., and Watsonian Monarch sidecar, Easting windscreen, electric lighting; exceptionally good condition throughout | 80 | 0 |
| **ROYAL RUBY** 1918-19 combination, new sidecar, re-enamelled and plated makers' colours, all lamps | 95 | 0 |
| **VERUS,** 1920, 2½ h.p. Blackburne, 2-speed clutch, and k.-s., fully equipped, new condition | 55 | 0 |
| **BRADBURY,** 1913-14, 4 h.p., combination, 3-speed clutch, and coach-built sidecar, windscreen, all lamps and horn; snip | 50 | 0 |
| **COULSON,** 1920, 2¾ h.p. Blackburne, 3-speed, spring frame; good condition | 47 | 10 |
| **MORGAN,** 1920, De Luxe model, lamps, horn, screen, speedometer | 125 | 0 |
| **CARDEN,** 1921, 2-seater, electric lights, hood and screens | 75 | 0 |
| **ROVER,** 1913-14, 3½ h.p., 3-speed | 38 | 0 |
| **ARIEL,** 1914, 3½ h.p., 3-speed | 38 | 0 |
| **ENFIELD,** 1916, 3 h.p., 2-speed, fully equipped | 45 | 0 |
| **BRADBURY,** 1915, 3½ h.p., 2-speed, re-enamelled, and plated, perfect condition | 36 | 0 |
| **SCOTT,** 1921, Sports, 3¾ h.p., just been re-enamelled and plated, as new, exceptionally fast | 77 | 10 |

### RECONSTRUCTED MACHINES.

| | | |
|---|---|---|
| **DOUGLAS,** 2¾ h.p., fully equipped, lamps, horn, licence holder | 55 | 0 |
| **DOUGLAS,** 4 h.p., solo, 3-speed clutch, and k.-s., equipment as above | 75 | 0 |
| **DOUGLAS,** 4 h.p., combination; equipment as above; and brand new bulbous-back sidecar, finished saxe blue, upholstered in antique leather | 95 | 0 |
| **ROYAL RUBY,** 1919, equipment as above, 8 h.p., combination, brand new sidecar | 95 | 0 |
| **ROYAL ENFIELD,** 1919, equipment as above, 8 h.p., combination, brand new sidecar | 95 | 0 |
| **CLYNO,** 6 h.p., as above | 85 | 0 |
| **P. and M.,** 3½ h.p., 2-speed clutch, and k.-s. | 60 | 0 |
| **P. and M.,** 3½ h.p., 2-speed clutch, and k.-s., finished service green | 55 | 0 |

The above machines have been thoroughly overhauled, entirely rebuilt with new parts in our own works, re-enamelled and plated (makers' colours), and carry our usual guarantee for three months from date of purchase.

***Extended Payments only 4 per cent. extra.***

# ALLEN-BENNETT MOTOR CO., LTD.,

**9-10-11, Royal Parade, W. Croydon.** **'Phone Croydon 2450.**

**OPEN SATURDAYS UNTIL 7.30 p.m.** **Bus 59a from Charing Cross passes the door.**

## MOTOR CYCLES FOR SALE.

### Alldays.

£25.—1917 2¾h.p. Alldays-Alloa, 2-speed, running order, licensed.—King, Egrove Farm, Oxford. [8337

1918 Alldays-Allon 2¾h.p., 2-speed, clutch, K.S., accessories, tax paid; £40.—Stroud, Lechlade. [8399

ALLDAYS' Allon 1921 2¾h.p., C.K.S., etc., as new; £50.—15, Nightingale Lane, Hornsey, N.8. [7781

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Allons; unequalled service, repairs, etc. [3148

2¾h.p. Allon, guaranteed perfect, legshields, D.A set, all tools, run 250; £58.—133, South Lambeth Rd. [7728

ALLDAYS-VILLIERS, splendid running order; £30, or exchange.—Medley, 24, Coptfold Rd., Brentwood, Essex. [8178

ALLDAYS 2¾h.p., 2 speeds, clutch, kick starter; wanted, Cycle, 22in. frame, or Autowheel.—13, Cadogan Rd., Cromer. [8370

£35 or nearest offer.—Allon-de-Luxe 2¾h.p., late 1919, scarcely used, Lucas lamps.—Apply, Castle Hill, High Wycombe. [8853

1914.—Alldays' Matchless, 3½h.p., Bosch, Druids, 2 speeds, Duolops, faultless; £27.—Captain Collins, Sunbury Common. [7558

2¼h.p. Alldays' Matchless, Villiers 2-stroke engine, just overhauled; £20; take push-cycle part.—E. H. Macmillan, King's Langley. [7317

2¾h.p. Allday Allon, 1920, 2-speed, kick start and clutch, lamps, original tyres, in excellent condition and order; £48.—Hartnett, 35, Stafford Rd., Wallington (nr. Croydon). [8844

39 GNS. (1920 late).—Alldays Alloa, Sturmey-Archer 2-speed, kick start, hand clutch, legshields, lamps, horn, taxed for year, smart perfect order; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park W.11. Park 2071. Open Sunday morning. [8452

### American X.

1920 7-9h.p. American-X Combination, 3 speeds, K.S., etc.; £60 or exchange.—14, Swaton Rd., Bow. [8750

AMERICAN X 8-10h.p. 1920, perfect order, been used very little; £65.—McHudson, Market Weighton. 'Phone: No. 4. [7442

1921 American X 7-9h.p., 3-speed, at enormously reduced price; only slightly shop-soiled; Milford coachbuilt sidecar in stock to suit; if you require a powerful high grade combination at little above second-hand price write for our special clearance list.—Premier Motor Co., Aston Rd., Birmingham. [7243

### Ariel.

LAMBERT'S of Thetford for Ariels, all models. Immediate delivery. [8272

1920 3½h.p. Ariel, fully accessories, like new; £70.—Ross, 86, High Rd., Lee. [7918

1922 3½h.p. Sports Ariel, just delivered, immediate delivery; £87/10.—Dan Guy, Weymouth. [0823

ARIEL 3½h.p. Combination 1920, lamps, etc., perfect condition; £75.—Coryn, Walden, Hornchurch. [8709

F.O.C.H. have 1920 3½h.p. Ariel Combination, fully equipped; bargain.—5, Heath St., Hampstead. (Near Tube.) [7740

1920 3½h.p. Ariel, only done 500 miles, condition as new, fully equipped, licensed; best offer over £75.—King, Sandford Avenue, Church Stretton. [7631

ARIEL 5-6h.p. Combination, nearly new condition, guaranteed; £68, equipped.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6 (facing Princess Rd.). [8700

ARIEL 1919 5-6h.p. Combination, lamps, horn, speedometer, etc.; £85.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0066

ARIEL 6-6h.p. Combination (Oct., 1918), Stewart, Klaxon's, Easting, electric, spares, etc., licensed, insured; offers, appointment.—27, Griffin Rd., Plumstead, S.E.18. [7795

ARIEL Combination, 1920, 3½h.p., 3-speed, foot clutch, kick start, pillion, lamps, tools and accessories, excellent condition; offer.—Bradford, 17, Airedale Avenue, Chiswick. [8368

1921 4½h.p. Ariel, fully equipped, perfect condition, mechanical oiling, hand and foot clutch, legshields, licensed 1922, absolutely as new; £82.—100, Union St., Southwark, S.E.1. [790-

ARIEL 3½h.p. late 1920, 3-speed, chain-cum-belt drive, and Canoelet D4 sidecar, acetylene lamps, Lucas horn, Watford speedometer. The outfit has not been driven more than 2,000 miles, and is in perfect mechanical order, and enamel and plating unscratched; £105.—Everingham, George St., Pocklington. [7366


# EASTER BARGAINS!

## A FEW EXAMPLES.

**Be assured of an enjoyable Easter by purchasing a machine from us, either new or second-hand.**

## CASH or DEFERRED PAYMENTS

| DEPOSIT and | | 12 MONTHLY PAYMENTS. |
|---|---|---|
| £25 | **SCOTT, 1920.** T.T., electric lamps, horn, Ace discs, tax paid, oversize tyres | £4-15-0 |
| £20 | **BLACKBURNE, 1920.** 4 h.p., 3-speed, K.S. Clutch, fully equipped, excellent condition ... ... ... ... | £5-8-0 |
| £30 | **SCOTT, 1922.** Specially fast, Squirrel, Lucas accessories, Bonniksen, mileage 350 ... ... ... ... | £6-5-5 |
| £50 | **MORGAN, 1921.** W.C., Grand Prix, Mag. engine, tax paid, absolutely as new ... | £10-6-0 |
| £40 | **G.N., 1920.** Sporting model, dynamo lighting, spare wheel, good condition | £7-3-4 |
| £25 | **ALLDAYS-ALLON, 1921.** 2¾ h.p., 3-speed Combination, K.S. Clutch, fully equipped, speedometer, mud-shield, screen ... ... ... ... | £4-0-9 |
| £40 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p. C.B. Combination, electrical model, fine condition | £8-10-3 |
| £30 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p., electrical model, electric horn, new condition. | £6-5-5 |
| £25 | **NORTON (1921, LATE).** 3½ h.p., No. 9 Model, equipped as new. ... ... ... ... | £4-9-7 |
| £27 | **NUT, 1920.** 3½ h.p., twin Lucas, dynamo lighting, indistinguishable from new ... ... ... ... | £6-10-0 |
| £40 | **SUNBEAM, 1918.** 3½ h.p. Combination, 3-speed, K.S. Clutch, fully equipped, good condition ... ... ... | £5-7-6 |
| £40 | **BAT (1 ONLY).** NEW (SHOP-SOILED), 6 h.p., 3-speed, C./K.S. ... ... | £8-6-8 |
| £40 | **HARLEY-DAVIDSON.** 4-5 h.p. sports, Swan sporting sidecar, fully equipped, as new | £9-3-4 |
| £30 | **A.J.S. 1918 COMBINATION** LUCAS accessories, spare wheel, screen, speedometer, tax paid. ... ... ... ... | £6-5-5 |
| £24 | **TRIUMPH, 1919.** GLORIA Combination, fully equipped, leg shields, tax paid, good condition ... ... ... | £5-0-0 |
| £15 | **INDIAN.** T. T. Clutch model, fully equipped, very fast ... ... | £2-13-9 |
| £40 | **COVENTRY PREMIER, 1921.** 3-wheeler, dynamo, spare wheel, dickey seat, water-cooled, 3-speed and reverse, as new ... ... ... ... | £9-12-0 |

# PARKER'S

**BOLTON: Bradshawgate. Tel. 1348.**

**MANCHESTER: 245, Deansgate. Tel. Cen. 864.**


## MOTOR CYCLES FOR SALE.

### Ariel.

ARIEL.—All models, cash or gradual payments. Spares supplied from stock.—West Central Agency, Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0704

1921 (July) 6-7h.p. Ariel De Luxe Combination, all-chain drive, hand and foot clutch, dynamo lighting, electric horn, screen, better than new; any trial; bought car; £150.—31, Corsica St., Highbury, N.5. North 1143. [7778

ARIELS.—Longman Bros., Bond St., Ealing. Telephone: 689.—All models obtainable from the Ariel experts. Specially tuned sports models, 3-speed, certified to have exceeded 65 m.p.h.; £92/10. Cash, exchange, or deferred payments. [5785

ARIEL 3½h.p. 1920, with Montgomery sporting sidecar, Baby Easting windscreen, acetylene and electric lighting sets, speedometer, mirror, etc., perfect condition; £100, bargain.—Margesson, Fiat Motors, Wembley. 'Phone, 186. [8287

ARIELS, the most reliable machines on the road: all models from stock; spare parts sent anywhere; trade supplied.—F. Speakman, Ariel Expert, Ariel Garage, 7, Rochdale Rd., Harpurhay, Manchester. Tel.: 325 Cheetham Hill. [5135

1919 3½h.p. Ariel, and Sidecar; bought new, and only driven by present owner, now buying cycle car; wearing parts and tyres recently renewed; electric lighting, legshields, numerous spares; trial willingly; £70.—Walker, Cottingley, Bingley, Yorkshire. [7578

ARIEL 1919 6-7h.p. Combination, (under 5,000 miles), attractive sporting coachbuilt sidecar, electric lighting, Stewart speedometer, Cameo windscreen, Klaxon, splendid running order, tax paid December, 1922; £100.—Smith, 6, Linden Rd., Muswell Hill, N.10. [7460

ARIEL 1920 3½h.p. Sporting Combination, 3-speed countershaft, clutch, Powell and Hanmer dynamo, electric lighting, decompresser, horn, mirror, speedometer, Zeppelin-shaped sidecar, Easting, year's tax paid, insured to October, done 5,000 miles; £95.—Clarke, 37, Ruby Rd., Walthamstow, E.17. [7592

*Spare Parts:*

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Ariel Spares. [5704

ARIEL Spares for all models, post free. Ariel Agents, and Spares Service Depot.—Jones Garage, Broadway, Muswell Hill, N.10 [0804

### Arno.

ARNO 4h.p., 3-speed, clutch, absolutely new Druids, new Clincher; £40, offers.—Plumstead Vicarage, Woolwich [8143

### Bat.

BAT 3½h.p., spring frame, Bosch magneto, good order; £12/10.—68, Gloucester Rd., Camden Town. [7849

8h.p. Bat, overhauled throughout, re-enamelled, plated, guaranteed 65 m.p.h.; £40.—Cogger, School of Education, Shorncliffe. [8148

BAT-J.A.P. 6h.p. and sidecar, with hood, 1921, as new, dynamo lighting set, spare wheel, horn, tools, spares; £110.—311, Wandsworth Rd., S.W.8. 'Phone: Brixton 1921. [8652

83 GNS., exchange.—1920 Bat-Jap 8h.p., 3 speeds, clutch, kick start, sporting sidecar, equipped, fast, any examination, trial.—Seabridge, 35, Hansler Rd., East Dulwich. (Sydenham 2452.) [7240

BAT-J.A.P. 8h.p., Grade gear, accessories, splendid condition, very fast, exchange lower power or sell; £35; canoelet sporting sidecar (optional), £8 extra.—Cowdell, 1, Minstead Rd., Endinbton, Birmingham. [8375

### Beardmore.

BEARDMORE-PRECISION 1919 3½h.p., 2-stroke, excellent order; £50.—The Morris Garages, Oxford. [7353

BEARDMORE-PRECISION.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7227

BARR and Stroud engined Beardmore-Precision 1922 new models for immediate delivery anywhere.—Baldock's Garage, Burton-on-Trent. Telephone: 465. [7700

BEARDMORE-PRECISION Combination 3½h.p. 1921, spring frame, electric lighting, excellent condition and appearance; £80.—Chirney's Garage, Harpenden. [4651

1922 Beardmore Precision 3h.p. Sports Model. Sturmey-Archer gear box, brand new, £65; 3h.p. chain-drive sidecar combination, £85; wonderful value; easy payments only 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [7244

BEARDMORE-PRECISION, all chain, spring frame, overhauled by makers this January and refitted with 1922 pattern parts, insured, licensed, accessories; best offer over £44; owner going abroad immediately.—Priston, 27, Putney Hill, S.W. (D) [6008

## MOTOR CYCLES FOR SALE.

### Beardmore.

BEARDMORE-PRECISION 3½h.p., new September, 1921, mileage under 500, clutch, kick start, B.T.H. electric lighting complete. Bonniksen trip, horn, licensed, unscratched, as new; £59/10; Kenningfon.—Box 9656, c/o *The Motor Cycle.* (D) [7835

### Blackburne.

1920 4h.p. Blackburne, full accessories, bargain; £74.—Ross, 86, High Rd., Lee. [7922

BLACKBURNE 4h.p., 3-speed, thoroughly overhauled; £45.—Nicholas, 30, Little Trinity Lane, E.C. [7398

8h.p. Blackburne, new, unregistered; owner buying Morgan; accept £95.—12, St. Romans Rd., Southsea. [7628

8h.p. Blackburne and Canoelet Bulbous Back Sidecar, bought Sept., 1920, including all accessories, excellent condition; £110.—Shalders, 10, Golden Sq., W.1. [7342

BLACKBURNE 4h.p., October, 1919, 1921 Canoelet sidecar, Easting Royal, electric light, Klaxon, trip Cowey, Brampton spring chain, any trial; £95.—Austin, 2, Abbotts Rd., East Ham. [7506

4h.p. 1920 Blackburne Combination, excellent condition, new tyres and chains, Easting, Klaxon, Binks, all lamps, tools, spare chains, etc. 90 m.p.g.; £80.—15, King's Terrace, Southsea. [7629

BLACKBURNE-DALTON 1921 2¾h.p., Burman 2-speed clutch, K.S., electric lamps, mileage 700, perfect condition, cost £115, bargain; £59.—Talbot, 30, Brookfield Park, Highgate Rd., N.W.5. [8361

*Spare Parts:*

BLACKBURNE Engine spares from stock.—Maudes' Motor Mart, 100, Gt. Portland St., W.1. [7884

### Bradbury.

BRADBURY 3½h.p.; real bargain, £13/19; Bosch, Senspray, Dunlops.—Littleover Motors, Derby. [7373

BRADBURY Combination, polished aluminium body, splendid outfit; £35.—17, Heaton Rd., Mitcham. [8289

BARGAIN.—4h.p. Bradbury C.B. combination, lamps, spares, excellent condition; £44.—144, Clarence Rd., Wimbledon. [7784

BRADBURY 4½h.p. Combination, C.S. gears, K.S., chain drive, fully equipped, as new; £65.—174, Vicarage Rd., Leyton. [8042

38 GNS.—4h.p. Bradbury coachbuilt Combination, 3-speed, and clutch, excellent condition, any trial.—130, Beulah Hill, Norwood. [8695

BRADBURY Combination, 1920, 4h.p., Montgomery sidecar, lamps, Cowey horn, excellent condition; nearest £95.—Scott, Sunscales, Cockermouth. [7402

BRADBURY, 6h.p., 1921 Twin, 3 speeds, chain drive, hand and foot-controlled clutch, new and unused; £96.—Eagles and Co., 275, High St., Acton, London. [8518

BRADBURY, £40.—4h.p. coachbuilt combination, 2-speed, large underslung sidecar, all in perfect condition, seen by appointment.—Bryant, 51, Barretts Grove, Stoke Newington. [8007

1921 6h.p. Bradbury and sidecar, lamps, horn, etc., spare wheel, and spare wheel carrier fitted to sidecar, sliding Orto windscreen, licence and insurance paid for the year; £120, a bargain.—McHudson, Market Weighton. 'Phone: No. 4. [7443

BRADBURY Motor Cycle, 4h.p., and wicker goods carrier, 2-speed, free engine, accessories, engine No. 9357; price £22/10 lot. Apply to the Purchasing Agent, Great Eastern Railway, Liverpool St. Station. Telephone: London Wall 3585 ex. 5. [3479

*Spare Parts:*

BRADBURY Spares and Repairs.—Agents, Bright and Hayles, 78, Church St., Camberwell. [8030

### Brough.

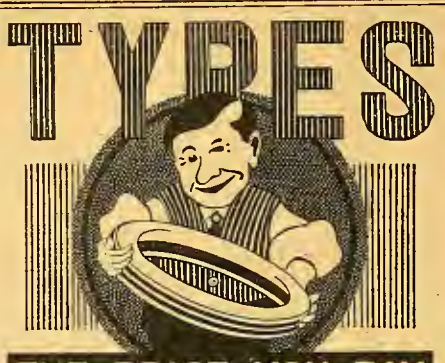
BROUGH 1916 3½h.p., o.h.v.'s, 3-speed, used one season; cash £60; exchange Lea-Francis,, lightweight; evenings.—120, Marlborough Flats, Walton St., Chelsea, S.W.3. [8371

BROUGH 1920 3½h.p., o.h.v., sporting model flat twin, 60 m.p.h., 2-speed, free, Amac, full lamp set, Lucas horn, tools, etc., tax paid for 1922, has been little and carefully used and is very hot stuff on the road, tyres as new; accept £65; a real bargain.—R. Watson, Victoria Rd., Aldeburgh, Suffolk. [8836

### Brough Superior

BROUGH SUPERIOR 8h.p. o.h.v. Combination, new September, 1921, cost £220; price £140.—17, St. Charles Sq., W.10. [6233

BROUGH SUPERIORS.—Order your new mount from us. We are the Brough experts. Specially tuned to order. Mark I., 8h.p., side valve, £150; sporting combination, with screen, step, mat, and apron, £180; Mark I., 90mm. bore, o.h.v., £160; Mark II., 6.5h.p. M.A.G. engine, £125; Mark II. combination, £150. Special Service Agents; lists.—G. and J. Dawson, The Ideal Garage, Cambridge. 'Phone: 993 [0834


THE PRICE YOU PAY
*for the price of Perfection.*

**As we shall be shortly marketing a new Motorcycle Cover of our own design, we are anxious to dispose of our present stock of various makes at the following special prices.** ***These covers are not old W.D. stock, but special clearance lines which we have purchased at slump prices.***

| Size. | Make. | Our Price. | List Price. |
|---|---|---|---|
| 24×2 | **Palmer,** ribbed | 21/- | 29/6 |
| 24×2½ | **Clincher de Luxe,** ex. heavy.. | 28/9 | — |
| 26×2 | **Englebert,** Passenger, rub. std | 17/6 | 53/- |
| " | **Englebert,** Touring, rub. std.. | 14/- | 46/3 |
| 26×2¼ | **Bates,** special hvy., wired-on. | 32/6 | 38/6 |
| " | **Bates,** special heavy, beaded. | 28/6 | 40/- |
| " | **Dunlop,** heavy rub. std. .... | 28/6 | 37/3 |
| " | **Clincher de Luxe,** heavy..... | 24/6 | 35/6 |
| " | **Wood-Milne** or **Spencer Moulton,** extra heavy ..... | 22/6 | 50/- |
| " | **Englebert,** Touring, rub. std.. | 15/- | 49/- |
| 26×2½ | **Dunlop,** heavy rubber std.... | 29/6 | 41/6 |
| " | **Avon,** Tricar rubber studded. | 26/- | 40/3 |
| " | **Hutchinson,** rubber studded . | 25/- | 49/6 |
| " | **Clincher de Luxe,** ex heavy | 24/6 | 47/6 |
| 26×2½ / ×2¼ | **Clincher de Luxe,** ex heavy.. **Heavy,** rubber studded..... | 39/6 27/6 | 49/- — |
| 26×2½ | **Goodrich,** safety tread ..... | 40/- | 52/6 |
| " | **Bates,** special heavy ..... | 29/6 | 56/- |
| " | **Clincher de Luxe,** heavy..... | 25/- | 28/3 |
| *26×3 | **Elite,** extra heavy, 3-rib..... | 56/- | 66/- |
| " | **Englebert,** Passenger, rub. std. | 32/6 | 64/9 |
| | * Fits 650×65 Rims. | | |
| 28×2½ | **Goodyear,** rubber non-skid .. | 35/- | — |
| 28×3 | **Goodrich,** safety tread ..... | 48/- | 65/- |
| " | **Englebert,** Racing, ex. heavy | 36/6 | 70/6 |
| " | **Elite,** grooved retreads ..... | 17/6 | — |
| 650×65 | **Goodrich,** safety tread ..... | 40/- | 67/6 |
| " | **Clincher de Luxe,** ex. heavy . | 30/- | 64/6 |
| " | **Soly,** rubber non-skid ..... | 21/6 | 63/- |
| 700×80 | **Goodrich,** safety tread ..... | 48/- | 69/- |

**BELTS** IN STANDARD LENGTHS

| | ⅝ in. | ¾ in. | ⅞ in. | 1 in. | 1½ in. |
|---|---|---|---|---|---|
| Bates Avon .. etc., per foot .. | 1/- | 1/5 | 1/9 | 2/- | 2/6 |

**TUBES** BEST QUALITY GUARANTEED.

| | | | |
|---|---|---|---|
| 24 × 2, 4/9 | 26 × 2¼, 5/3 | 26×2½, 5/6 | |
| 26 × 2, 4/9 | 26 × 2½ 5/6 | 28×3, 6/- | |
| 26 × 2¼, 5/- | × 2½ | 700×80, 6/- | |

**These Special Clearance Lines are sent on 7 days' Approval against remittance. CARRIAGE PAID**

YOU CANNOT BUY FROM A BETTER FIRM

ORDER THE ELITE WAY

LONDON'S LEADING TYRE HOUSE.

PHONE: Victoria 6553 6554.

264-66, VAUXHALL BRIDGE Rd. LONDON, S.W.1
& AT 44, SURBITON Rd. KINGSTON-ON-THAMES
Please address all orders to Vauxhall Bridge Rd.

PHONE: Kingston 3355.

Hours of Business——9 till 6; Sat., 9 till 1.

*Steele*


## MOTOR CYCLES FOR SALE.

### Brough Superior.

ALLEN-BENNETT Motor Co., Ltd., Service De and sole London agents for the Brough Supe the sporting rider's ideal.—Immediate delivery of 1 models at reduced prices. Mark 1., 90×77½, o.h.v speed, clutch, and kick starter, £160; Mark 1., spor combination, step, mat, screen, etc., £180, or special side valve J.A.P. engine, same price; M II. 6.5, mag., 72×90, 3-speed, clutch, and kick sta £125; sporting combination, step, mat, screen, £150. Demonstration models in stock. Catalogues post free on request.—The Allen-Bennett Motor Ltd., 9-10-11, Royal Parade, London Rd., West C don. 'Phone: Croydon 2450. [0

*Spare Parts:*

SPARES.—All engine, gear box, and frame sp for Brough Superior in stock; write for list G. and J. Dawson, The Ideal Garage, Cambridge [0

### Brown.

3½h.p. Brown, Bosch mag., Druid forks, low, g tyres and belt; £15.—Anthony, 1, Townsh Cottages, St. John's Wood, N.W.8. [8

BROWN 3½h.p. automatic carburetter, drop frame, brass exhaust, grips, sporty, fast, macb in daily use; nearest £16.—Private Garage, Vi Rd., Penge. [6

### B.S.A.

B.S.A.—Complete range in stock, catalogues pleasure.

B.S.A. Specialists.—County Cycle and Motor Broad St., Birmingham. [4

LAMBERT'S of Thetford for B.S.A. motors. La models in stock. [8

B.S.A. Combination; £75, a very nice lot.—3 Green St., Upton Park. [72

B.S.A. 3½h.p., free engine, perfect condition; £ —Steer, 67, Balmoral Rd., N.W.2. [47

B.S.A. 1922.—All models; immediate deliveries Clifford Motories, Eastwood, Notts. [88

B.S.A. 3½h.p., 2-speed, free engine, pedal start accessories; £29, bargain.—Moss, Wem. [87

£35.—3½h.p. 2-speed Combination, good conditio evenings.—24, Oxford Rd., Upper Norwood. [86

1916 4½h.p. B.S.A., belt-cum-chain, renovated li new, bargain; £55.—Ross, 86, High Rd., Le [79

B.S.A. 3½h.p. 1914, 2-speed, clutch, condition a appearance good; £32/10.—4, Austin-Waye, U bridge. [865

B.S.A. 4½h.p. 1918, smart; wanted exchange Stagg, "Woodbine," St. John's Rd., Newpo Wight. [81

NEW 1921 4½h.p. B.S.A. Combination and acc sories; £125.—Bounds' Garage, 223, High R Kilburn. [76

B.S.A. Combination, new May, 1921, all spar perfect.—G. E. Vinter, Sutterton, Boston, Li colnshire. [74

B.S.A. 1916 Combination, dynamo lighting, gadg hos; £60, or offer.—Honey, Harrow Alley, Al gate, E.1. [85

8h.p. B.S.A. Combination in stock, all models. Keene, 301, Goldhawk Rd., Shepherd's Bus London, W. [362

B.S.A. 3½h.p., 2-speed, free engine, good co dition, any trial. — Broughtoo, Stanton S John, Oxon. [790

B.S.A. 1922, all models, immediate delivery. Hucklebridge, 133, Sloane St., Chelsea. Tel. Victoria 451. [745

1920 B.S.A. 4½h.p. Combination, all chain, pe fect condition; 78 gns.—Cunningham, 9 Moorgate, E.C.2. [633

B.S.A. 1919 (November) 4½h.p. Combination, ele tric lighting; £79.—R. B. Clark and Co., 7, E hibition Rd., S.W.7. [720

£55.—4½h.p. B.S.A. Combination, 3-speed, counte shaft, gears, clutch, K.S., fine condition.—Kin Egrove Farm, Oxford. [833

1917 4½h.p. B.S.A. Combination, fully equipped £55.—28, Woodford Rd., Forest Gat 'Phone: Stratford 2598. [841

29 GNS.!—4h.p. B.S.A., K.S., clutch, etc equipped; deliberate sacrifice. — Ramsden Maybell Av., Blackpool. [765

B.S.A.—All models from stock. Official Agent deferred payments.—Bambers, 2, Eastbank St Southport. 'Phone: 607. [629

B.S.A. 1914 Model II., all chain, Millford wicke sidecar, excellent condition; £65.—38, Winde mere Rd., Muswell Hill, N.10. [749

35 GNS.!—4h.p. B.S.A. coach combination, clutch K.S., etc., Easting, perfect, one only.—Ram den's, Maybell Av., Blackpool. [765

B.S.A. 1922, all models.—It should be noted that th Plus One sidecar body at £27 is suitable fo fitting to these machines; cash or terms; exchanges.— W. E. Line, late Coppen Allan, 89, Gt. Portland St Langham 1601. [581

## MOTOR CYCLES FOR SALE.

### B.S.A.

1920 B.S.A. 4¼h.p. Combination, all chain, perfect condition, tax paid; £80; must sell.—Howich, Keeper's Corner, Burstow, Surrey. [8090

1921 all-chain B.S.A. 4¼h.p. Combination, mileage 1,000, all on; £120, offers—Talbot Bros., Henley-on-Thames. 'Phone: 222. [7967

B.S.A. 4¼h.p. and sidecar, December, 1919, delivered, 3-speed, all on, excellent condition; £70.—381, West Green Rd., N.15. [7391

1920 3½h.p. T.T. B.S.A., fixed engine, sports model, excellent condition; £40.—J. L. Smith, Huddleston, South Milford, Yorks. [8162

B.S.A. 3½h.p. Combination, K.S., 2-speed, coachbuilt, Bosch, perfect order; £45.—B., 10, Trioder Rd., Crouch Hill, London. [7435

B.S.A. 1919 4¼h.p., recently overhauled, new cylinder, re-enamelled, new sidecar, all accessories; £70.—Power, Brewery, Marlow. [7590

B.S.A. 1913 Combination in excellent running order; £44.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7036

1921 B.S.A. Combination, not done more than 500 miles, lamps and horn fitted, complete; £120.—Wallis and Easton, Mill Rd., Cambridge. [7737

1920 B.S.A., Model K., Lucas lamps and horn, guaranteed not more than 1,500 miles, perfect; £65.—Wallis and Easton, Mill Rd., Cambridge. [7738

1921 4¼h.p. B.S.A. Combination, Magdyno lighting set, electric horn, hood, screen, all spares, as new; best offer.—Monk, Gunmaker, Chester. [7587

B.S.A. 4¼h.p. 1915, 3 speeds, clutch, kick starter, sidecar, needs overhauling; sell £30; exchange 3½h.p., cash adjustment.—Kirkbarrow House, Kendal. [7509

B.S.A., 1922, brand new 4¼h.p., Model "H2," in stock; £110. Easy payments arranged. Exchanges.—Wilkins Simpson, opposite Olympia, London. [7564

B.S.A. Combination, 3-speed, countershaft, clutch, and kick start, overhauled, and guaranteed; £65.—Rhind and Co., Stone Place, Rusholme, Manchester. [8227

1914 B.S.A. Combination, 2-speed hub, kick start, all-chain, lamps, spares, tyres good, mechanically sound, trial; £40.—McCormack, Avenue, Northwich. [8043

B.S.A., 1914, re-enamelled and overhauled, cylinder, piston, tyres, sprockets, etc., new, 3-speed clutch; £50, or nearest.—75, Charles St., Milford Haven. [7343

42 GNS.!—B.S.A. 4¼h.p., 3-speed, countershaft Combination, lamps, windscreen, excellent condition; sacrifice!—15, Elsenham St., Southfields, S.W.18. [7707

B.S.A. 1922 Model H2, with B.S.A. No. 2 sidecar, brand new; £135; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7012

B.S.A. 1920 4¼h.p. Combination, all accessories, excellent order; £89; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7029

1918 B.S.A. Combination, Lucas, Magdyno, fitted Easting screen, in first-class condition; £87/10, exchange.—Rhind and Co., Stone Place, Rusholme, Manchester. [8226

INSURED and licensed, a late 1920 4¼h.p. all-chain B.S.A. combination, Easting, speedometer, many spares; £90.—Young, 22a, Hillside Gardens, Highgate, N 6. [8767

B.S.A. 4¼h.p., Model K, 3-speed, countershaft gear, coachbuilt sidecar, with all accessories, any trial; £65.—Eagles and Co., 275, High St., Acton, London. [8520

1921 4¼h.p. B.S.A., all-chain drive; this machine has never been ridden and is unregistered; cost £110, first cheque for £93 secures.—Williams, 2, St. David St., Neath. [8327

B.S.A., new, not shop-soiled, No. 3 sidecar, all lamps, etc., never used; £115.—James, c/o Bradmore's, 482, Harrow Rd., Paddington, or 'phone Willesden 1744. [8539

B.S.A. all-chain 1920 Combination, new 1921, hand and foot clutch, Easting Royal, lamps, horn, under 2,000 miles; trial any time; tax paid; £95.—714, Holloway Rd., N.19. [7583

1922 6h.p. B.S.A. Sports Combination, ridden 50 miles, exchange 1920-22 Morgan or Triumph Combination, cash adjustment either way.—King, 4, Willow Walk, Short St., Cambridge. [8824

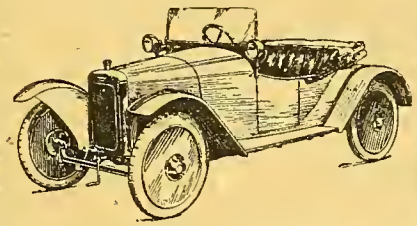
1921 B.S.A. 6-7h.p. Twin Combination, special large sidecar, interchangeable wheels, Lucas lighting, Easting windscreen, absolutely as new; £160, or nearest offer.—143, Peckham Rye, S.E. [7807

4¼h.p. B.S.A. Combination, late K model, appearance and mechanically as purchased new, lavish equipment, accessories, luxurious sidecar, special dash, Triplex screen, hood, plated fittings, luggage carrier, many spares, including tyres; an outfit to be proud of; exceptional bargain £78.—27, West End, Englefield Green, Egham, Surrey. [7487


# 1922 COVENTRY PREMIER

**REDUCED PRICE, £230.**

*8 h.p. W.C. 4-wheeler, dynamo lighting, spare wheel, hood, screen, speedometer, dickey seat and 12 months' insurance*



## NEW 1922 LIGHT CARS

**AIREDALE, CALTHORPE, COVENTRY PREMIER, LAGONDA, AND L.S.D.**

## NEW 1922 MOTOR CYCLES

**B.S.A., BRADBURY, DOUGLAS, ENFIELD, EDMUND, LEVIS, MARTINSYDE, NEW IMPERIAL, NORTON, REX, ROYAL RUBY, SCOTT, SUNBEAM and TRIUMPH.**

## SECOND-HAND BARGAINS

### SOLOS.

| | |
|---|---|
| A.B.C., 1921, 3 h.p., electric light | £87 10 |
| A.V., 1920 Monocar, 8 h.p. Jap | £75 0 |
| ARIEL, 1920, 3½ 3-speed | £72 10 |
| BRADBURY, 3½ single gear | £35 0 |
| COV. EAGLE, 1920, 3½, 3-speed | £65 0 |
| DOUGLAS, 1920, 2¾, 3-speed | £65 0 |
| ENFIELD, 1922, 2¼, tax paid | £52 10 |
| INDIAN SCOUT, 1920 | £87 10 |
| O.K., 1920, 2¼, single speed | £29 10 |
| O.K., 1916, 2¼ 2-speed | £32 10 |
| RUDGE MULTI, 1920, 3½ T.O.M. | £59 10 |
| RUDGE MULTI, 1916, 3½ | £45 0 |
| TRIUMPH, 3½, with clutch | £39 10 |
| WOOLER, 2¼, 1920, flat trim | £49 10 |
| PREMIER, 3½, 2-speed F.E. | £35 0 |
| SUNBEAM, 1921, 3½, Sports | £115 0 |

### PASSENGER MACHINES

| | |
|---|---|
| MORGANS, 8 h.p. | £85, £95 |
| ACME-J.A.P., 1920, Mag-Dyno | £125 0 |
| A.J.S., 1919, 6 h.p. comb. | £125 0 |
| ARIEL, 3½ 1920, 3-speed comb. | £85 0 |
| B.S.A., 1921, 4½, Mag-Dyno | £135 0 |
| COVENTRY VICTOR, S-6, 1921 | £115 0 |
| CHATER-LEA, 8 h.p. comb. | £59 10 |
| ENFIELD, 1920, hood, screen | £99 10 |
| ENFIELD, 1915-16, 6 h.p. comb. | £85 0 |
| HARLEY, 4 h.p., 1915 comb. | £55 0 |
| HARLEY, 1919, electric comb. | £115 0 |
| INDIAN, 1915, 5-6, 3-speed comb. | £59 10 |
| P. & M., 3½, tax paid, 1922 | £49 10 |
| REX, 6 h.p., 2-speed comb. | £49 10 |
| REX BLACKBURN, 1920 | £117 10 |
| ROVER, 5-6, 1920, unused 1920. New Rover sidecar | £120 0 |
| RUDGE, 7 h.p. 1920 comb. | £97 10 |
| SCOTT, 1920, 2-speed comb. | £95 0 |
| SUNBEAM, 8 h.p. M.A.G. | £115 0 |
| ZENITH, 6 h.p. kick start, clutch | £52 10 |

### SPECIAL BARGAINS

| | |
|---|---|
| STANDARD, 11.6 bnd. new 2-sr. | £47 0 |
| FORD, 1920, 4-seater, dynamo lighting and starter, and extras | £125 0 |
| MARTINSYDE, 1921, combination. Brand New | £125 0 |

The . .

## Halifax Motor Exchange,

**25, Horton Street, Halifax.**

Phone: 1400. 'Grams: "Perfection."


## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. 4¼h.p. Combination, late 1921 pattern, perfectly new condition, only driven 900 miles, owner buying car, Easting, mirror, 3 lamps, horn, and apron; £125.—Evans, Glengar, Stroud. [7484

B.S.A. 1920 4¼h.p. chain-drive Combination, with Lucas dynamo lighting, excellent condition; £105; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone.: Hammersmith 80. [7034

1920 (date guaranteed) T.T. 3½h.p. B.S.A., as new, never been registered, best bargain of the week; 49 gns.; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11 Park 2071. Open Sunday morning. [8454

1921 B.S.A. Combination, 6-7h.p., fully equipped, Lucas, Magdyno, Easting, Cowey, spare wheel, luggage grid, insurance, tax paid; £140.—Underwood, 7, King's College Rd., Hampstead, N.W.3. 'Phone: Hampstead 6782. [8677

B.S.A. 6-7h.p. Combination, Magdyno lighting, perfect condition, elaborate equipment, mileage under 2,000, May, 1921, receipts; take £60 less than cost; bought car, doctor's advice.—Izzard, 585, Green Lanes, Harringay. Hornsey 2214. [7619

4¼h.p. 1919-20 B.S.A. Combination, 3-speed gear, clutch and kick start, £77/10; and 3½h.p. B.S.A. and sidecar, 1913, 2 speeds, £35; another, 4¼h.p. 1915 B.S.A. and sidecar, 3 speeds, £65.—Wauchope's, 9, Shoe Lane, London. [7871

B.S.A. 4¼h.p. chain-cum-belt model, very late 1919 model, and condition guaranteed as new, both appearance and mechanical parts, head lamp and horn; bargain, £59; approval.—Holland, Hearsall Lane Corner, Coventry. 'Phone: 1945. [8603

1921 B.S.A. 6-7h.p. Twin Combination, Lucas dynamo lighting, Easting Royal windscreen, disc wheels, Tan-Sad pillion seat, Cowey horn, insurance policy, tax paid to 31st December next, in first-class condition; £155.—Ferrier Williams, Maesteg, South Wales. [7995

1921 (April) B.S.A. 6-7h.p. Twin Combination, spare wheel, luggage carrier, Low generator, Easting, largest sidecar, special mat, legshields, rear-drive speedometer, Cowey horn, many spares, overhauled, perfect throughout; £145.—Write Advertiser, 8, Westbourne Gardens, W.2. [7395

### *Spare Parts*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7539

THE Promptest Firm for B.S.A. Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3161

B.S.A. Specialists.—All spares by return.—County Cycle and Motor Co., Broad St., Birmingham. [4677

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All B.S.A. parts in stock; no waiting. [4944

B.S.A. Spares can be had by return, post free, from Jones Garage, B.S.A. Agents and Spares Service Depot Broadway, Muswell Hill, N.10. [0805

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all B.S.A. spare parts always in stock. Write for free spare part list, stating year of manufacture. [0750

### Calcott.

SNIP.—2¾h.p. Calcott, about 1916, perfect throughout; £16/10.—7, Cowdrey Rd., Wimbledon. [8121

2¾h.p., Calcott, believed 1916, new tyres, belt, new B. and B., Bosch, guaranteed; bargain, 18 gns.—67, Fernlea Rd., Balham. [8726

### Calthorpe.

2¾h.p. Calthorpe, 2-speed, good condition; £28.—21, Keighley Rd., Avenden, Halifax. [8171

CALTHORPE-J.A.P., 1920, 2-speed, equipped; £42.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7198

CALTHORPE 2¾h.p., J.A.P., late 1919, 2-speed, perfect; £38.—A. Hunt, 23, Castle Crescent, Reading. [7830

2¾h.p. Calthorpe-Jap 1916, Enfield gear, full accessories, condition as new; £35.—Waite, Alverstoke, Twickenham. [7621

CALTHORPE 2¾h.p., sold new in 1921, 2 speeds, lamps, tax; £40; excellent.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [8535

LATE 1920 Calthorpe 2-stroke. 3h.p., Enfield 2-speed, all on, as new; £45; tax paid; ride away.—119, Risley Av., Tottenham, N.17. [7298

1920 Calthorpe, 3h.p., 2-stroke, 2-speed, Miller lamps, Cowey speedometer, Klaxon, good tyres, recently decarbonised, excellent condition throughout, licensed 1922; £38.—Augerand, 17, Enys Rd., Eastbourne. [8640

### Campion.

CAMPION-PRECISION, 2-speed, countershaft, all-chain drive, 4h.p., coachbuilt sidecar, comfortable; £45.—Turnill North, Peterborough. [7667

1919 8h.p. Campion-Jap Combination, Easting, all accessories, any trial, anywhere; £90.—Stephens and Kay, Engineers, Staveley, Chesterfield. [7493

## MOTOR CYCLES FOR SALE.

### Cedos.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Cedos; unequalled service, repairs, etc. [3149

### Chater-Lea.

1916 Chater-Lea, 4h.p. J.A.P., Grado gear, tax paid; £32 or near offer.—170, Broadway, West Hendon, N.W.9. [8379

CHATER-LEA Combination, 8h.p. J.A.P., 3-speed, take any load; £68; take lower power part.—57, Kenbury St., Camberwell, London. [8312

CHATER-LEA 2½h.p., 1920 model, Villiers engine, small mileage, every accessory, really good condition; £40, or near offer.—Apply Oram, 15, Holland Mews, W.14. [7726

CHATER-LEA, heavy frame, 8h.p. J.A.P. engine, magneto, Sturmey late gear, tank, Druids, wheels, requires little to finish; £33.—32, Canterbury Rd., Brixton, London. [8514

1921 8h.p. Chater-Lea Combination, new and unregistered, used for few demonstrations only; complete with 4 detachable wheels, spring seat pillar, and sidecar screen; £35 below list price; £135.—South Eastern Garage, Herne Hill, S.E.24. [8778

CHATER-LEA 8h.p., double-seater coachbuilt sidecar, 1914, small mileage run, in good mechanical condition, 3-speed, foot clutch, kick starter, oversize tyres. Sidecar: hood, screen, luggage carrier, mat, lamp, etc. Cycle: pillion seat, lamps, horn, etc.; £69.—8, Grosvenor Terrace, York. [7512

### Chater-Lea-Brown.

3½h.p. Chater-Lea-Brown, re-hushed, re-enamelled, new semi-T.T., tank, and heavy Dunlops, late Brooks, Amac and Bosch, easy starter, overhauled throughout, perfect, bargain; £30, or exchange Douglas.—Howell, 100, Muswell Hill Rd., N.10. [7436

### Chater-Lea-Jap.

CHATER-LEA-J.A.P. 8h.p. Combination, just overhauled with brand new A.J.S 3-speed gear and kick starter, which cost £24; coachbuilt sidecar, with double springs; Tan-Sad, windscreen, and hood; price £60 lowest.—Collyer, 286, High Rd., Wood Green. [7755

### Clyno.

1917 2½h.p. 2-stroke Clyno; £15.—Carnforth Motor Co., Carnforth. [5948

2½h.p. Clyno, 1919; £37/10.—Wanchope's, 9, Shoe Lane, London. [7867

CLYNO Combination, spare wheel, full accessories, bargain; £68.—Ross, 86, High Rd., Lee. [7919

CLYNO 5-6h.p., 1916, splendid running order, lamps; bargain, £42/10.—Locke, Draper, Penge. [7285

CLYNO Combination, hood, screen, lamps, splendid condition; £65.—34, Adela Avenue, New Malden. [8382

5-6h.p. Clyno Solo, condition as new, spring drive, tax paid 1922 for sidecar; £55.—13, Charles St., Barnes. [7970

£28.—5-6h.p. Clyno, 2-speed, clutch, K.S., with coachbuilt sidecar; £35.—King, Egrove Farm, Oxford. [8339

29 GNS.—Clyno 2½h.p., 2-stroke, 2 speeds, clutch, 1919 model, all accessories, perfect.—8, High St., Wandsworth. [8087

1918 Clyno Combination, interchangeable wheels, new tyres, perfect condition; £50.—3, St. James Rd., Croydon. [8732

CLYNO 1916 6h.p., 3-speed, countershaft combination, splendid condition, any trial; 49 gns.—134, Earlswood Rd., Redhill. [7945

CLYNO 1920 2½h.p., overhauled, tax paid, fittings, accessories, nearly new; £35.—Daye, 30, Cambridge Avenue, Kilburn. [7708

1920 2½h.p. Clyno, 2-speed, clutch, 2-stroke, all on, tax paid, excellent condition, very fast; £39/10.—11, Queen's Rd., S.E. [7311

CLYNO 5-6h.p., and sidecar, windscreen, grid, good order, tyres, and chains; £42/10, near offer.—Davies, 45, Denning Rd., N.W.3 [8611

CLYNO Combination, 1918, complete, spare wheel, lamps, horn, splendid condition; any trial; £75, or offer.—42, Southsea Av., Watford. [8105

CLYNO Combination, 6h.p., 3-speed, clutch, K.S., lamps, hood, screen, all on, in good order; £65.—W. Phillips, 1, High St., Plumstead. [7288

CLYNO Combination 6h.p., 2-speed, kick start, splendid order; £58; take lower power part.—57, Kenbury St., Camberwell, London. [8314

CLYNO 1920 2½h.p., 2-speed, 2-stroke, equipped; £37/10.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0065

49 GNS.—6h.p. Clyno Combination, luxurious sidecar, hood, lamps, horn, spare wheel, enamelled blue and gold.—Smith, c/o Claremont Garage, Blackpool. [8409

CLYNO 1918 8h.p., J.A.P. engine, 3-speed, hand and foot clutch, and sidecar, very good condition; £75.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [8417


# BAMBERS

WILL MAKE YOU AN

# EXCHANGE

HIGHEST MARKET VALUE
ALLOWED FOR YOUR
PRESENT MACHINE

## NEW 1922 MODELS

### SOLO

| | | |
|---|---|---|
| 1922 | 2¾ h.p. **ENFIELD**, 2-speed | £5S |
| 1922 | 2¾ h.p. **DOUGLAS**, All on | £7S |
| 1922 | 2¾ h.p. **DOUGLAS**, All on, k.s. | £90 |
| 1922 | 8 h.p. **MATCHLESS**, Sports | £130 |
| 1922 | 3½ h.p. **ARIEL** | £9S |
| 1922 | 4½ h.p. **B.S.A.**, chain drive | £110 |
| 1922 | 3½ h.p. **NORTON**, 16H | £115 |
| 1922 | 2¾ h.p. **RALEIGH** | £6S |

### COMBINATIONS

| | | |
|---|---|---|
| 1922 | 7 h.p. **A.J.S.** | £17S |
| 1922 | 8 h.p. **ENFIELD** | £140 |
| 1922 | 8 h.p. **ENFIELD**, Dynamo | £158 |
| 1922 | 4 h.p. **DOUGLAS**, All on | £135 |
| 1922 | 8 h.p. **MATCHLESS** | £170 |
| 1922 | 3½ h.p. **ARIEL** | £12S |
| 1922 | 6 h.p. **B.S.A.** | £164 |
| 1922 | 4½ h.p. **B.S.A.** | £142 |

## ANY MAKE SUPPLIED
## DEFERRED PAYMENTS

### RELIABLE SECONDHAND MACHINES

| | | |
|---|---|---|
| 1922 | 3½ h.p. **ZENITH-BRADSHAW**, shop soiled | £100 |
| 1921 | 500 c.c. **I.O.M. SCOTT** | £75 |
| 1921 | 2¾ h.p. **ROYAL RUBY**, 2-speed | £50 |
| 1921 | 2¾ h.p. **FEDERAL**, 2-speed | £40 |
| 1921 | 2¾ h.p. **DOUGLAS**, 2-speed | £SS |
| 1921 | 8 h.p. **ENFIELD**, Comb. | £13S |
| 1921 | 4½ h.p. **HUMBER**, Comb. | £127 |
| 1920 | 6 h.p. **ENFIELD**, Comb. | £110 |
| 1920 | 4 h.p. **HARLEY-DAVIDSON**, Comb. | £110 |
| 1920 | 2¾ h.p. **METRO-TYLER**, 2-speed | £50 |
| 1919 | 3½ h.p. **ROVER**, Comb. | £80 |
| 1919 | 8 h.p. **SUNBEAM**, Comb. | £112 |
| 1916 | 4½ h.p. **B.S.A.** Comb. | £65 |
| 1915/16 | 7-9 h.p. **HARLEY-DAVIDSON**, Comb. | £7S |
| 1915 | 2¾ h.p. **DOUGLAS** | £37 |
| 1913/14 | 3½ h.p. **TRIUMPH**, Comb. | £45 |
| | 2¾ h.p. **CONNAUGHT** | £17 |
| | 3½ h.p. **BRADBURY**, 2-speed, k.s. | £2S |

# DROP US A LINE !

# R. BAMBER & Co.,

LIMITED,

## 2, EASTBANK STREET, SOUTHPORT.

'Phone 607.


## MOTOR CYCLES FOR SALE.

### Clyno.

1916 Clyno 5-6h.p., kick start, coachbuilt sidecar, Cameo, excellent running order; £45, bargain exchange.—Rhiod and Co., Stone Place, Rusholme, Manchester. [82

1920 Clyno 2½h.p., 2-speed and clutch, lamps and horn, tax paid for 1922; £37/10; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [78

1918 spring drive 5-6h.p. Clyno Combination, speed, kick start, interchangeable wheels, spare wheel, good order; best offer.—Goff, Docking Hill, Gaywood, Norfolk. [74

1914 5-6h.p. Clyno Combination, excellent condition, good running order, Easting screen, electric horn and light; £75, or near offer.—Rev. Stiff, Littleton, Winchester. [76

8h.p. Clyno Combination 1917, little used, spare wheel, Easting screen, lamps, and spares, pillion £90, or near offer; appointment.—Slater, 101, Abbotsbury Park Rd., Leyton, E.10. [75

CLYNO 2½h.p., 2-speed, clutch, 1919 model, only been tested since being overhauled and re-enamelled, as good as new; a bargain, £35; (Midland district).—Apply, Box 9635, c/o *The Motor Cycle*. [75

1916 Clyno Combination, 700×80 tyres, spare wheel, long dash, screen, overhauled, new cylinders, pistons, bushes, gear parts, black and gold accessories; £55.—Parker, 65, Clifton Av., Wembley Hill. [807

MISS DOOLEY.—5-6h.p. 1916-17, 3-speed, K.S. Clynos, in perfect mechanical order and renovated like new, complete with tradesman's carrier; price £55 each.—Please apply, Miss E. Dooley, 35, Killyon Rd., Clapham, S.W.8. [852

CLYNO.—5-6h.p. 1916-17 models, rebuilt, replated, enamelled black, 3 speeds, kick start, foot clutch, interchangeable wheels, chain drive, aluminium cases, sidecars coach painted, in excellent condition, lamps complete, machines as new; solo, £57; combinations £68; deferred payments or exchange.—Hearn Bros., 94, Brixton Hill, S.W.2. 'Phone: Brixton 2888. [628

*Spare Parts:*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [754

### Connaught.

2¾h.p. Connaught, 1921, 2-speed; £45.—Wanchope's, 9, Shoe Lane, London. [786

CONNAUGHT 1921 Miniature, 2-speed, kick starter, clutch, small mileage, perfect order, licence paid, horn; £50.—8, Church Rd., Kingsland, N.1. [732

1922 Connaught, the super 2-stroke, for sidecar or solo; cash or easy terms; inquiries invited.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [325

CONNAUGHT 2-stroke (1921), 2-speed, accessories, lamps, tax paid, insured, perfect running order, genuine bargain; £35.—Westwood, Forty Lane, Wembley Park. [748

1920 Connaught Standard model, lamps, horn, etc., tax paid for year, in first-class condition; 38 gns., cost £65; would consider exchange and cash for 1922 model, not necessarily Connaught.—14, Kingsway, Coventry. [775

CONNAUGHTS, 1922.—2-stroke, £45; 2-speed model, £54; 2-speed, clutch and kick starter, £57/10; 3-speed 3½h.p. combination, £95; cash or terms; exchanges.—W. E. Line, late Coppeo Allan, 89, Gt. Portland St. Langham 1601. [582

### Coulson.

COULSON 1920 2¾h.p., 2-speed, clutch, lamps, horn, new belt, tyres good, tax paid, insured; £50; perfect.—6, Woodchurch Rd., West Hampstead. [810

NEW Coulson 2¾h.p., spring frame, Blackburne engine, 3-speed clutch and kick starter (reduced from £117/12); £75; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [785

1921 Conlson B., 3-speed, spring frame, lamp, horn, Cowey speedometer, mirror, driving overalls, mileage under 500, everything as new, tax paid 1922; £75 for quick sale.—28b, Coolhurst Rd., N.8.—Hornsey 356. [732

1921 4h.p. Coulson £126 Model, 3-speed Sturmey-Archer, electric lighting, accessories; any trial or test, ride 50 miles to purchase; £75, or near offer; guaranteed perfect. — Howard-Allman, The Lodge, Wye, Kent. [811

### Coventry Victor.

COVENTRY VICTOR Combination, Montgomery Sidecar, been used for demonstrating; special frame guaranteed; first cheque £85 secures.—The Coventry Victor Motor Co., Ltd., Coventry. [052

### Crescent.

CRESCENT-VILLIERS, 2-speed, 1916; £32/10; like new; exchange.—31, London Rd., Enfield. [867

### Dalm.

1918 2¾h.p. 2-speed Dalm, a bargain; £25.—Ross, 86, High Rd., Lee. [793

## MOTOR CYCLES FOR SALE.

### Dalm.

DALM 2-stroke, 2¼h.p., enamelled, overhauled, 2-speed; £25.—Tiley, Duke's Mews, Duke St., Oxford St., W. [8100

### Dayton.

2½h.p. Dayton, 2-stroke, lamps, horn, in running order; bargain, £7.—26, Tulse Hill, Brixton. 'Phone, Brixton 1232. [8500

### De Dion.

DE DION 2¾h.p., overhauled, good running order; nearest £10.—Norris, Chapel St., Slough. [8358

### Diamond.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Diamonds; unequalled service, repairs, etc. [3146

2¾h.p. Diamond-Jap, 2-speed, Enfield gear, just decarbonised, fast, tyres good; £37/10, or near offer.—Barlow, Sunnybrae, Selly Oak, Birmingham. [7609

SPORTING Diamond (J.A.P.), 1921, 250 c.c., special racing engine, Sturmey-Archer, 2-speed clutch, tyres, condition as new, all accessories; £60; won several speed events.—55, Hainault Avenue, Wetsceliff-on-Sea. [8107

### Dot.

1921 Dot-Jap 2¾h.p., 2-speed, complete outfit, cheap.—Munro, Peckover Inn, Church Bank, Bradford. [7415

### Douglas.

2¾h.p. Douglas, 2-speed, as new; £38.—42, Abbey Grove, Abbey Wood, S.E. [7986

DOUGLAS 4h.p., fully equipped, splendid condition, cheap.—33, Pennard Rd., W. [8233

DOUGLASES, 2¾h.p., a few left, as new; £38/10. 417a, Brighton Rd., Croydon. [5043

£25.—1913 2¾h.p. Douglas, new Dunlop tyres, belt.—King, Egrove Farm, Oxford. [8340

F.O.C.H. have a 2¾h.p. Douglas, excellent.—5, Heath St., Hampstead. (Near Tube.) [7744

ALL Douglases.—A trial order only is requested.—Gibb., Gloucester. Phone: 852. [8121

2¾h.p. Douglas 1921, 2-speed Eadie; £65.—Wauchope's, 3, Shoe Lane, London. [7869

DOUGLAS 2¾h.p., 2-speed, 1915; £29/10; view Friday.—Druitt, 47, Ordell Rd., Bow. [8331

1920 Douglas Combination, nice order, year's tax paid; £80.—Ross, 86, High Rd., Lee. [7920

DOUGLAS, Douglas, Douglas.—Gourlay, the Great Douglas Agent, Fallowfield, Manchester. [3647

DOUGLAS 2¾h.p., 1913, 2-speed, lamps, fast, reliable; £25.—108, Bruce Grove, Tottenham. [7670

3-SPEED 1915 Douglas 2¾h.p., accessories; £35; exchanges.—Kent's 417, Lord St., Southport. [8647

1919 4h.p. Douglas Combination, equipped, beautiful condition; £70.—17, St. Charles Sq., W.10. [6236

2¾h.p. Douglas, July, 1921, 2-speed, all on; £65.—Whitaker, "Eversley," Gerard Rd., Rotherham. [7306

1920 4h.p. Douglas Combination, complete equipment; £75.—24, Balliol Rd., North Kensington. [8139

LATE Douglas Combination, very posh condition, Easting; bargain, £65.—67, Fernlea Rd., Balham. [8727

DOUGLAS 2¾h.p. 1918, almost new, little used, fully equipped; £40.—9, Townley Rd., East Dulwich. [7826

DOUGLAS 2¾h.p. Twin 1915, W.D., lighting, tools, tax paid; £30.—227, Grove Green Rd., Leytonstone. [7532

DOUGLAS, 1920, 2¾h.p., 3-speed, kick start, disc wheels, tax paid; £50. — H. Rock, Cradley Staffs. [8264

DOUGLAS 2¾h.p., 1920, 3-speed, latest type, scarcely used; price £60.—The Morris Garages, Oxford. [7352

54 GNS.—1920 2¾h.p. Douglas, 3-speed, clutch, K.S., equipped.—20, Treen Av., Hogger's Corner, Barnes. [7960

DOUGLAS 2¾h.p., 2-speed, good condition and running order; £32.—Pinn's Garage, 12, High St., Fulham. [7681

DOUGLAS 1915 2¾h.p., 3-speed, new Dunlops, perfect order; £35.—Sibley, 106, Market Place, Romford. [8067

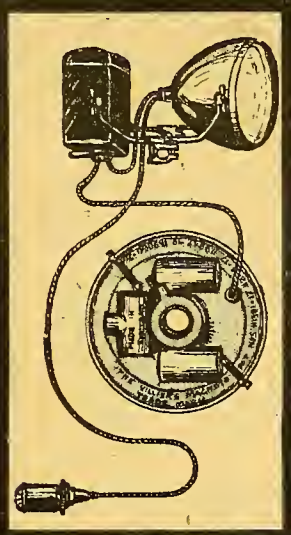
£19.—Douglas 2¾h.p., 2-speed, 1911, fast, good appearance; seen week-end.—24, Mitcham Park, Mitcham. [7788

DOUGLAS Combination 4h.p., 3-speed, perfect running order; £57/10.—94a, High Rd., East Finchley. [8801

1921 2¾h.p. Douglas, new, 1922 licence, complete accessories; 55 gns.—Fersfield, Westbury Rd., New Malden. [8323

DOUGLAS, very fast, 2¾h.p., overhauled, enamelled, 1915; £35.—Tiley, Duke's Mews, Duke St., Oxford St., W. [8099

4h.p. Douglas Combination, nice condition, fully equipped; sacrifice £55.—71, Windermere Rd., South Ealing. [8479

£4:10:0

IS THE ONLY EXTRA (NOT FITTED) TO EQUIP YOUR NEW MACHINE WITH POWERFUL ELECTRIC LIGHTS IF ITS A

VILLIERS

TWO-STROKE

WORKS:-

SUNBEAM STREET.

WOLVERHAMPTON


## MOTOR CYCLES FOR SALE.

### Douglas.

4h.p. Douglas, Torpedo sidecar, lamps, speedometer, Cameo, smart outfit; £70.—40, Forest Hill Rd., East Dulwich. [7332

DOUGLAS 2¾h.p., new condition; any trial; genuine bargain, £34.—103, Choumert Rd., Peckham, S.E. [7597

2¾h.p. Douglas, brand new engine, gear box, Palmers, etc.; offers.—Simpson, Orchard, Sunbury-on-Thames. [8575

29 GNS.—2¾h.p. Douglas, 2-speed, complete, licensed, overhauled, not rubbish.—Bustin, Chilton, Thame. [8244

DOUGLAS 1919 2¾h.p., perfect condition, any trial; bargain, £49/10.—32, Douglas Av., Wembley, Middlesex. [7374

DOUGLAS.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7228

£32.—1915-1916 2¾h.p. Douglas, 2-speed, excellent condition, any trial; bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [8446

DOUGLAS 4h.p. Combination, 1919, splendid order, lamps, accessories; £62, offer.—132, White Horse St., Stepney. (P) [7362

DOUGLAS 2¾h.p. 1915, horn, lamps, speedometer, excellent condition, trial; £38.—46, Brougham Rd., Dalston, E.8. [7837

1921 Douglas 2¾ h.p., 2-speed, fully equipped, perfect, tax paid, specially built; £48, offers.—34, Iffley Rd., Hammersmith. [8563

DOUGLAS 2¾h.p., 1918, tax paid, overhauled, lamps, Klaxon, Zoom; snip, £37/10.—Norris, Chapel St., Slough. [8357

1920 2¾h.p. 3-speed Douglas and accessories, in good condition; £60.—Bounds' Garage, 223, High Rd., Kilburn. [7662

DOUGLAS 4h.p. Combination, late 1919, very smart turn-out; £80; Lightweight wanted.—Bunting's Exchange, Wealdstone. [8742

4h.p. 1919 Douglas, new appearance, just overhauled, new tyres, etc.; £58.—P. A., 120, Fielding Rd., Chiswick, W. [8307

1917 2¾h.p. Douglas, 2-speed, all accessories, like new, tax paid till December; £28.—64, Church St., Edgware Rd., W. [8755

14 GNS.—2¾h.p. Douglas, single-speed, Bosch, Amac, all on, ride away.—20, Treen Avenue, Hoggers Corner, Barnes. [8092

1919 Douglas 2¾h.p., 2 speeds, tax, excellent condition; £47/10.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [8534

DOUGLAS.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6269

1919 Douglas 4h.p. Combination, fully equipped, speedometer, screen, A1 condition; £75.—64, Guilford Avenue, Surbiton. [7554

1920 4h.p. Douglas Combination; £95; or exchange LH Ford and cash.—73, St. Albans Avenue, Bedford Park, W.4. [7765

1915 Douglas 2¾h.p., 3-speed, new cylinders, pistons, etc., good condition; £45.—Turner, 2, High St., Walton-on-Thames. [8055

DOUGLAS 4h.p. 1920 Combination, fully equipped, perfect condition, licence and insurance, any trial; £95.—19, Church Av., S.W.14. [8819

1915 2¾h.p. Douglas, not rode for 3 years, perfect condition, a bargain; £32/10.—Wallis and Easton, Mill Rd., Cambridge. [7739

DOUGLAS 2¾h.p., 2-speed, low sporting, new tyres, discs, overhauled; £28, offers; wanted, Triumph. 10, Plover St., Hackney Wick. [7951

3½h.p. Douglas Combination (1915), 2-speed, condition as new; £45, or nearest offer.—Bush, North Street, Sudbury, Suffolk. [8095

DOUGLAS 1918 4h.p., 3-speed, lamp, horn, kick start, etc., tax paid, splendid condition; £43.—Ault, 22, Bengeo St., Hertford. [7618

DOUGLAS, 1922.—All models for cash or easy payments. Lists free. Exchanges.—Wilkins Simpson, opposite Olympia, London. [7570

2¾h.p. Douglas, 2-speed, mechanically perfect, all on, any trial; 32 gns.—Bennett, 3, Gorringe Park Parade, Tooting Junction. [8040

DOUGLAS 1922.—All models; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [5821

1921 2¾h.p. Douglas, 3 speeds, kick starter, good condition, fully insured and licensed; £60.—R. Hole, Broadway, Burgess Hill. [7313

£22.—Douglas 2¾h.p., 1913, sporty, lamps, disc wheels, good thing.—Wood, 10, Farrant St., Fourth Avenue, Harrow Rd., W. [7422

4h.p. Douglas Combination 1919, little used, exceptional condition, fully equipped; £85, or near offer.—11, Sydney Rd., Muswell Hill. [7475

1919 4h.p. Douglas, 3-speed, kick start, £49. Douglas sidecar, £6.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2593. [8415

## MOTOR CYCLES FOR SALE.

### Douglas.

2¾h.p. Douglas, late W.D., lamps, speeds, tax paid, tools, etc., good order; £35.—Hartnett, 35, Stafford Rd., Wallington (nr. Croydon). [8839

1919 2¾h.p. Douglas, fully equipped, licensed 1922, condition as new throughout; £45.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [8762

DOUGLAS Combination 1920, Feredo clutch, pillion, Easting, mechanically perfect; £85; exchanges:—27, Brisbane Av., Wimbledon. [7831

HALIFAX.—Douglas 1922 models, cash or exchange. Note 100 m.p.h. Brooklands performance.—Halifax Motor Exchange, Horton St., Halifax. [7873

DOUGLAS 1919 2¾h.p., 2-speed, in perfect condition, lamps, Klaxon, tax paid, guaranteed, any trial; £45.—F. Warren, Hindon, Wilts. [8849

1921 2¾h.p. Douglas, 2-speed, fully equipped, low mileage, licence paid; £50; after 6.—8, Hempstead Rd., Walthamstow (Wood St. Station). [7953

BIRKENHEAD, Douglas Agents.—All new models in stock, solos and combinations.—Birkenhead Motor Works, 9, Hamilton St., Birkenhead. [2388

4h.p. Douglas Combination, 1918, repainted, lamps, hood, windscreen, luggage grid, perfect; nearest £65.—McEwen, 27a Anerley Park, Anerley. [8097

1915 2¾h.p. Douglas, 2-speed, lamps, horn, tax paid, good running order; £33.—D. and S. Autocar Co., 33, The Parade, Golders Green. [5802

1919-20 4h.p. Douglas Combination, splendid condition, fully equipped, Easting, tax paid; £110, or nearest offer.—Goodley, Ock St., Abingdon. [6773

DOUGLAS (tax paid) 1915, 2-speed, P. and H. lamps, knee grips, footboards, etc., smart, reliable mount; 38 gns.—36, Second Av., Mortlake. [7491

1920 4h.p. Douglas and Sidecar, painted royal blue, dynamo lighting, fully equipped; bargain, £85.—Blake, 216, Westbourne Grove, W. [8080

1921 Douglas, 2¾h.p., 3-speed, new, fully equipped, under-shield, footboards, long exhaust; £66, great bargain.—Welch, Great Missenden, Bucks. [7914

DOUGLAS 4h.p. Combination, splendid condition, tax paid, equipped; £58.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6 (facing Princess Rd.). [8701

1921 Douglas, 2¾h.p., 2-speed, Binks carburetter, mileage 1,500, perfect condition, all on; £65.—Talbot Bros., Henley-on-Thames. 'Phone: 222. [8127

1921 4h.p. Douglas Combination, speedometer, full equipment, date, condition guaranteed; £85.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [8759

1914 2¾h.p. Douglas, like new; £36; also 1915 at £38; both guaranteed for 3 months; also 4h.p. 1915 model, bargain; £44.—Ross, 86, High Rd., Lee. [7926

DOUGLAS 1919 2¾h.p., 2-speed, splendid order, acetylene and electric lighting, mudshield, tax paid, trial; £45 nearest.—393, City Rd., Birmingham [8046

4h.p. Douglas Combination 1918-19, guaranteed perfect condition and appearance, sidecar 1921, cost £32; exceptional, £85.—Beadle, South Bank, Yorkshire. [7264

DOUGLAS 4h.p. Combination, fully equipped, mechanically perfect, tax paid, any trial; £65; evenings after 6 o'clock.—224, Park Rd., Crouch End, N.8. [7378

DOUGLAS 4h.p., large sidecar, splendid condition (overhauled, cost £20), ready for season; health cause of sale, proof; £75.—9, Edmonton Green, N.9. [7602

1920 2¾h.p. Douglas, 3-speed, clutch, kick start, full equipment, licensed 1922, condition as new; £57.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [8761

DOUGLAS 1921 (May) 2¾h.p., 2-speed, footboards, perfect condition, small mileage, used 6 months, missionary on furlough; £60.—W. Bray, Ledbury. [8383

1921 Douglas 4h.p., 3-speed, clutch, kick start, fully equipped, condition as new, tax paid December, 1922, any trial; £90.—Walker, 41, Aglionby St., Carlisle. [7457

DOUGLAS 4h.p. Combination, 1920-21, tax paid, new condition, speedometer, screen, all accessories; £115.—Carter, The Nook, St. Mary's Av., Wanstead. [7657

4h.p. Douglas 1918 Combination, 3-speed, clutch, kick starter, very good condition, good tyres, taxed; £65.—Lawson, 66, Perry Vale, Forest Hill Station, S.E. [7956

2¾h.p. Douglas Unused Spares.—Valves, 1/6; tappet guides, gudgeon bushes, rings, 1/-; piston, 7/6; postage extra.—Corner, 3, St. Martin's Rd., Preston. [8333

DOUGLAS 1922 models, 2¾h.p., £76; 4h.p. solo, £110; 4h.p combination, £135; prices include all accessories; delivery from stock.—Rivett, 236, High Rd., Leytonstone. [2266


# REYS

**173, Gt. Portland Street.**

*Telephone—Langham 1257.*

Business Hours.

At the request of numerous clients we have decided to alter our business hours, and in future we shall be open to give every attention to prospective customers up to

***7.30 p.m. Mon. to Fri.***
***4 o'clock Saturdays.***

## HIRE

Motor Cycles and Combinations.
Any period from one day.

**A GOOD SELECTION OF 1922**

## MODELS IN STOCK

*Easy Payments taken on New Machines, and Exchanges Entertained.*

**SECOND-HAND MACHINES.**

1919 **ZENITH**, sports, 6 h.p., with Sidecar and all accessories ..... **£85**
1920 **P. & M.** and Canoelet Sporting sidecar complete ..... **£60**
1919 2¾ 2 speed **NEW IMPERIAL**, speedometer, all accessories ..... **£40**

**And many others. Call and Inspect.**

G.N.'S, COVENTRY PREMIERS, MORGANS, and ROVERS IN STOCK.

**REPAIRS.**

**Good Machines taken in for Sale on Commission**

*New Imperial Spare Parts Stockists*



# SAVE £10 to £20

on a

# BRAND NEW 1921 MOUNT

James 7 h.p. Combination - **£140**

Harley-Davidson 7/9 Combination fully equipped - **£175**

New Imperial Jap Combination **£130**

Brand New Shop-soiled 1922 Bat Jap 8 h.p. Combination, listed at £176, for - - - **£160**

## ALEC THOM,

**201 & 203, City Road, CARDIFF**

**'Phone: 2876.**


## MOTOR CYCLES FOR SALE.

### Douglas.

DOUGLAS, 1922, brand new, 2-speed, all on, lamps, horn, licence holder, etc.; £75 cash. Easy payments arranged.—Wilkins Simpson, opposite Olympia, London. [7569

ELI CLARK can give you good service both in new machines and spares; try me. I may be useful to you. The pioneer agent for Douglas motors.—196, Cheltenham Rd., Bristol. [0016

DOUGLAS 2¾h.p., 2-speed, excellent order, electric lamps, mudshields, footboards, new tyres, spare tyre, tools, spares.—85, Ritherdon Rd., Balham. 'Phone: 1652 Streatham. [7825

1922 Douglas 2¾h.p., 2-speed, all on, only ridden a few miles, licensed to end 1922, owner bought combination; £60; no offers.—10, High Street Buildings, Dorking. 'Phone: 146. [7988

1921 4h.p. Douglas Combination, perfect, electric and acetylene lamps, screen, shields, mileage under 1,000 as owner has car; £110.—Borough Surveyor, Town Hall, Lowestoft. [7314

DOUGLAS 4h.p., 3-speed (Colonial Model), with Coronet C.B. sidecar; 55 gns.; fully equipped, K.S., clutch, thorough order, new appearance.—197, Shooters Hill Rd., Blackheath, S.E.3. [7832

1920 4h.p. Douglas Combination, equal to new, recently completely overhauled, electric light, Easting, Tan-Sad, speedometer, fully licensed, any trial; £120.—Box 9634, c/o *The Motor Cycle*. [7550

DOUGLAS 2¾h.p. 1915, speedometer, polished aluminium discs, long copper exhaust, lamps, etc., recently overhauled; £25.—L. M. Cox, 128, West Wycombe Rd., High Wycombe, Bucks. [7704

4h.p. Douglas Combination, early 1919, not W.D., hood, screen, tax paid, lamps, horn, tools; excellent condition and appearance; trial; £68.—Attwood, 50A, Beulah Rd., Thornton Heath. [8613

FOR Douglas 1922 2¾h.p. and 4h.p. combinations, get in touch with us; we are North London agents and give you the best of service; all spares in stock; no W.D. rubbish.—Jones Garage, The Broadway, Muswell Hill. [0786

2¾h.p. T.T. Douglas, good sound 1914 model, stored 1915-1918, thoroughly overhauled for purpose of sale; discs, big exhaust, all on, inspection invited; £40, or near offer.—Weller, Nuthurst, Cranleigh, Surrey. [7731

1919 (late) 2¾h.p. Douglas, 2-speed, all on, discs, leggguard, Klaxon, knee grips, unpunctured tyres, £5 worth accessories, perfect condition, tax paid; £42, bargain.—118, Greenvale Rd., Eltham, S.E.9. [7501

BARKER'S Motors can supply all Douglas 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash deferred, or exchanges.—194, Balham High Rd., S.W.12. [7086

DOUGLAS 1920 4h.p. Combination, perfect condition, lamps, Cowey horn, windscreen, Tan-Sad, legshields, tools, spare tubes and belt; £90; seen in Birmingham; owner buying car.—Barnett, Broadoak, Lapworth, Warwickshire. [7614

SMARTEST Douglas Combination on road, 1921, indistinguishable from new, mileage 600, Easting, speedometer, many spares; £100, nearest.—James, c/o Bradmore's, 482, Harrow Rd., Paddington, or 'phone Willesden 1744. [8544

DOUGLAS 4h.p. Combination (1919, December), not W.D., latest clutch, electric lighting, aluminium hinged dash and wind screen, overhauled, absolutely perfect; £85 or reasonable offer.—Fairfield, Serpentine Rd., Selly Hill, Birmingham. [7428

DOUGLAS 2¾h.p. 1913, 2-speed, adjustable pulley, special T.T. bars, long exhaust, racing pistons, trip speedometer, lamps, horn, footboards, knee grips, fully equipped, very low machine, fast, excellent condition, tax paid; £37/10.—Bindon, 80, Rushey Green, Catford. [7810

KICKHAM, Stokes Croft, Bristol, the Douglas Agent with real experience and knowledge of a Douglas. Successes during 1920 on this mount: 38 firsts, 17 seconds, and 8 thirds, also 6 special trophies. Let me deal with your order. Unequalled service, repairs, etc. [3150

DOUGLAS Lightweight Combination, 1914, 2¾h.p., cylinders rebored, new pistons, etc., fitted 3 speeds, clutch, kick starter, Amac carburetter, lamps, spares, etc.; special Lightweight coachbuilt sidecar, Canoelet windscreen; licensed; outfit; £50.—R. S., 11, Bettran Rd., S.W.6. [7648

DOUGLAS 1917 coachbuilt Combination, 4h.p. 3 speeds, kick starter, free engine, clutch, C.A.V., powerful, fast, guaranteed perfect throughout, good tyres, all accessories; trial any time; bargain, £56.—Stepney Garages, 77, Salmon Lane, Commercial Rd., Stepney. 'Phone: East 4542. [8237

DEFERRED Payments, £45, or cash offers; 1919 2¾h.p. Douglas, 2-speed, tax and insurance paid, lamp, horn speedometer, fine condition; all 1922 models supplied; deferred payments, exchanges.—Haverstock Hill Garage, 50, Haverstock Hill, London, N.W.3. 'Phone: Hampstead 6609. [8747

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue

Motor Cycles advertised by private owners are, when desired, marked (P)

## MOTOR CYCLES FOR SALE.

### Douglas.

DOUGLAS Combination, late 1920, equipped, 3 lamps, horn, tools, Tan-Sad, licensed December, 1922, machine carefully used, as owner runs another machine; condition and appearance perfect; £95.—Files, 25, Oakfield Rd., Stroud Green. [7899

1921 Model Douglas 2¾h.p., 3 speeds, complete with lamps, etc., fitted with Mills-Fulford handbuilt sidecar, hood, windscreen with side wings, perfect condition, tax paid to Dec. 31st; £85, a real bargain.—19, Mersea Rd., Colchester. [8351

£85, or best offer.—4h.p. Douglas 1918 combination, perfect running order, best lamp sets, Bowey speedometer, complete Tan-Sad, Easting windscreen, special aluminium sidecar, legshields, tools, and numerous other accessories; owner going abroad. Apply after 6 p.m. or by letter, Crane, 285, Uxbridge Rd., Shepherd's Bush. [8384

2¾h.p. Douglas 1919, very fast, the property of member of *The Motor Cycle* staff, fully equipped with pillion seat; special features include experimental Bogle-lever carburetter, hand-made by well-known firm, and giving 98 m.p.g.; also brand new chain, Klaxon horn, and new belt; also fitted with special racing windscreen and exhaust manifold; practically new rear tyre (Hutchinson); machine just been completely overhauled; trial run arranged gladly; £45, bargain.—Write, Box 9609, c/o *The Motor Cycle*. [0846

*Spare Parts:*

DOUGLAS Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7541

HERBERT ROBINSON, Ltd., Green St., Cambridge, the Douglas Specialists.—Lists free; the trade supplied. [4945

DOUGLAS spares; large stocks of genuine Douglas spares; dealers supplied at trade rates.—Rivett, 36, High Rd., Leytonstone. [2267

DOUGLAS Spares.—We hold a complete stock for all models; post free. Douglas Agents and spare part stockists.—Jones Garage, Broadway, Muswell Hill, N.10. [0806

FRANK WHITWORTH, Ltd., 139, New St., Birmingham.—Complete stock, genuine guaranteed Douglas spare parts; prompt attention, immediate dispatch, lowest cash prices. [2147

DOUGLAS Spares. Try the Sulina Garage. We hold the largest stock of Spares in the South, and our prices are right. See our advertisement under "Parts and Accessories."—Sulina Garage Co., New Park Rd., Brixton Hill, S.W.2. 'Phone: Streatham 40. [8546

### Dunelt.

1921 4h.p. Dunelt, electric lighting, black finish, perfect, mileage 3,000; £85.—Dashwood, 163, Denmark Hill, S.E.5. [3540

### Duzmo.

DUZMO 1921 3½h.p., 3-speed, chain, demonstration model, splendid condition, lamps, etc., guaranteed; £70.—John Wallace, Enfield Highway. [8177

DUZMO Motor Cycles, 3½h.p., direct belt; £80; 3½h.p., 3-speed, chain; £115; 8h.p., 3-speed, chain; £140; immediate delivery all models.—John Wallace, Enfield Highway. [8176

DUZMO 1921 3½h.p. o.h.v. engine, direct belt drive, very fast machine, only run about 400 miles and as new; £55. Exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7039

### Economic.

£10, and deferred payments, buys new Economic motor cycles, or £34 cash; extraordinary value.—Write Direct Sales, 69, Newman St., W.1. [7446

ECONOMIC.—We can give you early delivery of this wonderful low-priced machine, variable gear model; £34. Please send p.c. for catalogue.—South Eastern Garage, Herne Hill, S.E.24. [8781

ECONOMIC Motor Cycles, modern marvel; £10 down and monthly instalments, or £34 cash. Ask your agent for details.—Economic Motors, Ltd., Manufacturers and Wholesale Distributors, Wells St., W.1. [7357

### Edmund.

NEW 2¾h.p. Edmund, spring frame, shop soiled; £70.—Ross, 86, High Rd., Lee. [7937

EDMUND, the great spring frame machines.—Gourlay, the Agent, Fallowfield, Manchester. [3648

EDMUND 1921 2¾h.p., spring frame, Blackburne engine, Burman 2-speed gear, new machine, fully guaranteed; £75.—P. J. Evans, John Bright St., Birmingham. [7758

EDMUND 1920, spring frame, 2½h.p., J.A.P., Enfield 2-speed, very good condition; £45.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7035

### Elswick.

ELSWICK Lightweight 2¾h.p., 2-speed gear, engine just overhauled, very good order; £19/10.—McHudson, Market Weighton. 'Phone: No. 4. [7444


1922

OMEGA

3 H.P. JUNIOR 348 c.c.

£39 : 10 : 0

OTHER MODELS

£45 to £120.

Omega Combination

£85

3 h.p. 348 c.c.

3 speeds; clutch, kick starter.

TOURING OR SPORTING SIDECAR. LAMPS, &c.

ROYAL RUBY 8 H.P.

SPRING FRAME COMBINATION.

SCREEN, LAMPS SPARE WHEEL £185

WATSONIAN SIDECARS

SPORTING—TOURING—COMMERCIAL.

DEFERRED PAYMENTS.

SECONDHAND:

| | |
|---|---|
| **1921 Douglas,** 2¾ H.P., 3-speed, clutch, kick-start, M.L. Dynamo Lighting | £78 |
| **1921 B.S.A.,** 6/7 H.P. Twin Combination, Dynamo as new | £145 |
| **1921 B.S.A.,** 6/7 H.P. Twin Combination, Electric Lights | £135 |
| **1921 Enfield,** 8 H.P. Combination, shop-soiled only | £130 |
| **1921 Omega,** 2¾ H.P., Villiers fixed gear | £30 |
| **1921 Omega,** 2¾ H.P., Villiers 2-speed | £42 |
| **1918 New Imp.,** 8 H.P., Combination | £90 |
| **1920 Coulson,** 2¾ Blackburne 2-speed | £55 |
| **1920 Norton,** 4 H.P., and light sidecar | £95 |

BARTLETTS

93, Great Portland Street,

Phone: LANGHAM 1271. London, W.


## MOTOR CYCLES FOR SALE.

### Enfield.

LAMBERT'S of Thetford for Enfield motor cycles. Latest models in stock. [8273

BRAND new Enfield Combination; £115.—24, Balliol Rd., North Kensington. [8134

BRAND new Enfield, 2-stroke, 2-speed; £45.—24, Balliol Rd., North Kensington. [8136

2¼h.p. Royal Enfield, 2-speed, 1921; £42/10.—Wauchope's, 9, Shoe Lane, London. [7857

1919 8h.p. Enfield Combination, well equipped; £80.—17, St. Charles Sq., W.10. [6237

1916 3h.p. Enfield, condition as new; £40.—Joseph Loveridge, Wote St., Basingstoke. [8172

£30.—3h.p. Enfield, 2-speed, K.S., tax, perfect; exchange.—27, Church Path, Chiswick. [7696

1915 3h.p. Enfield, 2-speed, full accessories, very fast; £32.—Ross, 86, High Rd., Lee. [7928

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

NEW 1922 Enfield Combinations in stock.—Bounds' Garage, 223, High Rd., Kilburn. [7659

NEW 1922 Enfield Combination in stock; immediate delivery; £140.—Walbro, Ely, Cambs. [7388

1915 6h.p. Enfield Combination, sound condition, full tax paid; £62.—Ross, 86, High Rd., Lee. [7921

NEW 1921 Enfield Combination and accessories; £130.—Bounds' Garage, 223, High Rd., Kilburn. [7660

LOOK! Brand new unpacked Enfield Lightweight; £48; exchanges.—Kent's, 417, Lord St., Southport. [8646

ENFIELDS.—1922 Combinations and 2-speed lightweights in stock.—Clifford Motories, Eastwood, Notts. [8829

ENFIELD 6h.p. Combination, very fine lot; £70; exchange or deferred payment.—Bunting's, Wealdstone. [8743

ENFIELD 2-stroke, 2-speed, perfect condition, lamps, tax paid.—College, 14, King's College Rd., Swiss Cottage. [7894

1918 Enfield Combination, 8h.p. Colonial model; a bargain, £85; like new.—Ross, 86, High Rd., Lee, S.E. [3481

1920 Enfield Combination, 6h.p., excellent condition, all on; £96.—B. Sharpe, Careby, Stamford. [7517

LONGMAN Bros., Bond St., Ealing, Official Enfield District Agents; cash, exchange, or deferred payments, 4% extra. [4485

ENFIELD Combination 6h.p., thoroughly overhauled, good condition throughout; £47.—Rose's Garage, Uxbridge. [8580

ENFIELD 6h.p. Combination, just overhauled; any trial; best offer over £75.—Annett, Terrace Rd., Walton-on-Thames. [8378

TWO 1921 6h.p. Enfield Combinations, mileage 1,500 each, perfect condition; £115 each, or near.—Goodall, Evesham. [7386

DAN GUY, Weymouth.—Enfield 1921 8h.p., Magdyno, double-seated sidecar, hood and screen, guaranteed perfect; £125. [0818

ENFIELD.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6290

ENFIELD 6h.p. Combination, splendid condition, overhauled, seen any time; £70.—"Carlton," Crook Log, Bexley Heath. [7523

ENFIELD 8h.p. Combination, Lucas lamps, speedometer, small mileage; £105, offers.—26, Totteridge Rd., Enfield Wash. [7981

1921 8h.p. Enfield-Vickers Combination, new, electric, speedometer, horn, year's tax; £135.—873, High Rd., Leytoostone. [8168

1921 2¼h.p. Enfield, 2-stroke, 2-speed, splendid condition, full insurance; £40.—J. Eliot, 89, Forest Rd., West Nottingham. [7571

ENFIELD 1915 Combination, full equipment, privately owned; bargain, £85.—Apply, Brookes Garage, Raynes Park, S.W. [8377

ENFIELD 2¾h.p. Twin, 2-speed, clutch, new Dunlops, lamps, etc., many new parts; £26.—26, Thornfield Rd., Shepherd's Bush. [7796

ENFIELD 1921 Combination, Magdyno, electric light, usual accessories, little used; bargain, £125.—2, Reading Rd., Henley-on-Thames. [5936

CROYDON and District.—Sole official appointed agent for Royal Enfields.—A. F. Pulling, 175a, London Rd., Croydon. 'Phone, 1619. [6951

1921 Enfield Combination, 8h.p., Magdyno, perfect condition, new tyres; a snip, what offers?—David, 1, River Side, Newbridge, Mon. [7329

ENFIELD 1921 2¼h.p., 2-speed, 2-stroke, mileage 300, exceptional bargain, tax paid year; £42.—Barker, 216, Portobello Rd., North Kensington. [8588

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue B25

Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Enfield.

1921 Enfield Combination 8h.p., Magdyno, born, speedometer, spares, good condition; £125.—Bryson, 136, High Rd., East Finchley, N.2. [7808

ENFIELD Combination, 8h.p., Lucas dynamo lighting, Tan-Sad, all accessories; £100, or close offer.—70, Rosebery Av., Manor Park, E.12. [7791

ENFIELD 1922 models for immediate delivery; cash or exchange.—Newnham Motor Co. 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7018

ENFIELD 1917 8h.p. Combination; £80; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7031

1921 2¼h.p. Enfield, 2-speed, licensed 1922, excellent order, good tyres; bargain, 38 guineas.—F. K. Hayman, 52, Caister Rd., Gt. Yarmouth. [7608

1919 Enfield Combination, all accessories, Easting windscreen; this machine is nearly new, a bargain; £75. -64, Church St., Edgware Rd., W. [8754

1921 8h.p. Royal Enfield, Vickers engine, 2-seater sidecar, fully equipped; £115.—Hillier (side bell), 9, Walliogford Avenue, North Kensington. [8018

1917 Enfield Combination, 2-seater sidecar, condition as new, fully equipped; £85.—28, Woodford Rd., Forest Gate. 'Phone: Stratford 2598. [8418

ENFIELD Combination, only done a few miles; £98; fully guaranteed.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6 (facing Princess Rd.). [8699

ENFIELD De Luxe Combination, electric lighting and every accessory, as new; £125.—Hammond, "Heathside" (top Station Rd.), Crayford, Kent. [8369

£80.—1916 Enfield Combination, excellent condition, 700×80, hood, screen, lamps, thoroughly overhauled, 1922 tax.—5, Chatterton Rd., Bromley, Kent. [8304

ENFIELD, 1922, brand new 2¼h.p., 2-speed, kick-starter, in stock; £57. Easy payments arranged. Exchanges.—Wilkins Simpson, opposite Olympia, London. [7565

ENFIELD, 1922, brand new 8h.p. Combination, in stock; £140. Easy payments arranged. Exchanges.—Wilkins Simpson, opposite Olympia, London. [7566

ENFIELD Combination 1914, 6h.p., J.A.P. engine, as new, overhauled, hood, screen, speedometer, lamps, all on; £78/10.—330, High Rd., Leytonstone, E.11. [8002

ENFIELD Combination 6h.p., Tan-Sad pillion seat, Lucas lamps, windscreen, splendid condition throughout; £65.—96, Bickersteth Rd., Tooting, S.W.17. [8634

£75.—1918 6h.p. Enfield Combination, fully equipped, electric lamps, hinged dash, screen, luggage grid, practically as new.—Beaulieu, Avenue Rd., St. Albans. [8123

1919 8h.p. Enfield Combination, Lucas, dynamo lighting, perfect condition, as new, tax paid; £90, offers; must sell.—Howich, Keeper's Corner, Burstow, Surrey. [8091

1921 Royal Enfield, J.A.P., electric lighting, windscreen, side curtains, tools, in new condition; £110; exchange.—Rhind and Co., Stone Place, Rusholme, Manchester. [8219

1921 Royal Enfield Combination, 8h.p., Magdyno, all accessories, perfect condition, not done 500 miles; nearest offer to £140.—Dr. Browne, 77, Victoria Rd., Southsea. [7326

ENFIELD, 1922, brand new 8h.p. Combination, Magdyno lighting, in stock; £158. Easy payments arranged. Exchanges.—Wilkins Simpson, opposite Olympia, London. [7567

ENFIELD.—Complete range of 1922 models in stock for immediate delivery. Cash! Exchanges! Easy payments 4 per cent. extra.—P. J. Evans, John Bright St., Birmingham. [7757

ENFIELD Combination 5-6h.p. 1917, dynamo lighting, 1918 engine, electric horn, fully equipped, windscreen, good tyres; £60.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [8678

1916 Enfield 5-6h.p. Combination, hood, screen, all lamps, 2 new tyres, Tan-Sad, engine overhauled, tax paid for year; bargain, £70.—Patterson, 12, The Quadrant, Winchmore Hill. [6071

ENFIELD Combination, 1921 (August), Magdyno, Vickers 8h.p. engine, small mileage, Easting, spares, condition throughout excellent; £135, or near offer.—Wooddene, Brighton Rd., Purley. [7836

ENFIELD Combination, 1921, fully equipped, Easting, speedometer, accumulator lighting, child's sidecar seat, Tan-Sad, mileage 4,500; £125.—Johnson, 50, Wellington Rd., East Grinstead. [8354

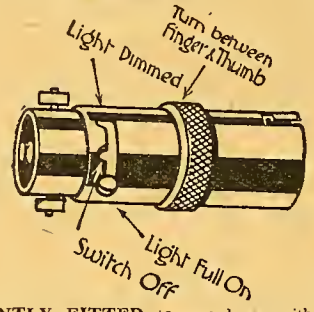
1921 Enfield Combination, Magdyno, Brookes cantiliver saddle, Cameo de Luxe screen; cost £195; new Stepney tyre, guaranteed as new throughout, mileage under 2,000; £130.—Spencer, Ledbury. [7990

1921 Enfield Combination, with Magdyno lighting set, horn and speedometer; cost owner over £190; small mileage; a bargain, £137/10.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [7854


# ASTRA

## DIMMER SWITCH & CURRENT ECONOMISER

(Patent applied for)


Turn between Finger & Thumb
Light Dimmed
When ordering state voltage and candle power of headlamp bulb.
Light Full On
Switch Off

**INSTANTLY FITTED** to any lamp with standard double contact holder and adapter.

Price **7/6** Post Free.

## ACCUMULATOR LIGHTING SETS

**SOLO SET** with 6" headlamp, accumulator case on lamp brackets and 4 v. 40 amp. accumulator tail lamp, all best quality. Complete with bulbs and wired up ready for instant fitting. **£3 18 6**

*Full particulars and catalogue of Dynamo Lighting Sets and Accessories from*

**THE ASTRA DYNAMO CO.**
**110, Victoria Street, Westminster, S.W.1**
Telephone: VICTORIA 7544 and 7545.



*fit The*

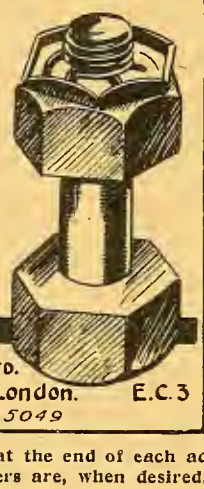
# Palnut

**SAFETY LOCK WASHER**

*to your Motor Cycle*

Will absolutely prevent the unseating and consequent loss of Nuts and Bolts under any condition of service whatsoever.

**THE GREATER**
**THE VIBRATION**
**THE TIGHTER**
**THE GRIP.**



**Cartons contalning 24 Palnut lock washers (assorted sizes)**

**2/6** post paid.

*Obtainable from*

**The PALNUT Co. Ltd.**
**6, Great St. Helens, London. E.C. 3**
*PHONE: AVENUE 5049*


## MOTOR CYCLES FOR SALE.

### Enfield.

69 Gns., exchange.—Really exceptionally nice Enfield Combination 1916, but had very little use, disc wheels, equipped, smart, any examination trial.—Seabridge, 35, Hansler Rd., East Dulwich (Sydenham 2462.) [7241

1922 Enfield Combination actually in stock for immediate delivery; standard, £140; 2-seater, £145; magdyno electric lighting £18 extra if required; easy payments 4% extra; carriage paid to your address.—Premier Motor Co., Aston Rd., Birmingham. [7245

*Spare Parts:*

ENFIELD Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7542

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Royal Enfield spares. [5705

ENFIELD Spares and Repairs a speciality.—Pulling's Garage, London Rd., Croydon. 'Phone, 1619. [6952

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Enfield engine parts in stock; no waiting. [4946

### Excelsior.

2¾h.p. Excelsior, magneto, B. and B.; etc., bargain, £18; take bicycle part.—Fisher, "Roseleigh," Heston, Hounslow. [7606

1921 Excelsior, 2-stroke, 2-speed, 2½h.p., horn, new condition, mileage 75; snip; 45 guineas.—Talbot Bos., Henley-on-Thames. 'Phone: 222. [8126

1922 Excelsior, all-chain, 2¾h.p., Blackburn, 3-speed, clutch, K.S., all on, Sports, mileage 250; offers.—Talbot Bros., Henley-on-Thames. 'Phone: 222. [7966

### Fafnir.

FAFNIR motor cycle, incomplete, engine sound; first £6 secures.—Platts, 602, King's Rd., Fulham, S.W.6. [8619

### F.N.

2½h.p. F.N., belt drive, good condition; £11; cycle part pay.—35, Maxim Rd., Crayford, Kent. [7426

F.N. Combination 7-8h.p. 1920; £135.—Motorists' Advisory Agency, Ltd., 89, Wigmore St., W.1. [8448

F.N., 4-cylinder engine, perfect, all on, tax paid 1923; £30, near offer.—28B, Cato Rd., Clapham. [8658

F.N. 1¾h.p., Bosch, good condition, lamp, horn, spare belt; 8 gns., or offer.—Smith, 38, Richmond Rd., Staines. [7699

F.N. 4-cylinder, just overhauled, new parts fitted, sporty mount, good tyres, tax paid; £25.—Barry, 44, Rodwell Rd., East Dulwich [8689

17 GNS. only.—F.N. 4½-5h.p., 2 speeds, shaft drive, wants attention.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [8548

F.N. 2½h.p., touring Model A, 2-speed, handle-bar control clutch, kick atart, new; £55.—Croydon and District Agents, Pulling's Garage, London Rd., Croydon. 'Phone: 1619. [6954

F.N., the wonderful 1922 £95 model, 7h.p., 4-cyl., gate change, car tyres, one actually in stock.—'Phone: Hampstead 2012.—Wire or call, Delancey St. Garage, Camden Town, N.W.1. [7900

LANGFORD'S, 37, Cricklewood Broadway, London, N.W.2.—1922 8h.p. 4-cylinder F.N., with new o.h.i.v. engine, 3-speed gear, and no-trouble shaft drive; £135. Lightweights, £55 and £72. Highest price for your present machine in exchange. [8204

*Spare Parts:*

F.N. Spares.—We can supply for all models from 1904. Prompt attention to enquiries. Please send frame number and stamp for reply.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [8205

### Francis-Barnett.

1920 Francis-Barnett, 2¾h.p. J.A.P., 2 speeds, kick start, hand clutch, appearance and condition as new; £40.—Hucklebridge, 133, Sloane St., Chelsea. [7461

### Grandex.

GRANDEX 1915 Lightweight, 1¾h.p. Precision engine, 2-speed, splendid running order, tax paid; £19.—Atkins, 246, High St., Barnet. [7677

### Griffon.

1917 Griffon 4h.p. twin, tyres new, Saxon forks, hardly been used; wants magneto and carburetter; £14.—52, Manor St., Clapham, S.W.4. [8047

### Haden.

1921 Haden-Precision, brand new, 3½h.p., handle-bar clutch and kick starter.—Rhind and Co., Stone Place, Rusholme, Manchester. [8221

### Harley-Davidson.

1918 7-9h.p. Harley, new condition; £70.—Ross, 86, High Rd., Lee, S.E. [7923

SHEFFIELD Agent for Harley-Davidsons; from £120.—Stacey, 12, Ecclesall Rd. [0577

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## Suggested New Motor Laws.

FOR long it has been recognised that existing laws concerning motor vehicles are out of date. The Government has realised this, but, before making drastic revisions, wisely instituted a committee to investigate every item from the standpoint of present-day needs. This committee's report has now been made public, and extracts from the sections affecting motor cyclists are given on page 473 of this issue.

The report reveals the views of actual road users, and, even if it is not possible to agree completely with all the recommendations, it is satisfactory to know that motorists and motor cyclists were represented on the committee.

We refer chiefly to the proposal to abolish the speed limit and to inflict very severe penalties for offences of driving to the common danger. It is feared that, if the proposals are adopted, too much power will be placed in the hands of the police. We have frequently advanced our view that a raised speed limit would be preferable to a law which is open to unreasonable interpretation on the part of biassed individuals.

Incidentally, the suggested abolition of the speed limit applies only to motor cycles and touring cars fitted with pneumatic tyres. If not thus equipped, it is intended that the speed limit remain at 20 m.p.h.

It is interesting that the Commissioner of Police disagrees with the total abolition of the speed limit, as he does with several other proposals of the rest of the committee.

A very sensible recommendation in the report is that the police, in instituting proceedings for a technical offence, should have regard to the object with which the regulation was made, and avoid regarding the mere breach of the regulation as being necessarily an offence in itself. The absurdity of the present-day position regarding baffle plates in silencers comes under this heading.

That it is proposed to make rules of the road part of the law will be regarded with satisfaction. At present these matters are merely courtesies of the highway. The question of passing tramcars, too, is covered by the report.

Every type of road vehicle is dealt with in the report, and, taken generally, the recommendations are sound and their adoption very desirable. It will, however, be some time before any new regulations are made law, and in the meantime certain revisions may be expected.

---

## Spring!

ALTHOUGH the use of a motor cycle is by no means limited to the finer months of the year, yet there are many riders who regard the pastime as a seasonal one and who therefore are now bestirring themselves, furbishing up their mounts and preparing for the open road.

Those who use their machines either for business or pleasure throughout the whole year—and they are in the majority—have already had some excellent enjoyment from the fine weather and dry roads with which we have been favoured even before winter was ended; yet even they will feel an awakened joy in the knowledge that spring is here—with its warmer sunshine, flourishing wild-life of the country-side, and lengthened evenings. The present year was heralded with a promise of being fuller than the preceding one, and, despite unrest in certain directions detrimental to the well-being of the motor cycle industry, it is already bearing out its early promise. The pastime has never been more popular and organised competitions never better supported—and the programme is a full one.

An Index to the advertisements in this issue will be found on the page facing the back cover.

# OCCASIONAL COMMENTS

BY IXION

## Solved?

IT was very wet. It was very cold. The road was unknown to me. The dark was intense. My only source of light was an electric head lamp. As I slithered cautiously round a greasy corner under some trees, the world quite suddenly went jet black, and remained so. By dint of peeping with such fitful light as a few matches shielded between my palms could produce, I found that everything visible was apparently in order, and decided that the bulb of my head lamp had gone phut. Fortunately there was a spare in a shaving soap tin in my pocket. With the penultimate match I tackled the lamp. Woe! It was of the type by which the sole access to the interior is by removing the front lens; and the front lens was secured by a split spring ring. I knew how to get the ring out. You just prise it out with a penknife. Did so. Inserted new bulb. World illumined once more. Now to replace the split spring ring. It whirred away several times into the mud. I got crosser and crosser. Finally—happy thought! *Electric bulbs don't blow out!* Why not proceed with lens in pocket? Did so.

Next morning, the Editor being absent, I experimented with that split spring ring in the secrecy of my office. I am glad I don't have to fit up those lamp lenses for a living—on piece rates. But, anyhow, I believe I know how they are meant to go in. Mine is in at last anyway. I pushed the lens well over to one side of its bed, inserted a tip of the ring, and then pushed it hard into the gap, holding the lens and its bed stationary. The last inch or so was a struggle, but all's well that ends well, and my next lamp shall have a hinged or screw front. Unless, of course, its bulb is removable from the tail end.

## Simple Fourwheelers.

I NOTICE that several correspondents are displaying marked interest in some of the cheaper cycle cars. And no wonder. You can buy certain of them new for much less than the price of a new 8 h.p. sidecar outfit, and second-hand at proportionately lower figures. An 8 h.p. two-seater at round about £100 must always be attractive. Their second draw is that both occupants enjoy a proper seat and such weather protection as goes with sitting *in* something instead of *on* something. Many readers must wonder why these remarkably cheap and handy fourwheelers do not sweep the sidecar right off the road. There are several reasons. The first is that none of them have ever been properly pushed. It is partly the fault of their makers, who seldom adopt a live publicity campaign; it is equally the fault of the clubs, who organise competitions fit only for chamois, whereas the cheap cycle car by comparison fits the needs of much quieter folk, and would not invariably show up well in a freak trial. The second is that these machines have no reverse, and are uncommonly awkward to turn round. They are too low to be nice to push, and if they were higher their solid back axles generate incredible friction when the helm is locked hard over. The third is that they have very narrow tracks, which makes them lively on bad surfaces. The fourth is the silly fashion in which the Government taxation scale handicaps the cheap four-wheeler as contrasted with the more expensive types of three-wheeler. If the first and the last difficulty can be met, these machines would sell very freely to people who can dispense with a reverse and who either confine their rides to goodish roads or do not mind being bounced about. I am sure it is high time that somebody organised a trial to show what such machines *can* do. They cannot do all that a sidecar outfit *de luxe* can do, and they have never had a chance to demonstrate their undoubted merits. If I were selling them I would run a big fleet through the Exeter, Land's End, and Edinburgh runs, which are well inside their compass. They all deserve to be much better known.

## From the Khyber Pass.

YES, the Blue 'Un is lovingly perused on the north-west frontier of India. So a kindly soldier sends the following cutting from the advertisement columns of the local print:—

IF YOU WANT A REALLY GOOD BIKE
You Cannot Do Better Than Go In For A
DE DION BOUTON
*PUSH* BICYCLE.

British pedal cyclists will please note the broad-mindedness of the distant Pathan.

## Mechanical Oiling in Frosty Weather.

MY recent question anent the behaviour of mechanical oilers in Arctic weather was really prompted by an experience aboard a friend's car equipped with a somewhat similar system. A mechanical pump delivered oil under pressure to a sight feed, from which a gravity pipe ran to the crankcase. In winter he encountered persistent trouble forward of the sight feed. As far as the glass, the feed was under pressure and O.K. But the thick oil, which he fancied, would not surrender to gravity when it was cold, the glass filled up, and presently the oil welled out through the venthole in

**)ccasional Comments.—**

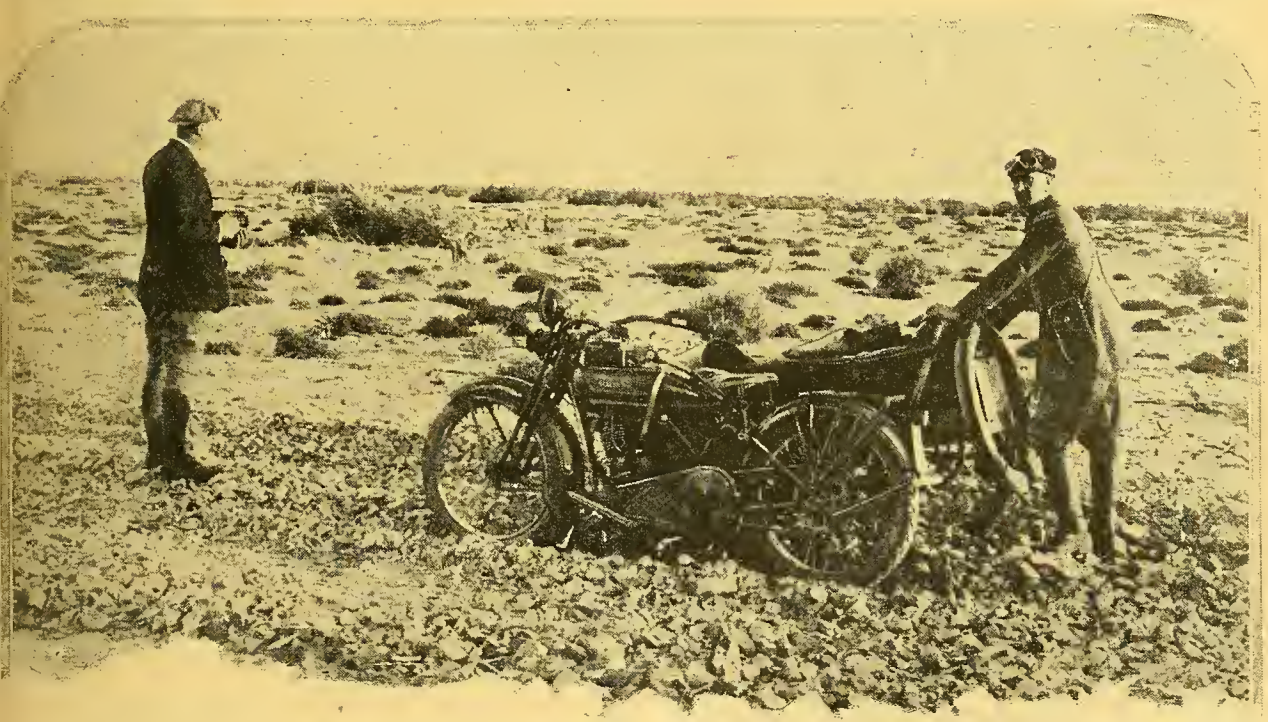
he top of the sight feed, "and so the poor engine ıad none." I was curious to know whether motor 'yclists are experiencing the same trouble with similar ayouts. My postbag indicates that they are not—ndeed many users of such pumps as the Best and the Showell tell me that right through the cold months hey continue to use the thickest summer oils with ɔerfect ease. Occasionally their sight glasses fill up, ɔut the pressure behind the lubricant is so great that it presently goes on to the engine. Possibly a helpful factor is the shortness and straightness of the pipe ɔetween their sight glasses and the engine; on the ɔar referred to above, this pipe was nearly 5ft. long, ınd included four rectangular bends—a particularly foolish bit of design.

## Simplifying Decarbonisation.

THE other day I received a sample "Vril stick." This quaint term identifies a wire brush intended to be spun in a brace for decarbonising the combustion head of a one-piece cylinder, and it is centred by a cone which fits into the compression tap orifice. There is nothing new under the sun. The R.B. Engineering Co., of Didsbury, Manchester, who make the Vril stick, may be interested to hear that when I last changed houses the scrap heap was enriched by a similar brush of unknown origin, sent to this office some fifteen years ago. It decarbonised many engines before its wire bristles at last gave up the ghost, and enabled me to get a polish on a part of the engine which is often rather sooty after we have done our best with a chisel. I wish the Vril an equal lease of life.

## Dr. Coué at Brooklands.

WHEN I can get away from the office for a day or two, I have distinct highbrow tendencies, and old Brown coaxed me last night to attend a lecture on the methods of Dr. Coué, which I understand are all the rage amongst unhealthy people (being a motor cyclist, I am perfectly healthy, thank you). I gather that being ill nowadays is quite a picnic. Instead of swallowing nauseous medicine and still more nauseous food, or having your inside decarbonised under chloroform, you merely assume a cheery expression, and remark repeatedly and fervently, "I'm getting better, I'm getting better!" And before you know it, you've *got* better. The next time I put myself round rather too much beer, and suffer from the proverbial parrot-cage mouth, I must try this recipe. But really the worthy Frenchman's ideas sounded quite plausible, and were much enhanced by demonstrations from sundry patients, who once had but one leg, and had recently grown a new one under the doctor's treatment; or had lived in bath chairs and on spinal couches for years, and were now in the front row of the chorus at one of C. B. Cochran's shows. So, being an impressionable sort of bloke, I blush to confess that I tried the dope on my Squirrel. I took it to Brooklands, and did a lap or two without Ebble-white developing that intent expression with which anything over 90 adorns his face. So I began to *coué*. I felt as confident as I could, and ejaculated as fervently as the wind pressure would let me, "She's revving faster, she's revving faster!" My speedometer took no notice, recorded no acceleration. After a lap or two my enthusiasm subsided.



A HIGHWAY ACROSS THE MEXICAN PLAINS. This view taken near La Laguna Salada (the Salt Lake) in the state of Baja, Lower California, shows a portion of the National Highway now under construction. This road extends from Mejicali to Ensenada, a distance of 180 miles, and its completion will make an easy motor course over what was formerly an almost impassable desert stretch.

# Through Feminine Goggles

## Some Notes on the Choice of a Motor Cycle.

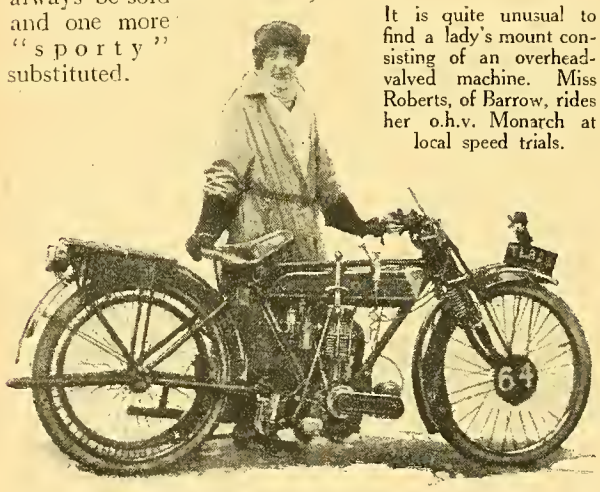
By MAB. LOCKWOOD-TATHAM.

SPRING produces all sorts of things, such as chickens, love, spots, the I-want-a-new-hat fever. It is reputed to play the dickens with a young man's fancy, but I think the most normal thing it does is to make everybody long to get out into the country and get lots of fresh air. I venture to think that this year particularly many girls, including some who probably have never ridden before, will buy a motor-bike as a good means to that end. Therefore a chat on the subject of choosing a suitable machine may be useful.

In the first place, and before any definite steps are taken, a prospective lady motor cyclist should think it over carefully, decide for what she is going to use the machine most, and consider her own capabilities, including strength, nerves and size.

It is a great mistake to try to run before one can walk, and a lot of difficulty and probably trouble of some sort will result if a lady attempts to drive a high-powered, heavy machine right away. It is much better to start with a machine which is not complicated nor too high powered, and which is amenable to drive.

When one has become thoroughly accustomed to motor cycles and their ways the original mount can always be sold and one more "sporty" substituted.



It is quite unusual to find a lady's mount consisting of an overhead-valved machine. Miss Roberts, of Barrow, rides her o.h.v. Monarch at local speed trials.

Girls are like the English weather—they vary a lot. One may be able to stand up to her big brother with the gloves; another may not be very strong. In the latter event the novice should not choose a machine that is too heavy to lift on to the stand. Remember one hasn't only to *ride* the bike. One must be able to push it about, hold it up, and prop it on to the stand without undue exertion. Conversely, if my reader's proportions are more Amazonian she will look better on, and be quite capable of handling, something a little more solid.

### The Question of "Nerves."

If her nerves are bad, in fact if she has any at all in the usual sense of the word, and she contemplates buying a motor cycle, my advice is the same as that of *Punch* to those about to commit matrimony—don't! She will be a danger to herself and everybody else, and nobody will love her. All the same, there is a possibility that one imagines oneself nervous. If any lady can ride a pedal cycle with ease and confidence, she should be quite fit to handle a motor cycle.

The next question should have a bearing on the choice of mount.

Suppose it is required just for local running about, getting into the nearest town, etc. Then one does not want such a speedy or capable mount as if she is going to make a speciality of long-distance touring or competition work.

For the purpose of pottering about, a small two-stroke answers the purpose admirably—and indeed, such strides have been made in the design of this type of machine that it shows good results on heavier work, too, sometimes. The type of country in which one lives should also be taken into consideration. If it is very hilly, the subject of gears must be considered. Practically every machine has two, three, or even four speeds nowadays.

**Through Feminine Goggles.—**

Another point which is important to a girl is the presence of a clutch and kick-starter—particularly the latter, as a clutch is not much good without it, except for restarting in traffic.

Of course, many lightweights are easy enough to paddle off under ordinary circumstances, but the best of engines are obstinate sometimes, and believe me, it's temper-wearing and back-breaking work pushing a machine along against compression—especially on a warm day.

### Two-Strokes versus Four.

The chief advantage of a two-stroke is that it is less complicated than the four-stroke and easier to understand in every way. The engine is usually more accessible, it is generally easy to start, and it is a very reasonable weight considering the power it develops. With one or two exceptions two-strokes are not made in sizes larger than 2¾ h.p., and a good model can be bought for considerably less than a four-stroke. All these points show that it is really an ideal machine for a lady, especially if she is a beginner or of a non-technical turn of mind, and does not want to indulge in very high or sustained speeds.

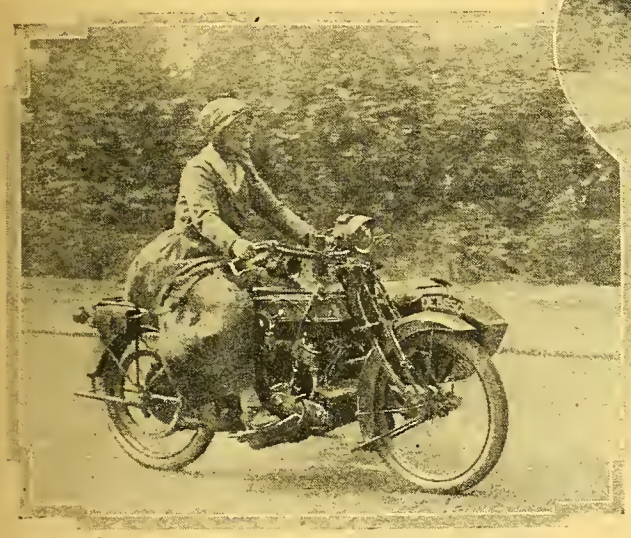
The four-stroke is usually of more substantial design and wider capabilities. There is less chance of overheating while keeping up a high average speed, and it is generally considered a more racy and professional mount than its young contemporary.

Still, it has the disadvantages, from the feminine viewpoint, of being rather heavier and slightly more complicated.

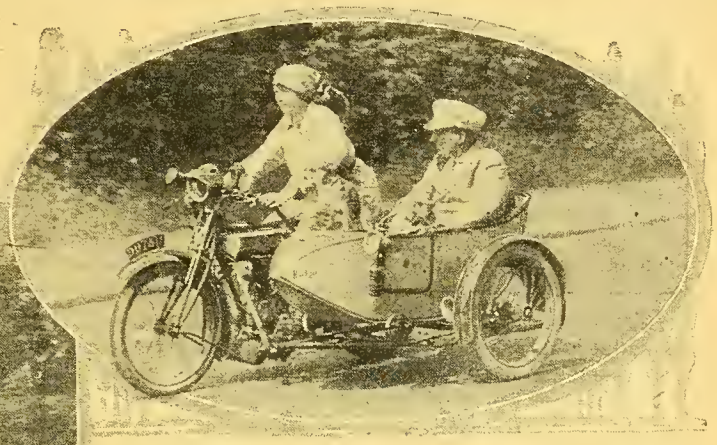
### Open or Closed Frame.

This point always crops up during the choice of a machine, and the reason for it is the question of wearing apparel. As Mrs. Grundy no longer frowns upon us for wearing breeches, this is now entirely a question of personal inclination. An open frame is really better if skirts are to be worn always, but it is possible to wear them on a low, diamond-frame machine.

The great disadvantage of the open frame is the difficulty of most manufacturers—that of producing sufficient rigidity to eliminate "whip" at speed. So that it is really better to buy the more general design, and if necessary compromise the dress question by wearing divided skirts.



A lady driver who appears quite at home on her powerful New Imperial outfit.



A change over. It is quite common in these days for the passenger to take her turn at driving.

### Second-hand Machines.

A word of advice from one who has bought the experience. In buying a second-hand machine, the lady should *take an expert with her*, and have it thoroughly tested on the road. There are thousands of second-hand machines on the market just now, and while some are good—others are like the curate's egg.

---

## ELECTRICAL *v.* HAND-TIMING.

REGARDING the recent short distance records at Brooklands, Mr. J. L. Norton, the designer of the machine which bears his name, writes :—"I am strongly of opinion that for short distance high-speed records electric timing is absolutely essential to accuracy, and I would suggest to the A.C.U. that for distances up to one mile. at any rate, electrical timing only should be recognised. My very esteemed friends, Messrs. Ebblewhite and Renolds (whose unequalled work and experience everyone recognises and appreciates) will not, I am sure, take exception to my suggestion, for no one can better realise than their good selves the impossibility of accurately measuring time by hand to the one-hundredth of a second, and speeds are now such as to make minute divisions essential."

As noted in *The Motor Cycle's* description, electrical timing was used in both the recent successful record attempts over short distances in the 500 c.c. class. Furthermore, the apparatus installed at the Weybridge track is of great accuracy.

# Road Tests of New Models

## The 4½ h.p. Chain-Driven Quadrant Sidecar.

*SPECIFICATION.*

| | | |
|---|---|---|
| *ENGINE: 4½ h.p. Quadrant; single cylinder. 85 × 110 mm. (624 c.c.).* | *CARBURETTER: Amac, two-lever.* | *DRIVE: All chain, cush hub.* |
| *VALVES: Side and rear.* | *MAGNETO: Gear-driven.* | *TYRES: 26in. × 2½in.* |
| | *GEAR: Sturmey-Archer, 3-speed.* | *SIDECAR: Coach-built.* |
| | | *PRICE WITH SIDECAR: £105.* |

IN spite of the very moderate figure at which the Quadrant is sold, the impressions obtained from an examination of the machine and from the feel of the engine on the road are not those which one is apt to associate with a cheap production. The engine is quiet and powerful in action, and a close inspection reveals no skimping of workmanship or fittings. A few may take exception to the retention of the horseshoe type front brake, but we purposely tested this fitting and found it quite serviceable.

A very considerable improvement has been made in the silencing of the engine, and the exhaust is now muffled by a duplex aluminium silencer until the noises peculiar to most four-stroke engines are the most audible sounds. The tappet noise, however, is not excessive, and the machine which we handled, even after over 4,000 miles road work, was quieter than the majority of motor cycles.

A glance round the machine before starting out on the road revealed the very sturdy and straightforward construction of both motor cycle and sidecar chassis, while the rounded saddle tank is distinctly attractive and the sidecar roomy and well finished.

No difficulty was experienced in starting the engine in spite of the intensely cold wind in which the machine had been standing for a considerable period before we took it over. A very good and natural riding position is provided, and the outfit steered perfectly at all speeds. For the first few miles we contented ourselves with normal touring speeds, though the machine handled so easily that there was no feeling of strangeness except for the fact that the powerful foot brake has its operating pedal on the not very usual right-hand side. Stoneleigh Hill, near Coventry, was the first test with which the machine was faced, and at the first attempt the engine, which was pulling stoutly on

Climbing Stoneleigh Hill, between Coventry and Leamington, on top gear with a 4½ h.p. Quadrant sidecar.

**Road Tests of New Models.—**

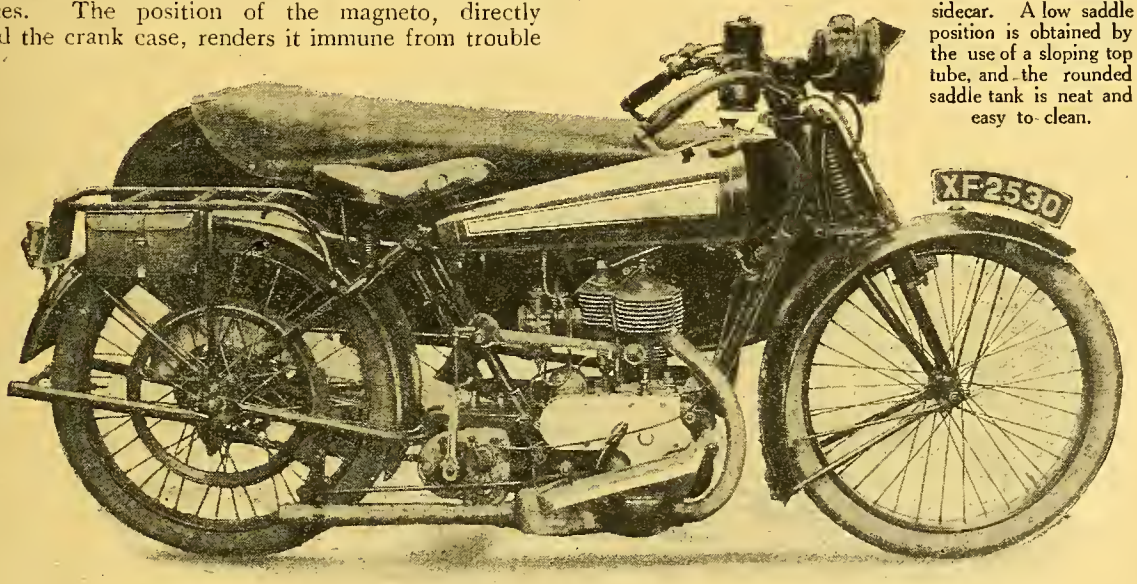
a top gear of 5-1, gave a momentary flutter which caused a drop to middle. This flutter was subsequently found to be due to a stoppage in the petrol pipe, and after removing a lump of fluff from below the carburetter the machine ran perceptibly better. A second attempt at Stoneleigh for photographic purposes resulted in a clean top-gear climb of the 1 in 9 gradient with a fairly heavy passenger in the sidecar. The hill is not a steep one, but as no "rush" is obtainable a top-gear climb with sidecar passenger may be considered as no mean performance. After a second short stop for photographic purposes we changed over to the sidecar seat, and as circumstances demanded haste, the next few miles were covered at a smart pace. Two points became immediately obvious: the sidecar was comfortable and very well sprung, the back being set at just the right angle for comfort, and the Quadrant engine proved itself capable of a very fair turn of speed with good staying qualities. Though no speedometer was fitted and no milestones were available, we should estimate the maximum speed of the outfit at somewhere in the neighbourhood of 45 m.p.h., and it is certainly capable of maintaining a high average for some miles without showing signs of distress. Some time was spent in driving the machine through water splashes at varying speeds and in climbing steep banks with grassy surfaces. The position of the magneto, directly behind the crank case, renders it immune from trouble in any reasonable depth of water, and we found the climbing powers of the machine ample for any hill on which a grip for the tyres can be obtained.

Recent modifications to Quadrant motor cycles include a new silencer giving greater ground clearance and very neat cast aluminium chain guards.

As regards equipment, the mudguards are of truly sensible width, the forks are neat and efficient in action, the lever of the Sturmey-Archer gear comes in just the right position, and the aluminium footboards are comfortable, but might be slightly longer.

It will be remembered that the valve position on the Quadrant engine is somewhat unusual, for though the exhaust port is normally placed at the side of the cylinder, the inlet port lies directly behind the cylinder, the valve being operated by a separate gear and shaft. Behind this again lies the magneto in a position which is well protected from mud and water, though the contact breaker is not too accessible.

The more we examined the latest 4½ h.p. Quadrant outfit and the more we rode it, the more obvious became the fact that it is very wonderful money value, and there is no need for anyone to fear that in purchasing such a mount they would be buying something nasty because it is cheap. All essentials are included in the price of £105, and no part is skimped in order to build down to a price.




The 4½ h.p. Quadrant sidecar. A low saddle position is obtained by the use of a sloping top tube, and the rounded saddle tank is neat and easy to clean.

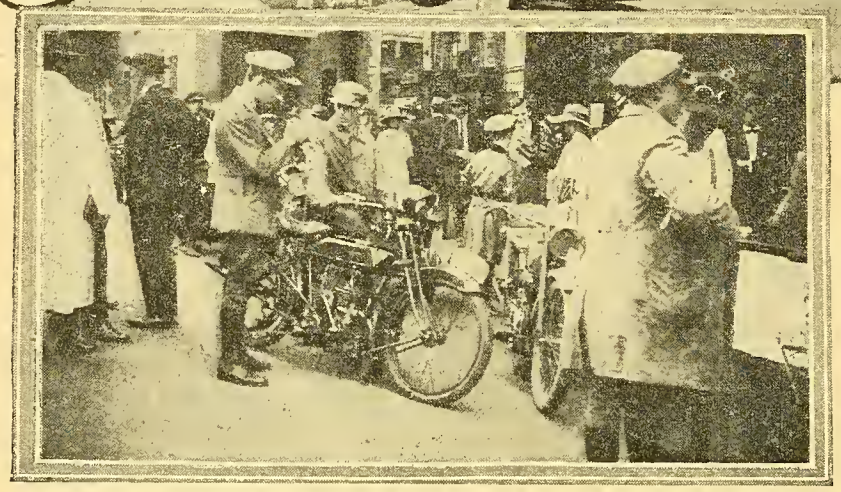
## WANTED: AN ANTI-DAZZLE REFLECTOR.

POLICE traffic signals at the busy traffic junctions of the provincial cities often lead to confusion. Obviously, the officer on duty cannot face four directions at the same time, but when a rider is approaching him from the rear misunderstanding arises due to the motorist being unable to perceive whether "the man in blue" intends him to proceed or stop. Viewed from the rear, the raising of a policeman's arm very frequently appears like the circular wave of the hand to go forward, when actually the motor cyclist was intended to "free engine."

More than once has the writer found himself in error from this cause, and it would seem to him at busy street intersections the use of mirrors would be helpful to both the police and to motor users. As a matter of fact, mirrors were used in Liverpool in the early part of last year, but were removed after a short trial, owing to the sun's reflected rays causing dazzle.

# An Australian Six Days Trial

In the centre is seen F. Roberts (4 Indian), who suggested the trial and backed it up by providing the whole of the prize money.



A scene at the start of the New South Wales M.C.C. Six Days' Trial.

## First Annual "Six Days" of the M.C.C. of New South Wales. Bad Weather Produces Pioneer Conditions. British Machine Driven by Private Owner Makes Best Solo Performance.

ALTHOUGH the first of its kind to be attempted in Australia, the N.S.W. "Six Days" proved to be a great success. Of 38 entries received 24 faced the starter. It was very unfortunate that wet weather was experienced during the trial, as the rain was responsible for the failure of some of the competitors. On the whole, however, the trial proved the reliability of the motor cycle, and it should also create a greater interest in the sport.

The success of Harry Hulford on the 3½ h.p. Douglas shows that the medium-weight has the reliability to go anywhere, the same as the high-powered machines, a fact not always realised by those with no experience of British motor cycle history.

### The Start of the Trial.

At the start it was very dull and threatening. The first day's run was to Bathurst, 129 miles, with the luncheon stop at Lithgow, 89 miles.

The first rider away was H. Cuncliffe (2¼ James), followed 20 minutes later by the "under 600 c.c." contingent. The sidecars followed next, and the procession was completed by the solo machines over 600 c.c.

The roads to Penrith were abominable to say the least. Bolton (4¼ B.S.A.) fell on the Mount Victoria Pass, but was luckily unhurt. A little further on Hodgson also came off. Patching (7-9 Indian), after crossing the deep creek before Lithgow, got water into his magneto, and was compelled to retire. E. Norman (7-9 Harley-Davidson) was troubled by oily plugs. P. Harrison (7-9 Indian) had a bad fall, but all except Patching checked in on time at Lithgow. Cuncliffe had had trouble with his lubricating oil and was compelled to change it at Lithgow.

Rain now commenced to fall, and it teemed all the way to Bathurst. Cuncliffe (James) punctured, but soon had matters right. On arrival at Bathurst it was found that Hallinan (2¾ Douglas) had struck a series of punctures, which cost him 76 points. Cross (Harley-Davidson sc.) and Head (Harley-Davidson solo) both retired before Bathurst.

### Incessant Rainfall.

Throughout the night the rain continued in a deluge, and it was ascertained that the road from Wellington to Parkes was impassable. The officials were in a quandary, and on it being submitted to the competitors it was decided to omit that section, and set out at 9 a.m. for Parkes, omitting Wellington.

Whilst the riders were having breakfast, word was received to the effect that the road had collapsed four miles out, leaving a hole 10ft. wide and 12ft. deep. After a consultation it was decided to ride there in a bunch, all to lend a hand in getting the machines across. After some difficulty the machines and the official car got safely over, only to meet, five miles further on, a creek swollen by the heavy rain; with difficulty all crossed safely, and rode through to Orange.

After lunch at Orange, Tretheway (7-9 Indian sc.) had three punctures, which cost him 44 points. Four miles out of Molong, Bolton (4¼ B.S.A.) ran out of oil. A mile or so further on he fell heavily, and was rendered unconscious. Cuncliffe, on the James, lost the top of his carburetter, and ran out of petrol. He had to walk two miles for a supply, making a new top for his carburetter out of a puncture repair outfit tin.

### Third Day—Parkes to Young.

Twenty competitors set out from Parkes. The road conditions were only fair, and many of the competitors got lost. Buckley (7 Harley-Davidson) was unfortunate, covering 84 miles instead of 42, and losing 37 points. Cuncliffe (2¼ James) also got lost. Hulford (3½ Douglas) punctured. J. Miles (7-9 Harley-Davidson sc.), had a sooted plug, and J. Saunders (7-9 Harley-Davidson sc.), had water in his magneto.

### Fourth Day—Young to Cootamundra.

The start was made in fine weather, all getting away except Stuart, who remained to repair a punctured sidecar wheel. Six miles out the Douglas riders, E. Williams, M. Hallinan, and H. Hulford (known as "Faith, Hope, and Charity"), were passed, one having a puncture and the other two helping. Naught (Indian sc.) also suffered from tyre trouble. The last portion of the run was an almost straight 50 miles, but a most enjoyable run was spoilt by grasshoppers, which were present in millions. Everyone arrived at Temora except Stuart, who through punctures lost 51 points.

On the next stretch to Junee, White (7-9 Harley-Davidson), had a bad spill. All the way to Cootamundra the "roads" were merely rough waterlogged tracks.

### Fifth Day—Cootamundra to Goulburn.

This stage will never be forgotten by those who took part. Before starting, Norman took out his Harley back wheel and sidecar wheel to repair punctures. Hallinan's Douglas refused to fire for some considerable time. The road to Harden was only fair, but all checked in except Naught, although Norman only just arrived on time.

At 2.10 p.m. the competitors left Yass for Goulburn in pouring rain. The lightning was very vivid, and struck a tree which fell across the road. Those who left Yass early arrived at Goulburn, but the late starters left their machines on the roadway, and walked to Gunning, five miles away, where they stayed the night.

### Sixth Day—Goulburn to Sydney.

Fourteen riders faced the starter for the last day of the trial, and none looked very happy, as it was still raining, and the speeds set were high. Hulford could not start his Douglas, and was delayed ten minutes. Three who stayed the night at Gunning started with the others from Goulburn. White (7-9 Harley-Davidson), who had not lost a single point, stopped with a broken valve, and Hodgson, who stopped to assist, failed to get his machine going again, and had to be towed to Moss Vale. Another huge tree was found across the road, having been struck by lightning.

Three miles from Picton, Kerslake (4 Indian) opened up on a perfect metalled road, but striking a greasy patch, skidded into a culvert and smashed his machine. Up till this accident he had not lost a mark. Roberts (4 Indian) stopped to place some bearings in his front wheel, and arrived at Camden control three minutes early, thus losing two marks, his only loss in the trial. Hulford (3½ Douglas) was now the only solo rider with a clean sheet.

### At the Finish.

Everyone who timed in at Taverner's Hill was allowed 15 minutes to reach the final control at the Club rooms, in order to go slow through the city traffic.

On arrival at the rooms each machine was checked in, and the riders retired for refreshments. One prominent rider was heard to say that the mud-caked machines were a bad advertisement, and should not be permitted.

Undoubtedly it proved how inefficient the mudguards were. Also noticeable was the fact that four machines of one make had all broken front forks in the one place.

The results were :—

SOLO CLASS.

| | Marks lost |
|---|---|
| H. Hulford (3½ Douglas) ... ... | nil |
| F. Roberts (4 Indian) ... ... ... | 2 |
| E. White (7-9 Harley-Davidson) ... | 94 |
| E. Williams (3½ Douglas) } ... ... | 100 |
| L. Palmer (7-9 Indian) } | |
| H. Hodgson (7-9 Harley-Davidson) .. | 110 |

SIDECAR CLASS.

| | Marks lost. |
|---|---|
| P. Williams (7-9 Excelsior sc.) } | |
| J. Miles (7-9 Harley-Davidson sc.) } | Dead heat nil |
| A. Dennis (7-9 Indian sc.) } | |
| E. Norman (7-9 Harley-Davidson sc.) ... | 34 |
| E. Buckley (7-9 Harley-Davidson sc.) ... | 36 |
| J. Thretheway (7-9 Indian sc.) ... ... | 43 |
| S. Stuart (7-9 Harley-Davidson sc.) ... | 63 |
| J. Saunders (7-9 Harley-Davidson sc.) .. | 100 |
| M. Grayson (7-9 Harley-Davidson sc.) ... | 152 |

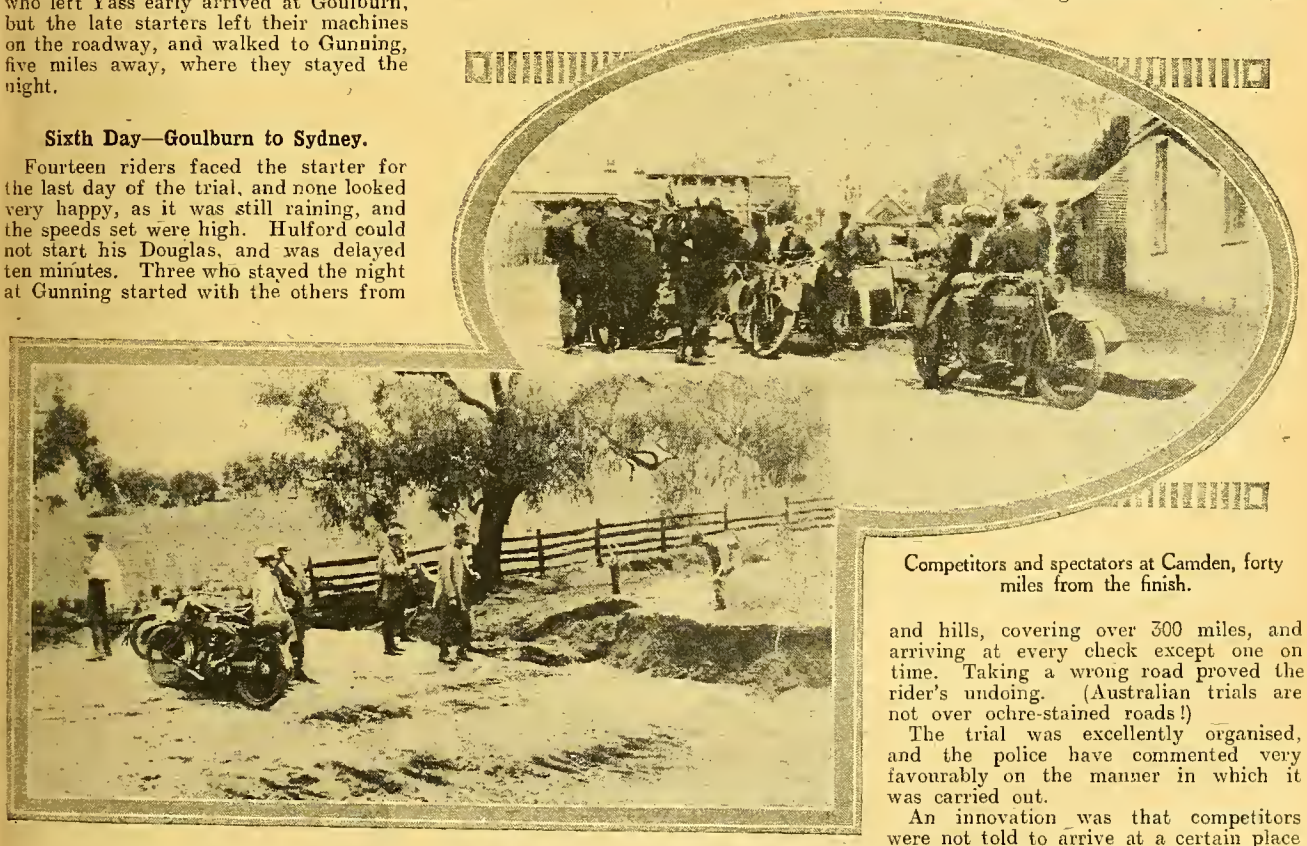
RETIRED AND CAUSES.

P. Harrison (7-9 Indian)—broken forks, and progress stopped through rain.
P. Kerslake (4 Indian)—machine smashed through fall.
A. Patching (7-9 Indian sc.)—water in magneto and capsize.
R. Cuncliffe (2¼ James)—took wrong road.
M. Hallinan (3½ Douglas)—punctures and heavy rain.
M. Cross (7-9 Harley-Davidson sc.)—did not complete first day, no fault of machine.
H. Head (7-9 Harley-Davidson)—did not complete first day, no fault of machine.
W. Bolton (4¼ B.S.A.)—machine damaged owing to fall.
R. Naught (7-9 Indian sc.)—rain and punctures.

Undoubtedly the best performance in the trial was that of H. Hulford. He rode a 3½ h.p. Douglas solo, and had no occasion to touch his machine except for a few punctures. Almost as good was the 2¼ h.p. James ridden by Cuncliffe. This machine negotiated the worst roads and hills, covering over 300 miles, and arriving at every check except one on time. Taking a wrong road proved the rider's undoing. (Australian trials are not over ochre-stained roads!)

The trial was excellently organised, and the police have commented very favourably on the manner in which it was carried out.

An innovation was that competitors were not told to arrive at a certain place at a certain time. They were given a set time to do the distance and had to work out their own time of arrival.



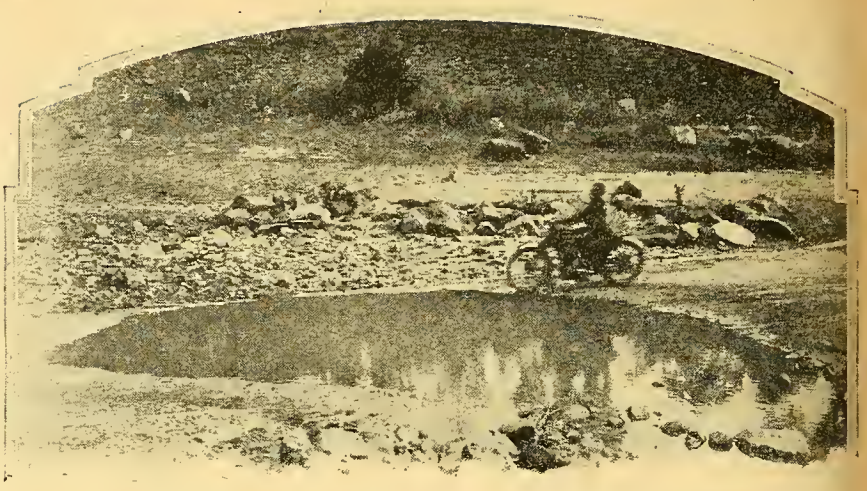
Competitors and spectators at Camden, forty miles from the finish.

A scene en route. Owing to heavy rains part of the road had been washed away and had to be repaired by competitors themselves.

**An Australian Six Days' Trial.—**

The four riders who got through without loss of points were two trade and two private competitors. The latter rode a Douglas and a Harley sidecar, and the manner in which they got through speaks volumes for those machines, as the course was an everyday one over main roads.

Mr. J. A. Fair, secretary to the M.C.C. of N.S.W., states: "When we organised the trial and issued the conditions we promised on the official programme, 'The course selected is over beautiful roads, the conditions are suitable to all, and, if you propose a social trip at Christmas, what better can you do than enter?' I am sorry to say it was the reverse, owing to the heavy rains over the whole course. The roads were in a frightful state, the riders were rain-soaked throughout, and the machines had a gruelling test beyond doubt. I have followed every reliability trial held in this State, and many inter-State, but this was the daddy of the lot. The riders who finished deserve great credit, and also their machines. Many lost points through sheer bad luck, such as falls and punctures; but it is all in the game, and none grumbled."



H. Hodgson (7-9 Harley-Davidson), a rider who holds road records between Sydney and Melbourne, at one of the several water splashes on the route.

Such was Australia's first "Six Days." Everyone is looking forward to the next, which, it is confidently anticipated, will be a great event.

## EAST MIDLAND CENTRE TRIAL RESULTS.

ONLY a small proportion of the starters retained clean sheets in the open trial of the East Midland Centre A.C.U., held by the Leicester M.C. in Derbyshire on March 25th, and described in *The Motor Cycle* of the Thursday following. This, of course, was only to be expected from the nature of the trial; and that a three-wheeler would gain the premier award was also almost a foregone conclusion—no solo machine could overcome the handicap of being a single track vehicle on "roads" utterly unsuited for solo motor cycles.

Apart from this criticism, we think the results make interesting reading; those who have gained 100% awards have every reason to be proud of their performance, this applying only fractionally less so to the silver medallists.

The official results follow :—

**OPEN AWARDS.**

**The Raleigh Cup** (value 100 guineas; to be held for one year with gold medal; for the best individual performance).—**H. F. S. Morgan (Morgan Runabout).**

**The London Motors Trophy** (To be held for one year with gold medal, for the best sidecar performance).—**B. L. Bird (6-7 B.S.A. sc.).**

**The Chapman Trophy** (To be held for one year with gold medal; for the best performance by a solo machine). **B. Kershaw (2½ New Imperial).**

**The Winn Trophy** (To be held for one year with gold medal; for the best performance 3-wheeled runabout or cycle-car—winner of premier award not eligible). **N. Norris (Morgan Runabout).**

**The Bowerman Trophy** (To be held for one year with gold medal; for the best performance by a solo two-stroke up to 350 c.c.). **L. Bees (3 Beardmore-Precision).**

**The Waddington Cup** (To be held for one year with £4 4s. gold medal (by the North Derbyshire Motor Club); for the best performance by an amateur).—**F. J. Ellis (Matchless sc.).**

**Team Prize. Sunbeam Team.**—G. Dance, Reg. Brown, and A. Bennett.

Gold Medals (Best Class performances, other than trophy recipients).

Solo: 250 c.c., A. Bowerman (2¼ Velocette); 350 c.c., H. Gibson (2¾ Raleigh); 560 c.c., A. Bennett (3½ Sunbeam); unlimited, G. Brough (S Brough Superior).

Sidecar: 250 c.c., no award; 350 c.c., T. H. Weaver (2¾ Sirrah sc.); 560 c.c., G. M. Townsend (4½ P. & M. sc.); unlimited, I. Cohen (10 Campion sc.).

Additional Gold Medals, carrying first class awards: H. Harris (2¾ A.J.S.); W. Hadfield (2¾ Raleigh); G. Dance (3½ Sunbeam); H. J. Stretton-Ward (3½ Triumph); S. Wright (4½ Humber sc.); F. O'Brien (Matchless sc.).

Silver Medals, carrying 2nd class awards: F. Hatton (3½ o.h.v. Douglas); J. Simpson (3½ Scott); J. A. Watson Bourne (2¾ Coventry Eagle); E. A. Barnett (2¾ Francis-Barnett); G. W. Hartwell (8 Brough Superior); F. W. Giles (7 A.J.S. sc.); J. W. Hazelwood (5-6 Hazelwood sc.); W. L. Danskin (7-9 Rudge sc.); B. Bourke (4½ New Hudson sc.); J. H. Walker (6 B.S.A. sc.); F. H. Brown (4 Rex Acme sc.); Reg Brown (3½ Sunbeam sc.); W. Ridley (New Hudson Light Car); H. P. Denley (Rhode Car).

## RESULTS OF "ARCTIC" TRIAL.

SPECIAL silver medals, to rank as first-class awards, will be given to all the solo competitors in the Western Centre A.C.U. Open Trial who checked in at Clevedon and all the drivers of passenger vehicles who reached Tetbury or Clevedon. As announced in our description last week, the event was abandoned at half distance, owing to the unprecedented weather conditions.

The official list of medallists follows :—

SOLO MOTOR CYCLES. (Officially deemed to have checked in at Clevedon.)

J. A. Newman (3½ Douglas); V. C. Anstice (3½ Douglas); A. J. Colcombe (4 Indian); J. Whalley (2¾ Massey-Arran); B. Kershaw (2½ New Imperial); P. L. Mayo (2½ Coventry-Eagle); J. N. Roberts (2½ New Imperial); E. W. Spencer (3½ Douglas); W. J. L. Paynter (3½ Norton); A. Bennett (3½ Sunbeam); G. Dance (3½ Sunbeam); W. B. Gibb (3½ Douglas); W. Brandish (4½ Humber); R. Grindlay (4½ Humber); F. G. Ball (2¾ Douglas); P. B. Phillips (2¾ Douglas); C. G. Pullin (2¾ Douglas); S. M. Greening (2¾ Coventry-Eagle); D. A. Atkin (2¾ Francis-Barnett); A. White (2¾ Francis-Barnett); E. A. Barnett (2¾ Francis-Barnett); K. J. Davis (3½ Sunbeam); A. E. Rollason (3½ Ariel); W. T. Woodcock (3½ Ariel); L. Newey (6 Ariel); G. H. Tucker (4 Norton); W. H. Drew (3½ Norton); F. C. Parkes (2½ Sun-Vitesse); M. Bishop (2½ Sun-Vitesse); F. J. Johnson (2½ Sun-Vitesse); S. Gill (2½ Sun-Vitesse (award subject to confirmation); G. Butcher (3½ Sunbeam); A. W. Thrush (3½ Sunbeam); F. J. Adam (3½ Norton); E. R. Main (3½ Zenith-Bradshaw); C. W. Ramstedt (2¾ Cotton); W. Brooke (2¾ Cotton); F. G. Morgan (2¾ Cotton); F. Ferriday (2¾ Omega); H. Greaves (3 Beardmore); H. V. Collins (3½ Norton); W. T. Bicknell (2½ Enfield); A. E. Paley (3½ Sunbeam); F. W. Hughes (2¾ Rex-Acme); N. W. Smith (4 Triumph); H. J. Stretton-Ward (3½ Triumph); W. Moore (3¾ Scott); R. Sadler (3 Ivy); H. Gibson (2¾ Raleigh); H. J. Greathead (3 Ivy); W. H. Hadfield (2¾ Raleigh); C. F. Nott (2¾ Raleigh); H. W. Parkes (2½ Sun-Vitesse); A. R. Edwards (2½ Levis); E. J. Henson (2½ Alldays-Allon); E. F. Cope (5-6 Raleigh); R. C. Cooper (2½ Alldays-Allon); R. W. Duke (3½ Triumph); C. W. J. Busby (2¾ New Imperial); R. C. Bennett (2½ Federation).

PASSENGER VEHICLES. (Officially deemed to have checked in at Tetbury.)

N. Hall (2¾ O.K. Junior sc.); V. H. Smith (3½ Norton sc.).

PASSENGER VEHICLES. (Officially deemed to have checked in at Clevedon.)

J. T. Bashall (6 Martinsyde sc.); W. H. Bashall (6 Martinsyde sc.); E. H. Gifford (6 Martinsyde sc.); L. R. Blick (7 Harley-Davidson sc.); B. L. Bird (6 B.S.A. sc.); J. H. Walker (6 B.S.A. sc.); H. S. Perrey (6 B.S.A. sc.); P. Pehrson (4 Dunelt sc.); B. Bladder (8 New Imperial sc.); T. H. Weaver (2¾ Sirrah sc.); F. T. Sibley (3½ Rudge sc.); W. L. Danskin (7-9 Rudge sc.); L. E. Clulee (2½ Alldays-Allon sc.); H. G. Uzzell (8 New Imperial sc.); A. G. Cocks (4½ Beardmore sc.); F. W. Giles (7 A.J.S. sc.); F. W. Becker (5-7 Coventry-Victor sc.); H. O. Walters (8 Ariel sc.); A. Watson (4½ Sunbeam sc.); W. F. Scott (3¾ Scott sc.); G. H. Goodall (8 Morgan cyclecar); J. W. Meredith (8 T.B. cyclecar); W. A. Carr (8 Morgan cyclecar).

NOMINATED TEAMS OFFICIALLY DEEMED TO HAVE FINISHED COMPLETE. (In alphabetical order.)

MANUFACTURER'S SOLO TEAMS.

Ariel Motors, Ltd. (Mixed Team.)
Douglas Motors, Ltd. (2¾ Team.)
Douglas Motors, Ltd. (3½ Team.)
John Marston, Ltd. (3½ Team.)
Norton Motors, Ltd. (3½ Team.)
Raleigh Cycle Co., Ltd. (2¾ Team.)
Sun Cycle & Motor Fittings Co., Ltd. (2¼ Team.)

# REGULATING ROAD TRAFFIC.

## Suggested Abolition of Speed Limit. Illuminated Number Plates and Rear Lamps on Motor Cycles. Recommended Signals for Drivers.

A PERUSAL of the report of the Departmental Committee on Taxation and Regulation of Road Vehicles brings good news to all motorists, as it embodies really sensible proposals, based upon experience, regarding motor car law.

The report deals with every form of road vehicle, and contains not a few references to motor cycles, the first of these being with respect to trade numbers, which are issued at a fee of £1 10s.

**No Speed Limit.**—The most startling recommendation in the whole report is that the speed limit should be abolished, the actual opinion of the Committee reading as follows: "Upon the whole we have come to the conclusion that more effective control could be exercised in a less unpopular manner by amending Sec. I. so as to make it applicable to all cases of negligence or reckless driving, or driving to the common danger, it being made explicitly clear that speed is an element of danger. This involves the repeal of the 20 miles an hour speed limit." It is now suggested that Sec. I. of the Motor Car Act should read as follows:—"If any person drives a vehicle on a public highway recklessly or negligently, or at a speed or in a manner which is dangerous, having regard to all the circumstances of the case, he shall be guilty of an offence under this Act," thus removing the objectionable clause "having regard to the traffic which may reasonably be expected to be on the highway."

**Ten Mile Limits Discountenanced.**—The abolition of 10 miles an hour speed limits is also suggested, while in their stead cautionary signs with notices to the effect that speed should not exceed so many miles an hour might be erected. It is also suggested that the mere exceeding of the suggested limit is not necessarily an offence. The Committee goes on to say that unauthorised signs should not be allowed.

**Heavy Penalties for Dangerous Driving.**—Having abolished the speed limit in its suggestions, the Committee expresses its opinion that driving to the public danger should be treated as a most serious offence, the offender for the first time being liable to a fine not exceeding £50 and the possible suspension or withdrawal of his licence, while on the occasion of the second or subsequent offences suspension or withdrawal should be compulsory, and the fine not exceeding £100, and/or imprisonment not exceeding six months.

In view of the suggested abolition of the speed limit the illumination of motor cycle rear number plates is expressed as being desirable and essential in the public interest. As in the case of a previous report, motor cycles are classified as "those vehicles which have less than four wheels and do not exceed 8cwt. unladen." It is also stated that the Committee is aware that there are motor cycles which do not comply with the regulations as regards weight.

**Motor Cycle Brakes.**—As before, the motor cycle must be equipped with two independent brakes, but a further suggestion is made that these brakes must be "kept in proper order and repair," and that the police be empowered to examine them if occasion require.

A curious statement is made as regards trailers. The word "trailer" indicates a wagon attached to a heavy motor car; it does not include "sidecar," but we also read that "no motor cycle be permitted to draw a trailer as distinguished from a sidecar." That means to say that a trailer carrying a camping outfit towed behind a sidecar outfit or a motor bicycle will not be allowed if the suggestions are adopted.

So far as the age limit is concerned, the Committee recommends that the Minister of Transport be empowered to raise the minimum age limit for motor cycles (14 years) if found necessary owing to altered traffic conditions, or for greater horse-power of motor cycles, or for similar reasons.

**Non-Production of Licence.**—Another abuse of the existing law which is put forward for alteration is that affecting the production of licences on demand by the police, and the report states that the failure to produce a licence on demand should not be necessarily an offence if the holder gives his correct name and address, and produces the licence to the police authorities within three days and satisfies the court that his failure to produce it was due to occasional inadvertence. Nevertheless, the licence should always be carried by the driver.

Licences should be all of a common form; that is to say, every county should issue the same form of licence, and the holder should sign his licence.

**Police Want Bigger Number Plates.**—With regard to the question of number plates, it is expressly stated that the police want motor cycle number plates to be two-thirds the size of those carried on cars, and not half the size as at present required, but the Committee does not recommend this alteration. It is further expressly stated that the illumination of front number plates was most unsatisfactory; it was recommended that rear number plates on motor cycles should be properly and clearly illuminated, and that the red rear lamp should be compulsory. Driving mirrors are also recommended.

**Drivers' Signals.**—Some important remarks are also contained in the report concerning the rules of the road and driving. These signals, the report suggests, should be as few as possible, but those mentioned are sensible, and are practically those in daily use. For example, the driver wishing to stop holds out his right arm vertically; if he turns to the right he holds his right arm out horizontally; if he is about to slow down the right arm is held out horizontally with the palm downwards, the hand being moved up and down; if he desires to turn to the left the right arm is held out horizontally and swept towards the left hand; if the driver desires a vehicle to overtake him he holds his right arm below the horizontal, and waves it from the rear to the front. It is suggested that non-observance of these driving rules is not to be constituted as an offence, but failure to make the right signal would be taken into consideration if an accident has been caused.

Under the heading "Rules of the Road; Advice to Drivers," it is suggested that any towing by, or riding on a vehicle without the consent of the driver would be regarded as an offence.

**No Case Against Pillion Riding.**—A good deal has been written concerning pillion riding, but in the opinion of the Committee this should not be forbidden, as "no case has been made out to be so strong as to justify its prohibition."

Pedal cycles have not escaped the notice of the Committee, and it is expressly stated that every cycle should have a means of audible warning of approach, and if fitted with a free wheel it must have a brake. It is also suggested that deaf cyclists should carry a signal showing the disability from which they are suffering.

There was only one dissentient among the Committee signing the report; this was Mr. Frank Elliot, C.B., Assistant Commissioner of Police, and as it is by no means impossible that his views may influence the final adoption of the report by Parliament, we reproduce those objections which affect motor cyclists:—

"I disagree with the recommendation to treat all motor vehicles with less than four wheels, and not exceeding 8cwt. in weight, as falling within the motor cycle class, and therefore entitled to carry number plates of half size. Further, I am satisfied that an ample case has been made out for increasing the size of the identification mark on motor cycles.

"As regards the legal speed of motor vehicles, I would have been ready to assent to a substantial increase of speed, but I think that the increases proposed for some of the heavier types are too generous, and I disagree altogether with the recommendation to fix no maximum speed limit for motor cars and motor cycles. In my opinion, the time is not ripe for such a drastic change; the proposal does not show due regard for the public safety; and, if carried into effect, would be attended by the most unfortunate results, however great the deterrent afforded by the penalties for dangerous driving and kindred offences.

"I cannot support the recommendation that pedal cycles with a fixed wheel need not be fitted with a brake and that those with a free wheel need have only one. I think that the former should be required to carry a brake (subject to special concessions for machines designed and used for track racing, whose use on the highway is only occasional and for short distances), and that the latter should have two."

# GUIDE TO THE LONDON—LAND'S END TRIAL.

## Official List of Competitors. Route and Time Table. Contour of Beggar's Roost. Detail Maps of Timed Hill Climb.

**322 COMPETITORS:**
122 Motor Bicycles.
98 Sidecar Outfits
9 Cycle Cars.
93 Cars.

THE ROUTE AT A GLANCE.

THE first London-Land's End Trial took place for the cup presented by the late president of the Motor Cycling Club, Lt.-Col. Charles Jarrott, in 1908.

The course was from London to Land's End and back *via* Salisbury and Exeter, only six hours' rest being allowed at Penzance. In the following year the same course was utilised.

In the first two years the trial was held in August, but in 1910 the time was changed to Easter. Thirty-five started and twenty finished the same course. A more difficult route was chosen in 1911; sixty-nine started and twenty-seven finished. In 1912 the course was made still more difficult; eighty competitors started and forty-four finished. Lyme Regis and Trow hills were first included in 1913, and, despite very bad weather, fifty finished out of the ninety-five riders who started.

Better weather prevailed in 1914, and the same course was used. One hundred and sixty-nine men started, and one hundred and eight finished. It was not until 1920 that the trial was resumed. Further stiffening of the course took place by the inclusion of Porlock and Lynton hills, and the journey was made a single one, finishing at Land's End. Cups were offered for sidecars, three-wheeled cycle cars and light cars. Last year the run was made severe by insisting that the competitors should take Porlock on the run and cover the most difficult section of the route at a speed of 19.4 m.p.h. Seventy-two solo riders started and sixty finished. Sixty drivers of sidecars started and forty-four finished.

This year the course has been made even more difficult by the inclusion of Beggar's Roost (Barbrook Mill) one of the most trying climbs in the country.

Previous winners of the Jarrott Cup were :—

1908. S. G. Frost (4½ Minerva).
1909. F. G. Smith (3½ Triumph).
1910. Rear-Admiral Sir R. K. Arbuthnot, Bt., K.C.B. (3½ Triumph).
1911. A. J. Moorhouse (7 Indian).
1912. H. Karslake (3½ Rover).
1913. P. W. Moffat (2¾ Douglas).
1914. E. A. Colliver (7-9 Indian).
1920. T. S. Sharratt (4 Triumph).
1921. F. A. Longman (3½ Ariel).

## Route and Time Table.

| Time. P.M. | Place. Two miles west of | Mileage. | Total mileage. |
|---|---|---|---|
| 10.30 | SLOUGH (start) ... ... | 0 | 0 |
| 10.42 | Maidenhead ... ... | 4 | 4 |
| 11.21 | Reading ... ... ... | 13 | 17 |
| A.M. | | | |
| 12.12 | Newbury ... ... ... | 17 | 34 |
| 12.38 | HUNGERFORD (check) | 8½ | 42½ |
| 1. 8 | Marlborough ... ... | 10 | 52½ |
| 1.28 | Beckhampton ... ... | 6¾ | 59¼ |
| 1.51 | Devizes ... ... ... | 7½ | 66¾ |
| 2.21 | Trowbridge (check) ... | 10 | 76¾ |
| 2.48 | Frome ... ... ... | 9 | 85¾ |
| 3.22 | Shepton Mallet ... ... | 11½ | 97¼ |
| 3.49 | Glastonbury ... ... | 9 | 106¼ |
| 4.33 | BRIDGWATER (control and check) ... ... | 14¾ | 121 |
| 5.33 | BRIDGWATER ... ... | — | 121 |
| 5.58 | Nether Stowey ... ... | 8¼ | 129¼ |
| 6.26 | Williton (Minehead) ... | 9¼ | 138½ |
| 7. 8 | PORLOCK (timed mile)... | 14 | 152½ |
| 7.45 | Lynmouth (non-stop begins) | 11½ | 164 |
| 7.45 | LYNMOUTH HILL TOP (check) ... ... ... | ½ | 164½ |
| 7.48 | Barbrook Mill ... ... | 1 | 165½ |
| 7.51 | LYN CROSS (check, non-stop ends) ... ... ... | ¾ | 166¾ |
| 8.12 | Simon's Bath ... ... | 7 | 173¼ |
| 8.45 | SOUTH MOLTON ... | 11 | 184¼ |
| 9. 7 | Umberleigh Bridge ... | 7½ | 191¾ |
| 9.33 | GREAT TORRINGTON (check) ... ... ... | 8½ | 200¼ |
| 9.45 | Langtree ... ... ... | 4 | 204¼ |
| 10.18 | HOLSWORTHY ... ... | 10¾ | 215 |
| 11. 0 | LAUNCESTON (control and check)... ... ... | 14 | 229 |
| NOON. | | | |
| 12. 0 | LAUNCESTON ... ... | 0 | 229 |
| 12.25 | Trewint ... ... ... | 8¼ | 237¼ |
| 1. 5 | BODMIN ... ... ... | 13½ | 250¾ |
| 1.41 | Indian Queens ... ... | 12 | 262¾ |
| 2.19 | TRURO (check) ... ... | 12½ | 275¼ |
| 2.45 | Redruth ... ... ... | 8½ | 283¾ |
| 2.55 | Camborne ... ... ... | 3½ | 287¼ |
| 3.13 | Hayle ... ... ... | 6 | 293¼ |
| 3.35 | PENZANCE ... ... | 7¼ | 300½ |
| 3.45 | Catchall ... ... ... | 3¼ | 303¾ |
| 3.51 | St. Buryan... ... ... | 2 | 305¾ |
| 4.10 | LAND'S END ... ... | 6¼ | 312 |

## Complete List of Entries.

*Including official numbers and registration numbers of the machines where known.*

**MOTOR BICYCLES.**

1. F. A Longman (3½ Ariel), MD 144.
2. E. Pond (4 Triumph), XK 781.
3. G. W. Burgoyne (4 Triumph), XF 8386.
4. A. H. S Love (3½ Norton), XF 4301.
5. W. Atkinson (4 Triumph), AJ 7627.
6. V. Belfield (3 A.B.C.), XC 1694.
7. P. L. B. Wills (3½ Rudge), XA 6521.
8. C. J. Wheeler (3½ Scott Squirrel), BL 9663.
9. E. Atkins (3½ Ariel), HM 2074.
10. P. H. Jones (3½ Sunbeam), OK 283.
11. C. F. Plowman (3½ Sunbeam), NK 1613.
12. E. J. Keyhoe (3½ Rudge), BL 9251.
13. J. J. Boyd-Harvey (3½ Scott Squirrel), L 9711
14. G. W Segrett (3½ Ariel), BY 8340.
15. E. W. Spencer (3½ Douglas), HR 6008.
16. J. A. Newman (3½ Douglas), AD 7009.
17. K. V. Chidley (5 Brough), MD 2691.
18. O. S. Bridcutt (4 Dunelt), BY 8178.
19. J. S. Austin (3½ Scott Squirrel), YA 2271.
20. S. W. Ratcliffe (8 Brough Superior), R 6384.
21. A. C. Rhodes (3½ Triumph), NO 4496.
22. G. Brough (8 Brough Superior), HP 2122.
23. P. Street (3½ Suobeam), PA 4169.
24. C. Dickinson (3½ Ariel), NM 1527.
25. C. Bourlet (3½ Ariel), ——.
26. H. C. Nias (3½ Ariel), ME 1566.
27. L. N. Stannah (3½ Rover), HP 3658.
28. E. A. Collum (4 Indian-Scout), BL 9280.
29. T. L. Daniels (4 Douglas), XB 3404.
30. S. Haocox (3½ Zenith-Bradshaw), FC 4335.
31. S. W. Easten (3 A.B.C.), Y 8017.
32. G. S. Green (3½ Scott), XB 1123.
33. M. V. Gordon-Cumming (3½ Norton), SP 5339.
34. R. V Saltmarsh (4 Harley-Davidson), XC 2633.
35. J. Richardson (3½ Lea-Francis), ——.
36. W. G. Boyer (3½ Norton), MD 6493.
37. E. H. Gifford (3½ Martinsyde), PC 435.
38. H. H. Nicholson (3½ Martinsyde), PC 334.
39. A. A. F. Symes (6 Martinsyde), PC 433.
40. M. Pearson (4 Triumph), BW 5376.
41. J. A. Stedman (4 Powell), ——.
42. B. H. Brayne (4¼ Blackburne), LY 2216.
43. F. V. Edwards (4¼ B.S.A.), MD 5822.
44. J. G. L. Boorer (5 N.U.T.), HK 1781.
45. V. Gayford (3½ Zenith-Bradshaw), ——.
46. W. D. Pugh (3½ Zenith-Bradshaw), PC 480
47. J. A. O'Sullivan (8-10 Reading-Standard), XB 1362.
48. E. W. T. Howard (3½ N.U.T.), XF 4853.
49. J. W. Grose (3 A.B.C.), HE 6482.
50. R. B. Roberts (4 Triumph), HP 2281.
51. J. Eddy (4 Rover), FJ 1922.
52. T. A. Slann (4 Triumph), HM 1141.
53. J. W. Troughton (4 X.L.), XK 4894.
54. A. W. Hadley (3½ Rudge), XK 2283.
55. F. E. Salter (3½ Zenith-Bradshaw), NNN.
56. E. J. Walter (3½ Zenith-Bradshaw), KE 7510.
57. W. A. Newell (3¾ Scott), FX 5683.
58. G. E. Cuffe (5-6 Metro-Tyler), ME 1932.
59. E. Hardwick (5 N.U.T.), BY 7956.
60. H. R. Harveyson (3½ Triumph), HP 2933.
61. R. Charlesworth (3½ Zenith-Bradshaw), ——.
62. W. R. Williams (3½ Triumph), KE 8556.

## Guide to the London-Land's End Trial.—

### MOTOR BICYCLES—*cont.*

63. S. J. Marks (3½ Triumph), HM 2406.
64. R. Pugh (3½ Triumph), BH 8726.
65. E. S. Burnett (5-6 Raleigh), BH 8450.
66. E. Foster (5-6 Raleigh), ——.
67. P. Pike (3½ Norton), ——.
68. J. Harrison (3½ N.U.T.), XH 743.
69. R. Newitt (3½ Douglas), BH 8113.
70. W. Heury Wells (3 A.B.C.), ——.
71. D. J. G. Dickson (4 Triumph), CE 7030.
72. B. J. Sims (4 Triumph), LH 1587.
73. G. O. Ford (3½ Zenith-Bradshaw), TA 2632.
74. J. G. Biss (4 Norton), T 1739.
75. E. M. Chudley (4 Indian-Scout), FJ 1764.
76. E. H. Williams (3½ Triumph), FJ 1962.
77. T. S. Sharratt (2¾ A.J.S.), BN 8541.
78. I. F. Anderson (2½ Connaught), OH 8697.
79. R. H. Baxter (2¼ Radco), HK 416.
80. C. L. Sprosen (2½ Connaught), XK 610.
81. A. M. Knill (2¾ Raleigh), XK 134.
82. H. Gibson (2¾ Raleigh), AU 5296.
83. G. Richardson (2¾ Raleigh), ——.
84. R. L. Richardson (3½ Alecto), XF 904.
85. R. V. Cranford (2¾ P.V.), XF 174.
86. W. L. Thomas (2¾ P.V.), AF 5025.
87. R. N. Thomas (3 Hagg Tandem), NK 627.
88. B. N. Taylor (3 Hagg Tandem), MD 7931.
89. C. W. Lewis (3½ Beardmore-Precision), OK 886.
90. D. G. White (2¾ G.R.I.), GB 435.
91. H. A. Davies (2¾ A.J.S.), ——.
92. C. H. Mocatta (2¾ A.J.S.), XK 861.
93. W. C. Hemy (2¾ A.J.S.), ——.
94. H. Sutton (2¼ Royal Enfield), DP 3289.
95. G. Kuhn (2½ Calthorpe), OK 464.
96. L. Heller (2½ Calthorpe), OO 334.
97. A. G. Wall (2¾ Velocette), ——.
98. H. J. Greathead (3 Ivy), OK 950.
99. L. A. Welch (2½ O.K. Junior), FC 4444.
100. F. J. Youngs (2½ O.K. Junior), XK 3512.
101. W. G. Churchill (2¾ Verus), ——.
102. S. G. Wooldridge (2¾ A.J.S.), ——.
103. A. M. C. McLachlan (2¾ A.J.S.), XK 1426
104. F. W. Applebee (2¼ Levis), OB 9743.
105. A. R. H. Stewart (2¾ Raleigh), XK 1982.
106. R. S. Newnham (2¾ Raleigh), XK 1981.
107. S. T. Glanfield (2½ Cotton-Villiers), T 9289.
108. H. V. Bateman (2¾ Diamond), DA 5600.
109. A. S. Gnthrie (2¾ Diamond), ——.
110. C. N. Cooper (2¾ Sirrah-Blackburne), PC 890.
111. M. R. Gray (3 Coventry-Eagle), HP 3359.
112. D. J. Stone (2¾ Orbitt), ME 171.
113. D. Read (2½ Ready), YA 1004.
114. H. Haydon Robinson (2¾ Wooler), MD 7295.
115. A. Milward (2¾ Wooler), MC 3640.
116. J. Wooler (2¾ Wooler), ME 879.
117. J. E. Pantard (2¼ Trump-Jap), XK 2545.
118. P. A. Hopkins ((3 Ivy), XH 9234.
119. J. L. Hanman (2¾ Coulson), XK 5123.
120. C. F. Alcock (2¾ Raleigh), AU 5869.
121. H. W. Harrington (2¾ Douglas), AN 3404.
122. H. W. Allen (2¾ Blackburne), XH 1168.

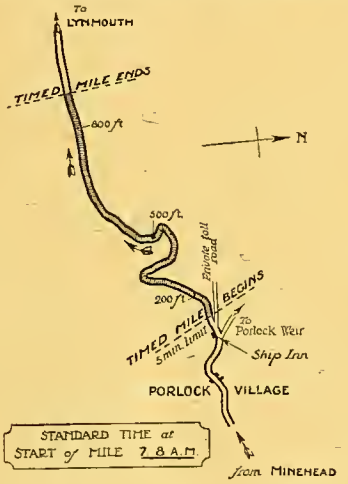
### SIDECAR OUTFITS.

123. W. A. Fell Smith (8 Brough Superior), HP 2929.
124. Clifford Wilson (4½ Quadrant), XF 2530.
125. G. A. Pidgeon (4½ Quadrant), XA 5731.
126. T. J. Ross (7 Matchless), XX 4835.
127. R. C. Boxer (7 Matchless), XK 720.
128. H. W. Glendinning (8 Rex), FM 519.
129. H. Clennell (8 Brough Superior), BY 8120.
130. S. C. Tait (8 Brough Superior), BY 8110.
131. A. C. Ward (4 Triumph), XA 6949.
132. F. V. Harris (4 Triumph), AD 8698.
133. P. W White (8 Sunbeam), W 8968.
134. R. McK. Veale (6-7 B.S.A.), KE 3555.
135. B. S. Allen (8 Matchless), BY 8069.
136. J. G. Hann (8 New Imperial), BL 8551.
137. J. Mackenzie (6 Humber), NH 193.
138. F. J. Watson (7 Ariel), MX 6244.
139. W. F. Gniver (7 Matchless), HO 8068.
140. W. H. Hardman (8 Matchless), NK 1266.
141. E. A. Bridgman (7 Indian), SJ 80.
142. D. H. Davidson (4 Indian-Scout), LY 7.
143. R. W. E. Clarke (4½ Quadrant), XK 3831.
144. J. D. Marvin (8 Brough Superior), XF 666.
145. W. P. Brandon (4 Triumph), CR 5691.
146. A. G. Cocks (4¼ Beardmore-Precision), OH 9186.
147. C. G. Pullin (6 Douglas), PC 691.
148. E. Elaud (4¼ B.S.A.), SS 344.
149. A. A. Attwood (4¼ Hawker), BY 8365.
150. A. H. Carnt (3¾ Scott Squirrel), FL 2651.
151. J. A. Peacock (7 Matchless), XF 9958.
152. W. J. Barker (Henderson), ——.
153. S. H. Farley (Henderson), ——.
154. P. S. Cranford (7 Matchless), XF 157.
155. T. E Ranger (8 Matchless), ——.
156. T. G. White (7 A.J.S.), CA 9849.
157. A. H. Nelson (4 Triumph), BY 7591.
158. J. A. Masters (7-9 Harley-Davidson), LM 324.
159. C. F. Temple (7-9 Harley-Davidson), XH 9794.
160. S. E Longman (7-9 Harley-Davidson), LO 9120
161. G. Nott (7 Matchless), XK 532.
162. D. S. Parsons (8 Matchless), ——.
163. F. E. Jones (8 Matchless), ——.
164. T. H. Weaver (5-6 Verus), DA 9323.
165. A. Greenwood (8 Brough Superior), CX 4925.
166. M. P. Bradley (4¼ Sunbeam), NP 655.
167. A. J. Agg (7 A.J.S.), ——.
168. K. Campbell-Cullen (5-6 A.J.S.), AF 2472.
169. B. E. Belfield (7-9 Harley-Davidson), XK 2532.
170. E. J. L. Strong (7-9 Harley-Davidson), TA 293.
171. W. H. Bashall (6 Martinsyde), PB 1746.
172. J. T. Bashall (6 Martinsyde), PB 1745.
173. G. Baxter (6 Martinsyde), PB 4742.
174. S. Julian (8 Matchless), DP 4104.
175. W. H. Julian (8 Matchless), DP 3991.
176. W. Bucknell (8 Matchless), BY 8319.
177. A. F. Pulling (8 Royal Enfield), BY 3304.
178. G. R. Claridge (4 Triumph), FJ 1573.
179. E. Wood (4 Norton), FJ 1899.
180. C. R. Collier (7 Matchless), LW 2991.
181. F. J. Ellis (7 Matchless), XH 6022.
182. G. D. Hardee (7 Matchless), XK 4411.
183. B. L. Bird (6 B.S.A.), NP 308.
184. J. H. Walker (6 B.S.A.), NP 310.
185. H. S. Perry (6 B.S.A.), NP 309.
186. M. A. Newnham (5-6 Raleigh), AU 4479.
187. A. J. Bosworth (5 Brough), AU 4209.
188. A. Conville (5 Lea-Francis), EM 1169.
189. G. Dyer (7-9 Harley-Davidson), XH 9205.
190. H. L. Miseres (7 Matchless), XH 1570.
191. A. H. Ilsley (7 Matchless), XK 4408.
192. J. A. Hoult (7 Matchless), XK 4410.
193. P. Cunningham (4½ Phelon and Moore), ——.
194. F. W. Giles (7 A.J.S.), DA 3010.
195. W. L. Danskin (7-9 Rudge), HP 2755.
196. J. Wallies (5-6 Coventry Victor), ME 1524.
197. E. C. Barton (4 Triumph), BP 4034.
198. T. J. Ryan (7-9 Rudge), XK 4658.
199. W. King (7-9 Harley-Davidson), BY 4644.
200. F. Pownall (8 Royal Ruby), LX 3597.
201. Eli Clark (4¼ Beardmore-Precision), ——.
202. F. W. Neill (7 Matchless), XK 4409.
203. J. Graham (7 Matchless), XH 5855.
204. F. Macdonald (7 Matchless), XF 1133.
205. F. A. Jaques (8 Zenith), ME 275.
206. F. W. Becker (5-7 McKechnie), HP 3529.
207. E. W. Choldcroft (6 A.J.S.), LT 115.
208. A. P. McGowran (4 Triumph), HP 2225.
209. A. C. Maskell (8 Matchless), XK 1045.
210. W. L. Gard (7 Matchless), ——.
211. H. H. Saddington (6 James), NH 332.
212. A. R. Richardson (4 Triumph), PB 1418.
213. P. Pehrsen (4 Dunelt), OE 341.
214. C. W. Vallings (4 Dunelt), LT 3521.
215. W. E. Brough (3½ Brough), ——.
216. R. B. Clark (3½ Zenith-Bradshaw), ——.
217. F. T. Sidley (3½ Rudge), DV 2555.
218. W. N. Worthington (2¾ Wooler), ME 1303
219. J. Pruen (3½ Douglas), YA 2077.
220. I. P. Brettell (3½ Connaught), OK 1017.

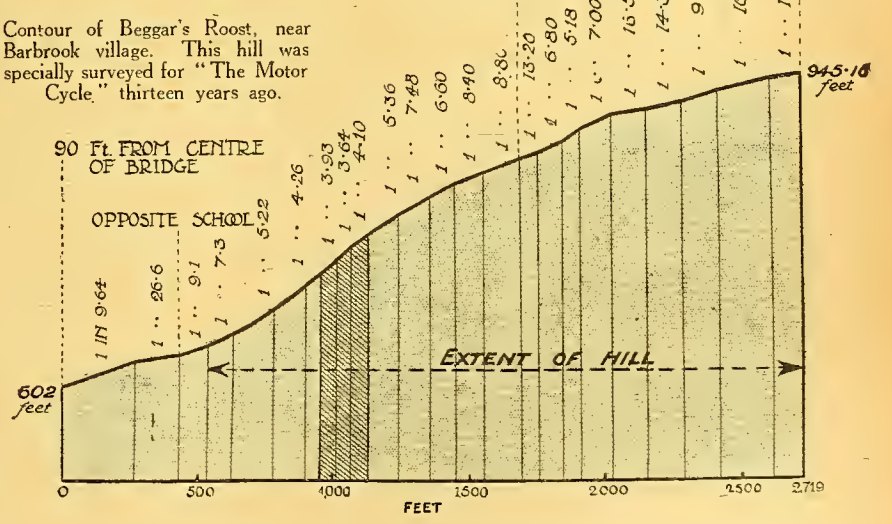
### CYCLE CARS.

221. W. H. Elce (10 Morgan), ——.
222. H. E. K. Sawtell (11 Morgan), EX 5968.
223. S. Hall (10 Morgan), ——.
224. F. W. Dame (8 Morgan), HX 9951.
225. F. Spouse (8 T.B.), ——.
226. H. W. Holmes (10 Morgan), ——.
227. S. A. McCarthy (8 Morgan), KK 295.
228. A. G. Gripper (10 Morgan), ——.
229. H. F. S. Morgan (8 Morgan), CJ 743.

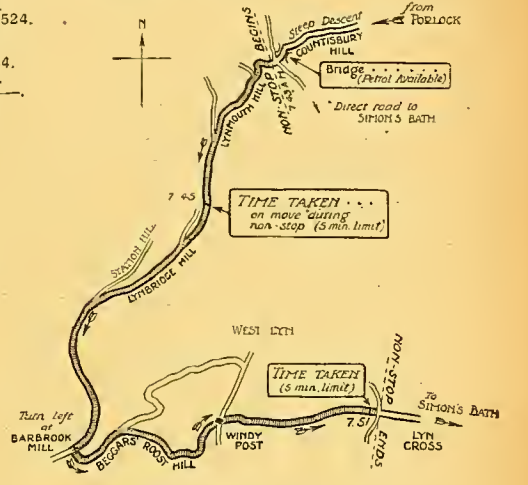
A list of the 93 car entries appears in *The Autocar*.



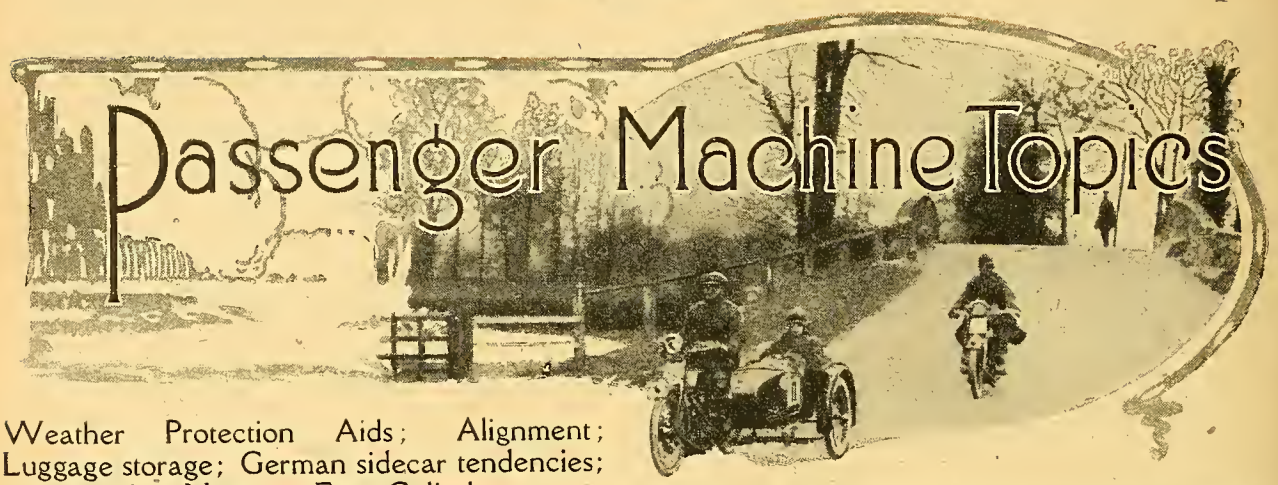

The shaded portion shows the timed mile, commencing a little way beyond Porlock village.




Contour of Beggar's Roost, near Barbrook village. This hill was specially surveyed for "The Motor Cycle" thirteen years ago.




From the foot of Lynton Hill to some little distance beyond the summit of Beggar's Roost is a non-stop section, details of which are shown.



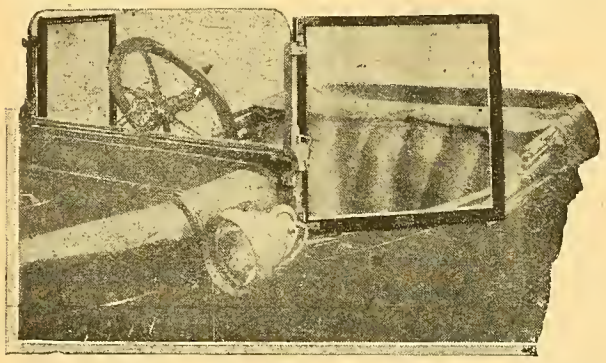
# Passenger Machine Topics

## Weather Protection Aids; Alignment; Luggage storage; German sidecar tendencies; and a Note on Four-Cylinders.

By "FRIAR JOHN."

TO what endless uses have the many ex-Government surplus stocks been put. Aeroplane wings have been used as pigsties and hen-runs, propellers as walking sticks, and swords as ploughshares, at any rate bayonets as pokers—so the mighty arms of war have fallen, and now the Service Co. has sent me an ex-W.D. fencing jacket in white drill that will make "an ideal under-jacket for the motor cyclist who gets about in all weathers." It converts the slimmest figure into a veritable Bibendum, and will defy an Alaskan blizzard. One can buy this garment for 4s. 9d., even though the original cost was 32s., and probably get more than 4s. 9d. worth of cotton-wool in the linings.

A COLD draught whistling round the edge of the screen, whether on a sidecar or runabout, can completely spoil the passenger's comfort—and, by the way, how is it that the driver himself so seldom complains of draughts and cold? Is it because the charm and distraction in driving blinds him to discomfort? However, if passengers did not frequently and persistently criticise, probably we should not have advanced so far as we have done in providing passenger comfort. The makers of the Orto windscreen must have heard grumbles about the flat windscreen, for they fitted sidescreens long ago on their admirable productions, and now they are placing sidescreens on the market which are specially designed for Morgans, and very effective they are too, being of good width, and, of course, adjustable, as the illustration shows.



An Orto sidescreen which will interest Morgan owners.

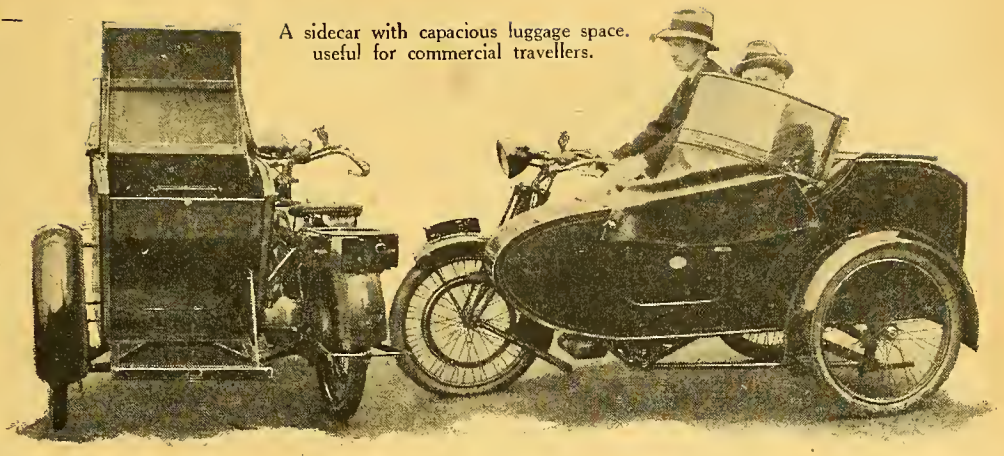
KNOCK-KNEED outfits are not so common as they used to be, although there are still too many on the road, and what a disgraceful sight they are, labelling the owner at once a slothful and unreliable individual, unless, of course, the maladjustment be a temporary accident. There is no excuse whatever for loose tube clips, and although one may say that the nuts are fastened as tightly as possible and will not hold, any mechanic will make the job hold some way, either using packing or pinning the clip. At all costs avoid appearing on the road like the rider shown in the illustration, and have a little thought for your passengers, since in some mysterious way a knock-kneed outfit makes both rider and passenger look foolish and ridiculous

Avoid appearing on the road with a sidecar and machine leaning in this ungainly manner.

**Passenger Machine Topics.—**

A COLLEAGUE facetiously remarks, on seeing the photographs of the sidecar on the right, that "it was a capital idea for camping, being of good length, for if the folding back were supported on legs, one could sleep in the body." Being well accustomed to sleeping in a yacht's bunk about the width of a matchbox, *he* might sleep dreamlessly in it, but many would not. When Mr. Easting had the sidecar made, it was not his idea to sleep in it, I feel sure; at any rate, he said nothing about that particular point. The most commendable feature of the body, which was built specially as a business vehicle, is the great provision for storage without an ugly and cumbersome appearance; there is room for a passenger as well as a great many samples.

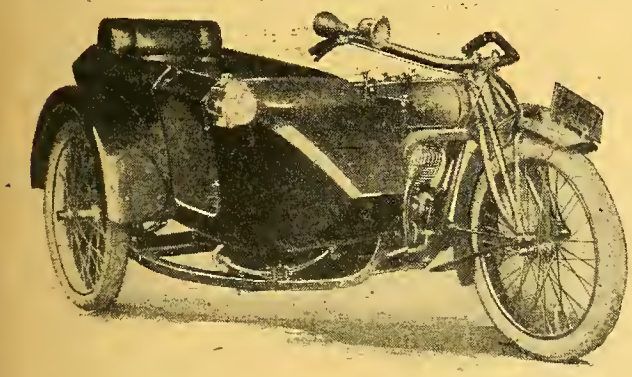
I do not know whether a private individual would be justified in carrying a body of this size about with him always on short journeys, but for frequent long tours the superb storage capacity would save the trouble of packing luggage on the carrier, besides looking infinitely neater.



A sidecar with capacious luggage space, useful for commercial travellers.

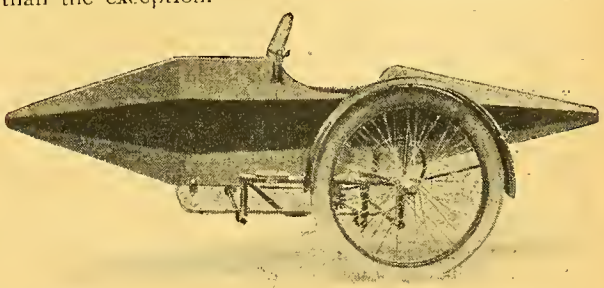
◈ ◈ ◈ ◈

JUDGING from the illustration on this page German sidecar manufacturers are not blind to the tendency of design in this country. Mr. R. Shepherd, of Eindhoven, OOievaarslaan, sends an illustration of a body of pleasing appearance, with ample mudguarding, yet not at all clumsy. Angle iron is used in the chassis construction and transverse semi-elliptic springing for the front suspension. The hood is concealed in the locker behind. At the present rate of exchange the cost of this sidecar in Germany is 11,500 marks, roughly £10 in English money, a price that need not be commented upon; it speaks for itself



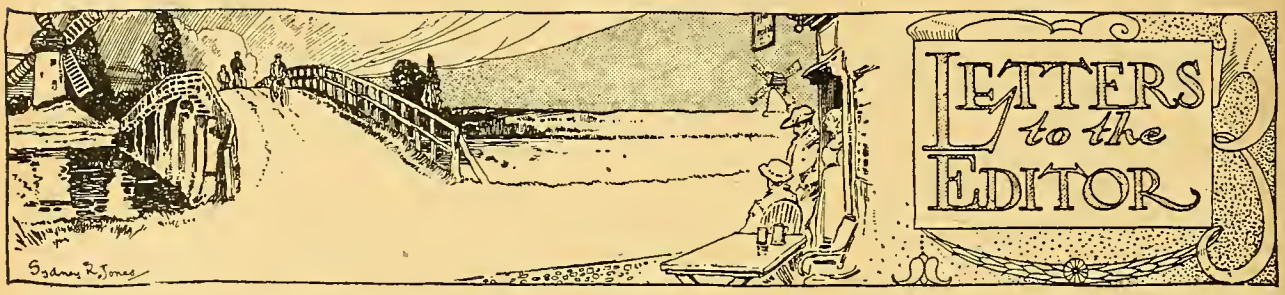
A German sidecar with concealed hood and cruiser type of body.

ONE hardly associated four-cylinders with a sporting solo mount, although we may shortly see more four-cylinder models on the road. Up to the present their weight has placed them in the category of passenger mounts, but the advent of the Low two-stroke and another design which will shortly be shown to the public may alter this state of affairs. As a purely speed mount it may never equal the super-single, but, if only on the merit of smooth running and pleasure of driving or being driven in a four-cylinder outfit, the introduction of new engines of this type is more than justified. Ten years ago more than one well-known authority on motor cycle matters predicted the four-cylinder sidecar eventually ousting the twin and the single. Although their prediction is far from fulfilment, the advent of new models marks a desirable revival of interest in the type. I have often asked passengers whether they have any preference in the matter of engines, whether the purring twin is so very much more desirable than the "thumping" single, and it must be acknowledged that the twin has the vote in the majority of cases. But then all twins don't purr, and all singles don't thump. Personally the most pleasurable sidecar ride I have ever had was in a four-cylinder outfit. Terrific acceleration combined with excellent brakes (on this particular machine) made driving in traffic and on the open road an absolute pleasure, and top-gear hill-climbing was the rule rather than the exception.



GRACEFUL AND LIGHT.

Unique streamline design is one of the features of this sporting model Hawk sidecar. There is a spacious locker behind the passenger with room for batteries, and it is sold complete with windscreen and clockboard by the Hawk Manufacturing Co., 12, Hampton Street, Brighton.




The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *MOTOR CYCLES FOR BOYS AND GIRLS.*

Sir,—May I, as a motor cyclist of some twelve years' experience, be permitted to say that though in the many thousand miles of my wanderings I have met many youthful riders of both sexes, I have yet to encounter one who was guilty in any way of either reckless or careless driving. Most of my thrills have been caused by "speed merchants" of about twenty years of age. That, I know at any rate, was my own dangerous period!

By all means let the youngster have a motor cycle. The sport will do him, or her, nothing but good, both physically and mentally.

I only wish that some of the "old hands" I have met were as considerate in their driving as the youngsters I have met—or as cheerful in the case of a breakdown!

O. P. C. COLLIER.

Sir,—My eldest boy, before he was 14 years of age, came into possession of a very ancient 2¾ h.p. F.N. machine. It was at least six years old, and looked more. He took the whole thing to pieces, engine and all, cleaned it up, and re-assembled it. The old-fashioned tappets were very badly worn, and I helped him to turn new ones on my little 4in. lathe out of some steel rods which had belonged to an old sewing machine. After re-assembling and re-enamelling, the old bike looked quite smart, and, more wonderful still, *she went!* On the boy's fourteenth birthday I presented him with the price of a driver's licence. That was five years ago, and he has since ridden some thousands of miles on the same old bus. Now will anyone say that a boy who could take down, repair, and re-assemble a motor cycle at that age is not better qualified to drive one on the open road than a middle-aged duffer whose fingers are all thumbs, and who does not know which way to turn a screw?

WM. F. A. ELLISON.

### *ON WHICH SIDE DO YOU FALL?*

Sir,—A correspondent mentions that in nine out of every ten cases a machine is damaged on the near side.

I appear to be the tenth case.

I have had several skids and sideslips this winter, and in each case I have hit the ground and damaged the offside of the machine.

I suggest that the following explanation is the cause:—

I always mount my machine from the offside and dismount from the offside.

In case of any danger my right leg is the first to leave the footrest. Therefore at the slightest sign of danger my weight is automatically thrown to the offside, and in case of a sideslip the machine falls on the offside. G.P.H.

Watford.

Sir,—I am very much interested in Mr. Leslie Lyon's statement that in nine cases out of ten a tumble, or sideslip, results in the machine being damaged on the near side, I myself having the same experience.

My theory is, one mounts a machine from the near side in nearly all cases, therefore there is a natural tendency when danger occurs to bring oneself over to the left if it is possible. In fact, quite a number of people find it much easier to make a left-hand turn on this account than they would a right.

E. RICHARDS.

### *GREASE NAVIGATION ON A PRE-WAR SINGLE.*

Sir,—I see that "Troubled" has difficulty in keeping a straight course on his 1910 single-geared Triumph when riding on grease.

Perhaps his trouble may be caused by the same things that caused rolling on grease on my 1912 Triumph. I have ridden it about 13,000 miles since I bought it in 1920, and I have now no trouble in keeping a straight course. I found that my trouble was:—

(1.) The ball races in the head and forks were badly worn, so that the steering was stiff and the forks were not smooth in action. I fitted new ball races, and made the head and forks work properly.

(2.) The barrel spring of the forks was not a genuine Triumph spring; it was too long, thus shortening the wheel base and restricting the movement of the forks. I fitted a genuine Triumph spring.

(3.) I find that running slowly on a gear that is too high will cause skidding, because the back wheel jumps at each power impulse. I have an adjustable pulley, but I carry two belts, an inch belt (top gear) and a ⅞in. belt (low gear for riding on greasy tram lines). I hold the bars firmly (but not as if I am trying to bend them), and I grip the tank with my knees.

I use W.D. Triumph flat bars, the saddle is as near the centre of the machine as possible, and the footrests are 4in. below and 1in. to the rear of the old pedalling gear bearing.

H. N. W. GOSS.

### *THE A.C.U. AND PRIVATE TRIALS.*

Sir,—Many points have been well ventilated, but I do not understand why Mr. A. E. Curtis should require "every intelligent motor cyclist" to support Mr. Loughborough's attitude. Who constitute the "certain type of rider" who "object to being dictated to in the matter of sport"? I should say 99 per cent. of the total motor cyclists living. Surely we have a sufficient number of restrictions and obligations enforced by the police (bearable only because they are more or less necessary) not to want more regulations from unnecessary sources.

If the only objections to these trials are the facts that unofficial figures may be published, and that "the ordinary private owner, without opportunity or inclination to investigate the claims of all and sundry, would simply be unable to come to a reliable opinion," then we need consider these objections very little. The experienced motor cyclist can always judge for himself; the beginner, if starting in a small way, would buy the best machine within his reach, while if buying a new machine he would, without doubt, get advice from an experienced friend. In any case, "the art of the advertisement writer" is likely to be overshadowed by the art of the salesman.

So I repeat, but without any gibe, Mr. Curtis's words, "By all means let Mr. Booth promote his petrol consumption competition if it amuses him." Doubtless there is a sufficient number of good sportsmen who will back him up, and therein find amusement, too.

I, as one of the ordinary private owners, shall be grateful to know what may reasonably be expected from an ordinary machine in ordinary hands.

L. WAKEFORD.

### ULTRA-RAPID AMERICAN TWINS.

Sir,—I would like "Triumph" to know of one of my experiences with a Yankee big twin. Last summer a friend and I went on a tour of four days, during which time we covered some 600 odd miles. The machine was not repaired or adjusted throughout the trip. On our return journey we touched 63 m.p.h., my friend weighing 11st. 8lb., myself 11st. 4lb. We carried a full two-gallon tin of petrol, kit of tools, and two suitcases. The machine had at that time covered just over 5,000 miles. HARLEY.

London, W.9.

Sir,—"Triumph" may now be disposed to believe the statement that an extra passenger on the carrier has *very little* effect upon the speed of a solo machine on the level.

We are loth to appear "Doubting Thomases," but, as we happen to reside quite close to, and consequently know, the stretch of road referred to, we cannot share "Triumph's" optimism in regard to the speeds mentioned.

B. WHOMES.
L. W. G. HARTLEY.

Sir,—The other day, while jazzing to the South Coast from London on my 1 h.p. Tish-Tosh with two passengers in the sidecar and one on the pillion seat (I usually carry two here), I saw in front of me a moving object of enormous dimensions. On passing it I noticed that it was Count Z--b--ky's wonderful 3,000 h.p. X.Y.Z.

A minute or so passed, when up he rushed! Zing! I immediately opened up, and we ran parallel for some ten miles or so, when he began to draw away from me, although my Bon--k--n (geared up 1 to 10) showed 98.765 m.p.h.

For the benefit of your correspondent, I might add that seventeen drops of water in the float chamber and a small amount of bird seed in the oil tank considerably lessen the time taken on these record runs. HANDLEBARS.

Friern Lane.

Sir,—Your correspondent "Triumph" is, I think, mistaken in his conclusion that the "ultra-rapid" qualities are confined to American machines. My own experience last summer, when driving my 12-cylinder car in the early morning, was somewhat similar to his. On a perfectly open, wide, safe road, I was travelling just over 40 m.p.h. when I received warning toots and was somewhat surprised to be rapidly overtaken by a procession of three motor cyclists, who yelled a cheery invitation to speed up. The first was passed at 52 to 53 m.p.h., the second at 58, whilst the fleetest took a lot of catching at 63. I noticed that each cycle was a B.S.A. I make no apologies for this furious speeding, as the conditions were ideal, the time 6 a.m., and the safety of no one but ourselves was imperilled. As an old motor cyclist (1906-7) I was greatly impressed with the beautiful rhythm and speed of these machines, each well laden with a lusty rider and full kit of luggage, also with the cheeriness and sportsmanship of the "tourers."

"1906-1922."

Wallasey.

QUEUEING FOR THE CLIMB. Scenes of this sort are by no means uncommon in 1922 trials, where fear of baulking on a freak hill results in a check and consequently a queue of waiting competitors at the foot.

Sir,—I should like to reply to "Triumph's" remarks re speeds of a blue Indian and his own 'bus between Swanley and Farningham.

Riding a 1915 7 h.p. R.R. Indian in this district, and knowing every inch of the roads and lanes, I should like to ask exactly where 64 m.p.h. was obtained, for I do not know of a stretch of road between these two towns on which I should dare to attempt such high speeds—especially on a Saturday afternoon. JACK LINGGOOD.

Sir,—It might interest "Triumph" to know that the Indian he mentions has never done more than 60 m.p.h. solo, let alone 66 m.p.h. two up, in its six years of existence. Also the machine is not a so-called "Blue Indian," but merely a repainted red one. ZENITH.

### TWO-STROKE EFFICIENCY.

Sir,—How does Mrs. Mary C. Jennison explain the fact that long-distance records were held by the 350 c.c. Alecto 2-stroke? (I am presuming this machine had a cast-iron cylinder and a normal bore-stroke ratio.) R.R.

Birmingham.

### POSSIBILITIES OF THE WIMSHURST INFLUENCE MACHINE ON I.C. ENGINES.

Sir,—Referring to the letter on the above question, it scarcely seems possible that any machine which depends wholly on an infinitely high state of insulation in all parts could be made to give good results for general ignition purposes, as damp air alone is quite sufficient to cause total failure.

One of the greatest sources of trouble in all electro-static machines is failure to "build up" owing to leakage of the residual charge of electricity, either through or across the insulation, or through the air. This difficulty seems, so far, quite impossible to overcome entirely, the quantity of electricity being extremely minute, but at a very high potential.

A certain amount of improvement might be effected by enclosing the whole in a case containing compressed air, but this would at once introduce mechanical objections when seen from the motorist's point of view.

Admitting that machines of the Wimshurst type will give very powerful discharges at long intervals, it is doubtful whether sparks sufficiently powerful to jump the sparking plug points and not brush across the porcelain could be got in succession rapidly enough for a high-speed engine.

It may be said that these criticisms relate only to the present state of development, and take no account of the future possibilities of the static machine; but, all considered, there seems but little hope of improvement over the magneto by its adoption, either on the question of size, weight, reliability, or cost of production.

It would be interesting to know how Mr. Freeman Lee arrives at the theoretical output and the useful output of 5 per cent. of a Wimshurst machine.

H. W. BAKER.

### COMPLICATED COASTING.

Sir,—Having owned various machines for the last ten years, commencing at the age of 14 (I hasten to add I was neither reckless nor irresponsible), I should like to explain to Mr. F. Walker the method of coasting which has proved so successful during my experience with both fixed engined and multi-geared 'buses.

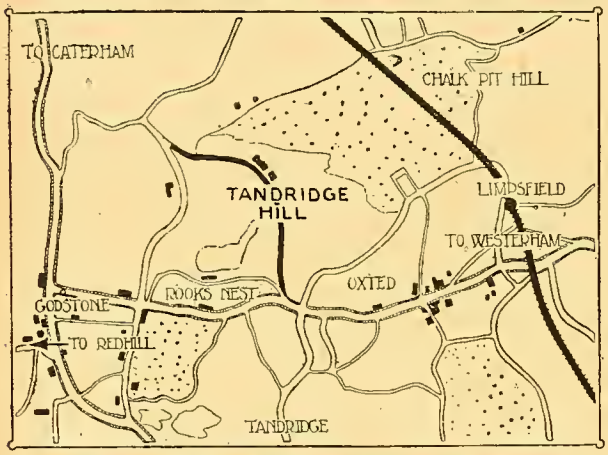
When coasting down the average main road hill with a multi-geared machine, descend in top gear with the throttle shut and air wide open. Thus, it will be seen, that although no petrol is being consumed, the engine is being turned over and is sucking in clean, cool air into the cylinder, which has a cooling effect, and not that of distortion; then with a touch on the throttle lever the engine will start up when desired.

Should the descent be steep, a lower gear will have greater braking effects, should that be deemed necessary.

Concluding, one should never descend a hill in neutral, as it may become necessary to "shovel the coals on" at a moment's notice. LOUIS FIELD NORTON.

### WHEN BORED WITH MAIN ROADS.

Sir,—It may be of interest to you to know that a very good hill for a sporting trial is situated in the Oxted district, and I enclose a very rough map, which will enable you to see exactly where it is to be found (Tandridge Hill).




Map showing the location of Tandridge Hill, referred to by Mr. G. Collard.

G. COLLARD.

### JUSTIFYING THE FREAK TRIAL.

Sir,—There appears to have been considerable comment caused recently by the introduction in reliability trials of hills and surfaces, over which, until a short time ago, it was assumed that no sane motorist would wish to travel. Has it never occurred to your readers that these various roads and by-roads (erroneously termed "colonial tracks"), do not exist merely for the sake of providing trials promoters with courses, but that they serve some other useful purpose also. It is quite possible to find habitations alongside these tracks, and more often than not, the local inhabitants number amongst them several users of motor cycles, whose only means of reaching home is along these self-same paths.

We, ourselves, are fortunate in having the Peak District close to hand for the purpose of testing our gears, and many times our testers have driven up and down these by-lanes with heavily laden sidecars for the purpose of discovering whether any latent defect might become evident after prolonged use of one or the other low gears.

We think we are right in stating that practically every track of suitable width in this district has been travelled over "three up" on one of our testing outfits, and therefore we see no cause for grumbling on the part of some would-be sportsmen who find that their progress is barred by an obstacle such as they are not accustomed to meet in the more southern part of the kingdom.

Competitions are presumably arranged for finding the best combination of machine and rider, and we hardly think it fair to expect more than a very small proportion indeed of competitors to obtain medals. The absurdity which has recently arisen in the Victory Trial, where out of approximately two hundred and eight competitors eighty-one obtained gold medals, and fifty-two silver medals, is self-evident. We fail to see what advertising value a medal in such a case can possess, as apparently every manufacturer seems to have won one of some sort. Apparently in such a case the award means little more than that machine and rider have succeeded in finishing the course. Surely it is the manner of finishing the course, and not the fact of finishing, that should be the essential point in making awards. I. COHEN.

John Jardine, Ltd.

### REAR LIGHTS FOR ALL.

Sir,—The cyclists' arguments against rear lights are perfectly sound, but like so many other theories, complications step in and make modifications necessary in actual practice. The complication in this case is that of dazzle, and I consider this to be the deciding factor in the whole problem. After being half blinded by one of the "double million magnifying" projectors (as Sam Weller would have described them) demanded by cyclists to justify their case, a live light ahead is about the only thing visible to the overtaking motorist, and at any speed over 12 m.p.h. an unlighted object ahead is a real danger till the eyes have regained their normal condition. No pedestrian with any sense will disport himself in the middle of the road with his shadow in front proclaiming the presence of an overtaking vehicle, and besides pedestrians and cyclists there are very few unlightable objects on the main roads where the dazzle nuisance is met with.

The answer to this problem will be given in the future, when the importance of fast road travel is recognised, and when, excepting pedestrians, unlightable road users will not be allowed on main roads at night, any more than Tom, Dick, and Harry are allowed to play marbles between the tracks of the Great Western Railway after school hours.

LESLIE LYONS.

Sir,—For some time past the Committee of the North Eastern Automobile Association has been interesting itself in the agitation for the reimposition of the regulation making the carrying of rear lights on bicycles compulsory.

This is not a question of inflicting any hardship upon cyclists, as rear lights are inexpensive, easily fitted, and there is no difficulty or danger in keeping them alight, as was proved during the war years while the regulation was in force. Further, motor cyclists, who are about the fastest travellers on the road will also be required to carry a rear light.

But it is chiefly in the interests of cyclists themselves that the regulation is desired. There have been lately several accidents, due to no fault on the part of motorists, in which users of bicycles have been injured more or less seriously, and it is therefore for their own sakes that the reform is desired.

J. E. HODGKIN, Hon. Sec., N.E.A.A.

Sir,—Personally I consider rear lamps are an abomination and absolutely unreliable, firstly because all rear lamps are minute, and in the case of acetylene the burner is very small, with very low pressure in the tube. Remembering that rear lamps are at the extreme rear of the machine and get heavy jolting, it does not require the use of much grey matter to realise that they are much more easily extinguished than head lamps, which are on the best sprung part of the machine.

At present night runs are one of my greatest pleasures, but, before, I never went out after dark unless forced to, because every few yards I had to screw round to see if the blinkin' rear lamp had finally blinked.

In a smash it's the carrier, or non-carrier, of the rear light who gets hurt, and not the overtaking car—so why all this sob stuff about the "common good to all," etc?

TRIUMPH SOLO.

Manchester.

Sir,—I feel very angry with Angus Macdonald, in spite of his name, and feel sure that he is a constant danger on his Highland roads.

I should like to catch him up, some dark night, when he and his flock were spread over the road and I was driving a Foden. WILLIAM H. KENT.

### *AN AMATEUR ROAD RACE.*

Sir,—With reference to the proposed Amateur Road Race, I think that if the entry fee were definitely fixed at £5 and *no* surplus were returned, the race would receive more support.

To take one's machine to the Island and stay for, say, two weeks will cost at least £10, and on top of this we are asked £10 for an entry fee.

I am also of the opinion that a class should be formed for owners of 600 c.c. dual purpose mounts such as the following: 4 h.p. Triumph, 3¾ h.p. Scott, 4 h.p. Norton, 4 h.p. Douglas, etc.

It cannot be said that these machines will be too fast for the course, as the 3½ h.p. sporting models made by the above firms are much faster. AMATEUR.

Southport.

Sir,—Why not, as suggested in an earlier article in *The Motor Cycle*, endeavour to prevent any advertising of successes in the Amateur Race? This would most effectually put a stop to possible faking by interested trade men.

Secondly, why does the Manx M.C.C. worry about A.C.U. "permission to apply for a permit" at all? If the Manx authorities are willing—well. "—UMPH!"

London, W.C.2.

### *RADIATION OF HEAT.*

Sir,—Your contributor "E.N.J." falls into a very popular error in his article on "Radiation of Heat" when he states that the heat from the outside of the cylinder wall is dissipated by radiation.

The amount so dissipated is very small compared with the total amount to be dealt with.

Radiation is proportional to the fourth power of the absolute temperature, and, at the comparatively low temperature of the cylinder, radiation is of very little value. This would become very obvious if the cylinder were enclosed in a vacuum, or even in a small closed glass box (glass being practically transparent to radiant heat).

The real cooling effect is due to convection; not the convection caused by the heat, but by each particle of air being heated by direct contact with the cylinder as it passes in the stream caused by the motion of the machine.

So although the cooling will be improved by a dull black finish on the cylinder, such improvement will be too small to be detected by ordinary means. P. BREWSTER.

### *ARTIFICIAL OBSTACLES.*

Sir,—In reference to Mr. Newman's amusing letter in your last issue, I regret that I cannot give him the names of any guilty of all the terrible offences he enumerates.

Respecting Gorsey Bank, doubtless your correspondent will recollect that he himself successfully negotiated the water splash there on the occasion of the Leicester Club's Winter Trial in 1921, when it was a miniature lake. This time, under easier conditions, more than one-half the competitors succeeded, and he failed. Hence the squeal.

Cross Keys, Loughborough. A. PRINCE.

### *RIDING COMFORT.*

Sir,—We are pleased to see in your issue of the 23rd ult. that "Friar John," in "Passenger Machine Topics," draws a comparison between the average vehicle and the Chesterfield chair, for which anything up to £20 is frequently paid, this after a most critical and justified examination.

We cannot understand why some motor cyclists will pay such careful attention to the engine and machinery portions of the machine, apparently forgetting entirely that their own concern is to sit on this machine during the whole of its useful service. In this way they must spend, at any rate during the summer months, a very much longer period of their lives in the saddle than in the expensive Chesterfield chair.

H. T. BALLEMY.
(For J. B. Brooks & Co., Ltd.).

### *4 H.P. AEROPLANES.*

Sir,—I was much interested to see that "Ixion" in his "Occasional Comments" voices his regret that the day of the £100 aeroplane has not yet arrived.

This is a fact, as regards flying as we have become accustomed to see it of late years, but I firmly believe that *modest* flying is within the means of the comparatively impecunious, and that for a sum much less than that mentioned a small party of enthusiasts could build themselves a machine capable of giving them much pleasure.

I emphasise the word "modest," for high speed, high altitude and long distance all demand big engines, which mean big cost, both original and upkeep

The writer has built many aeroplanes since the far-off days of 1909, of various types, from four man-power (ground speed 9 m.p.h.) to "Hun strafers" of the hottest; so, although he is quite prepared for the howl of derision which is bound to greet his views, he is not entirely talking through his hat.

The ideal I have in view is a machine of extremely light weight, large surface, slow speed and small engine power, and obviously limited to use in favourable weather, and within the limits of good ground.

I have discussed the project frequently with an eminent designer of war-time machines, who, at first sceptical, on making rough calculations, expressed the opinion that the plan was certainly not hopeless, and that 4 h.p. would probably be sufficient for the machine in view, and an air speed of 25 m.p.h. attainable.

I am afraid the question of design and cost would occupy too much space to be entered into, but I have not ignored these, and in conclusion should like to point out to those interested that German amateurs have devoted much work along these lines since the war, and have achieved remarkable success with featherweight machines without engines, flights of eight miles in length and fourteen minutes' duration having been officially recorded.

"NUTANSPLITPIN."

Birmingham.

### *CLEANING CELLULOID SCREENS.*

Sir,—I am sending the following hint in the hope that it may benefit your numerous readers who are blessed (or cursed) with celluloid windscreens.

Mix some whiting and olive oil into a smooth paste and rub well into the celluloid with a soft cloth. When the marks have been removed wipe as much of the paste off as possible and sprinkle with french chalk. Leave for a few minutes for the chalk to soak up any oil which may remain and then polish off.

The above treatment will remove all marks and small scratches, and is recommended by one of the leading celluloid manufacturers. ROBERT CHATTERTON.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook of the motor cycle.
Price net 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# PLAIN WORDS ON PILLION RIDING.

## Passenger's Position a Less Important Safety Factor than the Driver's Capability and his Companion's Mentality.

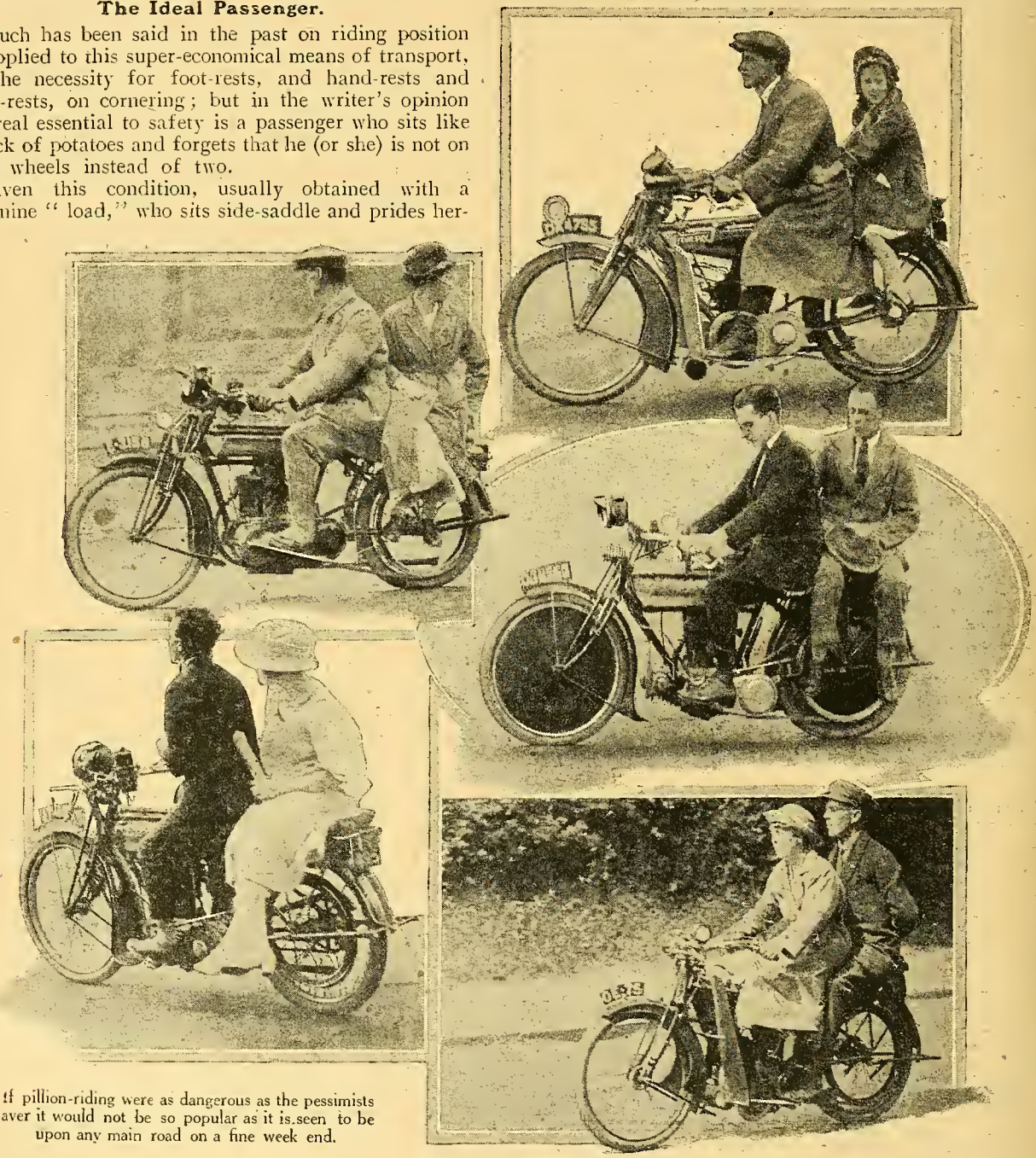
PILLION riding is somewhat of a contradiction. With an experienced and careful driver and a passenger entirely ignorant of motor cycles and oblivious to traffic problems it is as safe as walking, perhaps more so. With an uncertain driver and a nervous and traffic-wise passenger it may be very dangerous.

### The Ideal Passenger.

Much has been said in the past on riding position as applied to this super-economical means of transport, on the necessity for foot-rests, and hand-rests and back-rests, on cornering; but in the writer's opinion the real essential to safety is a passenger who sits like a sack of potatoes and forgets that he (or she) is not on four wheels instead of two.

Given this condition, usually obtained with a feminine "load," who sits side-saddle and prides herself on the fact that she does *not* hang on, insurance companies would cease to increase their premiums for the privilege.

For comfort a spring seat is a decided improvement, but unless it has been thoughtfully designed it may display a tendency to side-roll as well as raise the centre of gravity of the outfit—two serious faults.



If pillion-riding were as dangerous as the pessimists aver it would not be so popular as it is seen to be upon any main road on a fine week end.

# CLUB NEWS.

YORKSHIRE CLUB ENTHUSIASTS. Scene at the opening rally of the Sheffield and Hallamshire M.C. and L.C.C. at Millhouses. Although cold, dull weather prevailed, a good number attended.

### St. Anne's-on-Sea M.C.C.

A club has been formed at St. Anne's, near Blackpool, with Mr. F. Knutton as the president, and Mr. F. Dearden as hon. secretary.

### South-East Durham M.C.

On Easter Monday the club will hold a reliability trial to Kirkby Stephen and back; distance, 140 miles.

### Bishop Auckland M.C.C. and Durham and District M.C.C.

Supported by the Stockton, Darlington, Hartlepool, Pelton, Annfield Plain, and South-East Durham Clubs, an important hill-climb will be held at Legs Cross Hill on Easter Monday. Particulars may be obtained from Mr. W. Hedley, Lloyds Bank Chambers, Durham.

### Prestwich and District M.C.C.

Taking the form of a speed-judging contest, the opening run took place on the 19th ult. In spite of the dubious nature of the weather, quite 75 per cent. of the members completed the 30 mile course of Cheshire lanes. A trail of flour was laid, the route being unknown to competitors previous to the run. Results have now been announced as follows:—

1, W. Brown (3½ Rover sc.), 2 secs. error; 2, R. Murphy (2¾ Wolf), 30 secs. error.
Booby Prize. W. Weaver (4¼ B.S.A. sc.).
Award for Pluckiest Attempt: Miss K. Hands (2¼ Calthorpe).

### Natal M.C.C.

On Saturday, March 11th, the club held its second hill-climb for the Aggregate Cup on Van der Spuy's Hill. The surface was good, and some fair times were put up. The results are as follows:

1. C. H. Young (3½ Triumph).
2. D. Gelderd (2½ Singer).
3. C. Woodward (3½ Norton).

It will be seen that British machines can more than hold their own as far as Natal is concerned.

### Durham and District M.C.C.

Entitled, on the topically humorous menu card, the "1922 Inaugural Competition, Consumption Trial," the club's recent annual dinner was well in keeping with this hint of a cheery atmosphere.

### Bloxwich and District M.C.C.

Humorously illustrated and arranged in the form of a trial's route card, the programme of the club's recent dance formed not the least important contribution to an enjoyable evening.

### Skipton M.C. and L.C.C.

The opening run was made to Ingleton on April 2nd. A good number of members turned out, and a most enjoyable day was spent in the "Land of Waterfalls." The scenery at Ingleton is perfect, and club secretaries who wish to arrange a lovely day's outing could not do better than include a run to Ingleton in their fixtures.

### Bradford M.C. and L.C.C.

To the strains of the Rosedale Abbey Brass Band, the annual freak climb of Rosedale Abbey Bank for the Fell Cup will be held on the 23rd inst.

### Biggleswade and District M.C.C.

Three new challenge cups have been donated, and there is a general enthusiasm which, it is hoped, will continue through the year. The club opens its activities on Good Friday afternoon, when a paperchase open to all motorists in the district is to be held.

### Ferryhill and District M.C.C. (Durham).

Nearly forty members have already been enrolled, and further applications are being received daily. Richmond Meet on Good Friday will form the object of the opening run. Particulars may be obtained from Mr. R. E. Gittens, 35, Morrison Terrace.

A northern club's opening run. Members of the Westmorland M.C.C. at Brough.

### Pendle Forest M.C.C.

Over three circuits of a nineteen-mile course, including numerous freak hills, a reliability trial will be held on the 15th inst. Entry forms may be obtained from the hon. secretary, Mr. C. Dyson, Cherry Tree Cottage, Higham, Burnley.

### Brighton and Hove M.C.C.

On the 26th ult. the club opened its competition season with a well supported hill-climb, at Varncomb, near Saddlescombe. Entries numbered 100, and the event was witnessed by a large crowd of interested spectators. Lewes, Horsham, and Eastbourne club members took part. The average gradient was 1 in 9, and the length of the course was ¼ mile. Results :—

TWO-STROKES (LADIES).

| | SECS. |
|---|---|
| 1st.—Miss N. Dunford (2¼h.p. Enfield) ... | 29 1-5 |
| 2nd.—Miss M. Dunford (2¼h.p. Enfield) | 32 1-5 |
| 3rd.—Miss E. Dunford (2¾h.p. Sirrah) | 36 4-5 |

300c.c. TWO-STROKE (GENERAL).

| | SECS. |
|---|---|
| 1st.—S. Dunford (2¼h.p. Enfield) ... | 28 4-5 |
| 2nd.—E. Brook (2¼h.p. Enfield) ... | 31 2-5 |
| 3rd.—W. Hylands (2¼h.p. Verus) ... | 33 |

350c.c. MOTOR CYCLES (AMATEUR).

| | SECS. |
|---|---|
| 1st.—A. Fraser (2¾h.p. Sheffield-Henderson) ... ... ... ... | 19 |
| 2nd.—R. G. Martin (2¾h.p. Royal Ruby) | 21 2-5 |
| 3rd.—L. P. Greenwood (2¾h.p. Royal Ruby) | 23 1-5 |

350c.c. MOTOR CYCLES (GENERAL).

| | SECS. |
|---|---|
| 1st.—A. Fraser (2¾h.p. Sheffield-Henderson) ... ... ... ... ... | 18 3-5 |
| 2nd.—A. C. Quick (2¾h.p. Rex-Acme) ... | 19 1-5 |
| 3rd.—C. Volk (2¾h.p. A.J.S.) ... ... | 19 2-5 |

600c.c. MOTOR CYCLES (AMATEUR).

| | SECS. |
|---|---|
| 1st.—W. H. Sheraton (3½h.p. Norton) ... | 15 3-5 |
| 2nd.—R. Green (3½h.p. Norton) ... | 17 |
| 3rd.—A. Fraser (3½h.p. Sunbeam) ... | 17 1-5 |

600c.c. MOTOR CYCLES (GENERAL).

| | SECS. |
|---|---|
| 1st.—A. J. Koehler (3½h.p. Douglas) | 15 1-5 |
| 2nd.—W. H. Sheraton (3½h.p. Norton) | 15 3-5 |
| 3rd.—A. Fraser (3½h.p. Sunbeam) ... | 16 2-5 |

UNLIMITED MOTOR CYCLES (AMATEUR).

| | SECS. |
|---|---|
| 1st.—W. H. Sheraton (3½h.p. Norton) ... | 15 2-5 |
| 2nd.—L. W. Preston (7-9h.p. Harley) ... | 17 |
| 3rd. A. Fraser (3½h.p. Sunbeam) } ... R. Green (3½h.p. Norton) } | 17 1-5 |
| Result of "run off" for 3rd award:— | |
| A. Fraser (3½h.p. Sunbeam) ... | 17 |
| R. Green (3½h.p. Norton) ... | 17 4-5 |

UNLIMITED MOTOR CYCLES (GENERAL).

| | SECS. |
|---|---|
| 1st.—A. J. Koehler (3½h.p. Douglas)... | 15 |
| 2nd.—W. H. Sheraton (3½h.p. Norton) | 15 2-5 |
| 3rd.—A. Fraser (3½h.p. Sunbeam) ... | 16 4-5 |

350c.c. MOTOR CYCLES (STANDING START).

| | SECS. |
|---|---|
| 1st.—A. Fraser (2¾h.p. Sheffield-Henderson)... ... ... ... | 27 1-5 |
| 2nd.—R. G. Martin (2¾h.p. Royal Ruby) | 30 3-5 |
| 3rd.—C. Volk (2¾h.p. A.J.S.) ... ... | 31 1-5 |

600c.c. MOTOR CYCLES (STANDING START).

| | SECS. |
|---|---|
| 1st.—A. Fraser (3½h.p. Sunbeam) ... | 21 2-5 |
| 2nd.—W. H. Sheraton (3½h.p. Norton) | 21 3-5 |
| 3rd.—A. J. Koehler (3½h.p. Douglas)... | 22 3-5 |

UNLIMITED MOTOR CYCLES (STANDING START).

| | SECS. |
|---|---|
| 1st.—W. H. Sheraton (3½h.p. Norton) | 21 1-5 |
| 2nd.—A. J. Koehler (3½h.p. Douglas)... | 21 3-5 |
| 3rd.—A. Fraser (3½h.p. Sunbeam) ... | 22 1-5 |

UNLIMITED SIDECARS.

| | SECS. |
|---|---|
| 1st.—G. E. Stacey (3½h.p. Norton) ... | 21 1-5 |
| 2nd.—S. Dunford (7-9h.p. Harley) ... | 22 |
| 3rd.—J. A. Bowles (8h.p. Zenith) ... | 27 |

1,100c.c. LIGHT CARS.
Dead Heat (on formula).
L. Humphries (G.N.).
H. S. Moore (Amilcar).

Special award, value £5, presented by Mr. A. Fraser for fastest time of the day;—
A. J. Koehler (3½h.p. Douglas) ... 15 secs.

### Wallington and District M.C. and L.C.C.

On Wednesday, April 19th, the club is holding a short evening trial for the President's Cup (to be won outright). The start will be from the Triangle, Wallington, at 5 p.m.

### Bristol M.C. and L.C.C.

What was described as a "Mystery Trial" was held recently; it consisted of a fifty-mile course of varied character, run in five sections, each covered by sealed orders which were opened by the checkers. Thus the 25 riders were quite in the dark as to the direction of each succeeding section, and being set the task of keeping to a secret time schedule without the distance being known, they were kept guessing all the way to the finish, where competitors and helpers to the number of over 40 took tea. Results:—

1, H. Walker (3½ Norton sc.); 2, H. Challenger (3½ Triumph sc.); 3, A. E. Le Brun (3½ Rudge); 4, H. C. Walters (8 Ariel sc.).

### Bristol M.C. and L.C.C. and Bath M.C.

These two live clubs, having a joint membership approaching three hundred, were amongst the most eager supporters of the Centre scheme when it was formed, and have taken a very prominent part in the affairs of the Western Centre A.C.U. both financially and in arranging events. The open trial of this Centre, organised over a course the most difficult sections of which were in the particular "hunting grounds" of these clubs, has been the cause of differences of opinion which have resulted in both clubs signifying their intention of withdrawing from the Centre.

### Leamington Spa M.C.C.

Under the above title a club has been formed, with Mr. F. A. Boggis, 53, Clarendon Avenue, as secretary.

### Sheffield and Hallamshire M.C. & L.C.C.

Arrangements for the Traders' Team Trial were on the lines of the M.C.C. Inter-team Trial (*i.e.*, 3 circuits of a given course; stop causes disqualification; petrol to be carried, etc.).

Five teams, each consisting of three solo and three sidecar machines, faced the starter. The course was round Stocksbridge. The tit-bit of the trial was undoubtedly Windhill Lane, where, although the gradient is comparatively easy, the surface, except at the very top, is simply a mass of slime. On the first circuit several machines failed, wheel slip and, in one case, a skid into the wall on the right-hand side being the causes. On the second circuit some fine climbs were made. R. May (3½ Norton) came up steadily; F. Hall (Indian sc.) tore up at speed, hugging the right-hand side; R. L. B. Taylor (2¼ Levis), riding the smallest powered machine in the trial, came up in good style with power to spare; J. Younie (5-6 Martinsyde sc.) came up very slowly but with an entire absence of wheel slip, his machine being the steadiest performer on the hill; but undoubtedly the fastest ascent was made by Reg. Stacey (7-9 Harley sc.), who literally streaked up the hill with a grim expression on his face. The trophy is won by the "Holmes and Younie, Limited," team, consisting of:—

L. Adams (3½ Martinsyde), R. L. B. Taylor (2¼ Levis), L. Hayward (3½ Sunbeam), J. M. Younie (5-6 Martinsyde sc.), G. W. Wilkin (5-6 Martinsyde sc.), A. Blake (5-6 Brough sc.)

AN OFFICIALLY OBSERVED TEST OVER DARTMOOR. Under A.C.U. observation, a 2¼ h.p. Levis and a 4 h.p. Norton sidecar successfully accomplished a journey from Exeter to Penzance and back on six consecutive days. The daily run was 240 miles, part of the route being across Dartmoor which on several occasions was covered with snow. The two machines under test are in the foreground, and the A.C.U. official observer on the machine in the rear. Pike & Co., of Exeter, were the organisers of the trial.

### Dunheved (Launceston) & District M.C.C.

At the annual meeting the secretary (Mr. Maurice Prout) reported a balance in hand (including prizes in stock) of £32. A feeling of optimism prevailed as to the club's future.

### Coventry and Warwickshire M.C.

There were forty-four starters for last Saturday's trial for the Cole Cup (presented by Lieut.-Col. Cole, the president), and thirty-three finished. The route, including an acceleration test, lay in the Cotswolds, and the weather, especially in the morning, was bad. No award has yet been made, but it is known that very little margin separates the leaders.

### Darlington and District M.C.

Sixteen enthusiasts competed in the reliability trial held on the 2nd inst. The course was a very sporting one, including Peat Hill and Loftley Hill and water-splashes, the difficulties being increased by the snow-covered moors.

The winner of the C. W. Smith Cup proved to be C. Bone (4 Triumph), the second prize falling to J. M. Richmond (3½ Norton sc.), third B. M. Fox (4 Triumph).

### North Wales M.C.C.

On Thursday last the club held its opening reliability trial. The route lay over a really sporting course of 53 miles, and included five observed hills, of which two are well known as "North Wales terrors." All kinds of roads were encountered, also one stretch of mountain track upon which lay over eighteen inches of snow. Provisional results:

| | Marks lost. |
|---|---|
| 1. R. R. Bromley (3½ Sunbeam) ... | 1 |
| 2. F. T. Jones (3½ Sunbeam) ... | 5 |
| 3. S. W. Smith (3½ Scott Squirrel) | 5 |

### Cork and District M.C.C.

Results of the series of interesting events at Five Mile Bridge have now been announced as follows:—

FLEXIBILITY TEST.

SIDECAR MACHINES UNDER 600 C.C.—1, A. Wilson (3½ Sunbeam sc.); 2, C. M. Ryan (4 Triumph sc.).

SIDECAR MACHINES OVER 600 C.C.—1, C. S. Hosford (8 Blackburne sc.), 2, C. A. Murphy (6 Enfield sc.), R. J. Swanton (7 Indian sc.), and Reg. Good (4 Norton sc.), equal.

SOLO MACHINES UNDER 350 C.C.—1, J. Gibbings (2¾ A.J.S.); 2, J. Healy (2¾ A.J.S.); 3, J. O'Sullivan (2¾ A.J.S.).

SOLO MACHINES, 350 TO 600 C.C.—1, J. Mulligao (3½ Triumph); 2, W. Waterman (3½ Sports Douglas); 3, J. Wilson (3 A.B.C.).

SOLO MACHINES OVER 600 C.C.—1, Raymond Good (4 Norton); 2, C. A. Murphy (6 Enfield).

STOPPING AND RE-STARTING TEST.

SIDECARS OVER 600 C.C.—1, C. S. Hosford (8 Blackburne sc.); 2, R. J. Swanton (7 Indian sc.); 3, Reg. Good (4 Norton sc.).

SOLO MACHINES UNDER 350 C.C.—1, J. Gibbings (2¾ A.J.S.); 2, T. O'Sullivan (2¾ A.J.S.); 3, —. Browne (2¼ Diamond).

SOLO MACHINES, 350 TO 600 C.C.—1, J. Mulligan (3½ Triumph); 2, J. A. Wilson (3 A.B.C.); 3, J. Ryan (3½ Indian Scout).

SOLO MACHINES OVER 600 C.C.—1, Raymond Good (4 Norton); 2, C. A. Murphy.

FAST CLIMB.

SIDECAR MACHINES OVER 600 C.C.—1, C. S. Hosford (8 Blackburne sc.); 2, Reg. Good (4 Norton sc.); 3, R. J. Swanton (7 Indian sc.).

SOLO MACHINES UNDER 350 C.C.—J. O'Sullivan (2¾ A.J.S.), w.o.

SOLO MACHINES, 350-600 C.C.—1, J. Mulligan (3½ Triumph); 2, W. Waterman (3½ Sports Douglas); 3, R. S. Russell (3¾ Scott).

SOLO MACHINES OVER 600 C.C.—1, Raymond Good (4 Norton); 2, C. A. Murphy (6 Enfield).

(6–12)

## Week-End Club Events.

*April 14th.—Ipswich and District M.C. and Norfolk M.C. and L.C.C.—Inter-Club Reliability Trial.*
*April 14th.—Kent Clubs Hill Climb at Vigo Hill.*
*April 14th.—Reigate, Redhill and District M.C.C.—Run to Bognor.*
*April 14th.—Worcester and District M.C.C.—Half Day Reliability Trial.*
*April 14th.—Rochester, Chatham and District M.C. and L.C.C.—Hill Climb.*
*April 14th.—Berkhamsted and District M.C.C.—Challenge Cups.*
*April 15th.—Birmingham M.C.C.—Trial to Weston-super-Mare for Sangster Cup.*
*April 15th–17th.—S. Birmingham M.C.C.—Birmingham to Lynmouth. Birmingham Trial.*
*April 15th.—Coatbridge, Airdrie and District M.C.C.—Run to Lanark.*
*April 15th.—Kidderminster M.C.C.—Social Run.*
*April 15th.—Coventry Triangle M.C.—Run to Napton.*
*April 16th.—Manchester M.C.—Social Run.*
*April 16th.—Northern Centre A.C.U.—Rally at Dungeon Ghyll.*
*April 16th.—Halifax and District M.C.C.—Run to Edinburgh.*
*April 16th.—Darlington and District M.C.—Run to Ravenstonedale.*
*April 16th.—Coventry Triangle M.C.—Run to Earlswood Lake.*
*April 16th.—Featherstone and District M.C.C.—Run to Bawtry.*
*April 16th.—Sheffield M.C.C.—Run to Ashford-in-the-Water.*
*April 17th.—Neath and District M.C.—Speed Trials at Porthcawl.*
*April 17th.—Colchester and District M.C. and Bury St. Edmunds M.C.—Inter-Club Hill Climb.*
*April 17th.—Bishop Auckland M.C. and Durham District M.C.C.—Inter-Club Hill Climb.*
*April 17th.—Scarborough and District M.C.—Staxton Hill Climb.*
*April 17th.—Eastbourne and District M.C.C.—Hill Climb.*
*April 17th.—S.E. Durham M.C.—Reliability Trial.*
*April 17th.—Barrow and District M.C.—Run to Gunner's Howe.*
*April 17th.—Blaxwich and District M.C.C.—One-Day Reliability Trial.*
*April 17th.—Avon M.C.C.—Social Run.*
*April 17th.—Gloucester M.C. and L.C.C.—Run to Cheddar Gorge.*
*April 19th.—Wallington and District M.C. and L.C.C.—Evening Trial for the President's Cup.*
*April 20th.—Dunheved (Launcestan) and District M.C.C.—Hill Climb.*

### Newcastle and Northern M.C.

During the past few months several attempts have been made to bring about an amalgamation between the three Newcastle motor organisations, and in that way do away with a great deal of the overlapping and useless expenditure caused by having three separate clubs. The idea culminated in a joint general meeting of two of the clubs, which was held in the Crow's Nest, Newcastle, on the 30th ult., at which the amalgamation was sealed.

Mr. W. Stevenson, a member of the Newcastle daily Press, acted as neutral chairman, and business was pushed forward harmoniously. The members were were unanimously in favour of the amalgamation, and when Mr. Atkinson suggested that the title of the new club should be the Newcastle and Northern M.C. his suggestion met with instant approval, and was adopted.

The meeting fixed the annual subscription at 10s. 6d., and decided that the question of an entrance fee should be waived.

### Reigate, Redhill and District M.C.C.

The results of a paperchase held recently were as follows: 1, R. T. Alderton (3½ Norton); 2, H. Hudson (3 A.B.C.); 3, W. D. Steyning (5 Zenith).

### Austin L.C. and M.C.C.

With headquarters at the Longbridge factory, Northfield, Birmingham, yet another works club has been formed in the Midlands; and a successful opening run was held on the 1st inst. to the Old Hundred House, Whitley Court.

### Cardiff M.C.C.

The first event of the year, a reliability run, will take place on Wednesday, April 19th. All prospective entrants should communicate with the hon. sports organiser, Mr. E. R. Mitchell, 29, Llanfair Road, Cardiff.

### Manchester M.C.

Thirty competitors took part in the reliability trial for the silver challenge cup presented by Messrs. J. Blake and Co., run on the 2nd inst., over a fairly stiff course, starting from Monks Heath. The surface of Mow Cop was greasy, and several failures occurred, also some fine climbs were recorded, notably H. Jacques (7-9 Harley-Davidson sc.), E. Foster (5 Raleigh), H. Reed (8 Dot sc.), and E. P. Allbones (7-9 Rudge sc.).

### North London M.C.C.

In the form of a "find your way" competition, the captain's surprise run was held on Saturday the 1st inst. A prize awarded for this event was won by B. Staley (4 Triumph), whose time was nearest to 20 m.p.h.

This club's second "At Home" was held at Ye Olde Gate House Hotel, Highgate, on the following Monday. Considering the weather, there was a very good attendance, and a most enjoyable evening was spent. It has been decided to hold these gatherings on the first Monday of each month throughout the year, and all motor cyclists will receive a hearty welcome.

The hon. secretary is Mr. Alan W. Day, "Claremont," Ballards Lane, Finchley London, N.3.

### Leinster M.C.C.

The club held an open hill-climb recently at Kilinarin Hill. The afternoon was bitterly cold, and snow fell at intervals, but nevertheless a good number of competitors turned out and an interesting afternoon's sport was witnessed. The handicapping was very skilfully done, and in most of the classes the men were brought nicely together.

| | Handicap Time. Secs. |
|---|---|
| TWO-STROKES UNDER 350 C.C. | |
| 1 R. Humphreys (2¼ Velocette), 2 secs..... | 39⅔ |
| 2. T. F. Slevin (2¼ Velocette), scr. ..... | 43⅓ |
| 3. J. Gilmour (2½ Omega), 5 secs..... | 77⅓ |
| FOUR-STROKES UP TO 350 C.C. | |
| 1. H. J. McInally (2¼ New Imperial), 2 secs. | 31⅔ |
| 2. J. G Burney (2¾ Douglas), 8 secs. ..... | 33 |
| 3. J. A. H. Waters (2¾ A.J.S.), scr. ..... | 33⅓ |
| ALL TYPES UP TO 600 C.C. | |
| 1. A. A. Wayte (3½ Sunbeam), 1 sec. ..... | 26⅔ |
| 2. C. S. Maguire (4½ Humber), 4 secs. ..... | 27 |
| 3. J. Alexander (3½ Sunbeam), 2 secs. ..... | 27⅓ |
| SIDECARS UP TO 1,000 C.C | |
| 1. P. A. Bell (7 James sc.). 4 secs. ..... | 38 |
| 2. S. J. Redmond (7-9 Indian Chief sc.), scr | 40 |
| 3. J. Healy (4½ James sc.). 8 secs. ..... | 41⅓ |

C 7

# CURRENT HAT

## Times to Light Lamps.

| | | |
|---|---|---|
| April 13th | .. .. | 8.50 p.m. |
| „ 15th | .. .. | 8.53 „ |
| „ 17th | .. .. | 8.57 „ |
| „ 19th | .. .. | 8.59 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Surbiton Inter-Club Team Trial.

Entries for this year's inter-club Team Trial for the Maude's Challenge Trophy, to be held on the 22nd inst., close on Saturday next.

### Rear Lights for All.

In the Report on the Regulation of Road Vehicles (see p. 473) attention is drawn to the first interim report of the Committee on Lights on Vehicles (1920), which recommends that a red rear light should be carried at night by all vehicles.

### Qualification for Driving Licences.

It is generally known that driving licences may be issued to any member of the public, no matter whether he be insane, halt, maimed, or blind. The authorities are against a medical examination for fitness for intended drivers, but recommend that every applicant should make the following declaration: "I hereby declare that to the best of my knowledge I am not suffering from any disease or physical disability which would be likely to cause the driving of a mechanically-propelled vehicle by me to be a source of danger to the public."

### 100 m.p.h. in Natal?

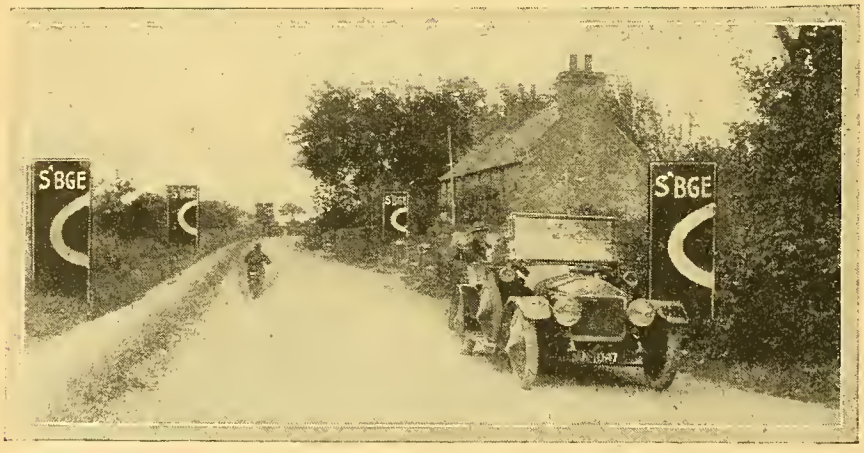
R. Blackburn, acknowledged to be S. Africa's champion heavyweight rider, will very shortly be seen in Natal competitions with a new racing Harley-Davidson, which has just been unpacked. The new machine is of the eight-valve track type, and is certified as having accomplished the speed of 112 m.p.h. in America.

### The Snowbound West.

The blizzard which heralded April in the West Country effectively put many well-known beauty spots "off the map" for the time being. Cheddar Gorge, particularly the top, was quite impassable for vehicles even on Sunday and Monday of last week, drifts being well over head level in some parts. Access to Cheddar village was only possible by a roundabout route.

### London-Holyhead-London Trial.

On Friday and Saturday (21st-22nd inst.) the Ealing and District M.C.C. will hold its annual twenty-four-hour run to Holyhead, open this year to any club in the South-eastern Centre A.C.U. The premier award is the Maude's Challenge Shield, to be held for one year. Entries are coming in at a very satisfactory rate, and it is expected that last year's record will easily be beaten. First post tomorrow morning is the last date upon which entries will be received, further particulars being obtainable from the organising secretary, Mr. F. A. Longman, 17, Bond Street, Ealing, London, W.5.




DANGER AHEAD. Instead of banners, which were always liable to fall on the road in front of 60 m.p.h. riders, sets of notice boards, as shown, each 8ft. high, will be used this year as warnings of the proximity of dangerous bends on the T.T. course.

## Special Features.

AUSTRALIAN SIX DAYS.
FIRST 1922 BROOKLANDS MEETING.
GUIDE TO EASTER TRIALS.

### Peggy Fraser on the Screen.

Miss Peggy Fraser, the fashion artist whose dress designs for lady motor cyclists are familiar to our readers, is now "featuring" in a screen interview in the "Around the Town" series of topical films. She is the first dress artist to be screened.

### Big Easter Monday Hill Climb.

Such well-known riders as George Dance, G. S. Boston, F. W. Dixon, R. T. Cawthorne, and E. Searle are competing in the Staxton Brow hill-climb on Easter Monday, and since the hill is in perfect condition it is expected that all records will be broken.

### "Rough, Heart-breaking Stuff."

It has now been practically decided to give premier awards in each of the eleven classes in the Yorkshire Centre colonial trial in June. The course, which will centre upon Harrogate, is of 70 miles, and will be covered twice. Though there will be no such freak hills as Park Rash, "all the course," according to Mr. J. N. Longfield, "except for nine or ten miles, will be absolutely rough, heart-breaking stuff—the sort of thing that we Yorkshire riders appreciate." Marks will be given for the condition of the machines.

### At Brooklands next Month.

Among the principal attractions of the next meeting of the B.M.C.R.C., to be held on May 6th, are three races for motor bicycles conforming more or less to Tourist Trophy requirements. Of these events two will be run together (250 c.c. and 350 c.c. machines), while the third race will be for motor cycles which conform to the Senior T.T. conditions. The smaller machines will cover 26 laps, and those in the senior class 30 laps. It has been estimated that the time occupied will be 1½ hours for each race, it having been considered that the lightweights should travel at 45 m.p.h., the junior machines at 50 m.p.h., and the senior machines at 60 m.p.h. Other events will be the five-lap All-Comers passenger machine handicap, and a three-lap scratch race for motor bicycles up to 1,000 c.c. It has been decided by the B.M.C.R.C. that members who enter for a race and do not start will lose 10 marks in their scoring for the aggregate cup presented at the end of the year.

### Liability of a Dog.

Two hundred and fifteen pounds damages were recently awarded a Scottish motor cyclist, who sued the owner of a dog which had attacked him on the road and caused a bad spill.

### Attempting Records in Italy.

P. S. Vailati, the Italian champion for the 500 c.c. class on a Sunbeam, is attempting the flying kilometre (world's record) on a machine of the same make. It is rumoured that the machine in question is the one on which Dance obtained such marvellous speeds last year.

### Road Racing in France.

To form the first eliminating trial of the French international motor cycle championship, a minor Grand Prix race will be held at Lyon on May 21st. It is claimed that the roads on the circuit, St. Andre-De Corcy, will be improved, even if at considerable expense.

### An Historical Retrospect.

The earliest recognition by Parliament of the use of mechanically-propelled road vehicles was in 1831, when a Select Committee of the House of Commons was appointed to inquire into the tolls imposed on coaches and other vehicles propelled by steam or gas on common roads.

### Road Patrols During the Lunch Hour.

Hitherto the A.A. road patrols have left their beats for their midday meal at various times between 12 and 2 p.m. To enable members, however, to know precisely when they may rely upon receiving midday road assistance, it has been arranged that all patrols take their meal-time from 1 to 2 p.m.

AT BROOKLANDS LAST SATURDAY.
A notable win was scored by G. H. Williams (348 Sheffield-Henderson) in the private owner's race. His speed was 63·69 m.p.h.

### Entries for the Amateur Road Race.

Should A.C.U. sanction be obtained for the I.O.M. Amateur Road Race, referred to in *The Motor Cycle* last week, entries will probably close on May 15th.

### Manchester Trades Dance.

A dance in aid of the Manchester Centre Cycle Trades Benevolent Fund was recently held at the Assembly Rooms, Cheetham Hill, Manchester, at which 200 local traders were present.

### British Racing Success in Italy.

Three o.h.v. 3½ h.p. Triumphs practically swept the board in the 500 c.c. class of the Italian *Circuite di Brescia*, finishing first, second, and fifth, making the fastest lap of the day, and winning the team prize.

### Golf Competition for Traders.

On May 1st a golf competition (at Redditch Vale Golf Club) is to be organised by the Manchester Centre of the Cycle and Motor Cycle Trades Benevolent Fund, open to all members of the centre. This event is to be followed by a dinner and a concert. Entries close to-morrow and should be forwarded to Mr. F. Webster, 28, King Street, West Manchester.

### Motor Cyclist's Conviction Quashed.

An important precedent has been established by the Lord Chief Justice and Justices Sherman and Salter, who quashed a conviction against a motor cyclist because it could not be proved that he was the driver. The case was that of a motor cyclist who was summoned for riding to the common danger. He could not be identified, but the registration number of the machine was taken, and he, as the owner, was summoned. Although he could not be definitely identified as the driver the magistrates decided that he was, and fined him. The motor cyclist appealed, with the above result.

# SOME ROADS TO BE AVOIDED.

## Holiday Routes which are in Indifferent Condition.

ALTHOUGH it is not possible to avoid travelling over some of the roads mentioned in the list below if extensive journeys are made, to be forewarned is to be forearmed, and motor cyclists should, as far as possible, take heed of the warning which the Automobile Association gives with relation to the condition of the stretches enumerated.

### Home Counties (North).

London to Romford.
Billericay to Southend.
London to Epping.
North and South of Alconbury (Great North Road).
Stony Stratford and Fenny Stratford.
Oxford Road.
London to Uxbridge.
Beaconsfield to Stokenchurch.
Bath Road; Colnbrook to Maidenhead.

### Home Counties (South).

Hastings Road south of Bromley and between Sevenoaks and Tonbridge.
Eastbourne Road; between East Grinstead and Maresfield and south of Hailsham.
Brighton Road; north of Crawley.
Worthing Road; between Dorking and Warnham.
Portsmouth Road; near Petersfield.
Southampton Road; on the London side of Farnham and halfway between Winchester and Southampton.
Exeter Road; between Hartley Row and Basingstoke.
Bath Road; west of Hungerford.

### Midland Counties.

The Fosseway; Leicester to Six Hills.
Leicester to Ashby.
Oundle to Peterborough.
Derby to Ripley.
Wolverhampton to Whitchurch.
Alcester and Stratford-on-Avon.
Stonebridge and Kenilworth.
Watling Street (Wellington-Daventry) between Prior's Lee and St. George's, also between Fazeley and Wilnecote, Churchover and Dunsmore.
Lichfield to Walsall.
Lichfield to Coventry.
Rugby to Coventry.
Nuneaton and Hinckley.

### Western Counties.

Exeter to Plymouth.
Brent to Wrangaton.
Exeter to Barnstaple; bad after Lapford.
Exeter to Torquay.
Kingsteignton to Newton Abbot.
Exeter to Minehead.
Tiverton to Bampton.
Exe Bridge and Dunster.
Newton Abbot to Kingsbridge; bad in places.
Princetown to Exeter; bad, to Moretonhampstead.
Barnstaple to Ilfracombe; bad via Braunton.
Lynton to Simonsbath and South Molton.
Dartmouth to Modbury.
Bath to Wells; bad to Newton St. Loo.
Taunton to Minehead.

### North-Eastern Counties.

York to Bridlington; poor after Driffield.
York to Hull; between Barnby Moor and Market Weighton.
Hull to Withernsea via Patrington.
Selby to Market Weighton.
Leeds-Otley-Pontefract.
Great North Road; from seven miles from Doncaster to Aberford.
Doncaster to Wakefield; full width repairs 5½ miles from Wakefield.
Bradford to Wakefield.
Great North Road; between Colsterworth and Stretton.
Boston to Spalding.
Scunthorpe to Thorn.
Spilsby to Horncastle.
Horncastle to Wragby.
Lincoln to Grimsby via Market Rasen.

### North-Western Counties.

South of Kendal and between Kendal and Shap.
Kendal and Kirkby Lonsdale.
Sedbergh to Lancaster.
Gisburn to Nelson.
South of Preston on both roads to Bolton.
Matlock and Derby.
Derby to Ashbourne.
Chester to Flint, and northwards.
Pentre Voelas to Corwen.
Dolgelly to Festiniog, Barmouth, and Machynlleth.

### South Wales.

Clun to Newtown.
Llanidloes to Newtown.
Cardigan to Aberayron.
Haverfordwest to Begelly.
Carmarthen to Swansea.
Cardiff to Penarth.
Merthyr Tydfil to Abergavenny.

### Eastern Counties.

Norwich to Saxmundham.
Beccles to Lowestoft.
Norwich to Great Yarmouth.
Norwich to Cromer.
Holbeach to Spalding.
Peterborough to Oundle.
Colchester to Sudbury } both bad halfway.
Colchester to Halstead }
Chelmsford to Rayleigh.

# FIRST 1922 BROOKLANDS MEET.

## Wonderful Speeds by 350 c.c. and 250 c.c. Machines. Sunbeam and Sheffield Henderson Records.

C. F. Temple (988 Harley-Davidson sidecar) leading, H. Le Vack (980 Zenith sidecar) in a stiff struggle for a place in the sidecar handicap.

IT is only to be expected that the first Brooklands meeting of the year should provide an uncertain hour or two for competitors, backers and bookmakers alike, and last Saturday's affair was no exception to the rule.

The presence of George Dance with a couple of new super-track o.h.v. Sunbeams, looking very businesslike, despite their glittering finish, gave the hero-worshipping element in the crowd something tangible to follow, and compensated for the fact that neither O'Donovan nor Judd nor the o.h.v. Norton were racing.

Taken on the whole, the racing was interesting and easy to follow; all the events consisted of three laps, starting and finishing at the fork: and it is difficult to imagine any further changes in organisation or arrangement which would make the meeting more exciting as a spectacle. It is a pity, however, that motor cyclists cannot be handicapped in the manner horses are, *i.e.*, by carrying weight, or by some other method which would ensure a simultaneous start and a close finish.

Again, scratch races are become rather farcical when the limit men are well beaten by the back markers in previous handicap events over the same distance.

### Scratch Man Wins.

Fourteen riders faced the starter in the first event. Dance gave from 45 seconds up to 2 minutes 24 seconds to the rest, but hurtled through the field at nearly 80 m.p.h., catching up W. D. Marchant (248 Sheffield-Henderson) just as they came into view a few hundred yards from the finish on the last lap. Marchant himself rode a fine race and was considerably faster than any of the 350 c.c. machines against which he competed; E. J. Anderson (249 New Imperial) was the only other to look dangerous, but he was troubled with mis-firing at half distance.

EVENT 1.—(350 C.C. SOLO 3 LAP HANDICAP).
1. G. Dance (349 Sunbeam), scratch.
2. W. D. Marchant (249 Sheffield-Henderson), 1m. 36s.
3. J. Woodhouse (349 Martin-Jap), 1m. 48s.

Winner's speed, 78.90 m.p.h.

During this race Dance and Marchant broke records as under:—

CLASS B (350 C.C.): 5 MILES.—G. Dance (349 Sunbeam), 3m. 43.56s.=80.51 m.p.h. (Previously held by H. R. Davies (349 A.J.S.) at 74.40 m.p.h.)

CLASS A (250 C.C.): 5 MILES.—W. D Marchant (249 Sheffield-Henderson), 4m. 34.63s.= 65.82 m.p.h. (Previously held by R. N. Judd (249 Velocette) at 65.61 m.p.h.)

History looked like repeating itself in the 500 c.c. handicap, which attracted seventeen starters, including Dance (498 Sunbeam), J. Emerson (499 Douglas), F. B. Halford (499 Triumph), and C. P. Wood (486 Scott), but Dance broke a connecting rod and the remaining three were unable to overtake the limit men, headed by W. H. Sinnett (490 Norton), who won comfortably.

EVENT 2.—(500 C.C. SOLO 3 LAP HANDICAP).
1. W. H. Sinnett (490 Norton), 1m. 45s.
2. Guy James (490 Norton), 1m. 48s.
3. G. Maund (398 A.B.C.), 1m. 27s.

Winner's speed, 69.98 m.p.h.

Mr. Ebblewhite despatching two of the limit men in the 600-1,000 c.c. passenger event.

### Triangular Contest.

Although there were only seven starters in the 1,000 c.c. class, there was the material for a very exciting triangular contest in the matching of C. F. Temple (Harley-Davidson) against H. Le Vack (Zenith-Jap) and Kaye Don (Indian), the latter pair receiving 9 seconds from the Harley rider. The limit man, J. W. Tollady (600 Humber), kept his place first time round, followed by J. Hall (748 Trump-Jap), and then Kaye Don and Temple almost abreast, with Temple visibly gaining ground. At the end of another lap the Harley rider led the field, Le Vack, who had fought ahead considerably, being second, with Tollady gamely hanging on behind. It was not a close finish.

**First 1922 Brooklands Meet.—**

EVENT 3.—(1,000 c.c. Solo 3 Lap Handicap).
1. C. F Temple (988 Harley-Davidson), scratch.
2. H. Le Vack (980 Zenith-Jap), 9s.
3. Kaye Don (988 Indian), 9s.
Winner's speed, 90.59 m.p.h.

Out of nine entrants only one, R. Dequin (348 Ivy sc.), turned up for the following event, and he was well round on his first lap before some indignant backers persuaded C. P. Wood (486 Scott sc.) to make a race of it. As Dequin hove in sight again he was duly warned that he was not having a walk-over, but it was unnecessary, for the odds were too great against the Scott.

EVENT 4.—(600 c.c. Sidecar 3 Lap Handicap).
1. R. Dequin (348 Ivy sc.), 2m. 57s.
Speed, 45.1 m.p.h.

Big twin sidecars and cycle cars (represented by E. B. Ware's Morgan at scratch and Eric Longden's four-wheeler) were lumped together in Event 5, in which O. de Lissa's 996 c.c. Motosacoche outfit deservedly won a fine race. Temple, Ware, and Le Vack had an exciting tussle amongst themselves, and had the race gone another lap all three and the actual winner might have finished within inches of each other.

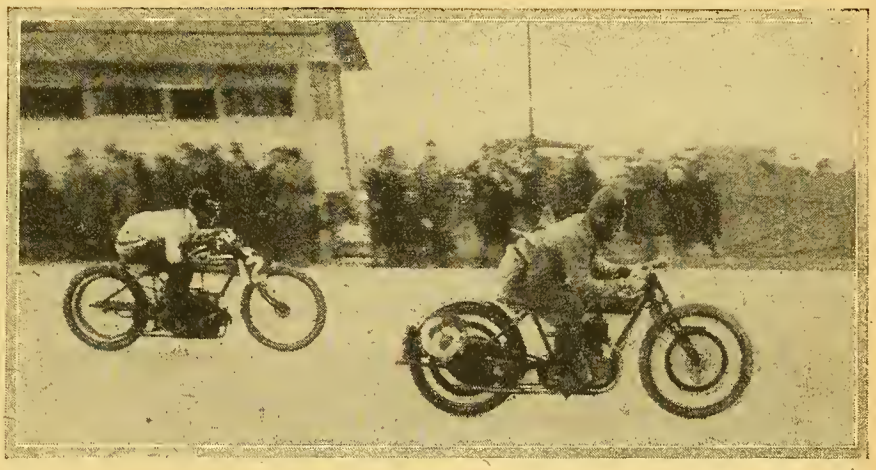
EVENT 5.—(600-1,100 c.c. Passenger Machine 3 Lap Handicap).
1. O. de Lissa (996 Motosacoche sc.), 57s.
2. C. F. Temple (988 Harley-Davidson sc.), 6s.
3. E. B. Ware (1,098 Morgan-Jap), scratch.

**Leading All the Way.**

The 350 c.c. scratch race does not deserve much comment. Dance (349 Sunbeam) had already proved that he was nearly 20 m.p.h. faster than his competitors, and it satisfied him to keep just in front of J. Woodhouse (344 Martin-Jap) and F. V. Jones (349 Coulson-Jap), this order being maintained throughout.

EVENT 6.—(350 c.c. Solo 3 Lap Scratch Race).
1. G. Dance (349 Sunbeam).
2. J. Woodhouse (344 Martin-Jap).
3. F. V. Jones (349 Coulson-Jap).
Winner's speed, 58.72 m.p.h.

Nothing daunted at his 499 c.c. mount being *hors de combat*, Dance essayed to lower the Douglas and Triumph colours in the 500 c.c. class, carried respectively by C. G. Pullin and F. B. Halford, on his 349 c.c. machine. It was a thrilling



Private-owner speedmen, S. E. Herrtage (492 Sunbeam) and G. E. Eyston (498 Zenith-Bradshaw), show the spectators what to expect from machines "just as you can buy."

struggle. Dance led from Halford and Pullin at the end of lap one; he still led, with Pullin second, at the end of lap two. He was beaten on the post by the Douglas rider in lap three (and last) by a matter of yards only. Incidentally, Pullin's winning time exactly equalled the speed at which Dance won the first event of the afternoon. While the big three were fighting it out, J. W. Tollady (Scott-Squirrel) and P. G. Kennedy (Norton) were having a little race between themselves, "won" by the latter.

EVENT 7.—(500 c.c. Solo 3 Lap Scratch Race).
1. C. G. Pullin (499 Douglas).
2. G. Dance (349 Sunbeam).
3. F. B. Halford (499 Triumph).
Winner's speed, 78.90 m.p.h.

Temple, Le Vack, and Kaye Don now met again, this time on even terms, J. W. Tollady on a Sports Humber being the only other starter. Result:

EVENT 8.—(1,000 c.c. Solo 3 Lap Scratch Race).
1. C. F. Temple (988 Harley-Davidson).
2. H. Le Vack (980 Zenith-Jap).
3. Kaye Don (998 Indian).
Winner's speed, 90.09 m.p.h.

Fifteen entered the lists for the final event, a private owners' handicap; it was the biggest field and probably the most interesting event of all. The limit man, F. V. Jones (349 Coulson-Jap) kept his lead for one lap, but A. Frazer (349 Sheffield-Henderson), Guy James (490 Norton), and C. Moser (499 Triumph) were all drawing ahead in a threatening manner. G. H. Williams (349 Sheffield - Henderson) overhauled Jones in lap two, as, in quick succession, did James and Moser, both apparently slightly faster than Williams or Frazer. Then Moser's engine seized in the final lap, leaving the race to Williams and Frazer, who just succeeded in overtaking James.

EVENT 9.—(Private Owners' 3 Lap Handicap).
1. G. H. Williams (349 Sheffield-Henderson), 1m. 33s.
2. A. Frazer (349 Sheffield-Henderson), 1m. 6s.
3. Guy James (490 Norton), 1m. 24s.
4. S. E. Herrtage (492 Sunbeam), 1m. 6s.
5. A. G. Williams (492 Sunbeam), 1m. 6s.
6. F. V. Jones (349 Coulson-Jap), 2m. 21s.
7. L. G. Cantle (977 Zenith), 18s.
Winner's speed, 63.69 m.p.h.

Several British makes were represented, including the only 600 c.c. sidecar entries; unfortunately these machines, a B.S.A. and a Sunbeam, retired on the second day. Results, with marks lost:

250 c.c. SOLO.

| | |
|---|---|
| Berger (Velocette) ... ... | 16 |
| Bignon (Soyer) ... ... ... | Not stated |

350 c.c. SOLO.

| | |
|---|---|
| Pierre (D.F.R.) ... ... ... | 0 |
| Reynaertz (Gillet) ... ... | 0 |
| Renier (Gillet) ... ... ... | 0 |
| Kelly (Viratelle) ... ... ... | 283 |

500 c.c. SOLO.

| | |
|---|---|
| Naas (A.B.C.) ... ... ... | 0 |
| Borgotti (Gnome and Rhone) ... | 0 |
| Rolly-Gonnet (Gnome and Rhone) | 11 |

750 c.c. SOLO.

| | |
|---|---|
| Berrenger (B.S.A.) ... ... | 0 |
| Montarlot (Rover) ... ... | 4 |
| De Neuville (Triumph) ... ... | 10 |
| Vaché (Indian) ... ... ... | 17 |
| Arnaud (Indian) ... ... ... | 71 |
| Lambert (Viratelle) ... ... | 105 |
| Pinney (Triumph) ... ... | 148 |

350 c.c. SIDECARS.

| | |
|---|---|
| Dubost (D.F.R. sc.) ... ... | 664 |

1,000 c.c. SIDECARS.

| | |
|---|---|
| Vuillamy (Harley-Davidson sc.) ... | 0 |
| Raymon (Harley-Davidson sc.) ... | 30 |
| White (Sunbeam sc.) ... ... | 30 |

## SCOTTISH SIX DAYS' ROUTE.

FULLER details of the route of the Scottish Six Days' Trials are now available, which make it clear that the event is, at least, to be quite as severe as hitherto. Within one mile of the finish on the sixth day Blackford Hill is down to be climbed; competitors in the two-day autumn trial will remember this precipitous ascent in an Edinburgh park and will quake accordingly.

A skeleton of the route is appended. The start is on Monday, May 1st.

First day.—Edinburgh, Stirling, Crieff, Amulree, Kenmore, Trinafour, Dalmally, Pitlochry, Kenmore, Perth.

Second day.—Perth, Cairn o' Mount, Ballater, Rinloon, Cockbridge, Grantown.

Third day.—Grantown, Carrbridge, Farr House, Craggie, Inverness, Abriachan, Fort Augustus, Glendoe, Inverfarigaig, Grantown.

Fourth day.—Grantown, Bridge-of-Avon, Braemar, Lumsden, Cabrach, Aberdeen.

Fifth day.—Aberdeen, Laurencekirk, Forfar, Perth, Dollar, Falkirk, Edinburgh.

Sixth day.—Edinburgh, Broughton, Talla, Moffat, Tinto, Biggar, Edinburgh.

Observed hills:—

First day.—Sheriffmuir (special awards only), Amulree, Trinafour, Kenmore.

Second day.—Cairn o' Mount, Rinloon, Cockbridge.

Third day.—Abriachan, Glendoe, Inverfarigaig (special awards only).

Fourth day.—Bridge-of-Brown, Cabrach.

Sixth day.—Talla, Tinto, Blackford.

## THE TOUR DE FRANCE.

TWENTY motor cycles out of an entry of thirty-eight completed the arduous twelve-day 2,300 mile Tour de France reliability trial.

Set speeds for the various classes were arranged, the highest (24.8 m.p.h.) being for the 1,000 c.c. solo machines; marks were also deducted for the breakage of sealed parts.

# EASTER WITH THE CLUBS.

## Varied Competitive and Social Programme for the First Holiday Week-end of the Year.

EASTER is always a period of great activity among the motor cycle clubs, but seldom if ever has it attained such magnitude as this year. New clubs are being formed almost daily and old clubs are growing in strength, so it is not surprising that next week's fixture list has surpassed any previous calendar in extent and in importance.

Naturally the M.C.C. London-Land's End Trial takes precedence; particulars of the entry of 229 competitors and the route changes to include Beggar's Roost will be found on pages 474-5.

Possessing a different appeal, the Richmond Meet nevertheless arouses just as great interest in its own sphere, and, should long overdue favourable weather greet the day (Good Friday), there seems no doubt that the old Yorkshire market town will welcome more motor cyclists than ever before.

### Scotland and the Midlands.

Easter is less of a national holiday in Scotland than in England, but this year one of the biggest clubs on the other side of the Tweed is organising a two-day (Saturday and Monday) trial, which promises to receive excellent support. Oban is the Sunday resting-place, and the route has not hitherto been well traversed by numbered motor cyclists. In the Midlands two of the most important Birmingham clubs are scheduled to hold long-distance out-and-home trials. The Birmingham M.C.C. goes to Weston-super-Mare on Saturday to decide who shall hold the Sangster Cup, and, on the same day, the South Birmingham M.C.C. will start its annual run to Lynmouth, returning on Monday.

The Northern Centre A.C.U. will stage a social rally at Dungeon Ghyll on the 16th; and on Monday the Scarborough and District M.C. will hold its usual hill-climb at Staxton, open to the Yorkshire Centre.

### Other Inter-Club and Centre Events.

Many other fixtures show indications of over-reaching the importance of the usual confined club events. Inter-club meets, either speed or reliability affairs, are more popular than ever, and in some cases these joint competitions are promised the active support of many more clubs than the actual organisers. The Colchester and Bury St. Edmunds clubs combine for the purposes of a hill-climbing competition on Good Friday; the Bishop Auckland and Durham clubs for the same reason on Easter Monday, several further local bodies assisting in the latter scheme; and in the South on Friday yet another big climb, on Vigo Hill, will be staged by the various Kent organisations headed by the West Kent M.C. and the Rochester, Chatham, and District M.C. and L.C.C.

Welsh speedmen are catered for by the Porthcawl races to be held on Monday by the Neath and District M.C.

Minor trials, hill-climbs, and social runs are referred to in our fixture list in "Club News." Sufficient to say here that there is scarcely a district in Great Britain where some form of organised motor cycle event will not take place.

# T.T. NOTES AND NEWS.

Practice for the Tourist Trophy Races will extend from May 15th to 29th, the practice hours lasting from 5 a.m. to 7 a.m. daily, with the exception of the 21st and 28th.

* * * *

The mountain climb is at present rather soft, but from the gate above Windy Corner to Craig-Na-Baa will be found enormous improvements. The road has been widened very considerably and much improved, Windy Corner has been eased to a great extent, and when the work is complete Keppel Gate will be 10 feet wider.

* * * *

With regard to improved landing facilities at Douglas, it is understood that the authorities are ready and willing to erect a special crane, but are unable to obtain sanction for the expenditure from the British Treasury.

* * * *

Following a practice which has long been popular in similar events on the Continent, the machines actually competing in the T. T. Races will be on exhibition to the public after the official examination.

Considerable interest attaches to the Rudge re-entry to road racing, for their previous notable success provided them with first-class experience, and it is certain that this year's T.T. machines will not be "back numbers."

* * * *

Though the roads are not yet in good trim, the authorities are to be congratulated on the good work they are putting in. A heavy snowfall has delayed work on the mountain, but some big changes for the better will be noted.

* * * *

Four or five Nortons are already in the Island, one an o.h.v. model!

* * * *

Shall we see anything very startling in the way of design? Probably not, though there will be more new overhead valve engines, and at least one make will employ dry sump lubrication.

* * * *

With the exception of the Scott, two-strokes are not represented in the senior event; but the Scott has found quite a lot of extra speed, and the two-stroke twin may well win the race once again this year.

A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### DIMENSIONS OF BELT DRUM.

How does one get the measurements for a new belt rim—width, belt line, etc.?—F.M.

The belt line is the distance between the centre line of the machine (*i.e.*, centre of tyre track) and the centre line of the belt pulley. The width of the belt used, of course, determines the width of the belt drum, and the diameter will depend to some extent on the size of the back wheel: 18in. is the usual size.

### WHEN DO AUTOMATIC INLETS OPEN?

Please tell me the correct exhaust valve timing of a 2¾ h.p. Douglas (1911 model), and when the automatic inlet valve actually opens on the induction stroke.—J. McE.

In timing the engine the exhaust valve closes as the piston reaches top dead centre of the stroke; the point of its opening may then be disregarded. The actual moment of opening of the automatic inlet valve cannot be definitely stated, as it depends upon such valuable factors as the strength of the springs, the compression-tightness of the engine, and the engine speed. In timing an a.i.v. engine the inlet valves are ignored.

### PAYMENT FOR REPAIRS ESTIMATE.

(1.) Would you let me know if it is a custom in the motor repairing trade to charge for estimates submitted for repairs to their cycles? To my knowledge all estimates in building and various other trades are submitted free of charge or obligation to the client. (2) Is the owner of the cycle bound to get the cycle repaired by the firm so submitting an estimate? (3.) If the estimate submitted is unsatisfactory or exorbitant, and the machine is handed back without making any claim for payment for the estimate furnished, can the repairers claim subsequently such amount as they fancy for the estimate submitted?—M.W.H.

As it is necessary to dismantle a motor cycle, either partly or completely, before a definite estimate for many of the repairs connected with it can be given, it is quite usual for many firms to specify that a nominal charge for labour in dismantling and re-erecting will be made before the preparation of an estimate can be undertaken. If, however, no arrangement was made, there does not appear to be any claim on the part of the repairers; at the same time, we think it quite reasonable that they should demand payment for the actual work involved if the estimate was not accepted.

## Important Dates.

**Fri., April 14th—The Richmond Meet (Yorks.).**
**Fri. April 14th, and Sat., April 15th.—M.C.C. London-Land's End Run.**
**Sat., April 15th, and Monday, April 17th—Western M.C.C. (Glasgow) Two-day Trial.**
**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 6th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**F.i., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 Mile Sidecar Race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### RE-BALANCING A SINGLE.

Will you help me with the balance of my 4 h.p. Bradbury motor cycle? I am fitting a lighter piston and connecting rod and am puzzled about the different weights. Does it stand that if I lighten the piston and connecting rod by half that I must likewise lighten the flywheel the same, or shall I have to put the weight that I took out of the piston and connecting rod into the flywheel. I was told by a friend of mine that the latter was the right way, but I think that he is wrong.—J.S.B.

You would be approximately correct in removing half the difference in weight of the two pistons from a point in the balance weight exactly opposite to the crank pin and at exactly the same distance from the crankshaft. Of course, you must take half the total weight to be removed from each flywheel, not all of it from one side.

### LIGHTING FROM A MAGNETO.

I wish to run an electric rear light from the Thompson Bennett magneto fitted to my 3½ h.p. Sunbeam. There is a terminal fitted on the low tension side, which takes the current from the screw in the centre of the contact breaker. I have purchased an electric rear light with wiring, also a choking coil, as I understand that I shall need one. I have fitted the lamp and wired it up so that the coil bridges the wires from the magneto to the lamp, and the lamp to "earth," and I find that if the light is switched on while the engine is running, there is just a flicker of light and the engine stops. I should be much obliged if you would point out where the error lies. I think there must be some mistake in the wiring.—SUNBEAM.

Lighting from the low tension circuit of an ordinary magneto, especially when running at half engine speed, is not always successful. In all probability you will not be able to start the engine when the lamp is switched on, and the light will flicker very badly at low speeds. Your description of the wiring indicates that the choking coil is wrongly connected; insert the coil in series with the lamp, not in parallel; in other words, insert the coil in the lead between the magneto terminal and the lamp.

## READERS' REPLIES.

### BADLY WORN PISTON RINGS.

"A.L.G." might cure his trouble described under the above heading in the issue of March 30th by fitting a new spring to the release valve.—M.N.

### MOTOR CYCLES AND NERVES.

I can sympathise with "Not Yet Beaten" in his efforts to master the outfit. I had the same experience when I first attached my sidecar after riding solo for some considerable time, for I finished with the machine on the off side pavement. I think that if "Not Yet Beaten" takes his first runs dead slow and determines that the outfit *shall* run straight ahead, even when in overtaking traffic in a narrow road he gets on the camber on the wrong side of the road, he will eventually overcome that uncomfortable feeling he has experienced. — A. G. TURNER.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"S.J.C." (London, N.1).—4 h.p. Dunelt sidecar.

"J.B." (Leith).—4¼ h.p. Beardmore-Precision sidecar.

"A.A." (Bucks).—7 h.p. four-cylinder F.N. sidecar: Economy tips specially.

"G.S.S." (London, W.C.)—3½ h.p. T.T. Sunbeam and 8 h.p. Brough Superior.

"E.W." (Catford). — 1916 2¾ h.p. Douglas: Speed; most suitable light sidecar.

"J.H." (Eastbourne).—7-9 h.p. o.h.i.v. Indian: Misfiring on front cylinder at low speeds.

"N.L.J." (Huddersfield). — 3½ h.p. Rudge Multi: Ease of starting, suitability of Binks carburetter.

"A.F.E.F." (Fambridge). — 4¼ h.p. B.S.A., solo and sidecar: Comparisons with other 1921-22 singles.

"F.D." (Monkseaton).—Method of preventing oil leaks from timing gear to magneto on Skootamota engine.

"A.R." (Consett).—1921 A.B.C., solo and sidecar: valve and exhaust noise; reliability of kick-starter and valves.

"K.F.C." (Norwich).—Best automatic oil pump on 7 h.p. A.J.S.: Consumption, fitting, and reliability; also most suitable plug.

"E.H." (Morecambe).—3 h.p. A.B.C., 2¾ h.p. A.J.S., and 3½ h.p. model 16h or 17c Norton: Suitability for riding to and from business.

"H.P.E." (Bedford). Most suitable carburetter and plugs on Scott; hints on slow running and equal oiling; Hood Equaliser for chains.

"G.P.W." (Aberdeen).—3½ h.p. Sports Douglas: Life of o.h.v., fitting of Showell pump, steering at speed and on grease; also Scott Squirrel, best carburetter, gearing for hilly district, oversize tyres, efficiency of cooling system.



SPARKLETS

### A Cycle Car Race in Algeria.

A telegram from Mostaganem announces that in a race organised there the first, second, and third prize winners drove G.N. cycle cars.

### Sleeve-Valve Engine's Success.

The engine used in F. J. Price's Diamond, on which he secured the Duke Cup in the Victory Trial, was a 3 h.p. Barr and Stroud.

### Motorised Invalid Tricycles.

A move has been made by the Argson Engineering Co., Ltd., from the West End to larger works at Cambridge Park, East Twickenham, Middlesex.

### For Motor Cyclist Campers.

There is no better way of spending a roving holiday than by undertaking a camping tour; equipment capable of being packed into the smallest compass is provided by the Lightweight Tent Supply Co., 70, High Holborn, London, W.C.1.

### Price of the Raleigh.

Some misapprehension has existed in regard to the price of the 2¾ h.p. Raleigh, a road test of which we described in the issue of March 30th. With two-speed gear this machine costs £68; for the three-speed model an extra £5 is charged. This was not made clear to us when the road-test specification was prepared.

### In the Western Centre "Arctic" Trial.

It is claimed that the only machines which covered the entire course, up to the lunch stop, of the Western Centre's abandoned trial in the recent snowfall, were the team of three Martinsyde sidecars, two B.S.A. sidecars, and one each New Imperial, Norton and Sunbeam sidecars, and one Sun Vitesse.

### A Stop in the Stock Trial.

A protest was entered by A. J. Stevens, Ltd., regarding the stopping of F. W. Giles (7 A.J.S. sc.) during the speed test in the A.C.U. stock machine trial. This stop, it was claimed, had nothing whatever to do with the machine, which otherwise had a clean score; the A.C.U., however, upheld the decision to withhold an award.

### Tommy Bars for Box Spanners.

More often than not the tommy bars supplied for use with box spanners are insufficiently strong, and bend when much force has to be exerted. Sir W. G. Armstrong, Whitworth & Co., Ltd., are producing four tommy bars of different sizes, made from steel of one hundred tons tensile strength, which will not bend or snap under the most severe usage. The address is Central Commercial Department, 8, Great George Street, Westminster, London, S.W.1.

### British Machine Honoured.

At the International Motor Show held in Milan a First Class Diploma and Gold Medal were awarded to a Lea-Francis machine.

### Improved Signposting.

Credit for the new signposts in the Birmingham area (one of which was recently illustrated in our pages) must be given to the Engineer's Department of the City of Birmingham, and not the Ministry of Transport.

### Flat Twin as Sidecar Hill-climbe .

It is reported that a 3½ h.p. Zenith-Bradshaw with sidecar has successfully climbed Quarry Bank, Purbold, before the committees of the Southport M.C. and the N.W. Centre, A.C.U.; the hill has never been climbed previously by a 500 c.c. sidecar.

### A Record Breaking Two-Stroke Revived

Alecto motor cycles are again to be produced, the makers being the Whitmee Engineering Co., who have retained Mr. Cashmore as manager of the motor cycle department. The address continues to be Alecto Works, 3, Grove Road, Balham, London, S.W.

### Victory Trial Echoes.

P. H. Johnson, who gained a silver medal in the Victory Trial, rode a 5-7 h.p. Coventry-Victor and not another make, as reported, while S. G. Neal (3 Neal-Dalm), against whom a stop was recorded on Abberley Hill, was baulked and allowed another attempt, which was successful.

### Catalogues Received.

Victoria Motor and Cycle Co., Ltd., Victoria Works, Dennistoun, Glasgow: A folder describing the principal patterns of Victoria motor cycles.

The Sun Cycle and Fittings Co., Ltd., Aston Brook Street, Birmingham. A folder dealing with the latest model Sun and Sun-Vitesse motor cycles.

Francis and Barnett, Ltd., Lower Ford Street, Coventry: A well got up catalogue of Francis-Barnett motor cycles, which are differentiated by types and not by initials or marks.

The East London Rubber Co., Ltd., 29-33, Great Eastern Street, London, E.C.2: Kerry motor clothing, including garments of every sort and description for everyday use and motoring, suitable for both sexes.

The Enfield Cycle Co., Ltd., Enfield Works, Redditch: Catalogue in two colours, giving particulars of the 2¼ h.p. Royal Enfield two-stroke, with and without kick-starter, and the 8 h.p. sidecar outfits.

New Imperial Cycles, Ltd., Imperial Works, Princip Street, Birmingham: The New Imperial Guide, a catalogue containing excellent sectional drawings of engine and gear box and sketches of gear box adjustments, etc.

C. Edmund & Co. (1920). Ltd., Milton Works, Milton Street, Chester; London Office, 117, Great College Street, N.W.1. A folder describing the Edmund motor cycle. This is one of the oldest machines on the market fitted with a spring suspension system for the rider.

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

**ADVERTISEMENTS** in these columns —First 12 words 3/–, and 3d. for every additional word. Paragraphs of under 8 words are charged double rate. Each paragraph is charged separately. Name and address must be counted. Series discounts, conditions, and special terms to regular trade advertisers will be quoted on application.

Postal Orders and Cheques sent in payment for advertisements should be made payable & Co. to ILIFFE & SONS Ltd., and crossed Treasury Notes, being untraceable if lost in transit, should not be sent as remittances.

All advertisements in this section should be accompanied with remittance, and be addressed to the offices of "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. To ensure insertion letters should be posted in time to reach the offices of "The Motor Cycle," by the first post on Friday morning previous to the day of issue. Advertisements that arrive too late for a particular issue or that are crowded out will automatically be inserted in the following issue unless accompanied by instructions to the contrary.

All letters relating to advertisements should quote the number which is printed at the end of each advertisement, and the date of the issue in which it appeared.

The proprietors are not responsible for clerical or printers' errors, although every care is taken to avoid mistakes.

## NUMBERED ADDRESSES.

For the convenience of advertisers, letters may be addressed to numbers at "The Motor Cycle" Office. When this is desired, the sum of 6d. to defray the cost of registration and to cover postage on replies must be added to the advertisement charge, which must include the words Box 000, c/o "The Motor Cycle." Only the number will appear in the advertisement. All replies should be addressed No. 000, c/o "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. *Readers who reply to Box No advertisements are warned against sending remittance through the post except in registered envelopes; in all such cases the use of the Deposit System is recommended, and the envelope should be clearly marked "Deposit Department."*

In the case of motor cycles offered for sale under a box number, as it is unusual for these to be sold without first being inspected by the intending purchaser, advertisers will facilitate business by embodying in their advertisements some mention of the district in which the machine offered may be seen and tried.

## DEPOSIT SYSTEM.

Persons who hesitate to send money to unknown persons may deal in perfect safety by availing themselves of our Deposit System. If the money be deposited with "The Motor Cycle," both parties are advised of this receipt.

The time allowed for a decision after receipt of the goods is three days, and if a sale is effected we remit the amount to the seller, but, if not, we return the amount to the depositor. Carriage is to be paid by the buyer, but in the event of no sale each party pays carriage one way. The seller takes the risk of damage in transit. For all transactions up to £10, a deposit fee of 1/- is charged; on transactions over £10 and under £50, the fee is 2/6; over £50 and under £75, 5/-; over £75 and under £100, 7/6 and on all transactions over £100, ½%. All deposit matters are dealt with at Dorset House, Tudor Street, London, E.C.4, and cheques and money orders should be made payable to Iliffe & Sons Limited.

The letter "D" at the end of an advertisement is an indication that the advertiser is willing to avail himself of the Deposit System. Other advertisers may be equally desirous, but have not advised us to that effect.

## SPECIAL NOTE.

Readers who reply to advertisements and receive no answer to their enquiries are requested to regard the silence as an indication that the goods advertised have already been disposed of. Advertisers often receive so many enquiries that it is quite impossible to reply to each one by post.

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C., 1920, splendid condition; run 2,000 miles; long separate exhaust pipes, T.T. handle-bars, very fast machine; £65, or best offer.—Butterworth, Lower Hills, Holmfirth, nr. Huddersfield. [9029


"LANGHAM 1300"

THURSDAY BEFORE EASTER—

"THAT GODFREYS"?

"YES, SIR"!

"WHAT HAVE YOU IN STOCK"?

"EVERYTHING"!

"READY FOR THE ROAD"?

"YES, SIR"!

"WHAT ABOUT REGISTRATION, LICENCE, NOS., AND INSURANCE"?

"WE DO ALL THAT FOR YOU"!

"TO-DAY"?

"YES, SIR"!

—THAT'S GODFREYS!

GODFREY'S LTD.

SHOWROOMS AND STORES 208, Gt. PORTLAND ST., LONDON, W.

'PHONE—LANGHAM 1300 (2 Lines).

THE SERVICE HOUSE FOR B.S.A., INDIAN, LEVIS AND SCOTT SPARE PARTS.

WORKS AND REPAIRS 14, MILLER STREET, CAMDEN TOWN, N.W.

'Phone—MUSEUM 2434.


## MOTOR CYCLES FOR SALE.

### A.B.C.

1920 A.B.C., lamps, horn, speedometer, not ridden until 1921, perfect condition; £75.—Sellers, Wyke, Bradford. [7488

A.B.C. Motor Cycle, 1922, brand new, tax paid, also sidecar, hood, screen, etc.; £105.—Gossip, Knowsley, Inverness. [9334

A.B.C., latest model, brand new; standard, £82; dynamo, £98; exchanges arranged.—Maude's, 100, Great Portland St., London. [1138

A.B.C., 1921, August, equipped, mechanically perfect; £70, or exchange Sunbeam, Matchless, A.J.S., 3-speed Velocette; Midlands.—Box 9764, c/o *The Motor Cycle.* [9316

A.B.C. Motor Cycle, kick start, 2-cylinder flat twin, 4-speed gear box, quite new; genuine bargain, price £85.—Apply to Messrs. John Birch and Co., Ltd., 12, Park Crescent Mews East, Great Portland St., W. [9254

1920 A.B.C., lamps, horn, speedometer, Binks carburetter, and year's licence, also spare racing carburetter, pistons, cylinder, and complete overhead gear; only £65.—Blake, 4, Park Crescent Mews, Gt. Portland St., London, W.1. [9688

A.B.C., 1921, engine, gears overhauled, receipt shown, ball and cup rocker adjustments, rocker return, springs, special gudgeons, front forks rebound spring, Binks intensifiers, lamp, generator, horn, tools, full tax paid; £78.—Kirby, 43, Martell Rd., Dulwich (nr. Rosendale Hotel). [9111

*Spare Parts:*

A.B.C. Spares.—We are the largest stockists of these spares, and can supply any part by return; trade supplied.—Maudes' Motor Mart, 100, Great Portland St., W.1. [1133

### Abingdon.

ABINGDON King Dick Sports Model, nearly new, 3½h.p.; £30; tax paid, excellent order.—68, Gloucester Rd., Camden Town. [1159

ABINGDON King Dick Combination, 2-speed and clutch, handle start, perfect condition; £30.—Robini, 1, Tulse Hill, Effra Rd., Brixton, S.W.2. [1180

### Ace.

ACE 4-cylinder Combination, original tyres, unmarked, well equipped, magnificent outfit; bargain. £110.—Clark, 7, Exhibition Rd., S.W.7. [1279

ACE 1921 Combination, C.B. Middleton spring wheel, screen, locker, speedometer, lamps, tyres as new, horn, tools, hardly used, excellent condition; any trial; sacrifice, £135.—21, Wonterer Rd., Balham. [9200

### Acme.

FOR Sale.—Acme Combination, 8-10h.p., 1920 model, electric lighting, coachwork sidecar, all in beautiful condition; £120, or best offer.—Foley, Bourne. [9070

ACME 8h.p. J.A.P. Combination, spare wheel, lamps, horn, tax paid, speedometer, perfect order, and ready for the road; £125.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1021

### A.E.L.

BARGAIN.—Brand New 1922 (unpacked) A.E.L.-Jap 2¾h.p., 2 speeds, clutch, kick starter; £49; genuine Easter bargain.—89, East Hill, Wandsworth. [9952

### A.J.S

BROMLEY, Kent.—A.J.S. Agents, J. L. Love and Co. [1318

SHREWSBURY Agent for A.J.S.; exchanges.—J. C. Pickering. [9556

CROSS, Effingham Sq., is agent for A.J.S.'s in Rotherham. [1115

A.J.S. New 1922 Models in stock.—Combination, £175; Model B1, £85.—Nelson's, Rhyl. [9302

A.J.S. Combinations and 2¾h.p. models; order now. —Official Agent, Longman, Salisbury. [9616

6h.p. A.J.S. Combination, spare wheel, or exchange lower power.—69 London St., Southport. [9587

A.J.S. 1922, immediate delivery Combination, early delivery 2¾h.p.; book now.—Moss, Wem. [1184

A.J.S. 2¾h.p. Motor Cycles, delivery from stock.—Geo. Langley, 49, Bromham Rd., Bedford. [9121

A.J.S. 7h.p. 1922 Outfits; delivery free anywhere.—Write, Merrick's Stores, Listerhills, Bradford. [9141

DAN GUY, Weymouth.—1922 7h.p. A.J.S. Combination, £175; in stock. Dorset trade supplied. [0817

1920 November A.J.S., Lucas dynamo lighting, spare wheel, legshields; £135.—17, St. Charles Sq., W.10. [9570

## MOTOR CYCLES FOR SALE.

### A.J.S.

A.J.S.—All 2¾h.p. models from stock, also 7h.p. combications.—King and Harper, Bridge St., Cambridge. [8489

A.J.S. 2¾h.p. Sports, late 1921, done 200 miles, as new, lamps, horn, etc.; £76.—184, Whitehorse Rd., Croydon. [8894

A.J.S. Combination, perfect, equipped; £80, real bargain.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. [9925

2¾h.p. A.J.S., kick starter, handle-bar clutch, guaranteed perfect, any trial, £48.—Box 9792, c/o *The Motor Cycle*. [9827

1918 A.J.S. Combination, as new, mileage under 500 miles; £125, bargain.—Lawrence, The Common, Southampton. [9205

A.J.S.—All models from stock. Official Agents. deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6288

IN Stock.—1922 7h.p. A.J.S. Combination, spare wheel and tyre; £183.—D. and S. Autocar Co., 33, The Parade, Golders Green. [9884

A.J.S. 6h.p. Motor Cycle and Sidecar, condition as new, complete with all accessories.—Twentyman, Union St., Wolverhampton. [9082

1915 A.J.S. 6h.p., 3 speeds, kick starter and side car complete, accessories, excellent condition; £75.—Blake, 216, Westbourne Grove, W. [8079

FOR A.J.S. 1922 models, 2¾h.p solo, or 7h.p. combinations, get in touch with the N. London agents —Jones Garage, The Broadway, Muswell Hill. [0785

1922 A.J.S. 7h.p. Combination in stock for immediate delivery; £175; cash or easy payments.—Premier Motor Co., Aston Rd., Birmingham. [7242

A.J.S. Combination 1920, perfect order, complete, hood, speedometer, spare wheel, electric lighting, tax paid; £110.—Roberts, Padgate, near Warrington. [8966

1920 A.J.S. Combination, spare wheel, Lucas, accessories, hood, and screen; £125.—Hillier (side bell), 9, Wallingford Avenue, North Kensington. [1039

1922 A.J.S.—All models. Early delivery 2¾h.p. Model B1. Catalogues with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich S.E.10. [589?

A.J.S. 2¾h.p. Sports Combination, late 1921, electric lighting, speedometer, overhauled throughout, perfect condition; £75.—Richardson, 33, Union St., S.E.1. [1256

1922 7h.p. A.J.S. Magdyno, spare wheel, unused, unregistered, just delivered; owner cannot keep, and will sacrifice £10 off list.—Box 9801, c/o *The Motor Cycle*. [1240

A.J.S. 6h.p. 1914 Combination, 3-speed, electric lighting, hood and screen, perfect order; £70, or near; exchange Morgan.—Hammant, 63, Carlton Vale, Kilburn, N.W. [9639

1920 A.J.S. 6h.p. Combination, dynamo lighting, electric and bulb horns, speedometer, insured, spares, perfect condition; £130.—Dnff, 127, The Vale, Golders Green. [9377

A.J.S. 1922 7h.p. Combination; £175. Secure delivery for Easter by placing your order now. Cash! Exchanges! Easy payments!—P. J. Evans, John Bright St., Birmingham. [9272

A.J.S., first-rate condition, 2¾h.p., 1914, 2-speed, hand clutch, all-enclosed chain drive, speedometer, mechanical horn; offers invited.—75, North End Rd., Golders Green, N.W. [9355

1916 A.J.S. Combination, mileage 6,000, perfect condition, spare wheel, speedometer, hood, screen, spring pillion, new tyres; £90; after 5 p.m. —18, Kent House Rd., Beckenham. [9352

A.J.S., 1921, dynamo lighting, Combination de Luxe, hood, screen, absolutely unscratched; 125 gns; good solo part.—37, Elmbank Gardens, Barnes Bridge. Telephone: Putney 2755. [1271

A.J.S. Combination, 1918, hood, screen, spare tyre, interchangeable wheels, mechanically as new; £80.—Station Hotel, Bramley Rd., Notting Hill (Latimer Rd. Station, Metropolitan). [1067

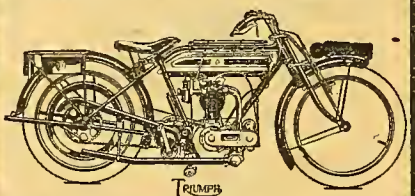
A.J.S., late 1919, spare wheel, Triplex windscreen, hood, speedometer, D.A. lighting set, 2 new tyres, tax paid, excellent condition throughout; £130, no offers.—47, Masons Hill, Bromley, Kent. [9058

A.J.S. 6h.p. Combination, 1918, perfect running order, complete with hood, wind screen, and usual fittings: Price £95 or near offer; for owner.—Burt, 60A, Trinity Rd., Balham. 'Phone: Battersea 1528. [1255

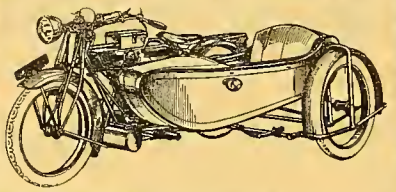
A.J.S. 6h.p. Combination 1917, Mills-Fulford sidecar, re-upholstered, outfit just overhauled, Lucas dynamo lighting, spare wheel, luggage grid, condition excellent; £87.—Whiting, 100, Nottingham Rd., Nottingham. [9982

A.J.S. Combination 1920, spare wheel, hood, screen, Klaxon, speedometer, clock, horn, 2 new tyres (spares), new spare chain, lamps, D.A. cylinder; £120; owner buying car.—Bounds, 223, Kilburn High Rd. [9376

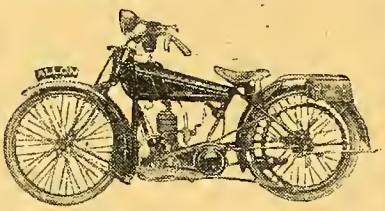

# SAVE YOUR TICKET MONEY
## "PAY AS YOU RIDE"
## OUR
## MOTOR CYCLES.



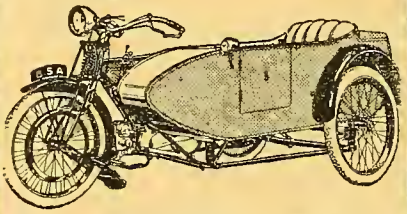
**TRIUMPH "Ricardo."** £120 cash or £31 4 0 down and 12 payments of £7 16 0. All models in stock.



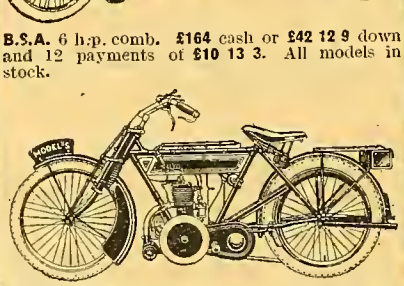
**MATCHLESS "Sports."** £160 cash or £41 12 0 down and 12 payments of £10 8 0.



**ALLON.** £60 cash or £15 12 0 down and 12 payments of £3 18 0.



**B.S.A.** 6 h.p. comb. £164 cash or £42 12 9 down and 12 payments of £10 13 3. All models in stock.



**LEVIS.** From £48 cash or £12 9 8 down and 12 payments of £3 2 5. All models in stock.

EVERY WELL KNOWN MAKE OF MOTOR CYCLE IN STOCK.

DISCOUNTS ALLOWED IF ACCOUNT PAID IN 2, 4 OR 6 MONTHS.

# LAMB'S Ltd.

WOOD GREEN, LONDON, N. 50, High Road. 'Phone—Hornsey 1056.
WALTHAMSTOW, LONDON, N.E. 151 High St. 'Phone—Walthamstow 169 (2 lines).
EUSTON ROAD, LONDON, N.W. (Opp. Gt. Portland Street Station). 'Phone—Museum 4978.


## MOTOR CYCLES FOR SALE.

### A.J.S.

A.J.S. Combination 6h.p. 1915, only seldom used spare wheel, unused tyre, wonderfully reliable last, financial economy only reason for selling; £100.—Rev. Fairfax Robson, Caister-on-Sea, Norfolk. [895

A.J.S. Combination 6h.p. 1916-17, 3-speed, kic start, etc., recently overhauled and repainted smart outfit; £87/10; call for trial.—George "The Captain Cook," Howard Rd., Stoke Newington, N.16. [935

A.J.S. 1919 6h.p. Combination, Lucas lamps, horn speedometer, spare wheel and tyre, tax paid December, 1922, tyres good all round, in good mechanical order throughout; £105.—Shaw Bros. Halesowen. [958

A.J.S. Combination (August, 1920), guaranteed equal brand new, just thoroughly overhauled a A.J.S., costing £25, Lucas equipment, licensed; bargain, £135.—31, Claremont Rd., Alexandra Park Manchester. [125

PRACTICALLY new 7h.p. 1921 A.J.S. Combination Lucas dynamo lighting, electric horn, speedometer legshields, 2 screens, hood and cover, spare wheel cantilever saddle, taxed; £147.—24, Balliol Rd. North Kensington. [939

1921 2¾h.p. A.J.S., 3 speeds, kick starter, Luca lamp sets and horn, tax paid till December been 400 miles only and gnaranteed equal new and very fast; £68.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [126

A.J.S.—The latest models in stock; also 192 dynamo lighting model, lavishly equipped, only 3 weeks old, £185.—Lamb's, Ltd., 151, High St. Walthamstow; 387, Euston Rd., N.W.1; 50, High Rd., Wood Green, N.22. [110

A.J.S. 7h.p. Combination, May, 1921, splendid condition throughout, never ran better, enamel and plating excellent, 710mm.×85mm. back tyre, other good for thousands of miles, spare wheel and tyre cost £215, sacrifice £155.—30, Chaffinch Rd., Beckenham, Kent. [925

A.J.S. 6h.p. Combination, steel body sidecar, Co Atmos carburetter, Terry's links to forks, Tan Sad seat with back and footrests, in excellent condition, all Dunlop tyres and tubes last season, lamps and generators; owner bought car; offers; tax paid.—Lee, 48, Clevelands Rd., Bnrnley. [964

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [753

A.J.S.—Complete stock of spares.—King and Harper Cambridge. 'Phone: 853. [848

A.J.S. Spares; prompt delivery.—Cyril Williams Chapel Ash Depot, Wolverhampton. T.A.: Parts [790

A.J.S., 1910, 1911, 1912.—Authorised manufacturer of spares for early models.—Harry C. Boham Penn Rd., Wolverhampton. [497

### Alecto.

ALECTO 3½h.p. 2-stroke, brand new, 2-speed Burman gear, clutch; list price £87/10, £45; only a few left.—Daw, Agent, 114, Brixton Hill. [949

### Alldays.

£25.—1917 2¾h.p. Alldays' Allon, 2 speeds, lamps tax paid.—King, Egrove Farm, Oxford. [973

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Allons; unequalled service, repairs etc. [314

1918 Allon, 2¾h.p., 2-speed, discs, legshields, perfect condition; £38, or offer.—"Gaywood, Castle Rd., N. Finchley. [979

ALLDAYS-VILLIERS 2½h.p., 3-speed, clutch model as new; bargain, £36; tax paid.—23, Ravele St., Kentish Town, N.W.5. [923

ALLDAYS' Allon, late 1921, 2-speed, hand clutch fully equipped, Tan-Sad, in splendid condition, gas starter; £47/10.—Birkinger, 28, Fallow Court Avenue North Finchley. [974

### American X.

1921 American X, standard model, gas lamp with D.A. cylinder, Lucas horn, Whitley sidecar, Easting screen; £130.—To be seen at Robertson Motors, Ltd., 157b, Great Portland St., W.1. [929

£75.—1920 7h.p. American X coachbuilt Combination. Rideezi sidecar, dynamo lighting, 3-speed tax paid; to any requiring a smart, reliable, and easi handled machine, this is it.—Pride, 156, Stockwe Rd., Brixton S.W.9. [980

1920 American X, standard model, acetylene head lamp, with D.A. cylinder, electric rear and sidecar lamp with accumulator, Henderson Elite sidecar to match, small mileage; trial given; £120, offer.—G. W. McL. Henderson, Henwick, Maidenhea [928

1921 American X 7-9h.p., 3-speed, at enormous reduced price; only slightly shop-soiled; Mi ford coachbuilt sidecar in stock to suit; if you requi a powerful high grade combination at little abo second-hand price write for our special clearance li —Premier Motor Co., Aston Rd., Birmingham. [72

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### B.S.A.

.S.A. 1919 4¼h.p. Combination, all chain, K.S., Dunlops unpunctured, lamps, horn, Cameo een, insurance and tax paid; 85 gns.—Austin, 138, denhall Rd., Clapton, E.5. [9083

.S.A., August, 1919, 4¼h.p., Model K, and Grindlay sidecar, hood, screen, grid, etc., Lucas lamps, horn, ., full insurance and licence; £100, or near offer.—ply Fred. Sands, Hoo, Rochester. [8994

.S.A.—We have several late model B.S.A. Combina- tions in excellent order for sale or exchange; list request.—Newnham Motor Co., 223, Hammersmith ., W.6. 'Phone, Hammersmith 80. [1014

.S.A. 1921 6-7 h.p., interchangeable wheels, electric light, indistinguishable from new, edometer, mudshields, etc., cost £205; accept 35—K.J. Motors, Bromley, Kent. [9603

.S.A. 1922 Models for immediate delivery; best prices allowed on second-hand machines in part meet.—Newnham Motor Co., 223, Hammersmith ., W.6. 'Phone, Hammersmith 80. [1027

.S.A. 1920 4¼h.p. Chain-drive Combination, Gloria sidecar; best accessories, not done 1,000 les, excellent condition; what offers; must sell.— litch, 22, Larkfield Rd., Richmond. [9363

.S.A. 1920, new July, 1921, Montgomery special 2-seater sidecar, speedometer, Lucas lamps, abso- ely perfect condition, tax paid; 90 gns.—Longman os., 17, Bond St., Ealing. Tele.: 689. [1308

921 B.S.A. 7h.p. Twin Combination, Magdyno, cost £240 last July; also 1920 B.S.A. twin o, owner just bought 8h.p. B.S.A. combination.— mpson, 14, Stanley Terrace, Ripon, Yorks. [8892

.S.A. 6-7h.p. 1921 Combination, equal to new, spare wheel, Palmer cords, grid, hood, Easting, n-Sad, Lucas set, Klaxon, insurance and tax paid; 85.—Goodhouse, Goose Green, East Dulwich. [8867

920 B.S.A. 4¼h.p. Chain Drive Combination, with No. 2 sidecar, hood, Cameo screen, Klaxon, 3 etylene lamps, speedometer, 1922 tax paid; genuine gain, £90.—Rivett, 236, High Rd., Leytonstone. [9098

ATE 1916 4¼h.p. B.S.A., countershaft 3-speed and coachbuilt sidecar, 3 lamps, generators, gage grid, tool kit, nearly new tyres; any trial; 0; would separate.—74, Clifton Rd., Canning Town. [9248

.S.A. Model H 4¼h.p. Combination, chain drive (new), 1921 showroom model, never been ensed, precisely same as 1922; will sacrifice for 00 if before Easter.—P.B., 101, Holloway Rd., N.7 [9143

.S.A. 4¼h.p. b.c.c., 4¼h.p. all chain, the 6h.p model and the No. 3 sidecar all in stock.— mh's, Ltd., 151, High St., Walthamstow; 387, ston Rd., N.W.1; 50, High Rd., Wood Green, 22. [1109

.S.A. 1921 6-7h.p. Combination, with lamps, horn, speedometer, tax paid, mileage 100, absolutely as w; £145; exchange for solo and cash.—Newnham otor Co., 223, Hammersmith Rd., W.6. 'Phone, mmersmith 80. [1012

921 (April) B.S.A. 6-7h.p., Twin Combination, spare wheel, luggage carrier, Low generator, sting, largest sidecar, special mat, legshields, ir-drive speedometer, Cowey horn, many spares, erhauled, perfect throughout; £145.—Write Ad- rtiser, 8, Westbourne Gardens, W.2. [7395

.S.A. 6-7h.p. Model A, with No. 1 sidecar, brand new as uncrated, 3-speed chain drive, 28×3 tachable wheels with spare wheel and tyre, luggage id and wheel carrier, Palmer cord tyres, spring t pillar, splendid mount; list £190, sacrifice at 65.—Rivett, 236, High Rd., Leytonstone. [9096

*Spare Parts:*

.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7539

HE Promptest Firm for B.S.A. Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3161

.S.A. Specialists.—All spares by return.—County Cycle and Motor Co., Broad St., Birmingham. [4677

.S.A. Spares can be had by return, post free, from Jones Garage, B.S.A. Agents and Spares rvice Depot Broadway, Muswell Hill, N.10. [0805

ODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all B.S.A. spare parts ways in stock. Write for free spare part list, stating ar of manufacture. [0750

### Calcott.

ALCOTT lightweight, new carburetter, tyres, belt, guaranteed, equipped; £17/10.—67, Fernlea Rd., alham. [1222

### Calthorpe.

ALTHORPE, new 1922 2½h.p. 2-stroke actually in stock; £36.—Moss, Wem. [1187

3h.p. Calthorpe-Jap, 2-speed, just overhauled; £25. 4 —Bradbeer, Minehead, Som. [9651

916 2¾h.p. Calthorpe-Jap, 2-speed, clutch, licensed and equipped; 32 gns.—Edwards, 101, Gt. ortland St. [9661


# MANUFACTURERS' STOCK
# MAKINKOT BRAND
## *TO BE CLEARED.*

**Fawn double texture, interlined rubber,**

# MOTOR SUITS

**THESE suits are made of Fawn double texture cloth, interlined rubber.**

**The seams are cemented, sewn and taped, making these absolutely waterproof**

**Will stand any amount of hard wear.**

**The jackets are made double-breasted, with belts and wind cuffs.**

**The overalls are made on the trouser pattern, fastening with clips and straps, and have wind gussets in leg.**

**These suits actually cost over 30/- to manufacture without any profit, but we have several thousands to clear.**

Every suit is guaranteed absolutely waterproof, and should these not meet entirely with your approval, we guarantee to return your money in full, if returned within seven days.

**SPECIAL PRICE,**

# 29/11 Carriage 1/- extra.

We have also several thousands, heavy Twill Suits to offer. These are made of the heavy Twill used for making Motor Hoods, and are one of the finest suits made for motor cycling, interlined rubber. They are made with sewn and cemented seams, and taped, also the seams of these suits are striped, making these garments absolutely waterproof, and we are prepared to give a guarantee that these are absolutely impossible for water to penetrate through. The overalls are made in the same way with wind gussets, fastening with clips and straps. The Suits are in sizes 34, 36, 38, 40, 42 and 44 chest, lengths inside leg are 27, 29, 31. Please state when ordering by post, measurements of chest, length inside.

**50/-** Carriage 1/- extra.

**Orders to be addressed—**

## *The* LANCASHIRE and CHESHIRE RUBBER Co.

**MAKINKOT HOUSE,**
**30, Thomas Street,**
## LIVERPOOL.

**'Phone 4891 Bank, Liverpool.**


## MOTOR CYCLES FOR SALE.

### Calthorpe.

1916 2¾h.p. Calthorpe-Jap, 2-speed, legshields, beautiful condition; bargain, £32.—62, Hawkshead St., Southport. [9764

1 GNS.—2½h.p. Calthorpe-Precision, 2-speed, good tyres, splendid order.—Smith, Claremont Garage, Blackpool. [9938

CALTHORPE-J.A.P., late 1919, Enfield, 2-speed, equipped, taxed, mechanically perfect; £40.—56, The Grove, Palmers Green. [9778

CALTHORPE 2¾h.p., J.A.P., Enfield gear, legshields, decompressor; £28; S.E. London.—Box 9768, c/o *The Motor Cycle.* [9343

### Campion.

8h.p. Campion Combination, hood, screen, all lamps, new tyres, perfect condition; £90.—C. Brittain, 10, High St., Grantham. [9009

CAMPION-J.A.P. 6h.p. Combination, coachbuilt sidecar, underslung, 2-speed countershaft, Bosch magneto, just overhauled; £55.—68, Southgate Rd., N. [9081

LATE 1920 Campion Combination, 8-10h.p., electric horn, lights, fitted with car tyres as new, luggage carrier, Tan-Sad; cost £200; only done 4,000 miles, guaranteed perfect; £110.—Shorter, Broad St., King's Lynn. [9008

1921 4h.p. Campion-Jap Combination, excellent condition, Sturmey 3-speed gears, B. and B. carburetter, Thomson-Bennett magneto, Dunlop tyres, Easting, done about 3,000 miles; exchange considered.—93, Lea Rd., Gainsborough. [9442

### Cedos.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Cedos; unequalled service, repairs, etc. [3149

2¾h.p. Cedos, latest model, clutch, K.S., 2-speed, fully equipped, licensed; £57; Oxfordshire.—Box 9738, c/o *The Motor Cycle.* [9073

### Centaur.

15 GNS.!—4h.p. Centaur, grand order, any trial, tax, genuine sacrifice.—Morrisson, Waterloo Rd., Blackpool. [9158

### Chater-Lea.

4h.p. Chater-Lea, metal sidecar, N.S.U., Bosch; £35, ex carriage.—150, Garratt Lane, S.W. [9031

CHATER-LEA Combination, 8h.p. J.A.P., 3-speed, very powerful; take lower power part.—57, Kenbury St., Camberwell, London. [9452

3½h.p. Chater-Lea, Antoine engine, m.o.v., Bosch, Amac, N.S.U. 2-speed, lamps, horn, long exhaust, sporting sidecar; first £15; ride away.—Ford, Sotwell, near Wallingford, Berks. [9604

1921 8h.p. Chater-Lea Combination, new and unregistered, used for few demonstrations only; complete with 4 detachable wheels, spring seat pillar, and sidecar screen; £35 below list price; £135.—South Eastern Garage, Herne Hill, S.E.24. [8778

### Chater-Lea-Precision.

4¼h.p. Chater-Lea-Precision Combination, countershaft, clutch, free, mechanically perfect; £45.—75, Hampton Rd., Ilford. [9913

CHATER-LEA-PRECISION Combination, 3-speed, kick-start, complete in every way, as new; £75, or close offer.—118, Disraeli Rd., Putney. [9186

### Clyno.

2½h.p. Clyno, 1919; £37/10.—Wauchope's, 9, Shoe Lane, London. [7867

CLYNO 1919, 2-stroke, 2 speeds, clutch; 29 gns.—8, High St., Wandsworth. [9859

WAUCHOPE'S, 9, Shoe Lane, London.—Clyno 2½h.p. 1919; £37/10. [1298

5-6h.p. Clyno Combination, 2-speed; £33, or near.—Aston, Dean House, Plymstock, Devon. [8924

1917 6h.p. Clyno Combination, lamps, taxed; £63; exchange.—2, Fortune Gate Rd., Harlesden, N.W. [9586

1921 8h.p. Clyno Combination, complete, spare wheels, shop-soiled; £135.—Taylor's Garage, Wednesbury. [8942

49 GNS.—1916-17 Clyno 6h.p. 3-speed Combination, all-chain drive, splendid condition.—134, Earlsbrook Rd., Redhill. [9795

8h.p. Clyno Combination, 1919-20, sound and fast; any trial; £88; will separate.—Witt, Molcey Mill, West Deeping, Lincs. [9199

CLYNO 5-6h.p., with all accessories; accept £40 for immediate sale; also sidecar if required.—94, Westbury Av., Wood Green. [9257

1921 8h.p. Clyno, Model de Luxe, condition perfect, all spares, tax, insurance paid; £140.—Steer, Colne Cottage, London Colney. [9760

1918 Clyno Combination 5-6h.p., lamps, horn, all accessories, spare wheel, large bulbous back sidecar, in perfect condition; £75, or offer.—C. A. Blay, 192, Heath Rd. Twickenham. [1093

## MOTOR CYCLES FOR SALE.

### Clyno.

CLYNO 1918 8h.p., 3-speed, countershaft, sidecar, splendid order; £65.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [9514

CLYNO 5-6h.p., and sidecar, windscreen, grid, good order, tyres, and chains; £42/10, near offer.—Davies, 45, Denning Rd., N.W.3 [8611

5-6h.p. Twin Clyno, coachbuilt sidecar, windscreen, in good running order; £45, bargain.—Rhind and Co., Stone Place, Rusholme, Manchester. [9623

CLYNO 8h.p. J.A.P. Combination, special made frame and chassis for rough roads, fully equipped, spare wheel, tax paid 1922, original tyres on and scarcely scratched; £80.—Bunting's Motor Exchange, Wealdstone. [9706

CLYNO.—5-6h.p. 1916-17 models, rebuilt, replated, enamelled black, 3 speeds, kick start, foot clutch, interchangeable wheels, chain drive, aluminium cases, sidecars coach painted, in excellent condition, lamps complete, machines as new; solo, £57; combinations, £68; deferred payments or exchange.—Hearn Bros., 94, Brixton Hill, S.W.2. 'Phone: Brixton 2888. [6282

*Spare Parts:*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7540

### Connaught.

BROMLEY, Kent.—Connaught Agents, J. L. Love and Co. [1343

SHREWSBURY Agent for Connaught; exchanges.—J. C. Pickering. [9559

2¾h.p. Connaught, 1921, 2-speed; £45.—Waucho pe's, 9, Shoe Lane, London. [7865

CONNAUGHT, 1922, immediate delivery from stock, 2-speed, clutch and kick start; £57/10.—Southcroft Motors, Mitcham Lane, Streatham. [1061

1922 Connaught, the super 2-stroke, for sidecar or solo; cash or easy terms; inquiries invited.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3259

CONNAUGHTS Now Reduced, from 28 gns.; all models in stock.—Lamb's, Ltd., 151, High St., Walthamstow; 387, Euston Rd., N.W.1; 50, High Rd., Wood Green, N.22. [1112

CONNAUGHT, show model, 2-speed, 26in. wheels, Dunlops, never been on road; special bargain, £55. Other 1921 shop-soiled machines; full range 1922 models in stock. Trade supplied.—Connaught Depot, 111, Great Portland St., W.1. 'Phone: Langham 1968. [9145

### Corah.

CORAH 4h.p. Combication, ride away; £27/10.—Seen 2, Stapleton Parade, Mount Pleasant Rd., N.4. [9376

### Coulson.

COULSON B 2¾h.p., 1920, fully equipped, perfect, tax paid.—43, Pembridge Rd., Notting Hill Gate. [9435

COULSON, 1921, brand new, 4h.p. Blackburne, Sturmey-Archer 3-speed; £95.—White Bros., Northgate, Darlington. [9124

COULSON Combination 4h.p., J.A.P., S.A. 3-speed, small mileage, excellent condition, stored winter; £95.—99, Princes Av., Wood Green, N. [9375

1920 2¾h.p. Coulson B, specially fitted B. and B., spare belt, chain, etc., all accessories, fast tourer; 49 guineas.—15, Charlbury Rd., Oxford. [9003

4h.p. Coulson B 1920 Countershaft, fully equipped, with lamps, horn, tools, etc., small mileage, tyres, etc., as new; £50.—25, Fredericks Rd., Custom House, E.16. [9695

COULSON 1922 models.—Deliveries now commenced. Write for catalogues giving price and all latest improvements.—London Motors, 61, Holborn Viaduct, E.C.1 Telephone: City 4230. [7096

COULSON 1922 models.—2¼h.p., £67/10; 2¾h.p., £78; 2¾h.p., o.h.v. (T.T. model), £95; 4¼h.p., £95. Cash or deferred terms. Old machines taken in part payment.—London Motors, 61, Holborn Viaduct, E.C.1. Telephone: City 4230. [7097

COULSON 1921 models.—Shop-soiled machines at greatly reduced prices. Three only left; £65. £75, £85 each. Cash, deferred terms, or old machine taken in part payment.—London Motors, 61, Holborn Viaduct, E.C. Telephone: City 4230. [7098

### Coventry Eagle.

£25.—Coventry Eagle, 2¾h.p., 2 speeds, Jardine speedometer, lamps, horn, splendid order.—11, Warwick St., Oxford. [9180

BARGAIN.—Coventry Eagle 4h.p., 2-speed countershaft, sidecar, running order but shabby, needs slight attention; £19.—Keen, Leominster. [8908

BARGAIN, Coventry Eagle, 1921, 5-6h.p., Jap engine, B.B.M.L. mag, Sturmey 3-speed K.S., Mills sidecar, tyres as new, accessories all on; price £140 or offer.—K., 122, Fore St., Edmonton, N.18. [1213

### Coventry Victor.

COVENTRY VICTOR Combination, Montgomery Sidecar, been used for demonstrating; special frame; guaranteed; first cheque £85 secures.—The Coventry Victor Motor Co., Ltd., Coventry. [0520


**Your complete EASTER outfit—from mount to accessories—supplied immediately from stock.**

There is no house more favourably situated or better equipped than we are to fit you out for Easter—on favourable terms. We hold an exceptionally extensive stock of both new and second-hand machines at prices touching rock bottom. Every mount sold carries our clearly defined guarantee, and we go all out to ensure your entire satisfaction.

**Spare parts, accessories, clothing and outfitting, comforts, solo machines, combinations, etc. In every department we excel on quantity, quality and price. Our easier easy terms are arranged to suit your convenience.**

**Actually in Stock Now.**

| | | |
|---|---|---|
| Ariel | McKenzie | Rudge |
| B.S.A. | Matchless | Royal Ruby |
| Calthorpe | New | Stanger |
| Douglas | Imperial | Triumph |
| Enfield | Norton | Zenith |
| Humber | O.K. | Zenith |
| Martinsyde | P. & M. | Bradshaw |

Motor Cycles

Millford Watsonian
Grindlay Henderson

Sidecars

**Let our staff of Specialists help you.**

Every man on our staff is a specialist in his department. When you come here for your mount you discuss its merits and demerits with a practical motor cyclist of wide experience. Unbiassed advice is given and you are helped to choose the machine that is best for your particular purpose. That is the whole basis of this highly successful business—service unlimited.

Come along and inspect the stock.

We shall be open on Saturday morning prior to Easter Monday.

**URGENT ORDERS**

**Wire Remittance and Order—deduct cost of telegram from amount of order.**

The Service Company Ltd. LONDON

**289-293, High Holborn, W.C.1**


## MOTOR CYCLES FOR SALE.

### Dayton.

DAYTON 1½h.p. 2-stroke, buffer spring forks, goo tyres, enamelling and plating in good condition £10; ride away.—14, Estcourt St., Devizes. [954

### De Luxe.

BARR AND STROUD.—How to get a 1922 De Luxe Barr and Stroud motor cycle at £20 off list price See our advert. under Miscellaneous.—Motoritie Wolverhampton. [780

BRAND New De Luxe Barr and Stroud motor cycle Dunlop tyres, C.A.V. magneto, Amac carburette Pan saddle, a luxurious mount; £56, including 2-spee Albion.—1, Meadow View, Newbridge, Wolverhampton [131

### Diamond.

SHREWSBURY Agent for Diamond; exchanges.—J. C. Pickering. [956

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Diamonds; unequalled service, repairs etc. [314

1920 Diamond-Jap, Sturmey-Archer 2-speed, indistinguishable from new; £55.—Wells, Brockwell Mon. [920

1919 Diamond-Jap 2¾h.p., Enfield 2-speed gear fully equipped, tax paid to December; £40.—114 Brixton Hill. [949

DIAMOND-J.A.P., 2¾h.p., Sturmey-Archer, 2-speed K.S. and clutch, good condition throughout; £45 —Nelson's, Rhyl. [930

1919 2¾h.p. Diamond-Jap, Enfield gears, all accessories, condition guaranteed, full tax; £40, near offer.—Drummond, White Bridges, Boston. [895

1921 Diamond-Villiers, Sturmey 2-speed, clutch kick start, splendid condition, lamps, etc. nearest £45.—Mason, "Hillcrest," Peelhouse Lane Widnes. [923

### Douglas.

BROMLEY, Kent.—Douglas Agents, J. L. Love and Co. [132

DOUGLAS, 2-speed model, all on; £75, immediate delivery.—Nelson's, Rhyl. [930

DOUGLASES, 2¾h.p., a few left, as new; £38/10 417a, Brighton Rd., Croydon. [504

£14.—Douglas, about 1912, fine condition.—Box 9787, c/o *The Motor Cycle*. [983

ALL Douglases.—A trial order only is requested.—Gibb, Gloucester. 'Phone: 852. [812

LATE Douglas, exceptional bargain, guaranteed 62 gns.—67, Fernlea Rd., Balham. [121

2¾h.p. Douglas 1921, 2-speed Eadie; £65.—Wauchope's, 9, Shoe Lane, London. [786

2¾h.p. Douglas, 1912, 2-speed; £20; exchange.—27 Flaxton Rd., Plumstead, London. [933

1920-21 2¾h.p. Douglas, 3 speeds, perfect, licensed £56.—26, Church Rd., Tottenham. [921

DOUGLAS 2¾h.p., 3½h.p. sports and combination —Official Agent, Longman, Salisbury. [961

4h.p. Douglas 1918, 3-speed, clutch, kick starter £47.—56, Park Lane, Kidderminster. [999

4h.p. Douglas, smart, new appearance, overhauled 55 gns.—120, Fielding Rd., Chiswick. [118

2¾h.p. Douglas, 2-speed, little used, splendid condition; £36.—80A, High St., Bexley. [122

4h.p. Douglas Combination, 1919, all on; £70, no offers.—Hazell, 20, Hoyle Rd., Tooting. [915

DOUGLAS 2¾h.p., 3-speed, K.S., 1920, all on; £6 or offer.—7, Stoke Newington Rd., N.16. [895

DOUGLAS 2¾h.p., 1918-1921, less parts of engine £18.—Hughes, 30, Homesdale Rd., Bromley. [906

1920 4h.p. Douglas Combination, well equipped £75.—24, Balliol Rd., North Kensington. [940

2¾h.p. Douglas, in running order, tax paid; £2 —50, Invicta Rd., Custom House, E.16. [909

3-SPEED 1915 Douglas, 2¾h.p.; £35, soip; exchanges.—Keat's, 417, Lord St., Southport. [959

1917 4h.p. Douglas, perfectly sound, been stored bargain, £45.—Reynolds, Melbourn, Cambs. [900

2¾h.p. Douglas needs slight attention; £14, offers.—Hill, 101, Shaftesbury Rd., Hammersmith, W. [906

2¾h.p. Douglas, 2-speed, fully equipped, appearance as new.—16, Portland Rd., London, W.1 [919

1919 4h.p. Douglas Combination, equipped, beautiful condition; £65.—17, St. Charles Sq., W.1 [957

DOUGLAS 2¾h.p., 2-speed, discs, lamps, tools, perfect order; £32.—19, Valnay St., Tooting, S.W [891

DOUGLAS 2¾h.p., excellent condition, tyres unpunctured, tax paid; £42.—61, Tanfield Rd., Croydon. [90

DOUGLAS 2¾h.p., 1915, good tyres; bargain, £3 or near offer.—2, Palmerston Rd., Southfield S.W. [93

BIS All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Douglas.

*Spare Parts:*

OUGLAS Spares.—We hold a complete stock for all models; post free. Douglas Agents and spare stockists.—Jones Garage, Broadway, Muswell Hill, ).[0806

RANK WHITWORTH, Ltd., 139, New St., Birmingham.—Complete stock, genuine guaranteed glas spare parts; prompt attention, immediate atch, lowest cash prices.[2147

OUGLAS Spares. Try the Sulina Garage. We hold the largest stock of Spares in the South, our prices are right. See our advertisement er "Parts and Accessories."—Sulina Garage Co., Park Rd., Brixton Hill, S.W.2. 'Phone: atham 40.[8546

### Economic.

:0, and deferred payments, buys new Economic motor cycles, or £34 cash; extraordinary value.—te Direct Sales, 69, Newman St., W.1. [7446

CONOMIC.—We can give you immediate delivery from stock of this wonderful low-priced machine, able gear model; £34 cash, or £10 down and rred payments. Please send p.c. for catalogue.—th Eastern Garage, Herne Hill, S.E.24.[1281

### Edmund.

SK Robbins to call with Edmund demonstration machine; latest specifications free.—The Efficient ıund, 177, Great College St., N.W.1.[9450

DMUND 1921 2¾h.p., spring frame, Blackburne engine, Burman 2-speed gear; new machine; fully ranteed; £75.—P. J. Evans, John Bright St., Birgham.[9269

DMUND, spring frame, chain-cum-belt, J.A.P. 2¾h.p., 2 speeds, new September, 1921, large as acetylene head lamp, horn, Cowey speedoer, extra heavy 26×2⅜ new cover on back el, carefully used; any examination, reasonable ; owner wants faster machine, touring; £55. or Thorburn, Artillery Mess, Deepcut, Farnıugh.[914

### Enfield.

ROMLEY, Kent.—Royal Enfield Agents, J. L. Love and Co.[1334

1.p. Enfield, 2-speed; £35.—Kemp, 62, Southfield Rd., Chiswick, W.4.[9649

20.—3h.p. Enfield, 2-speed, clutch, good running order.—Burt, Rayne, Essex.[9552

NFIELD, 1922 new 2-stroke and Combination actually in stock.—Moss, Wem.[1188

ATE 8h.p. Enfield Combination, perfect condition £75.—17, St. Charles Sq., W.10.[9577

EW 1922 Enfield Combinations in Stock.—Bound Garage, 223, High Rd., Kilburn.[997

NFIELD 2¼h.p. 2-stroke and 8h.p. combinations.—Official Agent, Longman, Salisbury.[9618

TAUCHOPE'S, 9, Shoe Lane, London.—8h.p Royal Enfield Combination; £95.[1300

1h.p. Royal Enfield, 2-speed, 1921; £42/10.—Wau & chope's, 9, Shoe Lane, London.[7857

HEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd.[0577

NFIELD Combination 1921, mileage 2,000, like new, bargain; £118.—Gifford, Overton, Hants.[9546

916 6h.p. Royal Enfield Combination, lamps, tax paid to December; £70.—114, Brixton Hill.[9492

EW 1921 Enfield Lightweight and Accessories £50.—Bounds Garage, 223, High Rd., Kilburn.[9979

NFIELD, new 1922 models, 8h.p. Combination £140; lightweight, £55, in stock.—Nelson's, Rhyl.[9305

RAND new 8h.p. Enfield Combination, unregistered; £114.—24, Balliol Rd., North Kensington.[9403

NFIELD 1916 3h.p., splendid condition; £40.—R. Blackmore, 17, Leighton Rd., Busb Hill Park,[9005

1.p. Enfield, 2-speed, clutch, speedometer, lighting set; £32.—Cartwright, Highwood Hill, Mill l.[1254

NFIELD, 2-speed, beautiful condition; £38.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 8.[9513

OYAL ENFIELD Combination, in good condition, all on; £60.—J. Yates, 55, Holland St., Brixton, ndon.[8964

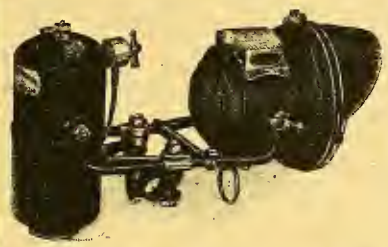
GNS.!—Enfield Lightweight, just overhauled, all accessories, recommended.—106, Fircroft Rd., ting.[9187

EW 1921 8h.p. Enfield Combinations and Accessories; £130.—Bounds Garage, 223, High Rd., ›urn.[9976

918 Enfield Combination, 8h.p. Colonial model; a bargain, £85; like new.—Ross, 86, High Rd., , S.E.[3481

8h.p. Enfield Combination, about 1918, little used, tax paid, all on.—Harley, 15, Knockhall Grove, enhithe.[9011

Sole London and District Agents for A.J.S., Excelsior & Dunelt Motorcycles



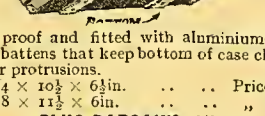
LOW Motorcycle Lamp Set ... **£4 1D**
Packing and carriage 2/- extra.
Illustrated Catalogue FREE on request.

**TAN-SAD PILLION SEATS**

SPRING Seat as illustrated. **3/-**
Back Rest **7/-**
Astride foot rests **4/6**

**Wearproof Expanding Carrier Case**

So light that the case weighs only 4 lbs. yet strong enough to support two men. Water and



dust proof and fitted with aluminium-faced 3-ply battens that keep bottom of case clear of carrier protrusions.

Size 14 × 10½ × 6½in. .. .. Price **26/-**
„ 18 × 11½ × 6in. .. .. „ **27/6**

**PLUG BARGAINS, 1/9**

A limited supply of brand new K.L.G. and Lodge Mica Plugs available at this exceptional price.

**HANDLE-BAR WATCHES, 8/6**

Specially designed to withstand vibration.

**COWEY MECHANICAL HORNS .. 25/-**
**A.J.S. TANKS (perfect condition) .. 40/-**
**POST HORNS (black finish) .. .. 12/6**
**LUGGAGE GRIDS, 38/-**

Will fit any width sidecar. All joints welded. Folds flat against back of sidecar when not in use. Supplied complete with straps and all fittings.

**H.T.C. MUDSHIELDS .. 18/6**
**TAN-SAD FOLDING STOOLS .. 4/6**
**WATERPROOF HELMETS .. 7/6**
**LEATHER KNEE GRIPS (pair) .. 5/-**
**All orders over 10/- in value, carriage paid.**

**H. TAYLOR & Co., Ltd.**

Showrooms—
Motorcycles and Cars,
**52-53, Sussex Place, South Kensington.**
Accessories, Spare Parts and Repairs,
**21a, Store Street, Tottenham Court Road, W.C.1**
Wholesale—
**38, ALFRED PLACE, W.C.1**
Garage—Tottenham Court Road, W.1.
Phones: Accessories & Repairs, Museum 1240
Motorcycles and Cars, Kensington 7260
Telegrams: "Dynametro, Westcent, London"


## MOTOR CYCLES FOR SALE.

### Enfield.

HALIFAX.—1922 Enfield combination; £140; cash or exchange.—Halifax Motor Exchange, Horton St., Halifax.[9890

GIVEN Away.—Brand new unregistered Enfield Lightweight; £46; exchanges.—Kent's, 417, Lord St., Southport.[9593

ROYAL ENFIELD 6h.p. coachbuilt Combination, exceptionally good; £75.—Blanchard, 45, Fenton St., St. Helens.[9959

6h.p. Enfield Combination, all accessories, in good condition; £65, or offer.—C. A. Blay, 192, Heath Rd., Twickenham.[1095

1920 (Oct.) 8h.p. Enfield Combination, electric lighting, Easting, etc., perfect; £105.—86, Inchmery Rd., Catford.[9361

1920 Enfield Combination, Lucas dynamo lighting, spares, as new.—"Springhurst," Fassett Rd., Kingston-on-Thames.[9598

DAN GUY, Weymouth.—Enfield 1921 8h.p., Magdyno, double-seated sidecar, hood and screen, guaranteed perfect; £125.[0818

ENFIELD.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607.[6290

ENFIELD 6h.p. Combination, splendid condition, overhauled, seen any time; £70.—"Carlton," Crook Log, Bexley Heath.[7523

ENFIELD 1921 Lightweight, as new (250 miles), all accessories, best offer; £48.—53, Avenue Rd., King's Heath, Birmingham.[9480

ENFIELD 2¾h.p., 1914, Bosch, Amac, lamps, horn, tools, good condition; £30, or near offer.—Wood, Hythe Rd., Staines, Middlesex.[9132

1914 3h.p. Enfield, M.A.G. engine, 2-speed, good running order; 23 gns.—Edwards, 50, Harrington Rd., South Kensington.[9670

1918 Enfield Combination, 2-speed, enamel and tyres good, accessories, very fast; sell £45 or exchange.—174, Avenue Rd., Acton.[9674

CROYDON and District.—Sole official appointed agent for Royal Enfields.—A. F. Pulling, 175a, London Rd., Croydon. 'Phone, 1619.[6951

1922 Enfield Combination, new dynamo lighting, hood, screen, horn, licence paid; sacrifice for £160.—Chatfield, 27, High St., Tonbridge.[8972

£55.—1915 6h.p. Enfield Combination, 3 lamps, horn, taxed 1922, speedometer, guaranteed perfect.—"Beaulieu," Avenue Rd., St. Albans.[1231

ENFIELD Combination, 2-seater sidecar, mag. dynamo, hood, screen, etc.; sacrifice, £120, or near offer.—Read, 323, High St., Brentford.[9378

1916 6h.p. Enfield Combination, bought 1918, all accessories, in perfect condition, like new; £80. —C. A. Blay, 192, Heath Rd., Twickenham.[1091

ENFIELD Combination, 1913, 6h.p., good condition, all on; any trial; nearest £60.—The Telegraph, Albert Rd., North Woolwich, E.16.[9127

ENFIELD 1921 2¼h.p., 2-speed, 2-stroke, mileage 300, exceptional bargain, tax paid year; £42.—Barker, 216, Portobello Rd., North Kensington.[9470

1920 Enfield Lightweight, lamps, horn, tools, tax and insurance paid; £35.—Wilson, 91, Stockwell Park Rd., Brixton, S.W.9. Evenings, after 6.[9807

ENFIELD Combination, only done a few miles; £98; fully guaranteed.—Mosedale, 30, Canterbury Rd., Kilburn, N.W.6 (facing Princess Rd.).[8699

1921 Royal Enfield 8h.p., Vickers engine, 2-seater sidecar, Lucas lamps, tax paid; £115.—Hillier, Side Bell, 9, Wallingford Avenue, North Kensington.[1035

ENFIELD Combination, 8h.p., large sidecar, equal new, fully licensed and insured, D.A. lighting, hood, Easting; £105.—6, Waldock Rd., West Green, N.[9025

1921 Enfield-Vickers Combination, splendid condition throughout, fully equipped; 100 gns.—37, Arlington Rd., Surbiton. 'Phone: Kingston 1274.[9856

ENFIELD Combination 8h.p., engineer owned, hood, screen, 700×80 tyres, as new, electric light, reliable outfit, any trial; £95.—18, Darley Rd., Wandsworth Common.[9580

1921 Enfield Combination, 8h.p. Vickers engine, nearly new, mileage negligible, tax paid, £30 worth extras; bargain, 120 gns.—Derngate Motor Co., Northampton.[8980

ENFIELD 3h.p. Twin, speedometer, lamps, etc., splendid condition, tax paid; ride away; £45.—Can be seen any time at 57, Stephenson St., Willesden Junction.[9040

ENFIELD Combination, 6h.p. J.A.P., December, 1919, good condition, has been carefully ridden, lamps, tools, etc.; £90.—Lloyd, Greenhill Villa, Kidderminster.[9014

£39 10s., 1921 Enfield, 2-stroke, 2-speed Enfield, perfect condition; exchanges.—W. J. C. Motor Exchange, 5, Addison Avenue, Holland Park, W.11. Tel.: Park 2071.[1235

## MOTOR CYCLES FOR SALE.

### Enfield

ENFIELD-J.A.P. Combination, late 1920, Magdyno, condition O.K.; £105 cash.—Cromwell Engineering Co., 327, Putney Bridge Rd., S.W.15. 'Phone: 1601 Putney [9285

ENFIELD.—Complete range of 1922 models in stock for immediate delivery. Cash! Exchanges! Easy payments, 4 per cent extra.—P. J. Evans, John Bright St., Birmingham [9268

1921, June, 8h.p. Enfield Combination, low mileage, appearance and order as new, lamps, fully insured and tax paid; £125.—Hitchman, Ivydene, Prospect Hill, Walthamstow. [8893

ENFIELD Combination, 8h.p., August, 1920, electric lighting, Cameo windscreen, tools, spare tyre, smart, good condition; £110.—Clark, "Belle-Vue," Sunbury-on-Thames. [9041

ENFIELD Combination 8h.p., Magdyno lighting, speedometer, electric horn, hulhous back sidecar, windscreen, perfect; £60.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [1290

1921 8h.p. Enfield Combination, magnificently equipped, electric lighting, etc., as new throughout; £110, bargain; exchange.—Rhind and Co., Stone Place, Rusholme, Manchester. [9620

ENFIELD 3h.p. T.T., October, 1919, excellent condition, completely equipped, speedometer, small mileage, tax paid, seen Wendover or Watford; £50.—Box 9796, c/o *The Motor Cycle*. [1164

ENFIELD 8h.p. Combination 1918, new Langford coachbuilt sidecar, just overhauled, re-enamelled, appearance and running as new, any trial; £80.—Anson, Lancaster Rd., Leicester [9476

1921 (late) Enfield-Vickers Combination, Magdyno screen, tax paid, low mileage, as new; £120; exchanges.—W. J. C. Motor Exchange, 5, Addison Av., Holland Park, W.11. Park 2071. [1236

ENFIELD Combination 1916, modern improvements, perfect order, good condition, any trial, speedometer, Easting; £75, or near offer.—Ingledew, 37, Surrey St., Strand. 'Phone: Holborn 6400. [8984

66 Gns., exchange.—Really exceptionally nice Enfield Combination 1915, but had very little use, disc wheels, equipped, smart, any examination, trial.—Seabridge, 35, Hansler Rd., East Dulwich. (Sydenham 2452.) [7241

ENFIELD 1922 Models for immediate delivery.—8h.p. Combination, £140; with dynamo lighting, £158; lightweight models from £55; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1031

1922 Enfield Combination actually in stock for immediate delivery; standard, £140; 2-seater, £145; magdyno electric lighting £18 extra if required; easy payments 4% extra; carriage paid to your address.—Premier Motor Co., Aston Rd., Birmingham. [7245

ENFIELD 8h.p. Combination, new September, 1921, 2-seater sidecar, hood, Triplex Orto screen, P. and H. lighting set, Tan-Sad with back and foot-rests, tax and insurance (£200) paid, little used; bargain, £160. Trains met Witham.—Ramsey, Great Totham, Witham, Essex. [9905

1920 (July) 8h.p. Enfield Combination, Lucas Magdyno lighting, horn Tan-Sad, spare tube, tools, etc., condition, appearance as new, 3,000 miles only; 3 up anywhere; cost £205, £140, or near offer; any trial, 1922 tax paid.—Rogers, Shutwell House, Pilton, Shepton Mallet [9642

1920 Enfield Combination, sidecar with child's seat, rear, Easting Royal (new), 6h.p. J.A.P., Lucas Magdyno, Cowey, 700×80 tyres, good, spare new chain (rear) Brooks cantilever suspension saddle, splendid condition and appearance, mileage under 4,000, £115.—Stevenson, 3, Roland Gardens, South Kensington. Telephone: 1432 Kensington. [9322

ENFIELD, 1920, dynamo model, with hood, screen, child's seat, speedometer, £110; 1921 dynamo model, hood, screen, £125; 1920, Lucas lighting, £95; 1920, Lucas lighting, hood, screen, £110; 1921, Lucas lighting, £115; also 1922 single and double-seaters, with and without dynamo; also sports lightweight in stock.—Lamb's, Ltd., 151, High St., Walthamstow; 387, Euston Rd., N.W.1; 50, High Rd., Wood Green, N.22. [1104

*Spare Parts:*

ENFIELD Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7542

ENFIELD Spares in stock for immediate delivery.—Longman, Fisherton, Salisbury. [9614

ENFIELD Spares and Repairs a speciality.—Pulling's Garage, London Rd., Croydon. 'Phone, 1619. [6952

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Enfield engine parts in stock; no waiting. [4946

### Excelsior.

BRITISH EXCELSIOR Combination, late date, 5-6h.p., all-chain drive, 3-speed countershaft, good condition; 58 gns.—47, Lyham Rd., Brixton. [9366

Many happy rides on machines purchased now. Norton, Indian, Scott, Raleigh, Quadrant, Velocette, Levis, B.S.A., Martinsyde, A.J.S., Royal Ruby, and Victoria.

## A Selection of Secondhands

1919 4 h.p. **Norton & Milford** s/car, acetylene lighting .. **£90**

1920 4 h.p. **Wilkin-Blackburne** comb., dynamo lighting and windscreen ..... **£100**

1914 6 h.p. **A.J.S.** comb., acetylene lighting and Easting screen ..... **£75**

1920 3½ h.p. **Sunbeam,** acetylene lighting and Lucas horn **£90**

1920 5-6 h.p. **Rudge** comb., horn and acetylene head and tail lamps ..... **£70**

1916 2¾ h.p. **Douglas** ..... **£40**

1920 4 h.p. **Triumph,** fixed gear, mileage under 500 .. **£45**

1918 4 h.p. **Douglas** solo, horn **£65**

1921 3 h.p. **Royal Ruby,** spring frame, Cowey horn and tool kit. Perfect condition ..... **£55**

All above machines are guaranteed and can be obtained on

**Deferred Payments.**

*Any modern motor cycle taken in part exchange for a new machine.*

**Victor Horsman Ltd.,**

**7, MOUNT PLEASANT, LIVERPOOL.**

## MOTOR CYCLES FOR SALE.

### Excelsior.

EXCELSIOR (British) 8h.p. 1920 Combinatio fully equipped, Easting, very little used; 90 g —Longman Bros., 17, Bond St., Ealing. Tele 689. [13

EXCELSIOR 1921 6-8h.p., J.A.P. engine, Sturm 3-speed countershaft, with Excelsior sidec lamps, horn, speedometer, tax paid, perfect ord £110.—Newnham Motor Co., 223, Hammersmith R W.6. 'Phone, Hammersmith 80. [10

1920 (late) 8h.p. British Excelsior, Mills-Fullo Excelsior 2-seater sidecar, hood, screen, lugga grid, detachable wheels, original tyres, trip speedomet small mileage, tax paid, guaranteed; £98/10.—S Upper Richmond Rd., Putney. 'Phone: Putney 27 [12

### F.N.

F.N., 4 cylinders, shaft drive, lamps, horn, sidec chassis enamelled Indian red, going order; £25 Wainwright, 135, Victoria St., Burton-on-Trent. [88

F.N. Combination, very sound condition, Lucas ligh ing set, new tyres all round, hood, windscre tax paid; £30.—Colonial Motors, 104A, Finchley R Hampstead 7822. [99

F.N. 2½h.p., touring Model A, 2-speed, handle-b control clutch, kick start, new; £55.—Croyd and District Agents, Pulling's Garage, London R Croydon. 'Phone: 1619. [69

LANGFORD'S, 37, Cricklewood Broadway, Lond N.W.2.—1922 8h.p. 4-cylinder F.N., with n o.h.i.v. engine, 3-speed gear, and no-trouble sh drive, £135; lightweights, £55 and £72; highest pr for your present machine in exchange. [95

*Spare Parts:*

F.N. Spares.—We can supply for all models fr 1904; prompt attention to inquiries.—Langford 37, Cricklewood Broadway, London, N.W.2. [95

### Francis-Barnett.

1921 Francis-Barnett, 2¾h.p. J.A.P., 2-speed, k start, hand clutch, new, slightly shop-soile £63.—Hucklebridge, 133, Sloane St., Chelsea. [90

### Grose.

GROSE 2¼h.p., excellent condition, only wa seeing; £18.—31, Westpark Rd., Kew. [89

### Harley-Davidson.

BROMLEY, Kent.—Harley-Davidson Agents, J. Love and Co. [13

SHEFFIELD Agent for Harley-Davidsoos; fr £120.—Stacey, 12, Ecclesall Rd. [05

1919 Harley-Davidson, with £50 sidecar, perfe £87/10.—9, Church Rd., Harlesden. [94

HARLEY Sports, new, for 1918 Triumph or ot good make, and cash.—Kemp's Garage, Lou Lincs. [93

1919 Harley-De-Luxe Combination, every possi accessory, taxed; £82.—24, Balliol Rd., No Kensington. [94

HARLEY, 7-9h.p., 2 speeds, lamps, etc.; £39/1 exchange 4h.p. or Lightweight.—8, High S Wandsworth. [98

1915 7-9 h.p. Harley Combination, Millford sidec Lucas lamps, good order; 55 gns.—Edwards, 1 Gt. Portland St. [96

1920 Harley-Davidson 7-9h.p., all accessories, seater sidecar, in splendid order throughou £140.—114, Brixton Hill. [94

1920 4h.p. Harley, lamps, speedometer, mile 4,000; £69/10.—Shepherd, Enfield Highw 'Phone: Waltham Cross 31 [08

1917 Harley-Davidson Combination, fully equipp £67/10.—Hillier, Side Bell, 9, Wallingto Avenue, North Kensington. [10

HARLEY-DAVIDSON Flat Twin; £115; fo equipped; these models actually in stock.—Lo man Bros., 17, Bond St., Ealing. [88

HARLEY Late 1920 4h.p. Sports Solo, beauti condition, small mileage; £80; owner goi abroad.—Ward, 167, London Rd., Kingston. [90

1918-19 Harley-Davidson Combination, discs, side re-painted, beautiful condition; 78 gns.; ev ings, week-end.—17, Redfern Rd., Harlesden, N.W.10 [95

1921 7-8h.p. Harley-Davidson, electric model, gns. C. and M. sidecar, screen and appearing hood, speedometer, licensed, as new; gns.—Below.

1920 7-9h.p. Harley-Davidson, electric model, and M. sidecar, speedometer, splendid c dition; 130 gns.—Edwards, 101, Gt. Portland St [9

HARLEY-DAVIDSON 1919 Combination, coa built, electric lghts, hood and screen, very and sporty; £127.—261, Mitcham Lane, Streath [10

1920 Harley Combination, complete with lam Easting, Tan-Sad, etc., unscratched; sell £1 cost £240; take good solo part payment.—Willia Pilton, Somerset. [9

## MOTOR CYCLES FOR SALE.

### Matchless

ATCHLESS, 8-10h.p., spare wheel, windscreen, hood, luggage and petrol carriers, lamps; in good condition, both mechanical and appear- tax paid; £120; any time during holidays or evening.—75, Howarth Rd., Plumstead, S.E.18. [9908

RKER'S Motors, The South-West London Matchless Agents and Service Station.—1922 ls at list prices. We give an insurance policy st mechanical breakdown for 12 months free. Matchless spares in stock. Open from 9 a.m. 8 p.m.—194, Balham High Rd., S.W.12. [7085

ATCHLESS 1920-21 Model H 8h.p. Combination, Lucas lamps, speedometer, horn, mirror, Tan- with feet and backrests, hood and screen, spare and tyre, tools, pump, etc., fully insured, con- excellent; genuine bargain, £130; owner buying after 6.—P.D., Seven Sisters Hotel, Broad Lane, nham. [8930

ATCHLESS Combination, exceptional opportunity of securing the finest turnout on the road; no lighting, Easting windscreen, spare wheel and every conceivable accessory; tax paid for year; over £275 a little over a year ago; ready to away; a bargain to first comer; £140.—Vander- 199, Piccadilly, W.1. Gerrard 562. [9286

22 Matchless.—All models. 'Phone, Greenwich 751. Immediate delivery. Sam. E. Clapham, agent that gets there. Why? Ask my clients reason my sales of the popular Matchless com- ion increase weekly. Give Sam. E. Clapham a My reputation depends upon your satisfaction. rs at your service. Cash, exchange, or easy . Agent for all the world's best motor cycles. displayed advertisement, *Motor Cycling*. Note ss.—Sam. E. Clapham (Motors), 27, Stockwell Greenwich, S.E.10. [5894

*re Parts:*

TCHLESS Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7221

TCHLESS Spares for J.A.P. or M.A.G. by re- turn, post free.—Jones Garage, Matchless Agent, way, Muswell Hill, N.10 [0808

### Metro.

TRO-TYLER, 2¾h.p., 2-speed, really good; best £30.—Cullen, 20, Wade Rd., E.16. Bank 8290. [9477

.p. 2-stroke Metro-Tyler, just overhauled, com- plete with accessories, good tyres; £25.—1, od Rd., Herne Hill, S.E.24. [8780

### Minerva.

.p. Minerva, in running order; £13 or offers. 72, Beechfield Rd., Finsbury Park, N.9. [1056

)K, £9.—3½h.p. Minerva, engine running order, requires tyres and minor adjustments, taxed.— Ramsbury, Wilts. [9090

### Mohawk.

HAWK Cycles, new or second-hand, at lowest possible prices for cash or easy payments.—Mohawk Co., Ltd., Alexandra Rd., Hornsey. [4793

2 Mohawk Lightweight, 2½h.p. Villiers engine, 2-speed gear, clutch, dynamo lighting, lamps, speedometer, etc.; £52/10; year's licence and nce transferred.—Dunn and Stringer, St. e's Square Mews, South Belgravia. [9540

### Monarch.

20 Monarch, 2¾h.p. J.A.P., 2 speeds, clutch, kick start, excellent order; £35, bargain.—Goad, 122, Vale. 'Phone: Hampstead 1353. [9879

### Monopole.

—1917 Monopole-Villiers, 2-stroke, splendid con- lition, aluminium footboards, all accessories.— ws, Surveyor, Shire Hall, Bedford. [9465

### Moto-Reve.

*re Parts:*

TO-REVE Spares for all models, also repairs, overhauls.—Motor Supply Co., Sole Concession- 223a, High St., Lewisham, S.E. [9092

### Motosacoche.

—2¼h.p. Motosacoche, mechanical valves, K.S., lutch, variable gear, Bosch, tax paid, ride away. , Newton Rd., Burton-on-Trent. [9932

TOSACOCHE, 2¼h.p., Bosch, Amac, lamps, ools, pump, all complete, recently overhauled, t running order; £15. Apply between 6 and 7 or Saturday after 1 o'clock.—33, Rutland Rd., Hackney, E.9. [9369

### Ner-a-Car.

-A-CAR in stock; 66 gns.—Taylor's Garage, Wednesbury. [8940

### New Comet.

W COMET 2-stroke, condition better than new, only done few miles; bought car; what offers?— Gray's Inn Rd., London, W.C. [0845

By so doing you can always obtain the service of a Specialist with the essence of experience gained through 10 years in the Engine Dept. at the Douglas Works.

## 1922 MODELS.

| | | |
|---|---|---|
| 2¾ H.P. | Two-speed, fully equipped | £75 |
| 2¾ H.P. | Three-speed, fully equipped | £90 |
| 3½ H.P. | The famous 1922 Sports Model, fully equipped | £130 |
| 3½ H.P. | The famous 1922 Sports Model, fitted with Sports Sidecar | £155 |
| 4 H.P. | Solo, fully equipped | £110 |
| 4 H.P. | Combination, fully equipped | £135 |
| 6 H.P. | Combination, fully equipped | £165 |

## THE L.S.D. LIGHT CAR

**Complete, ready for the road,**

## £165

The real value for money proposition. We shall be pleased to give you a demonstration run by appointment, and thereby prove the merits of this sturdy car.

## ONLY 4% EXTRA FOR EXTENDED PAYMENTS.

**Bargains in Second-Hand Light Cars**

**SINGER COUPE** 10 H.P., late 1920 model, dynamo lighting, self starter, six detachable wheels - £275

**B.O.B.** 8-9 H.P., two-seater, nearly new, 1921 model, four cylinder water-cooled engine, three speed gear box, dynamo lighting, five detachable wheels - £200

**STANDARD** 11-6 H.P. Four-seater, leather upholstered, perfect running order - £90

**DE MARCAY** 7-9 H.P. Two-seater, sporting body, 1921 model, dynamo lighting, hood, screen, five detachable wheels, practically new - £125

**DE MARCAY** 7-9 H.P. 1921 Competition Model, three speed gear box, acetylene lighting, five detachable wheels - £110

**SAXON** 19-20 H.P. 6 cyclinder, five-seater Touring, dynamo lighting and self starter £350

## WHOLESALE DISTRIBUTORS FOR LONDON AND SURREY.

**Sub-Agents wanted for Douglas Motor Cycles and L.S.D. Cars.**

## A. H. LAKEMAN LTD.

**26, LONG ACRE, W.C.2.**

'Phone No.: Gerrard 1383.


## MOTOR CYCLES FOR SALE.

### New Hudson.

1920 New Hudson, 2-speed, 2-stroke, little used, all accessories; sacrifice, £37.—62, Hawkshead St., Southport. [9765

NEW HUDSON 1921 2¾h.p., 2-stroke, 2-speed, acces- sories, tax paid; £35.—Vicarage, Chatham St., Walworth, S.E. [9489

NEW HUDSON 4h.p., 3-speed, cancelet sidecar, windscreen, hood, speedometer; £45.—292, Gold- hawk Rd., W.12. [9446

£28.—1914-15 New Hudson 3½h.p., 3-speed, K.S., clutch, all accessories; ride away; snip.—219, Belsize Rd., N.W.6. [9873

NEW Hudson, 1919, 2-speed, 2-stroke, specially tuned, new tyre; £32.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7199

NEW HUDSON Motor Cycles.—London Depot, 45, Gray's Inn Rd., London, W.C.2. Full stock of spares. Trade supplied. [0851

1916 New Hudson 4h.p. Combination, 3-speed, excellent order and condition; 50 gns.—John Barnett, Ltd., Malvern Link. [8874

1917 New Hudson 2-stroke, single speed, perfect condition, all on, tax paid; £23.—6, Chippen- dale Waye, Uxbridge, Middlesex. [8879

NEW HUDSON 2½h.p., 2 speeds, sports model, very fast, tax paid, in absolutely new condition, lamps, etc.; call for trial; £35.—Snow, Laurel St., Dalston, E.8. [9357

1920 New Hudson Lightweight de Luxe, very reli- able, splendid condition, lamps (Miller), horn, tax paid; £40; evenings.—Danehill, Hastings Av., Chorlton-cum-Hardy, Manchester. [9125

£45.—New Hudson Combination 5-6h.p. Twin, Stur- mey 3-speed, countershaft, clutch, kick starter, 1921 Amac, cancelet sidecar, lamps, accessories, splen- did order.—63, Solon Rd., Brixton. [9770

3½h.p. New Hudson-Jap, 3-speed hub, clutch, real good condition, take 2 anywhere; any trial as pillion; £40, or exchange late model Rover or other good make, cash adjustment.—Harvey, Baker, Marlow. [9970

1922 New Hudson 10h.p light car, £230; 4½h.p. combinations, £125, solo, £100; 2¼h.p. 2-speed Popular, £50, De Luxe, £63; exchanges and deferred payments entertained; sole agents for Combridge.— Wallis and Easton, 104, Mill Rd., Cambridge. [0824

### New Imperial.

BROMLEY, Kent.—New Imperial Agents, J. L. Love and Co [1338

1919 New Imperial 2¾h.p., Burman, overhauled, all on; £40.—12, St. Michael's Terrace, Wood Green. [9407

SHEFFIELD Agent for New Imperial Motor Cycles; all models in stock.—J. A. Stacey, Ecclesall Rd., Sheffield. [0813

NEW IMPERIAL 2¾h.p., 2-speed, countershaft, smart, perfect, 1922 Amac; £31/10.—Lloyd, rear 92, High St., Wandsworth. [9853

NEW IMPERIAL-J.A.P. 1918 8h.p. Combination, excellent condition; bargain, £75; after 6.—40, Caversham Rd., Kentish Town. [9801

1916 2¾h.p. New Imperial, fine order, fully equipped, tax paid; £32. — Maynard, 161, Bowes Rd., Bowes Park, N.11. [9673

IMPERIAL-J.A.P., 1917, 2-speed, excellent condi- tion, all on; 30 gns., nearest offer.—Pollard, High Mill Rd., Gt. Yarmouth. [8899

2¾h.p. New Imperial 1915-16, 2-speed, accessories, licensed 1922, overhauled; £32.—12, Dulverton Mansions, Gray's Inn Rd., W.C.1. [1243

NEW IMPERIAL, all models, immediate delivery; exchanges or deferred payments.—Edwards, 50, Harrington Rd., South Kensington. [9686

NEW IMPERIAL! Immediate delivery of 1922 models. Cash! Exchanges! Easy payments!— P. J. Evans, John Bright St., Birmingham. [9270

1920 2¾h.p. New Imperial-Jap, 2-speed, Lucas lamps, Cowey, Tan-Sad, had little use, tax paid to December; £40.—114, Brixton Hill. [9501

1920 New Imperial, 2¾h.p. J.A.P., 2 speeds, clutch, kick start, excellent condition; £47/10.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [9880

NEW IMPERIAL 1922, models 1 and 2, new, to stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0069

NEW IMPERIAL 8h.p. J.A.P. 1920 Combination, 3-speed, kick start, sound and perfect condition; £110, or near.—Brewster, 58, Wakering Rd., Barking. [9993

1919 New Imperial-Jap, 8h.p., Cancelet sidecar, Easting windscreen, speedometer, Klaxon, Lucas outfit; £90, or near offer.—Brown, 35, Church Rd., Upper Norwood. [8905

SPECIAL Model New Imperial-Jap 6-8h.p. Twin Solo, new condition, late 1919, special fittings; £80, or nearest; stamp for details.—Hillside, Slafton, Towcester, Northants. [9803

## MOTOR CYCLES FOR SALE.

### New Imperial.

1920 New Imperial 6h.p., 3-speed, expensive Grindley sidecar, hood, screen, horn, luggage grid, tax paid, in beautiful condition; £95.—365, King St., Hammersmith. [9702

NEW IMPERIAL 2¾h.p. Models at £63, £69 and £75, all in stock.—Lamb's, Ltd., 151, High St., Walthamstow; 387, Euston Rd., N.W.1; 50, High Rd., Wood Green, N.22. [1111

1920 8h.p. New Imperial-Jap, tandem sidecar, windscreen, hood, luggage grid, 2 spare tyres, engine spares, Lucas lamps, speedometer, Klaxon; £90.—Scarfe, 23, Mandeville Rd., Enfield Wash. [1085

1922 New Imperial actually in stock for immediate delivery; Model No. 2, £59; Model No. 3, £73; 8h.p. Combination, £145; easy payments, 4 per cent. extra.—Premier Motor Co., Aston Rd., Birmingham [7251

EXCEPTIONAL Bargain.—New Imperial 6h.p. Combination, little used, lovely condition, with electric lamps, Cowey speedometer, mechanical horn, tools; tax paid; trial run; £100.—Burdett, 15, Waldemar Avenue, Ealing, W.13. [9152

1919 8h.p. New Imperial, coachbuilt sidecar, 28in. wheels, mechanically perfect, 4 tyres as new, mirror, speedometer, and lot of extras. (Requires new chassis for sidecar to make compete, to cost about £3.) Owner wants room; £95 the lot.—11, South Parade, Blackpool. [9387

*Spare Parts*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All New Imperial parts in stock; no waiting [4949

NEW IMPERIAL Spare Parts.—London stockist's, Rey, 173, Gt. Portland St. 'Phone: Langham 1257. Open till 7.30 p.m., 4 o'clock Saturdays. [0855

### New Ryder.

EASTER Bargain.—1920 New Ryder-Jap 2¾h.p., 2 speeds, fully equipped, licensed, as new; £36.—113, High St., Clapham. Latchmere 4290. [9844

### Norton.

PREMIER Motor Co. for 1922 Nortons:

NO. 9, 3½h.p., belt drive, £80; 16H 3-speed T.T. £115; Big 4, 3-speed, £120; easy payments 4½ extra.—Immediate delivery from the Norton Specialists The Premier Motor Co., Aston Rd., Birmingham [069

BROMLEY, Kent.—Norton Agents, J. L. Love and Co. [1321

SHREWSBURY Agent for Norton; exchanges.—J. C. Pickering. [9563

NORTONS.—Delivery from stock, all models.—King and Harper, Bridge St., Cambridge. [8488

T.T. Norton, late model, guaranteed, sell cheap, exchange.—Green, Winemerchant, Reigate. [9723

LATE 1919 Norton Big Four, 1920 Covette sidecar, complete; £80.—Pearse, Staplehurst. [9964

NORTONS.—All models. If you require one that pulls, try Gibb Gloucester. 'Phone: 852. [8125

NORTONS, 1922.—Immediate deliveries of all models.—Clifford Motories, Eastwood, Notts. [8828

1921 3½h.p. T.T. Norton, electric light, tax, beauty; 58 gns.—Smith, Claremont Garage, Blackpool. [9941

1920 (November) B.R.S. Norton, Lucas lamps; 59 gns; exchanges.—Kent's, 417, Lord St., Southport. [9589

NORTON 3½h.p. T.T., October, 1920, mileage 1,500, new condition; £58.—23, Hilderthorpe Rd., Bridlington. [9055

HALIFAX.—Norton 1922 models. Note Brooklands record.—Halifax Motor Exchange, Horton St., Halifax. [9892

1921 3½h.p. Norton and Norton Sports Sidecar, fully equipped, licensed and insured, as new; 105 gns.—Below.

1921 Big 4 Norton, fully equipped, Tan-Sad, as new, mileage negligible; 90 gns.—Edwards, 101, Gt. Portland St. [9657

NORTON 3½h.p., 16H, 3-speed, clutch, K.S., late model, in perfect condition, guaranteed; £85.—F. Warren, Hindon, Wilts. [9243

NORTON, No. 9 T.T., new December 1921, Lucas 462 lamp and horn, as new; £67/10.—Williams, 19, Portland St., Cheltenham. [9736

DAN GUY, Weymouth.—Norton 1921, absolutely new, Big Four Combination, fitted De Luxe sidecar, oversize tyres, sacrifice; £130.

ABSOLUTELY new 1921 Sports Model, 17C, oversize tyres, to clear, £98/10. [0821

1921 Norton 16H., fully equipped, as new; £95, or exchange Triumph and cash.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [9881

BIG Four Norton, 3-speed, all chain, fully equipped, accessories, bargain; £75.—35, Shepherd's Bush Rd., Hammersmith. 'Phone Museum 7286. [9748

## ARE YOU READY FOR EASTER? IF NOT, WIRE OR 'PHONE US.

**All the undermentioned machines are ready for immediate delivery.**

**All second-hand machines accompanied by the Layton guarantee.**

### NEW MACHINES.

Ariel, 3½ h.p., Sports.
B.S.A., Model K2.
Enfield Lightweight.
Indian.
New Imperial, 2¾ h.p., 3-speed.
Scott Squirrel.
Triumph, Model H.
Velocette.
Edmund.
Brough Superior.
Enfield Lightweight Sports, £55.
Enfield Combination.
Matchless.
Norton, 16 H.
Triumph Ricardo.
Triumph, Model S.D.
Massey Arran.
Etc. Etc. Etc.

### SECOND-HAND & SHOP SOILED.

Ariel, 1921, 3½ h.p. Comb., 85 gns.
1920 A.B.C., Dynamo Model, £90.
B.S.A., Model K2 and sidecar, 80 gns.
Douglas, 1920, Comb., very fine, £80.
1918 James, Comb., Dynamo £90.
Omega-Jap, 1920, 2-speed, 40 gns.
1920 Scott and sidecar, £75.
1920 Ariel, Combination, £75.
B.S.A., 1920, 4¼ h.p., £65.
B.S.A., K2, soiled, £97 10s.
Harley-Davidson, 1918, £65.
N.U.T., 1922, 3½ h.p., Sports, £95.
Rover, 3½ h.p., 1920, £70.
Rudge-Multi and sidecar (1921), Maglita, very fine, £90.
1920 Model H Triumph and Montgomery Sports Sidecar, exceptional order, £85.
1922 Triumph H. and new Sidecar. Fully equipped and licensed. Not done 200 miles. Sacrifice for £120 cash. Unrepeatable.
1921 Enfield, 8 h.p. Combination, Colonial model, soiled only, £115.
1920 Verus-Blackburne, 2¾ h.p. Special. Side by side and overhead valve gear, fast, £70.
Zenith, 1920, 5 h.p., Sports. Very small mileage and as new, £70.
Etc. Etc. Etc.

All second-hand machines have been through our workshops and are ready for first-class road service.

Enquiries invited and treated with every courtesy and consideration.

# Layton Garages

**90, High Street, & 30, Hollywell Street, Oxford, and London Road, Bicester.**

Phones: 581 Oxford; 35 Bicester
Grams: "Integrity," Oxford and Bicester

**J. W. Tollady,**
*General Manager.*

## MOTOR CYCLES FOR SALE.

### Norton.

1920 Big Four Norton, Magdyno lighting a brand new Montgomery Sports sidecar a screen, licensed; 95 gns.—Edwards, 101, Gt. Portla St. [96

1921 Norton 16H Sporting Combination, Bonn sen, equipped, taxed; 105 gns.; would se rate or exchange.—284, South Lamoeth Rd., Sto well. [12

NORTON T.T. 3½h.p., engine No. 161442, Philip pulley, engine perfect, lamps, horn, speedomet licence paid; £47.—G. Savage, 7, High St., Sutt Surrey. [89

NORTON 1921 (May) 3½h.p., 3-speed, 16H, a minium piston, excellent condition, spares, ty 3 inner tubes, tools; £85.—Walker, Gt. Lines Cam Chatham. [89

1921 3½h.p. Norton H16 and Montgomery si car, fully equipped, speedometer; 102 go exchanges or deferred.—Edwards, 50, Harrington R South Kensington. [96

16H Norton, 3-speed, late 1921, as new, milea 2,000, quick sale, £87; two Enfield 2¼h.p. strokes, late 1921, good order, £38 each.—Brun wick House, Tiverton. [10

NORTON Big Four, 1920, electric lighting, a C.B. Millford sidecar, unused 15 months, proper officer abroad; £90; perfect condition; bargain.—2 Manor Green Rd. East, Epsom. [90

NORTON (Late 1921), 16H, 3½h.p., 3-speed, sm mileage, perfect condition; £88; with canoe sporting sidecar, £100; tax and insurance paid. Bradley, Albert Mills, Bingley, Yorks. [95

NORTON No. 9, specially tuned, 80 m.p.h. guara teed, like new, tax paid and insured; a gem in good setting; £63; no offers; old machine accept part payment.—Queen's Road Garage, Bradford. [12

EXCEPTIONALLY Fast.—1921 T.T. Norton 3½h. Bouniksen speedometer, lamp sets, horn, and t paid, been little used and is equal to new, ty unscratched; £68.—Walbro Motor Cycle Co., Saffr Walden. 'Phone: 45. [12

*Spare Parts:*

NORTONS.—All spares for all models.—King a Harper, Cambridge. 'Phone: 853. [84

HERBERT ROBINSON, Ltd., Green St., Ca bridge.—Complete Norton list post free; tra supplied. [49

### N.S.U.

2¾h.p. N.S.U., mechanical valves, overhauled; £1 —27, Flaxton Rd., Plumstead. [93

N.S.U. 4h.p. Combination, 2 speeds, fully equipp £33, or offer.—Goodhouse, Goose Green, E Dulwich. [88

N.S.U. 6h.p. Coachbuilt Combination, slig adjust required; bargain, nearest £45.—Mathe Crossley Sanatorium, Kingswood, Frodsham, Cheshi [91

N.S.U. 5-6h.p., 2-speed, free engine, Watsoni sidecar, just overhauled, tax paid 1922, perfe condition, all on; trial given; £50, or near offer. Van Weert, 21, Wellington Rd., Battersea Bridge [89

### N.U.T.

BROMLEY, Kent.—N.U.T. Agents, J. L. Love a Co. [13

N.U.T. 3½h.p., 3-speed, Model M; £100; just de vered.—Nelson's, Rhyl. [93

N.U.T. 3½h.p., Magdyno, 1920, horn, as new; offe —Williams, 19, Portland St., Cheltenham. [97

1920 5h.p. Sports N.U.T., dynamo lighting, or done 500 miles; £75.—Bonnds Garage, 22 High Rd., Kilburn. [99

1921 3½h.p. N.U.T., magdyno, speedometer, sp light, Terry spring saddle, superb conditio 90 gns.—Edwards, 101, Gt. Portland St. [96

BRAND new N.U.T. 3½h.p., Lucas Magdyno ligh ing equipment, Lucas electric horn, license £90.—37, Canterbury Rd., Ball's Pond Rd., Dalsto N.1. [12

### O.K.

BROMLEY, Kent.—O.K. Agents, J. L. Love a Co. [13

2¼h.p. O.K., 2 speeds tax paid, lamps; £19/1 bargain.—74, Brighton Rd., Surbiton. [11

O.K. Junior 1921 2¾h.p. 2-stroke, 2-speed, on, perfect condition; £35.—Sharpe, 172 Upp St., Islington. [91

£25.—O.K. 2½h.p., 4-stroke, 1915, 2-speed, lam horn.—Smith's, 86 Chalk Farm Rd. (oppos Chalk Farm Tube Station). [98

OXFORD O.K. Agency.—1922 models in stock; to 92 gns.; gradual payments arranged.—27 38, Cowley Rd., Oxford. Tel.: 870. [94

1917 O.K., 2¾h.p. J.A.P., 2-speed, clutch and ki starter, overhauled; £32, or near offer.—Ov den, 70, London Rd., Bromley, Kent. [90

1920 2¾h.p. O.K. Union, fine condition, compl lamps, horn, etc., tax paid; £30.—Write, And son, 10, Shawfield Park, Bromley, Kent. [69

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P)

## MOTOR CYCLES FOR SALE.

### O.K.

. Juniors.—We have Mark IX., X., XI., new 921 models in stock at greatly reduced prices.— and Co., 275, High St., Acton, London. [1081

E 1920 O.K. 2½h.p. 2-speed, clutch, kick art, lamps, horn, pump, etc., 1922 tax paid; Pelling, 53, Rosslyn Av., Barnes, S.W. [9140

1 O.K.-Villiers, 2-speed, clutch, kick start, amps, Klaxon, tyres unpunctured, insured; any £45.—48, Church Crescent, Finchley, N.3. [8923

-VILLIERS, 1921, 2-speed, fully equipped, mps, knee grips, pump, mechanical horn, etc., rfect order; £38.—Miller, 224, Hertford Rd., am Cross. (D) [9042

1 O.K. Junior, 2½h.p., 2-speed, kick start, clutch, accessories, good as new, splendid run- condition; licence paid; £50.—Apply Povey, wick Rd., Evesham. [9221

### Omega.

0 2¾h.p. 2-speed Omega-Jap, lamps, horn, etc., in perfect order; £42, must sell.—Tucker, Moor Bideford. [8897

EGA-J.A.P. 2¾h.p. 1921, little used, speeds, lutch, kicker; £49.—Williams, Brightview, Had- l., New Barnet. [7689

EGA 1922 Models; prices from £39/10. Write or catalogue, London Motors, 61, Holborn Via- E.C.1. Your old machine taken in part pay- for cash, or on deferred terms.

EGA 1922 Models for earliest deliveries. Write London Motors, 61, Holborn Viaduct, E.C.1. distributing agents for:—Norfolk, Northampton- Huntingdonshire, Cambridgeshire, Hampshire, adshire, Bedfordshire, Berkshire, Buckingham- Oxfordshire, Suffolk, Essex, Hertfordshire, Sus- Surrey, Kent (with the exception of 20 miles of London). [7099

### P. and M.

)MLEY, Kent.—P. and M. Agents, J. L. Love nd Co. [1333

nd M. 1916 3½h.p. Combination, lamps, horn, tc; bargain, £50.—Below.

nd M. 1918 3½h.p., lamps, horn, etc., good con- lition; £42/10.—Elce, Ltd., 15-16, Bishopsgate e, Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

. Coach Combination, late model, tax paid; £56. -112, Gorton Rd., Coventry. [1051

8 P. and M. 3½h.p., 2-speed; £40, or near- Rixon, Chilmark, Salisbury. [1070

nd M., 1919, not W.D., new condition; 38 gns. -Ramsey, 79, Marquess Rd., N.1. [9823

nd M. Combination, 1919, just overhauled, as ew; bargain, £55.—Hayes, Aylesbury. [9154

nd M., 2-speed, etc., lamps, horn, speedometer, Tau-Sad; £55.—Davis, 53, Lennard Rd., Penge. [9726

8 P. and M. 3½h.p., 2-speed, clutch, kick starter; £37.—56, Park Lane, Kidderminster. [9995

nd M., 1920, 2-speed: £58; like new, all on, censed, tyres excellent.—11, Warwick St., Ox- [9179

nd M. 1920 Model, excellent order and condi- ion, lamps, speedometer, horn; £65.—Nelson's, [9299

and M. Combination, 2-speed, kick start, good rder; £35.—1, Springfield Park Crescent, Cat- S.E.6. [9854

and M. Combination, equal to new, fully equipped; £69.—Goodhouse, Goose Green, East ich, S.E. [8864

nd M. Combination, 2-seater body, 2 screens, pil- lion seat, all on, reliable, tax paid, trial; £40.— Midmoor Rd., Balham. [9693

19 P. and M., 2 speeds, clutch, with lamps, good condition; £38/10, or exchange lightweight.— King St., Hammersmith. [9504

. Combination, smart and good condition; 43 gns.; tax paid.—Longman Bros., 17, Bond Ealing. Telephone: 689. [1305

and M. 1919 Combination, all lamps, etc., practically unused; £55.—James, c/o Bradmore's, Harrow Rd., Paddington. [9923

and M. Combination, 1918, overhauled, taxed, equipped; £52/10: would separate.—38, Sherriff West Hampstead, N.W.6. [9842

18 3½h.p. P and M. Combination, equipped, exceptionally fine condition throughout; £56.— Fairbridge Rd., Highgate, N.19. [9864

21, late, P. and M. Combination, fully equipped, windscreen, tax, indistingnishable from new; first s.—Morrisson, Waterloo Rd., Blackpool. [9157

and M. Combination, 1917 (about), 2-speed, kick start, lamps, horn, windscreen, all in genuine order, tax paid; £57/10.—78, Crowborough Rd., ng Bec. [1060

and M. 3½h.p. Combination, latest type, kick tart and ratchet brake; £85.—Newnham Motor 223, Hammersmith Rd., W.6. 'Phone,' Ham- mith 80. [1023

# The Juno Cycle and Motor Co.

*Proprietors:*

**METROPOLITAN MACHINISTS Co., Ltd.**

**248, BISHOPSGATE, LONDON, E.C.2.**

**TELEPHONE: BISHOPSGATE 2195.**
**TELEGRAMS: QUILLS AVE LONDON.**

ESTABLISHED OVER FORTY YEARS.

## The Pick of the Bunch!

**A.J.S., ARIEL, B.S.A., CHATER LEA, DOUGLAS, ENFIELD, INDIAN, LEVIS, MATCHLESS, NORTON, RALEIGH, RUDGE, SUN.**

## McKENZIE
**LIGHTWEIGHT MOTOR CYCLES.**

**Low price. Cheap running.**
**Easy Payments.**
**26 Guineas cash, or**
**£7 10 0 deposit and 12 monthly payments of £1 17 6.**
**Carriage and packing extra.**

**Any Motor Cycles, Combinations (or Sidecars), can be supplied on our well-known GRADUAL PAYMENT SYSTEM.**
**Particulars on Application.**

## KEEP DRY—OUTSIDE.

**Special Line double texture Waterproof Suits, complete with helmet to match, 53/-, very smart and comfortable.**

**Sidecar Bodies, Sandum or Venus, from £5 15 0.**

**Underslung or step chassis from £7.**

**EVERYTHING FOR THE MOTOR CYCLIST AT REASONABLE PRICES.**

## Accessories at Reduced Prices.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| Bowden Heavy Band Brakes | 2 16 0 | Watford Speedometers, slightly soiled, guaranteed | 4 15 0 |
| Cameo Screens | 2 15 0 | Renolds Chain ½ × ¼ per ft. | 6 1 |
| Bluemels, 1921 | 3 10 0 | All spares in stock. | |
| Orto Hoods | 3 5 0 | Tan-Sads | 1 10 0 |
| Spring Shackles, set of four | 6 6 | Brooks Br7o Saddles | 2 8 0 |
| P. & H Lamp Sets | 1 12 0 | B & B Lightweight Carburetters, window soiled | 2 10 0 |
| Fleece-lined Leather Gauntlets | 14 9 | Cross over Belt Rim Brakes | 18 6 |
| W. S. R. Jets, all sizes | 6/6 & 10 6 | | |
| Large H'bar Mirrors, 4½" reflector | 7 6 | | |

**FREE.** Call or write for 80 pp. Illustrated List with all latest price reductions.

## MOTOR CYCLES FOR SALE.

### P. and M.

P. and M., 1917, nice coachbuilt sidecar, lamps, horn, luggage grid, tax paid, just overhauled and re-enamelled all over; sacrifice, £67/10.—365, King St., Hammersmith. [9700

P. and M. Sidecar Combination, late 1920. 3½h.p., little used, been stored, splendid condition, all accessories; any trial; £65.—Brown, 174, Mitcham Rd., Tooting, S.W.17. [9250

P. and M. Combination, late R.A.F. model, exceptional condition, smart and mechanically sound, lamps; £50.—13, Somers Mews, Edgware Rd., London (of Cambridge Terrace). [9536

PHELON-MOORE Combination, carriage-built sidecar, new condition, electric lighting, speedometer, tools, etc.; price £125.—Dendy, adjoining "Swan" Hotel, London Rd., Mitcham. [9220

P. and M. Combination, R.A.F., enamelled and plated 1920 colours, perfect condition internally and externally, completely equipped, posh bus; 47 gns. —42, Southsea Avenue, Watford. [9728

VOLTAIRE Motor Works can supply a limited number of late type ex-R.A.F. P. and M.'s, rebuilt, re-enamelled, lined and plated, fitted with new T. and B. magnetos, B. and B. carburetters, tyres and tubes, and guaranteed perfect; 40 gns.—Below.

P. and M. Solos, ex-R.A.F., £33; combinations, £50. These machines are late models, rebuilt and guaranteed perfect.—Voltaire Motor Works, 4, Voltaire Rd., Clapham Rd. Station, London, S.W.4. [4962

*Spare Parts:*

P. and M. Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7219

P. and M. Spare Stockist. Every part stocked; cheap.—Inman, Durham Rd., Seaforth, Liverpool. [6249

P. and M.—All parts in stock for P. and M.'s; send stamp.—P. and M. Specialist, H. Beardwood, 147, Burlington St., Liverpool. [0839

### Pero.

PERO 1916 2½h.p., 2-stroke, condition like new; £24.—H. Drake, 118, East Rd., Cambridge. [8961

### Peugeot.

PEUGEOT 3½h.p., low, powerful; £10, worth double.—Peake, Banbury [9930

PEUGEOT 4h.p. Twin, perfect condition, low, aluminium footboards, tool bags, Bosch, lamps, etc.; £16.—41, Devonshire Rd., Holloway, N.7. [9522

### Portland.

PORTLAND 1920 new, 2-speed, chain-cum-belt drive; £45.—Maudes's, 100, Paris St., Exeter. [1143

### Precision.

¾h.p. Precision Sports, condition appearance new; £27; licensed.—19, Beverley Rd., Anerley. [9461

PRECISION Junior 2¾h.p., 2-speed, equipped, taxed, perfect; £17/10.—17, Heaton Rd., Mitcham. [9821

¾h.p. Precision, Paragon folding Sidecar (cane), 2-speed, K.S., latest B.B., pillion, mirror, licence; £40; exchange new model.—56, Lime Grove, New Malden, Surrey. [9640

### Premier.

PREMIER 3½h.p., new condition, cheap.—Particulars, 28, Heaton Rd., Newcastle-on-Tyne. [8956

PREMIER 3½h.p. Coachbuilt Combination, 3-speed, perfect, taxed; £29.—17, Heaton Rd., Mitcham. [9820

£28.—3½h.p. Premier, clutch, handle-bar control, lamps, good tyres.—45a, Overbury, Tewkesbury, Glos. [9108

PREMIER, lightweight, gradua gear, kick start, must sell, licensed; £22/10.—67, Fernlea Rd., Balham. [1221

£25.—Premier 1914 3½h.p., 2-speed, clutch, kick starter, any trial, bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [1169

PREMIER 3½h.p. 1914, 3-speed hub, rebored, rebushed, lamps, etc., several spares; £26.—43, Delawarr Rd., East Grinstead. [9576

PREMIER Motor Cycle Combination, 1913, 3½h.p., in excellent condition, and warranted running order; £30; licence paid 1922; trial arranged.—S. Constable, Nizels, Hildenborough, Kent. [9168

*Spare Parts.*

PREMIER Spares and Repairs.—We claim to be the most competent firm to supply spares and execute repairs to Premier motor cycles. We served in the Premier works, and know this machine from A to Z. We hold the most varied stock of parts for it in the world. We are the only traders who can claim to supply every part for a Premier machine. Our prices are rock bottom, and our service unsurpassable. Write us full requirements; you will receive our reply per return.—Forfield Motors, Forfield Place, Leamington Spa. [3167

## MOTOR CYCLES FOR SALE.

### P.V.

1920-21 3½h.p. P.V.-Precision, T.T., spring frame, 2-speed, lamps, speedometer, scarcely ridden, handsome machine, tax paid; 48 gns.—21, Mostyn Gdns., Kensal Rise, N.W.10. [9774

P.V.—Astounding value is represented by our new range of popular models, incorporating our famous spring frame and Villiers or J.A.P. engines. Prices from £45. Lists from agents or P.V. Motor Cycles, Ltd., Forest Hill, London. [6548

### Quadrant.

BROMLEY, Kent.—Quadrant Agents, J. L. Love and Co. [1340

CLIFFORD WILSON Company, 16 years' experience with Quadrants. [3277

1922 Quadrant 4½h.p. Combinations; £100. Agents for Cambridge.—Wallis and Easton, 104, Mill Rd., Cambridge. [0825

FRANK WHITWORTH, Ltd., Distributors, 139, New St., Birmingham.—Quadrant £100 4½h.p. Combination, delivery from stock. [0767

1921 Quadrant Combination, all chain, perfect, all accessories; £70.—31a, Compton Rd., Wakeman Rd., Kensal Green, N.W.10. [9039

CLIFFORD WILSON Mfg. Company, Quadrant Works Representatives and Sole Wholesale Distributors for London, Southern and Eastern Counties; official repairers and spare part stockists; deferred payments; exchanges; all models in stock. Special insurance facilities applicable to Quadrants only.—177, Westminster Bridge Rd., London, S.E.1, opposite Waterloo Station Approach. Telephone: Hop 210. [3279

### Radco.

2¼h.p. Radco, single speed, just overhauled, bargain; £15.—Bradbeer, Minehead, Som. [9652

RADCO 2-stroke, in perfect condition, fitted with special tank and electric lighting, any trial, 2 up; £28.—Sutton, 41, Lewis Grove, Lewisham. [8888

### Raleigh.

PREMIER Motor Co. for 1922 Raleighs.

IMMEDIATE Delivery of 5-6h.p., spring frame, detachable wheels, £130; standard sidecar, £35; De Luxe sidecar, £42; early delivery of the new Raleigh lightweight, £68; easy payments 4% extra.—The Premier Motor Co., Aston Rd., Birmingham [0626

BROMLEY, Kent.—Raleigh Agents, J. L. Love and Co. [1341

SHREWSBURY Agent for Raleigh; exchanges.—J. C. Pickering. [9564

RALEIGH 2¾h.p., new, in stock; £68.—Bradbeer Bros., Minehead, Som. [9653

RALEIGH 5-6h.p. Combination, new 1922 model; £165.—Nelson's, Rhyl. [9308

RALEIGH, new 1922 2¾h.p. Lightweight actually in stock; £68.—Moss, Wem. [1189

RALEIGH 2¾h.p., 2-speed, kick start, in stock; £68.—Clark, 7, Exhibition Rd., S.W.7. [1280

1922 Raleighs, 2¾h.p. and Combinations, delivery anywhere, always in stock.—Clifford Motories, Eastwood, Notts. [7764

RALEIGH.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7230

RALEIGH 1921 5-6h.p., 3-speed, kick start, Raleigh sidecar, all lamps; £118.—Maudes', 100, Gt. Portland St., London. [1150

BRAND new 2¾h.p. Raleigh, 2 speeds, in stock; £68, plus delivery.—Walbro Motor Cycle Co., Co., Saffron Walden. 'Phone: 45. [1264

RALEIGH.—2¾h.p., 3h.p., and 5-6h.p. solos and combinations from £68. Cash or deferred payments; old machine taken in part payment.—London Motors, 61, Holborn Viaduct, E.C. 'Phone: City 4230. [7095

RALEIGH 2¾h.p., 2-speed model, in stock; early delivery of all other models. Why not give your present mount in part exchange? Cash or deferred terms.—Edwards, 50, Harrington Rd., South Kensington. [9680

RALEIGH 5-6h.p., 3-speed, spring frame, interchangeable wheels; immediate delivery from stock; solo, £130; combination, £165; best prices allowed on exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1028

### Reading-Standard.

READING-STANDARD, 1921, 10h.p., dynamo lighting, electric horn, Plus One, single or double seater sidecar, hood, windscreen, mileage 1,000, tax paid; £145, near offer.—33, Viaduct Rd., Chelmsford, Essex. [9912

### Revere.

1920 2½h.p. Revere, single speed, equipped, good condition; 23 gns.—Edwards, 101, Gt. Portland St. [9662

### Rex.

REX 3½h.p., clutch model; £14; fixed-gear Rex, £10.—17, Heaton Rd., Mitcham. [9819


# RIDEEZI

It is safer for you to purchase in

## 18 MONTHLY INSTALMENTS

*LISTEN HERE!*

We will supply you with any make of

## SOLO or COMBINATION

complete with Wind Screen, Hood, Lamps, Horn, Number Plates, Licence-holder, any Gadgets.

**FULLY INSURED AND TAX PAID, &c. CARRIAGE PAID**

You can pay a Deposit and the remainder in 18 Monthly Payments.

We will give you a DISCOUNT if you complete the payments earlier.

**We also supply the famous**

## RIDEEZI Sidecars

**ON 12 MONTHLY PAYMENTS.**

*Send for Lists and Forms, which places you under NO obligation.*

**Please note that we finance ourselves.**

## RIDEEZI SALES

LIMITED,

**5, VICTORIA STREET, LONDON, S.W.1.**


## MOTOR CYCLES FOR SALE.

### Rex.

REX Combination 3½h.p., 2-speed, tax paid; —Axford, 32, Marens St., Wandsworth, S.W. [

3½h.p. Rex, Bosch, B. and B., Dunlops, in splendid order; 10 gns.—McLeod, 17, Victoria Elgin. [

1914 Rex 6-8h.p. Combination, splendid condi Easting, tax paid; £55.—Hole, Cowper Av Sutton. [

REX 6-8h.p. Combination, 3 speeds, K.S., ele lighting; £35; 2-speed model, £30.—17, H Rd., Mitcham. [

14 GNS.—Rex 2¾h.p. mechanical valves, mag Senspray, dropped frame, runs splendidly.- Swaffield Rd., Wandsworth. [

1912 6h.p. Twin Rex Combination, stored retyred; nearest £45.—Peroune, Hampden behind St. Pancras Station. Holborn 6522. [

1921 Rex-Acme, as new, 3- or 5-seater sidecar, tric light, Bonniksen, spare wheel, equipped, suit family man or hire work; £150.— High Rd., Wood Green. [

1912 5-6h.p. Twin Rex coachbuilt Combinatio speed, Bosch, Binks, Brooks B.250, Lucas handle start, requires attention; first cheque f.c.r.—Mackie, 52, St. Peter St., Peterhead. [

1922 Rex-Acme; book your orders now for mode's, early delivery can be given of 8h.p. Blackburne engine, all chain drive, 3-s clutch, kick starter, Model G, detachable and changeable wheels; complete with luxurious si at £150; catalogues with pleasure.—Sam E. Cla (Motors), 27, Stockwell St., Greenwich, S.E.10. [

### Rover.

BROMLEY, Kent.—Rover Agents, J. L. Love Co. [

ROVER, new 1922 4h.p. chain-drive model in s £100.—Moss, Wem. [

1921 3½h.p. Rover, speedometer, fully equipped cellent condition; 75 gns.—Below. [

1914 3½h.p. Rover and Rover Sidecar, 3-s speedometer, licensed, lamps, insurance; 45 —Edwards, 101, Gt. Portland St. [

ROVER 3½h.p., fast, sporty, smart, guaran must realise; £32.—67, Fernlea Rd., Balh [

ROVER 1914 3½h.p., Philipson, good order, machine; £34.—H. Drake, 118, East Rd., bridge. [

ROVER 3½h.p. 1920, 3 speeds, clutch, kick st fully equipped, as new; £65.—63, Solon Brixton. [

ROVER 1920 3½h.p. Combination, perfect; 1919 ditto, £68.—R. B. Clark and Co., 7, hibition Road, S.W.7. [

1913 3½h.p. Rover Combination, 3-speed, start, in perfect condition; £55.—5, Nor Rd., Herne Hill, S.E.24. [

1914 Rover Combination, little used, good c tion, mechanically sound; £35.—Perrott, ville, Twyford, Berks. [

ROVER 5-6h.p. 1919 Combination, dynamo ligh hood, screen, just overhauled; £90, or near —Central Garage, Bromley, Kent. [

T.T. Rover 3½h.p., in splendid mechanical dition, enamel unscratched; £40; call for —Snow, Laurel St., Dalston, E.8. [

ROVER 1921 3½h.p., 3-speed, with coachbuilt car; new machine; fully guaranteed; £1 P. J. Evans, John Bright St., Birmingham. [

1922 4h.p. Rover, 3 speeds, all-chain drive; better value cannot be obtained.—Of Agents, White Bros., Northgate, Darlington. [

ROVER 1917 3½h.p. Combination, lamps, etc.; £65.—Elce, Ltd., 15-16, Bishopsgate Av Camomile St, E.C.3. 'Phone: Avenue 5548. [

3½h.p. Rover, 3-speed hub, engine recently vated Rover Co., new tyres, sound order; —Lulworth House, Tilehouse Rd., Shirley, Birmingham. [

ROVER 3½h.p. C.B. Combination 1914, 3-s foot clutch, accumulator lighting set, wants ing, Easting; offers.—Winder, 28, Binfield Clapham. [

HOT Stuff.—75 m.p.h., 1921, 3½h.p. Rover-Pl son, accessories, long plated exhaust, perfect low mileage, unscratched; bargain, £68.—9, Ea Crescent, Earl's Court. [

1919-20 5-6h.p. Rover-Jap, Henderson Elite sid windscreen, electric lighting, aluminium Binks, Watford trip speedometer, little used, pa £100.—25, Wellington St., Slough. [

LEICESTER.—5-6h.p. 1920 Rover Combina windscreen, luggage carrier, speedometer, el lighting, etc., in excellent condition; £110 or offer.—Thornwood, Stoughton Rd., Leicester. [

ROVER 1920 5-6h.p. Combination, with dy lighting, £110; also 1919 ditto, £100; 5-6h.p. combination, £75; 1921 3½h.p. all-chain £85; exchanges.—Newnham Motor Co., 223, Ham smith Rd., W.6. 'Phone, Hammersmith 80. [

B30 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Rover.

10.—Rover 1914 3½h.p., 3 speeds, with coach-built sidecar, three lamps, horn, apron, etc., practically unsoiled, full year's tax paid.—Bey Street Garage, Camden Town, N.W.1. [9967

*Spare Parts.*

ER Spares. Immediate delivery.—Kays, 8, nd St., Ealing. [7225

### Royal Ruby.

p. Royal Ruby, good condition; £23.—Kemp, 2, Southfield Rd., Chiswick, W.4. [9648

) Royal Ruby, Villiers, new condition, year's tax; 25 guineas.—Fersfield, Westbury Road, alden. [9928

p. Royal Ruby, 2-speed, Villiers engine, condition as new; £40, or near offer.—Smith, 11, on, near Lewes. [9946

p. Royal Ruby, 1917, Villiers engine, splendid condition, fully equipped, licensed; £25.—on, Cambria Avenue, Ellesmere. [1007

RAND new 1921 Sports Model Royal Ruby 5½h.p., 2-speed, kick start; £60 to clear; would ghtweight in part payment.—Lofts, Spital St., rd. [8876

AL RUBY 1918 Combination 8h.p., fully uipped, tax paid, pillion seat, maker's original unsoiled; £95.—Bunting's Motor Exchange, tone. [9711

8h.p. Royal Ruby—the spring frame combination par excellence—fitted with interchangeable are wheel, luggage and petrol carrier, Easting n screen, lamps, horn, etc., all on, at £185; iate delivery from the agent for all high-class k as usual.—Sam. E. Clapham (Motors), 27, ell St., Greenwich. 'Phone, 751. [5893

### Rudge.

MLEY, Kent.—Rudge Agents, J. L. Love and . [1331

GE 3½h.p. Multi and 3-speed chain-drive odels.—Longman, Salisbury. [9619

p. Rudge-Multi 1920 I.O.M.; £62/10.—Wauchope's, 9, Shoe Lane, London. [7861

) Rudge-Multi, fully equipped, and in excellent order; £40.—114, Brixton Hill. [9497

p. Rudge, fixed gear, first-class order, lamps, etc.; £29.—Dyer, 552, Harrow Rd., W.9. [8903

GE-MULTI 1921, splendid condition, tax paid; 65, must sell.—15, Red Lion St., Woolwich. [8887

4 Rudge, 3½h.p., good; £27/10.—Shepherd, Enfield Highway. 'Phone: Waltham Cross 31. [0848

p. T.T. Rudge, in excellent condition, very fast; £35.—Moseley, Kirby Muxloe, Leicester. [9989

2 3½h.p. T.T. Rudge, brand new, in stock; list price.—C. A. Blay, 192, Heath Rd., Twicken- [1092

GNS.—Rudge coachbuilt Combination, 2-speed, N.S.U., smart int.—Smith, Claremont Garage, ool. [9942

GE-MULTI 1915, first-class condition, new back heel, new tyres; £35.—Bowling, Chemist, Pem- Dock. [8968

p. Rudge-Multi, 1921, August, new, fully equipped; £60.—101, Wilmslow Rd., Didsbury, nester. [9245

p. Rudge, fast, splendid condition; £48; any amination.—Tongue, 53, Fassett Rd., Kingston- mes. [9374

GE, 3½h.p., clutch model, perfect condition; ial; £45, offers.—Bennett, Wymondham, Oak- utland. [9197

) I.O.M. Rudge-Multi, small mileage, engine just overhauled, speedometer; £42.—7, South Park, d., Croydon. [9253

2 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, ill Hill, N.10. [0791

—Clutch Model Rudge 3½h.p., all accessories.—mith's, 86, Chalk Farm Rd. (opposite Chalk Tube Station). [9887

3½h.p. Rudge-Multi touring model, lamps, horn, tax, guaranteed; 28 gns.—Smith, Clare- Garage, Blackpool. [9940

p. Rudge, clutch, thoroughly overhauled and re-enamelled, smart appearance; £29.—282, hans Rd., Watford. [9539

1 Rudge-Multi, as new, mileage 300, T.T. bars, pedal starter, full tax paid; £64.—9, Havana Wimbledon Park, S.W. [9184

is the price of a new Rudge. Get it from the gents; in stock; cash or payments.—Knight's, Upper Tooting Rd., S.W.17. [0836

GE, 1919, 5-6h.p., Multi gear, chain-cum-belt drive, Rudge sidecar, all lamps; £75.—Maude's, reat Portland St. London. [1142


# *JUST WHAT YOU WANT!*

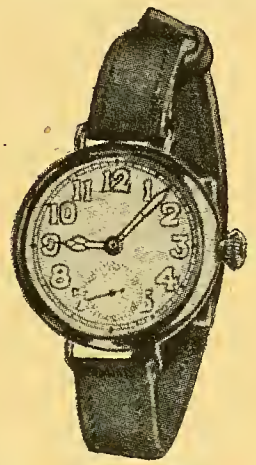
AFTER many experiments in trying to evolve an absolutely accurate time-keeper for Motor Cyclists, we now offer you the

## "LIMIT" Wrist Watch

and the

## "LIMIT" Handle Bar Watch

both the acme of perfection.



Both have luminous dials and hands of the best quality. Whilst not claiming the impossible for these watches, we back our opinion with an honest, straightforward guarantee that the variations do not exceed 10 seconds per day under any conditions, and it stands good for two years from date of purchase. It is the watch which will never let you down in appointments or in the trial runs, when accurate time is of importance. To introduce this watch we are offering it at much below usual price, and will give you a special guarantee insuring it against accidents for one year. The following are a few points of quality: Jewelled, Breguet hair-spring, interchangeable parts, nickel damaskeened movement, timed within 10 seconds per day, two years' guarantee, hard enamel dial, foolproof easy winding, prices including postage.

**Wrist Watches W.64, Nickel Case,**
**£3 : 15 : 0** Usual Price, **£4 : 18 : 0**

**W.65, Silver, H.M. Case,**
**£4 : 15 : 0** Usual Price, **£5 : 18 : 0**
**Handle Bar Watches Ditto.**

# FATTORINI

***Watch and Clock Specialist***

**ORMSKIRK, LANCS.**

**All makes of Motor Clocks and Watches repaired at reasonable rates.**

*Please make all cheques payable to Messrs. Fattorini, and crossed* ——— *& Co.*


## MOTOR CYCLES FOR SALE.

### Rudge.

3½h.p. Rudge-Multi, 1919, and Canoelet Minor sidecar, complete with tools; £75.—R. W. Atkins, "Royden," Parkhurst Rd., Bexley. [1040

1921 5-6h.p. Rudge-Multi, brand new, shop-soiled; £88, for quick sale.—Shepherd, Enfield Highway. 'Phone: Waltham Cross 31. [0849

3½h.p. Rudge-Multi Combination, excellent condition, any trial; £45; seen by appointment.—G. P. C., 7, Florence Terrace, Ealing, W.5. [9633

RUDGE-MULTI, 3½h.p., and coach-built sidecar, mechanically perfect, lamps, speedometer, etc.; £45, or near offer.—357, High Rd., Ilford. [1223

RUDGE 3½h.p. Combination, guaranteed excellent condition; £60.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1016

RUDGE 3½h.p., 3-speed hub, clutch, lamps, speedometer, full equipment, any reasonable inspection and trial; £35.—Foote, Church St., Pewsey, Wilts. [8976

1921½ Rudge-Multi 3½h.p., I.O.M., low mileage, licensed 1922, fully equipped, absolutely new condition; £60.—Smith, 29, Lower Clapton Rd., E.5. [9691

RUDGE-MULTI, 3½h.p., 1914, tax paid, lamp, mechanical horn, £9 overhaul, new Dunlop, belt; £30, near offer.—61, Kensington Avenue, Manor Park, E.12. [9223

6h.p. Rudge-Multi Combination, exceptionally good, equipped, spares, guarantee, cash or solo part, offers wanted.—Estate Office, 43, South St., Ponders End. [9578

RUDGE-MULTI, new 1922, 3½h.p., T.T. Isle of Man; £77; in stock.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0071

RUDGE-MULTI, 3½h.p., September, 1919, stored 1921; engine 16914, clutch, starter, new heavy Dunlops, good condition; £48/10.—Morris, Printer, Worcester. [9229

1920 7-9h.p. Rudge Combination, under 5,000 miles, Lucas accessories, practically new; best offer over £90.—Simmons, 13, Jubilee Crescent, Wortholme, Gainsboro. [1097

1920 Rudge-Multi 5-6h.p. Combination, little used, in good order, with lamps (3), tools, etc.; trial given; £80, or offer.—Dennis, Watton Rd., Knebworth, Herts. [9104

RUDGE 3½h.p., perfect condition, Grado gear, black wicker sidecar, new tyre, belt, Easting windscreen, screspray, electric lamps; first offer, £30.—2a, Zennor Rd., Balham, S.W.12. [9517

£60.—1920 5-6h.p. Rudge-Multi, Rudge touring sidecar, Cameo screen, Lucas K.R. lamps, tools, spares, appearance, condition as new; photo, stamp.—Bacon, Offington Lane, Worthing. [9034

RUDGE 1922 3½h.p. Isle of Man Models for delivery from stock at reduced price of £77; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1030

RUDGE, I.O.M., 1920, lamps, speedometer, special engine with Zephyr piston and buffed crankcase, excellent appearance and perfect mechanical condition; £60.—Watson, "Bee" Inn, Denbigh. [9958

7-9h.p. 1921 Rudge-Multwin Combination, licensed for year, done under 1,500 miles, condition and appearance as new; 100 gns.—Hamilton, 69a, Ferrit Rd., East Dulwich. 'Phone, New Cross 1309. [8472

BARGAIN.—1920 Rudge-Multi 3½h.p., lamps, horn, and speedometer, racing piston and cams, fast, new Goodyear oversize tyre, good condition; £55.—E. Godfrey, 4, The Drive, Bounds Green Rd., New Southgate, N.11. [9581

*Spare Parts:*

RUDGE Spares in stock for immediate delivery.—Longman, Fisherton, Salisbury. [9615

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3163

### Saltley.

£35 Bargain.—1922 2¾h.p. Saltley, 2 speeds, fully licensed, absolutely new, not run 20 miles, unscratched, perfect.—89, East Hill, Wandsworth. [9953

### Sarolea.

£14.—5-6h.p. Sarolea twin, brand new tyres, fast.—King, Egrove Farm, Oxford. [9734

### Scott.

BROMLEY, Kent.—Scott Agents, J. L. Love and Co. [1324

SCOTT, 3½h.p. Squirrel, just received; £105.—Nelson's, Rhyl. [9307

3¾h.p. Scott and Sidecar, 1914-15; £45.—Wauchope's, 9, Shoe Lane, London. [7860

BRAND new 1922 Scott; owner must sell at once; accept £95.—Box 9739, c/o *The Motor Cycle.* [9072

SCOTTS, either model, West of England Agent is Gibb, 100, Northgate, Gloucester. 'Phone: 852. [8126

## MOTOR CYCLES FOR SALE.

### Scott.

SCOTT Service Depot, Gt. George St., Liverpool.—Scott motor cycles, Scott sociables, efficient Scott service. [8329

F.O.C.H. have a 1920 Scott, brand new condition; also 1914 combination.—5, Heath St., Hampstead (near Tube). [9278

SCOTT, £40 or cash adjustment, for late Rudge; evenings, Sundays.—Watts, 417, Caledonian Rd., Holloway, N. [9036

SCOTT 1910, less carburetter and back chain, good order, engine new parts; £15, or near.—Sowerby, Beelsby, Grimsby. [7600

SCOTT, 1914, 3½h.p., 2speed, all chain drive, Millford sidecar, all lamps; £50.—Maude's, 100, Great Portland St. London. [1141

£34.—Scott combination, engine, gears, chains, all new, lamps, accessories, complete, licensed, smart; bargain.—79, Castleton Mansions, Barnes. [9202

SCOTT Combination 1914, lamps, horn, speedometer, good tyres, serviceable machine, ride away; £40.—Owner, 50, Horsham Av., North Finchley. [8965

1921 Sports Scott, perfect condition, Bonniksen, mirror, Klaxon, lamps, insured and taxed for season; photo.—James, Stewart St., Nuneaton. [9689

SCOTT Combination, electric horn, dynamo lighting, speedometer, almost as new, run only 3,125 miles; £115.—J. S. Horsfall, Motor Engineer, Nelson. [607

SQUIRREL Scott, absolutely brand new, tax paid, Lucas, accessories; test card, 2/3/22, 12-5 b.h.p.; 98 gns.; exchanges.—Kent's, 417, Lord St., Southport. [9588

SCOTT and sidecar, Gloria wicker, splendid condition, with lamps, luggage grid, Tan-Sad, etc.; bargain, £50, or near.—15, Temple Rd., Hounslow, Middlesex. [8895

£65.—1920 Scott, mechanically sound, smart appearance, electric lamps, Lucas horn, tyres as new, little used, ride 50 miles.—Wilson, 27, Bath St., Market Harborough. [8947

1921 Scott Combination, complete with all accessories, excellent order, any trial or examination, tax and insurance paid to December; £110.—McLay, 13, Morley Rd., Doncaster. [9051

£100.—1922 Scott Squirrel, mileage negligible, indistinguishable from new, lamps, horn, other extras, full tax paid, cost £120, too fast.—28, Stockton St., Moss Side, Manchester. [9240

3¾h.p. Scott, 1912, 2-speed, free, all chain, 650×65 heavy Dunlops, as new, been stored; running, but needs little tuning; gift; 26 gns.—Herefords, Box 9786, c/o "The Motor Cycle." [9835

1920 Sports Scott, Lucas lamps, Stewart horn, 2in. copper exhaust, new Dunlop Extra-Heavy tyres, chains, 55 m.p.h., 75 m.p.g., used week-ends; £80, or nearest.—50, King's Rd., Leeds. [1006

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8352

1920 Sports Scott, Lucas lamps, horn, Binks, spare 75-tooth sprocket with chain for sidecar work; 1921 rubber footboards, tools, fine condition; private owned; £72/10.—Lambert, 4, Aberdour Gardens, Goodmayes, Essex. [9044

1920, August, Scott 3¾h.p. Sports, not ridden until November, condition as new, Bosch magneto, speedometer, etc, new 3in. tyre, many spares; £85, or nearest.—Chapman, 60, Onslow Gardens, South Kensington, S.W.7. 'Phone: Ken 1009. [9779

*Spare Parts:*

SCOTT Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7226

SOUTH London Scott Service Depôt.—Scott Spares: Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone 1129. [8353

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list, stating year of manufacture. [0751

### Singer.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. Singer, 1910, N.S.U. gear; £25. [1302

BROOKLANDS 2¾h.p. Singer, 1914, 2-speed countershaft, as new, spares, licensed; offers.—Walter, Kiaora, Westmoors, Dorset. [1004

4¼h.p. Singer with Coachbuilt Sidecar, 2 speeds, free engine, splendid condition; bargain.—Pilcher, 19, Grosvenor Place, Margate. [9216

39 GNS.—Singer 3½h.p. coachbuilt Combination, 3-speed and clutch, in splendid running order; also Lightweight, 2-speed, 29 gns.—53, Swaffield Rd., Wandsworth. [8009

*Spare Parts:*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

# There is just time to get it for EASTER.

**Any machine in this list can be equipped with accessories, Registered, and the number plates written—in fact, ready for the road—within a few hours from receipt of instructions.**

## NEW 1922 MODELS.

| | |
|---|---|
| **A.J.S.,** 7 h.p., Model D Standard Combination .... | £175 |
| **A.J.S.,** 7 h.p., Model D Combination, with dynamo lighting | £198 |
| **ALLON,** 2½ h.p., 2-stroke, 2 speeds, clutch and kick-starter | £60 |
| **ARIEL,** 3½ h.p., Sports Model | £87 10 |
| **B.S.A.,** 4½ h.p., Model H2, all-chain | £110 |
| **B.S.A.,** 4½ h.p., Model H2, Combination | £142 |
| **B.S.A.,** 4½ h.p., Model K2, chain-cum-belt | £107 |
| **B.S.A.,** 4½ h.p., Model K2, Combination | £139 |
| **B.S.A.,** 6 h.p., Model E, all-chain | £132 |
| **B.S.A.,** 6 h.p., Model E, Combination | £164 |
| **DOUGLAS,** 6 h.p., Combination, detachable wheels, lamps, horn and windscreen | £165 |
| **LEVIS,** 2½ h.p., 2 speeds, clutch and kick-starter... | £60 |
| **MATCHLESS,** 8 h.p., Model H2 Standard Combination | £170 |
| **MATCHLESS,** 8 h.p., Model H2 Combination, with dynamo lighting | £188 |
| **MATCHLESS,** 8 h.p., Model J Sports Combination . | £160 |
| **MATCHLESS,** 8 h.p., Model H 2-seater Combination, with dynamo lighting | £193 10 |
| **NEW IMPERIAL,** 2¾ h.p., Model No. 2, chain-cum-belt | £69 |
| **NEW IMPERIAL,** 2¾ h.p., Model No. 3, all-chain drive | £73 |
| **N.U.T.,** 3½ h.p. Twin, Model M, chain-cum-belt .... | £100 |
| **N.U.T.,** 5 h.p., Model M, all-chain drive | £120 |
| **ROYAL ENFIELD,** 8 h.p., Standard Combination.. | £140 |
| **ROYAL ENFIELD,** 8 h.p., Combination, with dynamo lighting | £158 |
| **ROYAL ENFIELD,** 2¼ h.p., 2 speeds | £55 |
| **ROYAL ENFIELD,** 2¾ h.p., 2 speeds, with kick-starter | £57 |
| **ROYAL ENFIELD,** 2¾ h.p., Sports Model | £55 |
| **RUDGE-MULTI,** I.O.M. Model | £77 |
| **RUDGE-MULTI,** 3½ h.p., I.O.M. Model, with foot-starter | £77 |
| **TRIUMPH,** 4 h.p., Model H, chain-cum-belt ..... | £105 |
| **TRIUMPH,** 4 h.p., Model S.D., all-chain | £115 |
| **TRIUMPH,** 2¼ h.p., 2-stroke, 2 speeds | £65 |
| **ZENITH-BRADSHAW,** 3½ h.p., Model A, Gradua gear | £113 |

*EXCHANGES AND DEFERRED PAYMENTS ARRANGED.*

**Our secondhand machines are submitted to a complete overhaul and are just as fully guaranteed as when they left the manufacturers' works new.**

## SECONDHAND.

| | |
|---|---|
| **DOUGLAS,** 1917, 4 h.p. Combination, 3 speeds, clutch and kick-starter | £85 |
| **ROVER,** 1919, 3½ h.p., 3 speeds, clutch and kick-starter, lamps, horn, and Millford Skiff sidecar .. | £76 |
| **ENFIELD,** 1921, 8 h.p. Combination, 2 speeds, clutch and starter, Lucas Magdyno lighting, horn, screen, and side curtains, tax paid | £125 |
| **ROVER,** 1920, 3½ h.p., 3 speeds, clutch and kick-starter, lamps, horn and Millford Corvette sidecar | £85 |
| **CLYNO,** 1918, 6 h.p. Combination, 3 speeds, clutch and kick-starter, detachable wheels | £95 |
| **NEW IMPERIAL,** 1918, 8 h.p. Combination, 3 speeds, clutch and kick-starter, speedometer, lamps, horn, hood, screen | £75 |
| **BROUGH,** 1920, 5 h.p., 3 speeds, clutch and kick-starter, lamps, horn, speedometer, Henderson Elite sidecar, Easting screen, tax paid | £110 |

WRITE FOR COMPLETE LIST.

## THE EASTERN GARAGE CO.

(Official Repairers to R.A.C., A.C.U., A.A., & M.U.)

**418 ROMFORD ROAD, FOREST GATE, E.7.**

Telephone..... 490 East Ham.
Telegrams..... "Egarco, London."

## MOTOR CYCLES FOR SALE.

### Spark.

SPARK 1922 models, Villiers engine, flywheel neto, £39/18; also 2-speed kick starter mo stock, £52/10.—Eagles and Co., 275, High St., London.

### Sparkbrook.

SPARKBROOK Model A 1920, flywheel mago speeds, new condition; £39.—Eagles and Co. High St., Acton, London.

SPARKBROOK-VILLIERS, 2¾h.p., 2-speed, equipped, copper exhaust, like new; £37 Garden Avenue, Mitcham, S.W.

SPARKBROOK 1919 2½h.p., 2-speed, all series, tax paid, splendid condition, runnin fect; £40.—Gerard, 47, Elborough St., South S.W.18.

### Sun.

SUN-VILLIERS, equipped, new magneto, ru order; £25.—6, Esplanade, Burnham, Some

1921 (October) Sun-Vitesse, tax paid, equippe gns.; exchanges.—Kent's, 417, Lord St., S port.

SUN-VITESSE rotary valve T.T. show m £49/10.—C. A. Blay, 192, Heath Rd., Twi ham.

NEW 2¾h.p. 1921 Sun-Vitesse, 2-speed, clutch, starter, lamps; cost £90; £48.—30, Molewood Hertford.

SUN-VITESSE 2¾h.p., 2-speed, kick starter, new; £45, or offer.—C. A. Blay, 192, Rd., Twickenham.

SUN-VITESSE 1922, new, 2¾h.p., 2-speed, 2-st clutch, K.S.; £57/15.—Elce, Ltd., 15-16, Bis gate Avenue, Camomile St., E.C.3. 'Phone: A 5548.

LATE 1921 Sun-Vitesse, scarcely used, 2¾ Stnrmey-Archer, 2-speed, lamp, horn, licensed; £45, or near offer.—Elliott, 7, Brondes Park Mansions, N.W.6.

FOR Sun, J.A.P., or Sun-Vitesse, get in touch the sole North London agents. Models in single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, 50 gns. Send for catalogues. Trade supplied.— Garage, Broadway, Muswell Hill, N.10.

### Sunbeam.

BROMLEY, Kent.—Sunbeam agents, J. L. and Co.,

SUNBEAM 3½h.p., new pattern, new; £1 Nelson's, Rhyl.

3½h.p. Sunbeam, 1919; £85.—Wauchope's, 9, Lane, London.

LATE 3½h.p. Sunbeam, absolutely unscrate £85.—17, St. Charles Sq., W.10.

SUNBEAM, new 1922 Light Sporting model ally in stock; £136/10.—Moss, Wem.

KICKHAM, Stokes Croft, Bristol. Sole Dis Agent for Sunbeams; unequalled service, rep etc.

CROSS, Effingham Sq., is agent for Sunbeams Rotherham, 3½h.p. and 4¼h.p. models stock.

1921 Sports Sunbeam, condition throughout as £100.—Graham P. Dodge, Frome. 'Pho Frome 30.

SUNBEAM 3½h.p. 1919, all chain, perfect co tion throughout; what offers?—322, Green La Finsbury Park, N.4.

SUNBEAM 1919 3½h.p., 3-speed, all-chain d Sunbeam sidecar, all lamps; £105.—Maud Walsall Garage, Walsall.

1919 3½h.p. Sunbeam, fully equipped; £70; d 1917, £62/10.—Hillier, Side Bell, 9, Walliog Avenue, North Kensington.

SUNBEAM 3½h.p. 1920, semi-T.T. bars, long haust, Lucas 462 lamp, horn; £90.—Willia 19, Portland St., Cheltenham.

SUNBEAM 1920 3½h.p. Sports, 3-speed, all-ch drive, semi-T.T. bars, first-class condition; £10 Maudes', 100, Paris St., Exeter.

SUNBEAM 1920 3½h.p. Combination, L equipped, speedometer, Easting, licence paid.— price apply, Bunner, Montgomery.

SUNBEAM 8h.p. M.A.G. engine, very good Sunbe sidecar, all accessories; bargain, £150.— Palmerston Rd., Southfields, S.W.

1921 3½h.p. Sunbeam and Sunbeam Side speedometer, licensed, excellent condition; gns.—Edwards, 101, Gt. Portland St.

1919 3½h.p. Sunbeam Combination, in fine dition, seen any time; £85.—Hillier, Side 9, Wallingford Avenue, North Kensington.

500c.c. Sports Sunbeam, 1921; 90 gns. Sunbeam Combination; 120 gns. changes.—Kent's, 417, Lord St., Southport.

1920 3½h.p. Sunbeam Combination, only used months, fine condition; £105.—Pike, Church St., Chelsea. 'Phone: Kensington 137.

## MOTOR CYCLES FOR SALE.

### Sunbeam.

3h.p. Sunbeam, 2-speed, K.S., thoroughly overhauled and indistinguishable from new; £60, 4er.—8, Hinstock Rd., Handsworth, Birmingham. [9107

19 Sunbeam Combination 3½h.p. Sports Model, lamps, tools, etc., perfect condition; £80.—2, eaville Place, Gloucester Rd., South Kensington. [9762

h.p. 1919 Snubeam Combination, spare wheel, equipped, as new; £125; exchange lower power; ivate owner.—106, Sydney Rd., West Wimbledon. [9551

ATE 1921 Sunbeam 3½h.p., semi-sporting, mileage 700, as new, stored winter, Cowey horn, speedoter, lamps; £120; appointment.—1, Albany Gardens, ichmond. [8952

UNBEAM 6h.p., 2-seater, Bowser sidecar, speedometer, lamps, horn, all in excellent condition, es nearly new, tax paid; £95.—Wood, 10, Station t., Horley. [9389

921 Semi-Sports Sunbeam, condition as new, interchangeable wheels, leaf spring fork, mileage der 400, tax paid, insured; £110.—247, Green nes, London, N [9408

UNBEAM, 3½h.p. Sports, August, 1921, 3-speed, special variable carburetter, specially tuned 70 p.h., condition perfect; £96.—9, New Rd., Halesen, Nr. Birmingham. [9016

PORTS Sunbeam, 1921, carefully used, absolutely as new, fully insured, exceptionally fast, with without accessories; best offer.—Seen Sunbeam pot, 157, Sloane St., S.W.1. [9163

920 8h.p. Sunbeam Combination, hood, screen, spare wheel, Lucas lamps, horn, speedometer. n-Sad, just overhauled, condition perfect.—R. ans, 1 Lower Bar, Newport, Salop. [8083

h.p. Sunbeam 1921 Combination, Magdyno, lamps, hood, screen, speedometer, electric horn, spare terchangeable wheels, almost new condition; £180; pointment.—8, Grange Rd., Ramsgate. [9110

h.p. Sunbeam Combination, cream sidecar, hood, screen, dynamo lighting, electric and bulb horns, are wheel, late 1919, small mileage, result as w; £170.—Paxton, 337, Park Lane, Macclesfield. [1203

921 Sunbeam Combination 3½h.p., perfect condition, electric horn, lights, interchangeable spareheel, Cowey speedometer, latest seat, tax paid; £140. M., 2, Queen's Mansions, Queen's Rd., Bayswater, W. [9015

UNBEAM, last year's model, 3½h.p., and Sunbeam Sidecar with screen, interchangeable detachable heels all round, perfectly new; to-day's price, 182/14, will accept £170 cash for this superior nation.—Nelson's, Rhyl. [9295

UNBEAM 3½h.p. 1921 Combination, Magdyno electric lighting, electric horn, speedometer, windreen, hood, spare wheel, fully equipped, as new; nton, Bedfordshire; £160, or nearest offer.—Box 62, c/o *The Motor Cycle*. [9314

919 3½h.p. Sunbeam Combination, 3-speed, clutch, kick start, all-chain drive, lighting set, horn, c., most beautiful running engine, very fast, in autiful condition throughout; £88.—Surgery, 769, omford Rd., Manor Park, London, E. [9850

UNBEAM, 3½h.p. 1920 Combination, perfect, leg shields, Lucas electric fittings, two C.A.V. cumulators, sidecar screen, 3 new oversize tyres, x paid; accept reasonable offer; owner bought car. Dufty, 115, Uppingham Rd., Leicester. [8483

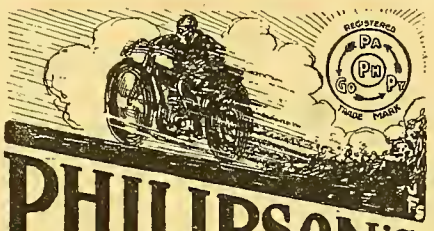
921 3½h.p Sporting Model Sunbeam Motor Cycle complete with lamp, generator, horn, and usual pares, cast aluminium plates, new in April last, and in xceptionally good condition tyres unpunctured; nearest ffer to £110.—Geoffrey Smith, *The Motor Cycle*, oventry [X4285

DECEMBER, 1919, 8h.p. Sunbeam de Luxe Combination, Lucas dynamo lighting, electric and ulb horns, hood, screen, spare wheel, Ralli discs, tepney tyres nearly new, F.E.W. valve lubricators, nee grips, speedometer, etc., mileage 6,000; £185; ny examination or trial (bought car).—Nixon, 41, eepsend Lane, Sheffield. [8971

h.p. F.M.M. Sunbeam (October, 1919), black and gold, 3-speed, K.S., overhauled throughout by akers, plated straight-through exhaust, quantity pares, new tyres, Bonniksen, Tan-Sad, Lucas King of oad lamps, 4,500 miles, perfect condition, any trial, nsurance £150, licensed for year; £90.—Hubbard, 8, ew Rowley Rd., Dudley, Worcester. [8962

921 (October) Sunbeam 3½h.p. Semi-sports Combination, 1922 sidecar, engine No. 153/11582, avishly equipped, new condition, interchangeable heels, licensed and insured for ensuing year; cost ver £180, accept £130, or near offer; trial and xamination, photograph.—Foster, 3 Arrows Hotel, iddleton Rd., Rhodes, nr. Manchester. [9201

SUNBEAM Combination, 8h.p. twin, 1921, engine No. 26/72377/K; run under 1,800 miles, in perfect ondition and equal to new, equipped with Lucas, Magdyno lighting, horn, hood, screen, apron, luggage carier, 4 wheels, covers, and tubes, solid leather suitcase o fit on pillion, all tools, etc., etc.; £175, or first easonable offer; is ready for road.—Proprietress, Bridge House Hotel, Wheatley, near Oxford. [9075




# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED.

**A sweet, silent drive is only obtainable with a**

# Philipson

**No gear box friction.**
**No grinding noises.**

**No wheels or pinions to chew up.**

**The lightest, speediest, and simplest gear on the market for direct belt-driven 4-stroke engines.**

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

## IMMEDIATE DELIVERY.

*Send for Illustrated Booklet.*

**During the past few weeks the following machines have been fitted with**

**PHILIPSON Pulley**

| | |
|---|---|
| Triumph | Arno, |
| Rover, | Rex, |
| Norton, | B.S.A., |
| Douglas, | James, |
| Singer, | L.M.C., |
| Bradbury, | Lincoln Elk, |
| Ariel, | N.U.T.-Jap, |
| Swift, | Humber, |
| Abingdon, | N.S.U., |
| Minerva, | Peugeot, |
| Precision, | Rudge, |
| Matchless, | Quadrant, |
| Ivy Precision, | Alldays, |

Villiers Mark IV.,
and numerous Jap engines.

*What is your make? Write us*

REDUCED PRICE **£7 7 0** Carriage Paid.

**Philipson & Co., Ltd.,**
Astley Bridge, BOLTON, Lancs.

(Established over 50 years.)
Phone: 147 Eagley. 'Grams: "Safety, Bolton."

## MOTOR CYCLES FOR SALE.

### Sunbeam.

SUNBEAM 3½h.p. Semi-sports, 1920 model, interchangeable wheels, thoroughly overhauled, tip-top condition throughout; £90 cash.—Nelson's, Rhyl. [9296

*Spare Parts*

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Sunbeam parts in stock; no waiting. [4952

### Triumph

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £105. Type SD, chain drive, £115; Type LW, lightweight, £65; sidecars from £20 to £50; easy payments 4% extra. Buy direct from the leading Triumph agents: The Premier Motor Co., Aston Rd., Birmingham. [0627

BROMLEY, Kent.—Triumph Agents, J. L. Love and Co. [1320

TRIUMPH, 1912, Sports Model, perfect; £20.—1, Priory Rd., Kew. [9632

1922 Triumphs, all models; catalogues will please; cash or easy terms.

1921 4h.p. Triumph, model H, fully equipped, tax paid for year, exceptional bargain; £86.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [7228

TRIUMPH, new Type H, and all-chain drive models in stock.—Moss, Wem. [1192

1920 C.S. Triumph, lamps, horn, etc., condition as new, gift; £70.—Below.

1918 C.S. Triumph, renovated throughout, 75% new parts, guaranteed 3 months; £70.—Below.

1917 C.S. Triumph, re-enamelled and plated, overhauled, etc., splendid condition; £55.—Below.

1918 C.S. Triumph, as new, 3 months' guarantee; £75.—Below.

TRIUMPH Combination 1917, re-enamelled and plated, bargain; £70.—Below.

WE have several W.D. Triumphs in good condition; £45. Give us a call, we are the Triumph Specialists.—The Hackford Engineering Co., 33, Hackford Rd., Brixton, S.W.9. [1209

NEW 1921 4h.p. Triumph, Model H; £95.—Bounds Garage, 233, High Rd., Kilburn. [9980

1918 Countershaft Triumph, perfect; £47/10.—24, Balliol Rd., North Kensington. [9404

1920 Triumph 4h.p., 3-speed, equipped, all as new; £70.—17, St. Charles Sq., W.10. [9571

BABY Triumph, fully equipped, tax paid to December; £42.—114, Brixton Hill. [9500

4h.p. Triumph, as new, Ricardo piston, wide tank; £60.—"Dugdale," Radford, Coventry. [1048

TRIUMPH Combination 4h.p., 1918, accessories, perfect; £65.—8, High St., Wandsworth. [9861

TRIUMPH 1920 fixed gear Sports, scarcely soiled; £58.—Clark, 7, Exhibition Rd., S.W.7. [8681

1922 Triumph 4h.p., shop-soiled only, never been on the road; £95.—114, Brixton Hill. [9499

1913 3-speed Triumph, splendid condition, year's tax; £29.—185, Shernhall St., Walthamstow. [9745

£16.—3½h.p. Triumph, Bosch magneto, splendid running order.—King, Egrove Farm, Oxford. [9732

COACHBUILT Triumph Combination; £40.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [9987

BRAND new Model H Triumph, unused, unregistered; £84.—51, Upper Richmond Rd., Putney. [1241

TRIUMPH Coachbuilt Combination, good condition, trial given; £48.—115, George St., Romford. [9828

CROSS, Effingham Sq., is agent for the Trusty Triumph in Rotherham. All models from stock. [1118

4h.p. 1919 Triumph Combination, good condition.—Gerhold, 119, The Estate, Rosendale Rd., Herne Hill. [9381

TRIUMPHS.—A fine assortment of all models in stock at prices to suit all.—Ross, 86, High Rd., Lee [5020

£18.—3½h.p. Triumph, overhauled, guaranteed, single speed.—Chamberlain, 769, High Rd., Leyton, E.10. [9010

1922 Triumphs; immediate delivery all models.—Kemp's Garage, Triumph Agents, Louth, Lincs. [9348

TRIUMPHS.—All models from stock, including Model R.—King and Harper, Bridge St., Cambridge. [8487

1918 Late Triumph Countershaft, good condition, guaranteed; £49.—51, Upper Richmond Rd., Putney. [1241A

TRIUMPH 4h.p. Countershaft, lamps, Klaxon, pump, tools, Dunlops; £45.—2, Madrid Rd., Barnes. [9840

## MOTOR CYCLES FOR SALE.

### Triumph.

BABY Triumph, good order, with accessories, tax paid; £35.—Sheppard, 108, The Crescent, Slough. [1065

TRIUMPH 4h.p. 1916 sidecar, electric lighting, all on; £85.—Bolding, 14, Fernside Rd., Balham, S.W.12 [6330

1918 Countershaft Triumph, perfect; £48.—Hillier, Side Bell, 9, Wallingford Avenue, North Kensington. [1033

1914 Triumph Combination, overhauled and renovated; £45; tax paid.—112, Gorton Rd., Coventry. [1049

£17/10.—Triumph 1910, excellent condition, tax paid to June.—35, Annesley Avenue, The Hyde, Hendon. [9793

48 GNS.—4h.p Triumph, countershaft, Binks, good tyres, ride away.—181, Newton Rd., Burton-on-Trent. [9934

3½h.p. Triumph, new cylinder, discs, Hunt's, Brooks', tax paid; £28/10.—Harris, 15, Furlong Rd., Holloway. [9518

TRIUMPH Junior, 1921, lamps, horn, spare belt, perfect order; £55, lowest.—Bush, King's Parade, Isleworth. [9085

1920 Baby Triumph, accessories, tax paid, excellent; £38; exchanges.—Kent's, 417, Lord St., Southport. [9591

TRIUMPH (countershaft) 1918; £40; callers only.—Davis, 46, Blandford Rd., Bedford Park, Chiswick, W.4. [9725

1918 Triumph-Gloria outfit, first-class condition; £75.—Rhind and Co., Stone Place, Rusholme, Manchester. [9622

19 GNS. — 1912 Triumph, N.S.U. 2-speed, modernised; ride away.—183, Canterbury St., Gillingham. [9129

TRIUMPH 1919 Combination, fully equipped, tax paid 1922; £85.—Bunting's Motor Exchange, Wealdstone. [9708

TRIUMPH, chain-driven model, fully equipped, mileage 100; £95.—Bunting's Motor Exchange, Wealdstone. [9707

EASTER.—Triumph, 1918, as new, fully equipped; £55.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. [9922

TRIUMPH Countershaft, 2-speed, drop frame, fine condition, equipped; £28.—25, Ravensbourne Rd., Catford. [9413

3½h.p. Triumph 2-speed Lightweight Combination, lamps, speedometer; £35.—Sharp, 11, Vorley Rd., Highgate. [9918

TRIUMPH-GLORIA Combination, C.S., electric lamps, Klaxon, perfect; £70.—120, Sutherland Rd., Croydon. [1072

1918 4h.p. Triumph, Philipson, Amac, engine overhauled; £45.—Summers, Beechcroft, Rustington, Sussex. [9806

TRIUMPH Combination, 1919, 4h.p., tax paid, splendid condition; 78 gns.—6, Thurlow Rd., Hanwell, W.7. [9637

TRIUMPH 1917 Model H, countershaft, Montgomery sidecar; bargain, £67.—365, King St., Hammersmith. [9704

TRIUMPHS.—All new 1922 models in stock; £65, £105, £115, £120. Triumph Spare Agency.—Nelson's, Rhyl. [9309

TRIUMPH 2¼h.p., 1919, with all accessories, very little used; £37/10.—41, Lovelace Rd., Surbiton, Kingston 1224. [9326

TRIUMPH 4h.p. 1920, condition as new, fully equipped; £75.—Vincent, 50, Cranmer Rd., Forest Gate, E. [9457

BABY Triumph, recently overhauled by makers, in perfect condition and complete; £26.—Springett, Billericay, Essex. [9079

3½h.p. Triumph, 2-speed, clutch, tax, perfect order and condition; £28.—14, Gordon Rd., High Wycombe, Bucks. [9600

TRIUMPH 3½h.p., in good order; £16; write appointment.—H. R. Hall, Hutton Grove, North Finchley, London. [9077

1915 3½h.p. T.T. Triumph, exceptional condition, fast, flexible; 29 gns.—Smith, Claremont Garage, Blackpool. [9937

TRIUMPH Junior 1921, perfect, equipped, taxed, mileage 2,000; £45.—12, Stanford Rd., New Southgate, N.11. [9915

TRIUMPH 1919 4h.p. Combination; £95.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1024

19 GNS.—1912 3½h.p. Triumph, 2-speed, lamps, Klaxon, guaranteed. — Smith, Claremont Garage, Blackpool. [9939

1918 Triumph, lamps, licensed, speedometer, perfect; £48.—37, Canterbury Rd., Ball's Pond Rd., Dalston, N.1. [1250


An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

Insurance Policies

**IMPORTANT AGENCY EXTENSION**

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS

Address—Agency Dept.,

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED**

Head Office:

**77, Cheapside, London, E.C.2.**

*Telephone: City 9831 and 9832.*
*Telegrams: "Autoinsure, Cent. London."*


## MOTOR CYCLES FOR SALE.

### Triumph.

4h.p. Triumph, model H.; £105; immediate livery.—Shepherd, Enfield Highway. Te Waltham Cross 31. [08

TRIUMPH Combination, 3-speed, splendid conditi £38; take Lightweight part.—57, Kenbury Camberwell, London. [94

1920 4h.p. Triumph, equipped, licensed, spee meter, excellent condition; 80 gns.—Edwar 101, Gt. Portland St. [96

£29.—T.T. Triumph (believed 1914), Philips decompressor, all accessories, extremely fast.— Minet Av., Harlesden. [92

F.O.C.H. for Triumphs; latest models in stock. A 1921 solo and 1918 combination.—5, Heath Hampstead (near Tube). [92

1921 (late) Triumph-Henderson, little used, excell condition, hood, cameo, accessories.—Chilt House, Sudbury, Suffolk. [62

1919 Triumph, Lucas lamps, etc., excellent c dition, fast, any trial; 55 gns.—Spearma Parks, Crediton, Devon. [93

TRIUMPH, 1913, 3-speed and clutch, lamps, ho tools, tax paid, splendid condition; £33.—3 King St., Hammersmith. [96

27 GNS.—3½h.p. Triumph, Mabon clutch, sin speed, splendid running order, all on.—1 Earlsbrook Rd., Redhill. [97

TRIUMPH 1921, Model H, fully equipped, licens 1922, every detail in the pink; £90.—Buntin Motor Exchange, Wealdstone. [97

TRIUMPH, 1918, 3-speed, clutch, kick start, ful equipped, tax paid; genuine bargain, £56.— Bishops Mansions, Fulham. [91

TRIUMPH, late 1920, direct belt drive, very fa splendid condition; £55; after 5.30.—Millar, Penwortham Rd., Streatham. [88

1920 T.T. Triumph, hardly used, perfect conditio best equipment; low price quick sale.—Bentle Park Rd., Shenfield, Essex. [91

TRIUMPH, 1916, 4h.p., 3-speed, kick start, chai cum-belt drive, all lamps; £65.—Maude's, 10 Great Portland St., London. [11

£19.—1911 Triumph, clutch, K.S., tax, new tyre tax another sports, very posh; £29.—Ewe Newton Rd., Burton-on-Trent. [99

WAUCHOPE'S, 9, Shoe Lane, London, E.C.4.— 4h.p. Triumph, Model H, and Sidecar, 1918, ta paid, fully equipped; £77/10. [12

COUNTERSHAFT Triumph, latest, gear-chang fully equipped; 49 gns.; would exchange.—2 South Lambeth Rd., Stockwell. [12

1919 Triumph Model H, countershaft, origin enamel and plate, splendid condition; £68/10.— 365, King St., Hammersmith. [97

TRIUMPH 3½h.p., good condition; must sell; r liable; appointment; £25.—C.L.F., "Drayton, Bramber Rd., North Finchley. [91

TRIUMPH 4h.p., 1917, 3-speed countershaft, ne lamp set, fast and in perfect order; £49/10— 261, Mitcham Lane, Streatham. [10

TRIUMPH-GLORIA Combination, December, 191 just overhauled, bargain, all on, tax, etc.; £95.— Savin, 74, Baring Rd., Lee, S.E. [89

£45!—4h.p. 3-speed countershaft Triumph, splen did condition; another, reconditioned, £50.—3 Canning Crescent, Wood Green. [90

TRIUMPH 1922, model SD, new, in stock; £115.— Elce, Ltd., 15-16, Bishopsgate Avenue, Camomil St., E.C.3. 'Phone: Avenue 5548. [00

TRIUMPH, all models, immediate delivery; e changes or deferred payment.—Edwards, 5 Harrington Rd., South Kensington. [96

TRIUMPH 4h.p., late 1919, excellent condition Whitley sidecar, licence paid, £75; or would se solo, £65.—Corwen Motor Co., Corwen. [96

1921 (delivered April) 4h.p. Triumph Solo, al chain, T.T., accessories; £100 or nearest.—Ho wood, 12, Park Place, Eltham, S.E. (P) [98

1920 Triumph, 3 speeds, countershaft, clutch, kic start, in beautiful condition; exchange, or se 79 gns.—53, Swaffield Rd., Wandsworth. [80

1920 Triumph, condition perfect, practically bran new, with sidecar, lamps, etc.; £75, quic sale.—Henderson, Fairholm, Fairwarp, Sussex. [88

1920 Triumph, countershaft, Lucas lamps, licensed date, condition guaranteed; £67/10.—37, Car terbury Rd., Ball's Pond Rd., Dalston, N.1. [125

4h.p. T.T. Triumph, 1917, clutch, kick start, speed, countershaft, tax paid December, lamps etc.; £58.—230, Underhill Rd., Dulwich, S.E. [92

IN Stock.—1922 4h.p. Triumph, chain and belt driv 3-speed, clutch and kick starter; £105.—D. an S. Autocar Co., 33, The Parade, Golders Green. [98

1920 Triumph Combination, fully equipped an exceptionally good condition; 73 gns.—Lon man Bros., 17, Bond St., Ealing Tele.: 689. [130

## MOTOR CYCLES FOR SALE.

### Triumph.

RIUMPH 4h.p., clutch model, pedal start, free engine; exchange for higher power or sell £30.—ing, 46, Eastern Rd., Kemp Town, Brighton. [9059

HEFFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stacey, umph Service Depot, 12, Ecclesall Rd., Sheffield. [0812

)19 Triumph Sporting Combination, re-enamelled, painted, engine guaranteed, any inspection; £85.—trangways Dixon, Middlesex Hospital, Oxford St. [9416

58.—1916 4h.p. 3-speed Triumph countershaft coach built Combination, splendid condition, fully dipped.—Pride, 156, Stockwell Rd., Brixton, S.W.9. [9799

h.p. 1914 Triumph and Henderson Lightweight sidecar, Sturmey 3-speed and F.E., good condi t; £49.—20, Forest St., Latchford, Warrington [9743

RIUMPH centre frame forks, £5; variable pulley gear, new, £2; Clyno body, £4/10; electric set, 11 gns., £5.—57, Kenbury St., Camberwell, Lon- [9455

OUNTERSHAFT Triumph, just overhauled, 3-speed, K.S., guaranteed perfect; any trial; accept £42 quick sale.—T., 49, Heaton Rd., Peckham, Lon- [9384

RIUMPH Junior, practically new, mudshields, footboards, horn, any examination, tyres unpunc ed; £46.—Plumridge, 6, Station Rise, Marlow, ks. [9443

)18 (late) Triumph, fast, reliable, splendid appearance, fully equipped, Bonniksen, licensed, nerous spares; offers near £60.—33, Deodar Rd., ney. [9238

)19 Triumph Combination, lamps, tools, windscreen, legshields, tax paid, as new; £85, barn.—Rhind and Co., Stone Place, Rusholme, Manster. [9621

RIUMPH, new 1921 Model S.D., all chain, and Gloria sidecar, spring wheel, screen, Lucas lamps horn, nice outfit; £108.—365, King St., Hamrsmith. [9701

)20 Triumph Combination, electric lighting, speedometer, re-enamelled, new tyres, belt, in, spares, tax paid; £80.—23, Tivoli Rd., Crouch l, N.8. [9604

RIUMPH 3½h.p., variable gear, free engine, Bosch magneto, new tyres, any trial; 19 gns.; sidecar, —28, Woodford Rd., Forest Gate. 'Phone: Maryd 2598. [9512

ATE Countershaft Triumph Combination, tax paid, insurance, speedometer; £85.—Junction age, Highstone, Leytonstone, E.11. 'Phone, Wanid 403. [1286

RIUMPH Coachbuilt Combination, clutch model, splendid condition, ready to go anywhere; £30.—n, 260, Balham High Rd., Balham. 'Phone: Latchre 4714. [9261

)13 Triumph, kick start, free engine, Tan-Sad, Klaxon, lamps and tools, good condition, must l; £30, or offer.—C. A. Blay, 192, Heath Rd., ickenham. [1089

h.p. Triumph Combination, countershaft, Easting windscreen, lamps, etc., splendid condition; £70. ston, 260, Balham High Rd., Balham. 'Phone: chmere 4714. [9262

RIUMPH 4h.p., renovated 1920 by Triumph Co., absolutely unscratched, licensed for year; 75 s.; exchanges or deferred.—Edwards, 101, Gt. tland St., W. [9670

ICARDO, Triumph 4h.p. o.h.v. Racing Model, T.T. bars, for immediate delivery, in stock; also other umph models, immediately.—Meeten Motors, Dork- 'Phone, 163. [7962

)12 Triumph, guaranteed mechanically perfect, tyres as new, lamps, etc., any trial; £23.—Richardson, 2, Kelton Villas, Hawkes Rd., ngston-on-Thames. [9597

RIUMPH Junior 1921, equipped with Lucas accessories, fine condition, £46; also a similar machine, w and unused, £57.—Eagles and Co., 275, High , Acton, London. [1078

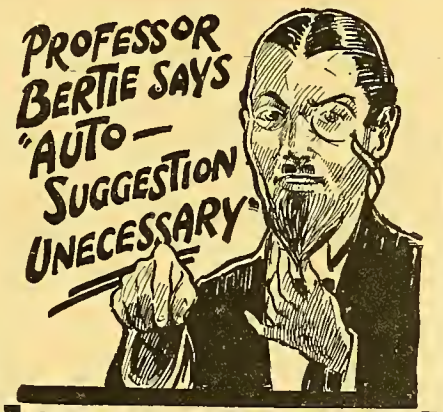
26.—1912, 3-speed, clutch, Triumph, lamps, cylinder just reground and new piston, good, reble machine.—Hayter, Hope Cottage, Grange Rd., ughton, Guildford. [9174

OUNTERSHAFT Triumph renovated 1922, splendid condition mechanically; £50. Several in d running order, £45.—26, Tulse Hill, Brixton, one: Brixton 1292. [1199

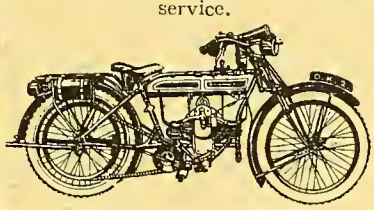
)20 Triumph (September), speedometer, Lucas lamp set, special copper exhaust pipe, new es, tubes, perfect condition throughout, any trial; .—E. Pledger, Ely. [7478

)20 4h.p. countershaft Triumph, de Luxe fittings, new condition, been stored, owner bought car, test; seen by appointment.—C. F. Attneave, West- d, Nether St., Finchley. [8932

)19 Triumph, pillion and light sidecar, quickly detachable, will go through 28in. doorway, nd and reliable, tax paid; £75.—Swain, 73, West a Rd., Harlesden, N.W. [9171




You can't do better than get a machine from the Burlington—because each machine is carefully tuned and tested for good hard work and constant service.



**BURLINGTON DOUGLAS**
**2¾ h.p.**

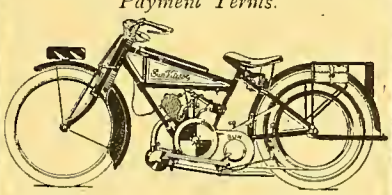
*Practically rebuilt throughout with new parts.*

**Prices.**

**2¾ h.p. 2 speed - - - 55 Gns.**
**4 h.p. 3 speed and k/s - - 75 Gns.**
**4 h.p. comb. with new Burlington s/c - - 93 Gns.**

**Fully equipped and fully guaranteed for three months.**

*Write for our generous Easy Payment Terms.*



**SUN VITESSE.**

"The two-stroke that is different."

Vitesse 2-stroke engine, Sturmey-Archer 2-spd. gear, c. and k/s.

**Price 55 Gns.**

*We are special distributing agents for Sun Motor Cycles, and shall be pleased to forward you particulars of the above and other models.*

**Cash or Deferred Payments.**

*List of new and secondhand machines in stock on application.*

**TRADE SUPPLIED.**

**BURLINGTON**
**MOTOR CYCLE CO., LTD.,**
**7, South Side, CLAPHAM COMMON, S.W.4**

*Phone: Brixton 2417. Wires: Burlington Motors, Clapham*

Just by Clapham Common Underground Station

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH 4h.p. 1922 Model, all-chain drive, mileage 200, Lucas horn, knee grips, taxed June, plated exhaust; bargain, £90, no offers; Sussex.—Box 9791, c/o *The Motor Cycle.* [9809

JUNIOR Triumph, Bonniksen speedometer, Miller headlight, Lucas cyclorn, excellent running order and good appearance; £35 lowest.—Edward Turner, 14, Great Smith St., S.W.1. [9817

TRIUMPH Combination, 1918, 3-speed, clutch, tax paid, hood, large locker, Easting, all accessories, perfect condition; £75; call after 6.—2, Temple Rd., Selwyn Estate, Richmond. [9135

TRIUMPH!—Complete range of 1922 models in stock for immediate delivery. Cash and exchanges. Easy payments, 4 per cent. extra.—P. J. Evans, John Bright St., Birmingham. [9274

£47/10.—Triumph 1914, 3 speeds, in exceptional condition, with sporting coachbuilt sidecar, new front tyre, horn, lamps, speedometer, etc.—Delancey Street Garage, Camden Town, N.W.1. [9963

£78, a Bargain.—Triumph Combination, 1919, speedometer, horn, lamps, mirror, leg shields, knee grips, Easting screen, luggage carrier, tyres good.—Box 9763, c/o *The Motor Cycle.* [9315

1921 Triumph 4h.p. all chain Combination, Montgomery sports aluminium-fronted sidecar, aluminium discs, perfectly equipped, tax paid, exceptionally fast, exceptionally smart; £110.—Below.

1921 Triumph 4h.p., countershaft, lamps, tax paid, exceptionally fine condition, Triumph footboards; £85.—Below.

1921 Triumph 4h.p., countershaft, all on, fitted with brand new Coupette sidecar, exceptionally fine combination; £115.—Below.

1918 Triumph 4h.p., countershaft, renovated as new, new tyres, etc., tax paid; £60.—Below.

1918 Triumph 4h.p. Combination, tax paid, as new throughout, fine outfit; £87/10.—Below.

1920 Triumph 4h.p., lamps, tools, just overhauled, very fine condition, tax paid; £70.—Below.

1918 Triumph 4h.p., countershaft, excellent condition; £58/10.—Below.

1921 Triumph Baby 2¼h.p., 2 speeds, absolutely as brand new, insurance; £45; all the above machines are not rubbish and fully guaranteed.—Coad, Engineer, Norman Lodge, 122, Maida Vale. 'Phone: Hampstead 1553. [9875

TRIUMPH 3½h.p., all on, Philipson, Binks, new belt, good tyres, extra large tank, plating and enamel as new, very fast, tax paid; 40 gns.—Coote, 92, Canterbury Rd., West Kilburn, N.W.6. [9176

1916 Triumph Combination, large coachbuilt sidecar, bulbous back screen, etc., all accessories, splendid mechanical condition, tax paid; £59.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [1197

TRIUMPH December 1918, Henderson sidecar, luggage grid, Tan-Sad, new 8in. mudguards, just stove enamelled, accumulator lighting, as new; £78; exchange 2-seater.—400, High St., Lewisham. [9438

TRIUMPH 1914 4h.p. Combination, windscreen and hood, 3-speed, kick start, splendid condition, good tyres and spares, tax paid; nearest offer £45.—Hoare, Fire Station, Gt. Scotland Yard, S.W.1. [9365

1920 Countershaft Triumph, Canoelet sporting sidecar with luggage grid, lamps, speedometer, Cowey horn, full insurance, mileage 2,600; £95.—78, Ruskin Avenue, Manor Park, E.12. [9906

1919 Triumph, renovated 1921, aluminium swan sporting sidecar, splendid condition, enamelling paint unscratched, accessories, guarantee, must sell, best offer; £95.—Allerton, 60 Eaton Rise, Ealing. [9415

TRIUMPH, T.T., 1913, coach sidecar, countershaft gear, clutch, kick start, lamps, Cowey horn, powerful, perfect, had little use; £40; take Douglas part.—91, Carpenter Gardens, Winchmore Hill, N. [9089

£35.—3½h.p. Triumph Combination 1913, 3-speeds clutch, exceptionally good condition, both mechanically and in appearance, lamps, speedometer, horn, tools.—Langford's, 37, Cricklewood Broadway, N.W.2. [9530

TRIUMPH and Sidecar, late 1919, most completely equipped, Easting, tool kit, spare tyres, chain, belt, plug, licence paid; £75.—Collett, 1, Railway Buildings, Opposite Norwood Junction Station, S.E.25. [9448

1921 Triumph-Gloria, July, smartest outfit running, magnificently equipped, hood, speedometer, Tan-Sad, etc., guaranteed as new, owner abroad; £120, near offer.—79, Bedford Hill, Balham. [1223

1920 Triumph 4h.p. Combination, delivered November, Gloria type sidecar, mechanically perfect, indistinguishable from new, lamps, horn, etc., tax paid, must sell; sacrifice, £88.—T. C. M., 20, Oxford Mews, Titchborne St., Edgware Rd., London, W.2. [9752

1920 4h.p. Triumph and Sidecar, 3-speed, clutch and kick starter, chain and belt drive, all lamps, horn, perfect order and condition; £85.—D. and S. Autocar Co., 33, The Parade, Golders Green. [9885

## MOTOR CYCLES FOR SALE.

### Triumph.

BARKER'S Motors can supply all Triumph 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [7087

£37.—Triumph 3½h.p., 3-speed hub, gear, clutch, in excellent condition, ideal mount for Easter, tax paid 1922; any trial or examination; supplied easy terms if desired.—The Welwyn Auto Service Co., Welwyn, Herts. [9030

TRIUMPH 4h.p. countershaft, new lamps, mechanical horn, and long exhaust pipe, tools complete, driving suit, condition excellent, licensed, insured till June, many spare parts; £53.—153, Strathyre Avenue, Norbury, S.W. [9074

TRIUMPH-GLORIA Combination, 1920, disc wheels, electric lights, spares, oversize pisten, tax paid, insured, guaranteed perfect; any trial 4 up; £100.—Jack Wheeldon, "Hillside," Princes St., Leamington, [9235

1919 GNS.—Tax paid, all on, 3½h.p. Sporting Triumph, dropped frame, late forks, Bosch, B. and B., good order and tyres, reasonable trial, inspection invited, cash wanted.—Stapleton, Meadfield, Langley, Bucks. [9423

4h.p. Triumph, Model H, 3 speeds, kick starter and clutch, £85; also a 4h.p. W.D. 1918 countershaft, 3-speed model, £65; and 4h.p. Triumph and sidecar, 3 speeds, 1914, £47/10.—Wauchope's, 9, Shoe Lane, London. [7870

1921 Triumph Combination, 4h.p., Canoelet sports sidecar, absolutely new condition, bought April, 1921, not used since October, selling owing death of owner; inspection by appointment; £100.—The Executor, "Penrhyn," Enfield. [9002

1921 chain-drive Triumph and Gloria Sidecar, in perfect condition; £120, all on; very little used owing absence abroad; to be seen Manchester, and telephone, Central 2236.—Clegg, Woodlands Bank, Stockport Rd., Altrincham. [1044

TRIUMPH Combination, late model, fully equipped, hood, screen, grid, child's seat, Tan-Sad, speedometer, mirror, etc., tax paid, numerous spares splendid condition and appearance, inspection by appointment; £120.—Young, 48a, Emmanuel Rd., Balham. [8915

TRIUMPH 1914 3-speed and Sidecar, £42/10; also 1920 Model H, nicely equipped, £79/10; also 1922 Type H, HC, SD, and SDC, all actually in stock; terms ¼ down and 12 payments.—Lamb's, Ltd., 151, High St., Walthamstow; 387, Euston Rd., N.W.1; 50, High Rd., Wood Green, N.22. [1108

1917 Triumph 4h.p., 3-speed, countershaft, Model H, equipped with Smith's Trip speedometer, Tan-Sad, mechanical horn, copper exhaust extension, P. and H. lamps, (£3) tax paid until December, a real pleasure to ride, mechanical condition perfect; £58.—Clarke, 20, Oxford Mews, Southwick St., London, W.2. [9753

TRIUMPH 1914 4h.p., 3-speed hub, gear, coachbuilt sidecar, Tan-Sad, Watford, perfect condition; £58, or near offer (stored 3½ years); exchange for 7-9h.p. Harley, Reading, Standard, or Indian, 1920, cash adjustment; tax paid December, 1922; Saturday, Sunday, or by appointment.—7, Ravenscourt Gardens, Hammersmith, W.6. [8997

*Spare Parts:*

TRIUMPH Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7545

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Triumph spares. [5709

HERBERT ROBINSON, Ltd., Green St., Cambridge, the Triumph experts.—Complete illustrated list post free. [4953

TRIUMPH Service Agents, Cambridgesbire.—Complete stock of spares.—King and Harper, Cambridge. 'Phone: 853. [8484

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [1247

TRIUMPH Spare Parts.—Immediate delivery of genuine Triumph spares. Authorised Triumph service agents.—J. E. Lawes, Ltd., The Triangle, Aldershot. [7669

LIGHT Car and Motor Engineering Co., Ltd.—All Triumph spares in stock.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. (½ minute from Brixton Skating Rink.) [1200

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; gear overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10. [0809

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

**We have in stock the following machines, undoubtedly the pick of the world's best. Cash, Exchange, or Easy Payments.**

**A.J.S. 2¾. Price £85.**
**A.J.S. 2¾ COMBINATION. £110.**
**RALEIGH 2¾. £68.**
**TRIUMPH 2-STROKE. £65.**
**TRIUMPH TYPE H. £105.**
**TRIUMPH ALL CHAIN. £115.**
**TRIUMPH ALL CHAIN COMBINATION. £155.**
**HUMBER 4½ h.p. £110.**
**HUMBER 4½ SPORTS. £100.**
**ROVER 4 h.p. SPORTS. £110.**
**ROVER 4 h.p. COMBN. £135.**
**ROVER 5/6 COMBN. £155.**
**ROVER LIGHT CAR. £220.**

A few shop-soiled and second-hand machines at prices that you will buy at. SEND FOR LIST.

Our patent Footboards for Junior and 4 h.p. TRIUMPHS, **£1 : 9 : 6** pair. Carriage **1s. 6d.** extra.

No alterations required, can be fitted in a few minutes.

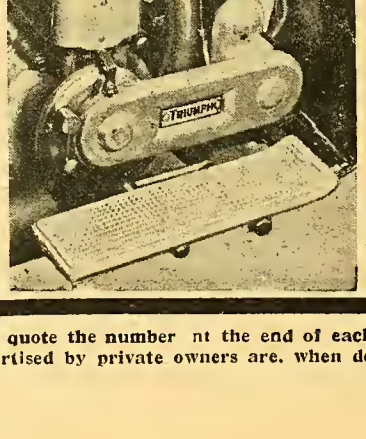
Leg Guards easily fitted to any Motor Cycle. Patent pressed steel **£1 : 17 : 6.** Carriage **1s. 6d.** extra.

Send for list of Footboards and Leg Guards

**W. Brandish & Sons**

**Works and Showrooms:**

**Foleshill Road & Queen Mary's Road, COVENTRY.** *'Phone* 1050




## MOTOR CYCLES FOR SALE.

### Triumph.

*Spare Parts:*

SEND to the Rhosha Motor Garage, South Romford, for Triumph and Sturmey-Ar spares and repairs. No disappointing delays; e part in stock. Repairs by skilled mechanics o We are official service agents. [7

### Unibus.

BRAND new 1922 Unibus, 2 speeds, clutch, hai start, Villiers engine, C.A.V. magneto, spi frame, list £49; take £30 cash.—Walbro Motor C Co., Saffron Walden. 'Phone: 45. [1

### Velocette.

PREMIER Motor Co. for 1922 Velocettes.

IMMEDIATE delivery of Model E.2, 2-speed, £ E.2, 3-speed, £72/10; all with clutch and l starter; easy payments, 4 per cent. extra, carri paid to any address.—Premier Motor Co., Aston l Birmingham. [7

VELOCETTE, new 1922 2-speed in stock; one s soiled, £59.—Moss, Wem. [1

£23.—Velocette 2¼h.p., 2 speeds, all-chain, ac sories, splendid order.—63, Solon Rd., Brixto [9

VELOCETTE 1921, only ridden 500 miles; ow going abroad; seen by appointment; £50.—I 161, Brigstock Rd., Thornton Heath. [9

VELOCETTE, 1919, 2¾h.p., lady's model, 2-sp all chain drive, touring bars, good order; £4 Maude's, 100, Great Portland St., London, [1

### Verus.

1920 Verus, 2-stroke, perfect order, licensed, lam £27/10.—19, Saxon St., Wrexham. [9

VERUS 1920 2½h.p., single speed, good conditi £34.—Maudes', 100, Gt. Portland St., London [1

1920 Verus 2¾h.p., 2 speeds, clutch, kick st tax paid; £35, bargain.—Goad, 122, Ma Vale. 'Phone: Hampstead 1353. [9

VERUS-BLACKBURNE 2¾h.p. Sports, S.A. 3-sp clutch and kick-starter, 50 m.p.h., insured; or offer.—300, South Lambeth Rd., S.W. [9

4h.p. Verus-Blackburne, 1920, 3-speed, clutch, K mileage 500, tax paid, fully equipped; £6 Blyth, c/o Goodmayes Motor and Cycle Co., Go mayes. [9

VERUS-BLACKBURNE 1920 (September) 2¾h 2-speed, K.S., clutch, electric lights and ho discs, and speedometer; £55.—19, Well Hall Para Eltham, S.E.9 [9

### Villiers.

28 GNS., 1917 2¾h.p. Villiers, 2-speed, coun shaft, discs, taxed, trial.—25, General St., Bla pool. [9

VILLIERS 2-speed, privately owned, just the mach for the holidays, tax paid to December; ride aw £44; after 6.—12, Birchington Rd., Kilburn. [9

### Werner.

WERNER 4h.p., splendid condition; £22; t push cycle part.—57, Kenbury St., Camb well, London. [9

### Wolf.

WOLF-VILLIERS, Albion 2-speed, perfectly new, shop-soiled, 1920 model; £37/10, genuine b gain.—Nelson's, Rhyl. [9

1920 Wolf-Villiers, 2-speed, extra large petrol ta long exhaust pipe, semi-T.T. bars, elect lights, licence paid, very fast; first cheque £27 secu this bargain, carriage paid.—Mullock, The Croft Prees, Salop. [9

### Williamson.

8h.p. Williamson Combination, equipped, tools, a spares; a lovely machine and genuine; barga £66; exchange considered.—120, Fielding Rd., Ch wick. [1

### Wooler.

2¾h.p. 1920 Wooler, 2-speed; £37/10.—Wauchope 9, Shoe Lane, London. [7

WOOLER, 2¾h.p., spring frame, as new; 45 gns 9, Woolwich Rd., Belvedere, Kent. [9

WAUCHOPE'S, 9, Shoe Lane, London, E.C. 2¾h.p. Wooler, 1920, variable gear, tax pai £37/10. [1

1920 Wooler 2¾h.p., overhauled, splendid conditio licence paid; £38, or nearest offer.—Ly Cresford, Dorchester. [8

1921 2¾h.p. Wooler, as new, accessories, l m.p.g., variable gear, flat twin; £48, offer exchange.—174, Avenue Rd., Acton. [9

WOOLER 1921 2¾h.p., 9 speeds, clutch, almo new, lamps, horn, footboards, tool bags, n tyres, tax paid; any test; £44.—371, Earlsfield R London, S.W. [9

### X.L.

X.L., late 1921, electric light, tax paid; £90 offer.—1, Brookhill Rd., Woolwich. [9

## MOTOR CYCLES FOR SALE.

### Yale.

9h.p., Yale, splendid condition, new tyres; £55. Lighter machine taken in part exchange.—Attfield, 5 Lewisham Rd., Greenwich, S.E. [9038

### Zenith.

LLAN GRUZELIER, Zenith Specialist.

ARGAINS for Easter.

)22 chain-drive Bradshaw, demonstration model; £112.

)22 Gradua gear model, shop-soiled; £95.

)21 Gradua gear model, shop-soiled; 85 gns.

)21 5h.p. Sports, brand new, £75; 8h.p. countershaft model, new, £110.

VERYTHING for the Zenith rider, spares, overhauls, tuning and advice.

LLAN GRUZELIER, Ulster Chambers, 168, Regent St. Regent 205. Showroom and Works, Knight and Wheatley's Garage, 4, The Pavement, Coulsdon. [1205

ROMLEY, Kent—Zenith Agents, J. L. Love and Co. [1325

REWSBURY Agent for Zenith; exchanges.—J. C. Pickering. [9565

ENITH 5h.p. Sports, taxed, all on; £46, exchange. —49, Well St., Hackney. [9606

3h.p. Zenith Combination, splendid machine; very fast; £60.—120, Fielding Rd., Chiswick. [1183

ENITH 6h.p., discs, fast, special oiling to front cylinder; £45.—14, Phœnix St., Euston. [9383

)18 Zenith 6h.p. Combination, perfect condition; £75, offers.—Fellows, Crescent Rd., Darlaston. [9956

.p. Zenith, 1915, lamps, complete, fast, must sell; £38.—Kraggs, 6, Dordons Rd., Leagrave, Beds. [9485

3h.p. Zenith, aluminium discs, Tan-Sad, splendid running order; £55.—Hammond, Hurstpierpoint, Sex. [9159

.p. Zenith-Jap Sports, with sidecar, condition as new; £55 for quick sale.—5, Lancaster Avenue, chin. [9396

ENITH 8h.p. Sports Combination, V jet, C. shaft, K.S., Cowey, lamps; £65.—44, Thorpe Rd., gston. [9730

ENITH, 1914, 3½h.p. J.A.P., Gradua gear, Amac carburetter; £35.—Maude's, 100 Great Portland London. [1137

ENITH 4h.p. Sports Model, T.T. bars, good tyres, complete, splendid order; £25.—3, Lambton St., nton, Eccles. [9436

.p. 1920 Zenith Combination, all accessories; offers, or exchange furniture and cash.—Howe, Warren Lenham, Kent. [9425

ENITH-BRADSHAW 1921 3½h.p., shop-soiled, chain-cum-belt drive; £100.—Mandes', 100, Gt. tland St., London. [1146

ENITH 1920 8h.p. Sports, Swan sidecar, speedometer, lamps; £78.—R. B. Clark and Co., 7, hibition Rd., S.W.7. [7201

)14 3½h.p. Zenith, Sports Model, very good condition; £25.—28, Woodford Rd., Forest Gate. one: Maryland 2598. [9510

.p. Zenith, late 1920, clutch, K.S., Watsonian R34 sidecar, insurance; £90; tax paid.—Seen High St., Hampstead. [9173

O.C.H. for Zeniths; latest models in stock. Also 1920 8h.p. countershaft combination.—5, Heath Hampstead (near Tube). [9276

ATE Sports Zenith, 6h.p., special sidecar, perfect condition, fully equipped; £65, nearest offer.—, Hale End Rd., Woodford Green. [9479

ENITH 5h.p. Sports, late 1920, as new, low generator, speedometer, etc.; £70, offers, exchange single. ldred, 58, Church St., Warrington. [9046

5 GNS.—Magnificent 6h.p. Zenith Combination, hood windscreen, lamps, horn, Tan-Sad, full —Smith, Claremont Garage, Blackpool. [9935

ENITH, 1919, 6h.p. Sports, excellent order, with sidecar; £75, or exchange countershaft, tax .—Sheppard, 108, The Crescent, Slough. [1064

ENITH, Special sidecar, Ace discs, speedometer, electrics, Flexi, not ridden 1,000, trial; £110; £220.—83, Queen's Rd., Richmond, Surrey. [1071

)15-16 4h.p. Twin Zenith, J.A.P. engine, countershaft, kick starter, condition good, all accesses; £50.—Blake, 216, Westbourne Grove, W. [8078

ENITH-GRADUA 4h.p. 1916, engine just overhauled thoroughly, tax paid 1922, lamps, horn; , or offer.—20, Oakwood Avenue, Beckenham. [9340

ENITH 6h.p. Sports, electric lighting speedometer, good order throughout; £45; exchange light- ght and cash.—Price, Police Station, Wallingford. [9996

# The Effra Motor Works
LIMITED.

# DOUGLAS
## Motor Cycles & Spares

**Having purchased the entire stock of Douglas Motor Cycles and Spares from Messrs. Crabtree & Son, Ltd., of Wisbech, we are in a position to re-sell at most attractive prices.**

**These machines are entirely re-built and finished as new. Over 75% of brand new parts on every machine and fully guaranteed for 3 months.**

***(Easy Payments arranged)***

## Cash Prices.

***(Trade Supplied)***

2¾-h.p. two-speed, fully equipped ... .. ... **£47-10-0**

4-h.p. three-speed, kick start and clutch, fully equipped **£68-0-0**

4-h.p. ditto and sidecar, with new body finished in "DOUGLAS" Saxe Blue, and fully equipped as above **£85-0-0**

CARRIAGE EXTRA IN EACH CASE

2¾ Douglas Frames, **£4 10s.**; Carriers, **15/-**; Footbrake Mounting, **7/6**; Forks, **25/-**; Springs, **2/-**; Head Clips, **5/-**; Fork Spindles, **1/6**; Shackles, **1/6**; Handle Bars, **15/-**; Pistons, **7/6**; Bushes, **2/-**; Small, **1/6**; Gudgeons, **1/-**; Rings, **1/3**; Tappets, **2/-**; Guides, **1/6**; Con Rods, **15/-**; Valve Guides, **2/-**; Crankshafts, **32/6**; Inlet Rockers, **3/3**; Exhaust, **3/9**; Belt Rims, **10/-**; Wheel Spindles, **3/6**; Tanks (Maker's Colours), **45/-**; Silencers, **12/6**; Petrol Filters, **2/9**; Flywheel Sprockets, **3/-**; Front Brakes, **10/-**; Non-return Valve, **1/9**; Secondary Shafts, **15/-**; Sprocket, **5/-**; Pulley, **5/-**; Petrol Pipes, **2/9**; Valve Caps, **3/9**; Seat Pillar, **3/6**; Magneto Wheels, **5/-**; Exhaust Handle, **3/6**; Carb. Controls, **4/-**; Chain Guards, **6/-**; Chains, **5/-**; Rear Stands, **10/-**; Front, **4/-**; Engines (complete unit) overhauled and guaranteed, **£15**; Gear Boxes Complete, **£5** (built from over 50 per cent. of brand new parts). All miscellaneous engine and gear box parts, also the useful small odds and ends.

4 h.p. Douglas Frames, **£5**; Carriers, **22/6**; Fork Blades, **40/-**; Tanks, **60/-** (Maker's Colours); Pistons, **9/-**; Rings, **1/6**; Gudgeons, **1/-**; Con Rods, **18/6**; Cylinders, **27/6**; Guides, **2/-**; Camshaft, **15/-**; Complete Exhaust Lifter, Cable Handle, etc., **12/6**; Magneto Wheels, **5/6**; Brakes, front, **18/6**; Rear, Complete, **14/6**; Clutch Face Plate, **12/-**; Clutch Worm, **7/6**; Drawbolts, Complete, **2/6**; Silencers, **10/-**; Crankshafts, **60/-**; Gear Box Halves, Clutch Side, **15/-**; Head Lugs, **15/-**, etc., etc. All the useful replacements.

We have huge stocks of Motor Cycle Spares and should be pleased to quote at most attractive prices.

Telephone: Brixton 1115. Telegrams: "Efframota, Clapcom., London."

## The Effra Motor Works
LIMITED.

**59, 61 & 63, HIGH STREET, CLAPHAM, S.W.4.**

## MOTOR CYCLES FOR SALE.

### Zenith.

6h.p. Zenith Combination, 2-seater sidecar, fully equipped outfit for small family, good running order; £75, or nearest offer.—Baker, High St., Ealing. [9035

6h.p. Zenith, clutch model, new Middleton sidecar, electric horn, speedometer, excellent condition; private; £95, or offers.—Peaston, 1, Station Rd., Epsom. [9178

5h.p. Zenith Sport, 1921, Model C, brand new, with makers' guarantee, listed at £110; our price 76 gns.; exchanges or deferred.—Edwards, 101, Gt. Portland St. [9669

ZENITH 1921 5h.p. Sports Models, new, guaranteed, 76 guineas. All-chain Bradshaw models, £119, from stock.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [1278

£46.—1914-15 Zenith-Gradua Coachbuilt Combination, 4h.p. J.A.P., fully equipped, excellent condition, 2 spare covers, etc.—18, Marlborough Rd., Old Kent Rd., S.E.1. [9398

1922 Zenith-Bradshaw, slightly used for a few demonstrations, indistinguishable from new, full guarantee; sacrifice, £95.—Frank Whitworth, 139, New St., Birmingham. [0711

1920 8h.p. Zenith Combination, clutch model, good horn and lamps, windscreen, etc., splendid condition, fast; must sell; £90.—Wyndham, 2, The Terrace, Woburn Sands Beds. [9043

ZENITH 1920 Sports 8h.p., R34 sidecar, electric lamps, gorgeous condition; £95; tyres perfect; offers.—Nisbet, Easington, Castle Rd., Weybridge. Station: Walton-on-Thames. [9228

ZENITH-BRADSHAW 3½h.p. 3-speed chain-drive Models in stock for immediate delivery; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1032

1921 5h.p. Zenith, sports model, brand new, unused, with makers' guarantee; listed at £110, our price 76 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [9682

90 Bore Zenith, 1914, overhauled and in perfect condition, guaranteed for 80 m.p.h.; offers, or exchange.—W. J. C. Motor Exchange, 5, Addison Avenue, Holland Park, W.11. Park 2071. [1233

ZENITH 8h.p., with sporty coachbuilt sidecar, Bosch magneto, lamps, Amac, all accessories, the whole outfit lately been re-enamelled and overhauled; £65.—Write, W. S., c/o Daniels, High St., Wendover. [1163

ZENITH 1920 8h.p. Combination, just re-painted and re-nickelled, electric lighting, excellent tool outfit, speedometer, mechanical horn, driving mirror, very low mileage; £105.—W., 20, Finchley Rd., N.W.8. [8978

5h.p. Twin Zenith, Iorward countershaft gears, kick start, and clutch just overhauled, fast and powerful; £45, or would exchange for really good 2¾h.p. 2-speed kick start lightweight.—Brooks, Brynville, Martock, Som. [9067

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred or exchaoges.—194, Balham High Rd., S.W.12. [7084

ZENITH 1917 6h.p. 1921, aluminium sidecar, Tan-Sad, electric-acetylene lighting, excellent tool kit, Lucas horn, tax and insurance paid, good tyres, very fast outfit, in perfect order; £59.—Littlefield, 123, Norwood Rd., Herne Hill, S.E.24. [9177

ZENITH, late 1921, clutch combination, mileage 1,000, electric throughout, Easting, luggage grid, special rear seat, speedometer, various gadgets, every spare, guaranteed perfect, tax paid; £140; trial after 6 p.m.—252, St. Ann's Rd, Tottenham. [9219

1921 Zenith Sports 5h.p., Canoelet K4 sidecar, torpedo apron, windscreen, luggage grid, Fallolite head light, dissolved acetylene, Klaxon, Bonniksen, licensed, condition perfect, extremely smart; £105.—Allen, c/o Stuart Harrison's, Cheadle, Cheshire. [8896

ZENITH 90 Bore O.H.V. Racing Twin Combination, special ball-bearing engine, racing Amac, polished aluminium sidecar, 1,200 miles only, Bonniksen, lamps, 28×3 tyres, unscratched; personal reason selling; £135; solo, £115.—Meeten Motors, Dorking. [7963

349 c.c. Zenith, single, J.A.P., o.h.v., 1922, cylinder, Cox carburetter, Lucas lamps, Smith speedometer, licensed, competition machine, fast and perfect everywhere; first reasonable offer accepted; ride 100 miles to purchaser.—Morden, 33, Broad St., Stamford, Lincs. [9392

ZENITH 1920 6-8h.p. sporting Combination, new Lucas lamps, special racing sidecar, also spare Mills-Fulford body; condition perfect, all accessories; will appeal particularly to sporting riders; annual tax, insurance paid: £85.—Hudson, "Nairne," Southhill Avenue, South Harrow. [9165

SPECIAL Competition 7-9h.p. Zenith-Mag., 1921, enlarged ports, aluminium pistons, racing Amac carburetter, special M-L. magneto, 700×88 mm. tyres. The whole machine is as new, any trial, 80 m.p.h.. Watford knee grips, exchange 1921 close ratio Norton; sell £100.—"Windermere," London Rd., Twickenham. [1074

## MOTOR CYCLES FOR SALE.

### Zenith.

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7222

LONGMAN BROS., 17, Bond St., Ealing.—Official agents Zenith spares. [5706

### Ladies' Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

VELOCETTE 1922 Models, with clutch and kick starter, for immediate delivery; 2-speed, £68; 3-speed, £75; all black weatherproof finish, all-chain drive, open frame, giving very low position; the ideal ladies' mount; easy payments, 4% extra; illustrated catalogue free on request.—Premier Motor Co., Aston Rd. [1277

### Miscellaneous.

7-9h.p. Harley-Davidson Combination, new chassis, new carburetter, etc.; £105.—Below.

2¾h.p. Martin-Jap, 2-speed, kick starter and clutch; £65.—Below.

2¾h.p. New Imperial, 1919, 2-speed model, recently overhauled; £40.—Below.

2¼h.p. Clyno, 2-stroke, 2-speed, and clutch, 1920; £28.—Below.

2¾h.p. O.K. Junior, Jap engine; £35. 2¾h.p. Douglas, 2-speed; £45.—Below.

ALL second-hand, and in perfect condition; reasonable trial or examination. Offers considered.—Edmondson's Garage, Ltd., 28, Main St., Keswick. [9294

JONES Garage, The Broadway, Muswell Hill, N.10, and Woodside Parade, North Finchley.

NOTICE.—We are open all day every Saturday, and have all makes in stock. Write, call, or 'phone Hornsey 2917 for big bargain list.

1919-21 Ariel 3½h.p. and sidecar; Messrs. F. E. Jones Competition Gold Medal machine, specially tuned; £80.

1920 4h.p. Douglas Combination, demonstration model, exactly as new; £90.

1920 Radco 2½h.p., 2-speed, fully equipped, perfect little 'bus; £32/10.

1920 4h.p. Blackburne and Sidecar (Mills-Fulford), Easting, licence paid and insurance, fully equipped, precisely as new; £87/10.

1919 Triumph 4h.p. and luxurious sidecar, Easting, and all equipment; a high class turn-out; £85.

1919 8h.p. New Imperial Combination, fully equipped, licensed; £85; scarcely used; our special bargain of the week.

ANY of the above can be had for one-quarter down, balance in 6 or 12 payments; all guaranteed 3 months. Send for particulars.—Jones Garage, Broadway, Muswell Hill, N.10. Motor-'bus from Highgate or Finsbury Park. [1289

MOTOR Cycles bought, sold, or exchanged.—Rhind and Co., Stone Place, Rusholme, Manchester. [9628

HALIFAX.—50 second-hand machines and combinations; cash or exchange; get list.—Halifax Motor Exchange, Horton St., Halifax. [9893

J.A.P. 4h.p. racing, overhauled, re-bushed, splendid condition, good tyres, new belt, economical; £24; exchange lower power. "Frondeg," Sudbury Hill, Harrow. [9209

ALLBER Garage, Thornsett Rd., Earlsfield, London, S.W. (opposite Station, L.S.W. Railway). 'Phone: Latchmere 4388. Terms: no extra with good deposit. Immediate delivery. No inquiries. Satisfaction guaranteed.

ALLBER.—Clyno 1920, 2-stroke, 2 speeds, clutch, all accessories; tax paid, in new condition; £40.

ALLBER.—Sun-Villiers, 1916, 2¼h.p., all accessories, good order; £21.

ALLBER.—Ixion-Villiers, 2½h.p., complete with lamps, in running order; £24.

ALLBER.—Levis, 1916. 2½h.p., 2-speed, all accessories, good order; £35.

ALLBER.—B.S.A., 1914, 3½h.p., 2 speeds, all accessories, beautiful order; £32.

ALLBER.—1919 New Imperial Combination, 8h.p. J.A.P., 3 speeds, clutch, kick, complete with all accessories, in splendid order; £80.

ALLBER.—Enfield, 1917, 3½h.p. twin M.A.G. engine, 2 speeds, all accessories, tax paid, in good order; £38.

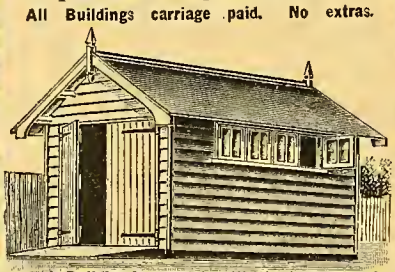
ALLBER.—A.E.L.-J.A.P., 1922, 2¾h.p., 2 speed clutch, kick-starter, splendid machine, brand new; bargain, £48. [1126

BARGAINS in Motor Cycles and Sidecars.—A limited number of 1920 and 1921 shop-soiled models, all well-known makes; best offer secures in each case. Send for list or call and inspect.—Mebes and Mebes, 144, Gt. Portland St., W.1. 'Phone: Langham 2230. [9144

# STOP

**at this and compare prices and quality. Invitation to inspect before purchasing.**

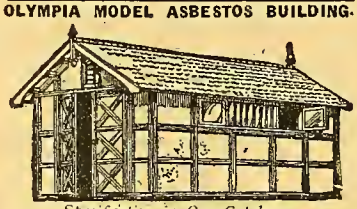
**All Buildings carriage paid. No extras.**



**This Building is complete with 1in. tongued and grooved floor, ¾in. match-boards or weather-boards, 3in. framing, strong boarded roof, best pluvex felt. Building treated with weather-proof composition. Prices, complete and carriage paid to any station in England and Wales.**

| | | | | | |
|---|---|---|---|---|---|
| 8×6 | £8 0 0 | | 16×10 | £27 0 0 | |
| 10×8 | £13 0 0 | | 18×10 | £33 0 0 | |
| 12×8 | £17 10 0 | | 20×10 | £37 10 0 | |
| 14×10 | £23 0 0 | | 20×12 | £40 0 0 | |

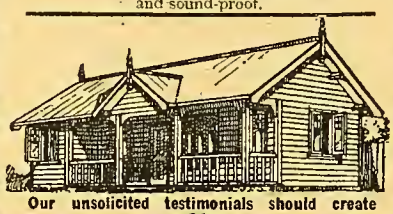
**OLYMPIA MODEL ASBESTOS BUILDING.**



*Specification in Our Catalogue.*

| | | | | | |
|---|---|---|---|---|---|
| 12×8 | £23 10 0 | | 18×10 | £42 10 0 | |
| 14×10 | £32 15 0 | | 20×12 | £46 15 0 | |
| 16×10 | £37 15 0 | | | — | |

Delivered with iron roof complete. Fire-proof and sound-proof.



**Our unsolicited testimonials should create confidence.**

24, Emsworth Road, Shirley, Southampton.
*Feb.* 25, 1922.

Messrs. The South-Western Appliance Co., S.W. 6.

Dear Sirs,—The Delholme Motor House arrived safely on Monday last, and I have erected it to-day. I am very satisfied with it. The workmanship and materials are excellent. I thank you for dispatching so promptly; too promptly, in fact, as I had allowed a week for possible delays on rail. Notwithstanding the fact that it has been lying out in the heavy rains for 5 days, I had no difficulty in erecting it, the timber having apparently not swollen. Many thanks.

Yours faithfully, W. R. WILLIAMS.

St. James's Palace, S.W. 1.
*March* 28.

Dear Sirs,—Lady Helena Gleichen will be glad to receive the 16×15 Motor Car House as soon as possible.

11, Elm Terrace, Cockton Hill, Bishop Auckland.
*March* 25, 1922.

Dear Sirs,—I beg to acknowledge receipt of complete shed, which, since erected, has been admired by many friends.

Thanking you for your prompt attention,
Yours faithfully, Mr. T. W. LUMLEY.

**Illustrated Catalogue Free.**

**SOUTH-WESTERN APPLIANCE Co.,**
**High Street, Fulham, London, S.W.**
Telephone: PUTNEY 2771.

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

WANDSWORTH Motor Exchange.—Great East bargains. Fine selection cheap motor cycle easy terms.

WANDSWORTH.—Easter holiday easy terms; ri while you pay; now's your chance.

WANDSWORTH.—Easy terms. Easy terms. T only firm to give immediate delivery fr deposit.

WANDSWORTH.—Gregoire 3½h.p., magneto, go tyres, runs splendidly; only 19 gns.; easy term

WANDSWORTH.—Condor 3½h.p., fine sporti type machine, enamelled red; 22 gns.; ea terms.

WANDSWORTH.—Triumph 3½h.p., magneto, go tyres, drive away; only 23 gns.; easy terms.

WANDSWORTH.—Motosacoche lightweight 2½h. variable gear, runs splendidly; clear, 21 gns easy terms.

WANDSWORTH.—F.N. 5-6h.p., 4 cylinders, Bose shaft drive, very fast; 26 gns.; easy terms.

WANDSWORTH —Matchless-Jap 4-5h.p. twi Bosch, ready drive away; 25 gns.; easy terms

WANDSWORTH.—Tourist (sporting type) 3½h.p., speed gear box; 29 gns.; easy terms.

WANDSWORTH.—Rover 3½h.p., clutch model, ki starter, nice machine; 33 gns.; easy terms.

WANDSWORTH —Peugeot 3½h.p., magneto, l built, runs well; cheap, 26 gns.; easy terms

WANDSWORTH.—Levis, late model, looks li new, runs beautifully; 35 gns.; easy terms.

WANDSWORTH.—Henderson, clutch model, 8h. 4 cylinders, lamps, drive away; 39 gns.; ea terms.

WANDSWORTH.—Scott twin, water-cooled, ma neto, fine machine, very fast; 42 gns.; ea terms.

WANDSWORTH.—Indian T.T. type 7h.p., 2 speed beautiful condition; 49 gns.; easy terms.

WANDSWORTH.—Humber, looks new conditio 3½h.p., 2 speeds, lamps; 46 gns.; easy terms.

WANDSWORTH —F.N., most beautiful combin tion, 5-6h.p., 2 speeds, clutch, lamps, speed meter; 59 gns.; easy terms.

WANDSWORTH — Wolf combination, 3½-4h. J.A.P., 3 speeds, countershaft, lamps; 49 gns easy terms.

WANDSWORTH —Indian late 7-9h.p. Powerph 3 speeds spring frame; 59 gns.; easy terms.

WANDSWORTH.—Bradbury combination, 4h Bosch, 2 speeds, lamps; 49 gns.; easy terms. terms.

WANDSWORTH.—Triumph combination, 4h.p., speeds, clutch, lamps, speedometer; 59 gns easy terms.

WANDSWORTH.—Rex combination, 6h.p. twi Bosch, 2 speeds, lamps; 49 gns; easy terms.

WANDSWORTH.—B.S.A. combination, 4h.p., speeds, kick, lamps; clear, 45 gns.; easy term

WANDSWORTH.—1918 P. and M. 3½h.p., speeds, kick, nice machine; 49 gns.; easy term

WANDSWORTH. — F.N., magnificent machin 5-6h.p., 2 speeds, clutch, lamps, newly enamelle plated; 58 gns.; easy terms.

WANDSWORTH —Triumph, latest, absolutely new, 4h.p., 3-speeds, 89 gns.; easy terms.

WANDSWORTH.—1921 Wooler, nearly new, twi everything fitted; what offers? easy terms.

WANDSWORTH.—1920 almost new Scott com bination, unscratched, everything fitted; 85 gns easy terms.

WANDSWORTH.—1921 Douglas 2¾h.p., 3 speed everything fitted; 58 gns.; easy terms.

WANDSWORTH.—1922 A.E.L., 2¾h.p. J.A.P., speeds, kick, brand new; 55 gns.; easy terms

WANDSWORTH.—1919 Triumph 4h.p., 3 speed lamps, nice condition; 59 gns; easy terms.

WANDSWORTH —F.N. 4½h.p., 4 cylinders, speeds, shaft drive, wants attention; 17 gns terms.

WANDSWORTH.—Exchanges.—Wandsworth Mot Exchange, Ebner St., Wandsworth (To Station). 'Phone: Latchmere 4686. [98

1920 2¼h.p. Clyno, 2-speed, clutch, £40; 19 3½h.p. Rudge-Multi, £65; 1921 2¾h.p. Dougl 2-speed, £60; 1921 3½h.p. N.U.T., 3-speed, Magdy £80; 1915 6h.p. Clyno Combination spare wheel, £ 1920 7-9h.p. Indian Combination, dynamo lighti windscreen, £100; 1920 4h.p. Norton Combinati windscreen, £110. Above all tax paid, complete w lamps, etc., thoroughly overhauled. Brand new 6h Bradbury and Henderson Elite sidecar, windscre £120.—J. Hebden and Sons, 71, Scotland Rd., Nels Lancs. Tel.: 91. [11

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

SALE or Exchange, must clear, Abingdon King Dick 3½h.p., Zenith 5-6h.p., Rex 5-6h p., Ariel 4p., Simms 2¾h.p., B.S.A. Combination 3½h.p., Pair Combination 3½h.p.—79a, Clapham Rd., S.W.9. [9846

BLACKPOOL Bargains.—1922 Rudges, 1922 Ariels, 1922 O.K.s, 1922 New Imperials, 1922 Quadrants, 12 Royal Ruby's. Quick deliveries. Good price for your machine; exchange.—Booths' Motories, 294, Waterloo Rd., Blackpool.

BLACKPOOL Bargains.—1919 New Imperial, 2 speeds, kick starter; £45/10.—Booths' Motories.

BLACKPOOL Bargains.—1919 P. and M. Combination; £49/10/6. 6h.p. Clyno Combination, detachable wheels, £69/10/6.—Booths' Motories.

BLACKPOOL Bargains.—3½h.p. Minerva, £10/10/6. N.S.U. Lightweight, £13/10/6. 6h.p. Zenith Combination, £49/10/6. 6h.p. Rex Combination, £70/10/6.—Booths' Motories, 294, Waterloo Rd., Blackpool.

BLACKPOOL Bargains.—1920 Matchless Combination, detachable wheels, £120/10/6. A.J.S. and Spear, £59/10/6.—Booths' Motories.

BLACKPOOL Bargains.—1917 Alldn, 3-speed gear, clutch, kick starter, lamps, speedometer, £10/10/6. 1920 Sun, 2 speeds, kick starter, £10/10/6.—Booths' Motories.

BLACKPOOL Bargains.—1920 Wooler, £49/10/6. 3½h.p. Humber, £20/10/6. P. and M. £6/10/6. Indian Combination, disc wheels, £6/10/6. 6h.p. 3-speed Rudge, £35/10/6.—Booths' Motories.

BLACKPOOL Bargains.—2-speed O.K., £24/10/6. 1919 Douglas, £45/10/6. 1919 4h.p. Douglas Combination, £79/10/6. 4h.p. Douglas, £55/10/6. 10 Tamplin, £79/10/6. 1920 Morgan de Luxe, speedometer, water-cooled magneto engine, £155/10/6. Several others cheap. Push cycles taken in exchange. Motor cycles purchased for cash.—Booths' Motories, 294, Waterloo Rd., Blackpool. [9317

BO.C.H. for second-hand cycles, combinations, and runabouts at bargain prices. Exchanges arranged. Any new cycle, combination, or car supplied, cash or deferred payments.—Fair Offer Car House, 5, Heath St., Hampstead (near Tube). 'Phone' Hampstead 362. Hours: 9-7, including Saturdays. [9284

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigden, 130, Eton Rd. [0795

## MOTOR CYCLES WANTED.

EDWARDS and Co.,

101, Gt. Portland St., W., are cash buyers of solos, combinations, and Morgans. Highest prices given, distance no object. Call, write, or 'phone: Mayfair 4027. [0604

MAUDES' Motor Mart are purchasers for spot cash of late models Sunbeam, Triumph, Douglas, Triton; also Morgans.—Maudes', 100, Gt. Portland St. London, W.1. [1128

WE

RE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination. We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 314, Euston Rd. [0815

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. F. Dunn, Ltd., 326, Euston Rd., London. Museum 561. [0332

WB

WANT

£500 COMBINATIONS and Solos, any make, guarantee top prices given.—T. and B. Motor Co., L., 372, Euston Rd. Museum 6581. [5564

LATE Model Solo or Combination.—14, Swaton Rd., Bow. [9784

T. Norton, cash waiting if price right.—32, High St., Reigate. [9722

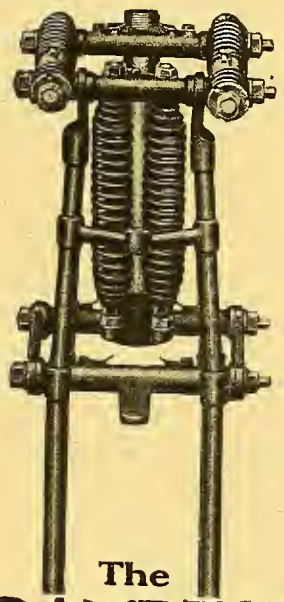
£60 to £70 offered for late Combination.—Particulars, 65, Norton Rd., Letchworth. 9777

WANTED, good Motor Cycle or Combination, cheap, for cash.—8, High St., Wandsworth. [9863


# Motor Cycling in Car Comfort

The vibrationless and smooth gliding motion of a motor cycle fitted with The Brampton Bi-Flex Spring Fork is comparable to that of a well-sprung Car.

You cannot appreciate how luxuriously comfortable motor-cycling can be made until you have ridden a machine fitted with the Brampton Bi-Flex. The exclusive dual action of The Brampton Bi-Flex Spring Fork, in conjunction with the successful combination and arrangement of coil springs—acting in compression—is instantly reponsive to, and completely absorbs within itself, all vibration and road shocks from every angle at which resistance is encountered, rendering the rider immune from discomforts which are otherwise impossible to entirely eliminate. Choose a motor cycle fitted with The Brampton Bi-Flex Spring Fork or let us send you a measurement form and descriptive Booklet illustrating models for machines from 2¼ h.p. upwards.



The **BRAMPTON** **Bi-Flex** **SPRING FORK.**

**BRAMPTON BROS. LTD.**
**Oliver St., BIRMINGHAM**


## MOTOR CYCLES WANTED.

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted machine can be included in auction sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms:—Selling commission 7½%, not chargeable unless machine is sold. If no sale a nominal auction fee is charged: For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Telephone, 208 Streatham. Telegrams, Palmer's Garage, Tooting. [1156

WANTED, Triumph or Coulson B, cheap, cash.—24, South St., Newport, Isle of Wight. [9746

WANTED, Modern Solos or Combinations, for cash.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [8682

WANTED, 1922 Triumph, S.D., new, lowest trade quotation, Berkshire.—Box 9790, c/o *The Motor Cycle*. [9829

TRIUMPH or similar Combination, 1921 or later.—Write fully, P., 79, Akermao Rd., Brixton, S.W 9. [9870

COMBINATION wanted, Douglas or other low h.p.; best bargain under £85.—5, Bouverie Sq., Folkestone. [9490

WANTED, 4h p. Triumph Combination; no fancy price.—Towsey, Sheffield Rd., Glossop, Manchester. [8883

COUNTERSHAFT Triumph Crankcase, also flywheels with shafts.—Strettell, Heron Rd., Meol's, Cheshire. [9630

WANTED, Combination, spot cash, bring or 'phone. 28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [9516

NORTON, Coulson, other makes, lowest price.—Letters only, Jones, Llangovan Farm, Penyclawdd, Monmouthshire. [9203

WANTED, powerful Combination, late model, Lancashire district preferred.—Denton, 73, Burnley Rd., Colne. [9215

WANTED, late model Enfield or Matchless Combination.—Call or write, 73, Victoria Rd., Stroud Green, N.4. [8974

2¾h.p. Douglas, New Imperial, etc., also combination and Morgan 1921-22, water-cooled, cheap.—H., 63, Solon Rd., Brixton. [9773

GOOD Secondhand Combination up to £200 as part exchange for Bianchi 4-seater.—12, Greville Place. Hampstead 1819. [4975

WANTED, Triumph, B.S.A., Blackburne, A.J.S., solo or combination.—Rhind and Co., Stone Place, Rusholme, Manchester. [9629

WANTED urgently, good Triumphs, also any good motor cycle; cash waiting.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [9882

£50 to £60 for best Triumph or B.S.A. countershaft combination offered; deposit system.—82, Gertrude Rd., West Bridgford, Notts. [9577

WANTED, 2¾h.p. Douglas, 1912-1915, 3-speed model preferred, cheap.—Lewiss, 10, Buckingham Vale, Pembroke Rd., Clifton, Bristol. [9548

TRIUMPH Combination wanted, not earlier than 1920; must be cheap and in good condition.—Butler, 70, Kingsfield Rd., Watford, Herts. [8904

WANTED, good Triumph or Douglas combination, about 1920 or later, must be cheap for spot cash.—Price and particulars to Walker, 769, Romford Rd., Manor Park, London, E. [9849

SUNBEAM 1921 Semi-Sporting, with standard Silencer, magdyno or accessories studied, must be as new, engine number essential, earlier model entertained, fullest particulars.—53, St. Andrews Rd., Southsea. [1375

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [0828

## MOTOR CYCLES WANTED

WANTED immediately, Motor Cycles, Combinations, and Light Cars.—Seabridge, 35, Hansler Rd., East Dulwich. Telephone, Sydenham 2452. [2079

WANTED, your motor cycle or combination. We are buyers. Full market price given and cash paid on the spot. Write, call, or 'phone Museum 5938.—J. Smith and Co., Motor Agents, Ltd., 52-54, Hampstead Rd., N.W.1. [0768

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

WANTED to Purchase outright, for cash, bankrupt stocks; W.D. spares, miscellaneous spares, motor cycles, any make.—Send full particulars, McNeille and Platt, 57, Great George St., Liverpool. 'Phone: 1092 Royal. [6060

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Bradburys, Martinsydes, Zeniths, — Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station) 'Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted. —Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [4559

F.O.C.H. always have cash waiting for sound machines of all types. Highest prices and courteous treatment assured.—Fair Offer Car House, 5, Heath St., Hampstead (near Tube). 'Phone: Hampstead 3752. Hours: 9-7, including Saturdays. [9283

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/24 Woodstock St. (off Blenheim St.), Bond St., W.1 'Phone: Mayfair 6559. [0772

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station, Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address, Palmer's Garage, Tooting. [1153

## MOTOR SCOOTERS.

KINGSBURY Scooter and Spare Parts.—3, Kendall's Mews, Blandford St., W.1. [5499

1¼h.p. Kenilworth Cyclette, 1921 model; £37/10 —Wauchope's, 9, Shoe Lane, London. [7868

A.B.C. Skootamota, brand new, unused; £20, cost £60.—19, Beverley Rd., Anerley. [9460

WAUCHOPE'S, 9, Shoe Lane, London.—Kenilworth Motor Cyclette, 1¼h.p., 1921; £37/10. [1299

A.B.C. Skootamota, new, unsoiled, latest model; £23, sacrifice.—Frank Whitworth, 139, New St., Birmingham. [2151

£15.—A.B.C. Scootamota, as new, electric lamps, any trial, bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [117

NEW Shop-soiled Autoped Scooters, dynamo lighting, 1½h.p.; bargain, £12/10 each. — Percy and Co., 314, Euston Rd., N.W.1. [4178

SCOOTER, Kenilworth, overhead valves, spring seat, cost £50, not ridden 20 miles; any reasonable offer considered.—C. F. Rymer, Ltd., Little Sutton, near Birkenhead. [9224

## MOTOR ATTACHMENTS.

YOUNG Bicycle, with 1¾h.p. engine, also new James tank; offers.—93, Guildford St., Chertsey. [8901

AUTOWHEEL Owners!—Turn your engine into a smart up-to-date motor cycle in one hour.—Below.

AUTOWHEEL Owners!—Cheapest Lightweight yet; complete sets; stamp particulars.—S. Motors, Egerton, Kent. [9945

2h.p. Johnson, less tyre and tube, perfect condition, tax paid; 12 gns.—Baibridge, 9, Ewell Place, Camberwell. [9123

1921 Young's Attachment, practically new, guaranteed complete and perfect; £12.—37, Arlington Rd., Surbiton. 'Phone: Kingston 1274. [9855

WALL Auto-wheel, attached gent.'s cycle, 28in. frame, both engine condition, tax paid; £15, or near offer.—Beard, 33, Hunt St., Swindon, Wilts. [9335

YOUNG special cycle and attachment, equal to new, guaranteed perfect; owner bought combination; £22/10, or nearest.—H. Hurdley, High St., Iron-Bridge. [9990

## HOODS, WIND SCREENS, ETC.

EASTING Windscreen, £2; Amac carburetter, 25/-. —14, Phœnix St., Euston. [9193

V-shaped Windscreens, £3/18; small size, £2/15.—Bright and Hayles, 78, Church St., Camberwell. [8026

HERCULES Hoods and Aprons; write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [0853

# STANLEY BELTS AND FASTENERS.

**MILLIONS ordered and in use by H.M. WAR OFFICE and our ALLIES.**

A BOX OF STANLEY SPARES is a complete belt equipment outfit—the best and cheapest insurance you can effect against belt trouble on the road. It contains

1/2 *each.*

**The STANLEY FASTENER with the BEND that NEVER BREAKS, the BEST at any price. Hardened & tempered hook and flanged pins**

1/1

**The STANLEY SPARE LINK which is the best belt length adjuster yet invented. Saves time, trouble & money. Saves the cost of a new belt.**

**The STANLEY SHIELD, which protects the belt fastener, prevents wear of the pulley, and conserves power. Specially designed for use with the Philipson Pulley. 9d.**

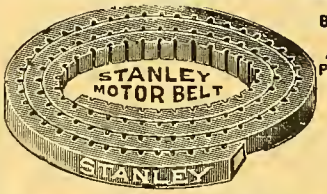
**STANLEY ADJUSTING HOOKS, for adjusting the length of your belt in one second. Set of 3, 6d.**

*"Never be without a box of Stanley Spares."*

*Price* 3/6 *post free. Send size of belt when ordering.*

**The LION FASTENER, guaranteed for 5,000 miles—11d.**

**Our Goods are World-renowned for their Reliability A STANLEY FASTENER free with each belt.**




**Belt Punches 1/6**
**Adjustable Punches 2/**

Per t
½" 1/-
¾" 1/5
⅞" 1/9
1" 2/-
1½" 2/6

**Stanley Motor Belts & Fasteners**
BRITISH THROUGHOUT
(STANLEY WEBB, inventor of the original Hook Belt Fastener and other Practical Belt Aids.)
**32, London Road, BROMLEY, KENT.** 'Phone, Bromley 806

# Motor Houses

**For your Motor Cycle or Car. Built of Best Quality Timber. Sectional. Tenant's Fixtures. PRICES from £5 5 0.**

*Catalogues post free.*

**FOTHERGILL & SCHOFIELD,**
Warwick Road.
BATLEY
Yorks

## HOODS, WIND SCREENS, ETC.

COLLINS and Son for hoods, screens, and aprons; hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreens, complete with apron, 22/6, as sold elsewhere at 30/-; Easting windscreens, standard model, good condition, 45/-; other screens at 30/- and 35/-; any screen on approval. Celluloid panels fitted to any windscreen in few hours. Open Sunday mornings, 10 to 12, weekdays till 8.30 p.m. Saturdays till 5 p.m. —Collins and Son, rear of 84, High St., Putney, S.W. [5320

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3239

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

AVIA V-shape windscreens are undoubtedly an engineer's product; 50/-; complete with rubber apron, fit any sidecar in 5 minutes; trade inquiries invited.—"Avia" Manufacturing Co., 9, Yew Grove, Cricklewood, N.W.2. [8656

ROBINI Manufacturing Co.—The Bower Adjustable Windscreen, registered, with coverall apron, 30/-, carriage paid. Beware of imitations. This is the standard price for this screen. Agents wanted. Celluloid panels fitted, Eastings, 16/6; aprons made to order, 10/-.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone, Brixton 1585. [1179

## BODIES.

SUNBEAM body, like new, roomy.—Particulars, 12, Bessie St., Barnoldswick, Yorkshire. [9013

CAMBER Sidecar Bodies; from £4/17/6.—Bright and Hayles, 78, Church St., Camberwell. [8024

RENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

COLLINS and Son.—Bodies, new bulbous back coachbuilt at £6/5; 2-seater bulbous back, £9.—Below.

COLLINS and Son are actual manufacturers, and give twelve months' guarantee with every body over 200 in stock. Large number of secondhand in stock.—Below.

COLLINS and Son repair, re-paint, and upholster at moderate charges; all work guaranteed. Estimates free. Send for catalogue.—Collins and Son, rear of 84, High St., Putney, S.W. [5321

BODIES, several new, bulbous back and step, from £4/15. Call and inspect.—Edwardes, 277, Camberwell Rd., S.E. [9781

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [513

SECONDHAND Sidecar Bodies, Matchless, Harley P. and M., etc., from £3/10.—Edwardes, 277, Camberwell Rd., S.E. [9781

VENUS Step Bodies, 2 dozen to clear; from 50/- each; great bargains.—Venus Sidecar Co., 694, Seven Sisters Rd., Tottenham. 'Phone; 2102. [997

SPEEDY and Gardner, "The Speedy" 2-seater, £15 single, £8; bodies to order; screens repaired 12/-; aprons to order, 8/-; let us quote you.—67, Effra Rd., Brixton. [918

COBB Speedman Bodies for speedmen and all who desire a finely finished, well-made coachbuilt attachment to fit any old type or modern chassis at moderate price.

COBB Speedman Bodies cost £2/12/6, unpainted and unupholstered; or finished ready for the road to match your machine at from £3/15.

COBB Speedman Bodies are manufactured by Vernon Cobb, 18, Midland Rd., Carlton, Nottingham. [996

ROYAL Leicester Sidecar Bodies fit any chassis, first class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [033

EASTER Bargains.—Bodies, 1922 production, brand new, from £3/15; 2-seaters, complete, from £. Actual manufacturers. Write for catalogue. Bodies re-painted and upholstered from £3.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone: Brixton 1585. [11

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale. Cooper's Vehicle Journal, Designing Dept., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—Dorset House, Tudor St., London, E.C.4. [00

£4/17/6.—New Douglas type Bodies, bulbous back and upholstered in crocodile rexine; they require a finishing coat of paint only. We have contracted for a large quantity, so can give the benefit to you. See Sidecar Attachment column.—Old Man Hep., 19, Wilcox Rd., South Lambeth, London, S.W. 'Phone: 1958 Brixton. [1

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not dash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

BASTONES. - Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; lightweight model £17/10, Model No. 3 £19/10, Sports model £23/10, tradesman's carrier model £23/10, Model No. 2 £24/10, Model No. 1 £28/10, Model de Luxe £34/10, tandem model £30.

BASTONES.—Whitley 1922 sports model in stock. £25.

BASTONES for Sidecar Chassis, underslung £7/19/6. tandem chassis £14/10, auxiliary arms 14/-.—28, Pentonville Rd., King's Cross, London, N.1 'Phone: 2481 North. 'Grams: Bastones, London. [5132

CAMBER Utility Models; £25.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Utility Tandems; £27.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Semi-touring Models; £18/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Bulbous Back Models; £19/12/6.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Lightweight Models; £16/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Hexagon Sports Models; £25/17/6.—Bright and Hayles, 78, Church St., Camberwell. [8023

CRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

CRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

CRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

CRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [8622

SIDECAR, coachbuilt, off Triumph; £8.—"Kynance," Wildwood Rd., N.W.11. [9692

SIDECAR, 4-point, underslung, off Triumph, as new; £10.—Ford, Watchmaker, Redhill. [9786

WATSONIAN R34 (1921 model), Easting, lamp, apron; £18. 78, Fordel Rd., Catford. [9172

COACHBUILT Sidecar, sound, but paint rough; £8, or close.—198, King St., Hammersmith. [9506

CLYNO Sidecar Chassis, complete; £6/10.—Kennard, 78, Yerbury Rd., Holloway, N.19. [9139

COACHBUILT Sidecar, complete with chassis and wheel, hardly used.—31, Linden Grove, Nunhead. [9419

SANDUM Featherweight Sidecar, new, with fittings.—Oliver, 11, Osborne Rd., Egham, Surrey. [1055

SIDECAR Chassis, new, complete with wheel, from £5/17/6.—Edwardes, 277, Camberwell Rd., S.E. [9789

SIDECARS.—Several cheap; room wanted; fitted free.—57, Kenbury St., Camberwell, London. [9454


# MAUDE RUBBER Co.

**58, PRAED STREET, W.2**

4484 Padd.

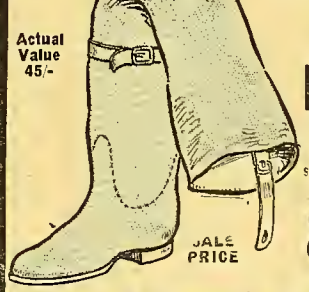
## WE GUARANTEE YOUR SATISFACTION

and send immediately on 7 days' approval against Cash

| | | |
|---|---|---|
| 24×2¼ | **Avon Ribbed.** Heavy ..... | 18/6 |
| | **Clincher de Luxe.** Ex.Hvy... | 21/- |
| 26×2 | **Englebert** Passenger. Heavy.. | 17/6 |
| 26×2¼ | **Avon** Rubber-studded. Heavy | 22/6 |
| | **Wood-Milne** Key-grip. Heavy | 13/6 |
| | **Wood-Milne** Comb. Ex. Hvy. | 22/- |
| | **Dunlop** Rubber-studded. Heavy | 27/6 |
| | **Goodyear** Diamond. Ex. Hvy. | 25/- |
| | **Firestone** Safety. Ex. Heavy .. | 28/3 |
| 26×2¾ | **Dunlop** Rubber-stud. Ex. Hvy | 36/- |
| | **Clincher de Luxe.** Ex. Hvy... | 26/6 |
| | **Hutchinson** Rubber stud. Hvy. | 26/3 |
| 26×2½×2¼ | **Avon** Ribbed. Heavy..... | 27/6 |
| | **Palmer Cord.** Heavy ..... | 32/6 |
| | **Clincher de Luxe.** Heavy .... | 28/6 |
| | **Kempshall** Anti-skid. Heavy | 27/6 |
| | **Avon** Rubber Stud. Ex. Hvy. | 28/6 |
| | **Dunlop** Heavy. Rubber Stud. | 46/- |
| 26×2½ | **Wood-Milne** Key-grip. Heavy | 13/6 |
| | **Wood-Milne** Key-grip. Ex. Hvy. | 18/6 |
| | **Bates Ribbed.** Ex. Heavy.... | 35/- |
| | **Hutchinson** Rubber Stud. Hvy. | 26/6 |
| | **Englebert** Passenger. Ex. Hvy. | 22/6 |
| 26×3 | **Englebert** Passenger. Heavy.. | 30/- |
| 28×3 | **Macintosh** Chain Tread..... | 28/6 |
| | **Clipper-Reflex.** Extra Heavy | 32/6 |
| | **Clincher Ribbed.** Lt. Car. .... | 38/6 |
| | **Avon** S. studded. Extra Heavy | 37/6 |
| | **Wood-Milne** Extra Heavy .... | 30/- |
| 650×65 | **Wood-Milne.** Sq. Tread. Ex. Heavy..... | 22/6 |
| | **Englebert.** Sq. Tread. Ex. Heavy..... | 22/6 |
| | **Goodyear** Diamond. Ex. Hvy. | 30/- |
| | **Dunlop** S. studded. Light car | 35/- |
| 700×80 | **Avon** Sunstone. Ex. Hvy .... | 45/- |
| | **Avon Super-Chain.** Ex. Hvy. | 45/- |
| | **Michelin** St. Stud. Ex. Hvy... | 45/- |
| | **Firestone** Grooved. Lt. Car.... | 45/- |
| | **Rodace** Sq. tread. Ex. Hv. Lt. Car | 42/6 |
| | **Dunlop** Magnum Cord. Ex. Hvy. | 55/- |
| 710×90 | **Avon Sunstone** ..... | 50/- |
| | **Avon Square** Extra Heavy. | 45/- |
| | **Firestone Grooved** ..... | 50/- |

**Tubes.** Brand new **Dunlops, Palmers,** and **Avon** 26"×2", 2¼", 2¾" and 2½" 5/6 each. 26×3, 28×3, 650 & 700 6/6 ,,

**MADE BY NORTH BRITISH RUBBER Co., etc. Easily Converted to Wellingtons.**



**RUBBER HIP BOOTS (WADERS)**

Actual Value 45/-

Thousands sold at 12/6

SALE PRICE **8/6**

Postage 1/3

All Goods sent on Approval 7 days against cash



# Petrol & Oil Tanks

Tanks any shape to order. Repairs and re-enamelling from 15/6. Illustrated List free.

Auxiliary tanks, with filler, tap, T piece, piping, clips, complete, always in stock.

**A. GREEN, Water St., off Chapel St., Salford, Manchester**


## SIDECAR ATTACHMENTS.

GOOD Tradesman Box Sidecar, £5, bargain; fit any motor cycle.—Box 9804, c/o *The Motor Cycle*. [1512

WICKER Sidecar, complete, nice shape; offers.—Owen, 2, Denmark Gardens, West Kilburn. [9117

WATSONIAN Lightweight sidecar (80 lbs.), cost £22, as new; £13.—Roberts, Stanton-by-Bridge Derby. [8946

£6/10.—Red Coachbuilt Sidecar, all connections, fine condition.—41, Olive Rd., Cricklewood, London N.W.2. [9050

HALIFAX.—New Swan Sporting and Millford De Luxe for Harley and American X.—Motor Exchange, Horton St., Halifax. [9897

BOOTHS Blackpool Bargains.—Limited number, new coach bodies, full size with locker, £5/17/6 usually £9/10.

BOOTHS Blackpool Bargains.—New £9/10 coach bodies for £5/17/6; illustration free.—Booths Motories, Blackpool.

BOOTHS Blackpool Bargains.—Quantity new under slung chassis, 4-point attachment, £9/19/6; illustration free.—Booths Motories, Blackpool.

BOOTHS Blackpool Bargains.—Several shop-soiled sidecars, cheap. Hercules coach sidecar £9/10/6; ditto Canoelet, £8/10/6; ditto Farlow, £8/10/6.

BOOTHS Motories, 294, Waterloo Rd., Blackpool. [9318

TRADESMAN'S Box, off Enfield, new condition, superior finish, roomy; 10 gns.—H. Almond, Shepperton, Middlesex. [9214

SIDECAR, Sandum de Luxe, perfect, new January, not done 50 miles, apron, lamp; gift, 18 gns.—10, Manor Rd., Leyton. [9433

BASTONE'S Sidecar, lightweight, coachbuilt, good as new, windscreen, apron, 4-point attachment; £12/10.—101, High St., Merton. [9502

LARGE bulbous back Fulford coachbuilt sidecar for spring frame Indian, fine condition; £10.—29, Pembroke St., Cowley Rd., Oxford. [8885

EXTENDED Payments accepted for sidecars; models for all makes.—Send for catalogue, etc., Rideezi Sales, Ltd., 5, Victoria St., S.W.1. [0829

MILLS-FULFORD Sidecar, deep body, fully underslung, perfect running order, bargain; £8.—152, Crystal Palace Rd., E. Dulwich, S.E.22. [9161

COACHBUILT Sidecar, 1921, off Zenith, by Kirk and Merrifield, hood, screen, very little used; £20, cost double.—Caram, Bycott, Tiverton, Devon. [9053

SANDUM Metal Cigar-shaped Sports Body, Harley-Davidson colours, splendid condition; £4.—Claremont Garage, Claremont Rd., Highgate. [9903

SIDECAR, brand new, latest, underslung, handsome bulbous back, coach, £12/10; body separate, £6.—Taylor, 637, Seven Sisters Rd., Tottenham. [9409

LARGE family coachbuilt sidecar (Canoelet), off 6-7h.p. B.S.A., as new; £25; locker at back; cost £41.—W. Boyles, Dalkeith Place, Kettering. [8889

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers' throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589 [2319

B.S.A. Coachbuilt Sidecar, Model No. 2, brand new, never used, complete fittings, apron, etc.; bargain, £25.—Thompson Bros., Dromore, Down. [2404

£19/10.—Sandum 2-seater, off Henderson, 28×3in. wheel, windscreen, apron, 2 electric lamps, and switchboard.—Smith's, 86, Chalk Farm Rd., N.W.3. [9839

MILLFORD Sidecar off Triumph, new, £18; also Millford chassis complete, suit any machine, £60.—33, Hackford Rd., Brixton, S.W. [1211

TRIUMPH Gloria sidecar, new, not been used, fitted with hood screen, and apron; price £38/10.—G. H. Layne and Co., Triumph Agents, Brigg. [6068

## SIDECAR ATTACHMENTS.

WATSONIAN Lightweight Sidecar, brand new, polished aluminium, with all fittings and apron, complete; £15.—West, 2, Brunswick Rd., Tottenham. [9027

PARAGON Folding Sidecar, 28×3 Palmer cord, Easting, luggage grid, very roomy, new condition; cost £40, accept 25 guineas.—23, Hilderthorpe Rd., Bridlington. [9064

COLLINS and Son for sidecars, new bulbous back models, complete with renovated underslung chassis, coverall apron, all fittings for any machine from £12/10.—Below.

COLLINS and Son.—2-seater bulbous back coachbuilt models with underslung chassis, all fittings, from £15.—Below.

COLLINS and Son have various models in stock to suit any machine; few secondhand sidecars in stock, cheap.—Below.

COLLINS and Son specialise in frame and chassis repairs; special chassis built to order; work guaranteed. Send for catalogue, or call. Open till 8.30 p.m., Saturdays till 5 p.m., Sunday mornings 10 to 12.—Collins and Son, rear of 84, High St., Putney, S.W. [5322

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

LIGHT Coachbuilt Sidecar, Easting, luggage grid, tool box, lamp, re-enamelled B.S.A. green, 26×2½ wheel, new tyre; £17.—13, Searles Rd., New Kent Rd., S.E.1. [1311

COMFY Sidecars, strong underslung chassis, coachbuilt body, bulbous back with locker, quick detachable fittings, Clincher tyre; price 18 gns.—Comfy Sidecar Co., Leytonstone. [3079

SPORTING Canoelet Sidecar, complete, nearly new, 4 points, Lucas lamp set, waterproof apron, plated adjustable windscreen, photo; £14/10; delivered free first 50 miles.—E. Pledger, Ely. [7477

ROVER Coachbuilt Sidecar, £12; Rudge coachbuilt, £12/10; both lovely condition, complete, ready for machine; coachbuilt sidecar, £6.—Syd. Pearson, Gate House, Cheylesmore, Coventry. 'Phone: 1639. [9759

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself obsolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1 [0388

HAVE You Seen the Latest in Sidecars (Brookes' Patent)? An open or closed sidecar in 60 seconds, guaranteed protection; from 45 gns., complete with chassis (no leather or canvas hood).—Particulars from Patentees and Designers, Brookes-Harris, Bishop St., Wolverhampton. [1173

OLD Man Hep. has 1,000 Douglas Underslung Chassis, complete and renovated, to suit all makes of machines to order, £5 each. We can supply a brand new bulbous-backed Douglas type body and new tyre for £6/10 extra. The body requires a finishing coat of paint only, upholstered in rexine.—17-19, Wilcox Rd., South Lambeth, London, S.W.8. 'Phone: 1958 Brixton. [1284

LIGHT Car and Motor Cycle Engineering Co., Ltd. —Light touring complete, £12/12. Medium touring complete, £15/15. Heavy touring complete, £21. Second-hand touring sidecar, suit 8h.p. machine, complete with lamp, £5. Second-hand body, dark green, in very good condition, fitted to brand new chassis, £12.—26, Tulse Hill, Brixton (½ minute from Brixton Skating Ring). 'Phone: Brixton 1292. [1196

GREAT Bargains for Easter.—20 1922 new underslung chassis, complete with new bulbous back body, £18/10; 20 1922 lightweights, complete, all brand new, £11/10; P. and M. outfits, complete, from £12/10; Douglas outfits, complete, from £14. Wonderful bargains; we are the actual manufacturers. Extended payments.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone: Brixton 1585. [1177

## RUNABOUTS AND CYCLE CARS.

7-8h.p. Carden De Luxe, 1921; £110.—Wauchope's, 9, Shoe Lane, London. [7866

WAUCHOPE'S, 9, Shoe Lane, London.—Carden de Luxe, 7h.p., 1921; £110. [1297

WAUCHOPE'S, 9, Shoe Lane, London.—5-6h.p. 1914 Carden Monocar, £50. [1301

£135.—Morris-Oxford 2-seater, beautiful condition, tax paid.—King, Egrove Farm, Oxford. [8792


THE

# Pero Works Co.

10, Anderton Sq., Whittall St.,

BIRMINGHAM.

Cylinders Reground.

Pistons—Over-size. supplied.

Engines Overhauled.

Spares—Made to order.

Welding—Acetylene. Aluminium a speciality.

Over £1,000 is the value of the machines and equipment that will do your repairs.

*No Repair too small.*

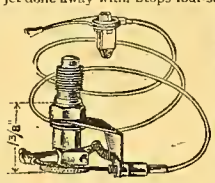


**AC.U. 6 DAYS' TRIAL.**

**1919** two silver medals, **1920** team prize and six gold medals. **1921** team prize and four gold and four silver medals. **1922** Colmore Cup Trial Henley machine won silver medal. **1922** Victory Cup Trial Henley machine won gold medal.

**ALL FITTED WITH THE W.S.R. VARIABLE JET ADAPTER**

**Speed**, power, economy, easy starting, slow running, choked jet done away with. Stops four-stroking on two-stroke machines



**A.M.A.C., B. & B., 8/6 Senspray, Triumph, Claudel Hobson, "VICI" and Cedos Carburetter 10/6**

*Postage and Packing 6d.*

If fitted with **BOWDEN CONTROL 11/6 EXTRA.**

When ordering state length of jet, including plug and year of carburetter. Write for leaflet, it will interest you.

**RUDGE BROS.** Motor Fittings Manufacturers FLEET ST., BIRMINGHAM



**COMFORT AND SAFETY**

(for driver and rider) by using the "Eversure" Foot Rests for pillion seat riders.

An even balance. No side-slipping. Patent pending. A child can fit it. Small cost.

Price **7/9** pair, 8/- post free. Cash with order. Special terms to the trade. Standard size ⅞in. Other sizes to order. Fixed on back stays of machine.—**G. NICHOLLS,** The Central Garage, **103, Little Park St., Coventry.** Tel. 1260.


## RUNABOUTS AND CYCLE CARS.

MORGAN.—New models in stock.—Agents, Birkehead Motor Works, 9, Hamilton St., Birkenhead [23

£125.—G.N. 1921, mileage under 2,000, tax pa bargain.—Smith's, 86, Chalk Farm Rd., N.W [11

A.C. Sociable, beautiful 2-seater, overhauled, new painted; 49 gns.; exchange motor cycle; ea terms.

GIRLING Parcel Carrier, good tyres, drive awa gift, 29 gns.; easy terms.—Wandsworth Mot Exchange, Ebner St., Wandsworth (Town Station). [98

1921 G. P. Morgan, 10h.p. M.A.G. engine, dyna lighting; £150.—24, Balliol Rd., North Ke Islington. [94

BEDELIA.—The new 1922 model, 8-10h.p., a cooled or water-cooled, to choice. Immedia deliveries.

BEDELIA.—Air-cooled model, £185; water-cool model, £195. Side-by-side armchair seats, speeds and reverse, 5 detachable wheels, hood, scree lamps, tools, jack and pump included. Trial free.

BEDELIA.—Cash or easy terms. Your old car motor cycle taken part payment.

BEDELIA.—Catalogue free from L. N. Palmer, Sc Concessionaire for the British Empire.—Palme Garage, Tooting. [11

8h.p. Rover.—1922 model, early delivery; exchanges. Walbro Motor Cycle Co., Saffron Walde Phone: 45. [71

MORGANS, new 1922 Standard, Grand Prix, a Model de Luxe in stock, from £150 complete. Moss, Wem. [41

MORGANS Always in Stock.—The West of Engla Agent, Gibb, 100, Northgate, Gloucest 'Phone: 852. [81

A.C. 3-wheeler, B type, splendid order, equipp trial, tax (£4) paid; £48.—96, Wickham R Brockley, S.E. [97

£29/10.—Carden-Jap Monocar 5-6h.p. Twin, compl with accessories, bargain.—Smith's, 86, Cha Farm Rd., N.W.3. [11

MORGAN, 1919 Grand Prix, 8h.p., fitted with M.A.G. engine, aero body; £160.—Maudes', 1 Gt. Portland St., London. [11

G.N., September, 1921, Standard Touring, done 6 miles, complete, excellent order; £165.—Mayna Collington Avenue, Bexhill. [90

COVENTRY PREMIER.—1922 model, early livery; exchanges.—Walbro Motor Cycle C Saffron Walden. 'Phone: 45. [71

MORGAN, Grand Prix, 1915, excellent runni order, tax and insurance paid; £90.—Whi 437, West Green Rd., Harringay. [97

MORGANS.—Prompt delivery of all models, ne exchanges, extended terms; official agents, tra distributors.—Elce, Ltd.—Below.

G.N. 1922 Standard and All-weather Models stock, dynamo lighting, dickey seat, etc.—E Ltd., 15-16 Bishopsgate Avenue, E.C.3. [00

A.V. Monocar 1919, thoroughly overhauled, elect light; bargain, £65.—Ingledew, 37, Surrey S Strand. 'Phone: Holborn 6400. [89

MORGAN 1920, Grand Prix, M.A.G., very w equipped, aluminium dash; £142.—R. B. Cle and Co., 7, Exhibition Rd., S.W.7. [72

G.W.K. 1914 2-seater, overhauled, perfect, new tyr lamps, really reliable car; £115.—Owner, Thurlby Rd., West Norwood, S.E.27. [89

G.N., Easter Tour, excellent 1920 standard, go tyres, spares, dynamo lighting; £120.—Bowma Pembroke House, Aldeburgh, Suffolk. [95

CYCLE Car, J.A.P. engine, friction gear, lam etc.; £50, or exchange combination.—Knight, Pavement, Coulsdon, Surrey. Purley 1277. [91

1917 G.P. Morgan-Jap, lamps, horn, discs, co plete; any trial; £135; motor cycle part The Haven, 120, Sutherland Rd., Croydon. [10

MORGAN, Grand Prix, 8-10h.p., W.C., J.A. discs, lamps, horn, tools perfect conditi £125, or near offer.—17, Churchgate, Bolton. [47

SIZAIRE-NAUDIN 8-9h.p. 2-seater with dickey, n tyres, excellent condition, all on, tax pa £75.—Pryor, Off Licence, Newchapel, Lingfield. [9

GRAHAME-WHITE 2-seater, nearly new, 6h.p., wire wheels, new tyres; bargain, £50.—Wa South Western Garage, New Malden, Surrey. [84

MORGANS.—1922 De Luxe, Grand Prix, Popular models, early delivery; exchange Walbro Motor Cycle Co., Saffron Walden. 'Phone: [7

NEW 1921 Tamplin 2-seater, 8h.p., all compl £125; cycles or combination taken in part change.—Percy and Co., 314, Euston Rd., N.W.1. [4

A.V. 1920 Monocar, dickey, 2-speed, electric li ing, aluminium discs, new Dunlops, just re-pair and overhauled, as new; £50.—2, Madrid Rd., Bar [9

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

Editorial, Advertising, and Publishing Offices: Dorset House, Tudor Street, London, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

Coventry: Hertford Street.
*Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

Birmingham: Guildhall Buildings, Navigation Street.
*Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

Manchester: 199, Deansgate.
*Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## Spare Part Prices.

ALTHOUGH motor cycle prices have fallen appreciably during the past six months there has been no general tendency to reduce the price of replacement parts for current models. Old standing spares must perhaps naturally retain their original value.

In these days, when the front rank machines are almost of equal quality, and when performances and reliability are on a general level of excellence, the prospective buyer is apt to look towards some of the more extraneous characteristics of a machine for deciding factors in his final choice. Obviously if a rider wavers between two machines of very similar specification and capabilities, and he learns that the service given by the makers of the one is better, or the spares cheaper, than the other, his selection is bound to be influenced by the consideration of the fact.

Manufacturers in this country have never looked upon the spares side of their businesses in the same way as, for example, the producers of cheap cars in America. In some directions the car is sold at a small profit, and a great part of the value of the sale lies in the potentiality of the car as consumer of spare parts. Motor cycle manufacturers tend to regard the supply of spares as a necessary evil, and although they may produce copiously illustrated spares lists, they frequently give the impression that the sale of parts is a burden on their energies and resources, which can only be carried by the imposition of exceedingly high prices for the individual components of their machines.

This should not be so; any firm producing machines which are not needlessly changed in design from year to year, should be able to run its spares service department as a profitable trading concern, without demanding fictitiously high prices. One large concern has already made a step in this direction, and others must follow; as motor cycle design crystallises into hard and fast lines (a slow process, truly!) this extraneous matter of prompt and cheap spares supply will have more and more weight in the guidance of the public's choice.

---

## On Treacherous Surfaces.

STRANGE subjects crop up in our Correspondence columns, but there is possibly some method in the seeming madness of the query, "On which side do you fall?" It is suggested that when a solo machine upsets it eventually lands on the side from which the rider usually mounts.

But it would be more useful to obtain exact information as to the correct riding procedure in various situations which require careful negotiation to maintain an upright path. One well-known track rider, for instance, recommends that the handle-bars should be released entirely on the first symptoms of speed-wobble, asserting that the machine will then right itself; another rider advises a similar cure for an incipient skid caused by reaching a loose, uneven patch of road at too great a speed for safety—in effect, he says that bars should be held loosely; but a third fairly common hint is to speed up and grip tight on really bad grease.

There is really no reason why all this seemingly contradictory advice should not be correct under different circumstances; but to the ordinary rider the only tangible fact is that he begins to wobble or skid on a treacherous surface long before the trials riding expert, who may not skid at all, and he is more interested in why this should be so than on which side he will eventually fall.

An index to the advertisements in this issue will be found on Supplement ii.

# Occasional Comments.

By IXION.

## For Kerridge Folk.

OFTEN I have emphasised the growing, if somewhat inarticulate, demand for a utility motor cycle amongst people of limited means, devoid of technical knowledge, who merely desire cheap transport, and have no intention of ever growing interested in the technical or sporting aspects of motor cycling. This demand has become so keen of late that its victims are taking the initiative, and spontaneously hunt up machines which appeal to them, though clubmen know little about the designs and possibly care less. Within the last few weeks I have received quite a number of letters from people of distinct social standing referring to such machines as the Hack, the Reynolds, and the Xtra-car. How many of my readers could state the approximate specification of this trio offhand? The "gentry" are taking trial runs on these cheap and unconventional vehicles, and seem to be mightily tickled with them.

## A Moody Engine.

THE latest brain-twister in our out-patient department is purveyed by a reader who owns a Rudge. It is a machine with a past—a highly creditable past, too; but just lately it has developed a very curious trick. In the ordinary way it "rudges it" like any other Rudge. Every now and then, usually, though not invariably, when climbing a mild grade with the multi lever a notch or two backwards the engine suddenly begins to "super-rudge it," or behave like Cyril Pullin's 1914 bike of that ilk. In a hundred yards or so it returns to its normal self. The four-cylinder F.N. was often accused in old days of occasionally turning "fey," as the Scots call it, and developing about double its normal h.p. for a few moments. But I have not previously heard of the Rudge exhibiting a mad minute. Can any rudger account for the symptoms? The owner has been over the carburetter with a fine tooth comb to no purpose. That's the worst of these pedigree animals—they turn skittish when they're full of oats.

## Big Tyres and the Right Fork.

I HAVE tried big tyres and the wrong fork, little tyres and the right fork, and latterly big tyres and the right fork, as exemplified by two conjunctions, namely the Scott fork plus 3in. Palmer cords, and the Druid fork plus 3in. Dunlop magnums (or should it be "magna"?). We all know that big tyres spell a vast increase of comfort, and eke that the fork is really far more important than the engine. But I fancy there are lots of riders who have never sampled a first class fork in conjunction with a big tyre, blown rather sloppy. I frankly admit that on modern roads with a grade B fork and 2⅝in. tyres motor cycling can be a most exhausting pastime. More than once last year I rode upwards of 200 miles in the day, and when night came I felt as I never wished to do it again. I was never quite sure whether post-war roads or sheer Anno Domini were really responsible for the envious glances (horrible confession) which I occasionally cast at parties in big cars towards the 199th mile. But *this* year the various road strains, whether due to potholes or freak hill surfaces or speed or distance or perennial corners or grease, leave me as fresh as the proverbial daisy after 200 miles. I have not got a spring frame, and I really don't feel the need of one.

## Beggars' Roost.

THIS famous hill will obviously be a centre of public interest at Easter. The most humorous episode I ever witnessed on it was as follows: Jones, who sought to paralyse the market by producing the perfect cycle car, was with difficulty convinced that your sporting motor cyclist does not regard Dashwood and Stoneleigh as worthy the name of hills, and a friend of mine took Jones, complete with cycle car, down West to look at some real gradient. Porlock was found to be dry, and the Jonesette scrambled up after all superfluous kit had been dumped at the Ship Inn. Countisbury burnt out the brakes, and Lynmouth was negotiated slowly but surely at the tail of a cart with

**Occasional Comments.—**

the aid of a stout chain. Jones insisted on tackling the Roost, and my pal very laudably refused to assist otherwise than by taking a photograph. The Jonesette stuck as soon as its nose touched the 3 in 10 piece. Its brakes wouldn't hold backwards, so Jones was fain to turn it round before he descended. He got the car broadside on across the gradient, and it promptly turned over down the hill. I wish truth allowed to add that it rolled to the bottom; but, alas! the Jonesette was not sufficiently sturdy in construction for that. Its side squashed in like a sat-upon topper at the first capsize.

### The 1922 Sports Bus.

My motor cycling memory is as long as most, but I do not recall any year in which engines and frames have made so much progress as in 1921-2. The current sports bus is a direct incentive to average nearer 40 m.p.h. than 30 m.p.h. I do not mean that it will not trickle along at a speed which auntie would approve, but 40 m.p.h. is its natural minimum when the road is straight and clear, and what's more, its steering, its brakes, and its comfort all tempt the ordinary owner to keep up that sort of pace. There is actually nothing dangerous or reckless about it, so smooth and controllable are the latest editions. As a motor cyclist I appreciate this luxurious travel enormously; but as John Citizen I rather wonder that so few makers have utilised the recent advances in design to give us lighter, cheaper, and more economical solo buses. Every machine has a natural speed at which it runs its best without forcing and without being held back. For my own 1922 solo roadster that speed is 42 m.p.h. on standard gear, and the machine weighs 2½ cwt., all on. My surprise is expressed at the fact that the people who build this bus do not flank it in their list with a little sister, weighing, say, 180lb., and giving the sort of performance which we expected from a standard 3½ h.p. in 1914.

### Four-cylinder Sidecars.

In a review of a hush-hush four-cylinder project now on the carpet, I estimated that such an outfit might be produced at round about £175. Mr. H G. Bell, of the F.N. Co., points out that his firm's super o.h.v. 8 h.p. outfit-de-luxe is listed at £174. A bright guess on my part, for I had no notion of the F.N. price when I penned my paragraph. But Mr. Bell certainly offers astounding value in the shape of the 7 h.p. F.N. sidecar, which is actually listed at £127—less than I have paid for a solo single-cylinder in this year of grace. Makes me wonder how our exchange stands with Belgium; having no charitable relations in that country, I don't happen to be *au fait* with their money market.

A TYPICAL ENGLISH LANDSCAPE. Trials have now started in earnest, competitors' numbered machines being a familiar sight at week ends both on the highways and in the byways: the solo and sidecar riders, too, are thronging the roads in greater numbers, some attached to clubs, others preferring to follow their own inclinations. The scene is at the bottom of Birdlip, Gloucestershire.

# Exploring the Hebrides.

## A TRIP TO THE LONG ISLAND —A LITTLE KNOWN PART OF THE BRITISH ISLES

One of the curiously shaped chambered cairns known as Langass Barp, North Uist island.

The Norton outfit on a rocky track in the Island of Harris.

IN recent issues of *The Motor Cycle* contributors have described motor cycling conditions in the outlying parts of the United Kingdom. The Channel Isles, the Isle of Wight, the Isle of Skye, and the Isle of Man have all received their meed of praise. There is another distant fragment of the British Isles of which few know little about, *i.e.*, the Hebrides. Take a map and locate these islands, and you then realise that there are many districts—each with a charm of its own—which might be worth "discovering."

The writer, last summer, visited the Hebrides on a Norton sidecar, and the trip proved most interesting.

### The Western Islands.

On reaching Kyle of Lochalsh one feels instinctively that the Western Isles have already been reached. Kyle, indeed, is different from all other Highland towns; it is, as it were, the clearing house for the Hebrides. There, less than a mile across the sound, is Skye, where a white line of cottages stands out plainly marking the village of Kyleakin and, looking straight down the Kyles, the Cuchullins tower above the water.

But we were bound for the Long Island and, having arrived at Kyle late in the afternoon, we thought it advisable to see the Norton safely aboard the Stornoway boat, that vessel having apparently no very fixed time for weighing anchor.

### Applecross from the Sea.

About an hour's run from Kyle we were interested to see the ferry-boat come out from Applecross to take the mails off the steamer, for now the Highland postman no longer toils over the long "Pass of the Cattle," so familiar by name to all motor cyclists, to reach the village from the land side.

We arrived in Stornoway harbour about eleven o'clock, just as the sun was setting behind the island. The sea passage had been most enjoyable, the Kyles and the Minch really presenting a magnificent spectacle during fine weather.

Our plans were first of all to explore Lewis as far as possible, then to run down and look at Harris and, afterwards, to take the boat from Tarbert down the Little Minch and past the Sound of Harris to Lochmaddy in North Uist.

With the aid of the map we located the places of interest and set out on our trusty mount in quest of them. Much of the interest in Lewis lies in its prehistoric monuments. At Callernish we found a fine example of the Druidical circle; at Morsgail are two well-preserved specimens of all-stone bee-hive huts, known locally as the "bee-bothies"; at Carloway is an old round stone hill-fort, known as the "Dun Dearg" (red fort), which is one of the best preserved specimens of this type of structure still extant. At Uig there remains an old cave dwelling.

### A Land without Trees.

Besides these features the scenery in Lewis is not at all uninteresting. There is the Rocky Butt of Lewis, which well repays a visit. Perhaps the most striking feature is the almost absolute lack of trees. There are indeed trees in the castle grounds at Stornoway, planted by Major Matheson, Lord Leverhulme's predecessor, but even amongst these the winds have played awful havoc.

Lewis on the whole is flattish, one vast moorland, besprinkled everywhere with little lochans. The roads are what one would expect in such an outlying part. They are none too good, and are in many parts grass-grown and rutted, with a rough, stony surface.

The houses in Lewis are certainly unique. The walls consist of two walls of dry stone building between which is packed earth to keep out the wind. The framework of the roof is put up in wood, presumably imported or "scrounged" from somewhere, and over this a layer of turf is placed. Grass and heather are then heaped on over the turf and held in place by ropes and old fishing nets weighted down with stones.

Between Stornoway and Tarbert the road led us over the mountains which mark the border line between

**Exploring the Hebrides—**

Lewis and Harris. The road over Ben Clisham is long and has many patches where the gradient furnishes a searching test for the engine, and one hair-pin bend, marking the commencement of the really stiff part of the hill, is quite sufficient to tax the capabilities of any amateur rider.

Some three miles out of Tarbert we passed a disused whaling station at Bunamhuinneader, which we understood would be working again during next season.

Tarbert is a nice little "town," supplied with a fine hotel and situated on a narrow isthmus some few hundred yards across, separating the East Loch from the West Loch, and incidentally forming the boundary between North and South Harris.

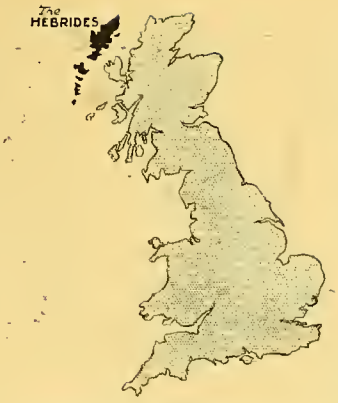
From Tarbert we ran the machine down to the extreme end of the island to a place now known as Leverburgh, the old name Obbe having fallen a recent victim on the altar of commercialism.

The scenery in Harris is totally different from that in Lewis; the difference might possibly be summed up in the words "peat" and "rock." Harris is rocky in the extreme, and the panorama for sheer wilderness and desolation must want some equalling in the British Isles. The road is one continual switchback of ups and downs, and possesses a "Devil's Elbow" all of its own and surely not unworthy of its name.

Along this stretch of road for some twenty-five miles, it was a joy to find a level reach where top gear could be engaged for any considerable time, bottom and middle gears frequently being required for the safe negotiation of the down slopes. In Harris, unlike Lewis, the villages are not found along the main road, but are scattered along rough tracks branching

A distant view of the range of mountains on which is the famous trials hill, Applecross. The village of that name can be discerned on the banks of the loch.

off at either side over the rocky, hilly country. Along one of these we ventured to take the machine, a feat which was safely managed by careful slow driving on middle and bottom gears. We were told later that we were the first to negotiate the track with a sidecar, the feat having been previously performed several times on a solo Triumph.




Showing the isolated position of the Hebrides.

Taking the boat from Tarbert to Lochmaddy, we had the pleasure of seeing the outfit swung up into the air by the ship's derrick and lowered into the hold.

North Uist possesses really only one road, running all round the island with two offshoots, the first to Carinish, the commencement of the North Ford to Benbecula, and thence to South Uist, and the second to Port Nan Long, the commencement of the Ferry to Berneray and Boreray islands in the Sound of Harris.

The motor cycling possibilities of North Uist are therefore easily exhausted. We, however, found plenty to interest us on the small island. Even on the first day of our arrival, while making our way from Lochmaddy harbour to our inn at Westford after dark, we disturbed a herd of deer which had wandered down from the hills to the roadway.

North Uist, too, is an island well dotted with lochs, many of which have round forts in them with winding causeways connecting them with land. There is also a few hundred yards from the road a huge chambered cairn, known as Langass Barp, which is in quite good preservation, and is the best example of a barp still standing, the barp itself being a type of structure only found in the Hebrides. The "Teampoull na Trionaid" at Carinish, too, a relic of early Hebridean Christianity, well repaid our visit.

As regards the machine, we found it absolutely equal to its task even on the stiffest slopes and roughest surfaces we encountered, and these were not a few. Sometimes, however, we would have liked a rear brake unaffected by climate. J.F.

A typical dwelling on the island of Lewis. Although crudely constructed it will withstand the most terrific gales.

# ROAD TESTS of NEW MODELS.

The "Light Six" B.S.A.

*SPECIFICATION.*

*ENGINE: B.S.A. side valves, V twin, 76 × 85 m.m. = 770 c.c.*
*LUBRICATION: Mechanical pump.*
*CARBURETTER: B.S.A. two lever.*
*GEAR BOX: B.S.A. 3-speed.*
*TRANSMISSION: Enclosed chains.*
*BRAKES: Dummy bell drums front and rear.*
*TYRES: 26in. × 3in.*
*PRICE: £132 Solo.*

SINCE the introduction of the 8 h.p. B.S.A., the 6 h.p. engine, which has already earned a good reputation, has been relegated to a lighter frame, and in its present form it is particularly well adapted to pull a light or medium weight sidecar. The machine in its standard form is remarkably well equipped with cast aluminium chain cases, comfortable footboards, and a spare detachable rear wheel may be supplied. In addition to all these fittings the actual model placed at our disposal was fitted with Lucas Magdyno lighting set, a pair of most practical leg shields, and the large sheet aluminium windscreen which attracted so much attention at the last Motor Cycle Show at Olympia.

### Behind a Complete Windscreen.

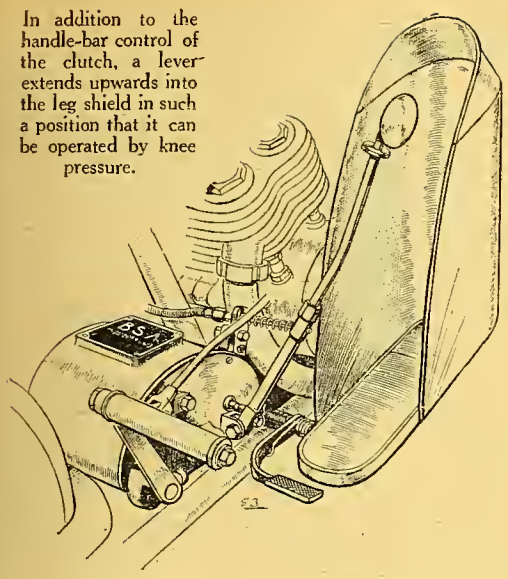
As the screen is the most noticeable fitting, it is as well to deal with it first and to sum up the pros and cons. The writer, who usually chooses a more or less sporting solo mount for his own use, seated himself behind the protecting wings of the big screen with a feeling which almost amounted to prejudice, and a tendency to look round or over the shield had to be consciously restrained for the first few miles. After a short time, however, the folly of such a procedure became obvious, for the view of the road obtainable through the adjustable celluloid window is ample for most driving purposes. Just to begin with, the window was kept open for about 6 inches, but a cold head wind encouraged a trial with the window totally closed.

### Undoubted Advantages.

Having once discovered the advantages of full protection, the feeling of security and comfort steadily increased, and after driving through an adverse hailstorm in the dark the conquest was complete. There is no doubt whatever that an adequate shield would be a blessing to hundreds of motor cyclists who ride daily through the winter, and the B.S.A. Co. are certainly on the right lines with their somewhat daring introduction. Concerning the head resistance, it would appear that this is but slight, for although the machine was ridden for nearly three hundred miles both with and without the shield, it was in position when the highest speed was actually accomplished.

Few experimental devices are without disadvantages in their early forms, but the disadvantages of the B.S.A. shield are not of major importance, neither are they by any means insuperable. Firstly, on rough roads the metal shield is apt to be noisy in itself; secondly, it intensifies any mechanical noises of the motor cycle; and thirdly, a trip over dry roads brought to light the fact that a certain amount of dust was sucked up behind the screen and was apt to get in the rider's eyes.

Now as to the 6 h.p. B.S.A., the engine is flexible and free from any serious periodic vibration. The flexibility and economy are materially increased by a



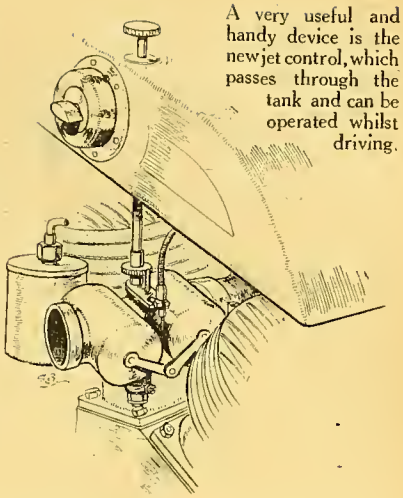
In addition to the handle-bar control of the clutch, a lever extends upwards into the leg shield in such a position that it can be operated by knee pressure.

simple jet control, conveniently placed on the top of the tank. This fitting is likely to become standard in the future, and it is certainly most useful.

### Knee Control for the Clutch.

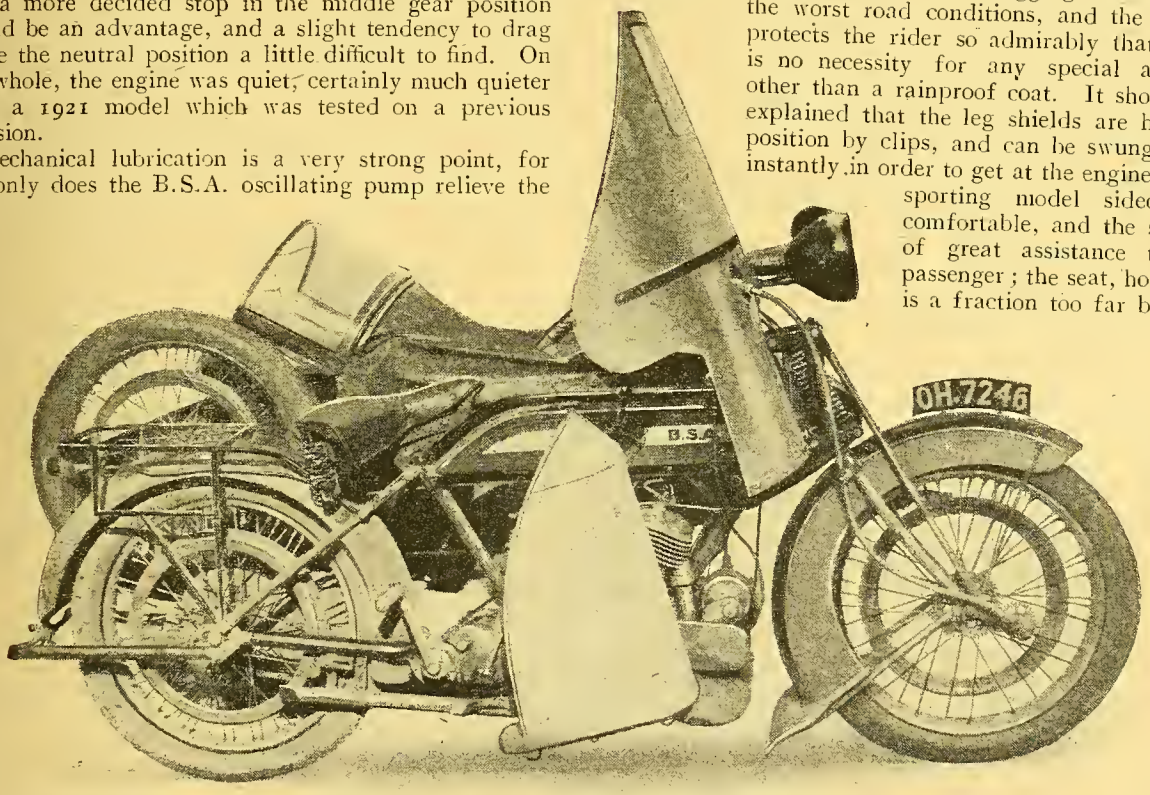
In addition to the normal handle-bar control we found an experimental knee clutch operation very convenient; in fact, the hand control was seldom used; the clutch itself is sweet in action. Gears are easily changed, but a more decided stop in the middle gear position would be an advantage, and a slight tendency to drag made the neutral position a little difficult to find. On the whole, the engine was quiet, certainly much quieter than a 1921 model which was tested on a previous occasion.

Mechanical lubrication is a very strong point, for not only does the B.S.A. oscillating pump relieve the rider of all worry, but, in conjunction with the roller and ball bearing engine, it is remarkably economical. The rear brake is admirable, and the chain transmission smooth at all but low speeds on top gear, and we found the riding position, combined with a Terry saddle, ideal for sidecar work.



A very useful and handy device is the new jet control, which passes through the tank and can be operated whilst driving.

During our road experience, which included much of the Colmore Cup Trial route, the machine performed steadily throughout; it is capable of a good turn of speed, and appears to revel in long runs on generous throttle openings. Hill climbing is well up to all reasonable requirements, and the engine remains clean externally even after a long, fast trip. Cleanliness is certainly a feature of the machine, and the mudguards are excellent. With the leg shields in position we found no need for leggings even under the worst road conditions, and the screen protects the rider so admirably that there is no necessity for any special apparel other than a rainproof coat. It should be explained that the leg shields are held in position by clips, and can be swung away instantly in order to get at the engine. The sporting model sidecar is comfortable, and the step is of great assistance to the passenger; the seat, however, is a fraction too far back.



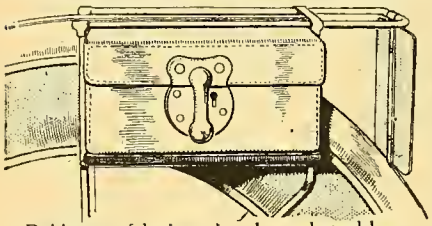

With its ample shields the B.S.A. may be ridden for long distances in bad weather without special clothing. The leg shields can be instantly hinged away to provide access to the engine.

# IDEAS: USEFUL AND INGENIOUS.

A Selection of our Readers' Home-made Gadgets, with some Practical Hints on Work in the Garage.

## Eliminating Tool-bag Rattle.

BRIEF and to the point is Mr. D. J. Balderson's idea for preventing noise from the pannier bags of his Triumph machine. A rubber or felt pad

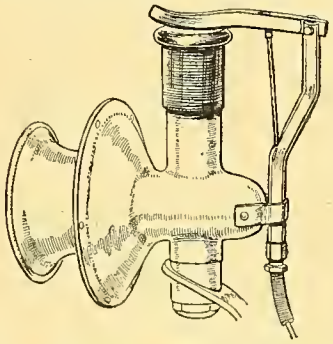


Rubber or felt insertion beneath tool-bag on Triumph carrier pannier platform.

is inserted beneath the bottom of the bag and the platform on which it rests; this packing he has found to eliminate a rattle which could not be obviated otherwise, no matter how tightly the bag was packed.

## Operating Mechanical Horns from the Handle-bar.

IN all probability Mr. A. H. Swann is an organist, for he has arranged a Cowey horn on his machine for either pedal or keyboard (pardon—handlebar!) operation. The instrument is fitted horizontally on the front down tube so that an inward pressure with the toe produces the desired result. The handlebar control consists of a piece of suitably bent 5/16in. brass tube fitted



Simple wire control for Cowey horn.

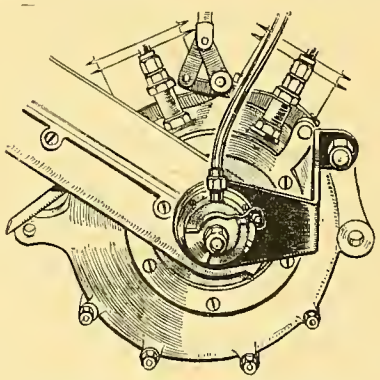
to the back of the horn; a Bowden stop is screwed into the tube at one end. There is an elongated hole in the elbow of the tube through which the wire passes to the lever pivoted in the cleft upper end of the tube. No return spring other than that contained in the horn plunger is necessary, providing the wire from the bar is led by easy curves.

## Moving Obstinate Valve Caps.

A SEA-GOING engineer who writes from aboard ship gives a stock method the engine-room staff uses for moving any screwed part that has rusted up. For example, he instances a ship's side dead light (cast iron), which, although immovable previously, yielded to their simple treatment, which is merely to soak a lump of cotton waste in vinegar and leave it on the immovable part for a few hours, or all night, if possible. Our reader, who motor-cycles when in port, suggests that this method is much safer than "a spanner and six feet of gas pipe" on a refractory valve cap, as recently recommended by a correspondent.

## Fitting a Mechanical Pump on a Matchless-M.A.G. Engine.

WE have had samples of the Best mechanical pump fitted to at least three of our staff machines, with satisfactory results, and have not experienced the need for a fitment such as that described below, which is sent in by Mr. H. Tyler, of Boston. However, this

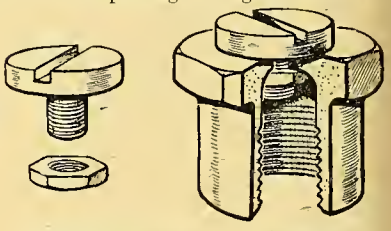


Torque reaction plate for Best pumps.

reader considers that on his Matchless machine (M.A.G. engine) the strengthening plate between the pump casing and the magneto chain case is an advantage. The sketch is really self-explanatory. Mr. Tyler mentions that in fitting the pump it is very necessary to secure perfect centring for the pump spindle and for the circle on which the holes for the holding screws must be drilled. Having fitted two of these pumps with our own hands we concur in his opinion.

## Repairing Badly Worn Tappets.

ON a Cornish reader's machine, the tappet heads were worn into such deep depressions that adjustment became very inaccurate. A new lease of life was given to the parts however, by drilling a hole through the centre of the hollow and passing through a screw with

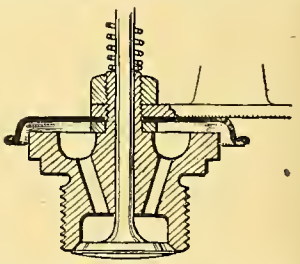


Method of building up a deeply worn tappet head.

a large flat head, which was filed down to the required thickness. The screws were cut off so that they would take a very thin nut inside the tappet head, it being possible in this case. On some engines it would be impossible to fit a nut inside the tappet head, in which case the latter might be tapped for the screw, which could be slightly riveted over inside. Case-hardening of the screw head would be advantageous.

## Preventing Release Valve Blowing Oil.

RIDERS who use two-stroke engines which are minus the refinement of an enclosed release valve that is connected to the exhaust system are often afflicted by the messy blowing of oil on to the under side of the tank. Mr. A. Charlton, of Ipswich, has cured this defect by very simple means, which can be applied to many makes of engines. All that is needed is a thick washer of bore suitable for slipping over the release



Carbide tin lid used as an oil trap on a two-stroke release valve.

valve guide, and a carbide tin lid punched with a hole of the same size. The washer goes on the guide first, then the lid, then the usual control mechanism plate and nut, etc., holding all in position. This tip is not applicable to engines where the escape holes from the valve blow out at right angles to the valve stem, of course.

# THREE MILES A PENNY!

## Being an Account of a Ride from Hyde Park Corner to Yarcombe, Devonshire, on a Motorised Bicycle.

A cast by the road-side, with the Cyclotracteur conveniently near.

I WILL admit that I was rather sceptical when a friend recommended me to purchase a motor attachment for my pedal cycle. I wished to journey to Devonshire, and I was doubtful if the "Cyclotracteur" would negotiate all reasonable hills.

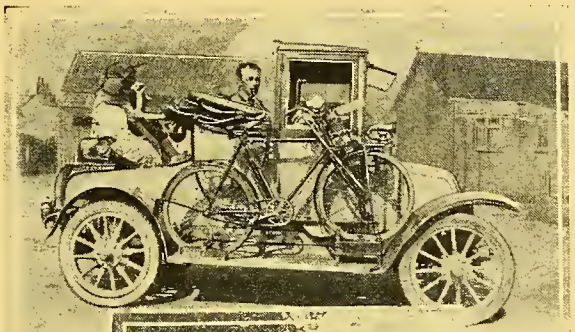
Inspired by a spirit of adventure, I made the plunge—twenty guineas and my faithful old pedal cycle became a motor vehicle.

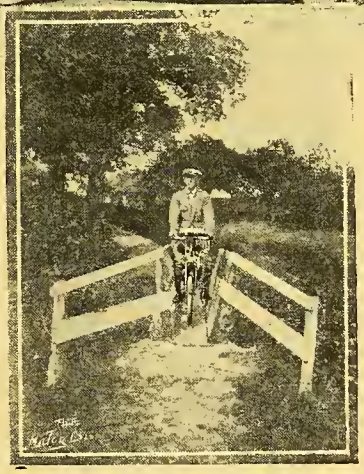
On a Thursday I wired my friends that I was due to arrive at Stotehayes, near Yarcombe—a matter of 150 miles—on Friday. "What an optimist!" I said to myself. Within a few minutes of mounting my bicycle—if the truth be known I was a bit nervous—I found I was quite *au fait* with the simplest of controls, and was sailing along at a good speed and with ease, leaving Edgware Road at 11.30 a.m.

Having safely negotiated all the tramlines, I found myself on the Staines Road. What a wonderful run it is through Virginia Water! A great wide road with a good surface, firs on either side, and a pleasant little surprise in a picturesque waterfall on the right-hand side of the road. Knowing how easy it was to start up my little machine, I had no compunction in pulling up, propping it against the side of the road and taking in the beauties that existed on all sides.

### 88 Miles in the Day.

Off again on a splendid spin to Sunningdale, I found the level crossing gates closed, and so decided to lunch at the Sunningdale Hotel. After a threequarters of an hour's rest I continued my journey, and passed through Bagshot and Farnboro', where I took in some petrol: the little tank holds nearly a quart, which is sufficient for about fifty miles. I had tea at Andover after travelling 63 miles. The distance between Andover and Salisbury—18 miles—was covered in 59 mins. It is a wonderful stretch through open country on a switchback road, mounting all the time, the downs stretching out for miles on either side, with splendid views.





(Top.) The short wheel-base of the motorised bicycle enabled it to be carried on the running board of the Renault.
(Bottom.) In by-lanes and when crossing narrow bridges the machine was found very handy.

I stopped at Salisbury for refreshment, and proceeded to Wilton, where I decided to stay for the night. This is a charming old-world village, and distant from London 88 miles. After a dinner composed of wonderful Wiltshire bacon and tomatoes, I went to the local inn, and there heard the local gossip discussed over pots of cider, and so to bed—as Pepys would say.

### The Second Day.

From Wilton next morning at 10.30 I journeyed through Shaftesbury, where I stopped for an hour, then down into Sherborne. The country was getting more hilly every mile, but still my machine "carried on" in game fashion. I reached Sherborne, lunched at the Half Moon, and had a long rest, visited the Digby Arms and took in petrol, and so into Yeovil, famous for its leather tanning and glove making. It is a beautiful run from there into Ilminster and on to Chard. Here I stopped for tea and started off on the long hill that leads from Chard into Yarcombe. Devonshire at last!

My destination was a fishing cottage on a farm about one and a half miles

**Three Miles a Penny.—**

from Yarcombe and down a country lane. At the bottom of the lane is a ford across the River Yartey, and a small wooden bridge only 1ft. in width. It was here I found an advantage of my machine, being able to get it across the bridge. A larger mount might have necessitated a *détour* of some six miles to reach my destination. I took the Cyclotracteur over the bridge, across some fields, and arrived, having covered 150 miles on one and one-third gallons of petrol and a shillingsworth of oil.

Later, as an experiment, I rode through the ford without detriment to the engine, which is placed above the front wheel. I do not think I remember having enjoyed a trip more than this one.

I carried my luggage on a carrier at the rear, the total weight, including myself, being about 200lb.

C. H. C. N.

# DYNAMOS FROM OLD MAGNETOS.

## Some Further Details in the Construction of a 25/- Dynamo.

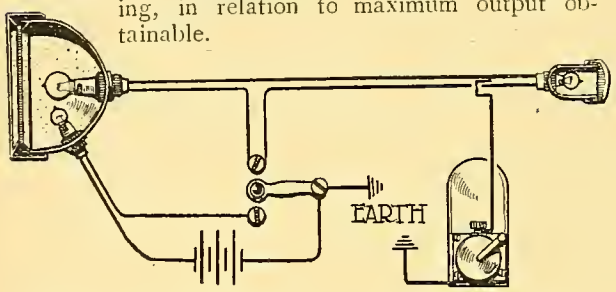
SO many enquiries have been received from readers asking for further details as to the construction of the dynamo converted from an old magneto, which was described in *The Motor Cycle* a few weeks ago, that further explanation seems necessary.

The various queries submitted were:

(1.) Fitting a rear lamp and best bulbs to use.

(2.) Whether a twin-cylinder magneto could be used.

(3.) Size of magneto, and wire used for rewinding, in relation to maximum output obtainable.




Wiring diagram showing parallel wiring of head and tail lamps, and also dry battery circuit for small bulb in the head lamp.

(4.) Speed of dynamo; direction of rotation and whether possible to charge accumulators.

(5.) Method of drive for inside flywheel engine.

### Fitting a Rear Lamp.

The lighting of two or three lamps presents certain difficulties, the dynamo functioning best when only one lamp is required as on a solo machine.

It will be realised, then, in order to fulfil the conditions specified in the previous article, that it is essential that the current used by the lamp should be exactly equal to the maximum amps. obtainable, *i.e.*, if two lamps are used, their combined currents must not exceed this maximum. This rather complicates matters, since if only 1 amp. can be taken from the dynamo, both bulbs would have to take 0.5 amp. each, since bulbs are not obtainable in fractions of an amp. less than ½ (*i.e.*, 1, 1.5, 2 amps., etc.).

It will be seen that such an arrangement of lamps would seriously impair the brilliancy of the head light, and would give an unnecessarily bright rear lamp.

Of course, if 2 amps. were obtainable a 1 amp. and ½ amp. bulb could be used; but since they would have to be wired in parallel the burning out of one lamp would cause the whole of the available current to flow through the other, which would also cause it to burn out quickly.

The method used by the writer is as follows:

The maximum current obtainable was found to be approximately 1 amp. (1.3 amps. to be exact). The bulbs chosen consisted of an 8 volt 1 amp. head and a 12 volt ½ amp. bulb in the rear, both lamps being run in parallel.

The total resistance of the parallel circuits will be 6 ohms $\left( i.e.,\ \frac{1}{R} = \frac{1}{8} + \frac{1}{24} \right)$ and the lamps will share the current in the ratio of their respective resistances of 3 to 1. As the total current available is 1.3 amps., and the combined resistance is 6 ohms, neither of which are variable, the following equation is obtained by Ohm's law:

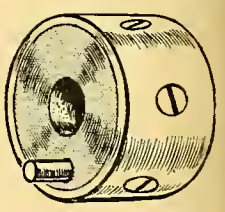
$$\text{Voltage} = \text{Res.} \times \text{Current} = 6 \times 1.3 = 7.8 \text{ volts.}$$

Therefore, the current in the head light will $= \frac{\text{Voltage}}{\text{Res.}} = \frac{7.8}{8} = 0.98$ amp. (approx.), and current in rear light $= 0.325$ amp.

The respective candle-power of the two lamps will be 7.65 and 2.5 (approx.), the light obtainable for the rear lamp being quite sufficient to give a good red light.

### On Sidecar Machines.

The use of such a dynamo to light three lamps on a sidecar outfit is not advisable, as, in the writer's opinion, the brilliancy of the head light would be seriously affected, but if it were attempted a good arrangement of bulbs would be: Head and side lamp 8 volt ½ amp. bulbs, rear light 12 volt ½ amp. bulb.



The reconstructed slip ring.

Of course, readers may obtain a different maximum current from their respective dynamos, but the principle still holds good, and the size of bulbs may be worked out as follows:

First obtain maximum current obtainable either by means of a fairly sensitive ammeter or by the bulb method as previously described. Then decide upon the speed at which maximum light is required, and

**Dynamos From Old Magnetos.—**
note the voltage obtained. Use a head light bulb of this voltage, which will take nearly *but not the whole* of the available current. Choose a rear light bulb of the lowest possible ampèrage obtainable and of a voltage approximately one-third greater than the head light bulb. It is of the utmost importance that the amps. taken by the bulbs when added together should not exceed the maximum amps. obtainable, and they must be wired in parallel and operated by the same switch, as shown in the diagram.

### Twin Magnetos.

A twin-cylinder magneto may be used, but as the slip ring is insulated over part of its circumference another must be substituted, which may be constructed as follows:

Obtain a piece of hard red fibre and turn it down until the outside diameter is 1½in. Over this fit a brass ring about $\frac{1}{16}$in. thick, and secure it in the fibre with short countersunk brass screws. Bore out the centre of the fibre to fit the armature-shaft, and in the side of fibre fit a wooden peg, which is inserted in the hole bored in the armature end plate, thus preventing the slip ring from turning round on the shaft.

Care must be taken that the width of the constructed slip ring is exactly equal to that of the one removed, or else the brush will not run on the centre of the ring.

### Size of Magneto and Wire Used.

Any size of magneto may be used, provided it can be fitted to the machine. In general the larger the magneto the greater the maximum output, but as the latter depends entirely upon the strength of the permanent field, it is quite possible to obtain a larger output from a small magneto with a strong field than from a larger one with a comparatively weak field.

The size of wire used will neither increase nor decrease the maximum output in watts. This is rather difficult to explain in non-technical language, as the output is governed by armature reaction. This reaction, on weakening of the main field, is due to the current flowing round the armature coils multiplied by the number of turns of wire, and is known as ampère-turns.

As an example, consider a dynamo wound with 200 turns of 20 S.W.G. and giving a maximum output of 1 amp. at 8 volts. Then the permissible ampère turns allowed, before any appreciable weakening of the field sets in, will equal $200 \times 1 = 200$ ampère-turns.

If the dynamo were rewound with 25 S.W.G. wire, more turns could be placed into the winding space available, say 250, and since the voltage generated is proportional to number of turns, this increase would give a corresponding increase in voltage equal to $\frac{250}{200} \times 8 = 10$ volts; but since the ampère-turns must not exceed 200 the permissible current would now be $\frac{200}{250} \times 1 = 0.8$ amp., and the maximum watts obtainable will equal 8 watts, and are the same as that obtained when the 20 gauge wire was used. The chief effect of a different sized wire is to alter the voltage obtainable at a given speed, but it does not give any increase in the maximum output obtained.

### Speed and Rotation of Dynamo.

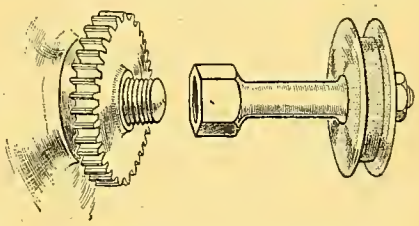
The dynamo may be driven in either direction, and for intermittent use the speed may be as high as twice that of engine speed without damage to the bearings, the belt being removed during daylight.

It is not possible to charge accumulators, since the current obtained is alternating. The dynamo is earthed, as shown in the wiring diagram, to the frame of the machine, to which the lamp is also earthed *via* the switch.

### Method of Drive for Internal Flywheel Engine.

The simplest method would be to extend either the mainshaft or the magneto-shaft, which could be accomplished as follows:

Obtain a piece of hexagonal mild steel and turn it down over part of its length to, say, ½in. diameter, leaving sufficient of the hexagonal portion to act as a nut. Bore out and screw the inside of this portion to the same size of thread as the existing lock-nut, and substitute. Another hole will then have to be bored in the timing case cover to allow the turned-down portion to protrude outwards, the dynamo pulley being secured to this by any suitable method.

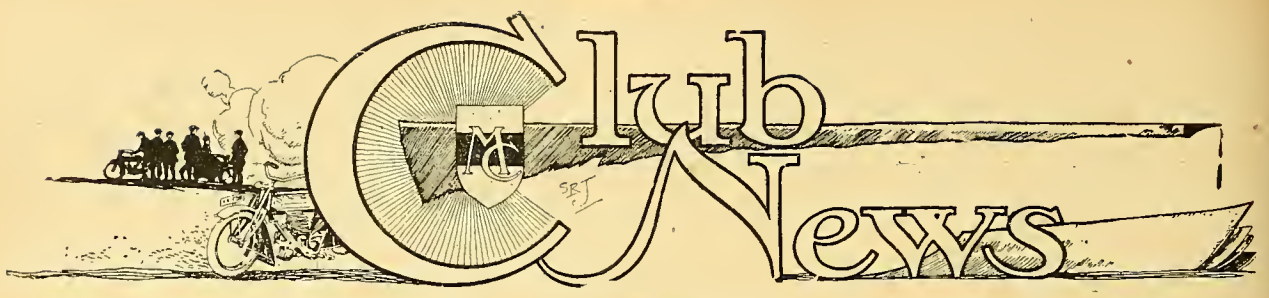


A suggested method of a dynamo drive from an engine with internal flywheels.

In conclusion, the best method for readers to adopt is to first make the dynamo as previously described and then to carry out their own experiments as to bulbs to be used, method of drive, etc., using the instructions given in this article as a guide to the correct procedure to be adopted. W.R.

## TIMING SPRINT RECORDS.

AS is only obvious, electrical timekeeping is surely coming into its own. At a recently held meeting of a special Timekeeping Sub-Committee of the A.C.U., consisting of Mr. H. P. E. Harding (in the chair), Col. F. Lindsay Lloyd, C.M.G., Prof. A. M. Low, D.Sc., Messrs. A. V. Ebblewhite, and A. G. Reynolds, it was decided to recommend to the Competitions Committee that in the case of all attempts at records up to one mile the time should be taken within 1/20sec. by means of an electrical chronograph, the records to be timed by two or more official timekeepers stationed at the commencement and finish of the different distances attempted. All claims for record must be accompanied by the official documents, and, in the case of Brooklands, the actual tapes recording the times on the chronograph must be produced.




### Yorkshire Centre A.C.U.

Saturday's hill climb on Sutton Bank, which has gained an excellent entry, will start at 12 noon.

### Falkirk and District M.C.

Amulree was the test hill in the opening reliability trial on the 5th inst., but presented no great difficulty; nine competitors finished. A special prize was awarded to J. Patrick (2¾ Douglas).

### Eastern Centre A.C.U.

On Saturday, the 29th inst., a half-day reliability trial will be held by the Ipswich and District M.C.C., open to clubs in the centre, entries closing this morning.

### North-Western Centre A.C.U.

All motorists are cordially invited to the big rally at Rawcliffe Hall on the 23rd inst. Various prizes are offered, including the Motor Agents' Cup for the best club attendance and mileage figure.

### Herts M.C. and L.C.C.

The first sporting event of the summer season—a paper chase—was held on the 8th inst. Eleven false trails were laid, and there were several unexpected fords and hills. The winner was T. Derek Chapman (8 Zenith), 18.07 m.p.h.; second, B. G. Robbins (4 Triumph), 16.85 m.p.h.; third, S. R. Mardon (2¾ Francis-Barnett), 15.8 m.p.h.

### East Midland Centre A.C.U.

Club awards in the open trial of the Leicester M.C. held on the 25th ult. have now been announced, as follows:—

Petty Trophy and Gold Medal (For best performance by a Leicester Club amateur):
Alex Bowerman (2½ Velocette).
Gold Medal (For the best performance by a Hinckley Club member):
G. White (3½ o.h.v. Triumph).
Gold Medal (For the best performance by a Loughboro' Club member):
H. Gibson (2¾ Raleigh).
Silver Medal: G. Marsh (4 Triumph).

### East South Wales Centre A.C.U.

On Saturday, May 6th, the centre is holding a reliability trial, starting at Brynmawr, and going through Brecon, Merthyr Cynog, Builth, Hay, Trefadoc, Longtown, Pontulais, Broadoak, Monmouth, Llangwm, Usk, Little Mill, Abergavenny. It is open to members of the centre only, and any machine is eligible to compete. The Abergavenny, Brynmawr, and Blaina clubs are organisers, and full particulars may be obtained from hon. trials secretary, Mr. H. E. Prichard, chemist, Blaina. Observers are required.

### Mid-Bucks M.C.C.

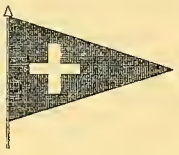
Already possessing a very satisfactory membership, the club is reviving its pre-war activities, and has arranged an interesting programme for 1922. Mr. H. T. Ball, 159, Cambridge Street, Aylesbury, is the hon. secretary.

### Burnley and District M.C.C.

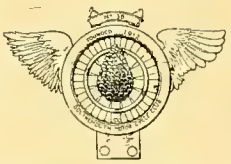
On the 30th inst. the opening reliability trial will be held for the Whitehead Cup. New members are enrolling at each meeting, and all local motorists interested are invited to join. The hon. secretary is Mr. J. Collinson, 9, Fir Street, Burnley.

CLUB PENNANTS AND BADGES.

Coventry District Works Motor Association: Yellow ground with black spots and lettering.



Neath and District M.C.: Black with Maltese cross in white.



Bournemouth and District M.C. and L.C.C.: Silver badge with the fir cone enamelled in natural colours.

Harrow and District M.C.C.: Club badge.

### Berkhamsted and District M.C.C.

Fine weather and a fair number of competitors and interested spectators attended the club's maiden venture in competition organisation, a hill climb at Aston Clinton. The class winners were: A. Driscoll (3½ Norton), B. Hobson (2¾ Douglas), and C. Hill (3½ Douglas sc.).

### North Eastern Centre A.C.U.

At the Centre Board meeting, held on the 7th inst., arrangements were made for the team trial to be held on May 21st. The route chosen is: Newcastle; Shotley Bridge; Castleside; Stanhope; Peat Hill; Rookhope Chimney; Allanheads; Burtreeford; Killhope; Allandale. *Return*: Allanheads; Stanhope; Allansford; Corbridge; Newcastle. (119 miles.)

### East Lothian M.C.C.

An opening run was held recently from Haddington to Dunbar, Grantshouse, Duns, Lauder, and home *via* Soutra Hill, its success auguring well for the progress of the club.

### West Herts M.C. and L.C.C.

At a meeting held at the Swan Hotel, Rickmansworth, the above club was formed, officers elected, etc. Anyone interested should communicate with Mr. H. H. Lewis, 18, Church Street, Rickmansworth, Herts.

### Ayr M.C.C.

Over thirty entrants faced the starter in the recent opening reliability run. The course included Burnfoothill, which was the tit-bit, but quite a number made a clean climb.

All Ayr and district motor cyclists are asked to join up for sport and pleasure. The hon. secretary is Mr. T. Gilchrist, Ashgrove Street, Ayr.

### Cookstown and District M.C.C.

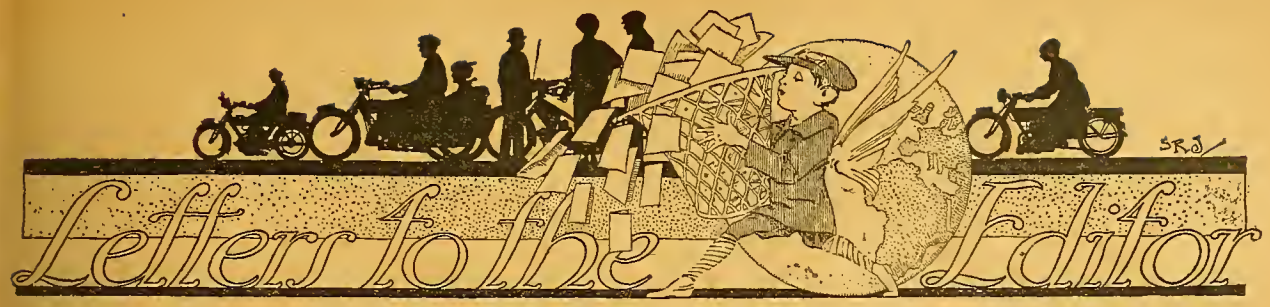
Three very interesting events will be held on May 4th, including an open reliability trial consisting of five circuits of a two-mile course at speeds varying from 15 m.p.h. to 27 m.p.h.; and a T.T. handicap race of 25 miles over the same course. Entry forms may be obtained from Mr. Arthur Gourlay, Cookstown, Ireland.

### Luton and South Beds. A.C.

The opening run has been fixed for Saturday next, it being proposed to have a social run, with a halt for tea and a sing-song. Mr. E. J. O. Sansome has been elected captain, Mr. Dunham vice-captain, and Mr. C. Dickinson secretary, with Mr. S. W. Brown again holding the purse-strings. Trophies for competition this year will include a new challenge cup, presented by Lord Ludlow, M.F.H., the president.

### Liverpool M.C.

There were 92 entries for the club's first run of 1922. An interesting machine was a 2¾ h.p. Sunbeam, with overhead valves. The competitors started off in pairs at intervals of 30 seconds, for Chester and Broxton to Peckforton Gap, where there was a stop to permit of a hill climb. A clean ascent was made first time by Miss Cottle, riding a 4 h.p. Triumph, J. H. Fox on a 4 h.p. Norton, and C. H. Fox also on a 4 h.p. Norton. Perseverance rewarded the efforts of S. H. Falck (4 Triumph), L. G. Copley (3½ Norton), and T. Dehaney on a 2¾ h.p. A.J.S.




The Editor does not hold himself responsible for the opinions of his correspondents.

Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.

### *ULTRA-RAPID AMERICAN TWINS.*

Sir,—With reference to the original letter regarding "Ultra-rapid American Twins," we trust that our friend of the "particularly hot single" has by this time suitably disposed of his very particularly hot stuff Bonniksen.

Slough. DOUGLAS, BEARDMORE, SHANKS.

### *LIGHTWEIGHT CLASSIFICATION LIMITS.*

Sir,—May I plead for a more general adoption of the 275 c.c. limit, as opposed to the 250 c.c. one, as the smallest class in speed trials and the like? In looking through your "Buyers' Guide," I noticed no fewer than twenty-nine makes of motor cycles with one model of their engines of 269 c.c. Now, in a speed trial none of these machines would stand any chance against, for instance, a 2¾h.p. A.J.S., which is, however, in the same class, and therefore the owners of these machines wisely abstain from entering. A 275 c.c. limit would, I am sure, produce a very considerable increase in the entries. "METRO."

Congleton.

### *OIL-COOLING AND WORN PISTON RINGS.*

Sir,—The oil-cooled engine does not depend on the piston rings proper to prevent the increased quantity of oil circulating through the engine from entering the combustion chamber.

I believe all oil-cooled engines are fitted with a scraper ring on the skirt of the piston whose duty it is to return to the crank case any surplus oil that may reach the cylinder walls on the upstroke of the piston.

It might interest your correspondent to know that owing to the improved cooling of the piston due to the large quantity of oil circulating in the crank case carbon does not form either on the crown of the piston or round the rings to the same extent as in the average air-cooled engine. The rings are, therefore, left free to do their work in an efficient manner and do not become gummed up. This consequently increases the life of the piston rings, and for these reasons, therefore, the oil-cooled engine does not suffer in the manner suggested by your correspondent to any greater extent than other types of either air- or water-cooled engines. G. CAMPLING.

### *GARAGE HUNTING DURING T.T. WEEK.*

Sir,—As the T.T. Race week is approaching, I would like to know if any persons or garages are likely to make provision to cater for the number of motor cyclists who find it more convenient to travel to Liverpool by road. From past experience, I know that motorists have to do a lot of skirmishing around to find a garage or suitable place to store their machines, particularly if any mishap has caused them to arrive in Liverpool late. The following suggestions are offered for what they are worth:—1. That arrangements be made at all garages conveniently situated to have their addresses and charges published in *The Motor Cycle*. 2. That an A.A. or R.A.C. Scout be on point duty at suitable road junctions, furnished with a list of places to direct strangers on entry to Liverpool. Something worked on these lines would be greatly appreciated by those who travel to get the night boats. A. E. BEARD, Capt.

### *"VALVE BOUNCE MADE VISIBLE."*

Sir,—I thank Mr. A. J. H. Elverson for the information conveyed by his letter. I agree that the insertion of 101 per cent. in place of 99 per cent. was an error, and I am glad that he realised it was clerical and not intended.

As regards his technical points—1. (*a*) Has he ever attempted to measure the frequency of a tuning fork by means of the stroboscopic disc? If so, did he notice any halation effect? (*b*) Is there a variable cam in the oscilloscope to allow for sufficient illumination at high speeds and good persistence of image at low speeds? I cannot imagine that the arrangement of a variable shutter or apertnre would present an insurmountable obstacle.

2. I agree that a truly flexible drive is out of the question, but an adjustable drive free from cyclic hunting is the matter of a very few minutes' thought.

3. A motor driven off a *direct* current main should be free from appreciable cyclic aberration. Reverting to point 1, the stroboscopic disc mentioned is driven by electric motor and cyclic aberration is not noticeable.

In high speed cinematography relative aberration is not present to any extent.

In conclusion, I would be glad of the opportunity of accepting Mr. Elverson's invitation to inspect the oscilloscope. R. A. DENNE.

### *ARTIFICIAL OBSTACLES IN AN OPEN TRIAL.*

Sir,—Seeing Mr. J. A. Newman's letter, I wish to state that while detained upwards of two hours at the top of the hill previous to Hunger Hill, I was able, with the aid of binoculars, clearly to distinguish officials replacing boulders in their original position after they had been disturbed by the passage of competitors. This was on the second bend of Hunger Hill.

I regret I am unable to give you the actual names of the persons who replaced these rocks, but there is no doubt in my mind that they were officials, as they wore the armlet.

W. L. DANSKIN.

[It seems possible that our correspondent mistook the action of one or two spectators who endeavoured to improve the road surface on this hill by filling in the worst holes with large flat slabs of stone; their motives were good, but whether the action was really helpful or not is another matter.—ED.]

Sir,—I have just received a list of the awards in the East Midland Centre Open Trial, and this appears to me to be as big a farce as the trial itself. No account is given of how many marks any competitor lost, or how he lost them, and therefore no competitor knows how he stands. It would be interesting to know how the Leicester Club has arrived at the results, owing to the chaos which prevailed throughout the trial.

First—as competitors were not allowed to stop and sign at checks and were only allowed one minute early or late, nobody knew if he had lost marks at a check or not.

Secondly, competitors were held up at the foot of every hill, and could not obtain information from the officials how long they had been held up for, and in one instance no times

were taken at all, consequently nobody knew what time he would be expected to arrive at the next check. Then, again, I myself was held up so long at the foot of Hunger Hill that I arrived at the lunch check at Matlock one minute *after* I was due to leave after lunch. When I complained that I wanted lunch I was cheekily told by an official that I had had my two hours at "Hungery" Hill; consequently I left this control, after filling up with petrol, without any lunch and late on my time, and no allowance made for this delay.

Amongst the surprising things in the results is the fact that one competitor has obtained a gold medal who was reported to have parted company with his machine on one hill, which entailed a loss of 12 marks, and is shown in a photograph on another hill with his foot on the ground, which according to the rules lost him 5 marks—17 marks in all. In all my years of competition work I have never competed in a trial where the organisation left more to be desired, or an open A.C.U. trial where the open competition rules were treated with such utter contempt. Also the placing on the road of artificial obstruction was the most unfair thing I have ever known in any trial. I maintain that most of us were induced by the Leicester M.C.C. to enter what was purported to be an ordinary A.C.U. one-day trial, run on the same lines as the A.C.U. themselves would run it, and under the same rules, and we were badly let down.

ARCHIE G. COCKS.

*RADIATION OF HEAT.*

Sir,—Your contributor, "E. N. J.," writing about cooling, states that heat is dissipated from a water-cooled engine by water flowing round the cylinder carrying away the heat by convection; he then states that an air-cooled engine is cooled by radiation.

Surely, since air is flowing round the cylinder at an even greater rate than the water in the previous case, the air must take the heat away by convection also. Furthermore, supposing "E. N. J." is correct and the heat from an air-cooled cylinder is dissipated by radiation, why fit fins (misnamed "radiating")?

Radiation is the transmission of heat from one body to another without necessarily heating the substance in between them, the transmission of heat having nothing to do with the contact of one object with another. The fins fitted to the cylinder, being there to increase the surface exposed, are therefore useless, put there as ornaments or dust traps.

Personally, when my cylinder gets sufficiently hot to dissipate an appreciable amount of heat by radiation, I stop, light a cigarette on the head thereof, and wait till I have finished it before proceeding.

"ENIL MAERTS."

Derby.

*EQUITABLE INSURANCE.*

Sir,—Your contributor "X.Y.Z." in the issue of April 6th appears as an apologist for the insurance companies, and tells us that for the insurance pool to be *equitably* administered it is necessary that the careful and skilful suffer for the careless, clumsy, and unscrupulous. This may be necessary up to a point; but is it *equitable*?

My great objection to motor cycle insurance has always been this one point. I have driven a motor cycle for sixteen years in many countries and three continents, and have never—I touch wood—been concerned in an accident that would have cost an insurance company a single pound. A friend of mine has a son who, in his first season of motor cycling and insurance, has had paid two heavy accident claims and one total loss by theft. We are insured through the same agent, and my season's mileage is more than double his. To insure at the beginning of last season we were absolutely on level terms. I got no advantage whatever for my previous safe record. I and all other experienced and careful riders are put on exactly the same footing as reckless novices.

Surely this is not necessary. A life office does not accept all and sundry without investigating their expectation of life, and they adjust their tables accordingly. As it is, I insure for total loss and third party risk only, as I do not believe in benefiting the incompetent and the road hog more than I can help.

I feel sure that if this matter, which many find a real grievance, is ventilated in your columns, some enterprising office will be found who will come forward to adjust the inequity. Of course, all insurance is to a certain extent a gamble; but in this case the personal factor is so immensely important that it cannot reasonably be overlooked.

BERNARD SIFFKEN.

Sir,—Is it not a fact that the larger proportion of the liabilities incurred by the insurance companies is due to the "smart Aleck" who reckons to keep his machine up to date by saddling the company with every repair on as lavish a scale as possible, and who does not consider he has had a good season unless he has made the company repay him considerably more than the amount of his premium?

In my opinion, the legitimate use of insurance is only to safeguard oneself against large claims or losses too great for the individual to bear. I should suggest that the insurance companies issue policies only which put the first £2 10s. or £5 loss upon the insured; this would undoubtedly make him more careful and less likely to send in questionable claims of a few pounds, if a fair proportion of the loss fell upon himself.

Even under the present system, I feel sure, if the insurance companies examined their liabilities under such policies, they would find that they could allow a very much larger rebate than the 15 per cent. or 20 per cent. as at present, if the careful policy-holders were not made to bear the charges incurred by the type of rider mentioned above.

H. A. CHAPLIN.

*TUNING A 4 H.P. TRIUMPH.*

Sir,—I have pleasure in answering the queries contained in Mr. Barker's letter on page 460.

1. "Petrol consumption at 35-40 m.p.h."

I have no record of this, as I do not find it possible to maintain such a high speed on the road for long enough to get consistent results; but over longish runs with sidecar and luggage the fuel consumption has varied from 60 to 85 m.p.g., the extremes being the figures on petrol, driving hard against a head wind, and on benzole, in calm weather on the Great North Road. My average on tour seems to be about 72 m.p.g., this including, of course, sundry spurts on full throttle, as well as the normal one-third throttle required to keep up 25-30 m.p.h.

Solo, I have not any figures available, but in comparison with a friend's standard Triumph, on a long run we made together, I had slightly the advantage.

2. "Behaviour at slow engine speeds."

This is as nearly perfect as possible, the engine ticking over in neutral as slowly as will suffice to carry over compression.

Acceleration and power at *all* engine speeds are better than on any standard Triumph I have been able to compare it with, but acceleration would probably be improved by fitting an aluminium piston, such as on the machine owned by "Triumph 4" (whose identity it is not difficult to guess). However, for sidecar work I have concluded that a cast-iron piston is better.

3. "Gear ratio."

On the occasions when I have reached 60 m.p.h. solo, I have used a 16-tooth engine sprocket, giving a top gear of approximately 4.7 to 1. With a sidecar I used a 15-tooth sprocket, giving a 5 to 1 top gear, but I have now adopted a 14-tooth sprocket (5.4 to 1) as giving sweeter running without apparently affecting the maximum speed of the machine on the level.

As regards the Triumph spring fork, *I like it.* It has its disadvantages, notably in cornering, and it does not damp out pot-holes, as do some other forks of more elaborate but less rigid and strong construction; but it is capable of adjustment against sideplay, it is proof against sidecar drag, and it is the simplest fork on the market.

I have never had the least suspicion of a speed wobble, although at one time my handlebars were very "touring." Since then I have altered their shape so as to give better control with a very comfortable riding position, and I suppose they might now be called "semi-T.T."

I should mention that I keep my forks strapped up tightly against rebound, so that the spring is stressed in compression only. I have not had a broken spring on my present machine, but on another Triumph I owned I once

broke a spring on a very bad pot-hole, and rode for some days in reasonable comfort on the broken spring. This could not be done with a link fork using two springs arranged symmetrically.

I trust that the length of this defence of the Triumph fork will be pardoned. It appears to me that most of the recurrent adverse criticism (not, of course, in Mr. Barker's case) emanates from those who argue from theory rather than from practice, and that a statement of actual favourable experience might be worth putting foward. I think I ought to add the usual disclaimer.

KENNETH H. LEECH.

### *AMATEUR ROAD RACE DETAILS.*

Sir,—Now that a little of the suspense is over and we may reasonably hope for *the* race, and bearing in mind the usually hard-up speed-merchant (the enthusiast who "sells his shirt" for hill-climbs, etc.), whose reason for not competing this time, I hope, will not be the entrance fee, may I make a few suggestions?

1. That every effort be made to reduce the entrance fee to a rock-bottom figure (£10 to two or three probable competitors I know represents a terrific sum).

2. In view of the fact that the race is largely a personal matter (the man, not the machine), it would be very interesting and perhaps fairer to institute a class for competitors under 20 years of age; also to give them, if possible, a reduced entry fee, this because of the uncertainty of the depth of their pockets in most cases.

3. That the number of practice laps be limited to as few as should be sufficient, say 5.

4. That as a matter of course the usual classes should be run. I presume they would be run at the same time, so what matter?

With reference to suggestion 1, it might be interesting to add that the entry fees for the French and Belgian Grands Prix are £10 and £8 respectively.

Two laps seem ideal.

All honour to *The Motor Cycle* and the Manx M.C.C. for their go-ahead policies. MARCHAND DE VITESSE.

Paris.

### *GOOD TYRE MILEAGE.*

Sir,—May I, through your columns, take the liberty of asking your correspondent, Mr. C. H. Stevenson, what make and size of tyres he has used on his Triumph, the mileage of which he claims as, approximately, 12,000 miles?

Great Yarmouth. BRUNDALL-BUSTER.

### *BLACKLEADING CYLINDERS.*

Sir,—Regarding the article by "E. N. J." which appears on page 426, might I warn your readers that the last paragraph might easily lead them astray, as to blacklead motor cycle cylinders with ordinary domestic blacklead is fatal to proper cooling, a semi-polished surface being obtained.

I speak from bitter experience of this trouble, and might say that blacklead, when once put on, is very difficult to remove.

Possibly the specially prepared blacklead sold for the purpose of coating cylinders is all right, although I have never tried it, as I prefer to run with the cylinders in their natural condition (rough surface). W. D. EDWARDS.

### *MOTOR CYCLES FOR BOYS AND GIRLS.*

Sir,—In reply to Mr. N. Queston Graves, elderly motor cyclist and owner of 1910 sidecar outfit, who narrowly escaped death at the hands of a juvenile, I really must congratulate him on his powers of observation, being able to determine the age of the motor cyclist travelling at this extraordinary speed. E. GORDON BODE.

Sir,—I fully agree with "1922 Triumph 4 h.p. Solo" that the reason for our not seeing more boy and girl motor cyclists is that the financial position of parents nowadays is certainly one calling for economy. I should like to point out, however, that a great many parents, especially mothers, are frightened to let their children get near a motor cycle.

EX-SCHOOLBOY MOTOR CYCLIST.

Margate.

Sir,—I was much interested in Mr. N. Queston Graves's letter. If I might be allowed to state my opinion, I think that all outfits as old as 1910 should be put in a safe place, such as the local museum.

Kent. INFANTILE MONOMANIAC.

Sir,—I was very amused at the indignant letter from Mr. Graves on the subject of "Infantile Monomaniacs." How inconsiderate of that "child" to startle him.

But I really think he exaggerates things a trifle. I should have thought it impossible to have seen the make of a motor cycle when it passed him at 70 m.p.h. (?) on the road; much less ascertain the driver's age. S.J.B.A.

London, S.E.6.

Sir,—I would suggest that as a solution of this difficult question the speed limits for motor cyclists should be restricted to one mile per hour per year of age, thus preventing the 16-year-old from exceeding 16 miles per hour, whilst one of my age and experience would be perfectly at liberty to "put on a bit of a spurt" if he so wished.

London, S.W.15. CENTENARIAN.

Sir,—I cannot help thinking that such letters as those from "Middle-age," "XH-3296" and, lastly, Mr. N. Queston Graves give a very bad impression of the sportsmanship of elderly motor cyclists. The wording of all their letters implies that they consider that they have the first right to the road, merely because they are getting on in life.

If there exists any "first right," surely it is the younger generation who has it, for motor cycling is essentially a pastime for the young and healthy. I would like your younger readers to know that, at any rate, a good many of us who are not youthful any longer do not share such unsportsmanlike views. Is there any logic in "Middle-age's" opinion that a pedal cycle is "good enough" for youths; "let them earn" motor cycles? This in the case where a boy has the chance of participating in one of the most healthy pastimes existing!

One cannot seriously attempt to answer such a letter as that from "XH-3296," who states that he prefers to meet short-sighted, deaf, or crippled motor cyclists to an average healthy boy on a motor cycle.

Again, it is certainly not for a man like Mr. Queston Graves, who is evidently in constant fear of death by heart failure, to give an opinion as to what type of person should be in charge of a motor cycle, while he himself is still "taking the road."

I have always been of the opinion that a certificate of health should have to be produced when obtaining a driving licence, but if such wholesale unsportsmanship exists among elderly motor cyclists, it seems that there should be an age-limit as well, but in the opposite direction to that which your three correspondents advocate.

Lincoln. LIVAN LETLIVE.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle.*

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle.*
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### WELDING OR BRAZING?

Having just had a frame rebuilt, I am claiming that it is absurd to *weld* the tank saddles to the tube, as has been done, for the intense heat applied usually results in fractures immediately after the work is finished. Perhaps you will give me your opinion on the matter, as I contend that the saddles should have been brazed to such a thin tube and not welded.—C.H.S.

We cannot agree with your opinion that it is absurd to weld tank brackets to the frame tubes of a motor cycle, as we know several cases in which this is done; true, brazing is more commonly the method in use, but under proper control the heat of welding should not affect the tube detrimentally.

### CLAIM AGAINST A GARAGE HAND.

Being unable to restart my motor cycle after a stop, I wheeled it to a garage, entering by what appeared to be the principal entrance, and was met by a man in overalls who asked what was wrong. He looked about the machine, and then violently worked the kick-starter without releasing compression, and so broke the gear box. A relative of the proprietor's (being, I understand, in temporary charge of the garage), saw this man start operations, but didn't see me come in, and walked away before the gear box was broken. The proprietors say (*a*) I could recover nothing from the man as he has no money; (*b*) that they are not responsible, saying that I should have come to the office first, that the man only does casual work for them, and that I engaged him independently of them. They offer to do without a profit in mending the gear box. Have I a right to any better compensation?—S.P.C.

It is difficult to imagine that any responsible garage proprietor would employ a man for whom he did not take a certain amount of responsibility; certainly, if the man was employed by them at all, it does not seem feasible that he would be making arrangements in their garage to undertake work for customers on his own account. Whether you can claim any compensation is rather a difficult matter to ascertain; before you could succeed in an action you would have to prove that an employee of the garage (always supposing him to be an employee) was negligent and careless in the manner in which he handled the machine. As the garage people appear to admit some responsibility in the matter by offering to repair the gear box at cost price, we think your best plan would be to take legal advice locally, especially if you are in a position to prove that they have offered certain concessions on account of the damage done to the machine.

## Important Dates.

**Sat., April 22nd—N.-Eastern Centre A.C.U. Open Reliability Trial.**
**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 6th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd. and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 Mile Sidecar Race. Brooklands.**
**Fri., June 23rd. and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### CONSUMPTION OF 5-6 h.p. TWIN.

I have a 6 h.p. Clyno sidecar, and want to know what is considered a fair average of mileage obtainable from a gallon of petrol. At present I am not getting more than an average of about 45 m.p.g.—E.R.

From a machine of the type you mention 50 to 55 m.p.g. should be obtained if the engine is in good tune, but as possibly your machine is an old one, 45 m.p.g. is not unreasonable.

### LACK OF SPEED.

(1.) On a recent journey in the West Country I covered 600 odd miles on my 1920 model two-stroke, and on the return trip, being anxious to reach the town where I intended stopping for the night, I increased my speed a little above the average. After about five miles of this speeding, a terrific knock developed in the cylinder, and I had to slow down, but found I could reach the town by going slowly. I had given the engine plenty of oil so as to be on the safe side. The next day the knock was present at any speed over about 15 m.p.h. When I got home I dismantled the engine and found a lot of carbon, particularly on the inlet side of the piston head, but the rings were quite free. Thinking I had cured the trouble by decarbonising, I subsequently set out for a 50-mile run, and was surprised to find the knock return at the end of the run. Can you explain this, or suggest a remedy, please? (2.) In connection with the above, I was using an aero type plug. If this is not considered suitable, can you suggest any other? (3.) I should like to point out that I have never been able to average more than 20 m.p.h. at the best. When I see that two-stroke machines attain 32 to 37 m.p.h., I cannot understand my machine's lack of power. I am not a speed hog, but should like to get 25 to 30 m.p.h. Can you help me, please?—J.S.R.

(1 and 2.) The knock is probably due to pre-ignition, and we should recommend you to try another plug; although aero plugs are excellent for many engines, they are not suitable for all two-strokes. It may be that the particular plug you have has become faulty owing to carbonised or burnt insulation. (3.) If you

n average 20 m.p.h. over a long journey e speed of your machine must be fairly od. If you mean that 20 m.p.h. is the st speed which you can generally attain, is certainly low. You must recollect, wever, that the majority of small two-roke machines are not built for high eeds. If all engine details are in order, y advancing the ignition a little.

## XPERIENCES WANTED.

*Readers' replies to questions published der this heading should be addressed o The Editor, "The Motor Cycle," orset House, Tudor Street, London, C.4, when they will be forwarded rect to the querists concerned. Requests r experiences should be accompanied by stamp.*

"A.R.C." (Sunderland).—8 h.p. 1921 nfield two-seater sidecar: W.D. plugs, nac carburetter.

"W.C.K." (Eltham).—Morgan, family odel: Air or water cooled, Binks or her carburetter, gear ratios.

"L.W." (Leicester). — 2¾ h.p. 1922 ulson-B: Reliability and handling of ring frame. Also 2¾ h.p. Rex-Black-rne, all chain.

"J. DE W." (Lelant).—3 h.p. Beard-re-Precision two-stroke with sidecar in ly country.

"A.W." (Mapplewell).—A.B.C.; general performance; obtaining spares.

"M.W." (Otley).—Proud variable jet.

"E.T." (Bury).—Hood and sidescreen A.J.S. sidecar; shelter provided.

"R.D." (Edinburgh).—A.B.C. (latest odel); mechanical pump; reliability.

"W.S." (Bridge of Earn).—Orbit en-nes; Motorities home-assembly sets.

"K.M." (Isle of Mull).—Scott Sociable d Seal two-seater; general remarks, o any wear at joints of Scott chassis ter long use.

"J.W.V." (Towcester).—Binks carbur-er on 3½ h.p. M.A.G. engine.

"H.S." (Sheffield)—Jet sizes in Binks 4 h.p. Douglas outfit.

## ECOMMENDED ROUTES.

ARLINGTON TO WOLVERHAMPTON.—G.E.H.

Darlington, Scotch Corner, Catterick, eming, Baldersby Gate, Ripon, Ripley, rrogate, Spofforth, Wetherby, Aberford, otherton, Ferrybridge, Doncaster, Balby, adworth, Tickhill, Oldcoates, Carlton, rksop, Whitwell, Barlborough, Staveley, imington, Chesterfield, Baslow, Edensor, atsworth Park, Beeley, Rowsley, Matlock idge, Matlock Bath, Cromford, *via* llia, Grange Mill, Ashbourne, Clifton, dbury, Draycott, Yoxall, Kings Bromley, chfield, Muckley Corner, Walsall, olverhampton. Approximately 197 miles.

EYBRIDGE TO GREAT MALVERN.—C.E.H.

Weybridge, Chertsey, Staines, Wind-r, Eton, Salthill, Maidenhead, Henley, ettlebed, Benson, Shillingford, Dor-ester, Nuneham Courtenay, Littlemore, xford, Woodstock, Chipping Norton, oreton-in-Marsh, Bourton-on-the-Hill, ockley, Broad Campden, Chipping mpden, Aston-sub-Edge, Weston-sub-dge, Willersey, Broadway, Evesham, ershore, Defford, Baughton, Upton-on-evern, Hanley Castle, Great Malvern. pproximately 119 miles.

(2–8)

### Carburetters under Official Observation.

In the recent A.C.U. observed test of a Norton sidecar outfit and a Levis lightweight, carried out in Devon and Cornwall, Cox Atmos carburetters were used on both machines.

### Useful Instruction Booklet.

A second edition of "Martinsyde Maxims," giving valuable information to users of Martinsyde motor cycles, to whom it is issued free of charge, is now available from Martinsyde, Ltd., Woking, Surrey.

### Oil for Nothing.

To any motor cyclist who would like a sample tin of Prices' oil, Prices' Co., Ltd., Battersea, London, S.W.8, will issue a voucher on application, which on presentation to any motor agent will be exchanged for a quart tin of Prices' oil, free of charge. The company only ask that the applicant for the free tin should furnish particulars of the machine and state that he has had no previous experience of Motorine or Huile de Luxe.

### T.T. Souvenir.

Last year the Leicester Rubber Co., Ltd., Leicester, published a most useful little booklet entitled "The John Bull T.T. Souvenir." The 1922 issue is in course of preparation and will be ready abont May 1st; it gives a complete history of the T.T. races, full information concerning the course, local regulations, fastest laps, a speed table, and a list of motor cycle records.

### Bulk Fuel Storage at Brooklands.

Two underground tanks and two Bowser delivery pumps have been installed at Brooklands by the British Petroleum Co., Ltd.

### Tyre Price Reduction.

Dominion motor cycle tyres have been reduced in price by The United States Rubber Co., Ltd., 47-48, Farringdon Street, London, E.C.4.

### Found on the Road.

A tool-roll was discovered on the London-Brighton road at Patcham on April 9th by Mr. J. E. Hay, cycle dealer, 34, Kensington Gardens, Brighton.

### Prices of 1922 Models.

The Sun Vitesse range for 1922 is priced as follows: 247 c.c. two-stroke, two-speed, chain and belt, £57 15s.; three-speed, all-chain, £72 9s.; 293 c.c. four-stroke (J.A.P.) two-speed chain and belt, £66 3s.; three-speed all chain, £78 15s. In our Spring Issue Buyers' Guide it was also not made clear that the 2¾ h.p. and 3 h.p. Raleigh models at £68 and £73 respectively had two-speed gears; for three speeds £5 extra is charged.

### Catalogues Received.

The Hobson Manufacturing Co., Ltd., 29, Vauxhall Bridge Road, London, S.W.1. A catalogue of accessories, including Hobson and Pognon plugs, the Hobnova plug cleaner, and plug box spanners.

The Ruby Cycle Co., Ltd., Moss Lane, Altrincham, Cheshire. A catalogue of Royal Ruby motor cycles, illustrated by half-tones and sketches.

The Capac Co., Ltd., 18, Bruton Place, New Bond Street, London, W.1. A leaflet describing Capac single-lever carburetters, and embodying instructions for fitting.

Murden Page, Ltd., 21, Mortimer Street, London, W.1. Electric and mechanical motor cycle horns, nickel steel valves, spanners, and compression taps.

SPRING! April snow storms and biting east winds stopped many a hardy motor cyclist but not enthusiastic lady competition riders. Mrs. Hardee (8 Matchless sidecar) followed by W. Julian (2¼ Levis sidecar) in the "Colonial Section" (? Labrador brand) of the Surbiton Club's recent event.

# CURRENT COAT

## Times to Light Lamps.

| | | | |
|---|---|---|---|
| April 20th | .. | .. 9.1 | p.m. |
| ,, 22nd | .. | .. 9.5 | ,, |
| ,, 24th | .. | .. 9.7 | ,, |
| ,, 26th | .. | .. 9.11 | ,, |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Considering the Amateur Road Race.

To-morrow the draft rules for the proposed Amateur Road Race in the I.O.M. come before the Competitions Committee of the A.C.U., when it is hoped that the necessary permit will be forthcoming.

### Yorkshire Enterprise.

Through its secretary, Mr. W. A. Dovener, the Bradford M.C. and L.C.C. has already made application for the 1922 edition of *The Motor Cycle* film.

### For the Next East Midland Trial?

One day last month an enthusiatic amateur rider, Mr. A. R. Linsley, of Nottingham, made a successful attempt on an ex-Army 6 h.p. A.J.S. up a track over the Peak in Derbyshire, the course consisting of the river-bed at the bottom of Jacob's Ladder, and then up a precipitous track, with several severe corners and an appalling gradient.

### Very Much Split Seconds.

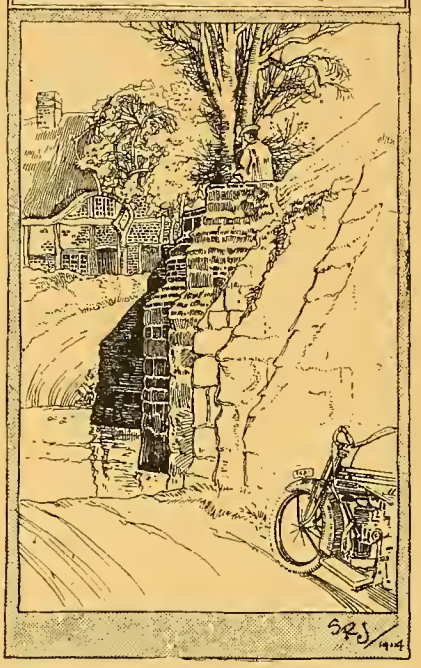
The resolution of the Timekeeping Sub-committee of the A.C.U. to the effect that short-distance record times must be taken up to 1-20sec. largely owes its origin to certain tests made by the Royal Air Force during the war, when it was found that that particular fraction of a second was the time taken by a normal individual to transmit action from the brain to the hand.

### Fair Lady and Freak Hill.

Mere male readers may be alarmed to hear that one of the only three clean ascents at a first attempt of a freak hill included in the Liverpool M.C.'s opening run was made by a lady motor cyclist, Miss Cottle, whose driving skill was, incidentally, one of the outstanding features of two of last year's open trials in North Wales. There were 92 entrants.

### Testing a Big Single Two-stoke.

In order to prove that overheating under strenuous hill-climbing conditions is not a fault of the 499 c.c. Dunelt two-stroke; W. Chase, of Newcastle-on-Tyne, recently made twenty-five non-stop ascents of Clara Street, a notorious gradient of 1 in 6 in that city, having in addition to the sidecar passenger, another adult on the carrier of the machine. The test was successfully accomplished under A.C.U. observation.



### Free Transport for a Scottish Tour.

Any reader, prepared to pay his own expenses, who would like a sidecar seat on a competing machine in the Scottish Trials, should communicate with Mr. F. W. Becker, 3, Booth Fields, Foleshill, Coventry, the McKechnie-Victor driver.

## Special Features.

EASTER EVENTS ILLUSTRATED.
IN THE HEBRIDES.
THREE MILES A PENNY.

### Rudges in Competition.

This year the Rudge has been a familia name in most of the big competitions and as is evident from a list of entries or in tended entries for forthcoming events, i will continue to be so. Those who wi ride Rudges in trials in the near futur include G. W. White, R. R. Grindlay and R. Carfrae.

### French Assault on British Market.

News that the 3½ h.p. Gnome Rhône motor cycle is eventually to b placed on the British market is interesting, in view of the fact that one of thes machines completed the 2,334 miles o the Tour de France without the loss of single mark, tieing with the A.B.C which hails from the same factory. Th designer of the Gnome et Rhône is a Englishman, Mr. K. Bartlett.

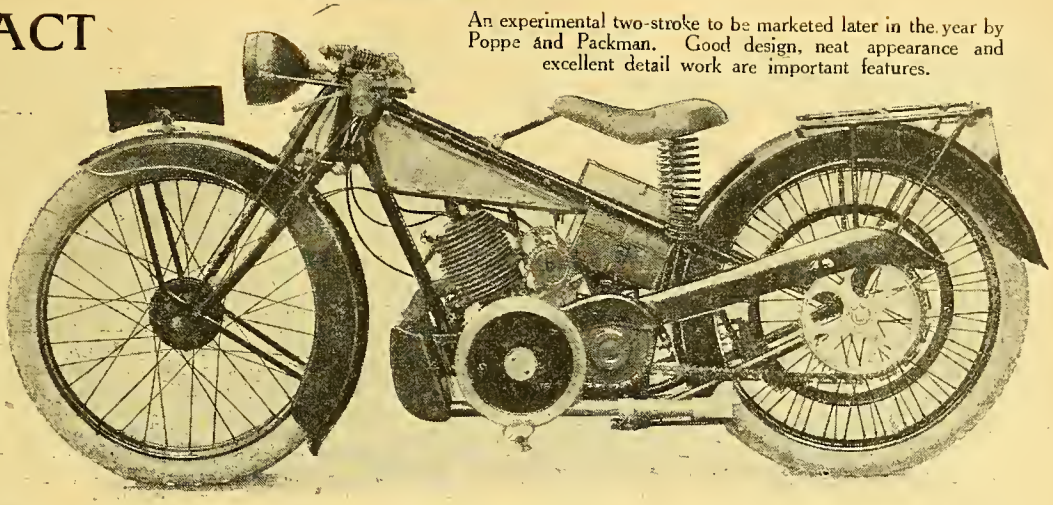
### Switzerland as a Trial Ground.

In its natural characteristics no coun try in Europe is better situated for motor cycle trials than Switzerland. The length of the hills are in themselves an excellen test, the long descents are trying to th brakes, and if steep gradients are require it is not difficult to find them. Man manufacturers might profit by the report of an experienced tester turned loose i the Alps for a month or so, with instruc tions to cover 5,000 miles.

NOT 1822 BUT 1922. This disgraceful stretch of highway is on the main Taunton-Minehead road, and should be avoided if possible, especially by solo riders at night time. Readers journeying from Taunton to Minehead this Easter are advised to take the road round Bridgwater.

# A COMPACT TWO-STROKE.

## Duplex Loop Frame, All Chain Drive and Detachable Wheel, Embodied in the New White and Poppe-Engined Lightweight.



An experimental two-stroke to be marketed later in the year by Poppe and Packman. Good design, neat appearance and excellent detail work are important features.

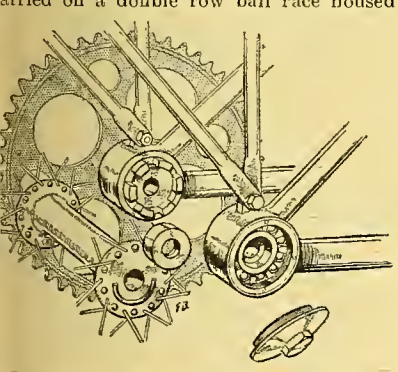
QUITE one of the most interesting machines which we have been able to examine and handle is now undergoing preliminary road tests in an experimental form.

Originated by Mr. E. Poppe, it will be produced in conjunction with Mr. G. Packman, of Rochester, and it is hoped that it will be ready for the market in the autumn of the present year. Though in its present form the machine differs somewhat from the production model, the essentials are embodied and are undergoing prolonged tests.

A White and Poppe two-stroke engine of 250 c.c. (previously described in these pages) is fitted, and the gear is a Sturmey-Archer lightweight three-speed, with clutch and kick-starter. It is intended that these two parts shall be embodied in a single unit, the Sturmey-Archer gear parts being fitted in an extension of the crank case. The engine is to be increased in bore so as to bring it within the 350 c.c. class, and a mechanical pump will supply oil from a pump between the crank and gear box partitions.

### Power Unit Moved for Chain Adjustment.

The whole power unit is mounted slidably on the duplex frame, and it can be moved to provide adjustment for the rear chain. A very unusual feature is incorporated in the final drive, for the rear sprocket lies outside the chain stay, and is carried on a double row ball race housed in the rear fork end. A similar ball bearing is mounted in the opposite fork end, and the quickly detachable wheel has no hub bearings, but is held in place by a central knock-out spindle and driven by a dog clutch. A refinement not without importance lies in the provision of a semi-circular lip on the wheel hub which locates the distance washer (necessary for wheel withdrawal) and consequently facilitates assembly.



Details of the rear wheel assembly; the semi-circular projection on the hub is used to locate the distance washer.

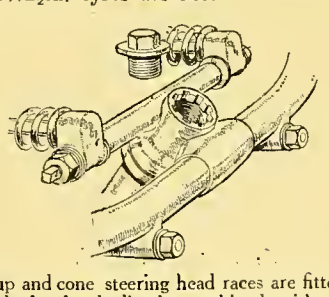
The standard machine will be equipped with the B.T.H. Sparklight ignition and lighting set, the accumulator box being fitted under the saddle; pannier tool bags are neatly housed below the duplex tubes from head lug to rear axle. Brampton forks are used, cup and cone bearings being employed in the steering head, while the normal head clip is replaced by a combined cup, spring buttress and handle-bar lugs splined on to the steering column, and held down by a special set pin.

### Complete Enclosing of Mechanism Possible.

By a clever piece of design (not shown in our illustrations) the whole engine and its accessories can be closed in by side shields, which are neatly fastened to the tank. These side pieces splay outwards at the front, and they are curved round to form leg shields, which help to deflect air over the engine and keep the rider free from oil as well as mud, yet they can be detached in a few seconds.

Even on the experimental model the fittings are practical and excellent. A large sized Webb front brake is employed, and both mudguards are fully valanced and supported by flat stays, but the present internal V rear brake will be replaced by an expanding brake within the rear sprocket. Roughly, the frame may be described as consisting of six tubes, two from the head to the rear spindle, two from the head passing downwards under engine and gear box and extending rearwards to form chain stays, and two light tubes bolted in and taking the place of the saddle tube. The seat itself is hinged from a point on the frame, well in front of the saddle peak, and is supported on the rear by a pair of very long compression springs. Complete with 26in. × 2½in. tyres and B.T.H. lighting set, the machine scales 185lb., and it is hoped that it may be marketed at about £65.

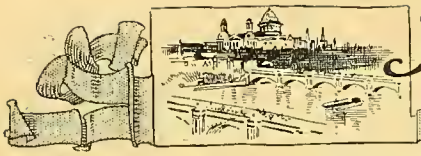
A short run on the road convinced us that the machine is thoroughly comfortable, and steers perfectly at speeds over 10 m.p.h.; at slower speeds an improvement might be made, and the matter is receiving attention at the moment. A large silencer directly in front of the frame member successfully reduces the exhaust noise, and other mechanical noises are slight. The riding position is excellent, as the seat is well in front of the rear wheel and so close to the front that the forward swept bars come into a natural position. It is difficult to realise the size of this very compact little machine, but as a guide to proportions when examining the illustration it is well to remember that 26in. × 2½in. tyres are fitted.



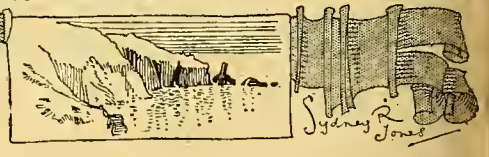
Cup and cone steering head races are fitted, and the head clip is combined with the handle bars and spring fork buttress, the whole being carried on splines.

## INCREASE IN EXPORTATION OF MOTOR CYCLES.

A SATISFACTORY feature in the Board of Trade returns for March is the substantial increase in value of machines and accessories exported. In February their value was £54,849, but last month this figure was increased by £19,049. Even this amount falls short by the big sum of £96,429 when compared with the March figures of 1920, but still to find our overseas trade on the up grade, no matter how slight, shows that the bed rock of trade depression has been reached, and that a trade revival is imminent.



# The LONDON LANDS END TRIAL



## Porlock and Beggar's Roost Try the Passenger Machines. Rain and Head Winds Test Endurance of Competitors. 212 Motor Cyclist Starters, 43 Retirements.

GALES and gradient proved uncommonly difficult obstacles in this year's London—Land's End Trial, the record-breaking Eastertide event of the M.C.C. to decide the soloist and sidecar driver to hold the President's and Captain's Cups respectively for another twelve months.

Not only was Beggar's Roost included in the stiffened edition of last year's route as a climax to a very possibly almost impassable Lynton, but the "O. i/c. Gales" apparently went holiday-making, leaving his south-west army to wage war against the luckless Land's End men. Rain provided the finishing touch—stinging rain which was almost indistinguishable from hail.

Rumour had it, too, that the eight-mile section from Beggar's Roost to Simonsbath was one of the (hundred odd) worst roads in the country, but it was so thoroughly snow-bound that it was wisely decided at the eleventh hour to divert the competitors by a less exciting route.

### More Main Road Checks.

Little incident of note relieved the monotony of the long procession as it wended a fairly straight-forward way from Slough, through Maidenhead, Reading, and Newbury to the first check at Hungerford. Incidentally, there were more checks this year, but nobody grumbled, the general opinion being that, within limits, the more the merrier.

Through Savernake Forest the going was rough, but this was expected. The gale that met the earlier solo men after turning off for Devizes was not. Gradually its intensity increased, or so it seemed, and rain came more heavily—sometimes dead ahead, sometimes half-left, but never behind.

Frome, Shepton Mallet, and Glastonbury came to be regarded as milestones in the fight for Bridgwater, and 90% of the riders pondered the usual problem at this stage—why on earth were they there?

At approximately half-past four "No. 1," F. A. Longman (498 Ariel), entered Bridgwater for the usual breakfast stop, which almost as truly might be called supper, at the White Hart Hotel. Two items only call for comment here: there was an extraordinary number of fully authenticated but quite impossible-to-be-true stop-press rumours about all three test-hills, and, secondly, the washing arrangements were greatly improved on those of last year.

### Timed Climbing Test on Porlock.

Porlock, which came next, may always be relied on to relieve one or two of their gold medals; this year also it was again the deciding factor for the trophy awards—nearest to twenty miles per hour up the first mile winning—and in consequence anxiety bred failure in several cases. As a hill it is the least difficult of the three included in the trial.

Porlock's two hairpin turns of terrifying steepness formed the first real "stumbling block" in the course of the trial.

On Saturday the surface of soft red clay and loose sharp stones was adversely affected by the previous heavy rains, and many of the competitors failed on, or just after, the first bend.

Some stopped at the first corner by taking the turn too close in; there the road surface was very bad. Attempting the turn too fast and skidding into the outside ditch was also the cause of several failures at this point. Some excellent cornering, however, was witnessed, both by the solo and sidecar men.

Probably because of their low bottom gears many of the lightweight riders took the first turn in splendid style, notably S. G. Wooldridge (349 A.J.S.) and A. R. H. Stewart (348 Raleigh). F. E. Salter (496 Zenith-Bradshaw) had rather a bad skid, and fell just before the turn. E. S. Burnett (750 Raleigh) and R. Newitt (497 Douglas) made very good climbs, as did E. H. Williams (499 Triumph).

C. H. Mocatta (349 A.J.S.) skidded badly into the ditch, and H. Robinson (345 Wooler) stopped after taking the first turn in good style, and had to be pushed to restart, whilst T. E. Pantard (250 Trump-Jap) failed just round the bend.

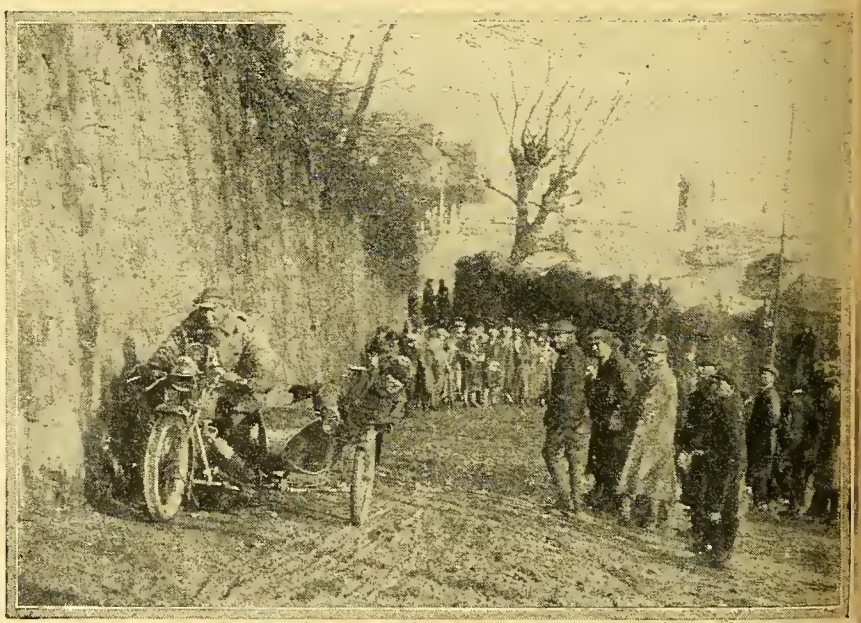
### Skids and Baulks.

Much excitement was caused when W. H. Julian (996 Matchless sc.) took the turn too fast and skidded across the road. In the haste to get away again he baulked two other Matchless sidecars (G. Nott and D. S. Parsons), which, however, just managed to scramble through the restricted road passage.

Ivan P. Brettell (370 Connaught sc.) made a very clean ascent as far as could be seen—sailing round the bend very smoothly.

C. W. Vallings (499 Dunelt sc.), A. C. Maskell (996 Matchless sc.), P. Cunningham (555 P. and M. sc.), and William King (989 Harley-Davidson sc.) also made splendid climbs.

A 600 c.c. Beardmore-Precision outfit driven by A. G. Cocks took the turn well, though too wide; and W. P. Brandon



Well round the acute bend at the foot of Lynton, J. Wallis (688 Coventry-Victor sidecar) opens out for a successful climb.

Two 678 c.c. Martinsyde outfits, piloted by the Bashall brothers, passing through the quaintly named village of Indian Queens.

T. Weaver (796 Sirrah sidecar) nearing Truro during a brief respite from the storm

(550 Triumph sc.) stopped right on the bend and caused an exciting obstruction, involving three other machines. G. R. Claridge (550 Triumph sc.) made an outstanding climb.

### Cycle Cars on Porlock.

Most of the three-wheeled cyclecars managed the ascent remarkably well. W. H. Elce (1096 Morgan), F. W. Dame (980 Morgan), H. F. S. Morgan (975 Morgan), and F. Spouse (980 T.B.), all climbed excellently, but H. W. Holmes, driving a Grand Prix model Morgan, took the first turn in too dashing a style, and made a most spectacular skid on the loose surface. As a result his rear tyre burst with a loud report, but, undaunted, he roared away up towards the second bend on the rim.

### Between Somerset and Devon.

The road over Exmoor and down Countisbury hill to Lynmouth had only been opened on the previous week-end after the recent heavy snowstorms in the neighbourhood, but its general condition was by no means worse than usual; lingering remains of once 6-feet-deep snowdrifts indicated what might have been had Easter been a little earlier this year.

Most of the riders used their engines as brakes on Countisbury, and oiled plugs were not uncommon at Lynmouth.

### Snares of Lynton Hill.

When the surface is out of condition there are three bad spots on Lynton Hill. The first is at the first corner, where it is well-nigh fatal to cut in on the inside; the second is a steep, loose patch about 100 yards higher, and the worst is a stiff pull about 200 yards beyond. Recent heavy weather on this occasion rendered the hill at its worst, though it needed the advent of the sidecar machines and cars to show how bad matters might be, for almost without exception the soloists made good climbs. This, of course, was to be expected, as the only moderately rideable path is close to the offside wall, and is very narrow.

### Good Performances.

First man up, in good style, was F. A. Longman (498 Ariel). E. Atkins (498 Ariel) had to indulge in foot work, whilst J. S. Austin (496 Scott-Squirrel) climbed well, although his engine appeared to be misfiring. E. A. Collum (596 Indian Scout) went up steadily but quietly, and noticeably good performances on and after the first corner were made by J. Richardson (498 Lea-Francis), V. Gayford (500 Zenith-Bradshaw), R. Newitt (497 Douglas), G. O. Ford (500 Zenith-Bradshaw), and G. Kuhn (245 Calthorpe). S. Hancox had a sidecar attached to his 500 c.c. Zenith-Bradshaw, although listed as solo; he created a sensation by coming up to the first corner at a great speed, but he cut in too fine and stopped round the bend, getting away again in the end. W. Henry Wells (398 A.B.C.) narrowly escaped a baulk from another machine, but neatly cut in and managed to pass above the first corner. Praise must be, and was on the spot, awarded to the veteran F. W. Applebee (211 Levis), who with his engine misfiring slightly, skidded on the corner, used

At one period something approaching chaos reigned on Beggar's Roost. F. W. Giles (800 A. J. S. sidecar), in the left foreground, is making a brilliant get-away after a bad baulk.

Two solo riders making light of Beggar's Roost—H. A. Davies (498 Ariel), leading, and C. H. Mocatta (349 A.J.S.)

his feet to recover, and got away again very well. C. H. Mocatta (349 A.J.S.) narrowly missed being baulked by a cart. B. N. Taylor (349 Hagg Tandem) arrived very late, took the corner too fine, stopped, and eventually went up running beside his machine, which was not an easy task.

### Sidecarists not Happy on Lynton Slime.

When the sidecar machines came, the fun began. Many of the solos took the hill as if there was nothing in it, engines by no means extended. All the wise men hugged the right-hand wall as they went up.

Because of the stops and baulks, particularly on the upper portion of the hill, it was almost impossible to say who did, or might have done, well, and the promoters of the trial will have some difficulty in sorting things out to universal satisfaction. It was noticeable that, despite these troubles, the competitors showed the utmost good humour, whilst the marshals did their best to keep track of things and to help those who needed it. The cause of the trouble, of course, was the unutterably loose surface made worse by recent showers.

### One Accounts for Many.

The beginning of one turmoil was the failure of A. J. Agg (799 A.J.S. sc.). He baulked A. Greenwood (976 Brough-Superior sc.), who passed it on to W. H. Bashall (678 Martinsyde sc.), and then J. T. Bashall (678 Martinsyde sc.), G. Baxter (678 Martinsyde sc.), B. E. Belfield (989 Harley-Davidson sc.), T. H. Weaver (796 Sirrah sc.), and A. H. Carnt (532 Scott-Squirrel sc.), all became involved. This was typical of the day.

### Good Sidecar Climbs.

The following can be picked out as making good climbs by skill, judgment, or luck :—A. H. Nelson (550 Triumph sc.), who drove splendidly; S. Julian (996 Matchless sc.), F. J. Watson (994 Ariel sc.), J. Wallace (688 Coventry-Victor sc.), J. Graham (996 Matchless sc.), B. S. Allen (996 Matchless sc.), T. J. Ross (996 Matchless sc.), and R. C. Boxer (996 Matchless sc.). So many were the incidents, so rapid the action, so thrilled the onlookers, that it was almost impossible to keep track of all the happenings. At least 32 failed, and at least 20 more stopped through baulks, which were extremely prevalent.

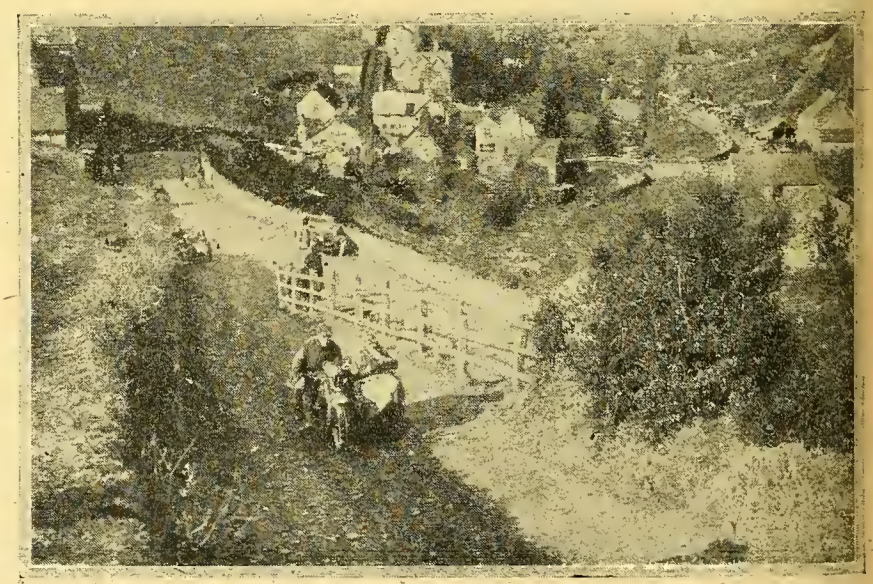
Not much better luck befell the three-wheelers. A. G. Gripper (1096 Morgan) came to grief on the corner; F. W. Dame (980 Morgan) failed; but W. H. Elce (1096 Morgan), F. Sponse (980 T.B.), and H. F. S. Morgan (975 Morgan) all did well on the first corner and beyond.

### Beggar's Roost—the Third Test Hill.

Thence followed the culminating ascent of the Devonshire Hills, namely, Beggar's Roost, on the edge of the village of Barbrook Mill. From the contour survey exclusively published in last week's issue of *The Motor Cycle* it will be seen that the steepest section is 1 in 3.64, and for the whole three-quarter mile length of the hill the gradient averages about 1 in 7. Spectators gathered in the early hours—the first man was due at 7.48 a.m.—some keen enthusiasts being content to munch sandwiches in lieu of breakfast, which some of the Lynmouth district hotels fought shy of providing so early.

It was fine with a strong wind blowing up the hill. F. A. Longman (Ariel), last year's Jarrott Cup winner, led the way in company with E. Pond (550 Triumph) and P. L. Wills (499 Rudge), followed by an official Morris car piloted by L. A. Baddeley.

Belfield (398 A.B.C.), C. Wheeler (481 Scott-Squirrel), and P. H. Jones (499 Sunbeam), were next, and so far all got up comfortably. E. W. Spencer's 497 c.c. Douglas toyed with the precipitous gradient, whilst O. S. Bridcutt (499



The commencement of Beggar's Roost and the main road, on the right, by which competitors rejoined the route after completing the climb. S. H. Farley (1170 Henderson sidecar) is the rider in the foreground.

L. A. Welch (292 O.K. Junior) zig-zagging up Beggar's Roost while D. G. White (347 G.R.I.), on the worst side of the road, finds it necessary to dismount.

Dunelt) slewed around in the road and had to touch with his feet, but kept going, nevertheless. E. Atkins (498 Ariel) footed, but re-started and finished well. G. Segrott, on a similar mount, was slow and sure. E. J. Keyhoe (499 Rudge) charged the gradient with his feet dangling, and disappeared at a rare bat; J. A. Newman (497 Douglas) was good, but his right eye was blackened, apparently through a fall.

### Some Fine Solo Ascents.

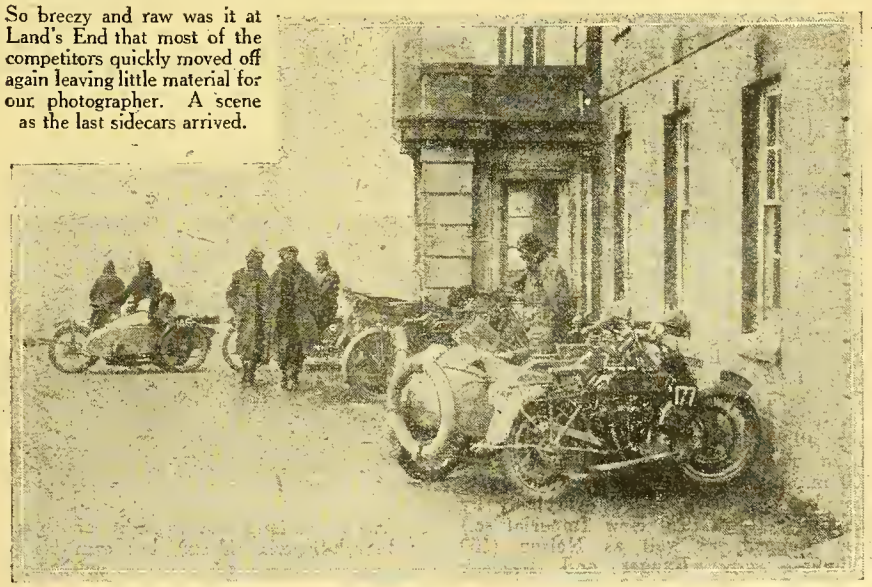
Then a roar, and two riders in close company charged round the bend at speed—they were G. Brough and S. Ratcliffe (976 Brough Superiors). A. C. Rhodes (499 Triumph) made a neat climb, also P. Street (499 Sunbeam), T. L. Daniels (595 Douglas), and H. C. Nias (498 Ariel). Austin's 496 c.c. Scott was misfiring, and he stopped and elected to retire. One of the I.O.M. T.T. Rovers, ridden by L. N. Stannah, stopped in front of C. Bourlet (498 Ariel), but the latter got up by dextrous driving. C. Dickinson, on another 498 c.c. Ariel, climbed faultlessly, also E. A. Collum (596 Indian), W. G. Boyer (490 Norton), and H. Nicholson (496 Martinsyde). J. Richardson (498, Lea-Francis) was in excellent fettle, notwithstanding the all-night gruelling, but B. H. Brayne (548 Blackburne) only just got up, hindering V. Gayford (496 Zenith-Bradshaw), who, however, made a clean ascent. R. V. Saltmarsh (584 Harley-D.) and S. Easton (398 A.B.C.) did well; J. G. Boorer (678 N.U.T.) was slow but sure; and then three made clean climbs in close company—W. D. Pugh (496 Zenith-Bradshaw), E. Gifford (496 Martinsyde), and A. Symes (678 Martinsyde). S. Hancox's (496 Zenith-Bradshaw) sidecar stopped low down and proceeded to push—a foretaste of what might happen to the passenger machines.

### Gaps in the Ranks.

So far the road surface had quite well survived the biggest crowd of motor cycles ever to climb Beggar's Roost, but the lower reaches were strong. G. S. Green's 532 c.c. Scott came to a standstill on the very crest of the crucial stretch; J. O'Sullivan's 1170 c.c. Reading Standard was surprisingly slow, but good notwithstanding. Then a long wait, which suggested "fun" on Lynton, the preceding climb, only 1½ miles away. F. V. Edwards' 557 c.c. B.S.A. stopped low down; M. Pearson's 550 c.c. Triumph was good, also J. Eddy's 499 c.c. Rover, E. Howard's 499 c.c. Sunbeam, and R. Roberts' 550 c.c. Triumph. Grose added to A.B.C. laurels, and was followed by a batch of successful men, Hardwick (N.U.T.), Cuffe (Metro Tyler), Charlesworth (Zenith), Harveyson and Marks (o.h.v. Triumphs), Hadley (Rudge), Walter (Zenith), and Troughton (XL). The sun bothered the riders, as it shone straight into their eyes during the ascent. After Pugh (499 Triumph) had passed at speed there was another long wait until F. Salter (496 Zenith-Bradshaw), P. Pike (490 Norton), and G. Ford (496 Zenith-Bradshaw) came up well. E. Foster (750 Raleigh) hesitated after a swerve, but recovered well, and afterwards the following showed up conspicuously: E. Burnett (750 Raleigh), J. Biss (630 Norton), Williams (499 Triumph), Sprosen (293 Connaught), R. Newitt (494 Douglas), H. Gibson (348 Raleigh), T. S. Sharratt (349 A.J.S.), A. M. Knill (348 Raleigh), Wells (398 A.B.C.), and Baxter (247 Radco). G. Richardson (348 Raleigh) was slower than his confrères. Lewis (349 Beardmore-Precision) made a neat ascent; Thomas (349 Hagg Tandem) footed vigorously, but kept going. Hemy (349 A.J.S.) was good, also Davies (498 Ariel) and Mocatta (349 A.J.S.), who were noticeably faster than the forerunners. White's 347 c.c. G.R.I. stopped in the stones, Welch (292 O.K. Junior) made a fine climb. Greathead (348 Ivy was good, but Kuhn and Heller on 245 c.c. Calthorpes footed. R. Richardson (349 Alecto) stopped, whilst Wooldridge (349 A.J.S.) and Stewart (348 Raleigh) were fast. McLachlan (349 A.J.S.) touched with his feet, needlessly one thought; Guthrie (Diamond, with 349 c.c. Barr and Stroud engine) was very good.

### One Way of Clearing the Course.

Youngs (292 O.K. Junior) raised a laugh among the crowd by steering straight for a spectator sitting on the bank, who promptly fell on his back with his legs in the air.



So breezy and raw was it at Land's End that most of the competitors quickly moved off again leaving little material for our photographer. A scene as the last sidecars arrived.

On Bodmin Moor a few minutes after one of the worst storms of the year. W. J. Barker (1170 Henderson sidecar).

### Sidecar Observations.

Then the sidecars started in earnest, W. A. Fell-Smith (976 Brough-Superior sc.) forming the vanguard, and incidentally clearing the over-zealous spectators who meandered aimlessly in the road while natural banks awaited them. Clifford Wilson (653 Quadrant sc.) stopped, but was able to see Pidgeon on a similar outfit go up well. More sidecars followed, Ross and Boxer among a remarkably big Matchless representation, doing well. Watson (994 Ariel sc.) got over the critical 1 in 3.64 by vigorous bumping on the saddle.

### Two Star Climbs.

But the star ascents among the sidecar competitors we credited to Bridgman (998 Indian), and Marvin (987 Brough-Superior). Curiously enough, they were in close company, and their fast ascents thrilled the onlookers.

"Hard luck!" exclaimed the onlookers as Harris (550 Triumph sc.) came to a standstill after manfully breasting the steepest bit; Glendinning's 998 c.c. Rex outfit stopped at precisely the same spot. Tait (980 Brough-Superior sc.) stopped with his driving-wheel churning up the stones. Davidson's 596 c.c. Indian Scout outfit repeated the performance, and he burnt out the clutch in attempting a restart. White (996 Sunbeam sc.) stopped, and then perfect chaos prevailed as a bunch of sidecarists in close company attempted the hill. Some were baulked, and the officials took their depositions in the midst of the climb instead of clearing the course for the next men. Mackenzie (745 Humber sc.), Guiver (996 Matchless sc.), Cocks (598 Beardmore-Precision sc.), Attwood (548 Hawker sc.), were all at one time at a standstill within a space of twenty yards. The 100 m.p.h. exponent—C. G. Pullin (749 Douglas sc.) disappointed everybody by stopping; Hann (980 New Imperial sc.) also stopped, as well as Nelson (550 Triumph sc.). Ranger and Peacock (Matchless sc.) just scraped up; one noticed that most of this team had Parsons chains on the driving wheel. White (800 A.J.S. sc.) stopped, due to wheel spin; Nott (Matchless sc.) was slowly overhauled by Parsons, who actually struck Nott's stand, but managed to keep going; Jones (996 Matchless sc.) stopped low down the hill, but Wood (633 Norton sc.) got over the steep pitch and then unaccountably failed.

The sidecar men found Beggar's Roost a tough proposition, and another bunch of machines were strewn about the hill at this point awaiting assistance from willing helpers. W. H. Bashall (678 Martinsyde sc.) was baulked at this point, but restarted with a third passenger on the carrier and went up well. Giles (800 A.J.S. sc.), who had found his progress barred by a stranded Matchless and Henderson, made a perfect restart, and climbed the hill faultlessly. Greenwood (956 Brough-Superior sc.) followed Bashall's example, whilst Hardee and Ellis (Matchlesses) restarted at the point they were baulked and climbed the remainder of the hill excellently. Claridge (550 Triumph sc.) and Carnt (532 Scott sc.) were assisted, but C. R. Collier (993 Matchless sc.) made no mistake. Wheelspin brought Walker (770 B.S.A. sc.) to a stop. Bad luck again dogged the Martinsyde, for Baxter was badly baulked by three stopped sidecars; he managed to worm his way around them all, however, and got up amid applause; Perrey (770 B.S.A. sc.) made a similar performance but unluckily stopped, while Bird (770 B.S.A. sc.) simply had no opening left for him.

### A Mix-up on the Gradient.

There was surely never such a scene; anxious spectators yelled themselves hoarse to clear the road of a Harley, two Matchlesses, and an Enfield; excited sidecar passengers joined in, and pandemonium prevailed. It was strange that hereabouts the percentage of failures was over 80, whereas formerly fully 60 per cent. had succeeded. Hoult (993 Matchless sc.) relieved the monotony, sending a shower of gravel from his driving wheel among the spectators, now scattered all over the roadway; then Cunningham (555 P. and M. sc.) stopped, as his front wheel refused to steer straight ahead. Four more

One of the finest sidecar ascents of Beggar's Roost was made by W. A. Fell-Smith (976 Brough-Superior sidecar), but even his passenger found it advisable to transfer more weight to the rear wheel.

**The London-Land's End Trial.**—sidecars followed in a bunch: Choldcroft (750 A.J.S. sc.) stopped; Macdonald (993 Matchless sc.) did well; Maskell (Matchless sc.) failed, as did Wallis (688 Coventry-Victor sc.), but the last-named restarted and went up well. Wheel spin stopped Clark (499 Zenith sc.), but Neill (980 Matchless sc.) made a splendid ascent. Danskin (998 Rudge sc.) stopped and burnt his clutch out, as did several others, in attempting a restart, and so retired; Elce (Morgan), effectually stopped by a sidecar failure, restarted and went up well, followed by H. F. S. Morgan, who was exceptionally good.

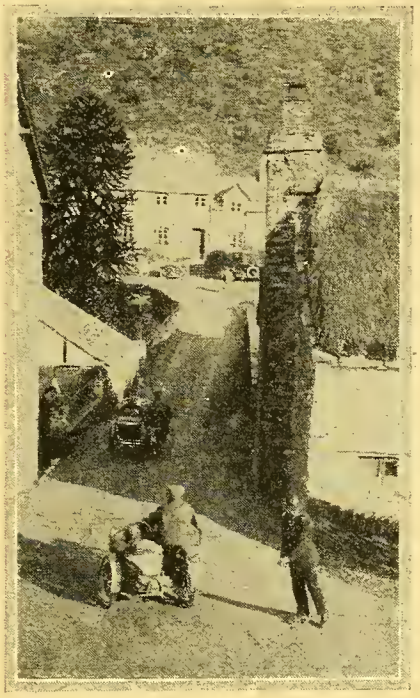
Spouse (T.B.) halted on the crest of the steep pitch, also Gard (Matchless sc.). Cars now began to arrive, but a number of sidecar competitors, having lost time, trickled through while the car ascents were in progress, including Allen (Matchless), who was good, Brettell (370 Connaught sc.), who stopped, due to wheel spin only, King (989 Harley-Davidson sc.), stopped, Strong (989 Harley-Davidson sc.), a plucky rider minus legs, who had to be assisted while a passing shower cooled the willing helpers, and Gripper (Morgan), who made an excellent ascent.

### Last Moment Change of Route.

The last moment change of route after the ascent of Beggar's Roost meant that competitors doubled back on their own tracks for a short distance at Barbrook Mill. This worked quite well in the case of the solo machines, but there were some time-wasting jams on the road before the later sidecars got clear.

On via Simonsbath, South Molton, and Umberleigh Bridge to another check at Great Torrington the road was often exceedingly tortuous, and in the neighbourhood of Umberleigh Bridge there were hills of considerable severity. Added to this the gale seemed ever-increasing in intensity.

A. H. Carnt (532 Scott-Squirrel sc.) gave up near Umberleigh, and I. P. Brettell on the 370 c.c. Connaught outfit



Barbrook bridge, which the competitors crossed and re-crossed on their detour to Beggar's Roost. A local policeman lends a willing hand at traffic control.

was noticed gamely fighting a losing battle with the head wind.

A little further on H. W. Harrington's 349 c.c. Douglas with the draught-board tank was overtaken in trouble from the same cause, and indeed there were few of the solo lightweights or passenger outfits which did not find difficulty in keeping to schedule over this section. Driving, too, was most unpleasant; it was almost impossible to open more than one eye at a time; A. G. Cocks (598 Beardmore sc.) left the road entirely at one stage and went ploughing over the moor to the considerable detriment of his front fork, although on the whole the Beardmore stood it remarkably well.

### Terrible Weather.

All the way to the Launceston lunch stop and for the first hundred riders or so right into Bodmin the blinding rain continued, and it was no uncommon sight to meet people returning in disgust; it was however, quite impossible to decipher their numbers as they sped homewards.

F. W. Becker (688 McKechnie sc.), sustained the last straw in this section in the shape of a puncture in the sidecar tyre.

There were dry intervals after Bodmin, which gradually increased in duration until a cold rainless wind was the only remaining obstacle to reaching the end on time. At the same time there were several not unexpected secret checks, which, in conjunction with the tortuous nature of the switch road chosen from Penzance this year, made the task quite sufficiently arduous

Land's End was reached by the vanguard of the surviving soloists shortly after four o'clock, but it was well past lighting-up time before the last car finished the memorable 312 miles ride.

An article describing how the cars fared in this severe trial appears in to-morrow's issue of *The Autocar*

## THOSE WHO REACHED LAND'S END.

### MOTOR BICYCLES.

F. A. Longman (498 Ariel), E. Pond (550 Triumph), Victor Belfield (398 A.B.C.), P. L. B. Wills (499 Rudge), C. J. Wheeler (481 Scott Squirrel), E. Atkins (498 Ariel), P. H. Jones (499 Sunbeam), C. F. Plowman (499 Sunbeam), E. J. Keyhoe (499 Rudge), G. W. Segrott (498 Ariel), E. W. Spencer (494 Douglas), J. A. Newman (497 Douglas), O. S. Bridcutt (499 Dunelt), S. W. Ratcliffe (956 Brough Superior), A. C. Rhodes (499 Triumph Ricardo), G. Brough (956 Brough Superior), P. Street (499 Sunbeam), C. Dickinson (498 Ariel), C. Bourlet (498 Ariel), H. C. Nias (498 Ariel), L. N. Stannah (499 Rover), E. A. Collum (596 Indian Scout), T. L. Daniels (595 Douglas), S. W. Easton (398 A.B.C.), G. S. Green (532 Scott), R. V. Saltmarsh (584 Harley-Davidson), J. Richardson (498 Lea-Francis), E. H. Gifford (496 Martinsyde), H. H. Nicholson (496 Martinsyde), A. A. F. Symes (678 Martinsyde), M. Pearson (550 Triumph), B. H. Brayne (548 Blackburne), F. V. Edwards (557 B.S.A.), V. Gayford (496 Zenith-Bradshaw), W. D. Pugh (496 Zenith-Bradshaw), J. A. O'Sullivan (1170 Reading-Standard), E. W. T. Howard (499 Sunbeam), J. W. Grose (398 A.B.C.), J. Eddy (499 Rover), J. W. Troughton (550 X.L.), A. W. Hadley (499 Rudge), F. E. Salter (496 Zenith-Bradshaw), E. J. Walter (496 Zenith-Bradshaw), G. E. Cuffe (698 Metro-Tyler), E. Hardwick (678 N.U.T.), H. R. Harveyson (499 Triumph), R. Charlesworth (496 Zenith-Bradshaw), R. Pugh (499 Triumph), E. S. Burnett (750 Raleigh), E. Foster (750 Raleigh), P. Pike (490 Norton), R. Newitt (494 Douglas), W. Henry Wells (398 A.B.C.), B. J. Sims (550 Triumph), G. O. Ford (496 Zenith-Bradshaw), E. H. Williams (499 Triumph), T. S. Sharratt (349 A.J.S.), R. H. Baxter (247 Radco), C. L. Sprosen (293 Connaught), A. M. Knill (348 Raleigh), H. Gibson (348 Raleigh), G. Richardson (348 Raleigh), R. L. Richardson (349 Alecto), W. L. Thomas (293 P.V.), R. N. Thomas (349 Hagg Tandem), B. N. Taylor (349 Hagg Tandem), C. W. Lewis (349 Beardmore-Precision), H. A. Davies (498 Ariel), C. H. Mocatta (349 A.J.S.), W. C. Heny (349 A.J.S.), G. Kuhn (245 Calthorpe), L. Heller (245 Calthorpe), A. G. Wall (249 Velocette), H. J. Greathead (348 Ivy), L. A. Welch (292 O.K. Junior), F. J. Youngs (292 O.K. Junior), S. G. Wooldridge (349 A.J.S.), F. W. Applebee (247 Levis), A. R. H. Stewart (348 Raleigh), R. S. Newnham (348 Raleigh), S. T. Glanfield 269 Cotton-Villiers), A. S. Guthrie (349 Diamond), P. A. Hopkins (348 Ivy).

### SIDECARS.

W. A. Fell-Smith (976 Brough Superior), T. J. Ross (996 Matchless), R. C. Boxer (996 Matchless), H. W. Glendinning (998 Rex), S. C. Tait (980 Brough Superior), F. V. Harris (550 Triumph), B. S. Allen (996 Matchless), J. Mackenzie (745 Humber), F. J. Watson (994 Ariel), W. F. Guiver (996 Matchless), E. A. Bridgman (998 Indian), J. D. Marvin (987 Brough Superior), A. G. Cocks (598 Beardmore-Precision), A. A. Attwood (548 Hawker), J. A. Peacock (996 Matchless), W. J. Barker (Henderson), S. H. Farley (Henderson), P. S. Crauford (996 Matchless), T. E. Ranger (996 Matchless), A. H. Nelson (550 Triumph), G. Nott (996 Matchless), D. S. Parsons (996 Matchless) F. E. Jones (980 Matchless), T. H. Weaver (796 Sirrah), A. Greenwood (956 Brough Superior), J. T. Bashall (678 Martinsyde), W. Bucknell (996 Matchless), A. F. Pulling (965 Royal Enfield), G. R. Claridge (550 Triumph), E. Wood (633 Norton), C. R. Collier), (993 Matchless), F. J. Ellis (993 Matchless), G. D. Hardee (993 Matchless), B. L. Bird (770 B.S.A.), J. H. Walker (770 B.S.A.), H. S. Perrey (770 B.S.A.), H. L. Miserez (993 Matchless), J. A. Hoult (993 Matchless), P. Cunningham (550 P. and M.), F. W. Giles (800 A.J.S.), J. Wallis (688 Coventry Victor), Eli Clark (600 Beardmore-Precision), F. W. Neill (980 Matchless), J. Graham (993 Matchless), E. W. Choldcroft (750 A.J.S.), A. C. Maskell (964 Matchless), W. L. Gard (993 Matchless), P. Pehrson (500 Dunelt), C. W. Vallings (500 Dunelt), R. B. Clark (499 Zenith-Bradshaw), S. Hancox (500 Zenith-Bradshaw).

### CYCLE CARS.

W. H. Elce (1096 Morgan), F. W. Dame (980 Morgan), F. Spouse (980 T.B.), H. F. S. Morgan (975 Morgan).

### RETIRED.

#### MOTOR BICYCLES.

G. W. Burgoyne (550 Triumph), A. H. S. Love (490 Norton). E. J. Keyhoe (499 Rudge), M. V. Gordon-Cumming (490 Norton), W. G. Boyer (490 Norton), J. A. Stedman (547 Powell), J. G. L. Boorer (678 N.U.T.), R. B. Roberts (550 Triumph), T. A. Slann (550 Triumph), W. A. Newell (533 Scott), W. R. Williams (499 Trinmph), S. J. Marks (499 Triumph), J. Harrison (496 N.U.T.), J. G. Biss (630 Norton), Ivan F. Anderson (295 Connaught), R. V. Crawford (293 P.V.), D. G. White (347 G.R.I.), H. Sutton (225 Royal Enfield), W. G. Churchill (348 Verus), A. M. O. MacLachlan (349 A.J.S.), C. N. Cooper (350 Sirrah), D. Read (250 Ready), H. H. Robinson (345 Wooler), Alan Milward (345 Wooler), J. E. Pantard (250 Trump-Jap), J. L. Hanman (348 Coulson), C. F. Alcock (348 Raleigh), H. W. Harrington (349 Douglas).

#### SIDECARS.

Clifford Wilson (653 Quadrant), G. A. Pidgeon (653 Quadrant), H. Clennell (976 Brough Superior), P. W. White (996 Sunbeam), R. M. Veale (770 B.S.A.); J. G. Hann (980 New Imperial), W. H.

**London-Land's End Trial.—**

Hardman (996 Matchless), D. H Davidson (596 Indian Scout), W. W. E. Clarke (654 Quadrant), W. P. Brandon (650 Triumph), C. G. Pullin (749 Douglas), E. Eland (557 B.S.A.), A. H. Carnt (532 Scott Squirrel), T. G. White (800 A.J.S.), M. P. Bradley (599 Sunbeam), A. J. Agg (800 A.J.S.), B. E. Belfield (989 Harley-Davidson), E. J. L. Strong (989 Harley-Davidson), W. H. Bashall (678 Martinsyde), G. Baxter (678 Martinsyde), S. Julian (996 Matchless), W. H. Julian (996 Matchless), M. A. Newnham (700 Raleigh), A. J. Bosworth (690 Brough), A. Conville (592 Lea Francis), G. Dyer (989 Harley-Davidson), A. H. Lisley (996 Matchless), W. L. Danskin (998 Rudge), E. C. Barton (550 Triumph), T. J. Ryan (998 Rudge), W. King (989 Harley-Davidson), F. Pownell (986 Royal Ruby), F. Macdonald (996 Matchless), F. A. Jaques (986 Zenith), F. W. Becker (688 McKechnie), A. P. McGowran (550 Triumph), H. H. Saddington (662 James), F. T. Sibley (499 Rudge), W. M. Worthington (347 Wooler), J. Prnen (494 Douglas), I. P. Brettell (370 Connaught).

CYCLECARS.

H. E. K. Sawtell (1,096 Morgan), S. A. McCartley (1,980 Morgan), A. G. Gripper (1,096 Morgan).

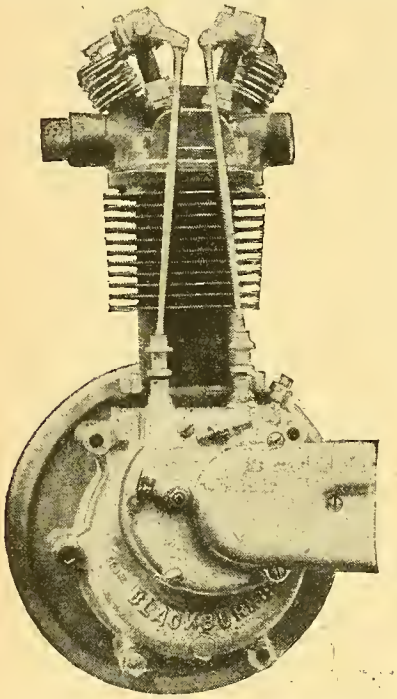
# CURRENT CHAT (*continued from p. 510*)

### Honours Easy.

Was Beggar's Roost or Lynton the worse hill in the London-Land's End Trial? Opinion at present is divided.

### Police Holiday Activity.

On Good Friday a member of *The Motor Cycle* staff was held up by the Somerset police no less than seven times between Frome and Porlock.



As will be seen, the new lightweight record-breaking Blackburne engine follows closely the lines of the 350 c.c. type bearing the same name.

### Aids to Cooling.

Whether to leave one's cylinder bare or to paint it dead black is a problem for those who want the best cooling results. During the holiday week-end we saw an Autowheel owner, however, who had struck out on original lines, for his cylinder was covered with gold paint.

### The Week-End Gale.

Not only the London-Land's End competitors, but everyone who took to the road during the Easter holiday, experienced the force of the gale which swept over the country. Trees were blown down in many districts. On two occasions pedal cyclists were blown over immediately in front of our machine.

### Great Travellers!

Rather an amusing *faux pas* was made in the programme of this year's London—Land's End Trial. Travelling marshals were instructed, among other things, to ensure that every finisher returned his number-plates at Staines. To do this they would certainly have had to travel!

### Important 250 c.c. Class Records.

Early last week W. D. Marchant, riding a Sheffield-Henderson with a new 250 c.c. o.h.v. Blackburne engine, gained the British mile record at a speed of 72.89 m.p.h., and the kilometre at 71.96 m.p.h. He then went for the international (mean speed) records, covering the mile at the rate (average of two runs) of 71.42 m.p.h., and the kilometre at 71.88 m.p.h.—truly wonderful speeds for so small an engine.

On the following Thursday the same rider and machine created new records for the hour and the fifty miles, his speeds being respectively 58.89 m.p.h. and 58.99 m.p.h., over 3 m.p.h. increase on the previous bests.

The new Blackburne lightweight engine is built on the lines of the famous 350 c.c. unit, having inclined overhead valves. The bore and stroke are 60 and 88 mm. respectively, the capacity being 249 c.c.

### Relieving Officer's Motor Cycle.

A motor cycle, value £57, has been provided for the relieving officer of the Henley Board of Guardians.

### Cost of Making a New Road.

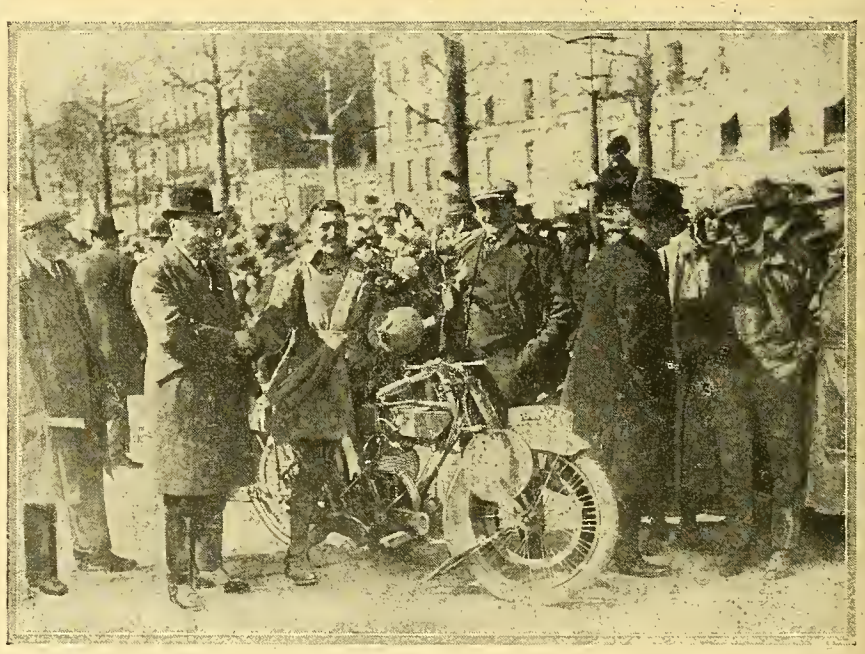
A new tar-macadam 20ft. road costs about £3,000 per mile, but the estimates submitted by local authorities to the Ministry of Transport are often excessive. Many existing roads could be made good for seven years for half that amount.

### "Dug-outs."

Ordinarily the City of London is not an ideal place for the riding of ancient fixed geared machines, but it is deserted at holiday times, and on Easter Monday we were much interested in the passage of two a.i.v. singles near the Tower. Neither machine was less than 15 years' old, and they romped along the quiet streets quite healthily.

### Over-loading.

To possess a more-or-less capable passenger machine is to be expected to provide transport for friends and relatives on holiday occasions. From every big city the roads were to be seen thronged with outfits carrying at least double the normal load. What is more, the overburdened mounts do not appear to suffer appreciably.



THE TOUR DE FRANCE. Berrenger, winner of the 750 c.c. class on a B.S.A., being congratulated at finish of 2,300 miles trial by M. Pollack, a prominent member of the M.C.F.

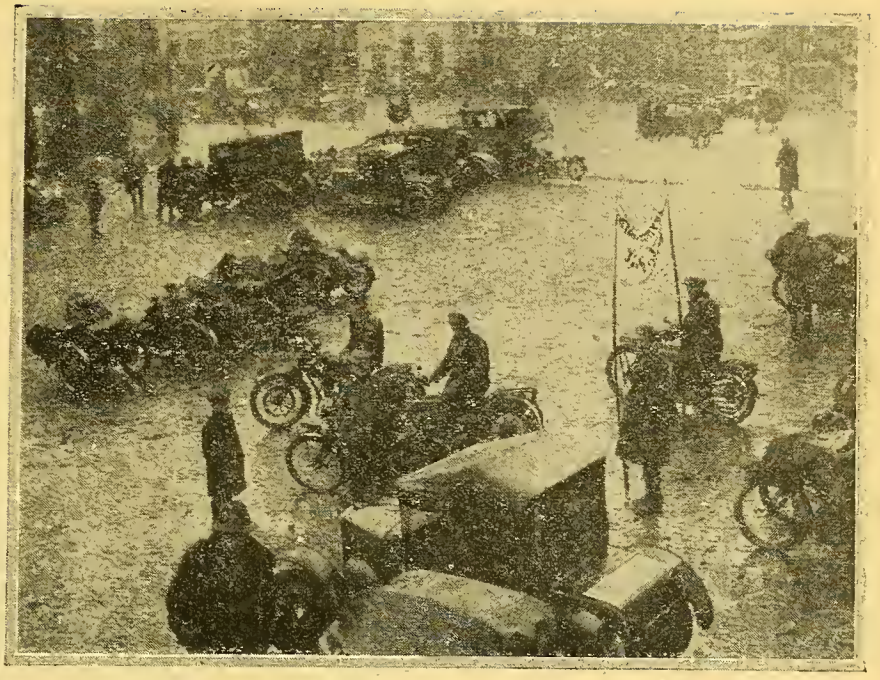
# THE RICHMOND MEET.

## Heavy and Continuous Rain Spoils Popular Northern Good Friday Rendezvous.

OWING to the early date at which this popular meeting of Northern motor cyclists is held, a variety of weather conditions has from time to time attended it, but never previously has the day been so completely spoilt by unbroken downpour as on Friday last.

Over two thousand motor cyclists were expected, and provision made for their reception, but nothing approaching this number materialised. At six on Good Friday morning the officials were out, marking off the square for the various clubs. An hour or so later the rain began, and continued to fall without interlude to the end of the day, entirely obliterating their efforts.

The best representation of members was put up by the Middlesbrough Club, followed by Stockton. The Mayor, in his speech preceding the donation of the prizes by the Mayoress, specially commented upon the manner in which the Middlesbrough Club had always upheld the event, and he thought that it was largely due to them that the popularity of the meet has grown so considerably. He extended a cordial invitation to the promoters of the meet to make it in future a three days' affair, extending over to Easter Monday.



Owing to the rain, the ancient square at Richmond (Yorks) did not present its usual Good Friday spectacle of hundreds of machines. The majority sought shelter.

The A.C.U. Cup was won by the Berwick club, which unquestionably deserved it, considering the weather conditions and the distance the men had travelled. Scarborough and North London were highly commended.

In the smartest lady's machine, a prize given by Councillor Parnley was won by Mrs. Linfoot, of Stockton (2¼ Levis). A second award went to Miss E. C. Simkins (2¼ Clyno), of Darlington. The prize offered by Mr. W. R. Haggas for the most ingenious gadget was won by Harold Walton, of Stockton, whose acetylene headlamp was fitted with an auxiliary electric bulb so that either gas or electricity could be used.

### Test of Mudguarding.

Mudguarding in the solo machines was very poor, and the weather conditions showed up its shortcomings. A standard A.B.C., a standard Scott, and a 2¾ h.p. New Imperial were the only three machines which could be considered adequately mudguarded, and in the opinion of the judges the A.B.C. was the best. Therefore Major Renwick's prize went to C. E. Morris, of the North London Club.

*The Motor Cycle* award for the best protected sidecar outfit went to M. Brass, whose 8 h.p. Brough Superior outfit was fitted with ingenious and practical shields to protect the rider.

In the award for the lady who had ridden the greatest distance to the meet honours were equal between Miss Bel-

Despite weather! Mrs. Linfoot, of Middlesbrough, who secured the lady's prize for the smartest lady's machine. Her mount is a 2¼ h.p. Levis.

Youngest motor cyclist at the meet. Master Blackburn (age 14), of Middlesbrough. His great-grandfather (age 89) also rides a two-stroke, and was only prevented from attending by the heavy rainstorm.

**The Richmond Meet.—**
lerby and Miss Procter, both of the Middlesbrough Club (mounted on Harley-D. and Triumph sidecars respectively). Miss Bellerby drew the handsome silver tray presented by the Mayor of Richmond, and a further award is to be made to Miss Procter. Mr. Longfield's prize for the best kept solo machine was won by A. Hindson, of Darlington (2¾ Blackburne), and that for the best kept sidecar by A. Blackburn (Bat).

The greatest novelty award went to B. Meacock (Doncaster and District), for a set of lighting switches and combined mirror and door let into the dash of the Volta sidecar on an 8 h.p. Blackburne.

At the request of the Ilkley Club officials the Mayor concluded the meeting by presenting Harold Sellers with a handsome silver card tray as a recognition from the members of the Ilkley Club for his able services as secretary, and for his good influence generally in motor cycle circles in the North of England.

# EASTER TWO-DAY HIGHLAND TRIAL.

## Wretched Weather Conditions Make Holiday Event of Glasgow Western M.C.C. Unusually Stiff.

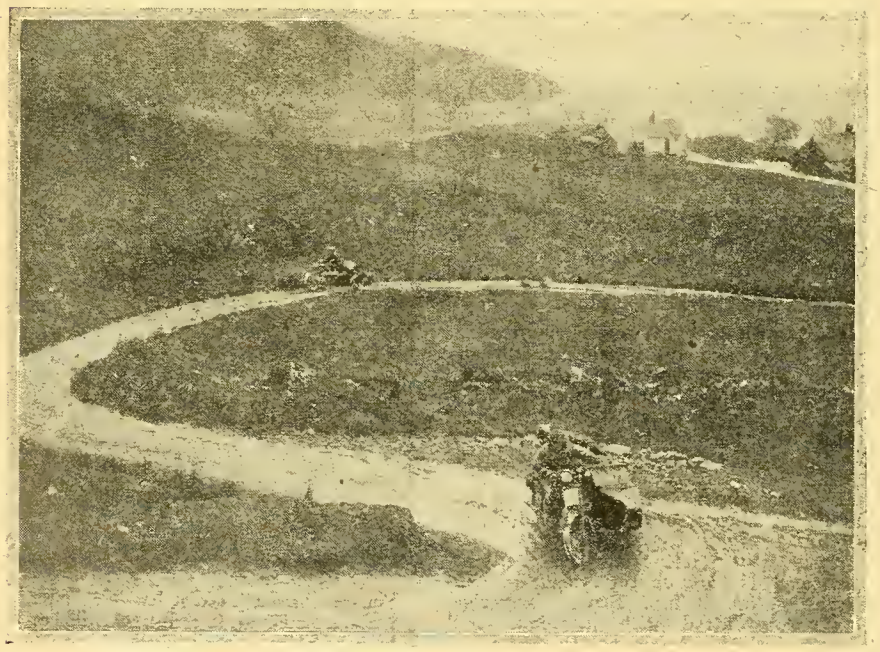
WHEN the Western M.C.C. does anything it is never by halves, and the trial arranged as an Easter two-day event was a real success. Sixty-five competitors started away from Canniesburn Toll, Glasgow, on Saturday last in rain which beggars description.

The course was for the most part a new one, and for almost the whole way the route was over loch-side roads. Loch Lomond, Loch Long, Loch Fyne, Loch Awe are amongst the best known lochs on the way to Oban, which was the last check of the day. In fine weather the scenery is amongst the best in Scotland; on Saturday, however, it was just a ride through a land of mountain and flood.

### On "Rest and Be Thankful."

To the first check at Inverbeg was covered without incident, but the non-stop section from there to the top of Rest and Be Thankful gave the competitors their first anxious moments. Here the first batch of golds vanished. The rain made itself felt, and caused trouble to magnetos and carburetters. Douglas Alexander was amongst the first of the unfortunates; his 3½ h.p. Douglas spluttered and stopped in sight of the check, and it was some time before it could be persuaded into action again. F. Ball (7 A.J.S. sc.) also fizzled out with water in his carburetter. Amongst the best performers was R. Wilson (2¾ A.J.S.), who rode into the flying check, watch in hand, dead on time.

Some idea of the nature of the trial may be gathered from this view of D. S. Barr climbing Ariehamish Hill on a Barr and Stroud engined Ner-a-car.



James Bell (7 A.J.S. sidecar) rounding an awkward right-hand hairpin included in Saturday's route.

Douglas Barr, who was riding a Ner-a-car fitted with one of his firm's B. and S. sleeve-valve engines, was going well all day, and on the very difficult hairpins at Ariehamish the cornering of this machine was excellent.

From the top of the Rest to the lunch stop at Inverary was plane sailing.

### Water-Bound Roads.

Weather conditions now became worse, if possible, and the stiffest part of the course was yet to come. From Gradish to Ford, down Loch Awe side, there was a lot of water on the road, and both riders and passengers were treated to a series of shower-baths; although nothing could make them wetter than the incessant rain had already done.

After Ford the route lay from Ariehamish to New York. There were hills and hairpin bends, some of them being

**Easter Two-Day Highland Trial.—**

1 in 4, a track which in parts is on a cliff high above the loch, and a road surface which for the most part was covered with grass. Failures on a road like this were no disgrace.

The section began with a hill at Ariehamish, which starts from a farmyard; there is a gradient of 1 in 4, and three hairpin bends so acute that the light cars could not round them without reversing.

The officials had arranged for helpers along this section, and they had a busy time of it.

**Belt-slip Prevalent.**

The belt-driven Ariels ridden by R. Lochead and Leo Helyer did not get far, and B. H. Cathruk (4 Dunelt) also suffered from belt-slip and was assisted up the first hill; further up he ran into the bank and gave up. T. J. Perry (7-9 Rudge) appeared to be overgeared; he took the corners at speed, but failed to keep his engine going.

Duncan Bell (2¾ A.J.S. sc.), who had made a fine performance up to this point, was unfortunate. His number-plate had fallen on the road, and while shouting his number to an observer he caught a boulder with his foot-rest, which brought him up very suddenly; he started away again without assistance. Geo. Grinton (7-9 Harley), J. M'Fadyen (8 Sunbeam sc.), and R. Brown (7 A.J.S. sc.) also went over this stretch in good style.

The last check of the day was at the Royal Hotel, Oban, the official hotel for the week-end.

After a change into dry clothes and a hot meal the weather was soon forgotten. In the evening a concert was arranged amongst the club members, and it is surprising what talent the club can muster when occasion arises.

Sunday in and about Oban was spent in various ways, and with the weather improving the prospects for the morrow were good.

**The Return Journey.**

Owing to Saturday's weather the number of competitors was very much reduced when they were checked out of Oban on the Monday morning. One-third of the numbers called failed to appear; the weather, however, this morning was ideal. Down through the pass of Melfort presented no difficulties, but after Kilmelfort it was back in the rough again.

After passing Loch Avich the competitors were back to Loch Awe side, the scene of many of Saturday's failures. Barnet Gold (2¾ Francis Barnett sc.) found trouble on the first hill, and baulked about half a dozen competitors, amongst them being R. MacRae (7-9 Harley-Davidson), whose sidecar collapsed shortly after. Next came the hill at Covaignaish, which proved to be the hardest task of the day; the competitors were sent up one at a time. Amongst the soloists, R. Wilson (2¾ A.J.S.) and H. Wilson (Edmund) were outstanding, and amongst the sidecars G. Grinton (7-9 Harley-D. sc.), who went up steadily, R. Watson (6 Martinsyde sc.), who was probably the fastest, and D. Bell (2¾ A.J.S.), whose climb was good, and the pluckiest performance of anyone in the trial. After Craigneish and Ford the course was round by Lochgilphead to the lunch check at Inverary. The Duke of Argyll came down to see them go away.

From Inverary to Glasgow saw but few failures, and at Cumnesburn Toll finished a good sporting trial.

# HILL CLIMBING IN YORKSHIRE.

THE Staxton Hill Climb, probably the most popular event of its kind held in Yorkshire, took place on Easter Monday in cold, wet weather, with a strong following wind for the competitors. There was a record entry, a big gathering of spectators, and plenty of incident at the starting-point, where the grease resulted in several spills. One competitor, Smith-Branhan, experienced trouble with his sidecar and ran into the spectators, fortunately without serious consequences.

The results of the various classes, which were run off smartly, follow :—

275 c.c. Class.

Stainforth (New Imperial), 37 sec.
Wood (New Imperial), 37⅗ sec.
Bower (New Imperial), 39⅕ sec

Amateur :—
Miss Wilson (Velocette).

350 c.c. Class.

Dance (Sunbeam), 31⅕ sec.
Wilkinson (A.J.S.), 32⅕ sec.
Hodgson (Sheffield Henderson).

Amateur :—
Sheppeard (Sheffield Henderson).

600 c.c. Sidecars.

Cawthorne (Norton sc.), 32⅖ sec.
Wood (Scott sc.), 33 sec.
Dance (Sunbeam sc.), 35⅖ sec.

Amateur :—
Boston (A.J.S.).

800 c.c. Sidecars.

Wood (Scott sc.), 33½ sec.
Cawthorne (Norton sc.), 35⅖ sec.
Searle (Sheffield Henderson sc.), 35⅗ sec.

Amateur :—
Boston (A.J.S.).

Sidecars, Unlimited.

Dixon (Harley-Davidson sc.), 32 sec.
Cawthorne (Norton sc.), 33⅕ sec.
Searle (Sheffield Henderson sc.), 33⅗ sec.

Amateur :—
Boston (A.J.S.).

Solo, 500 c.c.

Wood (Scott), 28⅖ sec.
Cawthorne (Norton), 29 sec.
Dance (Sunbeam), 30 sec.

Amateur :—
Tied.
Bower (Norton).
Bradshaw (Sunbeam).

Solo, Unlimited.

Dixon (Harley-Davidson), 28 sec.

Fastest time :—
Wood (Scott), 28⅖ sec.
Bower (Norton), 31 sec., amateur.

Solo Touring, 650 c.c.

Brabble (amateur) (Norton), 35 sec.
Stephenson (Zenith-Bradshaw), 35⅖ sec.
Turner (Norton), 37⅖ sec.

Cyclecar (970lb., 1,100 c.c.).

Moore (G.N.), 33⅗ sec.
Cave (amateur) (Morgan), 48⅖ sec.
Waters (G.N.), 50⅕ sec.

# EASTER TWO DAYS' TRIAL IN IRELAND.

A TWO-DAYS' trial to Tranmore, Co. Waterford, and back during the Easter holidays was held by the Leinster Motor Cycle Club. The weather conditions were most unpromising at the start from Dublin on Saturday morning, but nevertheless twenty-nine of the thirty-two entrants turned up and were duly despatched. The first portion of the outward journey was over a circuitous route in Co. Wicklow, and with the roads in a very heavy state owing to the previous day's downpour, it was exceedingly difficult to average twenty miles an hour. From Woodenbridge onwards the conditions were easier. Those who took part in the trial were as under :—

J. J. Boggan (8 Henderson); C. S. Maguire (4½ Humber); T. F. Slevin (2¼ Velocette); M. J. Doyle (2¾ New Imperial); W. J. Fagan (5 Indian); P. A. Bell (7 James sc.); J. Patton (2¼ James); J. Healy (4¼ James); H. E. Bell (3½ James); H. Briggs (2¾ Douglas); J. A. Carville (4¼ B.S.A.); E. G. Draper (4 Indian); Geo. Thomson (5½ N.U.T.); T. E. Greene (3½ Douglas); P. F. Moran (3¼ Velocette); T. F. [illegible] J. Browne (3½ Douglas); T. Henry (2¼ Velocette); F. Holmes (8 Matchless sc.); G. A. Daly (4 Triumph); R. Murphy (4 Triumph); W. E. S. Gilmour (4 Douglas sc.); Jas. Adair (4 Triumph); J. A. Adair (4 B.S.A.); H. Adair (4 B.S.A.); R. M. Murphy (4 Triumph); S. J. Redmond (7-9 Indian sc.); W. J. Burney (9 Belsize); J. G. Burney (8 Enfield sc.).

Of the above, Doyle, Fagan, Patton, Healy, Briggs, Draper, Moran, and Gilmour failed to complete the 153 miles of the first day's run. The second day's route was mostly over main roads.

# HOLIDAY EVENT NEAR DUBLIN.

THE original intention of the Dublin and District M.C. to hold the open trial for the Dunlop Cup on Easter Monday was abandoned so as to permit members to take part in the two-days event of the Leinster Club. An open trial without a premier award was substituted, and for this an entry of thirty-four was received. The course lay in Co. Wicklow, and, with favourable weather the outing was more or less of a holiday nature.

All of the entrants, with one exception, took part. The crossing of Wicklow Gap in the forenoon and the traversing of a "Colonial" Section between Laragh and Roundwood were the chief features of the trial. Of the thirty-three starters, the following completed the course on time :—

Major J. A. H. Waters (2¾ A.J.S.), Mrs. Waters (2¼ Velocette), Thos. Murphy (2¾ Douglas), R. R. Hill (2¼ Velocette), G. V. B. Cooke (3½ Sunbeam), E. Adair (3½ Premier sc.), E. McGuire (8 Royal Enfield sc.), L. A. W. Orr (2¼ Royal Enfield), D. Orr (2½ Sun Vitesse), G. Ellerker (2¾ Douglas), R. Talkington (2¾ New Imperial), Hugh W. Nesbitt (3½ Norton), G. W. Travey (8 Sparkbrook), Dene Allen (4 Norton sc.), A. Carton (3½ Norton), E. A. Tracey (4 Indian Scout), H. McGarry (8 Ariel sc.), H. McAllister (2¾ A.J.S. sc.), P. Grimes (8 Ariel sc.), W. H. Freeman (7 A.J.S. sc.), R. Watson (4 Triumph), P. H. Hurse (4½ Ariel sc.), M. McSlerry (8 Matchless sc.), A. L. Murray (2¼ Levis), J. F. McMillan (3½ Campion), A. Breslin (4 Triumph sc.), A. Maher (4 Douglas sc.), F. O'Connor (3½ Douglas), A. G. Coard (4 Indian), J. H. Patton (2¼ James), R. Gill (2¼ Radco), R. Humphreys (3½ Norton), J. Hanley (2¾ Raleigh).

# CLUB NEWS (continued from p. 504)

### Marlow and District M.C.C.

The club held its opening run on Easter Monday, the venue being Kop Hill, where an impromptu trial was held. Some good climbs were made, and a most enjoyable afternoon was spent.

Any motor cyclists in the district are welcome on any run, and the hon. secretary, Mr. A. F. H. Baldry, Marlow Common, Bucks, will be pleased to answer any inquiries.

### Coatbridge, Airdrie and District M.C.C.

Kyle's Garage, Bank Street, Coatbridge, presented an unusually lively and animated scene on the afternoon of Saturday last, when the club met for the opening run. The gathering, including about seventy members, attracted much interest and attention from the townspeople, crowds of whom lined the streets to view the proceedings. Enthusiasm and good fellowship prevailed everywhere throughout, and every member who left Coatbridge reached Lanark, despite the trying weather conditions. At the Bonnington Hotel, Lanark, the company indulged in an enjoyable tea, and afterwards listened to a short concert programme, which was much appreciated.

### Bradford M.C. and L.C.C.

In the form of a Despatch Riders' reliability trial the club held its second event of the year on April 9th. Competitors had to find their route by the map, as at each check a card was given bearing the next destination and mileage by the nearest route. The Sidney Cup (presented by Charles Sidney, Ltd., of Bradford), to be won outright, was the first prize. There were 30 entries, and the distance of the course was 90 miles, over some "tricky" roads. Result :—

1st: Sidney Cup: H. S. Lockwood (3¾ Scott sc.): Total error, 17 min. 35 sec.
2nd: Silver Medal: E. P. Dodd (3½ Sunbeam): Total error, 27 min. 36 sec.
3rd: Bronze Medal: H. S. Moorhouse (4 Triumph): Total error, 28 min. 50 sec.

## Week-End Club Events.

*April 21st-22nd.—Ealing and District M.C.C.—24 hours Trial. London-Holyhead. London Trial.*
*April 22nd.—Surbiton M.C.—Inter-Club Team Trial.*
*April 22nd.—Dumfries and District M.C. and C.C. Social Run.*
*April 22nd.—York and District M.C.—Hill Climb at Sutton Bank.*
*April 22nd.—West Kent M.C.—Inter-Club Team Trial.*
*April 22nd.—Essex County and Southend A.C.—Knockout Hill Climb.*
*April 22nd.—Coatbridge, Airdrie and District M.C.C.C.—Social Run to Killearn.*
*April 22nd.—Midland Centre A.C.U. Inter-Club Team Trial.*
*April 22nd.—Coventry Triangle Motor Club.—Secretary's Run.*
*April 22nd.—West Birmingham M.C.C. — Hill Climb.*
*April 23rd.—Bradford M.C. and L.C.C.—Annual "Freak Hill" Climb at Rosedale Abbey Bank.*
*April 23rd.—North Western Centre A.C.U.—Rally of Club Members at Rawcliffe Hall.*
*April 23rd.—Featherstone and District M.C.C.—Run to Goole.*
*April 23rd.—Sheffield M.C.C.—Run to Gringley-on-the-Hill.*
*April 23rd.—Halifax and District M.C. and L.C.C. Run to Whalley.*
*April 23rd.—Ilkley M.C. and L.C.C.—Novice Trial for the Founder's Trophy.*
*April 23rd.—Barrow and District M.C.—Speed Trial.*
*April 23rd.—Rochester, Chatham and District M.C. and L.C.C.—Run to Mayfield via Tunbridge Wells and Mark Cross.*
*April 23rd.—Colne and District M.C.—Run to Stainforth.*
*April 23rd.—Southampton M.C.C.—Run to Sandbanks.*
*April 23rd.—Coventry Triangle M.C.—Run to Evesham.*
*April 23rd.—York and District M.C.—Run to Farndale.*
*April 23rd.—Darlington and District M.C.—Run to Rosedale Abbey Bank.*
*April 23rd.—Croydon and District M.C.C.—Opening Run to Burford Bridge.*

### Barrow and District M.C.

The successful competitors in the club's reliability trial on the 9th inst. were as follows :—

1st: W. Exton (5-6 Unique-Jap).
2nd: C. H. Oliverson (8-9 Belsize-Bradshaw l.c.).
3rd: Bryan Fisher (4 Norton).

### Southport M.C.

Over a course of 196 miles to the Lakes and back, the club held a twelve hours' reliability trial for the President's Challenge Cup and several special prizes. The entries included 17 solo machines, three sidecars, and two cycle cars. All the machines did very well at the Kirkstone Pass climb, Jones (2¾ A.J.S.) covering the three miles in 7m. 50s.; Hughes (Morgan), 8m. 55s.; Klein (Zenith-Bradshaw), 9m. 2s.; King (Zenith-Bradshaw), 9m. 5s.; Ecroyd (Morgan), 9m. 20s.; Allison (Sunbeam), 9m. 22s.; Killey (Triumph), 9m. 55s. Another creditable performance was that of Stott (2½ Bown-Villiers). On the return journey no marks were lost by the fourteen competitors who finished, and eleven of them had not lost a mark at any of the checks or controls. The winner of the President's prize was Klein on a Zenith-Bradshaw, and he also took a special prize for the best performance on a solo mount over 350 c.c. Jones (2¾ A.J.S.) won the special prize for solos under 350 c.c.

### West Kent M.C.

There were between 1,500 and 2,000 spectators at the very successful hill climb held by the combined Kent clubs at Vigo Hill on Good Friday. The timed distance was 550 yards, and the average gradient 1 in 5. G. Williams (3½ Sunbeam) made fastest time of the day, his speed being 54.2 m.p.h. Other results follow :—

350 C.C.

| | Secs. |
|---|---|
| L. Williams (2¾ Massy Arran) ... ... | 26 |
| L. Tong (2¾ Massy Arran) | 26⅖ |
| A. Gorringe (2¾ A.J.S.) ... ... ... ... | 29 |

500 C.C.

| | |
|---|---|
| A. G. Williams (3½ Sunbeam) ... ... ... | 20⅘ |
| G. Newman (3½ Sunbeam) .. ... ... | 21⅖ |
| G. Maund (3 A.B.C.) ... ... ... ... | 22 |

1,000 C.C.

| | |
|---|---|
| A. G. Williams (3½ Sunbeam) ... ... | 19⅗ |
| G. Maund (3 A.B.C.) ... ... ... ... | 20⅗ |
| G. Newman (3½ Sunbeam) ... ... ... | 21⅖ |

SIDECAR 1,000 C.C.

| | |
|---|---|
| A. Clark (4 Triumph sc.) ... ... ... | 33⅗ |
| H. Chalklin (7-9 Harley sc.) ... ... ... | 36⅘ |
| G. Potts (7-9 Harley sc.) ... ... ... ... | 45⅗ |

# T.T. NOTES AND NEWS.

SOME alterations and additions have been made to the list of entries already published in *The Motor Cycle*. In the lightweight races the 2¼ h.p Sheffield-Hendersons previously entered by Henderson Motors, Ltd., are now under the name of L. B. Henderson; the 2¼ h.p. Diamond ridden by F. J. Price previously in the lightweight class has been transferred to the Junior Race. New Imperial machines ridden by Calder, Prentice, and Kershaw have been transferred from the Junior to the Lightweight Race. In the Junior, other alterations and additions are J. Bance (2¼ O.E.C.-Blackburne) and J. A. Porter (2¾ New Gerrard.) Porter was previously down as riding a New Scale. Norton riders are now specified; they are H. W. Hassall, J. W. Shaw, D. M. Brown, R. T. Cawthorne, and N. Black. These are machines entered by the firm. In the Senior Race, J. A. Porter is down as riding a New Gerrard.

* * * *

Tarring is in progress near Union Mills and Crosby, and from Ballacraine to Ballig Bridge the roads have been re-surfaced.

* * * *

The hairpin at Governor's Bridge will in time be entirely eliminated, but unfortunately the modification will not be ready for the forthcoming races.

* * * *

Hope that a crane may be installed on the quay is not absolutely abandoned. Particulars of a small electric crane have been laid before the Steam Packet Co. and the Highway Board, and it is to be hoped that they may be persuaded to hire one for the benefit of competitors and visitors.

A change has been made in the situation of the A.C.U. office. This year it will be at the Peveril Hotel, where Major Dixon Spain will be in charge.

* * * *

Further improvement for the scoring board at the grand stand has been evolved. It consists of a clock arrangement above each competitor's number, on which there are six letters. These not only indicate certain positions on the course, but also correspond in numbers to the actual laps made in the Senior Race. The letters on the clock face, reading clockwise, are: F, Start and Finish; Q, Quarter Bridge; B, Ballacraine; S, Sulby; R, Ramsey; B, Bungalow. One hand is advanced round the dial letter by letter as the rider completes his laps, while the other is used to indicate the point on the course at which he was last signalled.

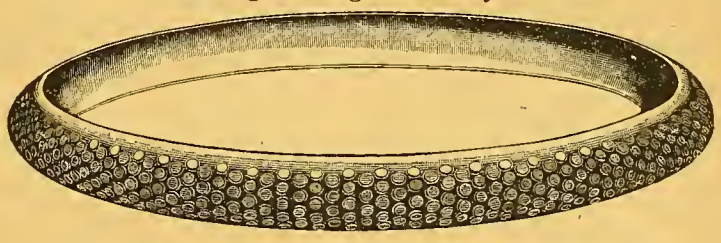
# "The Hermetic" Tyre Protecting Band

(Pat. No. 29575/20)

The "Hermetic" Band is made of good resilient rubber only with specially shaped and graduated rubber studs moulded upon its upper surface.
The Band is used *inside* the Tyre, between the air tube and the tyre lining.
The air pressure in the tube compresses the band against the tyre lining, thus forming a resilient supporting cushion which absorbs all road shocks and deflects any ordinary puncturing agent.

**It is a real Trouble Saver and Tyre Economiser. . .**

for the prevention of Tyre Damage resulting from road shocks and punctures and for strengthening weak tyres.



**Price 14/-. Easily Fitted or Detached.**
**One Band Outlasts Three Tyres.**
May be obtained through any Motorcycle or Cycle Agent.

Pamphlet on application:

## The Self-Sealing Rubber Company, Limited,
**"Hermetic Works," Ryland Street, Birmingham.**

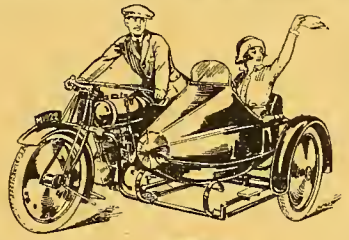
---

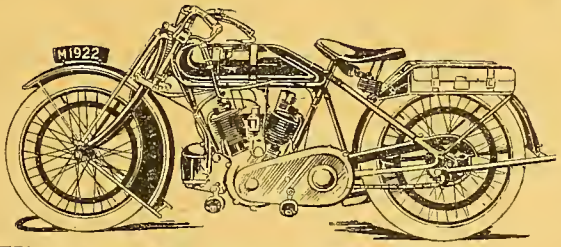
M
*The Symbol of Success*

## MARTINSYDE LTD
MAYBURY HILL, WOKING, SURREY.

*Telephone:-* WOKING 551 *(Two Lines)*

*This week's reason Why you should buy a*
# MARTINSYDE





*Everything has been done to improve the appearance and reliability of the tank.*

### THE RIGHT KIND OF TANK.
As one has to carry petrol, let the tank enhance the appearance of the machine. We believe we have not only made the most handsome tank, but one that cannot vibrate or leak.

A few of our most recent **SUCCESSES**

**A.C.U. Standard Stock Trial.**
*15th March, 1922.*
**Two Special Certificates of Merit.**

**Sheffield Traders Cup.**
*April 6th, 1922.*
**Three Gold Medals.**

**A.C.U. Western Centre Reliability Trial:**
*April 1st, 1922.*
**Three Arctic Medals.**

The BARR & STROUD SINGLE SLEEVE Four Stroke Engine

*It's the Engine that Counts*

## MORE PROOFS.

WEEK by week proof accumulates of the efficiency of the Barr and Stroud 4-stroke Sleeve Valve Engine **(350 c.c.)**

In the A.C.U. Standard Stock Trial, on March 11th, Mr. J. J. Donaldson on a "Royal Scot," with "B. & S." Engine, won a Special Certificate of Merit.

In the Birmingham Victory Cup Trial, on March 18th, Mr. F. J. Price, on a "Diamond," won the Duke Cup (for best performance on a solo machine over 275 c.c.) and a Gold Medal.

The "B. & S." Engine is just as reliable in everyday use as it is in competition. It is remarkable for the ease with which it can be handled, the power it develops, its flexibility, silence and low running costs. Fuel consumption 140 m.p.g.; oil 2,500 m.p.g.

*The Single Sleeve of the Barr and Stroud Engine.*

## Booklet FREE.

BEFORE placing your order for a new machine, send to us for copy of *"The Book of the 'B. & S.' Engine"*; and write to the makers of Beardmore-Precision, Diamond, Edmund and Royal Scot machines for details of their models equipped with it.

"B. & S." Engines can be fitted to existing machines by Warnes, Ltd., Churchfield Road, Acton, W. 3.

BARR & STROUD, Limited,
Anniesland, Glasgow.
London Office: 15, Victoria Street, Westminster, S.W. 1.



# An Important Series of Eight Special Numbers

*of*

# Engineering Production

*The British Journal of Works Practice and Administration Circulating at Home and Overseas.*

**MARCH 16th to MAY 4th, 1922**
**(Inclusive).**

DEVOTED TO

# Production and the Railway Shop

MODERN machines and appliances as employed upon interchangeable repetition work in locomotive and rolling stock production. The application of the latest methods and plant to the securing of increased output on more efficient lines.

**ALL MODERN PLANT AND EQUIPMENT FULLY ILLUSTRATED AND DESCRIBED.**

DETAILS given of the best practice in the Railroad and independent locomotive shops in this country, also of works systems, every phase of the latest works methods being dealt with.

The whole series is being very fully illustrated.

"Engineering Productioo" is published Weekly, price 6d., and may be obtained through any newsagent or bookstall, or direct from the publishers, price 7½d., a copy post-free.

Subscription Rates: United Kingdom, 32/6; Canada 32/6; Other Countries Abroad, 36/10, per annum, post free.

**Publishers:**
**ILIFFE & SONS LTD., Dorset House, Tudor Street London, E.C.4.**

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

**ADVERTISEMENTS** in these columns —First 12 words 3/–, and 3d. for every additional word. Paragraphs of under 8 words are charged double rate. Each paragraph is charged separately. Name and address must be counted. Series discounts, conditions, and special terms to regular trade advertisers will be quoted on application.

Postal Orders and Cheques sent in payment for advertisements should be made payable & Co. to ILIFFE & SONS Ltd., and crossed Treasury Notes, being untraceable if lost in transit, should not be sent as remittances.

All advertisements in this section should be accompanied with remittance, and be addressed to the offices of "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. To ensure insertion letters should be posted in time to reach the offices of "The Motor Cycle," by the first post on Friday morning previous to the day of issue. Advertisements that arrive too late for a particular issue or that are crowded out will automatically be inserted in the following issue unless accompanied by instructions to the contrary.

All letters relating to advertisements should quote the number which is printed at the end of each advertisement, and the date of the issue in which it appeared.

The proprietors are not responsible for clerical or printers' errors, although every care is taken to avoid mistakes.

## NUMBERED ADDRESSES.

For the convenience of advertisers, letters may be addressed to numbers at "The Motor Cycle" Office. When this is desired, the sum of 6d. to defray the cost of registration and to cover postage on replies must be added to the advertisement charge, which must include the words Box 000, c/o "The Motor Cycle." Only the number will appear in the advertisement. All replies should be addressed No. 000, c/o "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. *Readers who reply to Box No. advertisements are warned against sending remittance through the post except in registered envelopes; in all such cases the use of the Deposit System is recommended, and the envelope should be clearly marked "Deposit Department."*

In the case of motor cycles offered for sale under a box number, as it is unusual for these to be sold without first being inspected by the intending purchaser, advertisers will facilitate business by embodying in their advertisements some mention of the district in which the machine offered may be seen and tried.

## ☞ DEPOSIT SYSTEM.

Persons who hesitate to send money to unknown persons may deal in perfect safety by availing themselves of our Deposit System. If the money be deposited with "The Motor Cycle," both parties are advised of this receipt.

The time allowed for a decision after receipt of the goods is three days, and if a sale is effected we remit the amount to the seller, but, if not, we return the amount to the depositor. Carriage is to be paid by the buyer, but in the event of no sale each party pays carriage one way. The seller takes the risk of damage in transit. For all transactions up to £10, a deposit fee of 1/- is charged; on transactions over £10 and under £50, the fee is 2/6; over £50 and under £75, 5/-; over £75 and under £100, 7/6; and on all transactions over £100, ½%. All deposit matters are dealt with at Dorset House, Tudor Street, London, E.C.4, and cheques and money orders should be made payable to Iliffe & Sons Limited.

The letter "D" at the end of an advertisement is an indication that the advertiser is willing to avail himself of the Deposit System. Other advertisers may be equally desirous, but have not advised us to that effect.

## SPECIAL NOTE.

Readers who reply to advertisements and receive no answer to their enquiries are requested to regard the silence as an indication that the goods advertised have already been disposed of. Advertisers often receive so many enquiries that it is quite impossible to reply to each one by post.

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C. 1921, September, Cowey, Challenge tubes, spares, perfect; £68.—Jakins, 247, High Rd., Lee. [1581


# Did you enjoy your Easter Holiday?

¶ If you are one of the unfortunates who endured a tedious railway journey or in some other way felt the lack of a motor-cycle, you will doubtless desire to at once remedy such an unsatisfactory state of affairs.

¶ There is really no reason why you should not immediately participate in the delights of motor-cycling, as we can supply a machine that exactly suits your needs.

¶ If it is not convenient to pay cash down for it take advantage of our system of deferred settlement, it is simplicity itself and has no irritating conditions.

¶ May we send you now our lists of new and second-hand machines? They include models of nearly every reputable make.

## The Eastern Garage Co.

(Official Repairers to R.A.C., A.C.U., A.A. and M.U.),

**418, Romford Road, Forest Gate, E.7.**

Telephone: 490 East Ham.

Telegrams: "Egarco, London."


## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C. 1921 3h.p., dynamo model, all-chain drive, semi-T.T. bars, tax paid; £90.—Maudes', 100, Great Portland St., London. [1829

1920 A.B.C. 3h.p., excellent condition, lamps, Cowey horn, speedometer, tools, tax paid 1922; £75.—Anthony, 61, Queen's Gate, S.W.7. [1778

*Spare Parts:*

A.B.C. Spares.—We are the largest stockists of these spares, and can supply any part by return. Trade supplied.—Maudes' Motor Mart, 100, Great Portland St., W.1. [1754

### Abingdon.

ABINGDON King Dick Combination, 2-speed and clutch, handle start, perfect condition; £30.—Robini, 1, Tulse Hill, Effra Rd., Brixton, S.W.2. [1180

### Ace.

ACE 4-cylinder Combination, original tyres, unmarked, well equipped, magnificent outfit; bargain, £110.—Clark, 7, Exhibition Rd., S.W.7. [1279

### Acme.

FOR Sale.—Acme Combination, 8-10h.p., 1920 model, electric lighting, coachwork sidecar, all in beautiful condition; £120, or best offer.—Foley, Bourne. [9070

ACME 6h.p. J.A.P. Combination, spare wheel, lamps, horn, tax paid, speedometer, perfect order, and ready for the road; £125.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1021

### A.J.S.

SHREWSBURY Agent for A.J.S.; exchanges.—J. C. Pickering. [9556

A.J.S. 7h.p. 1922 Outfits; delivery free anywhere.—Write, Merrick's Stores, Listerhills, Bradford. [9141

A.J.S. 1922 2¾h.p. Sports and 7h.p. Combinations in stock.—Clifford Motories, Eastwood, Notts. [8826

DAN GUY, Weymouth.—1922 7h.p. A.J.S. Combination, £175; in stock. Dorset trade supplied. [0817

A.J.S. 6h.p. Combination, complete, with all extras, late model; bargain, £115.—Timberlake's Garage, Wigan. [1525

A.J.S.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6288

6h.p. A.J.S. Combination, 1920 model, interchangeable wheels, with spare, and complete equipment; £110.—Hopkins, New St., Ledbury. [1437

1921 7h.p. A.J.S., complete with all lamps, horn, hood, screen, very small mileage, and licensed; £135.—Carnforth Motor Co., Carnforth. [1707

£20.—A.J.S. 2½h.p., overhauled, new tyres, horn, half tax paid, adjustable pulley, good running order.—13, North St., Bishop's Stortford. [1415

IN Stock.—1922 A.J.S. combination, complete with spare wheel and screen; £183.—D. and S. Autocar Co., 33, The Parade, Golders Green. [1704

MOST luxurious 1921 7h.p. A.J.S., Lucas dynamo lighting, every possible accessory, mileage 1,000; £142.—24, Balliol Rd., North Kensington. [1619

FOR A.J.S. 1922 models. 2¾h.p solo, or 7h.p. combinations, get in touch with the N. London agents. —Jones Garage, The Broadway, Muswell Hill. [0785

2¾h.p. A.J.S. for sale, late 1921 sports model, insurance and tax paid, guarantee in perfect condition; 80 gns.—Walker, 22, Grenfell Rd., Hereford. [1381

1922 A.J.S.—All models. Early delivery 2¾h.p. Model B1. Catalogues with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5892

1922 7h.p. A.J.S. Magdyno, spare wheel, unused, unregistered, just delivered; owner cannot keep, and will sacrifice £10 off list.—Box 9801, c/o *The Motor Cycle.* [1240

A.J.S. 1922 2¾h.p. B1, done 200 miles only, lamps, horn, speedometer; £85, recently cost £100.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0066

A.J.S. 1921 Model Combination, with electric light, disc wheels, spring, Tan-Sad, and every extra, splendid condition, used very little; bargain, 140/-.—Timberlake's Garage, Wigan. [1528

1918 A.J.S. Combination, mileage 6,000, perfect condition, spare wheel, speedometer, hood, screen, spring pillion, new tyres; £90; after 5 p.m. —18, Kent House Rd., Beckenham. [8352

A.J.S. 1920 (April) 6h.p., electric lighting, speedometer, legshields, spare wheel, hood, screen, side curtains, in splendid condition; £120.—Yates, 151a, Clapton Common, E.5. 'Phone: Dalston 1475. [1351

## MOTOR CYCLES FOR SALE.

### A.J.S.

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7538

A.J.S. Spares; prompt delivery.—Cyril Williams, Chapel Ash Depot, Wolverhampton. T.A.: Parts. [7901

### Alldays.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Allons; unequalled service, repairs, etc. [3148

ALLDAYS Matchless, 2¾h.p. Villiers, 2-stroke, splendid condition, sporty model, tax paid; £30, or near offer.—7, Aldenburg Av., West Ealing. [1591

### American X.

1921 American X, standard model, gas lamp with D.A. cylinder, Lucas horn, Whitley sidecar, Easting screen; £130.—To be seen at Robertson's Motors, Ltd., 157b, Great Portland St., W.1. [9291

1920 American X, standard model, acetylene head lamp, with D.A. cylinder, electric rear and sidecar lamp with accumulator, Henderson Elite sidecar to match, small mileage; trial given; £120, or offer.—G. W. McL. Henderson, Henwick, Maidenhead. [9289

### Ariel.

1922 3½h.p. Sports Ariel, just delivered, immediate delivery; £87/10.—Dan Guy, Weymouth. [0823

F.O.C.H. have 1920 3½h.p. Ariel Combination, fully equipped; bargain.—5, Heath St., Hampstead. (Near Tube.) [1601

1919 Ariel 3½h.p. Combination, good condition, coachbuilt sidecar, all accessories.—Bridgman, 5, Park Hill Rise, East Croydon. [9115

ARIEL.—All models, cash or gradual payments. Spares supplied from stock.—West Central Agency, Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0704

ARIEL 1921 5½h.p. Touring, 3-speed, kick start, mileage 600, as new throughout, Tan-Sad; £70; wanings.—Johnston, 1, Muswell Av., Muswell Hill. [1372

ARIEL 1919 6-6h.p. Combination, speedometer, lamps, etc.; £85.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0065

1920 6-7h.p. Ariel Combination, 3-speed chain-cum-belt, Montgomery sidecar, Cameo screen, lamps, horn, luggage grid, etc., perfect order throughout; price 85 gns.—Below.

1920 3½h.p. Ariel, 3-speed gear, kick start and clutch, chain-cum-belt transmission, footboard, legshields, mechanical horn, perfect condition throughout; price 65 gns.—Edwards, 101, Gt. Portland St., W.1. [1686

ARIEL 6-7h.p. Combination (October, 1920), speedometer, lamps, horn, pillion, Easting, legshields, many spares, etc., unpunctured, mileage, 2,160, condition as new; £110.—Gregory, Stanton Lane, Sandiacre, Notts. [1553

ARIELS, the most reliable machines on the road. all models from stock; spare parts sent anywhere; trade supplied.—F. Speakman, Ariel Expert, Ariel Garage, 7, Rochdale Rd., Harpurhey, Manchester. Tel.: 325 Cheetham Hill. [5135

*Spare Parts:*

ARIEL Spares for all models, post free. Ariel Agents, and Spares Service Depot.—Jones Garage, Broadway, Muswell Hill, N.10 [0804

### Bat.

83 GNS., exchange.—1920 Bat-Jap 8h.p., 3 speeds, clutch, kick start, sporting sidecar, equipped, fast, any examination, trial.—Seabridge, 36, Hensler Rd., East Dulwich. (Sydenham 2452.) [7240

### Beardmore.

BEARDMORE-PRECISION.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7227

### Blackburne.

4½h.p. Blackburne Motor Cycle, 1921, slightly ridden; £75.—Mr. Wykeham Musgrave, Barnsley Park, Cirencester. [1436

BLACKBURNE 4h.p. 3-speed chain drive Combination, tax paid, accessories; £85.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1025

1921 8h.p. Blackburne with K3 Canoelet sidecar, lamp, horn; etc., detachable interchangeable wheels, perfect order throughout; price 115 gns.—Edwards, 101, Gt. Portland St., W.1. [1690

1921 Blackburne 4h.p., all-chain drive, H.B. controlled clutch, Sturmey 3-speed, guaranteed in new and perfect condition, Klaxon and tools, etc., licensed till June; £80; deposit system with pleasure.—J. Ervine, 4e, Sloop St., Barrow-in-Furness. [1682

*Spare Parts:*

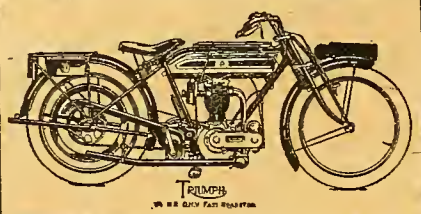
BLACKBURNE Engine Spares from stock.—Maudes' Motor Mart, 100, Great Portland St., W.1. [1753


**SAVE YOUR TICKET MONEY**

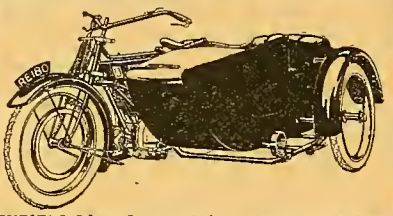
**"PAY AS YOU RIDE"**

**OUR**

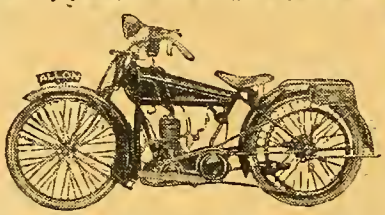
**MOTOR CYCLES.**



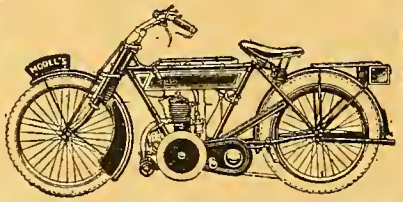

**TRIUMPH "Ricardo."** £120 cash or £31 4 0 down and 12 payments of £7 16 0. All models in stock.



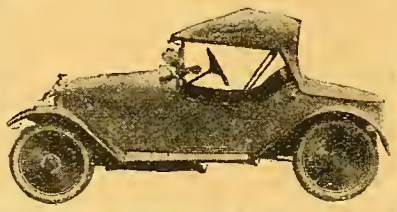
**ENFIELD** 8 h.p. Comb. £140 cash or £36 8 0 down and 12 payments of £9 2 0. All models in stock.



**ALLON.** £60 cash or £15 12 0 down and 12 payments of £3 18 0.



**LEVIS.** From £48 cash or £12 9 8 down and 12 payments of £3 2 5. All models in stock.



**COVENTRY PREMIER.** £230 cash or £59 16 0 down and 12 payments of £14 19 0.

EVERY WELL KNOWN MAKE OF MOTOR CYCLE IN STOCK. TRADE SUPPLIED.

DISCOUNTS ALLOWED IF ACCOUNT PAID IN 2, 4 OR 6 MONTHS.

**LAMB'S Ltd.**

WALTHAMSTOW, LONDON, N.E. 151, High St. 'Phone—Walthamstow 369 (2 lines).
EUSTON ROAD, LONDON, N.W. (Opp. Gt. Portland Street Station). 'Phone—Museum 4978.
WOOD GREEN, LONDON, N.E. 50, High Road. 'Phone—Hornsey 1956.


## MOTOR CYCLES FOR SALE.

### Bradbury.

BRADBURY Combination 6b.p. 1920, perfect running order; £80.—Lt. Tyrrell, 2nd Div. Signals, Aldershot. [163

F.O.C.H. have a Bradbury combination, 3-speed countershaft, kick starter; bargain.—5, Heath Street, Hampstead (near Tube). [160

CHEAP.—Bradbury 1915 4h.p., 2 speeds, clutch K.S., tax paid, good order; £35, or nearest offer —67, Philip Rd., Peckham Rye. [140

BRADBURY 4h.p. Combination, coachbuilt, 3 speed, clutch, excellent condition, any trial; bargain, £35.—130, Beulah Hill, Norwood. [158

*Spare Parts:*

BRADBURY Spares and Repairs.—Agents, Bright and Hayles, 78, Church St., Camberwell. [803C

### Brough Superior.

SHREWSBURY Agent for Brough Superior.—J. C. Pickering. [9557

BROUGH SUPERIOR, 1921, special 8h.p. o.h.v. J.A.P. engine, guaranteed 80 m.p.h.; plated tank and cylinder, with Swan sporting sidecar, disc and step complete, Lucas accessories, all spares; puncture-proof tubes, as new; £140.—Rae, Annickvale, Saltcoats. [9960

BROUGH SUPERIORS.—Order your new mount from us. We are the Brough experts. Specially tuned to order. Mark I., 8h.p., side valve, £150; sporting combination, with screen, step, mat, and apron, £180; Mark I., 90mm. bore, o.h.v., £160; Mark II., 6.5h.p. M.A.G. engine, £125; Mark II. combination, £150. Special Service Agents; lists.—G. and J. Dawson, The Ideal Garage, Cambridge. 'Phone: 993 [0834

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½ o.h.v., 3-speed, clutch, and kick starter, £160; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0733

*Spare Parts:*

SPARES.—All engine, gear box, and frame spares for Brough Superior in stock; write for lists.—G. and J. Dawson, The Ideal Garage, Cambridge. [0835

### B.S.A

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

SHREWSBURY Agent for B.S.A.—J. C. Pickering, Shrewsbury. [9558

B.S.A. new 1922 models, K.2 and H.2, actually in stock.—Moss, Wem. [1731

1922 B.S.A. Light Twin, Model E, with No. 4 sidecar, in stock, at list price.—Below.

1921 6-7h.p. B.S.A., No. 1 sidecar, spare wheel, windscreen, overhauled by B.S.A. Co., as new; 120 gns.—Edwards, 50, Harrington Rd., South Kensington, S.W.7. [1624

B.S.A. 1913 3½h.p., 2 speeds, good condition; nearest £30.—29, St. Philip's Av., Maidstone. [1392

NEW 1921 4¼h.p. B.S.A. Combination and accessories; £125.—Bounds Garage, 223, High Rd., Kilburn. [1662

B.S.A. 1922, all models, immediate delivery.—Hucklebridge, 133, Sloane St., Chelsea. Tel.: Victoria 451. [7454

B.S.A. 1919 (November) 4¼h.p. Combination, electric lighting; £79.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7203

4¼h.p. 1919-20 B.S.A. Combination, 3-speed gear, clutch and kick start, £77/10.—Wanchope's, 9, Shoe Lane, London. [7871

B.S.A.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6292

B.S.A. 4¼h.p. Combination, 2-speed, kick starter, good condition; any trial; £49.—Skinner, 296, London Rd., Westcliff, Essex. [1427

B.S.A. Combination, 3-speed, kick start, windscreen, and lamps; tax paid; call any time for trial; £65.—Snow, Laurel St., Dalston, E.8. [1806

1920 B.S.A. Combination, lamps, hood, luggage grid, splendid condition, licensed; nearest offer to £96.—Hulls, Peascod St., Windsor. [1365

B.S.A. 4¼h.p. 1921, 3-speed, all-chain drive, completely equipped, good running order; £78.—Maudes', 100, Great Portland St., London. [1833

B.S.A. 4¼h.p. 1920 Combination, accessories, Easting, grid, licence, overhauled, reupholstered; £69.—25, Silverdale Rd., Higham's Park, E.4. [1422

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Enfield.

NEW 1922 Enfield Combination in stock.—Bounds Garage, 223, High Rd., Kilburn. [1660

2¼h.p. Royal Enfield, 2-speed, 1921; £42/10.—Wauchope's, 9, Shoe Lane, London. [7857

BRAND new Enfield 2-stroke, 2-speed; £45.—24, Balliol Rd., North Kensington. [1617

ENFIELD 2¾h.p., 2-speed, excellent condition; £19; exchange.—17, Heaton Rd., Mitcham. [1674

WAUCHOPE'S, 9, Shoe Lane, London.—8h.p. Royal Enfield Combination; £95. [1300

BRAND new 8h.p. Enfield Combination; £112.—24, Balliol Rd., North Kensington. [1618

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

1917 Enfield, 2-speed, C.K.S., splendid condition; what offers?—Pierce, Holmwood, Surrey. [1371

NEW 1921 Enfield Lightweight and accessories; £50.—Bounds Garage, 223, High Rd., Kilburn. [1665

NEW 1921 Enfield Combination and accessories; £130.—Bounds Garage, 223, High Rd., Kilburn. [1661

ENFIELD 2¼h.p., 2-speed, perfect, equipped, condition as new, late 1919; £38.—3, Knowles Rd., Gloucester. [1375

HALIFAX.—1922 Enfield combination; £140; cash or exchange.—Halifax Motor Exchange, Horton St., Halifax. [1757

ENFIELD 1921 Lightweight, 2-speed, K.S., all on, tax paid, perfect order; £45.—97, Rosebery Rd., Muswell Hill. [1615

6h.p. Enfield Combination, 1920 model, fully equipped, very little used; £115.—Hopkins, New St., Ledbury. [1440

6h.p. Enfield Combination, first-class mechanical condition, fully equipped; £65.—Hopkins, New St., Ledbury. [1439

£30.—1916 3h.p. Enfield, tax paid, makers recent overhaul, excellent order.—Lieut. Small, R.N. College, Greenwich. [1564

DAN GUY, Weymouth.—Enfield 1921 8h.p., Magdyno, double-seated sidecar, hood and screen, guaranteed perfect; £125. [0818

ENFIELD.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6290

1914 3h.p. Enfield, M.A.G. engine, 2-speed, good running order; 23 gns.—Edwards, 50, Harrington Rd., South Kensington. [1626

CROYDON and District.—Sole official appointed agent for Royal Enfields.—A. F. Pulling, 175a, London Rd., Croydon. 'Phone, 1619. [6951

1914 3h.p. Enfield Twin, year's licence, fully equipped, good condition; price 32 gns.—Edwards, 101, Gt. Portland St., W.1. [1698

1922 Enfield Combination; only ridden from station; good reason for selling; what offers?—Waushury, Kingsdown, Sevenoaks, Kent. [1397

ENFIELD 1922.—Brand new 8h.p. combination, in stock; £140. Easy payments arranged. Exchanges.—Wilkins Simpson, Opposite Olympia, London. [1711

ENFIELD 1919 6h.p. Combination, Colonial model, equipped; £75.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0068

1921 Enfield, 8h.p. Vickers engine, 2-seater sidecar, fully equipped, run only few miles; £115.—Hillier (Side Bell), 9, Wallingford Ave., North Kensington. [1558

ENFIELD 1921 2¼h.p., 2-speed, 2-stroke, mileage 300, appearance posh, topbole bargain, tax paid car; £42.—Barker, 216, Portobello Rd., North Kensington. [1550

ENFIELD 1922.—Brand new 2¼h.p., 2-speed, kick starter, in stock; £57. Easy payments arranged. Exchanges.—Wilkins Simpson, Opposite Olympia, London. [1710

1921 Enfield Combination, 8h.p. Vickers engine, nearly new, mileage negligible, tax paid, £30 worth extras; bargain, 120 gns.—Derngate Motor Co., Northampton. [8980

1920 8h.p. Enfield Combination, lamps, horn, etc., Bonniksen speedometer, Easting screen, perfect condition; price 93 gns.—Edwards, 101, Gt. Portland St., W.1. [1691

ENFIELD 1921 8h.p. Combination, hood, windscreen, all accessories, Tan-Sad, spare tyre, tax, insurance paid, perfect order; £120, offers.—Reid, Brockhill, Wickford, Essex. [1482

1920 Enfield Combination, Magdyno, just been overhauled, as good as new, privately owned; insured for 10 months; £115.—Nelson, Crescent Garage, Ramsgate. [1364

ENFIELD Combination, 6h.p., fully equipped, exceptionally good condition, licence paid; worth seeing; £60, or near offer.—Kavanagh, 4, Montague Rd., Hornsey, N. [1400


THE HALIFAX MOTOR EXCHANGE

*NEW 1922 LIGHT CARS*
B.S.A., CALTHORPE, COVENTRY PREMIER, LAGONDA, L.S.D. AND RHODE.

*NEW 1922 MOTOR CYCLES*
B.S.A., BRADBURY, DOUGLAS, ENFIELD, EDMUND, LEVIS, MARTINSYDE, NEW IMPERIAL, NORTON, REX, ROYAL RUBY, SCOTT, SUNBEAM and TRIUMPH.

*SECOND-HAND BARGAINS*
*SOLOS.*

| | |
|---|---|
| A.B.C., 1921, 3 h.p., electric light | £79 10 |
| A.V., 1920 Monocar, 8 h.p. Jap | £75 0 |
| ARIEL, 1920, 3½, 3-speed | £69 10 |
| BRADBURY, 3½, single gear | £29 10 |
| COV. EAGLE, 1920, 3½, 3-speed | £65 0 |
| INDIAN, 1915, 5-6, 3-speed | £49 10 |
| INDIAN SCOUT, 1920 | £87 10 |
| RUDGE MULTI, 1920, 3½ I.O.M. | £59 10 |
| RUDGE MULTI, 1916, 3½ | £45 0 |
| SCOTT, 1920, 3¾ h.p., 2-speed | £79 10 |
| TRIUMPH, 3½, 2-speed, F.E. | £37 10 |
| TRIUMPH, 1914, 3-speed, hub gear | £37 10 |
| WOOLER, 2¾, 1920, flat twin | £42 10 |
| PREMIER, 3½, 2-speed F.E. | £35 0 |
| SCOTT, 1922 SQUIRRELL, 1,000 miles, tax paid | £95 0 |
| ZENITH GRADUA, 4-5 Twin, countershaft | £49 10 |

*PASSENGER MACHINES*

| | |
|---|---|
| MORGANS, 8 h.p., taxes paid | £85, £95 |
| A.J.S., 1915, 6 h.p. comb., spare wheel, etc. | £87 10 |
| A.J.S., 1919, 6 h.p. comb., spare wheel, etc. | £115 0 |
| ARIEL, 3½ 1920, 3-speed comb. | £79 10 |
| B.S.A., 4½, 3-speed, and coach sidecar | £65 0 |
| COVENTRY VICTOR, 5-6, 1921, flat twin. | £115 0 |
| COVENTRY ACME-J.A.P., 8 h.p., Magdyno combination, spare wheel, etc. | £125 0 |
| ENFIELD, 1920, hood, screen | £99 10 |
| ENFIELD, 1915-16, 6 h.p. comb | £85 0 |
| HARLEY, 4 h.p., 1915 comb. | £55 0 |
| HARLEY, 1918, 7-9, Henderson Elite s.c. | £105 0 |
| HARLEY, 1919, electric comb. | £115 0 |
| HUMBER, 1919, 3½, flat twin comb. | £75 0 |
| INDIAN, 1915, 5-6, 3-speed comb. | £59 10 |
| REX M.O.V., 8 h.p., 2-speed comb. | £39 10 |
| REX, 8 h.p., 2-speed comb. | £45 0 |
| REX BLACKBURNE, 1920, spare wheel, etc. | £110 0 |
| REX J.A.P., 8 h.p., 2-speed comb. | £52 10 |
| ROVER, 5-6, 1920, unused 1920. New Rover sidecar | £120 0 |
| ZENITH, 4-5 crankshaft comb. | £62 10 |
| RUDGE, 7 h.p., 1920 comb. | £97 10 |
| SCOTT, 1920, 2-speed comb. | £95 0 |
| TRIUMPH, 1914, 4 h.p., 3-speed hub comb. | £52 10 |
| TRIUMPH, 3½, 2-speed, F.E. comb. | £42 10 |
| SUNBEAM, 8 h.p. M.A.G. | £115 0 |
| ZENITH, 6 h.p., kick start, clutch | £52 10 |

*SPECIAL BARGAINS*

| | |
|---|---|
| STANDARD, 11.6 bnd. new 2-sr. | £475 0 |
| FORD, 1920, 4-seater, dynamo lighting and starter, detachable and spare wheels | £125 0 |

*DOUGLAS CASH BARGAINS*

| | |
|---|---|
| DOUGLAS, 1914, 2¾, 2-speed | £35 0 |
| DOUGLAS, 1915, 2¾, 3-speed | £42 10 |
| DOUGLAS, 1920, 2¾, 3-speed | £59 10 |
| DOUGLAS, 1922, 3½, 3-speed Sports, mileage about 300, and accessories... | £110 0 |

All tax paid. Spot cash only.

25, Horton Street, HALIFAX.
'Phone 1400 'Grams: "Perfection"


## MOTOR CYCLES FOR SALE.

### Enfield.

ENFIELD 1922.—Brand new 8h.p. combination, magdyno lighting; £158; in stock. Easy payments arranged. Exchanges.—Wilkins Simpson, Opposite Olympia, London. [1712

ENFIELD Combination, screen, hood, grid, Klaxon, speedometer, Tan-Sad, 3 lamps, tools, spares, tax paid, splendid condition; £85, offer.—26, Granville Rd., Hoe St., Walthamstow. [1491

ENFIELD 1921 Combination, 6h.p., Magdyno electric lighting set, horn, good tyres, condition perfect, appearance as new, tax paid; £135.—Mucklow, 84, Grove Park Terrace, Chiswick. [1460

1916 6h.p. Enfield Combination, splendid condition, under 2,000 miles, Easting, Willowbrook back seat, stored 3 years, original tyre on sidecar, perfect; any trial; £85.—Hirst, Bream, Glos. [1405

ENFIELD 2¼h.p., 1920, lamps, horn, speedometer, variable ignition, variable jet (handle-bar control), tax paid, cost owner £80, excellent condition; sell £35.—Crossle, Lansdowne, Worcester Park, Surrey. [1367

66 GNS., exchange.—Really exceptionally nice Enfield Combination 1915, but had very little use, disc wheels, equipped, smart, any examination, trial.—Seabridge, 35, Hansler Rd., East Dulwich. (Sydenham 2452.) [7241

ENFIELD 1922 Models for immediate delivery.—8h.p. Combination, £140; with dynamo lighting, £158; lightweight models from £55; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1031

*Spare Parts.*

ENFIELD Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7542

ENFIELD Spares and Repairs a speciality.—Pulling's Garage, London Rd., Croydon. 'Phone, 1619. [6952

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Enfield engine parts in stock. Trade supplied. [1783

### Excelsior.

EXCELSIOR (British) 8h.p. 1920 Combination, fully equipped, Easting, very little used; 90 gns.—Longman Bros., 17, Bond St., Ealing. Tele.: 689. [1307

EXCELSIOR 1921 6-8h.p., J.A.P. engine, Sturmey 3-speed countershaft, with Excelsior sidecar, lamps, horn, speedometer, tax paid, perfect order; £110.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1017

### F.N.

LANGFORD'S, 37, Cricklewood Broadway, London, N.W.2.—1922 8h.p. 4-cylinder F.N., with new o.h.i.v. engine, 3-speed gear, and no-trouble shaft drive, £135; lightweights, £55 and £72; highest price for your present machine in exchange. [1647

*Spare Parts.*

F.N. Spares.—We can supply for all models from 1904; prompt attention to inquiries.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [1648

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons: from £120.—Stacey 12 Ecclesall Rd [0577

7-9h.p. Harley-Davidson Combination, in first-class mechanical condition; £75.—Hopkins, New St., Ledbury. [1438

1920 4h.p. Harley, lamps, speedometer, mileage 4,000; £69/10.—Shepherd, Enfield Highway. 'Phone: Waltham Cross 31 [0850

HARLEY 7-9h.p. Combination, overhauled, as new, lavishly equipped; £80; faultless condition.—Davies, Crockeries, Reading. [1357

HARLEY-DAVIDSON Flat Twin; £115; fully equipped; these models actually in stock.—Longman Bros., 17, Bond St., Ealing. [8856

1916 7-9h.p. Harley-Davidson, guaranteed sound, Mills-Fulford sidecar, 2 new tyres, new paint; £55.—Passmore, Wood St., Swindon. [1598

HARLEY-DAVIDSON 1915 7h.p., 3-speed, kick start, all-chain drive, Coronette sidecar, requires slight overhaul; £60.—Maudes', 100, Great Portland St., London. [1831

1920-21 Harley-Davidson Combination, electric model, speedometer, screen, hood, unscratched condition; £125.—Hillier (Side Bell), 9, Wallingford Ave., North Kensington. [1562

1922 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices; catalogue with pleasure.—Sam. E. Clapham (Motors), 27 Stockwell St., Greenwich. S.E.10 [5986

1920 7-9h.p. Harley-Davidson, electric model, de luxe sidecar, 2-fold screen, rear drive speedometer, discs, perfect order throughout; price 125 gns.—Edwards, 101, Gt. Portland St., W.1. [1688

BARKER'S Motors can supply all Harley-Davidson models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [7088

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue C23
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

HARLEY-DAVIDSON 7-9h.p., magneto model, gas and electric lighting (accumulator), 6 months old sidecar and Easting windscreen, speedometer, Tan-Sad; £95.—Apply, Warwick, 21, Abinger Rd., Bedford Park, W.4. [9267

1920 Harley, with C. and M. sidecar, electric lighting hood, screen, luggage grid, licensed for year, in splendid mechanical condition and appearance; price 120 guineas; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1634

HARLEY Combination, 1920 (early), Henderson Elite, Lucas dynamo lighting, electric Klaxon, spot light, speedometer, discs, legshields, enamel and plating perfect; £105, or near offer.—Malsbury, 2, Pilgrim's Lane, Roslyn Hill, Hampstead. [1819

HARLEY-DAVIDSON, 1920, 7-9h.p., 3-speed, kick start, 1921 type clutch, specially coachbuilt sidecar, one of the most fully equipped and elaborate machines offered on the market to-day; originally cost nearly £300, bargain price to clear, £155.—Maudes', 100, Great Portland St., London. [1836

*Spare Parts:*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7543

### Hazlewood.

1922 Hazlewood, all models, for early delivery See the 6h.p. J.A.P. Twin Combination at £118; finest value for money to-day; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10 [5988

### Henderson.

HENDERSON 10h.p. Combination, 2 speeds; £65.—Basildon House, West Byfleet. [8400

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Hendersons; unequalled service, repairs, etc. [3145

£53.—Henderson Combination 1915-16, 4 cylinders, electric lighting, new carburetter, hood, etc., splendid condition, gift.—63, Solon Rd., Brixton. [1530

IMMEDIATE Delivery.—1922 Henderson de Luxe, dynamo lighting, electric horn, etc.; £175.—Pioneer Motors, Ltd., 50, Grindlay St., Edinburgh. [1408

10h.p. Henderson Combination, 1920, Z2, electric lighting, bulbous sidecar, large luggage grid, in excellent condition; £125.—63, King St. East, Rochdale. [1600

HENDERSON 1920 10h.p. Combination, lamps, horn, speedometer; £115.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0067

BARKER'S Motors are agents for the luxurious 4-cyl. Hendersons; all new models at list prices supplied carry a free insurance policy against mechanical breakdown for 12 months. Spare Parts supplied. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [7088

1921 4-cylinder Henderson Combination, dynamo lighting, with large accumulator in sidecar, electric Klaxon horn, Cowey speedometer, Millford tandem sidecar, 2 screens, hood, 1,000 miles total, as new, privately run, owner now has car; £160.—To be seen at Robertson's Motors, Ltd., 157b, Great Portland St., W.1. [9290

1921 (November) Henderson Model K, 4-cylinder, 3 speeds, dynamo lighting, electric horn, Watford rear drive speedometer, Millford De Luxe bulbous sidecar, Millford screen, hood, luggage grid, 27×3½ tyres all round, air cushion Tan-Sad, dimmer switch, many refinements, spares, small mileage, practically new, original owner, cost over £300; trial, appointment; genuine bargain, £155.—Bruce, Harmer's Hill. [1638

### Hobart.

HOBART 2¾h.p. J.A.P., 1921, all on, tax paid; 60 gns.—3, Ventnor Rd., New Cross. [1348

1920 2¾h.p. Hobart, 2-speed, lamps, horn, etc., licensed; price 35 gns.; perfect condition.—Edwards, 101, Gt. Portland St., W.1. [1697

### Humber.

HUMBER Agents.—All 1922 models in stock.

4½h.p. Flat Twin Sporting Model, 65 to 75 m.p.h.; £100.

4½h.p. Flat Twin Combination; £144.

TRIAL Rides Arranged.

EXCHANGES; extended payment terms to suit individual requirements. Catalogues on application.—Herbert Robinson, Ltd., Green St., Cambridge. [1797

HUMBER Lightweight, 3-speed, nearly new; £22; take push cycle part.—57, Kenbury St., Camberwell, London. [1669

HUMBER 3½h.p., 2-speed, clutch, good condition, lamps, horn, tools; £22/10, or best offer.—Reany, Bell Hotel, Chelmsford. [1485

3½h.p. Humber Combination, single engine, splendid condition, ready for use, all complete; cash £50; before 6 p.m.—Dawes, 213, Kingsland Rd., London, E.2. [1382

# TYRES

## IMPORTANT NOTICE.

Owing to the various cheap covers that are being offered, we desire to draw your attention to the fact that they do not represent the best value. If you require a reliable article you must pay a reasonable price. Cheap goods not only 'let you down' on the road but mean additional expense. The experienced motor-cyclist pays 'a little more' because he knows it is the cheapest in the end. Everything offered below is guaranteed to be thoroughly reliable.

***These covers are not old W.D. stock, but special clearance lines which we have purchased at slump prices and we are anxious to dispose of, to make room for a new Motor Cycle Cover of our own design we shall be shortly marketing.***

| Size. | Make. | Our Price. | List Price. |
|---|---|---|---|
| 24×2 | **Palmer,** ribbed | 21/- | 29/6 |
| 24×2¼ | **Clincher de Luxe,** ex. heavy.. | 28/9 | — |
| 26×2 | **Englebert,** Passenger, rub. std | 17/6 | 53/- |
| " | **Englebert,** Touring, rub. std.. | 14/- | 46/3 |
| 26×2¼ | **Bates,** special hvy., wired-on. | 32/6 | 38/6 |
| " | **Bates,** special heavy, beaded. | 28/6 | 40/- |
| " | **Dunlop,** heavy rub. std. .... | 28/8 | 37/3 |
| " | **Clincher de Luxe,** heavy..... | 24/6 | 35/6 |
| " | **Wood-Milne** or **Spencer Moulton,** extra heavy ..... | 22/6 | 50/- |
| " | **Englebert,** Touring, rub. std.. | 15/- | 49/- |
| 26×2¾ | **Dunlop,** heavy rubber std.... | 29/8 | 41/6 |
| " | **Avon,** Tricar rubber studded. | 26/- | 49/3 |
| " | **Hutchinson,** rubber studded . | 25/- | 49/6 |
| " | **Clincher de Luxe,** ex heavy | 24/6 | 47/6 |
| 28×2¼ × 2¼ | **Clincher de Luxe,** ex heavy.. | 39/6 | 49/- |
| | **Heavy,** rubber studded..... | 27/6 | — |
| 26×2½ | **Goodrich,** safety tread ..... | 40/- | 52/6 |
| " | **Bates,** special heavy ..... | 29/6 | 56/- |
| " | **Clincher de Luxe,** heavy..... | 25/- | 28/3 |
| *26×3 | **Elite,** extra heavy, 3-rib.... | 56/- | 66/- |
| " | **Englebert,** Passenger, rub. std. | 32/6 | 64/9 |
| | * Fits 650×65 Rims. | | |
| 28×2¼ | **Goodyear,** rubber non-skid .. | 35/- | — |
| 28×3 | **Englebert,** Racing, ex. heavy | 36/6 | 79/6 |
| " | **Elite,** grooved retreads ..... | 17/6 | — |
| 650×65 | **Goodrich,** safety tread ..... | 40/- | 67/6 |
| " | **Clincher de Luxe,** ex. heavy . | 30/- | 64/6 |
| " | **Soly,** rubber non-skid ..... | 21/6 | 63/- |
| 700×80 | **Goodrich,** safety tread ..... | 48/- | 69/- |

## BELTS

IN STANDARD LENGTHS

| | ½ in. | ¾ in. | 1 in. | 1½ in. |
|---|---|---|---|---|
| Bates Avon .. etc., per foot .. | 1/- | 1/5 | 1/9 | 2/- 2/6 |

## TUBES

BEST QUALITY GUARANTEED.

| | | | | | |
|---|---|---|---|---|---|
| 24 × 2, | 4/9 | 26 × 2¼, | 6/3 | 26×2½, | 5/8 |
| 26 × 2, | 4/8 | 26 × 2½ | 5/6 | 28×3, | 6/- |
| 28 × 2½, | 5/- | × 2½ | | 700×80, | 6/- |

**These Special Clearance Lines are sent on 7 days' Approval against remittance. CARRIAGE PAID.**

YOU CANNOT BUY FROM A BETTER FIRM

ORDER THE ELITE WAY

LONDON'S LEADING TYRE HOUSE.

PHONE: Victoria 6553 6554

264-66, VAUXHALL BRIDGE Rd. LONDON, S.W.1

& AT 44, SURBITON Rd. KINGSTON-ON-THAMES

Please address all orders to Vauxhall Bridge Rd.

PHONE: Kingston 3355.

Hours of Business—9 till 6, Sat., 9 till 1.

*Steele*

## MOTOR CYCLES FOR SALE.

### Humber.

HUMBER 1919 3½h.p. flat twin Combination; £85.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1022

HUMBER 4½h.p. sports model; £100; immediate delivery.—D. J. Shepherd and Co., Enfield Highway. Tel.: Waltham Cross 31. [0842

HUMBER Combination 1916-17, 6h.p., flat twin, 3 speeds, clutch, kick starter, accessories, luggage grid, splendid condition; reasonable offer; exchanges.—63, Solon Rd., Brixton. [1531

### Indian.

SHREWSBURY Agent for Indian; exchanges.—J. C. Pickering. [9561

INDIAN 7-9h.p., 3 speeds, clutch, and K.S., spring frame; £70.—670, Holloway Rd. [1492

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Indians; unequalled service, repairs, etc. [3144

1914 7-9h.p. Indian Combination, 2-speed, clutch, lamps, tools, any trial; nearest £45.—Oak Cottage, Brighton Rd., Coulsdon. [9354

INDIAN Scout, 1921, fully equipped, new sidecar, mileage 1,400; £87/10.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7197

1922 Indians, immediate delivery; cash or deferred payments.—Brown (Indian Specialist), 3 and 7a, Parker Lane, Burnley. 'Phone, 1032. [8208

1920 Powerplus Indian Combination, Mills-Folford sidecar, year's tax paid, equipped, perfect condition; £86.—13, Vambery Rd., Plumstead. [6140

1920 Indian Combination, electric lighting, Easting, perfect condition, mileage 3,000; £105.—Reade, Draper, 214, High Rd., Wood Green, London. [9382

INDIAN Combination, 1920 year, 7-9h.p., C.A.V. lighting, condition as new; any trial; £115.—T. Taylor, 15, County Chambers, Corporation St., Birmingham. [9225

1919 November Indian Combination 7-9h.p., all on, electric lighting, spares, condition as new, inspection invited; reasonable offer.—48, Churchill Avenue, Coventry. [1821

INDIAN Scout, special Montgomery sports sidecar, outfit new December, 1921, mileage 1,500, absolutely spotless and perfect; 90 gns.—Longman Bros., 17, Bond St., Ealing. Tele., 689. [1309

INDIAN 1920 7-9h.p. Combination, with dynamo lighting, speedometer, excellent order and condition; £105.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1018

FOR Indians, all models, new and secondhand, write, call, or phone us; 1921 new shop-soiled combinations, fully electrically equipped, at below manufacturers' cost; £140.—Jones Garage, Muswell Hill. [0787

INDIAN Twin 1917 Combination, 5-6h.p., 3-speed, clutch, K.S., new tyres, 2 spare tubes, overhauled, re-enamelled, hood, screen, luggage grid, 3 lamps, horn, year's tax paid; £80, offer.—Johnson, 37, Hillmarton Rd., N.7. [1463

JUNE, 1920, Big Valve Indian Powerplus Combination, total mileage 2,600, tyres unpunctured, electric, Easting, Tan-Sad pillion, perfect condition; any trial; £120, or best offer.—Owen, 3, Merivale Rd., Harrow. [1407

1920, 7-9h.p. Indian, electric combination, rear drive, speedometer, windscreen, licensed for year, absolutely perfect mechanical condition and appearance as new; price 96 guineas; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [1635

INDIAN 1921 7-9h.p. Combination, electric and gas lighting, electric horn, speedometer, luggage carrier, De Luxe sidecar, Easting and sidecar cover, paint and tyres as new, only done 4,617 miles; £130, or near offer.—Sparke's, 7-13, Upper Gloucester Place, N.W.1. 'Phone: Paddington 2900. [1435

LANGFORD'S, Indian Specialists, can supply all 1922 models. In stock.—4h.p. Scout, £112; Millford Junior sidecar, £134; Swan sports, £137/10; De Luxe, £147; 7h.p. combination, £175, with dynamo and speedometer; Chief, £199, with ditto; exchange your present machine for one of these magnificent models; we can allow you highest prices; write, call, or 'phone for full particulars.—Langford's, 37, Cricklewood Broadway, N.W.2. Hampstead 8616. [1649

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7544

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Indian spare parts always in stock. Write for free spare part list, stating year of manufacture. [0752

INDIAN.—The Dennis Accessories Stores, 89, Brixton Rd., London ('Phone: Brixton 3129), supply all parts from stock, new and second-hand. They also specialise in Indian repairs. [6789

INDIAN Spares.—New and second-hand for all models; all second-hand spares sent on approval; write, call, or 'phone; we can save you money.—Langford's, 37, Cricklewood Broadway, N.W.2. Hampstead 8616. [1650

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### P. and M.

*Spare Parts:*

D. and M. Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7219

D. and M. Spare Stockist. Every part stocked; cheap.—Inman, Durham Rd., Seaforth, Liverpool. [6249

D. and M.—All parts in stock for P. and M.'s; send stamp.—P. and M. Specialist, H. Beardwood, 147, Arlington St., Liverpool. [0839

### Precision.

h.p. Twin Precision, 3-speed, clutch, kick start, lamps, coachbuilt sidecar, windscreen, splendid condition; £40.—40, Warley Rd., Blackpool. [1590

### Premier.

PREMIER 3½h.p., 3-speed, equipped, £25; coach-built sidecar, £17.—17, Heaton Rd., Mitcham. [1572

1h.p. Premier, 1913, 3-speed, clutch, Philipson, 2 speedometer, lamps, etc., condition excellent, not used during war; £28.—Freeman, Otford, Kent. [1513

*Spare Parts*

PREMIER Spares and Repairs.—We claim to be the most competent firm to supply spares and execute repairs to Premier motor cycles. We served in the Premier works, and know this machine from A to Z. We hold the most varied stock of parts for it in the world. We are the only traders who can claim to supply every part for a Premier machine. Our prices are rock bottom, and our service unsurpassable. Write us full requirements; you will receive our reply per return.—Forfield Motors, Forfield Place, Leamington Spa. [3167

### P.V.

P.V.—Astounding value is represented by our new range of popular models, incorporating our famous spring frame and Villiers or J.A.P. engines. Prices from £45. Lists from agents or P.V. Motor Cycles, Ltd., Forest Hill, London. [6548

### Quadrant.

CLIFFORD WILSON Company, 16 years' experience with Quadrants. [3277

QUADRANT, new 1922 4½h.p., chain-drive Combination actually in stock; £105.—Moss, Wem. [1732

1922 Quadrant 4½h.p. Combinations; £100 Agents for Cambridge.—Wallis and Easton, 94, Mill Rd., Cambridge. [0825

FRANK WHITWORTH, Ltd., Distributors, 139, New St., Birmingham.—Quadrant £100 4½h.p. Combination, delivery from stock. [0767

CLIFFORD WILSON Mfg. Company, Quadrant Works Representatives and Sole Wholesale Distributors for London, Southern and Eastern Counties; official repairers and spare part stockists; deferred payments; exchanges; all models in stock. Special insurance facilities applicable to Quadrants only.—77, Westminster Bridge Rd., London, S.E.1, opposite Waterloo Station Approach. Telephone: Hop 210. [3279

### Radco.

MOTOR Cycles.—Ride while you pay. Radco, king of lightweights, from 34 gns. £9/2/2 down and monthly payments of £2/2/3. Immediate delivery. Pritchett's Automobile Garage, Park St., Islington. [1493

### Raleigh.

PREMIER Motor Co. for 1922 Raleighs.

IMMEDIATE Delivery of 5-6h.p., spring frame, detachable wheels, £130; standard sidecar, £35; Deluxe sidecar, £42; early delivery of the new Raleigh lightweight, £68; easy payments 4% extra.—The Premier Motor Co., Aston Rd., Birmingham [0628

SHREWSBURY Agent for Raleigh; exchanges.—J. C. Pickering. [9564

RALEIGH 2¾h.p., 2-speed, kick start, in stock; £68.—Clark, 7, Exhibition Rd., S.W.7. [1280

RALEIGH, new 1922 2¾h.p. Lightweight in stock, early delivery, 3h.p. model.—Moss, Wem. [1737

1922 Raleighs, 2¾h.p. and Combinations, delivery anywhere, always in stock.—Clifford Motories, Eastwood, Notts. [7764

RALEIGH.—Immediate delivery of 1922 models Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7230

RALEIGH 1921 5-6h.p., 3-speed, all-chain drive, hand clutch, Raleigh sidecar, fully equipped; £118.—Maudes', 100, Great Portland St., London. [1835

RALEIGH.—Early delivery of all models. Why not give your present mount in part exchange? Cash or deferred terms.—Edwards, 50, Harrington St., South Kensington. [1627

RALEIGH 5-6h.p., 3-speed, spring frame, interchangeable wheels; immediate delivery from stock; solo, £130; combination, £165; best prices allowed on exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1028

### Reading-Standard.

£130.—1921 Reading 8h.p., Plus One sidecar, hood, screen, etc., 3,000 miles.—Morrell, Barming, Maidstone. [1458

By so doing you can always obtain the service of a Specialist with the essence of experience gained through 10 years in the Engine Dept. at the Douglas Works.

## 1922 MODELS.

| | |
|---|---|
| 2¾ h.p. Two-speed, fully equipped | £75 |
| 2¾ h.p. Three-speed, fully equipped | £90 |
| 3½ h.p. The famous 1922 Sports Model, fully equipped | £130 |
| 3½ h.p. The famous 1922 Sports Model, fitted with Sports Sidecar | £155 |
| 4 h.p. Solo, fully equipped | £110 |
| 4 h.p. Combination, fully equipped | £135 |
| 6 h.p. Combination, fully equipped | £165 |

## THE L.S.D. LIGHT CAR

**Complete, ready for the road,**

## £165

## MORGANS IN STOCK FROM £150

## IMMEDIATE DELIVERY

OF ALL MODELS.

ONLY 4% EXTRA FOR EXTENDED PAYMENTS.

**Bargains in Second-Hand Light Cars**

**SINGER COUPE** 10 h.p., late 1920 model, dynamo lighting, self-starter, six detachable wheels ..... £275

**B.O.B.** 8-9 h.p. two-seater, nearly new, 1921 model, four cylinder water-cooled engine, three-speed gear box, dynamo lighting, five detachable wheels ..... £200

**STANDARD** 11.6 h.p. four-seater, leather upholstered, perfect running order ..... £90

**DE MARCAY** 7-9 h.p. two-seater, sporting body, 1921 model, dynamo lighting, hood, screen, five detachable wheels, practically new ..... £125

**DE MARCAY** 7-9 h.p. 1921 Competition Model, three-speed gear box, acetylene lighting, five detachable wheels ..... £110

**SAXON**, 16-20 h.p. 6-cylinder, five-seater Touring, dynamo lighting and self-starter ... £350

**Only used for demonstration purposes.**

## WHOLESALE DISTRIBUTORS FOR LONDON AND SURREY.

**Sub-Agents wanted for Douglas Motor Cycles and L.S.D. Cars.**

## A. H. LAKEMAN LTD.

**26, LONG ACRE, W.C.2.**

'Phone No.: Gerrard 1383.

## MOTOR CYCLES FOR SALE.

### Revere.

1920 2½h.p. Revere 2-stroke, single speed, equipped, good condition; price 23 gns.—Edwards, 101, Gt. Portland St., W.1. [1695

### Rex.

REX 4h.p. Clutch Model, perfect order; £14; exchange.—17, Heaton Rd., Mitcham. [1571

REX 6h.p. Combination, 3-speed, all-chain, electric lights; £36; exchange.—17, Heaton Rd., Mitcham. [1570

REX Lightweight, Gradua gear, splendid order; £20; take push cycle part.—57, Kenbury St., Camberwell, London. [1667

1921 8h.p. Rex combination, Blackburne engine, all lamps, horn, spare wheel, tax paid December, D.A. cylinder, perfect order and condition; £115.—D. and S. Autocar Co., 33, The Parade, Golders Green. [1706

1922 Rex-Acme; book your orders now for all models, delivery can be given of the 8h.p. Blackburne engine, all-chain drive, 3-speed, clutch, kick-starter, Model G, detachable and interchangeable wheels; complete with luxurious sidecar at £150; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [1815

1922 Rex-Acme; book your orders now for all models, early delivery can be given of the 8h.p. Blackburne engine, all chain drive, 3-speed, clutch, kick starter, Model G, detachable and interchangeable wheels; complete with luxurious sidecar at £150; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [2082

### Rockson.

1922 Rockson Lightweight, 2½h.p. Villiers engine; not done 50 miles.—36, Beccher Rd., Cradley, Staffs. [1395

### Rover.

ROVER Combination, twin-cylinder, complete, bargain, 95 gns.—Timberlake's Garage, Wigan. [1527

ROVER 1920 3½h.p. Combination, perfect; £82. 1919 ditto, £68.—R. B. Clark and Co., 7, Exhibition Road, S.W.7. [7200

1914 3½h.p. Rover and Rover sidecar, 3-speed, clutch, equipped, speedometer, good condition; price 40 gns.—Edwards, 101, Gt. Portland St., W.1. [1701

ROVER 1917 3½h.p. Combination, fully equipped; £65; good order.—Elce, Ltd., 15-16 Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

1921 3½h.p. Rover, all-chain drive, speedometer, etc., fully equipped, excellent condition throughout; price 75 gns.—Edwards, 101, Gt. Portland St., W.1. [1696

3½h.p. T.T. Rover 1918 (November), Philipson, completely equipped, excellent condition, tax paid, insured, welcome inspection; £50.—Wesley, "Wayside," Braunstone, Leicester. [1541

ROVER 1920 5-6h.p. Combination, with dynamo lighting, £110; also 1919 ditto, £100; 1918 5-6h.p. combination, £75; 1921 3½h.p. all-chain solo, £85; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1013

*Spare Parts*

ROVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7225

### Royal Ruby.

1922 8h.p. Royal Ruby—the spring frame combination par excellence—fitted with interchangeable and spare wheel, luggage and petrol carrier, Easting Saadum screen, lamps, horn, etc., all on, at £185; immediate delivery from the agent for all high-class makes, as usual.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich. 'Phone, 751. [5893

### Rudge.

3½h.p. Rudge-Multi 1920 I.O.M.; £62/10.—Wauchope's, 9, Shoe Lane, London. [7861

1914 Rudge, 3½h.p., good; £27/10.—Shepherd, Enfield Highway. 'Phone: Waltham Cross 31. [0843

1921 Rudge 3½h.p., I.O.M., fully equipped, tax paid; £56.—Jones, c/o Bradmore, 482, Harrow Rd., Paddington. [1768

1922 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, Muswell Hill, N.10. [0791

1922 Rudge, I.O.M. model, immediate delivery from stock.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [1816

£77 is the price of a new Rudge. Get it from the Agents; in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17. [0836

RUDGE 1921 3½h.p., I.O.M. model, Multi gear, pedal starter, first-class condition; £58.—Maudes', 100, Great Portland St., London. [1834

1921 5-6h.p. Rudge-Multi, brand new, shop-soiled; £88, for quick sale.—Shepherd, Enfield Highway. 'Phone: Waltham Cross 31. [0849

RUDGE, 1919, 5-6h.p., Multi gear, pedal start, Rudge sidecar, fully equipped, tax paid; £75.—Maudes', 100, Great Portland St., London. [1833

## MOTOR CYCLES FOR SALE.

### Rudge

**19**19½ 5-6h.p. Rudge Combination, Easting, speedometer, new tyres, overhauled, fully equipped; £85, offers.—McIntyre, Larklands, Ilkeston. [1471

**19**22 3½h.p. T.T. Rudge, brand new, in stock; £77. Cash or easy payments. Exchanges.—Vilkins Simpson, Opposite Olympia, London. [1716

RUDGE 3½h.p. Combination, guaranteed excellent condition; £60.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1016

**19**20 Rudge, new Montgomery sidecar, Triplex windscreen, fully equipped, Low lamp set, speedometer, fully licensed; £75.—Perkins, 455, High Rd., Leyton. [1504

RUDGE 1922 3½h.p. Isle of Man Models for delivery from stock at reduced price of £77; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1030

£55.—Rudge Multi, I.O.M., 1920, in practically new condition, fitted with lamps, Stewart mechanical horn, leather belt and tube case, spare belt and tube, 3 toolbags, tools, pump, kneegrips, etc., full year's tax paid; bargain.—Smiths, 86, Chalk Farm Rd., N.W.1. [1818

*Spare Parts:*

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3163

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Rudge parts in stock. Trade supplied. [1786

### Scott.

SCOTT, new unused 3¾h.p. sporting model in stock; £98.—Moss, Wem. [1733

**3¾**h.p. Scott and Sidecar, 1914-15; £45.—Wauchope's, 9 Shoe Lane, London. [7860

BRAND new 1922 Scott; owner must sell at once; accept £95.—Box 9739, c/o *The Motor Cycle*. [9072

SCOTTS, either model, West of England Agent is Gibb, 100, Northgate, Gloucester. 'Phone: 852. [8126

F.O.C.H. have a 1920 Scott, brand new condition, also 1914 combination.—5, Heath St., Hampstead. (Near Tube.) [1604

SCOTT, 1920, 3¾h.p., 2-speed, kick start, all chain drive, Scott sidecar, completely equipped; £90.—Maudes', 100 Great Portland St., London. [1837

**19**21 Scott Combination, complete with all accessories, excellent order, any trial or examination, tax and insurance paid to December; £110.—McLay, 13, Morley Rd., Doncaster. [9051

SCOTT Combination, late 1920, 2-speed, kick starter, electric lighting, Easting screen, tools, etc., condition excellent, tax paid; accept £97/10 quick sale.—Wilkins Simpson, Opposite Olympia, London. [1724

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8352

*Spare Parts:*

SCOTT Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7226

SOUTH London Scott Service Depôt.—Scott Spares: Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone 1129. [8353

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list, stating year of manufacture. [0751

### Singer.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. Singer, 1910, N.S.U. gear; £25. [1302

**28** GNS.—Singer 3½h.p., 3-speed, fast, sporting machine, in fine condition, tyres, belt as new, full year's tax paid.—Delancey St. Garage, Camden Town, N.W.1. [1640

*Spare Parts.*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

### Sun.

**19**21 (July) Sun 2¾h.p. Combination, Canoelet sidecar, dynamo lighting, used demonstration; accept £70.—Cooke, Garage, Crewe. [1408

FOR Sun, J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S. 60 gns. Send for catalogues. Trade supplied.—Jooes Garage, Broadway, Muswell Hill, N.10. [0790

### Sunbeam.

**3½**h.p. Sunbeam, 1919; £85.—Wauchope's, 9, Shoe Lane, London. [7864

SUNBEAM, brand new 1922 Light Sporting model actually in stock.—Moss, Wem. [1735

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs, etc. [3143


# PROTECTION

*from Rain, Wind & Dust IS ESSENTIAL*

**Secure one of our "ALL WEATHER" GARMENTS.**

Fig. 1

**WATERPROOF MOTOR CYCLE SUIT (Fig. 1).**

Fawn double texture material, interlined rubber, seams cemented and taped, wind cuffs, wind gusset in overalls, and clasp fasteners. Guaranteed waterproof.

**SUIT COMPLETE 35/-**

**Jacket only, 25/-**

**POST YOUR ORDER EARLY**

Any of these garments sent carriage paid. Prompt despatch. **OUR GUARANTEE.** Money refunded in full if not thoroughly satisfied.

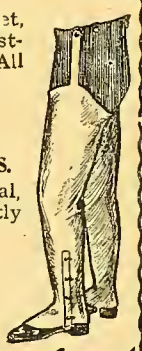
**Waterproof Trench Coat 25/-**

(Fig. 2 Fawn material, rubber lined wind cuffs, guaranteed waterproof.

Fig. 2

**SEAT-LESS** Trousers Fawn double texture material rubber interlined, wind gusset, & clasp fasteners. All sizes.

**18/-** per pair.



**WATERPROOF OVERALLS.**

Double texture material, clasp fasteners, perfectly waterproof.

per **12/6** pair.

*If you cannot call, send money with breast measurement and height.*

*Send for pattern bunch of Cloths to-day.*

*Carriage paid on all Orders.*

**Actual Manufacturers:**

**Martin Waterproof Co., 208, Oldham Rd., New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### Sunbeam.

SUNBEAM Agents.—All 1922 models in stock

**3½**h.p. Touring Model; £126.

**3½**h.p. Super Sports Model; £136/10.

**3½**h.p. Light Touring Model; £136/10.

**4¼**h.p. Combination; £182/14.

**8**h.p. Combination; £217/7.

EXCHANGES; extended payment terms to individual requirements. Catalogues on application.—Herbert Robinson, Ltd., Green St., Cambrid [

BRAND new 3½h.p. 1921 Sports Sunbe £122/10; or exchange.—Jack Pruen, Oxford Weston-super-Mare. [1

**19**17 3½h.p. Sunbeam, 3-speed, K.S., fully equip £62/10.—Hillier (Side Bell), 9, Walling Ave., North Kensington. [1

SUNBEAM, 3½h.p. Touring model, semi-T.T. har bar, new last July, equipped, licensed, and g anteed; £110.—Moss, Wem. [1

**19**19 Sunbeam Combination 3½h.p., excellent ditioa; £80.—Hillier (Side Bell), 9, Wall ford Ave., North Kensington. [1

SUNBEAM, 1920, 3½h.p., sports model, 3-speed, chain drive, in first class condition; £10 Maudes', 100, Paris St., Exeter. [1

SUNBEAM 1920 3½h.p. Combination, L equipped, speedometer, Easting, licence paid.— price apply, Bunner, Montgomery. [9

**7**-9h.p. Sunbeam Combination, spare wheel, h and screen, dynamo lighting; £112/1 Wauchope's, 9, Shoe Lane, London. [1

**8**h.p. Sunbeam, late model, with sidecar, L lamps, liceoce, all complete, splendid conditi £150.—Timberlake's Garage, Wigan. [1

**19**20 3½h.p. Sunbeam. Henderson sidecar, complet equipped, mechanically perfect, spares; £95 Hocking, Royal Mint, E.1. (Appointment.) [1

SUNBEAM, 1921, 3½h.p., 3-speed, kick start, chain drive, very fully equipped, in splendid c dition; £115.—Maudes', 100, Paris St., Exeter. [1

SUNBEAM 6h.p., 2-seater, Bowser sidecar, spee meter, lamps, horn, all in excellent conditi tyres nearly new, tax paid; £95.—Wood, 10, Stat Rd., Horley. [92

**19**21 3½h.p. Sunbeam Combination, lamps, ho speedometer, etc., detachable interchangeal wheels, perfect throughout; price 120 gns.—Edwar 101, Gt. Portland St., W.1. [16

SUNBEAM 3½h.p. Combination, late 1919, ho screen, lamps, and all accessories, tax and ins ance paid to 1923, owner driven, very little us perfect condition; best offer.—Moat Farm, Pilgrin Hatch, Brentwood, Essex. [14

SUNBEAM, 3½h.p. 1920 Combination, perfe legshields, Lucas electric fittings, two C.A. accumulators, sidecar screen, 3 new oversize tyr tax paid; accept reasonable offer; owner bought c —Duffy, 115, Uppingham Rd., Leicester. [84

**19**21 3½h.p. Sporting Model Sunbeam Motor Cyc complete with lamp, geoemtor, horo, and use spares, cast aluminium plates, new in April last, and exceptionally good condition tyres unpunctured; owner offer to £110.—Geoffrey Smith, *The Motor Cycl* Coventry. [X42

LATE 1921 Sunbeam, semi-sports engine, accum lator electric lighting, superior fittings, standa mudshields, Cowey horn, new oversize tyre, speed meter (minus cable), just been tuned; offers, neare £120 secures.—Inspection by appointment invited, write, W. T. Delamain, R.M. Academy, Woolwich. [142

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cam bridge.—Sunbeam Spare Part Service Agent Trade supplied. [178

### T.D.C.

**2¾**h.p. T.D.C. de Luxe, semi-T.T. Druids, E.I. magneto, Senspray carburetter, variable pulle lamps, splendid condition, fast, tax paid; £30.—15 Northwold Rd., Upper Clapton, E.5. [138

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £10 Type SD, chain drive, £115; Type LW, lightweight £65; sidecars from £20 to £50; easy payments 4% extra —Buy direct from the leading Triumph agents: Th Premier Motor Co., Aston Rd., Birmingham. [062

TRIUMPH, new type H, solo and chain-drive Com binations in stock.—Moss, Wem. [173

NEW 1921 4h.p. Triumph, model H.—Bound Garage, 223, High Rd., Kilburn. [166



**All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

ARWOOD Easter Bargains.—1922 2-speed, 2-stroke fully licensed, not run 20 miles; £35.—Below.

ARWOOD.—Brand new 1922 A.E.L.-J.A.P. 2¾h.p., 2 speeds, kick start, hand clutch, genuine bargain; £49.—Below.

ARWOOD.—Late Powerplus Indian Combination, fully licensed, 3 speeds, all lamps, perfect outfit; £65.—Below.

ARWOOD.—1920 4h.p. Harley, fully licensed, all goo; £85.—Below.

ARWOOD have several other bargains; exchanges entertained; smart Martini 2-seater, dickey, £75. Arwood Garage, 89, East Hill, Wandsworth. [1543

LACKPOOL Bargains.—1922 Rudges, 1922 Ariels, 1922 O.K.s, 1922 New Imperials, 1922 Quadrants, 22 Royal Ruby's. Quick deliveries. Good price for car machine; exchange.—Booths' Motories, 294, Waterloo Rd., Blackpool.

LACKPOOL Bargains.—1919 New Imperial, 2 speeds, kick starter; £45/10.—Booths' Motories.

LACKPOOL Bargains.—1919 P. and M. Combination; £49/10/6. 6h.p. Clyno Combination, detachable wheels, £69/10/6.—Booths' Motories.

LACKPOOL Bargains.—3½h.p. Minerva, £10/10/6. N.S.U. Lightweight, £13/10/6. 6h.p. Zenith combination, £49/10/6. 6h.p. Rex Combination, £7/10/6.—Booths' Motories, 294, Waterloo Rd., Blackpool.

LACKPOOL Bargains.—1920 Matchless Combination, detachable wheels, £120/10/6. A.J.S. and Sidecar, £59/10/6.—Booths' Motories.

LACKPOOL Bargains.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £12/10/6. 1920 Sun, 2 speeds, kick starter, £9/10/6.—Booths' Motories.

LACKPOOL Bargains.—1920 Wooler, £49/10/6. 3½h.p. Humber, £20/10/6 P. and M. £5/10/6. Indian Combination, disc wheels, £5/10/6. 6h.p. 3-speed Rudge, £35/10/6.—Booths' Motories.

LACKPOOL Bargains.—2-speed O.K., £24/10/. 1919 Douglas, £45/10/6. 1919 4h.p. Douglas combination, £79/10/6. 4h.p. Douglas, £55/10/6. 1920 Tamplin, £79/10/6. 1920 Morgan de Luxe, speedometer, water-cooled magneto engine, £155/10/6. Several others cheap. Push cycles taken in exchange. Motor cycles purchased for cash.—Booths' Motories, 294, Waterloo Rd., Blackpool. [9317

BARGAINS in motor cycles and sidecars.—A limited number of 1920 and 1921 shop-soiled models, all well-known makes; best offer secures in each case. Send for list, or call and inspect.—Mebes and Mebes, 4, Gt. Portland St., W.1. 'Phone: Langham 2230. [1756

M.O.C.H. for secondhand cycles, combinations and runabouts at bargain prices. Exchanges arranged. Any new cycle, combination or car supplied, cash or deferred payments.—Fair Offer Car House, 5, Heath Street, Hampstead (near Tube). 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1611

RACING 3½h.p. Overhead Valve J.A.P. 3-speed and Combination, Flying Middleton sidecar, winner of numerous awards in competition, everything cream of condition, fitted best of material regardless of expense; sacrifice or consider exchange; photo sent on request. H. E. Carter, 2, Westwood St., Moss Lane East, Manchester. [1496

BUNTING'S.—New Hudson, 3½h.p. Armstrong, 3-speed hub, £25; Triumph, Sturmey 3-speed hub, £5; Young's motor attachment (this is almost new), £1; J.E.S., £21; Campion-Precision 2½h.p., 2-speed in box, £16. All (many others at similar prices) good order. (No Sunday business.)—Bunting's Motor Exchange, Wealdstone. [1776

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigden, 130 Euston Rd. [0705

## MOTOR CYCLES WANTED.

EDWARDS and Co.,

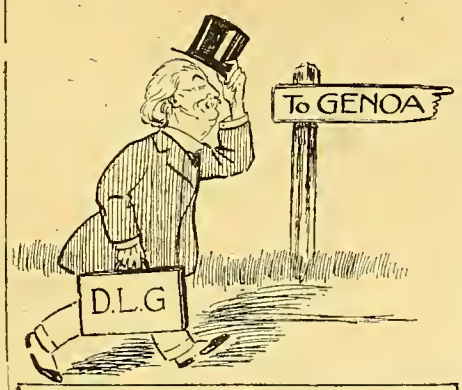
101, Gt. Portland St., W., are cash buyers of solos, combinations, and Morgans. Highest prices given, distance no object. Call, write, or 'phone: Mayfair 4027. [0604

MAUDES' Motor Mart are purchasers for spot cash of late models Sunbeam, Triumph, Douglas, Norton; also Morgans.—Maudes', 100, Gt. Portland St., London, W.1. [1128

W.B

WANT

500 COMBINATIONS and Solos, any make, guarantee top prices given.—T. and B. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5564




# HE HAS "WORKED IT" ALL RIGHT— *CAN'T YOU?*

**Genoa better thing to strive for than a motor bike?**

**Our payment terms bring one within your reach.**

| Cash Price | Make and Description | First Payment | Twelve Monthly Payments |
|---|---|---|---|
| £115 0 | **Norton 16 H** ... | £40 | £6 13 0 |
| £120 0 | **Norton Big 4** .. | £42 | £6 18 0 |
| £153 0 | **Norton Big 4** and De Luxe side car | £53 | £8 17 0 |
| £130 0 | **Indian Scout** with electric equipment | £45 | £7 11 0 |
| £160 0 | **Indian Chief** with electric equipment | £55 | £9 6 0 |
| £199 0 | **Indian Chief** with electric equipment and side car .. | £69 | £11 10 0 |
| £105 0 | **Scott Squirrel** .. | £37 | £6 0 0 |
| £110 0 | **Scott Standard** | £38 | £6 8 0 |
| £48 0 | **Levis Popular** .. | £17 | £2 15 0 |
| £60 0 | **Levis** 2-speed, clutch & kick-starter | £21 | £3 9 0 |
| £66 0 | **Levis Model G**.. | £23 | £3 16 0 |
| £110 0 | **Martinsyde** 3½ twin sports .. | £38 | £6 8 0 |
| £85 0 | **Quadrant** 4½ single, chain drive, solo | £30 | £4 18 0 |
| £105 0 | **Quadrant** 4½ single, chain drive, combination .. .. | £37 | £6 0 0 |
| £110 0 | **B.S.A.** 4½ chain drive.. .. .. | £38 | £6 8 0 |
| £65 0 | **Velocette** 2-speed | £23 | £3 15 0 |
| £72 10 | **Velocette** 3-speed | £25 | £4 4 0 |
| £130 0 | **Raleigh 5 h.p.** solo | £45 | £7 11 0 |
| £165 0 | **Raleigh 5 h.p.** combination .. | £57 | £9 11 0 |
| £68 0 | **Raleigh** 2¾ **h.p.** 2-speed .. .. | £23 | £3 19 6 |

MANY OVERHAULED GUARANTEED BIKES FROM STOCK.

## VICTOR HORSMAN,

:: :: LTD. :: ::

7, MOUNT PLEASANT, LIVERPOOL.

## MOTOR CYCLES WANTED.

WE

ARE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination. We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 314, Euston Rd. [0815

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391. [0332

WANTED, late Triumph or N.U.T.—Elcock, Penywern, Neath. [1545

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted machine can be included in auction sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms:—Selling commission 7½%, not chargeable unless machine is sold. If no sale a nominal auction fee is charged: For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Telephone, 208 Streatham. Telegrams, Palmer's Garage, Tooting. [1156

DOUGLAS Combination; about £50 cash.—Mearis, 106, East Barnet Rd., New Barnet. [1503

DOUGLAS 2¾h.p., any condition, cheap; particulars, price.—58, Harringay Rd., N.15. [1584

WANTED, Scott, after 1919, good condition, cheap. —20, Marlwood Av., Wallasey, Cheshire. [1523

WANTED, Modern Solos or Combinations, for cash. —R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [8682

£35-£45 offered for sound 4h.p. countershaft combination.—Booker, 8, Griffins Wood Cottages, Epping. [1473

OLD or Damaged Machines, engines, gear boxes; parts, wanted, cheap.—Captain Collins, Sunbury Common. [1596

£70-75 Cash for best combination offered, 1920-21, date guaranteed, Harley or B.S.A. preferred.—Warr, Eaton, Grantham. [1536

GOOD Secondhand Combination up to £200 as part exchange for Bianchi 4-seater.—12, Greville Place, Hampstead 1819. [4975

COMBINATION Wanted, Brough Superior or Sunbeam preferred, late model.—Particulars to Box 9859, c/o *The Motor Cycle*. [1680

2¾h.p. Douglas, New Imperial, etc., also combination and Morgan, 1921-22, water-cooled, cheap. —H., 63, Solon Rd., Brixton. [1533

TRIUMPH Countershaft or Norton, price must be reasonable; state full particulars.—Pride, 156, Stockwell Rd., Brixton, S.W.9. [1540

WANTED immediately, Motor Cycles, Combinations, and Light Cars.—Seabridge, 35, Hansler Rd., East Dulwich. Telephone, Sydenham 2452. [2079

TRIUMPH Countershaft Combination or Solo by ex-D.R., one in need of overhaul or slight repair not objected to.—Marns, 151, Turners Rd., E.3. [1403

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [0828

WANTED, your motor cycle or combination. We are buyers. Full market price given and cash paid on the spot. Write, call, or 'phone Museum 5938.—J. Smith and Co., Motor Agents, Ltd., 52-54, Hampstead Rd., N.W.1. [0783

## MOTOR CYCLES WANTED.

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

WANTED to Purchase outright, for cash, bankrupt stocks; W.D. spares, miscellaneous spares, motor cycles, any make.—Send full particulars, McNeille and Platt, 57, Great George St., Liverpool. 'Phone: 1092 Royal. [6060

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Brauburys, Martinsydes, Zeniths.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [4559

F.O.C.H. always have cash waiting for sound machines of all types; highest prices and courteous treatment assured.—Fair Offer Car House, 5, Heath Street, Hampstead (near Tube). 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1610

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Blenheim St.). Bond St., W.1. 'Phone: Mayfair 6559. [0772

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station, Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address, Palmer's Garage, Tooting. [1153

## TRICARS FOR SALE.

FOR Sale, mechanically propelled invalid chair, practically new; offers.—Davies, "Corsock," Stanley Avenue, Wembley. [1780

SINGLE-SEATER Tricar, De Dion engine, 3-speed, chain, gear box, and clutch, in excellent condition, on C springs, wheel steering, handle starting, a real bargain; first £25; suitable for short-legged man.—Jones, 6, Avondale Avenue, Woodside Park, North Finchley. [1411

## MOTOR SCOOTERS.

KINGSBURY Scooter and Spare Parts.—3, Kendall's Mews, Blandford St., W.1 [5499

SKOOTAMOTA, brand new, with leather seat; £25.—Hopkins, New St., Ledbury. [1441

1¼h.p. Kenilworth Cyclette, 1921 model; £37/10—Wauchope's, 9, Shoe Lane, London. [7868

WAUCHOPE'S, 9, Shoe Lane, London.—Kenilworth Motor Cyclette, 1¼h.p., 1921; £37/10. [1299

A.B.C. Skootamota, new, unsoiled, latest model; £23, sacrifice.—Frank Whitworth, 139, New St., Birmingham. [2151

NEW Shop-soiled Autoped Scooters, dynamo lighting, 1½h.p.; bargain, £12/10 each.—Percy and Co., 314, Euston Rd., N.W.1. [4178

1920 Autoped Scooter, clutch, electric lamps, splendid condition; first cheque £10.—Piper, 17, Cambridge Rd., Bexhill-on-Sea. [1475

SCOOTERS.—Skootamota, well equipped, original tyres still on and in good order; £10/10; would take push bike part payment.—Bunting's Motor Exchange, Wealdstone. [1777

## MOTOR ATTACHMENTS.

AUTO-MOTOR; £14; ride away; take push cycle part.—57, Kenbury St., Camberwell, London. [1670

AUTOWHEEL, new, latest model, only done 30 miles, cost £35; bargain, £25.—Raglan Garage, Colchester. [1420

1921 Simplex Attachment, not run 50 miles, perfect running order; £10.—Stanford Rectory, Loughborough. [1455

## HOODS, WIND SCREENS, ETC.

V-shaped Windscreens, £3/18; small size, £2/15.—Bright and Hayles, 78, Church St., Camberwell. [8026

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3239

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

HOODS.—Best quality heavy motor twill, plated fittings, side supports, turn-buttons, best leather straps, all screws; 40/-, carriage paid.—Grafton, 23, Coombe Rd., New Malden, Surrey. [1391

**There's many a happy day ahead for the motor cyclist during the coming season. If you haven't yet definitely fixed on your machine, this list will help you to decide.**

**They're all A1 machines, tuned and tested to give the best under all conditions.**

## Shop-Soiled & Second-Hand List.

1922 **"CALTHORPE,"** 3 h.p., 2-stroke, 2-speed gear and kick-starter (Olympia Show Model) ..... **£60**

1921 **"CALTHORPE" J.A.P.,** 2¾ h.p., 2-speed and kick-starter..... **£65**

1922 2¾ h.p. **"WOLF BLACKBURNE,"** Sturmey-Archer 2-speed clutch and kick-starter **£70**

1922 2¾ h.p. **"DOUGLAS,"** hardly used, tax and insurance paid..... **£70**

1920 7-9 h.p. **"HARLEY-DAVIDSON"** Combination, electric model, fully equipped with all spares, special large sidecar, with Dickey seat, windscreen and hood, condition and appearance as new ..... **£145**

1920 3½ h.p. **"ROVER,"** with Canoelet sidecar, fully equipped ..... **£100**

5-6 h.p. **"ROVER"** Combination.... **£90**

6 h.p. **"NEW IMPERIAL" J.A.P.,** fully equipped with Lucas Mag.-dyno. lighting ..... **£120**

**"TRIUMPH"** Combination, C.A.V. electric lighting, Easting Royal wind-screen, fully equipped..... **£95**

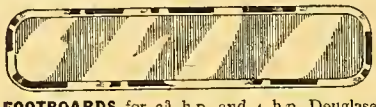
1918 **"TRIUMPH"** Solo, fully equipped.. **£70**

2¾ h.p. **"WATSON" J.A.P.,** overhead valves, very fast Sports machine .... **£30**

*Any of the above machines can be supplied on our Easy Payments System, particulars of which we shall be pleased to forward you on application.*

### *SPARES FOR DOUGLASES.*

***We carry a larger stock of spares for Douglases than any motorcycle agent in the country. Write for what you want and get it by return.***



**FOOTBOARDS** for 2¾ h.p. and 4 h.p. Douglases covered with lino; brass beading; with clips **12/6** per pair. Postage 1/6.

*TRADE SUPPLIED.*

**Burlington MOTOR CYCLE CO. LTD**

**7, South Side, Clapham Common, S.W.4.**

**'Phone: Brixton 2417.**

**Wires: Burlington Motors, Clapham.**

Just by Clapham Common Underground Station.

## HOODS, WIND SCREENS, ETC.

HERCULES Hoods and Aprons; write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [0853

ROBINI Manufacturing Co.—The Bower Adjustable Windscreen, registered, with coverall apron, 30/-, carriage paid. Beware of imitations. This is the standard price for this screen. Agents wanted. Celluloid panels fitted, Eastings, 16/6; aprons made to order, 10/-.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone, Brixton 1585. [1179

## BODIES.

RENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

CAMBER Sidecar Bodies; from £4/17/6.—Bright and Hayles, 78, Church St., Camberwell. [8024

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5131

THE Cobb Speedman Sidecar Body is a light, strong, and handsome attachment, designed to fit any chassis and sold at a reasonable price.

COBB Speedman Bodies from £2/12/6 upwards are sent carriage paid anywhere in the United Kingdom. You can have one to match your machine without extra charge. Cobb Speedman bodies are manufactured by Vernon Cobb, 18, Midland Rd., Carlton, Nottingham. [1613

VENUS Step Bodies, 2 dozen to clear; from 50/- each; great bargains.—Venus Sidecar Co., 694, Seven Sisters Rd., Tottenham. 'Phone: 2102. [9974

ROYAL Leicester Sidecar Bodies fit any chassis, first-class finish; have a few coachbuilt bodies, clearance lines from £5 each; extra good value.—The Willowbrook Motor Co., Leicester. [0336

EASTER Bargains.—Bodies, 1922 production, brand new, from £3/15; 2-seaters, complete, from £9. Actual manufacturers. Write for catalogue. Bodies re-painted and upholstered from £3.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone: Brixton 1585. [1178

£4/17/6.—New Douglas type Bodies, bulbous backed and upholstered in crocodile rexine; they require a finishing coat of paint only. We have contracted for a large quantity, so can give the benefit to you. See Sidecar Attachment column.—Old Man Hep., 17-19, Wilcox Rd., South Lambeth, London, S.W.8. 'Phone: 1958 Brixton. [1285

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Designing Dept., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—Dorset House, Tudor St., London, E.C.4. [0004

## SIDECAR ATTACHMENTS.

SFOR

SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middletoo's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

£8.—Good sound coachbuilt sidecar, off P. and M.—King, Egrove Farm, Oxford. [1569

SIDECARS, several, cheap, room wanted, including Douglas.—57, Kenbury St., Camberwell, London. [1674

WHITLEY Sidecars, Coventry.—Three models, £25 £29/10, £32/10. Nothing on one wheel to equal. Lists free. [0856

## EXTENDED PAYMENTS.

OR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or ond-hand, write Service Co., 292, High Holborn, C.1. [0672

NY make of cycle or any combination completely equipped; licensed, insured on 12, 15, 18 months' ended payments system.—Write for particulars, leezi Sales, Ltd., 5, Victoria St., S.W.1. [0830

ERBERT ROBINSON, Ltd., Green St., Cambridge, will supply any make of motor cycle or car on easy terms at the lowest possible price ainable anywhere. Catalogues and full particulars post. [1789

ASY Payments.—Any make of motor cycle or car supplied for cash or the easiest of easy payments. ents for all leading makes, including B.S.A., Douglas, Enfield, Matchless, Rudge, Triumph, etc.; also ver, Coventry-Premier, Singer, Calcott, Swift, mber cars, etc.—Note address, Wilkins Simpson, posite Olympia, London. [1718

## ENGINES.

ILLIERS, all spares from stock. J.A.P. 8h.p. twin, air cooled, new, £25; also 7-9h.p. M.A.G., ter-cooled, new, £35.—Maudes' Motor Mart, 100, eat Portland St., W.1. [1752

.A.P. Engines, J.A.P. Engines, J.A.P. Engines.—I have the largest stock of 8h.p. J.A.P. Engines parts in England; over 30 engines in stock to ect from. Engines at £18 each, and all parts for p. new cylinders, 50/- each; new pistons, 17/6 h complete; new connecting rods, 40/- pair; new nk cases, 35/- pair; valves complete, 4/- each; exnst caps, 3/-; cam levers, 3/- each; gear covers, /6; chain covers, 7/6; exhaust box and pipes, 15/-. mp reply.—South Croydon Motor Exchange, 22, uth End, Croydon. [9320

## IGNITION, LIGHTING, ETC.

I.B. I. Co.

I.B. for new and second-hand magnetos; all spares stocked.

I.B. Specialise in Thomson-Bennett complete for fixing to Triumph.

D.M., J.A.P., Douglas, 2-stroke engines, etc.; £3.

M.A.V. New, twin and single, clock and anti; £3

DIXIE, Single and twin, all degrees; £2/5.

I.B. Guarantee all magnetos one year.

I.B. will take your old machine in part payment.

I.B. Despatches all goods per return, carriage paid, on approval against cash, or through *The Motor cycle* deposit system.

I.B. Ignition Co., 78, New Park Rd., Brixton Hill, London. 'Phone: Brixton 610. [0694

COUNTY of London Engineering Works, Ltd.

ALL Magneto Spares stocked.

GOVERNMENT Surplus Magnetos (new, unused).

BOSCH, Single, type D.A.L., variable ignition; £3/15 each.

ML. Single Enclosed Waterproof, variable Ignition, £4 each.

THOMSON-BENNETT, single, enclosed waterproof, variable ignition; £3 each.

THOMSON-BENNETT, twin, enclosed waterproof, variable ignition, all degrees; £3 each.

M.A.V., single, enclosed waterproof, variable ignition; £3 each.

M.A.V., twin, enclosed waterproof, variable ignition; £3 each.

RUTHARDT, single, enclosed waterproof, variable ignition; £2/10 each.

BERLING, single cylinder, enclosed waterproof, variable ignition; £2/10 each.

SPLITDORF, single, enclosed waterproof, variable ignition; £2/10 each.

DIXIE, single, enclosed waterproof, variable ignition; £2/5 each.

DIXIE, twin, enclosed waterproof, variable ignition; £2/5 each.

ANY of the above single-cylinder Magnetos can be supplied with the special long driving spindle, suitable for Rudge.

THESE Magnetos are fitted with leads and base-plates, ready to be immediately fitted. Please state make of engine when ordering.

GUARANTEE.—We guarantee all our Magnetos for 12 months, and will willingly replace or repair any that should prove defective within that period.

SEND your repairs to us; it will pay you; all repair work guaranteed.

COUNTY of London Engineering Works, Ltd., 27, Stockwell Rd., Clapham, London, S.W. (opposite Stockwell Underground Station).

TELE.: Brixton 2841. T.A.: Ignitionac, Brixstret, London. [1848

# The Juno Cycle and Motor Co.

*Proprietors:*
METROPOLITAN MACHINISTS Co., Ltd.
248, BISHOPSGATE, LONDON, E.C.2.

TELEPHONE: BISHOPSGATE 2195.
TELEGRAMS: QUILLS AVE LONDON.

ESTABLISHED OVER FORTY YEARS.

## The Pick of the Bunch!

**A.J.S., ARIEL, B.S.A., CHATER LEA, DOUGLAS, ENFIELD, INDIAN, LEVIS, MATCHLESS, NORTON, RALEIGH, RUDGE, SUN.**

## McKENZIE
**LIGHTWEIGHT MOTOR CYCLES.**

**Low price. Cheap running.**
**Easy Payments.**
**26 Guineas cash, or**
**£7 10 0 deposit and 12 monthly payments of £1 17 6.**
**Carriage and packing extra.**

**Any Motor Cycles, Combinations (or Sidecars), can be supplied on our well-known GRADUAL PAYMENT SYSTEM.**
**Particulars on Application.**

## KEEP DRY—OUTSIDE.

**Special Line double texture Waterproof Suits, complete with helmet to match, 53/-, very smart and comfortable.**

**Sidecar Bodies, Sandum or Venus, from £5 15 0.**

**Underslung or step chassis from £7.**

**EVERYTHING FOR THE MOTOR CYCLIST AT REASONABLE PRICES.**

## Accessories at Reduced Prices.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| Bowden Heavy Band Brakes | 2 16 0 | Watford Speedometers, slightly soiled, guaranteed | 4 15 0 |
| Cameo Screens | 2 15 0 | Renolds Cham ⅜ × ⅛ per ft. | 6 1 |
| Bluemels, 1921 | 3 10 0 | All spares in stock. | |
| Orto Hoods | 3 5 0 | Tan-Sads | 1 10 0 |
| Spring Shackles, set of four | 6 6 | Brooks Bryo Saddles | 2 8 0 |
| P. & H. Lamp Sets | 1 12 0 | B&B Lightweight Carburetters, window soiled | 2 10 0 |
| Fleece-lined Leather Gauntlets | 14 9 | Cross over Belt Rim Brakes | 18 6 |
| W. S. R. Jets, all sizes | 8/6 & 10 6 | | |
| Large H'bar Mirrors, 4½" reflector | 7 6 | | |

**FREE.** **Call or write for 80 pp. Illustrated List with all latest price reductions.**

## IGNITION, LIGHTING, ETC.

BROWN, Gardiner and Co.

C.A.V. 2-cylinder, clockwise, aeroplane starting magnetos, platinum points, guaranteed unused, all working parts interchangeable with C.A.V. type KU2.

THESE Magnetos can be converted for use on any 1- or 2-cylinder engine of less than 5h.p.; 25/- each, carriage paid.

SPECIAL Prices for quantities.

CASTINGS and brass armature ends; 10/6 per set.

LONG Cams necessary for single cylinders; 3/- each.

SAMPLES sent on approval against cash.

BROWN, Gardiner and Co., 8, Bevis Marks, E.C.3. [0826

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3.

C.A.V. Magnetos, 1- or 2-cylinder, clock or anti, variable ignition, with short-circuiting terminal and platinum points; price 50/- each; all working parts are standard, and interchangeable with C.A.V. types KU1 and 2.

THOMSON-BENNETT, types A.M.1 and 2, variable ignition, clock or anti, fitted with short-circuiting terminal and platinum points; price 52/6 each.

THOMSON-BENNETT, and M-L's of Coventry, 1-cylinder, types A.D.S. or P.L.R., especially suitable for stationary engines, price 35/- each; fitted with variable ignition, 10/- extra.

THOMSON-BENNETT 4-cylinder, variable ignition, clock or anti, fitted with short-circuiting terminal; price £4/10.

BOSCH, D.A.L., waterproof, variable ignition, 1 cylinder, clock or anti, with short-circuiting terminal; price £3 each.

GUARANTEE.—All magnetos are guaranteed to give satisfaction, and are despatched in perfect working order; any machine not in accordance with our guarantee will be replaced or money refunded, if returned to us as sent, and within 30 days of receipt.

TERMS.—Net cash with order; samples sent on approval against cash; all goods carriage paid.

BEFORE ordering elsewhere, write for samples, and compare our quality and finish with other supplies.

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. 'Phone: Central 877 [0698

RELIANCE Magneto Repairing Co. (the largest London repair depot) for repairs and new magnetos.—See below.

RELIANCE Guarantee to Return your magneto within 3 days, if necessary 24 hours, with a 12 months' written guarantee.

RELIANCE Test Every Magneto after repair under all running conditions, and, as we cootract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE Manufacture and Stock Spare Parts for all magnetos. Special line, genuine platinum screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice, free of charge, upon any question concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., London, E.C.1, for new and second-hand magnetos.

THOMSON-BENNETT Magnetos, brand new, enclosed waterproof type, singles, suit any engine, price £3; twins, 45, 48, 50, 55, 60, 180 degrees, for Douglas, Clyno, etc., price £3. See our guarantee below.

C.A.V. Magnetos, waterproof, new and unused, singles and 180 degrees twins, suitable for Douglas, O.K., Calthorpe, A.J.S., Enfield, Levis, New Imperial, Scott, Velocette, or any lightweight. These magnetos are of the finest workmanship throughout. Price £3. See our guarantee below.

BEFORE Sending Elsewhere, send a P.C. for our small interesting booklet showing a full range of magnetos to suit every engine, with full particulars and prices.—See below.

GUARANTEE.—Every magneto, no matter what the price or make, is guaranteed by us. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee each machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE Cordially Invite Customers to their works to see any of the above on test. Magneto list, giving full particulars, sent upon application. It will pay you to deal with a firm of repute.—Reliance Magneto Repairing Co. (1914), 283, St. John St., London, E.C.1. [3882

## IGNITION, LIGHTING, ETC.

THE Largest Organisation in Europe for ignition and automobile electrical equipment.

THE Runbaken Repair Service has eight fully staffed and equipped Service Depots throughout the country, each ready and competent to carry out the most difficult repair to any make or type of magneto, dynamo, starter, accumulator, or battery.

COMPLETED Work is fully guaranteed and of the highest finish. Send your machine for a free examination and quotation.

THE Runbaken Magneto Co., Ltd. Head office and works: Cheetwood Lane, Derby St., Manchester (City 8266) (3 lines). Manchester: 288, Deansgate, (Central 7312). London: 142, Gt. Portland St., W.1 (Museum 3905). Leeds: 94, Albion St. (27219). Liverpool: 65, Renshaw St. (605 Royal). Birmingham: 192, Corporation St. (2059 Central). Bristol: 14, Colston St. (3728). Glasgow: S. W. Murray, 34, Bath St. (Douglas 1784). Paris: 7, Rne Brunel (Wagram 50-11). [0841

BOSCH and M-L. Singles, 30/-; C.A.V., 37/6; variable ignition, guaranteed.—84, Greenside Rd., Croydon [1580

DYNAMO Sets.—Lucas 12v. battery, cut-out, £7; 6v. dynamos with cut-out, £6.—Jenner (Dept. M.C.), 165, Church St., Mitcham. [5401

K.L.G. W.D. Plugs, unprecedented value, 4 for 2/6, postage 9d.; immediate return of money if not satisfied.—Thompson, 59, Queen St., Wolverhampton. [8206

ACCUMULATORS.—Quality right; price right; write for list; trade supplied.—Adams Bros. (Longton), Ltd., Accumulator Manufacturers, Longton, Staffs. [1284

ANY Motor Cycle Magneto repaired, no matter what condition, provided complete, for 30/-; 24 hour service.—Kays, Electrical Dept., 8, Bond St., Ealing, W. [7232

CHELTENHAM.—Repairs to magnetos, self-starters, lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham. 'Phone: 1256. [0758

DASH Switchboards, 4-way, with ammeter, 20/-; with ammeter and voltmeter, 35/- each nett.—Leslie Dixon and Co. (Dept. H.1), 9, Colonial Av., Minories, E.1. [0760

MAGNETOS Overhauled and Repaired from 15/- to 30/-; returned as new in 2 days; guaranteed for 12 months.—Turner Bros., Magneto Repair Service, Summerseat, Manchester. [6954

JEBRON Contacts, used by Messrs. Collier Bros., platinum, for blades, screws, etc., cures misfiring; Jebron screws, fit Bosch mag., 10/6 pair; old screws, any make, Jebronised, 4/9 each, return post.

JEBRON Contacts, used by Messrs. Collier Bros., Colver, Martin, making world's records.—Jebron, 38, Herbert Rd., Woolwich, London, S.E.18. [0002

THOMSON-BENNETT Magnetos, Type A.M., new, guaranteed perfect, waterproof, singles, flat twins, V twins, any angle 42° to 55°, clock or anti; week's approval against cash.—Brockbanks, 58, Lord St., Southport. [0756

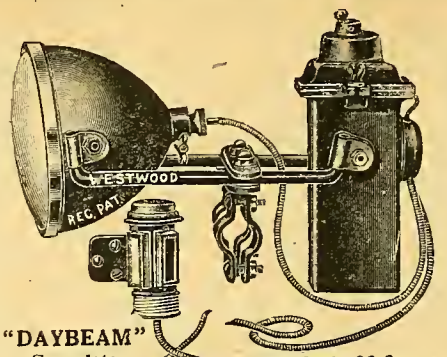
LUCAS Latest Electric Head, Side, and Tail Lamps, soiled only, 70/-; Lucas accumulators in case, unused, solo 35/-, combination 45/-; magdyno single anti, as new, perfect, £11; E3 dynamo, £5; cables and switchbox, 55/-.—60, Baker St., Sparkhill, Birmingham. (D) [1517

C.A.V. Magnetos.—Extraordinary bargains. Brand new 180° twin or single cylinder, 38/6, carriage free. Every magneto thoroughly tested before despatch; approval against cash. Kindly state rotation required.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [1652

SURPLUS Magnetos, with written guarantee one year; M-L single, 35/-; B.L.I.C. ditto, 42/-; Bosch ditto, 45/-; Thomson-Bennett and C.A.V. singles and twins, 50/-. We specialise in repairs and spares for all makes; lists 2d. stamp. Deal with experts and avoid certain disappointment.—Whitdale Magneto Service, Cherry Orchard, Croydon. 'Phone: Croydon 1625 [7593

THE Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government, and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can mostly return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock, all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1. 'Phone: Museum 1158. T.A.: Kumagnelec, Eusroad, London. [2445

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repairs and spares. All repairs are tested on an approval A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock; charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034. T.A.: Magdyno, Eusroad, London. [0263

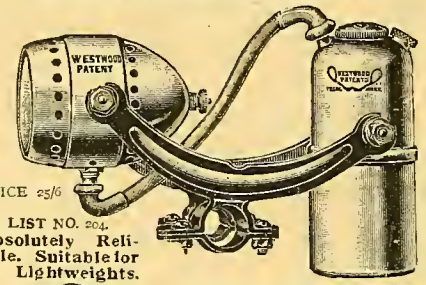



**"DAYBEAM"**
**Complete Electric Set for Lightweights.**

Solo Outfit, £3 3s.
Combination Outfit, £3 15s.
Headlamp only, 25/-
Tail Lamp only, 5/-

**"DAYBEAM" Heavyweight Sets.**—Solo, £5 5s.; Combination, £7 7s. *Illustrated List Free.*

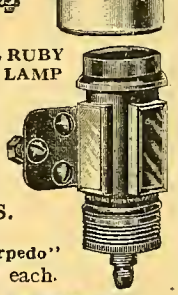
**ACETYLENE HEADLAMP SET.**



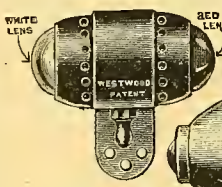

PRICE 25/6
LIST NO. 204.
**Absolutely Reliable. Suitable for all Lightweights.**

4/- each.

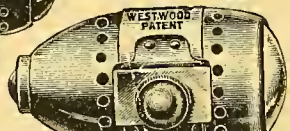
**ROYAL RUBY TAIL LAMP**
**2/9 each.**



**"TORPEDO" TAIL LAMP.**
**SIDECAR LAMPS.**

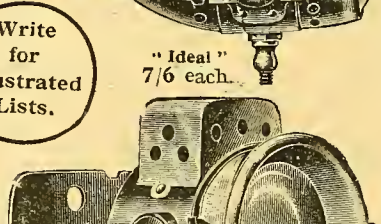



**"Torpedo" 4/6 each.**




Write for Illustrated Lists.

**"Ideal" 7/6 each.**



THE "LIFEGUARD" ACETYLENE REAR LAMP.
Price 3/- each.

**MADE TO LAST.**

***Westwood Special Lines are stocked by all reputable agents.***

TRADE MARK
**WESTWOOD**
**RIM & PATENTS LTD**
LAWDEN RD BORDESLEY BIRMINGHAM.

## TYRES.

CENTRAL Garage for fair dealing

**26**×2¼ Dunlop, 37/3; Goodyear E.H., 26/-; Bate 31/6; Avon, 25/-; Clincher-de-Luxe, 21/ or fit an oversize 28×3 Macintosh, 28/6.

**26**×2⅜ Dunlop heavy, 32/-; E.H., W.D., 37/6 Clincher E.H. (for 2¼), 27/6; Avon R.S 27/6.

**26**×2½ Avon, 24/-; Wood-Milne, 13/3; Clinche 30/-.

**26**×2½×2¼ Dunlop, 46/-; Avon E.H., 30/ Hutchinson T.T., 36/-; Clincher, 30/-; Palme cord, 32/6.

**28**×3 Clincher (plain rib), 42/6; Dunlop E.H 65/-; John Bull (the Harley special), 68/ Dunlop sidecar A.C., 32/6; Mackintosh, 28/6; Cli per 3-ribbed, E.H., 35/6.

**650**×65 Goodyear E.H., 30/-; Dunlop S.S., 47/6 Wood-Milne E.H., 19/-; Palmer cord, 45/-.

**700**×80 Wood-Milne E.H., 41/6; Internation grooved, 55/-; Firestone, 45/-; Engleber 42/6; Dunlop Mag. cord (light car), 57/6; Avon sup studded, 4/6.

TUBES, all sizes, 6/6 each; 700×80, 7/6.

CENTRAL Garage will be open over East Holidays for convenience of London client or will send any of the above lines on 7 day approval on receipt of cash plus 1/6 postage.—30 London Rd., Thornton Heath. 'Phone: 2237 Cro don. [11

ALWIN Tyre Co. will send on approval against cas any of the following tyres:—

**26**×2¼ Clincher, 19/-; Palmer Cord, 21/-; Fir stone, 30/-; Goodyear, 26/-; 26×2¾ Clinch E.H., 26/-; Dunlop heavy, 31/-; E.H., W.D., 37/ Avon R.S., 27/6; 26×2½×2¼ Palmer cord, 32/ Clincher, 25/6; Avon E.H., 28/6; 28×3 Fisk E.H 45/-; Dunlop ribbed, 30/-; Clincher ribbed, 42/-; Ma intosh special, 28/6; Clipper 3-ribbed E.H., 35/ 700×80 Wood-Milne E.H. 41/6; Firestone, plai 45/-; motor cycle tubes, all sizes, at 6/-; Avon sup studded, 4/6; 650×65 Palmer cord, 45/-.

ANY of the above lines will be sent on 7 days' a proval against cash, plus 1/6 for post.—T Alwin Tyre Co., 37, Red Lion St., High Holbor W.C. [11

EMANUEL'S For Tyre Bargains.—From Manufa turers', Bankrupt, and Surplus Stocks.—Below

**24**×2.—Hutchinson rubber studded, 22/3.

**24**×2¼.—Clincher de Luxe heavy rubber studde 22/3.

**26**×2.—Continental standard and ribbed, 16/ Wood-Milne Key-grip, 18/6; Hutchins Brooklands rubber studded, 26/9; Palmer cord heav 34/6.

**26**×2¼.—Moseley heavy ribbed, 20/6; Bates speci heavy beaded, 28/3; Macintosh chain heav 32/3; Palmer cord 3-ribbed heavy, 34/9; Dunlop Ma num heavy, 36/-.

**26**×2⅜.—Dunlop retreaded grooved, 20/6; Palm cord 3-ribbed extra heavy, 35/3; Dunlop Ma num heavy, 35/9; Clincher de Luxe extra heavy, 24/

**26**×2½ (to fit 2¼ rims).—Emanuel's All-weathe 25/9; Hutchinson rubber studded or ribbe 33/-; Bates special 3-ribbed extra heavy, 56/-.

**26**×2½.—Wood-Milne 3-ply, 13/6; Wood-Mil 4-ply extra heavy, 16/6; Rom. Combinatio 38/9; Dunlop rubber non-skid, 41/-; Hutchins rubber non-skid or ribbed, 29/9; Emanuel's ext heavy rubber non-skid, 45/-; Englebert passeag rubber, 32/-.

**28**×2½.—Hutchinson ribbed, 25/-; Spencer Moult rubber non-skid, 30/-.

**28**×3 (to fit 2½ rims).—Dunlop heavy rubber no skid, 45/-.

**28**×3.—Macintosh chain tread heavy, 27/6; Du lop sidecar, 37/6; Dunlop heavy rubber studde 44/-; Fisk extra heavy rubber studded, 46/-; Joh Bull extra heavy rubber studded, 68/-.

**650**×65.—Wood-Milne special key-grip, 14/ Wood-Milne 4-ply extra strong, 25/ Emanuel's rubber non-skid extra heavy, 26/6; Palm cord light car, 40/-; Burnett grooved, 30/-; Dunl steel studded, 45/-.

**700**×80 (to fit 650×65 rims).—Bates speci heavy 3-ribbed, 52/6; John Bull extra hea rubber non-skid, 55/-; Clincher grooved, 47/6.

EXTRA Heavy Rubber Studded Non-skid, 42/6.

NEW Tubes, all sizes, 7/-; clearance, 5/6 each.

H. EMANUEL and Co.—Stores, 37a, Balls Po Rd., Dalston, N.1. Office, 27, Belgrade R Stoke Newington, N.16. Tele.: Dal. 3161. [08

MOTORISTS.—Try our 3,000 mile retreads, repai etc., carriage paid.—Buxton Vulcanising C Buxton, Derbyshire. [92

THE Difference between a good retread and a b one is its mileage. Try us. Watch results. Melton Rubber Works, Melton Mowbray. [06

# SERVICE BARGAINS

## DRIVING GLOVES

(as illustrated)

**Made from best quality HORSEHIDE**

One Stud Fastener at wrist. **SOFT AND PLIABLE STRONG AND DURABLE IN TAN AND GREY.** State size Glove worn.

A PAIR **2/8** Post 6d.

**5 Only. GREY OILSKIN SUITS.** Jacket D.B., 40in. long, deep storm front all round belt, Leggings to match. 38, 40, 42. Usual price, 58/6 suit. To clear, **32/6** suit. GUARANTEED NEW GOODS.

## LEGGINGS

(as illustrated).

**Made from Stout Fawn Twill Mackintosh. Absolutely Waterproof.**

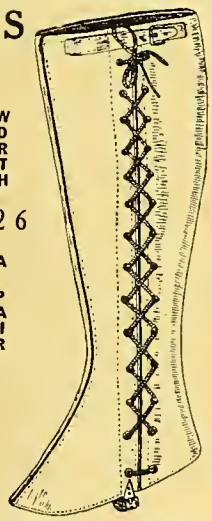
WORTH **12 6** A PAIR

ALL SIZES FOR LADIES' WEAR. Ideal for Drivers and Pillion Riders.

GENTS' and YOUTHS' in following calf sizes:

12, 12½, 13, 13½, 14

**2/6** A PAIR. POST FREE.



**0 Only. GAUNTLET MITTENS.** Made from Fire od Water-proof material, lined Kapok, Strap Wrist - - Post paid, **2/3**

**ENUINE "TRIPLEX" AVIATION MASK GOGGLES** (as illustrated).

Ex-Government Surplus. Made from Best Quality Chrome Leather; nutria fur lined, White or Tinted Lenses. Maker's list price, 42/- Post free. **11/9**

**) Only. Stout Leather WAIST BELTS. 2/11,** post free

The Service Company Ltd. LONDON

**289-293, High Holborn, London.**


## EXCHANGE.

NO. 2 Bull's Eye Kodak, R.R. lens, for 1920-21 Senspray carburetter, 1⅛in. inlet.—Ross, 17, Hillend Place, Edinburgh. [1516

YOUR old machine exchanged for new or second-hand combination. Bring it along.—Edwards, 101, Great Portland St., W. [0803

1921 Beardmore-Precision, spring frame, guaranteed perfect, for good combination; cash adjustment. —Seager, Wincanton, Somerset. [1417

RACING J.A.P. Combination.—See Motor Cycles—Miscellaneous Column.—Carter, 2, Westwood St., Moss Lane East, Manchester. [1495

EXCHANGE.—1920-21 2¾h.p. Coulson B., 2-speed, equipped perfect, for Wooler, chain or belt drive. —Box 9819, c/o *The Motor Cycle*. [1396

EXCHANGE 15.9h.p. Darracq Landaulet; £150; wire wheels, tax paid; solo or combination and cash.—417a, Brighton Rd., Croydon. [1312

EXCHANGE 25h.p. Daimler Limousine, 1915, mechanically sound, for motor cycle combination and cash.—610, High Rd., Chiswick. [7732

1920 American X Combination, dynamo lighting, perfect condition, for Triumph or Douglas.—Pride, 156, Stockwell Rd., Brixton, S.W.9. [1539

EXCHANGE Douglas 2¾h.p., fine condition; F.N. 5-6h.p., mechanical inlet valves; 2¾h.p. 2-stroke engine; offers.—Bostock, Byron St., Ilkeston. [1461

EXCHANGE Saxon 2-seater for good combination; cash either way.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1010

HALIFAX.—1922 B.S.A., Calthorpe, Coventry Premier, Lagonda, and Rhode light cars; keen exchanges.—Motor Exchange, Horton St., Halifax. [1762

EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hansler Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452. [7939

WANTED, Norton, Triumph, Sunbeam (sports), or A.J.S., 2¾h.p., in part exchange for 1921 Castle Three.—"The Denne," Hardwicke Rd., Reigate. [1487

1914 Briton 10-12h.p., 2-seater and dickey, fully equipped and in good condition, 5 detachable wheels; exchange for modern combination and cash, or sell £165.

1921 Carden cycle car, standard model, not done 300 miles; exchange for combination, or sell £100. —Salsbury, Oundle. [1639

A.J.S. 1922 Models.—Your Triumph solo or combination taken in part payment; full value, satisfaction.—Ward and Co., 51, Upper Richmond Rd., Putney. [7537

EXCHANGE Chenard Wlacker 2-seater Coupé for combination; cash adjustment offered.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1011

P. and M. Combination, as new, equipped very special Royal Leicester sidecar, for Douglas or Triumph solo and cash; or would sell.—Shepherd, 41, Elmwood Rd., West Croydon. [6174

HERBERT ROBINSON, Ltd., Green St., Cambridge, will take your present car or combination in part exchange for a new model. We give a fair deal for cash, exchange, or easy terms. [1790

EXCHANGE 4-seater Touring Darracq, in first-class running order, for combination; cash adjustment offered for good outfit.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1009

WANTED, 8h.p. Sunbeam Combination complete; exchange 1916 Indian 2-stroke 2½h.p., 3-speed, clutch, accessories, licence paid, perfect condition, and cash.—Jennings, Station Rd., Fakenham, Norfolk. [1353

EXCHANGE 1921 Carden 2-seater, with twin-cylinder 2-stroke engine, in new condition, for combination; would sell £80.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1020

HALIFAX.—1922 B.S.A., Douglas, Edmund, Enfield, Levis, Martinsyde, New Imperial, Norton, Rex, Royal Ruby, Scott, Sunbeam, Triumph, and Henderson motor cycles; exchanges quoted.—Halifax Motor Exchange, Horton St., Halifax. [1763

F.O.C.H. will take your present machine in exchange for a new or secondhand car or motor cycle; highest prices allowed.—Fair Offer Car House, 5, Heath Street, Hampstead (near Tube). 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1609

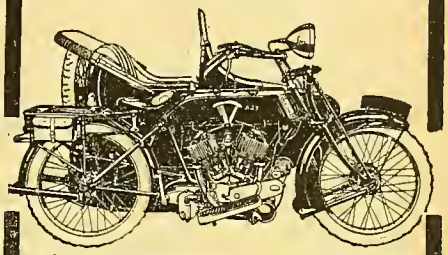
BUNTING'S will allow full market value for your present machine in part payment for any used one from our stock; or off any new motor cycle or car. Collection and delivery arranged any distance if desired. Closed Sundays.—Bunting's, The Motor Exchange, Wealdstone. [1774

EXCHANGES.—Highest prices allowed. New models in stock—A.J.S., Enfield, B.S.A., Douglas, Matchless, Zenith, Ariel, Norton, etc., etc. We have a good selection of second-hand motor cycles for you to choose from. Write now.—R. Bamber and Co., Ltd., 2, Eastbank St., Southport. 'Phone: 607. [1393


# BAMBERS

## THE EXCHANGE SPECIALISTS.

**NEW 1922 MODELS FROM STOCK.**



| | | |
|---|---|---|
| 7 | h.p. **A.J.S.** Combination | £175 |
| 8 | h.p. **ENFIELD** Comb. | £140 |
| 8 | h.p. **ENFIELD** Comb., dyn mo | £158 |
| 4 | h.p. **DOUGLAS** Comb. | £135 |
| 6 | h.p. **DOUGLAS** Comb. | £165 |
| 8 | h.p. **MATCHLESS** Comb. | £170 |
| 6 | h.p. **B.S.A.** Comb. | £164 |
| 4½ | h.p. **B.S.A.** Comb. | £142 |
| 3½ | h.p. **ARIEL** Comb. | £125 |

**SOLO**

| | | |
|---|---|---|
| 2¾ | h.p. **ENFIELD,** 2-speed | £55 |
| 2¾ | h.p. **DOUGLAS,** 2-speed | £75 |
| 2¾ | h.p. **DOUGLAS,** 3-speed and K.S. | £90 |
| 3½ | h.p. **DOUGLAS,** Sports | £130 |
| 3½ | h.p. **NORTON,** 16H | £115 |
| 3½ | h.p. **ARIEL,** 3-speed and K.S. | £95 |
| 4½ | h.p. **B.S.A.,** all chain | £110 |
| 2¾ | h.p. **NEW IMPERIAL** | £73 |
| 3½ | h.p. **ZENITH-BRADSHAW** | £119 |

ANY MAKE SUPPLIED.

**HIGHEST MARKET VALUE ALLOWED** for your present machine in part exchange.

## DEFERRED PAYMENTS SECONDHAND MACHINES.

| | | | |
|---|---|---|---|
| 1922 | 2¾ | h.p. **ENFIELD,** shop-soiled | £50 |
| 1921 | 2¾ | h.p. **ROYAL RUBY,** 2-speed | £50 |
| 1921 | 2¾ | h.p. **FEDERAL,** 2-speed | £40 |
| 1921 | 2¾ | h.p. **DOUGLAS,** 2-speed | £55 |
| 1921 | 8 | h.p. **ENFIELD** Comb. | £135 |
| 1921 | 4½ | h.p. **HUMBER** Comb. | £127 |
| 1920 | 5 | h.p. **ZENITH** Comb. | £90 |
| 1920 | 2¾ | h.p. **EDMUND,** 2-speed | £45 |
| 1920 | 6 | h.p. **ENFIELD** Comb. | £110 |
| 1920 | 4 | h.p. **HARLEY-DAVIDSON** Comb. | £110 |
| 1920 | 2½ | h.p. **METRO-TYLER,** 2-speed | £50 |
| 1919 | 6 | h.p. **JAMES** Comb. | £85 |
| 1919 | 3½ | h.p. **ROVER** Comb. | £90 |
| 1919 | 8 | h.p. **SUNBEAM** Comb. | £112 |
| 1916 | 4½ | h.p. **B.S.A.** Comb. | £65 |
| 1915–16 | 7-9 | h.p. **HARLEY-DAVIDSON** Comb. | £75 |
| 1915 | 2¾ | h.p. **DOUGLAS** | £37 |
| 1913–14 | 3½ | h.p. **TRIUMPH** Comb. | £45 |
| | 2½ | h.p. **CONNAUGHT** | £17 |
| | 3½ | h.p. **BRADBURY,** 2-speed, K.S. | £25 |

**WRITE NOW.**

**R. BAMBER & Co. Ltd.,**

**2, EASTBANK STREET,**

'Phone: 607 **SOUTHPORT.**

An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

# Insurance Policies

**IMPORTANT AGENCY EXTENSION**

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS.

Address—Agency Dept.,

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED**

Head Office:

**77, Cheapside, London, E.C.2.**

*Telephone: City 9831 and 9832.*

*Telegrams: "Autoinsure, Cent. London."*


## EXCHANGE.

EXCHANGES.—Your present motor cycle or car taken in part exchange for a new model. We offer best possible prices. Agents for all leading makes, B.S.A., Douglas, Enfield, Matchless, Rudge, Triumph, etc.; also Rover, Coventry-Premier, Singer, Calcott, Swift, Humber cars, etc. Any make supplied.—Note address, Wilkins Simpson, Opposite Olympia, London. [1717

EXCHANGES.—We have a large stock of slightly used and second-hand motor cycles, combinations, and cars, which we are open to exchange for other models. Cash either way. Any make of car or motor cycle supplied for cash or exchange. Keenest prices quoted in all cases. Earliest deliveries offered. A firm offer will be made by post on receipt of full particulars and make of machine required. Distance no object.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone, Hammersmith 80. [1008

## REPAIRERS.

ANY

ARMSTRONG or Sturmey-Archer Gears Repaired promptly and efficiently.—County Engineering Co., Hounslow. [0517

C. R. FOSTER, of Leeds, is the original cylinder grinding specialist.

CYLINDER Grinding by Foster, of Leeds, has no equal. Price, complete with piston, from 25/-.

£1,000 is the value of the machine and equipment that will grind your cylinder at our works.—Foster, of Leeds, 170, Cardigan Rd. [0003

WHITTALL.—Pistons, any make, cheapest, promptest; accuracy guaranteed.

WHITTALL.—Cylinders re-ground and new complete pistons from £2. Perfection guaranteed. Experts in welding.—Whittall Machinists' Co., Whittall St., Birmingham. [0017

REPAIRS and overhauls to any make of machine.—Bright and Hayles, 78, Church St., Camberwell. [8029

CYLINDERS re-ground, new pistons fitted, £2/12/6.—Bright and Hayles, 78, Church St., Camberwell. [8028

DOUGLAS Repair Specialists.—We specialise in Douglas overhauls and repairs.—Tavistock Engineering Co.

DOUGLAS Repair Specialists.—We specialise in overhauling and tuning for speed and power.—Tavistock Engineering Co.

DOUGLAS Aluminium Valve Caps, with 6 horizontal fins, 2/6 each; approval against cash.—Tavistock Engineering Co., Johnson St., Notting Hill Gate, London. 'Phone: Park 3447. [1099

WELDING Aluminium Crank Cases, gear boxes by experts; immediate attention; seasonable prices.—Below.

WELDING Broken Cylinders, flanges, combustion experts of 11 years' experience.—Below.

CYLINDER Grinding on latest machinery, installed since hostilities ceased; accuracy guaranteed; new pistons fitted.—Sadgrove and Co., 140, Conybere St Birmingham. [4769

REPAIRS and Overhauls, satisfaction guaranteed.—Davies, Engineers, Ferham Works, Foundry St., Rotherham. [1657

ARMSTRONG and Sturmey-Archer Gear Repairs and replacements; all parts supplied from stock.—Tavistock, below.

ARMSTRONG and Sturmey-Archer Gears repaired while you wait.—Tavistock, below.

GEARS.—Any type of gear boxes or gear replacements made to pattern or drawing at competitive prices.—Tavistock, below.

KINDLY Note our new address.—Tavistock Engineering Co., Johnson St., Notting Hill Gate, Park 3447. [1100

ENGINE Overhauls.—Rebushed from 30/-; oversize parts to pattern or sketch.—Moulder, Blackwell St., Kidderminster. [7582

SWIFT Repair Works, 133, Long Acre, W.C. Any make of motor cycle overhauled and renovated. Estimates submitted. [0796

FOR Expert Engine Overhauls, cylinder grinding, new pistons, and spares, Hedley and Co., Forth St., Newcastle-on-Tyne. [1333

INDIAN Owners.—If you have trouble with your machine, send to Indian repair specialists, Dennis, 89, Brixton Rd., London. [1853

FRAME, chassis, and tank repairs, enamelling and painting by experts; prompt deliveries.—Langham Co., Fitzroy St., Leicester. [6097

ENGINES rebushed, overhauled, rings fitted, compression guaranteed. Singles, 35/-; twins, 45/-; returned in three days.—Below.

CYLINDERS reground, new pistons fitted with Brice rings and gudgeon from 25/- to 40/-.—Below.

WE repair any make of countershaft gear.—Turner Bros., Motor Engineers, Summerseat, Manchester. [8834


# RIDEEZI

It is safer for you to purchase in

**18 MONTHLY INSTALMENTS**

*LISTEN HERE!*

We will supply you with any make of

**SOLO or COMBINATION**

complete with Wind Screen, Hood, Lamps, Horn, Number Plates, Licence-holder, any Gadgets.

**FULLY INSURED AND TAX PAID, &c. CARRIAGE PAID**

You can pay a Deposit and the remainder in 18 Monthly Payments.

We will give you a DISCOUNT if you complete the payments earlier.

**We also supply the famous**

**RIDEEZI Sidecars**

**ON 12 MONTHLY PAYMENTS.**

*Send for Lists and Forms, which places you under NO obligation.*

**Please note that we finance ourselves.**

**RIDEEZI SALES**

LIMITED,

**5, VICTORIA STREET, LONDON, S.W.1.**

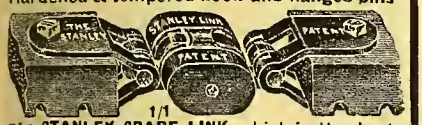
# STANLEY BELTS AND FASTENERS.

MILLIONS ordered and in use by H.M. WAR OFFICE and our ALLIES.

A BOX OF STANLEY SPARES is a complete belt equipment outfit—the best and cheapest insurance you can effect against belt trouble on the road. It contains

1/2 *each.*

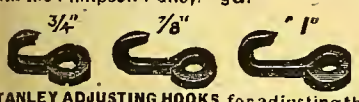
The STANLEY FASTENER with the BEND that NEVER BREAKS, the BEST at any price. Hardened & tempered hook and flanged pins



1/1

The STANLEY SPARE LINK which is the best belt length adjuster yet invented. Saves time trouble & money. Saves the cost of a new belt

The STANLEY SHIELD, which protects the belt fastener, prevents wear of the pulley, and conserves power. Specially designed for use with the Philipson Pulley. 9d.




STANLEY ADJUSTING HOOKS, for adjusting the length of your belt in one second. Set of 3, 6d.

*"Never be without a box of Stanley Spares."*

*Price 3/6 post free. Send size of belt when ordering.*

The LION FASTENER, guaranteed for 5,000 miles—11d.

Our Goods are World-renowned for their Reliability. A STANLEY FASTENER free with each belt.

Belt Punches 1/6
Adjustable Punches 2/
Per ft.
3/8" 1/-
5/8" 1/5
3/4" 1/9
1" 2/-
1 1/8" 2/6

Stanley Motor Belts & Fasteners
BRITISH THROUGHOUT
(STANLEY WEBB, inventor of the original Hook Belt Fastener and other Practical Belt Aids.)
32, London Road,
BROMLEY, KENT. 'Phone, Bromley 806



# DOUGLAS

Terms from 12/6. 100 Apartments. 80 windows overlooking Bay. Exceptional Cuisine. Separate Tables. Everything of the best. Letters and Telegrams—"HYDRO," Douglas.

# "The HYDRO" HOTEL — QUEEN'S PROMENADE.


## REPAIRERS.

ACETYLENE and Electric Welding.—Broken flanges, cracked water jackets, scored bores, worn bearings built up; aluminium gear boxes, crank cases, any broken motor part welded and machined up and returned in 7 days; 14 years' experience.—Lincoln Jeffries, Jun., Gun and Motor Maker, 120, Steelhouse Lane, Birmingham. 'Phone: Central 729. [2818

WHITE and Watson, 80, Belvedere Rd., S.E.1, Motor Cycle Repair Specialists.—In addition to our reboring speciality, we have taken over a new process for aluminium welding. Crank cases, gear boxes, and aluminium parts welded without distortion; all work guaranteed. Reboring prices as usual. 2¾h.p., 3½h.p., and 4h.p. Douglas cylinders reground and fitted with 2 new pistons complete, 35/-, 40/-, and 45/- per pair. Other flat twins from 40/- to 46/- per pair. Other cylinders at the following rates:—Up to 65 mm., 22/6; 70 mm., 27/6; 80 mm., 32/-; 85 mm., 35/6; and over, 37/6 2-strokes extra. Aluminium or steel pistons if required. Brico rings fitted to our rebores as standard, but we will fit the Clewpet endless ring at 4/- per bore extra. Engines re-bushed, re-balanced, and overhauled. Gear boxes overhauled and replacement machined. Business as usual. [1483

## CLUB ANNOUNCEMENTS.

*Space can always be obtained under this heading for announcements required by Clubs. Rate 3d. per word, minimum 3/-.*

## PARTS AND ACCESSORIES.

NOTE: *In addition to advertisements under this heading, advertisements of Spare Parts for individual makes of motor cycles will be found at the end of the advertisements of such makes in the classified pages of "Motor Cycles for Sale."*

A BANISTER and Botten for Douglas Spares.—Without doubt the largest stock in London. All new and genuine. Trade supplied.—Below.

DOUGLAS 4h.p. Engine Spares.—Cylinders with guides (chipped), 25/-; pistons, 9/6; valve caps, 2/-; guides, 1/9; crankshafts, 37/6; connecting rods, 16/-; valves, 2/6; spring, 6d.; tappets, 3/3; guides, 3/9; rings, 1/6; small ends, 1/6; gudgeons, 1/-; big ends, 2/-; camshafts, 15/-; camshaft races, 4/-; housings, 3/-; sprockets, 3/6; main timing wheels, 4/-; magneto, 5/6; others, 5/-; pumps, complete, 9/-; top and middle sections crank case, each 25/-; main oil pipes, 4/6; crankshaft race, narrow, 8/-; induction pipes, 12/6.—Below.

DOUGLAS 4h.p. Gear Box Spares.—Halves casing, 10/-; all pinions, 6/-; mainshaft races, 6/-; secondary, 5/-; bolts, 6d.; dogs, 3/6; mainshaft, 9/-; steel fork, 3/6; bronze, 3/-; pulleys, complete, 15/-; back plate, 10/-; races, 1/-; middle, 2/6; cork, 5/-; front, 6/6.

DRAWBOLTS, 2/6; sleeve nuts, 5/6; kick starter pinions, 2/6; nuts, 1/6; kick starter quadrants, 12/6; worms, 5/6; bridles, 3/6; front bolts, 2/6; rear bolts (kick starter), 4/6; springs, 6d.; all smaller parts.—Below.

DOUGLAS 4h.p. Frames (latest), £7; forks (latest), £5; headlugs, 15/-; rear bottoms, stays, sides, 4/6; fork sides, 15/-; steering columns, 6/6; beadclips, 5/-; races, 9d.; shackles, top, 4/-, bottom, 4/6; spindles, 3/6; springs, 1/6; eyes, 1/9; eye-nuts, 6d.—Below.

DOUGLAS 4h.p. Mudguards.—Rear, 10/-; footboards, brass-edged, genuine, 12/6 pair; carriers 1918, 16/6; carburetter controls, 3/-; magneto, 3/6; wheel rims, 5/6; hubs, 15/-; spindles, 3/-; belt rims, 10/-; cups, 1/-; nuts, 2d.—Below.

DOUGLAS 4h.p. Front Brakes, 18/6; rear, 14/6; rear exhaust pipes, 10/6; silencers, 10/-.—Below.

DOUGLAS 2¾h.p. Crank case, timing side, 30/-; pistons, 7/6; rings, 1/-; connecting rods (complete), 14/-; valves, 2/-; flywheels, 20/-; chains, 5/6; rockers, 3/6; valve guides, 1/6; tappets, 2/-; guides, 1/3; main pinions, 4/-; intermediate and magneto wheels, 5/-; small ends, 1/-; big ends, 2/-.—Below.

DOUGLAS 2¾h.p. Gear Box.—Layshafts, 13/6; plain sleeves, 6/-; large races, 4/-; small, 3/-; pulleys, 5/-; chain wheels, 5/-.—Below.

DOUGLAS 2¾h.p. Front Brakes, 12/6; mudguards, 8/6 each; carriers, 15/-; armoured toolbags, 7/-.—Below.

TRIUMPH Carriers, 12/6; Rudge gears, 2/10 (second-hand); Scott carburetters, 5/-.—Below.

MAGNETOS for Douglas and Triumph.—Bosch, M-L, E.I.C., £3; C.A.V. for Rudge, 50/-; all genuine and unconverted; Thomson-Bennetts 180° and singles, 40/-.—Below.

LARGE Car Toolkits, 21 tools, 16/6 each.—Banister and Botten, 341, Upper St., London, N.1. 2480 North. [1480

3-SPEED ball-bearing foot motors for driving small lathes; 67/6.—Below.

SIDECAR Covers.—Best motor twill; 14/9; complete with turnbuttons; send paper pattern or sketch.—Sterlings, Cobden St., Bradford. [1666


# MAUDE RUBBER Co.

58, PRAED STREET, W. 2
4484 Padd.

WE GUARANTEE YOUR SATISFACTION
and send immediately on 7 days' approval against Cash.

HOURS.—9-7. Sat. 9-6.

| | | |
|---|---|---|
| 24×2¼ | **Avon Ribbed.** Heavy ..... | 18/6 |
| | **Clincher de Luxe.** Ex.Hvy... | 21/- |
| 26×2 | **Englebert** Passenger. Heavy.. | 17/6 |
| 26×2¼ | **Avon** Rubber-studded. Heavy | 22/6 |
| | **Wood-Milne** Key-grip. Heavy | 18/6 |
| | **Wood-Milne** Comb. Ex. Hvy. | 22/- |
| | **Dunlop** Rubber-studded. Heavy | 27/6 |
| | **Goodyear** Diamond. Ex. Hvy. | 25/- |
| | **Firestone** Safety. Ex. Heavy .. | 28/6 |
| 26×2¾ | **Dunlop** Rubber-stud. Ex. Hvy | 36/6 |
| | **Clincher de Luxe.** Ex. Hvy... | 26/6 |
| | **Hutchinson** Rubber stud. Hvy. | 26/6 |
| 26×2½×2½ | **Palmer Cord.** Heavy ..... | 32/6 |
| | **Clincher de Luxe.** Heavy .... | 28/6 |
| | **Kempshall** Anti-skid. Heavy | 27/6 |
| | **Avon** Rubber Stud. Ex. Hvy. | 28/6 |
| | **Dunlop** Heavy. Rubber Stud. | 46/- |
| 26×2½ | **Wood-Milne** Key-grip. Heavy | 13/6 |
| | **Bates Ribbed.** Ex. Heavy.... | 35/- |
| | **Hutchinson** Rubber Stud. Hvy. | 26/6 |
| | **Englebert** Passenger. Ex. Hvy. | 22/6 |
| 26×3 | **Englebert** Passenger. Heavy.. | 30/- |
| 28×3 | **Macintosh** Chain Tread..... | 28/6 |
| | **Clipper-Reflex.** Extra Heavy | 32/6 |
| | **Clincher Ribbed.** Lt. Car. .... | 38/6 |
| | **Avon** S. studded. Extra Heavy | 37/6 |
| | **Wood-Milne** Extra Heavy .... | 30/- |
| 29×3½ | **Dunlop** Extra Heavy ..... | 50/- |
| 650×65 | **Wood-Milne.** Sq. Tread. Ex. Heavy..... | 22/6 |
| | **Englebert.** Sq. Tread. Ex. Hvy. | 22/6 |
| | **Avon Sunstone.** Extra Heavy. | 35/- |
| | **Dunlop** S. studded. Light car | 35/- |
| 700×80 | **Avon Sunstone.** Ex. Hvy .... | 45/- |
| | **Avon Super-Chain.** Ex. Hvy. | 45/- |
| | **Michelin** St. Stud. Ex. Hvy... | 45/- |
| | **Firestone** Grooved. Lt. Car.... | 45/- |
| | **Rodace** Sq. tread. Ex. Hv. Lt. Car | 42/6 |
| | **Dunlop** Magnum Cord, Ex. Hvy. | 52/6 |
| 710×90 | **Avon Sunstone** ..... | 50/- |
| | **Avon Square** Extra Heavy. | 45/- |
| | **Firestone Grooved** ..... | 50/- |

**Tubes.** Brand new **Dunlops, Palmers,** and **Avon.** 26"×2", 2¼", 2⅜" and 2½" 5/6 each. 26×3, 28×3, 650 & 700 6/6 ,,

MADE BY NORTH BRITISH RUBBER Co., etc. Easily Converted to Wellingtons.

RUBBER HIP BOOTS (WADERS)

Thousands sold at 12/6.

8/6

Postage 1/3

All Goods sent on Approval 7 days against cash



# SHOCKSTOPS

INVERTED RUBBER GRIPS

Lightweight, 3/- per pr.
Standard - 5/- per pr.
Extra Long (8½ inches) For Rudge, Triumph, Enfield, &c., 6/9 per pr.
Stocked by Leading Agents.

Non-Inverted (Neat Solid Flange). Standard, 3/9 per pr.

If unobtainable, sample pair on approval, post free (home or abroad), on receipt P.O., or write for full Illustrated List. (Actual size photo.)

T. LLOYD - 12 BRIDGE ST. MANCHESTER.

Try

HEPWORTH'S

The Piston and Ring Specialists

for

Regrinding Motor Cycle Cylinders and Fitting New Pistons, Pins, and Rings

PRICES.

A.J.S., 4 and 6 h.p.; Ariel 3½ h.p.; Bradbury 4 h.p.; B.S.A., 4½ h.p. and Dome head; Blackburne 2¾ and 4 h.p.; Indian 7-9 h.p. and Powerplus; Jap 2¾, 6, 8, and 10 h.p. Norton; Premier 3½ h.p.; Precision 8 h.p.; Rudge 3½ h.p.; Triumph 3½ h.p. (Dish head), 4 h.p. (Flat head), and 1914 Dome head; 35/- each.

Douglas 1914-20 2¾ h.p. 36/- pair.
Douglas 3½ & 4 h.p. 46/- pair.

First Class Material and workmanship and quick delivery.

*Carriage F.O.R. Bradford.*

Please Send Old Piston with Cylinder.

HEPWORTH RINGS conform to Air Board Chemical Analysis and Physical Test.

*HEPWORTH PISTON RINGS were used on the Napier "Lion" engine in the D.H.9 Biplane, which broke the world's altitude record, and also on the same type of engine which was fitted to the machine winning the British Aerial Derby, 1921.*

HEPWORTH & GRANDAGE, Ltd.
Wakefield Road, BRADFORD.



HIGH HOLBORN 236 WEST CENTRAL AGENCY.

A FEW DOORS FROM KINGSWAY.

'Phone: 4676 Holborn.

DEPOT FOR THE

"ARIEL"

The Motor Cycle that holds the Record for RELIABILITY

We carry a large stock of

ARIEL SPARES

and can give IMMEDIATE DELIVERY

MAKE A NOTE OF OUR ADDRESS

PARAGON Patent

FOLDING SIDE CAR SAVES STORAGE

WHEN FOLDED COMBINATION WILL PASS THROUGH 30 INCH DOORWAY.

CALL & SEE IT DEMONSTRATED

GRADUAL PAYMENTS arranged to suit customers' convenience

WINCYCLE COMPANY, LTD.,
236, HIGH HOLBORN, LONDON, W.C.1.
(A few doors from Holborn Tube Station.)


## PARTS AND ACCESSORIES.

AMAUDES' Motor Mart.

STURMEY-ARCHER countershaft gear spares from stock. Plugs, new ex-W.D. Lodge, 2/6; Apollo, 1/6; Bosch, 2/6; voltmeters reading 12 volt, pocket or flush fitting, 4/-; James fork springs, 5-6h.p., 2/- pair; Druid spring, light, 1/6 pair; heavy, 2/-; P. and M. R.A.F. model frame tool-bags, 11/-; back mudguard, less rear portion, 12/6; special offer of Cowey non-trip speedometer complete, new, 90/-; front brakes, new, complete, 2¾h.p. Douglas, 12/9; P. and M., 24/6; B.S.M. polished aluminium discs, 17/6 per wheel; chains, Renolds, new, W.D. surplus stock, for 2¾h.p. Douglas, 6/4; 4h.p. Douglas, 9/6; Coventry, ex-W.D., for P. and M. high gear, 7/-; low gear, 7/6; driving chain, 15/-; set complete, 28/-; any length Coventry ⅝×⅜, 4/6 per foot; P. and H. No. 120 lamp set, shop-soiled, 25/-; black mechanical or bulb-type horn, 11/-; 8h.p. Royal Ruby spindles, complete with cones, front, 5/-; rear, 7/6; 5-6h.p. James, front, 5/-; rear, 7/6; P. and M. front stands, 6/6; aluminium fir-cone valve caps, 5/9; Bowden wire, inner and outer, in 8ft. lengths, 3/6. All goods sent on approval against cash.—Maudes' Motor Mart, 100, Great Portland St., W.1. Museum 581. [1750

FOSTERS.

OUR Spares are genuine and new. Our prices are keener than elsewhere, our stock one of the largest in London, therefore try us and be satisfied at last.—Below.

DOUGLAS 4h.p. Spares.—Cylinders, 30/-; crankshafts, 37/6; valves, 2/6; guides, 1/9; springs, 6d.; caps, 2/; tappets, 3/6; guides, 3/6; pistons, 10/6; rings, 1/6; gudgeons, 1/-; big end bushes, 2/-; small, 1/6; main pinion wheels, 4/-; induction pipes, 12/6; oil pumps, 10/-; worm screws, 1/6; wheels, 1/-; camshafts, 15/-; chains, 9/-; connecting rods complete, 16/-; etc.—Below.

DOUGLAS 4h.p. Gear Box Spares.—Gear box complete with clutch as new, £8/10; screwed sleeve pinions, 6/-; 25 and 19 teeth pinions, 6/-; dogs, 3/6; ball races, 6/-; small, 5/-; clutch plates, back, 10/-; loose, with cork inserts, 5/-; middle, 3/-; front, 6/-; clutch release arm, 6/-; drawbolts complete, 2/6; rear bolts, 4/-; K.S. pinions, 2/6; ratchet nuts, 1/6; springs, 9d.; adjustable pulley, 15/-; etc.—Below.

DOUGLAS 4h.p. Miscellaneous Spares.—Forks, £3; carriers, late type, 16/6; front brakes, £1; handle-bars, 12/6; fork sides, 15/-; springs, 1/6; steering columns, 10/-; head clips, 8/-; ball races, set of 4, 2/6; etc.—Below.

DOUGLAS 2¾h.p. Spares.—Pistons, 9/-; rings, 1/-; gudgeons, 1/-; big end bushes, 2/-; small, 1/6; crankshafts, 35/-; valves, 2/-; guides, 1/3; springs, 6d.; caps, 2/-; tappets, 2/-; guides, 1/3; rockers, 3/-; engine sprockets, 3/-; Renolds chains, 7/-; Coventry ditto, 5/-; silencers, 10/-; etc.—Below

DOUGLAS 2¾h.p. Gear Box Spares.—Chain wheels, 5/-; pulleys, 5/-; screwed sleeve pinions, 8/-; mainshafts, 11/-; secondary, 15/-; operating forks, 6/-; ball bearings, large, 4/-; small, 3/-; etc.—Below

DOUGLAS 2¾h.p. Miscellaneous Spares.—Forks complete, £3/10; fork springs, 2/; links, 1/-; spindles, short, 1/-, long, 2/-; ball races, set of 4, 2/6; front brakes complete, 12/6; etc.—Below.

MISCELLANEOUS.—Tubes, 4/9; flexible steel tubing, 1⅛in. bore, 1/3 per foot; Douglas sidecars, complete with new body, £11; chassis only, as new, complete £5; Thomson-Bennett new enclosed type magnetos, 180°, twins and singles, guaranteed, 37/6; etc.—Below.

FOSTERS.—The quick despatch firm. All goods sent same day on approval, carriage extra; send stamp for lists.—Fosters, 31, Clissold Rd., Clissold Park, London, N.16 'Phone: Dalston 2526. [1582

INDIAN Spares, actual stockists, Dennis, 89, Brixton Rd. London [5375

WILLIAMSON cylinders, pistons, gears, frame and fork parts in stock.—Below.

SINGER, Premier, Rex, and Arden parts in stock; send inquiries.—Below.

TRIUMPH Parts.—Second-hand and new parts for all models in stock.—Below.

GEARS!—Sturmey heavyweight, Moss 3-speed lightweight, and Albion 2-speed, K.S., and clutch model gear boxes in stock; exchanges.—Below.

ALBION 2-speed gear box and controls, perfect, £4; Millennium 2-speed wheel, £4.—Alf. Holland, Hearsall Lane Corner, Coventry. Phone: 1945. [1656

INDIAN Engines, forks, mudguards, handle-bars, gears, clutches, wheels.

INDIAN Magnetos, carburetters, kick starters, and all parts for above.

INDIAN Carriers, chains, springs, sprockets; in fact, all parts for models 1909-1921.

INDIAN Spares.—Vast stock new, also second-hand.—Dennis, 89, Brixton Rd., London; the Indian Repair Specialists 'Phone: Brixton 3129. [8207


OIL

The Quality of your Oil is of paramount importance. Take no risks. Use

CHALLENGE MOTOR OILS

ONE QUALITY ONLY—THE BEST.

Grade H.M. for Motor Cycles will keep its Fluidity at low temperatures.

*Of all Dealers.*

CHALLENGE OIL CO., Ltd.
Stoke Newington, N.16.



The Speedwell "V"

LEG SHIELD

Speedwell Patent No. 83617/20

For Lightweights .. 30/-
For Heavyweights..35/-
Per set complete.

Exhaustive tests prove that their use ensures complete protection increased power and fuel economy through engine cooling without wind resistance.

Through your agent or direct.

When ordering please specify whether outward curve or double curve is required and whether footboards or rests

## PARTS AND ACCESSORIES.

IDE and Clarke for ex-W.D. lamp sets at bargain prices.—Below.

/6.—Largest size Miller, No. 31H, lamp set, complete with latest 1922 generator, finished .—Below.

/6.—Medium size No. 125 P. and H. lamp set, complete with latest 1922 generator, ed ebony. Maugin mirrors, all sizes, 5/-. P. H. brackets, 4/6; Lucas brackets, 5/-.—Below.

UGLAS 2¾h.p. cylinders, new (front only), 25/-; pistons, 6/6; connecting rods, 12/6; rings, 1/-.—

UGLAS 2¾h.p. crankshafts, 25/-; tappets, 2/-; cappet guides, 1/3; valves, 1/6; valve guides, springs, 4d; gudgeons, 1/-; bushes, 1/6.—Below.

UGLAS 2¾h.p. gear box spares.—Chain wheels, 4/6; palleys, 5/-; mainshafts, 7/6; secondary s, 12/6; ball bearings, large, 3/-; small, 2/-; pton chain, new, ½×3-16, 4/-; belt punches, 6d. low.

UGLAS 4h.p. pistons, new, 9/-; crankshafts, 25/-; connecting rods complete, 20/-; gudgeon 1/6; engine sprockets, 3/-; valve guides, 2/-.—

RRIAGE extra on all the above goods. Stamp for reply or list of spares.—Pride and Clarke, Stockwell Rd., Brixton, S.W.9. 'Phone: Brix-398. (Garage entrance, Garden Row.) [1538

LE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3.

SHBOARD Lamps, with bulbs and 2 yds flex. 2 volt; sample, carriage paid, 1/6; 12, 10/6; 80/-.

GLE Valves to fit standing part of any standard sized motor cycle or car valves, 2, carriage paid, lots of 100, 75/9.

ERING Wheels, 12in. bore, ¾in. aeroplane type; price 3/- each; lots of 6, price 15/-, carriage

ASHERS, engineer's bright steel; sample set, 6d.; 1 gross mixed, 2/-; 10 lbs., 11/6, carriage paid; of 28 lbs., 20/-; 56 lbs., 35/-; 112 lbs., 60/-, age forward. Sizes, bore ⅛in. to ½in.; if plated, extra.

NVERSION Wheels for 4-cylinder magnetos, all makes; price 10/- per set; liberal discount to the ; guaranteed quiet running, and to give satisn.

RMS net cash; satisfaction or money refunded f goods returned as sent, within 14 days.

LE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. [0699

.P. Spares Immediate delivery.—Kays, 8, Bond St., Ealing [7224

LINDERS for 2¾h.p. J.A.P., 40/-, while they last. Limited number only.—Below.

IUMPH and Premier Spares. New, second-hand. Most varied assortment in the world.—Below.

IUMPH Spares.—We can supply genuine or pattern parts as your pocket dictates.—Below.

IUMPH Riders.—We supply a special large 2½-gallon tank for this machine. Old tank taken irt payment. Triumph or any colours to order. e for full particuars.—Below.

IUMPH Tanks, complete with fittings, 22/6, 32/6, 42/6, 52/6. Premier tanks, 42/6.—Below.

IUMPH centre portion of frames, 1905-7, 14/-; 1908-13, 27/6; 1914-22, 49/-.—Below.

IUMPH and Premier Repairs and overhauls our speciality. Promptest service.—Forfield.—Below.

IUMPH engine sprockets, 6/9; engine to gear box chains, new, 10/6. Triumph carburetters, 15/-, 20/-, 30/-. Brand new saddle, latest type, .—Below.

IUMPH size tool bags, new, 15/- per pair. D.R. pattern handle-bars, new, 21/-. Countershaft mudguards with stand-clip, new, 12/9. Valanced guard, champion mud-stopper, 12/6. Brooks e, 15/-. Long copper exhaust pipes for Tri-, new, 16/6. Triumph bottom back stays, 17/6. nd B. carburetter, complete with controls, good tion, 21/6. Bosch magneto, single, anti-clock. Triumph 1909 cylinder, 52/6. Ditto crank complete, 60/-.—Below.

EMIER.—Every part in stock. Cheapest and promptest in the trade. Lightning despatch.—w.

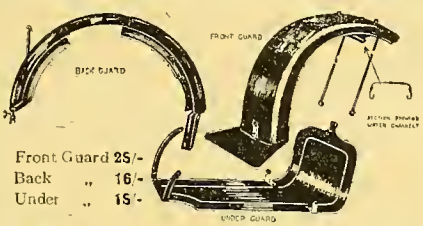
EMIER and Triumph riders in any difficulty, write us. We have opened our Technical Dement to help you. Advice free.—Below.

EMIER, Triumph, Singer, B.S.A., J.A.P., Douglas, Rudge, Sturmey-Archer, Enfield, Hum-We specialise in spare parts for above. Stock mense, cannot advertise a fraction. Write us exact requirements; quotation per return.—w.

ARS.—If you are requiring gears of any description, write us. We specialise in these.—Forfield rs, Forfield Place, Leamington Spa. Telephone: [1310

# HERBERT ROBINSON
## GREEN STREET, CAMBRIDGE. LTD

**THE TRIUMPH SET.**
New wide pattern front and rear
Mudguards give full protection to rider, underguard protects magneto and engine from mud and dirt.




Front Guard 28/-
Back „ 16/-
Under „ 18/-

# SPECIAL BARGAINS

Aluminium rear lamps, **4/-**. Large Side car Lamps, **7/6**. Douglas chain covers, **3/6**. Plated French bulb horns, **7/6**. Large size, **10/6**. Tool rolls, **3/-**. Knee grips, **3/-**. Ditto all leather, **5/-**. Tweed lined overall suits in large sizes only, **45/-**. Leather helmets, **5/-**. Crash helmets, **7/6**. Triumph valve caps, **1/6**. Renolds rivet extractors, W.D., **5/6**. Large repair outfits, **1/-**. Large packets assorted patches, **1/-**. Tool kits, **8/6**. Large standard kits, **18/-**. T.T. motor cycle suits, **45/-**. Tool bags, **8/6**. Gauntlet Gloves, **4/11** pair.

**CRASH HELMETS.**

Approved by the A.C.U., as used in the T.T. Races. Comfortable, light, and give full protection, **37/6**. We have a few shop-soiled Leather American pattern Safety Helmets, clearing at **19/-**.

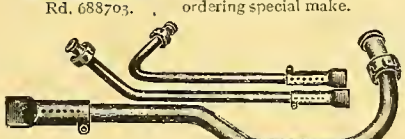
**HANDLE-BARS.**

**SPECIAL OFFER.** Slightly soiled Douglas Flat T.T. ⅞ stem, ⅞ top. Touring, ⅞ stem, 1 in. top. 1921 Flat T.T., 1⅛ stem, ⅞ top. Semi T.T., 1 in. stem, 1 in. top. Touring, 1 in. stem, 1 in. top. Triumph Touring, ⅞ stem, ⅞ top. and 1 in. stem, 1 in. top, all at **14/6** pair. The new Half-moon Flat pattern as now being fitted, 1 in. stem, 1 in. top, and ⅞ stem, ⅞ top. **21/-**.

**ALUMINIUM VALVE CAPS.**
**IMPROVED DESIGN.**

Rd. 688703.

After much experimenting we have now produced an improved valve cap. This is far superior both in appearance and efficiency to any other on the market. In stock for Douglas, Triumph, B.S.A., A.J.S., Blackburne, Rover, Norton, J.A.P., Sunbeam P. & M., 8 h.p. Rover Light Car, **5/6** each. Other makes to order, **6/6**. Please send old valve cap when ordering special make.



**EXHAUST PIPES.**
Straight through direct from engine, no back pressure. In stock for Triumph, Rudge, Rover, Sunbeam, Ariel. Heavy nickel plated. Complete with fishtail, **21/-**. Copper, **27/6**. 2¾ Douglas, nickel plated, **21/-**. Pair fishtails, **2/6** each. Other makes to order in 7 days. Prices on application.

## PARTS AND ACCESSORIES.

TOOL Rolls, Strong Leather, with strap and pockets, 7in.×18in., 3/-.—Below.

KNEE Grips, well padded, porpoise laces, 5/6 pair, carriage paid; cash refunded not approved.—County Legging Co., Perry Barr, Birmingham. [8380

SPOKES, 1/10 dozen.—Easterhouse Engineering Co., Bellahouston, Glasgow. [8433

INDIAN.—New parts. Write us for spares for all models; despatch by return.—Below.

INDIAN.—Second-hand parts in perfect condition are our speciality; all models; approval against cash; prompt attention to all inquiries.—Below.

INDIAN.—1911-15 models. Cylinders, 40/-; pistons, 10/-; flywheels, 20/-; crank-cases, £5 pair; Binks carburetters, 50/-; Cox-Atmos, new, £4/10; magnetos, 50/-; Bosch, £3/10; handle-bars, Renold, 30/-; front, 18/6; silencer, 25/-; saddles, 30/-. All Powerplus spares in stock.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [1654

PHILIPSON Pulley, off 3½h.p. Triumph; bargain, £3.—Powell, 37, Epsom Rd., Leicester. [1474

CASTROL R., 28/6 5 gallons, drum free, carriage forward.—Gwennap, Engineer, Stafford. [1379

TRIUMPH 1911, minus engine, good tyres; £6.—Rowlands, New Rd., Gobowen, Oswestry. [1355

BINKS Carburetters.—Large stock ready for immediate delivery.—Booths Motories, Blackpool.

BINKS Carburetters.—We specialise in these; all models supplied.—Booths Motories, Blackpool.

BINKS Carburetters.—We take your old carburetter in exchange.—Booths Motories, Blackpool.

BINKS Carburetters for Douglas, Scott, Indians, Harley-Davidsons, Triumphs.—Booths Motories, Blackpool.

BINKS Carburetters enable your engine to tick over; try one.—Booths Motories, Blackpool.

BINKS Carburetters save petrol and give more power.—Booths Motories, Blackpool.

BINKS Carburetters.—Let us take your old carburetter in exchange.—Booths Motories, Blackpool.

NEW Sidecar Wheels 19/9, hubs 10/6, rims 5/9, sidecar blades with valance 8/9, with stays and lug 19/9, springs 12/6, 2¼ or 2½ tyres 17/6.—Booths Motories, Blackpool.

MAGNETOS, Bosch and C.A.V., weatherproof, cheap; magneto for Douglas, 45/-.—Booths Motories, Blackpool.

150 CARBURETTERS.—Nearly new 1920 carburetters: B.S.A., 38/6; Brown and Barlow pilot jet, 45/-; double lever Amac, 45/-; automatic Amac, 32/6; Capac for Douglas, 32/6; 1921 models Capac, 38/6; Flexi and S.U. for Douglases, 30/-; good Brown and Barlows and Amacs, 22/6; 1920 Binks, 50/-; carriage 1/3 extra.—Booths Motories, 294, Waterloo Rd., Blackpool. [9319

N.S.U. Gears, several, £5/10 each; good order; state machine.—Box 9861, c/o *The Motor Cycle*. [1677

THE promptest firm for J.A.P. spares and repairs.—Forfield Motors, Forfield Place, Leamington Spa. [4459

BINKS Latest, as new, exchange for Senspray; sell 50/-.—C. Patrick, 143, Whipps Cross, Leytonstone. [1486

TRIUMPH Countershaft Spares.—Centre frames (new), 80/-; top stays, 20/-; bottom (new), 60/-.—Below.

TRIUMPH Chains.—Renolds, new, 11/6; chain covers, 14/6; sprockets, 12/6; tanks, 32/6.—Below.

TRIUMPH Magneto controls, new, 5/6; carburetter controls, 12/-; footrest sockets, 6/- pair.—Below.

STURMEY-ARCHER Spares.—Clutch control, new, 5/6; sliding pinions, new, 7/-.—Below.

SIDECAR bodies, underslung, coachbuilt, for Triumph, as new, £5; commercial, suit butcher or provision merchant, £5.—Below.

TRIUMPH Riders.—Everything for the Triumph in stock; also Sturmey-Archer spares and complete gear boxes always in stock.—Miles, 11, Chichester Rd., West Kilburn, N.W.6. (1 minute Kilburn Park Tube.) [1802

A.K. Knee Grips, new genuine, shop-soiled, 7/6 pair; new Rotherham petrol taps, 1/3 each, carriage paid.—Below.

250 STEEL Bolts, pins, set screws, nuts, hexagon, useful assorted parcels; 5/-, carriage 1/-.—Below.

VALVES, high grade Douglas exhaust, 2/6 each.—Below.

ALUMINIUM Footboards, 9/6 pair, post 1/6.—Below.

BINKS 3-jet, latest, suit 4h.p. h.o. twin Humber; £2/15; exchanges considered.—Below.

SPARE Parts, machining, replacements, bushes, gudgeons, pistons, anything made, splendid workmanship.—O. E. Carter, Motor Expert, 17, Webster St., Greenheys, Manchester. [1497

WILLIAMS & JAMES

CYLINDER GRINDING MACHINES.

GLOUCESTER

**Cylinders reground**
**and fitted with new Pistons complete.**

**Two Stroke.**

Enfield, Triumph, Levis, Velocette, Ivy, T.D.C., New Hudson; Allon, O.K. Union, Villiers... **50/-** ea.

**Four Stroke Singles.**

2¼ and 2½ Jap, Premier and F.N. ... ... **38/-** ea.
A.J.S., Norton, 3½ Humber and Triumph... **45/-** ea.
3, 3½ and 4 h.p. Jap, Premier, Rover, Rudge **48/-** ea.
3½ and 4½ Precision, James and Bradbury **50/-** ea.

**Four Stroke Twins.**

2¾ Douglas, Enfield and 3 h.p. Jap... ... **58/-** pr.
3½ and 4 Douglas, 5 and 6 Jap, and 3½ James **70/-** pr.
5/6 Indian, A.J.S., Humber, Rudge, Brough, 8 and 10 h.p. Jap, 7/9 Indian, Harley-Davidson, Clyno, A.B.C. ... ... ... ... ... ... **80/-** pr.
Four Cylinder F.N. ... ... ... ... **115/-** set.

**Other Singles, 50/-. Twins, 80/-.**

*Prices include return carriage.*

OFFICERS'

**TRENCH COATS**

**Check-Lined and Oilskin Interlined 57/6 and Detachable Fleece-Lining.**

SIMILAR COATS SOLD ELSEWHERE AT 70/-

BLUE

**TRENCH COATS**

**45/- & 52/6**

**Check-Lined** **Check-Lined and Interlined.**

THESE COATS ARE WOOL GABARDINE AND ARE WONDERFUL VALUE AT THESE PRICES.

Sports Jackets, **17/6, 22/6, 25/-, 27/6, 30/-** and **35/-**
Flannel Trousers, **10/6, 12/6, 15/-, 17/6, 20/-** and **25/-**
Dinner and Dress Suits .. **60/-** to **120/-**
Lounge Suits (Second-hand) **35/-** to **70/-**
Lounge Suits (New and Misfit) **40/-** to **90/-**

*ALL GOODS SENT on SALE or RETURN*

Money returned if dissatisfied.

*Illustrated Price List and Self-Measurement Form sent on application.*

**GENTS.' CLOTHING BOUGHT, SOLD, OR TAKEN IN EXCHANGE.**

**MOSS BROS.,** ('Phone: Park 4817)
**83-5, High Street, Notting Hill Gate, and 224 High Road, Kilburn, N.W.6.**


## PARTS AND ACCESSORIES.

SEND for free leaflet on Care of Valves.—New Ways, Ltd., Middleton Hall Rd., King's Norton, Birmingham. [8670

SADDLES.—Brooks B170, rebuilt as new, 21/-, postage 1/6; third year.—Gosford Engineering, Ltd., Coventry. [1554

VALVES for 1914 to 1918 6-8h.p. J.A.P. engines, 4/6 each; guides, 2/- each.—Storey, Petersham Rd., Surrey. [9288

MUDGUARDS.—Extra large 7in. domed mudguards, heavy gauge, slots in front for forks; 32/- pair, enamelled.—Below.

SILENCERS.—Large silencers, exhaust pipe and long tail pipe, new, 15/- complete; brake shoes, blocks, and pedal, 7/6.—Ashgate Garage, Edgedale Rd., Sheffield. [1499

HEAVYWEIGHT B. and B., 12/-; 8h.p. J.A.P. con. rod, bushes, 10/-.—Patterson, 2nd Divisional Signals, Aldershot. [1453

COPPER Exhaust Pipe (solid copper tubing), polished, all sizes stocked; straight, from 2/- foot. Bending a speciality.—Evans.

TRIUMPH Pipes, special offer, complete with clip, long copper, 14/6; steel, 12/6; plated, 16/6.—Evans.

DOUGLAS, 2¾h.p.; copper, 12/6 pair; steel, 10/-.—Evans.

RUDGE, Sunbeam, Rover, Norton.—Copper, 20/-; steel, 13/6; plated, 17/6.—Evans.

NEW IMPERIAL, Omega, Levis, etc.—Copper, 14/-; steel, 10/6; all T.T. bends.—Evans.

MUFFLER Ends (Norton pattern), detachable, fish-tailed, various sizes stocked, from 2/6.—Evans.

FOOTBOARDS.—Solid aluminium, upcurved front and heelpiece, with adjustable clips, 12/- pair; with fittings for Douglas, 12/-; complete with rods for Triumphs, 14/-.—Evans.

TOOL Boxes, armoured, suit Triumph, etc., 10/6 pair; with locks, 12/6 pair.—Evans.

HANDLE-BARS, plated, Triumph pattern, W.D or D.R., ⅞in. 15/6, 1in. 14/6.—Evans.

LEGSHIELDS, suit all machines, enamelled and gold lined, complete, 13/6 pair; aluminium, 15/- pair.—Evans.

WHEELS from 42/- pair; to suit standard Triumph, rear, 60/-; front, 30/-; complete; specials built to order; any parts supplied.—Evans.

BELT Rims.—Standard Triumph 10/6; any size to order, 16/6; tyre rims, 10/6; spring forks from 50/-.—Evans.

CARRIAGE Free, cash with order, discount to trade.—Evans Bros., Brougham St., Hockley, Birmingham. [1644

CAMEO Windscreen, perfect, few 4h.p. Triumph parts; 30/- lot; no approval.—27, Gleaves Rd., Eccles (Lancs.). [1587

ENGINE, magneto, and chain sprockets promptly manufactured.—Ridington, 202-204, Southampton St., Camberwell. [3400

INDIAN Spares, vast stock, new and second-hand.—Dennis, the "Indian" Repair Specialists, 89, Brixton Rd., London. [5376

**150** SCREWS, nuts, washers, set screws, 3/-; 144 bright steel bolts, 2/6; 72 bright hexagon nuts, 2/6.—See below.

**72** BEST Spring Washers, 3-16in. to ½in., 1/9; 36 castle nuts, ¼in. to ½in., 1/9.—See below.

**144** Coppered Bifurcated Rivets, 8d.; 12 8in. hacksaw blades, 1/6; any of the above carriage paid.—Wood, Tithebarn St., Preston. [5566

COWEY Speedometers, non-trip, brand new, complete, 80/-, post free; cannot repeat.—Godstone Motor Garage, Surrey. [9208

**250** BRIGHT Steel assorted nuts, studs, bolts, etc., sent, carriage free, 10/- approval.—Palmer's Garage, Tooting. [1152

P. and M.—Just arrived, 10 incomplete machines; £17/10 each; 1918 machines renovated and guaranteed; £45.—Below.

P. and M. Engines, £7/10; gears, £5; forks, 70/-; wheels, 17/6; tanks, 15/-.—Below.

P. and M.—All new, magnetos, £2; chain case, 5/6; saddle, 25/-; valves, 5/-; piston rings, 1/-; bushes, 1/-; K.S. chains, 2/-; frames, 50/-; foot-rest rubbers, 2/- pair; valve caps, 3/6; gear operation boxes, £1; gear chains, 9/6; silencers, 17/6.—Below.

P. and M.—All parts stocked. Immediate delivery. Inquiries, stamp please.—Below.

P. and M.—The Specialist Agent, Lewis M. Inman, Durham Rd., Seaforth, Liverpool. 'Phone: Waterloo 296. [6248

BRAND new Burman, 2-speed, K.S., clutch, complete with controls; £7/15.—Davies, Villa, Chesswardine, Market Drayton. [1412

SOLUTION, quick drying, strongest adhesive, non-flam. (odourless); sample 7d.—Bateman, Rubber Footwear Specialist, Hammersmith. [7620


**ASTRA**

**HIGH CAPACITY ACCUMULATOR SET.**

Solo, **£3 18**
Sidecar, **£4 15**

**Head Lamp:** 6in. front, adjustable focus, fitte with high efficiency 8 c.p. bulb. **Accumulator:** volt, 40 amp., specially strengthened for moto cycle work. **Tail Lamp** combining detachable in spection lamp and complete with bulb. **All Lamp fitted with self-contained switches. Wired up** wit best quality twin rubber covered cable, ready fo instant fitting.

**LAMP SETS** complete but without accumulator Solo, **£2 11 6**; Sidecar, **£3 8 6.**

*The above Sets can be converted to Dynamo sets fo* **£7 10 2** *extra including all standard fittings.*

**The ASTRA Dimmer Switch & Current Economiser** which can be instantly fitted to any lamp, with standar double contact S.B.C. holder and adapter, **7s. 6d.** post fre State voltage and candle power of head lamp bulb whe ordering. *Full particulars and Catalogue fre*

**THE ASTRA DYNA O CO**
**110, Victoria Street, Westminster, S.W.**
Telephone: VICTORIA 7544 and 7545.

**JULIANS OF READING**

**YOUR LAST CHANCE.**

**Raleigh** 2¾ h.p. 2-speed **£68**
**Matchless** Combination Touring Model 'J' **£150**
**Enfield** Combination - **£140**
**Levis,** 2-speed - - **£58**
**Triumph Ricardo** - **£120**
**Triumph,** Model 'H' - **£105**
**Norton 16 H** - - - **£115**
**Ariel** 3½ h.p. 3-speed - **£9**

**H. JULIAN,**
**84, Broad St., Reading.**
'Phone: 1024.

THE MOTOR CYCLE

ESTABLISHED IN 1903

TWENTIETH YEAR OF PUBLICATION

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## Lesser Popularity of Speed Events.

LAST year more than 60 per cent. of the open motor cycle competitions took the form of speed trials or, what is much the same thing, timed hill-climbs; this year's fixture list of important dates consists mainly of reliability trials, speed events being almost rarities.

This is no doubt in part due to the stand which *The Motor Cycle* made regarding the unwieldy nature the latter type of competition tended to take, often making it wearisome to riders and spectators alike. Racing against the clock lacks any considerable element of the spectacular, and is only interesting if the course (in the case of a hill-climb) be difficult, if the number of classes be curtailed to a minimum, and if the onlookers are able to follow the times, etc., in a fully intelligent manner. If these considerations are kept to the fore, the limited number of open speed trials to be run during 1922 should gain in importance over anything of the kind previously organised, and the very fact that they are limited should further enhance trade and public interest.

## Unmechanically Fitted Sidecars.

SIDECAR attachments and the evils of bad alignment have been discussed in our pages almost *ad nauseam*, but machines are still to be seen on the road every week-end which are not only an offence in the sight of mechanically-minded people, but are actually ludicrous and even dangerous in appearance to the eyes of the everyday world.

Of course, the trouble is chiefly apparent on old machines, especially those not fitted with the maker's own sidecar. An outfit that has seen several years' service in various hands naturally may have suffered, for it is unlikely that the passenger attachment is secured to special lugs built into the frame.

Much of the pleasure of driving a sidecar is lost if the cycle leans in towards the attachment appreciably, for all responsiveness in handling is lost; moreover, the defect encourages a slovenly and ungraceful attitude on the part of the driver, who, to counteract the effect on the steering, often sits with one foot up on the sidecar chassis, his body twisted, and the saddle supporting any part of his anatomy than that for which it was designed. It is such machines and riders which bring discredit on the motor cycle movement generally, and as there is no need for even old machines to remain thus out of adjustment it behoves every self-respecting rider possessing such an outfit to see that it is lined up and gives an appearance of mechanical correctness before it is again seen on the road.

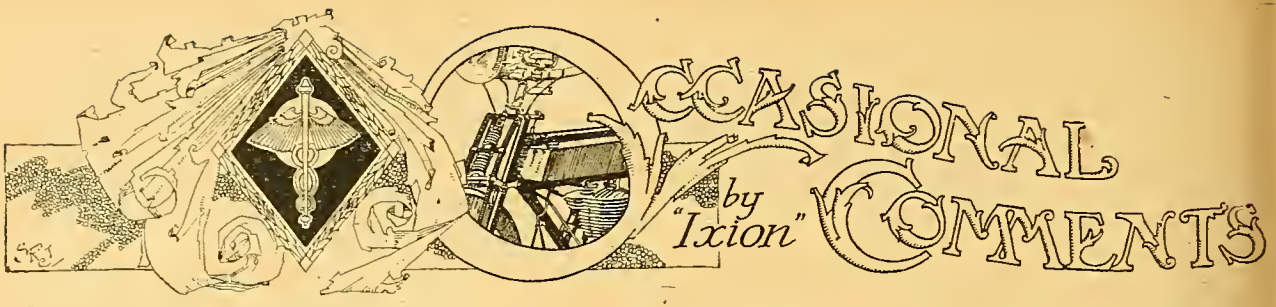
## The Amateur Road Race.

ON Friday last the Auto-Cycle Union reversed its attitude towards the Amateur Road Race which the Manx Motor Cycle Club proposed to hold during the T.T. week. Distinct encouragement was given to the Manx delegates when they first approached the governing body, and "permission was granted for the club to apply for a permit."

In the meantime other influences have been at work. When the Manx delegates formally made application for an open permit on Friday last, it was resolved, for reasons which are stated in another page of this issue, that no permit for an amateur road event on the Wednesday between the two T.T. races would be granted.

The greatest objection was that the committee felt that if such a race had been held between the two T.T. races it would have been to the detriment of the latter.

An index to the advertisements in this issue will be found on Supplement ii.




## Ambitious Amateurs.

LAST week brought me quite a batch of letters, running somewhat as follows :—

"DEAR IXION,

"Motor cycles are the only things I live for. I am at present employed in an office, which I hate.

"I have a 2¼ h.p. baby two-stroke.

"I have occasionally begged a ride on a friend's machine.

"Can you introduce me to some firm who would give me a mount in the T.T., or otherwise assist me to a start in the competition world?"

Obviously, any firm which has lots of young mechanics or apprentices on its own premises, lads who understand and possibly ride the firm's machines better than 80 per cent. of the concern's customers, are unlikely to look far afield for a recruit. So keen is the rivalry in the motor cycle world to-day that it is just as hard to excel in it as anywhere else. I can give no counsel to these discontented penpushers than the disappointing maxim that there is always room at the top. The only royal road into the inner circle of racing men is to tackle them at their own game, and hold your own with them. This is much harder than it used to be, for racing is so specialised that a crack concern will often employ (*a*) a special technical man; (*b*) a picked rider; (*c*) a small experimental workshop. Hence the sagest advice for most would-be T.T. winners is that they should stick to their present jobs until they earn enough to purchase a machine, and then enjoy motor cycles in an amateur status. Nevertheless, the really clever youngster, possessed of sufficient ready money to put in a season's hard work at competitions, may achieve sufficient success to secure a subordinate job on a trade staff.

## About Insurance.

THE rise in premiums coincided with a friend's purchase of a 3½ h.p. machine valued at £85. His meditations ran somewhat as follows: "Better have full cover, and I may lend it to a pal occasionally." The quotation from a tariff company (he fancies there must be some snag in the non-tariff rates) was £6 10s., plus 50% for covering any licensed rider; total, £9 15s. Subsequent reflections were to the following tune: "Dash it all, this is almost as expensive as electric lighting. Let's ask the agent where I can economise." The reply was that if he cared to be content with cover against the three worst foes of the unlucky rider, viz.:

1. Third-party risks.
2. Fire.
3. Theft.

the premium would be £2 14s. plus 27s. extra for covering any friend to whom he might grant a ride. So he decided to be churlish and never to let anybody else drive, so that he is actually paying £2 14s. But it is interesting to notice that covering an £85 500 c.c. machine against accidental damage costs £3 16s. It shows what a lot of petty accidents some folk have, and what almighty smashes occur to quite cautious persons who take the precaution to insure. I must confess that I had a fancy the motor thieves were principally to blame for the rise in premiums.

## The Prop Stand.

MY 200-mile-in-a-day runs are interspersed with other days in which I may not cover 50 miles, and may make as many as thirty stops. At some of these stops there is a kerb handy, against which to support the machine; at others, there is no kerb. My machine weighs 282 lbs. My rear stand is not spring operated, and is not remarkably well balanced, *i.e.* it is rather long and high, and its feet, when in action, are well forward of the rear spindle. So whenever I use it I have to wander round to the tail of the machine, stub the stand with one foot, and haul quite hard with both hands to pull the cycle up. It follows that my enthusiasm for the prop stand, which saves me so much time and exertion, remains undiminished.

## About Jets.

A HARD rider discourses interestingly about jets in a private letter to me. He eschews the various patent variable jets, because he has noticed them leaking on his friends' machines (incidentally, I have not yet sustained this trouble either with the old B. and B., the W.S.R., or the S. and P.). His only road stops are due to choked jets and punctures, so that in theory the variable jet appeals to him as being remediable without tools. He also uses benzole when obtainable, but often he cannot get it on tour, and is then reduced to petrol; and the closed-up 32 jet, which suits benzole on his Triumph, sets up pernicious knocking on pure petrol. So he has to carry a larger jet in reserve for use with petrol; and here, again, a variable jet would suit his needs.

This letter furnishes two strong arguments in favour of the variable jet, and indicates that the firms who market such devices should take steps to reassure a suspicious public against the dread of leaking joints. Short memories, my friends. Most trade riders used handle-bar controlled jets in the last A.C.U. Six Days.

**Occasional Comments.—**

## Mrs. Malaprop.

MY literature is very rusty nowadays, but I fancy it was Sheridan who invented the widow with a knack of using words in their wrong senses. Had the cynical playwright lived to-day, and sampled the fierce joys of motor cycling, how he would have enjoyed a neighbour of mine, who instead of saying "I accelerated" always remarks "I *exhilarated!*"

## The Trade and Trials.

THE correspondence columns of the trade papers indicate that there are sharp divisions of opinion both amongst manufacturers and agents as to the value of our numerous competitions, and the justification of the expense which they imply. Naturally in such a quarter the influence of competitions upon sales is regarded as paramount; and the support which trials receive from traders—an *increasing* support—shows that the majority of the trade recognise that competitions are valuable, even from this comparatively sordid standpoint. My own view is that a large percentage of adults take a very mild interest in freak trials and sprints. But you should catch your motor-cyclist young, if possible, as the Army and the Church try to catch their men young; and it is the competition side of the sport which bites the youngster every time. Any material reduction of the competition programme would be reflected promptly in sales statistics.

## A New Industry.

HERE'S a cutting from the *Barnet Press*:—

> Experienced motor cyclist in London, N.W. district, offers sporting ladies or gentlemen desiring exhilarating country rides the comfortable pillion seat on his special solo motor cycle, 6d. per mile; distance no object; passenger weight limit 9 stone.

I've given many sporting ladies pillion rides, but it never occurred to me to charge them 6d. a mile. Oh, and here's another; from the *Daily News* this time:

> An "Aerial Orient Express" from London to Constantinople is to be started on Saturday. The flight of 2,000 miles will take 40 hours. The fare is £37 10s.—roughly 4½d. per mile.

When I get my wages on Saturday, I will have a few sixpenny miles behind "Experienced Motor Cyclist"; but when I win a T.T. sweep at Douglas, I will have a few 4½d. miles in the air along the Balkan route.

## Dud Bulbs.

UNDER this heading I described what was to me a novel experience with an electric lamp, the bulb refusing to light up, though the filament remained intact, so that I presumed an internal short in the socket. A reader suggests that a leak may have destroyed the vacuum and admitted the air, in which case the filament might convey the current and complete the circuit, but would be so far cooled by the air leak that it would not become incandescent.

ON BEGGAR'S ROOST IN THE LONDON-LAND'S END TRIAL. Spectators gathered on the hill in the early hours of the morning of the 15th, expecting to see some fun. They were not disappointed, for many of the sidecarists were unhappy on the loose surface, although most of the solo riders made fine ascents. T. J. Ross (996 Matchless sidecar) and S. T. Glanfield (269 Cotton Villiers) are shown on a steep portion of the hill.

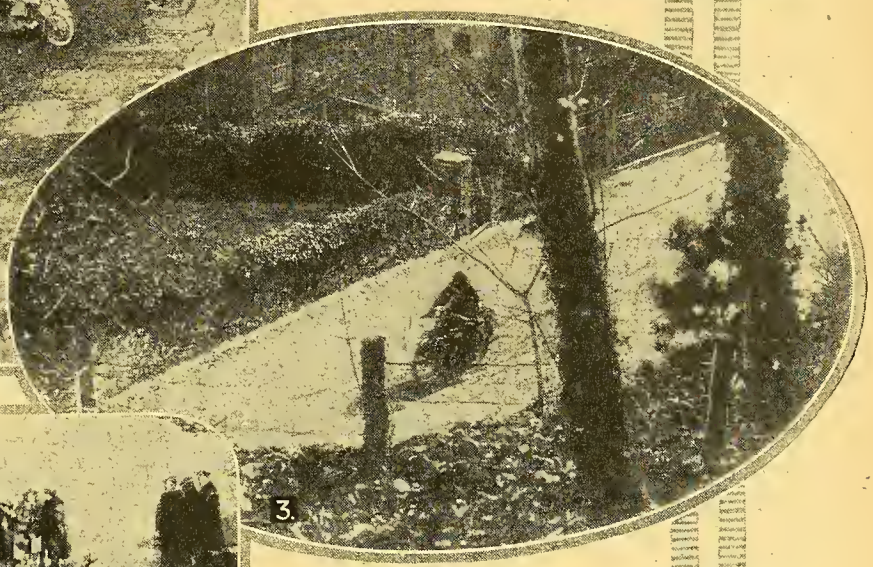
## ON A SOMERSET GRADIENT—LONDON-LAND'S END TRIAL.

An impression of the Porlock climb at the second hair-pin. By F. Gordon Crosby.

# PICTORIAL ECHOES OF THE LAND'S END TRIAL.

1.

2.

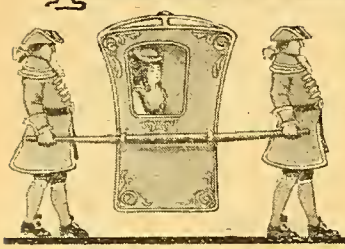

3.

4.

5.

(1.) C. W. Vallings (500 Dunelt sidecar) passing through Truro. (2.) B. L. Bird (770 B.S.A. sidecar) making a good climb up Beggar's Roost. (3.) An unusual view of Lynton. (4.) Sun-glare hampers E. J. Walter (496 Zenith-Bradshaw) and J. W. Troughton (550 X.-L.) on Beggar's Roost. (5.) Spectators going to the assistance of F. W. Becker (688 McKechnie sidecar) on Lynton.

# Passenger Machine Topics



By Friar John.

HOW suggestive, how full of optimism are the words "Preparing for the Tour"! No one, not even the grumpiest of individuals, ever prepared for a motor cycle tour except in the highest hopes and with the rosiest anticipation, not even "Wharfedale," who incidentally openly admitted, in his article in the Spring Number, to the luxury of being a pessimist. I, too, agree that one never finishes packing in an amiable frame of mind—that is, finishes packing a sidecar the occupant of which is to be his wife and perhaps a youngster to boot. But, dour "unlucky" "Wharfedale," how melting, how pathetic, how prophetic was the prelude to your final hints—"much-married men need no advice on the subject of what to take on a tour"; the responsibility is taken from them; theirs is but to pack, "theirs is but to do or die"—and the final sentence, how bitter and disillusioned. "Even then she will want to put the soap and sponge in your haversack." The advice, however, that "Wharfedale" offers on the subject of packing is sound; advice founded on practical experience, no matter how bitter or soul-searching, even on such a prosaic subject of packing luggage on the sidecar, must always be fascinating.



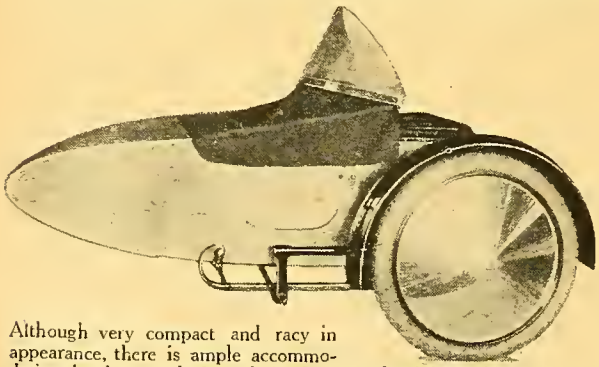
DYNAMO lighting has deservedly become popular on both sidecar and solo mounts, the majority of manufacturers offering at least one of their models so equipped. Everyone will admit, too, that the greatest bugbear of night riding—the keeping in order of acetylene sets—is totally eliminated by the use of a good dynamo lighting set. But for the sidecarist who cannot afford that luxury, or whose night riding is of short duration, a dry battery is certainly worth considering. A thoroughly sound production by Messrs. Siemens Bros. & Co., has been sent to me for testing purposes. It is one that should appeal to the rider who has to use his machine for, say, a quarter of an hour every night—at this rate the dry battery should last six months or so.

The set is sold complete with a plain but well-finished head, side, and tail lamps, and a switch which can be attached to any convenient place on the sidecar body, the batteries, of course, being carried under the sidecar seat.

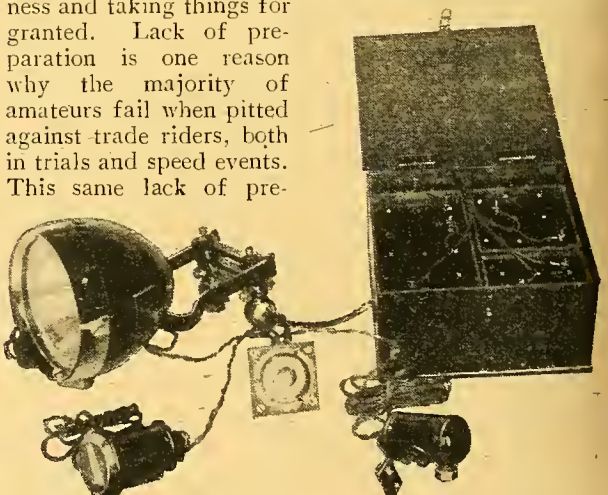
When the light from the sidecar lamp shows decreased brilliancy a lower voltage bulb, say 3.5 volt 0.2 amp., can be utilised. Spare head and rear bulbs are included in the equipment.



THE first week of real warm spring-time weather will bring out sidecars that have been stored practically the whole of the winter, and with the sunshine will come the owner who prepares and overhauls his machine on the roadside. Year by year the motor cyclist grows better in this respect, but it must be admitted that the proportion of motor cyclists to car owners found effecting repairs on the roadside is unduly high. This can only be attributed to carelessness and taking things for granted. Lack of preparation is one reason why the majority of amateurs fail when pitted against trade riders, both in trials and speed events. This same lack of pre-



Although very compact and racy in appearance, there is ample accommodation in the rear locker of the Bowser aluminium sidecar for a tin of petrol and for the wind screen. The price is £32 10s. 0d.



A Siemens dry battery lighting set of interest to sidecar owners.

**Passenger Machine Topics.—**

paration at the commencement of a long spell of riding is the cause of half the worry on the roadside. Outfits are taken out after the most perfunctory overhauls, renewals and repairs only taking place when a particular weakness has manifested itself whilst riding. The astute owner, however, of an aged outfit will by now have had his machine thoroughly examined. Everyone is liable to a puncture or an accident, but little sympathy can be offered to the man who wastes his own time and sometimes other people's on roadside repairs which might easily be obviated by five minutes' careful scrutiny at home.

Here are a few things the sidecar owner ought to do if he is to ride with that feeling of security that adds to the pleasure of the road :—

Take out all inner tubes and carefully examine for loose patches and minute cracks.

See that spare tubes are in good condition. Renew the valve rubbers.

Stop all cuts and gashes in the tyre; see that the outfit is complete, and that the solution is not dried up.

The ends of the belt may be perished; examine carefully, and see if it has started to "pull out," even slightly.

Examine the chain, link by link, and do not risk a breakage; if very worn get a new one.

Adjust tappet clearances.

Grind in valves—see that the spare is the correct length and carefully packed, and not rattling about amongst the tools.

Carry a spare spring and cotter.

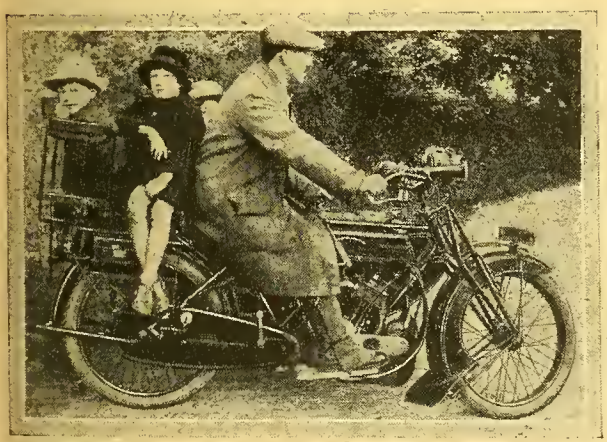
Oil bicycle bearings; even they require attention occasionally.

Don't forget the gear box.

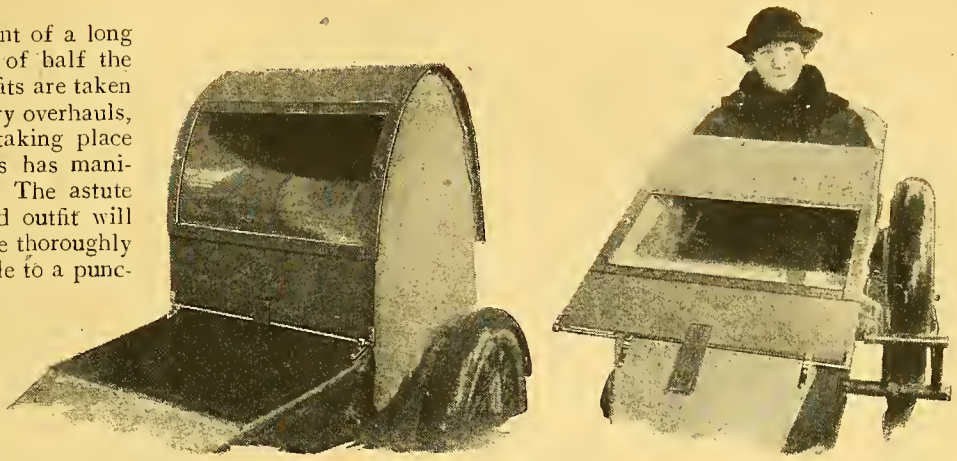
Carry spare carbide always, and see that the burners are in good order.

Flush out the tank with petrol by screwing out the waste cock, clean out float chamber and petrol pipes.

All these are very obvious hints, which is one reason why they are not followed as they should be.



A reader's happy idea for accomodating two juveniles on his outfit without the use of a tandem sidecar.



The latest Coupé combined hood and screen, a device light in construction but unconventional in appearance.

A HOOD and screen for £4, and weighing but 6½lb., is an attractive proposition; this is the price and weight of the new Coupé windscreen by T. A. Simpson, Portsmouth. The unconventional appearance of this little device should be no drawback to anyone requiring an effective and cheap protection for his passenger. Since the Coupé screen was described in *The Motor Cycle* (August 4th, 1921), detailed improvements have been made, an extra cross member has been fitted at the middle of the frame to prevent the water-pressed twill sagging overhead, and bends in front and back tubes are now eliminated.



THE double pillion shown on this page with the seats arranged jaunting-car fashion seems an excellent arrangement, especially from the point of view of the passenger, who has probably had enough of the "little dears" with her in the sidecar at one time or another.

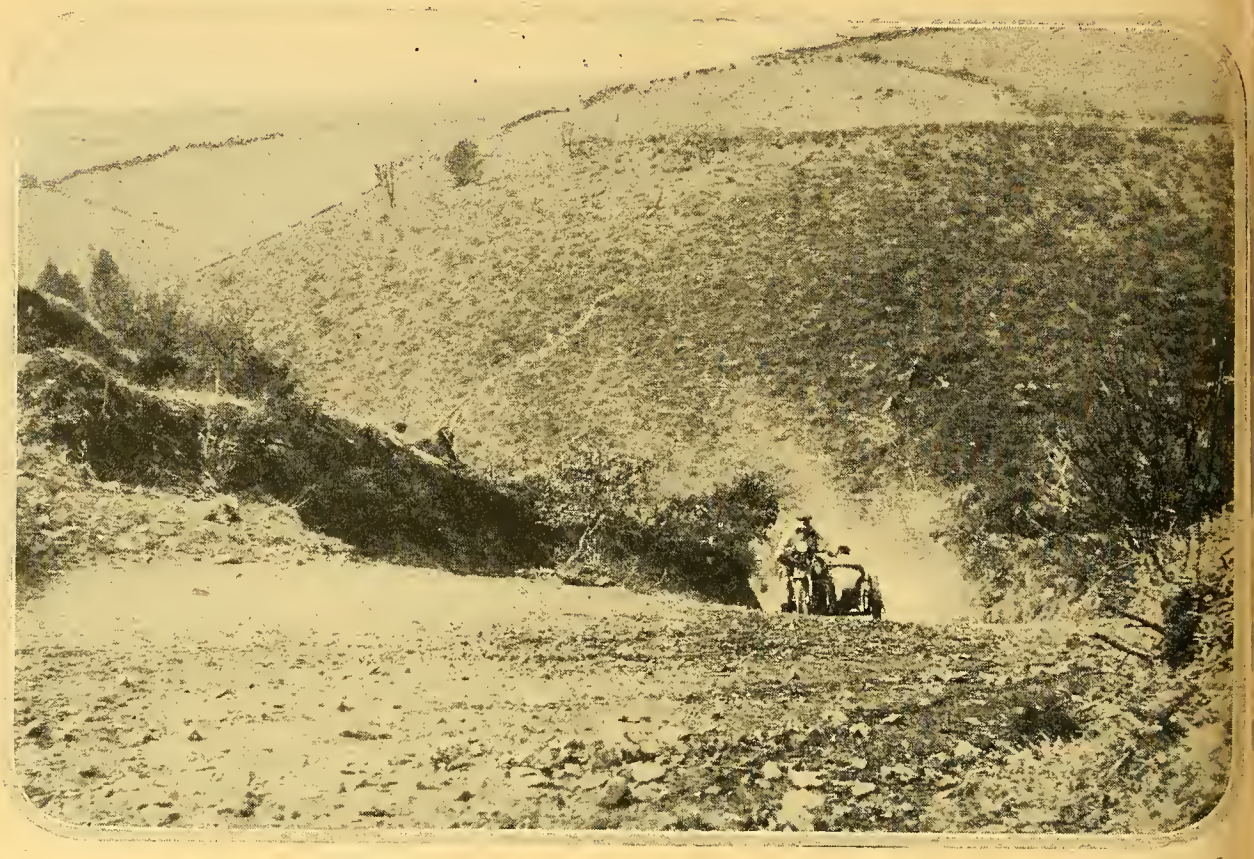
"Sweet recreation barred, what doth ensue,
But moody and dull melancholy."—*Comedy of Errors.*

SHAKESPEARE was indeed an optimist, believing firmly in sport. He took up his characters in the hollow of his hand and bade them dance his tune of tragedy or comedy in no high-brow spirit. Had he lived to-day he would just as likely have immortalised some lusty motor cyclist Adonis as he did the horsemen of his day, or a Venus in a sidecar as surely as he mirrored the milkmaid or the queen. But whoever the character that danced to his tune, and whatever tragedy overtook him, there would run the silver thread of humour through the play, and the spirit of sport and recreation would pervade the atmosphere.

No, perhaps this is hardly a passenger-machine topic, but how can I better remind those who are yet ignorant of the pleasures of the motor cycle (and there are many, even though they read *The Motor Cycle*) than that the great William penned those immortal lines knowing the ways of men and the absolute necessity of relaxation, and there is no recreation under the sun that can chase away "dull melancholy" like the sport of motor cycling.

# A RIVAL TO BEGGAR'S ROOST.

## Hill-hunting Expeditions in North Devon Provide a New Find between Lynton and Barbrook Mill.

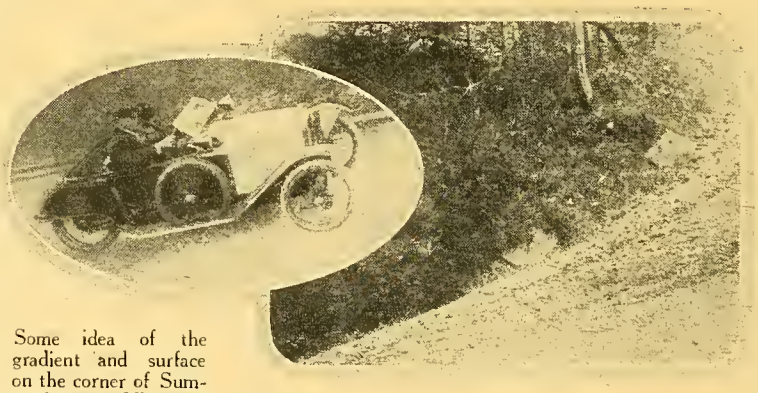


Breasting the 1 in 3·6 portion of Beggar's Roost in good style, R. W. Duke (7 James sidecar).

EXCEPT for the fact that the roadway is narrow, a defect from the competition point of view, there is a test hill near Lynton vieing in severity with Beggar's Roost. Known as Summerhouse Hill, and situated between Lynton and Barbrook Mill, it may be familiar to some of our readers. There are three bends, two of them acute; the gradient in parts must be quite 1 in 4, and the surface is loose, but passable.

We were introduced to the gradient by a group of members of the Birmingham Motor Cycle Club, who, knowing our penchant for hill climbing, dug us out of the comfortable fastnesses of the Lyn Valley Hotel, Lynmouth, to essay the new climb. The Birmingham riders were fresh from the Sangster Cup Trial to Weston-super-Mare; incidentally, they had experienced a terrific gale in that event, trees being encountered across the road in three places, necessitating a detour.

With sun shining on the lower reaches, there was actually thick snow at the top of Summerhouse Hill. First F. Hayes, driving a 10 h.p. New Hudson three-wheeler with a low ratio of 12 to 1, essayed the climb and succeeded comfortably. R. W. Duke on a 7 h.p. James sidecar followed, repeating the success; L. A. Bees (4¼ Beardmore-Precision) came next, with his passenger on the carrier to give extra



Some idea of the gradient and surface on the corner of Summerhouse Hill may be gained from this illustration. (Inset) F. Hayes' New Hudson climbing well.

**A Rival to Beggar's Roost.—** adhesion for the driving wheel; and then P. Bourke (4½ New Hudson sc), whose engine was in wonderfully good fettle. Although all the quartette are well known and experienced hill-climbing exponents, the 100% success somewhat minimised the severity of the climb, so a move was made to Beggar's Roost for purposes of comparison. Again all got up the hill which stopped nearly 50% of the London-Land's End competitors, Bees this time succeeding with his passenger normally seated. All were agreed that Summerhouse Hill, thanks to its two bends, ranks in severity with Beggar's Roost. Still not satisfied, A. J. Dixon, who had joined the party, led the way to the station hill at Lynton, and P. Bourke piloted his New Hudson sidecar up this precipitous ascent to prove to Dixon that the latter's opinion that the hill was unclimbable was wrong.

L. A. Bees (4¼ Beardmore-Precision sidecar) climbing Summerhouse Hill.

P. Bourke (4½ New Hudson sidecar) rounding the second bend of the same hill.

Those who require proof of the efficacy of Ferodo-lined single-plate clutches should invite Hayes to demonstrate the New Hudson clutch. Running downhill with the reverse engaged and brakes off, he will engage the clutch and bring the machine to rest, and straightway run backwards without touching brakes at all. Indeed, he "seesawed" in this fashion for our benefit with both hands above his head—a demonstration the like of which we have never previously witnessed or even heard of.

## TAKING A MOTOR CYCLE TO FRANCE.

SINCE the publication of our article entitled "International Touring," which appeared in *The Motor Cycle* of February 16th, page 199, some alteration has been made in the duties and licences to which visitors are liable.

Motor bicycles may be introduced into France free of duty and without the necessity of paying any cash deposit equivalent to the duty, on the production of a special customs card issued by the A.C.U. or A.A. and M.U. Motor cycles with sidecars attached are liable to the following duties, which must be deposited with the organisation previous to visiting the country.

| | *A. Francs. | *B. Francs. | *C. Francs. |
|---|---|---|---|
| Motor cycles only; per 100 kgs. net .. .. .. .. | 250 | 880 | 220 |
| Sidecars only; charges on body only, weighing less than 125 kilos net. .. .. .. | 150 | 480 | 120 |

The charges for motor cycles must also be multiplied by the coefficient 1.9.

The charges for sidecars must also be multiplied by the coefficient 3.5.

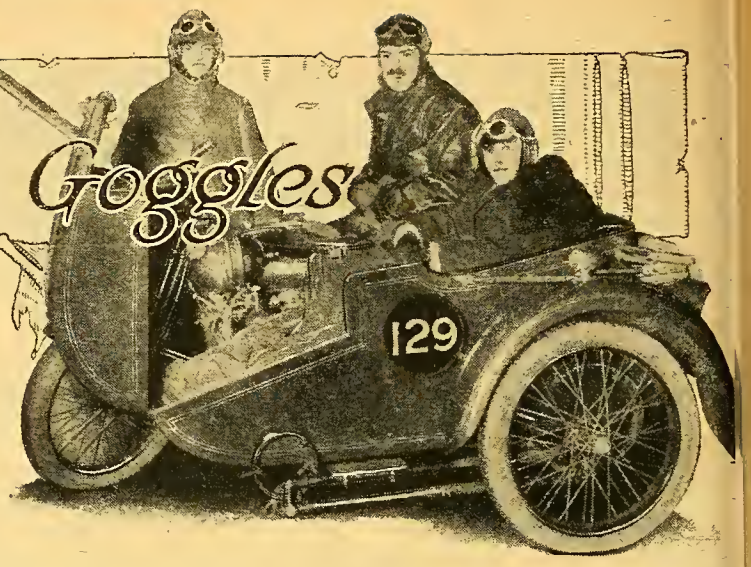
* A.—American makes.

* B.—German, Austrian, Czecho-Slovakian, Greek, Russian, and Portuguese makes.

* C.—Other makes.

On landing the motor cyclist is advised to ask for a *laisser-passer* available for three months at the cost of 2 francs; owners of motor cycles with sidecars should ask for a *laisser-passer* for either 48 hours, which costs 3 francs, for one month (25 francs), or two months (50 francs). Visitors with motor cycles who wish to make a longer stay than these periods must take out the yearly tax of 20 francs in the case of a motor bicycle (which cannot be paid quarterly) and 12 francs 50 centimes per quarter in the case of a sidecar outfit. The latter tax can be paid for the whole year in advance if desired at the cost of 50 francs. This yearly tax can be paid at any tobacconist's, while in the case of a motor bicycle a *plaque de contrôle* is issued and fixed to the machine, which is in the shape of a metal disc. If the owner desires to take a passenger on the carrier he must pay an additional 20 francs.

# Through Feminine Goggles




## London-Land's End and the Ladies.

By MAB. LOCKWOOD TATHAM.

AS I drove up to Slough at about 10 p.m. on Good Friday the scene which met my eyes fired my imagination with the idea that I had stepped into another world—a world peopled by strange creatures in gnome-like head gear, with big glass eyes, a wild manner, and a strange language in which they addressed their various weird chariots. The wild stormy night, pouring rain, and fitful moon lent colour to the fancy, and the cold, inadequate light of arc lamps only seemed to show blacker shadows here and there.

Coming back to earth I proceeded to examine with interest the three hundred and twenty-two entrants for the trial. The excitement was intense, and both building and yard hummed like a hive. Spasmodic pops and bangs and roars came from every quarter, tyres were violently pumped up, nuts and bolts tightened here and there, and refreshments tucked away in handy places. Only one oasis of calm did I see in all this. It was a four-seater Westwood containing two gentlemen coolly eating sandwiches, all tucked up ready to get away, quite half an hour before the start!

### Little Things of Note.

As my interest was in motor cycles and sidecars, I must not say too much about the car entries, but there were one or two ideas on the latter which appealed to my feminine mind. A little oil-cooled Belsize, though not carrying a lady passenger, had a maximum of comfort in every way, down to an air cushion, coffee in a Thermos, and sandwiches. One of the Morgans was carrying Mr. and Mrs. Morgan on their first London Land's End trial, and was excellently equipped for the journey. Both driver and passenger had air cushions, and they each had a hooter, while Mrs. Morgan was wisely furnished with a dinky little stone hot-water bottle. She was the only lady I saw wearing an ordinary little hat (of cerise suède)—all the other lady passengers had on orthodox driving helmets. Nevertheless she informed me that she was carrying one of the latter in case of necessity.

An A.V. 8 h.p. twin, though of rather an extraordinary appearance, seemed most comfortable. It is very low, and the engine is situated beyond the back axle. The bonnet concealed—nothing! and leg-room extended right to the end of it. In fact, there was nothing to prevent the passenger from going to sleep at full length.

### Sidecar Comforts.

There were fewer lady passengers both in cars and sidecars on this trial than in the London-Exeter at Christmas. It is undoubtedly a strain, this long, cold trip through the "wee sma' hours" when most people are tucked between the sheets, but I do not think I have ever seen more complete arrangements for comfort under the circumstances. Many ideas were worthy of standardisation, being thoroughly practical and obviously the outcome of much experience.

One of the Brough Superiors had a "Kangaroo" sidecar, so named, as readers may guess, because it carried the luggage in front. The entire front lifts up to allow the passenger to enter and a valise, etc., to be put in, and in this case it had a complete car dashboard fitted with switches, light, mirror, clock, and voltmeter. There were pockets on either side, and the lady passenger carried an electric torch. Thermos flasks containing respectively eggs and milk (which it was hoped would not curdle!), Bovril, and nuts ready cracked, were prepared for the interior comfort of the pair, and a nice little kangaroo mascot surveyed the world at large from the sidecar nose.

### Splendid Isolation.

Another outstanding feature was a hood on the Matchless sidecar occupied by Mrs. Collier. In this case the luggage was carried on the back, and the waterproof hood came right over it and buttoned on to the windscreen. A side curtain had its place on the engine side, and the whole thing looked wonderfully neat and comfortable. The only drawback seemed to be that the passenger could not speak to the driver with the hood up. An extra cushion and lots of chocolates completed this workmanlike outfit.

Nearly all the machines carried spare tyres with Parsons chains for the negotiation of Porlock Hill—the latter as usual the source of much anxiety—and Ingersoll watches predominated for timing. Most of the outfits carried three or even four watches, but I admired the faith of one Harley-Davidson driver—he carried one Ingersoll Midget. This driver (G. Dyer) had had a *brilliant* idea, and mounted an aero inspection lamp on the toolbox (on the tank) with a bolt. It was connected with the battery.

**Through Feminine Goggles.—**

Many of the machines had special legshields, but I think the cutest idea I saw was on the Dunelt. The large, round number plates on either side of the front forks were simply bent outwards to give the necessary protection. The passenger in this sidecar was of the male persuasion, and he looked quite happy on the cushions of corduroy velvet, and the ample waterproof apron seemed to obviate the necessity for a windscreen, which was missing.

FASHIONS FOR THE LADY MOTOR CYCLIST. The top left and right drawings show two styles of sleeveless leather waistcoats, one in yellow kid trimmed with brown suede and fastened with a belt and possessing pockets, the other in washable white doeskin without any trimming and fastened at the waist at both sides with one button. The centre sketch is one of the short fur sports coats that are being worn. For motor cycling grey lambswool is the most suitable material. Below are two hats suitable for either rider or passenger. (Left.) A close fitting turban cap of scarlet kid embroidered with oxidised thread and finished with a tassel. (Right). A light weight hat of green oiled silk with a front brim that affords protection from the glare of the sun. The trimming is a conventional design stencilled on the crown and a strap is fastened under the chin.

**Two Minutes with a Veteran.**

As I strolled along on my tour of inspection I saw a familiar figure on a Levis without whom no trial is really complete. It was "Pa" Appleby—cheery, weather-beaten, and ready for the road in his well-known sou'-wester turned back off his face. A black furry cat in a green ribbon ornamented the handlebars. "Pa" announced that he wasn't going to knock himself up this run, because of the coming T.T. I have seldom met so great an enthusiast.

**Feminine Kit.**

I should think the most critical of men have never seen a more sensibly garbed collection of ladies—and this without any loss of charm. Leather, wool, waterproof materials, and fur predominated. One lady was particularly neat and workmanlike in a brown leather coat, gauntlet gloves, gaiters, and a beaver-lined driving helmet. I should think it would be almost impossible to get cold in such a costume.

Another wore a Burberry over her leather jacket. Many wore just ordinary shoes and stockings, trusting to a travelling rug for warmth round the ankles. I only saw one lady with a muff—a most sensible thing to carry, as it is so much easier to slip one's hands out of than gloves, and is much warmer. Woolly scarves or mufflers were *de rigeur* round the neck, no furs at all being worn except in the form of a fur collar on a cloth or leather coat. Woollen, rather than skin, gloves also seemed popular.

**The Sporting Spirit.**

Although the drivers were all chivalrously concerned about their fair passengers' comfort, and anxious for them to rest or even sleep part of the time, I was glad to note the keen interest taken by the ladies in the active part of the run. Few intended to sleep at all during the night, and all were more or less responsible for the timing—not such an easy job as it sounds. Methods of carrying the route card were many and various—it was clipped in some cases to the sidecar windscreen, some hung from the driver's belt, some loose, but nearly all covered in celluloid and framed in leather. One driver had his strapped to his left arm—rather exposed, I thought, in the event of rain.

I think some of the ladies would like to have been driving their own machines, but, of course, such a thing is not yet permitted, though the reason is not obvious on trials of this description. After all, there is none of the danger of racing, and even ordinary speeding entails disqualification.

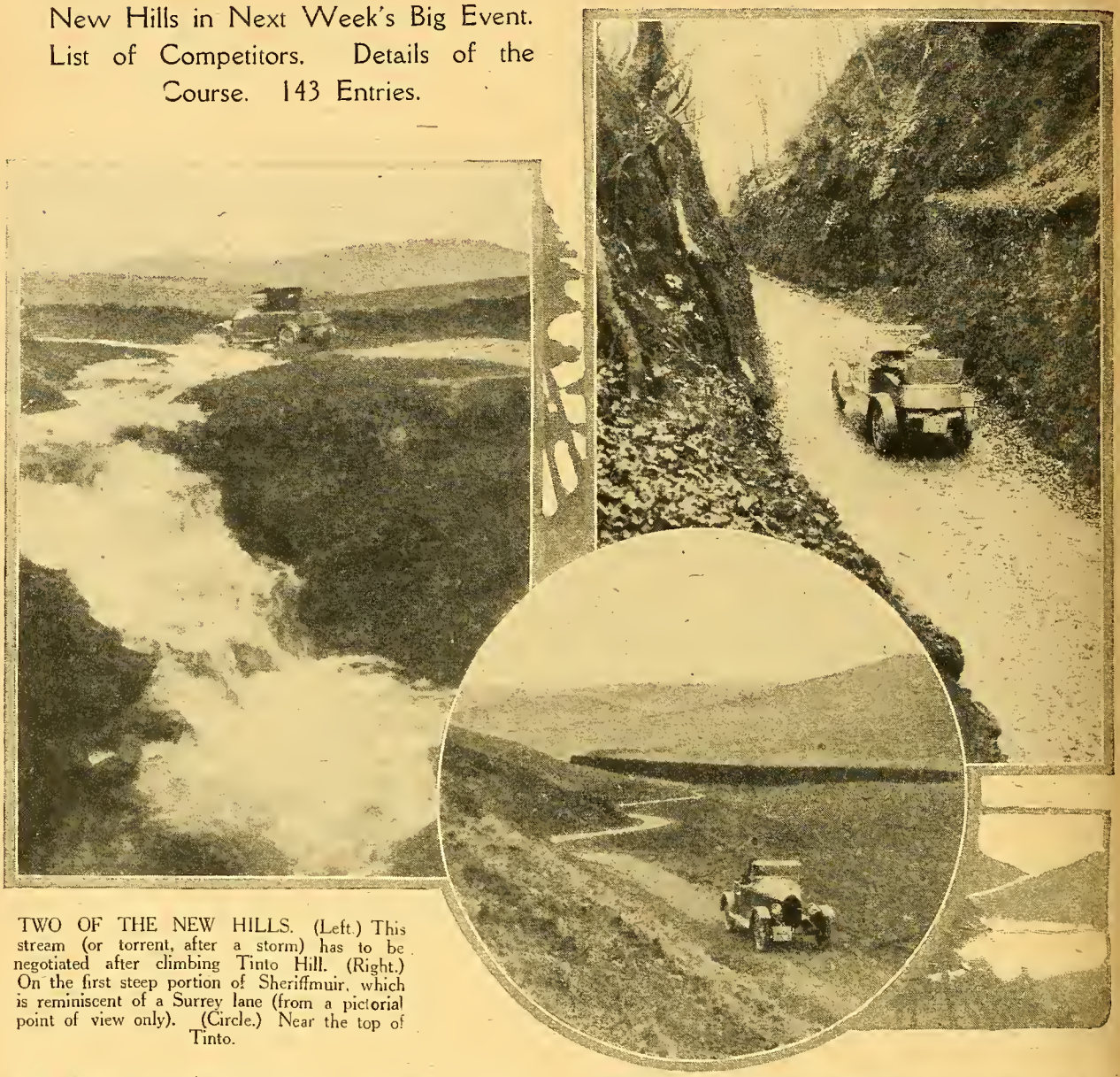
## DRIVING LICENCES IN FRANCE.

ALL candidates for driving licences in France must submit to a practical examination before a Government inspector. If the inspector is a practical motorist the examination is of real value; but if, as sometimes happens, the inspector's knowledge is entirely theoretical, and his time well filled up with other business, the candidate may get his *carte rose* without having given many proofs of his capability. The Government now seems inclined to rid itself of this task of granting driving licences and a Bill has been brought forward in Parliament and sent through to the Senate by the terms of which motor clubs and sporting associations will be entrusted with the duty and responsibility of conducting these examinations and granting certificates.

The change is not altogether an innovation, for already one or two French clubs are authorised to examine candidates for driving licences.

# THE SCOTTISH SIX-DAYS TRIALS.

## New Hills in Next Week's Big Event. List of Competitors. Details of the Course. 143 Entries.



TWO OF THE NEW HILLS. (Left.) This stream (or torrent, after a storm) has to be negotiated after climbing Tinto Hill. (Right.) On the first steep portion of Sheriffmuir, which is reminiscent of a Surrey lane (from a pictorial point of view only). (Circle.) Near the top of Tinto.

ON Monday next the Edinburgh Motor Club's Six Days Trials start from Edinburgh. As usual the event has attracted a large and representative entry. Owing to the earlier date than usual, this year the riders will not be taken very far north of the Caledonian Canal, but several new hills have been included, exclusive photographs of which are given on this page.

It is said, however, that the organisers of the trial are conscious that they have still found nothing to beat Amulree and Glendoe. During the wet Easter week-end a Scottish correspondent visited Sheriffmuir. This new hill, in the first day's run, is the start of a four-mile track leading to Sheriffmuir Inn, the scene of the battle of that name. The hill itself is hardly a mile long, and the only serious gradients are concentrated in three very short portions. The surface is very light soil with a foundation of rocks which jut through in places, some stones, and the usual cart-wheel ruts. It should be quite easy unless there is heavy rain at the time. After the hill proper there remain several sudden rises, with loose stones and lumps of rock, and there are two or three awkwardly concealed gulleys which make speeding inadvisable over this portion; also one bad water-splash.

Tinto Hill—a by-road over a shoulder in the famous low-land group of that name—is surely the easiest observed hill ever included in a "Scottish." Except for a short portion of loose stuff at the bottom, it is practically a top gear rise.

The following are the observed hills on the respective days:

First day. Sheriffmuir (special awards only), Amulree, Trinafour, Kenmore.

Second day. Cairn-o'-Mount, Rinloon, Cockbridge.

Third day. Abriachan, Glendoe, Inverfarigaig (special awards only).

Fourth day. Bridge-of-Brown, Cabrach.

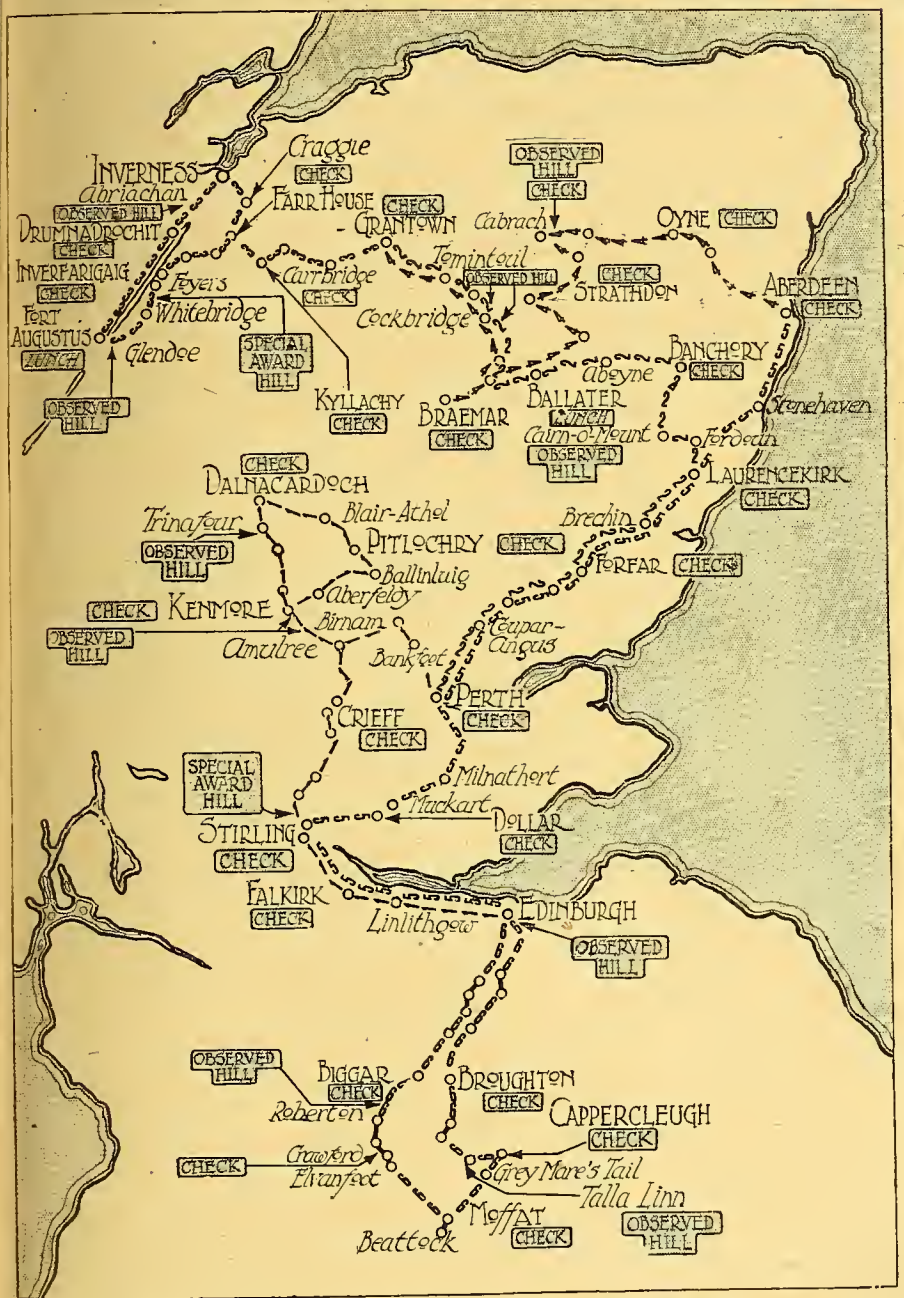
Sixth day Talla, Tinto, Blackford Hill.

A map of the route is given on the next page.

## The Scottish Six Days Trials.—

## List of Entrants.

Rex G. Mundy (B.A.C. l.c.).
R. E. Fairley (A.B.C. l.c.).
H. Goring (2¾ Hawker).
H. S. Perrey (6 B.S.A. sc.).
B. L. Bird (6 B.S.A. sc.).
J. H. Walker (6 B.S.A. sc.).
A. F. Downie (7 A.J.S. sc.).
N. W. Downie (3½ Ariel).
A. L. Downie (2¾ Raleigh).
W. G. Donaldson (Royal Scot).
H. Mortimer Batten (3 Barr & Stroud Precision).
H. Greaves (2¾ Barr & Stroud).
A. G. Cocks (4¼ Beardmore-Precision sc.).
J. R. Alexander (3½ Douglas).
A. H. Alexander (3½ Douglas).
H. Alexander (7 Matchless sc.).
D. S. Alexander (7 Matchless sc.).
Maj. Johnstone (7 Jowett l.c.).
R. S. Macrae (7 Harley-Davidson sc.).
Miss Pullinger (Galloway l.c.).
P. Pehrson (4 Dunelt sc.).
B. H. Cathrick (4 Dunelt sc.).
C. W. Vallings (4 Dunelt sc.).
Geo. Grinton (7-9 Harley-Davidson sc.).
L. S. Sealey (4¼ B.S.A.).
M. C. Breese (4¼ B.S.A.).
A. A. Farr (4¼ B.S.A.).
D. S. Milne (10 B.S.A. l.c.).
A. W. Brittain (10 B.S.A. l.c.).
T. G. Ellis (10 B.S.A. l.c.).
H. Gibson (2¾ Raleigh).
J. Shepherd (8 Chater-Lea sc.).
D. C. Sangster (3½ Sunbeam).
J. A. Newman (3½ Douglas).
E. W. Choldcroft (2¾ A.J.S.).
W. H. Hardman (3½ Wilkin).
W. A. Hadfield (2¾ Raleigh).
E. Foster (5-6 Raleigh).
A. Rollason (3½ Ariel).
R. N. Lochhead (3½ Ariel).
L. Newey (8 Ariel sc.).
J. L. Stocks (8 Ariel sc.).
W. Woodcock (8 Ariel sc.).
Geo. Nott (7 Matchless sc.).
Mrs. Knowles (2¾ A.J.S.).
R. M. Knowles (3½ Norton).
B. Jowett (7 Jowett l.c.).
W. Jowett (7 Jowett l.c.).
R. B. Clark (3½ Zenith-Bradshaw).
T. T. Sibley (3½ Rudge sc.).
J. H. Mathers (3½ Rudge).
R. R. Grindlay (3½ Rudge).
W. L. Danskin (7-9 Rudge sc.).
G. W. White (7-9 Rudge sc.).
E. S. Astley (7-9 Rudge sc.).
D. A. Aitkin (2¾ Francis-Barnett).
E. A. Barnett (2¾ Francis-Barnett).
S. M. Greening (2¾ Francis-Barnett).
G. M. Black (3½ Norton).
J. D. Price (3¾ Scott).
W. Moore (3¾ Scott).
W. L. Guy (3¾ Scott).
G. W. Scott (3¾ Scott).
R. W. Stansfield (3¾ Scott).
R. Carfrae (3½ Rudge).
E. R. C. Scholefield (9-10 New Hudson).
D. Parsons (7 Matchless sc.).
E. H. Gifford (3½ Martinsyde).
A. A. F. Symes (6 Martinsyde sc.).
W. H. Bashall (6 Martinsyde sc.).
J. T. Bashall (6 Martinsyde sc.).
B. Kershaw (2¼ New Imperial).
D. B. Calder (2¼ New Imperial).
G. K. Hubbard (2¾ New Imperial).
J. M. Philpott (2¼ Velocette).
W. Westwood (3½ Triumph).
A. Brown (8 Ariel sc.).
John Stirling (2¾ A.J.S.).
R. Lewis (4½ P. and M. sc.).
P. Cunningham (4½ P. and M. sc.).
G. M. Townshend (4½ P. and M. sc.).
Armstrong Graham (Harper Runabout).
R. O. Harper (Harper Runabout).
J. A. Porter (3½ New Gerrard).
J. G. Porter (2¾ New Gerrard).
R. M. Wishart (3½ New Gerrard).
W. Wilkie (American Henderson sc.).
Mrs. Hardee (7 Matchless sc.).
H. H. Vaughan-Knight (G.W.K. l.c.).
— Pope (G.W.K. l.c.).
— Jackson (G.W.K. l.c.)
A. B. Fairley (3½ Douglas).
J. B. Sanderson (2¾ Hawker).
C. A. Heashaw (4¼ Hawker).
W. C. Brookes (7-11 Marseel l.c.).
D. Brown (10 Salmson l.c.).
R. Spence (3½ Sunbeam).
L. Paynter (3½ Norton).
H. Collins (3½ Norton).
H. P. Horwood (3½ Ariel).
R. Humphries (2¼ Velocette).
W. S. C. Walker (6 Douglas sc.).
E. Wardlaw Ramsay (2¼ Velocette).
Geo. Brough (8 Brough Superior).
J. A. W. Bourne (8 Brough Superior).
F. B. Dickson (8 Brough Superior).
J. Richardson (5 Lea-Francis sc.).
A. Lea (3½ Lea-Francis).
R. P. Ransom (3½ Lea-Francis).
W. E. McKechnie (5-7 McKechnie).
F. W. Becker (5-7 McKechnie).
Donald Scott (5 Scott and Gasking)
S. L. Taylor (10 Taylor l.c.).
J. C. Nuttall (8-9 Belsize l.c.).
—— (A.B.C. l.c.)
—— (A.B.C. l.c.)
—— (A.B.C. l.c.)
Miss Cordery (10 B.S.A. l.c.).
Mrs. Jansen (2¼ Ner-a-Car).
F. W. Giles (7 A.J.S. sc.).
R. M. Wilson (2¾ A.J.S.).
D. Bell (7 A.J.S. sc.).
T. F. Sleven (2¼ Velocette).
J. M. Phillips (3½ Sunbeam)
S. H. Hubbard (4 Rex-Acme sc.).
W. Handley (——).
R. M. Johnstone (——).
A. G. Mitchell (2¼ Velocette).
H. Gold (2¾ Francis-Barnett).
G. C. Wakeham (9 Rhode l.c.).
A. B. Dentley (9 Rhode l.c.).
B. A. Hill (9 Rhode l.c.).
J. Boddington (Morgan Runabout).
J. M. Watson (4 Harley-Davidson).
W. A. Carr (Morgan Runabout).
J. Wallis (6 Coventry Victor).
H. E. Sawtell (10 Morgan c.c.).
R. H. Forrester (11 Riley).
V. Walsgroove (11 Riley).
J. R. Fellows (3½ Sunbeam).
C. Guthrie (5 Raleigh).
W. E. Smithie (3½ Norton).
—— (2¾ Royal Scot).




The Scottish Six Days Trials route in detail. The course for each day is indicated by the appropriate figure.

Considering the expense of participating in an event of six days' duration this is a wonderful entry, and testifies doubly to the popularity of the trials as a testing ground for manufacturers and as a holiday for private owners—providing, in the latter case, that the weather is better than it usually is in May!

# Road Impressions of the Scott Squirrel

Comfortable Riding Position, Acceleration and Smooth Running are Features of the Sporting Scott.

By H. MORTIMER BATTEN.

THOUGH at one time the Scott was far and away the writer's favourite mount, and many thousands of miles were covered annually on the famous two-stroke, it so happens that during the last three or four years this make has been conspicuously absent from the chosen few. This, of course, was merely a matter of chance.

But old friends do not meet as strangers, though on the surface of things the specification of the Scott Squirrel with its hot-stuff engine and gear ratios of 3·75 and 5·4 seemed rather forbidding!

The approach to the Scott works is rather typical of the kind of thing that the sporting Scott crew revel in. Leaving the works one progresses for a hundred yards or so over a stretch of road evidently begotten of a volcanic disturbance, thence through a knee-deep quagmire round a right-angle corner and straight up a severe and rutty gradient to the greasy tramway sets.

Once astride the machine, however, there was absolutely no further thought as concerned the road conditions. As a rule it takes a little while for one to feel completely at home on a strange machine. Not so the Squirrel. The most nervous rider could not help but lose all sense of nervousness immediately he found himself gripping those extremely businesslike bars.

### In Traffic.

Owing to fog and the appalling condition of the roads, I had decided to take the way of least resistance, namely, *via* Otley, Wetherby, York, and thence north and east. By the time I had arrived at Otley, however, my blood was up. Why funk Sutton Bank and the stretch of colonial road thence to Helmsley?

### Main Road Impressions.

One thing that strikes one immediately is that the Squirrel engine is a much better engine than anything of the kind that has preceded it. Not only is it more controllable and more efficient, but the balance is better—or at any rate there is considerably less vibration. This is due to some extent to the modifications in the frame design. There is no whip on the new frame. It is rigid. Also, of course, the engine is smaller, and the reciprocating parts are lighter — aluminium pistons, etc. Vibration is no more noticeable in the case of the Squirrel than it is in the best opposed twins, and though the chains were distinctly on the slack side, the old irritating snatch was gratifyingly absent.

Skirting Harrogate, the road *via* Ripley, Ripon, and Thirsk contains some fine speed stretches, but the engine being so new prudence forbade anything approaching full throttle. At 45 m.p.h one was progressing at a comfortable purr. One had no impression of a high road speed, as the cornering of the machine and the riding position are in accordance. Fifty on the Squirrel does not seem so fast as thirty-seven on the ordinary roadster, and on anything like a main road it should be possible to *average* 35 m.p.h. without taking a single risk and without any sense of strain.

In Thirsk a cab horse, complete with cab and old lady, meandered out of a side road on the wrong side, and proceeded to shuffle across the thoroughfare. Ordinarily one would have applied both brakes and come to a sudden stop, with appropriate glances at the cabby. Not so on the demoralising Squirrel. One opened the throttle, looped the loop round the growler, and roared off with rumbling exhaust amidst the wide-mouthed gaze of the populace. At least, that is how one pictures the populace.

### The Shadows of Sutton.

There is always an atmosphere of romance in approaching Sutton from the fertile but thinly peopled stretches of the plain. The great bank, crowned with a shimmer of blue pines and wildly timbered along its boulder-covered slopes, rises like a survival of another age from the agricultural lands, and on striking it civilisation dwindles to the rear, and beyond lies—the tundra! Wild moorland country, for the most part, yet providing endless surprises in its hidden-away little valleys, which for simple beauty have a charm quite their own.

By now the fogs of manufacturing Yorkshire were left far behind, and Sutton looked more than ever mysterious—languid with a damp and chilly beauty which was distinctly of the winter. From half-way down to the summit white strata of cloud streaked the slope, and the summit rose like a giant's castle from above the clouds, the effect being rendered more grotesque by the bright sunshine which reached only to the topmost ridges.

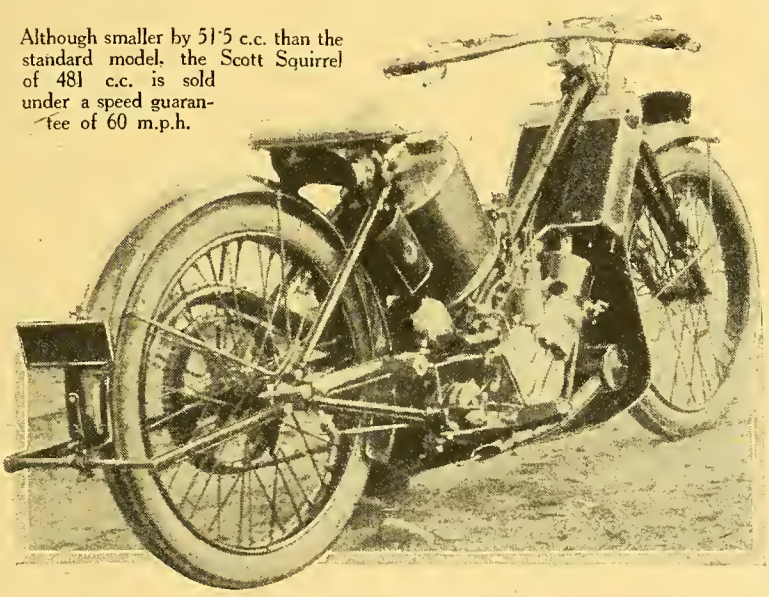
**Road Impressions of the Scott Squirrel.—**

At Sutton village I asked a cyclist what the hill was like. He said that he had never seen it worse, and that no motor vehicle had attempted it for several weeks. He recommended an alternative route, but the climb was finally tackled.

Those who know Sutton in the summer time have probably no great opinion of it. Its worst gradient is 1 in 3.96, but the road is more or less a main road. I have climbed it easily on an opposed twin which was missing continually on one cylinder, but this day I was to have the surprise of a lifetime. The hill was just about equivalent to Park Rash, but with deep mud instead of stones.

On the first attempt I failed miserably. One piston seemed rather inclined to grip, so I got the wind up and closed the throttle. Having sat for a minute or two, throwing snow at the radiator, I descended and made a second attempt. This time I got fully half-way up the first bad stretch on top gear, changed down, and climbed the 1 in 4 section easily. Fearful for the new engine, I rested a minute or two, restarted on the 5.4 to 1 gear without difficulty, and crept in a comfortable and easy fashion to the top.

Here, for the next ten miles or so, the roads were truly colonial—deep ruts, wet, bottomless sand and the like, supplementing a return of dense fog, while the way is tortuous, with many stunning little ascents and descents which take one by surprise. It was for such conditions as these that I had thought the high gear ratios would prove farcical, but it was surprising how the engine pulled and kept on pulling at a low rate of revolutions and over the most trying going—including deep, sodden snow. This improved flexibility is a great point about the latest Scott.



Although smaller by 51·5 c.c. than the standard model, the Scott Squirrel of 481 c.c. is sold under a speed guarantee of 60 m.p.h.

**Gear Ratios.**

A word now regarding the gear ratios and all they involved. My bottom gear was higher than the standard for Squirrel machines, which is 6.9, but despite the fact that most of my riding is in hilly moorland country, I think I would prefer the 5.4 bottom to the 6.9. In the first place it is much more sporting, and seems adequate even for abnormal conditions. In the second place it is safe and practical to ride the Squirrel at much higher speeds over difficult country than one would ride any ordinary machine, so that whereas 5.4 would be hopeless on most machines, even though one possessed a more powerful engine, the unique qualities of the Squirrel render it quite a practical ratio. The machine climbs wonderfully on its top gear, and, since it will do 45 m.p.h. on bottom, the change down can be made advantageously at 30 m.p.h., and that speed maintained without much regard for grease, corners and the like.

Summing up, the Squirrel is a very delightful solo mount, and though a considerable distance has now been covered on it, I have no criticism to offer. Among sporting machines it is distinct in that it is not solely and essentially a speedman's mount. It is the safest machine I have yet straddled, and though an inexperienced rider would be ill-advised to go in for the very high ratios, which might lead him into the abuse of his engine, I can imagine no safer and better type of motor bicycle for the man of nerves than a suitably geared Scott Squirrel.

## ROMANCE AND THE SIDECAR.

APROPOS the sidecar as a means of transport, and in proof of its popularity in Italy, we reproduce the following translation of a "Eulogy of the Sidecar," which recently appeared in a number of the *Sport Illustrato* of Milan:

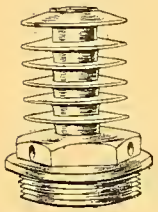
"'Tween the mud and the tempest, amid the hidden snares of the night, the 'sidecar' has won her battle; the timid anxieties of the critics have been calmed by a triumph which even the warmest supporters of the motor cycle and sidecar did not dare to hope for.

"All praise to the 'combination.' She represents a practical means of transport; she asks for but very little spirit for her nourishment; and yet she ascends swiftly to every summit, overcomes every obstacle, carries man and his companion everywhere where the fever of commerce and the desire for fresh beauties impel and entice.

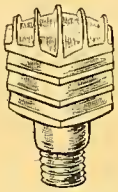
"Here is the picture: the handsome knight, enclosed in his armour (read 'overalls'), in a statuesque posture holds the reins of the impatient horse of steel which devours the road in a cloud of dust. Reposing in the sidecar, like a jewel in its case, the whole being of the little lady palpitates in the delicious throes of 50 and 60 miles an hour.

"We delight in the intoxicating speed, in the solitude (for two), under the fascination of the magnificent sights which Nature offers."

## Exhaust Valve Cooling.

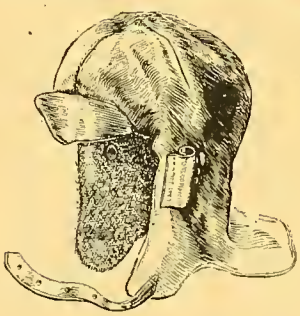


Radial holes in the hexagon portion leading to a hollow central column assist heat dispersion in the Airco exhaust valve radiator. 10s. (A. W. Gamage, Ltd., Holborn, London. E.C.1.)



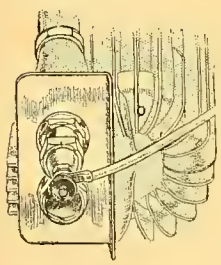
It is claimed that the fin area of the E.W.L. radiator is greater than any other type at present in use; it has a ¾-in. Whitworth thread and is intended to be screwed permanently into the valve cap. 3s. (The E.W.L. Accessories Co., 102, Lanchester Road, Shrewsbury Road, Forest Gate, London, E.7.)

## Head Protection in Winter.

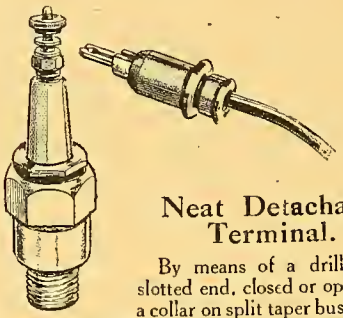


Made of very supple leather and lined with wool, this racing helmet is sold by A. W. Gamage, Ltd., Holborn, London, E.C.1, at 9s. 6d.

## Cooling the Cylinder Head.

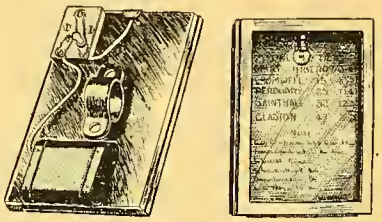


Simply a rectangular piece of sheet aluminium with two holes and a bent edge, the device illustrated forms a neat and inexpensive radiator for Douglas valve caps. (M.E.A., 25, Charlotte Mansions, Baron's Court, London, W.14.)



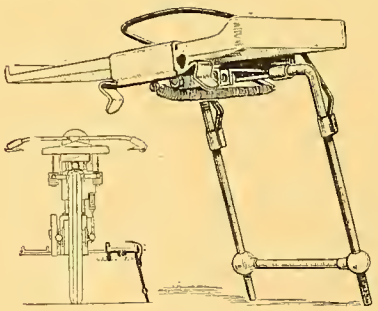
## Neat Detachable Terminal.

By means of a drilled and slotted end, closed or opened by a collar on split taper bushes, the Grose plug terminal is both quickly detachable and very secure when in position. (James Grose, Ltd., 4, Old Jewry, London, E.C.2.)



## For All-Night Competition Riding.

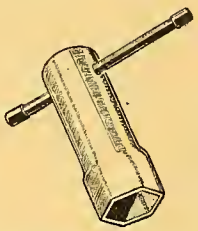
Competitors in all-night trials will appreciate the advantages of this waterproof, enclosed and dry-battery illuminated route card holder marketed at 15s. 6d., by E. S. Ramstedt, Seymour Road, Gloucester.



## Improvements to a Prop-stand.

Already illustrated in *The Motor Cycle*, the Bellairs prop-stand has undergone certain modifications. The diagrammatic inset shows exactly how the device is fitted and operated. (Mowbray, Bellairs & Co., 24, Little Chester Street, Belgrave Square, London, S.W.1.)

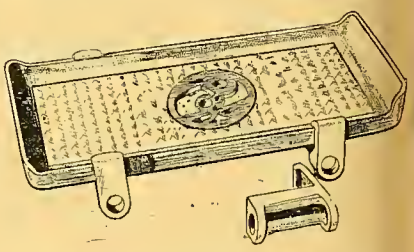
## Sparking Plug Box Spanner.



Where there room to use it, th Runbaken sparkin plug box spanne certainly provide more humane treat ment than does th popular "6-inch ad justable." It is well made article 2s. 9d. (The Run baken Magneto Co., Ltd., Cheetwood Lane Derby Street, Manchester.)

## Safe Solution Storage.

There has been considerable discussion recently as to the best method of carrying rubber solution in the tool-bag; as a result, A. W. Hirst of Chardin Road, Turnham Green Terrace London, W.4, has now introduced a special tubular brass holder with screw-top and metal tongue at 9d. and 1s. (nickel-plated).



## Conversion from Rests to Footboards.

Illustrated is one of an attractive looking pair of footboards designed for machines having footrest rods of various dimensions; the aluminium clamps may be placed in any position. 16s. 6d. (The Service Co., Ltd., 289, High Holborn, London, W.C.1.)

## Foiling the Motor Cycle Thief.

So mystical are the rites necessary to open this simple-looking combination lock that it might mar the efficiency of the device if we attempted an explanation; suffice to say that a key is only supplied to change the combination. 7s. 6d. (The D.O.T. Keyless Locks Co., Ltd., Northampton.)

# T.T. Notes and News

## Latest Jottings from the Isle of Man and the Competition Stables.

AT the moment of writing, the T.T. entries stand as follows: For the Lightweight class, 32; for the Junior event, 38; and for the Senior race, 67, making a total of 137 in all.

* * * *

Considerable activity is being displayed by various competitors on the track, and many experimental features are already being tried out at Brooklands.

* * * *

The two larger New Hudsons will closely resemble the 4½ h.p. model, but the bore will be reduced to 79.5 mm. (100 mm. stroke). These machines will be ridden by B. Bourke and E. Mundey; one of these riders, probably Mundey, will ride in both events.

* * * *

There is likely to be something of a sensation upon the appearance of the 350 c.c. New Imperial, and though at the present moment we are not permitted to give details, it is safe to say that the engine will have overhead valves. D. Prentice will, of course, defend his title in the lightweight race, and H. Le Vack will ride both in the 350 c.c. race and in the 500 c.c. race; in the latter event he will be mounted on a 350 c.c. model.

* * * *

Very few modifications have been made in the Norton for the forthcoming race. The engine remains as before, and a short wheelbase frame similar to that used in last year's race will be employed. A separate oil tank is attached to the saddle tube, and the pump is operated by foot; a Webb brake in front and a slightly modified internal Vee brake at the rear will be relied upon for deceleration. 550×65mm. tyres will be fitted.

* * * *

A considerable amount of experimental work is being carried out with the Levis T.T. machines, but the details of the engine have not yet been decided. With the exception, however, of comparatively small items, there will be no change from last year.

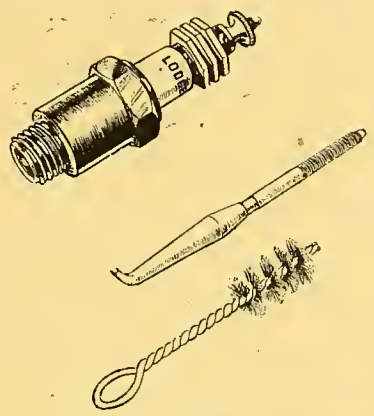
* * * *

Chain-driven Coulsons will make their first appearance in the forthcoming Tourist Trophy Race. These will be the forerunners of an all-chain model, which will probably appear on the market for 1923. One 350 c.c. machine and two 250 c.c. machines will compete, all three being fitted with overhead valve Blackburne engines. But little alteration has been made to the Coulson frame, though the wheelbase is somewhat shorter and a separate oil tank is fitted. All machines are shod with 26×2½in. tyres, and there is a distinct probability that some form of mechanical lubrication will be embodied in the design.

A special department has been set aside at the New Hudson Works for preparing the competing machines, and great activity prevails. In the 250 c.c. class the New Hudson will be represented by a two-stroke which varies but little from the standard machine, except that ball bearings will be fitted to the crankshaft.

* * * *

The engineers' lock-out will be responsible for at least one disappointment to keen motor cyclists, since owing to this cause Barr & Stroud, Ltd., will in all probability be unable to complete their special sleeve valve Tourist Trophy engine, and consequently several entries of this type have been withheld. This




A new Lodge racing plug showing cooling fins, heavy copper electrode (detached) and cleaning brush.

is most unfortunate, since the performance of the sleeve valve engine would have been keenly watched.

* * * *

Mechanical lubrication by a special pump will be a feature of all the New Imperial machines. In the 250 c.c. class, side-by-side valve J.A.P engines will be employed with the semi-unit system associated with the New Imperial name. The three-speed gear box is carried on the rear engine plates, and the whole unit is slung in a special loop frame. A tool box is clamped down on to the top of the tank, gripping the top tube; oil is carried in a separate compartment and an auxiliary foot-operated oil pump is incorporated in the design. Cox carburetters, Brampton forks, and internal expanding brakes, those at the rear being operated by a pedal from each side of the machine, are further features. It is not at all unlikely that an overhead valve-engined machine will take part in this race. Engine shaft shock absorbers will be fitted in all cases.

All Fellows magnetos fitted to T.T. competing motor bicycles will be painted red.

* * * *

Indians remain the only overseas entries; after continued fine performances they deserve good luck.

* * * *

Additional entries at ordinary fees have been received from Roberts and Hibbs (New Scale), driver R. Gray, and E. H. A. Humphries (O.K. Junior), driver W. L. Handley.

* * * *

It is now ruled that machines competing in the Lightweight class which perform so well that they qualify for an award in the Junior race must be entered in that event also before an award can be given. This accounts for the extra entries being received at ordinary fees.

* * * *

N. Hall, F. C. North, and W. L. Handley have been chosen to ride the O.K. Junior machines. A very neat little machine has been evolved which is engined with a 2¾ o.h.v. Blackburne. Most of the frame lugs are machined from steel billets, and a very powerful parallel action, internal V, rear brake is operated by pedals from either side of the frame.

* * * *

Already the Norton contingent is looking round the course, and a few trial runs have been made by R. T. Cawthorne (Leeds), J. W. Shaw (Belfast), and W. Mansell. Mr. J. L. Norton was there also, but the bad condition of the surface prevented them making proper "lap-time" tests. The weather was good, but there was snow on the mountain road. One of the Nortons is of the o.h.v. type.

* * * *

A 250 c.c. Francis-Barnett will be ridden by R. W. Loughton. This little machine, which has already been dispatched to its owner, has a 65.5×76 cm. side-by-side valve J.A.P. engine similar to that employed by last year's winning New Imperial. A three-speed Sturmey-Archer gear box with five plate cork clutch is fitted, the drive being by chain throughout. Frame and fittings are to all intents and purposes Francis-Barnett standard practice, but the tank is enlarged to hold nearly two gallons.

* * * *

Another private entry is that of J. Joynson, who will ride a 250 c.c. Invicta-Jap, a pretty little machine with chain drive throughout, large saddle tank, Webb front brake, and Sturmey-Archer gear.

* * * *

It is a promising symptom to find that both Francis-Barnett and Invicta lightweights are fitted with 26×2½in. (Palmer) tyres.

The Island is literally buzzing with steam-rollers, and everyone is doing his best to make a success of the T.T.

* * * *

One of the youngest riders in the races is Hamlet Burrell, who is only 18½ years of age. He is one of the Rudge stable.

* * * *

As in former years, coffee will be provided to every competitor during the early morning practising by the Dunlop Rubber Co., Ltd.

* * * *

The entire marshalling of the course, both for practising and racing, will be undertaken by the Manx M.C.C., whose work was so efficient last year. Dr. Pantin will be the official doctor at the start.

* * * *

An appeal is made by the A.C.U. for marshals at various points of the T.T. course. Those who are anxious to offer their services are requested to apply to the Secretary, 83, Pall Mall, London, S.W.1.

Chocolate, red and green, the colours worn by the Tanks and Armoured Car Corps, have been adopted as the official colours for the T.T. races by Humphries and Dawes, Ltd., for their O.K. Junior motor bicycles. The headquarters of the firm will be the Villiers Hotel, Douglas.

* * * *

Great indignation is felt by the Isle of Man authorities that the crane which it was stated would be erected before this year's T.T. races will not be forthcoming. The entire blame is put upon the British Government, who refuse the sanction for it for this year until they are certain that the pier is strong enough to stand the strain and the weight. The £5,000 involved is I.O.M. money, and the Manxmen are most indignant that they are not allowed to spend it.

* * * *

Naturally great interest is being displayed with regard to new comers to the Tourist Trophy and equally in the machines produced by firms who have not been represented for some years past.

A. E. Taylor, who rode a B.S.A. in the 1921 T.T., where he made some very fast laps but could not finish owing to engine trouble, is now riding under the Rudge colours.

* * * *

The standard Nortons are fast enough to win, and the appearance of a new o.h.v. model which has already done wonders on Brooklands will be keenly watched.

* * * *

The Rudge machines will be ridden by W. L. Danskin, J. A. Watson-Bourne, R. B. Ewens, J. H. Mathers, H. Riddell, O. Baldwin, and A. E. Taylor.

* * * *

A new racing plug by the famous house of Lodge has recently made its appearance, and is likely to be seen in the Isle of Man. It has a particularly heavy copper electrode, which is easily detachable. The gap is adjustable, and brass fins are fitted at the top. A small "flue" brush is supplied for internal cleaning purposes.

# WEATHER PROTECTION ON TWO WHEELS.

## Well known Scottish Competition Rider Designs a Single Track Carette.

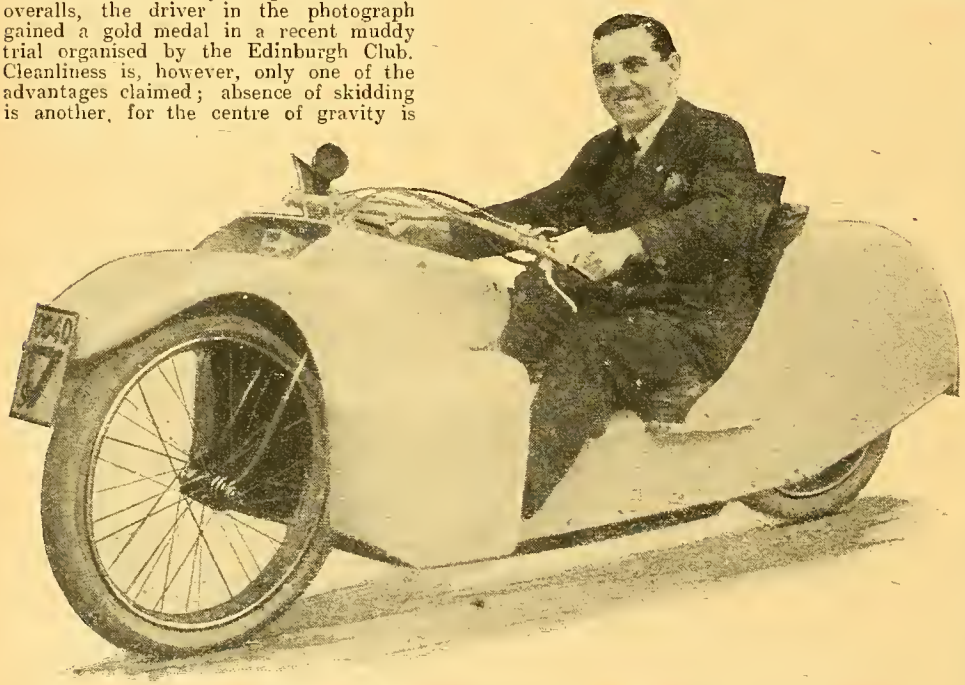
"CAR comfort on two wheels" has become so trite a phrase that we hesitate even to use it, but nevertheless it conveys more adequately than otherwise possible the aim of Alexander Motors, Ltd., in producing the vehicle illustrated. Incidentally, the designer, Mr. A. H. Alexander, is the well-known Scottish competition rider.

### Trials Riding in Ordinary Clothes.

At the outset, it may be stated that, clothed in an ordinary lounge suit without overalls, the driver in the photograph gained a gold medal in a recent muddy trial organised by the Edinburgh Club. Cleanliness is, however, only one of the advantages claimed; absence of skidding is another, for the centre of gravity is low; and cheapness of production should eventually be a third, for the only "finish" consists of enamelling the outer shell, the other parts being "waterproofed," as on a car. Finally, comfort for the rider figures largely in the design, which is sprung front and rear, and provided with a large cushion seat and backrest; and, if that is not enough, windscreen will be added, and probably a waterproof apron.

At present the design is, of course, in an experimental state, but its possibilities have been proved on the road; and it is hoped that it will not share the usual fate of the unconventional.

The pressed steel frame is of rectangular form, 12in. wide, to which is attached an ordinary type ball head, into which fits a pair of front spring forks somewhat resembling the original Indian type. The rear wheel is fully supported on a hinged fork, which is held up by a pair of leaf springs; owing to the width of the bearing, 11in., absolute rigidity is claimed. The petrol tank is set over the top of the very wide front mudguard enclosed in a housing of sheet metal, which forms a large air duct through which the air passes on to the top of the cylinder past the engine and out at the back of the under-cover. Engine and gear box are enclosed in sheet metal covers which are easily detachable, and are entirely protected from mud or rain.



Clothed as he is, without overalls, H. E. Fairley drove this carette through a muddy Scottish trial.

### Accessibility.

A pressed steel guard of considerable width encloses the rear wheel, the centre panel folding up on hinges, permitting extremely easy access to the wheel tyre, and final chain. The wheel can be detached and lifted out from above.

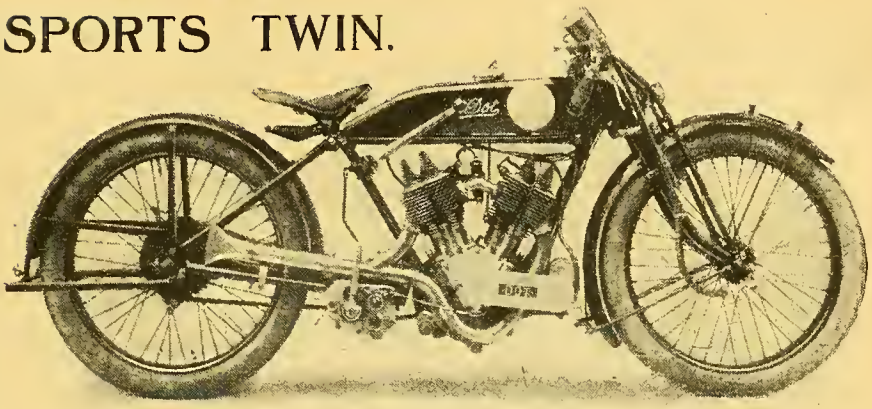
On the present model the wheelbase is 60in., but this was purposely lengthened to see whether it made any difference to the stability.

Final choice of engine, probably a 500 c.c. single, and gear box will be made later; and, surprising as it may seem, the possibility of fitting a sidecar has been seriously and favourably considered.

# AN 8 h.p. SPORTS TWIN.

## New Dot Model for Solo or Sidecar.

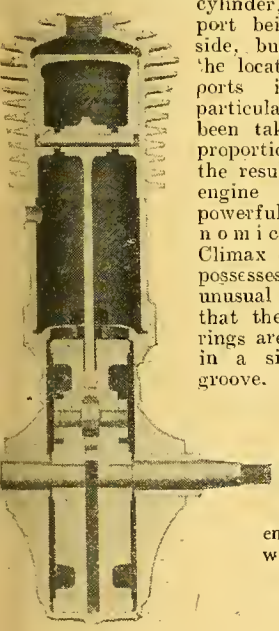
) NE of the most attractive-looking big twin sports models that we have yet seen is now being placed upon e market by Dot Motors, Ltd., Arundel reet, Hulme, Manchester. Fitted with e latest side-by-side valve 8 h.p. J.A.P. gine, three-speed Sturmey-Archer gear d all-chain drive, it is eminently suited · fast solo work. A saddle tank and a ecially constructed frame with duplex ver tank rails are distinctive features. Saxon forks, Amac carburetter, and I.C. magneto form part of the specifica-n, and sidecar lugs are incorporated in e frame. The machine may be supplied her with or without carrier.



A sporting twin of big capacity: the 8 h.p. Dot.

## A TWO-STROKE WITH INSIDE FLYWHEELS.

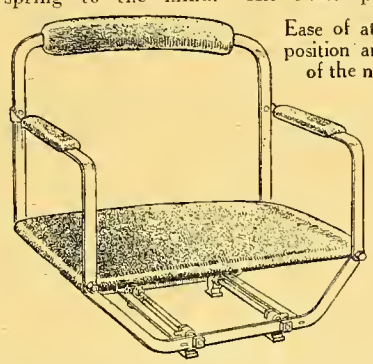
) NE of the few two-stroke engines to hold long-distance records at Brooklands is the little 293 c.c. Climax, · on July 12th last this plucky tle power unit fitted to a New Comet ptured the four, five, and six hours' and e 200 and 250 miles records in Class B/S or 350 c.c. machines with sidecar). In outward appearance the Climax has e outstanding feature, for it is practi-lly the only two-stroke in existence th inside flywheels. The crankshaft is the normal built-up construction, ving a single row roller big end and ng plain main bearings. It is claimed the manufacturers that these inside wheels provide remarkably smooth nning, and from our own experience we n testify that the engine is very smooth action. All three ports are cast in the cylinder, the inlet port being at the side, but although the location of the ports is normal particular care has been taken in the proportions, with the result that the engine is both powerful and economical. The Climax engine also possesses one other unusual feature in that the only two rings are contained in a single wide groove.

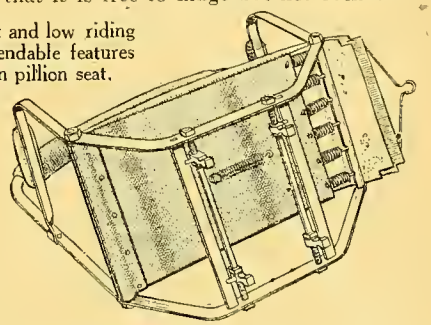


Section of the 350 c.c. Climax two-stroke engine, fitted with inside flywheels.

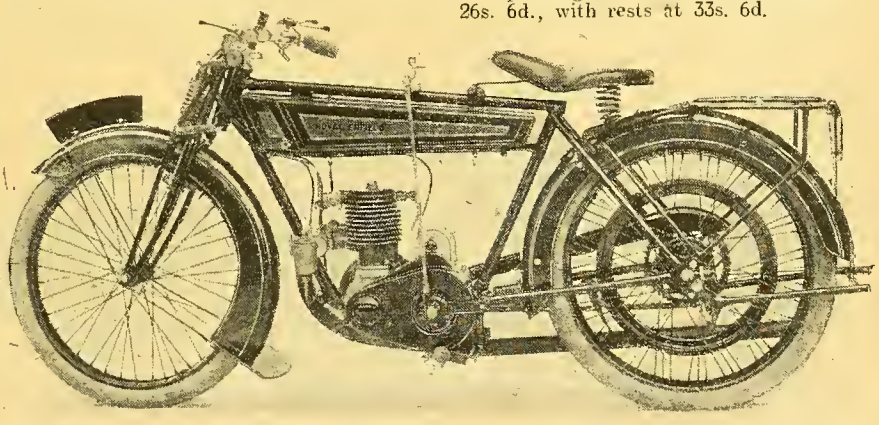
## A SIMPLE PILLION SEAT.

IF a pillion seat is to be attached to the carrier of a motor cycle there are certain important points to be considered. Comfort, absence of side rock, low position, and ease of attachment are obviously amongst the desiderata that spring to the mind. All these points have been carefully studied in the construction of the new Austin pillion seat, marketed by W. H. Jenks, 63, Snow Hill, Birmingham. To begin with, the strip steel framework is attached to the carrier by screw expanded blocks, which take but a minute to adjust. Secondly, the well-padded seat lies on a spring steel plate, which extends for the full width and the greater part of the length of the frame. This plate is folded over one of the frame cross-bars and is riveted in position so that it is free to hinge but not rock sideways. The opposite end of the plate is attached to another cross-bar by six tension coil springs, and when unloaded the whole arrangement lies flat and occupies but little room. The seat weighs 6lb. The complete device is well finished and upholstered with saddle leather and felt padding. The seat alone retails at 26s. 6d., with rests at 33s. 6d.



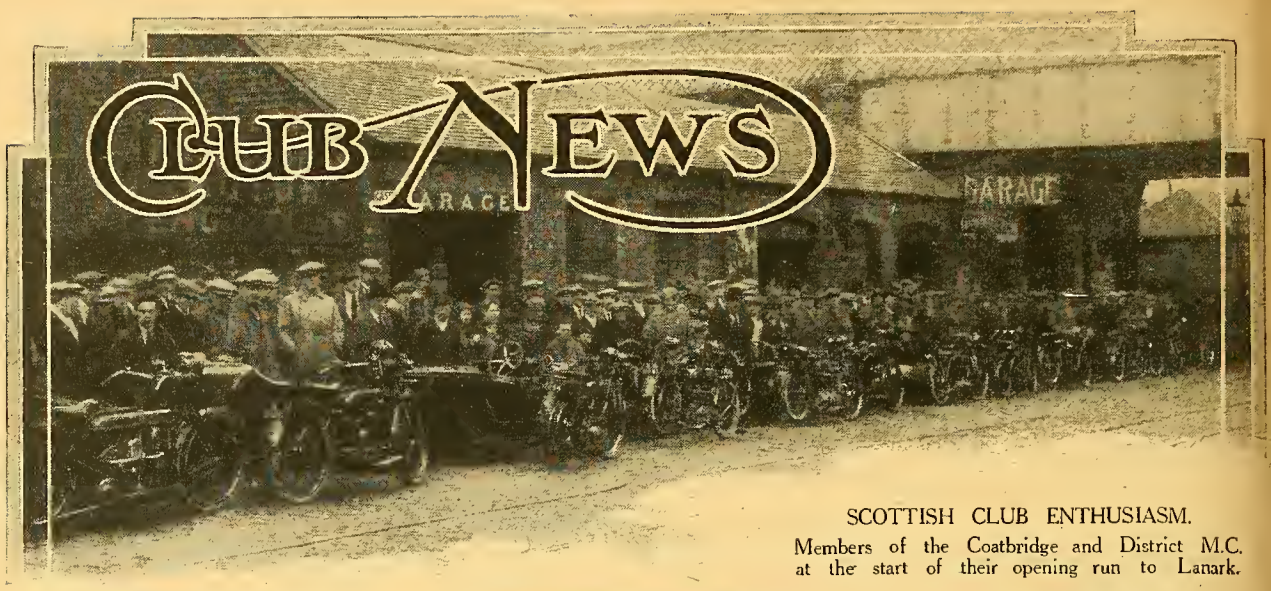


Ease of attachment and low riding position are commendable features of the new Austin pillion seat.



A TWO-STROKE SPORTS MODEL. This addition to the Enfield range possesses larger ports than the standard two-stroke. T.T. handle-bars and adjustable footrests combine to make it quite an attractive-looking machine.

# CLUB NEWS




SCOTTISH CLUB ENTHUSIASM.
Members of the Coatbridge and District M.C. at the start of their opening run to Lanark.

### West Birmingham M.C.C.

Notwithstanding the stormy weather experienced, seventeen members turned out to the opening run, a paper chase, organised by the captain and vice-captain. The latter were the hares, and led an intricate trail across Clent to Kinver, thereby successfully frustrating the followers. Though many went widely astray, all but one finished in time to enjoy a welcome tea at the Stewpony Hotel.

### West Sussex M.C. and L.C.C.

With a view to stimulating interest in its activities, the Club, which has just completed a very successful inaugural year, recently held a dinner at the Globe Hotel, Chichester. Mr. E. Harrison presided, and there was a delightful absence of formality about the proceedings of the evening.

### Rugby M.C.

If the entry list in the recent hill-climb at Edgehill was not a long one, the event did not lack interest in the matter of the speed of the machines entered, or as a sporting meeting. The course measured about five-eighths of a mile, and the fastest time recorded was 50 seconds, being made by G. Le Champion on a 3½ h.p. Sunbeam. As the hill had not been closed to ordinary traffic, the waits between individual performances were apt to be overlong, for competitors were obliged to give precedence to any passing traffic. Results :—

275 C.C.
1. M. G. A. Scally (2½ Rex Acme).
2. F. W. Fraser (2½ Levis).

350 C.C.
1. M. G. A. Scally (2¾ A J S)
2. G. Le Champion (2½ Rex Acme).
3. C. Walden (3 Beardmore Precision).

550 C.C.
1. G. Le Champion (3½ Sunbeam).
2. B. C. Garratt (3½ Norton).
3. W. L. Fincher (3½ Norton)

750 C.C.
1. F. T. Hatton (3½ Douglas).
2. H. G. Stretton-Ward (3½ Triumph).
3. W. L. Fincher (3½ Norton).

UNLIMITED.
1. G. Le Champion (3½ Sunbeam).
2. B. C. Garratt (3½ Norton).
3. W. L. Fincher (3½ Norton).

### Colchester and District M.C. and Bury and District M.C.C.

By a narrow margin of only nine points, the Bury Club won the very successful inter-club hill-climb on Easter Monday. There were 109 entries and about 1,000 spectators.

350 c.c. SOLO.—1, A. McKechnie (A.J.S.), 23 secs.; 2, C. Gooch (Douglas), 30 secs.; 3, F. Coulson (Douglas), 31⅘ secs.

500 c.c. SOLO.—1, R. Fenn (o.h.v. Triumph), 18⅘ secs.; 2, E. Lambert (o.h.v. Triumph), 19⅖ sec.; 3, L. Solomon (Sunbeam), 19⅘ secs.

600 c.c. SOLO.—1, R. Fenn (o.h.v. Triumph), 19 secs.; 2, D. Robinson (Sunbeam),) 19⅘ secs; 3, L. Solomon (Sunbeam), 20 secs.

750 c.c. SOLO.—1, D. Robinson (Sunbeam), 18 secs.; 2, A. Mann (Sunbeam), 18⅘ secs.; 3, R. Fenn (o.h.v. Trinmph), 19 secs.

1,000 c.c. SOLO.—1, D. Robinson (Sunbeam), 18 secs.; 2, R. Fenn (o.h.v Triumph), 18⅖ secs.; 3, L. Solomon (Sunbeam), 19⅘ secs.

500 c.c. SIDECAR.—1, R. Fenn (o.h.v. Triumph sc.), 22⅘ secs.; 2, O. Smart (Norton sc.), 23⅗ secs.; 3, H. Robinson (Sunbeam sc.), 23⅘ secs.

600 c.c. SIDECAR.—1, R. Fenn (o.h.v. Triumph sc.), 21⅘ secs.; 2, O. Smart (Norton sc.), 23⅖ secs.; 3, H. Robinson (Sunbeam sc.), 23⅘ secs.

750 c.c. SIDECAR.—1, O. Smart (Norton sc.), 22⅖ secs.; 2, H. Robinson (Sunbeam sc.), 23 secs.; 3, A. Medcalf (Norton sc.), 25⅗ secs.

1,000 c.c. SIDECAR.—1, O. Smart (Norton sc.), 22⅖ secs.; 2, A. Medcalf (Norton sc.), 23⅗ secs.; 3, H. Robinson (Sunbeam sc.), 23⅘ secs.

### Cumberland M.C.C.

Rainy weather somewhat spoilt t popular Easter trial of this flourishir club, and out of the 32 competitors on ten survived the watery ordeal. T majority retired through magneto troubl A splendid sporting route was chose which was to have been somewhat of preliminary skirmish for the big Northe event in the early future—the one da Open Trial on Saturday, May 13th, r ferred to on page 544 of this issue.

Notable performances on Blea Ta Pass were made by G. Henderson Triumph), W. B. Anderson (A.J.S.), a L. Dixon, whose Norton came up too fa for the comfort of mind of the spectator

R. Drinkall (4 Triumph sc.) stuck in t flood and carried his passenger asho Provisional results :

Lightweight Class:—R. Pape (2¾ Wilkin).
Solo Class:—1st, G. Henderson (4 Triumph 2nd, K. Hodgson (4 Triumph); 3rd, L. Dixon (3 Norton).
Passenger Class:—1st, R. Drinkall (3 Triumph sc.).
Novice Class:—1st, L. Dixon (3½ Norton); 2n W. F. Wasnop (3½ Sunbeam).
Hilton Robinson Cup:—G. Henderson (4 T umph).

Speed trials on Porthcawl sands. L. F. Griffiths (Norton), S. Parker (Sunbeam) and H. H. Bush (Norton) are starting in the "unlimited" class.

# Letters to the Editor

The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

## *IS THE GAME WORTH THE CANDLE?*

Sir,—Having read many letters on this subject, I should like to relate my experience in the "Mellano" Cup Trial. It was a very naughty, sporty course.

I had finished the morning section with 30sec. error, had done everything I was told to in the afternoon section, and was about 150 yards from the finish when a large car, travelling at speed, knocked me out, and all my hopes went west.

But I am looking forward to my next stunt, hill-climb or otherwise, and still most emphatically consider that competition riding is the finest of all sports, and well worth the candle. REG. GREEN.

## *LIMITED SADDLE ADJUSTMENT.*

Sir,—May I make a plea for greater latitude of adjustment of the saddle? I have never yet ridden a machine on which it was possible to have it too low; but with plenty it is not nearly low enough.

The chief adjustment should be horizontal, so that its distance from the handle-bars can be suited to the rider. For me the handle-bars are nearly always just 2in. too far away. People say "Bend the handle-bars." That is certainly a compromise; but not nearly as good as moving the saddle. It does not give the same control. R.E.C.

Ilfracombe.

## *RADIATION OF HEAT.*

Sir,—I have read, with interest, P. Brewster's reply to "E.N.J.'s" article on "Radiation of Heat," and being acquainted with the subject in general, I should like to give him my views.

His first statement, to the effect that very little heat is dissipated by radiation, needs no further comment, but it is his later statements that I should like to say something about.

First of all, glass is *not* transparent to radiant heat, since the latter consists of wave-lengths several times bigger than those encountered in the visible part of the spectrum. Glass is opaque to such wave-lengths which are first met with in the infra-red portion of the spectrum. A practical example of this is a greenhouse, which may be termed a heat-trap, since the glass is transparent to the sun's rays, which are of the visible light, but the radiant heat emitted by the objects inside the greenhouse is unable to pass back again through the glass, since, as stated, it consists of wave-lengths of greater length than those that entered as the sun's rays, and glass will only transmit wave-lengths whose size is about $5.9 \times 10^{-5}$cm., this being the wave-length of light corresponding to what is known as the D line of sodium, and whose colour, as is known by most people, is yellow.

The next paragraph is, however, where his mistake is most evident. Here it is stated that "The real cooling effect is due to convection . . . each particle of air being heated by direct contact with the cylinder as it passes in the stream caused by the motion of the machine." Surely Mr. Brewster means *conduction*—not convection, for as can be read in any text-book on heat, in *conduction*, the matter receiving the heat is in contact with the matter from which it receives it, this being a standard definition of the process of conduction.

The process of convection only occurs when the engine is stationary, and not when in motion, to any appreciable extent. W. E. MARSH.

## *COMPLICATED COASTING.*

Sir,—Over the signature of Louis Field Norton motor cyclists are advised to coast down hill ". . . with the throttle shut and the air wide open," so that "the engine is sucking clean, cool air into the cylinder," etc.

Unfortunately, in about 99 per cent. of carburetters in use on motor cycles, shutting the throttle also has the effect of shutting off the air, even though the air slide may be wide open.

Only on such carburetters as have the air inlet between the mixing chamber and the induction pipe (Binks, for example) is it possible to carry out your correspondent's advice, unless an additional air inlet is fitted. R. J. HARDMAN.

Bishop Auckland.

## *4 H.P. AEROPLANES.*

Sir,—I have read with interest "Ixion's" remarks on the £100 aeroplane, also "Nutansplitpin's" letter, and as I, too, would very much like to see such a machine put on the market, I venture to ask whether any of your readers can tell me what happened to a little machine I saw at Messrs. Farman's aerodrome at Toussous-le-Noble, near Paris, in the early part of 1919. It was a small, single-seater monoplane, fitted with a Fiat twin A.B.C. engine of—I think—36 h.p. The exact wing-span and length I cannot remember, but the main planes consisted of the tail-plane of a Farman "Goliath," the elevator portion being used as ailerons, and running the whole length of the planes. One could lift the fore part of the machine with ease, and one man could pick up the tail and wheel the 'bus anywhere. I was told that she was good for 60 m.p.h., and would do two hours on a tankful of petrol, *i.e.*, two gallons. Also that it was possible to get up to 4,000 feet, and that it was intended to put the machine on the market at 4,000 francs, which at the then rate of exchange worked out at about £148.

Surely, now that production costs are down, such an outfit would sell at about £100, and do all that the private owner would desire.

If my information as to consumption was correct, this little machine's juice bill would compare very favourably with that of an 8 h.p. sidecar outfit, and, with a simple flat twin engine, the maintenance costs should work out at rather less than with a sidecar outfit.

For "Nutansplitpin's" amusement, I may add that as a boy of 16 I built a 22-foot glider, and becoming elated with moderate success, eventually installed a 4½ h.p. F.N. engine with a very home-made prop. The results were catastrophic, needless to add, both to myself and the glider; one glorious ten minutes of frantic taxi-ing, culminating in a bump-off and a very bad landing, being enough to dissolve the whole bag of tricks into its component parts, and to necessitate six stitches being put into my noble brow!!

Cornwall. "NUTHERUMPH."

### ALUMINIUM PISTONS WITHOUT THE DISADVANTAGES.

Sir,—I was astonished to read "Ixion's" remarks in your issue of March 30th re aluminium pistons. But perhaps he has not yet heard of "Specialloid" pistons.

These pistons, as their name signifies, are made of a special aluminium alloy. This is unique, in that it possesses a very high tensile strength and at the same time a degree of expansion under heat very nearly equal to that of cast-iron. Thus this enables Specialloid pistons to combine all the advantages of ordinary aluminium pistons without the attendant disadvantages, *i.e.*, piston slap, risk of stiffness or seizure, etc., which are all a direct result of high expansion.

I could say a great deal more, but will remember that your space is valuable.

In actual practice over a considerable mileage during the last eighteen months I have found that they do all that I was told that they would do. This is especially noticeable as regards speed, economy, and cool running. Piston-slap is non-existent, and after the most brutal treatment as regards over-driving I have never had a stiff engine.

I may add that I have no connection with the makers, Messrs. Specialloid, Ltd., whose address is, I believe, Western Rd., Mitcham, Surrey. D. C. D.

London, N.8.

### COMPLETE SPRINGING.

Sir,—I have read your article on "Spring Frames" with much interest, but was greatly disappointed to find no mention of the "Wooler" spring frame therein.

No spring frame could be more typical of Class I., "That in which the whole frame . . . is sprung," and no spring frame could better comply with your contributor's remark, ". . . a spring frame is best designed as a whole with the front and rear springing on the same lines."

The Wooler front and rear spring parts are interchangeable, and the rear springing adds only about two pounds of unsprung weight, in addition to that of the wheel.

There is none of the "usual disclaimer" business about this letter; but basing my remarks on (I should be afraid to say how many) tens of thousands of miles riding on various types of Woolers, during which time I have never had the least trouble with the springing, it does seem to me a pity that this system of spring suspension was omitted from your otherwise excellent article.

The Wooler springing was first patented by Mr. John Wooler in 1911, has remained exactly true to type ever since, and is standard on all models. JOHN F. HULL.

### STEAM.

Sir,—"W.G.E.E.," writing on the subject of "Steam," asks why it is not given a trial on motor cycles, in view of its many advantages. The answer of an experienced motor cyclist would be that its advantages count for nothing until its disadvantages are overcome, which, so far, they have not been. Is this because the difficulties are insuperable, or because they have not been seriously attacked?

I believe it is for the latter reason, because no ordinary individual will face the trouble and cost of building a machine which must be, admittedly, heavier than a petrol machine of the same power, and more difficult to sell in after years. Nevertheless I am sure a thoroughly practical steam cycle could be built and would be just as reliable as the best modern machine, a better hill-climber, more suited to passenger work, pleasanter to drive, and better capable of maintaining its tune (not to mention fuel at 1s. 6d. a gallon).

Correspondence on this subject crops up regularly, but we can get no further by theory I would suggest that if some motor cyclist, who is also a "model engineer," were to build an experimental machine he would derive great pleasure and satisfaction from it, and would be doing a great service to the pastime by publishing his experiences.

Anyone who has seen Mr. Hindle's design in the *Model Engineer* (April 11th and 18th, 1918) must agree that he has overcome the more obvious difficulties very neatly, and one could not go wrong by following it.

J. R. HARDING.

Sir,—"W.G.E.E.'s" idea struck me as distinctly humorous. I can imagine the average motor cyclist seated astride a tank of water at a temperature of about 300° C; between his legs is a fire-box burning coke. (Coke carried in special coke carrier at rear.)

Every two or three miles A.M.C. must perforce dismount to stoke up.

When he stops his engine the safety valve, which would be situated *à la* top tube, would fly open, thereby considerably damping A.M.C., and also causing the recital of numerous words and phrases which are not fitted as standard on most modern makes of dictionary.

I am only seventeen, and am therefore very ignorant of these matters, but I know that until some genius invents a rig-out of nether garments of 3in. steel, asbestos lined, this child will stick to really inefficient i.c. engines. M.E.M.

Leicester.

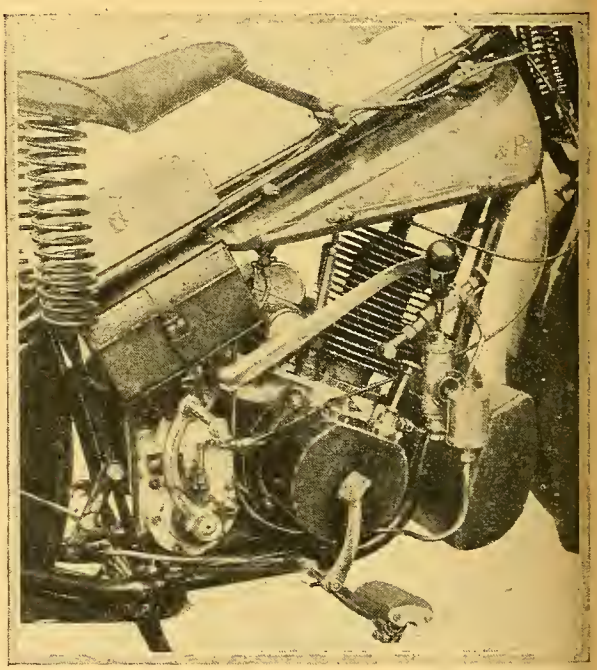
### SHAFT DRIVE'S UNPOPULARITY.

Sir,—Replying to Mr. Morris's query, the reason for the shaft drive being left severely alone by manufacturers is simply because it is not, and cannot be made, as efficient as the chain drive. The difference is anything from 15% to 20%, according to design, and may be even greater after prolonged wear. As a mechanical job, however, where transmission loss is not of importance, it is decidedly preferable.

The success of the modern motor cycle is undoubtedly due to the fact that for its power it is capable of doing much more work than any other machine on the road, and this is chiefly because of its higher transmission efficiency. No better proof of this can be obtained than by merely going back to the shaft-driven bicycle of a few years ago (or "chainless" as it was called). These machines died a natural death, in spite of a lighter and neater appearance, so soon as they were tried out on the racing track by experts, and in competition with the chain-driven machine.

The margin of power available from the average motor cycle engine does not permit of inefficient transmission systems simply on the score of cleanliness or appearance.

W. A. WEAVER,
COVENTRY VICTOR MOTOR CO., LTD.



Without departing radically from the orthodox, the experimental Poppe & Packman 250 c.c. two-stroke possesses several unconventional features, as the illustration shows, in the lay out of the power unit, frame construction and saddle suspension. A full description of the machine appeared last week.

### CORRECTION OF COMPASS ERROR.

Sir,—Your correspondent, Mr. K. N. Howard, asks for a means of correcting the error of a compass fitted to his motor cycle. The best method of doing this is to procure one or two small bar magnets and place them under the compass, being free to revolve independently round their centres (being an imaginary extension of the axis on which the needle works), and to be moved nearer and further from the needle. (One magnet would do, but would not be as accurate as two.)

The machine, in normal running condition, should then be placed in a level position and away from metal buildings or electric wires. The corrector magnet should then be set so that the compass needle shows a minimum average error all round; this can only be found by experiment. It is impossible to obtain absolute accuracy by this method, or for that matter by any other, and if Mr. Howard desires greater accuracy he will have to prepare a card setting down the error at a number of equal points round the compass. Obviously, the more points taken the better the results he will obtain.

It is almost impossible to say what the best position for the compass would be, as it depends on the machine itself, but above all, it should be placed as far from electric wires, magnetic speedometer, and the framework of the machine as possible. The sidecar would probably be found unsuitable owing to its bouncing propensities when empty.

Derby. STREAMLINE.

Sir,—I should advise Mr. Howard to procure one of the excellent treatises on this subject by Captain Craig Osborne, of the Admiralty Compass Department; these can be obtained by any bookseller. But I can assure Mr. Howard that it will be quite impossible for him to correct perfectly his compass under the conditions in which he wishes to use it. He will be able to correct for the magnetism in the wrought iron and steel parts of his machine by means of small correcting magnets, placed at right angles to each other, in a special receptacle under or above the compass, but he will not be able to correct for the magnetism in the soft iron parts of his machine. The only known way at present of making this latter correction is by means of soft iron balls placed either side of the compass, and owing to their size and weight this would be out of the question on a motor cycle.

A. G. STORY,
Late Compass Officer, R.A.F.

Sir,—With regard to Mr. Howard's compass showing an error of about 30° on northerly and southerly courses, it is quite clear that it is suffering from the effects of an athwartship magnetic attraction. I gather from his letter that the error is zero in east or west courses up to north or south. Now there is a position on his machine where the magnetic forces on one side of this position would be equally balanced by the forces on the other side; consequently a compass placed in the determined position would not be affected by the side pulls. On the other hand, if he placed the compass in this position it is quite possible that it would now be affected by fore-and-aft attraction, resulting in errors appearing when heading east or west, but not north or south.

I would suggest that he leave it in its present position, and get a small magnet and correct the error. NAVIGATOR.

Lee, Kent.

### SIXPENNY PILLION RIDES.

Sir,—Relative to my advertisement offering pillion rides at 6d. per mile, and your short comment, it may interest your readers to know that same was the outcome of a wager at the club with a view to disproving, if possible, an assertion of a fellow member. VIC.

Hendon.

### AMATEUR ROAD RACE DETAILS.

Sir,—The idea of an Amateur Road Race seems to be a most excellent one. I, amongst many, are most certainly in favour of such an event.

It will no doubt be well patronised by motor cyclists and others. TERRIER.

London, S.W.19.

Sir,—There is a clause in the condition of the proposed race to which I as an amateur very strongly object, viz.: It is stated that any riders who have entered this year's open T.T. are not eligible to enter the amateur event this year should such a race take place, although I notice it is suggested that amateur riders who do not gain a gold medal in this year's open event will be eligible to enter the race next year should one take place.

What is the reason for this clause? Are we amateur riders to understand that all the entrants in this year's open events are considered to have had assistance rendered to them in some form or other by the manufacturers? It looks very much like it when they are debarred from entering the amateur event.

I am an amateur absolutely, and have no connection in any shape or form with the trade, not even as a shareholder in any of the concerns. I have entered this year's open event, but I did so as it is, or was, the only means of taking part in any Tourist Trophy event. I have never won anything at all in any open competition of this kind, and I most certainly consider it most unjust and unfair that I should be excluded from taking part in this proposed amateur event.

If I had known that the amateur event was to take place I should not have gone to the expense of entering the open T.T. C. WATERHOUSE, Jnr.

### TWO-STROKE EFFICIENCY.

Sir,—In reply to "R.T.F.," it is not my intention to continue a technical discussion on thermal conductivity and emissivity in your correspondence columns. I would only say that I cannot agree with him. May I remind him—

(1.) That the rate of flow through metal is large compared with the rate of flow from metal to air, and the surface getting rid of the heat is through the whole of the outside cylinder surface, not the head only.

(2.) The loss of heat from the working stuff to the walls takes an appreciable time, and continues throughout the stroke, not merely at the instant of ignition.

In further reply to your correspondent, "R.R.," who raises the question of the Alecto long-distance records: whilst not wishing to disparage the excellent performance of the Alecto in these records, I would point out that one swallow does not make a summer, and he will find that my statement generally holds good. Innumerable instances might be quoted which would seem to support it, but these do not really do so, *i.e.*:—

The 500 c.c. class was won by a 350 c.c. four-stroke in the T.T. last year.

The 350 c.c. Sunbeam, at the first 1922 Brooklands meet equalled the time put up in the 500 c.c. class.

Berger, on a 220 c.c. Velocette, in France, got the premier award in the Tour de France, over a course of 2,300 miles.

M. C. JENNISON.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

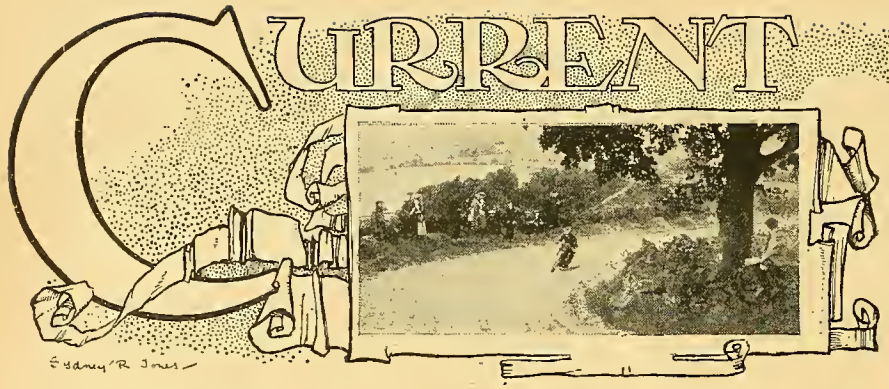
**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle*.
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.




## SPECIAL FEATURES

T.T. NOTES AND NEWS.
GUIDE TO THE SCOTTISH TRIALS.
PASSENGER MACHINE TOPICS.

## Times to Light Lamps.

| | | | |
|---|---|---|---|
| April | 27th | .. .. | 9.13 p.m. |
| „ | 29th | .. .. | 9.16 „ |
| May | 1st | .. .. | 9.20 „ |
| „ | 3rd | .. .. | 9.24 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Where to go on Saturday.

London and Home Counties enthusiasts should note that the big open hill climb, to be held next Saturday on Kop Hill, Princes Risborough, starts at 12 noon.

### Silence—in Two Continents.

Cut-outs have been prohibited in Great Britain for the past nine years. In the United States just now an appeal is being made to manufacturers to abandon the fitting of cut-outs altogether.

### Postmen Motor Cyclists.

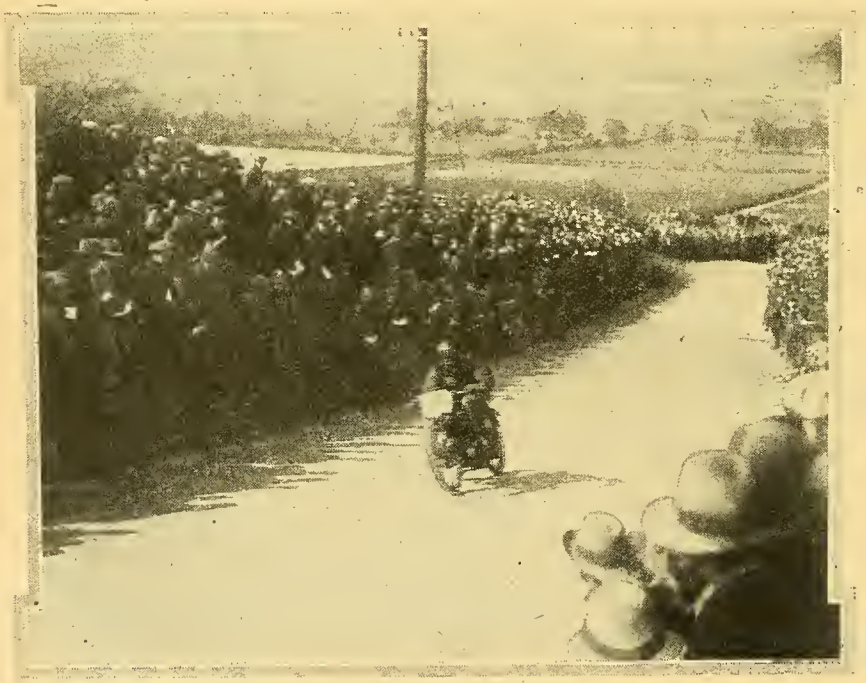
In the American town of Riverside motor car mail vans are being abandoned and motor cycles have taken their places.

### South African Imports.

For the twelve months ending December 31st, 1921, 1,424 motor cycles were imported into South Africa, to the value of £131,685, comparing rather unfavourably with the figures for 1920—3,314 motor cycles, value £274,593.

### Are they the Best?

According to Sir Henry Maybury, our finest roads are the granite-paved ones in Glasgow. The setts are blocks of granite like kerb-stones, 3ft. 6in. long, set in bitumen, but the price is prohibitive. For heavy transport vehicles they are, no doubt, very satisfactory, but what about solo riding thereon?



No keener sportsmen are to be found than Yorkshiremen, and no matter what the event crowds are sure to gather, as shown by the photograph taken at Staxton hill climb. The rider is E. Searle on a Sheffield-Henderson.

### Pillion Riding.

In view of the favourable comment on pillion riding in the Inter-Departmental Committee's report, the daily newspapers have given a distinct fillip to this method of carrying a passenger.

### Not so Bad as we Think.

There are bad roads in England, and plenty of them, but there are also some of the best in the world. According to the Director of Roads of the Ministry of Transport, French and other foreign road-makers frequently come over to study our methods.

### Driving Mirrors.

On a recommendation of the General Purposes Committee of the Derbyshire County Council, the clerk was instructed to draw up a bye-law compelling motor vehicles to carry driving mirrors. In the opinion of the Ministry of Transport, such a bye-law, before coming into force, would require confirmation by the Home Office, and such a contingency is, we understand, extremely unlikely.

### Regulations for the Grand Prix.

Official rules for the French Motor Cycle Grand Prix, to be run at Strasbourg, on July 12th, have just been published, and merely confirm the outline already given in these columns. This race, the most important event of its kind in France, is open to 250, 350, and 500 c.c. machines complying with the international regulations regarding weight and tyre sizes. The Strasbourg circuit is 8.31 miles round, and will have to be covered 20, 25, and 30 times respectively by the 250 c.c., 350 c.c., and 500 c.c. classes. The entry fee is 400 francs per machine, whatever the class. Entries close on May 15th, or at double fees on June 15th.

### Lake District Open Trial.

Organised by the Cumberland County M.C.C., the Northern Centre A.C.U. will hold an open reliability trial on Saturday, May 13th, starting from the Crown and Mitre Hotel, Carlisle, at 9 a.m. Valuable prizes and trophies will be awarded to the winners, including the "Alan Trophy," value 65 guineas, for the best individual performance; the "Cumberland County Trophy" for the best performance in the solo class, the "Barron Trophy," for the best performance in the passenger class (excluding light cars), and the "New Imperial Trophy," for the best performance on a machine up to 250 c.c. Further particulars and entry forms may be obtained from the hon. trials secretary, Mr. R. L. Williamson, 19, Cecil Street, Carlisle.

EVERY THINKING MOTORCYCLIST JOINS THE AUTO-CYCLE UNION.

# THE AUTO-CYCLE UNION

## What is the best method of ensuring that every Motor Cyclist in the Kingdom shall become a member of the A.C.U. ?

To do so means, firstly, making known the unquestionable advantages of membership—already known and appreciated by tens of thousands. If we are to create a really powerful national organisation these benefits must be made known individually to the whole of the half-million motor cyclists in the Kingdom.

If such a powerful organisation be not created, then we must continue to suffer at the hands of uninformed officials in matters of law and its administration, and also continue to be at the mercy of monopolists in matters which touch our pockets, and so restrict the free use of our machines.

How, then, can we bring home to every individual motor cyclist the necessity of joining, both for his own personal profit and in order to create *that great national body which all must recognise as so necessary to-day ?*

It is a simple matter to reply:

**"Advertise!"**

This is a valuable aid—

But it isn't *original*, is it?

# WE WANT ORIGINAL IDEAS.

## Therefore the following prizes are offered :—

**1st Prize - £100 in cash**

**2nd Prize - £50 " "**

**3rd Prize - £10 " "**

**and twenty Consolation Prizes of £1 each.**

### WHAT YOU HAVE TO DO TO WIN A PRIZE.

**Submit to the Secretary of the Auto-Cycle Union, 83, Pall Mall, London, S.W.1, suggestions as to the best method of inducing 250,000 motor cyclists to enrol in the A.C.U. by the 30th September, 1922; stating what additional benefits, if any, the Union might usefully offer.**

**These are the simple rules governing the Competition :—**

1. Your scheme must be expressed in not more than 500 words, but should set out in detail exactly how you would operate it.
2. It must be forwarded to the Secretary A.C.U., 83, Pall Mall, London, S.W. 1, not later than the 15th May, 1922.
3. No correspondence will be entered into with entrants.
4. The decision of the Judges, who will be members of the Committee of the A.C.U., assisted by Commander F. P. Armstrong, R.N.V.R., Acting Secretary, Royal Automobile Club, and the Editor of "Motor Cycling," as to the award of prizes will be final and binding on all entrants.
5. The Committee reserve the right to make use of or adopt any scheme or part thereof whether a prize has been awarded to its author or not—but in the event of such use will award a special honorarium to any competitor who is not an actual prize winner.
6. The result of the Competition will be published in "The Motor Cycle" and "Motor Cycling" on or before 15th July, 1922.
7. In order to rule out other than serious competitors, no suggestion will be considered unless accompanied by the application form at the foot of this page, together with a remittance of 1/- in stamps or postal order.

(Members of the Staff of the A.C.U. and R.A.C. are not eligible as Competitors.)

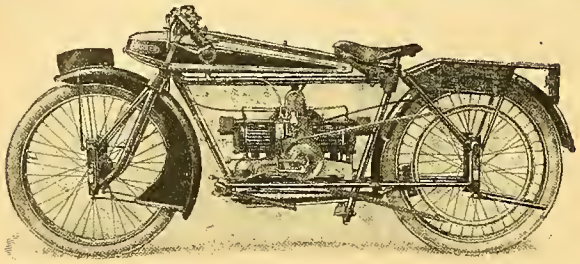
I desire to enter the A.C.U. Membership Competition and enclose 1/= entrance fee herewith.

NAME.....

ADDRESS..... M.C.27/4/22

EVERY THINKING MOTORCYCLIST JOINS THE AUTO-CYCLE UNION.

**Economical to Run,**
**Easy to Handle, Delightful to Drive.**
**Ranging in Price from - - - £65.**



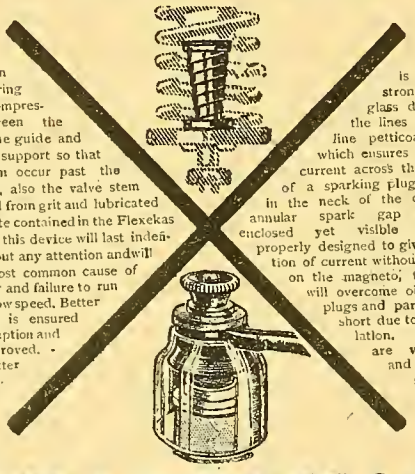
THE DEDERICH-WOOLER ENGINEERING Co
ALPERTON, LONDON.

*Write for particulars.*

**WOOLER Motor Cycles always are Value for Money and fulfil the most exacting requirements.**

# FLEXEKAS

Flexekas is simply an airtight spring fitted in compression between the bottom of the guide and the spring support so that no leak can occur past the valve guide, also the valve stem is protected from grit and lubricated with graphite contained in the Flexekas. Once fitted this device will last indefinitely without any attention and will cure the most common cause of bad starting and failure to run evenly at slow speed. Better carburation is ensured and consumption and power improved. Valve clatter is also eliminated.



Sparxekas is a dome of strong tempered glass designed on the lines of an H.T. line petticoat insulator which ensures no leakage current across the insulator, of a sparking plug. Embodied in the neck of the dome is an annular spark gap completely enclosed yet visible externally; properly designed to give amplification of current without any strain on the magneto, this device will overcome oiling up of plugs and partial internal short due to dirty insulation. Sparxekas are very neat and give a striking effect.

# SPARXEKAS

**FLEXEKAS fit any engine and are supplied with special heatproof graphite paste at 2/6 per valve. Extra cartons of paste to be used when overhauling are 1/6 each.**

**SPARXEKAS fit any plug and are supplied complete and ready for fitting under existing terminal nut at 2/6 per plug.**

*Obtainable from Halford Depots, James Grose Ltd, principle garages or direct from*

**CLIFFORD PRESSLAND, A.M.I.E.E.**
**Engineer, HAMPTON-ON-THAMES**

# HOBART—

## VALUE and EXPERIENCE—

these points are essential to you. In the lightweight motor cycle class, two-stroke or four-stroke, there's a HOBART model to meet your requirements.

VALUE—in price to the utmost limit, is represented in every HOBART model.

EXPERIENCE—in manufacture since 1884 is put into every HOBART Motor Cycle.

## THE MOTOR CYCLE FOR YOU—

Two-stroke—Villiers or Morris engine.
Four-stroke—J.A.P. or Blackburne engine.
Gear Box—Sturmey-Archer, 2 or 3 speed.
Transmission—Chain-cum-belt or all-chain.

**PRICE from £42 0 0 upwards.**

*Full specification post free on request.*

**HOBART CYCLE CO., LTD.,**
**COVENTRY.**

### Cheaper Benzole.

Most of the roadside garages during the week-end announced benzole stocks at 2s. 11d. per gallon.

### The Great North Road.

Gradually the condition of the Great North Road is improving. From London to Doncaster is generally good, the only really bad section being at Alconbury Hill. North of Doncaster, Aberford, Ferrybridge and Wetherby districts retain their old unenviable reputations, but signs of improvement are apparent here and there.

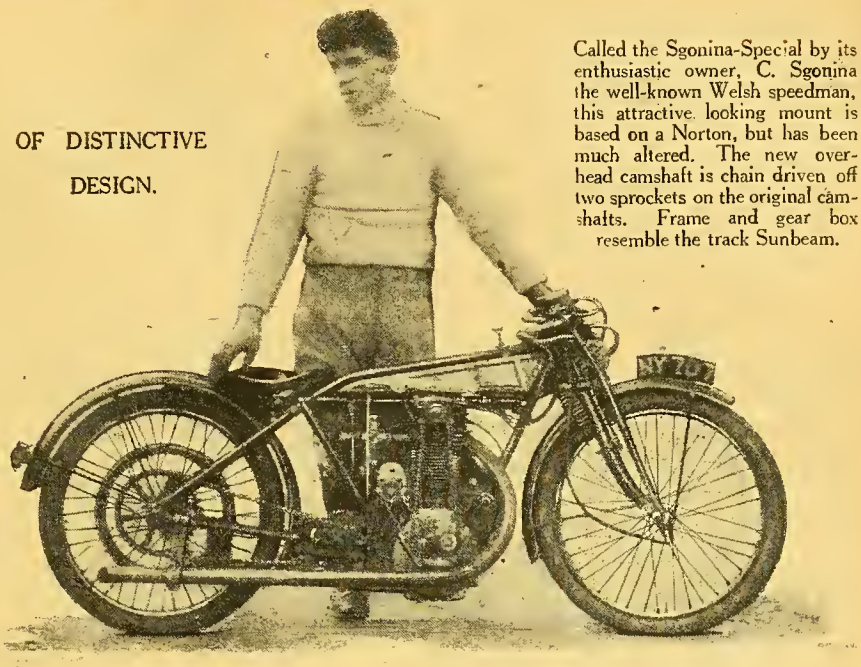
### South African T.T. Race.

It is wonderful the influence the T.T. Races have had throughout the world. The Natal M.C.C. has been accustomed to run a South African T.T., but at the request of the Motor Cycle Union of South Africa it has agreed to forgo the title of "South African," owing to the fact that the Union contemplates organising an event for the whole of South Africa, to be known as the South African Tourist Trophy Race.

### Sue the Manufacturers!

Sheffield magistrates reluctantly fined eight offenders £2 each for using motor cycles which were too noisy. In several of the cases it was evident that the noisy machines were used as sold by the manufacturers, and the presiding magistrate said that he was surprised that reputable firms sold machines in such a condition. The defendants were advised by the magistrates' clerk to sue the firms selling the machines for damages. We have already hinted in *The Motor Cycle* that the silencing arrangements on certain sporting models are, if used (to employ a common expression) "simply asking for trouble."

OF DISTINCTIVE DESIGN.



Called the Sgonina-Special by its enthusiastic owner, C. Sgonina the well-known Welsh speedman, this attractive looking mount is based on a Norton, but has been much altered. The new overhead camshaft is chain driven off two sprockets on the original camshafts. Frame and gear box resemble the track Sunbeam.

### Value of International Trials.

All the British competitors who took part in the International Six Days' Trial last year agreed that, on account of the unfamiliar nature of the Alpine roads traversed, the event was one of the most instructive in which they had ever ridden. The principal British makes represented were the A.J.S., Brough Superior, Douglas, Sunbeam, Scott, Raleigh, Triumph, and Norton; the two latter were entered by Swiss representatives.

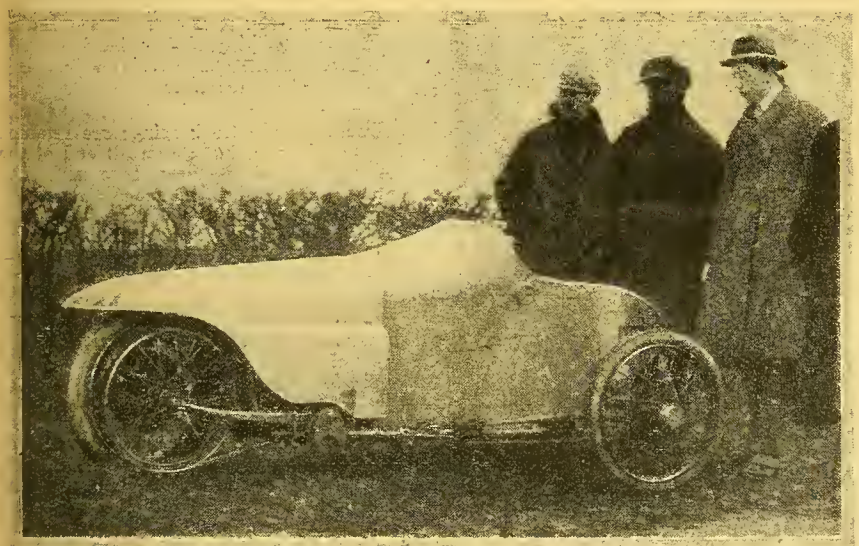
### Amateur Road Race Abandoned.

So as to avoid embarrassing the A.C.U., the Manx M.C.C. definitely decided last week-end to abandon the Amateur Road Race for this year. Particulars of the A.C.U.'s refusal of an open permit are given on page 549.

### Racing Track for Blackpool.

The Blackpool and Fylde Motor Club is receiving the enthusiastic support of motorists throughout the North of England for the proposal that a new motor racing track should be included in Blackpool's new park scheme. The A.C.U. and the Lancashire A.C. are to consider the question at their next meeting. Meanwhile a large number of important motoring clubs have written to the Town Clerk in favour of the proposal.

After all, why should not Blackpool have a motor race track? There are few seaside resorts in the country with a better claim and few places more popular amongst northern motor cyclists



FRONT WHEEL DRIVING AND STEERING. A Yorkshire product, the 8 h.p. Jap-engined Bramham monocar. Similar in layout and transmission to the Stanhope cycle cars, it was entered in last Saturday's Sutton Bank hill climb, which was postponed owing to rain.

THE NEXT STAGE!

*MOTOR CYCLISTS interested in small or large cars should read*

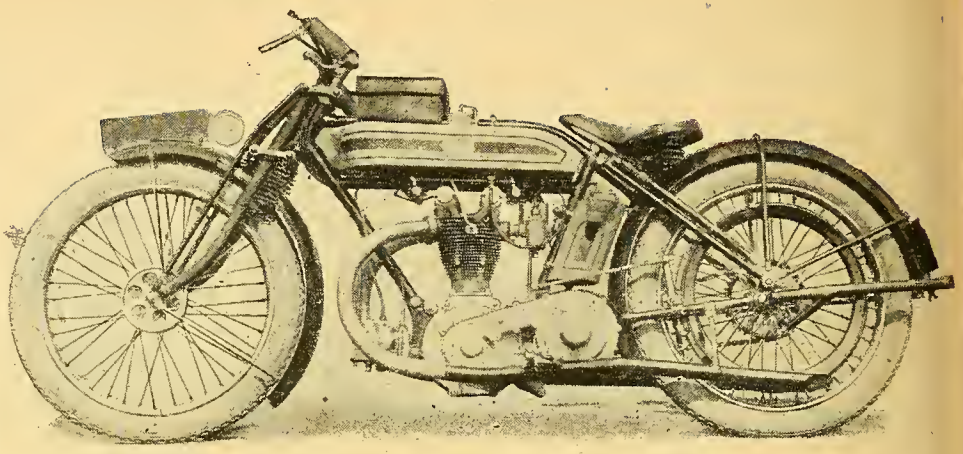
The Autocar

Every Friday 4d.

*the forerunner of all motoring journals. Founded in 1895, it remains the largest and most successful automobile paper, and enjoys the greatest circulation. It is universally accepted as the representative British motoring journal.*

# TRIUMPHS FOR THE T.T.

## Four-valve Engine; Three-speed Gear Box; No Kick-starter; Detail Modifications. 26×3in. Tyres Retained.



At a glance the Triumph for the T.T. resembles the standard four-valve model, but on closer examination there are one or two obvious modifications, none of which, however, is in any way freakish.

WHAT first impresses one about the Triumph for this year's T.T. is that it would make a most delightful standard solo mount of the super-sports type. For although it embodies advanced features of design it bears not the slightest suspicion of being a racing freak.

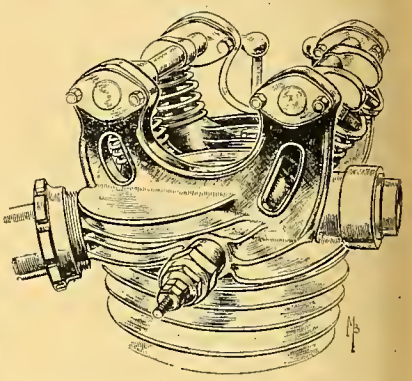
It may be described as a blend of last year's four-valve I.O.M. design, and this year's marketed model with several important modifications.

The cylinder dimensions now are 85×88 mm., the reduction in stroke permitting ample ground clearance, but at the same time allowing full scope for the design of an efficient cylinder head and overhead gear with two inlet and two exhaust valves without increasing the overall height, and, consequently, raising the centre of gravity of the machine. We were assured that there was no other reason for this reversion after a year in the long stroke class to a more "square" cylinder.

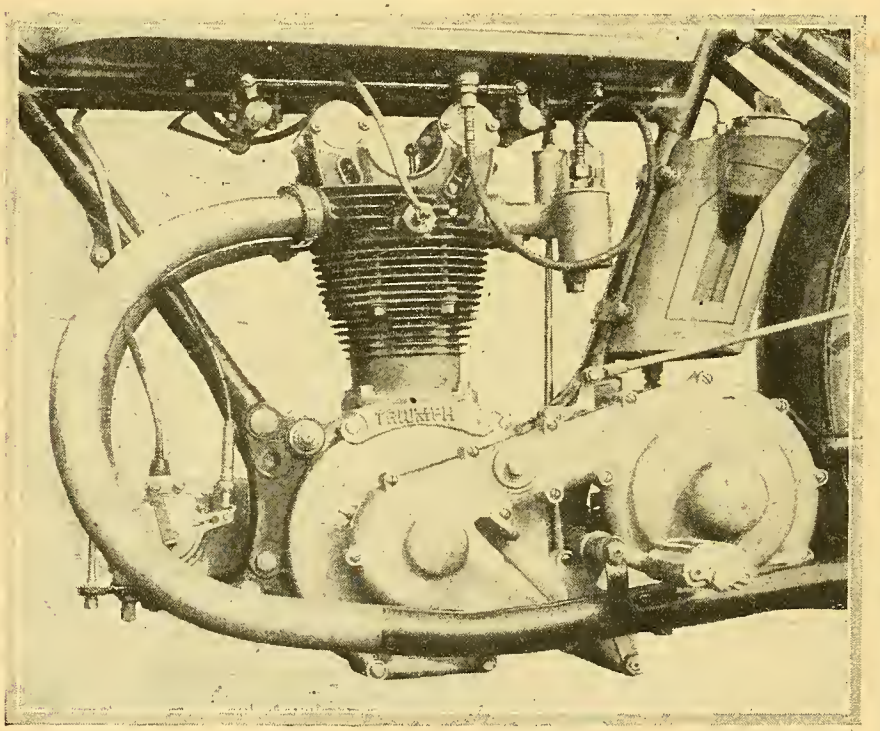
At a cursory glance, the cast iron cylinder, cylinder head, and the overhead valve gear, all resemble the marketed sports model, but actually there have been some modifications. The valve area is approximately 25% greater, the two exhaust ports are set out at an angle instead of being parallel on their centre lines, and the sparking plug has been transferred to the side. This last change was made purely on the score of increased accessibility and an alternative position is retained in the centre of the head.

As before, the inlet valves are "masked," but generally the whole valve gear is on more generous lines than hitherto.

The timing gear, too, has been altered on the lines of last year's I.O.M. Triumph, the cams are smaller but wider, and the decompressor has been dispensed with.



Overhead valve gear and cylinder head. The sparking plug may be fitted at the side as shown or in the old position in the centre.



The 85 × 88 mm. edition of the four-valve engine to represent Triumphs in the I.O.M.

Double-row roller bearings are retained for the big end, but the small end of the connecting rod is now hardened, and carries the floating gudgeon pin without the customary phosphor-bronze bush.

The lubrication system is not unchanged, but a detailed description of this must form the subject of a future article.

About 18 h.p. at 5,000 r.p.m. is expected from the engine. At present the compression ratio is about 5¼ to 1, but the removal of the standard compression plate would increase this considerably; whether this will be done has not yet been decided.

Transmission has also undergone detail alterations. A three-speed close ratio gear box on the usual Triumph lines has been designed so compactly that the actual casing is the same size as last year's T.T. two-speed box. The clutch area has been increased but both clutch and shock absorber are of the same design as previously. Clutch operation, however, is effected by a rod passing through the hollow main shaft. No kick-starter is fitted. The oil bath primary chain case

**Triumphs for the T.T.—**
is cut away in the centre, permitting the footrest bar to be fixed in the correct position for greatest controllabilty.

Several sets of alternative gear ratios are under consideration, the final choice depending on whether 80 m.p.h. is regarded as possible on the Island course. As the machine stands, a top ratio of 4.45 to 1 gives 5.48 and 8.23 as second and first; with a 4.75 top the others would be 5.84 and 8.78; while a third alternative, necessitating, of course, a change in the box, would give 4.75, 5.84, and 7.12.

Excess care has not been devoted to the engine and transmission at the expense of the bicycle parts, and the few details where improvement seemed possible have all received attention. The excellent rear brake remains as before, but the control rod has been modified so that the brake pedal lies directly under the rider's foot when normally placed on the rest. In front a neat external band brake has been fitted.

Since the main tank carries petrol only, and is of a wider build, the capacity has been increased to about 2¼ gallons. No carrier is fitted. 26in. × 3in. Dunlop Magnum tyres and Druid forks, of course, find a place in the specification as does the new square type M-L magneto. The final choice of a carburetter will probably fall on the racing Amac, but, naturally, not without experiment.

We should imagine that the Triumph team will be among the first favourites at the start on June 1st.

# A TRIAL FOR WORKS STAFFS.

## The Men who Assist in Making Motor Cycles hold a Trial of their own.

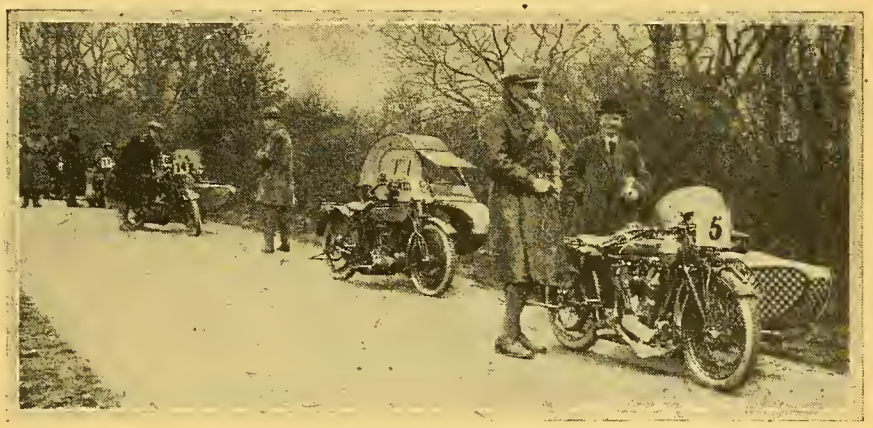
AS its name implies, the Coventry and District Works' Motor Association is a body whose membership is drawn from local works' staffs. That this energetic institution is growing rapidly is shown by the fact that no fewer than sixty-one entries were received for the half-day reliability trial held on Saturday last.

Unfortunately, various circumstances prohibited the participation of many entrants, and only thirty-five actually faced the starter. Of these thirty-two finished the course, which was approximately fifty miles in length, and was intentionally of an easy nature. This trial was intended as a form of training for stiffer tests in the near future, and it must be remembered that though the members are recruited from Coventry motor works, well-known competition riders are comparatively few and far between. In fact, the majority of competitors on Saturday last were genuine amateurs, riding and owning their own machines, many of which were faithful friends of some years' standing. This accounts for the fact that there were three failures on the very modest little hill turning off right-handed some three-parts of the way up Warmington hill. On this, the most severe up gradient on the course, there were several excellent performances, notably, W. Montgomery (8 Brough Superior sc.), J. Herbert (5 Lea-Francis sc.), E. Marshall (4½ Humber sc.), T. Gibbins (8 Rex-Acme sc.), S. Walker (6 Excelsior sc.), J. Bratby (4½ Humber), W. Dono (4 Triumph), and J. Richards (4 Triumph sc.).

For the rest, the only difficulties lay in the negotiation of some rather greasy but very smooth three-track field roads between Gaydon and Warmington. On one gradient in this section there was a certain amount of wheel spin, but the most serious trouble was the number of gates to be opened, which materially delayed competitors in the non-stop section.

Both start and finish took place just off the Coventry-Kenilworth Road, and in spite of a wet morning not a drop of rain fell throughout the trial. There might have been more direction arrows employed, but there was no real excuse for the few who left the course.

Results will not be available until next week.




A study in sidecars at the Coventry and District Works' Motor Association's Trial on Saturday. In the foreground is W. Montgomery's brilliant chessboard sidecar attached to a Brough Superior; immediately behind is J. Biddle's Rudge and compact little coupé.

Although associated all the week with the manufacture of motor cycles, the majority of the members of the Association are as keen amateurs as are to be found in any club. The illustration depicts the start of their trial last Saturday.

# A TRIAL FOR PRIVATE OWNERS.

## Surbiton Motor Club's Third Annual Team Contest.

Five of the winning team in the Surbiton Club's inter-team trial. From left to right they are A. Shillito (8 Matchless sidecar) R. C. Staunton (4 Triumph), R. A. Green (Norton), E. R. Showell (6 Martinsyde sidecar), R. Charlesworth (3½ Zenith-Bradshaw); the other member of the team was W. Henry Wells (7 A.J.S. sidecar). They represented the organising club.

DESPITE the very unpleasant weather conditions, there was no lack of enthusiasm on the part of the private owners who competed in the team trial organised by the Surbiton Club, which took place last Saturday. Team captains were supervising last minute preparations, checking watches, and issuing final instructions so that nothing should be left to chance, and so interfere with the teams' prospects of winning the Maudes Shield. The weather conditions being so bad, the organising club called a conference of club captains, who decided that instead of doing three circuits of the course, two would suffice.

### Not a Freakish Course.

The event being open only to amateur riders, the executive wisely decided to exclude anything of a freakish nature on the course, which lay through Guildford, Albury, Farley Green, Smithwood Common, Horseblock Hollow, Shere, Gonishall, White Downs, Crocknorth, Horsley Towers, Ockham, and back to Ripley. Bright Street, Guildford, Horseblock Hollow, and White Downs were the three test hills. Most of the competitors had plenty in hand on Bright Street, some of them making particularly fast climbs. The "star performances" were the two Brough Superiors, driven by H. D. Dobson and J. Clutterbuck; also the entire Oxford team.

From Bright Street the course was followed with some difficulty; it would have been considerably better if the club had augmented the blue dye with arrows, the continuous rain having washed most of it away.

Horseblock Hollow was the next test hill; having a gradient of about 1 in 5, and rather loose, it is quite a "stiffish" climb when dry, so it was not surprising that a few failures resulted. R. W. Greaves (Enfield sc.), B. E. Belfield (James sc.), and F. V. Edwards (4 Harley sc.) were among the unfortunates.

An excellent ascent was made by D. F. C. Fitzgerald (4 Norton); a sidecar failure directly in his fairway necessitated a swerve into the greasy gutter; this gave him a bad wobble, but, making a good recovery, he proceeded to the top at speed.

A circuitous run over muddy lanes brought the riders to Shere, and so on to White Downs. This accounted for quite a few stops, some due to bad luck, but none to absolute lack of power. Easy going through Ockham back to Ripley completed the circuit of 33.3 miles. Only four of the teams were intact for the next circuit, Woolwich leading on the first round, followed by Surbiton, Brighton, and Oxford. They continued in this position until Crocknorth, where F. Ellis, the Woolwich captain, riding a Triumph, had a fall and broke his handlebars, and so ended the Woolwich team chances.

The three remaining teams, finishing complete, made it a question of time as to which was the winner. Half an hour's work on the part of the officials found the Surbiton Club first.

D. H. Williams (2¾ A.J.S.) making light of White Downs Hill.

# THE AMATEUR ROAD RACE.

## A.C.U. Refuses Permit for Open Amateur Event between Junior and Senior Trophy Races.

AND so the open amateur race is not to be after all. The news will be received with regret by the hundred thousand odd keen motor cyclists in this country and riders the world over.

After giving the proposal its blessing, the A.C.U. Competitions Committee reversed its attitude last Friday, when formal application was made by the delegates of the Manx Motor Cycle Club, and, by a majority of one only, turned down a race it originally encouraged.

### Objections Not Convincing.

It will be recalled that at the previous meeting between the Anto-Cycle Union and the representatives of the Manx Club, the A.C.U. stated that the proposal was "sympathetically received," and "permission was granted to apply for a permit," but since then other influences have been at work.

The membership of the A.C.U. is very largely composed of private motor cyclists, and they will inevitably require an explanation for the refusal to grant a permit for an event so exclusively of interest to that particular class of rider.

That an amateur race would be popular has been amply proved in our pages. No one will deny that there are obstacles in the way, but some of the objections trumped up by the several interested parties were considered petty in the extreme.

### Of Political Significance.

Two Manx representatives came over specially for the A.C.U. meeting—G. J. A. Brown and H. Cowin—and returned to the island unconvinced as to the merit of the objections put forward, their report being presented to the Manx Motor Cycle Club last week end.

True the time in which to arrange the race has been short—and this may be regarded as one of the chief objections on the part of those who wished to see the race a success—but, from the moment the proposed event was announced in our pages, it appears to have become a political matter of greater significance than is generally realised by the enthusiast.

The position of the A.C.U. is rather a difficult one. It is first the governing body of the sport and pastime, representing the motor cycling public and doing its best to foster development along right lines. In order to do this, events such as the Tourist Trophy races are promoted. The committee are, therefore, race promoters. Now a race is proposed which, although not probable, is at least possible ultimately to rival the A.C.U. event, and antipathy is perhaps natural. This revives a question often asked by private owners, i.e., whether the governing body is in a position fairly to adjudicate in such matters, where an unbiased view cannot be expected.

### Trade Objections.

It was not the A.C.U. objections, however, which were entirely responsible for the rejection of the amateur race. It is no secret that there was strong opposition on the part of the trade, who, through Major H. R. Watling, of the Manufacturers' Union, approached the A.C.U. with a list of objections.

From what we know of the objections of both the A.C.U. and the trade, we can say that some at least were petty and unconvincing; but there was one objection shared by both the A.C.U. and the trade, and, we will admit, also by ourselves. *An amateur race sandwiched between the great blue riband Junior and Senior events would undoubtedly tend to minimise the importance of the latter.*

Some of the other objections are regarded in the Isle of Man as merely excuses. For instance, the view was advanced that such a race would have no scientific value. (Comment is unnecessary.)

Another objection was that an extra 25 or 50 men on the course would be detrimental to the roads, yet the A.C.U. was open to receive entries up to 200 for the T.T. races, and less than 150 have been received.

There is no doubt that the idea of an amateur race was not congenial to the A.C.U. management—as distinct from the competitions committee—a representative and sporting committee, it so happens. Thus the committee had the difficult task of deciding whether they were to be swayed by outside considerations or endorse their previous feeling and grant a permit, and so satisfy the insistent call of keen amateurs for a race all their own. As we have intimated, there was a majority of one—7 for and 6 against. A narrow rejection.

### Suggestion—Too Late.

We are informed that the feeling of the committee appeared to be that had a formal application for a permit been made in respect of the Friday after the senior race it would have been granted. It transpires, however, that this suggestion did not eventuate until after one or two members of the committee had left, and on the Isle of Man delegates making an application for a permit for the day mentioned, it was found that another meeting would have to be called. There is now no time for this to be done, so the I.O.M. delegates returned to the island with two alternatives to discuss:

1. Postponement until next year.
2. To run the race as a closed event.

It is some time now since we first termed the A.C.U. the Motor Cyclists' Parliament, but it was not until this affair that the true likeness to parliamentary methods became apparent.

Keen amateurs who want the race are bound to consider that the A.C.U. has been influenced by the trade in a matter over which the private motor cyclist considers the trade has no jurisdiction. It is argued that an amateur race on the lines suggested by the Manx Club is surely just the very event where trade considerations should be entirely absent.

Personally we should have liked to have seen the race materialise, but not at the expense of the T.T. races. Possibly the Manx Club will organise an event later in the year. Certainly an event at a later date would attain greater prominence than if held at a time when so many important competitions are engaging the attention of all interested in the motor cycle movement.

### "The Motor Cycle" Cup.

*The Motor Cycle's* offer to present a cup to the winner was contingent upon the official A.C.U. permit for the event, in order to preserve harmony in the motor cycle world, but it is renewed for an amateur race under A.C.U. ægis, if the Manx Club can arrange another date satisfactory to all parties.

---

## THIS YEAR'S LONDON-EDINBURGH RUN.

PARTICULARS of the fifteenth London-Edinburgh run organised by the Motor Cycling Club are now issued. As previously announced, the start will be from a private road adjacent to the London Country Club, Hendon, on the evening of Friday, June 23rd, and Kirkstone Pass will once again be included. The first breakfast will be at Grantham, the second breakfast at Ilkley, lunch will be served in Carlisle, while there will be a stop at Moffat for tea.

Entries cost £2, including a deposit on the number plates, which must be returned to the club after the trial. The final date for the closing of entries is Saturday, May 13th.

Gold medals will be awarded to competitors who comply with the regulations, who are not more than 15 minutes early at any point on the journey, or more than 10 minutes late at any point, and who complete the section from Ambleside over Kirkstone Pass up to Patterdale as a non-stop run.

Silver medals will be awarded to competitors who are not more than 15 minutes early or 30 minutes late at any point on the journey. Bronze medals will be awarded to competitors who are not more than 15 minutes early and who complete the journey in 25 hours.

Anyone not a member wishing to compete should apply to the honorary secretary, Mr. Southcomb May, 34, Gower Place, London, W.C.1, for a membership application form. These applications must be completed by Saturday, however. Entries for the run must be sent to Mr. F. T. Bidlake, M.C.C. Trials Secretary, 84, North End Road, Golder's Green, London, N.W.11.

# LONDON TO HOLYHEAD.

## Strenuous Week Event Traversing Welsh Mountain Passes Organised by the Ealing and District M.C.C.

FIFTY-FIVE entries, including motor cycles, three-wheelers, and cars, were received by the Ealing and District M.C.C. for its third annual trial from London to Holyhead.

The first man was despatched from Cranford Bridge at 12.1 a.m., the rest following at minute intervals. The route lay over main roads through Reading and Faringdon, where the first check was held, to Gloucester, where W. B. Gibbs was in charge of the second check; he also supplied the riders with coffee and sandwiches, which were appreciated.

G. E. Cuffe (5-6 Metro-Tyler) was dogged with ill luck throughout the trial, having suffered a burst rear tyre before reaching Faringdon; then his spare tube, which he carried in a haversack on his back, caught in his rear chain sprocket, throwing him off. F. R. G. Spikins (3½ Triumph) was passed on Birdlip with his carburetter dismantled, and was not seen again; also the Zenith-Bradshaws experienced oiled-up plugs after the descent of Birdlip Hill. Although rumour had it that the road surface from Gloucester to Hereford was in a shocking condition, it did not appear to be at all out of the ordinary, but misfortune in different ways befell many.

### About Dawn.

Cyril Pullin (350 Douglas) was observed sitting on a gate drinking coffee from his Thermos, but he was not seen again; F. J. Youngs (2¼ O.K.) discovered his platinum (alleged) points had burnt out, so fitted a new spare contact breaker complete, which he carried, and Mrs. Janson (2¼ Ner-a-car) burst her rear tyre, which made her late at Hereford, where one hour was allowed for breakfast.

Main roads led on to Rhayader, but before reaching this place F. S. Spouse (8 T.B.) retired with engine trouble, and Cuffe's front brake seized on, which resulted in a nasty fall. G. H. Goodall (8 Morgan) broke his rear brake band, and H. Beart (10 Morgan) had continuous trouble with his chains throughout the trial. Before reaching Rhayader several snowdrifts at the side of the road were passed, but fortunately this was all that was actually encountered, although the mountain tops were white in many parts. Within eight miles of the Rhayader check the first observed hill was ascended, but it did not cause much trouble, being dry and stony. It was announced in the final regulations that a secret check would be held somewhere between the last-named place and Bala, a distance of 88½ miles, which naturally made the competitors endeavour to keep to their schedule time. This, however, was difficult, as the road surface was in places appalling, added to which some nine water-splashes had to be negotiated. A. G. Wall (3 A.B.C.) hit a boulder and crashed with nothing more serious than water in his magneto, which he soon dried out; but H. C. Nias (3½ Ariel) made a splendid crossing.

### On the Mountains.

Passing by way of Devil's Bridge, the next check was held at Llanidloes, and then the most difficult section, scheduled at only 15 m.p.h., was started to Machynlleth, where one hour was allowed for lunch. Mrs. Janson (2¼ Ner-a-car) ran short of petrol near Stay-a-Little, but managed to obtain a supply. Hereabouts the route lay through several gates, which were closed, and over the mountain of Plynlimmon, with its rock-strewn, so-called road. Great havoc was wrought amongst the cars, the motor cycles coming through well, although several checked in late at Machynlleth. This section was doubtless severe, but in previous years the roads were wet, which added vastly to the difficulties in such circumstances. A good road now led on through Dinas Mawddwy to the dreaded Bwlch-y-Groes, where several gold medals were lost, as is usual on this hill.

W. S. Schooley, W. D. Pugh and V. Gayford, all on 3½ h.p. Zenith-Bradshaws, H. C. Nias (3½ Ariel), J. Hall (2¾ Trump), M. O'Reilly (3½ N.U.T.), H. W. Glendinning (4 Powell sc.), G. E. Cuffe (Metro-Tyler), S. A. McCarthy (8 Morgan), P. Pehrson (4 Dunelt sc.), all made good, steady climbs with all the solo Zeniths fast. Mrs. Janson (2¼ Ner-a-car) stopped, but with a great deal of foot slogging ultimately got up. A. Ward (2¾ Sirrah-Blackburne) put up a similar performance; S. E. Longman (3½ Zenith-Bradshaw sc.) was obliged to stop and shed his passenger. A. G. Wall (3 A.B.C.) was good, and F. J. Youngs (2¼ O.K.) came up slowly, emitting clouds of smoke. The secret check was at last found just over the summit from where the road was followed through Bala to the tea check at Bettws-y-Coed.

### Minor Collisions.

About here G. E. Cuffe in passing F. J. Youngs caught the latter's handle-bar grip, which resulted in the latter falling and hurting his leg; however, after straightening up footrests, handle-bars, etc., they were both able to continue. V. Gayford (3½ Zenith-Bradshaw), endeavouring to avoid someone on the road, hit a car while he was indulging in fast riding, which might have had very serious consequences. As it was, he was thrown from his machine with great force, but luckily only suffered a shaking. After tea the route continued on to Bangor (where Cuffe was at last obliged to retire with more tyre troubles) over the Menai Bridge and on to the final check which was held on the milestone reading "Holyhead two." In this trial the "sealed watch" system was used, as is usually done in the big Midland events. At time of going to press the results have not been announced, but the following are those who checked in at Holyhead:

S. E. Longman (3½ Zenith-Bradshaw sc.).
W. D. Pugh (3½ Zenith-Bradshaw).
V. Gayford (3½ Zenith-Bradshaw).
H. C. Nias (3½ Ariel).
Mrs. G. M. Janson (2¼ Ner-a-car).
T. A. Ward (2¾ Sirrah-Blackburne).
J. Hall (2¾ Trump).
W. S. Schooley (3½ Zenith-Bradshaw).
P. Pehrson (4 Dunelt sc.).
A. G. Wall (3 A.B.C.).
M. O'Reilly (3½ N.U.T.).
H. W. Glendinning (4 Powell sc.).
F. J. Youngs (2¼ O.K. Junior).
S. M. Greening (2¾ Coventry-Eagle).
G. H. Goodall (8 Morgan).
H. Beart (10 Morgan).
S. A. McCarthy (8 Morgan).

# A ROYAL MEETING AT BROOKLANDS.

ON May 20th the Essex M.C. will organise a race meeting at Brooklands, under the patronage of H.R.H. the Duke of York, K.G., who will be present during the meeting. There will be six car races and three motor cycle events: The Duke of York 3-lap junior handicap, for motor bicycles not exceeding 500 c.c.; the Duke of York 3-lap senior handicap, for motor bicycles not exceeding 1,000 c.c.; and the Essex 3-lap passenger machine handicap, for sidecars not exceeding 1,000 c.c. engine capacity, and cycle cars under 1,100 c.c. The distance in each case will be about 8½ miles. For the 1,000 c.c. solo race entries may be limited to machines capable of 70 miles per hour or more. Specially designed medals, commemorative of the occasion, the exclusive design of which will be approved by H.R.H. the Duke of York, will be awarded to the winners.

### Proceeds to Charities.

The proceeds of the meeting will be devoted to the funds of the Middlesex Hospital and the Industrial Welfare Society. The Appeal Committee consists of the Earl of Athlone, G.C.B., G.C.V.O., C.M.G., D.S.O., and Wing-Commander Louis Greig, M.V.O., representing the Duke of York, and a number of ladies and gentlemen prominent in the motor and motor cycle worlds. Tickets can be bought before the day for 4s., and the price of admission at the gates is 5s. To encourage advance booking a free gift of a 4 h.p. Harley-Davidson motor cycle, presented by Mr. Duncan Watson, will be awarded to a purchaser of an admission ticket before the day. Particulars of the scheme under which this machine will be awarded have not yet been announced. The hon. sec. is Mr. A. G. Reynolds, 95, Fillebrook Road, Leytonstone, London, E.11.

# OUR MIXED CLIMATE.

## Sutton Bank Hill Climb Postponed. Heavy Rain Makes Surface Impossible.

HOPES WASHED OUT. Disconsolate competitors, committee men, press men and spectators held repeated inquests on the state of the weather at the foot of Sutton Bank, the venue of the Yorkshire Centre A.C.U. hill climb last Saturday. Finally it was decided to postpone the event for one week.

SOUTHERNERS—and there were a number—who trekked northwards on Friday last in order to compete in the Yorks Centre Sutton Bank hill-climb on Saturday enjoyed a glorious ride under perfect weather conditions.

Inside Yorkshire's borders, however, gloom prevailed, and Saturday's dawn brought rain. Officials and competitors sadly peered through the mists and driving downpour and watched the surface deteriorate from a fairly ridable one to a slippery quagmire of yellow clay. One or two essayed the ascent, R. T. Cawthorne, for instance, on his 3½ h.p. Norton side-car, and Fraser Nash on the G.N. struggled up despite wheel-slip at a speed which scarcely ever exceeded 25 m.p.h. Many spectators found it impossible to climb the hill at all, and ultimately the committee reluctantly announced that the event would be postponed until next Saturday. Nothing else was to be done, of course, but the assembled motor cyclists having nothing better to do and perhaps feeling "fed up and far from home," whiled away the afternoon in desultory attacks on the gradient, in gossip, and in tea at Thirsk, where sorrow might be drowned.

Such a disappointment is, indeed, hard lines on the organising club (the York and District M.C.) and on the spectators, many having journeyed by chars-a-bancs from surrounding places. Many of the competitors, of course, may have other arrangements which will prevent them competing on the 29th, but to those who are able to be there, better luck next time!

Strange to say, those who travelled southwards on the following day found that lovely weather had been enjoyed intermittently during the week-end south of Yorkshire—such is fate.

# SPORTING NORTH COUNTRY EVENT.

## Few Finish with Clean Sheets in the Travers Trophy Trial of the Newcastle and District M.C.

INTERMITTENT rain during the whole day somewhat increased the difficulties of an already sporting course in last Saturday's Open Trial of the North-Eastern Centre A.C.U. The organising club was the Newcastle and District M.C., and the chief award, as last year, was the Travers Challenge Trophy (value 200 guineas), together with a special prize (or cheque), value £50. There were several further awards and the entry list was very representative, well-known riders attending from all over the country.

Each competitor was credited with 100 marks at the start and was allowed a five-minute early limit without penalisation. Failure on an observed hill meant a loss of five marks, and to decide the winner of the Trophy, should several finish with clean sheets, a formula climb was held *en route* on Killhope Hill. Fastest time in this climb, irrespective of class, gained the Alan Robson Shield for one year.

From the start at the Grand Hotel, Newcastle, the route led through Shotley, Castleside, Blackpool Hill, to Stanhope, up Peat Hill, which has a bad left-hand bend, and along a very difficult section to Holloway Hill, through Middleton-in-Teesdale to Killhope, and then on to lunch at Allandale, a distance of 83 miles.

Several competitors got into trouble early. H. R. Harveyson (3½ Triumph) punctured twelve miles from the start and was eight minutes late at the next check in consequence, as was P. Hart (3½ Sunbeam). However, he carried on without worrying much about keeping to schedule time, and indeed stopped on several of the hills to watch the other competitors' performances. Last year's Trophy winner, George Denby (2¼ Velocette), was also put out of the running at an early stage, owing to his magneto timing slipping.

Killhope, the timed hill climb, a main road test, was in fair condition. A car by the roadside was mistaken for the official check by a number of the competitors, who pulled up there by mistake.

Hugh Mason, on a very speedy sporting N.U.T., made fastest time, another N.U.T. was second, and Harveyson, on the o.h.v. Triumph, was third. Other excellent ascents were made by G. Grinton (1922 7-9 Harley-Davidson sc.), W. R. Haggas (3½ Triumph), Bert Kershaw (2¼

**Sporting North Country Event.**—New Imperial), and G. M. Townshend (4¾ P. and M. sc.).

After climbing the lower reaches at a good pace, Kaye Don (5½ Norton) came to a stop, owing to the needle-valve of his carburetter breaking.

There was a surprising number of stoppages in the morning's run which, although not difficult, included a considerable amount of grass-grown moorland tracks. Perhaps W. R. Haggas (3½ Triumph) shone more than any other on these sections, but Harveyson (Triumph) and Kershaw (New Imperial) were also very sure of themselves.

Stanley Bell (2¾ Beardmore, Barr & Stroud) retired at the luncheon check with a broken throttle wire; R. Pace (4 Triumph) was pursued by belt trouble, both in the morning and the afternoon, and J. Joynson (2¾ Invicta) broke a valve.

In the afternoon the reverse morning's course was followed in two separate portions, but the total distance was shorter by fifteen miles.

E. A. Barnett (2¾ Francis-Barnett) broke a chain, but by hard riding managed to make up time.

A big percentage of the starters finished, to the delight of a huge crowd, but it is generally agreed that very few retained absolutely clean sheets.

# CLUB NEWS (continued from p. 540)

### Worcester and District M.C.C. and Worcestershire M.C.

J. H. Kettle, an amateur driver, on a New Hudson three-wheeler, only delivered a week previously, made an outstanding performance in the recent joint trial of these clubs. Results:

Kay Cup:—Bert Kershaw (2¼ New Imperial).
Special Prize:—T. H. Leeke (10 Morgan).
Silver Medals: W. J. Stretton-Ward (3½ Triumph), L. W. Lewis (4¼ Beardmore), C. F. Townley (3½ ——).

### Cork and District M.C.C.

To qualify for first class awards in the Easter Monday trial, a competitor had to to be on time at all open checks. (2m. allowed), and at all secret checks (5m.); to climb both test hills, and to show a figure of merit in the flexibility test ranging from 4 for solos under 300 c.c. and sidecars under 600 c.c. to 7 for solo machines from 750 to 1,000 c.c. on the formula: slow time ÷ fast time. The total distance was about 150 miles. Six competitors made clean ascents of "Priest's Leap." Results:

First-class Awards (no marks lost).
Jack Mulligan (3½ Triumph).
R. S. Russell (3¾ Scott).
Don O'Sullivan (4 Triumph).
J. Gibbings (2¾ A.J.S.).
J. P. Frost (8 Blackburne).

Second Class Award.
J. O'Sullivan (2¾ A.J.S.) (1 mark lost).

The Challenge Cup presented by the South of Ireland Motor Co. was awarded to Jack Mulligan for the best performance of the day.

## Week-End Club Events.

*April 27th.—Gloucester M.C. and L.C.C.—Reliability Trials.*
*April 27th.—North Wales M.C.C.—Petrol Consumption Test.*
*April 29th.—Sheffield M.C.C.—Picnic at Strines Inn.*
*April 29th.—Cardiff M.C.C.—Hill Climb.*
*April 29th.—Eastern Centre A.C.U.—Half-day Reliability Trial.*
*April 29th.—Coventry Triangle M.C.—Hill Climb.*
*April 30th.—York and District M.C.—Club Run.*
*April 30th.—Manchester M.C.—Speed Trial.*
*April 30th.—Wolverhampton M.C.C.—Trial.*
*April 30th.—Darlington and District M.C.—Social Run.*
*April 30th.—Brighton and Hove M.C.C.—Surprise Run.*
*April 30th.—Rochester, Chatham and District M.C. and L.C.C.—Run to Penshurst.*
*April 30th.—Northern Centre A.C.U.—Rally.*
*April 30th.—Halifax and District M.C. and L.C.C.—Reliability Trial.*
*April 30th.—Kelso and District M.C.—Paper Chase.*
*April 30th.—Featherstone and District.—Run to Shipley Glen.*
*April 30th.—Kidderminster M.C.C.—Social Run.*
*April 30th.—Coventry Triangle M.C.—Run to Yarningdale Common.*
*April 30th.—Sheffield M.C.C. and S.C.C.—Trophy Trial.*
*April 30th.—Taunton and District M.C. and L.C.C.—Run to Sidmouth.*
*May 1st.—Oxford M.C.—May Morning Social Run.*

At the start of the 500 c.c. class in last Saturday's Edinburgh and District M.C. speed contest held at Ravelaw Hill, Balerno. J. R. Alexander (494 Douglas) and Graham Black crossing the tape.

### Essex County and Southend-on-Sea A.C.

On account of the organisation required to ensure a successful event, the club has been obliged to postpone its big hill climb from May 1st to May 27th.

### Cardiff M.C.

The first reliability trial of 1922 was held on Wednesday of last week over a 65-mile course. Seventeen competitors started, and twelve completed the course. R. Morel (8 Rex sc.) won premier place with a loss of only three marks.

### Rochester, Chatham and District M.C. and L.C.C.

Much of the credit for the success of the Easter hill-climb at Vigo Hill, described last week, is due to this club, which carried out the greater part of the organisation, the other Kent clubs attending mainly as competitors.

### Leinster M.C.C.

Results have now been announced of the two days' Easter trial:

Carver-Draper Cup (for medium solos and sidecars over 600 c.c.):—H. E. Bell (3½ James).

Lepler Cup (for lightweights solos and under 600 c.c. sidecars):—T. Henry (2¼ Velocette).

First Class awards:—H. E. Bell (3½ James), R. Murphy (4 Triumph), H. Adair (4 B.S.A.), J. A. Carville (4 B.S.A.), J. G. Burney (8 Enfield sc.), S. J. Redmond (7-9 Indian sc.), F. Holmes (8 Matchless sc.), T. E. Greene (3½ Douglas), G. A. Daly (4 Triumph), R. M. Murphy (4 Triumph).

Second Class Awards (Silver Medals):—James Adair (4 Triumph), G. Thomson (3½ N.U.T.), T. Henry (2¼ Velocette), J. A. Adair (4 B.S.A.), J. Brown (3½ Douglas), P. A. Bell (7 James).

Special Prize for best performance of a novice was awarded to H. E. Bell (3½ James).

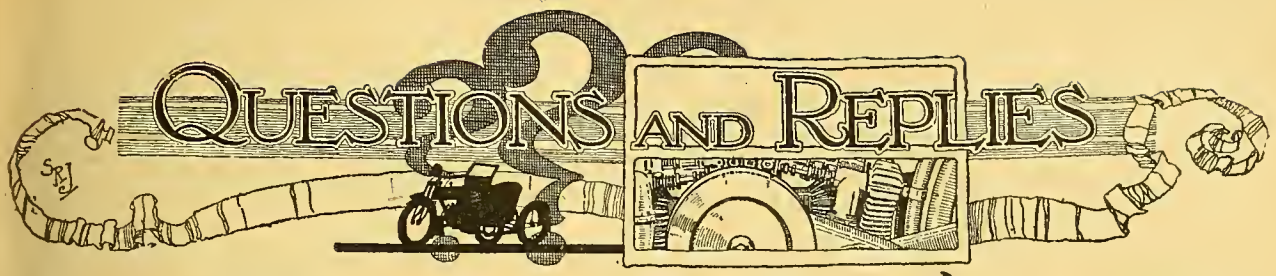
Special prize for best performance of machines up to 250 c.c. was awarded to T. Henry (2¼ Velocette).

### Nottingham and District M.C. and L.C.C.

Night runs are becoming popular with the East Midland centre A.C.U. clubs. In the last of them, organised by the Nottingham Club, the 141-mile route was *vid* Mansfield, Newark, Lincoln, Retford, Worksop, Chesterfield, Matlock, and Derby, finishing at Wollaton Park gates. A team event was incorporated, and gold medals offered by the North Derbyshire Club for the best performance of a team of three riders, from any club of the centre, but several riders took a wrong road outside Lincoln, and no complete team finished. Only one failure was reported in the observed section at Amber Hill. Awards:

350 c.c.: S. S. Debenham (2¾ Campion); 550 c.c. solo: W. N. Haslam (3½ Norton); 1,100 c.c. sidecar: I. Cohen (10 Campion sc.), only single cylinder sidecar machine to finish, L. S. Hooley (4¼ Beardmore-Precision sc.).

Gold medal certificates:—D. O. M. Macfarlane (Velocette), D. H. Jones (Beardmore), A. J. Raynor (Rndge-Multi), F. E. Nash (Scott), C. Coates (Douglas), and W. Waddington (Ivy).




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### TWISTED FRAME.

Owing to the very bad roads I have been over recently, the head of my Scott machine has been pulled over by the sidecar ¼in. out of the vertical. I have been assured that by placing a steel bar through the head it is possible to lever it back the necessary ¼in. (each end of the head) without heat. Is this not rather risky, as I feel the metal may possibly have a flaw in it after such treatment?—OLD MAN SAFETY.

The treatment you describe is distinctly risky if carried out without heating the frame, as on account of the spring of the metal you would have to pull it much more than you propose in order to set it back ¼in. The best plan will be to return the frame to the makers so that it can be properly trued on a jig.

### SPRING FORK AND TYRE WEAR ON BIG SINGLE.

I have a 1921 B.S.A., 4¼ h.p., and sidecar. (1.) The front fork springing seems very harsh; is this usual on this type of machine? (2.) Should I improve matters to a great amount if I fitted Terry spring links? (3.) After 1,000 miles running, the back tyre is worn quite flat, not down to canvas, but all pattern gone; is this caused by the all-chain drive?—R.W.F.

(1.) We do not quite understand what you mean by the front fork springing being harsh, as you do not make it clear whether the fork is too lively or whether it does not work at all; you can damp its action (if the former) by tightening the shackle bolts, while if it is too stiff you can free it by slackening them. We have found this spring fork to be efficient and satisfactory, although it tends to bounce somewhat if the shackles are allowed to get slack. (2.) Although we have not used the spring links on these particular forks, we should imagine that they are an improvement, as they make provision for horizontal shocks. (3.) With the same machine 2,500 miles (with sidecar) should be obtained from the back tyre before it is worn quite down to the canvas. The clutch spring tension is best eased off somewhat to render the drive less harsh, and the engine must never be allowed to thump on top gear, middle gear being used whenever necessary, and slight pressure being applied to the clutch lever when the engine is picking up on top gear.

### A CARBURETTER FAULT.

My Rudge machine starts off easily, but on steadily opening out above 30 m.p.h. chokes and backfires and stops unless I shut off again pretty quickly. I have just had the engine down (rebushed, new piston rings, etc.), and the magneto timing is correct; do you think wrong valve timing would do this? I have a large, long, trumpet-ended air intake fitted to the carburetter and a rather large jet. It chokes if I open both gas and air steadily, or if I open gas only. Could you kindly advise me on this, please? The pipe from the carburetter has an ugly bend in it; would it improve the running if I substituted a straight pipe?—R.V.

The symptoms are those of insufficient petrol supply beyond a certain throttle opening, and if you had not stated that the jet was a fairly large one we should have judged it to be on the small side. Test for partial obstruction in the flow. On the other hand, the trouble might be due to incorrect valve timing, and this should be checked carefully by the makers' instructions. A straight inlet pipe is generally desirable, but it is unlikely that the bend you describe is the cause of the trouble. As a guide to the correctness of the jet size, notice whether black smoke is given off from the exhaust; this is a symptom of too rich a mixture. Inability to open the air lever fully at moderate speeds indicates weak mixture.

## Important Dates.

**Sat., April 29th—S. Midland Centre A.C.U. Open Hill-climb.**
**Sun., April 30th, to Sun., May 7th—Paris-Pyrenees Trial.**
**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 6th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 Mile Sidecar Race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### INJURY TO A DOG.

Recently while riding up a slight hill I ran into a large shepherd dog. I did not run over it, but struck it hard in the centre of the body, and from what I hear the dog has died and the farmer has told me he is going to claim compensation for it. I did not fall off nor was any perceptible damage done to the machine; there were no people about at the time, and the dog was standing in the centre of the road and ran to the side at the moment I should have passed; the farmer now states I was going 30 miles per hour.—S.J.M.

The liability depends entirely on how you were riding. If you were going at a moderate speed and, by exercising proper care, could not avoid doing injury to the dog, then you are not liable. Of course the dog had a perfect right to be in the road, and it was your duty not to ride in such a manner as to cause it injury, but if, as suggested, the dog was standing in the centre of the road and suddenly ran in front of your machine just as you were passing there is no liability, if, as before stated, you were riding carefully.

### IMPROVING A TWO-STROKE ENGINE.

Being desirous of tuning up the 2½ h.p. Union 2-stroke engine on my motor cycle, I would be grateful for assistance. I understand that by filing all the roughness, corners, and sharp edges of the exhaust and inlet ports, more power

can be obtained. (1.) How much is it advisable to file off without weakening the cylinder? (2.) Should the ports be filed on all four sides? (3.) Will this seriously affect the timing of the ports? —D.H.S.

(1, 2, and 3.) It is quite likely that an improvement would be effected by filing the ports as you suggest, but at the commencement, at any rate, we think it would be best to do no more than smooth them and then test the effect on the running of the engine. You certainly should not take much off the top and bottom of the port without careful thought, as by so doing you will alter the timing of the engine.

### FITTING A SPEEDOMETER LIGHT.

[?] I have a Lucas Magdyno fitted to a Matchless outfit, which has the usual three lamps connected up. I now wish to fit a speedometer lamp, the current to be taken from the generating outfit; will you furnish me with details as to where to make my connections?—F.A.C.

There is a spare terminal in the switch box of the Magdyno set to which extra fittings such as a horn or inspection lamp may be connected. Write to the makers for their instruction booklet, which contains diagrams of the wiring and interior of the switch box.

### EFFECT OF EXCESSIVE IGNITION ADVANCE.

[?] I have a 3½ h.p. J.A.P. engine, and last week, after setting the magneto (Bosch) correctly, as I thought, I tried to start up, and the cylinder broke off where it is bolted to the crank case. What was the cause?—H.H.

You timed the ignition with too much advance, thus causing the spark to occur so far before the piston reached the top of the stroke that the full force of the explosion was developed when the piston was actually on top dead centre, with the result that the cylinder broke away from the crank case bolts. The spark should be timed to take place when the piston is on top dead centre with the ignition control two-thirds retarded, and in no case should it be much advanced beyond this setting.

### FOUR-CYLINDER TWO-STROKES.

[?] As I am about to design a four-cylinder w.c. two-stroke engine of about 7-9 h.p., I should like to know your opinion on such an engine for a light car, etc., before I go very far into the matter. (1.) Do you consider 60 mm. ×70 mm. bore and stroke will give 7-9 h.p.? (2.) What is the usual compression space for a two-stroke engine in relation to bore and stroke?—F.G.S.

(1.) The dimensions you mention will give a total capacity of approximately 800 c.c., and this might be nominally rated at 7 to 8 h.p. (2.) This question cannot be answered; the usual compression ratio is between 4 and 5 to 1. There does not appear to be any object in making a four-cylinder two-stroke unless the cranks are set at 90°; if the cranks are set at 180° the torque is no better than that of a two-cylinder two-stroke.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned. Requests for experiences should be accompanied by a stamp.*

"A.L.H." (Birmingham).—2½ h.p. Calthorpe two-stroke, with clutch and kick-starter.

"N.E.H." (London, W.2).—3½ h.p. Rudge-Multi and 3½ h.p. Duzmo.

"A.B.C." (Ashington).—1922 A.B.C. solo.

"J.M." (Newton Stewart).—A.B.C. under Colonial conditions; can W.S.R. be fitted; mechanical defects; also Palmer rear suspension on 2¾ h.p. Douglas.

"F.J.G." (London, W.).—Scott with sidecar; reliability, accessibility, m.p.g., compression losses at crankshaft glands.

"H.K." (London, N.W.1).—Ner-a-car: with additional passenger occasionally.

"C.T." (Norwich).—2¾ h.p. Excelsior-Blackburne.

"J.B." (Liverpool).—2½ h.p. Cleveland: improving starting and consumption.

"A.L." (London, S.E.17).—5-6 h.p. F.N.: particularly cost of upkeep.

"A.F.M." (Boat of Garten).—Volex dry battery outfit on sidecar machine.

## SPARKLETS.

### Coulson Motor Cycle Spares.

As the present makers of Coulson motor cycles, A. W. Wall, Ltd., have organised a spares and repairs department, and replacements are now promptly available from the works at Tyseley, Birmingham.

### Found on the Road.

Mr. P. T. Kimmins of Lynton, Devon, reports finding a starting-handle on Beggar's Roost after the passage of the Land's End competitors on Easter Saturday.

On Good Friday Mr. J. B. Cox, 27, Flanders Road, Chiswick, London, W.4, found an inner tube between Dorking and Horsham.

A new inner tube was seen to drop from a solo rider's machine at Hyde Park Corner on April 13th by Mr. P. H. Hardwick. Particulars should be forwarded to the Editor.

### Plugs in the Tour de France.

In the 500 c.c. class in the 2,300-mile Tour de France, Naas, who gained premier position, used K.L.G. plugs in his A.B.C. machine.

### Spares Service.

As an example of the value which the place upon the spares and replacement side of their agency business, Maudes Motor Mart, of London, Exeter, and Walsall, mention in a recent letter that 30% of their stock value is apportioned to these headings.

### Teams in the International Six Days.

Owing to a printers' error in the original regulations it was stated in our issue of April 6th that a national team must consist of three solo machines and one sidecar outfit or cycle car. The team should consist of two solo machines and one sidecar or cycle car.

### Touring Handbook of the A.C.U.

A new edition of the Auto Cycle Union touring guide is a larger publication than the 1921 issue. It contains information on legislative matters affecting motor cyclists, the new camping facilities offered to members, a list of ferries in the United Kingdom, railway rates, and a list of hotels and repairers.

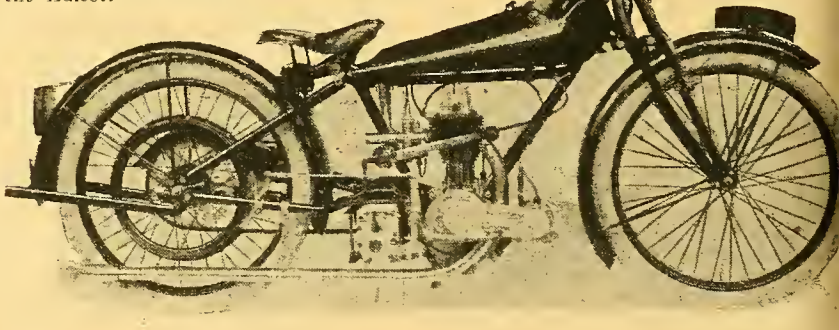
### More Echoes from the Arctic Trial.

Credit for taking round the small-engined sidecar outfit to gain an award in the Western Centre's abandoned trial of April 1st must be given to L. Clubb (2½ Allon sc.). Two solo Allons also secured certificates. The award of S. G. (2¼ Sun Vitesse) has been confirmed, and A. Williams (8.7 G.N.) has received an award.

### Catalogues Received.

The Mohawk Cycle Co., Ltd., 2, 4 & Alexandra Road, Hornsey, N.8. A catalogue dealing with the various models of Mohawk motor cycles, also sidecars and sidecarriers.

The D. F. & M. Engineering Co., Ltd., Diamond Works, Wolverhampton. Two catalogues, one describing the Jap engined Diamond models, and the other the B.S. & Stroud engined models.



A modified sports model 2¾ h.p. Coventry Eagle. All but essentials have been removed in order to reduce the price to £67. The prices of other models have also been reduced, but they do not replace the standard types with full specification.

# POWER AND—COMFORT

ots of both—go to make the "big single" spring-ame Beardmore-Precision a challenge to the rclecar.

he Design is simple, sound and strong through-it. It is a motor bicycle which anyone can drive ith ease and ***enjoyment*** because of the ample ower and supreme comfort.

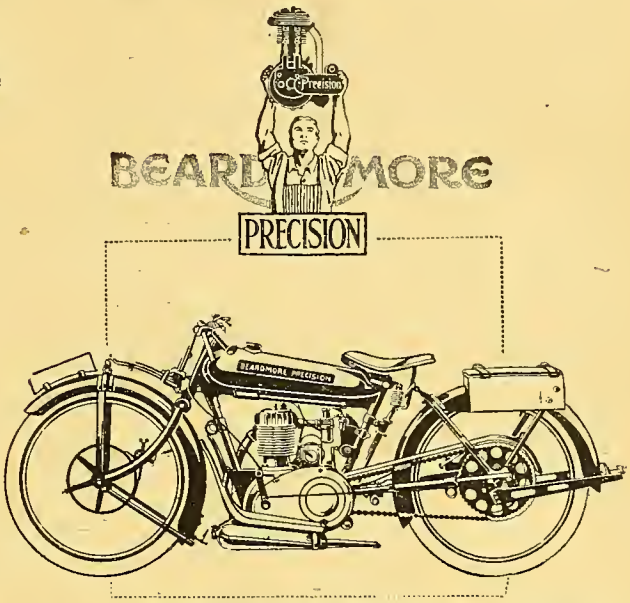
**EXCLUSIVE FEATURES OF THE 4¼ h.p. BEARDMORE-PRECISION.**

Full Cantilever Spring Frame and 700×80 mm. (26"×3") light car tyres. 598 c.c. 4¼ h.p. Precision single-cylinder four-stroke engine, *with detachable head.*
Automatic and Mechanical Lubrication.
Sturmey-Archer 3-speed gear, clutch and kick-starter, *built-in to engine unit.*
All-steel frame of battleship strength, embodying pressed steel petrol tank (holding 2 gallons), large mudguards and tool-case *as parts of the frame.*
Band brakes to *both* wheels.

**OTHER POINTS.**

All-chain drive with shock-absorbing hub. Sensible leg-shields. All-black finish. **Price £105**

**Sports Touring & Two-Seater Sidecars at £25, £30 and £35.**




## F. E. BAKER, LTD.,

*(Associated with William Beardmore & Co., Ltd.),*
PRECISION WORKS, KING'S NORTON.

'Phone: King's Norton 184-5. 'Grams: "Bachuck, Kingsnorton."
London Depot:—112, Great Portland St., W.1. Scotland (Wholesale)—James Robertson, 48, West Nile Street, Glasgow.

**COLMORE CUP—5 Beardmore-Precisions entered; 4 Silver Medals.**

---

*The*

# ZENITH MOTORCYCLE

*with the Infinitely Variable GRADUA GEAR.*

TRADE MARK

**ZENITH — J.A.P. MODELS.**

| | | |
|---|---|---|
| 5 h.p. | Sports Model C | £110 |
| 5 „ | Clutch „ D | £118 |
| 8 „ | Sports „ G | £121 |
| 8 „ | Clutch „ H | £125 |

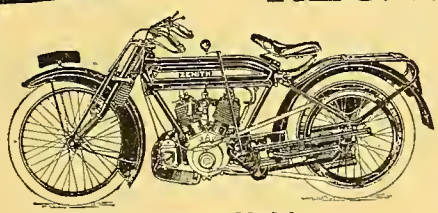
Sidecar for Model D or H, £29

Any other Sidecar can be fitted if desired.

## Zenith - Bradshaw Models.

| | |
|---|---|
| Model A. Belt Drive | £113 |
| Model B. Chain Drive | £119 |

*Deferred payments can be arranged if desired.*

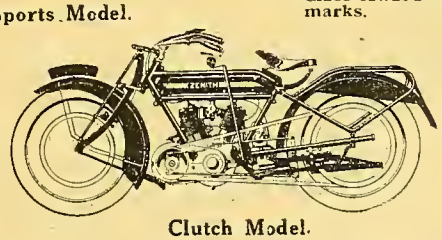


Sports Model.

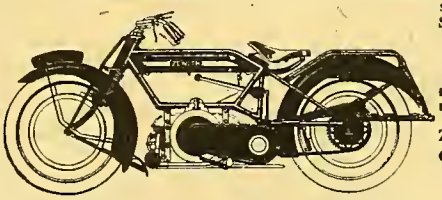
**LONDON—LAND'S END TRIAL.**

209 started, 72 retired.

8 Zenith-Bradshaws started, 8 finished.



Clutch Model.



ZENITH-BRADSHAW Chain Drive, Model B.

# RECENT SUCCESSES include:

**Successful Climb of Quarry Bank, Purbold, by 3½ h.p. Zenith-Bradshaw and sidecar with two passengers.**

**Zeniths finished 2nd and 3rd out of 55 entries in the Mellano Cup Trial, gaining 2 out of 3 only Gold Medals awarded.**

**Southport Club 12 hour Trial. Zenith-Bradshaw won President's Cup, another won 1st Class Award—the only machines to lose no marks.**

**Brooklands Race Meeting. Le Vack on Zenith-J.A.P. won two 2nds in the big Scratch and Handicap events.**

**Slough M.C. Kop Hill Climb. Zenith was 1st Solo and 1st Sidecar, and made Fastest Time of the Day.**

**A.C.U. Western Centre Arctic Trial. Zenith-Bradshaw won 1st Class Special Award.**

*Illustrated descriptive Catalogue posted on request.*

**ZENITH MOTORS, Limited,**
**HAMPTON COURT, ENGLAND.**

## SPECIAL SECONDHAND BARGAINS.

The following machines are fully guaranteed for three months from date of purchase, all having been thoroughly overhauled in our own works, and can be thoroughly recommended. For the benefit of country clients, machines are sent on 24 hours' approval against cash or on our Extended Payment System against approved references.

**t.O.M. Rudge-Multi,** 1921, fully equipped, as new, T.T. or Touring bars ..... £57 10
**Sparkbrook,** 1920, 2¾ h.p., 2-speed, fully equipped, very carefully used, small mileage ..... £42 10
**Velocette,** 1921, 2¾ h.p., 2-speed, all-chain drive, fully equipped and in new condition throughout ..... £47 10
**Triumph,** 1919, 4 h.p., 3-speed, Hunt's electric lighting, horn, etc., practically new, 3in. tyres ..... £80 0
**Lea-Francis,** 1920, 3½ h.p., 2-speed, M.A.G. engine, all-chain drive, all lamps and horn, run under 2,000 miles, as new ..... £65 0
**Enfield,** 1916, 3 h.p., 2-speed, Lucas lamps, mechanical horn, very carefully used ..... £42 10
**Douglas,** 1916, 2¾ h.p., 2-speed, snip £42 10
**Coventry-Eagle,** 1920, show model, 4 h.p., and Mills-Fulford sidecar, Sturmey 3-speed, all lamps, horn, windscreen, unscratched and indistinguishable from new ..... £90 0
**Zenith,** 1920, 8 h.p., and Zenith sidecar, windscreen, etc., most carefully used, perfect condition ..... £90 0
**Harley-Davidson,** 1919, 7-9 h.p., combination, fully equipped, not W.D., a real bargain ..... £95 0
**Douglas,** 1918, 4 h.p., combination, fully equipped, Bulbus back sidecar £75 0

The above are all TAX PAID.
And over 50 others.

### NEW 1922 MODELS.

**A.J.S.,** 2¾ h.p., 3-speed, Sports or Touring ..... £85 0
**A.J.S.,** 7 h.p. Combination ..... £175 0
**Allon,** 2¾ h.p., 2-speed, clutch and k.s. £60 0
**Ariel,** 3½ h.p., 3-speed, Sports ..... £87 10
**Brough Superior** ..... £125–£180
**B.S.A.,** 4¼ h.p., all-chain ..... £110 0
**B.S.A.,** 4¼ h.p. Combination ..... £142 0
**Calthorpe,** 2½ h.p., single speed .... £36 0
**Calthorpe,** 2½ h.p., 2-speed, clutch .. £45 0
**Calthorpe,** 2¾ h.p., J.A.P., 2-speed, clutch and k.s. ..... £65 0
**Enfield,** 8 h.p. Combination ..... £140 0
**Humber,** 4½ h.p. Sports ..... £100 0
**Dunelt,** 4 h.p. Combination, spare wheel ..... £113 8
**Levis,** 2½ h.p., single speed ..... £48 0
**New Imperial,** 2¾ h.p., 3-speed, all-chain ..... £73 0
**New Imperial,** 8 h.p. Combination .. £150 0
**Matchless,** J. Sports ..... £130 0
**Matchless,** J. Touring Combination .. £150 0
**Matchless,** H. ..... £170 0
**Matchless,** Family ..... £175 0
**O.K.,** all models ..... £39 18–£96 12
**Rudge,** I.O.M. multi ..... £77 0
**Zenith-Bradshaw,** 3½ h.p. ..... £113 0
**Zenith,** 5 h.p., Sports ..... £110 0
**Triumph,** 4 h.p., all-chain ..... £115 0

Easy Payments. 4% extra except where Makers enforce Special Rates.

**Allen-Bennett**
Motor Company Limited

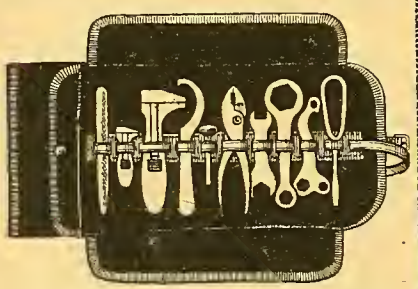
9, 10, 11, Royal Parade, W. Croydon.

Open Saturdays until 7.30 p.m.

*Phone: Croydon 2450*

*Commercial Publicity.*

# "KING DICK"-good tools



***"King Dick" TOOL KITS*** consist of ten "King Dick" tools in high grade canvas roll with adjusting strap and pocket. The tools are the best of their kind—and all you really need.

***"King Dick" BELT PUNCH***

Made from steel forgings accurately machined and well finished. Will pierce clean holes through the toughest belt without clogging. Made in four sizes, for ¾", ⅞", 1" and 1⅛" belts.

UTTER dependability, long life and exceptional accuracy are qualities of every tool that bears the "King Dick" mark. Behind that mark stands a reputation for honest value and fair trading for over fifty years.

Our standards remain as high as ever. A "King Dick" tool is a tool you can trust—always.

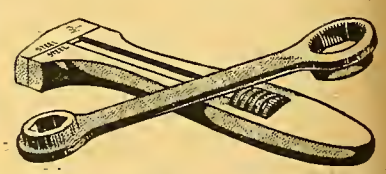
We illustrate here a few of our products, let us send you our complete catalogue.

*See the* *Trade Mark*

**ABINGDON WORKS LTD.,**
**Tyseley, Birmingham.**
**London Showrooms: 12, Mortimer St., W.1.**

***"King Dick" SPANNER SETS***

Handy, compact, to hold our 3", 4", 6" and 9" spanners. Also for 3", 4" and 6" sizes only. Wallets are of finest leather, strongly sewn and well finished.



***"King Dick" SPANNERS are guaranteed for ever***

British made from solid steel drop forgings, and capable of infinite adjustment. Always grip and never hurr the nuts. Made in four sizes—3 in. 4 in., 6 in., and 9 in.

## MOTOR CYCLES FOR SALE.

### Ariel.

RIEL 1920 3½h.p. Combination, good tyres, Easting, Tan-Sad, perfect running order; £80.—154, tonstone Rd., Stratford. [2590

919 Ariel 3½h.p. Combination, 3-speed, lamps, horn, mirror, pillion; nearest £70.—46, Hillier ., Wandsworth Common. [3128

919 Ariel 3½h.p. Combination, good condition, coachbuilt sidecar, all accessories.—Bridgman, 5, rk Hill Rise, East Croydon. [9115

52/10.—Ariel combination, late model, 3½h.p., 3 speeds, clutch, kick starter, fully equipped, splendcondition.—63, Solon Rd., Brixton. [2359

920 3½h.p. Ariel and Coachbuilt Sidecar, all accessories, in first-class condition; 75 gns.—Carhers, 48, Avenue Rd., Westcliff-on-Sea. [2715

RIEL.—All models, cash or gradual payments Spares supplied from stock.—West Central Agency. ncycle Co. Ltd 236, High Holborn, W.C.1 [0704

RIEL 1922 3½h.p. new Sports model in stock; £87/10.—Elce, Ltd., 15-16, Bishopsgate Av., momile St., E.C.3. 'Phone: Avenue 5548. [0065

RIEL, all models in stock, best value for money; 3½h.p., £95; Sports, £87/10. Special Ariel berts.—Longman Bros., 17, Bond St., Ealing. hone: 689. [3044

RIELS, the most reliable machines on the road all models from stock; spare parts sent any ere; trade supplied.—F. Speakman, Ariel Expert. iel Garage, 7, Rochdale Rd., Harpurbey, Manester Tel. 32[illegible] Cheetham Hill 5135.

921 (July) 6-7h.p. Ariel de Luxe Combination, all chain, hand and foot clutch, dynamo lighting, electric horn, wind screen, all accessories, res, guaranteed condition, trial run; £150 or er.—Morton, 31, Corsica St., Highbury, N.5. 30 to 6.30; Sat. 9.30 to 1.) [2892

*Spare Parts:*

RIEL Spares for all models, post free. Ariel Agents, and Spares Service Depot.—Jones Garage, oadway, Muswell Hill, N.10 [0804

### Bat.

BAT-J.A.P. Combination, fully equipped, £37; also cycle shed, £5.—Box 9899, c/o *The Motor Cycle*. [1875

COACHBUILT Combination, 6h.p. Bat-Jap; £60; ex- celleat condition.—Dennis, Union St., Ashbourne. [2849

1h.p. Bat-Jap 2-speed Combination, new coacb, 2 Easting, equipped, tax paid, stored 5 years; real rgain, £35.—64, Upper Brockley Rd., S.E. [2422

BAT-J.A.P. combination, 6h.p., 1919-20, fully licensed, 3-speed, all-chains, condition as new, go ywhere, accessories; £100.—88, Langthorne St., Fulm. [3209

20.—Sporting Bat-Jap 5-6h.p. M.O.I.V. Twin, spring frame, new Amac, heavy Dunlop, and belt, reished, fast, smart, reliable, photo; stamp.—Bacon, ffington Lane, Worthing. [2693

9 GNS., exchange.—1920 Bat-Jap 8h.p., 3 speeds clutcb, kick start, sporting sidecar, nipped, fast, any examination, trial.—Seabridge, 35. ansler Rd. East Dulwich (Sydenham 2452.) [7240

921 Late 8h.p. Bat-Jap Combination, electric lights, speedometer, screen, spare wheel, tax id, fully insured, too fast for owner; £140; or exange for 1921 Rover car, cash adjustment.—16, ldon St., Battersea. [2446

### Beardmore.

BEARDMORE-PRECISION.—1922 models for immediate delivery. Cash, exchange, or deferred yments.—Kays, 8, Bond St., Ealing. [7227

### Blackburne.

1h.p. Blackburne Motor Cycle, 1921, slightly 2 ridden; £75.—Mr. Wykeham Musgrave, Barnsley ark, Cirencester. [1436

BLACKBURNE, 1921, November, 4h.p., chain drive, little used, tax, horn, lamp, long exhaust, large res, excellent condition, any trial; £85.—Turner, The irl, Oxford. [2108

110.—1921 Blackburne Combination 8h.p., dynamo lighting, interchangeable wheels, fully equipped, xed, exceptionally cheap.—143, Ravensbury Rd., arlsfield, S.W.18. [2979

BLACKBURNE 4b.p. 1920, mileage 3,000, 3-speed, all chain, tyres perfect, B. and B., lamps, born, ly examination or trial; £68.—Neal 22, Penrith Rd., asingstoke, Hants. [2708

h.p. Blackburne and Sidecar 1920, lamps, 28×3 wheels, Burman 3-speed box, all cbain, bardly ed 1921 season, excellent condition; £88; seen ondon district.—Box 9980, c/o *The Motor Cycle*. [3014

921 Blackburne 4h.p., 3-speed, K.S., chain drive, oversize tyres, long copper exhaust, speedometer, lly equipped, almost new; absolute sacrifice. £72; change Triumph.—H.G., 33, Graham Rd., Wimble- on. [1890

# PARKER'S

**BOLTON :**
**Bradshawgate.**
Tel. 1348.

**MANCHESTER :**
**245, Deansgate.**
Tel. Cen 864.

# BARGAINS!

| DEPOSIT | and | 12 INSTALMENTS OF | CASH PRICE |
|---|---|---|---|
| £25 | **SCOTT, SQUIRREL.** Lucas lamps, Bonniksen, tax paid, as new..... | £6 5 5 | £95 |
| £15 | **BRADBURY** and C.B. sidecar, **1914.** 2-speed, K.S. and clutch, fully equipped, tax paid | £2 13 9 | £45 |
| £15 | **RUDGE, 1919.** 3½ h.p. Multi, fully equipped, tax paid .... | £2 13 9 | £45 |
| £30 | **A.J.S., 1918.** 6 h.p. Combination, Lucas accessories, screen, spare wheel, speedometer, fine turn-out..... | £6 5 5 | £100 |
| £15 | **INDIAN, 1914.** 7-9 h.p. model, clutch, fully equipped, very fast | £2 13 9 | £45 |
| £18 | **RUDGE, 1921.** 3½ h.p. Multi, I.O.M., fully equipped, tax paid | £4 3 4 | £65 |
| £10 | **DOUGLAS, 1914.** 2¾ h.p., 2-speed, fully equipped, good condition ..... | £2 4 9 | £35 |
| £40 | **SUNBEAM, 1918.** 3½ h.p. Combination, 3-speed, K.S., clutch, equipped ..... | £5 7 6 | £100 |
| £25 | **N.U.T., 1920.** 3½ h.p., 3-speed, K.S., clutch, Lucas dynamo lighting, new condition. | £6 5 5 | £95 |
| £35 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p., electrically equipped, comb., hood, screen, speedometer, new condition ..... | £8 17 1 | £135 |
| £15 | **ROYAL ENFIELD, 1913.** 6 h.p. and sidecar, fully equipped ..... | £2 13 9 | £45 |
| £20 | **ALLDAYS-ALLON, 1921.** Combination, fully equipped, speedometer, as new ..... | £4 8 7 | £70 |
| £40 | **MORGAN** GRAND PRIX. 8 h.p. W.C., equipped, as new, tax paid, mileage negligible ..... | £10 3 8 | £155 |
| £35 | **ZENITH** SPORTING COMBINATION. Fully equipped, Ace discs, absolutely as new | £7 19 5 | £125 |

## MOTOR CYCLES FOR SALE.

### Blackburne.

*Spare Parts:*

BLACKBURNE Engine Spares from stock.—Maudes' Motor Mart, 100, Great Portland St., W.1. [2807

### Bradbury.

3½h.p. Bradbury, N.S.U. 2-speed, new Dunlops, excellent order; £21.—248, Bentley Rd., Doncaster. [2864

WAUCHOPE'S, 9, Shoe Lane, London.—6h.p. Twin-cylinder 1921 New Bradbury, but shop-soiled; reduced to £130. [2919

BRADBURY 4h.p. Combination, C.S. gears, all-chain drive, fully equipped, tax paid; £60.—174, Vicarage Rd., Leyton. [2096

F.O.C.H. have a 3½h.p. Bradbury Combination, 3-speed countershaft, kick starter; bargain.—5, Heath St., Hampstead (near Tube). [2256

BRADBURY 1921 6h.p. Combination, Grindlay de Luxe sidecar, lamps, perfect condition, new tyres; £95, bargain.—Hughes, 79, College St., Ammanford, Carm. [2706

BRADBURY 6h.p. 1921 Twin, 3 speeds, chain drive, hand and foot controlled, clutch, new and unused; £94.—Eagles and Co., 275, High St., Actoo, London. [2898

39 GNS. only, or easy terms, Bradbury Coachbuilt Combination, 4h.p., 2 speeds, screen, lamps, drive away.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [2542

BRADBURY 4h.p., 2-speed, clutch, chain drive, Bosch, B. and B., Dunlops, lamps, licensed, running order but wants overhauling; £25, lowest.—120, Macoma Rd., Plumstead, S.E.18. [2297

4h.p. Bradbury, 2-speed, lamps, horn, generator, in good condition, Millford coachbuilt sidecar, with windscreen and draught valance, tax paid, must sell.—H. Bunting, High St., Bonsall, Matlock, Derbyshire. [9063

*Spare Parts:*

BRADBURY Spares and Repairs.—Agents, Bright and Hayles, 78, Church St., Camberwell. [8030

### Brough.

BROUGH 5h.p. Combination, late 1919, Easting, electric lighting, just overhauled; £85.—"Snowflake," Saffron Waldon, Essex. [2450

1916 o.h.v. Brough 3½h.p., 3-speed, used one season; nearest £65; evenings.—120, Marlborough Flats, Walton St., Chelsea, S.W.3. [2456

NEW 1922 3½h.p. o.h.v. Flat Twin Brough, "sports" model; £110, easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [3018

BROUGH, 1920, 5h.p., 3-speed, chain drive, kick-start, hand clutch, Brough sidecar, all lamps, Easting screen; £90.—Maudes', Walsall Garage, Walsall. [3199

£45.—3½h.p. Sporting Brough 1916, overhead valves, lamp, horn, taxed; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11. Park 2071. [2796

### Brough Superior.

BROUGH SUPERIOR, 1921, special 8h.p. o.h.v. J.A.P. engine, guaranteed 80 m.p.h.; plated tank and cylinder, with Swan sporting sidecar, disc and step complete, Lucas accessories, all spares; puncture-proof tubes, as new; £140.—Rae, Annickvale, Saltcoats. [9960

BROUGH SUPERIORS.—Order your new mount from us. We are the Brough experts. Specially tuned to order. Mark I., 8h.p., side valve, £150; sporting combination, with screen, step, mat, and apron, £180; Mark I., 90mm. bore, o.h.v., £160; Mark II., 6.5h.p. M.A.G. engine, £125; Mark II. combination, £150. Special Service Agents; lists.—G. and J. Dawson, The Ideal Garage, Cambridge. 'Phone: 993 [0834

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½ o.h.v., 3-speed, clutch, and kick starter, £180; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0733

*Spare Parts:*

SPARES:—All engine, gear box, and frame spares for Brough Superior in stock; write for lists.—G. and J. Dawson, The Ideal Garage, Cambridge. [0835

### Brown.

3½h.p. Brown, T.T. bars, sloping frame, watertight magneto, low and fast, licensed. £17.—Middleton, 35, Millais St., Albany Rd., Camberwell, S.E.5. [2304

## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. Specialists.—County Cycle and Motor Co., Broad St., Birmingham. [4678

B.S.A. 3½h.p., Mabon gear, tax paid, all on; £30. —11, Queens Rd., Peckham. [1993

4¼h.p. B.S.A. Combination, just overhauled, all on; £55.—Tegg, Dorchester, Wallingford. [2184

B.S.A. and Sidecar, under 2,000 miles, fully equipped, tax paid, as new; nearest £110.—Apps, Bracknell. [2478

WAUCHOPE'S, 9, Shoe Lane, London.—4¼h.p. B.S.A. Combination, 1919-20, 3 speeds, etc.; £77/10. [2934

NEW 1921 4¼h.p. B.S.A. Combination and accessories; £125.—Bounds Garage, 223, High Rd., Kilburn. [2291

£35.—3½h.p. B.S.A. Combination, 2-speed, clutch, good condition; evenings.—24, Oxford Rd., Upper Norwood. [2844

B.S.A. 1922, all models, immediate delivery.—Hucklebridge, 133, Sloane St., Chelsea. Tel.: Victoria 451. [7454

1920 B.S.A. 4¼h.p. Combination; nearest £70.—Greer, Bloomsbury House Club, Cartwright Gardens, W.C. [2278

B.S.A. 4h.p., 3-speed, clutch, kick start, new tyre, condition good; £47/10.—Bridge House Garage, Crayford, Kent. [1849

B.S.A. 1919 (November) 4¼h.p. Combination, electric lighting; £79.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7203

1922 B.S.A. model, H2, in stock; terms or exchange.—Shepherd, Enfield Highway. Tel.: Waltham Cross 31. [0860

1919 B.S.A. Combination, 3-speed, K.S., Tan-Sad, speedometer, in new condition; £70.—59, Clarendon Sq., Euston, N.W.1. [2673

B.S.A.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6292

29 GNS.—B.S.A. 4h.p. F.E. clutch, enclosed magneto, good tyres, ready to drive away.—53, Swaffield Rd., Wandsworth. [2957

B.S.A., 1921, 4¼h.p., 3-speed, hand clutch, kick start, all chain drive, tax paid; £78.—Maudes', 100, Great Portland St., London. [3184

B.S.A. 1922 Models.—Immediate delivery; cash, deferred payments, exchanges. Repairs.—Motoria, Regent Parade, Tally-Ho, Finchley. [2156

B.S.A. Combination, 3-speed countershaft, windscreen, tax paid, nice condition; £65; call any time.—Snow, Laurel St., Dalston, E.8. [3113

55 GNS.—1917 B.S.A. 4¼h.p. Combination, 3-speed countershaft, mechanically perfect, lamps, horn, windscreen, tax year.—1, Priory Rd., Kew Green. [2557

B.S.A. 2-speed 4¼h.p., mechanically perfect, fully equipped, £33; C.B. sidecar and screen to suit, £7/10.—Estate Office, Chelsea Gardens, S.W.1, after 5. [2209

BRAND new 1920 T.T. B.S.A. 3½h.p., sporting machine, fast; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11. Park 2071. [2801

B.S.A. 1919 4¼h.p. all-chain Combination, luxurious Dunhill sidecar, tax paid, insured, screen, hood, lamps, splendid condition; 75 gns.—87, Gore Rd., Hackney. [2476

B.S.A. 1921 chain-cum-belt Model, equipped lamps, horn, and licence holder, mileage about 2,500, in beautiful condition; bargain, £85.—Parker and Son, Longpool, Kendal. [2386

1919 4¼h.p. B.S.A. Combination, full equipment, registered, new tyres, windscreen, beautiful condition, bargain; 69 gns; after 5 p.m.—4, Elm Gardens, Hammersmith. [3089

£65.—1919 B.S.A. 4¼h.p. Combination, tank re-enamelled, bars, etc., re-plated, excellent condition, equipped, tax paid; after 8 p.m.—79, Huntingdon Rd., East Finchley. [2707

B.S.A. 4¼h.p., 1920, purchased 1921, not ridden 500 miles, 3-speed, kick start, all accessories, automatic oiler, Tan-Sad, tax paid 1923; £80.—Maher, 181b, High St., Hounslow, W. [2116

4¼h.p. B.S.A. Combination, 3-speed, kick start, 1916, taxed, overhauled, very smart outfit; £59; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11. Park 2071. [2798

1921 B.S.A. 6-7h.p. Combination, new August, Lucas lamps, Easting, Tan-Sad, chain drive, insurance, tax paid, spare tube; price £160, or near offer.—Day, 119, East Reach, Taunton. [1552

4h.p. B.S.A. 2-speed, all-chain drive, kick start, clutch, P.H. lighting, Klaxon engine, just overhauled, tyres as new, smart, reliable turnout, photo.; £35.—Shorter, Broad St., King's Lynn. [2519

B.S.A. 4¼h.p. 1920, delivered 1921, Brooklands model, C.B. sidecar, fully equipped, electric lighting, taxed, easy starter, splendid condition; evenings, or write.—6, Selwyn Rd., Walton-on-Thames. [2763


THE HALIFAX MOTOR EXCHANGE

## NEW 1922 LIGHT CARS

B.S.A., CALTHORPE, COVENTRY PREMIER' LAGONDA, L.S.D. AND RHODE.

## NEW 1922 MOTOR CYCLES

B.S.A., BRADBURY, DOUGLAS, ENFIELD, EDMUND, LEVIS, MARTINSYDE, NEW IMPERIAL, NORTON, QUADRANT, RALEIGH REX, ROYAL RUBY, SCOTT, SUNBEAM and TRIUMPH.

## SECOND-HAND BARGAINS

### SOLOS.

| | |
|---|---|
| A.B.C., 1921, 3 h.p., electric light | £79 10 |
| A.V., 1920 Monocar, 8 h.p. Jap | £75 0 |
| ARIEL, 1920, 3½, 3-speed | £69 10 |
| BRADBURY, 3½, single gear | £29 10 |
| COV. EAGLE, 1920, 3½, 3-speed | £65 0 |
| INDIAN SCOUT, 1920 | £87 10 |
| RUDGE MULTI, 1920, 7-9 Twin | £79 10 |
| RUDGE MULTI, 1920, 5-8 | £55 0 |
| RUDGE MULTI, 1920, 3½ I.O.M. | £59 10 |
| RUDGE MULTI, 1916, 3½ | £46 0 |
| SCOTT, 1920, 3¼ h.p., 2-speed | £79 10 |
| TRIUMPH, 3½, 2-speed, F.E. | £37 10 |
| TRIUMPH, 1914, 3-speed, hub gear | £37 10 |
| WOOLER, 2¾, 1920, accessories, tax paid. | £52 10 |
| PREMIER, 3½, 2-speed F.E. | £35 0 |
| SCOTT, 1922 SQUIRRELL, 1,000 miles, tax paid | £95 0 |
| ZENITH GRADUA, 4-5 Twin, countershaft | £49 10 |

## PASSENGER MACHINES

| | |
|---|---|
| MORGANS, 6 h.p., taxes paid | £85, £95 |
| A.J.S., 1915, 6 h.p. comb., spare wheel, etc. | £87 10 |
| A.J.S., 1919, 6 h.p. comb., spare wheel, etc. | £115 0 |
| ARIEL, 3½ 1920, 3-speed comb. | £19 10 |
| B.S.A., 4½, 3-speed, and coach sidecar | £65 0 |
| COVENTRY VICTOR, 5-6, 1921, flat twin. | £115 0 |
| ENFIELD, 1920, hood, screen | £99 10 |
| ENFIELD, 1915-16, 6 h.p. comb | £85 0 |
| HARLEY, 1918, 7-9, Henderson Elite s.c. | £105 0 |
| HARLEY, 1919, electric comb. | £115 0 |
| HUMBER, 1919, 3½, flat twin comb. | £75 0 |
| MATCHLESS, 6 h.p. coach combination | £57 10 |
| REX M.O.V., 6 h.p., 2-speed comb. | £39 10 |
| REX, 6 h.p., 2-speed comb. | £45 0 |
| REX BLACKBURNE, 1920, spare wheel etc. | £110 0 |
| REX J.A.P., 8 h.p., 2-speed comb. | £52 10 |
| ROVER, 5-6, 1920, unused 1920. New Rover sidecar. Electric Lighting | £120 0 |
| RUDGE, 1920, 5-6, and sidecar. Tax paid. | £75 0 |
| RUDGE, 7 h.p., 1920 comb. | £97 10 |
| SCOTT, 1920, 2-speed comb., special | £105 0 |
| TRIUMPH, 1914, 4 h.p., 3-speed hub comb. | £52 10 |
| TRIUMPH, 3½, 2-speed, F.E. comb. | £42 10 |
| SUNBEAM, 8 h.p. M.A.G. | £115 0 |
| ZENITH, 6 h.p., kick start, clutch | £52 10 |

## SPECIAL BARGAINS

| | |
|---|---|
| STANDARD, 11.6 brand new 2-seater | £475 0 |
| FORD, 1920, 4-seater, dynamo lighting and starter, detachable and spare wheels | £125 0 |
| SUNBEAM, new 1921, 3½, detachable wheels and new 1922 special sidecar | £152 0 |

## DOUGLAS CASH BARGAINS

| | |
|---|---|
| DOUGLAS, 1914, 2¾, 2-speed | £35 0 |
| DOUGLAS, 1915, 2¾, 3-speed | £42 10 |
| DOUGLAS, 1920, 2¾, 3-speed | £59 10 |
| DOUGLAS, 1922, 3½, 3-speed Sports, mileage about 300, and accessories | £110 0 |

All tax paid. Spot cash only.

25, Horton Street, HALIFAX.

'Phone 1403 'Grams: "Perfection"


## MOTOR CYCLES FOR SALE.

### B.S.A.

£85.—1920 late 4¼h.p. B.S.A. combination, Mo gomery sidecar, chain drive, fully equippe licensed, driven about 1,000 miles; reason of ea unemployment.—G. Holdway, Cople, Bedford. [25

1920 B.S.A. Combination, in absolute top-hole co dition, B.S.A. sidecar, just been re-painted a re-upholstered, luggage grid, Easting windscreen, lamp tools, tax paid, etc.; £77.—Casey, 51, Harberton Re Highgate, N.19. [27

B.S.A. Combination, 4¼h.p., late 1921, milea abont 600, indistinguishable from new, Model-o Luxe sidecar, dynamo lighting, Tan-Sad, hood, scree etc., guaranteed; 120 gns.—Longman Bros., 17, Bor St., Ealing. 'Phone: 689. [30

B.S.A. 1922 models for immediate delivery; be prices allowed for machines in part payme Also two 4¼h.p. Model K. combinations in stock, speeds, kick starter, £65 and £75 each.—Eagles an Co., 275, High St., Acton, London. [28

6-7h.p. B.S.A. 1921 Combination, No. 1010, tho oughly recommended, Lucas magdyno, Bluem adjustable, Bonniksen, luggage grid, Tan-Sad, ma wheels interchangeable and spare, best possible co dition; £160, or very near; cost £230.—29, Southgat St., Gloucester. [199

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bon St., Ealing. [753

THE Promptest Firm for B.S.A. Spares.—Forfiel Motors, Forfield Place, Leamington Spa. [316

B.S.A. Specialists.—All spares by return.—Count Cycle and Motor Co., Broad St., Birmingham. [467

HERBERT ROBINSON, Ltd., Green St., Cambridge —All B.S.A. parts in stock, no waiting. Trad supplied. [293

B.S.A. Spares can be had by return, post free from Jones Garage, B.S.A. Agents and Spare Service Depot Broadway, Muswell Hill, N.10. [080

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all B.S.A. spare part always in stock. Write for free spare part list, statin year of manufacture. [076

### Calcott.

2½h.p. Calcott, new B. and B., tyres, etc., smart owner away; 15 gns.—67, Fernlea Rd., Balham [308

1915 Calcott 2½h.p., good order; best offer over £12/10 secures, carriage extra.—Toyer, 76, Cromwell Rd., Luton. [2146

£20.—Calcott 2¾h.p., about 1916, lamps, horn, tax paid, good condition, real bargain.—143, Ravensbury Rd., Earlsfield, S.W.18. [1922

### Calthorpe.

CALTHORPE Junior, 2-speed, ride away; £28/10. —W. Pendry, Creech, Taunton. [2089

CALTHORPE 1920 2-stroke, Enfield; £38.—Thompson, 1, Nottingham Place, High Rd., N.12. [2187

2¾h.p. Calthorpe-Jap, Enfield gear, overhauled, re-bushed, lamps; £32/10.—Westfield, 23, Canal St., Paisley. [2098

CALTHORPE Junior, 2-speed, excellent condition; bargain, £22.—Fairhurst, 68B, Standishgate, Wigan. [2390

CALTHORPE-J.A.P., late 1919, Enfield 2-speed, licensed, equipped, any trial; £38.—56, The Grove, Palmers Green. [2588

1920 2¾h.p., 2-speed Calthorpe-Jap, in perfect condition throughout; £38.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [3004

CALTHORPE-J.A.P. 1916 2¾h.p., 2-speed, clutch, licensed, equipped, excellent condition; £32; after 6.—Gray, 52, Sumatra Rd., West Hampstead. [2562

CALTHORPE 1922 Models.—Immediate delivery; cash, deferred payments, exchanges. Repairs.—Motoria, Regent Parade, Tally-Ho, Finchley. [2159

CALTHORPE 3h.p. Combination, 2-speed, kick start, fitted with M-L Maglita set, slightly shop-soiled; £85.—P. J. Evans, John Bright St., Birmingham. [2240

CALTHORPE-J.A.P., 2¾h.p., believed 1917, 2-speed, fully equipped, rebushed, enamelled, excellent condition; £35.—Cox, Langton Cottage, Lytchett Minster, Poole. [2527

CALTHORPE-J.A.P., 2¾h.p., Albion 2-speed, kick start, hand clutch, chain-cum-belt drive, all lamps, tax paid; £35.—Maudes', Walsall Garage, Walsall. [3190

1921 Calthorpe Combination, 3h.p., 2-stroke, 2-speed, electric light, full equipment, taxed; cost £120; accept £60.—Sharpe, 4, Station Parade, Sevenoaks. [2267

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Douglas.

4h.p. Douglas Combination, 5-speed, clutch, kick starter, taxed, lamps, very good appearance and tyres; £87.—Lawson, 66, Perry Vale, Forest Hill Station, S.E. [2689

4h.p. Douglas, polished aluminium Douglas sidecar, perfect order, tax and insurance paid; offers.—Addis, 2, Ellington Gardens, Taplow (near Maidenhead Bridge). [2267

DOUGLAS 1922 models, 2¾h.p., £75; 4h.p. solo, £110; 4h.p. combination, £135; prices include all accessories; delivery from stock.—Rivett, 236, High Rd., Leytonstone. [2266

£55.—Douglas 1921 2¾h.p., 2-speed, fully equipped, speedometer, tax paid, mileage 500, condition as new.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [2893

ELI CLARK can give you good service both in new machines and spares; try me. I may be useful to you. The pioneer agent for Douglas motors.—196, Cheltenham Rd., Bristol. [0016

1918 2¾h.p. Douglas, just overhauled, enamel and plating like new, tyres new, magneto new, and several other parts, tax paid; £42.—Watson, 6, Cavendish Parade, Clapham, S.W. [2428

1916 Douglas 2¾h.p., aluminium disc, speedometer, copper exhaust, all lamps, horn, tax paid, like new; any trial; £35.—Ward, South-Westeru Garage, New Malden, Surrey. [2017

A Douglas Combination 4h.p., electric lighting, roomy sidecar, cover, cameo windscreen, Klaxon, numerous accessories, excellent running order; £75.—35, Wingmore Rd., Church Rd., Tottenham. [3083

DOUGLAS.—Smart turnout, licensed and equipped, lamps, mechanical horn, 4h.p., engine 7936, new tyres, enamel, and plate, sidecar, machine as new; £66.—58, Blagdon Rd., New Malden. [2890

40 GUINEAS.—Douglas 1918 2¾h.p., 2-speed, uncrated, 1920, small mileage, condition as new, lamps, horn, tax paid.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [2895

DOUGLAS, 1919, 4h.p., 3-speed, foot clutch, kick start, chain-cum-belt drive, Empire sidecar, complete with lamps, speedometer, tax paid; £88.—Saudes', 100, Great Portland Street, London. [3174

DOUGLAS Combination, 1919 model, practically new, both mechanically and appearance, 3 speeds, kick start, plated lamps, stored 2 years; bargain, £75; tax paid.—James, 25, Landor Rd., Clapham, London. [2723

FOR Douglas 1922 2¾h.p. and 4h.p. combinations, get in touch with us; we are North London agents and give you the best of service; all spares in stock; no V.D. rubbish.—Jones Garage, The Broadway, Muswell Hill. [0786

HALIFAX.—Douglas 1922 all-on models, 2¾h.p., 2-speed, £75; 2¾h.p., 3-speed, £90; 3½h.p. sports, £130; 4h.p. combination, £135; 6h.p. combination, £165. Liberal exchanges.—Halifax Motor Exchange, Horton St., Halifax. [2983

CHEAPEST Douglas in England.—1919, excellent condition, large copper exhaust pipe, leather mudshields, 2 lamps, generator, Klaxon horn, speedometer, knee grips, kit of tools, pump, etc., full year's tax paid; 8 gns.—Delancey Street Garage, Camden Town, N.W.1. [2961

KICKHAM, Stokes Croft, Bristol, the Douglas Agent with real experience and knowledge of a Douglas. Successes during 1920 on this mount: 38 firsts, 17 seconds, and 8 thirds, also 6 special trophies. Let me deal with your order. Unequalled service, repairs, etc. [3150

DOUGLAS 4h.p. late 1921 Combination, unscratched, and equal to new, windscreen with side curtains, all accessories, tax paid to June; £110. Also 2-4h.p. models, reconditioned throughout, 3 speeds, kick starter, foot clutch, £55 and £60 each; and one 2¾h.p. model, 2 speeds, all accessories, £40.—Eagles and Co., 275, High St., Acton, London. [2896

DOUGLASES, 2¾h.p., reconditioned, absolutely as new, practically all new spares fitted; the finest value obtainable; £45, all on. Before purchasing elsewhere, let us give you a trial, and convince yourself. If you require the real mount for Easter, we have it. Deferred terms if desired.—The Sulima Garage Co., 73, New Park Rd., Brixton Hill, S.W.2. Phone: Streatham 40. [8545

2¾h.p. Douglas 1919, very fast, the property of member of *The Motor Cycle* staff, fully equipped with pillion seat; special features include experimental single-lever carburetter, hand-made by well-known firm, and giving 98 m.p.g.; also brand new chain, Klaxon horn, and new belt; also fitted with special racing windscreen and exhaust manifold; practically new rear tyre (Hutchinson); machine just been completely overhauled; trial run arranged gladly; £45, a bargain.—Write, Box 9609, c/o *The Motor Cycle*. [0846

*Spare Parts:*

DOUGLAS Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7541

HERBERT ROBINSON, Ltd., Green St., Cambridge.—The Douglas Specialists. Trade supplied. [2939

# Harrods MOTOR CYCLES

## ON EASY TERMS

All the following machines are available from stock and may be obtained on Harrods Convenient System of Easy Payments. Details and latest lists free.

### NEW SOLO MACHINES

| | | |
|---|---|---|
| 2¾ h.p. | **ALLDAYS-ALLON** ... ... | **£60** |
| 4½ h.p. | **B.S.A.**, Belt Drive ... ... | **£107** |
| 2¾ h.p. | **DOUGLAS**, Two-speed ... | **£75** |
| 2¾ h.p. | **DOUGLAS**, 3-sp., clutch . | **£90** |
| 2¼ h.p. | **ENFIELD**, Two-speed model | **£55** |
| 2¾ h.p. | **FRANCIS-BARNETT**, 2-sp'd | **£73** |
| 2¼ h.p. | **LEVIS**, Popular model ... | **£48** |
| 2¾ h.p. | **NEW IMPERIAL**, 3-speed | **£63** |
| 2¾ h.p. | **NEW IMPERIAL**, Clutch, etc. | **£69** |
| 1¾ h.p. | **McKENZIE**, Lightweight | **£27 6s.** |
| 2¾ h.p. | **O.K. JUNIOR** ... | **£39 18s.** |
| 2½ h.p. | **O.K.**, 2 sp., clutch, etc. | **£60 18s.** |
| 2¼ h.p. | **SUN VITESSE**, single speed | **£44 2s.** |
| 2¼ h.p. | **SPARK**, single speed ... | **£39 18s.** |
| 2½ h.p. | **SPARKBROOK**, single sp'd | **£54 12s.** |
| 2¼ h.p. | **TRIUMPH**, Two-speed ... | **£65** |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | **£105** |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | **£115** |

### NEW COMBINATIONS

| | | |
|---|---|---|
| 4½ h.p. | **B.S.A.**, Belt Drive, No. 3 s/c | **£139** |
| 4½ h.p. | **B.S.A.**, Chain Drive, No. 3 s/c | **£142** |
| 8 h.p. | **ENFIELD** ... ... ... | **£140** |
| 8 h.p. | **MATCHLESS** ... ... | **£170** |
| 6 h.p. | **HAZLEWOOD** ... ... | **£118** |
| 8 h.p. | **NEW IMPERIAL** ... ... | **£145** |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | **£155** |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | **£145** |
| 4 h.p. | **DOUGLAS** ... ... ... | **£135** |
| 3½ h.p. | **INVICTA** and Sidecar ... | **£110** |

## SHOP-SOILED MODELS AT SPECIAL PRICES

4½ h.p. **HUMBER**, Flat Twin, 3 sp., clutch & k.s. **£100**

2¾ h.p. **WOOLER**, Flat Twin, Brooklands Sports model, fully equipped... **£69**

4½ h.p. **HUMBER COMBINATION.** Flat Twin Engine, 3-speed, etc. ... **£130**

### SECOND-HAND

2¼ h.p. **LEVIS**, Popular Model... ... ... **£42**

5/6 h.p. **HAZLEWOOD**, Combination, Speedometer. Thoroughly overhauled ... ... **£80**

*All machines sent Carriage Paid to nearest Railway Station*

**HARRODS MOTOR SALES DEPT**
**116–118 Brompton Road London SW1**
*(Opposite the Main Building)*

## MOTOR CYCLES FOR SALE.

### Douglas.

*Spare Parts:*

DOUGLAS spares; large stocks of genuine Douglas spares; dealers supplied at trade rates.—Rivett, 236, High Rd., Leytonstone. [2267

DOUGLAS Spares.—We hold a complete stock for all models; post free. Douglas Agents and spare part stockists.—Jones Garage, Broadway, Muswell Hill, N.10. [0806

### Economic.

£10, and deferred payments, buys new Economic motor cycles, or £34 cash; extraordinary value.—Write Direct Sales, 69, Newman St., W.1. [7446

ECONOMIC.—The Marvellous Flat Twin, with variable gear, within the reach of all; £10 down, balance easy terms, or £34 cash. Catalogues with pleasure.—Personally tested by Sam. E. Clapham, 27, Stockwell St., Greenwich, S.E.10. [3051

DEMONSTRATION Runs on Economic Motor Cycles can be fixed up with the following agents: The Associated Rubber Manufacturers Co., 172, Gt. Portland St., W.1; W. Parish, Esq., Cathedral Close Garage, Norwich, Norfolk; Messrs. Baker and Son, 87, Anlaby Rd., Hull; H. Braine, Esq., 13, St. Ignatius Rd., Dublin; The Associated Rubber Manufacturers Co., 100, Victoria St., Bristol; A. Finch, Esq., Frogmore St., Tring; E. T. Morris and Co., Marmet House, Swiss Cottage, N.W.3; J. W. Burton, and Co., 100, Byres Rd., Glasgow, W.; Messrs. Porter Bros., Mantle St., Wellington, Somerset; Yates and Topping, Grand Garage, Thornton Rd., Morecambe, Lancs.; Athol Motor Garage, Hill St., Douglas, Isle of Man; C. S. Barrow, 79, High St., Lymington; The Associated Rubber Manufacturers Co., 38, Grey St., Newcastle-on-Tyne. Ask for particulars from your nearest agent. Trial drive machines are proceeding North, and to the West Coast next week. Agents who are interested, please write, so that machine can call.—Economic Motor Cycles, 74½, Wells St., W.1. [2302

### Edmund.

EDMUND-J.A.P. 2¾h.p., spring frame, Enfield 2-speed; £58.—193, Broadway, West Hendon. [2148

THE Oldest Spring Frame Machine. Ask Robbins to call and show you one!—177, Great College St., London, N.W.1. [2011

GENOA Better Machine?—Edmund, latest Barr and Stroud model, just arrived; demonstrations arranged.—Edmund Depot, 295, Harrow Rd., W.9. [2618

### Enfield.

ENFIELD 3h.p., 2-speed, K.S., D.F., tax, perfect; £32.—27, Church Path, Chiswick. [2694

NEW 1922 Enfield Combinations in stock.—Bounds Garage, 223, High Rd., Kilburn. [2290

BRAND new Enfield Combination 8h.p.; £112.—24, Balliol Rd., North Kensington. [2466

ROYAL ENFIELD 3h.p. Twin, 2-speed, kick start; £32/10.—16, Montague Rd., Dalston. [2272

1915 3h.p. Enfield-M.A.G., 2-speed, chain; £26.—Shaw, New St., Wellington, Salop. [3157

ENFIELD 2¾h.p., 2-speed, clutch, equipped, perfect; £20.—17, Heaton Rd., Mitcham. [2568

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

WAUCHOPE'S, 9, Shoe Lane, London.—2¼h.p. Royal Enfield, 1921, 2 speeds; £42/10. [2933

1915 6h.p. Enfield Combination, tax paid; genuine bargain, £62.—Ross, 86, High Rd., Lee. [2300

1919 Enfield Combination, splendid condition; £85, or near offer; any trial.—49, Pearman St., S.E.1. [3070

WAUCHOPE'S, 9, Shoe Lane, London.—8h.p. 1917-18 Royal Enfield Combination, 2 speeds; £85. [2923

ENFIELD 2¾h.p. Twin, 1914, 2-speed; £27, or near.—Houchin, 189A, High St., Peckham, S.E.15. [2638

1922 Enfield Combination, hood, screen, horn, tax paid, never been ridden; £130.—Chesshire, Hockley Heath. [1952

HALIFAX.—1922 Enfield Combination; £140. Cash or exchange.—Halifax Motor Exchange, Horton St., Halifax. [2982

1920 Enfield Combination, 6h.p., splendid condition, tax paid, all on; what offers?—B. Sharpe, Careby, Stamford. [2155

1919 Enfield Combination, all accessories, new condition; £78; or exchange.—64, Church St., Edgware Rd., W. [3099

ENFIELD Combination, excellent condition, ready ride away; £60 or near offer.—Anderson, 66, High St., Evesham. [2534

ROYAL ENFIELD, 1919, 2¼h.p., 2-speed, chain drive, all lamps, tax paid; £38.—Saudes', Walsall Garage, Walsall. [3194

ENFIELD 1921 2-stroke, dynamo lighting, as new; £50, bargain.—James, c/o Bradmore's, 482, Harrow Rd, Paddington [2826

## MOTOR CYCLES FOR SALE.

### Enfield.

DAN GUY, Weymouth.—Enfield 1921 8h.p., Magdyno, double-seated sidecar, hood and screen, guaranteed perfect; £125. [0818

ENFIELD 6h.p., family sidecar, hood, screen, lamps, etc.; £85, condition as new.—Pembury Mews, Pembury Rd., Tottenham. [2261

ENFIELD.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6290

1921 Enfield-Jap Combination, Magdyno, Dunlops, tax December, splendid condition; £125.—40, Park Av. South, Hornsey. [2218

1921 Enfield Combination, Cameo, pillion, lamps, spares, like new, cost £170; lowest, £105.—Johnson, Printer, Nantwich. [2538

ENFIELD 2¾h.p., free engine, all accessories, perfect condition; £20, or good push cycle and cash.—1a, Garthorne Rd., S.E. [2217

ENFIELD, cheapest Combination on the road; immediate delivery, all models.—Longman Bros., 17, Bond St., Ealing. 'Phone: 689. [3045

2¾h.p. Enfield Twin, single speed, Bosch, Amac, running; £15.—Letters only, Bradley, Cleveland View, Coundon, Bishop Auckland. [2028

CROYDON and District.—Sole official appointed agent for Royal Enfields.—A. F. Pulling, 175a, London Rd., Croydon. 'Phone, 1619. [6951

BARGAIN.—Enfield 3h.p. twin, 1915, 2-speed, new Amac, fast and powerful; £25, or exchange 2-stroke.—61, Grand Parade, Harringay. [2671

ENFIELD 1922 Models.—Immediate delivery; cash, deferred payments, exchanges. Repairs.—Motoria, Regent Parade, Tally-Ho, Finchley. [2157

ENFIELD 6h.p., Millford sidecar, all lamps, licensed to December, good running order; £50.—Smith, 4, Honister Av., Jesmond, Newcastle-on-Tyne. [2605

ENFIELD 1921, 2-stroke, 2-speed, mileage 300, fully equipped, tax paid year; £42.—Barker, 216, Portobello Rd., North Kensington, W.11. [2612

ENFIELD 1919 6h.p. Combination, lamps, horn, etc.; £85, bargain.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0067

1921 Enfield 2-seater Combination, 8h.p. Vickers engine, fully equipped; £110.—Hillier, Side Bell, 9, Wallingford Av., North Kensington, W.10. [2699

ENFIELD, 1921, 6h.p., dynamo lighting, 2-speed, all-chain drive, Enfield sidecar, fully equipped, tax paid; £125.—Maudes', 100, Great Portland St., London. [3175

ENFIELD 6h.p. Combination, 1919, Lucas lamps, horn, just overhauled, new condition, tax paid; bargain, £90, offers.—367, St. Benedicts Rd., Birmingham. [2720

1922 Enfield Combination for immediate delivery, standard, £140; 2-seater, £145; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [3019

1917 3h.p. 2-speed Enfield, equipped, licensed, excellent condition; £39; exchange, cash, for Enfield. Zenith combination.—3, Morpeth Rd., S. Hackney. [2713

ENFIELD Combination 6h.p. 1914, 3½ years war stored, excellent condition, any trial given, complete in all; bargain, £55.—Box 9971, c/o *The Motor Cycle*. (D) [2996

ENFIELD Combination, late 1920, Magdynamo, 2-seater sidecar, hood, screen, speedometer, and spare chains, etc.; nearest £120.—323, High St., Brentford, W. [2602

1920 Enfield Combination, Magdyno, Easting, Cowey, mirror, Tan-Sad, spares, perfect condition, fully licensed; £115.—Darling, 19, Ardfern Av., Norbury, S.W.16. [2762

ENFIELD.—Complete range of 1922 models in stock for immediate delivery; cash, exchanges; easy payments 4% extra.—P. J. Evans, John Bright St., Birmingham. [2235

T.T. Enfield 3h.p., 2-speed, all chain, clutch, full licence, new tyres, 2in. exhaust, late model; absolutely perfect; £39 cash; genuine bargain.—89, East Hill, Wandsworth. [2574

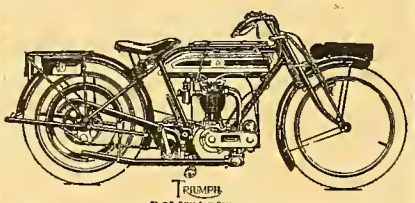
1921 8h.p. Vickers-Enfield Combination, Lucas Magdyno, low mileage, as new; £125; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11. Park 2071. [2797

ENFIELD 1921 8h.p. Combination, Easting, electric lamps, absolutely as new; £130, or exchange.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [2380

70 GNS.—Bargain, splendid Enfield Combination, 6h.p., windscreen, hood, speedometer, mirror, Tan-Sad, fine lamp set, tyres perfect, trial.—Lane, 126, Queen's Rd., Dalston, E.8. [2420

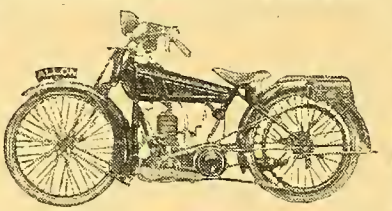
ENFIELD 1918 (late), 8h.p. J.A.P., special bulbous back sidecar body, Easting, legshields, Watford trip, lamps, horn, and spares, tyres and tubes nearly new; also tradesman's box to fit same, only wanting seeing, trial, tax paid 1922, everything in tip-top condition; price 100 gns.—J.T.M., Hooley Bakery, Coulsdon, Surrey. [287


# SAVE YOUR TICKET MONEY
## "PAY AS YOU RIDE"
## OUR
## MOTOR CYCLES.

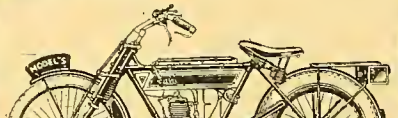


**TRIUMPH "Ricardo."** £120 cash or £31 4 0 down and 12 payments of £7 16 0. All models in stock.

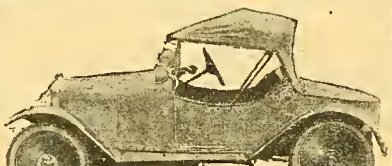
**ENFIELD** 8 h.p. Comb. £140 cash or £36 8 0 down and 12 payments of £9 2 0. All models in stock.



**ALLON.** £80 cash or £15 12 0 down and 12 payments of £3 18 0.



**LEVIS.** From £48 cash or £12 9 8 down and 12 payments of £3 2 5. All models in stock.



**COVENTRY PREMIER.** £230 cash or £59 16 0 down and 12 payments of £14 19 0.

EVERY WELL KNOWN MAKE OF MOTOR CYCLE IN STOCK. TRADE SUPPLIED.

DISCOUNTS ALLOWED IF ACCOUNT PAID IN 2, 4 OR 6 MONTHS.

# LAMB'S Ltd.

**WALTHAMSTOW, LONDON, N.E. 151, High St.**
'Phone—Walthamstow 169 (2 lines).
**EUSTON ROAD, LONDON, N.W.** (Opp. Gt. Portland Street Station). 'Phone—Museum 4978.
**WOOD GREEN, LONDON, N.E. 50, High Road.**
'Phone—Hornsey 1056.


## MOTOR CYCLES FOR SALE.

### Enfield.

1920 Enfield 8h.p. Combination, J.A.P. engine, Lucas dynamo lighting, horn, speedometer, tools, Easting windscreen, tax paid, excellent condition, £110.—Dr. Spencer, Alcester. [1940

6h.p. Enfield Combination, 1915, been thoroughly overhauled, receipts shown; no reasonable offer refused; money urgently required.—Whiting, 17, Barry Rd., Stonebridge Park, N.W.10. [2101

6h.p. Royal Enfield Combination, 1915 (late), stored 3 years, recently thoroughly overhauled, in excellent condition, insured, taxed; nearest offer £70.—Corner House, Godstone, Surrey. [2296

ENFIELD Combination, 8h.p., 2-speed, Magdyno lighting, fully equipped, electric horn, speedometer, etc., perfect running order; £60.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [2537

£120.—1921 dynamo lighting Enfield combination, Vickers 8h.p. engine, fully equipped, perfect condition throughout, will guarantee 6 months if required.—165, Junction Rd., Tufnell Park, N.19. [3131

66 GNS., exchange.—Really exceptionally nice Enfield Combination 1915, but had very little use, disc wheels, equipped, smart, any examination, trial.—Seabridge, 35, Hansler Rd., East Dulwich. (Sydenham 2452.) [7241

ENFIELD Combination, overbauled, Easting, lamps, Binks, Tan-Sad, tools, overalls, spares include extra driving chain, tyres, valves, pistons, connecting-rods; £68; write or call.—J. L. Furneaux, Whitbread and Co., Scrubbs Lane, Willesden. [2326

1920 (August) 8h.p. Enfield Combination, Easting, Cowey horn, and speedometer, Binks, 3 lamps, College shields, luggage carrier, tools, spares, good tyres, enamel coach painting excellent, tax paid, insured, take 4 anywhere; £95, or near.—Watts, Bethersden, Asbford, Kent. [2100

1920 Enfield Combination, 8h.p. twin J.A.P., 2-speed, handle start, 1922 tax paid, Magdynamo lighting throughout, horn, Bonniksen trip and distance speedometer, Easting windscreen, etc., exceptionally fast engine, in most beautiful condition; any test or trial; £98.—Walker, 769, Romford Rd., Manor Park, London, E. [1894

*Spare Parts.*

ENFIELD Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7542

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Enfield engine parts in stock. Trade supplied. [2940

ENFIELD Spares and Repairs a speciality.—Pulling's Garage, London Rd., Croydon. 'Phone, 1619. [6952

### Excelsior.

EXCELSIOR 1920-21 De Luxe Combination, 8h.p. J.A.P., fitted roller con.-rods by makers, Lucas magdyno, lamps and horn, latest 3-speed Burman gear box, Cowey speedometer, legshields, interchangeable wheels, spares: screen, carrier, perfect, tax paid, insured; nearest £145; appointment.—Long, 15, George St., Richmond. 'Phone 1281. [2400

### F.N.

F.N., 1914, 5-6h.p., 4-cylinder, 2-speed, hand clutch; £30.—Maudes', Walsall Garage, Walsall. [3197

F.N. 4-cyl. Coachbuilt Combination, 2 speeds, clutch, excellent condition; £35.—Box 9925, c/o *The Motor Cycle*. (D) [2056

LIGHTWEIGHT F.N., 2 speeds, clutch, shaft drive, new tyres, in perfect condition, tax paid; £24.—Dinwoodie, Brough, Westmorland. [2821

F.N. 2¾h.p., spring forks, new tyre, in splendid running order, suit beginner; bargain, £9.—Smith, 82, Seeley Rd., Tooting Junction. [2367

5-6h.p. F.N., 2-speed and clutch, licensed till December, splendid running order, new heavy tyres; £30, or nearest.—Souter, "Daisybank," Caldercruix, Lanarkshire. [2738

F.N. 5-6h.p., 2 speeds, h.c. clutch, 1921, Binks, Best-Lloyd mechanical lubrication, m.o.i.v., electrically equipped, frame cut down, wide tank, perfect condition; £58.—4, Hanover St., London, W. (P) [2714

LANGFORD'S, 37, Cricklewood Broadway, London, N.W.2.—1922 8h.p. 4-cylinder F.N., with new o.h.i.v. engine, 3-speed gear, and no-trouble shaft drive, £135; lightweights, £55 and £72; highest price for your present machine in exchange. [3024

*Spare Parts.*

F.N. Spares.—We can supply for all models from 1904; prompt attention to inquiries.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [3025

### Gamage.

1920 Gamage-Villiers, two speeds, good condition; £30.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [2910

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; from £120.—Stacey, 12, Ecclesall Rd. [0577

1919 Harley Combination, with £50 sidecar, perfect; £87/10.—9, Church Rd., Harlesden. [2488



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Indian.

*pare Parts:*

:DIAN.—The Dennis Accessories Stores, 89, Brixton Rd., London ('Phone: Brixton 3129), supply parts from stock, new and second-hand. They specialise in Indian repairs. [6788

### Ivy.

19.—2¾h.p. Ivy, 2-stroke, in splendid running order. —King, Egrove Farm, Oxford. [2832

920 2½h.p. Ivy, accessories, speedometer, ride away; bargain, £48.—47, Thurlby Rd., mbley. [2477

38.—1920 2½h.p. Ivy 2-stroke, 2-speed, clutch, completely equipped, licensed, run about 500 miles.—Holdway, Copie, Bedford. [2525

'Y-PRECISION Combination, 3¾h.p., 3-speed, coachbuilt, tax paid, good condition; £44; exange monocar or kick start combination, cash en.—180, Brecknock Rd., Islington. [2687

921 Ivy Three, 2-speed, clutch, kick start,—lamps, Cowey, horn, Smith's trip speedometer, etc., eage under 2,000, condition as new, tax paid, ready ride away; £55; absolutely genuine.—Hogg, 2, ses Sq., Newmarket. [1995

### James.

ET us fix you up with a James Combination or Solo for Whitsun.—Whitby's.—Below.

NLY 4% extra for deferred payments, and liberal cash allowances on your old machine.—Whitby's. Below.

ATALOGUES free on request, and demonstration runs.—Whitby's, James Service Depot, 7, The le, Acton, W.3. [2804

AN GUY, Weymouth.—1922 7h.p. James De Luxe Combination, £160; 2-stroke, kick start, £60; in ck. [0813

AMES 1921, 2-speed, 2-stroke, as new, not ridden 600, full equipment; £43.—2, Stafford Rd., Brix-, S.W.9. [2271

AMES, 1917, 2¼h.p., 2-speed, chain-cum-belt drive, Amac carburetter; £26.—Maudes', Walsall rage, Walsall. [0188

h.p. James Combination, late 1919; best offer over £100; splendid condition.—7 Station Parade, ling Common, W.5 [2670

921 James Combination, 7h.p., electric lighting, screen, Tan-Sad, as new; £95.—19, Grafton ws, Warren St., W.1. [2593

.O.C.H. have a James 4¼h.p. Combination, Lucas dynamo set, also 1920 4¼h.p. solo.—5, Heath , Hampstead (near Tube). [2253

V. WHITBY and Son.—Immediate delivery of new James models; no waiting; list free on quest.—7, The Vale, Acton, W.3. [3312

920 late 5-6h.p. James Combination de Luxe, new condition, any trial; £110; part exchange.— irhurst, 68B, Standishgate, Wigan. [2389

½h.p. Sporting James, twin, K.S. clutch, 3-speed, all chain, excellent condition, 1915, 100 m.p.g., ured; £49.—25, Cranley Gdns., N.10. [2589

¼h.p. James Combination, condition as new, year's tax, all on, spares, Easting, speedometer, trial; rest £70.—Hesketh, 36, Larch St., Southport. [1961

AMES 1918 Combination, 7h.p., Easting, speedometer, aluminium discs, copper exhaust, excellent dition; offers?—Welch, Wormingham, Beccles [2202

919 James 5-6h.p. Combination, lamps, Cameo, hood, speedometer, tools, splendid condition, ring up riding.—20, Tresco Rd., Peckham Rye. [2401

919 5-6h.p. James Combination, tank repainted by makers, thoroughly overhauled, electric ht, speedometer, in perfect order; £80.—Sylvana, inton Rd., Farnham. [1882

AMES 5-6h.p. Combination (1920), speedometer, horn, Lucas electric lighting set, hood, windscreen, ols, tax paid, good order; £90, quick sale.—198, rrock St., Gravesend. [1853

922 James 7h.p. Combination, spare wheel, dynamo lighting, child's dickey seat, unused, tax paid; asonable offer; lightweight taken part.—Thompson, 3, Munster Rd., Fulham. [2677

920 James combination, 7h.p., tax paid, lamps, horn, mirror, windscreen, etc., perfect condition 95.—Gordon R. Croxford, The Motor Cycle House, 1, Upper Richmond Rd, S.W.14. 'Phone: Richmond 322. [2814

*Spare Parts:*

AMES Spares. Immediate delivery.—Kays, 8, Bond St., Ealing [7223

WHITBY'S for James spares and service; agents for last 16 years.—7, The Vale, Acton. 'Phone: Chiswick 1513. [3311

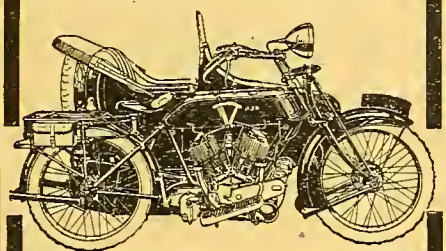
### J.E.S.

.E.S., 1921, 2h.p., 2-stroke, pedal starter, belt drive, suitable machine for beginners; £35.—Maudes', 0, Great Portland St., London. [5177


# BAMBERS

## THE EXCHANGE SPECIALISTS.

## NEW 1922 MODELS FROM STOCK.



| | | |
|---|---|---|
| 7 | h.p. **A.J.S.** Combination | £175 |
| 8 | h.p. **ENFIELD** Comb. | £140 |
| 8 | h.p. **ENFIELD** Comb., dynamo | £158 |
| 4 | h.p. **DOUGLAS** Comb. | £135 |
| 6 | h.p. **DOUGLAS** Comb. | £165 |
| 8 | h.p. **MATCHLESS** Comb. | £170 |
| 6 | h.p. **B.S.A.** Comb. | £164 |
| 4½ | h.p. **B.S.A.** Comb. | £142 |
| 3½ | h.p. **ARIEL** Comb. | £125 |

### SOLO

| | | |
|---|---|---|
| 2¾ | h.p. **ENFIELD,** 2-speed | £55 |
| 2¾ | h.p. **DOUGLAS,** 2-speed | £75 |
| 2¾ | h.p. **DOUGLAS,** 3-speed and K.S. | £90 |
| 3½ | h.p. **DOUGLAS,** Sports | £130 |
| 3½ | h.p. **NORTON,** 16H | £115 |
| 3½ | h.p. **ARIEL,** 3-speed and K.S. | £95 |
| 4½ | h.p. **B.S.A.,** all chain | £110 |
| 2¾ | h.p. **NEW IMPERIAL** | £73 |
| 3½ | h.p. **ZENITH-BRADSHAW** | £119 |

ANY MAKE SUPPLIED.

## HIGHEST MARKET VALUE ALLOWED for your present machine in part exchange.

## DEFERRED PAYMENTS SECONDHAND MACHINES.

| | | | |
|---|---|---|---|
| 1922 | 2¾ | h.p. **ENFIELD,** shop-soiled | £50 |
| 1921 | 2¾ | h.p. **ROYAL RUBY,** 2-speed | £50 |
| 1921 | 2½ | h.p. **FEDERAL,** 2-speed | £40 |
| 1921 | 2¾ | h.p. **DOUGLAS,** 2-speed | £55 |
| 1921 | 8 | h.p. **ENFIELD** Comb. | £135 |
| 1921 | 4½ | h.p. **HUMBER** Comb. | £127 |
| 1920 | 5 | h.p. **ZENITH** Comb. | £90 |
| 1920 | 2¾ | h.p. **EDMUND,** 2-speed | £45 |
| 1920 | 6 | h.p. **ENFIELD** Comb. | £110 |
| 1920 | 4 | h.p. **HARLEY-DAVIDSON** Comb. | £110 |
| 1920 | 2½ | h.p. **METRO-TYLER,** 2-speed | £50 |
| 1919 | 6 | h.p. **JAMES** Comb. | £85 |
| 1919 | 3½ | h.p. **ROVER** Comb. | £80 |
| 1919 | 8 | h.p. **SUNBEAM** Comb. | £112 |
| 1916 | 4½ | h.p. **B.S.A.** Comb. | £65 |
| 1915–16 | 7-9 | h.p. **HARLEY-DAVIDSON** Comb. | £75 |
| 1915 | 2¾ | h.p. **DOUGLAS** | £37 |
| 1913–14 | 3½ | h.p. **TRIUMPH** Comb. | £45 |
| | 2½ | h.p. **CONNAUGHT** | £17 |
| | 3½ | h.p. **BRADBURY,** 2-speed, K.S. | £25 |

WRITE NOW.

## R. BAMBER & Co. Ltd.,

2, EASTBANK STREET,

'Phone: 607 SOUTHPORT.


## MOTOR CYCLES FOR SALE.

### J.E.S.

J.E.S. Lightweights.—These machines run on the smell of petrol.—Gibb, Gloucester. [8122

### Kenilworth.

WAUCHOPE'S, 9, Shoe Lane, London.—1¼h.p. Kenilworth Motor Cyclette, 1921, suitable for lady; £37/10. [2926

### Kingsbury.

KINGSBURY 2¾h.p., 2 speeds, new; 43 gns.—32, Queen's Terrace Mews, Queen's Gate, S.W.7. [2308

### Lea-Francis.

LEA-FRANCIS, 1920, 3½h.p., 2-speed, M.A.G. engine, perfect order; bargain, £49/10.—W. Ayers, Garage, Kensington Palace. 'Phone: Park 86. [2113

LEA-FRANCIS Coachbuilt Combination, 3½h.p. twin J.A.P., 2-speed, countershaft, clutch, kick start, perfect condition, all-chain drive; 54 gns.—10, Belgrave Rd., Hounslow [2679

### Levis.

PREMIER Motor Co. for 1922 Levis.

POPULAR 2¼h.p. single gear Levis, £48; Model S, 2¼h.p., 2-speed, clutch, £58; Model C., 247 c.c., 2-speed clutch £56; kick starter, £2 extra; easy payments, 4 per cent. extra; carriage paid to any address; all models in stock for immediate delivery.—Premier Motor Co., Aston Rd., Birmingham. [3021

LEVIS 2¾h.p., 2-speed, as new; £34; any trial.—Crown Garage, Weybridge. [2410

LEVIS 1915 2¼h.p., excellent condition, licensed; £22.—313, St. Ann's Rd., Harringay. [1950

£25.—2¼h.p. Levis, 2-speed, clutch, all-chain, splendid running order.—King, Egrove Farm, Oxford. [2834

LEVIS, 1920, 2¼h.p., single gear, belt drive, all lamps, tax paid; £26.—Maudes', Walsall Garage, Walsall. [3190

LEVIS.—All models, by one who knows them Call, write, or 'phone 852.—Gibb, 100, Northgate, Gloucester [8123

£27/10.—Levis Popular, just thoroughly overhauled and stove enamelled.—8A, Culverden Down, Tunbridge Wells. [2870

LEVIS, 1920, all on, excellent condition, Tan-Sad, full outfit; 37 gns.—30, Norbury Crescent, Norbury, S.W.16. [3063

LEVIS 1920, 2-speed, tax paid 1922, fully equipped, perfect; £34.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [2535

1916-17 Levis, guaranteed first-class condition, lamps and everything complete; £26.—Carruthers, Halstead, Essex. [2344

LEVIS 2¼h.p., 1921, Sturmey 2-speed, clutch, speedometer, all accessories; £45, or near.—Hardy, Beaverwood Rd., Chislehurst. [1858

LEVIS 1922 Models.—Immediate delivery; cash, deferred payments, exchanges. Repairs.—Motoria, Regent Parade, Tally-Ho, Finchley. [2163

LEVIS 1921, Model S, 2-speed, and clutch, fully equipped, tax paid; £42.—Barker, 216, Portobello Rd., North Kensington, W.11. [2614

1920 Levis, perfect condition throughout, accessories, photo., only used by lady; £34.—Brooker, Mill House Farm, Salters Rd., King's Lynn. [2845

FOR 1922 Levis, the most reliable and neatest 2-stroke upon the road, send or call at Jones Garage, The Broadway, Muswell Hill, N.10. [0788

LEVIS. All 1922 models. Send your orders along; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [7943

1921 Levis, tax paid for a year, lamp, horn, etc., perfect condition; £34.—Gordon R. Croxford, The Motor Cycle House, 461, Upper Richmond Rd., S.W.14. 'Phone: Richmond 322. [2813

IMMEDIATE or early delivery of all Levis models. We have one Olympia Show model left, Model S, the acknowledged finest 2-stroke. We are agents for all the leading makes, and will supply Levis or any motor cycle or combination on deferred terms. Special terms for Levis. We specialise in deferred terms. Full particulars will be supplied with pleasure.—Clifford Motor Co., London and District Agents for Levis, 14, Clifford St., Bond St., W.1. [2080

*Spare Parts:*

LEVIS Spares. Immediate delivery.—Kays, 8, Bond St. Ealing. [7220

HERBERT ROBINSON, Ltd., Green St., Cambridge. —All Levis parts in stock. Trade supplied. [2941

LEVIS.—All spares or complete 1922 model cycles from stock, carriage paid.—Jones Garage, Broadway, Muswell Hill, N.10. [0807

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Levis spare parts always in stock. Write for free spare part list, stating year of manufacture. [0753

## MOTOR CYCLES FOR SALE.

### Lincoln-Elk.

£16/10.—1913 Lincoln-Elk 2½h.p., Bosch, B. and B., tax paid.—Milk, Clayton-Wickham, Hassocks. [2211

### Martinsyde.

MARTINSYDE.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7229

IN stock.—1922 3½h.p Martinsyde sports model; £110, cash or deferred.—D. & S. Autocar Co., 33, The Parade, Golders Green. [2974

F.O.C.H. have a 1921 Martinsyde Combination, completely equipped, excellent condition; bargain.—5, Heath St., Hampstead (near Tube). [2254

FOR a 1922 Martinsyde 3½h.p. Sports or 6h.p. Combination get in touch with the North London agents, Jones Garage, The Broadway, Muswell Hill, N.10. [0789

MARTINSYDE 1922 Sports Model for immediate delivery; £110. Best price allowed on exchange deals.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [2370

1921 6h.p. Martinsyde Combination, bought August, 1921, run about 4,000 miles, electric lights with new accumulator, windscreen, Speedwell V legshields, horn, handle-bar muffs, spare tyre, only 9d. expended on replacements since purchase, doctor's machine, well cared for, condition perfect; £130 or nearest; owner buying car.—Dr. Daniels, King's St., Lancaster. [3010

### Massey-Arran.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Massey-Arrans; unequalled service, repairs, etc. [3147

### Matchless.

NEW 1922 Matchless Combination, shop-soiled only; £155.—Cross, Effingham Sq., Rotherham. [2778

I HAVE in stock the latest rigid frame Special Model Matchless Combination; £150.—Ross, 86, High Rd., Lee. [2301

EARLY 1921 Matchless, Model H, dynamo lighting, hood, screen, spare wheel; £130.—187, Murchison Rd., Leyton, E.10 [2095

MATCHLESS Victory Combination, unscratched, full equipment, beautiful outfit; £90, lowest.—62, Princess Rd., Kilburn. [2769

MATCHLESS.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6291

MATCHLESS, 1921, all on, carefully run in, manufacturers' guarantee; appointment; £140.—Garland, 50, Northbrook Rd., Ilford. [2611

MATCHLESS 1915, M.A.G., 3 speeds, hood, screen, luggage carrier, excellent mechanical condition; £65.—Cox, 9, Langton Av., East Ham. [2722

MATCHLESS, Model H, Sept. 1920, Magdyno, spare wheel, Easting, Binks, insured, perfect; £120.—Daniels, Limes Parade, Weybridge. [2288

PRACTICALLY new Model H. Matchless Combination, dynamo lighting, taxed, every accessory; £122.—24, Balliol Rd., North Kensington. [2467

SHEFFIELD Agent for Matchless. All models in stock. Sporting models £130, standard models £170.—A. J. Stacey, 12, Ecclesall Rd., Sheffield [0574

1922 Matchless-M.A.G. combination, Lucas, magdyno, equipment, shop-soiled only, never been on the road; £168.—Arthur G. Daw, 114, Brixton Hill. [2748

MATCHLESS, all models supplied, very liberal exchange allowance on your machine.—Agents, R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7204

MATCHLESS combination, M.A.G. engine, 3-speed, kick starter, overhauled, re-enamelled, plated like new; £85.—Robarts, 81, Dundee Rd., South Norwood. [2881

£150 is the price of a new Matchless Combination; see our showrooms, all models in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17. [0759

MATCHLESS-J.A.P. 6h.p. Solo, kick start, clutch, sound tank, sports model, fully equipped, suit overalls, spares, etc.; £40.—13, Crooklog, Bexleyheath, S.E. [2459

TASSELL, 1a, Bloomfield Rd., Plumstead, for Matchless Combinations; deferred payments; spares of all dates; trade supplied where agents not appointed. [2241

8h.p. Matchless Combination, 2-speed, Easting, Tan-Sad, lamps, tax paid for year, condition perfect, any trial; £50.—York, Durnsford Rd. Pumping Stn., Wimbledon. [2697

MATCHLESS 1921 Combination, dynamo, hood, screen, etc., indistinguishable from new; £130, nearest.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. [2825

MATCHLESS 1920 Model H., fully equipped, new condition, 3 new tyres, guaranteed perfect, tax paid and insured; £120.—Lindsell, Corn Dealer, Bellenden Rd., Peckham. [2452

£57.—Matchless combination, late model, 7-9h.p. M.A.G., 3 speeds, clutch, kick starter, all-chain, lamps, licence, luggage grid, accessories; real snip.—53, Solon Rd., Brixton. [2360

**BERTIE'S TWO CALTHORPES SUCCESSFULLY COMPLETED THE COURSE.**

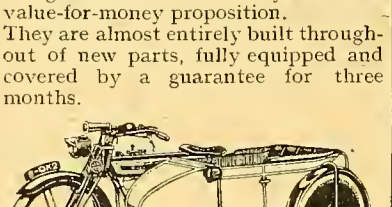
**They were the lightweight models, 2½ h.p. two-strokes, prices of which range from**

**£36**

*We shall be pleased to forward you particulars of the same together with our very easy payment terms.*

**TO SIDECARISTS.**

If you require a thoroughly reliable combination you cannot do better than a Burlington Reconstructed 4 h.p. Douglas and sidecar. They are a real value-for-money proposition.
They are almost entirely built throughout of new parts, fully equipped and covered by a guarantee for three months.



**CASH PRICE.**

Comb. with new Burlington s/c **93 gns.**
Solo .. .. .. **75 gns.**

**EASY PAYMENT TERMS**

For Combination: Deposit £25 16 6
12 monthly instalments of £6 9 6
For Solo: Deposit £20 18 6
12 monthly instalments of £5 4 3

**Burlington MOTOR CYCLE CO. LTD**

**7, South Side, Clapham Common, S.W.4.**
**'Phone: Brixton 2417.**
**Wires: Burlington Motors, Clapham.**
Just by Clapham Common Underground Station.


## MOTOR CYCLES FOR SALE.

### Matchless.

MATCHLESS Combination, June, 1921, M.A Lucas acetylene lighting, hood, screen, shields, perfect, trial; £120, or offer.—Hill, Marchmont St., Russell Sq. [2

DOUBLE-SEATER Matchless Combination, November, 1921, full accessories, only done 1, miles, year's tax paid; exceptional bargain, 160 gn Ross, 86, High Rd., Lee. [2

1919 Matchless Combination, Victory Model, us accessories, including spare wheel, windscr patent Tan-Sad saddle, etc., excellent condition; £ —Oatlands, Ashwood Rd., Woking. [2

MATCHLESS 1921 Combination, Magdyno, elec horn, speedometer, hood, screen, step, legshie tax paid, perfect condition; £148.—Richardson, Flat 58, Ufford St., Blackfriars Rd., S.E. [2

MATCHLESS Combinations.—Book your orders w Ross, 86, High Rd., Lee, S.E., or 'Phone Green 744 for immediate delivery of 1922 models. changes and gradual payments arranged. [3

MATCHLESS, Model H2, M.A.G. Combinati Magdyno, speedometer, mud shields, hood, si car step, Tan-Sad, spares, 5 tyres, good conditi £140; after 6.—199, Widmore Rd., Bromley, Kent [2

MATCHLESS Combination, 8h.p., Model H, 19 speedometer, hoods, screen, lamps, leg shie spare wheel, excellent appearance and running co tion, great bargain; 95 gns.—Longmao Bros., Bond St., Ealing. 'Phone: 689. [3

1922 Matchless, family model, dynamo lighti spare wheel, 2 screens, fitted with Triplex, r drive, speedometer, front band brake, legshields, other extras, mileage 400, cost £240; accept first sonable offer; owner buying car; seen by appointme —Hickmott, Longfield, near Dartford. [2

BARKER'S Motors, The South-West Lond Matchless Agents and Service Station.—19 models at list prices. We give an insurance pol against mechanical breakdown for 12 months fr All Matchless spares in stock Open from 9 a until 8 p.m.—194, Balham High Rd., S.W.12. [3

1922 Matchless. 'Phone: Greenwich 751. Combination that scores every time. See sults of Land's End Trial. You can do the same your Matchless is supplied by Sam E. Clapham. Se your orders along and secure satisfaction. Imm diate delivery, all models, cash, exchange, or e terms.—Matchless Service Depot, Sam E. Claph (Motors), 27, Stockwell St., Greenwich, S.E.10. [3

MATCHLESS, This is It.—1920 Model H, Ju done 4,200 miles, fine condition, J.A.P. engi magdyno, electric horn, hood, windscreen with s valences, speedometer, Sterling legshields, Covec thief-proof lock, Binks carburetter, mirror, inspecti lamp, spare wheel, spare bulb case, valves, etc., go bargain, cost £256; price £160.—70, Brioniogton R Stockport, Cheshire. [18

*Spare Parts*

MATCHLESS Spares Immediate delivery.—Ka 8, Bond St., Ealing. [72

MATCHLESS Spares for J.A.P or M.A.G. by turn, post free.—Jones Garage, Matchless Agei Broadway, Muswell Hill, N.10 [08

### McKenzie.

McKENZIE Lightweight; 26 gns.; immediate livery.—Sole District Agents, Motoria, Rege Parade, Tally-Ho, Finchley. [21

McKENZIE-HOBART Ultra Lightweight mot cycles; 26 guineas, ex works. Immediate de veries of these wonderful little machines.—Colcon Motors, 104a, Finchley Rd. Hampstead 7822. [31

### Metro.

METRO, 2-speed, extra posh and unused; £50 28, Hamilton Rd., Twickenham. [21

SPORTING Metro-Tyler, 2-speed, new condition, accessories; £25; sell engine alone, £10.—1 Reservoir Rd., Hartley, Plymouth. [26

1922 Metro-Tyler 2¼h.p. Sports, 2-speed, lamp horn, tax paid December, unscratched, perfec £45.—Chelmercot, Amberley Rd., Palmer's Gree London. [23

### Minerva.

£16/10.—Minerva 3½h.p., very fast; take pu cycle part.—57, Kenbury St., Camberwell, Lo don. [23

### Mohawk.

MOHAWK Cycles new, or second-hand, at lowe prices, for cash or easy payments.—Mohawk Cy Co., Ltd., 276, Alexandra Rd., Hornsey, N.8. [19

MOHAWK Combination, 1922 model, new but sho soiled, Model E, 3½h.p. Abingdon engin Sturmey-Archer 3-speed; 100 gns.; bargain.—2, Ale andra Rd., Hornsey, London. [19

### Moto-Reve.

MOTO-REVE 2¾h.p. Twin, in very good condition £14, or offer.—35, Theberton St., Islington London. [227



**All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue. Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### P.V.

P.V. 1921 2¾h.p. J.A.P., 2-speed, clutch, kick start, lamps, horn, spring frame, perfect condition; £5, or near offer.—32, Mayow Rd., Sydenham, S.E.26. [2739

P.V.—Astounding value is represented by our new range of popular models, incorporating our famous spring frame and Villiers or J.A.P. engines. Prices from £45. Lists from agents or P.V. Motor Cycles, Ltd., Forest Hill, London. [2384

### Quadrant.

CLIFFORD WILSON Company, 16 years' experience with Quadrants. [3277

QUADRANT, new 1922 4½h.p. chain drive Combination, actually in stock; £105.—Moss, Wem. [2915

1922 Quadrant 4½h.p. Combinations; £100. Agents for Cambridge.—Wallis and Easton, 1, Mill Rd., Cambridge. [0825

1913 4½h.p. Quadrant Combination, perfect, ride away; £20; seen week-end.—5, Stamford Brook Rd., Hammersmith, W.6. [2772

QUADRANT, a.i.v., good order, new magneto, minus exhaust and brakes; first cash £7.—Gibbons, Oswal Rd., Whittlesey, Cambs. [2166

FRANK WHITWORTH, Ltd., Distributors, 139, New St., Birmingham.—Quadrant £100 4½h.p. combination, delivery from stock. [0767

VAUCHOPE'S, 9, Shoe Lane, London.—4½h.p. Quadrant Combination, 3 speeds, kick starter clutch models, 1920 model; £77/10. [2936

CLIFFORD WILSON Mfg. Company, Quadrant Works—Representatives and Sole Wholesale Distributors for London, Southern and Eastern Counties; special repairers and spare part stockists; deferred payments; exchanges; all models in stock. Special insurance facilities applicable to Quadrants only.—7, Westminster Bridge Rd., London, S.E.1, opposite Waterloo Station Approach. Telephone: Hop 210. [3279

### Radco.

1916 Radco, 2½h.p., P. and H. lamp set, new tyres and belt, Klaxon horn, tax paid, College muddeld, very fast, as new; £25.—C. Baxter, Waterbeach, mbs. [2016

1915 Radco, 2¾h.p., tax paid for year, lamps, horn, etc., good condition; £20.—Gordon R. Croxd, The Motor Cycle House, 461, Upper Richmond ., S.W.14. 'Phone: Richmond 322. [2817

### Raleigh.

RALEIGH Motor Co. for 1922 Raleighs.

IMMEDIATE Delivery of 5-6h.p., spring frame, detachable wheels, £130; standard sidecar, £35; Dexe sidecar, £42; early delivery of the new Raleigh htweight, £68; easy payments 4% extra.—The Premier tor Co., Aston Rd., Birmingham. [062e

RALEIGH 2¾h.p., 2-speed, kick start, in stock; £68.—Clark, 7, Exhibition Rd., S.W.7. [1280

1922 Raleighs, 2¾h.p. and Combinations, delivery anywhere, always in stock.—Clifford Motories, Holstwood, Notts. [7764

RALEIGH.—Immediate delivery of 1922 models for Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing [7230

RALEIGH Lightweights and Combinations for immediate delivery. Best prices allowed on exchange ycles. We have been agents for Raleigh machines for over 15 years, and can offer best service and deliveries. Newnham Motor Co., 223, Hammersmith Rd., W.6. Phone: Hammersmith 80. [2369

### Rex.

REX 3½h.p., Bosch, single speed, perfect order; offers £10/10.—17, Heaton Rd., Mitcham. [2566

REX 16/10.—3½h.p. Rex, splendid condition; take push cycle part.—57, Kenbury St., Camberwell, Lon-n. [2341

REX, 5h.p. coachbuilt, 2-speed combination, all new tyres, full tax; 30 gns.; exchanges.—Kent's, 417, Lord St., Southport. [2002

1912 6h.p. Rex Coachbuilt Combination, 2-speed, all new tyres, taxed; gift, £30; exchanges.—Kent's, 417, Lord St., Southport. [2000a

1913-14 3½h.p. T.T. Rex, re-enamelled, overhauled, Bosch, B. and B., variable gear, new tyres, tax d; £25, nearest.—18, School Lane, Cirencester, os. [2188

1921 8h.p. Rex Combination, Blackburne engine, all lamps, horn, spare wheel, tax paid Dec., A. cylinder, all-chain drive, perfect order and con-ion; £115.—D. & S. Autocar Co., 33, The Parade, lders Green. [2976

1922 Rex-Acme, latest model G, immediate delivery. 'Phone: Greenwich 751. All-chain drive .p. Blackburne engine, Sturmey-Archer gear with ecial clutch, interchangeable and detachable wheels, rodo band brakes, spring seat-pillar, etc., special signed chassis, with luxurious sidecar; a combina-on bristling with refinements at £150, complete. ll and inspect same in my showrooms, catalogues th pleasure.—The agent for all high-class produc-ons is Sam E. Clapham (Motors), 27, Stockwell St., reenwich, S.E.10. [3053

## WATCH THIS COLUMN
EVERY WEEK FOR
# BANCROFTIAN CO.'S BARGAINS.

**Advertisers in "The Motor Cycle" from its first publication.**

**TYRES.**—Manufacturers' clearance stock, not W.D. Although clearance, they are new and perfect. Wood Milne extra heavy, 4-ply, 26×2¼, combination, **35/-**. Pedley, 26×2¼, 3-ribbed, **25/-**. Hutchinson, 26×2⅜, heavy T.T., **27/6**; Passenger, 26×2½ for 2½, **39/6**; 760×80 to fit 650×65 small car, heavy, **49/6**; light car, 750×75 for 28×3 rim, **42/-**; heavy Passenger, 26×3, **37/8**; extra strong Passenger, 28×3, **53/8**; 24×2 T.T. heavy, **25/-**; extra heavy, 3-ribbed, 700×65, **35/-**; 650×65 steel studded car type, **65/-**; original, **£6 6s.** Firestone, 20×2, Auto wheel, **21/-**; original, **45/-**; tube, **6/6**. Palmer, 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½ cord, **42/-**. Oylers, 650×65, ribbed square tread, heavy, in original packing, **27/6**; original, **45/-**. Clincher de Luxe, very heavy, 26×2½, **37/6**; 26×2 Junior de Luxe, **22/6**; 26×1¾, **17/6**. Hutchinson wired edge cover, 26×2½ and 26×2¼, **30/-** each. Postage 1/6.

**TUBES.**—24×2¼, **4/6**; 24×2, **4/6**; 26×2¼, **5/6**; 26×2½, **5/9**; 26×2⅜, **5/6**; 28×3, extra heavy, **7/6**; 700×80, **7/6**. Postage 9d.

**BELTS.**—Clincher, clearance line, new, not W.D. ⅜", 6' 6", **8/6**; ⅜", 7' 6", **12/3**; 8' 6", **14/-**; ½", 7' 6", **16/-**; 8', **17/-**; 1⅛", 7', **18/-**; 8', **20/6**; 8' 6", **21/6**; Bates short lengths, ⅜", 5', **4/6**; 5' 6", **5/-**; ½", 4' 6", **5/-**; 5', **5/-**; 5' 6", **5/6**; 1", 2' 6", **3/-**; 3', **4/-**; 3' 6", **4/6**; 4' 6", **6/3**; leather belts, ⅜" at **2/6** per foot; belt fasteners, **9d.** and **1/-**. Postage 1/-.

**SPEEDOMETERS.**—Slightly shop soiled. Cowey with trip, **£4 15s.**; Stewart with trip (£6 6s. model), **£4 10s.**; Jones with trip, **£3 14s.**; Smith's with trip, **£4 10s.** Also Bonniksen in stock. All speedometer replacements in stock. Postage 1/6.

**TAN-SAD,** with back seat, **28/6**; original, **57/-**; only limited quantity. Carriage 3/6 extra.

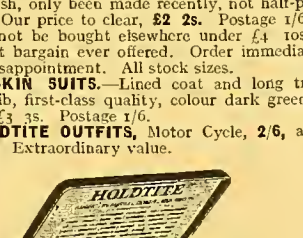
**GOGGLES.**—Genuine Triplex, 45/- model, **10/6**; 25/-model, **9/8**. They are new and perfect. Postage 9d.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined, **7/11**; lined, **10/6**; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, **3/6**; Gloves, leather, wool lined, **4/6**. Above lines worth more than double. Limited quantities only. Order at once. Postage 6d.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coat with belt, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality, extra heavy, double texture waterproof material, dark fawn, new and fresh, only been made recently, not half-perished W.D. Our price to clear, **£2 2s.** Postage 1/6 extra. Could not be bought elsewhere under £4 10s. The greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**OILSKIN SUITS.**—Lined coat and long trousers, with bib, first-class quality, colour dark green, **17/6**, worth £3 3s. Postage 1/6.

**HOLDTITE OUTFITS,** Motor Cycle, **2/6**, as illustrated. Extraordinary value.




**HOLDTITE PATCHES.**—"The patch that does not come off." Linen backs, No. 1, **1½d.**; No. 2, **2d.**; No. 3, **4d.**; No. 4, **6d.**; No. 5, **10d.** Post free.

**HORNS.**—Reliable Electric, Motor Cycle, up to 4-volt only, complete with wire and switch; usual price, 29/6, our price, **15/6**. Postage 1/3 extra. Smith's Electric Horns, black and nickel, in 6, 8, or 12 volts, large size, suitable for heavy combinations; original price, £2 15s.; our price, **30/-**. Postage 1/6. The greatest bargain ever offered. All new and perfect.

We can supply anything for the motor cyclist at competitive prices.

**BANCROFTIAN CO.,**
**78, BISHOPSGATE, LONDON, E.C.2.**
'Grams: "Chaikel, London." 'Phone: London Wall 9897

## MOTOR CYCLES FOR SALE.

### Rover.

1922 4h.p. Rover in stock; cash or exchange.—Rose's Garage, Uxbridge. [2617

ROVER Combination, twin-cylinder, complete, bargain, 95 gns.—Timberlake's Garage, Wigan. [1527

3½h.p. Rover, excellent condition, kick start, sporty; 30 gns.—67, Fernlea Rd., Balham. [3078

1913 Rover, 2-speed, 3½h.p., splendid condition, year's tax; £28.—6, Cambridge Rd., Gosport. [2167

£37/10.—Rover 3½h.p., 3 speeds, countershaft, splendid order, any trial.—8, High St., Wandsworth. [2578

ROVER 3½h.p., Philipson pulley, Binks, fast, licensed; £25.—Goodman, 35, Ranelagh Gardens, Barnes. [2144

£65.—Rover, 1920, 3½h.p., 3 speeds, clutch, kick starter, fully equipped, absolutely as new.—63, Solon Rd., Brixton. [2362

ROVER 1920 3½h.p. Combination, perfect; £82. 1919 ditto, £68.—R. B. Clark and Co., 7, Exhibition Road, S.W.7. [7200

5-6h.p. Rover 1919-20 Combination, electric lighting, screen, tools, beautiful turn-out; £95.—73, Windermere Rd., S. Ealing. [2561

ROVER 3½h.p., 1912, 3 speeds, clutch, excellent condition, tax; £30; exchange.—Smith, Huddleston Hall, South Milford, Yorkshire. [2204

ROVER Combination, 1920, 5-6h.p., perfect condition, used 6 months since purchased new; £120.—Blackwood, Moniaipe, Dumfriesshire. [1868

1920 Rover 5-6h.p. Combination, tax paid, accessories, little used, condition as new; £100.—51, Hertford Rd., Freezywater, London, N. [2345

ROVER 1921 3½h.p., 3-speed, with coachbuilt sidecar, new machine, fully guaranteed; £115.—P. J. Evans, John Bright St., Birmingham. [2237

5-6h.p. Rover Combination, Easting, full equipment, as new; any trial; owner wants more power.—S. W. P., 93, Old Dover Rd., Blackheath, S.E.3. [2685

3½h.p. Rover 1914, 3-speed, clutch, footboards, new Lucas lamps and horn, spare tyre, tax paid, just being overhauled; £40.—13, Portland Rd., Gravesend. [2454

ROVER 1917 3½h.p. Combination, fully equipped, excellent condition; £65.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

ROVER combination, late model, 5-6h.p., 3 speeds, clutch, kick starter, all-chain, oversize tyres, hood, screen, lamps, accessories, new condition; £78.—63, Solon Rd., Brixton. [2363

38 GNS.—Rover, 1914, 3½h.p., 3 speeds, Binks carburetter, with coachbuilt sidecar, three lamps, horn, aproo, etc., tyres practically unsoiled, full year's tax paid.—Delaocey Street Garage, Camden Town, N.W.1. [2959

1918 3½h.p. Rover, standard 3-speed, clutch and kick start model, in excellent condition, fitted with Cowey trip speedometer, mechanical and bulb horns, clock, spare belt and case, complete set of lamps with 2 generators, and a large number of tools and spares, bought new by present owner; price £60, no offers.—Hon. H. Bathurst, Lydney Park, Glos. [2784

*Spare Parts:*

ROVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7225

### Royal Ruby.

ROYAL RUBY-J.A.P., 2-speed, excellent condition; £40.—Monk, New Rd., Harlow. [1947

1920 Royal Ruby, 2-stroke Villiers engine, lamps and horn, licence paid, excellent condition; £30.—Johnson, Brinnington Hall, Stockport. [1869

1922 8h.p. Royal Ruby—the spring frame combination par excellence—fitted with interchangeable and spare wheel, luggage and petrol carrier, Easting Sandum screen, lamps, horn, etc., all on, at £185; immediate delivery from the agent for all high-class makes, as usual.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich. 'Phone, 751. [5893

### Rudge.

3½h.p. Rudge single-speed Model, in fine order; £26. Cross, Agent, Rotherham. [2782

VAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. 1919 Rudge Multi, I.O.M. model; £50. [2920

£39/10.—1920½ Rudge-Multi, Binks, excellent order, tax paid.—7, Portland Place, Leamington. [2854

1921 3½h.p. Rudge-Multi, Lucas lighting set, as new; 58 gns.—93, Ormerod Rd., Burnley. [2066

£16.—Rudge, T.T., Binks engine, perfect; exchange 2-stroke.—Holleway, 68, Julian Avenue, Acton. [2411

3½h.p. Rudge-Multi, fully equipped, tax paid, mileage 2,500; £47.—11, Merthyr Terrace, Barnes. [1883

1917 Rudge-Multi Combination, 5-6h.p., excellent order; £50.—Cooper, 28, Birch Grove, Acton, W. [2716

## MOTOR CYCLES FOR SALE.

### Rudge.

RUDGE-MULTI 3½h.p., sidecar, all accessories, perfect condition; £48.—4, Somerville Rd., New Cross. [2280

1920 Rudge-Multi 3½h.p., all on, tax paid; £48.—J. Haynes, 53, Pageant Rd., St. Albans, Herts. [2532

RUDGE-MULTI, 1919, T.T., I.O.M., clutch, all accessories; £40, or offer.—11, Nottingham Terrace, N.W.1. [2047

1920 5-6h.p. Rudge-Multi Combination, as new, all on; £65.—Railton, 47, South King St., Manchester. [3148

3½h.p. Rudge-Multi, I.O.M., fast, reliable; £38; appointment.—"Rothesay," Oatlands Park, Surrey. [2601

3½h.p. Rudge-Multi, speedometer, horn, lamps, etc.; £45, or near offer.—Kent, 44, Maidstone Rd., Rochester. [2068

£48.—1920 Rudge I.O.M. 3½h.p., fully equipped, exceptionally cheap.—143, Ravensbury Rd., Earlsfield, S.W.18. [2980

1922 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, Muswell Hill, N.10. [0791

1922 Rudge, I.O.M. model, immediate delivery from stock.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [1816

1920 I.O.M. Rudge-Multi, splendid condition, all accessories; £60.—Cooke, 110, Sewardstone Rd., Bethnal Green, London. [2522

£77 is the price of a new Rudge. Get it from the Agents; in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17. [0836

RUDGE-MULTI, 1921, 3½h.p., T.T., little used; £65, or exchange late clutch, Douglas preferred.—Simpkins, 27, Old Town, Clapham. [1855

1921 Rudge-Multi, I.O.M., speedometer, Klaxon, etc., beautiful condition; 53 guineas.—Fersfield, Westbury Rd., New Malden. [2563

1921 5-6h.p. Rudge-Multi, touring sidecar, all on, tax and insurance paid, small mileage; £90.—Edwards, 77, Rotherfield St., N.1. [1864

RUDGE, 1922 models; immediate delivery, cash, deferred payments; exchanges; repairs.—Motoria, Regent Parade, Tally-Ho, Finchley. [2160

RUDGE 3½h.p., I.O.M. model, in stock; £77. Easy payment and exchanges.—Longman Bros., 17, Bond St., Ealing. 'Phone: 689. [3041

£25.—Clutch model Rudge, good running order, lamps, horn, etc.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [2894

RUDGE 3½h.p., fully equipped, tax paid 1922, good running order; £22.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [2536

5-6h.p. Rudge-Multi, 1920, complete with necessary equipment, mileage 2,400; accept £50 for immediate sale.—Bridges, Ltd., Cirencester. [2966

RUDGE, 1919, 5-6h.p., Multi gear, chain-cum-belt drive, Rudge sidecar, complete with lamps; £75.—Maudes', 100, Great Portland St., London. [3173

1920 I.O.M. Rudge-Multi, electric lighting, aluminum discs, Lucas horn, taxed; 50 gns.; exchanges.—Keat's, 417, Lord St., Southport. [2005

5-6h.p. Rudge Combination, late 1919, just overhauled and re-enamelled, very fast, perfect order; £65.—H. F. Tattersall, Glenburn House, Pinner. [2106

1921 T.T. Rudge-Multi, k.s., equipped lamps, Klaxon, Tan-Sad, knee grips, etc., perfect condition; snip at £55.—8A, Culverden Down, Tunbridge Wells. [2868

1919 Rudge-Multi 3½h.p., re-enamelled and overhauled, sound condition, accessories, licensed 1922, ride away: bargain, £47/10.—Bath, Bulkington, Devizes. [2168

47 GNS.—1920 Rudge-Multi, equipped, pedal start, clutch, perfect mechanical condition, excellent appearance; after 5 p.m.—20, Treen Avenue, Hoggers Corner, Barnes. [2509

7-9h.p. 1921 Rudge Twin Combination, tax paid till 1923, condition practically new, windscreen, accessories; £105, or best offer.—Davies, 96, Beeches Rd., West Bromwich. [1954

5-6h.p. Rudge Combination, lamps, horn, screen, Tan-Sad, in splendid mechanical order; £80, or nearest; letter appointment.—Souter, "Daisybank," Caldercruix, Lanarkshire. [2737

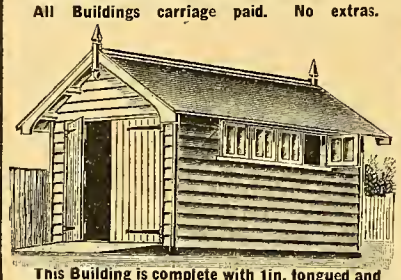
1919¾ 5-6h.p. Rudge-Multi, touring sidecar, Cameo screen, Cowey speedometer, horn, mirror, small mileage, tools, tax paid, appearance and condition as new; £70, or lightweight and cash.—Bareham, 62, Beachcroft Rd., Leytonstone, N.E.11. [2035

1921 3½h.p. I.O.M. Rudge-Multi, pedal start, little used, perfect and new condition, fast. Stewart speedometer, Lucas horn, knee grips, original tool kit, licensed, excellent condition throughout; owner unemployed; quick sale desired; £53.—Rudge, Tatenhill, Burton-on-Trent. [2398


# STOP

**at this and compare prices and quality. Invitation to inspect before purchasing.**

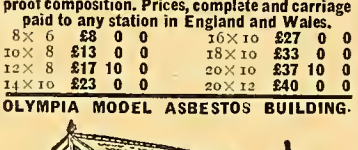
**All Buildings carriage paid. No extras.**



**This Building is complete with 1in. tongued and grooved floor, ¾in. match-boards or weather-boards, 3in. framing, strong boarded roof, best pluvex felt. Building treated with weather-proof composition. Prices, complete and carriage paid to any station in England and Wales.**

| | | | | | |
|---|---|---|---|---|---|
| 8×6 | £8 0 0 | | 16×10 | £27 0 0 | |
| 10×8 | £13 0 0 | | 18×10 | £33 0 0 | |
| 12×8 | £17 10 0 | | 20×10 | £37 10 0 | |
| 14×10 | £23 0 0 | | 20×12 | £40 0 0 | |

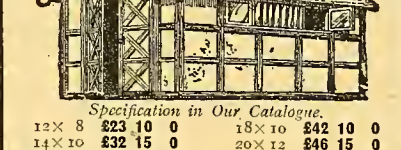
**OLYMPIA MODEL ASBESTOS BUILDING.**



*Specification in Our Catalogue.*

| | | | | | |
|---|---|---|---|---|---|
| 12×8 | £23 10 0 | | 18×10 | £42 10 0 | |
| 14×10 | £32 15 0 | | 20×12 | £46 15 0 | |
| 16×10 | £37 16 0 | | | — | |

Delivered with iron roof complete. Fire-proof and sound-proof.



**Our unsolicited testimonials should create confidence.**

24, Emsworth Road, Shirley, Southampton.
*Feb.* 25, 1922.

Messrs. The South-Western Appliance Co., S.W. 6.

Dear Sirs,—The Delholme Motor House arrived safely on Monday last, and I have erected it to-day. I am very satisfied with it. The workmanship and materials are excellent. I thank you for dispatching so promptly; too promptly, in fact, as I had allowed a week for possible delays on rail. Notwithstanding the fact that it has been lying out in the heavy rains for 5 days, I had no difficulty in erecting it, the timber having apparently not swollen. Many thanks.

Yours faithfully, W. R. WILLIAMS.

St. James's Palace, S.W. 1.
*March* 28.

Dear Sirs,—Lady Helena Gleichen will be glad to receive the 16×15 Motor Car House as soon as possible.

11, Elm Terrace, Cockton Hill, Bishop Auckland.
*March* 25, 1922.

Dear Sirs,—I beg to acknowledge receipt of complete shed, which, since erected, has been admired by many friends.

Thanking you for your prompt attention,
Yours faithfully, Mr. T. W. LUMLEY.

**Illustrated Catalogue Free.**

**SOUTH-WESTERN APPLIANCE Co.,**
**High Street, Fulham, London, S.W.**
Telephone: PUTNEY 2771.


## MOTOR CYCLES FOR SALE.

### Rudge.

*Spare Parts:*

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [316

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All Rudge parts in stock. Trade supplied. [294

### Scott.

1920 Scott Combination, hood, screen, perfect; £70.—120, Argyle St., St. Helens. [243

1920 Scott, perfect condition, tax paid; £64.—Pinn's Garage, 12, High St., Fulham. [242

WAUCHOPE'S, 9, Shoe Lane, London.—3¾h.p. Scott and Sidecar, 1914-15, 2 speeds, etc.; £45. [293

SCOTT 3¾h.p. Combination, 1914-15, in good running order; £45.—J. Peate, Midhurst, Sussex. [277

SCOTTS, either model, West of England Agent—Gibb, 100, Northgate, Gloucester. 'Phone: 85 [812

SCOTT 1920 3¾h.p., original tyres, all accessories, £75, or exchange.—72, Cornwall Rd., Brixton, S.W.2. [231

F.O.C.H. have a 1920 Scott, brand new condition, also 1914 combination.—5, Heath St., Hampstead (near Tube). [225

SCOTT, 3¾h.p., 1920, 2-speed, kick start, all chain drive, Binks carburetter; £70.—Maudes', Walsall Garage, Walsall. [318

SCOTT 1916 3¾h.p., 2 speeds, K.S., lamps, horn, good condition; must sell, £35, or offer.—Chandler, Ham, Hungerford. [284

SCOTT, 1920 3¾h.p., 2-speed, kick start, all-chain drive, Scott sidecar, all lamps; £90.—Maudes', 100, Great Portland St., London. [317

1920½ Scott Combination, accumulator electric lighting, perfect throughout; £90, or near offer.—125, St. James Rd., Watford. [269

1921 Sports Scott, perfect condition, Bonnikeen etc.; 55 gns.; photo; exchange lightweight part.—James, Stewart St., Nuneaton. [250

SCOTT, 1914, 3¾h.p., 2-speed, kick start, all-chain drive, Bosch magneto, Millford sidecar, all lamps; £50.—Maudes', 100, Great Portland St., London. [317

SCOTT Combination, 1919-20, exceptionally smart, Binks, electric, discs, apron, windscreen, etc., tax, insured; £85.—36, Elfort Rd., Drayton Park, N. [245

1920 3¾h.p. Scott, thoroughly overhauled and re-enamelled, splendid condition, speedometer, electric lighting, T.T. bars; £70.—Gilmore, 16, Poo St., S.W.1. Victoria 7904. [246

SCOTT, 1912, just thoroughly overhauled and re-fitted at cost of £15, has 1920 type cylinder, new tyres, new lamps, tools; £35.—Turner, Cotswold Stores, Far Hill, Stroud, Glos. [277

1920 3¾h.p. Scott Combination, as new, mileage under 1,000, complete with Miller lamps, tool kit, and Cowey horn, licensed December, 1922; what offers?—Partridge, Flour Mills, Pershore. [224

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [835

*Spare Parts:*

SCOTT Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [722

SOUTH London Scott Service Depôt.—Scott Spares. Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone 1129. [835

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list, stating year of manufacture. [075

### Singer.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. 1910 Singer, 2 speeds; £25. [292

22 GNS. only or easy terms.—Singer (clutch model) runs well.—Wandsworth Motor Exchange, Ebne St., Wandsworth (Town Station). [254

39 GNS.—1914 Singer Coachbuilt Combination, 3 speeds, clutch, enclosed valves, splendid running order.—53, Swaffield Rd., Wandsworth. [295

2½h.p. 1913 T.T. Singer, splendid tune, over-hauled, stoved, many accessories, photograph on application; £25, offer.—42, Wenham Drive, Westcliff. [244

*Spare Parts:*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [316

### Spark.

SPARK 1922 models, Villiers engine, flywheel magneto, £39/18. Also 2-speed, kick starter model in stock, £52/10.—Eagles and Co., 275, High St., Acton, London. [289

## MOTOR CYCLES FOR SALE.

### Sparkbrook.

RKBROOK, unscratched, only done 900 miles, or P. and M., not later than 1918, mechanically ; York district.—Box 9959, c/o *The Motor* [2258

### Sun.

GNS.—Sun-Villiers, 2-speed, clutch, equipped, licensed.—20, Treen Av., Hoggers Corner, Barnes. [2552

-VITESSE, new 1922 2¾h.p., 2-speed, clutch, ick start; £57/15.—Elce, Ltd., 15-16, Bishops- .v., Camomile St., E.C.3. 'Phone: Avenue 5548. [0071

; Sun, J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., s. Send for catalogues. Trade supplied.—Jones e. Broadway, Muswell Hill, N.10. [0790

### Sunbeam.

UCHOPE'S, 9, Shoe Lane, London.—3½h.p. Sunbeam, 1917, 3 speeds; £75. [2925

1 3½h.p. Sunbeam Combination, taxed, as new; £112.—24, Balliol Rd., North Kensington. [2470

5 3½h.p. Sunbeam Combination, year's tax paid; £70.—17, Cromwell Rd., Wimbledon. [2440

'KHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs. [3143

SS, Effingham Sq., is agent for Sunbeams for otherham. 3½h.p. and 4¼h.p. models from [2780

BEAM 3½h.p., 1919, spares, exceptionally fine ndition throughout; £75.—322, Green Lanes, ry Park, N.4. [1863

9 3½h.p. Sunbeam Combination, £75; ditto 1919, £80.—Hillier, Side Bell, 9, Wallingford North Kensington. [2700

) 3½h.p. Sunbeam Combination, horn, speedo- meter, lamps, screen, insurance; £120.—4, West- 'errace, Whitstable. [2014

p. Sunbeam, 2-speed, kick starter, enclosed chain drive, lovely condition, tax paid; £40.— Bentley Rd., Doncaster. [2863

) Sunbeam 3½h.p. Combination, Sunbeam side- car, excellent outfit; 120 gns.; exchanges.— , 417, Lord St., Southport. [2003

BEAM 1920 3½h.p. Combination, Lucas quipped, speedometer, Easting, licence paid.—For apply, Bunner, Montgomery. [9292

Sunbeam, late model, with sidecar, Lucas mps, licence, all complete, splendid condition; —Timberlake's Garage, Wigan. [1524

1919 Sunbeam Combination, as new, spare heel, lamps, hood, screen, etc., taxed; £125.— ydney Rd., West Wimbledon. [2322

Sunbeam Combination, late 1919, Swan sport- g sidecar, electric lighting, fine condition; near- 30.—Romer Jones, 56, Chester St., Wrexham. [1874

BEAM Combination, 4h.p., 1918, electric light- g, windscreen, fully equipped, perfect running 85 gns., nearest.—Ley, 261, Underhill Rd., E. h. [3129

E 1921 Sunbeam 3½b.p., semi-sporting, mileage 00, as new, stored winter, Cowey horn, speedo- lamps; £120; appointment.—1, Albany Gardens, ood. [1883

RTS Sunbeam, 1921, 3½h.p., tip-top condition, complete with lamps, generator, horn, tools. ew June last; £110 or near offer.—1B, Vine xbridge. [2515

BEAM 1919 3½h.p. 3-speed, kick start, hand lutch, all-chain drive, Sunbeam sidecar, all speedometer, screen; £105.—Maudes', Walsall , Walsall. [3201

9 8h.p. Sunbeam Combination, just thoroughly verhauled and enamelled makers, very smart, condition, all accessories; best offer near £119. Park St, Cambridge. [2540

CIAL Sporting 3½h.p. Twin Sunbeam, M.A.G., ractically unscratched, delivered June, photo; ver £90; evenings.—120, Marlborough Flats, n St., Chelsea, S.W.3. [2457

BEAM 3½h.p. Combination (November, 1919), creen, speedometer, etc., perfect order; £105; take lightweight motor bicycle part payment.— Maidstone Rd., Rochester. [2423

2 Long Stroke T.T. Sunbeam, Lucas lamps, Bonniksen, spares, cost £150, absolutely un- ed, only used two competitions; £120.—W. R. , Oakworth Manor, Keighley, Yorks. [2526

BEAM 3½h.p. Sports, light solo combination, w November, 1921, magdyno lighting, kick , speedometer, full equipment, tax paid, owner car; accept reasonable offer.—Dufty, 115, Up- m Rd., Leicester. [1933

BEAM Combination, 8h.p., 1922, recently new om makers, only run 500 miles, guaranteed than new, luxuriously equipped, spare wheel, screen, lamps, speedometer, etc., cost £250, forbidden owner to ride, sacrifice.—Moss, Wem. [2916


# DON'T ENVY THE OTHER MAN

## Take advantage of The Service Co.'s Easy Way and get a brand new 1922 model of your favourite make.

| Deposit. | Solo Mounts. | 12 Monthly Payments. |
|---|---|---|
| £13 | Alldays-Allon..... | £4 3 0 |
| £18 | Ariel, 3½ Sports, 3-speed | £6 2 10 |
| £23 | B.S.A., 4¼, 3-speed.... | £7 8 4 |
| £8 | Calthorpe, 2½ h.p. .... | £2 9 6 |
| £16 | Douglas, 2¾ Allon .... | £5 4 3 |
| £12 | Enfield, 2¼ Sports .... | £3 16 0 |
| £22 | Humber, 4½ Twin. .... | £6 17 9 |
| £27 | Martinsyde, 3½ Twin .. | £7 6 7 |
| £16 | New Imperial, Model 3 | £5 0 8 |
| £13 | O.K. Junior, 2¾, 2-sp., k.starter ..... | £4 4 11 |
| £14 | O.K. Junior, 3-speed, k.-starter ..... | £4 17 8 |
| £6 | 6s. McKenzie, 1¾ h.p... | £1 17 0 |
| £14 | Royal Ruby, 2¾ Sports. | £4 19 0 |
| £16 | Rudge Multi, 3½..... | £5 7 9 |
| £20 | Stanger, 5 h.p. Twin, 2-stroke, spring frame .. | £6 16 0 |
| £25 | Triumph, Model H..... | £7 1 4 |
| £28 | Zenith-Bradshaw..... | £7 10 2 |

## COMBINATIONS

| | | |
|---|---|---|
| £30 | B.S.A., 4¼, 3-speed.... | £9 14 4 |
| £30 | Enfield, 8 h.p..... | £9 14 4 |
| £35 | Martinsyde, 6 h.p..... | £11 0 10 |
| £32 | Matchless, 8 h.p., Mod. J | £10 8 6 |
| £26 | Triumph, 4 h.p., and Millford Sidecar..... | £8 18 5 |

Etc., etc.

Balance in 15 or 18 monthly payments if desired. Other Models of above makes at proportionate Rates.

Good up-to-date Machines taken in part exchange.

The Service Company Ltd. LONDON

**289-293, High Holborn, London, W.C.1.**

**(Few doors west of Chancery Lane.)**


## MOTOR CYCLES FOR SALE.

### Sunbeam.

SUNBEAM 1922 4¼h.p. brand new; £132; exchange A.J.S. 2¾h.p., Barr and Stroud, or similar.—Outram, Rectory Rd., Southport. [2761

SUNBEAM 1920 3½h.p. Combination, licence paid, speedometer, tools, spares, cost £205 May, 1920; £95, offers.—Box, 2, Duke St., Brighton. [2224

1921 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual spares, cast aluminium plates, new in April last, and in exceptionally good condition tyres unpunctured; nearest offer to £110.—Geoffrey Smith, *The Motor Cycle*, Coventry. [X4285

3½h.p. Special Racing Sunbeam, 1921, winner five cups and twenty medals, 75-80 m.p.h., only ridden in speed events, mileage about 1,000, appearance as new, expert examination invited, an ideal speed bike; £120.—Apply to W. Ivor Thomas, 85, Brecon Ter., Neath, S. Wales. [2285

*Spare Parts:*

HERBERT ROBINSON, Ltd., Green St., Cambridge, Sunbeam spare part service agents. Trade supplied. [2944

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £105. Type SD, chain drive, £115; Type LW, lightweight, £65; sidecars from £20 to £50; easy payments 4% extra —Buy direct from the leading Triumph agents: The Premier Motor Co., Aston Rd., Birmingham. [0627

BUY a Trusty Triumph Countershaft, renovated, as new; £60.—Below.

TRIUMPH Combination, hood, apron, lamps, horn, tax paid; bargain, £65.—Below.

TRIUMPH Countershaft, guaranteed 3 months, renovated throughout like new; £75.—Below.

ANY of the above or new machines from stock; cash or extended payments. Triumph agents and spare part specialists. Every spare always in stock.—The Hackford Engineering Co., 33, Hackford Rd., Brixton, S.W.9. [3122

TRIUMPH-RICARDO in stock; £120.—Batchelor, Clareoce St., Kingston. [2405

RICARDO Triumph, 4h.p., o.h.v., in stock; £120.— Meeten Motors, Dorking. [2358

TRIUMPHS.—All models in stock; cash or exchange. Rose's Garage, Uxbridge. [2615

TRIUMPH 1915 4h.p., Model H, lamps, horn, discs; bargain, £65.—Below.

TRIUMPH.—Immediate delivery of all 1922 models, including new type Ricardo, from stock.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0072

NEW 1922 4h.p. Triumph, Model H; £105.—Bounds Garage, 223, High Rd., Kilburn. [2293

TRIUMPH, late 1919 Junior, excellent condition; £39.—Rose's Garage, Uxbridge. [2616

1918 Countershaft Triumph, perfect; £47.—24, Balliol Rd., North Kensington. [2471

NEW 1921 4h.p. Triumph, Model H; £95.—Bounds Garage, 223, High Rd., Kilburn. [2292

4h.p. Triumph Countershaft, coachbuilt sidecar; £80, or nearest.—23, Foord St., Rochester. [2069

TRIUMPH 1918 Combination, countershaft, perfect; £70.—261, High St., Borough. [3068

TRIUMPH 1920 fixed gear Sports, scarcely soiled; £58.—Clark, 7, Exhibition Rd., S.W.7. [8681

NEW 1921 Baby Triumph; best offer over £40 secures.—Write, 7, The Vale, Actoo, W.3. [2803

1920-21 Triumph, Type H, Millford skiff sidecar, perfect; offers.—2a, Dover St., Coventry. [2858

1920 Triumph Combination, full equipment, taxed; £80.—24, Balliol Rd., North Kensington. [2468

4h.p. 1916 Triumph Combination, countershaft; £60, near.—Freeman, 20, Goodge St., W.1. (P) [2279

TRIUMPH-RICARDO Sports, just arrived; £120.— Messrs. Buckingham and Sons, Chelmsford. [2331

1919 Triumph combination, Easting, splendid order throughout; £82.—Daw, 114, Brixton Hill. [2753

TRIUMPH, late 1918, all on, taxed; £55.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. [2829

WAUCHOPE'S, 9, Shoe Lane, London.—4h.p. Triumph, 1920 model H, 3 speeds, etc.; £85. [2930

CROSS, Effingham Sq., is agent for the trusty Triumph for Rotherham. All models from stock. [2779

1919 Triumph Combination, all accessories; £68; or exchange.—64, Church St., Edgware Rd, W. [3098

TRIUMPH Countershaft, W.D., good condition; £37, or offer.—15, Baskerville Rd., Wandsworth Common. [1962

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH Combination 1919, 4h.p., tax paid, splendid condition; 78 gns.—6, Thurlow Rd., Hanwell, W.7. [2553

F.O.C.H. for Triumphs.—Latest models in stock; also 1921 solo.—5, Heath St., Hampstead (near Tube). [2251

3½h.p. Triumph, drop frame, clutch, kick start, all on, tax paid, any trial; £37.—1, Julian Ave., Acton. [2099

TRIUMPH 1920 4h.p., excellent condition, fully equipped; what offers,—50, Cranmer Rd., Forest Gate, E. [2774

TRIUMPH Junior, 1921, lamps, horn, spare belt, perfect order; £55, lowest.—Bush, King's Parade, Isleworth. [2182

1918 Triumph, countershaft, fully equipped, perfect; £48.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [3108

IN stock.—Model H Triumph. £105; cash or deferred.—D. & S. Autocar Co., 33, The Parade, Golders Green. [2975

1917 Triumph 4h.p., countershaft, Montgomery coachbuilt sidecar; bargain, £68.—365, King St., Hammersmith. [2824

TRIUMPH, 1920, 4h.p., 3-speed, kick-start, hand clutch, Gloria sidecar; £100.—Maudes', Walsall Garage, Walsall. [3200

TRIUMPH, 3-speed, hub gear, motor cycle, £25; in good running order.—Terry and Co., Ltd., Wrotham, Kent. [2609

3½h.p. Triumph, new tyres, free engine, tax paid, seen any time; £35. — Gray, Railway St., Braintree, Essex. [2597

1914 Triumph 3-speed 4h.p. coachbuilt Combination, overhauled; 45 gns.—Innes, Rydens Farm, Walton-on-Thames. [1376

1920 Triumph Combination, hood, screen, complete; any trial; best offer.—Taplin, 52, Gowlett Rd., East Dulwich. [3075

1914 Triumph Combination, fully equipped, excellent condition, tax paid; £60.—Low, 50, Pennard Rd., Shepherd's Bush. [1977

TRIUMPH 1917, coachbuilt sidecar, Lucas lamps, Klaxon; £68, or offer.—Worby, 34, Courland Grove, Clapham, S.W. [2731

TRIUMPH 4h.p. Combination, new folding sidecar, engine overhauled; sacrifice, £50.—Saunders, Parade, Golders Green. [2735

TRIUMPH 1920 Combination, extra comfortable saddle and spring pillar, accessories; £90, offers.—2, The Paddock, Dover. [2038

1920 4h.p. Triumph Combination, splendid condition; £80,—Hillier (Side Bell), 9, Wallingford Ave., North Kensington. [2702

TRIUMPH, 2¼h.p., lamps, 1922 tax paid, good running order; cash £25.—8, Garden St., Vauxhall Bridge Rd., S.W.1. [2324

TRIUMPH Coach-built Combination, clutch model, ready to go anywhere; £29.—Etou, 260, Balham High Rd. Balham. [2968

3½h.p. Triumph, about 1911, clutch, first-class running order, just done up; £26.—Flat 17, 122, Southampton Row, W.C.1. [2265

1918 4h.p. Countershaft Triumph, just renovated, perfect condition; exchange lightweight and cash.—12, Garfield St., Leicester. [1968

TRIUMPH-RICARDO, new, just delivered; sacrifice £5 under list, plus tax and accessories, if wanted.—Vos, Spring Bank, Bradford. [2070

TRIUMPH 1918 Combination, 3-speed countershaft, very good order; £65.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [1908

COUNTERSHAFT Triumph Combination, electric lights, screen, guaranteed good condition; 39 gns.—123, Alexandra Rd., Hampstead. [2518

TRIUMPH, 1922 Models.—Immediate delivery, cash, deferred payments, exchanges, repairs.—Motoria, Regent Parade, Tally-Ho, Finchley. [2161

£26!—1918 T.T. Triumph, 1913 engine, all on, long exhaust, fast and sporting.—1, Marguerite Villas, Molesey Rd., Hersham, Surrey. (D) [2847

TRIUMPH Combination, 3½h.p., 3-speed, overhauled, perfect condition, speedometer, tax paid; £36.—Pinn, 12, High St., Fulham. [2424

TRIUMPH 1919 4h.p., 3-speed, kick start, hand clutch, Hughes sidecar, all lamps; £105.—Maudes', Walsall Garage, Walsall. [3203

TRIUMPH, 1919, 4h.p., W.D., 3-speed, kick starter, chain-cum-belt drive, all lamps; £75.—Maudes', 100, Great Portland St., London. [3180

1919 Triumph Combination, equipped, spares, tools; £80, or exchange, with cash, w.c. Morgan.—218, Bath Rd., Hounslow. [2348

75 GNS.—4h.p. Triumph, fully equipped, registered 1922, practically brand new, a gift; after 5 p.m.—4, Elm Gardens, Hammersmith. [3091

# If the BEST is good enough, we have what you will like.

| Cash Price | Make and Description | First Payment | Twelve Monthly Payments |
|---|---|---|---|
| £115 0 | **Norton 16 H** .. | £40 | £6 13 0 |
| £120 0 | **Norton Big 4** .. | £42 | £6 18 0 |
| £153 0 | **Norton Big 4** and De Luxe side car | £53 | £8 17 0 |
| £130 0 | **Indian Scout** with electric equipment | £45 | £7 11 0 |
| £160 0 | **Indian Chief** with electric equipment | £55 | £9 6 0 |
| £199 0 | **Indian Chief** with electric equipment and side car .. | £69 | £11 10 0 |
| £105 0 | **Scott Squirrel** .. | £37 | £6 0 0 |
| £110 0 | **Scott Standard** | £38 | £6 8 0 |
| £48 0 | **Levis Popular** .. | £17 | £2 15 0 |
| £60 0 | **Levis** 2-speed, clutch & kick-starter | £21 | £3 9 0 |
| £66 0 | **Levis Model G**.. | £23 | £3 16 0 |
| £110 0 | **Martinsyde** 3½ twin sports .. | £38 | £6 8 0 |
| £85 0 | **Quadrant** 4½ single chain drive, solo | £30 | £4 18 0 |
| £105 0 | **Quadrant** 4½ single, chain drive, combination .. .. | £37 | £6 0 0 |
| £110 0 | **B.S.A.** 4½ chain drive.. .. .. | £38 | £6 8 0 |
| £65 0 | **Velocette** 2-speed | £23 | £3 15 0 |
| £72 10 | **Velocette** 3-speed | £25 | £4 4 0 |
| £130 0 | **Raleigh** 5 h.p. solo | £45 | £7 11 0 |
| £165 0 | **Raleigh** 5 h.p. combination .. | £57 | £9 11 0 |
| £68 0 | **Raleigh** 2¾ h.p. 2-speed .. .. | £23 | £3 19 6 |
| £136 10 | **Sunbeam** light sports .. .. | £47 | £7 19 0 |
| £136 10 | **Sunbeam TT** sporting .. .. | £47 | £7 19 0 |

*We will take good modern mounts in part exchange for new, and have many overhauled used machines for disposal at attractive prices. Ask for our second-hand list.*

**VICTOR HORSMAN,**

:: :: LTD. :: ::

**7, MOUNT PLEASANT, LIVERPOOL.**

## MOTOR CYCLES FOR SALE.

### Triumph.

1917 renovated 1922, countershaft Triumph mechanical condition guaranteed; £63.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [300

TRIUMPHS, several, 1921, chain drive, with extensive accessories, £95; 1921 belt, with sidecar, £90 1919 ditto, 80.—Buntiug's, Wealdstone. [281

1920 Triumph and Racing Sidecar, lamps, disc and accessories, very sporty; £95.—A. Harme The Old Crown, Church St., Kingston. [189

COUNTERSHAFT Triumph, 3-speed, K.S., guaranteed mechanically perfect; £40.—Callers only T., 49, Heaton Rd., Peckham, London. [313

1914 Triumph Adjustable Pulley, new, 15/6 countershaft cylinder, 25/-; piston, 5/-; 4 For pistons, 17/6.—Herbert's, Littlehampton. [188

1918 Triumph Combination, every possible accessory, condition guaranteed; £69/10.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [310

1921 Baby Triumph, enamel and plating perfect lamps, horn, etc., equal to new; £50.—3 Woodside Green, South Norwood, S.E.25. [244

TRIUMPH 1914 Combination, C.S., 4½h.p., speeds, guarantee perfect, lamps, tax paid; £6 —Kerr, 21, Chestnut Grove, New Malden. [314

TRIUMPH, 1916, 4h.p., 3-speed, kick start, chain-cum-belt drive, Bosch magneto, all lamps; £65.— Maudes', 100, Great Portland St., London. [318

1920 Triumph-Gloria combination, all accessories, tax paid till June, condition as new; £96.—2 Tulse Hill, Brixton. 'Phone: Brixton 1292. [300

£57/10.—1918 4h.p. Triumph, electric lighting registered 1922, fastest and soundest on the road after 5 p.m.—4, Elm Gardens, Hammersmith. [305

SHEFFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stace Triumph Service Depot, 12, Ecclesall Rd., Sheffield [08

TRIUMPH, all models, immediate delivery, sole district agent; easy payment and exchanges. Longman Bros., 17, Bond St., Ealing. 'Phone: 689 [304

1918 Triumph Countershaft Combination, Eastin wind screen, all accessories, in splendid condition; £60.—Eton, 260, Balham High Rd., Balham [290

TRIUMPH Combination, 1920, fully equipped, tax paid, Easting, Tan-Sad, pink of condition; £8 —Barker, 216, Portobello Rd., North Kensington W.11. [26

1920 Triumph Junior, with lamps and horn, splendid condition; as new, done under 800 miles £45.—Tolputt, Anhalt Cottage, Albert Bridge, Battersea. [25

42 GNS!—4h.p. 3-speed Countershaft Triumph licensed, fully equipped, excellent condition another rehovated, £45.—30, Canning Crescent, Wo Green. [22

1921 Baby Triumph 2¼h.p., 2-speed, lamps, tool condition as new, ride away or delivered London £55, or near offer.—Gordon, 12, Combs Crescent Stowmarket. [18

TRIUMPH Junior 1920, little used, condition perfect, Tan-Sad, Bonniksen, footboards, accessories insurance and tax paid; £55.—Sturton, 37, Hertford St., Coventry. [28

TRIUMPH.—Complete range of 1922 models in stock for immediate delivery; cash and exchange easy payments 4% extra.—P. J. Evans, John Bright St., Birmingham. [22

SPORTING Triumph, 3½h.p., 1913, 3-speed Sturmey overhauled, engine specially tuned, discs, Tan-Sad Klaxon, etc., parts replated; £45; trial.—331, Wigman Rd., Hornsey, N.8. [21

69 GNS. 1920 Triumph, model H, countershaft practically indistinguishable from brand new equipped, licensed; after 5 p.m.—20, Treen Avenue Hoggers Corner, Barnes. [25

1921 Triumph 4h.p., all-chain countershaft combination, Montgomery sports aluminium de aluminium discs, lamps, tools, tax, exceptionally sma guaranteed; £110.—Below.

1920 Triumph 4h.p., countershaft, complet equipped, tax, perfect throughout, guarantee £70.—Below.

1918 Triumph 8h.p., countershaft combinati nearly new bulbous sidecar, tax, perfe £72/10.—Below.

1920 Triumph 4h.p., countershaft, equipped, fect, tax; complete with smart sidecar, £8 Below.

1918 Triumph 4h.p., countershaft, just overhaul good condition; £52/10. All these machi are fully guaranteed and not rubbish.—Goad, engine Norman Lodge, 122, Maida Vale. 'Phone: Ha stead 1353.

TRIUMPH, early 1921, and Dunbill sidecar, spl did condition, good tyres, new cylinder, ri and belt, 3 lamps, spares, small mileage; £95.— Manor Lane, Lee, S.E.12.

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue**
**Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.
### Triumph.

10.—Triumph, 1914, 3 speeds, in excellent condition, with sporting coachbuilt sidecar, new front horn, lamps, speedometer, etc.—Delancey Street Camden Town, N.W.1. [2960

UMPH Coachbuilt Combination, 4h.p., 3 speeds, itch, kick, speedometer, lamp; only 55 gns.; tax asy terms.—Wandsworth Motor Exchange, Ebner andsworth (Town Station). [2549

Countershaft Triumph, late model, posh achine and as new, equipped and licensed; late lightweight and £25; sell £62.—Hillier, ratwood Lane, Earlsfield, S.W. [2412

Triumph-Gloria sprung-wheel Combination, perfect, powerful, Lucas accessories, Royal Eastrol carrier, luggage grid, spares; £112; after ck.—56, Malyons Rd., Lewisham. [2734

UMPH, 1920, Gloria sidecar, lamps, horn, Cowey speedometer, 2 new tyres, unused Easting reen and Tan-Sad seat, tax paid; price £115.—rzon St., W.1. Grosvenor 1975. [2394

UMPH Combination, 1917-18, overhauled, as w, electric, pillion, tools, spares, insurance, tax, running and appearance; £75, or offer.—28, onhurst Rd., Addiscombe, Croydon. [2274

Triumph, 4h.p., countershaft, speedometer, lamps, Tan-Sad, T.T. bars, long copper exhaust, ist, genuine, perfect, owner bought car; £85.—ds, Surveyor, Wellington, Somerset. [2083

UCHOPE'S, 9, Shoe Lane, London.—4h.p. Triumph and Sidecar, 1914, 3 speeds, etc.; £50; h.p. 1914 Triumph solo, 3 speeds, £40; and a 1918 W.D. model, 3 speeds, etc.; £65. [2932

Triumph and sidecar, tax paid for year, 3-speed, countershaft, splendid order; £55.—Gordon R. rd, The Motor Cycle House, 461, Upper Rich-Rd., S.W.14. 'Phone: Richmond 322. [2815

3 Triumph, 3-speed, clutch, K.S., lamps, horn, etc., a really good old 'bus; £32/10.—Gordon R. rd, The Motor Cycle House, 461, Upper Rich-Rd., S.W.14. 'Phone: Richmond 322. [2816

UMPH, 4h.p., 3-speed, countershaft, Swan Sporting sidecar, Cowey horn and speedometer, insurance and tax paid, trial evenings; £95.—Shakespeare Crescent, Manor Park, E. [2499

9 Triumph 4h.p. Combination, just overhauled by makers, enamelled and plated, lavishly ped, tax paid; £90; any trial or exchange.—South-Western Garage, New Malden, Surrey. [2018

—4h.p. 3-speed Triumph Combination, fully quipped, registered 1922, speedometer, pillion sporting sidecar, very smart appearance, guaranperfect; after 5 p.m.—4, Elm Gardens, Hammer-[3093

RKER'S Motors can supply all Triumph 1922 odels at list prices and give an insurance policy t mechanical breakdown for 12 months free. deferred, or exchanges.—194, Balham High Rd., 2. [3139

UMPH 4h.p., chain drive, Gloria sidecar, Lucas lynamo lighting, hood and screen, speedometer, ad, tax paid, new August, 1921, run 1,800 only, cost £235; accept £150.—Holmes, 36, ace St., Kingston-on-Thames. [2406

UMPH Combination, late model, fully equipped, hood, screen, grid, child's seat, Tan-Sad, speedo-, mirror, etc., tax paid, numerous spares, splendid tion and appearance, inspection by appointment; —Young, 11, Westbourne Av., Acton. [8915

21 Triumph-Gloria Combination, all chain, best spring wheel sidecar, Lucas lamp sets, horn, , speedometer, and spares, condition as new, unured, mileage negligible, tax paid; expert ination invited; £135.—Spikins, 365, Green St., n Park, E. [1915

UMPH 4h.p. Countershaft Model H, magdyno lectric lighting, electric horn, specially wide tank sight-feed lubrication, ace disc wheels, knee complete tool kit and several spares, a specially sporting machine in perfect condition throughout, paid; £90, or first reasonable offer. May be seen ime.—Owen, 19, Home Park Rd., Wimbledon. [2031

*re Parts:*

IUMPH Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7545

R Triumph spares go to the Hackford Engineering Co., 53, Hackford Rd., Brixton. [3127

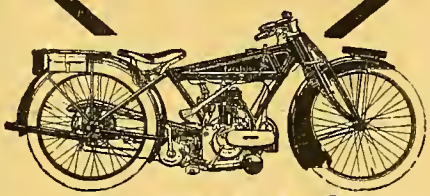
ERBERT ROBINSON, Ltd., Green St., Cambridge, Triumph spare part service agents. Trade sup-[2945

MPLETE stock Triumph and Sturmey-Archer pares, no waiting.—Ward's, 51, Upper Rich-Rd., Putney. 'Phone: Putney 2754. [1247

IUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birgham agents and service depot.—Premier Motor Aston Rd., Birmingham. [0798

IUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; overhauls by specialist.—Jones Garage, Triumph ts, Broadway, Muswell Hill, N.10. [0809


## EXCELSIOR-BLACKBURNE
**3-speed, all-chain drive**



**£75 0 0**

Easter ~~Holiday~~ over

**What about Whitsun?**

**—and what about the WEEK-ENDS in between Motorcycling**

**—ALSO what about calling at FRANK HALLAM'S to select any one of the following famous**

**MOTOR CYCLES**

**—and get some runs in before the next holiday?**

*Solo Machines:*

| | |
|---|---|
| **ARIEL** Sports Model .. .. | **£87 10** |
| **BROUGH-SUPERIOR** 6.5 h.p. .. .. .. | **£125 0** |
| **HOBART 2½ h.p. J.A.P.** 2-speed clutch and kick-starter .. .. . | **£63 0** |
| **HENLEY-BLACKBURNE** | **£67 10** |
| **RALEIGH 2½ h.p.** .. | **£68 0** |

*Combinations:*

| | |
|---|---|
| **EXCELSIOR 6 h.p. twin** 3-speed, all-chain drive | **£130 0** |
| **HARLEY-DAVIDSON** .. | **£188 10** |
| **NORTON "BIG FOUR"** de Luxe Sidecar.. .. | **£153 0** |
| **RALEIGH 5-6 h.p.** .. | **£165 0** |

Easiest of Easy Terms for Extended Payments, direct with the Purchaser.

**EXPERT TUITION FREE**

Registration, Insurance, etc., arranged with minimum amount of trouble and expense.

**EXCHANGES A SPECIALITY.**

Ask for Particulars.

**FRANK HALLAM**

**Dalton Street**
(2 doors from Bull Street)
**and 88, Bristol Street,**
**BIRMINGHAM.**

'PHONES:
Dalton St., Cent. 7317. Bristol St., Mid. 1472.


## MOTOR CYCLES FOR SALE.
### Triumph.

*Spare Parts:*

SEND to the Rhosha Motor Garage, South St., Romford, for Triumph and Sturmey-Archer spares and repairs. No disappointiog delays; every part in stock. Repairs by skilled mechanics only. We are official service agents. [7766

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Trump.

TRUMP-J.A.P., 1914, 4h.p., 3-speed, clutch, kick start, equipped, taxed; 27 gns.—37, Elmbank Gardens, Barnes. [3164

### Velocette.

PREMIER Motor Co., for 1922 Velocettes.

IMMEDIATE delivery of Model E.2 2-speed, £65; E.3 3-speed, £72/10; E.L.2 lady's open frame, £68; all with clutch and kick starter; easy payments, 4 per cent. extra; carriage paid to any address.—Premier Motor Co., Aston Rd., Birmingham. [3020

1922 3-speed Velocette, licensed, done 400, unscratched; £65.—R. Marley, St. Bees, Cumberland. [2399

VELOCETTE, 1921, 2¼h.p., 2-speed, all chain drive, tax paid; £48.—Maudes', Walsall Garage, Walsall. [3193

1921 Velocette, 2-speed, lamps, horn, tools, perfect condition and appearance; £45; appointment only.—55, Queen's Gate Mews, Gloucester Rd., Kensington, S.W.7. [2521

VELOCETTE 2¼ h.p., 2-speed, speedometer, only soiled, mileage 100, lamps, leg shields, indistinguishable from new; 48 gns.—Longman Bros., 17, Bond St., Ealing. 'Phone: 689. [3039

### Verus.

VERUS, 1920, 2¼h.p., single speed, all lamps; £34. —Maudes', 100, Great Portland St., London. [3176

### Wolf.

WOLF 1918, 2-stroke, lamps, horn, legshields, new condition, nearly new tyres and belt; £26.—Woodfine, 53, Westow Hill, Upper Norwood. Sydenham 958. [2680

49 GNS. only, or easy terms.—Wolf Coachbuilt Combination, 4h.p. J.A.P., 3 speeds, countershaft, clutch, chain drive.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [2550

### Wooler.

WOOLER, 3½h.p., 1920, 2-speed, clutch, lamps, speedometer, fully equipped; £45.—Telford Garage, 47, Streatham Hill, London, S.W.2. [2994

### Zenith.

ALLAN GRUZELIER, Zenith Specialist.

BRAND new 1921 5h.p. Sports Zenith at 76 gns

MAKER'S full guarantee; immediate delivery.

BRAND new 2¾h.p. models at £60.

ALL 1922 J.A.P. and Bradshaw models in stock for immediate delivery.—Write for full descriptive catalogue to the London Office, Ulster Chambers, 168, Regent St. Regent 205.

WORKSHOPS and Showrooms, Knight and Wheatley's Garage, 4, The Pavement, Coulsdon. Purley 1277. [2229

8h.p. Zenith, countershaft, in good condition; £65.—14, Phœnix St., Euston, N.W.1. [2674

1922 shop-soiled new Zenith-Bradshaw; £105 to clear.—Carnforth Motor Co., Carnforth. [1708

£50.—8h.p. Zenith Combination, in excellent running order.—8A, Culverden Down, Tunbridge Wells. [2871

8h.p. Zenith, late 1920, clutch, K.S., Watsoniao R34 sidecar, insurance; £80; tax paid.—Seen 78, High St., Hampstead. [3173

F.O.C.H. for Zeniths.—Latest models in stock; also 1920 8h.p countershaft combination.—5, Heath St., Hampstead (near Tube). [2250

1921 Sports Model Zenith, with torpedo sidecar, hardly soiled, electric lighting, licensed to December; £85.—Groom, Towcester. [2768

8h.p. Zenith 1919-20 Countershaft, Montgomery sidecar, Binks, capital condition; accept £90.—Hubbard, Bishop Thornton, Harrogate. [2088

ZENITH, late 1921, 8h.p. clutch Combination, electric throughout, Easting, luggage grid, special rear seat, speedometer, every spare, various gadgets, guaranteed perfect and as new, low mileage, tax paid; £140. Trial after 6 p.m.—252, St. Ann's Rd., Tottenham. [2342

## MOTOR CYCLES FOR SALE

### Zenith.

£40.—Zenith combination, 6h.p., new tyres, belt, spares, lamps, tools, etc., good family outfit.—Bateson, c/o Wirdnam, Burford, Oxford. [2024

1920-21 5h.p Sports Zenith-Swan Combination, lamps, horn Triplex, accessories, new condition, tax paid; £85.—12 Brooks Rd Chiswick. [2183

5 h.p. Sports Zenith, brand new (shop soiled), with maker's guarantee, list price £110, our price 76 gns.—Edwards, 101, Great Portland St., W. [2912

BARGAIN.—1914 T.T. Zenith Gradua, J.A.P. engine, fully equipped, full tax paid, ready to ride any distance; £25.—14, Estcourt St., Devizes. [2718

ZENITH Combination, 6h.p. J.A.P., countershaft, kick starter, speedometer, etc., windscreen, privately owned; £60.—At Carr Bros.' Garage, Purley. [8004

ZENITH 1917, 8h.p., clutch, 1920 special Dunhill sidecar, very good condition, low mileage; £73.—10, St. Mary Abbotts Terrace, Kensington. Park 4177. [2176

ZENITH-BRADSHAW, 1922, Gradua gear, hand clutch, immediate delivery; £113, special offer this week £100.—Collings, 334, Shirley Rd., Southampton. [1965

ZENITH Sports 1921 5h.p., excellent condition, electric lighting, long nickel exhaust, aluminium undershield, fully equipped; 60 gns.—2, Madrid Rd., Barnes. [2691

1922 Sports Zenith-Bradshaw, chain drive, 3 speeds, kick starter, long exhaust pipes, brand new, just delivered, tax paid; sacrifice, 100 gns.—King, 523, Lord St., Southport [2129

1922 Zenith-Bradshaw, slightly used for a few demonstrations, indistinguishable from new, full guarantee; sacrifice, £95.—Frank Whitworth, 139, New St., Birmingham. [0711

1919 Zenith 8h.p., sporting, electric lighting, double oiling, special 4in. plated exhaust, special discs, tax, exceptionally smart; £65.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [2909

ZENITH-BRADSHAW 1922, 3-speed, all-chain drive, in stock; £119. Best prices allowed on exchange deals.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [2371

ZENITH Combination, 1920, 8h.p. countershaft, 1921 chain case, electric side and tail lamps, Baby Easting, perfect order, mileage 2,500; £95.—Harding, Derwent, Newport, Mon. [2523

1921 Zenith-Gradua 8h.p., o.h.v., fully equipped, Bonniksen, aluminium sporting sidecar, mileage 1,000, perfect; cost £200; nearest £150; or solo, 5-70 m.p.h.—Mitchell, Lindens, Farnham. [2227

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free Cash, deferred or exchanges.—194, Balham High Rd., S.W.12. [3141

DEFERRED Payments £80, or Cash Offers.—Zenith 1919 8h.p. sports combination, full equipment, tax paid, excellent condition; any trial.—Haverstock Hill Garage, 50, Haverstock Hill, N.W.3. 'Phone: Hampstead 6609. [3111

ZENITH 1920 8h.p. Twin J.A.P. Countershaft Combination, luxurious Sandum sidecar, Cameo windscreen, lighting set, horn, Tan-Sad, speedometer, oversize tyres, etc., most splendid condition throughout, only needs seeing.—Sidney, 769, Romford Rd., Manor Park, London, E. [1897

750 c.c. Sports Zenith, extra handle-bar operated pump, racing cams, and many spares, just overhauled by makers, sports Swan sidecar, just coach painted, guarantee 60 with sidecar, 70 solo, an exceptional machine; £85; seen by appointment.—Harrison, "Fairhaven," Park Rd., Teddington. [2175

£47.—Zenith-Gradua Sports Model 1919, 5-6h.p. J.A.P. engine, waterproof magneto, Amac, Dunlops, new 1in. Pedley belt, T.T.-bars, aluminium discs, long plated exhausts, knee grips, very smart appearance, any expert examination, ridden to buyer.—110, Williams Rd., Cannon Hill Park, Birmingham. [2584

ZENITH Combination, coachbuilt sidecar with screen and hood, 4h.p J.A.P. engine, B. and B. carburetter, W.S.R jet adapter Bosch magneto, Gradua gear, lamps; has just been thoroughly overhauled and re-enamelled new tyre and belt; owner purchasing singles: 30 mile test run, £65, no offers.—Dadd, 5, Prout Grove Neasden, N.W 10. [2130

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7222

### Ladies' Motor Cycles.

LADY'S Douglas Motor Cycle, 2¾h.p., perfect condition; cheap.—Dan Guy, Weymouth. [2230

LADY'S Calthorpe, 2-stroke, 2-speed, clutch, perfect throughout; £36/10, carriage paid. — Notley, Rollesby, Gt. Yarmouth. [1981

VELOCETTE, 1919, ladies' model, 2¾h.p., 2-speed, all-chain drive, splendid order; £40.—Maudes', 100, Great Portland St., London. [3178


THE

# Pero Works Co.

10, Anderton Sq., Whittall St.,

BIRMINGHAM.

Cylinders Reground.

Pistons—Over-size. supplied.

Engines Overhauled.

Spares—Made to order.

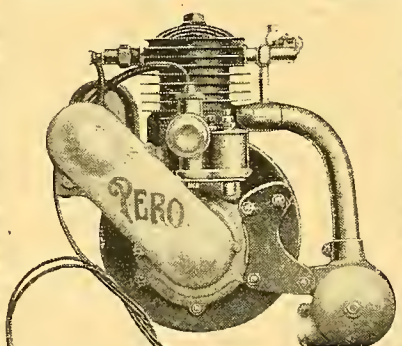
Welding—Acetylene. Aluminium a speciality.

Over £1,000 is the value of the machines and equipment that will do your repairs

*No Repair too small.*

"Pero" Two-Stroke

bore 70 m/m stroke 70 m/m.




Neat lines and evidences of durability are features of the Pero two-stroke engine.

2½ h.p. Pero Power Unit.


## MOTOR CYCLES FOR SALE

### Ladies' Motor Cycles.

NEW IMPERIAL-J.A.P. 2¾h.p., 2 speeds, clutch kick start, licensed, all on, perfect; £35; exchange considered.—40, Fore St., Seaton, Devon. [266

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy daintiest of all ladies' machines; £62, complete. Send for list. [072

VELOCETTE 1922 Models, with clutch and kick starter, for immediate delivery; 2-speed, £68 3-speed, £75; all black weatherproof finish, all-chain drive, open frame, giving very low position; the ideal ladies' mount; easy payments, 4% extra; illustrated catalogue free on request.—Premier Motor Co., Aston Rd. [302

### Miscellaneous

2-STROKE, 2h.p., good running order; £12.—Burrell Unstead, Shalford, Surrey. [253

£10.—2¾h.p. J.A.P., magneto, spring forks, running order.—King, Egrove Farm, Oxford. [283

B.S.A. 3½h.p., £35; Ariel 2¾h.p., wants building £15.—Farrar, Burn, near Selby. [203

7-9h.p. Harley-Davidson Combination, new chassis new carburetter, etc.; £105.—Below.

2¾h.p. Martin-Jap, 2-speed, kick starter and clutch £65.—Below.

2¾h.p. New Imperial, 1919, 2-speed model, recently overhauled; £40.—Below.

2¼h.p. Clyno, 2-stroke, 2-speed, and clutch, 1920 £28.—Below.

2¾h.p. O.K. Junior, Jap engine; £35 2¾h.p. Douglas, 2-speed; £45.—Below.

ALL second-hand, and in perfect condition; reasonable trial or examination. Offers considered.—Edmondson's Garage, Ltd., 28, Main St., Keswick. [929

JONES Garage, The Broadway, Muswell Hill, N.10 and Woodside Parade, North Finchley.

NOTICE.—We are open all day every Saturday, and have all makes in stock. Write, call or 'phone Horosey 2917 for big bargain list.

1919-21 Ariel, 3½h.p., and sidecar, Mr. F. Jones's competition gold medal machine, specially tuned; £80.

1920 Radco, 2½h.p., 2-speed, fully equipped, perfect little 'bus; £32/10.

ROVER, 5-6h.p. Sports solo, 3-speed, all-chain, shop-soiled, otherwise new 1921; £110.

RUDGE I.O.M., shop-soiled, £70; 8h.p. Enfield Combination, Magdyno, 1921, indistinguishable from new, £145.

1919 P. and M. Combination, exactly as new equipped; £70.

1921 3½h.p. Rover Combination, unused, special model, £97/10; Hobart-Villiers, shop-soiled £42/10.

1920 Ariel, 3½h.p., equipped, £72/10; also second hand and new sidecars from £7/10.

1920 4h.p. Blackburne and sidecar (Mills-Fulford), Easting, licence paid and insurance, fully equipped, precisely as new; £87/10.

1919 8h.p. New Imperial Combination, fully equipped, licensed, £85, scarcely used; on special bargain of the week. Any of the above can be had for one-quarter down, balance in 6 or 12 payments; all guaranteed 3 months. Send for particulars. — Jones Garage, Broadway, Muswell Hill, N.10. Motor 'bus from Highgate or Finsbury Park [316

1913 3½h.p. Rover Combination, 3-speed, pedal start, in perfect condition; £55.—Below.

1921 8h.p. Chater-Lea Combination, new and unregistered, 4 detachable wheels, spring seat pillar, sidecar screen; £35 below list; £135.—Below.

1914 2¾h.p. Premier, new condition, tax paid bargain, £18.—Below.

1914 3½h.p. Sioger, 3-speed, all accessories, as new £42.—Below.

1912 3½h.p. B.S.A., 2-speed, free, rebored and bushed by makers, not run since; £30.—Below.

ECONOMIC.—We can give you immediate delivery of this wonderful low-priced machine; variable gear model, £34; or on easy payments. Please send p.c. for catalogue.—South Eastern Garage, Herne Hill, S.E.24. [226

2¾h.p., 2-stroke, new engine, Druids-Amac, good tyres; £14.—41, Regent St., Wellington Salop. [315

2½h.p. J.A.P., sound, tyres perfect; a real bargain £5/10.—E.C., 6, Horley St., nr. Bishop Stortford, Herts. [24

J.A.P. Combination, 1915, cane torpedo sidecar, 3 speeds and clutch, condition perfect, tax paid, 50 gns.—W.R., 58, Tranmere Rd., Earlsfield. [184

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

:GE Garage, 74-76, Brighton Rd., Surbiton, Phone, Kingston 3025, have the following nes for sale or exchange at bargain prices:—

:GE.—A.J.S. 5h.p., twin cylinder, countershaft gear box, kick starter, hand clutch; £45, or nge.

:GE.—Indian 5h.p. Combination, 3-speed, gear box, kick starter, splendid condition; £50, or age.

:GE.—Clyno, 8h.p. J.A.P. engine, with large 2-eater sidecar, all accessories; £85, or exchange.

:GE.—New Hudson, 2-stroke, 2 speeds, splendid rder; £30, or exchange.

:GE.—Baby Triumph, 2-stroke, 2 speeds, only run bout 200 miles, indistinguishable from new, ccessories, complete; £40, or exchange.

:GE.—Triumph 3½h.p. Sporting machine, splen-lid condition; £22, or exchange.

:GE Garage, 74-76, Brighton Rd., Surbiton. Phone Kingston 3025. [3168

LIFAX.—50 second-hand machines and combina-tions. Cash, exchange, or deferred payments. t.—Halifax Motor Exchange, Horton St., Halifax. [2985

IS 2½h.p. 2-stroke, complete lamps, etc., tax aid, good condition, £18/10; Douglas 2¾h.p., g order, £12/10.—Johnstone, Dovemount Place, k. [2041

Make Solo or Combination on the most dvantageous terms for cash. Spares and acces-procured for customers on best terms; state ements.—T. Scott, Direct Manufacturers' Agent, lesbury St., Clerkenwell, London, E.C.1. Central [2013

:GAINS in Motor Cycles and Sidecars.—A mited number of 1920 and 1921 shop-soiled , all well-known makes. Best offer secures in ase. Send for list or call and inspect.—Mebes lebes, 144, Gt. Portland St., W.1. 'Phone: am 2230. [2124

C.H. for secondhand cycles, combinations and runabouts at bargain prices. Exchanges ar-. Any new cycle, combination or car sup-cash or deferred payments.—Fair Offer Car , 5, Heath Street, Hampstead (near Tube). e: Hampstead 3752. Hours 9-7, including lays. [1611

.CKPOOL Bargains.—2-speed O.K., £24/1/1 919 Douglas, £45/10/6. 1919 4h.p. Douglas nation, £79/10/6. 4h.p. Douglas, £55/10/6. Tamplin, £79/10/6. 1920 Morgan de Luxe, meter, water-cooled magneto engine, £155/10/6. l others cheap. Push cycles taken in exchange. cycles purchased for cash.—Booths' Motories, Waterloo Rd., Blackpool. [9317

'CHELOR BARGAINS.—1920 8h.p. Matchless Combination, all on, £110; 1920 8h.p. Zenith rshaft Combination, all on, £110; 1920 Enfield ination, dynamo lighting, hood and screen, 1920 6h.p. Ariel, all on, £80, condition brand 2¼h.p. New Hudson, 2-speed, £45; brand new rook, 2-speed, £50; 1921 4h.p. Sunbeam Com-on, detachable wheels, all on, £125.—36, ice St., Kingston, Surrey [2408

## MOTOR CYCLES FOR HIRE.

tE Latest Models cycles and combinations, any eriod.—Write terms, Fowler Brigden, 130. a Rd. [0705

## MOTOR CYCLES WANTED.

VARDS and Co.,

, Gt. Portland St., W., are cash buyers of solos, combinations, and Morgans. Highest prices distance no object. Call, write, or 'phone: May-027. [0604

NT

O COMBINATIONS and Solos, any make, guar-antee top prices given.—T. and B. Motor Co., 372, Euston Rd. Museum 6581. [5564

UDES' Motor Mart are purchasers for spot cash of late models, Sunbeam, Triumph, Douglas, n, and Morgans.—Maudes', 100, Great Portland London. [3205

E Combination; cash.—14, Swaton Rd., Bow. Tel.: E. 3155. [2501

. or 8h.p. Combination, 3 speeds.—Ayden, 159, Hornsey Rd., N.7. [2437

# IN STOCK AT THE EASTERN GARAGE

## 1922 MODELS, NEW.

**A.J.S.**, 7 h.p., Model D Standard Combination . £175
**A.J.S.**, 7 h.p., Model D Combination, with dynamo lighting ..... £195
**ALLON**, 2½ h.p., 2-stroke, 2 speeds, clutch and kick-starter ..... £60
**ARIEL**, 3½ h.p., Sports Model ..... £87 10
**B.S.A.**, 4½ h.p., Model H2, all chain ..... £110
**B.S.A.**, 4½ h.p., Model H2 Combination ..... £142
**B.S.A.**, 4½ h.p., Model K2, chain-cum-belt .... £107
**B.S.A.**, 4½ h.p., Model K2 Combination ..... £139
**B.S.A.**, 6 h.p., Model E, all chain ..... £132
**B.S.A.**, 6 h.p., Model E Combination..... £164
**DOUGLAS**, 6 h.p., Combination, de achable wheels, lamps, horn and windscreen ..... £165
**HAWKER**, 4½ h.p., and Sidecar, 3 speeds, clutch, and kickstarter, all chain drive..... £105
**LEVIS**, 2¾ h.p., 2 speeds, clutch, and kick-starter £60
**MATCHLESS**, 8 h.p., Model H2 Standard Combination ..... £170
**MATCHLESS**, 8 h.p., Model H2 Combination, with dynamo lighting ..... £188
**MATCHLESS**, 8 h.p., Model J Sports Combination ..... £160
**MATCHLESS**, 8 h.p., Model H 2-seater Combination, with dynamo lighting ..... £193 10
**NEW IMPERIAL**, 2¾ h.p., Model No. 2, chain-cum-belt ..... £69
**NEW IMPERIAL**, 2¾ h.p., Model No. 3, all chain drive ..... £73
**N.U.T.**, 3½ h.p. Twin, Model M, chain-cum-belt £100
**N.U.T.**, 5 h.p., Model M, all chain drive ..... £120
**RALEIGH**, 2¾ h.p., 2 speeds, clutch, and kick-starter ..... £68
**ROYAL ENFIELD**, 8 h.p., Standard Combination £140
**ROYAL ENFIELD**, 8 h.p., Combination, with dynamo lighting..... £158
**ROYAL ENFIELD**, 2¼ h.p., 2 speeds..... £55

## Exchanges & Deferred Payments Arranged.

**The following are used machines that have been overhauled by us, and carry our written guarantee that they are in proper mechanical order:—**

### SECONDHAND.

**DOUGLAS** 1917, 4 h.p. Combination, 3 speeds, clutch, and kickstarter..... £85
**ROVER** 1919, 3½ h.p., 3 speeds, clutch, and kickstarter, lamps, horns, and Millford Skiff Sidecar ..... £76
**ROVER** 1920, 5-6 h.p., Countershaft, 3-speed gear, all chain drive, lamps, horn, speedometer, windscreen, Tan-sad seat, and Millford Empress Sidecar ..... £115
**O.K.** 1920, 2¼ h.p., 2-stroke, 2 speeds, lamps, and horn, tax paid..... £38
**ARIEL** 1920, 3½ h.p. Combination, 3 speeds, clutch, and kickstarter, tax paid..... £80
**TRIUMPH** 1917, 4 h.p., 3 speeds, clutch, and kickstarter, and Millford Skiff Sidecar, tax paid ..... £70
**F.N.** 1920, 2½ h.p., 2 speeds, clutch, and kick-starter, shaft drive, lamps, and horn..... £40
**ENFIELD** 1919, 2¼ h.p., 2-stroke, 2 speeds, lamps, horn, tax paid..... £40
**ENFIELD** 1921, 8 h.p. Combination, 2 speeds, clutch and starter, Lucas Magdyno lighting, horn, screen, and side curtains, tax paid.... £125
**NEW IMPERIAL** 1919, 2¾ h.p., 2 speeds, lamps, and horn, tax paid..... £38
**CLYNO** 1918, 6 h.p. Combination, 3 speeds, clutch, and kickstarter, detachable wheels.. £95
**NEW IMPERIAL** 1918, 8 h.p. Combination, 3 speeds, clutch, and kickstarter, speedometer, lamps, horn, hood, screen..... £75
**BROUGH** 1920, 5 h.p., 3 speeds, clutch, and kickstarter, lamps, horn, speedometer, Henderson Elite sidecar, Easting screen, tax paid £110
**P. & M.** 1920, 3½ h.p., 2 speeds, clutch, and kick-starter, lamps, horn, speedometer, and Millford Sidecar, tax paid..... £80
**MATCHLESS** 1921, 8 h.p. Combination, 3 speeds, clutch, and kickstarter, lamps, horn, hood, and screen, spare wheel, tax paid..... ... £140

# The Eastern Garage Co.

**(Official Repairers to R.A.C., A.C.U., A.A. and M.U.),**

## 418, Romford Road, Forest Gate, E.7.

Telephone: 490 East Ham. Telegrams: "Egarco, London."

## MOTOR CYCLES WANTED.

WE ARE ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination. We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 314, Euston Rd. [0815

WE ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391. [0332

£120 offered for good Combination.—64, Church St., Edgware Rd., W. [3100

NORTON, any model.—Full particulars and price to 32, High St., Reigate. [2307

£30 cash for 3½-4h.p. countershaft; private.—4, Dorking Rd., Tunbridge Wells. [2165

£45 offered for Triumph countershaft model.—Box 9965, c/o *The Motor Cycle*. [2838

NEW IMPERIAL 2¾h.p., not earlier than 1918.—D.A.P., 60, Doggett Rd., Catford. [1935

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing at 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted, machine can be included in Auction Sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling commission, 7½%, not chargeable unless machine is sold. If no sale, a nominal auction fee is charged. For motor cars, 20/-; motor cycles under £50 value, 5/-; ditto over £50 value, 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Telephone: 208 Streatham. Telegrams: Palmer's Garage, Tooting. [2791

WANTED, motor cycle, any condition, cheap, cash waiting.—61, Grand Parade, Harringay. [2672

LATE countershaft Triumph wanted for cash.—Knight, 23, Station Grove, Wembley. [2316

COUNTERSHAFT, Triumph; good price for good machine.—33, Hackford Rd., Brixton. [3125

COMBINATION about £45, spot cash.—Thompson, 12, Trinity Rd. (above shop), Balham. [2745

8h.p. Zenith, o.h.v., or countershaft preferred; £50.—Ling Dene, Farnham Common, Slough. [2421

WANTED, late Solo or Combination; cash.—29, Addiscombe Court Rd., East Croydon. [2330

WANTED, Levis or other 2-stroke, not exceeding £20.—Box 9964, c/o *The Motor Cycle*. [2837

WANTED, Modern Solos or Combinations, for cash.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [8682

COUNTERSHAFT Triumph or Enfield, cheap for cash.—C. Franklin, Swinford, Eynsham, Oxon. [2207

WANTED, old Pierce Arrow motor cycle, cheap; give cycle and cash.—Huggins, Skelton, York. [2203

SMART Combination, late Triumph or Douglas.—Powell, 25, Carlton Park Av., Raynes Park. [1873

WANTED, late Combination for cash, perfect condition.—Particulars to Peplow, Clun, Salop. [2067

2¾h.p. A.J.S. or Coulson wanted, cheap, for cash.—Johnson, 110, Lincoln Rd., Peterborough. [2485

GOOD Combination wanted immediately; write or call.—143, Ravensbury Rd., Earlsfield, S.W.18. [2981

SPORTS Zenith or similar, condition immaterial, for cash.—Wilcock, Park Mansions, Knightsbridge. [2775

WANTED, incomplete P. and M.'s or parts, any quantity.—Inman, Durham Rd., Seaforth, Liverpool. [2154

**All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue** B51
**Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES WANTED.

WANTED, 3½h.p. Triumph, 1908 or 1910, no clutch or speeds.—Box 9973, c/o *The Motor Cycle*. [2999

WANTED, 1918 or late countershaft machine, solo or combination; cheap.—Green, 84, Park St., Slough. [1854

WANTED, T.T. machine, Norton, Rover, Rudge.—Write Braithwaite, 32, Winchester Rd., Colchester. [2636

GOOD Lightweight, equal new, low price, spot cash; also Matchless Combination.—253, Munster Rd., Fulham. [2678

WANTED, Sunbeam, Triumph, Scott, Norton, any good make solo or combination.—88, Lord St., Southport. [2006

WANTED, complete countershaft machine, less engine.—Particulars, Gillett, Maddox Park, Bookham, Surrey. [2025

COMBINATION, 1920-21, noted make, test required, cheap for cash.—Elliott, 61, Bromley Common, Bromley, Kent. [2225

WANTED, Triumph, B.S.A., or 16H Norton, solo or combination, cheap.—Letters only, Fruin, Raynes Park, S.W. [2659

WANTED, Sunbeam or countershaft Triumph; reasonable.—Write, A. S. N., 26, Cleveland Avenue, Chiswick. [3117

WANTED, 1922 2¾h.p. A.J.S. Standard Sports, new condition essential; cheap.—70, Minet Avenue, Harlesden. [2328

WANTED, Harley-Davidson combination or Indian; write particulars; must be cheap.—24, Geraldine Rd., Chiswick. [3116

£50 Waiting for Triumph Countershaft, must be Triumph, no comic makes.—L. Hive, Abington Brewery, Northampton. [2022

WANTED, good Solo or Combination, late model, for cash on sight.—37, Canterbury Rd., Bails Pond Rd., Dalston, N.1. [3110

WANTED, countershaft Triumph, solo or combination; please state condition and lowest offer.—20, Winchester St., Coventry. [2007

GOOD Secondhand Combination up to £200 as part exchange for Bianchi 4-seater.—12, Greville Place. Hampstead 1819. [4975

TRIUMPH Combination, not earlier than 1919; spot cash.—Write fully, P., 10, Bank Chambers, Tower Bridge Rd., S.E.1. [2862

2¾h.p. Douglas, New Imperial, etc., also combination and Morgan, 1921-22, water-cooled; cheap.—H., 63, Solon Rd., Brixton. [2364

WANTED, good motor cycle, with or without sidecar, also Lightweight, cheap for cash.—Write, 211, Garratt Lane, Wandsworth. [2580

TRIUMPH, B.S.A., Sunbeam combination, subsequent 1919, equipped; £65 cash.—Particulars, Box 9910, c/o *The Motor Cycle*. [1974

WANTED, 4h.p. Douglas Combination or 6h.p. Enfield; exchange 2¾h.p. Douglas and cash.—Kenaett, 7, Lower George St., Richmond. [2620

WANTED, late model Triumph or similar countershaft; must be in excellent condition, and cheap.—A. B., 11, Banbury St., Battersea, S.W. [2342

3½h.p. to 4h.p. Norton, Sunbeam, Triumph, N.U.T., or similar, must be good condition, late model, and cheap.—Full particulars, 5, Hill St., Douglas, I.O.M. [2026

£65 (about) for best twin combination offered; Enfield preferred; roomy or 2-seater sidecar; state guaranteed date.—"Rosebank," Thorkhill Rd., Thames Ditton. [2419

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [0828

WANTED, your motor cycle or combination We are buyers. Full market price given and cash paid on the spot. Write, call, or 'phone Museum 5938.—J. Smith and Co., Motor Agents, Ltd., 52-54, Hampstead Rd., N.W.1. [0768

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2365. [0372

WANTED to Purchase outright, for cash, bankrupt stocks; W.D. spares, miscellaneous spares, motor cycles, any make.—Send full particulars, McNeille and Platt, 57, Great George St., Liverpool. 'Phone: 1092 Royal. [6060

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Braoburys, Martinsydes, Zeniths.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [4559


# LISTEN TO THIS

SEND for our Extended Payment Form, fill in with the make of Solo or Combination you want, also the makes and models of Lamps, Horn, Speedometer, Screens, Hood, etc. (anything that you desire), Tax and Insurance.

Fill in the amount of deposit that is convenient to yourself, return to us, we will fill in prices (if you don't) and return for your consideration.

The payments may be spread over

**18 MONTHS**

and we give a

**DISCOUNT**

if you complete the payments earlier.

THIS places you under no obligation to us.

**IF IT'S SIDECAR**

only you require,

Send for latest Art Catalogue and Sidecar Extended Payment Form.

MODELS for every make.

**RIDEEZI SALES,**

**5, Victoria Street, LONDON, S.W.1.**


## MOTOR CYCLES WANTED.

F.O.C.H. always have cash waiting for some machines of all types; highest prices and courteous treatment assured.—Fair Offer Car House, Heath Street, Hampstead (near Tube). 'Phone Hampstead 3752. Hours 9-7, including Saturdays. [161

WANTED, immediately, any number of second-hand machines and combinations; a competent representative will be sent to inspect and complete purchase after preliminary negotiations; cash and good prices paid.—Longman Bros., 17, Bond St., Ealing. Telephone: 689. [304

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/2 Woodstock St. (off Bleaheim St.), Bond St., W. 'Phone: Mayfair 6559. [07

SEND your motor cycle to Palmer's Garage and Motor Auction Rooms, High Street, Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired. Sole address, Palmer's Garage, Tooting. [27

WANTED.—Motor cycles and combinations for immediate cash, new or second-hand. Bring your machine to us for a cash offer; high prices paid on the spot. Write, 'phone, or call if possible.—Ford Garage, 74-76, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [31

## TRICARS FOR SALE.

LATE 1920 T.B. Tricar, only done 3,000 miles, first-class condition, 8h.p. air-cooled J.A.P. engine, speedometer, gaiters, tail locker, spare wheel, lamps, full set of tools, spares, licence paid; £150, offers.—L. Newbigin, Narrowgate, Alnwick. [20

## MOTOR SCOOTERS.

DYSON Scooter; £12, or near offer.—Allan Bryan, 83, Balham Pk. Rd., S.W. [23

KINGSBURY Scooters and Spare Parts.—Beanlo Works, Richmond Rd., Twickenham. [22

A.B.C. Skootamota, unsoiled, as new, £17.—1 Bellevue Garoens, Clapham Rd., S.W.9. [21

KINGSBURY Scooter, 1½h.p., C.A.V. magneto, nearly new, excellent order; £14.—68, Gloucester Rd., Camden Town. [26

NEW Shop-soiled Autoped Scooters, dynamo lighting, 1½h.p.; bargain, £12/10 each.—Percy and Co., 314, Euston Rd., N.W.1. [41

12 GNS.—A.B.C. Scootamota, almost indistinguishable from new, electric lamps, etc., trial. Smith's, 86, Chalk Farm Rd., N.W.3. [28

SCOOTER, coupling, spring seat, perfect and hardly ridden; cost £45; any reasonable offer considered.—C. H. Harding, Grittleton, Chippenham [26

## MOTOR ATTACHMENTS.

AUTO-WHEEL, good running condition; £8 Holman, 17, Bourne St., Hastings. [18

J.E.S. Auxiliary, complete, good order; £10 Pounder, 79, Scarborough St., West Hartlepool. [19

AUTO-WHEEL, late model, in perfect mechanical condition, tax paid; £9.—Smith, 82, Seeley Rd., Tooting Junction. [23

1921 Young's attachment, guaranteed mechanically sound and complete, can be tried; £12.—3 Arlington Rd., Surbiton. [26

SIMPLEX Motor Attachment fitted to high-class gent.'s cycle, 24in., practically new, nausea 15 gns.—Guthrie, 196, Bishopsgate, E.C. [19

AUTO-WHEEL, 1920, complete, and in splendid condition; £9/10.—Anthony, 1, Townshend Cottages, St. John's Wood, N.W.8. [26

1921 Young Attachment and Lady's Cycle complete, done about 50 miles, new condition, excellent running order, licensed; £20.—Wakelin, White St., Coventry. [24

## HOODS, WIND SCREENS, ETC.

COLLINS and Son for hoods, screens, and aprons, hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreens, complete with apron, 22/6, as sold elsewhere 30/-; Easting windscreens, standard model, good condition, 45/-; other screens at 30/- and 35/-; a screen on approval. Celluloid panels fitted to a windscreen in few hours. Open Sunday morning 10 to 12, weekdays till 8.30 p.m. Saturdays till 5 p.m. —Collins and Son, rear of 84, High St., Putney, S.W. [1

V-shaped Windscreens, £3/18; small size, £2/15 Bright and Hayles, 78, Church St., Camberwell [8

HERCULES Hoods and Aprons; write for list Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [0

EASTING Windscreen, standard size, complete brand new; £3 for quick sale.—210, Great Lanes, Birmingham. [2

## HOODS, WIND SCREENS, ETC.

ENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, /6.—Henry Jones, 778, High Rd., Tottenham, Lon- [3239

ENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.— nnoc Motors, Ltd., 155a, Marlborough Rd., Upper lloway, N.19. [2521

OBINI Manfc. Co.—The Bower adjustable wind- screen, registered, with coverall apron, 50/-, riage paid. Beware of imitations. Celluloid panels ed, Easting's, 16/6; aprons made to order, 10/-.— bini Manfc. Co., 1 and 3, Tulse Hill, Effra Rd., xton, S.W.2. 'Phone: Brixton 1585. [3050

## BODIES.

AMILY Coachbuilt Body, new, not upholstered; 30/-.—1, Desmond St., New Cross. [2020

AMBER Sidecar Bodies; from £4/17/6.—Bright and Hayles, 78, Church St., Camberwell. [8024

ENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

ENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

ARGAIN.—Coachbuilt Body, apron, complete, as new; £6/10; photo.—Webber, Eastleigh, Honiton. [1985

OLLINS and Son.—Bodies, new bulbous back coachbuilt at £6/5; 2-seater bulbous back, £9.— low.

OLLINS and Son are actual manufacturers, and give twelve months' guarantee with every body; r 200 in stock. Large number of secondhand in ck.—Below.

OLLINS and Son repair, re-paint, and upholster at moderate charges; all work guaranteed. Esti- tes free. Send for catalogue.—Collins and Son, r of 84, High St., Putney, S.W. [1920

IDECAR Bodies, all sizes, shapes and colours, from £5; give us a trial.—33, Hackford Rd., ixton. [3123

EW Douglas pattern sidecar bodies, colour as desired; £5/10.—Reynolds, 15, Stafford Mews, lburn, N.W.6. [2647

DWARDES Sidecar Bodies, bulbous back, beautiful finish; only call and inspect; £4/15.—277, Cam- well Rd., S.E. [2495

ASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's ross, London, N.1. [5131

ENUS Step Bodies, 2 dozen to clear; from 50/- each; great bargains.—Venus Sidecar Co., 694, ven Sisters Rd., Tottenham. 'Phone: 2102. [9974

921 Matchless standard sidecar body complete, screen, luggage grid, as new; offers, or exchange eater Matchless body.—18, Saffron Rd., Biggles- de. [8509

PEEDY and Gardner, "The Speedy" 2-seater, £15; single, £8; bodies to order; screens repaired, -; aprons to order, 8/-; let us quote you.—67, Effra ., Brixton. [2127

OYAL Leicester Sidecar Bodies fit any chassis, first- class finish: have a few coachbuilt bodies, clear- ce lines from £5 each; extra good value — The illowbrook Motor Co., Leicester. [0336

ODIES, 1922 production, brand new, from £3/15; 2-seaters complete from £9. Actual manufac- rers. Write for catalogue.—Robini Manfc. Co., 1 d 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone: rixton 1585. [3049

IDECARS.—De luxe, sporting, touring, made to order and in stock, first-class work only, as fitted Harleys, Indians, Matchless, 2-seaters; old sidecars part payment.—R.E.A.L. Carriage Wks., Kew idge. 'Phone: Chiswick 1254. [2627

IGHT Car and Motor Cycle Engineering Co., Ltd. —Light weight, £4/10. Medium weight, £8. eavy weight, £10/10. Sports, £8/10. Second-hand ght touring, in new condition, £4. Enfield body upholstered and renovated as new, £9.—26, Tulse ill, Brixton (½ minute from Brixton Skating Rink) 'hone: Brixton 1292. [3003

4/17/6.—New Douglas type Bodies, bulbous backed and upholstered in crocodile rexine; they require finishing coat of paint only. We have contracted r a large quantity, so can give the benefit to you. e Sidecar Attachment column.—Old Man Hep., 17- ), Wilcox Rd., South Lambeth, London, S.W.8. 'hone: 1958 Brixtoo. [1285

IDECAR Body Designs for the trade only. Work- ing, coloured pencil, or line drawings of original signs, also working drawings, full-sized or to scale.— ooper's Vehicle Journal, Designing Dept., established signers to the coach trade for over 80 years. Con- lt us when designing new ideas.—Dorset House, udor St., London, E.C.4. [0004

NOBB Speedman Sidecar Bodies.—A light, beauti- fully streamlined coachbuilt attachment, to fit d type non-underslung, or modern chassis. Supplied £2/12/6, ready for painting and upholstering. andsomely finished any colour, upholstered in good uality red or black material, £3/15; door 10/- extra. Vernon Cobb, 18, Midland Rd., Carlton, Notting- im. [2136

# The Juno Cycle and Motor Co.

*Proprietors:*
METROPOLITAN MACHINISTS Co., Ltd.
248, BISHOPSGATE, LONDON, E.C.2.

TELEPHONE: BISHOPSGATE 2195.
TELEGRAMS: QUILLS AVE LONDON.

ESTABLISHED OVER FORTY YEARS.

## The Pick of the Bunch!

**A.J.S., ARIEL, B.S.A., CHATER LEA, DOUGLAS, ENFIELD, INDIAN, LEVIS, MATCHLESS, NORTON, RALEIGH, RUDGE, SUN.**

## THE HAPPY MEDIUM AT LAST!

**McKENZIE**
**LIGHTWEIGHT MOTOR CYCLES.**

**Low price. Cheap running.**
**Easy Payments.**
**26 Guineas cash, or**
**£7 10 0 deposit and 12 monthly payments of £1 17 6.**
**Carriage and packing extra.**
**No waiting. Machines actually in stock.**

**Any Motor Cycles, Combinations (or Sidecars), can be supplied on our well-known GRADUAL PAYMENT SYSTEM.**
**Particulars on Application.**

## RENEW YOUR BRAKES NOW

**Front Rim Bowden Brakes from 13/9.**
**Band Brakes and rear rod brakes from 18/6.**
**Brake Blocks to suit all makes in stock.**

**Sidecar Bodies, Sandum or Venus, from £5 15 0.**

**Underslung or step chassis from £7.**

**EVERYTHING FOR THE MOTOR CYCLIST AT REASONABLE PRICES.**

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| Goggles, Triplex; plain or smoked glass, celluloid or non-inflam. mica from | 1/3 pr. | Watford Speedometers, slightly soiled, guaranteed | 4 15 0 |
| Bluemels, 1921 | 3 10 0 | Renolds Chain, ½ × ¼, per ft. | 5 6 |
| Orto Hoods | 3 5 0 | All spares in stock. | |
| Spring Shackles, set of four | 6 6 | Tan-Sads | 1 10 0 |
| P. & H. Lamp Sets | 1 12 0 | B & B Lightweight Carburetters, window soiled | 2 10 0 |
| W. S. R. Jets, all sizes | 8/6 & 10 6 | Cross over Belt Rim Brakes | 18 6 |
| Large H'bar Mirrors, 4½ reflector | 7 6 | | |

**FREE.** Call or write for 1922 96 pp. Illustrated List with all latest price reductions. A veritable motor cyclist's encyclopædia.

## SIDECAR ATTACHMENTS.

SFORSANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen, a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

SIDECARS! Sidecars!

SEVERAL Second-hand Coachbuilt Sidecars from £7/10.—Below.

BRAND New Coachbuilt Sidecars with bulbous backs and complete with aprons; a first-class job; not cheap and nasty; £17/10.—Below.

BRAND New Sidecars, coachbuilt, from £16. These are really wonderful value.—Below.

WE Have two Langford spring wheel sidecars, 5-point attachments, large bulbous backs with Picnic cases, completely fitted with all utensils, most elaborately finished, complete £35.—Jones Garage, Muswell Hill, London, N.10. [3160

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines: Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone: Hornsey 1584. [0522

COACH Sidecar, off Triumph, hood and screen, £10. —70, Baring Rd., Lee. [2402

LIGHT Coachbuilt Sidecar; £6/10.—Keonard, 78, Yerbury Rd., Holloway, N.19 [2170

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone; 5. [8622

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

BASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock; £25.

BASTONES for Sidecar Chassis, underslung £7/19/6, tandem chassis £14/10, auxiliary arms 14/-.— 228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. 'Grams: Bastones, London. [3032

CAMBER Utility Models; £25.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Utility Tandems; £27.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Semi-touring Models; £18/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Bulbous Back Models; £19/12/6.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Lightweight Models; £16/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Hexagon Sports Models; £25/17/6.— Bright and Hayles, 78, Church St., Camberwell. [8023

SCOTT Sidecar (body purple); best offer; room wanted.—72, Cornwall Rd., Brixton. [2315

SPORTING Sidecar, good condition; £8, complete; after 6.—70, Newlands Park, Sydenham. [2333

ROVER Sidecar and Chassis, new condition; £9.— Pembury Mews, Pembury Rd., Tottenham. [2263

COACHBUILT Sidecar, suit 4h.p., good condition, repainted; £8/10.—76, London St., Chertsey. [2354

## SIDECAR ATTACHMENTS.

WATSONIAN Sidecar Chassis, 1921, very little used; £7.—Pankhurst, 36, Strand, Exmouth. [2104

SWAN Sporting, 4 points, condition as new; £14.—Harding, 48, Wellington Rd., Holloway, N.7. [1979

MONTGOMERY Sidecars, the famous sporting model, in stock; prices from £17/10.—Houchin, Below.

LIGHT Montgomery chassis re-enamelled, with new light bulbous body, £12/10.—Houchin, 189A, High St., Peckham, S.E.15. [2637

DE-LUXE Canoelet Sidecar, fine condition, fit Triumph or other machine; £12.—3, Parker Lane, Burnley. [2061

SANDUM Sidecar, bulbous back, 28×3 wheel, nearly new, cost £28; accept £14.—93, Ormerod Rd., Burnley. [2062

SIDECAR Chassis, new, suit most makes; £5/19/6 complete to clear.—Edwardes, 277, Camberwell Rd., S.E. [2496

WATSONIAN Lightweight Touring Sidecar, nearly new, perfect condition; £12.—Highdene, Ridgeway, Enfield. [2198

BOOTHS Blackpool Bargains.—Limited number, new coach bodies, full size with locker, £5/17/6; usually £9/10.

BOOTHS Blackpool Bargains.—New £9/10 coach bodies for £5/17/6; illustration free.—Booths Motories, Blackpool.

BOOTHS Blackpool Bargains.—Quantity new underslung chassis, 4-point attachment, £9/19/6; illustration free.—Booths Motories, Blackpool.

BOOTHS' Blackpool Bargains.—Several shop-soiled sidecars, cheap. Hercules coach sidecar, £9/10/6; ditto Canoelet, £8/10/6; ditto Farlow, £8/10/6.

BOOTHS Motories, 294, Waterloo Rd., Blackpool. [9318

SWAN Touring Sidecar, suit Harley, extremely comfy, wants seeing; £12.—1, Lunham Rd., Upper Norwood, S.E. [2270

DOUGLAS Sidecar and Chassis, complete, underslung, as new, too heavy; £10, or exchange.—Mercer, Thurso. [2073

WHITLEY Sidecars, Coventry.—Three models, £25, £29/10, £32/10. Nothing on one wheel to equal. Lists free. [0856

SIDECAR, light, neat, as new, underslung chassis, bulbous back, coachbuilt; £11.—30, Cloncurry St., Fulham, S.W. [2112

DUNHILL Bulbous Sidecar, coachbuilt, new, done 60 miles, special chassis; £22, offer.—Porter, 50, Bloomgate, Lanark. [2205

£9.—As new, very smart, comfortable coachbuilt sidecar, disc wheel, screen, fit any make.—205, Lillie Rd., Fulham. [2453

CANOELET Racing Sidecar for Indian, new condition, with screen, etc., photo.; £12/10.—Spencer, Okehampton. [2097

GLORIA sprung wheel No. 5 sidecar, black and gold, luxurious equipment, as new; £22.—S. Rock, Cradley, Staffs. [2861

SIDECAR, underslung, coachbuilt, smart, perfect condition; £12/15.—Farrow, c/o Kwik, 4a, Tyrrell Rd., E. Dulwich. [2260

8 GNS.—1921 coachbuilt sidecar, bulbous back, locker, 26×2½ Dunlop, new condition; evenings.—143, Norbury Crescent, Norbury. [2418

EXTENDED Payments accepted for sidecars; models for all makes.—Send for catalogue, etc., Rideezi Sales, Ltd., 5, Victoria St., S.W.1. [0829

SWAN Sidecar, cream and black, as new, windscreen triplex, lamp, generator, disc-wheel, etc.; 16 gns.—8, Clifton Gardens, Golders Green [2082

RENNOO Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 50 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock out prices. Note: Write for special clearance list.

RENNOO Co. have the finest selection of complete sidecars in the trade.

RENNOO Co. undertake repairs to any make of side car; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOO Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2519


An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

Insurance Policies

IMPORTANT AGENCY EXTENSION

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS

Address—Agency Dept.,

The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED

Head Office:

77, Cheapside, London, E.C.2.

*Telephone: City 9831 and 9832.*
*Telegrams: "Autoinsure, Cent. London."*


## SIDECAR ATTACHMENTS.

MILLFORD coachbuilt sidecar, new condition; £1(—Apply 30, Christchurch Rd., East Sheen, S.W

MONTGOMERY Coachbuilt Sidecar, complete wit Easting and mat, excellent condition; £13/10.—Woodside Motor Co., South Norwood. [195

SIDECARS complete from £15, Millford, Douglas etc., the above are fitted with the finest bodie on the market.—33, Hackford Rd., Brixton. [312

SIDECAR, coachbuilt, 4-point, new tyre, apron electric lamps, accumulator, suit 3½h.p. or ligh weight; £12/10.—2, Langley Court, Long Acre. [307

JUST a few left.—Our 10-guinea coachbuilt sidecar complete with fittings and Clincher non-skid tyre —Comfy Sidecars, 789, High Rd., Leytonstone. [222

SIDECAR, brand new, underslung, handsome bulbou back, coach, complete, £12/10; body separate £5.—Taylor, 637, Seven Sisters Rd., Tottenham. [185

SIDECAR.—Have a Hopley folding sidecar. Save garage worry and expense Attached to motc will go through passage 28in Tandem and singl bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motc specify a Hopley folder. Suits motors up t 10h.p. Can be changed from pleasure to commercia in few seconds. Detachable wheels can be fitte Tested 7 years.—Hopley, Upper Highgate St., Birmin ham. [015

COLLINS and Son for sidecars, new bulbous bac models, complete with renovated underslun chassis, coverall apron, all fittings for any machi from £12/10.—Below.

COLLINS and Son.—2-seater bulbous back coac built models with underslung chassis, all fitting from £15.—Below.

COLLINS and Son have various models in stock suit any machine; few secondhand sidecars stock, cheap.—Below.

COLLINS and Son specialise in frame and chass repairs; special chassis built to order; work gua anteed. Send for catalogue, or call. Open till 8.3 p.m., Saturdays till 5 p.m., Sunday mornings 10 12.—Collins and Son, rear of 84, High St., Putne S.W. [19

COMFY Sidecars, strong underslung chassis, coac built body, bulbous back with locker, quick d tachable fittings, Clincher tyre; price 18 gns.—Comf Sidecar Co., Leytonstone. [30

TORPEDO sidecar, underslung, 4-point attachmen £10; sidecar outfits for Douglas, Triumph, and M., etc., in stock; let us quote you.—De Cort an Flynn, 39, Essex Rd., London, N.1. [27

SIDECAR, coachbuilt, complete, £6/15. Al Douglas, £10/10. Canoelet, £16. Anoth nearly new, lowest position, £14; room wanted.—57, Kenbury St., Camberwell, London. [23

WILLOWBROOK Royal Leicester Sidecars, smarte designs, first-class finish; prices from 17 gu Write for catalogue Repairs undertaken, hoods, wi screens, etc.—The Willowbrook Motor Co., Leicester. [03

PARAGON (patent) Folding Sidecar saves storag has 7 years to its credit, and has proved itse absolutely reliable. Fits any make of motor cycl and, when folded, combination will pass through 30in. doorway. Call and see it demonstrated.—Wincye Co., Ltd., 236, High Holborn, W.C.1 [03

20 1922 Underslung Chassis, complete with ne bulbous back body, £18/10; 20 1922 lightweigh complete, all brand new, £11/10; P. and M. outfi complete, all new guards, etc., £14; Douglas outfi complete from £14: Extended payments.—Robi Manfc. Co., 1 and 3, Tulse Hill, Effra Rd., Brixto S.W.2. 'Phone: Brixton 1585. [30

OLD Man Hep has 1,000 Douglas underslun chassis, renovated and complete, to suit all mak of machines, for £5; or fitted with a brand ne Douglas type bulbous backed body, for £10/10 (the bodies are upholstered with good quality Rexine, b require a last coat of paint); this has been left f travelling on rail; send for photo, enclosing stam We cannot be beaten for our prices. 'Phone: 19 Brixton. (See Body column.)—19, Wilcox Rd., Sou Lambeth, London, S.W.8. [30

LIGHT Car and Motor Cycle Engineering Co., Lt —Light touring complete, £12/12. Mediu touring complete, £15/15. Heavy touring complet £19/19. Heavy touring de Luxe, £21. Spor model, £18. Bramble touring sidecar, good con tion, £8/10. Light touring body, dark green, spl did condition, £4; with new chassis, £12. Custome old sidecars taken in part payment. Large si tradesman's box carrier, complete with strong chass £10. Millford.—26, Tulse Hill, Brixton (½ minu from Brixton Skating Rink). 'Phone: Brixt 1292. [30

## RUNABOUTS AND CYCLE CARS.

MORGANS, new 1922 Popular and Model De Lu in stock.—Moss, Wem. [29

WAUCHOPE'S, 9, Shoe Lane, London.—5-6h 1914 Carden Monocar; £50. [29

## RUNABOUTS AND CYCLE CARS.

21 De Luxe G.N., dynamo lighting; £125.—24, Balliol Rd., North Kensington. [2474

RDEN, 1921, rebuilt by engineers, fine condition; £65.—58, St. James's Rd., West Croydon. [2071

AUCHOPE'S, 9, Shoe Lane, London.—7-8h.p. Carden De Luxe, 1921, 2 speeds; £87/10 [2928

21 Bleriot Whippet, practically as new; best bid over £70 secures.—Central Garage, Hunstanton. [1999

TE 1920 De Luxe Morgan, as new, every accessory; £110.—24, Balliol Rd., North Kensington. [2475

RGAN De Luxe, w.c., J.A.P. in stock; cash or exchange.—Daw, Morgan agent, 114, Brixton [2751

/10.—Carden 5-6h.p. Twin-Jap. Monocar, lamps, etc; exchanges.—Smith's, 86, Chalk Farm Rd., 5. [2876

DELIA.—The new 1922 model, 8-10h.p., air-cooled or water-cooled to choice. Immediate ries.

DELIA.—Air-cooled model, £185; water-cooled model, £195; side-by-side armchair seats, 3 and reverse, 5 detachable wheels, hood, screen, tools, jack and pump included. Trial free.

DELIA.—Cash or easy terms. Your old car or motor cycle taken part payment.

DELIA.—Catalogue free from L. N. Palmer, Sole Concessionaire for the British Empire.—er's Garage, Tpoting. [2786

22 8h.p. Rover; cash, terms, or exchanges.—Shepherd, Enfield Highway. Tel.: Waltham 31. [0862

. Sociable, B Type, fine order, all on, tax paid; £40, or near offer.—Jennings, Stanstead Rd., esdon. [1990

TE 1921 8h.p. Rover, dynamo lighting, every ccessory, taxed; £155.—24, Balliol Rd., North ngton. [2473

. Duocar-J.A.P., Bosch, Binks, variable gear, good tyres, fast; £40.—Shaw, Jeweller, Well-n, Salop. [3156

. Rover.—1922 model, early delivery; exchanges.—Valbro Motor Cycle Co., Saffron Walden e: 45 [7159

. Monocar, 1920-21, new condition, electric lighting, single seater; £55.—120, Argyle St., Helens. [2434

RGANS Always in Stock.—The West of England Agent, Gibb, 100, Northgate, Gloucester e: 852. [8137

RRALL-BROWN, 1920, 4-cylinder; £100, or exchange motor cycle.—19, Grafton Mews, n St., W.1. [2595

BY PEUGEOT, 1915, 3 speed, tax paid; £100, or exchange combination.—19, Grafton Mews, n St., W.1. [2594

RDEN, 1922 model, perfect order, semi-de-luxe, dark green, tools; £90.—du Plat, King Edwards Ascot, Berks. [2628

0 10h.p. Light Car Chassis, 4 speeds and reverse; sale or exchange lightweight, cash adjustment.—King's Lynn. [1983

. 1921 De Luxe, fully equipped, perfect; £130; mall mileage.—James, c/o Bradmore's, 482, w Rd., Paddington. [2827

RGAN.—New 1922 Models in stock.—Agents, Birkenhead Motor Works, Old Bidston Rd., head. 'Phone: 2047. [2389

RGANS.—Prompt delivery of all models; official agents and trade distributors; exchanges, ex-l terms; spares.—Below.

.—Delivery from stock of new 1922 Standard and All-weather models.—Elce, Ltd., 15-16, psgate Av., Camomile St., E.C.3. 'Phone: ne 5548. [0073

ENTRY PREMIER.—1922 model, early de-livery; exchanges.—Walbro Motor Cycle Co., n Walden. 'Phone: 45. [7160

BY Argo, 4-cylinder, 2-seater, 9h.p., mag., dynamo, 2 and reverse, as new; sacrifice £90.—nyers, Carriers, Keighley. [2634

RDEN, 1921 (August), perfect; sell £75, or exchange 7-piece Chesterfield suite and cash.—an, Union St., Winchester. [2733

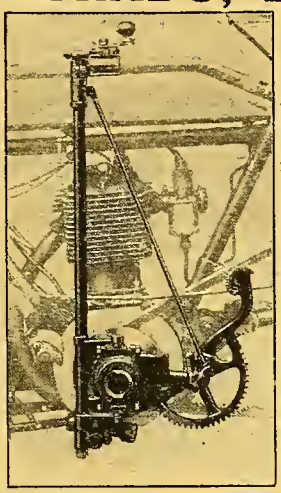
TE 1920 T.B. 3-wheeler, interchangeable wheels, 1 spare, every possible accessory, taxed; £110.—alliol Rd., North Kensington. [2472

21 Morgan-De-Luxe, new condition, about £60 extras, tax and insurance paid up to next ; £160.—168, High Rd., Kilburn. [2078

TT Sociable, delivered June, 1921, run 3,000 miles, all complete, spare wheel unused; £165, be seen 42, Cranbrook Rd., Ilford. [3037

W and Second-hand Light Cars and Cycle Cars, ll makes; good selection in stock; cash, easy nts, or exchange.—Service Co., 292, High Holborn, [0673


# GRADO, LTD.



**Special Prices.**

**Kick-start Model £6.**

Variable gear, free engine, kick-start. Here is our world-famed kick start Model for all machines from 3 to 10 h.p. Delivery from Stock.

**Plain Model £5 0 0.**

**Lightweight Plain Model £4 5 0.**

**Two-stroke Countershaft Model £8 8 0.**

Variable gear, free engine, handle start Complete with chain, both sprockets and starter.

*Postage Free.*

## The Grado Concentrix Valve Grinder.

**Grinds Valve Absolutely Central.**

**VALVE CAP and SPARKING PLUG SIZE.**

American and English Threads.

**PRICE 6/6 Post Free.**

**Requires No Effort. No need to take off Cylinder.**

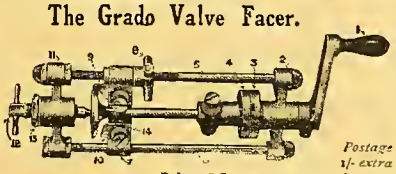
## The Grado Stand Spring Return.

**STAND CANNOT FALL DOWN.**

**ORDER ONE TO-DAY.**

**Price 5/9 Post Free.**

## The Grado Valve Facer.



*Postage 1/- extra*

**Price 20**

**LONDON: 26, Cross St., Hatton Garden, E.C.1.**
**NORTHERN & MIDLAND ORDERS: 66, Pershore Street. Birmingham.**


## RUNABOUTS AND CYCLE CARS.

A.C. Sociable, 1914, splendid order, Binks carburetter, hood, windscreen, newly upholstered; £55.—Partridge, Grocer, 174, Ealing Rd., W.5. [1997

MORGAN, 8h.p. J.A.P., a.c., 2 speeds, screen, hood and cover, lamps, in good condition; £90; any trial.—228, Kilburn Lane, Paddington. [3069

1921 G.P. Morgan, J.A.P., red, lined black, discs, spring seat, lighting set, Stewart horn, under 1,000 miles; £150; exchanges.—Ewen, King's Lynn. [1982

MORGANS.—1922 De Luxe, Grand Prix, and Popular models, early delivery; exchanges.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [7158

LATE 1920 Blériot-Whippet, dynamo lighting, spare wheel, many accessories, taxed; 98 gns.; good motor cycle part.—37, Elmbank Gardens, Barnes. [3165

1920 Morgan, Family model, 8h.p. J.A.P., w.c., engine recently overhauled, in good order, accessories, trial; £145.—Birch Cottage, Beech Hill, Bordon. [2729

RILEY Light Car Chassis, wheels, axles, £8; combination electric light set, 50/-; Norton Philipson pulley, 70/-.—E. W. Rapson, 116, Woking Rd., Guildford. [1953

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0736

BLERIOT Whippet, 1920, thoroughly overhauled, good condition, handle starter, lamps, tools, etc., not used for 12 months; £90.—Holloway and Knight, Bedford. [2503

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220; in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0773

TAMPLIN 1921, 2-seater, J.A.P. engine, 8h.p., 3 speeds, recently overhauled, not used since last September, a fast little car; price £80.—A. H. M., 24, Alexandra Rd., Reading. [1810

A.V. Monocar, 1921½ Sports, special J.A.P. racing engine, new oversize tyres, speedometer, lighting set, and horn, guaranteed perfect; £85.—Haven, Portsmouth Rd., Esher, Surrey. [3121

1920 Morgan de Luxe, 10h.p. M.A.G. engine, in new condition, all new tyres, acetylene lighting, very fast, any trial; £125; great bargain.—Stone, 280, Gloucester Rd., Horfield, Bristol. [2644

85 GNS, genuine bargain.—Morgan, M.A.G., a.c., 1920, large bonnet, fully equipped, including discs, any trial; wanted, Coventry-Premier. — 136, Dalmally Rd., Addiscombe, Croydon. [2325

HALIFAX.—Morgans, 8h.p. J.A.P., hood, screen, tax paid, £85 and £95; 1920 8h.p. A.V. Monocar, £75; 1920 2-seater Tamplin, £99/10.—Halifax Motor Exchange, Horton St., Halifax. [2989

1921 Carden 2-seater, nearly new, electric lighting, hood, screen, licensed, very smart; 85 gns.; exchanges; easy terms.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [2551

MARTINI 10h.p., 2-seater, 4-cylinder, hood, screen, side curtains, lamps, folding dickey, speedometer, tools, perfect order, reliable; £68; real bargain; trial.—89, East Hill, Wandsworth. [2576

BABY Peugeot 1915, 2-seater, hood, screen, lamps, licensed, entirely overhauled, 4-cylinder, three and reverse, splendid condition, trial, very smart; £85, guaranteed.—89, East Hill, Wandsworth. [2575

G.N., 8h.p., standard touring, electric lighting, left works August, first used January, like new, licensed to December, ready to drive away; £170.—Telford Garage, 47, Streatham Hill, London, S.W.2. [2993

G.N., 1921, Vitesse model, dynamo lighting, aluminium pistons, variable ignition, spare wheel, tax paid, condition as new; £145, bargain.—K., 7A, Grasmere Rd., Woodside, S. Norwood, S.E. [2651

8-10h.p. Voisin Light Car, 5 detachable wheels, dynamo lighting, very light and economical, any trial; £125, or exchange motor cycle or combination and cash.—7, Norwood Rd., Herne Hill, S.E.24. [2247

A.C. Sociables, by the A.C. Company, dependable runabouts, take 2 persons anywhere, good condition and appearance, fully equipped, from £40 to £55; trial.—29, Allsop St., Upper Baker St., London, N.W. [2652

A.V. Monocar, 1919, 6h.p., yellow and black, latest ball-bearing gear, electric lights, hood, screen, new tyres, new Cox Atmos carburetter, engine just rebushed throughout, tax paid, £30 spent on complete overhaul, bill shown, any trial; £70.—Robins, High St., Wanstead. 'Phone: 607. [2110

G.N. (April, 1920) Touring 2-Seater, Smith's dynamo lighting, bulb and electric horns, speedometer, interchangeable spare wheel, 5 new tyres, engine has been thoroughly overhauled and fitted with adjustable valve tappets and latest improved type cylinder heads, body re-enamelled, varnished and fitted with aluminium bonnet, very sporting appearance, car is complete with various spares and excellent tool kit; £155; any inspection or trial on application to owner.—C. C. Collumbell, 15, Devonshire Sq., Loughborough. [2232

## RUNABOUTS AND CYCLE CARS.

*Spare Parts:*

MORGAN Spares from stock.—Maudes' Motor Mart, 100, Great Portland St., W.1. [2809

MORGAN Spare Parts Depot.—Spares for all models from stock.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0074

## TAXI-COMBINATIONS AND CABS.

"COUNTY," 8h.p. B.S.A. Sidecar Taxis, as licensed throughout the country.—Write for full particulars, County Cycle and Motor Co., "Originators," 300, Broad St., Birmingham. [5353

## CARS FOR SALE.

9h.p. Bayard, 2-seater; £75.

10h.p. 1915 Calthorpe, 2-seater, sports, electric lighting, disc wheels; £120.

1921 Merrall-Brown 4-cylinder Coventry-Simplex, detachable disc wheels, etc.; £150.

EXCHANGES, deferred payments.—Railton, Cobham and Co., Ltd., 47, South King St., Manchester. [3149

£25 down and 12 monthly payments £4 secures excellent Napier long chassis.—Palmer's Garage, Tooting.

£35 down and 12 monthly payments £5 secures 12-14h.p. F.I.A.T. chassis.—Palmer's Garage, Tooting.

£40 down and 12 monthly payments £10 secures excellent Berliet touring car.—Palmer's Garage, Tooting.

£30 down and 12 monthly payments £6 secures 25h.p. Darracq limousine.—Palmer's Garage, Tooting.

£30 down and 12 monthly payments £6 secures 2-ton Karrier lorry, new tyres.—Palmer's Garage, Tooting.

£50 down and 12 monthly payments £8/10 secures Oakland 7-seater touring car, dynamo lighting.—Palmer's Garage, Tooting.

£125 down and 12 monthly payments £10 secures modern 15.9h.p. Peugeot sports 4-seater.—Palmer's Garage, Tooting.

£30 down and 12 monthly payments £5 secures splendid S.C.A.T. 12-seater waggonette.—Palmer's Garage, Tooting.

PALMER'S Garage, Tooting, will accept your old car or motor cycle as part payment for any car in stock. [2785

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

BARGAIN.—Old 8h.p. Rover, running order, needs attention, suit mechanic; scrap iron price, £19.—Keen, Leominster. [2642

ROVER 8h.p. 2-seater, and dickey, good running order, taxed; £45; exchange A.C. Sociable.—12, Lesbourne Rd., Reigate. [2698

ROVER Cars.—The famous 8h.p model in stock. £220; for immediate delivery.—Eagles and Co., 275, High St., Acton, London [0761

HUMBERETTE, A.C., excellent condition, fully equipped; year's tax paid, any trial; £78.—White, 24, Bramshill Rd., Harlesden. [2121

1921 Rover 8h.p.; dynamo lighting, spare wheel, condition perfect; £160.—Hillier (Side Bell), 9, Wallingford Ave., North Kensington. [2701

COVENTRY PREMIER, 1922, 4-wheel model; £230; immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash; deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hansler Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452 [7938

HALIFAX.—1922 B.S.A., Calthorpe, Coventry Premier, Lagonda, and Rhode. Latest models. Cash or exchange.—Halifax Motor Exchange, Horton St., Halifax. [2990

BABY Peugeot 2-seater, 1915, 4 cylinders, water-cooled, in excellent condition; nearest £85, or exchange for good motor cycle and cash.—18, Wherstead Rd., Ipswich. [2717

COVENTRY PREMIER 3-wheeler, 8h.p., water-cooled, show room model, unsoiled, never been sold, demonstration only, dynamo lighting, spare wheel; bargain, £165.—West's, Official Agents, 42, Cranbrook Rd., Ilford. [2150

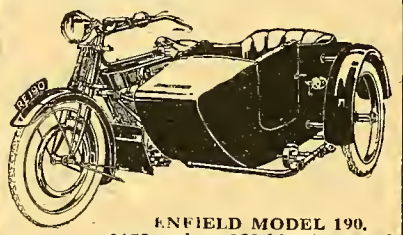
£115.—Morris-Oxford, 2-seater, in very fine condition, 3 tyres as new, hood, screen, spare wheel and tyre, 5 lamps, accumulator, Klaxon horn, speedometer, petrol can carrier, pump, jack, and tools; £9 tax paid.—Delancey Street Garage, Camden Town, N.W.1. [2962

# RATCLIFFE BROS.

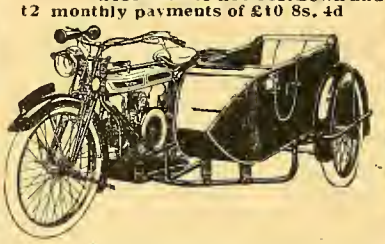
## 200, GT. PORTLAND ST., W

'Phone—Langham 1701.

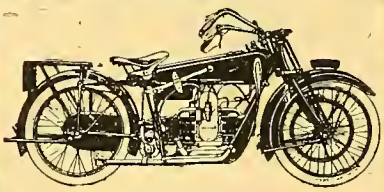
**Any make of machine can be supplied on our Payment out of Income Scheme. Write for full particulars, and state machine you are interested in**



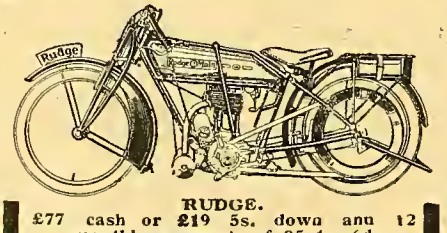
**ENFIELD MODEL 190.**
**£158 cash or £39 10s. down and 12 monthly payments of £10 8s. 4d**



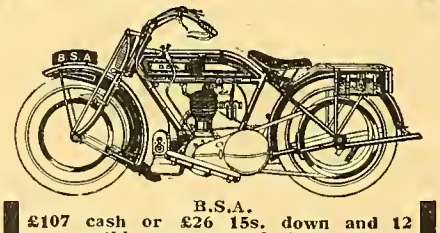
**DOUGLAS.**
**£135 cash or £33 15s. down and 12 monthly payments of £8 18s.**



**RALEIGH.**
**£130 cash or £32 10s. down and 12 monthly payments of £8 11s. 5d.**



**RUDGE.**
**£77 cash or £19 5s. down and 12 monthly payments of £5 1s. 6d.**



**B.S.A.**
**£107 cash or £26 15s. down and 12 monthly payments of £7 1s. 1d.**

**TRADE SUPPLIED.**

## CARS FOR SALE.

WEST NORWOOD!—Several fresh arrivals in the following (selection only), over 60 vehicles actually viewable, many absolutely absurd bargains, including:—De Dion chassis, £20; Rover 2-seater, £; Baby Peugeot, £40; Auto-Carrier, £45; Darracq, £; Adams 4-seater, £50; Alldays, £60; 10h.p. Siza sporting 2-seater, £65; Wolseley, £65; combinati £70; 15h.p. 5-seater, £75; 3-ton worm-drive lo £75.

WEST NORWOOD!—Exceptionally smart 1 Ford tourer, domed mudguards, dynamo, £ 12-15h.p. Duhanot 3-seater, dickey, monobloc, £ Unic 15 cwt. van, £85; 20h.p. Wolseley three-quar landaulet, gate, £90; L.G.O.C. 3-tonner, £95; little G.W.K. 2-seater, £100; 8-10h.p. 1913 light coupé, £100; 10h.p. 1915 2-seater light car, 4-cylin monobloc, £100; 30 cwt. lorry, £120; smart 16 English-made landaulet, enclosed valves, gate, Zen £125; 15-20h.p. Mitchell semi-sporting 2-seater, £1 3-ton Knight-Daimler, £130; 12h.p. Humber cou dickey, £135; Maxwell tourer, £135; 12h.p. Siza Naudin 3-seater, dickey, 4-cylinder, monobloc, £1 Renault, £135.

WEST NORWOOD!—Smart little 12h.p. 1916 O landaulet 4-seater, self-starter, dynamo lighting, cylinder, monobloc, nice, £150; Fiat landaulet, £1 brand new latest 1-ton Ford, £165; 10h.p. 4-cylin 4-seater, £175; 25h.p. English three-quarter land let, £175; 1917 1-ton G.M.C., £185; 15-20h.p. 1 coupé, self-starter, dynamo, £185; 15.9h.p. A Johnston tourer £185; 20h.p. Vauxhall landau dynamo lighting, cord interior, smart, £185; 15.9 Gregoire, stream line 4-seater, £200; 15.9h.p. three-quarter landaulet, £200; 3-ton 1916 Bel overhauled, retyred, £250; Minerva streamline tou £250; 22h.p. Darracq interior-drive saloon, dyn lighting, enclosed valves, cord interior, £250; s 22,4h.p. Flat three-quarter landaulet, £285; 2 Leyland, £285; 24-seater Hallford, £285; 1916 Tal dynamo, £300; 30h.p. 6-cylinder interior-drive weather double cabriolet, £350.

WEST NORWOOD!—1920 12h.p. Varley-Wo bulbous-back 3-seater, dickey, self-sta dynamo lighting, cantilevers, cost double, £350; cylinder bulbous-back streamline, 4-seater, Eng make, £18 tax, dynamo, £385; fine interior-d saloon, £385; 16-20h.p. Wolseley interior-drive sal self-starter, dynamo lighting, splendid car, barg £485; super-sporting 17-50h.p. Bignan-Sport, 4-se self-starter, dynamo, 70 m.p.h., splendid condit £650; 16h.p. Sunbeam super landaulet, £685; Fiat tourer, almost new, self-starter, £850; sev others; exchanges; payments.—Douglas S. Cox, absolutely straight motor man, Lansdowne Hill, Norwood, has above actually in stock. Please Established 1902. [

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, easy terms. 'Phone. Holborn 5777. [

HALIFAX.—Second-hand models at special rat Halifax Motor Exchange, Horton St., Halifa [

ABSOLUTE cash bargain purchases on exte payments. Postcard procures list.—Dougla Cox, West Norwood. [

FOR Best Treatment and best terms for light cycle cars, or motor cycles of any make, ne second-hand, write Service Co., 292, High Hol W.C.1 [

ANY make of cycle or any combination compl equipped; licensed, insured on 12, 15, 18 mo extended payments system.—Write for particu Rideezi Sales, Ltd., 5, Victoria St., S.W.1. [

HERBERT ROBINSON, Ltd., Green St., bridge, will supply any make of motor cycl light car on easy terms at the lowest possible obtainable anywhere. Catalogues and full partic by post. [

## ENGINES.

P. and M. engine, good; £9.—118, Algernon Lewisham. [

HARLEY Engine; £18.—Kennard, 78, Yerbury Holloway, N.19. [

2¾h.p. Minerva, mechanical rim, spring forks; —Swan Lane, St. George, Bristol. [

T.D.C. 2-stroke, 2¾h.p., like new, chain and for magneto; £6.—Storey, Crogan Hill, B [

LEVIS 4½h.p. Flat Twin, 2-stroke, M-L mag Binks carburetter, complete, seen running.—V 33, Angell Rd., Brixton. [

2¾h.p. 2-stroke (1922), latest type, eminent brand new, guaranteed perfect; approval, Grant, 1, Gosta Green, Birmingham.

4h.p. J.A.P. Engine, air-cooled, £7/10; 3h.p. I engine, air-cooled, £5.—Shotton Motor and Co., 85, Chester Rd., Shotton, near Chester.

2¾h.p. Minerva M.O.V., Thomson-Bennett ma Amac carburetter, £4/10; 3½h.p. Kerry e £2/10.—887, Lea Bridge Rd., Walthamstow.

1914 4h.p. Triumph Engine, 37225, decompr Splitdorf magneto, latest carburetter, e pipe, silencer, engine plates; £14/10, or offer Furze Lane, Purley.

## ENGINES.

.p. T.D.C. Engine, magneto, carburetter, new cylinder; £12.—26, Balcarres Rd., Preston. [1960

and M. complete engine, pre-war model; £2/10.—King, Egrove Farm, Kennington, Oxford. [2836

.h.p. Precision 4-stroke, Bosch, B. and B., rests, etc., recently overhauled, ready for frame; £12. Bailey St., Derby. [3154

LLIERS.—All spares from stock. J.A.P. 8h.p. twin, air-cooled, new, £25; also 7-9h.p. M.A.G., r-cooled, new, £35.—Maudes' Motor Mart, 100, it Portland St., W.1. [2808

!IUMPH Engine, 3½h.p., complete with silencer, magneto platform, chain covers, engine plates, carburetter; £8/10.—Maxwell, 4, Cambridge e, Kilburn Park, London, N.W.6. [2282

\.P., as new, 8h.p., £22; 6h.p., £18/10; 5h.p., £17/10; all rebuilt by makers. Cylinders and ns cheap, perfect. All spares. State engine her.—V. M., 13, Ashmount Rd., Page Green, . [3145

h.p. Bloomfield twin, £6/10; 6h.p. Bucket twin, with magneto, £12/10; 7-9h.p. Harley-Davidson , £18; 8h.p. new J.A.P. water-cooled twin, with neto, £25; 10h.p. new Precision twin cycle car ne, £30. — Murray's, 37A, Charles St., Hatton den, Holborn. [2859

S.A. engines, 4½h.p., perfect order and condition, from £12; Clyno 5-6h.p. twin, ditto, £12; T.D.C. p. special engine, with Bosch magneto and Zenith rretter fitted, complete unit, £20; Humber 2¾h.p. , magneto and carburetter, £15; others in stock; is quote you.—De Cort and Flynn, 39, Essex Rd., lon, N.1. [2756

EPPELTHWAITE'S.—8-10h.p. w.c. twin Rex, £11/10; 8h.p. a.c. J.A.P., £18; flat twin 2-e (unit), £10; Indian 7-9h.p., £14/10; M.A.G. (been in fire), £11; 1922 model 4h.p. Scout, 3h.p. M.O.V. Minerva, £3; and several others, Spare Parts and Accessories column, under elthwaite's, 19, Wilcox Rd., South Lambeth, lon, S.W.8. 'Phone: 1958 Brixton. [3033

tAND New Engines.—An exceptional opportunity: 1921 Precision 3h.p., 2-stroke (as fitted to the dmore motor cycle, etc.), a complete unit, with rson-Bennett magneto, Cox Atmos single-lever car-tter, list price over £30; limited number to clear, What a gift; or, less magneto and carburetter, ns. Only a few left.—Marble Arch Motor Ex-ge, 135, Edgware Rd., W.2. 'Phone: Padd. 789. [3102

CK LUCAS for reliable engines.—Bensley 6h.p. side-by-side twin, practically unused, £5; Scott oke, air and water-cooled, £6, complete with rretter; 1908 Rex 3½h.p., M.O.V., fitted on cylinder, really fast, £5; New Hudson, 1914, ically new, £8; Humber 3½h.p., A.I.V., £2; Dion, 35/-; 1½h.p. Clement, £1; Clement-ad water-cooled stationary, outside flywheel, l, oil and cooling tanks, magneto and car-tter, £10.—Jack Lucas, 110, Willows Rd., Com-Hill, Birmingham. [2587

..P. Engines, J.A.P. Engines, J.A.P. Engines.—I have the largest stock of 8h.p. J.A.P. Engines parts in England; over 30 engines in stock to from. Engines at £18 each, and all parts for new cylinders, 50/- each; new pistons, 17/6 complete; new connecting rods, 40/- pair; new cases, 35/- pair; valves complete, 4/- each; ex-caps, 3/-; cam levers, 3/- each; gear covers, ; chain covers, 7/6; exhaust box and pipes, 18/-. p reply.—South Croydon Motor Exchange, 22, n End, Croydon. [9320

## IGNITION, LIGHTING, ETC.

B. I. Co.

B. for new and second-hand magnetos; all spares stocked.

B. Specialise in Thomson-Bennett complete for fixing to Triumph.

M., J.A.P., Douglas, 2-stroke engines, etc.; £3.

A.V. New, twin and single, clock and anti; £3

XIE, Single and twin, all degrees; £2/5.

B. Guarantee all magnetos one year.

B. will take your old machine in part payment.

B. Despatches all goods per return, carriage paid, on approval against cash, or through *The Motor* deposit system.

B. Ignition Co., 78, New Park Rd., Brixton Hill, London. 'Phone: Brixton 610. [0694

W unused 1914 Bosch magneto, £5.—30, Christ-church Rd., East Sheen, S.W. [3211

W Thomson-Bennett 50° Twin; £4/15, close offer. —24, Wilton Crescent, Wimbledon. [2219

L Single, K1 type, variable, unused; 50/-.—Tomp-kios, 25, Buckingham Rd., Harlesden. [2032

XIE Magneto, enclosed waterproof, variable ignition, 180°; 30/-.—15, Lea St., Kidderminster. [2149

)SCH and M.L. singles, 30/-; C.A.V., 37/6, variable ignition guaranteed.—84, Greenside Rd., don. [2357

# BASTONES

**ESTABLISHED 16 YEARS.**

***No Better or Cheaper House***

## USCO RUBBER NON-SKID COVERS.

Manufactured by the Dominion Tyre Co.

| | List Price | Our Price |
|---|---|---|
| 20×2½ to fit 26×2¼ Heavy | 53/- | 28/6 |

## GOODRICH Safety-Tread COVERS (Extra Heavy)

| | |
|---|---|
| 26×2¼ .. .. .. .. | 28/- |
| 26×2½×2¼ .. .. .. | 36/- |
| 26×2½ .. .. .. .. | 35/- |
| 550×65 .. .. .. .. | 36/- |
| 650×65 .. .. .. .. | 40/- |
| 700×80 for 650×65 rim .. | 48/- |
| 28×3 .. .. .. .. | 48/- |
| 710×90 .. .. .. .. | 55/- |
| 815×105 .. .. .. .. | 80/- |

## CLINCHER Rubber Non-Skid COVERS.

| | |
|---|---|
| 24×2¼ De Luxe Junior .. | 20/- |
| 26×2⅜ De Luxe Heavy .. | 25/- |
| 26×2⅝ Extra Heavy .. .. | 27/- |
| 26×2½×2¼ Heavy .. .. | 27/- |
| 650×65 Dreadnought 3-ribbed | 39/- |
| 700×80 to fit 650×65 De Luxe Extra Heavy | 47/- |
| 28×3 De Luxe Extra Heavy.. | 37/6 |

## MISCELLANEOUS COVERS.

| | |
|---|---|
| 26×2 Englebert Passenger .. | 17/6 |
| Bergougnan Heavy .. | 18/6 |
| 26×2¼ Hutchinson T.T. .. | 23/- |
| 26×2⅝ .. .. .. .. | 25/- |
| 26×2¼ Bergougnan (Heavy) .. | 20/- |
| 26×2⅝ Kempshall Anti-Skid .. | 30/- |
| 26×2½ Midland Rubber Non-Skid .. .. .. | 26/- |
| 26×2½ Bergougnan Heavy .. | 23/6 |
| 26×2½ Wood Milne Extra Heavy.. .. .. | 23/6 |
| 650×65 Wood Milne Heavy .. | 18/6 |
| 26×3 Englebert Rubber Stud | 25/- |
| 26×2½ Michelin Fine Ribbed.. | 21/- |
| 26×2½ Englebert (wired edge) | 25/- |
| 26×2¼ Rom. Rubber, Non-Skid | 29/- |
| 26×2¼ ,, Combination .. | 40/- |
| 26×2¼ Goodyear Diamond Tread | 26/- |
| 26×2½ Skew Rubber, Non-Skid | 35/- |
| 28×2 Clincher A Won (wired edge) | 20/- |
| 28×3 Hutchinson Super-Studded | 64/3 |
| 700×80 Super Chain Ex. Heavy | 42/- |
| 30×3½ Prudential Rubber Non-Skid .. .. .. | 59/6 |

## TUBES.

**Goodrich, Clincher, Hutchinson and Red Fox.**

| | | |
|---|---|---|
| 24×2 and 24×2¼ .. | each | 4/3 |
| 26×2¼ and 26×2½ .. | each | 5/9 |
| 650×65 / 700×80 and 28×3 .. | each | 7/6 |

*The above new Clearance lines are sent on approval against remittance. Carriage Paid.*

**Hours—9 till 6; Sat., 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

'Phone: 2481 North. 'Grams: 'Bastones, London.

## IGNITION, LIGHTING, ETC.

BROWN, Gardiner and Co.

C.A.V. 2-cylinder, clockwise, aeroplane starting magnetos, platinum points, guaranteed unused, all working parts interchangeable with C.A.V. type KU2.

THESE Magnetos can be converted for use on any 1- or 2-cylinder engine of less than 5h.p.; 25/- each, carriage paid.

SPECIAL Prices for quantities.

CASTINGS and brass armature ends; 10/6 per set.

LONG Cams necessary for single cylinders; 3/- each.

SAMPLES sent on approval against cash.

BROWN, Gardiner and Co., 8, Bevis Marks, E.C.3. [0826

COUNTY of London Engineering Works, Ltd.

ALL Magneto Spares stocked.

GOVERNMENT Surplus Magnetos (new, unused).

BOSCH, Single, type D.A.L., variable ignition; £3/18 each.

M.L. Single Enclosed Waterproof, variable ignition, £4 each.

THOMSON-BENNETT, single, enclosed waterproof, variable ignition; £3 each.

THOMSON-BENNETT, twin, enclosed waterproof, variable ignition, all degrees; £3 each.

C.A.V., single, enclosed waterproof, variable ignition; £3 each.

C.A.V., twin, enclosed waterproof, variable ignition; £3 each.

RUTHARDT, single, enclosed waterproof, variable ignition; £2/10 each.

BERLING, single cylinder, enclosed waterproof, variable ignition; £2/10 each.

SPLITDORF, single, enclosed waterproof, variable ignition; £2/10 each.

DIXIE, single, enclosed waterproof, variable ignition; £2/5 each.

DIXIE, twin, enclosed waterproof, variable ignition; £2/5 each.

ANY of the above single-cylinder Magnetos can be supplied with the special long driving spindle, suitable for Rudge.

THESE Magnetos are fitted with leads and base plates, ready to be immediately fitted. Please state make of engine when ordering.

GUARANTEE.—We guarantee all our Magnetos for 12 months, and will willingly replace or repair any that should prove defective within that period.

SEND your repairs to us; it will pay you; all repair work guaranteed.

COUNTY of London Engineering Works, Ltd., 27, Stockwell Rd., Clapham, London, S.W. (opposite Stockwell Underground Station).

TELE.: Brixton 2841. T.A.: Ignitionac, Brixstret, London. [1848

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3.

C.A.V. Magnetos, 1- or 2-cylinder, clock or anti, variable ignition, with short-circuiting terminal and platinum points; price 50/- each; all working parts are standard, and interchangeable with C.A.V. types KU1 and 2.

THOMSON-BENNETT, types A.M.1 and 2, variable ignition, clock or anti, fitted with short-circuiting terminal and platinum points; price 52/6 each.

THOMSON-BENNETT, and M-L's of Coventry, 1-cylinder, types A.D.S. or P.L.R., especially suitable for stationary engines, price 35/- each; fitted with variable ignition, 10/- extra.

THOMSON-BENNETT 4-cylinder, variable ignition, clock or anti, fitted with short-circuiting terminal; price £4/10.

BOSCH, D.A.L., waterproof, variable ignition, 1-cylinder, clock or anti, with short-circuiting terminal; price £3 each.

GUARANTEE.—All magnetos are guaranteed to give satisfaction, and are despatched in perfect working order; any machine not in accordance with our guarantee will be replaced or money refunded, if returned to us as sent, and within 30 days of receipt.

TERMS.—Net cash with order; samples sent on approval against cash; all goods carriage paid.

BEFORE ordering elsewhere, write for samples, and compare our quality and finish with other supplies.

VALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3. 'Phone: Avenue 4564. [0698

THOMSON-BENNETT Magnetos, Type A.M., new, guaranteed perfect, waterproof, singles, flat twins, V twins, any angle 42° to 55°, clock or anti; week's approval against cash.—Brocklanks, 58, Lord St., Southport. [0756

## IGNITION, LIGHTING, ETC.

MAGNETO and Engineering Co. for magnetos, spares and repairs.

BOSCH Enclosed Waterproof Type D.A.L. Magnetos, Government surplus, ready to fit on Indian, Harley, J.A.P., or any big single or twin, gives powerful spark at all engine speeds, makes your engine a real live engine, gives you easy starting, smooth and rapid acceleration, high speed, and low fuel and oil consumption with increased power; price only £5 each, postage 1/6 extra; a 12 months' written guarantee sent out with each magneto. We give you satisfaction or refund cash.

PLEASE note, the above type magnetos were originally manufactured for 200h.p. aircraft engines; therefore we have every confidence in claiming them to be the magneto you require for your big machine. Fit one to-day, and see life with a live machine.

HARLEY-DAVIDSON owner writes:—"Magneto to hand; many thanks for prompt dispatch; satisfactory in every way; will recommend to my friends."

REMEMBER your magneto is sent on 14 days' approval against cash per return on receipt of your order; there is no obligation to keep it until you have used it for 14 days on your machine and are satisfied; let us send you one now.

MAGNETO and Engineering Co., 28, Bateman's Row, E.C.2. 'Phone: London Wall 4570. (One minute from Brown Bros.) [3208

THE Largest Organisation in Europe for ignition and automobile electrical equipment.

THE Runbaken Repair Service has eight fully staffed and equipped Service Depots throughout the country, each ready and competent to carry out the most difficult repair to any make or type of magneto, dynamo, starter, accumulator, or battery.

COMPLETED Work is fully guaranteed and of the highest finish. Send your machine for a free examination and quotation.

THE Runbaken Magneto Co., Ltd. Head office and works: Cheetwood Lane, Derby St., Manchester (City 8266) (3 lines). Manchester: 288, Deansgate, (Central 7342). London: 142, Gt. Portland St., W.1 (Museum 3905). Leeds: 94, Albion St. (27219) Liverpool: 16, Colquitt St. Birmingham: 192, Corporation St. (2059 Central). Bristol: 14, Colston St. (3728). Glasgow: S. W. Murray, 34, Bath St. (Douglas 1784). Paris: 7, Rue Bruuel (Wagram 50-12). [0841

RELIANCE Magneto Repairing Co. (the largest London repair depot) for repairs and new magnetos.—See below.

RELIANCE Guarantee to Return your magneto within 3 days, if necessary 24 hours, with a 12 months' written guarantee.

RELIANCE Test Every Magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE Manufacture and Stock Spare Parts for all magnetos. Special line, genuine platinum screws for every make, 12/- per pair.

RELIANCE will be pleased to give advice, free of charge, upon any question concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., London, E.C.1, for new and second-hand magnetos.

THOMSON-BENNETT Magnetos, brand new, enclosed waterproof type, singles, suit any engine, price £3; twins, 45, 48, 50, 55, 60, 180 degrees, for Douglas, Clyno, etc., price £3. See our guarantee below.

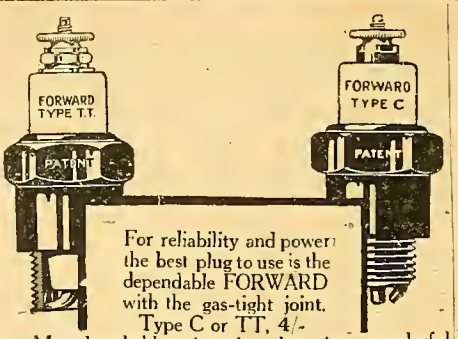
C.A.V. Magnetos, waterproof, new and unused, singles and 180 degrees twins, suitable for Douglas, O.K., Calthorpe, A.J.S., Enfield, Levis, New Imperial, Scott, Velocette, or any lightweight. These magnetos are of the finest workmanship throughout. Price £3. See our guarantee below.

BEFORE Sending Elsewhere, send a P.C. for our small interesting booklet showing a full range of magnetos to suit every engine, with full particulars and prices.—See below.

GUARANTEE.—Every magneto, no matter what the price or make, is guaranteed by us. Not merely a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee each machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

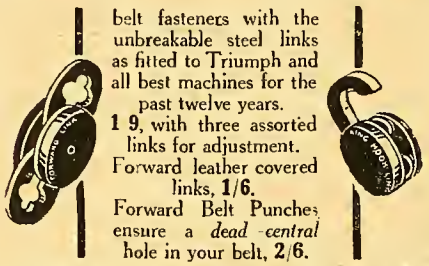
RELIANCE Cordially Invite Customers to their works to see any of the above on test. Magneto list, giving full particulars, sent upon application. It will pay you to deal with a firm of repute.—Reliance Magneto Repairing Co. (1914), 283, St. John St., London, E.C.1. [3882

LIGHTING Set, brand new 1922 Bosch, lamps, accumulator, dynamo, clips, wiring, spare bulbs, ready to fit; best offer.—Write, 3, Ashbourne Mansions, N.W.11. [2432




For reliability and power the best plug to use is the dependable FORWARD with the gas-tight joint. Type C or TT, 4/-
Type M, a detachable mica plug that gives wonderful results on hot engines, 5/-.

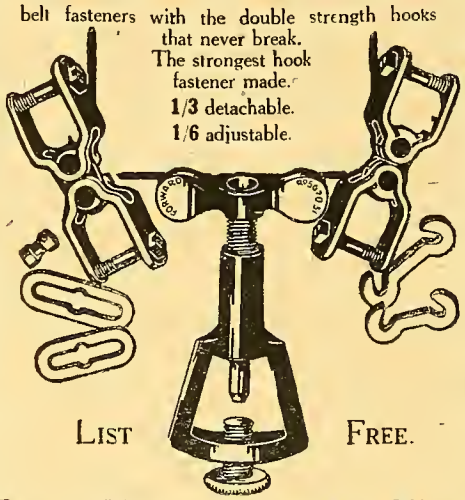
# FORWARD



belt fasteners with the unbreakable steel links as fitted to Triumph and all best machines for the past twelve years.
1 9, with three assorted links for adjustment.
Forward leather covered links, 1/6.
Forward Belt Punches ensure a *dead-central* hole in your belt, 2/6.

# KING HOOK

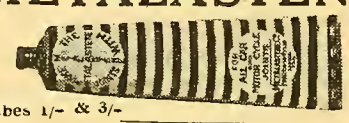
belt fasteners with the double strength hooks that never break.
The strongest hook fastener made.
1/3 detachable.
1/6 adjustable.



LIST FREE.

**Forward Plug Co., Summer Row, B'ham.**

NO MORE AIR LEAKS
MAKE YOUR ENGINE JOINTS WITH
# METALASTENE



Tubes 1/- & 3/-

## ALUPOL

The Perfect Polish for all ALUMINIUM metalwork, wheel discs, bodies, etc. Imparts a brilliant lustre with a minimum of effort.
**Large Tubes, 1/3.**
*From* **Live Agents, Halford Depôts, J. Grose, Ltd., London,** *or post free from*
**METALASTENE CO., Poulton-le-Fylde**

## IGNITION, LIGHTING, ETC.

BOSCH (soiled), Z.A.2 and D.A.L., 60 - cash approval; exchanges.—Magnetos, Bristol Mew Paddington, W.9. [235

THE Central Ignition Works, London.—Surplus magnetos (new, unused), not converted from ex W.D. starter magnetos.

BOSCH twins types: Z.A.2, £3/10; Z.U.2, £4.1 enclosed, waterproof, variable ignition.

M.L. singles only, enclosed waterproof, variable ignition, £3/10.

E.I.C. single and twin, enclosed waterproof, variable ignition, £3/5.

THOMSON-BENNETT single and twin, enclosed waterproof, variable ignition, £3.

RUTHART, singles only, enclosed waterproof, variable ignition, £2/10.

C.A.V. single and twin, enclosed waterproof, variable ignition, £3.

WE have a special line of C.A.V. and Ruthart magnetos fitted with genuine Rudge driving spindles. C.A.V., £3/7/6; Ruthart, £3/2/6.

THESE magnetos were formerly made exclusive for Rudge motor cycles, so that you can in no way doubt their entire efficiency.

BOSCH Sparking Plugs, suitable for all English cars and motor cycles, long and short reach, 1 each. Carriage on each plug, 2d. on orders up 6; over 6, carriage free.

REPAIRS accepted for all magnetos.

SPARES Stocked, all types.

ALL goods despatched by the Central are forwarded on approval against cash. If dissatisfied, your cash refunded within 24 hours.

GUARANTEE.—We guarantee all our magnetos for a period of twelve months, and will willingly replace or repair any magneto that should prove defective within that period.

CARRIAGE on all magnetos, 1/6.—The Central Ignition Works, 14, Loughborough Rd., Brixton, London, S.W. Tele.: Brixton 210. [32

DYNAMO Lighting Set; £6; Astra, 3 lamps, accumulators, cutout, switchboard, almost new Green, 298, Harrow Rd., Paddington. [21

K.L.G. W.D. Plugs, unprecedented value, 4 for 2, postage 9d.; immediate return of money if not satisfied.—Thompson 59, Queen St., Wolverhampton [82

ACCUMULATORS.—Quality right; price right write for list; trade supplied.—Adams Bros. (Longton), Ltd., Accumulator Manufacturers. Longton, Staffs. [12

ANY Motor Cycle Magneto repaired, no matter what condition, provided complete, for 30/-; hour service.—Kays, Electrical Dept., 8, Bond St Ealing, W. [72

CHELTENHAM.—Repairs to magnetos, self-starting lighting plants, etc.; London experts employed Norwood Magneto Works, 95, Bath Rd., Cheltenham Phone: 1256. [07

DASH Switchboards, 4-way, with ammeter, 20 with ammeter and voltmeter, 35/- each nett Leslie Dixon and Co. (Dept. H I), 9, Colonial A Minories, E.1 [07

HARLEY Lighting and Ignition Set, Remy generator, Exide battery, and case to fit frame, horn, all in excellent condition; £8/10.—10, Lang Lane, Vauxhall, S.W.8. [21

MAGNETOS Overhauled and Repaired from 15/- 30/-; returned as new in 2 days; guaranteed 12 months.—Turner Bros., Magneto Repair Serv Summerseat, Manchester. [69

U.H. Magneto Repairs.—We specialise in these magnetos, and can be relied upon to give you good service. A1, B1, AO, KB1, KB2V, KZ2V type spares stocked; prices moderate; 12 months' written guarantee.—Charles Parker and Co., Churchfield Rd., Acton, London. [2

C.A.V. Magnetos.—Extraordinary bargains.—Brand new 180° twin- or single-cylinder, 38/6, carriage free. Every magneto thoroughly tested before dispatch; approval against cash. Kindly state rotation required.—Langford's, 37, Cricklewood Broadway London, N.W.2. [3

SURPLUS Magnetos, with written guarantee 1 year; M-L single, 35/-; B.L.I.C. ditto, 42/- Bosch ditto, 45/-; Thomson-Bennett and C.A.V. singles and twins, 50/-. We specialise in repairs and spares for all makes; lists 2d. stamp. Deal with experts and avoid certain disappointment.—Whites Magneto Service, Cherry Orchard, Croydon. 'Phone Croydon 1625. [2

BRAND New Thomson-Bennett Magnetos, type A 180° anti clock, 45/-; Splitdorf Model EU single anti clock, 38/-; large type Dixies, single clock anti, 30/-; 50°, 55°, 180°, 35/-. All the above guaranteed perfect. None of these magnetos are converted or reconstructed starter mags. They are the genuine article.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd. 789. [3

## IGNITION, LIGHTING, ETC.

Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government, ficially appointed by the R.A.C. Magneto re- of every description; all repairs at lowest pos- prices, and strictly guaranteed. We can mostly them within 24 hours. We have several new econd-hand single and 2-cyl. magnetos in stock, aranteed.—The Magneto Repairing and Winding '8, Hampstead Rd., Euston, London, N.W.1. : Museum 1158. T.A.: Kumagnelec, Eusroad, a. [2445

TON Ignition Co.'s 24-hour repair service uaranteed repairs to all types of magnetos, rf and Dixie specialists; official Indian elec service station; Thomson-Bennett repairs and All repairs are tested on an approval A.I.D ench before despatch, and therefore carry one tee for 12 months. We hold the largest stock ranteed magnetos in London, twins all degrees, parts for all makes in stock; charged accumu all voltages, always ready in stock; plugs, ½-watt and vacuum bulbs, all voltages We ou real live service always.—Euston Ignition Co., Euston Rd., London, N.W.1. 'Phone: Museum T.A.: Magdyno, Eusroad, London [0263

## TYRES.

TRAL Garage for fair dealing

×2¼ Dunlop, 37/3; Goodyear E.H., 26/-; Bates 31/6; Avon, 25/-; Clincher-de-Luxe, 21/- an oversize 28×3 Macintosh, 27/6.

×2⅜ Dunlop heavy, 32/-; E.H., W.D., 37/6 Clincher E H (for 2¼), 27/6; Avon R.S.

×2¼ Avon, 24/-; Wood-Milne, 13/3; Clincher 30/-.

×2½×2¼ Dunlop, 46/-; Avon E.H., 30/-; Hutchinson T.T., 36/-; Clincher, 30/-; Palmer 32/6.

×3 Clincher (plain rib), 42/6; Dunlop E.H 65/-; John Bull (the Harley special), 68/-; sidecar, 32/6; Macintosh, 27/6; Clipper 3 E.H., 35/6.

0×65 Goodyear E.H., 30/-; Dunlop S.S., 47/6 Wood-Milne E.H., 19/-; Palmer cord, 45/-; in, 47/6.

0×80 Wood-Milne E.H., 41/6; International grooved, 55/-; Firestone, 45/-; Englebert Dunlop cord (light car), 57/6; Avon super d, 44/6.

ES, all sizes, 6/6 each; 700×80, 7/6.

TRAL Garage, always open, or will send any of he above lines on 7 days' approval on receipt plus 1/6 postage.—302, London Rd., Thornton 'Phone: 2237 Croydon. [3059

IN Tyre Co. will send on approval against cash ny of the following tyres:—

×2¼ Clincher, 19/-; Palmer Cord, 21/-; Fire stone, 30/-; Goodyear, 26/-; 26×2⅜ Clincher 26/-; Dunlop heavy, 31/-; E.H., W.D., 37/-; R.S., 27/6; 26×2½×2¼ Palmer cord, 32/6; er, 25/6; Avon E H, 28/6; 28×3 Fisk E.H. Dunlop ribbed, 30/-; Clincher ribbed, 42/-; Clip- ribbed E.H., 35/-; 700×80 Wood-Milne E.H. Firestone, plain, 45/-; motor cycle tubes, all at 6/-; Avon super studded, 44/6; 650×65 r cord, 45/-.

have a special line of Macintosh heavy covers which are an excellent oversize for 26×2¼, price, 27/-.

of the above lines will be sent on 7 days' approval against cash, plus 1/6 for post.—The Tyre Co., 37, Red Lion St., High Holborn. [3060

2⅜×2¼ Dunlop Extra Heavy, new; 37/-, post /6.—Fleming's, Redcar, Yerks. [2885

'ORISTS.—Try our 3,000 mile retreads, repairs, etc., carriage paid.—Buxton Vulcanising Co., , Derbyshire. [9293

Difference between a good retread and a bad ne is its mileage. Try us. Watch results.— Rubber Works, Melton Mowbray. [0636

×3 Pedley Clearance Covers, 39/6, list 70/-; 24×2¼ covers and tubes, 16/3 to 22/-, carriage -Davies, Union St., Wednesbury. [4452

'TISH readers will find it advantageous to purase their tyres from McArthur, Hill and Co., ddress: 436, Argyle St., Glasgow. Lists post [1514

READING Diamond Nobby, grooved and ribbed reads, 7 patterns, American and H.F. process; repaired.—Midland Tyre Works, Green Lane. l. [9508

ST Motor Cycle Tyres, chafed beads, remoulded, nda perfect, tube vulcanising, butt-ends fitted. ing; send for list.—Melton Mowbray Rubber , Melton Mowbray. [0347

E Repair Specialists.—H.F. process throughout, cluding retreading burst covers. Every kind of to tyres and tubes in 24 hours, retreads in 4 The Motor Tyre Co., 66, High St., West Brom- [2060

## STILL A FEW BARGAINS LEFT.

**The Easter rush has considerably lowered our stock, but amongst the following may be found something to meet all demands.**

**The following machines are actually in stock.**

### NEW MACHINES.

Ariel 3½ h.p. Sports.
B.S.A. Model K 2.
Brough Superior.
Enfield Combination.
Enfield Light-weight.
Enfield Sports.
Edmund.
Indian.
Matchless.
Massey-Arran.
Norton 16 H.
New Imperial.
Rex Acme.
Triumph Ricardo.
Triumph Model H.
Triumph Model S.D.
Velocette, etc., etc., etc.
Dumber, 1920, 4½ h.p., £85.

### SECOND-HAND & SHOP SOILED.

B.S.A. Model K 2, 1921, and sidecar, 80 guineas.
Douglas Combination, 1920, very fine, £80.
Omega J.A.P., 1920, 40 guineas.
1920 Scott and sidecar, £75.
B.S.A., 1920, 4½ h.p., £65.
B.S.A., Model K 2, soiled only, £97 10s.
Harley-Davidson, 1918, £65.
N.U.T., 1922, 3½ h.p., sports, £95.
Rover, 3½ h.p., 1920, £70.
1920 Model H Triumph and Montgomery sidecar, £85.
1920 Enfield Combination, completely equipped, exceptional order, £100.
1922 Model H Triumph and new sidecar, as new, unrepeatable at £120.
1921 Enfield Combination, Colonial model, soiled only, £115.
Zenith, 1921, 5 h.p., Sports, not done 200 miles. Bargain. Electric lighting, £80.
Ariel, 1920, 3½ h.p. Combination, equipped, £80.
Etc., etc., etc.

**Enquiries invited and treated with every courtesy.**

# Layton Garages

**90, High Street, and 30, Holywell Street, Oxford, and London Road, Bicester.**

**Phones: 581 Oxford. 35 Bicester.**

'Grams: "Integrity," Oxford & Bicester.

J. W. Tollady,
*General Manager.*

## TYRES.

MOTOR Cycle Tyres on Easy Terms, standard makes; list post free.—J. G. Graves, Ltd., Sheffield. [0589

EMANUEL'S For Tyre Bargains.—From Manufacturers', Bankrupt, and Surplus Stocks.—Below.

24×2.—Hutchinson rubber studded, 22/3.

24×2¼.—Clincher de Luxe heavy rubber studded, 22/3.

26×2.—Continental standard and ribbed, 16/6; Wood-Milne Key-grip, 18/6; Hutchinson Brooklands rubber studded, 26/9; Palmer cord heavy, 34/6.

26×2¼.—Moseley heavy ribbed, 20/6; Bates special heavy beaded, 28/3; Macintosh chain heavy, 32/3; Palmer cord 3-ribbed heavy, 34/9; Dunlop Magnum heavy, 36/-.

26×2⅜.—Dunlop retreaded grooved, 20/6; Palmer cord 3-ribbed extra heavy, 35/3; Dunlop Magnum heavy, 35/9; Clincher de Luxe extra heavy, 24/3.

26×2½ (to fit 2¼ rims).—Emanuel's All-weather, 25/9; Hutchinson rubber studded or ribbed, 33/-; Bates special 3-ribbed extra heavy, 56/-.

26×2½.—Wood-Milne 3-ply, 13/6; Wood-Milne 4-ply extra heavy, 16/6; Rom. Combination, 38/9; Dunlop rubber non-skid, 41/-; Hutchinson rubber non-skid or ribbed, 29/9; Emanuel's extra heavy rubber non-skid, 45/-; Englebert passenger rubber, 32/-.

28×2½.—Hutchinson ribbed, 25/-; Spencer Moulton rubber non-skid, 30/-.

28×3 (to fit 2½ rims).—Dunlop heavy rubber non-skid, 45/-.

28×3.—Macintosh chain tread heavy, 27/6; Dunlop sidecar, 37/6; Dunlop heavy rubber studded, 44/-; Fisk extra heavy rubber studded, 46/-; John Bull extra heavy rubber studded, 68/-.

650×65.—Wood-Milne special key-grip, 14/6; Wood-Milne 4-ply extra strong, 25/-; Emanuel's rubber non-skid extra heavy, 26/6; Palmer cord light car, 40/-; Burnett grooved, 30/-; Dunlop steel studded, 45/-.

700×80 (to fit 650×65 rims).—Bates special heavy 3-ribbed, 52/6; John Bull extra heavy rubber non-skid, 55/-; Clincher grooved, 47/6.

EXTRA Heavy Rubber Studded Non-skid, 42/6.

NEW Tubes, all sizes, 7/-; clearance, 5/6 each.

H. EMANUEL and Co.—Stores, 37a, Balls Pond Rd., Dalston, N.1. Office, 27, Belgrade Rd., Stoke Newington, N.16. 'Tele.: Dal. 3161. [0832

ECONOMIC Tyre Co.—We have the following bargain lines in clearance and blemished covers. All goods sent on 7 days' approval, against remittance, carriage paid.

ECONOMIC.—24×2¼ (also oversize for 2in. rims) Dunlop Heavy (warranted), 36/3; Clincher Heavy Junior de Luxe, 20/-.

ECONOMIC.—26×2¼ Firestone Extra Heavy, 28/6; Wood-Milne Keygrip 4-ply, 20/-; Bates Special Heavy, 27/6; special heavy tubes, 6/-.

ECONOMIC.—26×2⅜ Palmer Cord Heavy, 40/-; Clincher Extra Heavy de Luxe, 26/6; Hutchinson T.T., 29/-; special heavy tubes, 6/6

ECONOMIC.—26×2½×2¼ Dunlop Extra Heavy (warranted), 55/3; Clincher Heavy de Luxe, 30/-; R.O.M. Rubberstud, 25/-.

ECONOMIC.—26×2½ O.S. Bates Special Heavy, 30/-; special heavy tubes, 7/-.

ECONOMIC.—28×3 Fisk Rubberstud, 42/6; Stepney Roadgrip Extra Heavy, 47/6; clearance tubes, 6/6.

ECONOMIC.—650×55 Palmer Cord Light Car, 40/-; Stepney Roadgrip Extra Heavy, 40/-; special heavy tubes, 7/-.

ECONOMIC.—700×80 Beldam "V" Grooved (warranted), 50/-; Goodrich safety tread, 50/-; Avon extra heavy rubberstud, 42/6; clearance tubes, 6/6.

ECONOMIC.—Fully warranted Dunlop Rubberstud, 24×2, 22/6; 24×2¼, 24/9; 26×2, 24/6; 26×2¼, 25/9.

ECONOMIC Tyre Co., 314, New Cross Rd., S.E.14 (near Town Hall). 'Phone: New Cross 1593. Repairs and retreading. [1042

HERBERT ROBINSON, Ltd., Green St., Cambridge.—Special offer of shop-soiled and manufacturers' clearance stocks. 24×2¼ Moseley 3 ribbed, 29/-. 26×2¼ John Bull, 30/-; Bates, 30/-; Dunlop, 30/-; Palmer, 30/-; Cuthbe, 32/-. 26×2⅜, Hutchinson, 25/-; Clincher, 30/-; Bates, 37/6; Dunlop, 30/-. 26×2½, Bates, 30/-; Dunlop, 37/6; Moseley, 35/-; John Bull, 35/-; Cuthbe, 34/-; Kempshall, 30/-. 26×2½, to fit 2¼, Bates, 42/-; Cuthbe, 42/-. 26×3, Bates, 49/6; John Bull, 44/-; Cuthbe, 45/-. 29×3½, Bates, 50/-; Dunlop, 55/-. 650×65, Avon heavy, 32/6; Cuthbe, 45/-; John Bull, 45/-; Bates, 45/-. 700×80, Robinson's heavy studded, 42/6; John Bull, 45/-; Cuthbe, 55/-.

TUBES, best red rubber and guaranteed: 24×2, 4/9; 26×2, 4/9; 26×2¼, 5/-; 26×2⅜, 5/3; 26×2½ for 2¼, 5/6; 26×2½, 5/6; 26×3, 6/-; 28×3, 6/-; 650×65, 5/6; 700×80, 6/-.—Herbert Robinson, Ltd., Green St., Cambridge. [2948

## TYRES.

26in.×2¼in. Dunlop Heavy, 26/-; 26in.×3in. Dunlop, for 2½in. rims, 40/-; ditto combination; 50/-; 26in.×2½in., Avon Sunstone, 35/-; 28in.×3in. Clincher, 35/-.—Murray's, 37a, Charles St., Hatton Garden, Holborn. [2860

GOOD Second-hand Covers, all sizes, 12/6 each; New Beldam covers, 26×2⅜ for 2¼, 26×3 for 2½, 25/- each; 28×3, 35/- each; 650×65, 40/- each; 700×80, 45/- each; new Avon steel studded covers, W.D., 700×65, 35/- each; steel tow ropes, complete, 10/- each.—Homerton Rubber Works, Brooksby's Walk, Homerton, E.9. [0331

SPECIAL offer of clearance covers.—26×2 Dunlop light, 15/-; 26×2¼ Avon Stonehenge, 32/-; new Clincher de Luxe, non-skid (Junior), 16/-; 26×2 to fit 2¼, Dunlop, heavy W.D., 30/-; new Clincher de Luxe stud, non-skid, extra heavy W.D., 25/-; 26×2½ Wood-Milne special non-skid, 20/-; Spencer-Moulton steel stud, 17/6; 26×3 Rapson, with tube, 60/-; 28×2⅜ Diamond rubber non-skid, 30/-; Diamond 28×2¾ rubber non-skid, 30/-; 28×3 Fisk rubber stud, 40/-; Moseley sidecar rubber stud, 20/-; 650×65 Hutchinson 3 rib, 27/6; Dunlop plain, 20/-; 700×80 Firestone plain, 45/-; 750×75 to fit 700×65 Hutchinson 3 rib, 30/-; 30×3½ Burnett groove, 85/-; tubes any motor cycle size, 5/6. These goods are guaranteed by us; postage is included in the above prices.—Maudes' Motor Mart, 100, Great Portland St., W.1. Museum 7676. [2810

## MOTOR TRANSPORT VEHICLES.

MOTOR Van, 12h.p., 3 speeds and reverse, splendid condition; £65, or exchange for combination, cash adjustment.—80a, High St., Bexley. [3133

## TANKS.

TANKS re-enamelled, 15/6.—Bright and Hayles, 78, Church St., Camberwell. [8025

JAMES Tank, with Enot's drip feed lubrication; 35/-.—76, London St., Chertsey. [2353

TANKS, Radiators, Repaired or Replaced.—Hughes, 373, New John St. West, Birmingham. [8996

TANKS for B.S.A., new, 38/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [2243

TANKS for Triumph, new, 38/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [2244

TANKS for Humber, 1921 pattern, to fit 1912; 38/6.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [2242

TANKS Renovated, makers' designs, transfers; 13/6.—Whitworth Motor Renovating Co., 7, Jamaica Row, Birmingham. [2728

I SPECIALISE in Repairs, Rebuilds, etc., to any pattern; first-class enamelling; reasonable charges.—Day, 27, St Luke's Rd., Birmingham. [8245

COVENTRY Tankers, Ltd., makers to the principal manufacturers; petrol tanks for any style supplied extra capacity.—Hearsall Works, Coventry. [2245

TANKS Made or Repaired, re-enamelled, lined, transferred; handle-bars, etc., plated. Established 30 years.—Attwood's, 86, Rosebery Av., London, E.C.1. [7073

TANKS re-enamelled to pattern; high-class work only.—D. Jenkins and Sons, 6, Richard St., Atkinson St., Deansgate, Manchester. Established 25 years [2245

TANKS of every description replaced, repaired, and re-enamelled; quick service, moderate charges.—Herbert Robinson, Limited, Green St., Cambridge. [2951

OVERSIZE Triumph, capacity 2¼ gallons petrol ½ gallon oil, standard Triumph fittings, £4, unenamelled.—Asbton Bros., 14, Market Place, Manchester. [8598

TANKS of every description replaced, repaired, and re-enamelled at our own works; all kinds of fittings stocked; quick service and reasonable charges Illustrated list free.—A. Green, Wnter St., Chapel St., Salford, Manchester. Tel.: 2191 Central. [0256

AVERY'S Stock Tanks for Douglas, Hazlewood, B.S.A., Triumph, Omega, enamelled makers' colours, plated fittings, 40/-, complete; other design or shape to order. 12 months' guarantee with every tank.—Gordon Street Tank Works, Coventry 'Phone: 1774. [0770

TANKS Made, repaired, re-enamelled, partition leakage, dents, fastenings, and all repairs undertaken; enamelling, makers' colours, designs, transfers, as new, guaranteed. Six days' service, private or trade.—Park Tank Works, 1a, Paradise Rd., Highbury, N.5. [2664

TANKS,—All kinds made to order, 32/6 each, including 2 plated fillers, 2 taps. Delivery 14 days, carriage paid. Satisfaction guaranteed or money returned. Enamelling, one colour, 10/6; two colours, 17/6.—Order forms from H. Peel, The Liverpool Tank Hospital, 5, Smithdown Lane, Paddington, Liverpool. [4959

## BELTS.

BELTS.—Clipper, new, 8ft.×¾, 11/6 8ft. 6in.×¾, 12/3; 8ft. 6in.×⅞, 14/-.

JOHN BULL or Bates Standard (new), in any length. —¾in., 1/11; ⅞in., 2/3; 1in., 2/8; 1⅛in., 3/2, per foot.—H. Emanuel and Co., 37a, Balls Pond Rd., N.1. [0854


1922

# OMEGA

3 H.P. JUNIOR 348 c.c.

£39 : 10 : 0

OTHER MODELS

£45 to £120.

Omega Combination

£85

3 h.p. 348 c.c.

3 speeds; clutch, kick-starter.

TOURING OR SPORTING SIDECAR. LAMPS, &c.

ROYAL RUBY 8 H.P.

SPRING FRAME COMBINATION.

SCREEN, LAMPS SPARE WHEEL £185

F.N. 8 H.P. 4 cyls. shaft drive. New Overhead Valve Model £135

DEFERRED PAYMENTS.

WATSONIAN SIDECARS

SPORTING—TOURING—COMMERCIAL.

SECONDHAND:

1921 Douglas, 2¾ H.P., 3-speed, clutch, kick-start, M.L. Dynamo Lighting .. .. .. £75

1921 B.S.A., 6/7 H.P. Twin Combination, Dynamo as new .. .. .. .. .. £145

1920 Matchless M.A.G. 8 H.P. Combination, All Accessories, Dynamo Lighting .. .. .. £120

1921 Enfield, 8 H.P. Combination, shop-soiled only. .. .. .. .. .. .. .. £130

1921 Omega, 2¾ H.P., Villiers fixed gear .. £30

1921 Omega, 2¾ H.P., Villiers 2-speed .. .. £42

1918 New Imp., 8 H.P., Combination .. .. £90

1920 Coulson, 2¾ Blackburne 2-speed .. .. £55

1920 Norton, 4 H.P., and light sidecar .. .. £95

1920 Harley-Davidson and C & M Sidecar Dynamo, etc. .. .. .. .. .. .. £130

BARTLETTS

93, Great Portland Street,

Phone: LANGHAM 1271. London, W.


## BELTS.

BRAND New Clearance Belts, ¾×6ft. 6in., made Palmer; 7/- each.—Marble Arch Motor Exchan 135, Edgware Rd., W.2. 'Phone: Padd. 789. [31

BALATA and Chrome Combination V Belts, suital for all classes of motor cycles, ¾in., 1/4; ⅞i 1/6; 1in., 1/9; 1⅛in., 2/- per foot. Fasteners each. Postage 1/-.—W. Pollin & Son, Hollington, Leonards-on-Sea. [69

BRAND new Dunlop belting in standard sizes se on approval against cash, plus 1/- posta ¾in., 1/7 foot; ⅞in., 1/10 foot; 1in., 2/2 foot; 1⅛ 3/2 foot; Dunlop fasteners, all sizes, 1/3.—Cent Garage, 302, London Rd., Thornton Heath. [30

BASTONES for new belts.—John Bull, ¾in., 1/1 ⅞in., 2/3; 1in., 2/8; 1⅛in., 3/2 per foot. P ley, ¾in., 1/9; ⅞in., 2/-; 1in., 2/6; 1⅛in., 3/- foot. Buffalo hide and chrome, ⅞in., 1/9; 1in., 2 1⅛in., 2/3 per foot.—228, Pentonville Rd., Kin Cross, London, N.1. [19

HERBERT ROBINSON, Ltd., Green St., Ca bridge.—All brand new and guaranteed Dunl round top ¾in., 1/10 ft.; ⅞in., 2/2 ft.; 1in., 2/8 f ⅛in., 3/2 ft.; John Bull, ¾in., 1/11 ft.; ⅞in., 2 ft.; 1in., 2/8 ft.; 1⅛in., 3/2 ft.; any length c Clearance belts, 6ft. 6in.×¾in., 10/-. [29

## CARBIDE.

CARBIDE, finest quality, giving 100 per cent. p gas yield, all sizes, cwt. 23/6, ½-cwt. 14/6, 28 8/6, drums free.—Young, Importers, Misterton, Som set. [36

BEST Quality Carbide, 28lbs., 8/6, drum free; a quantity supplied from ½lb. tins to 2cwt. dran only the best brands stocked; trade inquiries invit —Dargue, 57, Grey St., Newcastle-on-Tyne. [91

## PATENT AGENTS.

J. E. S. LOCKWOOD, 3, New Street, Birmingha 'Phone: 5816 C. Patents guide free. [7

FREE, 100 Page Patent Guide, postage 6d.—T Consulting Patent Agency, 253m, Gray's I Rd., London. [24

PATENTS Advice, handbook free.—King, Registe Patent Agent, 146a, Queen Victoria St., E 35 years' references. [01

W BRYSON, B.Sc., Assoc.M.Inst.C.E., Charte Patent Agent, 29, Southampton Buildin London, W.C.2. 'Phone: Museum 3651. [92

## PATENTS.

WE Buy, Sell, and Finance Inventions and Pate and advise on their marketing.—Send poste for full particulars to Dept. C., Inventors' Sa Agency, 22-24, Spencer Av., Coventry. [14

## AGENCIES.

REQUIRED, energetic men with some capital, take up the sole agency for our motor cycles the West End of London and other large town Mohawk Cycle Co., Ltd., 277, Alexandra Rd., Ho sey, N.8. [1

THE Mohawk Cycle Co., Ltd., require sole age for their celebrated motor cycles in distri where they are not already represented.—Write lists and terms to Mohawk Cycle Co., Ltd., 2 Alexandra Rd., Hornsey, N.8. [1

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at comp tive rates.—Ernest Bass, 40, Chancery La W.C.2 'Phone: Museum 2234. [0

J. THOMPSON, Mitchell, and Co., Incorporated surance Brokers, 28, Basinghall Street, E.C specialise in Motor Cycle Insurance. [8

ROYS, LTD., Insurance Brokers.—Agents for companies and Lloyd's.—Competitive rates motor insurance.—170, Gt. Portland St., London [0

NO Increase in Motor Cycle Rates.—For prospec and full particulars, write or 'phone, P. Porter and Co., 33, Palewell Pk., East Sheen, S.W. Phone: Richmond 511. [1

FRANK ROY, Insurance Broker, Agent for companies and Lloyd's Comprehensive Motor C and Car policies, 33⅓% under tariff rates; prospec on application.—10-12, Copthall Av., E.C.2. [2

MORGANS, full cover, £6; comprehensive c policies from £3. Lowest rates for all cla of insurance consistent with security.—A. R. Erc hurst (late Clements and Co.), 65, Holborn Viad E.C.1. [1

THE Motor Cycle" Insurance Policy is the po authorised by "The Motor Cycle," and co motor cycles or cycles and sidecars used for pri purposes. Complete comprehensive cover. Maxin benefits, minimum rates. Full particulars and spectuses on application.—The Autocar Fire and A dent Insurance Co., Ltd., 77, Cheapside, London, E. [0

## SITUATIONS VACANT.

TRAVELLERS in Motor Accessories wanted British Isles by well-known firm, to take selling lines on liberal commission.—Write, Box 9 c/o *The Motor Cycle*. [2

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d per annum.

## C.C. or H.P.?

DISCUSSION in motor cycle circles is once again centred upon the subject of misleading horse-power ratings. And again the suggestion that 100 c.c. should be regarded as the standard horse-power unit for normal purposes has been advanced. The proposal is a practical one and can be put into effect without trouble by anyone acquainted with the cubical capacity of the cylinder simply by placing a decimal point in front of the last figure but two of the capacity figure. Thus a 249 c.c. engine would be rated at 2·49 h.p., and a 499 c.c. engine at 4·99 h.p. That the suggestion is not a new one does not detract from its value as a ready means of comparison, but we may remind readers that it emanated from the staff of *The Motor Cycle* as long ago as 1912. In our issue of January 18th in that year we published an article on the subject, in which it was contended that

> "every maker can and does make an engine which in the usual motor cycle sizes, is capable of giving 1 h.p. for every 100 c.c. capacity, and that in ordinary touring trim."

Since 1912 we have from time to time revived the subject, urging the adoption of the 100 c.c. unit, but events have moved forward a big stage in ten years, and more anomalies than ever exist to create confusion among the buying public. Generally speaking, the standard 499 c.c. machine is rated at 3½ h.p., but some engines of smaller capacity than 499 c.c. are actually rated at 4 h.p. And so on, up and down the scale, until one realises that horse-power ratings convey little or nothing to the buyer.

For some time past, recognising the misleading nature of horse-power ratings, *The Motor Cycle* has made a practice of quoting cylinder capacities in order to form a basis of comparison, and this practice will be continued in our columns. "C.C.," after all, is now well understood by novices and experienced alike, so that any horse-power denomination is immaterial, particularly since horse-power rating can be but a nominal one and in course of time become out of date, for the reason that increased power is obtainable from a given c.c. as the years roll by. Against the proposal to define horse-power by cubical capacity is the fear that daily or non-technical papers will drop the point in a 3·49 h.p. machine, and style it 349 h.p., and, again, mystery will be occasioned in novices' eyes when 4·99 h.p. is quoted, since 5 h.p. would (to them) prove so much more simple, and the fraction not worth consideration. By merely quoting 399 or 499 cylinder capacity, therefore, we consider that the position will be rendered clear to everyone, for, as we have said, those who desire to know the horse-power have it at a glance.

## Appearance.

IT is every rider's duty to himself, to his fellow motor cyclists, and to the pastime to turn out attired as neatly as is possible. It is no longer accepted as fact that old clothes and motor cycling are synonymous.

At one time, perhaps, the average motor cyclist was careless of his appearance, and conveyed an impression to the world at large that motor cycles were clothes tearing machines upon which it was impossible to present a neat appearance.

A change is now most apparent, and the increasing popularity of leather wear is fast removing the stigma of slovenliness which at one time was levelled at many riders. Overalls, too, are much neater than they were a few years ago, and motor cycles infinitely improved in their mudguarding, while the practice of wearing an ordinary cap with the peak behind is a rarity.

It is all a question of suitability of attire, which, for wet or fine weather, can always be neat if the rider takes the trouble adequately to equip himself.

An index to the advertisements in this issue will be found on Supplement ii.

# OCCASIONAL COMMENTS

By "IXION"

## Publicity in France.

I AM neither a politician nor a financier. My politics are limited to voting for anybody who is anti-waste, my finance to convincing Mrs. Ixion that she can keep house on far less than she imagines. So I will not dogmatise on the possibilities of the French exchange sinking enough to facilitate sales of British machines in France. But I happen to know that a correspondent at Lyons is correct when he asserts that the average French rider ranks British machines above all others, that the French market is particularly deficient in 500 c.c. sports machines, and that the French are peculiarly susceptible to sound propaganda work. He informs me that French motor cycle opinion esteems the Grand Prix de Lyon—run on May 21st—higher than our T.T. or the Grand Prix de France. So far I believe there is only one British entry—an o.h.v. Triumph. One deduces that our trade does not expect the French exchange to return to normal in the near future.

## Cost, Conservatism and Chances.

MOST trade brochures are dull as ditch water to the ordinary ride-and-cuss-it type of motor cyclists, of whom I am one. But I spent quite an eager half-hour over some recent Vickers catalogues which came into my hands the other day. The first dealt with Duralumin, which appears to be an ideal substitute for nickelled brass and copper. These two metals are the plague of a lazy motor cyclists's life, and as Duralumin doesn't rust, it tickled my fancy at once. I suppose it does not adorn our machines, for cost reasons, so let's hope it may get cheaper. The next pamphlet dealt with stainless steels. For example, Vickers stuck a piece of carbon steel and a piece of rustless on the top of their offices, and measured the weight lost by exposure to the particularly sulphurous air of Sheffield. They found that the carbon steel would be completely destroyed in twenty years, whereas a faint trace of the lump of rustless would survive after 400 years. If anybody will make rustless steel cheap enough for motor cycle purposes, he will do me a good turn, and Globe polish dividends a bad one. Finally, I knew that the market in rustless steel was hampered not only by its high original cost, but also owing to the expense of machining so hard a metal; but I did not know that softer rustless steels of good physical properties are now being produced. Heigho! When I am a grandfather, I suppose I shall see my posterity storing their motor cycles under the rhododendrons on my front lawn, whereas I suffer from housemaid's elbow contracted in trying to keep my machine bright inside a moderately weatherproof shed.

## Jumpers and Big Tyres.

YOU don't see the connection? Well, I don't mean the sort of "jumper" you mean. *You* mean one of those pink or mauve or yellow woollies, which used to be called sweaters till the girls copied them, and disdained mere white. *I* mean an inspector who dodges about a tram or 'bus route, and sees that the conductors have counted the passengers accurately and put all the coppers in the bag. A large West Country company (already mentioned in *The Motor Cycle*) has mounted its jumpers on 6-7 h.p. B.S.A. sidecars (the driver chases the 'bus with the B.S.A. whilst the jumper is toying with the tickets, so that no time is lost). These outfits are shod with 3in. Dunlop extra heavy covers—the "Magnum" wasn't invented when the outfits were bought. These 3in. tyres are averaging about 10,000 miles apiece. I have a lot of evidence that the ordinary 2⅜in. back tyre on a 500 c.c. sidecar seldom exceeds 2,000 miles in really heavy use. As the big tyre is far more comfortable and steers quite as well, utilitarian owners who have to consider expense should note the statistical experience of the large public service concern to which I refer.

## The Dump.

RECENT samples to hand include a couple of stout hide carrier straps from C. T. Penn, of 75, Abbey Road, Warley, Birmingham. He sells them at 1s., though they cost him nearly double, and advertisements costing £3 in various papers have only procured him one customer. He might as well try to sell footwarmers in the infernal regions, as market a touring requisite during frost *and* a nor'-easter. (N.B.—The straps are not long enough to secure a flapper.) Then the Luton Alum. (presumably "aluminium" is meant?) Casting Co., of South Road, Luton, forward a neat combination tool which performs four operations. It punches a belt. It extracts or replaces a chain rivet. It does ditto when the bush is broken. My only criticism would be that with its case it is as big as a repair outfit, though this does not affect its value for sidecar or garage work. So far as actual purchases are concerned I have been laudably economical of late, charm the gadget merchants never so wisely. But I have made an exception in favour of a B. & L. mechanical oil pump, which I am at present busy fitting to my o.h.v. Triumph. It will, I hope, save me from oiling up a plug, a pardonable weakness with a new engine.

*Ixion's "MOTOR CYCLE REMINISCENCES" are available in book form, price 2s. 9d. post free, from "The Motor Cycle" Offices, Dorset House, Tudor Street, E.C.4.*

**Occasional Comments.—**

Riders of o.h.v. Triumphs should note that their spare plug ought to be somewhat short in the body; otherwise there is not clearance to get the special tube spanner over it; and when the plug is nearly red-hot——! The dump is topped by a pair of Fox's puttees. Not khaki, thank you. Serviceable as that shade is, most of us had enough of it in 1914-1918. But the same people now manufacture puttees in every conceivable hue. They don't advertise that they can supply them to match any machine from Indian red to Douglas blue and silver, but no doubt they could. Mine are a rather tony dove colour, to match my latest "plus fours."

## Truth Is Stranger than . . .

THE original of the subjoined letter is in my possession. It was received by a reader who advertised his machine. No prize is offered for a suitable answer to it.

I see you want to sell your 3¾ h.p. Scott motor bicycle. There are a few questions I would like to ask before I buy it.

1. Why does the Scott motor bicycle have no pipe from the handle-bars to the saddle?
2. Why does it have eleven chains? My friend says it has eleven, and I am not sure, so will you tell me?
3. Why has it a two-bicycle engine? My friend says nearly all motor bicycles have four-bicycle engines.
4. Why are there two * plugs, and where are the spare plugs carried?
5. Has a motor bicycle many valves? How many valves has the Scott motor bicycle?
6. Will a 3¾ h.p. Scott motor bicycle carry me and my sister up a steep hill without changing the gears too often? My sister will be sitting up behind me and will be holding on to me.
7. If I buy your 3¾ h.p. Scott motor bicycle, will I have to water it often to cool it? My friend says it is not kept cool by the air like my uncle's.

I am sure I will be able to keep the machery good if it has not rustyed too much. I would give you twenty-eight pounds, and I do not know how much more till you answer my questions.

Yours truly,

---

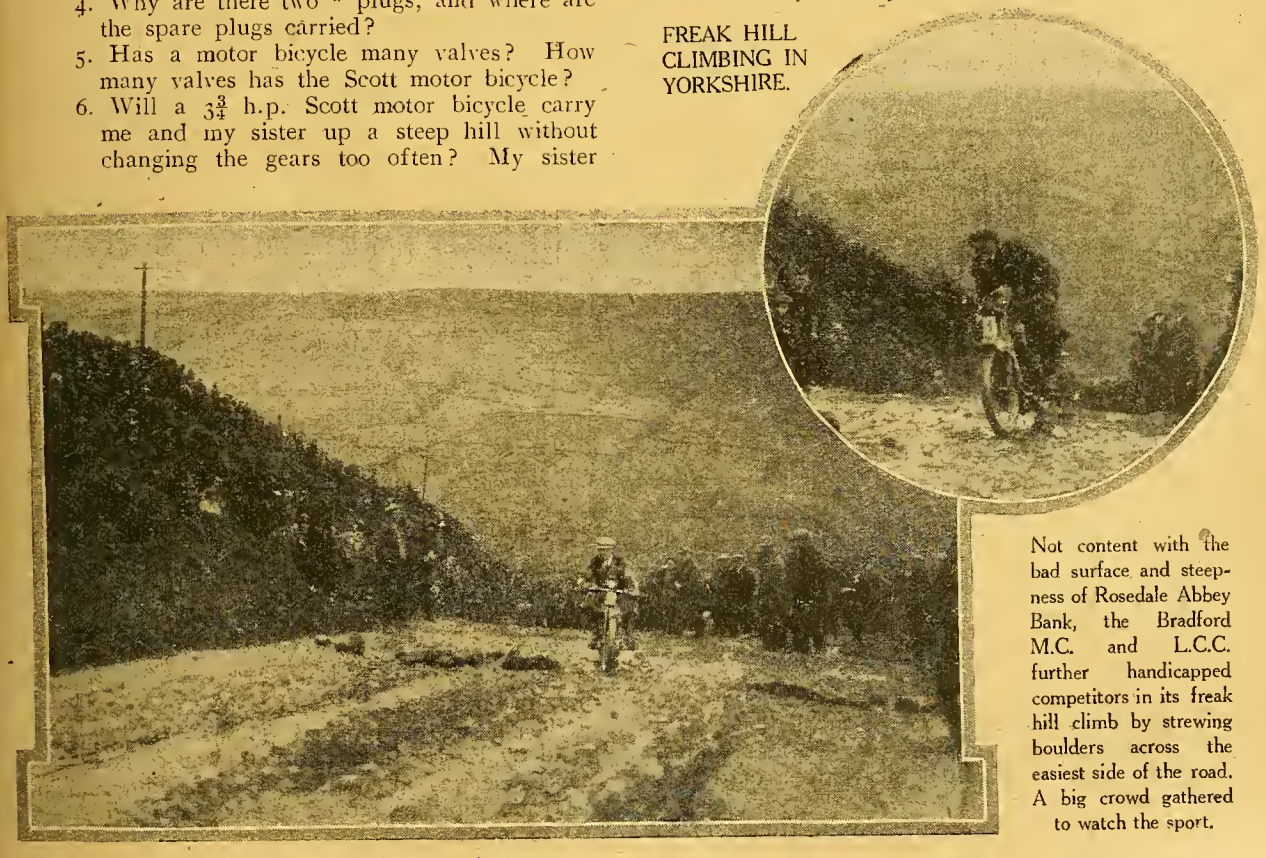
* I left out sparking.

I do not know if the Scott publicity man has bribed his little brother to perpetrate this letter in the hope of getting a free ad. But if he did, he deserves it.

## No More Solo Riding?

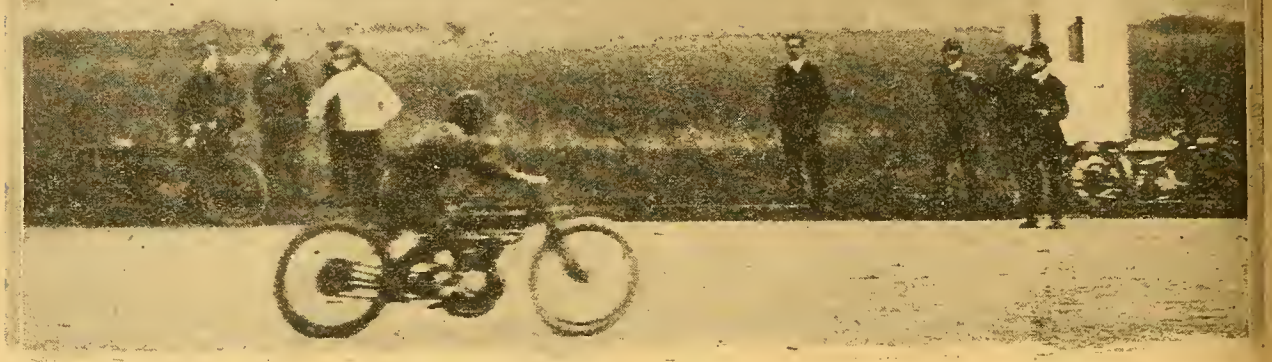
IF I carried all the tools which inventors and mechanics assure me that one needs, I should have to eschew solo work and fit a sidecar to take the kit. I vividly remember how I owned a chain-driver in 1905. Having a rough engine and no shock absorber in the transmission, it used to tear chains to pieces at short intervals. In those days we had no rivet extractors. We dismounted, and cursed, and got out a file, and looked round for a couple of hard stones. One of them served as hammer, and the other as anvil. The tang of the file was utilised to punch out the rivet after filing as much as possible. To-day almost every post brings me a new patent rivet extractor, most of which are excellent for garage use, but too bulky to carry solo.

FREAK HILL CLIMBING IN YORKSHIRE.



Not content with the bad surface and steepness of Rosedale Abbey Bank, the Bradford M.C. and L.C.C. further handicapped competitors in its freak hill climb by strewing boulders across the easiest side of the road. A big crowd gathered to watch the sport.

# 1922 Speed Possibilities.



## Which Figures will Rise or Fall on Brooklands for the Flying Kilometre in the Different Classes? Some Varied Opinions.

IN attaining over 100 m.p.h. on his o.h.v. Douglas, C. G. Pullin's recent achievement came as a surprise to most of our readers, but to those behind the scenes at Brooklands it had been acknowledged at the end of last year that 100 m.p.h. with a 500 c.c. engine was a likely possibility during 1922. It is no secret that Pullin took the wind out of the sails of other trackmen in setting up the records which it is prophesied will not stand for very long. An o.h.v. Norton is reported to have done over 100 m.p.h. on two unofficial occasions, and at the first favourable moment we shall probably see O'Donovan or Judd improving on Pullin's figures, although it must be admitted they have a hard task before them.

Pullin's half-mile at 100.61 m.p.h. (time, 17.89 secs.) is not an officially recognised distance; therefore, so far as official records are concerned, 100 m.p.h. with a 500 c.c. engine has not yet been attained.

Who will be the first to place the magic figure on the record lists in Class C?

Always in the past there have been distinct gaps between the kilometre and the mile speeds. When the last-mentioned distance has been covered at a speed exceeding 100 m.p.h., there still will be the mean speed international record, *i.e.* the mean of timed miles in opposite directions.

The mean speed record for the mile is at present held by R. N. Judd (Norton), who covered the distance one way at a speed of 91 m.p.h., and in the opposite direction at 86 m.p.h., a mean speed of 88.39 m.p.h.

### LEADING RIDERS' FORECASTS.

250 c.c. FORECASTS (Present Kilom. Record 71.70 m.p.h.*).

| Prophet. | m.p.h. | Type of Engine. |
|---|---|---|
| Eric Williams | 90 | 1-cyl. vertical. |
| C. R. Collier | 85 | o.h.v. |
| G. W. Walker | 84 | 1-cyl. 2-stroke. |
| F. B. Halford | 80 | 1-cyl. vertical. |
| S. M. Greening | 80 | 1-cyl. side-valve. |
| A. H. Alexander | 80 | 1-cyl. 4-stroke. |
| H. R. Davies | 80 | 1-cyl. |
| J. A. Watson Bourne. | 80 | 1-cyl. |
| F. W. Barnes | 80 | 1-cyl. |
| Kaye Don | 78 | 1-cyl. 4-stroke. |
| J. Shaw | 78 | 1-cyl. 2-stroke. |
| J. Emerson | 75 | 1-cyl. vertical. |
| T. C. de la Hay | 75 | o.h.v. |

* Held by 1-cyl. 2-stroke.

350 c.c. FORECASTS (Present Kilom. Record 87.38 m.p.h.*).

| Prophet. | m.p.h. | Type of Engine. |
|---|---|---|
| Eric Williams | 100 | 1-cyl. |
| C. R. Collier | 95 | o.h.v. |
| F. W. Barnes | 94 | 1-cyl. |
| G. W. Walker | 94 | o.h.v. 1-cyl. |
| S. M. Greening | 93 | o.h.v. |
| F. B. Halford | 92 | 1-cyl. vertical. |
| H. R. Davies | 91 | 1-cyl. 4-stroke. |
| J. A. Watson Bourne. | 91 | 1-cyl. 4-stroke. |
| Kaye Don | 90 | 1-cyl. 4-stroke. |
| T. C. de la Hay | 90 | o.h.v. |
| A. H. Alexander | 90 | 1-cyl. o.h.v. |
| J. Emerson | 90 | 1-cyl. |
| J. Shaw | 88 | o.h.v. flat twin. |

* Held by o.h.v. single.

500 c.c. FORECASTS (Present Kilom. Record 98.76 m.p.h.*).

| Prophet. | m.p.h. | Type of Engine. |
|---|---|---|
| Kaye Don | 110 | 1-cyl. 4-stroke. |
| A. H. Alexander | 107 | o.h.v. flat twin |
| J. Shaw | 106 | o.h.v. 1-cyl. |
| Eric Williams | 105 | 1-cyl. |
| E. Searle | 105 | — |
| G. W. Walker | 105 | o.h.v. 1-cyl. |
| C. R. Collier | 105 | o.h.v. |
| F. B. Halford | 104 | 1-cyl. vertical. |
| T. C. de la Hay | 103 | o.h.v. |
| H. R. Davies | 103 | 1-cyl. |
| J. A. Watson Bourne. | 103 | 1-cyl. |
| S. M. Greening | 102 | o.h.v. |
| J. Emerson | 102 | Flat twin. |
| O. de Lissa | 102 | — |
| F. W. Barnes | 102 | 1-cyl. |

* Held by 2-cyl. o.h.v. flat twin.

750 c.c. FORECASTS (Present Kilom. Record 98.76 m.p.h.*).

| Prophet. | m.p.h. | Type of Engine. |
|---|---|---|
| A. H. Alexander | 112 | o.h.v. flat twin. |
| Eric Williams | 110 | Twin. |
| F. B. Halford | 108 | 4-cyl. in line or flat twin. |
| H. R. Davies | 107 | Flat twin. |
| J. A. Watson Bourne. | 107 | Flat twin. |
| J. Shaw | 106 | o.h.v. flat twin. |
| C. R. Collier | 105 | o.h.v. |
| S. M. Greening | 102 | o.h.v. |
| J. Emerson | 100 | V twin. |
| G. W. Walker | 98 | o.h.v. flat twin |
| Kaye Don | 95 | V twin. |

* Held by 500 c.c. 2-cyl. o.h.v. flat twin.

1,000 c.c. FORECASTS (Present Kilom. Record 107.55 m.p.h.*).

| Prophet. | m.p.h. | Type of Engine. |
|---|---|---|
| Kaye Don | 120 | V twin. |
| H. R. Davies | 120 | V twin. |
| J. A. Watson Bourne. | 120 | V twin. |
| A. H. Alexander | 120 | o.h.v. V twin |
| F. W. Barnes | 118 | V twin. |
| T. C. de la Hay | 115 | o.h.v. |
| Eric Williams | 115 | V twin. |
| C. R. Collier | 115 | o.h.v. |
| F. B. Halford | 114 | 4-cyl. in line. |
| O. de Lissa | 112 | — |
| S. M. Greening | 112 | o.h.v. |
| J. Shaw | 110 | o.h.v. V twin |
| J. Emerson | 110 | V twin. |
| G. W. Walker | 110 | o.h.v. V twin |

* Held by 2-cyl. o.h.v. V twin.

**1922 Speed Possibilities.—**

It will be seen that our super tuners and riders have still a long way to go. Will it be done this year? It must be remembered that a 1,000 c.c. machine has yet to accomplish the same feat.

Everyone competent to judge agrees that such a performance with a 500 c.c. engine is not yet in sight. Judd, the Velocette and Norton track exponent, tells us that there is great difficulty in holding a comparatively light machine on the slight bend and on the rough surface at that point of the track where records are made.

**Favourable Conditions and One-Way Records**

In the opinion of F. B. Halford, present holder of the 500 c.c. 1-hour record on an o.h.v. Triumph, too much is made of a one-way kilometre record in which so much depends upon favourable weather conditions, and he regards mean speed records (with and against the wind) as being more indicative of power and speed.

Amongst well-known racing men and those who are in close touch with the attainment of high speeds, we find very few who prophesy a speed for the kilometre which provides sufficient margin to make the 100-m.p.h. mean speed mile record a probability this year. As is to be expected, there is a wide diversity of opinion, also concerning the types of engines which are likely to attain the highest speeds in their respective classes.

F. B. Halford does not include one V twin simply because for such sprint work as the flying kilometre he anticipates that this type of engine in either the 750 or the 1,000 c.c. sizes will gradually find itself more and more handicapped as engine speeds increase, due to the excessive loading of the crank pin. This, he says, particularly applies to the larger class, in which he believes the 4-cylinder will eventually oust the rest of the field.

This view is a new one to motor cyclists generally, but Major Halford is in a unique position to judge these matters, being closely associated with Ricardo & Co., Ltd., whose activities are greater than is generally appreciated.

It is thought that what efficiency may be lost due to increased frictional losses of the "four" will be compensated by the more even torque of this type of engine. Even in engines of under 750 c.c. the 4-cylinder is considered to be a possible alternative to the flat twin. In smaller sizes Major Halford favours the single cylinder engine.

In the accompanying series of lists the prophecies of many riders and prominent men in touch with recent developments are tabulated. The figures relate only to the kilometre records, and it will be seen that there is great diversity of opinion as to the types of engines which will achieve record-breaking speeeds, and also in some directions there are some very optimistic expectations of great increases.

# TWO SPARKS AND THE TWO-STROKE.

## Some Notes of Special Interest to Scott Riders.

THERE is no doubt that a two-pole plug, run in line with a single pole, one placed in the cylinder head (preferably the single pole) and the other in the side of the cylinder, helps considerably to increase the engine revolutions. I have used this system for several months, and can tell immediately when one of the two-pole plugs cuts out. The engine continues to pull fairly sturdily, but somehow it seems immediately to lose its liveliness. Scott enthusiasts who are out for high efficiency will find the tip worth trying.

The two-pole plug is, I think, preferable to a two-spark magneto. My experiences of the latter were confined to a pre-war magneto of Bosch make, and were not particularly happy. The advantage of the double plug system is that one obtains an intensified spark, which minimises plug troubles in the case of an oily engine.

The two-pole plug is, however, a *rara avis*, generally to be obtained only from the makers. In the Scott Sociable one of Mr. Scott's own design is used; it is made by the Lodge people, who for some years have marketed an alternative design.

The Scott Motor Cycle Co. learnt during the T.T. races some years ago that two sparks per cylinder produced improved results; some will recall "Tim" Wood putting up a record lap, then retiring with a burnt-out magneto. So said the reports immediately succeeding the race; but when it came to dissecting the magneto, it was found not to be burnt out, but to be suffering from something new in the way of magneto ailments, the result of its peculiar design. It was, of course, a two-spark magneto.

I had the same apparatus a little while later, but it was not so satisfactory as the two-pole system of to-day. When employing the two-pole system it is necessary to keep the plug points very finely adjusted, as, there being two gaps, there is a much greater strain thrown on the insulation. If the points are a fraction too wide, the spark will choose any course, even the safety gap, rather than the one it is intended to take. Thus the points need fairly regular attention, as the great heat of the spark quickly widens them, and the resultant shorting takes a variety of forms.

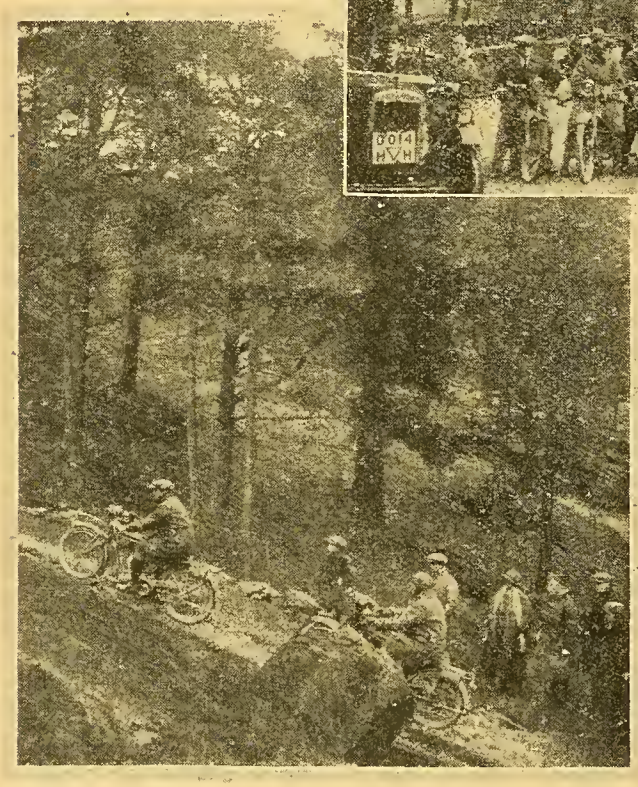
It is a curious fact that, while the power of most two-strokes is decidedly enhanced by two sparks, the addition seems to make no difference to a four-stroke. Incidentally, a two-stroke so equipped may tend to pink, in which case the way to get the best results is to find just the right mixture of petrol and benzole, which varies according to the tastes of individual engines. To obtain maximum revolutions, the quantity of benzole should be cut down until the pinking stage is almost reached, as it affects quick acceleration. Unfortunately, few two-strokes can accommodate more than one sparking plug.

H. MORTIMER BATTEN.

# SEARCHING FOR A LAKELAND TRIALS ROUTE.

## Little-known Corners Explored for a Forthcoming Event.

By GEORGE D. ABRAHAM.



On Tilberthwaite Hill, part of the proposed course of the forthcoming Northern Centre (A.C.U.) Open Reliability Trial. The riders, who are officials of the promoting club, are R. L. Williamson, on a Norton, and W. B. Anderson, on a 2¾ h.p. A.J.S.

At Tilberthwaite Farm, Coniston. The trials committee and friends who met to discuss the final course.

WITH the coming of spring in Lakeland, trials seem very much in the air. Enthusiasts are keenly on the hunt for new hills, and many a quiet dale is stirred by the lively music of motors striving lustily for mastery of the heights.

The forthcoming open trial of the Northern Centre (A.C.U.) on May 13th has roused unusual interest, and after a recent week-end outing the full course may now be considered complete. Many old favourites are to be included, but several new sections will be added. The lunching place will be the New Dungeon Ghyll Hotel in Langdale, and in this Westmorland section there will be many interesting features.

On a fine day, and with the surface fairly set, the notorious Blea Tarn Pass loses most of its terrors, but under wet, stormy conditions, which sometimes occur thereabouts, its inclusion in an open trial is hardly fair. This was proved during the Northern trials on Good Friday. Blea Tarn Pass will not be climbed this year, and at the outset it should be stated that a perfectly fair course has been chosen, with nothing of the Wrynose and Hard Knott element about it.

### Where Freak Hills Abound.

A recent outing of the Route-finding Committee lay in the Tilberthwaite area, and probably nowhere in the district are so many freak hills to be found. Unfortunately, these are usually roads that curl up to the many slate quarries, and they are not suitable for through routes.

A large party of keen hill-hunters foregathered at the famous Swan Hotel in Grasmere's peaceful vale. By the way, this splendidly renovated old hostelry on the roadside of the main highway is worth keeping in mind as a welcome house of call by all motor wanderers in Lakeland. In glorious sunshine, the more staid section of the party journeyed to Tilberthwaite, over Oxenfell. It was sheer delight to thread the daffodiled depths of the vales from Grasmere to Rydal, and so through speed-curbing Ambleside to Skelwith Bridge. The emerald gleam of larches lightened the way, and up we climbed to breezy heights where the promise of spring had scarcely come, and snow-capped loftiness loomed overhead. Once over the summit, it was a

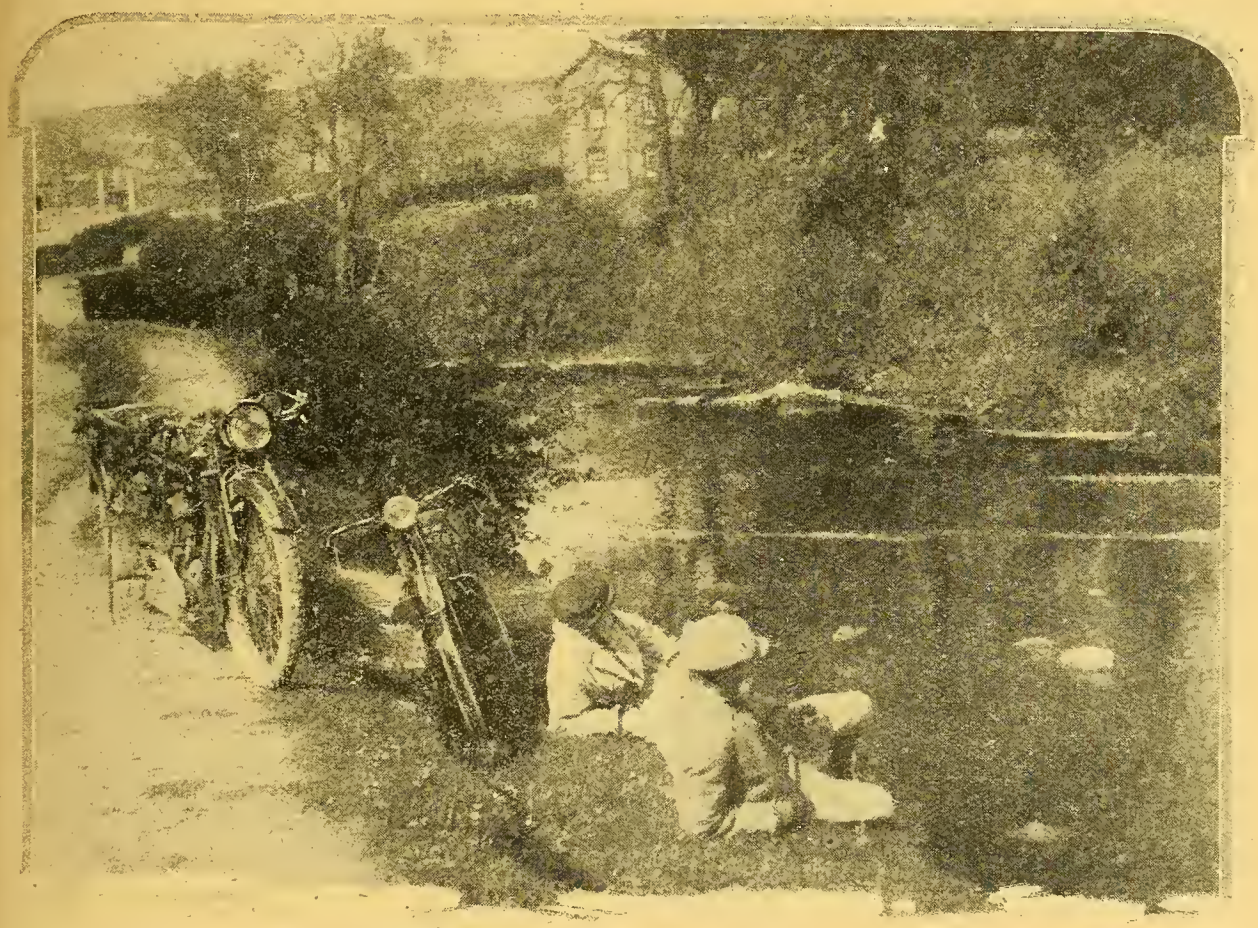
**Searching for a Lakeland Trials Route.—**

speedy run down through the softer airs of Yewdale, until about two miles short of Coniston an awkward sharp turn on the right led up into the wild recesses of Tilberthwaite, with its famous crag-girt glen and quaint, old-world farms. The hill enthusiasts had arranged to travel by the more mountainous route over Red Bank, Ullett Hill, and Colwith, and wait for us at Tilberthwaite Farm.

After a journey of a mile and a half through the pine woods a scene of much liveliness was encountered at the ford across the Brathay. This is the most notorious water-splash in Lakeland; a neighbouring farmhouse keeps a special rope to haul cars out of their watery dilemma. After inspection, there was no mistaking the deceptiveness of the place. It was about sixteen yards across. A footbridge spanned the ford. Apparently the road kept close by this, but there the water was four or five feet deep. The real road through the ford curved far away from the footbridge, and was from six to ten yards distant. There it was quite easily passable by cycles and small cars alike. Unless the weather is bad, the Colwith watersplash will probably be included in the forthcoming trial, but, failing suitable conditions, an alternative avoiding route of equal mileage will be used. Keeping to the shallows, all the machines of the exploring party came through the ford successfully. With the machines properly marshalled, the Colwith Ford deserves a place in what is certainly a much easier course than that of last year.

After leaving this a way was made back to Tilberthwaite Farm, where a tricky "hairpin" gave approach to the new Tilberthwaite Hill. This led up and over to a fascinating mountain road which leads to near Fell Foot in Little Langdale. Thence the Trials route will avoid Wrynose and go over Blea Tarn Pass from the southerly side using the well-known test hill for a brake-trying descent into Great Langdale.

At Tilberthwaite some very fine ascents were made, notably by the following riders: Williamson and Morton (Nortons), Anderson (A.J.S.), Pape (Scott), Jenkinson (A.B.C.); Reid (P. and M.), and Harrison (Sunbeam). Of the sidecars, Tiffen's B.S.A. was very speedy. Other interesting exploratory work was undertaken, then came the deluge. 'Midst a veritable watersplash the merry party scattered homewards in all directions, thus ending a fascinating and useful outing.



THE PLEASURES OF THE OPEN ROAD. Ravenstonedale, in Westmorland, is the Mecca of thousands of motor cyclists and holiday makers. The old world village situated in the heart of the Lake District abounds in historic interest and varied beauty. The machines are a 5 h.p. N.U.T. and a 2¾ h.p. Douglas.

# MOTOR CYCLES OVERSEAS

A competitor in the recent Bombay to Poona Reliability Trial crossing the Jhana bridge, about twenty-four miles from Bombay. The illustration conveys a good idea of the excellent roads to be found in the neighbourhood of big Indian cities.

## Views and News from our "Foreign" Mail Bag. Some Candid Criticisms.

ALTHOUGH widely separated by every diversity of climate and location the keen spirit of enthusiasm which has made the British motor cycle movement so strong flourishes in many corners of the earth.

Naturally, prevailing conditions modify the viewpoints of overseas motor cyclists, so we get very contradictory letters on similar subjects from time to time; nevertheless, the essentially British sport associated with motor cycles is a universal attribute, as is shown in the subjoined selection from our letter bag.

### Ceylon.

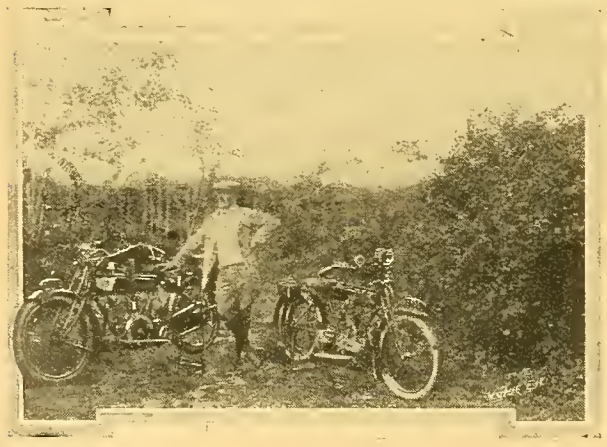
From the fair isle of Ceylon we have received the report of a 189-mile trial at 20 m.p.h. Our correspondent writes as follows:

"Thirty competitors took part. The medium-powered Indian showed itself the most popular motor cycle on our market, being represented by eight competitors. Of B.S.A. and Ariel machines there were three of each. The Wooler, Zenith, Ace, Harley-Davidson, and Triumph were each represented by two examples, while there was one machine of each of the following makes: N.S.U., Royal Ruby, Rudge Multi, Frere, and A.B.C.

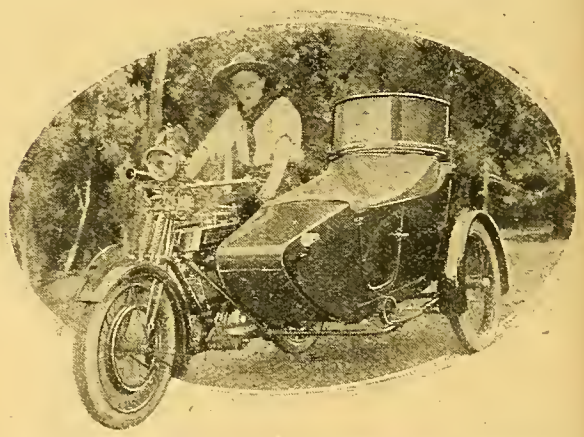
"The first stage of the run, from Colombo to Kandy, 90 miles, presented only the usual hindrances of sleeping bullock-cart drivers, excited pariah dogs which make the centre of the road their kennel, and still more excited stray cattle, which sometimes suddenly try to race with motor cycles. There were no serious accidents, however.

"The next section, from Kandy to the Yatiyantota Resthouse (51 miles), presented the greatest difficulties, as the dangerous Ginigatenna Pass and several steep hills and narrow and sharp turns had to be negotiated, but the delightfully cool climate modified the strain of the extra exertion very greatly. It is a pity a little time was not allowed to look over the beautiful country from the Ginigatenna hill-crest, or at the many other points noted the world over for their remarkable scenery.

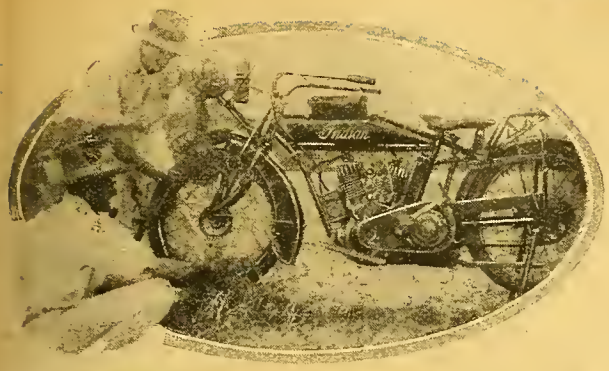
"The next run was for Ruanwella, a matter of seven miles, through undulating country thickly studded with dagobas and other interesting ancient relics. From here to Urupola (12 miles) was marked down for a non-stop test. The rest of the 28 odd miles back to Colombo, through many pleasing hamlets, presented no extraordinary motoring difficulties. The run was voted on all hands a delightful event.



A Blackburne twin and a New Hudson two-stroke in the Bandoeng district of India.



An Mbaban rider who has covered 17,000 miles in Swaziland, S.A., on his Enfield outfit.



When will unpuncturable tyres become universal? Riders of an Indian on a wayside in Rhodesia.

"That 80 per cent. of the machines should have survived so exacting a road and climate test speaks well for the reliability of the modern motor cycle.

"The Ceylon Motor Cyclists' Club has made arrangements to hold a six-hours' inter-district motor cycle competition, with the route laid entirely in the cool and beautiful but hilly up-country. In the middle of the run is included a half-hour's rest at the Newara Eliya Grand Hotel. Newara Eliya is the sanatorium of Ceylon.

"The winning team will be found by means of an acceleration test upon the steepest part of the Ramboda Pass, and by a high-speed half-mile test. The general average is, however, fixed at 18 m.p.h."

### India.

The Matchless motor cycle was quite an attraction at the Bandoeng Annual Industrial Fair, and was purchased by the Board of the Industrial Fair to be awarded as a prize to visitors. This make of machine and also Blackburnes are being demonstrated by B.C.A. (India), Ltd., at Bandoeng.

### Norway.

A correspondent in Scandinavia (who signs himself "V.B.T."), writes on ground clearance as under:

"I have twice in this country come to a standstill through the under parts of the machine hitting the mud when the back wheel slid into a particularly deep rut, and on Scandinavian roads this would continually be happening. There is no need to build English sidecar outfits quite as low as it is usually done.

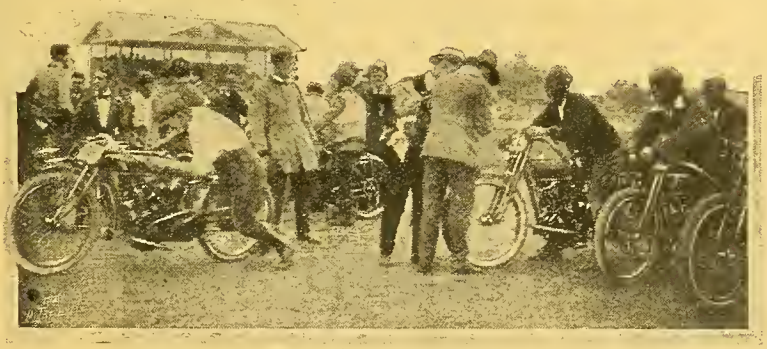
"With the heavy gloves used in Norwegian winters, the English short control levers are difficult to manage. The twist-grip throttle, foot clutch, and long gear lever are far better in cold weather.

"The drip-feed lubrication is moderately efficient in England, but at the temperatures often experienced in more northerly countries this method of lubrication would be unreliable.

"The chain cases also, though adding greatly to the appearance, are certain to become a nuisance before the machine has run for many years. My own experience of a broken chain in a forward cast aluminium chain case, and the consequence of its jamming under the gear box sprocket, are sufficient to convince me of the danger of these contrivances on solo machines.

"The difference of opinion in England and Norway is interesting. At home it causes comment if one rides a twin cylinder Sunbeam solo, whereas in Christiania it is very common to see four-cylinder Hendersons ridden solo, and very fine they look. In the surrounding country one more often sees Harley-Davidsons or Reading-Standards ridden solo than with sidecars."

A. F. Healey and his 6 h.p. A.J.S. outfit, the mudguarding of which he specially commends for pioneer work.



In Victoria Park, Sydney, where the M.C.C. of N.S.W. held its recent speed trials. (Top left.) T. Benstead (7-9 Harley-Davidson), winner of the 200 mile championship of Australia and various championships, and one of the best all-round riders in the Commonwealth. (Top right.) A. Clifton (7-9 Harley-Davidson), a successful competitor in speed events.

### Swaziland.

On the previous page we illustrate an 8 h.p. Enfield sidecar which is giving every satisfaction in Swaziland after having completed 17,000 miles. The owner in sending the photograph refers to it as one of "Ixion's" pet aversions, *i.e.*, a silent twin. We are told that the Enfield does not rely on vaseline and dope for protection, and is really silent. The buzz of the speedometer drive and hiss of carburetter can be easily heard above the whir of the engine. Can any overseas rider want anything better, especially when it is allied to the Enfield standard of reliability?

**The Motor Cycle Overseas.—**

### S. Rhodesia.

Colonial roads are discussed by a Bulawayo correspondent—A. F. Healey—who writes:

"I noticed in a copy of *The Motor Cycle* that riders were clamouring for a *less* Colonial section in 'the Six Days'.' The so-called Colonial section is better than some of our town roads. Roads! When you have to get off every few miles (or rather hundred yards) and scrape the mud from the wheels, and get stuck up to the hubs in Rhodesian mud, riders at home would have reason to complain; but it is an everyday occurrence here, during the wet season.

"Then, again, water-splashes. We have water-splashes here, not a few feet wide, but a hundred or more, and deep at that. I owned a well-known 4½ h.p. single a year ago, and was let down through water getting into the magneto. Why don't manufacturers fit magnetos behind the engine, such as the Sunbeam and Rover? It costs no more, is neater, and more suitable for overseas conditions.

"At present I own an ex-W.D. 6 h.p. A.J.S. The sidecar is home-made, and cost £7 10s. It is all wood, and took six weeks to make, working every now and then in my spare time."

### New South Wales.

One of our Australian correspondents comments upon British motor cycles for service in New South Wales. He writes:

"There are 97,000 miles of roads in N.S.W., and of these 36,000 miles are in their natural state—unmade and unmetalled. You can see there are some 61,000 miles formed which, although not all in good condition, can be used. In N.S.W. alone there are 11,066 motor cycles actually in use.

"There are many British machines eminently suitable for general purposes, but which are unobtainable here. Manufacturers do not advertise their prices for overseas sales. If they advertised the export price one could easily calculate the final cost, as shipping charges, etc., could be found out for inquiring.

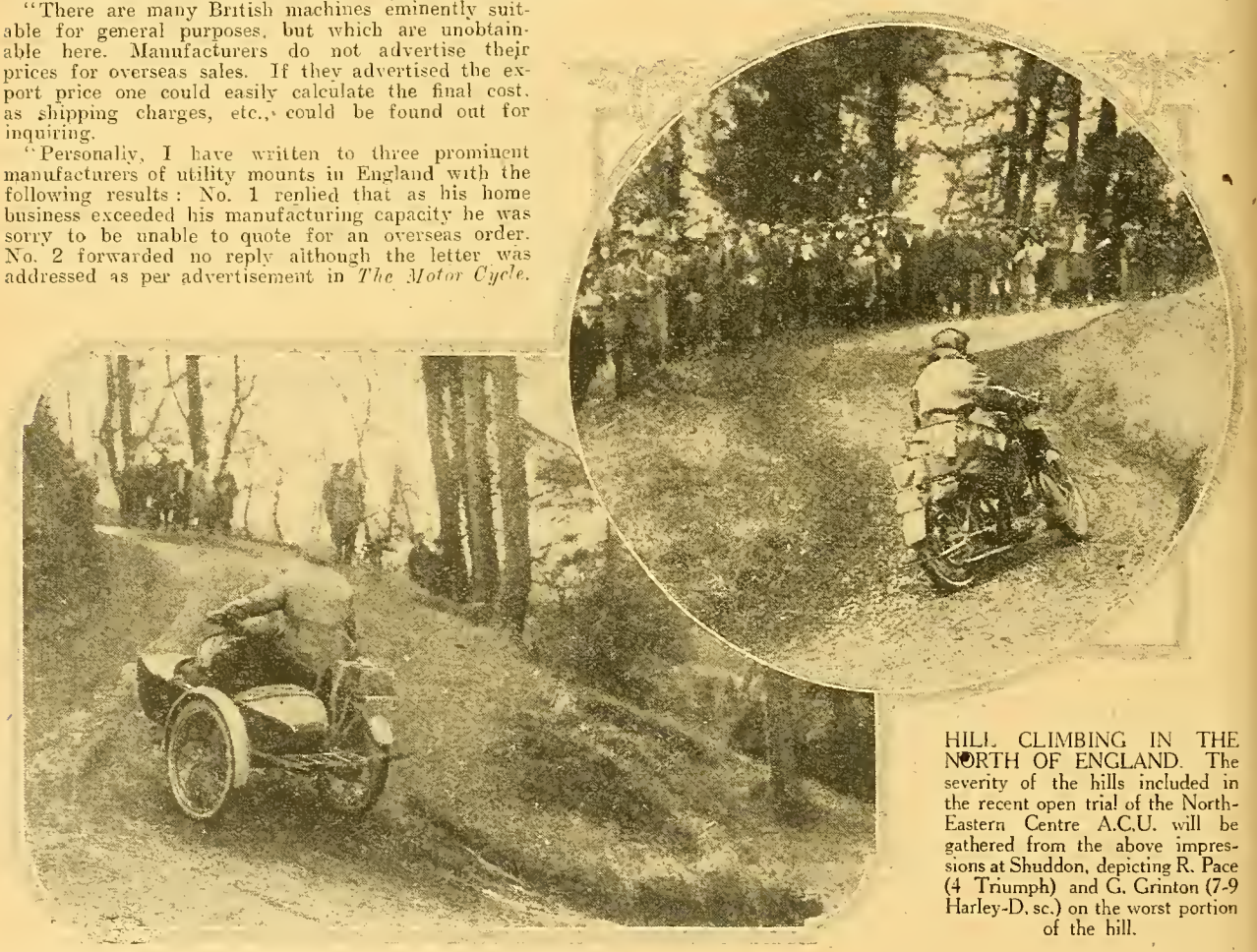
"Personally, I have written to three prominent manufacturers of utility mounts in England with the following results: No. 1 replied that as his home business exceeded his manufacturing capacity he was sorry to be unable to quote for an overseas order. No. 2 forwarded no reply although the letter was addressed as per advertisement in *The Motor Cycle*. No. 3 answered to the effect that they had a representative in Melbourne and that any transaction would have to be through him.

"Writing to this gentleman, he answered that he would have to enquire current price from England, and that it would be impossible to obtain a machine before six months unless he cabled. Should I care he would cable, provided I paid the cost of the cable whether I placed the order or not. Does this encourage one to get a British machine when one can get immediate delivery of any American machine? Everyone cannot wait.

"I have been asked by the hon. secretary of the M.C.C. of N.S.W., Mr. J. A. Fair, to mention the benefit derived by the affiliation of that club with the A.C.U. The M.C.C., which is the premier club of N.S.W., if not all Australia, has over thirty suburban and country clubs affiliated with it, and governs as an A.C.U. centre. There are only two clubs unaffiliated, but as both are mainly social clubs little is lost by their absence.

"The M.C.C. interprets the rules fairly and properly, and there is no chance of any two clubs running contests on days and clashing with one another. Before, that was practically always the case, as our local governing body always had club leanings. The A.C.U. scheme has brought about a great revival of interest in club life of the motor cycle in New South Wales.

"It has been very gratifying to motor cyclists generally and the M.C.C. in particular to know that the American club officials are seriously considering the advisability of adopting our method of hill-climbing in place of their machine-wrecking events. Our climbs are on the knock-out principle—two men climb at the same time and the best man wins. There is little doubt that this is the best system by far, and very much more interesting than merely timing the riders up the hill singly, as seems to be the vogue in your country."



HILL CLIMBING IN THE NORTH OF ENGLAND. The severity of the hills included in the recent open trial of the North-Eastern Centre A.C.U. will be gathered from the above impressions at Shuddon, depicting R. Pace (4 Triumph) and G. Grinton (7-9 Harley-D. sc.) on the worst portion of the hill.

# LONDON-LAND'S END RESULTS SUMMARISED.

## 332 Entries. 294 Starters. 76 Gold Medals. 121 Silver Medals. 2 No Awards.

IN winning the President's Cup, presented by J. K. Starley, Esq., in the London-Land's End run, a remarkable performance was made by A. G. Wall (398 A.B.C.).

In the official programme Wall was down to ride a Velocette, but he elected to change his mount at the last minute and was allowed to ride the A.B.C., a machine with which he was quite unfamiliar. He carried no watch, and broke his speedometer, yet nevertheless rode dead to schedule throughout the run. In the solo class there were 121 entries, nine of them proving to be non-starters; in addition to the President's Cup winner, 43 won gold medals, 40 were awarded silver medals, and 28 retired.

Of the 99 sidecar entrants, 92 started; of these 17 gained gold medals, 37 silver medals, and 36 retired. The cup presented by the captain of the club, Mr. W. H. Wells, was won by F. J. Ellis (993 Matchless sc.). One of the sidecar drivers, W. H. Bashall (678 Martinsyde), finished the journey, but arrived too late at the finish to gain an award.

Special mention must be made of the sportsmanlike act of Mr. W. H. Elce, the actual winner of the cup presented by himself for the best performance on a three-wheeled cycle car, who generously passed on the cup he had won to the competitor who made the next best performance, H. F. S. Morgan. In this class there were one gold and two silver medal winners.

### MOTOR BICYCLES.

| | |
|---|---|
| Entries | 121 |
| Starters | 112 |
| Cup winners | 1 |
| Gold medals | 43 |
| Silver medals | 40 |
| Retired | 28 |

### SIDECARS.

| | |
|---|---|
| Entries | 99 |
| Starters | 92 |
| Cup winners | 1 |
| Gold medals | 17 |
| Silver medals | 37 |
| No award | 1 |
| Retired | 36 |

### THREE-WHEELED CYCLE CARS.

| | |
|---|---|
| Entries | 9 |
| Starters | 8 |
| Cup winners | 1 |
| Gold medals | 1 |
| Silver medals | 2 |
| Retired | 4 |

### CARS.

| | |
|---|---|
| Entries | 93 |
| Starters | 82 |
| Cup winners | 1 |
| Gold medals | 13 |
| Silver medals | 44 |
| No award | 1 |
| Retired | 23 |

## INDIVIDUAL PERFORMANCES.

### A.B.C.

A. G. Wall (398). *President's Cup*
Victor Belfield (398). *Gold medal.*
W. Grose (398). *Gold medal.*
V. Henry Wells (398). *Gold medal.*
A. W. Easton (398). *Silver medal.*

### A.J.S.

S. Sharratt (349). *Gold medal.*
H. Macatta (349). *Gold medal.*
V. C. Henry (349). *Gold medal.*
W. Giles (800 sc.). *Gold medal.*
G. Wooldridge (349). *Silver medal.*
W. Cholderoft (750 sc.). *Silver medal.*
M. O. McLachlan (349). *Retired*
J. Agg (799 sc.). *Retired.*
Glen White (800 sc.). *Retired.*

### ALECTO.

L. Richardson (349). *Silver medal.*

### ARIEL.

A. Longman (498). *Gold medal.*
Atkins (498). *Gold medal.*
C. Nias (498). *Gold medal.*
J. Watson (994 sc.). *Gold medal.*
W. Segrott (498). *Silver medal.*
Dickinson (498). *Silver medal.*
Bourlet (498). *Silver medal.*
A. Davies (498). *Silver medal.*

### BEARDMORE-PRECISION.

W. Lewis (349). *Gold medal.*
G. Cocks (598 sc.). *Silver medal.*
Clark, Jr. (600 sc.). *Silver medal.*

### BLACKBURNE.

H. Brayne (548). *Silver medal*

### BROUGH.

A. J. Bosworth (690 sc.). *Retired.*

### BROUGH SUPERIOR.

W. Ratcliffe (956). *Gold medal.*
Brough (956). *Gold medal.*
W. A. Fell-Smith (976 sc.). *Gold medal.*
D. Marvin (987 sc.). *Gold medal*
C. Tait (980 sc.). *Silver medal.*
Greenwood (956 sc.). *Silver medal*
Clennell (1,000 sc.). *Retired.*

### B.S.A.

H. Walker (770 sc.). *Gold medal.*
S. Perry (770 sc.). *Gold medal.*
L. Bird (770 sc.). *Silver medal.*
McKenzie Veale (770 sc.). *Retired.*
Eland (557 sc.). *Retired.*

### CALTHORPE.

Kuhn (245). *Silver medal.*
Heller (245). *Silver medal.*

### CONNAUGHT.

L. Sprosen (293). *Silver medal.*
P. Brettell (370 sc.). *Silver medal.*
F. Anderson (295). *Retired.*

### COTTON-VILLIERS.

T. Glanfield (269 sc.). *Silver medal.*

### COULSON.

L. Hanman (348). *Retired.*

### COVENTRY-VICTOR.

Wallis (688 sc.). *Silver medal.*

### DIAMOND.

A. S. Guthrie (349). *Gold medal.*

### DOUGLAS.

W. Spencer (494). *Gold medal.*
A. Newman (497). *Gold medal.*
Newitt (494). *Silver medal.*
L. Daniels (595). *Silver medal.*
W. Harrington (349). *Retired.*

C. G. Pullin (749 sc.). *Retired.*
J. Pruen (494 sc.). *Retired.*

### DUNELT.

O. S. Bridcutt (499). *Gold medal.*
P. Pehrson (500 sc.). *Silver medal.*
C. W. Vallings (500 sc.). *Silver medal.*

### G.R.I.

D. G. White (347). *Retired.*

### HAGG TANDEM.

R. N. Thomas (349). *Silver medal.*
B. H. Taylor (349). *Silver medal.*

### HARLEY-DAVIDSON.

R. V. Saltmarsh (484). *Silver medal*
F. V. Edwards (484). *Silver medal.*
W. King (989 sc.). *Silver medal.*
B. E. Belfield (989 sc.). *Retired.*
E. J. L. Strong (989 sc.). *Retired.*
G. Dyer (989 sc.). *Retired.*

### HAWKER.

A. A. Attwood (548 sc.). *Silver medal.*

### HENDERSON.

W. J. Barker (1301). *Silver medal.*
S. H. Farley (1301). *Silver medal.*

### HUMBER.

J. MacKenzie (745 sc.). *Silver medal.*

### INDIAN.

E. A. Bridgman (998 sc.). *Gold medal.*
E. A. Collum (596 Indian Scout). *Silver medal.*
D. H. Davidson (596 Indian Scout sc.). *Retired.*

### IVY.

H. J. Greathead (348). *Silver medal.*
P. A. Hopkins (348). *Silver medal.*

### JAMES.

H. H. Saddington (662 sc.). *Retired.*

### LEA-FRANCIS.

J. Richardson (498). *Gold medal.*
A. Conville (592 sc.). *Retired.*

### LEVIS.

F. W. Applebee (247). *Gold medal.*

### MARTINSYDE.

E. H. Gifford (496). *Gold medal.*
H. H. Nicholson (496). *Gold medal.*
A. A. F. Symes (678). *Gold medal.*
J. T. Bashall (678 sc.). *Silver medal.*
G. Baxter (678 sc.). *Silver medal.*
W. H. Bashall (678 sc.). *No award.*

### MATCHLESS.

F. J. Ellis (993 sc.). *The Captain's Cup.*
T. J. Ross (996 sc.). *Gold medal.*
R. C. Boxer (996 sc.). *Gold medal.*
J. A. Peacock (996 sc.). *Gold medal.*
T. E. Ranger (996 sc.). *Gold medal.*
G. Nott (996 sc.). *Gold medal.*
D. S. Parsons (996 sc.). *Gold medal.*
C. R. Collier (993 sc.). *Gold medal.*
G. D. Hardee (993 sc.). *Gold medal.*
J. A. Holt (993 sc.). *Gold medal.*
F. W. Neill (980 sc.). *Gold medal.*
B. S. Allen (996 sc.). *Silver medal.*
W. F. Guiver (996 sc.). *Silver medal.*
P. S. Crauford (996 sc.). *Silver medal.*
F. E. Jones (980 sc.). *Silver medal.*
W. Bucknell (996 sc.). *Silver medal.*
H. L. Miserez (993 sc.). *Silver medal.*
J. Graham (993 sc.). *Silver medal.*
A. C. Maskell (964 sc.). *Silver medal.*
W. L. Gard (993 sc.). *Silver medal.*
W. H. Hardman (996 sc.). *Retired.*
S. Julian (996 sc.). *Retired.*
W. H. Julian (996 sc.). *Retired.*
A. H. Tisley (993 sc.). *Retired.*
F. Macdonald (993 sc.). *Retired.*

### McKECHNIE.

F. W. Becker (688 sc.). *Retired.*

### METRO-TYLER.

G. E. Cuffe (698). *Gold medal.*

### MORGAN (CYCLE CAR).

H. F. S. Morgan (975). *Elce Cup.*
W. H. Elce (1096). *Gold medal.*
F. W. Dame (980). *Silver medal.*
H. E. K. Sawtell (1096). *Retired.*
H. W. Holmes (1096). *Retired.*
S. A. McCarthy (980). *Retired.*
A. G. Gripper (1096). *Retired.*

### NEW IMPERIAL.

J. G. Hann (980 sc.) *Retired*

### NORTON.

P. Pike (490). *Gold medal.*
J. G. Biss (630). *Gold medal.*
E. Wood (633 sc.). *Silver medal.*
A. H. S. Love (490). *Retired.*
M. V. Gordon-Cumming (490). *Retired.*
W. G. Boyer (490). *Retired.*

### N.U.T.

E. Hardwick (678). *Silver medal.*
J. Harrison (496). *Retired.*
J. G. L. Boorer (678). *Retired.*

### O.K.

L. A. Welch (292). *Silver medal.*
F. J. Youngs (292). *Silver medal.*

### P. and M.

P. Cunningham (550 sc.). *Silver medal.*

### POWELL.

J. A. Stedman (547). *Retired.*

### P.V.

W. L. Thomas (293). *Silver medal.*
R. V. Crauford (293). *Retired.*

### QUADRANT.

Clifford Wilson (653 sc.). *Retired.*
G. A. Pidgeon (653 sc.). *Retired.*
W. W. E. Clarke (654 sc.). *Retired.*

### RADCO.

R. H. Baxter (247). *Silver medal.*

### RALEIGH.

E. S. Burnett (750). *Gold medal.*
A. M. Knill (348). *Gold medal.*
Hugh Gibson (348). *Gold medal.*
A. R. H. Stewart (348). *Gold medal.*
E. Foster (750). *Silver medal.*
G. Richardson (348). *Silver medal.*
R. S. Newnham (348). *Silver medal.*
C. F. Alcock (348). *Retired.*
M. A. Newnham (700 sc.). *Retired.*

### READING-STANDARD.

J. A. O'Sullivan (1,170). *Gold medal.*

### READY.

D. Read (250). *Retired.*

### REX.

H. W. Glendinning (998 sc.). *Silver medal.*

### ROVER.

J. Eddy (499). *Gold medal.*
L. N. Stannah (499). *Silver medal*

### ROYAL ENFIELD.

A. F. Pulling (965 sc.). *Silver medal.*
H. Sutton (225). *Retired.*

### ROYAL RUBY.

F. Pownall (986 sc.). *Retired.*

### RUDGE.

P. L. B. Wills (499). *Gold medal.*
E. J. Keyhoe (499). *Silver medal.*
A. W. Hadley (499). *Silver medal.*
W. L. Danskin (998 sc.). *Retired.*
T. J. Ryan (998 sc.). *Retired.*
F. T. Sibley (499 sc.). *Retired.*

### SCOTT.

C. J. Wheeler (481). *Gold medal.*
G. S. Green (533). *Silver medal.*
J. J. Boyd-Harvey (496). *Retired.*
J. S. Austin (496). *Retired.*
W. A. Newell (533). *Retired.*
A. H. Carnt (532). *Retired.*

### SIRRAH-BLACKBURNE.

C. N. Cooper (350). *Retired.*

### SUNBEAM.

P. Street (499). *Gold medal.*
E. W. T. Howard (499). *Gold medal.*
P. W. White (996 sc.). *Silver medal.*
P. H. Jones (499). *Silver medal.*
C. F. Plowman (499). *Silver medal.*
M. P. Bradley (599 sc.). *Retired.*

### T.B. (CYCLE CAR).

F. Spouse (980). *Silver medal.*

### TRIUMPH.

A. C. Rhodes (499). *Gold medal.*
M. Pearson (550). *Gold medal.*
H. R. Harveyson (499). *Gold medal.*
R. Pugh (499). *Gold medal.*
E. H. Williams (499). *Gold medal.*
E. Pond (550). *Silver medal.*
B. J. Sims (550). *Silver medal.*
F. V. Harris (550 sc.). *Silver medal.*
A. H. Nelson (550 sc.). *Silver medal.*
G. R. Claridge (550 sc.). *Silver medal.*
G. W. Burgoyne (550). *Retired.*
R. B. Roberts (550). *Retired.*
T. A. Slann (497). *Retired.*
S. J. Marks (499). *Retired.*
W. R. Williams (499). *Retired.*
W. P. Brandon (550 sc.). *Retired.*
E. C. Barton (559 sc.). *Retired.*
A. P. McGowran (550 sc.). *Retired.*

### TRUMP-J.A.P.

J. E. Pantard (250). *Retired.*

### VERUS.

T. H. Weaver (696 sc.). *Silver medal.*
W. G. Churchill (348). *Retired.*

### WOOLER.

H. H. Robinson (345). *Retired.*
A. Milward (345). *Retired.*
W. N. Worthington (347 sc.). *Retired.*

### X.L.

J. W. Troughton (550). *Silver medal.*

### ZENITH-BRADSHAW.

V. Gayford (496). *Gold medal.*
W. D. Pugh (496). *Gold medal.*
R. Charlesworth (496). *Gold medal.*
G. O. Ford (496). *Gold medal.*
S. Hancox (500 sc.). *Silver medal.*
F. E. Salter (496). *Silver medal.*
E. J. Walter (496). *Silver medal.*
R. B. Clark (499 sc.). *Silver medal.*
F. A. Jaques (986 sc. Zenith). *Retired.*

# A TWO-STROKE WITH POPPET VALVES.

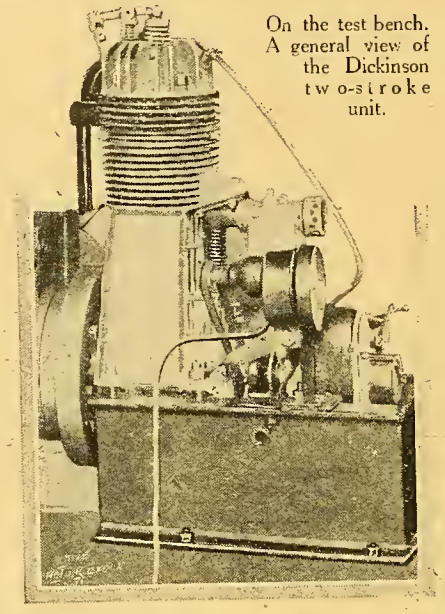
## Attempting to Combine the Advantages of a Two-Stroke with the Efficiency of a Four-Stroke. The Dickinson Engine.

MOST two-stroke users are aware of the disadvantages of this simple and popular type of engine, and it was with the idea of overcoming these failings that the engine here described was designed. It has a bore and stroke of 75×79 mm. (349 c.c.), and incorporates many startling departures from usual practice.

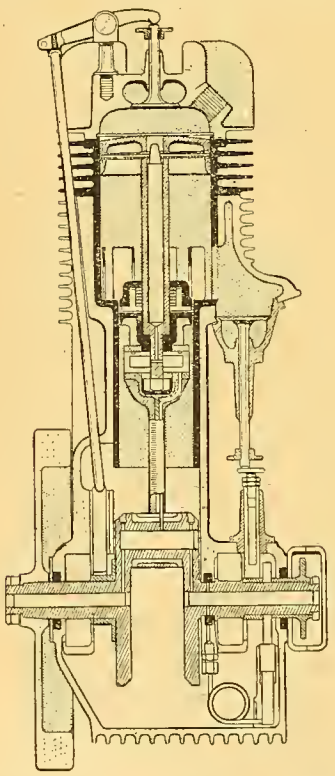
Firstly, it must be mentioned that it follows four-stroke practice in that it has mechanically-operated valves which are actuated by cams on the main shaft of the engine. The cylinder is of cast iron, with two-thirds of its length enclosed in the aluminium crank case, the upper portion of which is ribbed, to form part of the cooling system. The greater portion of the cylinder, therefore, is in the nature of a cast iron liner in the aluminium case. The cylinder barrel is of considerable length, the lower portion being a smaller diameter than the working portion, and forming a cross-head guide.

### Steam Engine Type Piston.

We must now turn our attenlion to the piston, which in design somewhat resembles that employed in a steam engine, being very shallow as to depth. It is provided with radiating fins under its head and has three grooves, in each of which there are three thin rings. The piston rod is in one with the piston head, and is filled with oil, which leaks out through a hole at the bottom, effectively sealing the gland through which it passes at the cylinder base. At the bottom of the piston rod is a cross-head, which carries the gudgeon pin and small end of the connecting rod.



On the test bench. A general view of the Dickinson two-stroke unit.



Steam engine type piston and crosshead and general arrangement of valve gear are shown in this sectional drawing of the engine.

### Functions of the Engine.

On the side of the crank case is the inlet port and valve chest, and this is in communication with a ring of vertical slits in the lower part of the wall of the working cylinder. In the head of the cylinder is the overhead exhaust valve, both valves being worked by tappets and cams on the crankshaft. As the piston rises, the inlet valve opens and the lower part of the cylinder is filled with gas. On the downstroke this gas is compressed, and 20 mm. before the bottom of the stroke the exhaust valve opens. The piston being very shallow and the slits in the cylinder wall being of greater depth, it follows that at the end of its stroke the compressed gas can escape from the lower to the upper side of the piston. The effective depth of the inlet ports, however (*i.e.*, that portion of the slits above the piston), is only 6 mm., but the area is large, since they extend round the cylinder, and consequently transfer takes place in a small period of piston travel.

The rush of the incoming gases from below results in the complete expulsion of the exhaust gas above (the valve remains open slightly after bottom dead centre), hence the excellent scavenging of this engine, which results in the Dickinson engine giving the remarkably good petrol consumption of 0.6 pint per h.p. hour, the same as a four-stroke engine of a similar cubic capacity.

### High Compression Ratio.

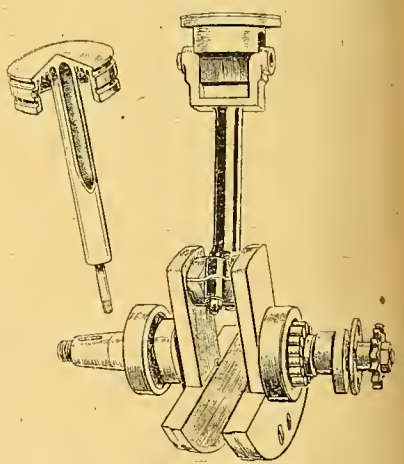
Instead of the usual compression ratio of 4 to 1, actually a 5¼ to 1 ratio is used, the compression pressure being between 75 and 80 lb. to the square inch. As has already been shown, the compression takes place in a separate chamber, and the crank chamber is isolated from the mixture by means of a diaphragm at the cylinder base and a special gland consisting of a split bush, held together by a steel contracting ring.

### Other Mechanical Features.

Roller bearings support the one-piece, outside flywheel, crankshaft, and the big end bearing is lined with white metal, and is of the split type. It will be noticed that the inlet valve works right away from the heat of the engine.

Lubrication is effected by means of a simple valveless oil pump in the sump, driven off the main shaft, and the lubrication throughout is forced, the crankshaft being hollow and the oil passing up the connecting-rod, lubricating both of its bearings, and eventually passing by way of the hollow piston rod into the cylinder proper, which it lubricates, and whence no oil can escape. Thanks to this arrangement, the oil consumption is excellent. Oil is delivered to the various bearings at a pressure of 20 lb. to the square inch, and the quantity delivered is adjustable from the exterior of the engine.

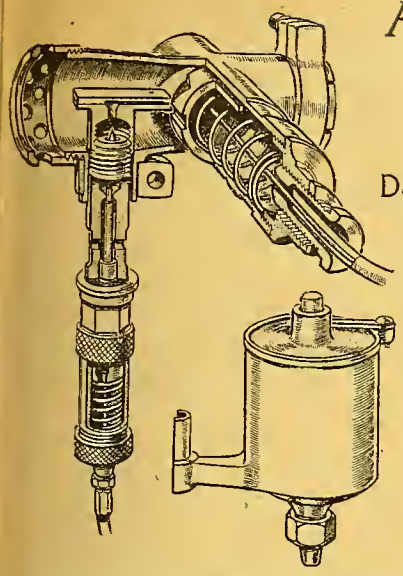
Not only are greater economy and ample power claimed for this engine, but increased flexibility as well. In the experimental works of Leopold Ward, Harmood Place, Chalk Farm, London, N.W.1, where it was built, the engine has been found to develop 6.2 h.p. at 2,700 r.p.m., while it can be made to turn over at 4,000 r.p.m. Its inventor is Mr. R. Harland Dickinson.



One piece crankshaft, connecting and cross-head; the piston and hollow piston rod are shown in part section.

# A VARIABLE JET AUTOMATIC CARBURETTER.

## Detail Improvements in the Wex. Handle-bar Operated Variable Submerged Jet.



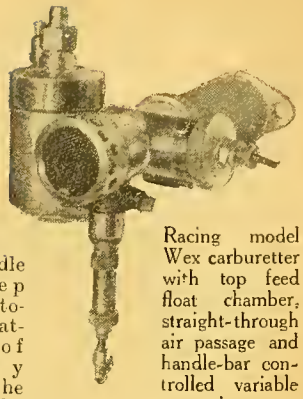
Sectional view of the latest Wex carburetter showing the taper needle jet control, the diffuser, and the throttle barrel which uncovers the diffuser as the throttle is opened.

ALTHOUGH first appearing as one of the single-lever variety, the Wex carburetter is now to be fitted with two controls. It still remains automatic in its action, however, for the second lever merely serves to actuate the tapered needle running through the jet, so controlling the aperture of the latter.

It is in the vaporising chamber of the Wex that the chief improvements are embodied. There is a submerged jet which limits the amount of fuel used at large throttle openings, while screwed above it is a diffuser, through which the petrol issues by way of a narrow slot. The amount of mixture passing to the engine is controlled by a barrel throttle, and this also regulates the amount of air which rushes in behind the diffuser and vaporises the spirit. The diffuser slot is tapered, and is of approximately the same length as the diameter of the air intake, and it will be seen that at any throttle opening a portion of the diffuser is uncovered, the illustration showing the groove in the throttle barrel which effects this.

### Fuel Control at All Speeds.

At high speeds the fuel flow is controlled by the fuel level in the well, since the submerged jet is not influenced appreciably by the depression in the inlet pipe, and therefore at very high speed the weaker the mixture tends to become, as the level is then low; at low speeds, however, the level is normally high. The tapered needle is a step further towards the attainment of economy through the control of the fuel.



Racing model Wex carburetter with top feed float chamber, straight-through air passage and handle-bar controlled variable jet.

It has been found in use that when the machine is pulling hard on a hill closing the throttle has very much the same effect as closing the air with a two-lever carburetter. To enable the carburetter to be accurately tuned spare submerged jets and spare diffusers can be supplied.

We have tried earlier models fitted to a 2¼ h.p. New Hudson, with which ample flexibility was obtained, and also on a Scott Squirrel, which proved to be not only flexible but capable of good acceleration.

The racing model works on exactly the same principle as the carburetter just described, but has an absolutely straight-through passage to the inlet and is provided with a top feed float. The makers the Wex Carburetters, Ltd., 319, Fulham Road, London, S.W.10.

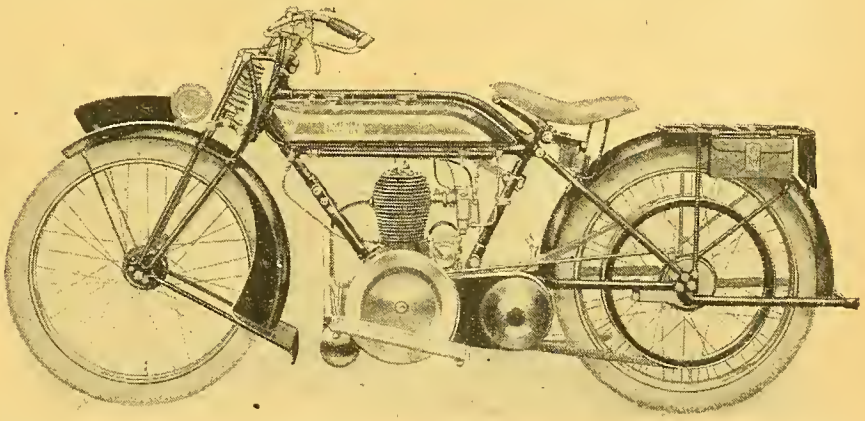
---

# NEW SLEEVE VALVE MEDIUM-WEIGHT.

## The Barr & Stroud Engined Coventry Mascot with Practical Specification.

AS an engine the 350 c.c. Barr and Stroud (70×90.5 mm.) is fast earning an enviable reputation. Silence and flexibility are outstanding points in its favour but in addition it is neat in appearance and extremely accessible. The first Coventry firm to announce the inclusion of this engine as standard are the Coventry Mascot Cycle Co., of 49, Gresham Street, their new 3 h.p. model being specially constructed for the Barr and Stroud engine. Except for a very stout divided down tube, which allows the exhaust pipe to pass direct to the silencer without unnecessary bends, there is nothing unusual about the frame construction; the lines, however, are good, and the saddle is well in front of the rear wheel. A Burman two-speed gear, with clutch and kick-starter, is fitted to the bottom bracket, the drive being by chain and ⅞in. belt. Maplestone forks are fitted, and both front and rear brakes are of the Webb internal expanding type, and particularly smooth in action. Both guards are wide and domed, and in addition to valances a sensible splash guard is fitted in front. All the detail work is good, the driving chain is partially enclosed, the front number plate is fitted with licence card holder, the tank has a slightly rounded top, and glass top filler caps are standard. With 26in.×2¼in. tyres, the Coventry Mascot is listed at £80.

On the road we found the engine smooth, powerful, and silent, the Vici carburetter (fitted as standard) giving good acceleration and slow running, while the riding position was comfortable. There is an entire absence of rattle, and the whole machine is thoroughly well turned out.



Fitted with a 350 c.c. Barr & Stroud sleeve valve engine and Burman two-speed gear, the Coventry Mascot, a new comer in the motor cycle field, makes a sound and pleasing-looking mount.

# MOTOR CYCLES AT ALL PRICES.

## Guide to the Present-day Value of Second-hand Machines, as Indicated by the Classified Advertisements in "The Motor Cycle."

### Below £30.

| | | | |
|---|---|---|---|
| £19 | | 1914. | 2¾ h.p. Enfield. |
| £20 | | 1914. | 2½ h.p. Connaught. |
| £22 | | 1920. | 1½ h.p. J.E.S. |
| £24 | | 1916. | 2-stroke Ivy. |
| £24 | 3s. | 1920. | 2½ h.p. Revere. |
| £24 | 3s. | 1914. | 3 h.p. Enfield |
| £25 | | 1915. | 2½ h.p. O.K. |
| £25 | | | 2½ h.p. Metro-Tyler |
| £27 | 10s. | 1914. | 3½ h.p. Rudge-Multi. |

### £30 to £40.

| | | | |
|---|---|---|---|
| £30 | | 1916. | 2¾ h.p. Calthorpe-Jap. |
| £30 | | 1913. | 3½ h.p. B.S.A. |
| £30 | | 1916. | 3 h.p. Enfield. |
| £32 | | 1920. | 2 h.p. J.E.S. |
| £33 | | 1919. | 2½ h.p. Diamond-Villiers. |
| £33 | 12s. | 1914. | 3 h.p. Enfield. |
| £33 | 12s. | 1914. | 2¾ h.p. Douglas. |
| £34 | 13s. | 1916. | 2½ h.p. Calthorpe-Jap. |
| £34 | 13s. | 1916. | 2¾ h.p. Douglas. |
| £35 | | 1915. | 4 h.p. Bradbury. |
| £35 | | 1914. | 3½ h.p. Zenith. |
| £35 | | 1920. | 2-speed Campion-Villiers. |
| £35 | | 1914. | 2¾ h.p. Douglas. |
| £35 | | 1919. | 2¾ h.p. Velocette. |
| £35 | 14s. | 1918. | 2¾ h.p. New Imperial. |
| £36 | | 1919. | 2¼ h.p. Levis. |
| £36 | 15s. | 1920. | 2¾ h.p. Hobart. |
| £36 | 15s. | 1920. | 2¾ h.p. Kingsbury. |
| £37 | 10s. | 1919. | 2½ h.p. Clyno. |
| £37 | 10s. | 1919. | 2¼ h.p. Triumph. |
| £37 | 10s. | 1920. | 2¾ h.p. Wooler. |
| £38 | | 1919. | 2¼ h.p. Enfield. |

### £40 to £50.

| | | | |
|---|---|---|---|
| £40 | | | 2¾ h.p. Omega. |
| £40 | | 1920. | 2½ h.p. Chater-Lea. |
| £40 | | 1917 | 3½ h.p. P. and M. |
| £40 | | 1914. | 4 h.p. Triumph sc. |
| £40 | | 1914. | 4 h.p. Douglas. |
| £42 | | 1914. | 3½ h.p. Rover sc. |
| £42 | | 1921 | 2¾ h.p. O.K. Junior. |
| £42 | | 1921. | 2¼ h.p. Enfield. |
| £42 | 10s. | | 5-6 h.p. Clyno sc. |
| £42 | 10s. | 1921. | 2¼ h.p. Royal Enfield. |
| £43 | | 1918. | 2¾ h.p. Douglas. |
| £45 | | 1921. | 2-stroke Levis. |
| £45 | | 1921. | 2¾ h.p. Connaught. |
| £45 | | 1919. | 2¾ h.p. Douglas. |
| £45 | | 1914. | 3¾ h.p. Scott sc. |
| £45 | | | 6 h.p. Chater-Lea sc. |
| £45 | | 1914. | 7-9 h.p. Indian sc. |
| £45 | | 1919. | 2¾ h.p. Douglas. |
| £45 | | 1917. | 4 h.p. Douglas. |
| £45 | 3s. | 1919. | 2¾ h.p. Douglas. |
| £47 | 5s. | | 2¾ h.p. Douglas. |
| £47 | 10s. | 1920. | 2¾ h.p. New Imperial. |

### £50 to £60.

| | | | |
|---|---|---|---|
| £50 | | 1916. | 3½ h.p. P. and M. sc. |
| £50 | | 1918. | 3½ h.p. T.T. Rover. |
| £50 | | 1922 | 2¾ h.p. Orbit. |
| £52 | 10s. | 1921. | 2¾ h.p. Hobart. |
| £55 | | 1916. | 7-9 h.p. Harley-Davidson sc. |
| £55 | | 1921. | 2½ h.p. Clyno. |
| £55 | | 1917. | 2¾ h.p. Douglas. |
| £55 | | 1916. | 5-6 h.p. Clyno. |
| £55 | | 1918. | 4¼ h.p. James sc. |
| £56 | | 1915. | 3½ h.p. N.U.T. |
| £56 | | 1921. | 3½ h.p. Rudge-Multi. |
| £57 | 10s. | 1921. | 2¾ h.p. Douglas. |
| £58 | | 1921. | 3½ h.p. Rudge-Multi. |

### £60 to £70.

| | | | |
|---|---|---|---|
| £60 | | 1920. | 2¾ h.p. Douglas. |
| £60 | | 1916. | 4 h.p. Calthorpe-Jap sc. |
| £60 | | 1920. | 2¾ h.p. Invicta-Jap. |
| £60 | | 1921. | 2¾ h.p. Douglas. |
| £60 | | | 3½ h.p. Rudge-Multi sc. |
| £60 | | 1917. | 6 h.p. Clyno sc. |
| £61 | | 1921. | 2¾ h.p. Douglas. |
| £61 | 19s. | 1920. | 2¾ h.p. Douglas. |
| £62 | 10s. | 1920. | 3½ h.p. Rudge-Multi. |
| £62 | 10s. | 1917. | 3½ h.p. Sunbeam. |
| £63 | | 1921. | 2¾ h.p. 3-speed Douglas. |
| £65 | | 1919. | 4¼ h.p B.S.A. sc. |
| £65 | | 1918. | 4 h.p. Douglas. |
| £65 | | 1916. | 4 h.p. Triumph. |
| £65 | | 1915. | 4¼ h.p. B.S.A. sc. |
| £65 | | 1921. | 2¾ h.p. Douglas. |
| £65 | | 1921. | 2¾ h.p. Douglas. |
| £65 | | 1920. | 6 h.p. Zenith. |
| £65 | | 1917 | 3½ h.p. Rover sc. |
| £68 | | 1919. | 3½ h.p. Rover sc. |
| £68 | 5s. | 1920. | 3½ h.p. Ariel. |
| £68 | 10s. | 1918. | 4 h.p. Triumph sc. |
| £69 | | 1920. | 4¼ h.p. B.S.A. sc. |
| £69 | 10s. | 1920. | 4 h.p. Harley-Davidson. |

### £70 to £80.

| | | | |
|---|---|---|---|
| £70 | | 1921. | 2¾ h.p. Sun sc. |
| £70 | | 1921. | 3½ h.p. Ariel. |
| £70 | | 1920. | 4 h.p. Triumph. |
| £75 | | 1919. | 5-6 h.p. Rudge-Multi sc. |
| £75 | | 1921. | 4½ h.p. Blackburne. |
| £75 | | 1920. | 3 h.p. A.B.C. |
| £75 | | 1920. | 4 h.p. Douglas sc. |
| £75 | | 1919. | 6 h.p. Enfield sc. |
| £75 | | 1922. | 2-speed Douglas. |
| £75 | | 1922. | 2¾ h.p. Douglas. |
| £77 | | 1922. | 3½ h.p. Rudge-Multi. |
| £78 | | 1920. | 8 h.p. Zenith sc. |
| £78 | | 1921. | 4¼ h.p. B.S.A. |
| £78 | 15s. | 1920. | 4 h.p. Triumph. |
| £78 | 15s. | 1921. | 3½ h.p. Rover. |
| £79 | | 1919. | 4¼ h.p. B.S.A. sc. |
| £79 | 16s. | 1921. | 5 h.p. Zenith. |

### £80 to £90.

| | | | |
|---|---|---|---|
| £80 | | 1920. | 2¼ h.p. Enfield. |
| £80 | | 1917. | 5-6 h.p. Indian sc. |
| £80 | | 1919. | 3½ h.p. Sunbeam sc. |
| £80 | | 1919. | 8 h.p. New Imperial sc. |
| £80 | | 1921. | 4 h.p. Blackburne. |
| £80 | | 1920. | 6 h.p. Bradbury sc. |
| £81 | 18s. | 1919. | 4 h.p. Triumph sc. |
| £82 | | 1920. | 3½ h.p. Rover sc. |
| £84 | | 1921. | 2¾ h.p. A.J.S. |
| £84 | | 1920. | 4 h.p. Triumph. |
| £85 | | 1919. | 5-6 h.p. Rudge-Multi sc. |
| £85 | | 1919. | 3½ h.p. Humber sc. |
| £85 | | 1919. | 3½ h.p. Sunbeam. |
| £85 | | 1922. | 2¾ h.p. A.J.S. |
| £85 | | 1921. | 3½ h.p. N.U.T. |
| £85 | | 1919. | 5-6 h.p. Ariel sc. |
| £85 | | 1919. | 4 h.p. Douglas sc. |
| £85 | | 1916. | 6 h.p. Enfield sc. |
| £88 | | 1921. | 5-6 h.p. Rudge-Multi |
| £86 | | 1919. | 4 h.p. Douglas sc. |
| £89 | 5s. | 1920. | 6-7 h.p. Ariel sc. |

### £90 to £100.

| | | | |
|---|---|---|---|
| £90 | | 1920. | 8 h.p. New Imperial sc. (2-seater). |
| £90 | | 1916. | A.J.S. sc. |
| £90 | | 1921. | 3 h.p. A.B.C. |
| £90 | | 1920. | 3¾ h.p. Scott sc. |
| £93 | 9s. | 1921. | 4¼ h.p. B.S.A. |
| £94 | 10s. | 1920. | 4¼ h.p B.S.A. sc. (2-seater). |
| £94 | 10s. | 1921. | 3½ h.p. N.U.T. |
| £95 | | 1919. | 8 h.p. Zenith sc. |
| £95 | | 1920. | 3½ h.p. Sunbeam sc. |
| £95 | | 1919. | 4 h.p. Triumph sc. |
| £98 | 10s. | 1920. | 5-6 h.p. James sc. |
| £99 | | 1921. | 4 h.p. Triumph sc. |

### £100 to £120.

| | | | |
|---|---|---|---|
| £100 | 16s. | 1920. | 7-9 h.p. Indian sc. |
| £105* | | 1920. | 7-9 h.p. Indian sc. |
| £105 | | 1920. | 3½ h.p. Sunbeam. |
| £107 | 2s. | 1921. | 3½ h.p. Norton sc. |
| £110 | | 1921. | 3½ h.p. Sunbeam. |
| £110 | | 1920. | 6-7 h.p. Ariel. |
| £110.* | | 1920. | 5-6 h.p. Rover sc. |
| £110 | | 1920. | 6 h.p. A.J.S. sc. |
| £110 | | 1921. | 5 h.p. Zenith sc. |
| £110 | 5s. | 1921. | 4¼ h.p. B.S.A. sc. |
| £112 | 10s.* | | 8 h.p Sunbeam sc. |
| £115 | | 1921. | 4¼ h.p. B.S.A. sc. |
| £115 | | 1920. | 6 h.p. Enfield sc. |
| £115 | | 1921. | 8 h.p. Rex sc. |
| £115 | | | 6 h.p. A.J.S. sc. |
| £115 | | 1920. | 10 h.p. Henderson sc. |
| £115 | | 1921. | 8 h.p. Enfield sc. (2-seater). |
| £115 | | 1920. | 7-9 h.p. Indian sc. |
| £115 | | 1921. | 3½ h.p. Sunbeam. |
| £118 | | 1921. | 5-6 h.p. Raleigh sc. |

### £120 to £140.

| | | | |
|---|---|---|---|
| £120 | | 1920. | 8 h.p. Acme sc. |
| £120 | | 1921. | 8 h.p. Enfield sc. |
| £120 | | 1920. | 6 h.p. A.J.S. sc. |
| £120 | 15s. | 1921. | 8 h.p. Blackburne sc. |
| £122 | 10s. | 1921. | 3½ h.p. Sports Sunbeam. |
| £125 | | 1921. | 4 h.p. Triumph sc. |
| £125 | | 1921. | 4¼ h.p. B.S.A. sc. |
| £125 | | 1921. | 8 h.p. Enfield sc. (2-seater). |
| £126 | | 1921. | 6-7 h.p. B.S.A. sc. |
| £126 | | 1921. | 3½ h.p. Sunbeam sc. |
| £126 | | 1921. | 8 h.p. Enfield sc. |
| £130 | | 1921. | 7-9 h.p. Indian sc. |
| £130 | | 1921 | 8 h.p. Reading-Standard sc. |
| £130 | | 1921. | 8 h.p. Matchless. |
| £131 | 5s. | 1920. | 7-9 h.p. Harley-Davidson sc. |
| £135 | | 1921. | 7 h.p. A.J.S. sc. |
| £135 | | 1921. | 6 h.p. Enfield sc. |

### £140 upwards.

| | | | |
|---|---|---|---|
| £140 | | 1921. | 8 h.p. Brough-Superior sc. |
| £142 | | 1921. | 7 h.p. A.J.S. sc. |
| £145 | | 1921. | 6-7 h.p. B.S.A. sc. |
| £155 | | 1920. | 7-9 h.p. Harley-Davidson sc. |
| £160* | | 1921. | 8 h.p. Matchless sc. |
| £160 | | 1921. | 6-7 h.p. B.S.A. |

* With dynamo lighting.

## SOUTH AFRICAN ROAD CONDITIONS.

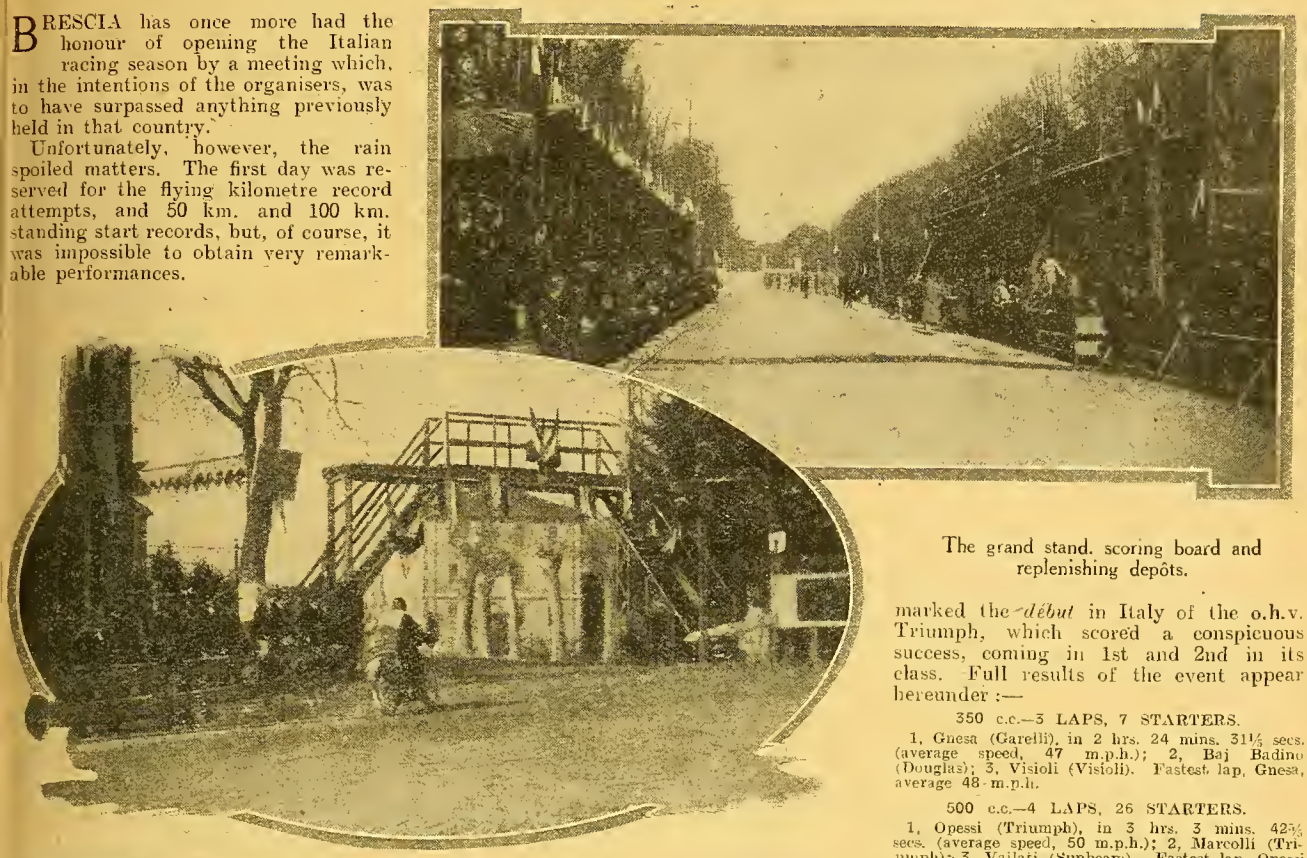
BY continually reiterating the faults and shortcomings of any particular thing, the virtues, no matter how desirable, are apt to be overlooked. In dwelling on the topic of bad road conditions overseas, for instance, it is quite easy to take for granted the fact that excellent roads do exist; and in the interest of motor cyclists generally we have laid special stress upon the need for good ground clearance and heavy tyres, knowing how essential these points are when negotiating the outlying roads of such countries as South Africa and Australia. *The Motor Weekly* of South Africa, however, thinks that a misleading impression as to the roads in South Africa was given in the notes we published on Mr. J. L. Norton's 3,039 mile tour in that country by the stress and importance that was made of the bad road conditions. But it must be remembered that there are two points of view on the subject. We have, as a technical journal, always endeavoured to foster for overseas work the type of machine that would be suitable for *all* conditions, and a motor cycle capable of performing well over the bad routes is more desirable than one which can traverse good roads only, and it is only by continually drawing the attention of makers to the road difficulties met with overseas that improvements continue to be made. It must be remembered, too, that Mr. Norton would be most impressed by, and naturally lay most stress on, features that were not in common with the riding conditions familiar to him in Great Britain. "In justice to our country," *The Motor Weekly* writes, "it should be stated that Mr. Norton made his tour during the rainy season, after several exceptionally heavy storms had been experienced, and the roads at the time were in no state for comparison with those of other countries. Under average conditions, however, the roads are very passable, and some of the main roads leave nothing to be desired. In view of the fact that South Africa is known to be a dry country subject to tropical rains, it is obvious that the conditions under which Mr. Norton and his machine were photographed are exceptional, and the photographs are not by any means a portrayal of typical scenes on the veld."

# FIRST 1922 ITALIAN ROAD RACE.

## Success of 500 c.c. British Machines in the Circuit di Brescia.

BRESCIA has once more had the honour of opening the Italian racing season by a meeting which, in the intentions of the organisers, was to have surpassed anything previously held in that country.

Unfortunately, however, the rain spoiled matters. The first day was reserved for the flying kilometre record attempts, and 50 km. and 100 km. standing start records, but, of course, it was impossible to obtain very remarkable performances.



A competitor at one of the several corners on the course. Observe the barricading and improvised footbridge.



The grand stand, scoring board and replenishing depôts.

The following times, however, are worth recording, considering the conditions under which they were accomplished:

Malvisi (1,000 c.c. 8-valve Harley-Davidson) covered the kilometre both ways at an average speed of 97.3 m.p.h. (23sec.). Rogai, on a 1,000 c.c. Harley-Davidson sc., covered the flying kilometre both ways at an average speed of 73.6 m.p.h. (30 2-5sec.); and Della Ferrera, on a new 350 c.c. twin of his own manufacture, at an average speed of 71.48 m.p.h. (31 3-10sec.), also beating the previous Italian record.

### Racing on Wet Roads.

The second day saw the running-off of the road race proper, over the usual circuit of 62 kilometres (38½ miles), and though the weather was clearer the roads were still in a very bad state. This event marked the *début* in Italy of the o.h.v. Triumph, which scored a conspicuous success, coming in 1st and 2nd in its class. Full results of the event appear hereunder:—

350 c.c.—3 LAPS, 7 STARTERS.

1, Gnesa (Garelli), in 2 hrs. 24 mins. 31½ secs. (average speed, 47 m.p.h.); 2, Baj Badino (Douglas); 3, Visioli (Visioli). Fastest lap, Gnesa, average 48 m.p.h.

500 c.c.—4 LAPS, 26 STARTERS.

1, Opessi (Triumph), in 3 hrs. 3 mins. 42⅘ secs. (average speed, 50 m.p.h.); 2, Marcolli (Triumph); 3, Vailati (Sunbeam). Fastest lap, Opessi (Triumph), average speed, 51.3 m.p.h.

750 c.c.—3 LAPS, 4 STARTERS.

1, Rava (Indian), in 2 hrs. 37 min. 28⅕ secs. (average speed, 44 m.p.h.).

1,000 c.c.—4 LAPS, 11 STARTERS.

1, Rogai (Harley-D.), in 2 hrs. 38 mins. 47⅕ secs. (average speed, 57 m.p.h.); 2, Wingler (Harley-D.); 3, Paraglia (Harley-D.).

Here the Harley-Davidsons "wiped the board," all the six finishers riding these machines, and the fastest lap being accomplished by Malvisi at an average speed of 60 m.p.h. The sidecar class was also won by a Harley-Davidson.

## RESULTS OF GLASGOW HOLIDAY TRIAL.

ONLY four competitors lost no marks in the two-day holiday trial of the Western M.C.C., described in *The Motor Cycle* of the 20th ult.

Gold medals have therefore been awarded to:—

R. M. Wilson (2¾ A.J.S.), D. Wright (3½ Sunbeam), G. H. Wilson (2¾ Edmund-B. and S.), G. Grinton (7-9 Harley-D. sc.).

The principal trophy winners were:—

Hutchinson Trophy. Best Solo Performance.—G. H. Wilson (2¾ Edmund-B. and S.).

A.J.S. Trophy. Best Sidecar Performance.—G. Grinton (7-9 Harley-D. sc.).

Agents' Team Prize. Bell Bros. Team.—D. Bell (2¾ A.J.S. sc.), R. Wilson (2¾ A.J.S.), R. B. Brown (7 A.J.S. sc.). Total loss, 12 marks.

Best Performance by Private Owner Club Member (Solo).—D. Wright (3½ Sunbeam).

Best Performance by Private Owner Club Member (Sidecar).—R. B. Brown (7 A.J.S. sc.).

SILVER MEDALS.

J. W. Morton (3½ Douglas), T. Morton (3½ Norton), D. Bell (2¾ A.J.S. sc.), R. B. Brown (7 A.J.S. sc.), J. W. Burton (7-9 Harley-D. sc.), G. A. Mann) (6 A.J.S. sc.), G. F. Ball (7 A.J.S.).

BRONZE MEDALS.

J. M. Cowan (3½ Martinsyde), R. H. Lochhead (3½ Ariel), C. M'Allister (2¾ Francis-Barnett), R. Watson (6 Martinsyde sc.), A. Downie (6 Raleigh sc.).

## CHAIN LUBRICATION.

SOME very useful hints regarding chain lubrication are contained in a booklet recently issued by Brampton Bros., Ltd. In the opinion of the author the only satisfactory method is to remove the chain periodically, place it in a bath of paraffin, petrol, or benzole, changing the liquid from time to time, until the chain is clean. It should then be dried and placed in a bath of lubricant (any good grease or graphite preparation) at melting, not boiling, point, and allowed to remain until cool. This procedure should be repeated every 500 to 1,000 miles. There is a fund of other useful information, and numerous valuable hints in the booklet, of which every owner of a chain-driven motor cycle should possess a copy.

# Road Tests of New Models

The 243 c.c. Calthorpe Two-stroke.

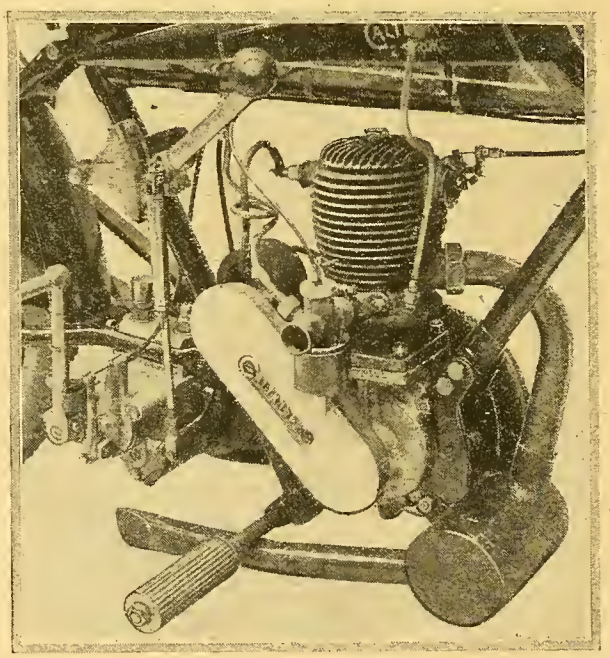
*SPECIFICATION.*

*ENGINE: Two-stroke, 67 × 69 mm. = 243 c.c.*
*GEAR: Two-speed, Albion clutch and K.S.*
*TRANSMISSION: Chain and ¾in. belt.*
*TYRES: 24 × 2¼.*
*CARBURETTER: Mills, single lever.*
*FORKS: Druid.*
*PRICE: £47.*

IT is no exaggeration to say that nearly half those who ride motor cycles and those who hope to ride in the near future are chiefly interested in the small machine selling at a low price. There are very many people who at present cover their journeys on a pedal cycle who would like to extend their range of action and avoid the exertion necessary with this form of transport, and in addition there is an army of young people, both boys and girls, who require a small machine, at any rate until they have graduated to something larger. To all these and to many others the little Calthorpe will make a strong appeal. Emphasis has been laid on the small size of the machine, but it must not be imagined that it is too small for the average man. Indeed, the writer who is well over the average height stowed himself away quite comfortably and at no time felt cramped.

### For Everyday Riders.

On a machine which is frankly intended to appeal to the multitude rather than to the exclusively sporting element, simplicity and ease of control is of the utmost importance, and in these particulars the motor cycle under consideration excels. Including even machines which sell at high prices, we have never handled one which steered better; true, the maximum speed does not greatly exceed thirty to thirty-five miles an hour, but so perfect is the steering that it is possible to control the little mount "hands off," even in ordinary traffic.



Power unit of the 243 c.c. Calthorpe. Oil is fed directly to the cylinder walls and the magneto is in a well protected position.

In addition to the controllability of the machine, the port setting of the engine is such that in conjunction with the Mills carburetter, the engine will two-stroke down to the very lowest speeds. Even with the gear lever in neutral and the throttle all but closed, two-stroking is maintained, and with the low gear engaged one can walk beside the machine at an ordinary pace while the engine runs perfectly regularly. First impressions give one the idea that the machine is

**Road Tests of New Models.—**

less powerful than is really the case; this is probably due to the even torque and good balance, for in actual practice the little engine carried us comfortably over a gradient of 1-9 on top gear.

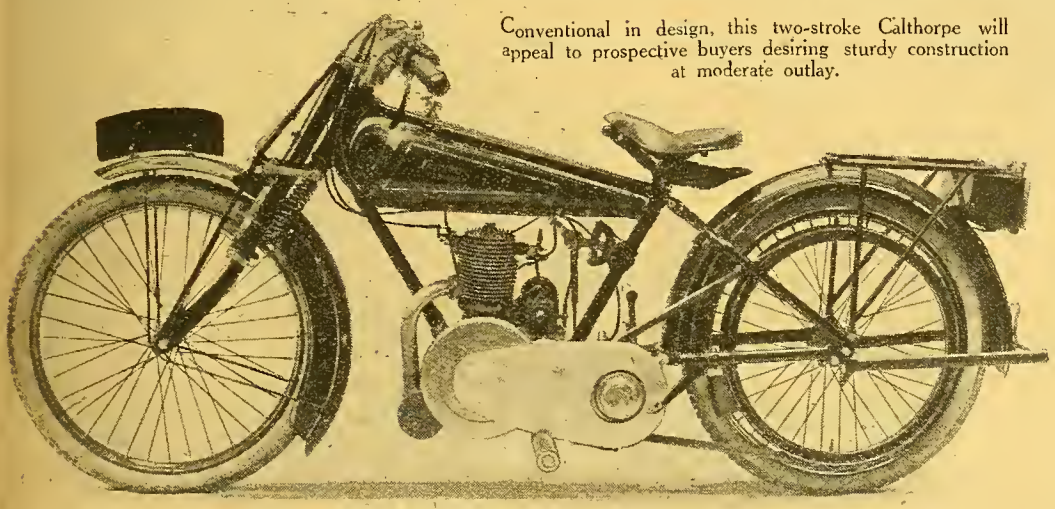
### Little to Criticise.

Few machines, especially in the more moderately priced class, are perfect, but our criticisms of the Calthorpe refer to details only. First, the saddle is too small for comfort, a matter which can be rectified by the purchaser at a small extra outlay. Secondly, there is a tendency to flywheel ring, due probably to the neat cast aluminium chain cover which protects the primary chain. It should be mentioned, in parenthesis, that this chain lies outside the flywheel and is consequently particularly easy of access. The last point, and one which the manufacturers are intending to modify, is that there are a number of comparatively awkwardly placed clip joints on the handle-bar which are apt to render clutch control a little uncomfortable.

### Oiling System, Brakework and Fittings.

With regard to mechanical features, one finds the magneto well placed behind the cylinder, and an admirable lubrication system which is confined to this make of engine. Oil is fed through a Best and Lloyd sight feed drip to a ring surrounding the cylinder. From this ring a series of small holes passes through the cylinder wall, and thus the piston is lubricated directly and not by splash only.

A simple internal V rear brake is operated by a pedal projecting forward from the pivoting point of the shoe—this arrangement is effective and obviates joints, rods, and toggles. The front brake is of the normal horseshoe type. A single armoured tool bag is mounted at the rear of the carrier, and the frame is low, having a sloping top tube, the saddle position being so low that even the shortest rider has a feeling of security.



Conventional in design, this two-stroke Calthorpe will appeal to prospective buyers desiring sturdy construction at moderate outlay.

### Other Models.

Similar in all respects except as regards transmission, there are two other Calthorpe models employing the same engine. One model has a two-speed gear without clutch or kick-starter, and a single-geared machine is listed at £36.

---

# FOR NAVAL OFFICERS.

## Details of the Two-Day Trial for the Arbuthnot Trophy.

OPEN to officers on the active lists of the Royal Navy, Royal Marines, R.N.R., and R.N.V.R., the trial for the fine trophy in memory of the late Rr.-Adm. Sir Robert K. Arbuthnot, R.N., will take place on June 30th and July 1st.

Reigate has been chosen as the starting and finishing point, and the competitors will cover one circuit of about 45-50 miles east of Reigate for the first section and about the same distance over a circuit west of that town for the second section of the day's run. The start is to be at 2 p.m. On the following day the same circuits will be covered in the same order but in the reverse direction, and a start will be made at 9 a.m., so that the event may finish about 3 p.m.

These routes will include some of the best known Surrey and Kentish test hills, but there will be nothing freakish in the course, and no roads of excessive roughness likely to damage competing machines.

Each circuit is to be considered as a non-stop section, and competitors will be required to furnish a full report of all stops, adjustments, and replenishments at the conclusion of each day's run.

### Regulations to Suit Circumstances.

Owing to the fact that this trial is unique, its conditions differ materially from those of the ordinary reliability trial. Being well aware of the difficulty which officers experience in obtaining leave exactly when desired, the organisers have arranged for the competition to start at 2 p.m., on Friday, and entries will be received until within two hours of the start; intending competitors are requested, however, to acquaint the Auto Cycle Union, 83, Pall Mall, London, S.W.1, of their desire to enter as early as possible.

Previous winners of the Trophy have been: 1919, Lt. E. S. K. Evans-Greaves, R.N.; 1920, Lt. G. P. Glen Kidston, R.N.; and in 1921 the Trophy was jointly awarded to Lt. T. H. Back, R.N., Sub-Lt H. C. Chads, R.N., Lt. E. V. James, R.N., and Lt. C. Plumer, R.N.

# CLUB NEWS

### North Western Centre A.C.U.

In addition to spectators' mounts, there were 125 machines at the Raweliffe Hall Rally in the count for the Motor Agents' Cup for the best attendance, calculated on a figure of merit. Chief results :—

| | | Fig. of merit. |
|---|---|---|
| 1. | Colne and District M.C.C | 2450 |
| 2. | Southport M.C. ... ... | 2217 |
| 3. | Accrington M.C.C. ... ... | 1368 |

### Lee, Lewisham, and District M.C. and L.C.C.

Results of Hopwood Cup Reliability Trial, held over a difficult course of approximately 84 miles, have been issued as follow :—

UNDER 350 c.c. SOLO.—G. W. Manger (2¾ P.V.), gold medal.
OVER 350 c.c. SOLO.—N. Gibbs (4 Douglas), gold medal.
600 c.c. SIDECARS.—W. A. Sweet (7-9 Harley-Davidson sc.), Hopwood Cup and gold medal.

The hon. secretary, Mr. H. W. Allen, of 23 Boone's Street, Lee, S.E.13, will be pleased to receive applications for membership.

### West Birmingham M.C.C.

On the 22nd ult. the club held a sporting hill-climb at Hopton Bank, near Cleobury Mortimer. The first portion of the hill, a distance of half a mile, was chosen, and the results, which were judged on time only, are as follows :—

FASTEST TIME OF THE DAY.—R. G. Smith (3½ Sunbeam), 41⅘s., special award.
UNDER 350 c.c.—W. C. Shelton (2¾ Douglas), 1m. 5⅘s.
UNDER 500 c.c.—R. G. Smith (3½ Sunbeam), 42⅕s.
UNLIMITED.—R. G. Smith (3½ Sunbeam), 41⅗s.
SIDECARS.—S. Brand (Indian), 1m. 6⅕s.

It has been decided to award silver cups instead of medals.

### Kilmarnock and District M.C.C.

As an initial venture, a reliability trial will be held on May 6th, starting at 2 p.m., the course being approximately 75 miles.

### Buluwayo M.C.C.

Motor cyclists of Buluwayo recently met with a view to forming a club. They congregated at Queen's Road, and a dozen of them took part in a flying half-mile speed trial, the fastest time being 35s.

### Knock M.C.C. (Belfast).

W. R. Boyd (2½ Allon) and B. Boyd (New Imperial) were respectively first and second of the "hounds" in a recent exciting paper chase, but none succeeded in catching up the "hares," G. W. Fitchie (Verus) and a car driver.

### Ipswich and District M.C.C. and Norfolk M.C.C.

Results of the very well-supported inter-club reliability trial on Good Friday have now been announced, as follows :—

SOLO MACHINES NOT EXCEEDING 350 c.c.—W. J. Coe, Ipswich (Velocette); G. Turner, Ipswich (A.J.S.); L. Sharpe, Ipswich (A.J.S.).
SOLO MACHINES NOT EXCEEDING 500 c.c.—P. Sherwood, Norfolk (Triumph); R. W. Fison, Ipswich (Norton); L. G. Baker, Norfolk (P. and M.).
SOLO MACHINES NOT EXCEEDING 750 c.c.—A. Blake, Norfolk (Norton); R. A. Daniels, Norfolk (Norton); M. F. Horlock, Ipswich (Zenith).
UNLIMITED SOLO MACHINES.—G. H. Gowing, Norfolk (Sunbeam); E. C. Rose, Ipswich (N.U.T.); J. Pretty, Ipswich (Triumph).
600 c.c. SIDECAR MACHINES.—C. D. Rose, Ipswich (B.S.A.); H. Chapman, Norfolk (Triumph); A. F. Bagshaw, Norfolk (Triumph).
UNLIMITED SIDECAR MACHINES.—E. C. Lunniss, Ipswich (Sunbeam); H. O. Goldsmith, Ipswich (Brough); H. D. Wheeler, Norfolk (New Imperial).

Ipswich thus won three firsts, four seconds, and three thirds, and secured the trophy.

### Sale and District M.C.C.

Formed only a month ago the club has already a membership of sixty, all enthusiasts, it is claimed. Headquarters are at the Sale Hotel.

### Wallington District M.C. and L.C.C.

Succumbs Hill and its atrocious surface accounted for no less than nine competitors in the President's Cup Trial, but Allan Gruzelier (3½ Zenith-Bradshaw), Reg. Green (3½ Norton), R. F. Alderton (3½ Norton), J. C. Sanford (5 Rover sc.), E. W. Lanfear (4 Triumph), made very excellent climbs. The fact that only five out of the 28 survived to collect awards alone proves the strenuous nature of the course.

WINNER OF THE CUP.—R. F. Alderton (3½ Norton).
GOLD MEDALS.—E. W. Lanfear (4 Triumph), J. C. Sanford (5 Rover sc.).
SILVER MEDALS.—E. C. Gordon (3½ Norton), H. E. K. Sawtell (10 Morgan).

### North London M.C.C.

Arrangements are now well in hand for the Second London Rally, to be held at the London Aerodrome, Hendon, on Whit Monday, June 5th. Apart from the Challenge Shield (presented by the captain of the North London M.C.C.), which is being competed for by clubs from various parts of the country, there will be a great deal to interest the unattached motor cyclist in the form of novel competitions, for which many prizes are to be won. Efforts are being made for the actual machines which win the Junior and Senior T.T. Races to be on view, but in any case many late models of new and uneconventional mounts will be on exhibition. Fuller details are obtainable from the hon. Rally Organiser, Mr. Alan W. Day, "Claremont," Ballards Lane, Finchley, N.3.

### Clevedon and District M.C.

With headquarters at The Royal Pier otel, Clevedon, the club, which has ly recently been formed, is affiliated the Western Centre A.C.U. The subription is 7s. 6d. per annum. Lt.-Col. r Chas. Miles, Bart., is president, and r. R. E. Merrifield, 24, Old Church oad, Clevedon, is secretary.

### Surrey M.C. and L.C.C.

Over the standard course, from Guildrd to Arundel, with finish at Hindead the first team-trial of the year took lace on the 22nd ult. Results :—

| | Marks lost. |
|---|---|
| Farnborough B. Team: H. C. Mansell (A.J.S.), P. W. S. Bulman (Zenith sc.), Miss Bewers (Triumph sc.) ... ... | 0 |
| Farnham A Team: P. T. Mitchell (G.N.), S. W. Mansell (Rover), T. Broadhurst (Sunbeam) ... ... ... | 0 |
| Holmwood Team: F. P. Verney (Triumph), F. Verney Jun. (Triumph Junior), C. C. Verney (Rover Eight) ... ... | 6 |

* Tied.

### Bradford M.C. and L.C.C.

It is estimated that some 5,000 people witnesesd the Rosedale Abbey Bank reak hill climb on the 23rd ult., and his despite a heavy hailstorm. Results :—

SIDECAR CLASS.—1, G. M. Townshend (4½ and M. sc); 2, Master T. Bullus (4¼ P. and . sc.).

SOLO CLASS.—1, W. Hodgson (3½ Snobeam); , H. S. Moorhouse (3½ Triumph); 3, J. H. impson (3¾ Scott); after a tie between these hree riders.

The winner in this class is awarded he Fell Cup outright.

### Isle of Wight M.C. and L.C.C.

On Easter Monday the club carried out very successful reliability trial. The ourse was, roughly, a 53-mile circuit of he island, and included two observed ills, Cowlease and Brighstone, which, owever, most of the competitors made ight of. Over an enjoyable tea at the Wheatsheaf Hotel, the President, Dr. E. F. W. Buckell, read out the results :

A. G. Smith (3½ Lea-Francis) was first with a loss of only 5 marks, and G. W. J. Marvin (4 Douglas), second, 7 marks. Other good performances were made by E. T. Witham (3½ Abingdon K.D.) and G. Mansbridge (2¼ James).

## Week-End Club Events.

*May 6th.—Birmingham M.C.C.—Half Day Sporting Trial.*
*May 6th.—Kilmarnock and District M.C.C.—Open Reliability Trial.*
*May 6th.—North West London M.C.—Optional Route Competition.*
*May 6th.—Loughborough and District M.C.C.—Hill Climb at Beacon.*
*May 6th.—Dumfries and District M.C. and C.C.—Minor Reliability Trial.*
*May 6th.—Coatbridge, Airdrie and District M.C. and G.C.—Flying Half Mile (Open).*
*May 6th.—Liverpool M.C.—Hill Climb.*
*May 6th.—Gloucester M.C. and L.C.C.—Reliability Trial.*
*May 6th.—Kidderminster M.C.C.—Petrol Consumption Trial.*
*May 6th.—Coventry Triangle M.C.—Run to Princethorpe.*
*May 6th.—Sheffield M.C.C.—Picnic.*
*May 6th.—Coventry and Warwickshire M.C.—President's Run.*
*May 6th.—West Birmingham M.C.C.—Half Day Reliability Trial for the Riley Cup.*
*May 7th.—East London M.C.C.—Solo Hill Climb.*
*May 7th.—Sheffield M.C.C.—Run to Handforth, Cheshire.*
*May 7th.—Coventry Triangle M.C.—Run to Ratby Woods.*
*May 7th.—Barrow and District M.C.C.—Meet W.M.C.C. at Blea Tarn.*
*May 7th.—Eastbourne and District M.C.C.—Reliability Trial "Blakemarsh" and "Doull" Cups.*
*May 7th.—Ilkley M.C. and L.C.C.—Social Event.*
*May 7th.—West Kent M.C. Social Run*
*May 7th.—Southampton M.C.C.—Run to Shapwick.*
*May 7th.—Colne and District M.C. Run to Ilkley.*
*May 7th.—Ashford M.C. and L.C.C.—Meet at Margate.*
*May 9th.—Colne and District M.C.—Sporting Event.*
*May 10th.—Surbiton M.C.—Social Event.*
*May 10th.—Eastbourne and District M.C.C.—Run to Brighton.*
*May 10th.—Ashford M.C. and L.C.C.—Event.*
*May 11th.—North Wales M.C.C.—Fast and Slow Hill Climb.*
*May 11th.—Gloucester M.C. and L.C.C.—Visit to Douglas Motor Works, Bristol.*

### Birmingham M.C.C.

All helpers in the Victory Trial are thanked by the club for their assistance. In most cases this has already been done by post, but some may have been neglected.

### Essex County and Southend A.C.

Motor cyclists were successful in beating the car drivers in a recent handicap knock-out hill climb. Results :—

1, F. C. Pead (2¾ Edmund); 2, Miss Freeman (2¾ Coulson).

### Redditch and District M.C.C.

On Saturday, the 20th inst., the club will hold a trial open to members of the Midland Centre A.C.U. The award list includes the Terry (40 guinea), and President's (30 guinea) Cups.

### Woolwich, Plumstead, and District M.C.C.

Starting from the Three Horse Shoes Hotel, Knockholt, on a three-circuit course, totalling about 100 miles, the fourth inter-team trial for the cup presented by the promoting club will be held on the 13th inst. Entries, which are limited to teams from S.E. Centre A.C.U. clubs, close on Saturday.

### Stafford and District M.C.C.

Awards in connection with the club's most recent trial (re-run) were as follows :—

CLUB GOLD MEDAL FOR BEST SOLO PERFORMANCE.—J. Worthington (2½ Sun-Vitesse). Worthington, after apparently losing all chance by a failure on the flexibility test, pluckily kept to the course, and was rewarded by being the only club member to complete the trial on a solo machine.

CLUB GOLD MEDAL FOR BEST SIDECAR PERFORMANCE.—E. H. Bunn (8 Royal Ruby sc.).

PRIZE FOR BEST PERFORMANCE BY NON-MEMBER.—W. E. Hill (2¾ H.B.).

### Heaton Moor M.C.C.

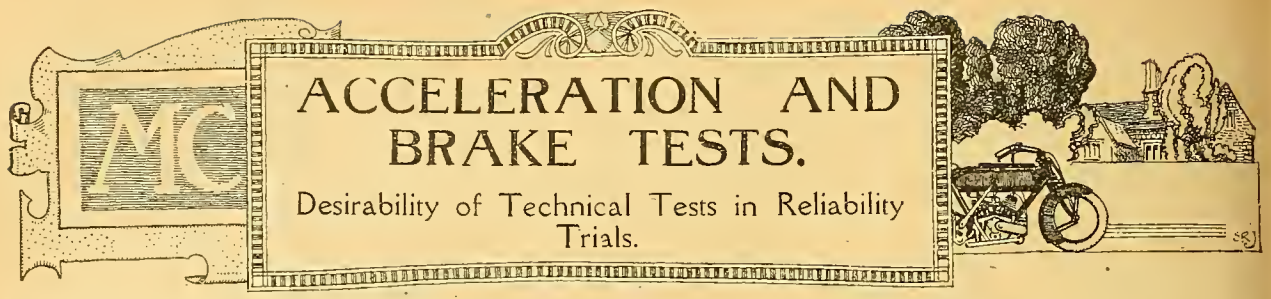
After some confusion at a first attempt to run a reliability trial this year owing to another club using the same blue dye for route-marking, a successful re-run event was held on the 23rd ult., lime-green being used on doubtful corners. The results have now been announced, as follows :—

500 c.c.—1, F. Slack (3½ Sunbeam), 9 marks lost, gold medal and special prize; 2, H. Cheetham (3½ Rover), 11 marks lost, silver medal.

350 c.c.—J. Beonet (2¾ Verus), special prize.

SIDECAR.—1, H. Moore (8 Royal Ruby sc.), 11 marks lost, silver medal and sidecar prize.

A MEET OF EAST ANGLIAN MOTOR CYCLISTS. The gathering of competitors at Hintlesham previous to the recent Ipswich and District and Norfolk M.C. and L.C.C.'s inter-club reliability trial.



# ACCELERATION AND BRAKE TESTS.

## Desirability of Technical Tests in Reliability Trials.

IT is desirable to include in a modern reliability trial tests to measure the ability of the machine to pick up speed, and also the efficiency of the brakes. The tests used by some clubs to determine these factors are far from satisfactory.

Brake tests as usually carried out simply consist of stopping the competitor on a hill and measuring the distance covered in coming to rest. This is no test at all, as everything depends on the speed of the competitor, and although one competitor may be caught by surprise, those following have generally time to reduce their speed. Even if every competitor is surprised at the same speed, the distance covered in coming to rest is no direct criterion of the retardation which is the important quantity to be measured. The following method gives a simple means of determining both the acceleration and retardation accurately. It may be carried out either at the start or at some stop during the trial.

### The Suggested Combined Test.

The competitors are started from a line marked A on the road (which should be of good surface and level). They are told to ride as fast as possible to a point B, also marked on the road, and then stop as quickly as possible. They are timed by means of a stop-watch from A to B, and the distance they are coming to rest, Y, is measured. Let T = time of acceleration, and X the distance from A to B (previously measured), then average velocity during time $T = \frac{X}{T}$.

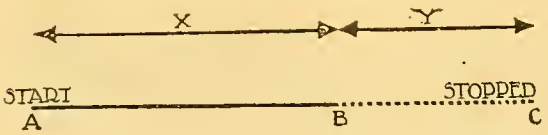



Diagram illustrating the writer's ideas on brake tests.

Since the machines start from rest, and the acceleration may be assumed uniform, the maximum velocity at B will be $\frac{2X}{T}$. The rate of increase of velocity or acceleration during T will be $\frac{2X}{T \times T} = \frac{2X}{T^2}$.

If the distance X is in feet, and T in seconds, the result will be acceleration in feet per second per second.

The distance covered in stopping is Y.

The formula of motion is $V^2 = 2fs$, where V is final velocity, $f$ is acceleration, and $s$ space covered. When $f$ is negative or retardation, V is the initial velocity, but initial velocity of braking period is equal to final velocity of accelerating period, and Y = S,

$$V = \frac{2X}{T}. \qquad \therefore \left(\frac{2X}{T}\right)^2 = 2fY;$$

or

$$\text{retardation} = \frac{2X^2}{T^2Y}.$$

The retardation will also be in feet per second per second. In reliability trials, it is desirable to award ten marks each to acceleration and braking, calling the best performance ten and expressing the other performances to the nearest 10 per cent.

### Personal Element Largely Eliminated.

A distance of 50 yards is suitable for X, as machines can attain a speed of 25 m.p.h., at which braking is reasonably difficult. The formula has one very desirable aspect. There is no opening for trickery. If the rider delays in getting away or cuts out before the point B it spoils his acceleration figure without improving his braking figure to any extent, as the following figures show.

EXAMPLE.

| Remarks. | T. | Y. | Ft. per sec. per sec. | | Acceleration. | Brake. |
|---|---|---|---|---|---|---|
| | | | Acceleration. | Retardation. | | |
| | | | | | marks. | marks. |
| Best Performance | 8·1 | 36 | 4·58 | 19·1 | 10 | 10 |
| | 10 | 24 | 3 | 18·7 | 6½ | 10 |
| Skidded Wheel | 8·8 | 84 | 3·88 | 6·9 | 8½ | 3½ |
| Cut out before reaching B ... | 14 | 42 | 1·54 | 4 | 3½ | 3 |
| Missed Brake Pedal ... ... | 12·6 | 120 | 1·88 | 2·35 | 4 | 0 |

Generally speaking, competitors would start with warm engines, but if held after a tea stop with cold engines, the acceleration figure could be used as a starting from cold test. To encourage clean riding it is sometimes desirable to include these rules :—

(*a*) Riders skidding round will have their performance halved.

(*b*) Riders falling off in the brake test will lose 10 marks.

(*c*) Competitors cutting out before end of acceleration are disqualified.

The lines at A and B should be marked with white distemper. The quickest method of measuring Y is to mark out on both sides of the road the number of feet from B. Two observers stretch a string in front of the machine after it has stopped, and thus get Y to the nearest foot.

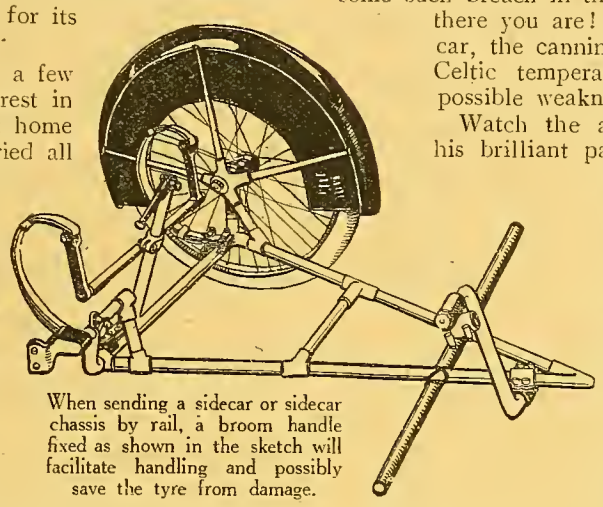
M. JENNISON, A.M.I.E.E.

# HANDLING SIDECARS.

## Unusual Hints and Observations on the Management of Sidecar Attachments.

THERE are several wrong ways of wheeling a detached sidecar, but some are worse than others; indeed, so far as I know, there is no really right way of wheeling a detached sidecar. If Billingsgate handled sidecars instead of herrings, a more or less correct method would doubtless have materialised; as things stand, the good old British railway porter, who can usually be depended upon for *the* way of conveniently handling unwieldy goods other than his own, sheds considerable light on the subject by showing us just how the sidecar should *not* be handled if due regard for its well-being is to be taken.

I watched two porters at it a few days ago, and having no interest in the victimised vehicle, I went home with hopes renewed. They tried all the worst ways, and finally stuck to the worst of all; for, having damaged several incidental goods during their initial efforts, including an unhappy bull-terrier—unhappy because he was muzzled—the brighter of them hit upon the idea of dragging the sidecar forcibly against the grain—that is, broadside on, the wheel scraping the concrete in semi-circles. At the tail-end of the procession two more wiry ex-soldiers were conveying the motor cycle which had run in happy unison. The gear lever had been knocked into engagement, and these sons of British toil knew nothing about exhaust valve lifters. So, chiefly by the force of blasphemous effort, the machine proceeded with the rear wheel locked, leaving a trail of Dunlop all along the fairway.



When sending a sidecar or sidecar chassis by rail, a broom handle fixed as shown in the sketch will facilitate handling and possibly save the tyre from damage.

### When Sending by Rail.

There is a moral to this. When sending a sidecar by rail, attach a broom handle under the chassis at the for'ard end This protects the vehicle, and gives porters two handles of inspiration. A couple of men can then easily wheel the machine, the one on the right holding the chain-stay coupling and his end of the broom handle, the other (quite unnecessary, but he is sure to be hovering about, so you might as well keep him out of mischief) steadying the vehicle by holding the other end of the handle. Further, when sending a motor cycle by train, remove the rear chain. It is also a good plan to bind the handle-bar controls flush with the bars.

### Wheeling a Detached Sidecar.

One of the least difficult ways in which to wheel a detached sidecar is to hold the chain-stay connection in the left hand and the steering-head connection in the right. Keep the chassis as level as possible, and steer by moving the front end. If any up grades have to be negotiated, it is as well to adorn oneself in shin-guards and wicket-keeping pads. A shrapnel helmet is necessary only for severe down grades, but it is better to hire a hand cart.

### Recollection and Re-connection.

I seem to recall having written a good deal on the subject of sidecar alignment and other giddy whirls of our gay youth. I suppose such literary efforts were the result of Matilda casting adrift, or some such breach in the couplings of life. Anyway, there you are! To-day, when I ride a sidecar, the canniness of accumulated years of a Celtic temperament carefully check all its possible weaknesses.

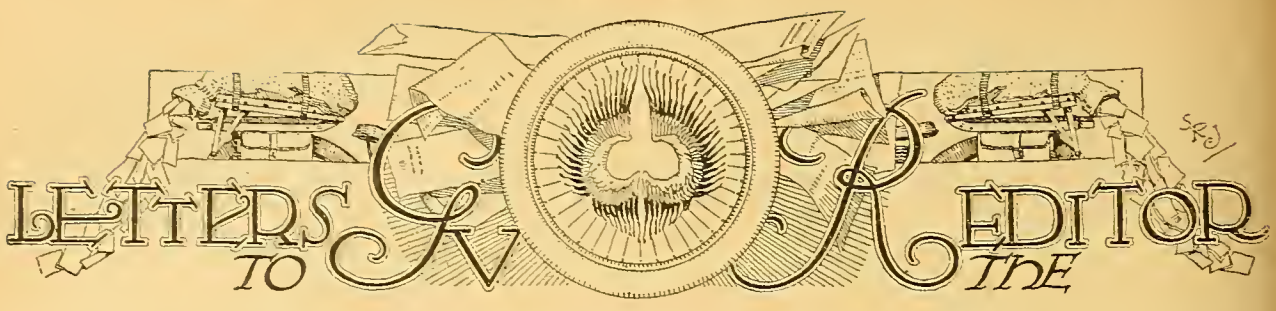
Watch the average garage mechanic and his brilliant partner in crime, the boy, who fills up the two-strokes, sticking a motor cycle and sidecar together. The main points of connection are made, and the united forces of the two, backed by a 4lb. hammer, soon bring the more reluctant couplings to within bolting distance. Some kind of check on the alignment is usually taken, and finally everything is pulled tightly up with the air of a stiff job well achieved.

Ride behind a sidecar travelling fast on a bad road, and you will obtain a fair idea as to the stresses it undergoes. Nor does it require much imagination for one to realise how tremendously these stresses are enhanced when the connections have been sprung forcibly together and rigidly fixed there! Moreover, a sidecar attached in this way is always a trouble to re-attach should it be removed, whereas if properly put up at first, there should be no further difficulty.

### Practical Advice on Connecting-up.

One of the best methods is as follows:—Presuming the outfit is standing on a hard, level floor, wangle your various connections till you get the correct alignment, then tighten everything as though for keeps. Now proceed to scotch both the motor cycle and the sidecar with blocks and strips of wood, placing them by the gentle persuasion of a light hammer under every corner of the chassis and under the footrests, so that the two rest irrespective of their connections. Now slacken every connection, and go round with the aforesaid light hammer as a railwayman tests his wheels. A tap here and there should relieve any tension there is, causing each connection to creep into its right place while the machine and the sidecar remain stationary. After a little experience this job takes only a minute or two, a few light taps with the hammer doing the trick, and so no unnecessary stresses exist when the final tightening takes place.

CHINOOK.




The Editor does not hold himself responsible for the opinions of his correspondents.

Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.

### *AN AMATEUR ASSOCIATION SUGGESTED.*

Sir,—As a prospective entrant in the Amateur Road Race, I read with considerable disappointment that the A.C.U. had refused a permit for this event.

By so doing, that autocratic body would appear to have signed its resignation as far as the control of the sport among private owners is concerned, and, to me, it seems that the obvious sequence should be the formation of a purely amateur association.

Are amateur motor cyclists less enthusiastic than amateur golfers or footballers? Unless they can muster the energy to organise their pastime on clean, businesslike lines, the answer must be in the affirmative, which I am sure is wrong.

What do fellow-readers think? R.I.C.-UMPH.

London, W.C.2.

### *BLACKLEADING CYLINDERS.*

Sir,—Regarding Mr. W. D. Edwards' letter, he would appear to have mistaken the point of the article by "E.N.J.," which was that the very idea of blackleading cylinders is to obtain a *black* and *not* a polished surface.

I might add that blackleading with ordinary blacklead gave excellent results on a B.S.A. which I used to have, and that it appears to work very well on the Rover "8" I now have. NIGER.

Salisbury.

Sir.—In reply to Mr. W. Edwards, I would like to say that the blackleading of the cylinder does materially assist cooling by radiation. I have seen an experiment conducted in which water cooled more rapidly in a blackened calorimeter, and I now quote from an authoritative text book:—"The rate at which heat is radiated depends upon the nature of the body's substance, thus a black surface radiates heat more rapidly than one not so treated." DUPE.

London, S.W.19.

### *ULTRA-RAPID TWINS.*

Sir,—While I agree with "Handlebar's" remarks in your issue of April 13th, I should like to point out that the original "Blue" Indians were racing models, built for speed, and while I should not expect 64 m.p.h. from a 1915 model with sidecar and passenger, I have a 1915 7 h.p. Indian that can touch over 60 solo, and will do 50 on a good road with sidecar.

It is true this machine has been kept carefully tuned, is fitted with a Binks carburetter and Bosch magneto, is run on Shell aviation, and has only two rings in each piston. I am constantly touring with heavy Gloria sidecar and child in pillion seat, and can take three and luggage up practically any hill in the Peak District.

Matlock. BLUE INDIAN.

Sir,—Replying to "Horley" re the speed of his machine. I own a 6 h.p. Enfield sidecar that can touch 65 m.p.h. loaded, by a "Stewart," and it has done something like 11,000 miles now. Only last Sunday on the Epping—Bishop's Stortford road, I had three up (weighing 32 stone, without weight of machine or car), and gave a solo rider on a 5 h.p. twin a nasty shock in both sprinting and long distance. He said afterwards "We were too good for him."

London. ENFIELD.

### *WITH A LIGHTWEIGHT SIDECAR OUTFIT.*

Sir,—I think I can go further than your correspondent Mr. Harold Wilson. I took possession of an "Ivy Three" outfit in May, 1921, and have covered on this outfit nearly 8,000 miles, with an outlay of 6 piston rings, 2 plugs, and 2 sets of heavy Dunlop tyres, plus oil and petrol.

ERNEST HEWKIN.

### *H.P. RATINGS AND INSURANCE.*

Sir,—In a recent issue the suggestion was recorded that the rating of motor cycles should be altered so as to make 100 c.c. equal to 1 h.p.

Whilst agreeing with the suggestion, I think the question of insurance has evidently been overlooked, and if the idea was put into force it would not benefit all motor cyclists unless the insurance "horse-powers" were altered likewise.

As an example, the 4 h.p. Harley-Davidson is 584 c.c. At present it can be insured under the "not exceeding 4 h.p." scale. Under the suggested new rating it would have to be placed under the "not exceeding 10 h.p." scale!

Olton. IVY THREE.

### *GOOD TYRE MILEAGE ON A TRIUMPH.*

Sir,—Your correspondent "Brundall-Buster" refers to the above question, and I am giving the most accurate details I can at the moment, as my records are not at hand.

I did not mean to convey that the whole 12,000 miles had been covered on the original tyres. The following details may be of interest:—

*Make and Size.*—Dunlop 26in. × 2¼in. (to fit 2¼in. rims). Front wheel and sidecar, "Heavy"; rear wheel, "Extra Heavy."

*Distances.*—Rear wheel: About 9,000 miles. Front wheel: Up to date this cover has done 14,000 miles, and is now on the sidecar. Sidecar: This cover was changed on to the rear wheel, and then on to the front wheel. It has just been scrapped; total life, about 7,000 miles or more.

I think that the results are most satisfactory, and show how good modern tyres can be, and that chain drive is no disadvantage from the point of view of tyre wear, if an effective "cushion" is incorporated in the transmission.

I have never had such good results from motor cycle or car tyres since 1906. C. H. STEPHENSON.

### *CLIMBING QUAY STEPS.*

Sir,—I see in "T.T. Notes and News" that there is a probability of a crane not being available at Douglas this year for the landing of machines.

Should this be the case, motor cyclists will find that if they adopt the method I have used, carrying the heaviest solo machine up the steps is a very easy and simple matter. All that is required are two lengths of wood, or in preference steel tube, about 2ft. each, these being passed through the two wheels, the front one to be at the *back* of the forks, and the rear one to be up solid also *behind* carrier down tube. When carrying machines down steps to the boat, place the bars through the wheels in *front* of forks and carrier stays. On the T.T. boats there is always assistance available. Machines carried in this manner cannot by any chance be damaged, provided strong enough bars or tubes are used. (Capt.) A. E. BEARD.

### FROM A MECHANICAL ENGINEERING VIEWPOINT.

Sir,—About July last year I commented upon the lack of any worthy attempt being made at designing a two-stroke lightweight machine from a mechanical engineering point of view.

Without wishing to labour the point, or appear prejudiced in the interest of any particular firm (I am not in the trade myself), permit me to point out that the Poppe and Packman machine illustrated in the issue of April 20th, from the description given, is certainly a better attempt at designing a two-stroke machine than the majority on the market at the present time. DRAUGHTSMAN.

Manchester.

### 50 MILES PER WEEK WITH A BABY TWO-STROKE.

Sir,—I took delivery of a Junior Triumph in July, 1920. I have not had a road stop excepting once last year for a burst in the front tyre; in fact, the machine has never required any attention at all, save a chain adjustment and belt shortening at a garage about a month after purchase, and decarbonisation of cylinder at intervals of about six months since. Otherwise it has not been touched, nor have the tool bags been opened.

The same belt is still running, and is only just being shortened for the second time in its history. The back tyre is unpunctured, and only needs pumping up every two or three months.

I have used the machine regularly, winter and summer, averaging 50 miles a week, in all kinds of weather, often on very bad roads, and think this is a record of absolute reliability which would be hard to beat. I can do a regular 25 miles per hour. H. CHALLEN SHARP.

### GEAR RATIOS FOR TOURING.

Sir,—I drive a well-known 750 c.c. sidecar outfit, and for the *tout ensemble* have nothing but praise, but I am not pleased with the gear ratios.

Ignoring decimals, these are: 5 to 1, 9 to 1, and 15 to 1. The top gear is ideal for bad conditions, *e.g.*, 160 miles against a nor'-easter, or when the engine is a bit off colour. Also, it takes quite respectable pimples "on the run." For normal running, under favourable circumstances, it is on the low side.

Second gear is far too low, and on hills just above top-gear compass entails a monotonous 10 m.p.h. grind on quarter throttle, or fearful "revs.," neither being much to my liking. Its lowness encourages hanging on to top, when with a more reasonable ratio a change down would be made.

As regards the bottom ratio, I can honestly say I have used it seriously *twice only* in 2½ years. I always start from rest, and turn round in the street on it, both of which could be easily done on a much higher ratio. I do not go mountain-hunting from choice, but use the machine like 90 per cent. of other motorists, as a means of transport for business and pleasure. For all practical purposes, my mount is on the same footing as the two-speed Enfield.

I may say I have tried an engine sprocket with one more tooth, but the experiment was not a success. It made the top gear about right, but, as it lessened my top gear climbing capacity, without seriously raising my two low bottom ratios, it merely showed up the defects of the latter still more by the increased number of changes necessary.

I presume we have to thank the various freak trials for these low ratios being fitted as "standard." Would it not be fairer to the majority to fit more reasonable ratios, giving the chamois the option of paying for specially low ones?

A. E. M.

### SIMPLE FOUR-WHEELERS.

Sir,—"Ixion," whose page I always read with interest, even when I don't agree with him, wonders why the simple four-wheeler, "the 8 h.p. 2-seater at round about £100," does not "drive the 8 h.p. sidecar outfit (and I presume the 3-wheeled cyclecar) right off the road." He finds that this is partly the fault of the makers, who don't advertise (this has not been the fault in all cases), and "equally the fault of the clubs, who organise competitions fit only for chamois."

Well, I don't think that the clubs will level down their competitions to the capacity of "remarkably cheap and handy" 4-wheelers, which are unfit to compete with the low-powered sidecar. "Ixion" evidently thinks the same, for he adds that "it is high time that somebody organised a trial to show what such machines *can* do" (the italics are his). But if they can do very little—too little to venture more than a saunter on the highway—the trial would hardly be taken seriously, and would not supply a good advertisement. I am a little sceptical about the thousands who are waiting anxiously for the potter-bus; one meets them more often in the correspondence column than elsewhere.

As "Ixion" himself says, the three big events of the M.C.C. should be (he says "are," but that is hardly borne out by the facts) "well inside the compass" of the simplest 4-wheelers. He would himself, if he were selling them, enter "a big fleet" for the Exeter, Land's End, and Edinburgh runs. Hotspur's words occur to one:

> Why so can I and so can any man,
> But will they run if you do enter them?

As a matter of fact, a number of these machines were entered for all three events in 1921, and only two obtained first-class awards; very few finished. There are eighteen 4-wheeled cyclecars of 8 h.p. and under entered for this year's Land's End, but few of them come under "Ixion's" category of "remarkably cheap 4-wheelers." I am writing before the event, and it is possible that the results may modify my opinion of the cheap 4-wheeler, but I can see no likelihood of the simple 4-wheeled cyclecar "sweeping the sidecar right off the road." H. GEORGE MORGAN.

### LAPPING AT 60 m.p.h. ON A TOURING SINGLE.

Sir,—It may interest Mr. K. H. Leech and others to know that I have covered a lap at Brooklands at a speed of 60.1 m.p.h. on a 4 h.p. Triumph with a perfectly standard engine. This speed was confirmed by Mr. Ebblewhite. I found it exceedingly difficult to steer at this speed, and several times I was obliged to cut out in order to regain control.

In my opinion the standard 4 h.p. Triumph engine has distinct leanings towards speed, and I see no reason why one of these engines, with lightened reciprocating parts and slight detail modifications, fitted in a good steering frame, should not pass the 70 m.p.h. mark. ARIEUMPH.

Isleworth.

### CARBON FORMATION ON OIL-COOLED ENGINES.

Sir,—I read with interest Mr. G. Campling's letter in defence of the oil-cooled engine, particularly in regard to improved piston cooling. I agree with him that owing to this improved cooling, carbon deposit is not formed so rapidly as in the case of the average air-cooled engine. Indeed, it is the latter type that is the greatest offender in this direction.

It would appear that to eliminate to a great extent the formation of excessive carbon deposit, gummed rings, etc., designers should concentrate upon a more efficient exhaust system than we have at the present day, one that would completely scavenge the cylinder of hot exhaust gas, thereby using to greater advantage the cooling effect of the incoming charge. I add the usual disclaimer. W. H. W.

Coventry.

### INACCESSIBLE CARRIER TOOL-BOXES.

Sir,—May I occupy a little of your valuable space to voice my misgivings as to the true merits of the growing practice of incorporating the tool-box in the carrier?

At first sight this seems a splendid scheme, but:—

(1.) The attachment of luggage (especially if it includes several oddly-shaped parcels) becomes even more difficult than in the past (*cf.* "Ixion").

(2.) Roadside repairs and adjustments would not be made more pleasant by the additional labour of unshipping and refixing one's week-end or touring suit-case, etc.

(3.) What is to happen to Ermyntrude and her Tan-Sad?

(4.) In certain cases (if not in all), the fixing of the rear lamp (when it is again compulsory) is going to be a problem.

(5.) One of the cross tubes of the carrier provides quite the best grip for heaving the 'bus on to its stand (again, *cf.* "Ixion").

I wonder if others share my doubts? Or am I just a prejudiced IGNORAMUS?

London, N. 15.

### ARTIFICIAL OBSTACLES.

Sir,—I believe that it is a legal paradox that "the greater the truth the greater the libel." Accordingly, though it is open to anyone to criticise vindictively the abstract subject of the conduct of a competition, it is not always policy or "fair comment" to discuss frankly the conduct of any particular competitor.

With this introduction I content myself by stating that after making exhaustive inquiries I cannot find any confirmation of Mr. Cock's allegation that artificial obstructions were placed on the course of the East Midland Open Trial by marshals.

K. S. TOPPING.
(Hon. Sec., East Midland Centre, A.C.U.)

### TRAILERS.

Sir,—Having been away on holiday, I did not see your report on the proposed regulations for road vehicles on page 473 in your issue of April 13th, until I returned home.

I was horrified, however, when I read that it is suggested that a trailer shall not be used behind a motor cycle and sidecar. Why?

I could understand trailers not being allowed behind solo machines. In the old days I had a trailer, and I can see very good reasons why this should not be allowed, but my personal experience with my camping outfit last summer proved that it was perfectly safe and reliable.

I should not have been surprised if it had been suggested that I should have to pay an additional tax, and I should not have grumbled, but why the few people who, like myself, have found out the great benefit to health which can be obtained in this way, should be victimised, completely passes my comprehension.

G. A. WEATHERILL.

[Our correspondent is the author of an article which appeared in *The Motor Cycle* for Dec. 29th, 1921, on the construction of a trailer caravan.—ED.]

### ELECTRICAL TIMING.

Sir,—I am pleased to note the A.C.U. has lost no time in moving in the important matter of electrical timing, but their move, although in the right direction, does not go far enough. I think the opportunity of removing any shadow of doubt due to the personal element entering into timing has, for the time being, been lost, and the difficulties and inconveniences already attending record attempts been increased, against the one single advantage gained (admittedly a most important one) of a finer division of the second. The suggested method *is not electrical timing of the vehicle*, it is merely the electrical registration of the time two separate individuals press two separate keys or buttons—however accurately or inaccurately this may be done.

In the past it has been necessary to consult, and frequently await the convenience of, a certain number of officials, probably miles away, before a timed event could be run. In the future, apparently, this number, whatever it happens to be, must be increased with additional inconvenience and expense, and *still without the elimination of the personal element*, the effect of which is likely to differ even with the same person, depending perhaps upon his liver, the share market, or the weather. (This is not a joke. It is a known scientific fact that the mental or physical condition of an individual makes a great difference in reflex action, and only a small difference is sufficient to determine the success or otherwise of a flying start record attempt.)

At Brooklands there is satisfactory timing equipment, always there, always ready for use with the laying down of the strips. There are officials at Brooklands also always there, experienced and capable of using the equipment. Why, then, should it be necessary to make special dates, pay travelling expenses, in addition to timing fees, etc., etc., to bring other officials to the track? Is not Brooklands of sufficient importance to warrant a permanent, or, if you wish, resident time-keeper? It should be possible to go down to the track at any time and make official and electrically timed tests without having to wait, and trouble time-keepers to come from the city or elsewhere, and returns, I am convinced, would amply repay the authorities.

The value and convenience of such arrangements would also be incalculable, and, I feel sure, would meet the wishes of the majority of the Brooklands habitués. In any case I fear there will always be a certain amount of dissatisfaction or doubt until, for short distances, *true* electrical timing is used.

I make these suggestions without, of course, any reflection whatever upon those good men and true who have officiated to date, but merely because the press key method does not eliminate the personal element, is not entirely scientific or best under the circumstances, and the usual procedure neither business-like nor economical.

JAS. L. NORTON.

### USEFUL GUTTERS.

Sir,—I am glad to see that the Triumph manufacturers have discovered how one gets all those nasty mud spots on one's trousers when riding on wet roads with no overalls.

May I suggest that many other makers would do well by fitting a "V" channel from the top to the bottom of the front mudguard on each side of the wheel?

Taunton. "ALWAYS FILTHY."

### ONCE A MOTOR CYCLIST—

Sir,—After reading my letter you will probably regard me as a sort of Rip van Winkle. To explain myself, I may say that at Easter, 1909, I bought an old chain-driven Humber, with accumulator ignition, and old type of control, which I rode until the end of 1910, when I had completed about 3,500 miles.

As the machine was becoming somewhat decrepit and funds would not allow of a better machine, owing to the demands of a rising family, I sold out, hardening my heart against the desire of the sport. Since then I have neither ridden a motor cycle nor even bought a motor cycle paper, until—about a month ago when waiting for a train I bought the old blue one at the bookstall, and, believe me, the fever is on me again.

RIP VAN WINKLE.
Heckmondwike.

DR. COUÉ AT BROOKLANDS. "Ixion" recently described his very discouraging experiences at Brooklands with Dr. Coué's doctrines, but, nothing daunted, C. F. Temple, the Harley-Davidson rider, has now adopted the idea, greatly to the amusement of fellow trackmen. Whether he will have more successful results than fell to the lot of the writer of "Occasional Comments" remains to be seen.

# Best in a Gruelling Test

The London to Land's End test is a severe one of the worth of a machine. Of eight

# ARIEL

machines entered ALL finished the course without trouble and were awarded 4 Gold Medals and 4 Silver Medals.

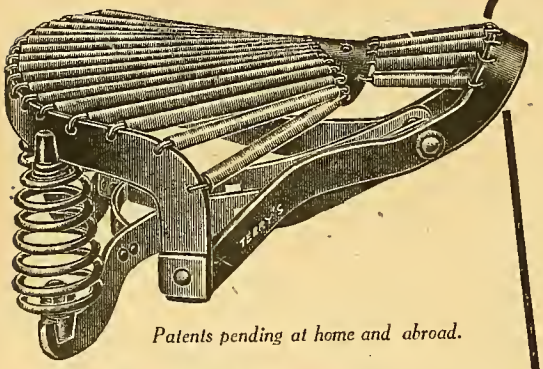
## 100% SUCCESS.

Moreover, Mr. F. J. Watson, riding an Ariel 8 h.p. Combination, competed for the 6th time and again won a gold medal—5 gold medals and special cup in 6 years—every time an Ariel.

**That's the machine you want.**

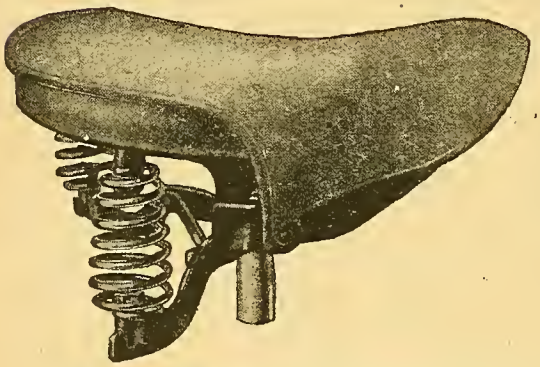
*Carriage paid by goods train to nearest agent's station.*

## ARIEL WORKS Ltd.,
## 3, BOURNBROOK, BIRMINGHAM.



*Patents pending at home and abroad.*

The springs work independently, or in unison, according to the pressure of the body.



It is covered with a high grade felt and "Rexine" cover. The "Rexine" is quite waterproof.

## 63/- From your Agent-

**or in case of difficulty, from us.**

WHEN ordering, please give weight of rider, and the name and year of machine to be fitted.

**If it does not give you satisfaction you may return it and have your money back—freely.**

**Pedal cycle size 30/- each.**

*Booklets Post Free*

# Those 28 high grade springs disperse road shocks by a process of absorption.

# Terry's spring seat saddle wins its way—day by day.

***Another "convert" praises its luxuriousness.***

April 25/22. Bournemouth.

"May I record my appreciation of your very excellent spring seat saddle. I have recently fitted it to my 3½ h.p. 'Rudge-Multi' Solo, and I can honestly say it is by far the most comfortable saddle I have ever ridden. My previous saddle was good, and many motor cyclists have said 'most comfortable,' but Terry's eclipses it absolutely.

Roads full of potholes I used to crawl over in fear and trembling, with jars, jolts and vibration, I can now cross as fast as the machine will go, without any discomfort whatever.

The 'Terry' saddle, instead of decreasing the shock by violent, vertical oscillation, disperses it by what you may term absorption. It is the 'Berkeley' of the motor cycle.

To appreciate your saddle, one must try it on the road. In the showroom it feels nice and soft, but one is inclined to think that its efficiency is no more than any other good quality saddle. The first ride over potholes dispels those ideas, and I venture to remark that, having once bought one of your saddles, many owners will retain their 'Terry' saddle when selling their machine.

Thanking you for such a comfort giving production.

(*Signed*) J. R.

P.S. You will be interested to know that this is the first time I have ever written to the manufacturers of any article, praising their goods to the extent I can the 'Terry' saddle. So many things are grossly over advertised with exaggerated claims."

# TERRY

THE SPRING AND PRESSWORK SPECIALISTS

**Herbert Terry & Sons, Ltd**

Manufacturers of high grade :: springs, spanners, etc. ::

**REDDITCH, ENG.**

Est. 1855. 217/22

### BLIZZARD PROTECTION FOR THE DRIVER.

Sir,—The recent blizzards and torrential rains make one wonder why screens, similar to the B.S.A. mentioned recently in *The Motor Cycle*, are not in general use.

Why not an "Easting" on the handle-bars?

C. S. MOORES.

### EQUITABLE INSURANCE.

Sir,—Mr. Siffken appears to have overlooked the fact that all the leading offices allow a rebate of 10 per cent. on renewal premiums where no claim has been made in the preceding year of insurance. In this way Mr. Siffken would have an advantage over his young friend of many accidents, in that he would only have to pay 9-10ths of the premium paid by his friend. F. H. BEVAN,

Edinburgh Assurance Co., Ltd.

### TEMPERAMENTAL ENGINES.

Sir,—I was more than usually interested in "Ixion's" reference to a "Moody Rudge Engine," which suddenly developed temporary abnormal power. I have a similar machine just over two years old, which behaves in a similar way. I am therefore delighted to take this opportunity of putting my trouble before some of the "No. 8 hats." The symptoms are somewhat different, however. The machine alternately accelerates and decelerates with regularity on any but large throttle openings. Of course, in this case the engine is running normally when accelerating and something causes it to slow up again after a few yards, the exhaust note dropping to a mere humble. The throttle may be a quarter or one-third open, but this goes on, the difference between the "slow" and "fast" running being very great. On a long run with a large (half and over, say) throttle opening, the engine gets going, and keeps going, but the amount of throttle required to get and keep it going varies with some (unknown) conditions.

I am not exactly a novice, and have gone over all ordinary possible causes. I may say when the engine does get going its performance is in every way up to Rudge standards. What is my trouble, please? R. S. L. BOOTE.

Sir,—I read with much interest "Ixion's" remarks on page 494 relating to a Rudge engine which occasionally "runs mad."

My present machine is a 1920 3½ h.p. Rudge Multi, and ever since I had the machine I have noticed the same thing occur, possibly on an average about once every fifty miles or so for about a minute or two.

I have thoroughly examined carburetter, valves, ignition, etc., several times in my endeavour to make the machine always "mad," but am still no nearer to the solution.

My machine is anything but slow for a 3½ h.p. roadster, but that extra "mad" bit if always available would considerably shorten those long straight stretches of road which seem sometimes to be too long when one's object is to "get there."

If other "Rudge" riders have experienced the same thing, it would be interesting to have the makers' views on the subject, but I have always put it down in the past to some defective adjustment which I had failed to discover.

W. D. EDWARDS.

Sir,—After reading "Ixion's" remarks, I am tempted to give my experiences with a 1911 3½ h.p. Triumph which I ride.

This machine is fitted with a Binks carburetter, and I always make use of the air brake when descending moderately steep hills. When the bottom of the hill is reached and I open the throttle I find myself the proud owner of a super-engined 'bus, and I can also give the engine more air. After about 200 yards more or less in proportion to length of hill traversed with air brake working, my engine becomes normal.

What is the explanation? The mere cooling of the cylinder seems a possible cause, but I find that cooling by other means, such as stopping for a little while, does not have the same effect at all. The increase in power just mentioned is very marked indeed, and I think that some of your readers should be able to offer a suitable explanation of this curious phenomenon. MX 599.

London, N.8.

### FROM "SERVICES" TO "SERVICE."

Sir,—Recently I was riding on a fairly quiet road between Hounslow and Staines, when upon looking at my petrol tank I discovered that I should have to obtain a fresh supply of juice at the next garage; so when I saw the welcome sign displayed outside what at first sight I took to be a church, I pulled in, and gained the information that it had been a church in its better days. This seemed to me to be rather unique, and I wonder if any of your readers can tell me of a garage with a better past than this. ROYALIST.

Windsor.

### POLICE HOLIDAY ACTIVITY.

Sir,—I notice a paragraph in a recent issue about police activity during the holidays. I went down to Porlock to see the London-Land's End, and between Tewkesbury and Porlock we had to show a sort of pass no less than 21 times. This includes the outward and return journeys.

I was also interested to see several of the Bristol Tramways and Carriage Co.'s B.S.A. outfits, and very surprised to notice that they were badly aligned, the machines leaning in towards the sidecars to a most marked extent.

C. H. STEPHENSON.

### OVERCOMING DEPRECIATION OF AWARDS.

Sir,—That the value of the gold medal in trials has depreciated as badly as the mark is proved by nearly half the competitors of the "Victory Trial" receiving this once-coveted reward, to use the remark of a friend: "Given away with a pound of tea!" Can they be termed trials at all? The course is published weeks before the event, and check times at stopping places are given. There is nothing to prevent a competitor going over the course until he knows it off by heart. With the modern machine and this knowledge the rest is simple. The course should not be made public until the morning of the event; this would give all a fair chance.

Now we all know that the modern machine fitted with suitable gears will take us anywhere the wheel will grip the road.

I suggest that maximum marks would be awarded to only those competitors who completed the course on *top gear*. Sidecarists would, of course, be awarded "bonus" marks. This would show us exactly what the engine would do on a given gear ratio, as well as put every competitor on the same footing. It would certainly add to the sport of the trial, and also the skill of the driver.

Birmingham. ANASTIGMAT.

[We take it that our correspondent intends that easier trial courses should also be chosen; no machine would have retained full marks over the Victory Trial route using only top gear.—ED.]


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle*.
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# T.T. NOTES and NEWS

## Designers and Riders making Serious Preparations for the Island.

EXPERIMENTAL and competitions departments of most motor cycle factories are working at full pressure for the T.T. races. As usual, many firms are behind schedule with the new racers, but perhaps not so much so as in previous years. Certain it is, those who have had their mounts on the road and track for some time—everything else being equal—stand the better chance.

* * * *

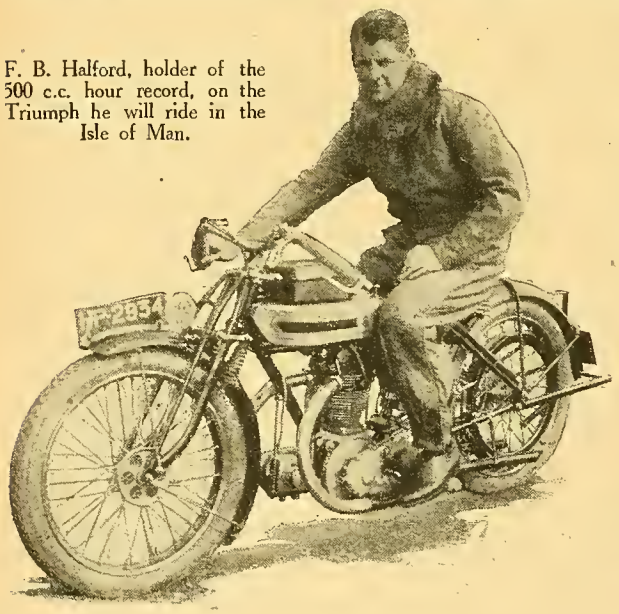
Two of the T.T. riders, Ivor Thomas and Jack Thomas, are members of the Neath M.C.C., the former being its chairman.

* * * *

Detail modifications will be found in the Ivy two-stroke models, and the most striking of these is the aluminium alloy detachable cylinder head. Another change is that a separate oil tank will be fitted behind the saddle tube.

* * * *

Among the well-known firms which will be absentees from the races this year is the New Rover Cycle Co. Mr. F. L. Allen, the general manager, informs us that it was found impossible to enter owing to the races being held in the week preceding the Whitsuntide holidays—probably the busiest week of the year for motor cycle manufacturers. *The Motor Cycle* pointed out the unsuitability of the chosen dates due to (1) the proximity to Whitsuntide and (2) the clashing of public interest in the old classic London-Edinburgh run, which starts on the evening following the Senior Race.



F. B. Halford, holder of the 500 c.c. hour record, on the Triumph he will ride in the Isle of Man.

In the Senior event the Scott machines are to be 3½ h.p. Squirrels, and they will be ridden by C. P. Wood, H. Langman and Ivor Thomas.

* * * *

The New Comet entered remains practically unchanged, in fact the machine will be the identical motor cycle used in the last two Junior events. This is surely a record for the Tourist Trophy Races.

* * * * *

In addition to the standard Norton entry it is more than probable that at least one overhead valve Norton will take part in the race. The Norton trade team consists of D. Brown, J. W. Shaw, R. T. Cawthorne, H. Hassall, and N. Black.

* * * *

Although two types of Rudge machines are entered, they will be similar as regards engines. Externally, there is not very much change in the design, though the distribution of metal in the cylinders has been re-proportioned and a new inlet valve dome is a noticeable feature. The frame of the Multi model is founded on the well-known 1914 type, and the chief modification in transmission lies in a simple pedal operated control of the gear. The fact that the wheelbase of the three-speed model is only one inch longer than that of the Multi is something of an achievement; the weight has been kept as low as possible and a close ratio Rudge gear box is employed. A spring shock absorber is fitted to the engine-shaft and an experimental clutch is giving most satisfactory results on the machines which are now under test.

* * * *

There is a likelihood of six 350 c.c. machines having "a flutter" in the Senior event. Encouraged by the success of the A.J.S. last year there is some method in this apparent madness, but will a "350" be good enough to win this year?

* * * *

Certainly if designers learned their lesson last year the "350" should be well beaten; but how many of the competition staffs have realised that rapid acceleration is worth more than an extra mile or two down the mountain?

In the Junior Race F. J. Price will be riding a 2¾ h.p. Diamond, and not a 2¼ h.p. as stated in the official list.

* * * *

C. Waterhouse, the honorary secretary of the Heaton Moor M.C.C., will represent his club on a Sunbeam in the Senior Race.

* * * *

Some of the Rudge riders and staff are already in the Isle of Man for a preliminary look round. Rumour has it that they are using the new Multi with foot control.

* * * *

Howard Riddell, who is riding a Rudge, took part in the 1913, 1914 and 1921 Tourist Trophy races, and did a good deal of racing in the United States in 1920.

* * * *

Naturally everyone will watch for the appearance of the latest A.J.S. It is yet too early to lift the veil, but there are excellent reasons for expecting an even better performance from this make than last year.

* * * *

W. L. Danskin, now a member of the Rudge competitions staff, was a consistent rider of Rover machines before the war. He has had successes in the London-Exeter and London-Land's End runs, and in the last three English Six Days' Trials.

* * * *

In the lightweight race two-strokes outnumber four-strokes, and the chances of this type are by no means negligible since it is represented by manufacturers of the highest repute.

* * * *

This year mounted on a Rudge, J. A. Watson-Bourne is an experienced T.T. rider. He just missed winning the Junior T.T. on a Blackburne in 1920, when he came in second, while in the 1921 Senior Race he finished fifth on a Triumph.

* * * *

Last year considerable attention was attracted to the Sun-Vitesse two-stroke with its rotary inlet valve. A somewhat similar engine will be used in the forthcoming races, but it is probable that at least one of the three machines entered will have an aluminium cylinder with steel liner. If tests which are being carried out at the present moment prove satisfactory, it is not unlikely that all the machines will be so equipped. The frame is neatly designed, Webb internal expanding brakes being used both front and rear. A curious departure from the conventional lies in the fact that an oil tank will be fitted above the top tube, while the toolbox will occupy a position behind the saddle tube.

**T.T. Notes and News.—**

Rates at which motor cycles accompanied by passengers are carried between Liverpool and Douglas on the I.O.M. Steam Packet Co.'s vessels are: Motor bicycles, 5s.; two-seated motor bicycles, 6s.; sidecar outfits 9s.; motor tricycles, 9s.

* * * *

Sidecars must be detached from motor cycles when conveyed by the I.O.M. steamers.

* * * *

Cycle cars are charged at the rate of 4s. 9d. per cwt. not exceeding 12 cwt. Liverpool town dues are 2s. 6d. per car.

* * * *

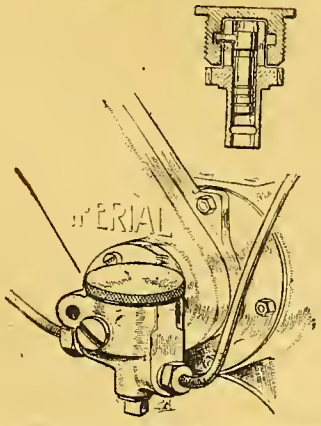
Licensed porters are authorised by the Douglas Town Council to charge 2s. for assisting in the landing of machines; if more than one porter is necessary no more than 4s. may be charged. An extra 2s. is demanded if a sidecar is fitted.

* * * *

From Monday, May 1st to Friday, May 19th, there will be daily sailings between Liverpool and Douglas on weekdays at 10.30 a.m. On the Saturdays May 6th and 13th the sailings will be at 3 p.m. The steamers on this service will be the *Douglas* and the *Fenella*.

* * * *

A double daily express service will be run from May 20th to June 30th from Liverpool at 10.30 a.m. and 3 p.m., and there will be an extra service on Tuesday, May 30th, and Thursday, June 1st, at 1 a.m.




Mechanical lubrication will be a feature of the new Imperial T.T. machines. A worm driven bronze shell with suitable ports is rotated at 1/120th engine speed, while the plunger is controlled by a cam track in the cap. By rotating the cap the amount of oil fed is infinitely variable.

From Douglas the return crossing may be made every weekday at 9 a.m. or 4 p.m., with an extra boat on Tuesday, May 30th, and Thursday, June 1st, at 12.30 (midnight).

* * * *

Special excursions have been arranged in connection with the T.T. Races on Tuesday and Thursday, May 30th and June 1st. The boats leave Liverpool for Douglas at 1 a.m. and 10.30 a.m., and return at 4 p.m. and 12.30 (midnight). Fleetwood to Douglas, 10.30 a.m., return from Douglas, 6 p.m. Day excursion fares: First, 12s. 6d.; third, 9s.

* * * *

For a period of three weeks prior to the races a nominal fee will be charged for temporary registration of visitors' machines.

* * * *

To all intents and purposes the Island is a foreign country, consequently, motor cycles brought from there to Great Britain are liable to an import duty of 33⅓%. In order to avoid difficulty, however, machines being temporarily exported from the United Kingdom to the I.O.M. are examined by the Liverpool Customs officers prior to leaving, so that they may be identified on their return.

* * * *

Representation has been made to the Royal Automobile Club by the Auto-Cycle Union that the practising for cars should cease until the motor cycle races have been held.

* * * *

There will be no exhibition of T.T. machines in Douglas prior to the races.

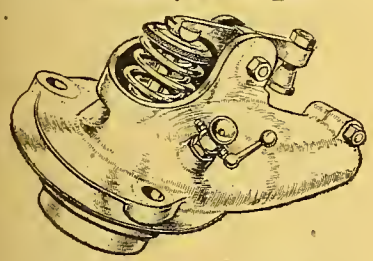
* * * *

As was the case last year, John Bull milestones will be erected round the T.T. course by the Leicester Rubber Co., Ltd. These will be in place much earlier this year, so that riders will get the fullest possible benefit from them.

# BACK TO RACING AGAIN.

## Rudge Machines in Preparation for the T.T. Detail Modifications.

THE return of the Rudge to the Tourist Trophy has caused considerable interest. Concerning the Multi model there is at first sight but little change from previous practice, except for the fact that the Multi gear is direct operated by a rocking pedal on the left-hand side. In addition to this the front brake is now of the flat rim pattern, similar to that used on the rear belt drum so successfully in the past.



A new inlet dome, facing forwards, is a feature of the T.T. Rudges.

A new inlet valve dome, which allows for very much easier gas flow, is the most obvious change in the engine, while the Senspray carburetter faces forwards. In addition to this the inlet valve itself has been increased to 1¾in. diameter.

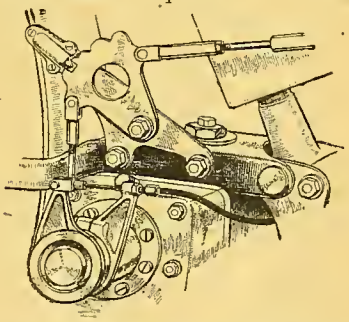
### Engine Improvements.

Though it is less obvious, the cylinder casting has been very much improved, and besides the fact that the walls have been stiffened up near the head, the ribs have been modified and are nicely radiused into the walls. The compression ratio will be approximately 5 to 1, a domed aluminium piston with a plain skirt being employed. A special stainless steel exhaust valve and a large exhaust pipe are now fitted. In the Multi model the gear ratios range from 3½ to 1 to 7 to 1, and John Bull belts will be used; Dunlop cord 650×65 tyres are fitted, but 700×80 covers of the same make are fitted to the chain-driven model, the engine of which is similar.

### Clutch on Countershaft.

On the extended main shaft of the close ratio gearbox is mounted a new dry plate clutch entirely made up of steel pressings. This clutch is giving admirable results, and is operated in rather an unusual way. Both hand and foot controls are used, operating through the same Bowden wire, the hand control actuating the clutch through the cable and the pedal through the casing. A Best mechanical oil pump will supply the lubricant from a tank on the saddle tube, and an auxiliary hand-pump is fitted in case of emergency.

Carried off the front down tube, the change speed lever is in a convenient position, and the gate is splined on to the supporting bracket so that it may be adjusted to the convenience of the rider. From the striking lever a control rod passes to a quadrant similar to the normal Rudge striking quadrant, but the quadrant itself is pivoted at the base,



The substantial clutch operating mechanism and the eccentric gear box adjustment may be seen in the above sketch.

and is locked by a stationary plunger. The gear striking mechanism is particularly simple and effective. The frame of the chain-driven model is only 1in. longer than that of the Multi, and the centre of gravity has been arranged as low as possible.

Both filler caps are on the left-hand side, so as to be convenient for the filling stations, and large spring-retained caps are employed. Tentative gear ratios for the chain-driven machine are 4.3 to 1, 6 to 1, and 8 to 1.

# THE SCOTTISH 6 Days TRIALS

## Preliminaries at Edinburgh; Snow on Mountains Necessitates Route Changes; The Start.

As the competitors travelled north, whether by rail or road, wide caps of snow on the Cumbrian fells roused forebodings which were amply confirmed on arrival at Edinburgh. Here the genial committee of the Edinburgh and District M.C.C. were found busy revising the trials routes in response to a barrage of telegrams from various road surveyors, local correspondents, and others. "Drifts twenty feet deep over Cockbridge Ladder, and still snowing," ran one of these wires.

The early date rendered necessary by the congestion of the 1922 competitions programme, and the usual scarcity of hotel accommodation, had already pinned the Trial south of Inverness; now at the eleventh hour several of the southerly moorland areas were perforce cut out. If report was to be trusted, the sodden condition of what remained would more than atone for any excisions, and by Saturday evening, lightweight entrants, remembering the "Arctic" Trial, rejoiced that their machines could be carried over snowdrifts in case of need.

### Revised Routes.

Several of the observed hills were affected by these last-minute changes in the course. On Tuesday's run, Rinloon and Cockbridge were exchanged for Cabrach and Bridge of Avon (always provided that the official plough could clear the latter hill in time). On Thursday Cairn o' Mount (north side) took the place of Cabrach. On Saturday, Tinto (of which nobody was afraid) gave place to Tynron Hill, the subject of many extremely alarmist rumours.

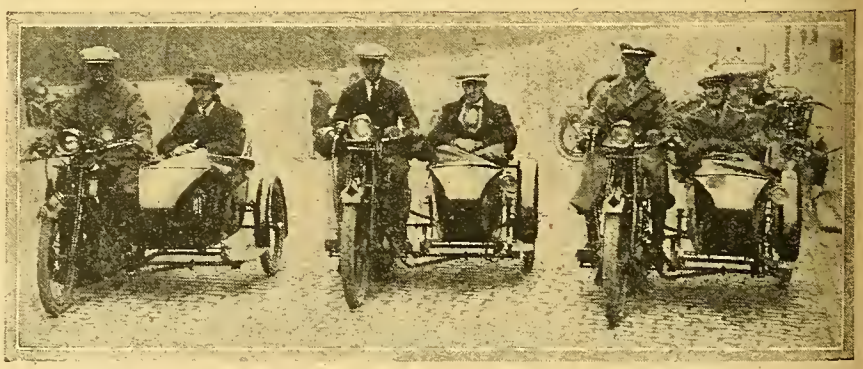
To-day's new route is:—Grantown, Bridge-of-Brown (observed hill), Achbreck, Cabrach, Castle Newe, Ballater, Banchory, Cairn o' Mount (observed hill), Charterstane, Aberdeen.

To-morrow, Friday:—Aberdeen, Laurencekirk, Forfar, Perth, Dollar, Falkirk, Murrayfield Car Terminns, Edinburgh.

Saturday's route will be:—Edinburgh, Broughton, Talla Linns (observed hill), Cappercleugh, Moffat, Durisdeer, Tynron (observed hill), Penpont, Wanlock Water, Biggar, Blackford Hill, Edinburgh (observed hill).

### Customs House Methods.

The organisation of the Edinburgh and District M.C.C. was always good and improves annually. With a minimum of fuss the 148 entrants were marshalled on Sunday morning into the darkest and least convenient garage ever utilised for a first-class trial. Hawk-eyed officials, doubtless with previous training in H.M. Customs, went through baggage and sidecars with fine-toothed combs; the haul of illegitimate spare parts included no fewer than five complete magnetos, all duly confiscated. Even tyre repair kits were opened for examination, and as some of the ladies complained that their suit cases were ransacked, no doubt a female searcher figured on the club staff. Quite a bevy of ladies started this year, many as passengers on cars or sidecars, but two as drivers of light cars, and three stalwart heroines as drivers of motor cycles: Mrs. Hardee (Matchless sc.), Mrs. Jansen (Ner-a-car), and Mrs. Knowles (348 A.J.S.). A certain amount of cunning had plainly been devoted to the wording of the rules, and especially with a view to discouraging doubtful claims for clean ascents of observed hills, which caused so much heartburning in 1921. The competitors as a body regretted the neces-



The Ariel team on 992 c.c. sidecars. L. Newey, F. J. Watson and W. Woodcock.

The New Gerrard trio. R. M. Wishart on a 482 c.c. machine, J. G. Porter (269 c.c.) and J. A. Porter (482 c.c.).

sity for dating the events so early in the season. Quite apart from the tremendous handicap imposed by bad weather, many of the loveliest parts of the Highlands are completely unattainable in May, and others are shorn of half their beauty until the forests come into leaf. The spring was so late that at Edinburgh on April 29th the trees were still black and the daffodils had not reached their zenith.

### Newcomers to the Six Days.

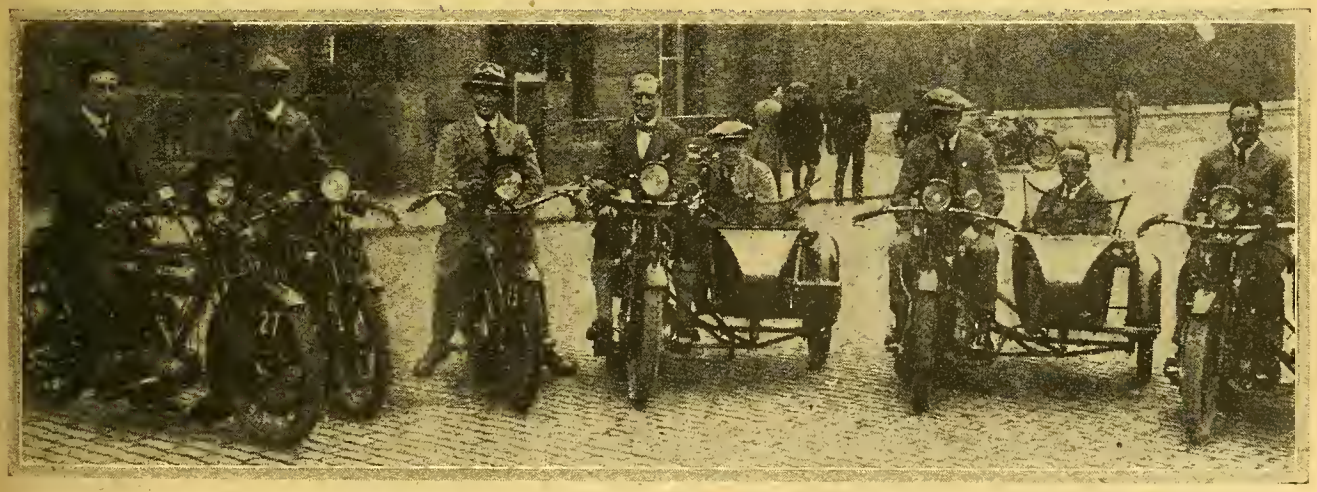
Many of the trials entrants are really making their *début* in an event of first-class rank, and the behaviour of their machines will be closely scrutinised. Among such are the Barr and Stroud engines; 348 c.c. Raleigh, 496 c.c. Zenith-Bradshaw, New Hudson cycle car, o.h.v. Triumph, Harper Runabout, New Gerrard, 4-cylinder Henderson, McKechnie spring frame, Ner-a-car, and the G.R.I.

### The Hill Tests.

None of the new hills were seriously expected to thin the ranks of gold medallists. Year by year the promoters increase their regard for Amulree and Glendoe as tests which sift out inferior machines and inferior drivers. Inverfarigaig was transformed into a "special award" hill for 1922, an admission that no disgrace is implied when a newcomer fails to climb it after others have cut up the corners. The entire trial ascends these "special" hills, but no gold medals are sacrificed by failure upon them. Motor cyclists do not look with any special favour upon the inclusion of light car entries in their events. Twenty-five light cars were entered this year, and were started indiscriminately, in order of entry—a system which contains serious threats of baulks in hill climbs, and creates much trouble about overtaking along moorland tracks which happen to be both narrow and rough.

The clothing question had obviously been the subject of much thought. A majority of the men evidently decided that a Scottish May was wet and cold, so they brought Sidcot suits, flying

Martinsyde competitors. A. F. Symes and J. T. Bashall on 678 c.c. sidecars, E. H. Gifford (498 c.c. solo), and W. H. Bashall (678 c.c. sidecar).



The two B.S.A. teams of solo and sidecar riders. A. A. Farr, M. C. Breeze, L. L. Sealey (on 557 c.c. machines), and B. L. Bird, S. H. Perrey and J. H. Walker (on 770 c.c. sidecars).

**The Scottish Six Days Trials.—**

coats, and other sub-arctic garments. On the other hand, quite tropical temperatures are not unknown at this time of year, and a sudden change might yet cause plenty of discomfort and fun. The present writer has gone south after two consecutive Scottish Six Days (*a*) with his face peeled; (*b*) with chilblains —so one never knows.

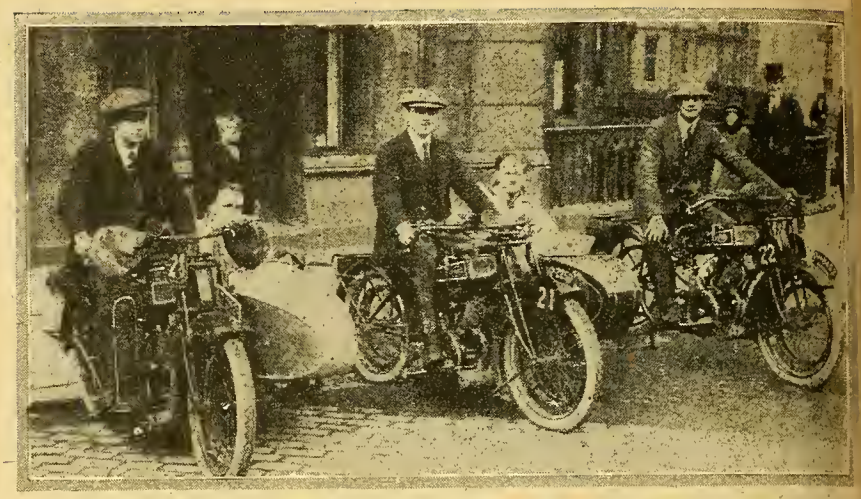
### Details of the Machines.

On the whole there was surprisingly little novelty among the competing machines; and the few deviations from catalogue specification were mainly those of convenience, effected by the drivers themselves. For example, Archie Cocks, remembering a toss in the London-Land's End Trial, caused by running off the road in a blinding hailstorm, had ensured that this would not happen again by fitting a small windscreen on the handle-bars of his 600 c.c. Beardmore-Precision outfit. The supporting member consisted of an old metal competition number plate, suitably bent, which also served in its original capacity. Much ingenuity had also been displayed in stowing the more commonly used tools and spares in Cocks's sidecar.

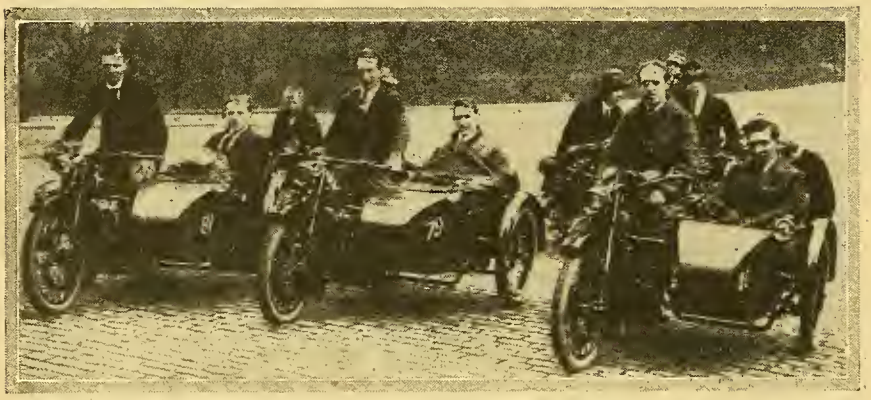
Another Beardmore rider, H. Greaves, had the latest edition of that make fitted with a Barr and Stroud engine; the exhaust arrangements on this machine were particularly neat, the necessary curve in the straight-through pipe being in a horizontal instead of a vertical plane.

Mrs. Jansen's Ner-a-car had undergone several modifications which converted it very cleverly from a potterer's runabout to a pukka trials mount. An emergency low gear of approximately 20 to 1 was provided by an auxiliary primary drive, a separate oil-tank adorned the front mudguard, feeding lubricant through a standard Best and Lloyd drip feed, and a double Bowden lever carburetter control replaced the twist grip.

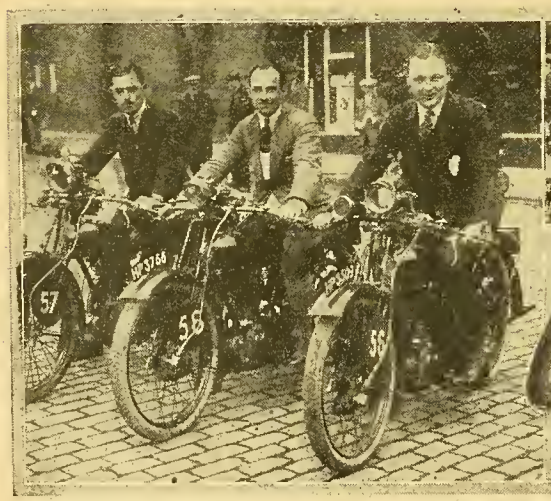
F. W. Becker's spring-frame McKechnie outfit was to all intents and purposes the show model already described in *The Motor Cycle*, but the designer's (W. E. McKechnie) own solo mount was altered in several respects, notably in the gear box, now a Jardine four-speed, and in the provision of rubber-covered stops to limit the amount of frame movement on the really bad roads expected by the competitors.



The Dunelt team. C. W. Vallings, W. Chase, B. Cathrick on 499 c.c. sidecars.



Single cylinder sidecars. The P. and M. team on machines of 555 c.c. capacity. G. M. Townsend, R. Lewis and P. Cunningham.



Francis-Barnett lightweight team on 346 c.c. machines. E. A. Barnett, S. M. Greening, and D. A. Atkin.

The Scott team. W. Moore, W. L. Guy, and G. W. Scott. Special knee-grips are fitted on the tanks.

**The Scottish Six Days Trials.—**

Mrs. Hardee's Matchless outfit had an Anzani engine, with neat covers for the over-head valve gear, fed with oil from a supplementary B. & L. sight feed in the tank top.

### Will be Watched Closely.

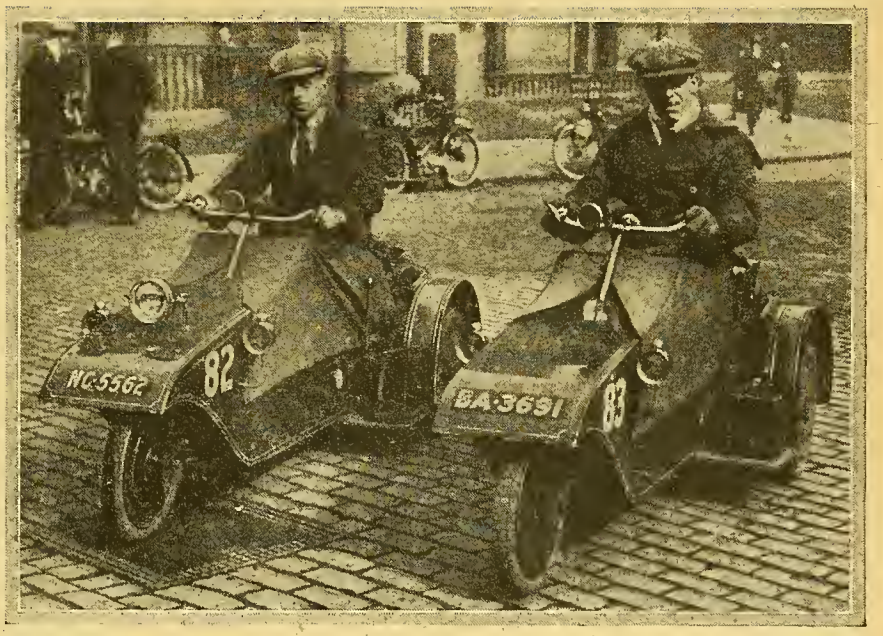
The Harper runabouts turned up in good time, and caused considerable speculation among the onlookers as to the procedure on Amulree—would the riders remain tied up in their storm aprons and, if so, what was going to happen if they failed? The drivers themselves, however, appeared confident that the difficulty would not arise. Two spare wheels and tyres were carried on each, the wheels, of course, being detachable and interchangeable. To use a well-worn phrase, their performances will be watched with interest.

On J. A. Watson-Bourne's big Brough-Superior there was one of the latest two-jet Bink carburetters, specially designed for this machine; the driver expressed considerable satisfaction to us regarding its behaviour. Above one-third throttle it is almost entirely automatic in action and acceleration is said to be particularly good.

### Two-Strokes.

Even less revolutionary were the remainder of the extra fitments. However, the fact that the Scott team had fitted knee-grips of special design to their machines is certainly worthy of note. J. M. Philpot's little nest of spare sparking plugs of all makes and sizes on his Velocette also aroused interest and some amusement, as did the same rider's massive thigh-operated big car type of bulb-horn, extending right down one of the rear stays.

The "5 h.p. Scott and Gasking," to have been ridden, according to the programme, by Donald Scott, did not materialise, and its place was taken by a 269 c.c. Excelsior two-stroke, the only representative of that make in the trial.




A plucky pair who have started the formidable trial on Harper runabouts, fitted with 269 c.c. engines. Armstrong Graham and R. O. Harper.

## First Day—The Start.

The only non-starters were D. C. Sangster (499 Sunbeam) and George Brough (976 Brough Superior), but W. Chase rode Pehrson's Dunelt, Watson rode Stock's Ariel sc., C. N. Faulconbridge was on White's Rudge, and A. Shepherd took over Handley's O.K. R. Evans on a lightweight Raleigh, and D. S. Bell (800 A.J.S. sc.), were additions to the programme.

Just as No. 2 started away at the lamentably early hour of 7.30 the rain, which had fallen almost continuously through the night, restarted; all the way to Stirling it fell more or less continuously, and even at this early stage belt slip was not unknown among the lightweight entries, for the tar macadamed roads were simply awash. On the whole this portion of the route was improved compared with last year, but it was, and always will remain, the most dull and unpleasant side of the week. Sherriffmuir Hill, four miles beyond Stirling, was in an extremely wet condition, and caused quite a lot of anxiety among the bedraggled competitors. But Amulree remained as dangerous as ever it was. No alteration had been made to the first day's route, and after climbing Trinafour and Kenmore in the afternoon the riders returned to Perth

## FROM SINGAPORE TO LONDON.

TWO ambitious motor cyclists, F. A. F. Johnstone (550 Triumph) and E. D. Hill (348 Douglas) are endeavouring to ride from Singapore to London. They left on December 21st and rode to Penang. Thereafter they found the roads unrideable, so made their way along the railway to Patalung, where they joined the roadway and got as far as Rompibun. Getting their machines rigged up so as to be able to ride along the railway track, they were then unable to get the necessary permission to use the lines, and therefore they went on to Bangkok by train. Owing to the total absence of roads and the nature of the country through which they must pass a considerable portion of their journey will have to be done by train and boat. From Burma they proceed to India, where the roads should present no difficulties, and then pass on to Persia. From Basra it is intended to use the railway attachment through Mesopotamia and on to Constantinople, after which plain sailing is expected. The journey will take about eight months, and the riders carry enough petrol for 600 miles.

## RESULTS OF THE LONDON-HOLYHEAD TRIAL.

LONDON to Holyhead by the main road is as easy as the Ealing and District M.C. Club's route over the Welsh mountains at Easter was difficult, hence the number of gold medals awarded is comparatively small, and those received are consequently well earned. The results are as follows:—

THE MAUDES' CHALLENGE SHIELD AND GOLD MEDALS.

Joint holders: V. Gayford (3½ Zenith-Bradshaw) and Hon. V. A. Bruce (11 A.C. car).

GOLD MEDALS.

W. D. Pugh (3½ Zenith-Bradshaw).
H. C. Nias (3½ Ariel).
J. Hall (2¾ Trump).
W. S. Schooley (3½ Zenith-Bradshaw).
P. Pehrson (4 Dunelt sc.).
A. G. Wall (3 A.B.C.).
M. O'Reilly (5-6 N.U.T.).
F. J. Youngs (2¼ O.K. Junior).
S. M. Greening (2¾ Coventry Eagle).
S. A. McCarthy (8 Morgan).

SILVER MEDALS.

S. E. Longman (3½ Zenith-Bradshaw sc.).
T. A. Ward (2¾ Sirrah-Blackburne).

BRONZE MEDALS.

Mrs. G. M. Jansen (2¼ Ner-a-Car).
G. H. Goodall (8 Morgan).

TEAM PRIZE.

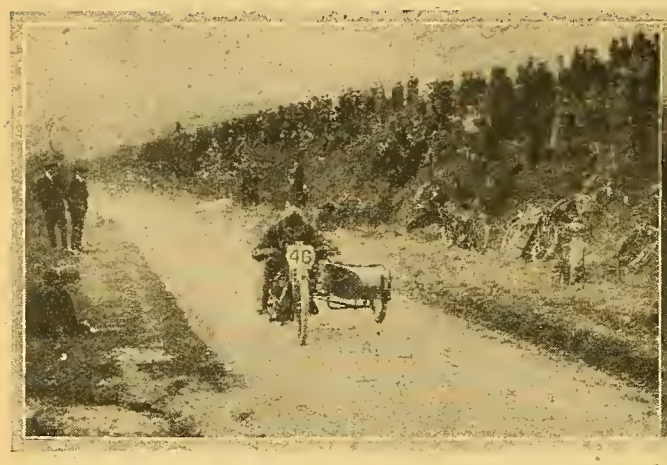
Zenith Motors—Messrs. Gayford, Pugh and Longman on Zenith-Bradshaws.

## WORKERS AT PLAY.

In the Coventry Works Motor Association's trial reported in our last issue, the solo award was won by W. Dono (Triumph), of the Triumph Works team; B. Brandish (Triumph), of the Hillman team, was runner-up. There was a much bigger entry of sidecars, and out of the twenty-three finishers in this class, G. Bettridge (4 Norton sc.), of the M.L. Works Club, had the least time error; the runner-up was L. Griffiths (Triumph), of the B.T.H. team.

# ONLY OPEN HILL CLIMB OF 1922.

## Well Supported South Midland Centre (A.C.U.) Event at Kop.



E. Searle (348 Sheffield Henderson sidecar) making a good climb.

Fastest time of the day. G. Dance on his 492 c.c. Sunbeam.

FINE weather, a record attendance, and George Dance's brilliant ascents of Kop Hill, were the chief features of the South Midland Centre's hill-climb on Saturday.

Everything possible had been done to make the event a success; police, R.A.C. road guides, and A.A. patrols all co-operating to regulate the dense traffic and park the numerous cars and motor cycles which bore spectators to this popular venue. Some idea of the vast concourse of people present may be gathered from the fact that 1,200 programmes were sold—the complete stock—quite early in the afternoon.

### One Run Only.

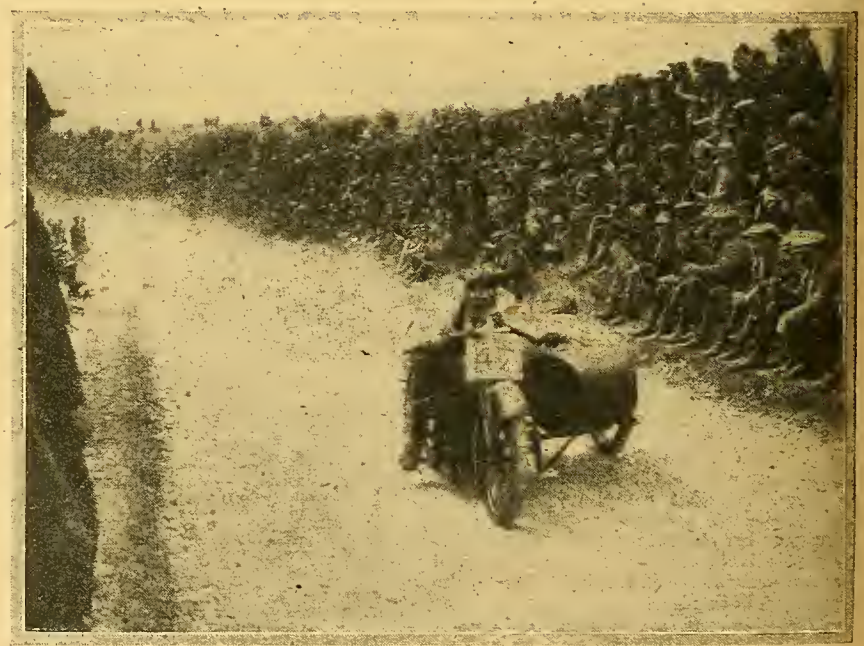
In many cases the events were divided up into pairs—experts barred to experts and general—and when this occurred no rider rode in more than one event of the two. For example, a private owner might enter for the "expert barred" class and also for the "expert and general" class, and when this happened, although his name appeared twice, he only rode once, but his time was recorded in both classes. This resulted in a considerable saving of time. Even then, the event which started at about 2.40 did not conclude until after 6.30. Fortunately there were no formula results, and owing to the excellent arrangements of posting the times promptly after each performance at the start and finish, people were able to follow the competition with interest throughout its duration.

### Thoughtless Spectators.

Competitors had to wear T.T. helmets, and owing to this regulation one unfortunate rider who fell off was saved from severe injury. Until this happened the crowd was rather difficult to control, and Baragwanath, who rode an M.A.G.-engined Matchless sidecar, and Bridgman (Indian sidecar) complained bitterly of people wandering on the course and obstructing their view of the road. After the accident the crowd sobered down somewhat, and the course was thereafter kept clear.

The first few classes provided little of interest, save that a few of the private owner entrants suffered from speed wobble. Failures were of course rare, and occurred owing to falls, of which there were only two, to a mechanical defect, and to a puncture. The latter trouble happened to Marshall (496 Matchless), whose back tyre punctured within sight of the finish. Riddoch (986 o.h.v. Zenith), the hope of the Oxford University M.C.C., smashed a valve spring early in his climb, and, notwithstanding, came up on one cylinder in 51sec. Fortunately he had arranged matters so that the valves could not fall into the cylinder.

Naturally Dance's performances on the Sunbeam overshadowed all others. The effect of his first superb climb in 28 3-5sec. was most interesting. First he came up, as the Americans would say, "like a streak." Hardly had the noise of the exhaust died away when no sound could be heard except the clapping of the enthusiastic spectators. Then a moment's silence, followed by the buzz of conversation made up of favourable comments on his magnificent riding. People travelling



A big crowd witnessed the excellent sport on Kop Hill on Saturday last. E. C. E. Baragwanath "all out" on his Matchless sidecar. He was disqualified on technical grounds.

**nly Open Hill Climb of 1922.—**

ip in 38-40sec. had wobbled dangerously, nd yet this superman, moving at express rain speed, had kept "the even tenor of is way." True his machine leaped from crag to crag," but, notwithstanding, he teered a perfect course.

**Organisation.**

So far as the organisation was con-erned there were small grounds for omplaint, but it is clear that in future pen hill-climbs should be timed by two ime-keepers. Though in this case the ield telephone worked perfectly, and Ir. A. G. Reynolds was as accurate and recise as his own stop-watches, too much lepended on the individuality of the two fficials who worked the buzzer at the tart; and on more than one occasion ompetitors' times were missed alto-ether. On the whole the riding was ood, but certain private owners who shut heir throttles before reaching the finish-ng line should receive a course in hill-limbing before competing again. Re-ults :—

Touring passenger motor cycles up to 500 c.c. experts barred) :—
D. F. C. Fitzgerald (490 Norton sc.), 46⅕ sec.
R. Pugh (499 Triumph sc.), 47⅖ sec.
N. V. Young (492 Sunbeam sc.), 48⅕ sec.

As previous class (experts and general) :—
D. F. C. Fitzgerald (490 Norton sc.), 46⅕ sec.
N. V. Young (492 Sunbeam sc.), 48⅕ sec.
E. Searle (350 Sheffield-Henderson sc.), 51⅕ sec.

Touring motor cycles up to 250 c.c. (experts barred) :—
S. M. Greening (248 Francis-Barnett-Jap), 41⅕ sec.
C. W. Johnston (247 New Imperial), 48⅕ sec.
G. L. Lake (225 Enfield), 59⅕ sec. (silver medal, fastest member of Beds Auto. Club).

Touring passenger motor cycles up to 750 c.c. (experts barred) :—
D. F. C. Fitzgerald (490 Norton sc.), 47⅕ sec.
N. V. Young (492 Sunbeam sc.), 47⅗ sec.

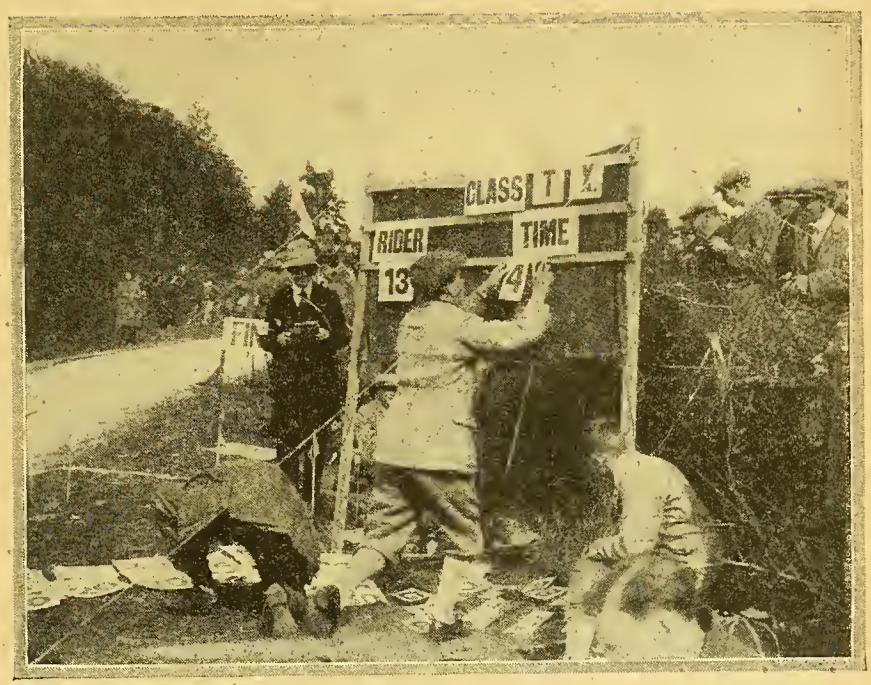
Touring motor cycles as above (experts and general) :—
N. V. Young (492 Sunbeam sc.), 47⅕ sec.
E. Searle (350 Sheffield-Henderson sc.), 51⅕ sec.

Touring motor cycles not exceeding 350 c.c. (experts barred) :—
A. Fraser (349 Sheffield-Henderson), 37⅕ sec.
S. M. Greening (248 Francis-Barnett-Jap), 41⅗ sec.
L. F. Peaty (348 Hawker), 48⅖ sec.

Touring motor cycles, as above :—
E. Searle (350 Sheffield-Henderson), 36⅘ sec.
A. Fraser (350 Sheffield-Henderson), 37⅘ sec.
S. M. Greening (248 Francis-Barnett-Jap), 41⅗ sec.

Touring passenger motor cycles not exceeding 1,100 c.c. (experts barred) :—
E. A. Bridgman (998 Indian sc.), 38⅘ sec.
C. Broom Smith (998 Indian sc.), 44⅕ sec.
A. Fitzgerald (490 Norton sc.), 47 sec.

Touring passenger motor cycles, as above (experts and general) :—
E. A. Bridgman (998 Indian sc.), 38⅘ sec.
C. Broom Smith (998 Indian sc.), 44⅕ sec.
N. V. Young (492 Sunbeam sc.), 48 sec.




Spectators were kept well informed as to the classes being run and the times made by the riders. A very excellent arrangement which other clubs might follow.

Touring motor cycles not exceeding 500 c.c. (experts barred) :—
A. W. Thrush (492 Sunbeam), 35⅗ sec.
R. Pugh (499 Triumph), 35⅘ sec.
H. James (490 Norton), 38⅕ sec.
Member of N.W. London M.C.

Touring cycle cars not exceeding 1,100 c.c. (expert and general) :—
H. R. Godfrey (1086 G.N.), 41⅕ sec.
H. F. S. Morgan (875 Morgan), 45⅕ sec.
C. D. Malby (1086 Morgan), 48⅖ sec.

Any type motor bicycle up to 500 c.c. (experts barred) :—
R. T. Grogan (490 Norton), 34⅕ sec.
E. A. Marshall (496 Matchless), 35 sec.
A. W. Thrush (492 Sunbeam), 36⅗ sec. (silver medal, fastest member Oxford M.C.).
A. Fraser (349 Sheffield-Henderson), 38⅗ sec. (silver medal, fastest member N. London M.C.C.).

Any type motor bicycle not exceeding 500 c.c. (experts and general) :—
G. Dance (492 Sunbeam), 28⅗ sec.
E. A. Marshall (496 Matchless-M.A.G.), 35 sec.
E. Searle (350 Sheffield-Henderson), 42⅕ sec.

Touring motor bicycles not exceeding 750 c.c. (experts barred) :—
G. F. Bainbridge (745 Martinsyde), 34 sec.
A. W. Thrush (492 Sunbeam), 35⅖ sec.
R. T. Grogan (490 Norton), 35⅗ sec.

Experts barred. Any motor bicycle not exceeding 750 c.c. :—
E. A. Marshall (496 Matchless), 33⅗ sec.
G. F. Bainbridge (745 Martinsyde), 34⅕ sec.
A. W. Thrush (492 Sunbeam), 35⅗ sec. (fastest member Oxford M.C.).

As above (experts and general) :—
G. Dance (492 Sunbeam), 27⅕ sec.
E. A. Marshall (496 Matchless-M.A.G.), 33⅖ sec.

Experts barred. Touring motor bicycles unlimited :—
C. Broom-Smith (998 Indian), 33⅓ sec.
E. W Finch (996 Zenith), 35 sec. (fastest time Slough and District M.C.C.).
A. W. Thrush (492 Sunbeam), 36⅗ sec.
* Fastest time of the day (approx. 65 m.p.h.).

Motor bicycles unlimited (expert and general) :—
C. Broom-Smith (998 Indian), 33⅓ sec.
E. Searle (350 Sheffield-Henderson), 37⅕ sec.

Any motor bicycle unlimited (experts barred) :—
G. J. Read (996 Enfield-M.A.G.), 30⅗ sec.
C. Broom-Smith (998 Indian), 32⅕ sec. (fastest time Bucks County M.C.C.).
L. Avery (988 Harley-Davidson), 35⅓ sec.

Any motor bicycle unlimited (experts and general) :—
G. Dance (492 Sunbeam), 28⅓ sec.
G. J. Read (998 Enfield-M.A.G.), 29⅓ sec.
C. Broom-Smith (998 Indian), 32⅓ sec.

In the next class for cars, the only competitor was H. R. Godfrey (belt-driven G.N.), whose time was (standing start) 38 4-5sec.—a considerable improvement on his previous performance. The length of the course was 802 yards.

## DUBLIN HILL CLIMB.

THE Dublin and District Motor Cycle Club held an open hill-climbing handicap on Saturday last at the de Selby Quarries Hill, near Tallaght. The various classes were well supported, the 350 to 600 c.c. solo division naturally having the largest number of entries. In this class the chief interest was centred in the scratch pair, T. E. Greene (3½ Douglas) and A. A. Wayte (3½ Sunbeam). The veteran Greene hardly rode up to expectations and was decisively beaten by his younger rival, who also won on handicap. The handicapping in the various events was not unsatisfactory, and most of the men were brought nicely together. The placed men in the various classes were as under :—

TWO-STROKE (UP TO 300 c.c.) CLASS.

| | H'cap time. min. | sec. |
|---|---|---|
| 1, J. H. Patton (2¼ James), 4 sec. ... | 1 | 21⅖ |
| 2, D. Allen (2½ Sun-Vitesse), scr. ... | 1 | 23⅕ |
| 3, Dr. T. F. Broderick (2¼ Levis), 2 sec. ... ... ... ... ... | 1 | 32⅕ |

FOUR-STROKE (UP TO 350 c.c.) CLASS.

| | H'cap time. min. | sec. |
|---|---|---|
| 1, H. J. McNally (2¼ New Imperial), 2 sec. ... ... ... ... ... ... | 0 | 54⅕ |
| 2, S. Wallen (2¾ A.J.S.), 3 sec. ... | 0 | 55 |
| 3, F. Holmes (2¾ Douglas), 4 sec. ... | 1 | 3 |

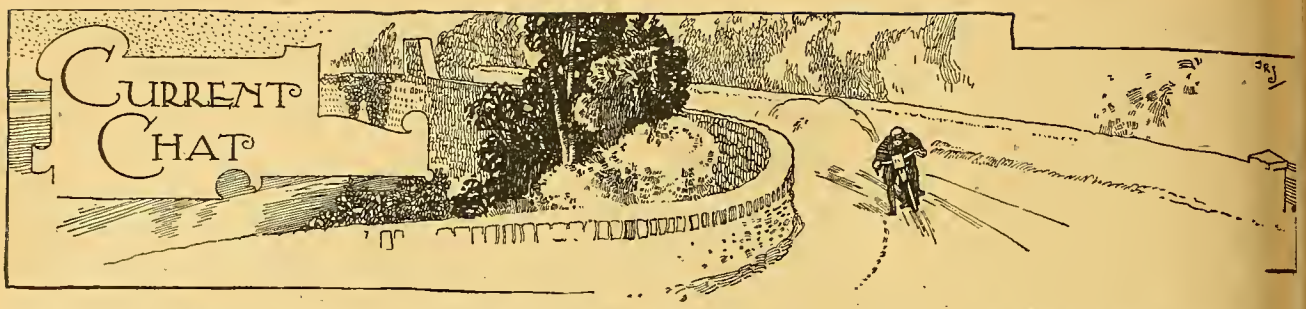
350 c.c. TO 600 c.c. CLASS (ALL TYPES).

| | H'cap time. min. | sec. |
|---|---|---|
| 1, A. A. Wayte (3½ Sunbeam), scr. ... | 0 | 44⅗ |
| 2, J. A. Adair (4¼ B.S.A.), 9 sec. | 0 | 46⅗ |
| 3, F. Holmes (4¼ Humber), 2 sec. ... | 0 | 48⅖ |

SIDECAR CLASS (UNLIMITED CAPACITY).

| | H'cap time. min. | sec. |
|---|---|---|
| 1, D. Allen (4 Norton), 5 sec. ... | 1 | 2⅗ |
| 2, H. W. Nesbitt (3½ Norton), 7 sec. | 1 | 3⅖ |
| 3, J. Holding (6 Enfield), 8 sec. ... | 1 | 14⅕ |

Despite the political situation the Dublin Club continues to hold successful and well-supported events, although some of the longer distance trials have had to be abandoned this year.




## Times to Light Lamps.

| | | | |
|---|---|---|---|
| May | 4th | .. .. | 9.25 p.m. |
| „ | 6th | .. .. | 9.28 „ |
| „ | 8th | .. .. | 9.30 „ |
| „ | 10th | .. .. | 9.33 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### Heavy Fines Not Confined to Britain.

In the Borough Court of Durban motor cyclists exceeding the speed limit were fined £7 10s. for 30 miles an hour and £5 10s. for 29 miles; a lady motor cyclist who did 37 miles an hour had to pay £5.

### Watering Roads with Salt Water.

In East London, South Africa, considerable damage is done to motor cycles through the watering of the city streets with salt water, which is highly deleterious to mudguards and their fittings. It is also damaging to the enamel.

### Next Saturday at Brooklands.

Quite a good entry has been received for the race meeting to be held by the B.M.C.R.C. at Brooklands track at 2 p.m. on Saturday next. Attractive features of the event will be the "T.T." races, in which it is to be hoped some of the actual machines for the I.O.M. races will be seen on the track.

### Disappointing the Amateurs.

Amongst amateur riders disappointment is felt that the Amateur Road Race proposed by the Manx M.C.C. has been "turned down" by the A.C.U. A selection from the many letters received on the subject will appear next week.

### That Extra Brake!

At the conclusion of the proceedings at Windsor Guildhall recently, the chairman of the Windsor County Bench, Sir William Shipley, stated that in future, if so many cases concerning motor cycles which were not equipped with efficient brakes came before the bench, the magistrates would very probably increase the fine from 10s. to a much larger sum.

### Bad Roads Round West Hartlepool.

So serious has become the state of the roads around West Hartlepool that the secretary of the Hartlepools M.C. addressed a letter to 900 local motorists urging them to combine with the object of getting the roads put into order. A meeting was convened at which a resolution was passed calling the attention of the Durham County Council and other Councils involved to the appalling state of the roads leading to the Hartlepools, and urging that they should be put into proper condition.

## Special Features.

1922 SPEED POSSIBILITIES.
MOTOR CYCLES OVERSEAS.
THE SCOTTISH "SIX DAYS."

### Drive Carefully in Cambridge.

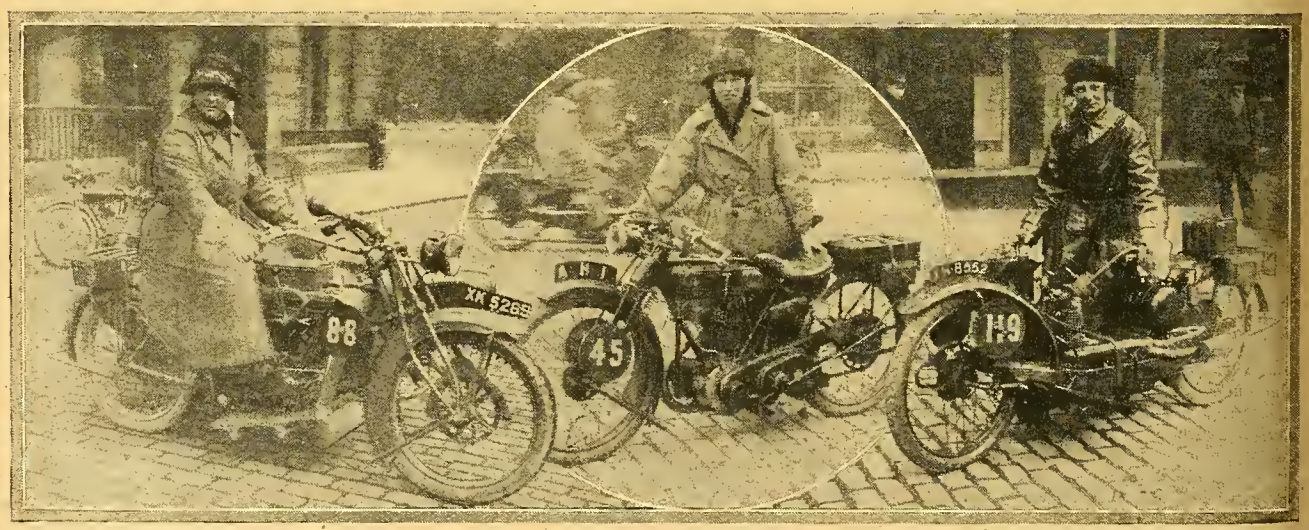
Motor cycles are immensely popular in Cambridge, but as the streets are narrow and, during term-time, are thronged with pedal cycles, riders should proceed with great caution. Traffic regulations are being strictly enforced.

### A Liverpool Picnic.

For the venue of the second annual picnic of the Liverpool Centre of the Cycle and Motor Trades Benevolent Fund, on June 7th, the Woodlands, Llangollen, has been chosen. Full particulars can be obtained from the Secretary, H. Rawnsley, 120, Duke Street, Liverpool.

### Parking Machines in Worcester.

Motor vehicles may now be left in certain streets in Worcester for short periods without arousing police objection, so we are informed by the A.A. The streets are: Shaw Street (south side), 15 vehicles; Trinity Street (west side), 5 vehicles; Queen Street (west side—between St. Nicholas Street and The Trinity), 7 vehicles; the Corn Market (near Public Hall when not being used), 2 vehicles; College precincts, 2 vehicles.




LADY COMPETITORS IN THE SCOTTISH SIX DAYS' TRIALS.
Mrs. Hardee (998 Matchless sidecar), Mrs. Knowles (349 A.J.S.), Mrs. Jansen (211 Ner-a-car).

### l Fields in South Africa?

Oil has been found in the Winterton strict, which, fortunately, is only six- en miles from the nearest railway.

### aleigh Extensions Completed.

To-morrow (Friday) the new works of e Raleigh Cycle Co., Ltd., at Lenton, ottingham, will be opened by Lord irkenhead. A special train will convey e guests from London.

### loists and Fine Weather.

Although Spring-like weather is not yet e order of the day, many more solo ders are to be seen than a couple of eks ago. Most of the soloists favour ghtweights of medium power, and two- rokes predominate.

### French Hill Climb.

The enterprising Western A.C. of ance is holding a hill climb on the 7th st., which will be open to all types of otor vehicles excepting lorries. There ill also be a gymkhana on the same day. ie organisers are L'Automobile Club de Ouest, 34, Place de la Republique, Le ans, France.

### Sunny Japan.

For the benefit of English and American otorists in Japan some rules affecting iving are printed in English. We give rewith a few specimens: "When a ssenger of the foot hove in sight, tootle e horn—melodiously at first, but if he ill obstacles your passage, tootle him ith vigour, express by workings of the outh the warning 'Hi! Hi!'" "Beware the wandering horse that he shall not ke fright as you pass him by. Do not plode an exhaust at him; go sooth- gly by." "Give space to the festive g that shall sport in the roadway." Avoid entanglement of dog with your heel-spokes." "Go soothingly in the ease-mud, as there lurks the skid- mon."

### pen Trial in Devonshire.

The route selected by the committee of e South-Western Centre A.C.U for the en trial on May 20th is a very sporting ie, and should attract a large entry. The art will be made from Exeter, and will nbrace the lovely Exe Valley and the xmoor hills. From Exeter the competi- rs will run to Crediton, after which ey will encounter Bickley Hill, passing rough Tiverton they will come to inkem Hill, and then on to Templeton, outh Molton, Rock Hill, and Barnstaple, here lunch will be taken. After lunch raunton and Coombe Martin will be sited, and then the famous Hunter's Inn ill will have to be negotiated. Passing arbrook Mill, Beggar's Roost, Countis- ury and Porlock Hills will be encoun- ered, after which the competitors will ouch the fringe of Minehead and pro- eed along the main road to Taunton, here they will complete the journey.

Rules and regulations were issued im- ediately after the meeting of the ports committee of the A.C.U., and pplication for same should be made to Ir. S. L. Ward, 5, Hammet Street, aunton.

### Fishy!

It is well-known that rain washings of a tar-treated road are apt to kill the fish in any river they may reach. A Joint Departmental Committee appointed by the Ministries of Transport and Agriculture considers that highway authorities should give preference to asphalt bitumen free from tar products for the treatment of roads draining directly into fishing waters.

### At the Start of the London-Edinburgh.

Members of the M.C.C. committee, competitors, and officials in the London-Edinburgh run will be made honorary members of the London Country Club for the day, and will be able to make use of the club for the purpose of getting light refreshments in the afternoon and dinner in the evening prior to the start of the run, which takes place on Friday, June 2nd, the day following the Senior T.T. race in the Isle of Man.

### American Records Cancelled.

All American claims for world's records in 1921 have been disallowed by the F.I.C.M., as the persons responsible have failed to realise that in the case of long distance records a standing start must be made, and in the case of the mile record, only the average speed after two attempts, one each way, is allowed to made, and in the case of the mile record, was made on a circular track, and it was therefore urged that the mean speed was not required, but the International Federation have insisted that all short distance records must be made in accordance with their regulations.

### Land's End-John o' Groats Abandoned.

In view of the impossibility of finding adequate accommodation for competitors in Scotland, or of finding a suitable date for the event, the End-to-End trial, which it was proposed to organise this year in celebration of the twenty-first anniversary of the M.C.C. will not take place.

### 217,427 Motor Cycle Licences.

According to the statement issued by the Ministry of Transport, the number of licences issued for motor vehicles from December 1st, 1921, to February 28th, 1922, show that there were during that period 201,667 annual motor cycle licences issued and 15,760 quarterly licences, making a total of 217,427. The figures published between January 1st to November 30th, 1921, showed that the total number of motor cycle licences issued was 357,359.

### French Trials Reporting.

This is how a bad rainstorm is described by a French journalist who followed the Tour de France. "After Aix heavy clouds pursue us. We try to escape them, but to no purpose. They fall on us, and it is a terrible deluge; torrents of water descend upon us, the rain which falls is cold, penetrating, punishing; it paralyses the bravest hearts. The nature of the surface is difficult. There are roads which are all stones, rough, jolts which provoke numerous short and violent oscillations, dangerous to the mechanism and to the wrists of the drivers. We reached Fréjus in a veritable lake of mud. The morning has been disastrous."

MODERN TRANSPORT MEETS ANCIENT CUSTOM.—Last week the Hocktide Court sat at Hungerford to elect the officers for the year; those elected are the Chief Constable, officers of the town, and the "tuttimen." The latter have the privilege of making a tour of the town and kissing all the girls they meet, giving an orange in payment for the kiss. As may be seen, the sidecar passenger qualifies for the golden fruit!

# A Motor Cyclist's Country Diary

## On the Question of Fogs in General with Notes on Live Stock and Open Gates.

*Here, flying loosely as the mane*
*Of a young war-horse in the blast;*
*There, roll'd in masses.*—H. MOORE.

POETS and painters have rhapsodised over the fleecy mist clouds, but the motor cyclist loves them not. They are worse than inky darkness, for they are impenetrable by the strongest lamp, they cling closer than a brother, they make us like unto the Father Christmas of the greeting card—and are altogether soul-killing.

To watch a rolling fog from the top of a mountain is fascinating—when the fog is in the valley below or enshrouding some distant peak; to be personally mixed up in one on a motor cycle is an abomination.

"Platoons of ducks slowly waddling to the green."

Those who live in the country and use their motor cycles to get to business in some neighbouring town have been greeted by the fog in their bedrooms, they have looked out of the window on to their own patch of the great round world to see if the said fog was as bad as yesterday, and have discovered it was worse. Then they have buttoned everything which would button, and set off on their journey, hoping that the meandering, unenterprising village cows will not be in the lane, that platoons of ducks and geese will not be slowly waddling to the green or duck pond, and that the school-coming children will have the sense to go to one side of the road or the other.

### Dogs, Fog, Pigs and Milk Carts.

All these daily possibilities past, there is the corner at which the dog always rushes out and which we have in vain endeavoured to kick, and there is the next corner at which we frequently find one or two pigs—apparently stone deaf, and bereft of both sight and sense—crossing the high road at the psychological moment we arrive. They are uncertain enough in blazing sunshine, but in the midst of a fog they are a risk no self-respecting accident insurance company would take. Sundry milk carts returning from the station, driven by boys with their hands deep in their breeches pockets, and whistling with such vigour as to endanger the retention of their front teeth and exclude all other sound, are also to be contended with. Altogether the ride from country to town in recent days has been a trial to those with nerves, even if we did go through "the Great War, daddy," and in those years take everything as it came, and with our "Where did that one go to, Herbert?" make a joke of things which carried death in their wake.

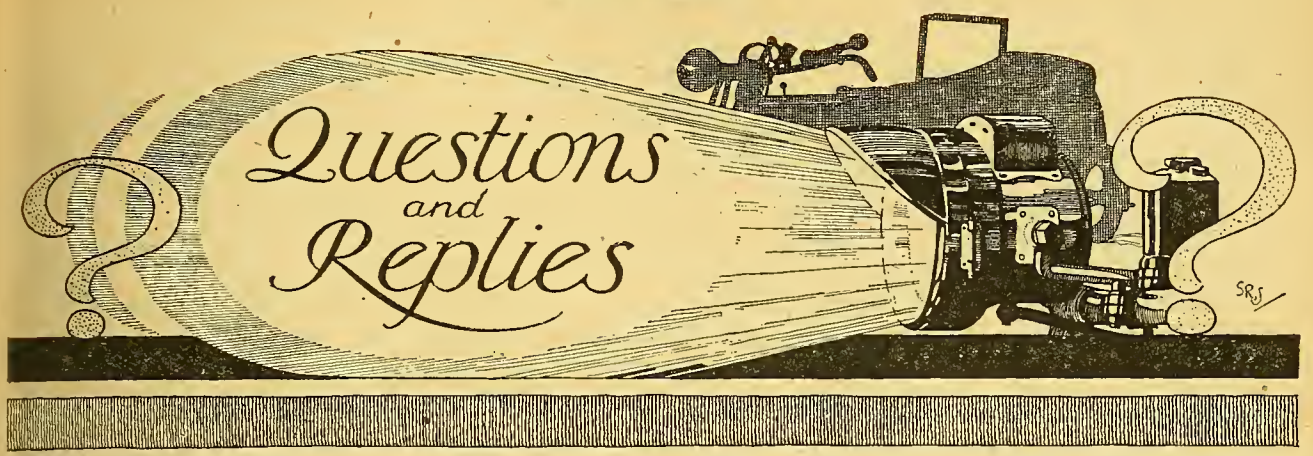
Only the other day the grandmother of a boy who will come into a big estate and a title confided in me thusly: "Stephen is bent on having a motor cycle. He'll probably get his way, too, . . . if he does, he'll be certain to be killed. They're so very dangerous, and he is so venturesome." I comforted her by saying I hadn't been killed yet and that the boy would be quite as safe on a motor cycle as on some of the young horses I'd seen him riding.

### Opening Gates.

There are a line of gates over a highway in Yorkshire along which several motor cyclists pass each morning. On each side are open fields with stock running in them. It is an inconvenience to the farmer if the stock get wrong—the gates are a daily inconvenience to the motor cyclists and others who use the road. The M.C.'s have come to an agreement that the first to reach the said gates will throw them open and leave them so for the benefit of those who follow, the last comer to close them. As in the case of gates out hunting, however, the last man always imagines that there is someone else to come. The result is, the farmer is furious.

Motor cyclists have to live their life in that district where folk are very locally minded and where fat sheep and bullocks, turnips and crops are the main topic of conversation. Consequently, with public opinion against them, they, as sensitive fellows, ask, "What should we do?" To fence off those fields would be an expensive undertaking, to dismount five times to open gates is so irritating as to upset the equilibrium of some M.C.'s (who do not salute the happy morn too cheerfully when there's snow on the ground or lakes in the road). The town motor cyclist knows "nowt" about these field gates over the high road, but we country cousins have much experience—and this is the year of grace 1922, and not the days of stage coaches, of toll bars, and Dick Turpin's Black Bess which could jump over the gates at a pinch.

J. FAIRFAX-BLAKEBOROUGH.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### A QUESTION OF DATE.

Last year I purchased a motor cycle which was sold to me as a 1916 model (a friend was with me when this statement was made). I have lately made an exchange for another bike at a garage, and I stated at the time of exchange mine was a 1916 model, which was quite agreed upon on both sides. Now, after seven weeks, the man tells me he finds it is a 1914 machine. I have always believed it to be as I stated, and the machine was taken in exchange very readily at the time, and the man was perfectly satisfied with the bargain. He now says I must compensate him. Can he make me do so?—J.B.

From a legal point of view it appears that there was misrepresentation of the date of the machine, although this appears to have been of an unintentional character. At the same time, the buyer would be justified in claiming the difference in value between the two machines of the years stated, and you in your turn would be in order in suing for a like compensation from the person who sold the machine to you. In view of all the circumstances, however, it is very improbable that the buyer would succeed in an action against you, and before making any payment you should take legal advice locally.

### EFFECT OF IGNITION TIMING ON NOISE.

You once stated in a reply to a reader who complained of the noise of his machine that you were inclined to believe that his ignition was too much retarded. (1.) Will you please say why this should affect the noise? (2.) What is the cause of eight-stroking instead of four-stroking when running slow (machine not driving, but out of gear)? The engine four-strokes correctly on increasing speed (1914 4½ h.p. Singer single).—E.W.

(1.) At large throttle openings the noise of the exhaust is much more noticeable if the ignition is retarded; obviously with late ignition the charge in the cylinder is still burning when the exhaust valve opens, this resulting in a more violent discharge into the silencer or exhaust pipe. (2.) The trouble may be due to an excessively rich mixture, or it may be caused by an excessively weak mixture, due to air leaks which dilute the charge at slow speeds; the latter solution is less likely than the former, however.

## Important Dates.

**Mon., May 1st, to Sat., May 6th—Scottish Six Days Reliability Trials.**
**Sat., May 6th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 Mile Sidecar Race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### BALANCE OF A SINGLE CYLINDER.

Should the balance weights of a 3½ h.p. Rudge Multi be equal in weight to the connecting rod and piston, as I find mine only balance the rod itself?—T.T.

The balance weight should be equal to the weight of the rotating parts, plus approximately 0.4 of the reciprocating weight. The former consists of the crank pin, big end, and lower half of the connecting rod, and the latter the top portion of the rod with gudgeon and piston complete.

### ENGINE RELEASE VALVE.

(1) When kicking my 499 cc. Sunbeam over compression there is a noise from the rear right-hand side of the crank case like the escape of compression. It appears to come from what I can only describe as an arrangement similar to a screw-on greaser, except that it has a hole bored in the head. I don't think this noise should be there, but as I know very little about the engine I shall be glad of your help. (2) Recently the oil feed was disconnected, leaving only the 4 or 5 inch connection on the front of the crank case. Immediately the engine was turned over oil spurted up through the top of this in fairly large quantities, and I cannot understand the cause. I may say that for some time the glass sight on the oil feed has been blurred, when the engine is running.—J.E.P.

(1) The fitting you describe is a crank case release valve, and it would appear that this has become partially obstructed; you should remove and clean it internally, and make quite sure it is in good order. (2) If the crank case release is not working properly, oil will be blown back up the oil feed pipe and this may account for the obscuring of the sight feed glass. Attention to the release valve will no doubt put matters right. If it does not cure the fogging of the sight glass make quite sure that the latter is not cracked or insecurely bedded on its leather washers at top and bottom of its chamber.

### CHAINS NEED ADJUSTMENT.

Some five months ago I purchased an 8 h.p. Royal Enfield sidecar, and drove it direct from the works, having since covered many hundreds of miles, the machine giving entire satisfaction. About a month ago, however, the engine developed a rather pronounced "jerkiness" at slow speeds, and despite all endeavours I have been unable to rectify it. I have decarbonised it, ground in the valves, etc., without results. This "jerkiness" is quite irregular, and appears quite distinct from misfiring. It only appears at moderate pace and when accelerating. Can you enlighten me as to the cause?—J.Y.F.

From the symptoms you describe we suspect slackness in the driving chains rather than faults in the engine. Probably the high gear chain needs adjustment.

## READER'S REPLY.

### LACK OF SPEED.

Under the above heading in *The Motor Cycle* of the 20th ult., "J.S.R." states that at any speed over 15 m.p.h. his two-stroke develops a serious knock. I have a 1920 2 h.p. Levis, and I have exactly the same trouble. I have overcome it for a short time by having the big end tightened up. This I have had done three times, but in a very short time it is as bad again. Each time I took it to the garage I was told that the big end was not loose, but I had it done: it is the only thing (that I can find) that will stop the trouble. There is nothing wrong with the ignition or carburetter. If any other reason for this fault can be suggested I shall be very glad to hear it.—F.R.K.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned. Requests for experiences should be accompanied by a stamp.*

"W.W." (Ipswich).—Single-speed Levis, especially suitable for 6ft. rider.

"J.C." (Maghull).—Easy starting tips for 1920 4¼ h.p. B.S.A. or most suitable carburetter.

"J.G.T." (Yate).—Comparisons between two-stroke and four-stroke machines for long-distance riding.

"INQUISITIVE" (Ceylon).—1921 3½ h.p. dual-purpose Sunbeam: Maximum speed solo geared 4.9 to 1.

"R.A.R." (Rotherham).—Jet size and consumption with Binks and Amac on 8 h.p. Matchless-Mag.

"H.E.R." (Bradford).—4¼ h.p. Beardmore Precision sidecar.

"D.A.H.B." (Shorncliffe). — A.B.C.: Speed, reliability of valve gear, etc.; also 2¾ h.p. stripped sports A.J.S. at high averages.

"J.A." (Bradford).—4¼ h.p. and 7 h.p. James sidecars and 6 h.p. Bradbury-Grindley sidecar.

"G.B.B." (Coventry).—Makers of recommended tents for motor cycle camping.

"V.D." (Brighton).—2¾ h.p. two-speed Raleigh.

"S.H.S." (Southport). — 8 h.p. New Imperial sidecar: Especially gears and transmission.

"T.A.M." (Newport, Mon.).—Jet sizes for Binks on 4 h.p. Douglas sidecar.

"R.M." (Yeovil). — Morgan, popular model.

"F.L.B." (Manchester).—Any improved type of o.h.v. rocker mechanism on A.B.C.

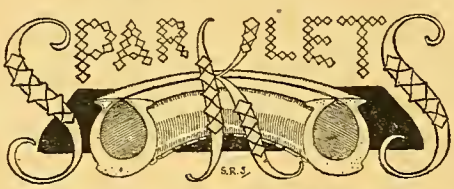
"F.H." (Maidstone).—Sit-easy tubular pillion seat; also 29in. × 3½in. tyres on Matchless.

"H.G." (Liverpool).—Volex dry battery lighting sets; duration of light, etc.

"A.E.C." (Kensal Rise).—247 c.c. two-speed Sports Levis with pillion passenger; also A.B.C. and A.J.S.

"PLUG" (Lemington-on-Tyne).—1921 3 h.p. two-speed Ivy.

"G.A.C." (Merthyr Tydfil).—Benzole on 7-9 h.p. Indian: Action on cork float. Particulars of any more convenient exhaust lifter.




### To Supersede the Copper Exhaust?

A process whereby steel or other pipes are given a coating of aluminium has been devised by Marsh and Wright, Victoria Street, Weymouth. It is specially recommended for exhaust systems.

### Competing on ex-W.D. Machine.

The award of a silver medal obtained by G. Kuhn in the Victory Cup trial has been amended to a gold. Kuhn rode an ex-W.D. Douglas, reconstructed by the Burlington Motor Cycle Co., Ltd., 7, South Side, Clapham Common, London, S.W.4.

### Dashboard Lighting-up Tables.

Small ivorine lighting-up tables suitable for fixing on the dashboards of sidecars or runabouts were offered gratuitously to motor cyclists some weeks ago by H. Taylor and Co., Ltd., 52-53, Sussex Place, South Kensington, London, S.W. The stock is not yet exhausted, and any applicant forwarding return postage will receive one.

### The Use of Enamels.

Manufacturing the well-known Robbialac motor cycle enamels is by no means the only activity of Jenson and Nicholson, Ltd., Stratford, London, E.15, for they make all manner of domestic enamels and varnishes, and have recently issued an instructive booklet on house decoration obtainable on remitting fourpence postage. Instruction leaflets on re-enamelling motor cycles and sidecars may be had on application also.

### Will Club Secretaries Oblige?

Particulars of competitions organised by motor cycle clubs are required by the Competition Manager, F. E. Baker, Ltd., King's Norton, Birmingham.

### Pedal-assisted Bicycles in Scotland.

Appointment as sole distributors of the McKenzie lightweights in Scotland has been given to Morris, Russell (Scotland), Ltd., 52, George Street, Edinburgh.

### Found on the Road.

On applying to Mr. J. Crawford, motor and cycle agent, Consett, the competitor who lost a lamp at Shotley Bridge in the Travers Cup trial on April 27th will have his property returned.

### British Products on the Continent.

Two of the principal events in Belgium this year, the Coupe de la Meuse and the Gillet Cup, have been won by British machines; the former by Ferdy on a Sunbeam and the latter by Vanneste on a Norton. Both machines were fitted with Bates tyres.

### A.C.U. Fixture List for 1921.

Copies of the list of A.C.U. fixtures and open trials for this year may be obtained from 83, Pall Mall, London, S.W.1, price sixpence. It also contains a list of the clubs affiliated to the Union, with the addresses of the secretaries.

### Local Machine's Win at Staxton.

In the recent Staxton Brow hill-climb the winner in the 275 c.c. class was mounted on a 249 c.c. Spa-Jap, and not on a New Imperial as previously announced. The machine is produced locally by the Spa Motor and Engineering Co., Scarborough.

### Catalogues Received.

John Marston, Ltd., Sunbeamland, Wolverhampton: A catalogue full of information relating to Sunbeam machines.

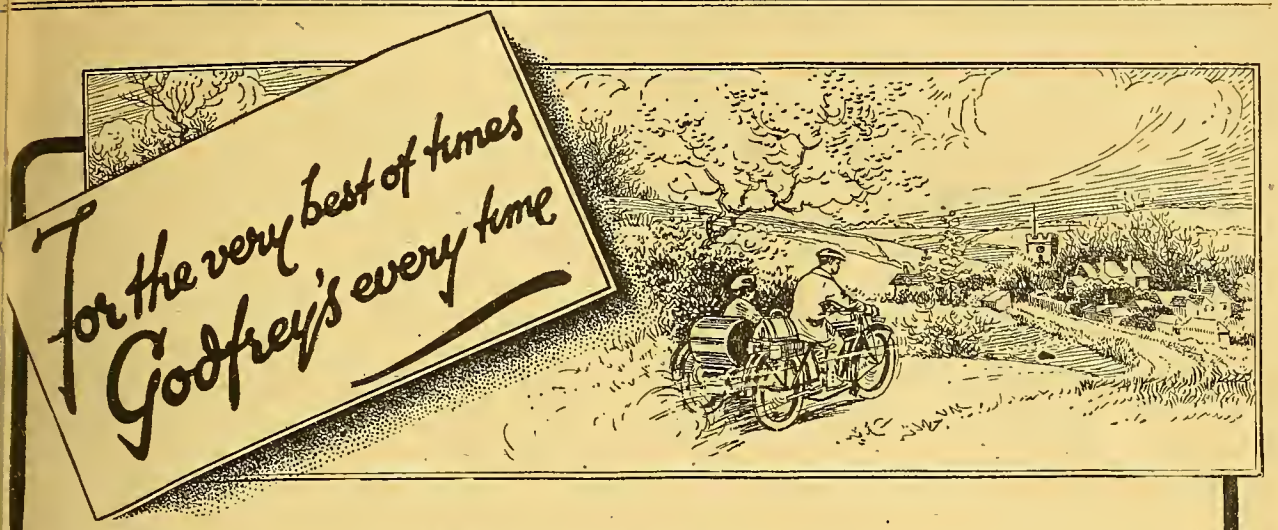
Joseph Kaye and Sons, Ltd., 93, High Holborn, London, W.C.1: A catalogue giving particulars of the famous Kaye oil cans.

The Coventry Eagle Cycle and Motor Co., Ltd., Foleshill Road, Coventry: Folder describing Coventry Eagle super-sports models.

A. W. Gamage, Ltd., Holborn, London, E.C.1: "Everything for the Motorist." A considerable section of this publication is devoted to accessories of interest to motor cyclists.

The Monopole Cycle and Motor Co., Ltd., St. Mary's Street, Coventry: Catalogue giving prices and particulars of the Monopole range from the 2½ h.p. single-speed two-stroke model to the 5-6 h.p. sidecar outfit.

Brown Bros., Ltd., 22-34, Great Eastern Street, London, E.C.2: Particulars of the Vindec lightweight two-speed two-stroke, the price of which has been reduced to £55, and of the Vindec 8 h.p. sidecar outfit, which is now £160, including spare wheel and tyre. Details of Duco sidecar chassis and bodies are also given.




**IF YOU KNEW** that one agent made a practice of lining the tool bags of all his motor cycles with a **£5 note**, would it influence your order ?
Presuming such a practice to be quite legitimate (which, by the way, it is not) and other things being equal, of course it would. Why ? "Because you would obtain greater value for your money."

**SERVICE** Now the "lining" of each machine at Godfrey's is the Bank Note of Service, the value of which is not to be measured in units of 5, but, like the hypothetical bank note, is good for any length of time.

Service, with Godfrey's, is a fetish, arising doubtless from the fact that the members of the firm are old competition riders and know by practical experience the needs of motor-cyclists. And so every department of Godfrey's business is organised with one end in view—Prompt and Efficient Service.

**EXCHANGES** Godfrey's are prepared to take your present mount in part exchange and will quote you an allowance price on receiving full particulars.

**CREDIT TERMS** Should your capital be locked up you may desire to take advantage of credit terms. Write for particulars of Godfrey's System. Our charge is 4 per cent. (except in a few cases where manufacturers have special rates). One quarter down and balance in 12 equal monthly payments.

**SPARE PARTS** In the course of the last few years we have built up a large mail order business. If you have any difficulty in obtaining spare parts, try Godfrey's. We carry full stocks of spares for B.S.A., Indian, Levis and Scott Motor Cycles.

**REPAIRS** Our works at 14, Miller Street, Camden Town, is staffed by experienced mechanics. Should your machine need overhauling, write direct. Estimates given.

To sum up, neither the motor-cyclist nor the prospective motor-cyclist need have any hesitation in putting our Service to the test. If we can be of any assistance to you quite apart from any obligation to purchase we shall welcome the opportunity.

**WE CAN GIVE IMMEDIATE DELIVERY OF THE FOLLOWING 1922 MODELS:**

## B.S.A., INDIAN, LEVIS, SCOTT, TRIUMPH,

**A.J.S., ARIEL, COVENTRY EAGLE, DOUGLAS, EXCELSIOR, HAWKER, MATCHLESS, MORGAN, NEW IMPERIAL, N.U.T., ROYAL ENFIELD, RUDGE, ZENITH.**

OUR FULL LIST OF ALL MACHINES IN STOCK AND ANY CATALOGUE SENT FREE ON REQUEST

# GODFREY'S LTD.,

**208, GREAT PORTLAND STREET, LONDON, W.1.**

**'PHONE—LANGHAM 1300 (2 lines). 'PHONE—WORKS—MUSEUM 2434.**

THE *Velocette* IN THE

**3,700 KILO = 2,312 MILES**

# TOUR DE FRANCE

SOMETHING LIKE A TRIAL.

**ONE VELOCETTE ENTERED**

GAINED

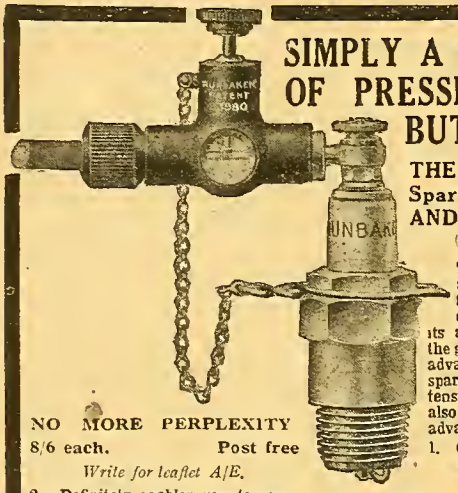
## FOUR PREMIER AWARDS.

**FIRST POSITION:—GOLD MEDAL.**
**CITY OF COLMAR:—GOLD MEDAL.**
**MOTOR CYCLE CLUB BEZONTIN PRIZE.**
**CLUB DU NORD:—SILVER PLAQUETTE.**

No other Lightweight (2 stroke or 4 stroke) can claim such a magnificent Success. Remember All Machines were Sealed

*Send for Catalogue—free from*

**VELOCE LTD., Victoria Rd., Sixways, Aston, BIRMINGHAM.**



## SIMPLY A MATTER OF PRESSING THE BUTTON—

**THE RUNBAKEN Spark AMPLIFIER AND TESTER ! !**

(Patd. 13980)

This highly finished accessory is quickly fitted to any type of plug, and with its aid, besides giving the generally recognised advantages of an extra spark gap in the high tension current, has also the following advantages :

1. Confirms Magneto and High Tension Wire O.K.
2. Definitely enables you to see a spark take place at Plug Points.
3. Whether sparking regular or not.
4. Whether points sooted or insulator cracked.
5. Indicates "shorted" Plug.
6. Will cut out cylinder for testing purposes.
7. Acts as thief-proof device.
8. Never necessary to take out Plugs except when faulty.

**NO MORE PERPLEXITY**

8/6 each. Post free

*Write for leaflet A/E.*

**THE RUNBAKEN MAGNETO CO., LTD.,**
**WORKS : DERBY ST., CHEETHAM, MANCHESTER.**
'Phone : City 8266 (3 lines).

| | |
|---|---|
| **MANCHESTER : 288, Deansgate** | 'Phone : Central 7342. |
| **LONDON : 142, Gt. Portland St., W.1** | 'Phone : Museum 3905. |
| **LEEDS : 94, Albion Street** | 'Phone : 27219. |
| **LIVERPOOL : 16, Colquitt Street** | 'Phone : 605 Royal. |
| **BIRMINGHAM : 192, Corporation St.** | 'Phone : Central 2059. |
| **BRISTOL : 14, Colston Street** | 'Phone : 3728. |
| **SCOTLAND : F. W. Murray, 34-36, Bath Street, Glasgow** | 'Phone : Douglas 1784. |
| **PARIS : 40, Rue Brunel** | 'Phone : Wagram 30-11 |

# FEDERAL

## Two-Stroke

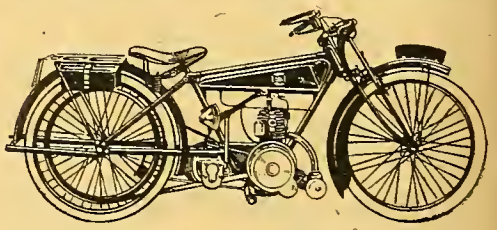
fitted with 2½ h.p. Villiers Engine, the Federal

**SOLVES the PRICE PROBLEM AT 38 GUINEAS.**

Fitted with two-speed, **48 Guineas ;** with two-speed, clutch and kick start, **53 Guineas.**

*Designed for comfort and ease, its construction is a sound piece of engineering.*

Send to C.W.S. Motor Cycle Works, Tyseley, Birmingham, for specification of the trusty, speedy, & popular "Federal."



# To Agents and Riders—

SUPPLIES MAY BE DIFFICULT, THEREFORE, BOOK YOUR ORDERS FOR

# VERUS AND SIRRAH

## MOTORCYCLES

**NOW, IN GOOD TIME FOR WHITSUNTIDE**

| | |
|---|---|
| VICTORY CUP TRIAL - - - - - | *Two Gold and One Silver Medal.* |
| A.C.U. WESTERN CENTRE - - - | *First Class award.* |
| A.C.U. EAST MIDLAND CENTRE - | *Gold Medal.* |
| SANGSTER CUP TRIAL- - - - - | *One Silver and One Bronze Medal.* |

**ALFRED WISEMAN Ltd., Glover St., BIRMINGHAM.**

Telegrams: VERUS, BIRMINGHAM. Telephones VICTORIA 560 & 561.

# MOTOR CYCLE CLOTHING OF DISTINCTION

"TREWSO."

IMPERVIOUS TRADE MARK

## RITCHIE PATENT SPLIT OVERALLS

In Two Styles—"TREWSO" and "TAB." *Patent No.* 10677

**Specially designed to meet the requirements of the business man, doctors, and all those wanting a quick on and off suit without soiling hands or clothes no matter how dirty the weather, and give absolute protection.**

"TREWSO" style are fastened with two long springs and tab at knee.

"TAB" style are fastened with four patent undamageable press studs.

*Nothing "just as good." The world's best in workmanship.*

"IXION" in his "Occasional Comments" in "The Motor Cycle" says—"The best of its kind and I know of nothing to beat it."

**THE IMPERVIOUS WATERPROOF CLOTHING**

is guaranteed to keep you dry under all conditions of weather. All proofings guaranteed for two years against decomposition.

The only clothing that stood the test in Copenhagen for the 200 miles Trials in a heavy downpour of rain.

**Can be procured from all the principal Rubber Shops and large Retail Warehouses.**

**Wholesale from all the principal Accessories Factors.**

"TAB."

*Sole Manufacturers:* **The IMPERVIOUS RUBBER Co., Ltd.,**

**38, FALFIELD STREET, GLASGOW.**

Wholesale and Export Only.
Telegrams: "Impervious, Glasgow."

# THE MARTINSYDE

*The Symbol of Success*

# WINS AGAIN!

**LONDON—LAND'S END TRIAL**
**Easter, 1922**

**3 SOLO MACHINES ENTERED**

**3 FINISHED**

**3 GOLD MEDALS AWARDED**

*"THE TWIN TO WIN"*

*The Symbol of Success*

MARTINSYDE LTD
MAYBURY HILL, WOKING, SURREY

*Telephone:-*
WOKING 551
*(Two Lines)*

# The B.T.H. "Sparklight"

combined ignition and lighting set for single cylinder cycle engines, supplies lighting from the magneto without increasing the power required to drive it, or affecting its ignition efficiency in the slightest degree.

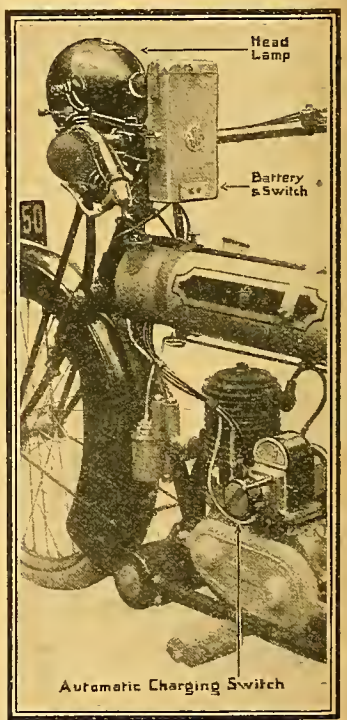
The set comprises a B.T.H. high-tension magneto with attachment to automatically collect the lighting current; a non-spillable battery in metal case with switch; and head and tail lamps complete with bulbs, wiring, and fittings.

| Two-Stroke Single Type | Four-Stroke Single (Solo) | Four-Stroke Single (Comb.) |
|---|---|---|
| £13 10s. 0d. | £16 16s. 0d. | £17 10s. 0d. |

***N.B.—We offer £2 10s. for any Magneto replaced by a B.T.H. "Sparklight" Set.***

Write for particulars and quote C.M. 4522.

**The British Thomson-Houston Co. Ltd.**
**Lower Ford Street :: :: :: :: Coventry**




Baby Triumph fitted with "Sparklight" Set.

TELEGRAMS: "MONTGOMERY SIDECARS COVENTRY." TELEPHONE 470 COVENTRY.

# MONTGOMERY SIDECARS

SOLE MANUFACTURERS:

## W. MONTGOMERY & CO.,

SIDECAR SPECIALISTS,

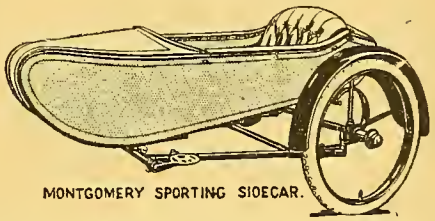
LEICESTER CAUSEWAY. COVENTRY.

SOLE PROPRIETOR: W. MONTGOMERY.

**The Motor Cycle Manufacturer's idea of a Sidecar is a big, heavy affair which slowly, but surely, wears the heart out of your engine and a big hole in your pocket.**

Montgomery Sidecars are the product of a firm who have specialised in Sidecars for over 20 years. Whatever make of Motor Cycle you choose, insist on a Montgomery Sidecar for distinguished appearance, easy steering, comfort of passenger, moderate cost and excellent road service.

*Art catalogue free on request.*



MONTGOMERY SPORTING SIDECAR.

**Price £23 10 0 complete.**

# Successes of the "Sheffield-Henderson."

## WORLD'S AND BRITISH RECORDS AT BROOKLANDS.

W. D. Marchant riding a 2¼ h.p. "Sheffield-Henderson" broke the following records in Class "A" (250 c.c.). (Subject to A.C.U. confirmation.)

| | | | | |
|---|---|---|---|---|
| BRITISH MILE .. | 72.89 m.p.h. | WORLD MILE .. | 71.42 m.p.h. | (International |
| BRITISH KILO .. | 71.96 ,, | WORLD KILO .. | 71.88 ,, | (Mean Speed. |

WORLD 5 MILES..4 min. 34⅘ sec. WORLD 50 MILES..58.99 m.p.h. WORLD 1 HOUR..58.89 m.p.h.

**Brooklands Meeting**
**April 8.**

Three Lap Handicap (350 c.c.).
W. D. Marchant - Second
A. Frazer - - - Fourth

Three Lap Private Owners Handicap
G. H. Williams - First
A. Frazer - - Second

**Brighton Hill Climb**
**March 25.**

A. Frazer - 3 Firsts

**Stanton Hill Climb**
**April 17.**

F. Shepherd - 1 First
G. Hodgson - - 1 Third
E. Searle - - 2 Thirds

**Sheffield and Hall M.C.C. Hill Climb at Grange Hill**
**April 15.**

L. Padley - - 8 Firsts
E. Searle - - - 4 Firsts
(Fastest Time of Day, Solo and Sidecar.)

**If you want to win speed events buy a "Sheffield-Henderson."**

***All "Sheffield-Henderson" Motor Cycles are fitted with Blackburne Engines.***

*Catalogue on Request:—*

**Henderson Motors Ltd., 73, Fitzwilliam Street, Sheffield.**

# LONDON—LAND'S END RELIABILITY TRIAL

## The Model de Luxe 4-cylinder

# HENDERSON

**made its first appearance in competition in the most strenuous English 24-hour trial ever organised.**

*Send for descriptive leaflet (post free) to*

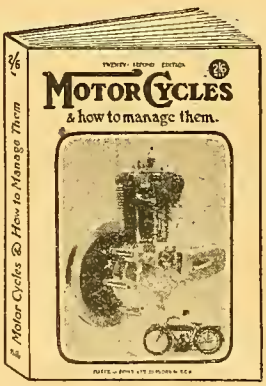
MELCHIOR, ARMSTRONG & DESSAU (LONDON), LTD.,
14E, GT. MARLBOROUGH STREET,
: : : LONDON, W.1. : : :
Grams - - "Melarm, London."
Phone - - - Gerrard 2462.

**2 Hendersons & Sidecars started,**
driven by W. J. Barker and S. Farley.

**2 Hendersons & Sidecars COMPLETED THE COURSE WITHOUT MECHANICAL TROUBLE OF ANY KIND AND FINISHED WITHIN SPECIFIED TIME. CAN YOU WISH FOR BETTER PROOF OF HENDERSON RELIABILITY?**

## *EVERY* Motor Cyclist

**Should possess a copy of this useful book**




"Motor Cycles and How to Manage Them" is the standard handbook on the motor cycle, its care and management. It deals with every part of the machine, and with all types of machines, and gives useful information in regard to keeping every part in good order. 400 illustrations.

*THE TWENTY-SECOND EDITION—revised and brought up to date—is now on sale*

**Price 2/6 net; by post (Home & Abroad) 2/10**

Obtainable from—
ILIFFE & SONS Ltd., Dorset House, Tudor St., London, E.C.4
*AND LEADING BOOKSELLERS*

## "PINNACLE" SIDECARS

FOR
**COMFORT, DURABILITY & ELEGANCE.**

| | | |
|---|---|---|
| "PINNACLE" | Light Tourer - | £18 18 0 |
| ,, | Racing Model - | £19 10 0 |
| ,, | Sports Model - | £26 15 0 |
| ,, | Touring Models | £27 15 0 — £30 15 0 |

Particulars from

**W. G. FEARN & Co.,** ALBION WORKS, KING'S CROSS, LONDON.

## RENT-FREE ADVERTISING

Advertisers and advertising agents who are investigating economical publicity methods should carefully consider the merits of

# WINDOW TRANSFERS

Always clean and attractive, they are appreciated by retailers. Once in position they cost nothing, yet continually produce business.

**Write for New Booklet and Specimen**

THE BRITISH TRANSFER PRINTING CO., LTD.,
Quinton Works, COVENTRY.
London: Dorset House, Tudor St., E.C.4. Manchester: 199, Deansgate.

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

ADVERTISEMENTS in these columns—first 12 words 3/–, and 3d. for every additional word. Paragraphs of under 8 words are charged double rate. Each paragraph is charged separately. Name and address must be counted. Series discounts, conditions, and special terms to regular trade advertisers will be quoted on application.

Postal Orders and Cheques sent in payment for advertisements should be made payable to ILIFFE & SONS Ltd., and crossed ____ & Co. Treasury Notes, being untraceable if lost in transit, should not be sent as remittances.

All advertisements in this section should be accompanied with remittance, and be addressed to the offices of "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. To ensure insertion letters should be posted in time to reach the offices of "The Motor Cycle," by the first post on Friday morning previous to the day of issue. Advertisements that arrive too late for a particular issue or that are crowded out will automatically be inserted in the following issue unless accompanied by instructions to the contrary.

All letters relating to advertisements should quote the number which is printed at the end of each advertisement, and the date of the issue in which it appeared.

The proprietors are not responsible for clerical or printers' errors, although every care is taken to avoid mistakes.

## NUMBERED ADDRESSES.

For the convenience of advertisers, letters may be addressed to numbers at "The Motor Cycle" Office. When this is desired, the sum of 6d. to defray the cost of registration and to cover postage on replies must be added to the advertisement charge, which must include the words Box 000, c/o "The Motor Cycle." Only the number will appear in the advertisement. All replies should be addressed No. 000, c/o "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. *Readers who reply to Box No. advertisements are warned against sending remittance through the post except in registered envelopes: in all such cases the use of the Deposit System is recommended, and the envelope should be clearly marked "Deposit Department."*

In the case of motor cycles offered for sale under a box number, as it is unusual for these to be sold without first being inspected by the intending purchaser, advertisers will facilitate business by embodying in their advertisements some mention of the district in which the machine offered may be seen and tried.

## DEPOSIT SYSTEM.

Persons who hesitate to send money to unknown persons may deal in perfect safety by availing themselves of our Deposit System. If the money be deposited with "The Motor Cycle," both parties are advised of this receipt.

The time allowed for a decision after receipt of the goods is three days, and if a sale is effected we remit the amount to the depositor. Carriage is to be paid by the buyer, but in the event of no sale each party pays carriage one way, the seller takes the risk of damage in transit. For all transactions up to £10, a deposit fee of 1/- is charged; on transactions over £10 and under £50, the fee is 2/6; over £50 and under £75, 5/-; over £75 and under £100, 7/6 and on all transactions over £100, 1%. All deposit matters are dealt with at Dorset House, Tudor Street, London, E.C.4, and cheques and money orders should be made payable to Iliffe & Sons Limited.

The letter "D" at the end of an advertisement is an indication that the advertiser is willing to avail himself of the Deposit System. Other advertisers may be equally desirous, but have not advised us to that effect.

## SPECIAL NOTE.

Readers who reply to advertisements and receive no answer to their enquiries are requested to regard the silence as an indication that the goods advertised have already been disposed of. Advertisers often receive so many enquiries that it is quite impossible to reply to each one by post.

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C. 1921 Combination, speedometer, screen, etc., just overhauled; £95.—126, Upper Tulse Hill. [3934


# PARKER'S

**BOLTON :** Bradshawgate. Tel. 1348.

**MANCHESTER :** 245, Deansgate. Tel. Cen. 864.

# BARGAINS!

SUBJECT UNSOLD.

| DEPOSIT | and | 12 INSTALMENTS OF | CASH PRICE |
|---|---|---|---|
| £25 | **SCOTT, SQUIRREL.** Lucas lamps, Bonnikson, tax paid, as new..... | £6 5 5 | £95 |
| £15 | **BRADBURY** and C.B. sidecar, **1914.** 2-speed, K.S. and clutch, fully equipped, tax paid | £2 13 9 | £45 |
| £15 | **ALLON, 1919.** 2¾ h.p., 2-speed, H.C. clutch, fully equipped, speedometer, tax paid | £2 13 9 | £45 |
| £20 | **A.J.S., 1921.** 2¾ h.p., 3-speed, K.S., clutch, Lucas accessories, tax paid, new condition | £4 9 7 | £70 |
| £30 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p., electrically equipped Combination, speedometer, screen, tax paid ..... | £8 1 3 | £120 |
| £18 | **RUDGE, 1921.** 3½ h.p. Multi, I.O.M., fully equipped, tax paid | £4 3 4 | £65 |
| £10 | **DOUGLAS, 1914.** 2¾ h.p., 2-speed, fully equipped, good condition ..... | £2 4 9 | £35 |
| £40 | **SUNBEAM, 1918.** 3½ h.p. Combination, 3-speed, K.S., clutch, equipped ..... | £5 7 6 | £100 |
| £25 | **N.U.T., 1920.** 3½ h.p., 3-speed, K.S., clutch, Lucas dynamo lighting, new condition. | £6 5 5 | £95 |
| £35 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p., electrically equipped, comb., hood, screen, speedometer, new condition ..... | £8 17 1 | £135 |
| £15 | **ROYAL ENFIELD, 1913.** 6 h.p. and sidecar, fully equipped ..... | £2 13 9 | £45 |
| £20 | **ALLDAYS-ALLON, 1921.** Combination, fully equipped, speedometer, as new ..... | £4 8 7 | £70 |
| £25 | **DOUGLAS, 1920.** 4 h.p. combination, Brooks leaf-saddle, screen, speedometer, tax paid, fully equipped .. | £6 5 5 | £95 |
| £35 | **ZENITH** SPORTING COMBINATION. Fully equipped, Ace discs, absolutely as new | £7 19 5 | £125 |


## MOTOR CYCLES FOR SALE.

### A.B.C.

58 GNS.—1920-21 A.B.C., equipped, perfect condition, taxed December.—40, Aynhoe Rd., W.14. [3901

1921 A.B.C., complete, licensed, lamps and horn; £65.—Herbert Robinson, Ltd., Green St., Cambridge. [3711

1921 A.B.C., 4-speed, fully equipped, as new; £65.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [3857

1922 A.B.C., latest model, in stock; £82, ex works. Exchanges.—Kent's, 417, Lord St., Southport. [4051

1921 A.B.C., 3h.p., 4 speeds, standard model, absolute gift; £63.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [4558

A.B.C. 1921 3h.p., 4 speeds, chain drive, kick start, hand clutch, electric lamps, tax paid; £70.—Maudes', Walsall Garage, Walsall. [4681

A.B.C., late 1921; £78; Lucas dynamo lighting, Bonnikson, new type pistons, gudgeon, guaranteed perfect.—17, The Park, Golders Green. [3741

ROBERTSONS Motors, Ltd.—1920 A.B.C. (new in 1921) Standard, with Henderson sidecar, accessories; £70.—157b, Gt. Portland St., W.1. [4215

A.B.C. 1921, dynamo model, 3h.p., 4-speed, hand clutch, all chain drive, speedometer, tax paid; £85.—Maudes', 100, Great Portland St., London. [4670

1921 (October) A.B.C. Special Sporting Combination, electric lighting, discs, spares, beautiful; 105 gns., exchange good solo and cash.—284, South Lambeth Rd., Stockwell. [4515

A.B.C. 1920 (Oct.), Lucas lamps, horn, Tan-Sad, engine, enamel perfect, mileage 2,000, new spare tyre; £70; exchange G.P. Morgan.—Shaw, Vicarage, Hunton Bridge, Watford. [3368

1921 A.B.C. De Luxe, dynamo lighting, electric horn, specially tuned by well-known expert, beautiful condition; £80; tax paid; any trial.—605, Garratt Lane, Earlsfield, S.W.18. [4308

*Spare Parts*

A.B.C. spares.—We are the largest stockists of these spares. Trade supplied.—Maudes' Motor Mart, 100, Great Portland St., W.1. [4587

### Abingdon.

1914 5-6h.p. Abingdon King Dick, 2 speeds, clutch; bargain, £27/10.—19, Audrey Rd., Ilford. [4250

ABINGDON 3½h.p., N.S.U. 2-speed gear, tax paid; £25 or nearest offer.—Hinton, Woodham Mortimer, Maldon, Essex. [3239

### Ace.

ACE. 1921 Combination, C.B., spring wheel, speedometer, lamps, horn, tools, tyres as new, excellent condition, any trial; £135.—21, Wontner Rd., Balham. [3599

### A.E.L.

A.E.L.-J.A.P., 2 speeds, K.S., brand new; £42/10.—47, Leigh Rd., East Ham. [3906

### A.J.S.

£20.—2½h.p. A.J.S., sound lightweight, fine running order.—King, Elgrove Farm, Oxford. [4090

A.J.S. 1916 5h.p. Combination, new cylinders and pistons; £55.—126, Upper Tulse Hill. [3935

1920 A.J.S. Combination, most lavishly equipped; £100.—24, Balliol Rd., North Kensington. [3851

6h.p. Combination A.J.S., 1914-1921 clutch; £100 or near offer.—32, Bromley Common, Kent. [3441

A.J.S. 7h.p. 1922 Outfits; delivery free anywhere.—Write, Merrick's Stores, Listerhills, Bradford. [9141

A.J.S. 1922 2¾h.p. Sports and 7h.p. Combinations in stock.—Clifford Motories, Eastwood, Notts. [8826

A.J.S. 1920 Combination, electric, hood, screen, spare wheel; £110.—17, St. Charles Sq., W.10. [3939

DAN GUY, Weymouth.—1922 7h.p. A.J.S. Combination, £175; in stock. Dorset trade supplied. [0817

A.J.S. 6h.p. Combination, 3 speed, detachable wheels, recently renovated; £85.—Snow, Laurel St., Dalston, E.8. 4543

1921 A.J.S. Combination, electric, all on; £130, as new.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [4646

A.J.S. 1916, 2-speed, clutch, new tyres and tubes, recently overhauled; price £40.—House Bros., Puriton, Bridgwater. [3360

A.J.S. 1913 5-6h.p., 2-speed, chain drive, kick start, foot clutch, coachbuilt sidecar; £60.—Maudes', Walsall Garage, Walsall. [4684

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue.

Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### A.J.S.

A.J.S.—All models from stock. Official Agents, deferred paymeots.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6288

A.J.S. Combination, 1919, good condition, hood, screen, extras; £85. — James, c/o Bradmores, 482, Harrow Rd., Paddington. [4643

A.J.S. 1920 6h.p., 3-speed, chain drive, coachbuilt sidecar, all lamps, fully equipped, tax paid; £125. —Maudes', Walsall Garage, Walsall. [4688

A.J.S., 1915, 2¾h.p., 3-speed, clutch, all-chain drive, guaranteed perfect, tax paid; £42.—16, Willoughby Rd., Hampstead. Near Tube. [3740

1922 A.J.S. 7h.p. Combination for immediate delivery; £175, exchanges or easy payments.—Premier Motor Co., Aston Rd., Birmingham. [3016

FOR A.J.S. 1922 models. 2¾h.p solo, or 7h.p. combinations, get in touch with the N. London agents. —Jones Garage, The Broadway, Muswell Hill. [0785

1920 A.J.S. Combination, Lucas dynamo lighting, hood, screen, small mileage; £125.—Hillier (side bell), 9, Wallingford Avenue, North Kensington. [4191

ROBERTSONS Motors, Ltd.—1921 A.J.S. electric combination, luxuriously appointed, Bonniksen speedometer; £155—157b, Gt. Portland St., W.1. [4214

£37/10.—2¾h.p. A.J.S., 2-speed, clutch, speedometer, lamps, horn, overhanled by makers last September, new tyres, chains.—Swans, West Garage, Stratford-on-Avon. [4149

A.J.S., 1922, 7h.p. Combination; £175. Secure delivery of this famous motor cycle by placing your order now.—P. J. Evans, John Bright St., Birmingham. [3684

1921 A.J.S. combination, dynamo lighting, spare wheel, speedometer, hood and screen, mileage 2,000, perfect order, as new.—Offers to A. G. W., c/o Tew, Petersfield. [3789

1920 (Sept.) 6h.p. A.J.S. Combination (£220), excellent condition, faultless, any trial; £125, near.—Simpson Smith, Selwyn, Cambridge (Honley, Huddersfield). [3627

1920 A.J.S. Combination, Lucas electric lighting, spare wheel, etc., guaranteed as new, little used, genuine; £120.—31, Claremont Rd., Alexandra Park, Manchester. [4487

A.J.S. 1921 Combination, spare wheel, 3 Lucas lamps and generator, also D.A. lighting, triplex screen, tax paid, carefully used; £130.—Taylor, 5, New Dover Rd., Canterbury. [3472

1922 A.J.S., with Plus One body complete, small mileage, in perfect order; £178; exchanges welcomed.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [3504

1920 A.J.S. Combination, condition as new, hood, windscreen, speedometer, Klaxon, spare wheel, electric lighting; 125 gns.—James, 91, Abingdon Rd., W.8. 'Phone: Western 4685. [4311

1920 A.J.S. Combination, original tyres, speedometer, spare wheel, valves, etc., hood, screen, legshields, pillion, splendid condition; £110; appointment.—42, Annandale Rd., Greenwich. [3261

1922 7h.p. A.J.S. Combination, Magdyno, spare wheel, Lucas electric horn, recently delivered, costing £207; unsoiled, unscratched, taxed, mileage negligible, genuine; £192/10.—51, Upper Richmond Rd., Putney. [3084

6h.p. A.J.S. Combination, 1919, mileage 8,000, in splendid condition, sidecar just newly relined and upholstered, screen, hood, luggage grid, spare wheel, 2 tubes, tyres practically new, all tools, lamps, speedometer, insurance and tax paid until next year, any trial after 5.30; £120.—25, Woodlands Rd., Ilford. [4546

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7538

A.J.S. Spares; prompt delivery.—Cyril Williams, Chapel Ash Depot, Wolverhampton. T.A.: Parts. [7901

### Alecto.

ALECTO 3½h.p., holder of '21 records on Brooklands, 2-speed; £35; private owner.—Apply at 19, Wilcox Rd., South Lambeth, London, S.W. [4641

1920 Alecto 3½h.p., 2-stroke, 2-speed, clutch and kick start, lamps, horn, tools, been overhauled, tax paid; £32/10; would take push cycle or old motor cycle part exchange.—Box 1130, c/o *The Motor Cycle*. [4081

### Alldays.

ALLON 1919 2¾h.p., clutch, K.S., accessories, good condition; £45.—Brown, Nascot Lawn, Watford. [3410

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Allons; unequalled service, repairs, etc. [3148

1918 2¾h.p. Allon, 2 speeds, in very good order; £25.—Maynard, 161, Bowes Rd., Bowes Park, N.11. [3964

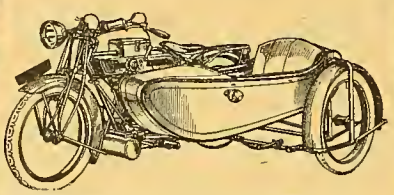
£38.—1920 Alldays-Allon, 2 speeds, clutch, K.S., fully equipped.—143, Ravensbury Rd., Earlsfield, S.W.18. [4418


FOR PLEASURE OR BUSINESS

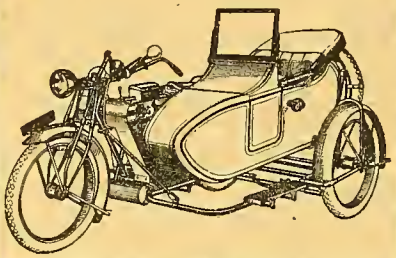
BUY THE FAMOUS

Matchless

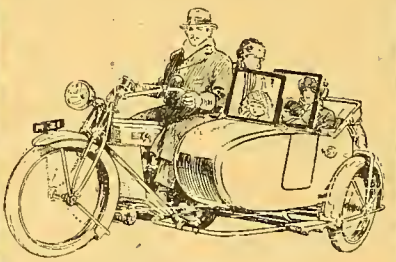
THE PERFECT PASSENGER MOTORCYCLE



MATCHLESS "Sports" comb. £160 cash or £41 12 0 down and 12 payments of £10 8 0.



Rigid frame model. £150 cash or £39 down and 12 payments of £9 15 0.



2-seater Dynamo Spare Wheel. £175 cash or £45 10 0 down and 12 payments of £11 7 6.

EXTRA EQUIPMENT.

| | |
|---|---|
| Spare Wheel and Tyre | £6 6 0 or £6 18 6 |
| 2 Screens | £4 1 6 |
| Hood | £4 17 6 |
| Hood Envelope | 9 6 |
| Dyno lighting | £17 10 0 or £18 0 0 |
| Acetylene lighting | £5 0 0 or £7 5 0 |
| Rear drive spdr. | £6 10 0 |

DISCOUNTS will be allowed if deferred payment accounts are paid in 2, 4, or 6 months.

EXCHANGES.—Any make of machine accepted in part exchange for a Matchless. Generous allowances.

WE ONLY CHARGE 4% for Deferred Payment accounts.

LAMB'S Ltd.

EUSTON ROAD, LONDON, N.W. (Opp. Gt. Portland Street Station). 'Phone—Museum 4078.
WOOD GREEN, LONDON, N. 50, High Road. 'Phone—Hornsey 1056.
WALTHAMSTOW, LONDON, E. 151, High St. 'Phone—Walthamstow 169 (2 lines).


## MOTOR CYCLES FOR SALE.

### Alldays.

1914 4h.p. Alldays-Matchless; condition, appearance, perfect; £25.—Potter, Hollybush Cott Pulham Market, Norfolk. [3

BARGAIN.—Alldays' Allon, 1917, 2¾h.p., 2-sp new tyres, tax paid, any trial or examinat £30.—61, Grand Parade, Harringay. [4

1920 Allon, 2-speed, clutch, Lucas lamps, h spare tube, tax paid, little used, like new; —Buttle, 56, Southwood Rd., Ramsgate. [3

ALLON 2¾h.p., 2-speed, clutch, excellent condi throughout, lamps, horn, speedometer, etc., paid; £30.—Totland, Station Rd., Orpington, Ken [3

ALLDAYS' Allon 1920 2¾h.p., 2-speed and clu electric dynamo lighting, cycle tip-top condit 45 gns.—Rood, 279, Globe Rd., Bethnal Green, don. [3

ALLDAYS' Allon 2¾h.p., only done few m looks new, tyres and condition perfect, tax p £45 or offer.—Jones, "Sunny Lawn," Burnham Sea, Somerset. [3

4h.p. Alldays' Matchless, ball-bearing engine, closed valves, 2-speed, T.T. model; £35 for q sale; licensed, guaranteed.—Aspell, Steeple, Ash Trowbridge. [3

31 GNS.—Allon 2-stroke, 2 speeds, footboards, la horn, good tyres, tax paid, splendid condit any examination, trial.—Seabridge, Hansler Rd., Dulwich, Sydenham 2452. [4

### American X.

AMERICAN X. 7-9h.p. Combination, luxurio equipped; £67/10.—17, Heaton Rd., Mitch near Tooting Junction. [3

ROBERTSONS Motors, Ltd.—1921 American shop-soiled. £90; 1921 combination, accesso tax paid, £115.—157b, Gt. Portland St., W.1. [4

1921 American X 7-9h.p. 3-speed with Mill coachbuilt sidecar. If you require a powe high-grade combination brand new at little a second-hand price, write for our special bargain —Premier Motor Co., Aston Rd., Birmingham. [3

### Ariel.

£25.—Ariel, 3½h.p., T.T. model, very fast, splen condition.—8, High St., Wandsworth. [3

ARIEL 3½h.p., as new, sporting, fast; 28 g offers.—Neville, Littlewick, Maidenhead. [3

ARIELS from Stock from the live agents, Bar and Son, Monton, Eccles. Tel.: 160 Eccles [3

3½h.p. Ariel Countershaft Combination, licence pa £45.—Herbert Robinson, Ltd., Green St., C bridge. [3

F.O.C.H. have 1920 3½h.p. Ariel Combination, f equipped; bargain.—5, Heath St., Hampst (near Tube) [2

ARIEL, immediate delivery, Combinations f £115. Cash or deferred.—Pinn's Garage, High St., Fulham. [3

1922 3½h.p. Ariel in stock, touring model; cash, terms, exchanges; £95.—Longman Bros., 17, B St., Ealing. Tel.: 689. [4

ARIEL 3½h.p., variable gear, decompressor, W sonian sidecar, splendid condition; £26.—Co 45, Sankey St., Warrington. [4

ARIEL 3½h.p., Bosch magneto, splendid order, frame, ride away; £15.—28, Woodford Rd., Fo Gate. 'Phone: Maryland 2598. [3

ARIEL.—All models, cash or gradual paymen Spares supplied from stock.—West Central Agen Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0

ARIELS, the most reliable machines on the ro all models from stock; spare parts sent a where; trade supplied.—F. Speakman, Ariel Exp Ariel Garage, 7, Rochdale Rd., Harpurhey, M chester Tel. 325 Cheetham Hill. [5

*Spare Parts:*

ARIEL Spares for all models, post free. A Agents, and Spares Service Depot.—Jones Gar Broadway, Muswell Hill, N.10 [0

### Bat.

79 GNS., exchange.—1920 Bat-Jap 8h.p., 3 spe kick, spring frame, sporting sidecar, scr equipped, fast.—Seabridge, Hansler Rd., East Dulw Sydenham 2452. [4

1920 6h.p. Bat-Jap, Henderson Elite sidecar, and H. lamps, Klaxon, speedometer, d 5,000, good running order; £95.—Hunt, 8, Gr away Gardens, N.W.3. [3

5h.p. Bat-Jap, 2-speed, cork clutch (new), perfect, engine perfect, 90 m.p.g., 60 m.p all on, fine condition, with good cane sidecar; £55 very near offer.—44, St. Donatts Rd., New Cross, [4

### Beardmore.

1921½ Beardmore Precision combination, 100 m as new; £75, or offer.—Taylor, Firth Huddersfield. [4

44 GNS.—1920 Beardmore-Precision, 2-speed, f equipped, taxed. Exchanges.—Kent's, Lord St., Southport. [4



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Clyno.

LYNO 6h.p. combination, 2-speed, kick start, good condition; £55 or offers; after 6.—25, Lincoln South Norwood. [3798

)18 Clyno Combination 6h.p., 3-speed, detachable wheels, good condition; £58; exchange.—110, er Richmond Rd., East Sheen. [4202

LYNO, 8h.p. J.A.P. engine, 3 speeds and clutch, detachable wheels; as new; £65. — 12, The idway, Muswell Hill, N.10. 'Phone: 668 Horn- [4015

LYNO, 2¾h.p., 1916, stored 3 years, lately overhauled by makers, new Dunlop tyre, belt, tube, paid, looks 1921; £26; evenings.—8, Walerand Lewisham Hill. [3978

LYNO (1918) 8h.p. Combination, fully equipped, licensed 1922, spare wheel, original tyres still on in excellent condition; £80.—Bunting's Motor hange, Wealdstone. [4477

LYNO Combination, 6h.p., 1918, 3-speed, lamps, horn, 4 interchangeable wheels, screen, apron, 's licence, good condition; best offers.—Eaton, 25, en's St., Kings Lynn. [3225

ATE 6h.p. Clyno Combination, 3-speed, clutch, K.S., coachbuilt sidecar, hood, screen, Klaxon, ric lighting, spare wheel, luggage grid, thoroughly hauled, superb condition; £70.—Oscroft, 212, Bow E.3. [3748

)18 Clyno Combination, 8h.p. J.A.P. engine, 3 speeds, kick starter, B. and L. automatic oiler, oughly overhauled, large 2-seater sidecar, hood, s, screen, lamps; £110.—Gurney, 158, Well St., kney, E.9. [3650

ISS DOOLEY.—5-6h.p. 1916-17, 3-speed, K.S., Clynos, in perfect mechanical order and renov- like new, complete with tradesman's carrier; e £55 each.—Please apply, Miss E. Dooley, 33 yon Rd., Clapham, S.W.8. [4496

LYNO 5-6h.p., 1916-17 models, re-built, re-plated, enamelled black, 3 speeds, kick start, foot ch, interchangeable wheels, chain drive, aluminium s; combinations, £68; solo, £57, as new; de- ed terms or exchanges. One commercial 4 cwt. rier, £75.—Hearn Bros., 94, Brixton Hill, S.W.2. [3284

*pare Parts.*

LYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7640

### Connaught.

'AUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. Connaught, 1921, 2 speeds; £45. [292:

¾h.p. Connaught, 3-speed, clutch; £26. — 32, Willow Vale, Shepherd's Bush, London. [3237

ONNAUGHT 1916, 2-stroke, lamp, horn, etc., excellent order; £20.—O.G., 59, Scholefield Rd., loway [3278

ONNAUGHT 1920, 2-speed, 2-stroke, equipped, year's tax; £29/10.—110, Upper Richmond Rd., Sheen. [4204

)20 Connaught, 2-speed, clutch, K.S., lamps, insured, taxed; £27.—Hodges, Station Rd., tlebury, Kidderminster. [4058

)22 Connaught, all models for immediate delivery; cash or terms, exchanges welcomed.—W. E. , late Coppen Allan, 89, Gt. Portland St. Lang- 1601. [3505

)22 Connaught, the super 2-stroke, for sidecar or solo; cash or easy terms; inquiries invited E. Clapham (Motors), 27, Stockwell St., Green , S.E.10. [3259

### Coulson

)20 Coulson B., 2¾h.p., 2-speed, spring frame, equipped and taxed; 48 gns.—284, South Lam- Rd., Stockwell. [4516

)20 2¾h.p. 2-speed Coulson B, overhauled by makers, all accessories, tax, insurance paid; £58, ear; after 6.30.—" Nyons," Fernleigh Drive, Leigh- ea. [3739

)21 Coulson 2¾h.p., 2-speed, clutch, K.S., Binks, jack-stand, Stewart speedometer, lamps, spares, perfect tune and appearance; £65.—Doran, 69, am Hill, Eltham. [3612

OULSON B 1921 4h.p., 3-speed, kick start, hand clutch, chain-cum-belt drive, fitted with Coulson ts sidecar, tax paid; £90.—Maudes', 100, Great tlaod St., London. [4692

OULSON-BLACKBURNE 4h.p., 2-speed, 1920, bought 1921, under 1,000, re-enamelled and ed, very posh; £60.—130, Farnham Rd., Hands- h, Birmingham. (D) [3642

)21 Coulson B., 4h.p., 3-speed, clutch, kick starter, spring frame, lamps, horn, speedo- er, mirror, as new, tax paid, mileage under 500; or near offer.—28B, Coolhurst Rd., N.8. Horn- 356. [3309

ATE 1921 model Coulson, very little used, in splendid condition; price £60, which includes lamps licence paid to end of year; a bargain; specially ed engine.—Apply, London Motors, 61, Holborn Via- t, E.C.1. [3766

**REPAIR OUTFIT - - - - 3/6**

# TYRES

SPECIAL NOTICE

**If you expect a reliable article you must pay a reasonable price. Experienced motor cyclists will tell you to be let down on the road is an expensive experiment. All goods offered by us are guaranteed to give satisfaction.**

**FREE** To each purchaser we will present AN IGNA SPARKING PLUG for each cover bought. This advertisement must be mentioned.

| Size. | Make. | Our Price. | List Price. |
|---|---|---|---|
| 24×2 | **Palmer,** ribbed | 21/- | 29/6 |
| 24×2¼ | **Clincher de Luxe,** ex. heavy.. | 28/9 | — |
| 26×2 | **Englebert,** Passenger, rub. std | 17/6 | 53/- |
| " | **Englebert,** Touring, rub. std.. | 14/- | 46/3 |
| 26×2¼ | **Bates,** special hvy., wired-on. | 32/6 | 38/6 |
| " | **Bates,** special heavy, headed. | 28/6 | 40/- |
| " | **Dunlop,** heavy rub. std. .... | 28/6 | 37/3 |
| " | **Clincher de Luxe,** heavy..... | 24/6 | 35/6 |
| " | **Wood-Milne** or **Spencer Moulton,** extra heavy ..... | 22/6 | 50/- |
| " | **Englebert,** Touring, rub. std.. | 15/- | 49/- |
| 26×2½ | **Dunlop,** heavy rubber std.... | 29/6 | 41/6 |
| " | **Avon,** Tricar rubber studded. | 26/- | 40/3 |
| " | **Hutchinson,** rubber studded . | 25/- | 49/6 |
| " | **Clincher de Luxe,** ex. heavy | 24/6 | 47/6 |
| 26×2½ ×2¼ | **Clincher de Luxe,** ex. heavy | 35/6 | — |
| | **Clincher de Luxe,** heavy .. | 32/- | — |
| " | **Heavy,** rubber studded..... | 27/6 | — |
| 26×2¼ | **Goodrich,** safety tread ..... | 40/- | 52/6 |
| " | **Bates,** special heavy ..... | 29/6 | 56/- |
| " | **Clincher de Luxe,** heavy..... | 25/- | 28/3 |
| *26×3 | **Elite,** extra heavy, 3-rib.... | 56/- | 66/- |
| " | **Englebert,** Passenger, rub. std. | 32/6 | 64/9 |
| | * Fits 6-0×65 Rims. | | |
| 28×3 | **Bates,** special heavy ..... | 50/- | 68/- |
| 650×65 | **Goodrich,** safety tread ..... | 40/- | 67/6 |
| " | **Clincher de Luxe,** ex. heavy . | 30/- | 64/6 |
| " | **Soly,** rubber non-skid ..... | 21/6 | 63/- |
| 700×80 | **Goodrich,** safety tread ..... | 46/- | 69/- |

## BELTS IN STANDARD LENGTHS

| | ¾ in. | ⅞ in. | 1 in | 1¼ in. |
|---|---|---|---|---|
| Sales Avon .. | ¾ in. | ⅞ in. | 1 in | 1¼ in. |
| ,,etc., per foot .. | 1/- | 1/5 | 1/9 | 2/- 2/6 |

## TUBES BEST QUALITY GUARANTEED.

| | | |
|---|---|---|
| 24 × 2, 4/9 | 25 × 2½, 5/3 | 26×2½, 5/6 |
| 26 × 2, 4/9 | 25 × 2¼ 5/6 | 28×3, 6/- |
| 26 × 2¼, 5/- | × 2½ | 700×80, 6/ |

**These Special Clearance Lines are sent on 7 days' Approval against remittance. CARRIAGE PAID.**

YOU CANNOT BUY FROM A BETTER FIRM

ORDER THE ELITE WAY

LONDON'S LEADING TYRE HOUSE.

PHONE: Victoria 6553 & 6554.

264-66, VAUXHALL BRIDGE Rd. LONDON, S.W.1

& AT 44, SURBITON Rd. KINGSTON-ON-THAMES

Please address all orders to Vauxhall Bridge Rd.

PHONE: Kingston 3355.

Hours of Business—9 till 6; Sat., 9 till 1. *Sicele*

## MOTOR CYCLES FOR SALE.

### Coulson.

COULSON 1922 models.—Deliveries now commenced. Write for catalogues giving price and all latest improvements.—London Motors, 61, Holborn Viaduct, E.C.1. Telephone: City 4230. [3770

COULSON 1922 models.—2¾h.p., £67/10; 2¾h.p., £78; 2¾h.p., o.h.v. (T.T. model), £95; 4¼h.p., £95. Cash or deferred terms. Old machines taken in part payment.—London Motors, 61, Holborn Viaduct, E.C.1. Telephone: City 4230. [3774

COULSON, 2¾h.p. Blackburne engine, 2-speed Sturmey, clutch and kick start, lamps, horn, complete kit and spares, excellent condition, fast, reliable, insured and licensed for 1922; £55.—Bergne, 367, Upper Richmond Rd., S.W.15. [3981

COULSON 1921 models.—Shop-soiled machines at greatly reduced prices. Three only left; £65, £75, £85 each. Cash, deferred terms, or old machine taken in part payment.—London Motors, 61, Holborn Viaduct, E.C. Telephone: City 4230. [3773

### Coventry Eagle.

COVENTRY EAGLE-VILLIERS, 1921, flywheel magneto, tax paid, all on, perfect condition; £33.—Write, H., 47, Glengall Rd., N.W.6. [4354

### Coventry Victor.

1922 Coventry Victor, Magdyno, Sturmey-Archer gear box, mileage 250; reasonable offers.—31a, Fieldhouse Rd., Balham, S.W. [3546

### Dalm.

DALM 2-stroke, 3h.p., pillion, etc., splendid running condition; £25, near offer.—201, Essex Rd., Islington, N. [3727

### Dayton.

2¾h.p. Dayton, T.D.C., 2-speed, Druids, tax paid, excellent condition; £25, nearest; bargain.—35, Cotleigh Rd., West Hampstead, N.W. [3955

### De Luxe.

DE LUXE 2-stroke, 2¾h.p., 1920, tax paid, lamps, horn, ride away; £32.—W. Taylor, 9, Charlton Rd., Blackheath. [3262

EVERYONE interested in the wonderful Barr and Stroud engined machines should read our advertisement. See Parts and Accessories columns.—Motorities. [3783

### Diamond

GIBB, 100, Northgate, Gloucester. Official District Agent for Diamonds. Delivery from stock. [8124

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Diamonds; unequalled service, repairs, etc. [3146

DIAMOND-VILLIERS, late 1919, tax paid 1922, horn, lamps, etc., excellent condition; £33; after 7, or week-ends.—90, Suffolk Rd., Barking. [3570

DIAMOND (250 c.c. Super-J.A.P.), 1922, Sports model, 3-speed near ratio Sturmey, clutch, all-chain drive, spare sprocket, speedometer, licensed, will do 58 miles per hour, only run 500 miles; £77.—Holland, 183, Chester Rd., Macclesfield. [3630

### Douglas.

DOUGLAS.—Great Reductions.

2¾h.p., 2-speed model; £68.

2¾h.p., 3-speed, clutch model; £82.

3½h.p. Sports model; £115.

6h.p. Combination; £165.

4h.p., 3-speed Solo; £110.

4h.p. Combination; £135.

ALL above models complete with best quality lamps, horn, licence holder, pump, tools, etc.; delivery from stock; exchanges and special payment terms if desired.—Herbert Robinson, Ltd., Green St., Cambridge. [3705

DOUGLAS 1916, just taken in exchange; £35.—Bunting's, Wealdstone. [4472

1916 Douglas, Bosch, equipped, any trial; £30.—53, Catskmi Rd., Kentish Town. [4022

1920 Douglas Combination, well equipped; £75.—24, Balliol Rd., North Kensington. [3843

ALL Douglases.—A trial order only is requested.—Gibb, Gloucester Phone: 852 [8121

DOUGLAS 2¾h.p., 2-speed, 1917, splendid condition; £33, offers.—17, Byron St., Ilkeston. [4659

£22.—Douglas 1912, 2-speed, fully equipped, tax paid, good running order.—Below.

1914 Douglas, 2¾h.p., 2-speed, tax paid, reconditioned as new; £30.—19, Grafton Mews, Warren St., W.1. [4043

£33.—1915 2¾h.p. Douglas, 2-speed, equipped; year's licence.—King, Egrove Farm, Oxford. [4091

DOUGLAS 2¾h.p., fully equipped, unscratched, fine machine; cheap.—33, Pennard Rd., W. [3810

## MOTOR CYCLES FOR SALE.

### Douglas.

1919 Douglas 2¾h.p., all on, tax paid; £45.—Hailton, 47, South King St., Manchester. [4385

DOUGLAS, 2-speed, countershaft, first-class running order; £36.—28, Bourne Rd., Bexley. [4540

DOUGLAS, 1922, 2¾h.p., 2-speed gear, shop soiled; only £69/10.—Attwood's Garage, Stafford. [3324

4h.p. Douglas Combination, new 1920, exceptional condition; £65.—17, St. Charles Sq., W.10. [3941

LATE 1919 Douglas Combination, electric, nice condition; 60 gns.—67, Fernlea Rd., Balham. [4519

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. Douglas, 1921, 3 speeds, clutch, etc.; £75. [2924

DOUGLAS 2¾h.p., 2-speed, all brand new; 47 gns.; few only left.—Clark, 7, Exhibition Rd., S.W.7. [4616

DOUGLAS 2¾h.p., thoroughly overhauled, running order; bargain, £23.—1, Austin Waye, Uxbridge. [3725

1921 4h.p. Douglas Combination, as new; £95.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [4116

BRAND new 2¾h.p. Douglases at 47 gns. from Allan Gruzelier, Ulster Chambers, 168, Regent St. [4230

£30.—1915 2¾h.p. Douglas, all on, tax paid, ride away.—130, Southwark Park Rd., Bermondsey, S.E. [3790

1918 Douglas, 2¾h.p., 2-speed, fully equipped and taxed; 37 gns.—284, South Lambeth Rd., Stockwell. [4517

DOUGLAS 2¾h.p., all on, splendid appearance, ride away; £40.—16, Portland Rd., London, W.11. [4434

1919 4h.p. Douglas, almost new, unregistered; £45, or nearest offer.—25, Nursery Rd., Merton, S.W.19. [4140

2¾h.p. Douglas 1911, splendid puller, fast; £10/10; gift.—Saunders, 49, Riverside, Kingston-on-Thames. [4260

DOUGLAS, 1915, 2¾h.p., 2-speed, perfect, insured; £35.—Sharp, 19, Doddington Grove, Kennington Park, S.E. [3873

39 gn.—Douglas, 1918 4h.p., speeds, new tank; exchanges.—12, Cornwall Mews, Gloucester Rd., S.W.7. [4575

1916 4h.p. Douglas Combination, all accessories, licensed; £60.—Herbert Robinson, Ltd., Green St., Cambridge. [3713

2¾h.p. Douglas, 2-speed, lamps, horn, footboards, licensed; £45.—Herbert Robinson, Ltd., Green St., Cambridge. [3708

DOUGLAS 4h.p., discs, accessories, good condition, guaranteed; 43 gns., a bargain.—217, Belsize Rd., Hampstead. [4358

DOUGLAS.—1922 models for immediate delivery Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [7228

1920 2¾h.p. 3-speed Douglas and accessories, in good condition; £60. — Bounds Garage, 223, High Rd, Kilburn. [3593

DOUGLAS Combination 4h.p., late 1918, good condition, Sandham screen, taxed; £50.—195, Laleham Rd., Catford, S.E.6. [3726

DOUGLAS Combination 1920 4h.p., clutch, kick start, electric and acetylene lamps; £85.—Jnleff, 57, Bexley Rd., Erith. [3661

DOUGLAS, 1918, 2¾h.p., splendid condition, for late Rudge-Multi, cash adjustment.—40, Lancaster Rd., Leytonstone. [3283

DOUGLAS, 2¾h.p., 1916, perfect condition; £37/10.—132, High Rd., East Finchley 'Phone: Finchley 2338. [3618

DOUGLAS.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6289

DOUGLAS 4h.p. Combination, 1918, 3-speed, good tyres, all accessories, good condition; £75.—9, Acacia Avenue, Wembley. [4041

1918 2¾h.p. Douglas, Klaxon, lamps, tools, shields, chain case, new carburetter; 40 gns.—205, Hampstead Way, Golders Green. [3954

DOUGLAS 4h.p. Combination, late 1919, perfect condition; 68 gns.; would exchange.—110, Upper Richmond Rd., East Sheen. [4201

1921 2¾h.p. Douglas, 2-speed, lamps, horn, tax paid December; £58/10.—Gritten, 69, Heathfield Rd., Wandsworth, S.W. [4265

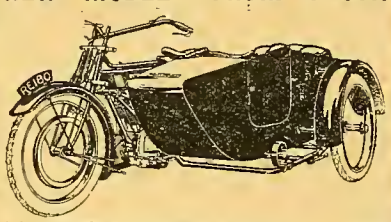
1918 4h.p. Douglas Combination, new body 1922, in perfect condition; £60; any trial.—10, Ash Grove, Cricklewood, N.W.2. [4323

DOUGLAS Combination, 4h.p., late 1918, overhauled, perfect condition; £85.—7, Atlantic Terrace, Camborne, Cornwall. [4437

DOUGLAS 1916 2¾h.p., good condition; £35; or exchange, with cash, for late Triumph.—Frost, 30, Offley Rd., Brixton. (P) [4011


# BAMBERS
## FOR
# EXCHANGES

## A.J.S. & ROYAL ENFIELD SPECIALISTS
## NEW MODELS FROM STOCK



8 h.p. **ENFIELD** Combination, dynamo.... **£158**

### NEW COMBINATIONS.

7 h.p. **A.J.S.** Combination ..... **£175**
8 h.p. **ENFIELD** Combination ..... **£140**
4 h.p. **DOUGLAS** Combination .. ..... **£135**
6 h.p. **DOUGLAS** Combination .. ..... **£165**
8 h.p. **MATCHLESS** Combination..... **£170**
6 h.p. **B.S.A.** Combination ..... **£164**
4½ h.p. **B.S.A.** Combination ..... **£142**
3½ h.p. **ARIEL** Combination ..... **£125**

### SOLO.

2¼ h.p. **ENFIELD,** 2-speed ..... **£55**
2¾ h.p. **DOUGLAS,** 2-speed ..... **£68**
2¾ h.p. **DOUGLAS,** 3-speed and kickstarter **£82**
3½ h.p. **DOUGLAS,** Sports ..... **£115**
3½ h.p. **NORTON,** 16H ..... **£115**
3½ h.p. **ARIEL,** 3-speed and kickstarter ... **£95**
4½ h.p. **B.S.A.,** all chain ..... **£110**
4 h.p. **TRIUMPH** ..... **£105**
4 h.p. **TRIUMPH,** all chain ..... **£115**
2¾ h.p. **NEW IMPERIAL** ..... **£73**
3½ h.p. **ZENITH-BRADSHAW** .. ..... **£119**

**ANY MAKE SUPPLIED.**

**BEST PRICES ALLOWED**
**for secondhand machines in part exchange.**

## EASY PAYMENTS

## BARGAINS.
### Secondhand Motor-Cycles.

1922 2¼ h.p. **ENFIELD,** shop soiled ..... **£50**
1921 2¾ h.p. **ROYAL RUBY,** 2-speed ..... **£50**
1921 8 h.p. **ENFIELD** Combination ..... **£135**
1921 4½ h.p. **HUMBER** Combination ..... **£127**
1920 2¾ h.p. **EDMUND,** 2-speed ..... **£45**
1920 6 h.p. **ENFIELD** Combination ..... **£110**
1920 4 h.p. **HARLEY-DAVIDSON** Comb.. **£110**
1920 2½ h.p. **METRO-TYLER,** 2-speed..... **£50**
1919 6 h.p. **JAMES** Combination ..... **£85**
1919 3½ h.p. **ROVER** Combination ..... **£80**
1919 8 h.p. **SUNBEAM** Combination ..... **£112**
1915/16 7-9 h.p. **HARLEY-DAVIDSON** Combination ..... **£75**
3½ h.p. **BRADBURY,** 2-speed, k.-s..... **£25**

DON'T "WAIT AND SEE"
WRITE NOW

**2, EASTBANK STREET,**
**PHONE: 607 SOUTHPORT.**


## MOTOR CYCLES FOR SALE.

### Douglas

DOUGLAS Combination, 1919, 4h.p., triplex wi screen, hood, electric lamps, tax paid; £8 Curtis, Eagle House, Dursley. [3

£32.—2¾h.p. Douglas, 1917, lamps, horn, tax new tyres, thoroughly overhauled.—K. Ba 11, Ridgmont Rd., St. Albans. [4

2¾h.p. 1914 Douglas, 2-speed, fully taxed, re vated, good tyres; £26.—Lawson, 66, Pe Vale, Forest Hill Station, S.E. [3

SPORTING Douglas, 2¾h.p., 2 speeds, kick start clutch, long copper exhaust, footboards, fu equipped, tax paid; £32. Below.

1919 Douglas, 2¾h.p., 2 speeds, nickel plated haust, equipped as new, lamps, Klaxon, r tyres, tools, etc., tax paid, perfect condition; £45.— Marsham St., Westminster. [4

DOUGLAS 1922 Solos and Combinations in sto —Agents, Birkenhead Motor Works, Old Bidst Rd., Birkenhead. 'Phone: 2047. [2

1919 Douglas Combination, recently overhaul £80, or would pay the difference for 1922 Trir sclo.—Roberts, Drapers, Wantage. [4

1916 2¾h.p. Douglas, fully equipped, as throughout, re-enamelled, guaranteed perfe £33.—7, Cowdrey Rd., Wimbledon. [4

DOUGLAS 4h.p. Combination, 3-speed, kick sta paint and mechanical condition perfect; £5 O.G., 59, Scholefield Rd., Holloway. [3

2¾h.p. Douglas, countershaft, Bosch, Binks, all in perfect running order; £18, offers.— Birmingham Rd., Stratford-on-Avon. [3

DOUGLAS 2¾h.p., W.D., T.T. bars, open exha exceptionally fast, good condition, accessori £55.—Brown, Nascot Lawn, Watford. [3

DOUGLAS 2¾h.p., 1916 model, very nice conditi all accessories, tax paid; £34/10.—26, Tu Hill, Brixton. 'Phone: Brixton 1292. [4

DOUGLAS 2¾h.p. late 1921, mechanically sou condition as new, fully equipped, tax paid; £ —Raymond, 15, Avenue Rd., Grantham. [4

£60, or offer; must sell; buying car; 4h.p. Doug combination, 1918 type.—Parsons, Veterinary S geon, The Mall, Ealing. 'Phone: 865. [3

DOUGLAS 1921 2¾h.p., 2 speeds, all on, v little used, small mileage, very fast and powerf bargain, £55.—Norfolk Works, Worthing. [3

2¾h.p. Douglas, 2-speed, all accessories, excellent c dition throughout, licence fully paid; £32. 157, Burntwood Lane, Earlsfield, S.W.17. [3

DOUGLAS 2¾h.p., 1918, 50 m.p.h. speedomet lamps, tools, guaranteed perfect; must sell; sac fice, £37/10.—455, Waterloo Rd., Blackpool. [3

1920 Douglas 2¾h.p., 3-speed, tax paid, all lam etc., perfect condition throughout; £55.— Belsize Park Gdns., Hampstead. 'Phone: 5590. [4

£30 Douglas, 2¾h.p., 2-speed, 1917, new tyr tubes, perfect throughout, all accessories, tax till 1923.—145, Leander Rd., Brixton, S.W.2. [4

DOUGLAS 2¾h.p. 1917, 2-speed, fully equipp tax paid, fine condition; 38 gns., or nearest Gidley, 7, Lankaster Gardens, East Finchley, N. [3

DOUGLAS, 2¾h.p., 2-speed, 1917, fast, perfect, go tyres, buffers, guaranteed throughout, lamps, too bargain; £39.—Owner, 45, Charles St., Stepney. [4

DOUGLAS 2¾h.p. 1920, 3-speed, posh lamps, t paid, many spares, fast; £55.—Station Ho (opposite), Latimer Rd. Station, Metropolitan. [4

1920 Douglas Combination, 4h.p., equipped eve possible accessory, beautiful condition; £78. 37, Canterbury Rd., Balls Pond R., Dalston, N.1. [4

DOUGLAS, 1921, 3-speed, kick start, clutch, ful equipped and practically unused; £65.—13 High Rd., East Finchley. 'Phone: Finchley 233 [3

HARLESDEN.—4h.p. Douglas Solo, 1917, ful equipped, speedometer, etc., new tyres, ma spares, taxed; £48.—M., 29, Greenhill Park, Harl den. [3

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h. Douglas, 1921, 2 speeds; £65; also a 4h. Combination, 1920, 3 speeds, clutch, and kick starte £85. [2

DOUGLAS 2¾h.p., 2-speed, uncrated 1919, equipp and taxed, perfect condition; bargain, £36, exchange.—Hillier, 91, Burntwood Lane, Earlsfie S.W. [3

F.O.C.H. have 1919 4h.p. Douglas solo, fu equipped, tax paid and insured, excellent co dition; bargain.—5, Heath St., Hampstead. (Ne Tube.) [3

DOUGLAS 1919 4h.p. Combination, new sidec perfect condition; £70; electric lighting.—Stati Hotel, Notting Hill (Latimer Rd. Station, Met politan). [2

DOUGLAS 1922, brand new, 2-speed, all-on, Jam horn, licence holder, etc.; £68 cash. Easy p ments arranged.—Wilkins Simpson, Opposite Olymp London. [3

## MOTOR CYCLES FOR SALE.

### Enfield.

*e Parts:*

ELD Spares.—Immediate delivery.—Kays, 8, od St., Ealing. [7542

ELD Spares and Repairs a speciality.—lling's Garage, London Rd., Croydon. 'Phone, [6952

### Excelsior.

3NS.—2½h.p. Excelsior 2-stroke, smart, fast, od tyres; real bargain.—Ewers, Newton Rd., on-Trent. [4376

British Excelsior, 8h.p., de Luxe Combioation, dynamo lighting, electric horn, interble wheels, spare and tyre, windscreen, legspare chains, valve, etc., unscratched; bargain, -5, Alstone Rd., Heaton Chapel, Stockport. [3991

### Fafnir.

Fafnir, 2-speed, Bosch, Amac, in perfect oning order, photo; £18/10, offers.—32, Birm Rd., Stratford-on-Avon. [3615

### F.H.

Motor Cycles.—Barr and Stroud engines.—amp for particulars and specification to F.H. The Wergs, Wolverhampton. [4428

### F.N.

1914 5-6h.p., 4-cylinder, 2-speed, hand clutch; 30.—Maudes', Walsall Garage, Walsall. [4682

t shop soiled 2½h.p. F.N., 2-speed, shaft drive; rice £45.—Harris's Garage, Slough. Phone 88. [3928

5-6h.p., 4-cylinder, 2-speed, clutch, mechanical verhead inlet valves, tax paid; £27, bargain, -17, Byron St., Ilkeston. [4660

5-6h.p., 4-cylinder, 2-speed, shaft drive, 1914, t good condition; £35; or exchange 3½h.p. cash either way.—The Nook, Dorchester Rd., idge. [3405

1914 Combination, 7h.p., 3 speeds, kick starter, uxuriously equipped, attractive in appearance echanically as new; £65.—Buotiog's Motor Exe, Wealdstone. [4478

GFORD'S, 37, Cricklewood Broadway, London, W.2.—1922 8h.p. 4-cylinder F.N., with new engine, 3-speed gear, and no-trouble shaft £135, lightweights, £55 and £72; highest price ur present machine in exchange. [3024

*re Parts*

Spares.—We can supply for all models from 904; prompt attention to inquiries.—Langford's, ricklewood Broadway, London, N.W.2. [3025

### Francis-Barnett.

1 Francis Barnett 2¾h.p., J.A.P., 2-speed, kick start, hand clutch, new, slightly shop-soiled; Hucklebridge, 133, Sloane St., Chelsea. [3835

### Gamage.

20 Gamage-Villiers, two speeds, good condition; £30.—Goad, 122, Maida Vale. 'Phone: Hamp 1353. [2910

### Grandex.

14 Grandex-Precision 2¾h.p., good appearance, running order; nearest £15; must sell, moving. High Rd., East Finchley. [3819

### Hagg.

GG Tandem, £60. Having new models now available, we are making this exceptional offer ew machines to standard specification to clear ng stocks only. Further particulars on applica—Taylor and Hayter, Engineers, Park St., near St, is. [3879

### Harley-Davidson.

EFFIELD Agent for Harley-Davidsons; from £120.—Stacey, 12, Ecclesall Rd. [0577

p. Harley-Davidson, 1921 model, new and not used; £95.—Lawes, Triangle, Aldershot. [3316

21 Harley De Luxe Combination, electric model; £125.—24, Balliol Rd., North Kensington. [3850

h.p. Harley-Davidson Combination, splendid condition, small mileage; £95.—Webber, Haldon Rd., er. [3949

ARLEY-DAVIDSON, 7-9h.p., electric model, thoroughly sound, like new; £80.—24, Geraldine Rd., wick. [4277

ARLEY Combination, 1919, in excellent condition; £95, or lower power part.—76, Dalling Rd., mersmith. [3903

ARLEY-DAVIDSON 1920, flat twin; £80; fully equipped, excellent condition.—Rydal, Rowlands Worthing. [3999

19 Harley-Davidson Combination, in running order; £85, no offers.—Mr. Higham, 1, Derby , Chiswick. [3336

20-21 Harley-Davidson 7-9h.p. Combination, dynamo lighting, hood, screen, disc; £120.—Hil-(side bell), 9, Wallingford Avenue, North Kensing- [4190

Sole London and District Agents for A.J.S., Excelsior & Dunelt Motorcycles

**Easy Payments Made Easier at TAYLORS**

**4%**

**is all we charge for credit accommodation extending over a whole year.**

*(Except where makers stipulate otherwise.)*

**1922 MACHINES.**

**NEW COMBINATIONS.**

| | | |
|---|---|---|
| **A.J.S.,** 7 h.p. Combination ..... | £175 | 0 |
| **A.J.S.,** 7 h.p. 2-seater Combination. | £185 | 0 |
| **A.J.S.,** 2¾ h.p. ..... | £110 | 0 |
| **MATCHLESS,** 8 h.p. Model J. Touring | £150 | 0 |
| **MATCHLESS,** 8 h.p. Sports ..... | £160 | 0 |
| **MATCHLESS,** 8 h.p., Model H .... | £170 | 0 |
| **P. & M.,** 4 h.p., 4-speed ..... | £130 | 0 |
| **ENFIELD,** 8 h.p. Standard ..... | £140 | 0 |
| **ENFIELD,** 8 h.p., Dynamo ..... | £158 | 0 |
| **EXCELSIOR,** 8 h.p. De Luxe, Dynamo ..... | £197 | 10 |
| **EXCELSIOR,** 8 h.p. De Luxe..... | £155 | 0 |
| **EXCELSIOR,** 6 h.p. Combination.. | £133 | 0 |
| **EXCELSIOR,** 4½ h.p. Big Single ... | £119 | 0 |
| **QUADRANT,** 4 h.p., Chain Drive .. | £100 | 0 |
| **B.S.A.,** 4½ h.p., Model H 2 ..... | £142 | 0 |
| **TRIUMPH,** 4 h.p., Chain Drive ... | £155 | 0 |
| **MORGAN,** 8 h.p., W.G. Grand Prix. | £180 | 0 |
| **ARIEL,** 4½ h.p., Chain Drive ..... | £140 | 0 |
| **ARIEL,** 6-7 h.p., Twin Combination | £125 | 0 |
| **OUNELT,** 4 h.p., 2-stroke Comb.... | £113 | 8 |

**NEW SOLO MOUNTS.**

| | | |
|---|---|---|
| **A.J.S.,** 2¾ h.p. Solo..... | £85 | 0 |
| **EXCELSIOR,** 2¾ h.p. Blackburoe .. | £75 | 0 |
| **EXCELSIOR,** 2½ h.p. Sports Model. | £39 | 18 |
| **EXCELSIOR,** 2½ h.p. Sports, 2-speed cl. & k/s ..... | £53 | 0 |
| **TRIUMPH,** 4 h.p., All Chain ..... | £115 | 0 |
| **ZENITH BRADSHAW,** Chain Drive | £119 | 0 |
| **RUDGE,** 3½ h.p. ..... | £77 | 0 |
| **O.K. JUNIOR** ..... | £39 | 18 |
| **NEW IMPERIAL,** 2¾ h.p., 3-speed clutch and k/s ..... | £89 | 0 |
| **ARIEL,** 3½ h.p. ..... | £87 | 10 |
| **ENFIELD,** 2¾ h.p. ..... | £55 | 0 |
| **RALEIGH,** 2¾ h.p. ..... | £68 | 0 |
| **A.B.C.,** 3 h.p., 4 speeds ..... | £82 | 0 |

**Send for Bargain List of shop-soiled and carefully used machines—It will pay you.**

**H. TAYLOR & Co., Ltd.**

Showrooms—
Motorcycles and Cars,
**52-53, Sussex Place, South Kensington.**
Accessories, Spare Parts and Repairs,
**21a, Store Street, Tottenham Court Road, W.C.1**
Wholesale—
**38, ALFRED PLACE, W.C.1.**
Garage—Tottenham Court Road, W.1.
Phones: Accessories & Repairs, Museum 1240
Motorcycles and Cars, Kensington 7260
Telegrams: "Dyoametro, Westcent, London."


## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

7-9h.p. Harley-Davidson Combination, electric model, only run 3,000 miles; 98 gns.—Flat 17, 122, Southampton Row, W.C.1. [4508

BARGAIN.—1919-20 Harley combination, not W.D., dynamo lighting, beautiful condition, licensed; £98.—89, East Hill, Wandsworth. [4136

65 gns.—Harley-Davidson, 1917 model, 7-9 h.p., 3 speeds, kick start; exchanges.—12, Cornwall Mews, Gloucester Rd., S.W.7. [4577

HARLEY-DAVIDSON, brand new, unregistered, 4h.p. flat twin, list £140; sacrifice, 98 gns.; exchange.—37, Elmbank Gardens, Barnes Bridge. [4175

1915 Harley-Davidson Combination, 7-9h.p., 3-speed, amps, Easting, etc.; £65.—97 Chesnut Rd., Plumstead. [3453

1920 Harley-Davidson 7-9h.p. Combination, lamps, horn, speedometer, hood, windscreen, guaranteed perfect, mileage 5,500; £110.—40, Warley Rd., Blackpool. [4008

HARLEY-DAVIDSON, all models, immediate delivery, special agents. Easy payments and exchanges.—Longman Bros., 17, Boad St., Ealing. 'Phone: 689. [3043

1918-19 Harley Combination, discs, re-paioted, spleodid mechanical coodition, powerful; bargain, £76; evenings, week-end.—17, Redfern Rd., Harlesden, N.W.10. [3729

1920 (late) 7-9h.p. Harley, handsome Harley sidecar, fully equipped, magneto model, unscratched and as new; £120.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [3856

1922 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices; catalogue with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5986

1921 Harley, 7-9h.p., electric combination, 2-seater sidecar, hood and cover, 2 screens, discs, Tao-Sad, spares; cost £279, accept £150 or near offer.—Packwood, Brent St., Hendon, N.W.4. [3795

1920-21 Harley-Davidson electric Combination, hood, screen, side-curtain, Binks carburetter, discs all wheels, beautiful condition, mileage 2,500; £145; insured.—60, Victoria Drive, Eastbourne. [3722

HARLEY-DAVIDSON 1915 7-9h.p., 3-speed, hand and foot clutch, kick start, all chain drive, Bosch magneto, Coronette sidecar, all lamps, tax paid; £60.—Maudes', 100, Great Portland St., London. [4674

HARLEY-DAVIDSON Combination, 8h.p., late 1919, electrically equipped, taken over in part payment for a yacht; must sell; highest offer over £75 accepted.—Rowland's Dockyards, Ltd., Bangor. [4227

1918 7-9h.p. Harley-Davidson, with bulbous back sidecar, thoroughly overhauled, re-enamelled, electric lighting, Tao-Sad, new tyres, with spares, licence paid; £100.—32, Preston Rd., Leytonstone, E.11. [3229

BARKER'S Motors can supply all Harley-Davidson models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [3137

HARLEY-DAVIDSON Combination, late 1919, electric model, Luxurette sidecar, low mileage, fully equipped, and in perfect condition throughout.—J., c/o Squire and Earp, London Rd., Forest Hill, S.E.23. 'Phone: Sydenham 513. [3760

HARLEY-DAVIDSON 1920 7-9h.p., 3-speed, kick start, all-chain drive, special coachbuilt sidecar. This outfit is one of the finest equipped combinations offered to-day. Only wants seeing to purchase; £140.—Maudes', 100, Great Portland St., London. [4662

HARLEY-DAVIDSON, W.D., 7-9h.p., 3-speed, kick start, hand and foot controlled clutch, all chain drive, 28in.×3in. tyres, fitted with brand new bulbous back Montgomery sidecar; £100.—Maudes' Motor Mart, London, Exeter, Walsall, and Norwich. [4683

1921 (Nov.) 7-9h.p. magnificent Harley-Davidson Sporting Combination, dynamo model, electric horn, disc wheels, speedometer, spot light, screeo, tax paid, almost new, and cost £245; finest outfit West London; sacrifice, £160, or near.—Parsons, 1, Acton Lane, Chiswick. [3937

1919 7-9h.p. Harley-Davidson Combination, first used 1920, equipped Eastings, Tynesider grid, spares, 200 miles since overhaul; following new: Bonnissen, Brampton spring chain, Renolds front, sprocket, mechanically perfect, any examination; £100.—Quenby, Middle Rd., Lymington, Hants. [3992

1920 Harley-Davidson 7-9h.p. Combination, electric lighting, horn, speedometer, discs, Tan-Sad, large sidecar, screen, hood, good condition, insurance paid to April, 1923, seen and trial at 102, Bromley Rd., Catford; £110, or near offer; must be sold; owner bought car.—Godbold, 157, Algernon Rd., Lewisham. [4512

1920 7-9h.p. Harley-Davidson Motor Cycle and luxurious C. and M. sidecar, dynamo lighting, perfect condition throughout, which will be included in an auction sale at "Trouville," 17, Smitham Bottom Lane, Purley, on Tuesday, May 9 next, by Messrs. King and Everall, 128, George St., Croydon, and branches. [3746

## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

*Spare Parts:*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7543

### Hawker.

1921 Hawker 2¾h.p., 2-speed, all on, tax paid; £45; exchange Omega or higher power.—Smith, Wakefield Rd., Horbury. [4368

### Hazlewood.

1920 Hazlewood Combination, 5-6h.p., just thoroughly overhauled, speedometer and horn; £75; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [3762

### H.B.

H.B., 1922 Models, 2¾h.p. Blackburne engine, 2-speed Burman gear box, chain belt, C. and K.S., £72; with 3-speed gear box, £75; 4h.p., 3-speed, £82; 4¼h.p., 3-speed model, clutch and kick start, £100; cash, deferred terms, or exchange.—Below.

H.B., 1922 Models for earliest deliveries.—Write London Motors, 61, Holborn Viaduct, E.C., sole distributing agents for the following counties:—Kent, Surrey, Sussex, Hants, Berks, Oxford, Bucks, Northants, Beds, Hunts, Cambridge, Norfolk, Suffolk, Essex, Herts, Middlesex (including London). [3771

### Henderson.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Hendersons; unequalled service, repairs, etc. [3145

1920 Henderson Combination, dynamo lighting, screen, speedometer; any trial; £110.—Broadway Garage, Tooting. [3932

£55.—Henderson Combinations, 1915-16, 4-cylinder, 2 speeds, clutch, fully equipped, excellent condition; choice of 2.—63, Solon Rd., Brixton. [4159

£75.—Henderson combination, windscreen, lamps, horn, and numerous extras, guaranteed.—Clifford Wilson, 177, Westminster Bridge Rd., S.E.1. [4601

IMMEDIATE Delivery.—1922 Henderson de Luxe, dynamo lighting, electric horn, etc.; £175.—Pioneer Motors, Ltd., 50, Grindlay St., Edinburgh. [1408

HENDERSON Solo, lamps, Klaxon, Tan-Sad, Cowey, etc., mileage 1,970, in perfect condition throughout; cost £200 in late 1920; £90.—"Bolnore," Hayward's Heath. [3588

HENDERSON 1920 10h.p. 4-cylinder Combination, lamps, horn, speedometer, tax paid; £115.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0067

1921 12h.p. Henderson, 4-cylinder, 3-speed and reverse, P. and H. electric dynamo lighting, all in perfect order, just been decarbonised; meet buyer anywhere; £115.—Ward, 94, Anlaby Rd., Hull. [3550

159 gns.—Henderson Elite Combination, 1921½, 12h.p., 4-cyl., side valves, 3 speeds, reverse, model, dynamo lighting, licensed, as new throughout, cost £285; exchanges.—12, Cornwall-mews, Gloucester Rd., S.W.7. [4576

BARKER'S Motors are agents for the luxurious 4-cyl. Hendersons; all new models at list prices supplied carry a free insurance policy against mechanical breakdown for 12 months. Spare Parts supplied. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [3138

ROBERTSONS Motors, Ltd., the original Henderson experts, offer the following: Practically unused 1922 De Luxe combination, Bonniksen speedometer, tax paid, £220; 1921 electric, with reverse, Cowey trip, Millford tandem sidecar with 2 screens, scarcely used, £170; 1921 Standard, in perfect order, tax paid, £110; 1920 electric combination, Tan-Sad, just completely overhauled, £135; 1920 Standard, Capjon and Mudd, £80; sidecar, Cowey trip, and all accessories, £135; 1920 Standard combination, all accessories, tax paid, £120; 1915 Standard, with luxurious sidecar, speedometer and accessories, £75.—157b, Gt. Portland St., W.1. [4213

*Spare Parts:*

ROBERTSONS Motors, Ltd., the original Henderson Spares Importers, have the largest representative stock in the country.—157b, Gt. Portland St., W.1. [4222

### Hobart.

1921 Hobart, new, shop soiled; £39.—Shepherd, Enfield Highway. Tel.: Waltham Cross 31. [0859

1922 Hobarts, all models. Catalogues with pleasure from the agent, Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [4633

1914 Hobart 4h.p. Twin, 2-speed, countershaft, and kick start, with Canoelet sidecar; tax paid, and all accessories; £35.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [4422

### Humber.

£18.—Humber, 3½h.p., licensed, ride away.—47, Bayston Rd., Stoke Newington, N.16. [3452

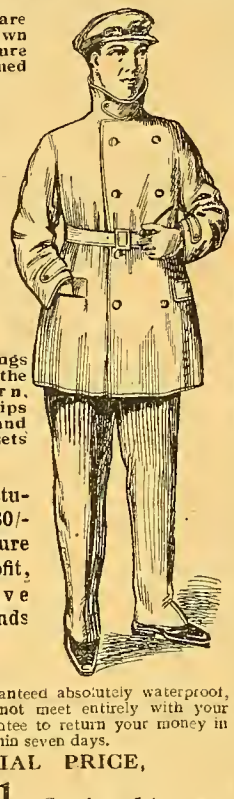

MANUFACTURERS' STOCK

MAKINKOT BRAND

*TO BE CLEARED.*

Fawn double texture, interlined rubber,

MOTOR SUITS



THESE suits are made of Fawn double texture cloth, interlined rubber.

The seams are cemented, sewn and taped, making these absolutely waterproof

Will stand any amount of hard wear.

The jackets are made double-breasted, with belts and wind cuffs.

The Motor Leggings are made on the trouser pattern, fastening with clips and straps, and have wind gussets to leg.

These suits actually cost over 30/- to manufacture without any profit, but we have several thousands to clear.

Every suit is guaranteed absolutely waterproof, and should these not meet entirely with your approval, we guarantee to return your money in full, if returned within seven days.

SPECIAL PRICE,

29/11 Carriage 1/- extra.

We have also several thousands heavy Twill Suits to offer. These are made of the heavy Twill used for making Motor Hoods, and are one of the finest suits made for motor cycling, interlined rubber. They are made with sewn and cemented seams, and taped, also the seams of these suits are striped, making these garments absolutely waterproof, and we are prepared to give a guarantee that these are absolutely impossible for water to penetrate through. The Motor Leggings are made in the same way with wind gussets, fastening with clips and straps. The Suits are in sizes 34, 36, 38, 40, 42 and 44 chest, lengths inside leg are 27, 29, 31. Please state when ordering by post, measurements of chest, length inside.

50/- Carriage 1/- extra.

Orders to be addressed—

*The* LANCASHIRE and CHESHIRE RUBBER Co.

MAKINKOT HOUSE,

30, Thomas Street,

LIVERPOOL.

'Phone 4891 Bank, Liverpool.


## MOTOR CYCLES FOR SALE.

### Humber.

HUMBER Combination, excellent condition, paid, drive away; £33.—13, Chaldon Rd., ham. [

HUMBER-CENTAUR 1914 3½h.p., runs excelle equipped, taxed; £19.—Clark, 7, Exhibition S.W.7. [

HUMBER, late 1919, flat twin, as new; bar £70. — Hobbs, 332, Wandsworth Bridge Fulham. [

HUMBER Motor Cycle, Roc gear; sell complet parts; bargain; stamps.—Cleworth, Twist Leigh, Lancs. [

F.O.C.H. have 3½h.p. Humber Combination speed, excellent condition; £35.—5, Heath Hampstead (near Tube). [

HUMBER 3½h.p., 1916 model, perfect condi all on; £25, or near offer.—W. Dowie, 9, shall St., London Rd., S.E. [

HUMBER 3½h.p., free engine, 2-speed, handle s Bosch magneto; £15.—28, Woodford Rd., F Gate. 'Phone: Maryland 2598. [

3½h.p. Humber, all on, discs, long exhaust, cou shaft frame but no gears, trial; £35.— 301, Hornsey Rd., Holloway, N.19. [

HUMBER 4½h.p. sports model; £100; imme delivery.—D. J. Shepherd and Co., E Highway. Tel.: Waltham Cross 31. [

£20 Humber 3½h.p., engine overhauled, Bosch and B., spring forks, good tyres and ru order.—Read, Aston, Nantwich, Cheshire. [

£43.—Humber 3½h.p. C.B. Combination, 3-speed, clutch, kick starter, apron, s licensed.—Pickett, Keepers, Chaldon, Caterham. [

HUMBER 1919 3½h.p., 3-speed, handle st hand clutch, all-chain drive, coachbuilt sid all lamps; £75.—Maudes', Walsall Garage, Walsa [

3½h.p. Humber Combination, C.B., 2 speeds, lamps, tyres good, and 2 spare covers; £ E. A. Cheeseman, 9, Wilson St., Battersea, S.W. [

HUMBER 3½h.p., 3-speed Combination, mech ally perfect, coachbuilt sidecar, tax paid insured; £45; seen and tried any time.—12, York Sudbury, Suffolk. [

HUMBER Combination, 2-speed, accessories, pe running order, tax paid, £35; also J.E.S. weight, perfect condition, £15.—5, Belmont G Lewisham, S.E.13. [

HUMBER 4h.p., 3-speed, kick start, hand cl all-chain drive, with Millford sidecar, all la speedometer, windscreen, tax paid; £90.—Mau Walsall Garage, Walsall. [

£65.—Humber Combination, 6h.p., flat twin, w cooled, 3 speeds, countershaft, clutch, starter, fully equipped, splendid condition. Excha —63, Solon Rd., Brixton. [

NEW Humber, flat twin, slightly shop-soiled, 4½ 3-speed clutch and kick starter; £100; also bination, £130; easy payments.—Harrods Motor Dept., 118, Brompton Rd., London. [

3½h.p. Humber Solo, 2-speed, good condition tune, nearly new gears, piston rings, tubes, hot air carburatioo, lamps, horn, speedom licensed; £35.—Evans, 12, Greenfield St., Abe wyth [

£30.—2¾h.p. Humber, 1913, twin, 3-speed, cl discs, round tank, low, sporty, posh 'bus, paid for quarter, rebushed, new rings.—Wills, Spring St., Rugby. [

HUMBER, 4h.p., 3-speed, kick starter, and c built sidecar, Bosch, splendid order, guaran nice outfit, lamps, tools, trial any time, bargain; —Stepney Garages, 77, Salmon Lane, Commercial Stepney. 'Phone: East 4542. [

### Indian.

INDIAN, 3-speed, K.S., clutch, spring frame; —670, Holloway Rd. [

INDIAN 5-6h.p., good order, lamps; £30; tax —15, Elthorne Rd., N.19. [

INDIAN 5-6h.p., 3-speed, clutch, K.S., perfect; —Marsh, 127, Grove St., Deptford. [

INDIAN 5-6h.p., clutch, road racer; £26. Heaton Rd., Mitcham, near Tooting Junctio [

KICKHAM, Stokes Croft, Bristol, Sole D Agent for Indians; unequalled service, re etc. [

7-9h.p. Indian Powerplus, lamps, horn, good ning order; £55.—Herbert Robinson, Ltd., St., Cambridge. [

7-9h.p. Indian Combination, electric light, He son sidecar, splendid condition; £65.— Booth, Frodsham. [

INDIAN Combination, guaranteed as new, equipped, tax paid; £75.—Tuck, 154, Black Rd., Walthamstow.

## MOTOR CYCLES FOR SALE.

### Matchless

CHLESS, 1921, Lucas dynamo lighting, elec-ic horn, hood, screen, legshields, speedometer, £140.—13, Arklow Rd., New Cross. S.E. [3607

CHLESS Combination, H2 model, M.A.G. h.p., 1921, perfect condition, every accessory; W. Netherton, 41, High St., Sidcup, Kent. [3365

CHLESS, new 1921, magneto engine, 2-seater idecar, 2 windscreens, hood, spare wheel, mile-); £155.—Read, 58, St. Aidans Rd., Dulwich. [3913

is the price of a new Matchless Combination, e our showrooms, all models in stock; cash or ts.—Knight's, 126, Upper Tooting Rd., S.W.17 [0759

CHLESS 1920 H Model, lamps, hood, screen, pare wheel, spares, just overhauled, tax paid; 167, Plumstead Common Rd., Plumstead, [3600

ELL, 1a, Bloomfield Rd., Plumstead, for atchless Combinations; deferred payments; of all dates; trade supplied where agents not ed. [2241

CHLESS-M.A.G., coachbuilt, screen, 3 speeds, Lucas lamps, overhauled, good condition, bar ash wanted; £64.—Weymouth House, Purrett lumstead. [4447

CHLESS Combination, Victory model, good ondition, accumulator, electric lighting, hood, spare wheel; price £90.—Seen at Oakley's, Hill, Ilford. [3285

Matchless-Mag, Magdyno lighting, hood, peedometer, leg shields, all perfect, cannot be ished from new; £155.—Tassell, 1A, Bloom d., Plumstead. [4456

CHLESS Combination 1921, Lucas acetylene ighting, hood, Easting screen, Binks, spare etc., perfect running; £125.—A. C., 86, Lao-Rd., W. Norwood, S.E. [3890

'CHLESS Model H. late 1920, good condition hroughout, complete with speedometer, screen, ) tyres, lamps, etc., ready for the road; bargain, 499, Harrow Rd., W.10. [390.

Matchless Combination (July, 1921), Lucas namo lighting, M.A.G. engine, magnificent turn bsolutely as new, genuine; £145.—31, Clare Rd., Alexandra Park, Manchester. [4486

'CHLESS Combinations.—Book your orders with toss, 86 High Rd., Lee, S.E., or 'Phone Lee 744 for immediate delivery of 1922 models. Ex s and gradual payments arranged. [3480

'CHLESS Combination, late 1920, 8h.p M.A.G. engine, dynamo lighting, windscreen, neter, etc., as new; £125; owner buying car.— he Broadway, Winchmore Hill, N. [3743

'CHLESS 1919 8h.p., spare wheel, windscreen, ood, good tyres, whole outfit in splendid con-many spares, tax paid; £105; any evening: ay afternoon.—75, Howarth Rd., Plumstead. [3723

'CHLESS Sports 8h.p., o.h.v. J.A.P. engine Zenith racing gear, Cox Atmos carburetter, d with 82 m.p.h., docile starter, tyres hardly tax paid; £50; owner's wife objects.—605, t Lane, Earlsfield, S.W.18. [4309

'CHLESS 1920 8h.p. Combination, M.A.G., dy-amo lighting, horn, speedometer, hood, screen, wheel and tyre, tools, tyres, practically new, on excellent; a genuine bargain, £139/10; tax till end of year.—Wilkins Simpson, Opposite ia, London. [3673

KER S Motors, The South-West Londo Matchless Agents and Service Station.—1922 at list prices. We give an insurance policy mechanical breakdown for 12 months free atchless spares in stock Open from 9 a.m 3 p.m.—194, Balham High Rd., S.W.12. [3140

TCHLESS 1921 (July) H2 Model Combination, -seater sidecar, Magdyno lighting, speedometer, wheel unused, hood and cover, legshields, steps, horn, in new and perfect condition, insured tax paid; £180; mileage 2,000.—Chorley, 39, ll St. E.C.1. 'Phone: Clerkenwell 2246. [3335

2 Matchless. 'Phone: Greenwich 751. The Combination that scores every time. See re-of Land's End Trial You can do the same if Matchless is supplied by Sam E. Clapham. Send orders along and secure satisfaction. Imme-delivery, all models, cash, exchange, or easy —Matchless Service Depot, Sam E. Clapham rs), 27, Stockwell St., Greenwich, S.E.10. [3052

### Spare Parts

TCHLESS Spares Immediate delivery.—Kays 3, Bond St. Ealing [7221

TCHLESS Spares for J.A.P. or M.A.G. by re-urn, post free.—Jones Garage, Matchless Agent. way, Muswell Hill, N.10 [0808

### Maxim.

XIM Junior, 2h.p. 2-stroke J.E.S. engine, Run-baken magneto, Dunlop tyres, footrests, weight 38lbs., absolutely new; bargain, £29/10.—224, rville Rd., London, N.1. [3559


# Harrods MOTOR CYCLES

## ON EASY TERMS

All the following machines are available from stock and may be obtained on Harrods Convenient System of Easy Payments. Details and latest lists free

### NEW SOLO MACHINES

| | | |
|---|---|---|
| 2¾ h.p. | **ALLDAYS-ALLON** ... ... | £30 |
| 4½ h.p. | **B.S.A.**, Belt Drive ... ... | £107 |
| 2¾ h.p. | **DOUGLAS**, Two-speed ... | £68 |
| 2¾ h.p. | **DOUGLAS**, 3-sp., clutch . | £82 |
| 2¼ h.p. | **ENFIELD**, Two-speed model | £55 |
| 2¾ h.p. | **FRANCIS-BARNETT**, 2-sp. etc. | £73 |
| 2¼ h.p. | **LEVIS**, Popular model ... | £42 |
| 2¾ h.p. | **NEW IMPERIAL**, Chain, etc. | £73 |
| 2¾ h.p. | **NEW IMPERIAL**, Belt, etc. | £69 |
| 1¾ h.p. | **McKENZIE**, Lightweight | £27 6s. |
| 2½ h.p. | **O.K. JUNIOR** ... | £39 18s. |
| 2½ h.p. | **O.K.**, 2 sp., clutch, etc. | £69 18s. |
| 2¼ h.p. | **SUN VITESSE**, single speed | £44 2s. |
| 2¼ h.p. | **SPARK**, single speed ... | £39 18s. |
| 2¼ h.p. | **SPARKBROOK**, single sp'd | £54 12s. |
| ¼ h.p. | **TRIUMPH**, Two-speed ... | £65 |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | £105 |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | £115 |

### NEW COMBINATIONS

| | | |
|---|---|---|
| 4¼ h.p. | **B.S.A.**, Belt Drive, No. 3 s/c | £139 |
| 4¼ h.p. | **B.S.A.**, Chain Drive, No. 3 s/c | £142 |
| 8 h.p. | **ENFIELD** ... ... ... | £140 |
| 8 h.p. | **MATCHLESS** ... ... | £170 |
| 6 h.p. | **HAZLEWOOD** ... ... | £118 |
| 8 h.p. | **NEW IMPERIAL** ... ... | £145 |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | £155 |
| 4 h.p. | **TRIUMPH**, Belt Drive | £145 |
| 4 h.p. | **DOUGLAS** ... ... ... | £135 |
| 3½ h.p. | **INVICTA** and Sidecar ... | £110 |

## SHOP-SOILED MODELS AT SPECIAL PRICES

| | |
|---|---|
| 4½ h.p. **HUMBER**, Flat Twin, 3 sp., clutch & k.s. | £100 |
| 2¾ h.p. **WOOLER**, Flat Twin, Brooklands Sports model, fully equipped... | £69 |
| 4½ h.p. **HUMBER COMBINATION.** Flat Twin Engine, 3-speed, etc. ... | £130 |

### SECOND-HAND

| | |
|---|---|
| 2¼ h.p. **LEVIS**, Popular Model... ... ... | £42 |
| 5/6 h.p. **HAZLEWOOD**, Combination, Speedometer. Thoroughly overhauled ... ... | £75 |

*All machines sent Carriage Paid from London to nearest Railway Station*

**HARRODS MOTOR SALES DEPT**
**116–118 Brompton Road London SW1**
*(Opposite the Main Building)*


## MOTOR CYCLES FOR SALE.

### McKenzie.

McKENZIE-HOBART Ultra Lightweight motor cycles; 26 guineas ex works. Immediate deliveries of these wonderful little machines.—Colonial Motors, 404A, Finchley Rd., Hampstead. 7822. [4312

### Metro.

METRO-TYLER, Burman 2 speeds, clutch, K.S., dise wheels, Clinchers, late model, licensed; £40.—267, Hightown Rd., Luton. [3807

METRO-TYLER.—We are the district agents. All models in stock.—The East Finchley Motor Engineering Co., 132, High Rd., East Finchley. 'Phone: Finchley 2338. [3621

### Minerva.

£16/10.—3½h.p. Minerva, splendid order; push cycle part.—57, Kenbury St., Camberwell, London. [3918

### Mohawk.

MOHAWK Cycles new, or second-hand, at lowest prices, for cash or easy payments.—Mohawk Cycle Co., Ltd., 276, Alexandra Rd., Hornsey, N.8. [1924

MOHAWK Combination, 1922 model, new but shop-soiled, Model E, 3½h.p. Abingdon engine, Sturmey-Archer 3-speed; 100 gns.; bargain.—2, Alexandra Rd., Hornsey, London. [1971

### Monopole

1917 Monopole-Villiers 2½h.p., ride away; £25.—127, Malden Rd., New Malden. [4017

1922 Demonstration Speed Model Monopole, fitted with 350 c.c. J.A.P. engine, Sturmey-Archer gear and kick start, T.T. bars and straight-through exhaust, tax paid, many accessories, new condition; £72.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [4467

### Moto-Reve.

MOTO-REVE, single, nearly new engine; £16, or exchange.—Hipkins, 5, Mill View, Mill Lane, Chadwell Heath. [3944

### Spare Parts

MOTO-REVE Spares for all models, also repairs, overhauls.—Motor Supply Co., Sole Concessionaires 225A, High St., Lewisham, S.E. [9092

### Motosacoche.

MOTOSACOCHE 2¼h.p., Bosch, 2-speed, tax paid, good running order; £13, or near.—106, Ritherdon Rd., Balham. [3626

### Ner-a-Car.

NER-A-CAR, as new, run 400 miles, perfect.—Offers to Major Norton, Halton Camp, Bucks. [3296

NER-A-CAR, unused, licensed to Dec.; offers wanted; cash or exchange.—111, Morton Ter., Gainsborough. [3344

1922 Ner-a-Car, special accessories, improved magneto, excellent running, better than new; bargain, 55 gns.; or exchange 4h.p. Triumph.—Box 1119, c/o *The Motor Cycle.* (D) [3700

### New Comet.

NEW COMET 2-stroke, condition better than new, only done few miles; bought car; what offers?—245, Gray's Inn Rd., London, W.C. [0845

### New Hudson.

NEW HUDSON, 2-stroke, 2-speed, nearly new; bargain; £50.—Foxwell, Ewhurst, Surrey. [3958

NEW HUDSON 6h.p. Combination, 3-speed, K.S., overhauled; £37.—S., 72, Carter St., S.E. [3299

£25.—New Hudson single-speed 2-stroke, Bosch, tax paid; offers considered.—99, Wilton Rd., Hackney. [3531

3½h.p. New Hudson, very smart machine, not being used; £22.—157, Burntwood Lane, Earlsfield, S.W.17. [3971

NEW HUDSON 3h.p., 3-speed, free engine, tax paid, trial; £28, or nearest.—Gassick, Bells Hill, Bishop Stortford. [3439

1922 Hudson de Luxe, £63. Also Popular model, £50.—Shepherd, Enfield Highway. Tel.: Waltham Cross 31. [0861

2¼h.p. New Hudson, lamps, horn, licensed, excellent order; £38.—Herbert Robinson, Ltd., Green St., Cambridge. [3706

NEW HUDSON 1921, 2-stroke, 2-speed, usual accessories, tax paid, perfect condition; £45.—Harris, 58, Langdale Rd., Hove. [3341

NEW HUDSON 2¼h.p. 2-stroke, 1916, lamps, etc., excellent condition; £18.—Thomas, 24, Townley Rd., East Dulwich, S.E. [3568

£35.—New Hudson Combination, 1914, 3-speed, clutch, Sporting cane sidecar; trial.—58, Acacia Rd., St. John's Wood, N.W.8. [4549

£22.—New Hudson, 2¾h.p. J.A.P., 3 speeds, clutch, starter, lamps, accessories, licensed, excellent condition.—63, Solon Rd., Brixton. [3556

NEW HUDSON motor cycles.—London Depôt, 45, Gray's Inn Rd., London, W.C.2. Immediate delivery all models. Spares stocked. Trade supplied. [0851

## MOTOR CYCLES FOR SALE.

### New Hudson.

NEW HUDSON 1916 2¼h.p. 2-stroke, single-speed, good condition; £25; exchange with cash P. and M. combination.—3, Chingford Hatch, Chingford. [3580

1917 (believed) 4¼h.p. New Hudson, 3-speed, countershaft, just thoroughly overhauled, done up in Sunbeam colours; £50.—122, Southampton Row, W.C.1. [4507

1914 New Hudson coachbuilt Combination 4h.p., 3-speed, hub gear, first-rate condition, perfect order; £50, or nearest offer.—Charman, Baker, Crawley, Sussex. [3457

NEW HUDSON 6-8h.p. V. Twin Combination, 3-speed countershaft, B. and B., Lucas dynamo lighting, tax paid 31/12/22, fine condition; £85, offer.—495, Southwark Park Rd., S.E.16. [3753

NEW HUDSON 2-stroke, 2-speed, absolutely as new, low mileage, original tyres, C.A.V., Binks carburetter, electric lighting, mechanical horn, all accessories, spare magneto, tax paid, £45, or near.—Swallow, Hazlehead, Sheffield. [3538

NEW HUDSON 1922.—2-speed lightweight, £50; 2-speed, clutch, kick starter, all-chain drive, £63; 4½h.p., all chain, 3-speed, combination, £125; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [3509

1922 New Hudson 10h.p. light car, £230; 4½h.p. combinations, £125, solo, £100; 2¼h.p. 2-speed Popular, £50, De Luxe, £63; exchanges and deferred payments entertained; sole agents for Cambridge.—Wallis and Easton, 104, Mill Rd., Cambridge. [0824

### New Imperial.

4h.p. o.h.v. New Imperial-Jap; £35.—Finch and Smith, Sovereign Mews, Edgware Rd. [3960

SHEFFIELD Agent for New Imperial Motor Cycles; all models in stock.—J. A. Stacey, Ecclesall Rd., Sheffield. [0813

NEW IMPERIAL, 6-8h.p., B.S.A. sidecar, everything required on, perfect; bargain, £90.—207, Railton Rd., Herne Hill. [3602

NEW IMPERIAL 2¾h.p., excellent condition, just overhauled, lamps, licence; £32; exchange higher power; Saturdays.—41, Wood St., Barnet. [3640

£28.—New Imperial-Jap 2¾h.p., 2-speed, extra tank on top bar, only wants seeing, ride away, tax paid 30/-.—28, Queen's Rd., Teddington. [4030

NEW IMPERIAL.—Immediate delivery of 1922 models. Cash. Exchanges. Easy payments.—P. J. Evans, John Bright St., Birmingham. [3686

1918 2¾h.p. New Imperial-Jap, 2-speed, all on, good condition, seen by appointment; £36.—Hartzwood, Church Rd., Osterley Park, Isleworth. [3804

£33.—1917 New Imperial-Jap, 1922 B. and B., and E.I.C. magneto, tax paid, insured, beautiful condition, all accessories.—124, Crofton Park Rd., Brockley, S.E.4. [3466

OCT. 1917 2¾h.p. New Imperial, in good condition, stored last two years, just fitted with new piston and new cylinder; first buyer £38.—Davies, Somerset House, Cefn, Merthyr. [3358

1920 New Imperial-Jap Combination, tax paid, electric lighting, electric horn, Easting, etc., indistinguishable from new; £110; exchange.—Rhind and Co., Stone Place, Rusholme, Manchester. [3695

1922 New Imperial actually in stock for immediate delivery; Model No. 2, £69; Model No. 3, £73; 8h.p. Combination, £145; easy payments, 4 per cent. extra.—Premier Motor Co., Aston Rd., Birmingham. [3022

NEW IMPERIAL 8h.p. Combination, delivered 1921, 700 miles; 1920 M.A.G. water-cooled Morgan; both fully equipped, excellent running order; respectively £110, £130 or near offer.—Trotter, 28A, King's St., Whitehaven. [3293

*Spare Parts.*

NEW IMPERIAL Spare Parts.—London stockist's, Rey, 173, Gt. Portland St. 'Phone: Langham 1257. Open till 7.30 p.m., 4 o'clock Saturdays. [0855

### New Scale.

1922 New Scale Combination, 3½h.p. Precision, slightly shop-soiled, unused; £45.—Railton, 47, South King St., Manchester. [4384

NEW Scale-Precision, perfect, equipped, ride 50 miles, £45; also Mobile-Pup Scooter, best over £12.—17, Salisbury St., Hull. [3425

### Norton.

PREMIER Motor Co. for 1922 Nortons.

NO. 9, 3½h.p., belt drive, £80; 16H 3-speed T.T. £115; Big 4, 3-speed, £120; easy payments 4% extra.—Immediate delivery from the Norton Specialists The Premier Motor Co., Aston Rd., Birmingham. [0[illegible]

NORTON 3½h.p., Colonial, Binks, almost new; £85.—Loring, Market Drayton. [3571

3½h.p. T.T. Norton, lamps, tax paid; £48.—L. Papworth, "Glendale," Elsworth, Cambs. [3825


THE

# Pero Works Co.

10, Anderton Sq., Whittall St.,

BIRMINGHAM.

Cylinders Reground.

Pistons—Over-size. supplied.

Engines Overhauled.

Spares—Made to order.

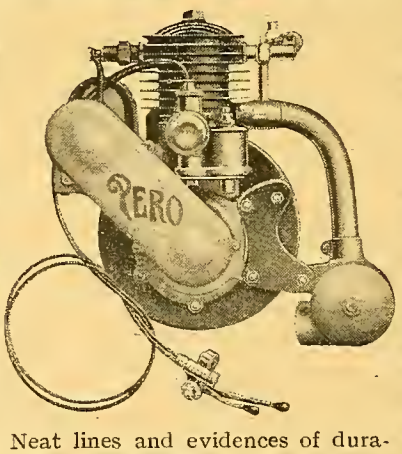
Welding—Acetylene. Aluminium a speciality.

Over £1,000 is the value of the machines and equipment that will do your repairs.

*No Repair too small.*

"Pero" Two-Stroke

bore 70 m/m stroke 70 m/m.




Neat lines and evidences of durability are features of the Pero two-stroke engine.

2½ h.p. Pero Power Unit.


## MOTOR CYCLES FOR SALE.

### Norton.

NORTONS.—All models. If you require one pulls, try Gibb, Gloucester. 'Phone: 852.

NORTONS, 1922.—Immediate deliveries of models.—Clifford Motories, Eastwood, Notts

NORTON, 16H, just delivered, unridden, unstered; £105 lowest.—Box 1159, c/o *The Cycle.*

NORTON Combination, 3-speed, excellent cond tax paid, drive away; £48.—19, Chaldon Fulham.

NORTON 1921, T.T. Model, 3½h.p., belt driv lamps; £75.—Maudes', 100, Great Portland London.

NORTON Combination, Big 4, 1921, counter chain, licensed, perfect; £100.—5, Victoria Surbiton.

DAN GUY, Weymouth.—Norton 1921, absonew, Big Four Combination, fitted De Luxe car, oversize tyres, sacrifice; £130.

ABSOLUTELY new 1921 Sports Model, 17C, size tyres, to clear, £98/10.

79 GNS.—1921 3½h.p. Norton, fully equsplendid condition; exchange considered; 5 p.m.—4, Elm Gardens, Hammersmith.

NORTON 1917 3½h.p., Grado-Multi pulley kick start, belt drive, all lamps, tax paid; —Maudes', 100, Great Portland St., London.

NORTON Big Four, De Luxe sidecar, Stu Archer countershaft, chain drive, splendid dition, accessories; £78.—49, South Lambeth S.W.8.

1919 Big Four Norton, 3-speed, all-chain, l accesories, in excellent condition; 69 35, Shepherd's Bush Rd., Hammersmith. 'P Museum 7286.

NORTON 1922 16H, unscratched, mileage 650, niksen, lamps, Tan-Sad, fully insured; cost accept £105; evenings.—The Homestead, H Lane, Finchley.

1920 (late) Norton Big Four Combination, 3-kick start, dynamo lighting, Canoelet si outfit as new, guaranteed; £87/10.—51, Upper mond Rd., Putney.

NORTON 1921 16H, speedometer, taxed, w many speed trials, £85; 1920 Big 4, Mag 1921 Norton sidecar, taxed, mechanically pe £105.—Clark, 7, Exhibition Rd., S.W.7

1920 Norton 3½h.p., 3-speed, equipped, taxed tyres, winner many competitions, gained s award reliability trial, April 19th, perfect; 78 21, Mostyn Gdns., Kensal Rise, N.W.10.

3½h.p. T.T. Norton 1916, lamps, horn, new and belt, long polished copper exhaust, fa condition throughout, licensed; £52.—Navarino, bury Av., Church End, N.3. 'Phone: 1119 Fin

JULY, 1921, 16H, Norton, not done 3,000 oversize tyres, head lamp, generator, horn, fect condition; £90, or nearest; new Sports Z wanted.—S. Bailey, Ivydene, Tichborne St., Leic

AUGUST, 1920, Big Four Norton, late 1921 car, V-screen, lifting scuttle, all access spares, oversize tyres, pillion legshields, any £95.—Hollinghurst, 477, Oxford St., W.1. Tel.: fair 1096.

VERY Hot T.T Norton, Watford, Cowey lamps, knee grips, enamel unscratched, perfect, driven carefully under 2,000 miles, Phil and 2-speed N.S.U.; cost £120 in Oct. 1920; £ "Bolnore," Hayward's Heath.

1920 Big Four Norton Combination, coach sidecar, 3-speed, hand and foot clutch, 3 l and generators, Klaxon, speedometer, complete tools, spare tube, chains, plugs, valves, sprocket, 2 carburetters, B. and B. and Cox Atmos, tax £105.—W. H. Hines, Castle Brewery, Bedford.

### N.S.U.

N.S.U. Twin Combination, coachbuilt, smart o perfect condition; bargain, £38.—89, Frenc Sunbury-on-Thames, Middlesex.

3½h.p. N.S.U., 2 speeds, Binks, tax paid good running order, recently overhauled; —Write 33, Minard Rd., Catford, S.E.

### N.U.T.

1920-21 3½h.p. N.U.T., full equipment, Mag tax paid, as new; £85.—4, Corporation Southwold.

1920 4h.p. Twin Sporting N.U.T., dynamo ligh only done 500 miles; £75.—Bonnds Ga 223, High Rd., Kilburn.

N.U.T. 3½h.p., 1920, Magdyno, speedometer, s splendid condition, licensed; £85.—114, Si Grove, Newcastle-on-Tyne.

PRACTICALLY brand new N.U.T. 3½h.p., Magdyno lighting equipment, Lucas electric Bonniksen speedometer; £85.—37, Canterbury Balls Pond Rd., Dalston, N.1.



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Sun.

21 (October) Sun-Vitesse, done 400 miles, taxed; gift. £29/10. Exchanges.—Kent's, 417, Lord Southport. [4055

### Sunbeam.

h.p. Sunbeam, new; £126.—The Morris Garages, Oxford. [4397

ROSS, Effingham Sq., is Agent for Sunbeam in Rotherham. [4492

AUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Sunbeam, 1917, 3 speeds; £75. [2925

ANDUDNO.—Kelly Bros., 108, Mostyn St., Agents. Sunbeams in stock. 'Phone: 277. [3311

ICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs. [3143

NBEAM Combination, late model, accessories; £65.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.8. [4119

.p. Sunbeam Combination, M.A.G., Lucas dynamo and horn, spare wheel; £145.—65, Oxhey Avenue, Ilford. [3820

NBEAM, 1921, 3½h.p., brand new, list price £155; offers wanted.—Ginger, Sunbeam Agent, Bury. [4150

NBEAM Combination, 1920-21, electric light, hood, tax paid; £125, or offer; after 2.—95, Broke Rd., ston, E.8. [3742

20 Sunbeam Combination, Sunbeam sidecar, detachable wheels; 115 gns. Exchanges.—Kent's, Lord St., Southport. [4056

21 Sports Sunbeam, as new, tax paid, fully equipped; £115, or offer.—French, 43, Old Park, Palmers Green, N.13. [3654

NBEAM, 1916, 8h.p., M.A.G. engine, speed, reliability, appearance excellent; £100.—Hayes, 105, tral Park Rd., East Ham. [3972

.p. Sunbeam and sidecar, shop soiled only, spare wheel and tyre; sacrifice, £185.—Harris, 51, on Lane, Forest Gate, E.7. [4426

20 8h.p. Sunbeam Combination, hood, speedometer, lamps, spare wheel, small mileage; £120. 27, Wolverton Rd., Leicester. [3982

NBEAM 1920 3½h.p. Combination, Lucas equipped, speedometer, Easting, licence paid.—For e apply, Bunner, Montgomery. [9292

21 Sunbeam, 3½h.p., semi-sporting, practically unscratched, lamps, spares, cost £168; accept .—Evans, 11, Burges, Coventry. [4144

19 3½h.p. Sunbeam, speedometer, lamps, horn and all accessories, splendid condition; bar-. £75.—Gooda, 22, York Rd., West Norwood. [4050

21 3½h.p Sporting Sunbeam, Lucas lamps, D.A. cylinder, Lucas horn, carefully used, guaranteed ad; £100.—Herbert Robinson, Ltd., Green St., Cam-ge. [3712

NBEAM 1919 3½h.p., 3-speed, kick start, hand clutch, all-chain drive, Sunbeam sidecar, all lamps, dometer, screen; £105.—Maudes', Walsall Garage, lsall. [4687

19 Sunbeam Combination, 3½h.p., electric lamps, horn, speedometer, tools, Easting screen, es, perfect; £90.—7, Hemington Villas, Park East Finchley. [3475

NBEAM 8h.p. Combination, double-seater sidecar, Easting, Klaxon, discs, electric lighting, tax , like new, unscratched; £165.—47, Gloucester Riverside, Cardiff. [3555

.p. Sunbeam Combination, late model, in splendid condition, spare wheel, electric lighting, hood, en, etc.; any trial by appointment; £140.—Sales ager, C. Binks, Ltd., Eccles. [3681

NBEAM Combination, 8h.p., 1920, unused last year, beautifully equipped, hood, screen, electric, y extras; £130, bargain.—James, c/o Bradmores, Harrow Road, Paddington. [4642

ORTS Sunbeam, 1921, fully insured, absolutely as new, numerous extras and spares, with or hout accessories; nearest £110.—Beaurain, 51, Willorce Rd., Finsbury Park, N.4. [3409

.p. Sunbeam Combination, dynamo lighting, electric horn, spare wheel and tyre, luggage carrier extras, as new, tax and insurance paid; £175.—ngate Motor Co., Northampton. [3501

21 Sunbeam, 3½h.p., and sidecar, delivered October, as new, done under 500 miles, licensed 1922, what offers? no dealers, owner bought car, at Church Hatch, Christchurch, Hants. [3479

NBEAM, 3½h.p., sporting, specially tuned, fast, fully equipped, licensed 1922, and insured; many es, whole as brand new, any trial; £90.—Cran-k, Christchurch Rd., Sidcup. 'Phone: Greenwich [3950

ATE 1920 3½h.p. semi-Sports Sunbeam, Lucas lamps, 700×80 tyres, 2 4-volt accumulators, light, 8-volt, Klaxon, hand Klaxon; offers over after 6 p.m.—Brian Astle, Copperfield, Bickley. t. [4032

# WATCH THIS COLUMN
## EVERY WEEK FOR
# BANCROFTIAN CO.'S BARGAINS.

**Advertisers in "The Motor Cycle" from its first publication.**

**TYRES.**—Manufacturers' clearance stock, not W.D. Although clearance, they are new and perfect. Wood Milne extra heavy, 4-ply, 26×2½, combination, **35/-**. Pedley, 26×2½, 3-ribbed, **25/-**. Hutchinson, 26×2½, heavy T.T., **27/6**; Passenger, 26×2½ for 2½, **39/6**; 700×80 to fit 650×65 small car, heavy, **49/6**; light car, 750×75 for 28×3 rim, **42/-**; heavy Passenger, 26×3, **37/6**; extra strong Passenger, 28×3, **53/6**; 24×2 T.T. heavy, **25/-**; extra heavy, 3-ribbed, 700×65, **35/-**; 650×65 steel studded car type, **65/-**; original, **£6 6s.** Firestone, 20×2, Auto wheel, **21/-**; original, **45/-**; tube, **6/6**. Palmer, 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½ cord, **42/-**. Oylers, 650×65, ribbed square tread, heavy, in original packing, **27/6**; original, **45/-**. Clincher de Luxe, very heavy, 26×2½, **37/6**; 26×2 Junior de Luxe, **22/6**; 26×1¾, **17/6**. Hutchinson wired edge cover, 26×2½ and 26×2½, **30/-** each. Postage 1/6.

**TUBES.**—24×2½, **4/6**; 24×2, **4/6**; 26×2½, **5/6**; 26×2½, **5/9**; 26×2¾, **5/6**; 28×3, extra heavy, **7/6**; 700×80, **7/6**. Postage 9d.

**BELTS.**—Clincher clearance line, new, not W.D. ¾", 6' 6", **8/6**; ¾", 7' 6", **12/3**; 8' 6", **14/-**; 1", 7' 6", **16/-**; 8', **17/-**; 1¼", 7', **18/-**; 8', **20/6**; 8' 6", **21/6**; Bates short lengths, ¾", 5', **4/6**; 5' 6", **5/-**; ⅞", 4' 6", **5/-**; 5', **5/-**; 5' 6", **5/6**; 1", 2' 6", **3/-**; 3', **4/-**; 3' 6", **4/6**; 4' 6", **6/3**; leather belts, ¾" at **2/8** per foot; belt fasteners, **9d.** and **1/-**. Postage 1/-.

**SPEEDOMETERS.**—Slightly shop soiled. Cowey with trip, **£4 18s.**; Stewart with trip (£6 6s. model), **£4 10s.**; Jones with trip, **£3 14s.**; Smith's with trip, **£4 10s.** Also Bonniksen in stock. All speedometer replacements in stock. Postage 1/6.

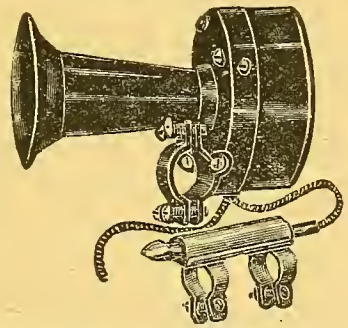
**TAN-SAD,** with back seat, **28/6**; original, **57/-**; only limited quantity. Carriage 3/6 extra.

**GOGGLES.**—Genuine Triplex, 45/- model, **10/6**; 25/- model, **9/6**. They are new and perfect. Postage 9d.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined, **7/11**; lined, **10/6**; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, **3/6**; Gloves, leather, wool lined, **4/6**. Above lines worth more than double. Limited quantities only. Order at once. Postage 6d.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coat with belt, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality, extra heavy, double texture waterproof material, dark fawn, new and fresh, only been made recently, not half-perished W.D. Our price to clear, **£2 2s.** Postage 1/6 extra. Could not be bought elsewhere under £4 10s. The greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**OILSKIN SUITS.**—Lined coat and long trousers, with bib, first-class quality, colour dark green, **17/6**, worth £3 3s. Postage 1/6.



**HORNS.**—Reliable Electric, Motor Cycle, up to 4-volt only, complete with wire and switch; usual price, 29/6, our price, **15/6**. Postage 1/3 extra. Smith's Electric Horns, black and nickel, in 6, 8, or 12 volts, large size, suitable for heavy combinations; original price, £2 15s.; our price, **30/-**. Postage 1/6. The greatest bargain ever offered. All new and perfect.

We can supply anything for the motor cyclist at competitive prices.

**BANCROFTIAN CO.,**
**78, BISHOPSGATE, LONDON. E.C.2.**
'Grams: "Chaikel, London." 'Phone: London Wall 9897

## MOTOR CYCLES FOR SALE.

### Sunbeam.

SUNBEAM 1920 3½h.p. Combination, licence paid, speedometer, tools, spares, cost £205 May, 1920; £95, offers.—Box, 2, Duke St., Brighton. [2224

1920 (Sept.) 3½h.p. Sunbeam Combination, Henderson Elite sidecar, electric light, dimmer head light, legshields, knee grips, first-class condition and appearance; £130.—Craukshaw, 12, Sandhurst Rd., Stockport. [3380

SUNBEAM 3½h.p. Sports, light solo combination new November, 1921, magdyno lighting, kick starter, speedometer, full equipment, tax paid, owner buying car; accept reasonable offer.—Duffy, 115, Uppingham Rd., Leicester. [1935

SUNBEAM 1914 2¾h.p., Sunbeam 2-speed gear, clutch, and kick starter, Bosch magneto, chain drive in oil-bath, Brooks saddle, Hutchinson tyres, lamps and horn, very little used; £65.—Rogers, Kingscliffe, Sandown, I.W. [3231

SUNBEAM Combination, 8h.p., M.A.G. engine, hood, screen, apron, dynamo lighting, electric and bulb horns, speedometer, spare wheel, luggage carrier, all accessories; £145, or nearest.—Hallett, Albion Works, Albion St., King's Cross. [3281

8h.p. Sunbeam Combination, July, 1921, Lucas Magdyno lighting, spare wheel and tyre, hood, screen and apron, speedometer, electric horn, legshields, 29×3½ back tyre, 4,500 miles, perfect condition; £200.—Edwards, Shornmead Fort, Gravesend, Kent. [3343

1921 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual spares, cast aluminium plates, new in April last, and in exceptionally good condition tyres unpunctured; nearest offer to £110.—Geoffrey Smith, *The Motor Cycle*, Coventry [X4285

SUNBEAM 3½h.p. sports, 1921, mileage 2,500, unscratched, perfect, equipped Lucas regardless, Pedley's knee and bars, oversize unpunctured, exceed 70 m.p.h., electrical timing, sprockets, spares, tax paid, insured; good reason; quick cash £100.—Trysull, Baylie St., Stourbridge, Worcs. [3897

8h.p. Sunbeam Combination, 1920 model, mechanically perfect, dynamo lighting and horn, speedometer, spare wheel, 3 nearly new Dunlops, windscreen, Tan-Sad, spare chain, etc., unused since last October; £150 or near offer.—Dr. Livingstone, Mount Lodge, Worplesdon, Surrey. [3292

1921 8h.p. Sunbeam Combination, Magdyno lighting, electric horn, Cowey horn and speedometer, sidecar fitted hood, windscreen, spare wheel, dashboard fitted watch, ampmeter, and lamp, also inspection lamp; new condition; seen by appointment; nearest offer £200.—Griffin, 154, Warwick St., Pimlico. [3215

### T.D.C.

2¾h.p. 2-stroke T.D.C., discs, M-L, Sensprav, perfect condition; £15.—Write, Andrews, 128, Falmouth Rd., Newington, S.E.1. [3648

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE Delivery of Type H 4h.p., 3-speed, £105. Type SD, chain drive, £115; Type LW, lightweight, £65; sidecars from £20 to £50; easy payments 4% extra. —Buy direct from the leading Triumph agents: The Premier Motor Co. Aston Rd., Birmingham [0627

2½h.p. Triumph Junior, new; £65.—The Morris Garages, Oxford. [4398

3½h.p. Triumph, Model R, new; £120.—The Morris Garages, Oxford. [4399

4h.p. Triumph, Model S.D., new; £115.—The Morris Garages, Oxford. [4400

4h.p. Triumph, Model H, new; £105.—The Morris Garages, Oxford. [4401

TRIUMPH Combination, 1919, in perfect condition; £65.—33, Hackford Rd., Brixton. [4564

1920 Triumph-Gloria, as new, mileage 2,500; 85 gns.—67, Fernlea Rd., Balham. [4520

NEW 1922 Triumph, Model H, in stock.—Bounds Garage, 223, High Rd., Kilburn. [3594

1918 Countershaft Triumph, full equipment; £48.—24, Balliol Rd., North Kensington. [3846

£48/10.—Countershaft Triumph, better than new; bargain.—47, Leigh Rd., East Ham. [3907

1920 Triumph Combination, full equipment, as new; £78.—24, Balliol Rd., North Kensington. [3849

TRIUMPH, coach-built sidecar, 1918, splendid condition; £55.—33, Hackford Rd., Brixton. [4565

4h.p. Triumph, shop-soiled only, fully equipped, taxed; £75.—17, St. Charles Sq., W.10. [3940

48 GNS.—4h.p. Triumph, countershaft, Binks, good tyres.—181, Newton Rd., Burton-on-Trent. [4373

TRIUMPH Junior, 1920, perfect, fully equipped; £45.—Clark, 8, Whitehorse Rd., Croydon. [3961

1919 Model H Triumph and Sidecar, lamps, horn, etc; £80.—365, King St., Hammersmith. [4340

## MOTOR CYCLES FOR SALE.

### Triumph.

17 GNS.—1911 Triumph, taxed, discs, adjustable pulley, sporty.—60, Barrington Rd., S.W.9 [3347

TRIUMPH 1920 Fixed Gear Sports, practically unused; £55.—Clark, 7, Exhibition Rd., S.W.7. [4617

TRIUMPH Coachbuilt Combination; £38.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [4115

TRIUMPHS.—Prompt delivery and service.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3692

£19/10.—1910 3½h.p. Triumph, fine running order, licensed year.—King, Egrove Farm, Oxford. [4092

WAUCHOPE'S, 9, Shoe Lane, London.—4h.p. Triumph, 1920 model H, 3 speeds, etc.; £85. [2930

TRIUMPH Motor Cycle, 1913, all accessories; £35. —Miller, St. Martin's St., Marlboro', Wilts. [3562

RICARDO Triumph actually in stock, immediate delivery; £120.—R. Fox, Pocklington. Tel.: 11. [3414

CROSS, Effingham Sq., is Agent for the Trusty Triumph in Rotherham. All models from stock. [4493

£20.—Triumph 1913 3½h.p., single gear, perfect running order.—28, Medora Rd., Brixton Hill, S.W. [3792

1918 Triumph, all on, taxed, as new; £58.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [4644

BABY Triumph, 2-speed, all accessories, nearly new, tax paid; £35.—64, Church St., Edgware Rd., W. [4525

TRIUMPH, 3-speed, sidecar, overhauled; £35, offer. —Whitaker, 209, Northend Rd., West Kensington. [4010

£25.—Sporting Triumph 3½h.p., lamps, accessories, fast, splendid condition.—63, Solon Rd., Brixton. [4163

F.O.C.H for Triumphs.—Latest models in stock; also 1921 solo.—5, Heath St., Hampstead (near Tube) [2251

£37/10.—Triumph Combination, 2 speeds, chain-cum-belt, accessories.—8, High St., Wandsworth. [3986

£25.—3½h.p. Triumph, 1911, Mabon clutch, lamps, tax paid, splendid order.—134, Earlsbrook Rd., Redhill. [4045

LATE model Triumph Combination, fully equipped, for Morgan. — Albert Deans, "The Croft," Baldock. [3902

TRIUMPH, 1922 model, 3½h.p., Ricardo engine, delivery from stock; £130.—Attwood's Garage, Stafford. [3327

TRIUMPH 3½h.p., all on, pillion, tax, fine condition; £18/10.—71, St. German's Rd., Forest Hill, S.E. [4511

TRIUMPH, countershaft, as new, equipped, tax paid; £50.—Davis, 46, Blandford Rd., Bedford Park, W.4. [4287

£38.—Baby Triumph (1920), fully equipped, taxed, excellent. Exchanges.—Kent's, 417, Lord St., Southport. [4054

TRIUMPH Junior for sale, only done 50 miles, as new; bargain, £48.—Fowell, 91, Castleton Rd., Goodmayes. [3574

£25.—Triumph 4h.p., guaranteed in good condition. —Geiger, 24, Mansfield Rd., Gospel Oak, London, N.W.3. [4606

TRIUMPH Combination 1919, 4h.p., tax paid, splendid condition; 78 gns.—6, Thurlow Rd., Hanwell, W.7. [4365

1918 Triumph, guaranteed perfect, electric light, registered; £55; after 5 p.m.—4, Elm Gardens, Hammersmith. [4534

3½h.p. Triumph, C.B. sidecar, Grado gear, all in good order; £27.—Rainey, High St., Farnborough, Kent. [3486

TRIUMPH 1920 4h.p., 3-speed, kick start, hand clutch, Gloria sidecar; £100. — Maudes', Walsall Garage, Walsall. [4686

£19.—1911 Triumph, clutch model, new tyres, tax; another, sports model, £29.—Ewers, Newton Rd., Burton-on-Trent. [4374

£65.—4h.p. Triumph, tax paid, accessories, guaranteed.—Clifford Wilson, 177, Westminster Bridge Rd., S.E.1. [4600

£22.—Triumph, 3½h.p., 2-speed, free engine, sidecar machine, in excellent condition.—Shore, Aldbury, Tring, Herts. [4029

TRIUMPH Combination, 1914, good condition, tax paid; £50.—30, Vestris Rd., Forest Hill, S.E. Saturday, Sunday. [3330

25 GNS.—Renovated T.T. Triumph, fully equipped, beautiful condition, gift.—Ramsden's, Maybell Avenue, Blackpool. [3544

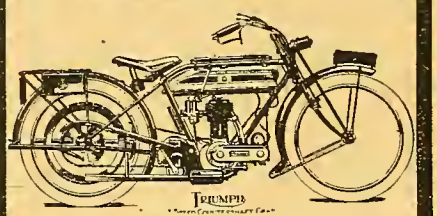
3½h.p. Triumph-Minerva, fast and sporty; bargain, £17/10; photo stamp.—Stevens, Springwell Rd., Heston, Hounslow. [4039

# RATCLIFFE BROS.

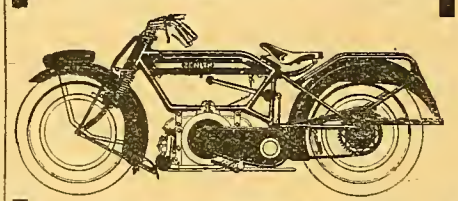
## 200, GT. PORTLAND ST., W

'Phone—Langham 1701.

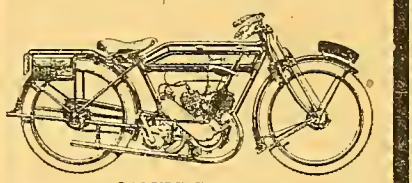
**Any make of machine can be supplied on our Payment out of Income Scheme. Write for full particulars, and state machine you are interested in.**



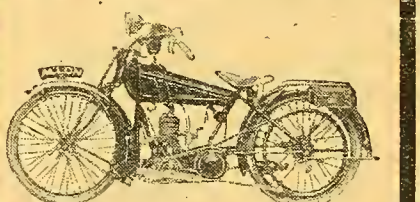
**TRIUMPH S.D.**
**£115 cash or £28 15s. down and 12 monthly payments of £7 11s. 8d.**



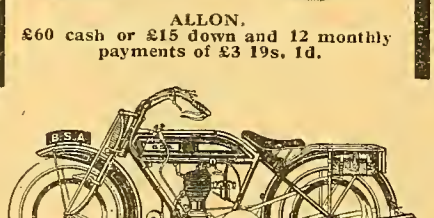
**ZENITH Model B.**
**£119 cash or £29 15s. down and 12 monthly payments of £7 16s. 11d.**



**JAMES Sports.**
**£105 cash or £26 5s. down and 12 monthly payments of £6 18s. 5d.**



**ALLON.**
**£60 cash or £15 down and 12 monthly payments of £3 19s. 1d.**



**B.S.A.**
**£107 cash or £26 15s. down and 12 monthly payments of £7 1s. 1d.**

**TRADE SUPPLIED.**

## MOTOR CYCLES FOR SALE.

### Triumph.

£18.—Triumph 3½h.p., Bosch, B. and B., boards, etc., bargain. — Fisher, "Roselei Heston, Hounslow. [

TRIUMPH, coach-built sidecar, renovated thro out, three months' guarantee; £70.—33, I ford Rd., Brixton.

TRIUMPH 1921 Model H Swan Sports, ele lighting, mudshields, Bonriksen; £115.—Scott Landford Rd., Putney. [

IN Stock.—1922 4h.p. Triumph, Model H; cas deferred; £105.—D. and S. Autocar Co., 33, Parade, Golders Green. [

TRIUMPH 1919 4h.p., 3-speed, kick start, clutch, Hughes sidecar, all lamps; £105.—Mar Walsall Garage, Walsall. [

£52.—Triumph 1918 4h.p., 3-speed, clutch, K.S. paid, fully equipped, splendid condition.—8, hop's Mansions, Fulham. [

1921 Triumph-Henderson, excellent condi hood, Cameo, accessories; £110. — Ch House, Sudbury, Suffolk. [

1918 Triumph Combination, 4h.p., beautiful c tion; £69 10/-.—37, Canterbury Rd., Pond Rd., Dalston, N.1. [

TRIUMPH Combination, 1918, countershaft, sp excellent condition, trial; 60 gns.—Owen, High Rd., East Finchley. [

TRIUMPH Combination, countershaft, new sid good tyres, excellent condition; £55.—O.G., Scholefield Rd., Holloway. [

1920 Triumph Combination, or separate, exce condition. Tan-Sad, insurance paid; £80. Pope Rd., Bromley, Kent. [

1918 4h.p. Triumph and sporting Rennoc, pe condition throughout; first reasonable cash —17, Blakesley Av., Ealing. [

1914 Triumph, 3-speed, coachbuilt sidecar, la horn, speedometer, screen, tax paid. Brampton Rd., St. Albans. [

1918 Triumph and new sidecar complete, ele lighting, splendid order; £65.—Webster, Rockingham Rd., Kettering. [

1921 S.D. All-chain Triumph and Gloria Sid Lucas lamps and horn, nice condition; £11 365, King St., Hammersmith. [

TRIUMPH 3½h.p. Combination, clutch, Bosch, frame, torpedo sidecar, splendid condition; —128, Smallwood Rd., Tooting. [

TRIUMPH 4h.p. Countershaft, 1922 renovated, carrying guarantee; £67/10.—26, Tulse Brixton. 'Phone: Brixton 1292. [

TRIUMPH 3½h.p., variable gear, free engine, tyres, ride away; £18.—28, Woodford Rd., F Gate. 'Phone: Maryland 2598 [

TRIUMPH countershaft, engine 46804, pe throughout, tyres nearly new, privately ow £60.—92, Romford Rd., Stratford. [

1914 3-speed Triumph Combination, coachb sidecar, all renovated, as new, guarant £45.—A. Clifford, Eastwood, Notts. [

1914 4h.p. Triumph and sidecar, excellent c tion, recently overhauled, 3-speed clutch; —Gales, 6, West Terrace, Folkestone. [

TRIUMPH 1918, with sidecar, good condition, and insurance paid, all on; £80; after 6 p. Warner, 87, Bermondsey St., Bermondsey. [

TRIUMPH 3½h.p. Lightweight Combination speeds, lamps, speedometer; £34; perfect dition.—Sharp, 11, Vorley Rd., Highgate. [

TRIUMPH Countershaft, 3 speeds, clutch, K5 carburetter, engine No. 55386, unregistered; £ Haynes, 28, Church St., Greenwich, S.E.10. [

62 gns.—Triumph, 1919½, 4h.p., 3 speeds, clu kick start, speedometer, licensed; exchang 12, Cornwall Mews, Gloucester Rd., S.W.7. [

1920 Triumph-Gloria Combination, with all a sories, including screen, splendid condit £87.—Parker, Erin Lodge, Buckhurst Hill. [

TRIUMPH 1915 Model H., lamps, horn, discs. £65.—Elce, Ltd., 15-16, Bishopsgate Ave Camomile St., E.C.3. 'Phone: Avenue 5548. [

1919 Triumph, countershaft, kick starter speeds, perfect condition; fully equipped new, tax paid.—47, Marsham St., Westminster. [

TRIUMPH, 1918, renovated makers 1920, and C.B. sidecar, perfect running order, very £65.—Limmer, 14, Constantine Rd., Hampstead. [

1922 Triumphs, all models. Still the finest si Catalogues with pleasure.—Sam E. Clay (Motors), 27, Stockwell St., Greenwich, S.E.10. [

1920 Triumph Combination, 4h.p. Easting, equi every possible accessory, as new; £82.— Canterbury Rd., Balls Pond Rd., Dalston, N.1. [

## MOTOR CYCLES FOR SALE.

### Triumph

IUMPH Combination, 1920, 4h.p., countershaft, Gloria car, lamps, speedometer, perfect condi- £105; evening.—88, Cecile Park, Crouch End. [3436

IUMPH Combination, special sidecar, fully equipped, large quantity spares; £80; apply 6 p.m. (except Thursday).—53, Bassein Park London, W.12. [3975

EFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stacey, mph Service Depot, 12, Ecclesall Rd., Sheffield. [0812

ARGAIN.—Triumph, 4h.p., 1914, 3-speed and clutch, lamps, good tyres, very fast, any trial xamination; £33.—61, Grand Parade, Harringay. [4036

21 Renovated Model H Triumph, by makers, lamps, horn, trip speedometer, tools, tax paid, ct condition; £68.—365 King St., Hammersmith. [4341

TE 1918 Triumph, countershaft, tax paid, all on, splendid condition; nearest offer.—G. Witt, Vooburn Cottage, Staines Rd., Bedfont, Middle- [3490

5, 3-speed Triumph Combination, lavishly equipped, speedometer, smart sporting sidecar, in tip-top ition; after 5 p.m.—4, Elm Gardens, Hammer- h. [4533

IUMPH 1919, renovated 1922, unscratched, aluminium Swan sporting sidecar, engine guaran- full insurance.—Details, Dixon, Eaton Rise, ng. [3267

21 4h.p. Sports Triumph, all chain, lamps, horn, speedometer, very fast, tax paid, bought Novem- done 1,200 miles; £95.—Middleton House, Os- ry. [3258

h.p. Triumph Junior Lightweight, lamps, horn, licensed, just been overhauled, perfect condi- £39/10.—Herbert Robinson, Ltd., Green St., bridge. [3707

19 Triumph Combination, Montgomery sidecar, windscreen, lamps, tax paid, as new, guaran- £85.—Rhind and Co., Stone Place, Rusholme, chester. [3696

h.p. Triumph, recently renovated by Trimph, tax paid, lamps, horn etc., good running order; £18 secures.—Collins, Riversley Rd., Nuneaton, wickshire. [4442

18 Triumph, countershaft, 1920 Montgomery sidecar, all on, plenty spares, condition and anically perfect; £65. — 305, Brockley Rd., kley, S.E.4. [4143

19 Triumph 4h.p., countershaft, under 3,000, perfect condition, speedometer, lamps; £75.— ons, Mountfort, Chorley Wood, Herts. 'Phone: rley Wood 88. [3404

19 4h.p. Triumph and brand new sidecar, whole outfit guaranteed mechanically perfect, new tax paid; bargain, £78.—Whisstock and Lingley, dbridge, Suffolk. [3828

21 Triumph 4h.p., all-chain countershaft combination, Montgomery sports aluminium deck, minium discs, lamps, tools, tax, exceptionally smart, anteed; £110.—Below.

20 Triumph 4h.p., countershaft, completely equipped, tax, perfect throughout, guaranteed; —Below.

18 Triumph 8h.p., countershaft combination, nearly new bulbous sidecar, tax, perfect; /10.—Below.

20 Triumph 4h.p., countershaft, equipped, per- fect, tax; complete with smart sidecar, £85.— w.

18 Triumph 4h.p., countershaft, just overhauled, good condition; £52/10. All these machines fully guaranteed and not rubbish.—Goad, engineer, nan Lodge, 122, Maida Vale. 'Phone: Hamp- 1353. [2908

IUMPH Baby 2-stroke Motor Cycle, 1921 model, ridden very little, indistinguishable from new; bargain, £47/10.—Holland, Hearsall Lane Corner, ntry. 'Phone: 1945. [3839

IUMPH JUNIOR, practically new and un- scratched, mileage negligible, expensively pped, tax paid; £40; apply after 2.—52, Durl- Rd., Upper Clapton. [4500

IUMPH-GLORIA Combination, 1921 model, almost new, tax paid, lamps, screen; Tan-Sad, es, etc.; no reasonable offer refused.—Seen, 9, lesley Gardens, Ilford, Essex. [3280

IUMPHS! All models supplied, new or second- hand, for cash or easy terms. Triumph Agents Spare Part Specialists.—The Hackford Engineer- Co., 33, Hackford Rd., Brixton. [4567

IUMPH Combination, Easting (Royal) wind- screen, speedometer, lamps, etc., new condition, l mileage 1,800, cost £158; sell £98; any trial. 9, North Side, Clapham Common. [3483

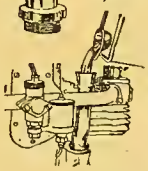
p. Triumph 1914, 3-speed, clutch, new over- hauled, enamelled, tyres good, coach sidecar; Humber Lightweight, overhauled, good; £20.— er, Victoria Rd., Garswood, Wigan. [4445


# By first post without fail

**Any spare part for any model Douglas or Williamson from 1908 upwards. Being on the spot I can get you anything you require, and guarantee not to disappoint you. Douglas Repairs completed, including a complete rebuilding and enamelling in seven days.**

**A FEW SPECIALITIES**

for your convenience. Filler, Funnel and Compression Reducer combined for 4 h.p. Douglas. The original patent. Permits the last drap of oil to be got out of the can. Sump refilled without soiling the hands. Fitted in 5 minutes, substantially made, and lasts a lifetime. **10/6.**



**PATENTED TWIN RINGS**

15 per cent. increase in power, hold compression indefinitely, prevent carbonising, reduce oil consumption and reduce friction. All the racing men and trial riders are now using them. 4 h.p., **1/8**; 2¾ h.p., **1/6** each. Insist on having them fitted.

**A NEW TWIN RING PISTON**

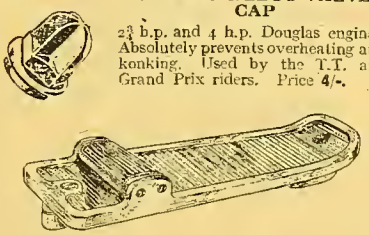
Scientifically designed to prevent distortion. Four strengthening webbs and radiating fins, gudgeon pins supported correctly. Much lighter than standard pistons, yet double the strength. Piston with rings and gudgeon pin, **14/6**. J.S. writes: "I fitted the new pistons, and was astonished at the speed and power increase."

**ZOOM! ZOOM!!**

Are you Zooming it? This lovely exhaust pipe gives a lovely Zoom note and provides an expansion chamber many times the cylinder capacity; it silences without back pressure. The most efficient system yet devised; over 2,000 sets already fitted. Beautifully finished in polished copper plate, **30/-**. Nickel plated, **33/6.**

**THE ORIGINAL AIR-COOLED ALLOY VALVE CAP**

2¾ b.p. and 4 h.p. Douglas engines. Absolutely prevents overheating and konking. Used by the T.T. and Grand Prix riders. Price **4/-**.



## The Tony Combined Footboard and Footrests (*Patented*).

Made in burnished aluminium; polished edge, non-slipping surface, solid rubber pads, ideal riding positions and keep the boots clean. Adds greatly to the appearance of any Douglas. Substantially made and unbreakable. Price **30/-** per pair.

*W. G. Coram*

THE MAN ON THE SPOT
OFFICIAL DOUGLAS AGENT
*Everything Douglas by return.*
*10 years with Doug'as Motors Ltd.*

**140, VICTORIA STREET, BRISTOL**
*(Late Douglas Motors, Ltd.)* *Tel. 3792*


## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH.—Complete range of 1922 models in stock for immediate delivery. Cash and exchanges. Easy payments 4 per cent. extra.—P. J. Evans, John Bright St., Birmingham. [3689

3½h.p. Triumph, 3-speed, clutch, re-enamelled, engine overhauled, beautiful condition and running order, all accessories, tax paid; £42.—135, Cavendish Drive, Leytonstone, E.11. [3869

TRIUMPH, 4h.p., 1920 T.T. model, fixed engine, accumulator electric lighting, mechanically excellent, tyres good, tax paid; accept reasonable offer. —Duffy, 115, Uppingham Rd., Leicester. [3329

ROBERTSONS Motors, Ltd.—1921 Triumph, all chain, Millford sidecar, accessories, tax paid, £105; chain-cum-belt, Millford sidecar, accessories, tax paid, £95.—157b, Gt. Portland St., W.1. [4217

TRIUMPH Combination, 1918, 3-speed, clutch, kick start, tax paid, hood, large locker, Easting, all accessories, recently overhauled; £75.—2, Temple Rd., Selwyn Estate, Richmond. [3577

WAUCHOPE'S, 9, Shoe Lane, London.—4h.p. Triumph and Sidecar, 1914, 3 speeds, etc.; £50; also 4 h.p. 1914 Triumph solo, 3 speeds, £40; and a 4h.p. 1918 W.D. model, 3 speeds, etc.; £65. [2932

TRIUMPH 1922 4h.p., chain-belt, £105; 4h.p., all chain, £115; Record model, fast roadster, £125; cash or terms; exchanges.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [3514

TRIUMPH Combination, 1917-18, Swan or Montgomery sidecar, overhauled by makers last December, tax, lamps, tools, discs, any reasonable offer.—"B.," 75, Carshalton Rd., Carshalton. 3899

1918 (late) Triumph, with Mills-Fulford spring wheel sidecar, the whole in excellent condition, enamel and plating as new, guaranteed; £78/10.—51, Upper Richmond Rd., Putney. [4573

BARKER'S Motors can supply all Triumph 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [3139

1921 Triumph-Montgomery (renovated), mechanically perfect, electric lighting, speedometer, windscreen, luggage grid, tools, spare belt, etc., tyres good, tax paid; £110 or near.—9, Fauconberg Rd., Chiswick. [4031

TRIUMPH Combination, 1919 model, in exceptional condition; sidecar and chassis only recently fitted at a cost of £30; speedometer and lamps, all accessories, tax paid; £87/10.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [4424

1921 Triumph, S.D. combination, purchased Triumph Co. January last, done under 1,000 miles, electric lighting, spare accumulator, hood, screen, Cowey speedometer, legshields; £120.—9, Kenilworth Court, Putney. [3232

1918 4h.p. Triumph, 3-speed, countershaft, kick starter, thoroughly overhauled, 1921 Canoelet sidecar, all on, enamel and nickelling perfect, guaranteed; £75; or exchange with cash for higher power; letters.—Evans, 52, Vicarage Rd., Camberwell. [3780

TRIUMPH H. 1921 and coach-built sidecar, fully equipped, very attractive outfit both in appearance and mechanically; £100. A similar 1919 Combination, £85. Clutch model in thorough good order, £30. All licensed 1922.—Bunting's Motor Exchange, Wealdstone. [4481

TRIUMPH Combination, tax, insurance, condition guaranteed, fitted following accessories: hood, speedometer, horn, electric lighting, long plated exhaust, Palmer cord new tyres, spare tyres, new chain, any test; £90.—21, Overhill Rd., East Dulwich, S.E. [3569

LATE 1920 Triumph Combination, Phœnix sidecar, brand new chassis, Easting windscreen, original tyres unpunctured, a splendid machine in first-class order, all lamps, spares, complete, tax paid; £110.—Back, Gardens, Rooksnest Park, Godstone, Surrey (1633). [3943

1920 4h.p. Trimph Combination, Gloria type sidecar, lamps, horn, tax paid, etc., perfect condition, latest shock-absorber on engine shaft, engine No. 73831, delivered November, indistinguishable from new, must sell; £88.—Clarge, 20, Oxford Mews, Titchborne St., Edgware Rd., London, W.2. [4299

1913 Triumph (licensed), modern frame and tank, 2-speed, hand and foot clutch, aluminium discs and legshields, new tyres and belt, speedometer, lamps, copper exhaust, kneegrips, Flexekas, Klaxon, overhauled and re-plated, perfect inside and out; £35, offers.—21, Hitherfield Rd., Streatham, S.W.16. [3638

NOV., 1919, 4h.p. Triumph Combination, Mills-Fulford sidecar, exceptionally smart, Easting windscreen and apron, apron to cover sidecar, aluminium discs, loose Bedford cord covers fitted to sidecar, legshields, electric rear and side lights, acetylene head, tyres as new, also two spares and tubes, tools, etc., new spare belt, tax paid for year; sacrifice, £80, or very near offer; private owned.—Box 1008, c/o *The Motor Cycle*. [3290

## MOTOR CYCLES FOR SALE.

### Triumph.

*Spare Parts:*

TRIUMPH Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7545

SIMPSON for Satisfaction.—Triumph ex-W.D., prices right; see "Parts and Accessories."—Orchard, Sunbury-on-Thames. [4132

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [1247

TRIUMPH Spare Parts.—Immediate delivery of genuine Triumph spares. Authorised Triumph Service Agents.—J. E. Lawes, Ltd., The Triangle, Aldershot. [3494

TRIUMPH Agents since 1906.—All Trinmph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; gear overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10. [0809

SEND to the Rhosha Motor Garage, South St., Romford, for Trinmph and Sturmey-Archer spares. No disappointing delays; every part in stock. Repairs by skilled mechanics. We are official service agents. Telephone: Romford 584. [7766

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hnndreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Trinmph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Trump.

TRUMP-J.A.P. 1914 4h.p., 3-speed, clutch, kick start, taxed, equipped; 26 gns.—37, Elmbank Gardens, Barnes Bridge. [4176

### Velocette.

PREMIER Motor Co., for 1922 Velocettes,

IMMEDIATE delivery of Model E.2 2-speed, £65; E.3 3-speed, £72/10; E.L.2 lady's open frame, £68; all with clntch and kick starter; easy payments, 4 per cent. extra; carriage paid to any address.—Premier Motor Co., Aston Rd., Birmingham. [3020

£32.—1919 2¼h.p. Velocette, 2 speeds, fully equipped, perfect.—King, Egrove Farm, Oxford. [4093

VELOCETTE 1921 2¼h.p., 2-speed, all chain drive, tax paid; £48.—Maudes', Walsall Garage, Walsall. [4679

VELOCETTE, 2¼h.p., 2-speed, all-chain, lamp, horn, new condition; £28/10.—Warwick, Hinckley Rd., Leicester. [3587

1921 Velocette 2¼h.p., 2-speed, legshields, lamps, horn, tax paid, as new, 49 gns.—Owner, 61, Westow Hill, Upper Norwood, S.E. [4262

VELOCETTE.—Last 2 late 1921 models, 3-speed, £60; ladies', £57/10; splendid opportunity, take it now.—O'Donovan Motors, 76A, Gt. Portland St., W.1. [4235

VELOCETTE, 1920, gent's model, 2-speed, Lucas lamps, horn, tools, splendid condition; £45.—Mrs. Gale, 49, Rookery Rd., Bournbrook, Birmingham. [4446

### Verus.

1920 Verus Blackburne, 4h.p., Sturmey gearbox, lamps, speedometer; £55, or near.—Paine, Boro', Canterbury. [4432

SPORTING Verus, late 1920, 2½h.p. Blackburne, 2-speed, clutch, kick start, engine just thoroughly overhauled, dual lighting set, Ace discs, licensed; £48.—14 Kildoran Rd., Brixton. [3451

1920 Verus 2¼h.p., single-speed, good as new, electric light outfit, good accessories, suit overalls (5ft. 6in.), insurance, tax paid; lot cost over £75; 40 gns., no offers; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [1020

### Vindec.

VINDEC Special 6h.p. Twin, less one cylinder and magneto; £5.—Saunders, 80, Cotterill Rd., Surbiton. [3242

VINDEC Special (1921) 8h.p. J.A.P. Combination, Sanduni sidecar, Easting windscreen, lamps, Klaxon, tax paid 1922; £80.—A. J. L., 14, Constantine Rd., Hampstead. [3423

### Werner.

£22.—4h.p. Werner, fast, powerful; take lower power part.—57, Kenbury St., Camberwell, London. [3917

### Westwood.

WESTWOOD-J.A.P. 1921 8h.p., 3 speed, all chain, super-luxurious sidecar (cost £47), hood, screen, legshields, dynamo lighting, speedometer; cost over £220; mileage 3,000, absolutely as new; 98 gns.; solo part.—110, Upper Richmond Rd., East Sheen. [4203

### Wolf.

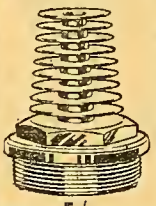
£12.—Wolf Lightweight, magneto, tax paid; ride away.—Howe, Nirvana, Fernbank Rd., Ascot. [3252


# William Nichols & Co.

**CLOUCESTER MANSIONS, CAMBRIDGE CIRCUS**

Tel.: Ger. 6472. **LONDON, W.C. 2**

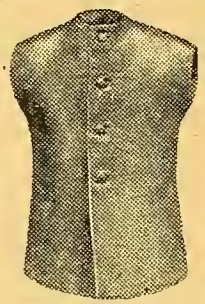
## Motor Cyclists ! ! !



**Replace** your exhaust valve caps with our aluminium air-cooled plug.
As used in the T.T.
Keeps your valve and engine cool.
Increases your power.
Reduces petrol consumption.
Stops pinking.
Supplied to fit any engine.
Made of pure aluminium.
Machined all over.
Aero-engine quality.

Price **5/-** Post free. Any engine.
When ordering—state make of engine and H.P.

## Clearance Line of Leather Jerkins



These Jerkins are made in strong leather lined with warm woollen material. They make ideal garments for Motorists, Motor Cyclists and Drivers, etc., and will give years of hard service. In splendid condition—well cut—soft and pliable—wind and cold proof.

State size — small, medium or large.

Price **7/-** each.

## Leather Driving Gloves

Soft and pliable, gusseted at wrist with tab & press-button fastener.

Made of best selected skins. Will stand the tests of heat, steam, water and washing.

Price **3/9** Ideal for Motorists, Cyclists, etc.

## Hutchinson Tyres—Clearance

**All new guaranteed Goods**

| Size. | Make. | Our Price. |
|---|---|---|
| 26×1¾ | Hutchinson, Brookland, Rub. Std. | 19/6 |
| 26×2 | " " " | 20/- |
| 26×2½ | " " " | 20/- |
| 26×2 | " T.T. " | 26/- |
| 26×2½ | " T.T. " | 26/- |
| 28×2½ | " T.T. " | 26/6 |
| 26×2 | " Passenger " | 30/- |
| 26×2½ | " " " | 30/- |
| 28×2½ | " " " | 32/- |
| 26×2½ | " three-ribbed | 28/6 |
| 26×2¾ | " " | 28/6 |
| 650×65 | " Light Car " | 30/6 |
| 700×75 | " " " | 30/6 |
| 650×75 | " Small Car " | 33/- |
| 750×75 | " " " | 33/- |

**HUTCHINSON TUBES—CLEARANCE. ALL SOUND.**

**26 x 2¼ and 26 x 2¾ .....4/11**

We have all other sizes in stock at proportionate prices—Send your inquiries—all goods sent post free, carriage paid against remittance.

Three days' approval.


## MOTOR CYCLES FOR SALE.

### Wolf.

WOLF-ENGINED 2-stroke 2¾h.p., new tyres, la horn; £15.—Foster, 24, Park Rd., Sunbury. [

£15.—2¾h.p. Wolf, m.o.h.v., guaranteed good ning order.—King, Egrove Farm, Oxford. [

### Wooler.

WOOLER, 1920, mileage 2,500, best offer; change 2-stroke and £20.—9, Woolwich Belvedere, Kent. [

WOOLER 2¾h.p., last year's actual T.T. mach very fast, as new, £55; standard tom new 1921, £50; also Brooklands model, as new.—L man Bros., 17, Bond St., Ealing. Tel.: 689. [

NEW Wooler 2¾h.p., flat twin, Brookl sports model, complete with lamps and horn duced from £105 to £69; a bargain; easy paymen Harrods Motor Cycle Dept., 118, Brompton London. [

### Yale.

YALE 8h.p., engine in thorough order, tyres g lamps, variable gear, clntch; £55, or near —Bailey, 25, London St., Reading. [

### Zenith.

ALLAN GRUZELIER, Zenith Specialist.

BRAND new 1921 5h.p. Sports Zeniths at 76

SLIGHTLY used 1921 5h.p. Sports model, spe meter, lamps, taxed, perfect; £75.

£60.—Brand new 2¾h.p. models, Gradua gear.

ALL 1922 models for immediate delivery London or Coulsdon.

LONDON Office, Ulster Chambers, 168, Regent Regent 205. Works, Knight and Wheat Garage, 4, The Pavement, Coulsdon. [

1919 8h.p. Sports Zenith, fully equipped, spe meter, tax paid; £55.—186, Southgate Rd. [

ZENITH 6h.p. Countershaft Combination; mus sold, £65, near offer.—58, Burns Rd., Harle [

ZENITH 5h.p. Sports, 1921, new and guaran few only left; 76 gns.—Clark, 7, Exhibition S.W.7. [

ZENITH, 1917, 4h.p., re-enamelled, fast, la pillion, etc.; sacrifice £40.—158, Grange Plaistow, E.13. [

ROBERTSONS Motors, Ltd.—1922 shop-s Zenith-Bradshaw, Gradua gear; £100.—157b, Portland St., W.1. [

3½h.p. Zenith, Sports model, Gradua gear, la horn, speedometer, speedy; £45.—Git Church St., Oswestry. [

8h.p. Zenith, sidecar, Tan-Sad, excellent condi licensed; £54.—Harwood, 100, Avenue Rd., Cottage Station, N.W.3. [

F.O.C.H. for Zeniths.—Latest models in stock; 1920 8h.p countershaft combination.—5, H St., Hampstead (near Tube) [

ZENITH 6h.p. Millford sidecar, lamps, windsc Klaxon, tax paid, perfect; £65.—221, Winch Rd., Higham Park, Chingford. [

ZENITH 8h.p. J.A.P. Countershaft Combina renovated; £90 or near offer to Hubert K Fernside, Inglesham, Lechlade. [

ZENITH Combination, 3½h.p. J.A.P., Gradua perfectly reliable, any trial; £40.—Seed, Mount Pleasant Rd., Crouch Hill, N.4. [

6h.p. Zenith C B. Combination, clutch, Gr gear, all on, good condition, tax paid; £ How, 13, Cotterells, Hemel Hempstead, Herts. [

£60 or near offer.—Late 6h.p. Zenith, special car, all accessories, perfect condition, ge bargain.—224, Hale End Rd., Woodford Green. [

1920 (late) 8h.p. Zenith sports combination, l lamps, horn, new belt, taxed, guarantee new; £87/10.—51, Upper Richmond Rd., Putney [

ZENITH 7-9h.p. Sports, special machine, only in England, very fast; £130; shop soil Barker's Motors, 194, Balham High Rd., S.W.

1920 Zenith 8h.p. countershaft Combination, p order, first-class condition, accessories, extras; bargain, £105.—114, Woodstock Rd., O

ZENITH 8h.p. Sporting Combination, mileage licensed 1922, speedometer and full equip £90. Like new.—Bunting's Motor Exchange, W stone.

ZENITH 1921 8h.p. Countershaft Combin speedometer, lamps, horn, taxed, new cond under 1,000 miles; £115.—Clark, 7, Exhibition S.W.7.

ZENITH-J.A.P., 1920, 5-6h.p. sporting Combin electric light, screen, speedometer, acces insured, low mileage; offers.—12, High Lane, Cho cum-Hardy.



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue

Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.
### Zenith.

7 8h.p. Sports Zenith, perfect, all new parts, tuned, do over 70 m.p.h.; £65, or exchange h or Triumph.—Howarth, Stand Lodge, Rad- Lancs. [4362

10.—Sports Zenith, 1919, 5h.p., excellent con- ition, only done 3,500, Bonnikseu, mechanical real bargain; Cambridge.—Box 1156, c/o *The Cycle*. [4468

2 Sports Zenith-Bradshaw, chain drive, 3 speeds, kick starter, long exhaust pipes, brand new, just ed, tax paid; sacrifice, 100 gns.—King, 523, Lord uthport [2129

ITH 1919, 8h.p. J.A.P., with Dunhill coach- uilt sidecar, hood, screen, lamps, etc., tax paid ul of year; £92/10.—Wilkins Simpson, Opposite ria, London. [3672

Zenith-Bradshaw, slightly used for a few demonstrations, indistinguishable from new, uarantee; sacrifice, £95.—Frank Whitworth, 139, St., Birmiogham. [0711

E 1921 Sports Zenith Combination, lamps, horn, Ace discs, tools, tax paid, only needs owner buying car; £125. — French, 21, am Rd., Tooting. [3822

ITH Combination 1920 8h.p., kick start, clutch, lectric lighting, hood, screen, guaranteed per- £80.—Marcus, Broadway, Tilbury Docks, and ilsa Rd., Westcliff. [3236

9 Zenith 8h.p., sporting, electric lighting, double oiling, special 4in. plated exhaust, special discs, xceptionally smart; £65.—Goad, 122, Maida Vale e: Hampstead 1353. [2909

ITH, 1919, 8h.p., Sports, and C.B. sidecar, hood and screen, competition mount, overhauled s, good dual-purpose machine; £85 cash.—2, r Rd., E. Dulwich. [3583

ITH-GRADUA, 4h.p., 1914, coachbuilt under- slung sidecar, fully equipped, spares, licensed, lass condition; £38, near offer. — Miles, 48, n Rd., Forest Gate. [3946

ITH-BRADSHAW 1922, 3-speed, all-chain drive, n stock; £119. Best prices allowed on exchange —Newnham Motor Co., 223, Hammersmith Rd., 'Phone: Hammersmith 80. [2371

W nnused 8-10h.p. 90 mm. bore, o.h.v. Zenith, built to special order for amateur competition unable to take delivery from agent; cost £146, cept £110.—Horton, 44, Barbourne, Worcester. [4151

. Zenith, 90 bore, new cylinder, carburetter earings, lamps, horn, Alum discs, long exhaust, paid, fully insured, do 55; £40 or offer.— s, Cambrian House, Royal Circus, West Nor- [3814

RKER'S Motors can supply 1922 Zeniths, all nodels, at list prices, and give an insurance against mechanical breakdown for 12 months Cash, deferred or exchanges.—194, Balham High S.W.12. [3141

2 8h.p. Zenith countershaft Combination, polished aluminium sporting body, fully equipped, ed, only run 1,000 miles, cost £185 in January accept £120.—Beech, 103, McIntyre Rd., St. s, Worcester. [4314

RTS Zenith 4h.p. Twin, speedometer, lamps, orn, licensed for whole year, good tyres, a very od sporting bike, condition as new; £45.—James and Sons, Ltd., 24 and 25, Brook Mews North, ster Gate, W.2. [4252

. Zenith Countershaft, 1915, stored several years, oachbuilt sidecar, tools, lamps, spares, tax paid, condition, £65; also Rennoc sidecar, 1921, extra , mileage 400, seat for child, £18.—" Sandleford," her Rd., N. Finchley, N.12. [3735

0-21, 8h.p. Zenith combination, countershaft, K.S., electric lighting, speedometer, large Canoe- decar, luggage grid, accessories, etc., practically new, tax and insurance for year; £85.—C. S., watoa Rd., Bow. Tel.: E. 3155. [4550

ITH late 1921 8h.p. clutch Combination, elec- ric horn and lighting, with dimmer, Easting, ge grid, special rear seat, speedometer, every guaranteed as new, tax paid; £140; trial after .—252, St. Ann's Rd., Tottenham. [4013

. Zenith (June, 1920), clutch, countershaft, ick start, speedometer, Tan-Sad, Klaxon, lamps, tax paid 1922, perfect condition, only 2,000 miles, any examination, trial by ap- ment; £85.—Walters, Harold Gardens, Wick- Essex. [3611

20 Zenith 8h.p. countershaft Combination, as new, special engine, done 4,000 miles, electric Easting screen, Tan-Sad, Ace discs, Stewart Cowey speedometer, quantity of spares, sidecar stered in corduroy; £125.—Hamilton, 17, Fen- h St. [4560

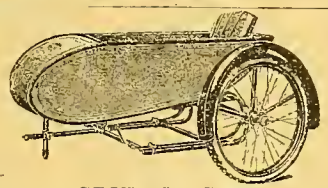
ITH 8h.p. Sports (July, 1921), Lucas equip- ment, Smith trip speedometer, Cox Atmos, s, Runbaken spark intensifiers, valve-stem ators, under 5,000, decarbonised April, first- condition, tyres perfect, full kit, spare tubes, very fast, good reason selling, trial; £80.— n, Richmond Rd., Altrincham. [3823


**JAMES GROSE LTD.,**

Established 1876.
'Phones: 7712 Central 1297 Orth. City 3634
OLD JEWRY, CHEAPSIDE, E.C.2.
and at 255-257, Holloway Road, N.;
8, New Bridge Street, E.C.

## SIDECARS

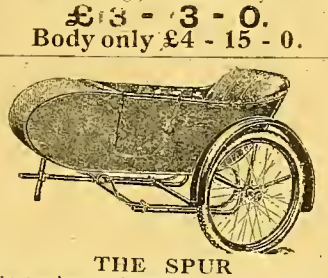
**We specialise in Sidecars, and can supply from Stock to fit almost any make of machine, and will fit free of charge.**



SPUR RACER.

Light sporting coachbuilt body, with small Locker fitted, on light underslung chassis, complete with all fittings, and studded tyre—

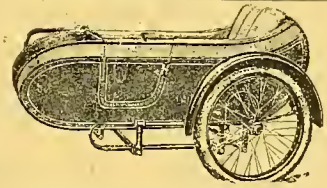
**£13 - 3 - 0.**
**Body only £4 - 15 - 0.**



THE SPUR

Light touring coachbuilt body, well upholstered, with locker under seat, light underslung chassis, complete with all fittings, and studded tyre—

**£14 - 14 - 0**
**Body only £6 - 6 - 0**



SPUR LA GRANDE.

The smartest Sidecar on the road. Best coachbuilt body with large bulbous back giving a large locker, spring upholstering and special shape door, chassis heavy underslung, four-point connection, valanced mudguard, etc., and complete with Hutchinson tyre—

**£23**
**Body only £10 - 10 - 0.**

## CHASSIS.

The **SPUR,** complete with all fittings, mudguards, wheel, etc. ..... **£7 7 0**
The **SPUR Heavy,** underslung, fitted with 4-point connection, valanced mudguard, etc. **£10 10 0**
The **SPUR Tandem,** specially suitable for Harleys and heavy twins, will take family body, etc., built of heavy gauge tubing, 3-leaf spring, 5-point connection, valanced mudguard, with special fitting any size wheel ..... **£16 16 0**
The **SPUR Indian,** specially made for spring frame Indian 4-point connection, valanced mudguard, 28in. wheel, finished in Indian red, complete ..... **£18 15 0**

**A Special Show of Sidecars is always on view at our Holloway Road Branch, which closes at 1 o'clock Thursdays and 9 o'clock Saturdays.**


## MOTOR CYCLES FOR SALE.
### Zenith.

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [7222

### Ladies' Motor Cycles.

1921 Ivy, 2-speed, clutch, K.S., electric lamps, horn, accessories, tax paid, condition as new, no dealers; £50.—Seen 148, Parnell Rd., Bow, E.3. [3295

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

DOUGLAS, lady's model, 2¾h.p., 2-speed, tax paid, new tyres; accept £24 cash.—Moore's Presto Motor Works, Ltd., North End, Croydon. 'Phone: 2624. [3322

VELOCETTE 1922 Models, with clutch and kick starter, for immediate delivery; 2-speed, £63; 3-speed, £75; all black weatherproof finish, all-chain drive, open frame, giving very low position; the ideal ladies' mount; easy payments, 4% extra; illustrated catalogue free on request.—Premier Motor Co., Aston Rd. [3023

### Miscellaneous.

JONES Garage, The Broadway, Muswell Hill, N.10, and Woodside Parade, North Finchley.

NOTICE.—We are open all day every Saturday, and have all makes in stock. Write, call or 'phone Hornsey 2917 for big bargain list.

1919-21 Ariel, 3½h.p., and sidecar, Mr. F. E. Jones's competition gold medal machine, specially tuned; £80.

1920 Radco, 2½h.p., 2-speed, fully equipped, perfect little 'bus; £32/10.

ROVER, 5-6h.p., Sports solo, 3-speed, all-chain, shop-soiled, otherwise new 1921; £110.

RUDGE I.O.M., shop-soiled, £70; 8h.p. Enfield Combination, Magdyno, 1921, indistinguishable from new, £145.

1919 P. and M. Combination, exactly as new, equipped; £70.

1921 3½h.p. Rover Combination, unused, special model, £97/10; Hobart-Villiers, shop-soiled, £42/10.

1920 Ariel, 3½h.p., equipped, £72/10; also second-hand and new sidecars from £7/10.

1921 Matchless, Model H, Magdyno Combination, spare wheel, speedometer, Easting, every accessory, indistinguishable from new, very exceptional outfit; £145.

1919 2¾h.p. Douglas, 2-speed, fine sporting little bike, as new; £37/10.

1919 8h.p. New Imperial Combination, fully equipped, licensed, £85, scarcely used; our special bargain of the week. Any of the above can be had for one-quarter down, balance in 6 or 12 payments; all guaranteed 3 months. Send for particulars. — Jones Garage, Broadway, Muswell Hill, N.10. Motor 'bus from Highgate or Finsbury Park. [4625

8h.p. J.A.P. Twin, as new; £18.—12, Broadway, Muswell Hill, N.10. 'Phone: 668 Hornsey. [4016

TO prevent disappointment, don't forget Bunting's Motor Exchange, Wealdstone, is closed Sundays. [4479

£19.—2-stroke, new engine, etc., recently fitted, perfect running order, licence, insurance; seen after 6.—8, Highlands Av., Acton. [4179

2h.p. Kerry Light Motor Cycle, £7/19/6; Mobile Scooter, mechanical magneto, etc., Palmer's, £11/19/6.—Littleover Works, Derby. [3521

FORGE Garage, 74-76, Brighton Rd., Surbiton; 'phone: Kingston 3052, have the following machines for sale or exchange at bargain prices:—

FORGE.—A.J.S. 5h.p., twin cylinder, countershaft gear, all-chain drive, hand clutch; £45; or exchange.

FORGE.—Indian Combination, 3-speed gear box, kick starter, splendid condition; £50; or exchange.

FORGE.—O.K. Junior, 2-speed gear box, in excellent running order; £20.

FORGE.—Douglas 1918 2¾h.p., 2-speed, disc wheels, speedometer, nearly new condition, fully equipped; £36; or exchange.—Forge Garage, 74-76, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [4638

1916 5h.p. M.A.G. Combination, 3-speed kick start, windscreen, licence paid year, Tan-Sad, just overhauled; cash wanted.—Peek, Reepham, Norfolk. [3994

HALIFAX.—Fifty Second-hand Machines and Combinations; cash, exchange, or deferred payments; get list.—Halifax Motor Exchange, Horton St., Halifax. [4406

1920 3½h.p., 3-speed, clutch, kick starter, semi-T.T. bars, Lucas lamps and horn, licence paid; £75.—Delamere, 74, Mount Pleasant, Barrow-in-Furness. [4489

## MOTOR CYCLES FOR SALE.
### Miscellaneous.

WANDSWORTH Motor Exchange.—Fine selection motor cycles, combinations; prices right; exchanges; easy terms.

WANDSWORTH.—Cheap machines is our motto; cheap machines; nothing dear; all cheap.

WANDSWORTH.—East terms; the only firm to give immediate delivery first deposit.

WANDSWORTH.—Henderson clutch model 8h.p. 4-cylinder, chain drive, cheap; 39 gns.; easy terms.

WANDSWORTH.—Indian 7h.p. twin, 2 speeds, clutch, beautiful condition; 46 gns.; easy terms.

WANDSWORTH.—India 7h.p. twin, 2 speeds, spring frame, newly enamelled blue, nickel plated; 55 gns.; easy terms.

WANDSWORTH.—Indian (late) Powerplus 7h.p twin, 3 speeds, spring frame; 55 gns.; terms.

WANDSWORTH.—Indian, lovely coachbuilt combination, 7h.p., 3 speeds, disc wheels, hood, screen, lamps; 65 gns.; easy terms.

WANDSWORTH.—Indian, 1921, dynamo lighting, bulbous sidecar, 7-9h.p., 3 speeds, hood, screen, 110 gns.; terms.

WANDSWORTH.—Henderson, 1920, dynamo lighting, 12.2h.p., 4 cylinders, 3 speeds; 95 gns.; easy terms.

WANDSWORTH.—Scott, 1920, latest, practically new, unscratched, coachbuilt combination; only 85 gns.; terms.

WANDSWORTH.—F.N., magnificent machine, 5-6h.p., 2 speeds, clutch, newly enamelled red, nickel plated; 49 gns.

WANDSWORTH P. and M., 3½h.p., 2 speeds, chain drive, going cheap; offers; easy terms.

WANDSWORTH.—Rex (late) coachbuilt combination, 6h.p., twin, 2 speeds; 48 gns.; easy terms.

WANDSWORTH.—Triumph coachbuilt Combination, 4h.p., 3 speeds, lamps, speedometer; 59 gns.; easy terms.

WANDSWORTH.—Triumph coachbuilt combination, 3½h.p., 2 speeds, lamps; only 49 gns.; easy terms.

WANDSWORTH.—Humber coachbuilt combination, 4½h.p., twin, 2 speeds, lamps; 39 gns.; easy terms.

WANDSWORTH.—Bradbury coachbuilt combination, 4h.p., 2 speeds, screen, lamps; 39 gns.; easy terms.

WANDSWORTH.—Singer 3½h.p. clutch model, kick starter, drive away; 22 gns.; easy terms.

WANDSWORTH.—Condor (sporting type), 3½h.p good tyres, low built; 22 gns.; easy terms.

WANDSWORTH.—Motosacoche, 2½h.p., variable gear, nice little runabout machine; 19 gns.; easy terms.

WANDSWORTH.—10 beautiful coachbuilt sidecars, Glorias, Grindleys; 15 gns.; others 8 gns.; easy terms.

WANDSWORTH.—Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth (town station). 'Phone: Latchmere 4686. [4207

ALLBER Garage, Thornsett Rd., Earlsfield, London, S.W. (opposite Station, L.S.W. Railway). 'Phone: Latchmere 4388. Terms, no extra with good deposit. Immediate delivery. No inquiries. Satisfaction guaranteed.

ALLBER.—Clyno 1920 2-stroke, 2 speeds, clutch, all accessories, tax paid, in new condition; £40.

ALLBER.—Sun-Villiers 1916 2¼h.p., all accessories, good order; £21.

ALLBER.—Ixion-Villiers 2½h.p., complete with lamps, in running order; £24.

ALLBER.—Levis 1916 2½h.p. 2-speed, all accessories, good order; £35.

ALLBER.—A.E.L.-J.A.P. 1922 2¾h.p., 2 speeds, clutch, kick starter, splendid machine, brand new; bargain, £48.

ALLBER.—Invicta-Villiers, 1920, practically new; £32.

ALLBER.—Douglas 1917 2¾h.p., 2 speeds, all accessories, tax paid, good order; £35.

ALLBER.—Rudge, 1920, I.O.M., Multi gear, all accessories, splendid condition; £55

ALLBER.—Hnmber 1914 3½h.p., 2 speeds, handle start, all accessories, tax paid; £25.

ALLBER.—1921 Baby Triumph, as new, tax paid, all accessories; £45.

ALLBER.—1921 Rudge-Multi twin combination, all accessories, condition as new; £75.

ALLBER.—Ariel combination, 1921, 6h.p., fitted all accessories, new condition, splendid outfit; £95.

ALLBER.—New Hudson combination, 4h.p., 3 speeds, clutch, all accessories, tax paid, splendid order; £40. [4236


GET YOUR TYRES AT THE TYRE HOUSE

**SPECIAL BARGAINS IN BRAND NEW COVERS**
**CLEARANCE**

*Quality counts as well as price.*

**24×2¼ for 24×2 Rim.**
Clincher Junior de Luxe ..... 18/6

**26×2.**
Clincher Ar Ribbed ..... 17/6
Rodace Fluted Tread ..... 16/6

**26×2¼.**
Wood-Milne Keygrip 4-Ply ..... 22/6
Wood-Milne Combination ..... 25/6
Pedley 3-Ribbed Medium ..... 33/–
Pedley 3-Ribbed ex. heavy ..... 37/6
Hutchinson Passenger Rubber Stud ..... 37/6
Goodrich Safety Tread ..... 33/–
*Hutchinson Super Stud Strong ..... 36/6
*Hutchinson Super Stud ex. Strong ..... 47/–

**25×2¾ to fit 2½ Rim.**
Heavy Rubber Non-skid, leading make .. 35/–
Hutchinson 3-Ribbed ..... 31/–
*Hutchinson Super Stud ..... 41/6
*Hutchinson Super Stud ex. Heavy ..... 49/6

**26×2¼ to fit 2½ Rim.**
Hutchinson Rubber Stud ..... 38/6
Englebert Touring Rubber Stud ..... 39/6
Heavy Non-skid, best make ..... 37/6
*Dunlop Extra Heavy ..... 55/3
*Hutchinson Super Stud ex. heavy ..... 55/3

**26×2½ for 2½ Rim.**
Clincher Sidecar Ribbed ..... 18/3
Skew Rubber Non-skid ..... 17/6
Skew ex. Heavy Rubber Non-skid ..... 21/6
Wood-Milne Combination ..... 25/6

**26×3 for 2½ Rim.**
Hutchinson T.T. Rubber Stud ..... 39/6
Hutchinson Passenger Rubber Stud ..... 45/6

**28×3.**
Englebert ex. Heavy ..... 42/6
Goodrich Safety Tread ..... 48/6
*Avon 3-Ribbed ..... 55/3
*Avon Sunstone ..... 56/3
*Dunlop Extra Heavy ..... 65/3
*Firestone Non-skid ..... 72/3
*Goodyear Diamond ..... 72/3
*Dominion Traxion Tread ..... 72/9
*Hutchinson Super Stud ..... 64/3

**28×2½.**
Clincher Ribbed Sidecar ..... 23/6

**650×65.**
Light Weight Fluted ..... 25/6
Wood-Milne 3-Ply ..... 35/–
Wood-Milne 4-Ply ..... 38/6
Clincher de Luxe ..... 39/6
Hutchinson 3-Ribbed ..... 59/6

**700×80.**
Heavy Rubber Stud ..... 39/6
Avon Square Tread ..... 39/6
Clincher Fluted ..... 41/3
*Firestone Non-skid ..... 69/6

Covers marked * are regular stock and not clearance.

*All goods sent Carriage Paid on 7 days' approval against remittance.*

**Pike Tyre & Rubber Co., LTD.**
**The TYRE HOUSE,**
**83, Theobald's Road, Holborn, W.C.1.**
**Phone: Museum 1543.**


## MOTOR CYCLES FOR SALE.
### Miscellaneous.

ABINGDON King Dick 3½b.p., 2-speed N.S.U. g £20; Douglas 2¾h.p., re-enamelled, plated, speed, £32; both perfect.—187, King's Cross London. [4

LIGHTWEIGHTS and higher power machines f £16 to £150; all in good order. Inquiries inspection invited. Closed Sundays.—Bunting's M Exchange, Wealdstone. [4

BUNTING'S Buy, Sell, or Exchange any make motor cycle. State your requirements. We no take to do your business and give you satisfact Distance immaterial.—Bunting's Motor Excha Wealdstone. [0

1921 2¾h.p. Douglas, 2-speed, £59; 1918 Trium countershaft and accessories, £60; 1921 J Diamond, 2¾h.p. Enfield gear, £40; 1920 Sunbe Combination, £105; 1915 Douglas Combinat £62/10.—Welfare, 21, Barmouth Rd., Wandswo S.W. [4

BARGAINS in Motor Cycles and Sidecars.- limited number of 1920 and 1921 shop-so models, all well-known makes. Best offer secures each case. Send for list or call and inspect.—Me and Mebes, 144, Gt. Portland St., W.1. 'Pho Langham 2250. [3

8-10b.p. overhead valve twin Jap-Star engi solo, sporting mount, built for speed, all-ch drive, top gear ratio 2½-1, mechanically sou complete with lamps, speedometer, etc., no reasona offer refused; to be seen by appointment at Bexley Rd., Erith. [3

F.O.C.H. for secondhand cycles, combinations runabouts at bargain prices. Exchanges anged. Any new cycle, combination or car s plied, cash or deferred payments.—Fair Offer House, 5, Heath Street, Hampstead (near Tu Phone: Hampstead 3752. Hours 9-7, includ Saturdays. [1

BLACKPOOL Bargains.—2-speed O.K., £24/10 1919 Douglas, £45/10/6. 1919 4h.p. Dou combination, £79/10/6. 4h.p. Douglas, £55/10 1920 Tamplin, £79/10/6. 1920 Morgan de L peedometer, water-cooled magneto engine, £155/10 Several others cheap. Push cycles taken in exchar Motor cycles purchased for cash.—Booths' Motor 394, Waterloo Rd., Blackpool. [9

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, period.—Write terms, Fowler Brigden, Enston Rd. [0

ROBERTSONS Motors, Ltd., for many years b specialised in this class of work. If machine purchased, full amount of hire up to one week allowed.—157b, Gt. Portland St., W.1. [4

## MOTOR CYCLES WANTED.

H

F

EDWARDS and Co.,

101 Gt. Portland St., W., are cash buyers of so combinations, and Morgans. Highest pr given, distance no object. Call, write, or 'phone: M fair 4027. [0

T.B

WANT

500 COMBINATIONS and Solos, any make, g antee top prices given.—T. and B. Motor Ltd., 372, Enston Rd. Museum 6581. [5

A

MAUDES' Motor Mart are purchasers for spot c of late models Sunbeam, Triumph, Douglas, N ton, and Morgans.—Maudes', 100, Great Portland London. [4

WE

ARE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combinati We pay cash on sight.—Write, call, or 'ph Museum 1337.—Percy and Co., 314, Euston Rd. [0

£25 offered for 3-speed hub geared Triumph.—1 1131, c/o *The Motor Cycle.* [4

P. and M. Solo or Combination.—Kemp, 4, Berke Mews, Edgware Rd., W. [4

LATE model combination for cash.—14, Swaton R Bow. Tel.: E. 3155. [4

WANTED, cheap Combination; not exceeding £ —Box 1132, c/o *The Motor Cycle.* [4

## MOTOR CYCLES WANTED.

/E

LWAYS Buy

OLOS, combinations, cycle cars. If in town, write, phone, or call. If country, send to London minus. We collect free and send best cash offer. T. Dunn, Ltd., 326, Euston Rd., London Museum 01. [0332

ALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

ALMER'S Garage, Tooting, will make you a cash offer at sight.

ALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at mer's Garage.

ALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

ALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale, every ursday at 2.

ALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

ALMER'S Garage, Tooting, will collect machines from any London railway station. The auction is held every Thursday, commencing 2 p.m.

ALMER'S Garage, Tooting.—If cash offer not accepted, machine can be included in auction sale every Thursday.

ALMER'S Garage, Tooting.—You fix the price and we do the rest.

ALMER'S Garage, Tooting.—Terms: Selling commission, 7½ per cent., not chargeable unless chine is sold. If no sale, a nominal auction fee is rged—for motor cars, 20/-; motor cycles under value, 5/-; ditto over £50 value, 10/-. When effect a sale, these charges are cancelled and commission charged.

ALMER'S Garage, Tooting.—Catalogues free. Telephone: 208 Streatham. Telegrams: Palmer's rage, Tooting. [4597

ATE model Triumph, solo or sidecar, cheap for cash.—88, Brampton Rd., St. Albans. [4187

IGHTWEIGHT, kick start, late model, cheap for cash.—4, Gaywood Rd., Walthamstow. [3560

/ANTED, motor cycle, any condition, cheap, cash waiting.—61, Grand Parade, Harringay. [2672

. and M. Solo, £30, not earlier 1918; state particulars.—Berry, 139, Brunshaw Rd., Burnley. (D) [3265

920 Harley or Indian Combination; under £90.—Slade, Tunnel Farm, Blisworth, Northants. [3420

RIUMPH Combination or Solo; reasonable price.—Foyle, Drapers, 149, Stockwell, Brixton, S.W.9. [4630

25-£30 Cash offered for good lightweight with gears.—Baker, 42, Tranmere Rd., Earlsfield, S.W. [3350

/ANTED, Triumph motor cycle with gear box, any condition.—Box 1122, c/o *The Motor Cycle*. [3733

OOD Modern Motor Cycles required immediately for cash.—110, Upper Richmond Rd., East Sheen. [4205

/ANTED, good second-hand 2-stroke; offer cash and old Triumph.—Rupert Smith, Thrapston. [4364

OUNTERSHAFT Triumph, good price given, condition immaterial.—33, Hackford Rd., Brixton. [4568

OMBINATION wanted; about £35; before Whitsun.—Offers to Mr. Wright, 97, Tollington Park, [4245

/ANTED, cheap, 1912 4h.p. Bradbury cylinder.—Booker, 104, Park Rd., Chesterfield, Derbyshire. [3384

/ANTED, reliable cheap combination, appearance immaterial, no dealers.—60, Barrington Rd., W.9. [3348

OMBINATION, 1920-21, noted make, test required, cheap for cash.—Elliott, 61, Bromley Common, mley, Kent. [2225

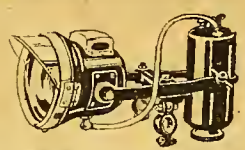
OUNTERSHAFT Combination, single, for business purposes, cheap.—Clements, 37, Clovelly Rd., swick, W.4. [3867

/ANTED, Countershaft Combination or solo; about £55. 37, Arlington Rd., Surbiton. 'Phone: ngston 1274. [4269

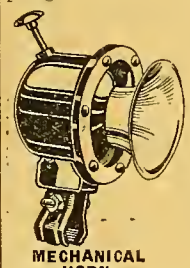
/ANTED, Triumph motor cycle or combination, 4h.p. countershaft; cheap, cash.—P. Riddelsdell, xford, Suffolk. [3361

/ANTED, 2¾h.p. Douglas or New Imperial.—Maynard, 161, Bowes Rd., Bowes Park, N.11. 'Phone: mers Green 19. [3966

/ANTED, Solo or Combination, 1920-21 model; cash waiting.—Hillier, Side Bell, 9, Wallingford , North Kensington. [4193



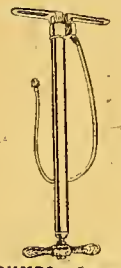
**LAMP SET.**—4in. front glass, finished in ebony, strong and reliable. **25/-**, including postage.



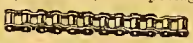
**MECHANICAL HORN.** Black finish, to fit handlebar, or top tube. **10/-**. Post. 1/-

**FRONT BRAKES.**—New unsoiled, complete for P. & M. **24/6**. For 2¾ h.p. Douglas, **15/-**, postage 1/-.

**PUMPS.**—Bluemel pattern, 18 and 15in., with foot clip, **3/6**, postage 6d.

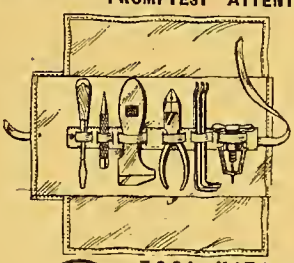


**PUMPS.**—Large 2ft. nickel-plated foot pumps, complete with adaptor for car or motor cycle, **6/6**, postage 9d.



**CHAINS.**—W.D. surplus Renolds chain, unused, in lengths, for 2¾ Douglas, 6/4; for 4 h.p. Douglas, 9/6. Also Coventry W.D. surplus for P. & M. low gear, 7/6; high gear, 7/-; driving chain, 15/-; set complete, 28/-; any length ⅝–¾ Coventry, 4/6 per foot, postage included.

**SPARE PARTS FOR A.B.C., VILLIERS, STURMEY GEARS, BLACKBURNE, MORGAN, IVY, ETC. PROMPTEST ATTENTION.**



**TOOL KITS.**—Complete as illustrated, with belt punch adjustable for all sizes, **9/6**, postage 1/-. Tool rolls only, 1/-, postage 4d.

**FRONT BRAKE STIRRUP.** Complete, suitable for 1913-14 3½ h.p. Douglas, **2/-**. Postage 7d.

**VOLT-METERS.** Pocket type, as illustrated or flush fitting for dashboard, reading 12 volts, **3/6**, postage 6d.

**HORNS.**—Black, 11in. over all, with clip as illustrated, **4/-**, postage 6d.

**TYRES.**—24×2¼ Avon studded, 14/-; 26×2¼ New Clincher de Luxe studded, non-skid, 16/-; 4-ply Avon, 25/-; 26×2¼ Avon studded, 18/-; 650×65 Hutchinson 3-rib, 27/6; 28×3 Fisk non-skid, 40/-; 700×80 Firestone plain, 45/-. Tubes for all Motor Cycle sizes, 5/6. These covers are all guaranteed by us, and postage is included in the above prices.

**MAUDES' MOTOR MART**
**100, GREAT PORTLAND STREET**
**LONDON——W.1.**
PHONES – MUSEUM 557 AND 7676. GRAMS 'ABOICATE WESDO'
**100, PARIS STREET, EXETER.**
TELEPHONE – EXETER 933 TELEGRAMS COMBUSTION EXETER
**WOLVERHAMPTON ST. WALSALL**
TELEPHONE. WALSALL 444. TELEGRAMS COMBUSTION WALSALL
**CASH, EXCHANGES OR DEFERRED PAYMENTS.**
Temporary Office:—27, Prince of Wales Rd., NORWICH.

## MOTOR CYCLES WANTED.

2¾h.p. Douglas, New Imperial, etc., also combination and Morgan, 1921-22, water-cooled; cheap.—H., 63, Solon Rd., Brixton. [4164

MODERN fast Solo, Norton, Triumph, Sunbeam, etc.; cash.—37, Elmbank Gardens, Barnes. (Telephone: Putney 2755.) [4178

WANTED, Twin Combination, cheap for cash; particulars and lowest price.—White, 437, West Green Rd., Tottenham, N.15. [4184

MOTOR Cycles, Combinations and 2-seaters bought, sold or exchanged.—Rhind and Co., Stone Place, Rusholme, Manchester. [3699

4h.p. Triumph, 3-speed, countershaft; price must be reasonable.—Price, 156, Stockwell Rd., Brixton, S.W.9. 'Phone: 898 Brixton. [4001

REQUIRED immediately, Triumph, B.S.A., Norton or similar machine, late model.—Evans, The Orchard, Ickenham, Middlesex. [3553

£45-50 for best solo mount offered, 3-speed, countershaft, S.A. essential; write full particulars.—Abbott, Eaton, Grantham. (D) [3356

WANTED, 1920 or later 16H. or 17C. Norton, close ratio gears preferred, any distance.—Bloomfield, 99, Ashleigh Rd., Mortlake. [3432

A FAIR Price paid for good used machines, preferably not earlier than 1920.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [3516

TRIUMPH or B.S.A. 4h.p. Combination, late model, must be good for cash.—Write, stating fullest particulars, lowest price, C. B., 341, Harrow Rd., W.9. [4326

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmood Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

WANTED to Purchase outright, for cash, bankrupt stocks; W.D. spares, miscellaneous spares, motor cycles, any make.—Send full particulars, McNeille and Platt, 57, Great George St., Liverpool. 'Phone: 1092 Royal. [6060

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Brauburys, Martinsydes, Zeniths.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [4559

F.O.C.H. always have cash waiting for sound machines of all types; highest prices and courteous treatment assured.—Fair Offer Car House, 5, Heath Street, Hampstead (near Tube). 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1610

WANTED, immediately, any number of second-hand machines and combinations; a competent representative will be sent to inspect and complete purchase after preliminary negotiations; cash and good prices paid.—Longman Bros., 17, Bond St., Ealing. Telephone: 689. [3046

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Blenheim St.), Bond St., W.1. 'Phone: Mayfair 6559. [0772

WANTED.—Motor cycles and combinations for immediate cash, new or second-hand. Bring your machine to us for a cash offer; high prices paid on the spot. Write, 'phone, or call if possible.—Forge Garage, 74-76, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [3169

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address, Palmer's Garage, Tooting. [4594

## MOTOR SCOOTERS.

KINGSBURY Scooters and Spare Parts.—Beaufort Works, Richmond Rd., Twickenham. [2231

A.B.C. Skootamota, little used; accept £25.—Phillips, Ironmonger, Newcastle Emlyn. [3448

A.B.C. Skootamota, not run 200 miles, perfect condition; accept best cash offer.—Riseley Lodge, Maidenhead. [3415

A.B.C. Skootamota, new, unsoiled, latest model; £23, sacrifice.—Frank Whitworth, 139, New St., Birmingham. [4658

MOTOR Scooter (Auto Glider), 2½h.p., with seat, good running order, C.A.V. magneto.—Cleverly, Headington, Oxford. [4023

A.B.C. Skootamota, scarcely used, leather saddle, extra air inlet, lamps, horn; bargain, £20. Perkins, Burnt Post, Coventry. [4295

## MOTOR ATTACHMENTS.

1921 Young's motor cycle, in good running order; accept £21.—136, Church St., Edgware Rd. [3395

AUTOWHEEL, splendid condition; £20, bargain; consider motor cycle exchange.—Richardson, Engineers, Lockerbie. [3221

YOUNG Motor Cycles, ladies' and gent.'s, never ridden; £26/10, or offer.—Hoare, 84a, Brigstock Rd., Thornton Heath. [3775

2h.p. Motor Attachment, cost £26/10, fit any cycle, electric lamps new; accept £12/10 quick sale.—318, North Rd., Preston. [4293

SIMPLEX Attachment and Cycle complete, hardly used, been stored, original show model; £15.—9, Kenilworth Court, Putney. [3233

WALL Auto-Wheel, splendid condition, new Dunlop and tube; £9, or near offer.—Wallis, 61, Parolles Rd., Highgate, London. [3781

1921 Special James Cycle and Young Attachment, year's licence, clutch, stand, guaranteed; nearest £24.—23, Saviour's St., Talke, Staffs. [3904

YOUNG Attachment on special cycle, all on, just overhauled, cost £38; take £19; owner buying combination.—Dingley, 10, St. Martin's Mews, Trafalgar Sq. [4505

CYCLE and attachment, 1921, 1¾h.p., clutch, 26in.×2in. tyre, acetylene lamps, M.C., saddle, variable spark, all on; £30.—Leared, 83, Humber Rd., Blackheath. [3575

AUTO-WHEEL (B.S.A.), in good running order, fast, good climber, tax paid; £10 or nearest.—Arthur Wilkinson, Leslie St., St. Helen's, Auckland, Co. Durham. [3465

SIMPLEX 1¾h.p. motor attached to gent.'s Hazlewood pedal cycle, 26in. wheels, only ridden few times, perfect; £20, near offer; take cycle part exchange.—50, King St., Norwich. [3644

## HOODS, WIND SCREENS, ETC.

COLLINS and Son for Hoods, Screens and Aprons; hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreens complete with apron, 22/6, 30/-, and 35/-; sent on approval against cash; carriage 1/6 extra.—Below.

COLLINS and Son fit celluloid panels to any windscreen in few hours; new aprons, side curtains, etc.; open weekdays till 8.30; Sunday mornings till 1 o'clock.—Collins and Son, rear of 84, High St., Putney, S.W. (D) [4083

SANDUM Screens in stock from £2/15.—Houchin, 189A, High St., Peckham, S.E.15. [3778

V-shaped Windscreens, £3/18; small size, £2/15.—Bright and Hayles, 78, Church St., Camberwell [8026

HERCULES Hoods and Aprons; write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [0853

BLUEMEL Brand New Windscreen; list price £4/8, take £3/10, carriage paid.—P. H. White, 62, High St., Kingston, Surrey. [4307

HOODS, Screens, Bodies, new and second-hand; repairs, upholstering, painting, cheap; aprons from 10/-.—Works, 132, Crystal Palace Rd., East Dulwich. [4530

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3239

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

ROBINI Manufacturing Co.—The "Bower" adjustable windscreen, registered, with coverall apron, 30/-, carriage paid. Beware of imitations. Celluloid panels fitted, Eastings, 16/6. Aprons made to order, 10/-.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone: Brixton 1585. [4454

## BODIES.

CAMBER Sidecar Bodies; from £4/17/6.—Bright and Hayles, 78, Church St., Camberwell. [8024

RENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

COLLINS and Son for coachbuilt bodies, all models in stock, from lightweights to 2-seater.—Below.

COLLINS and Son are actual manufacturers, and give twelve months' guarantee with every body made by them.—Below.

COLLINS and Son repair, repaint and upholster at moderate charges, first-class work guaranteed; estimates free; send for catalogue.—Collins and Son, rear of 84, High St., Putney, S.W. [4084

SIDECAR Body, Dunhill's, bulbous, as new; £9/10.—Keys, 9, Haroldstone Rd., Walthamstow. [3337


An Opportunity for Enterprising Agents.

THE MOTOR CYCLE

Insurance Policies

IMPORTANT AGENCY EXTENSION

SERVICE to your clients should include the best and most reliable Motor Cycle Insurance Agency it is possible to obtain.

The Policies you recommend should carry a name that inspires confidence and gives an assurance of prompt and generous settlement of claims.

From your own point of view it is desirable that you should represent a company that enjoys the highest reputation among the motoring public, and be able to offer policies that are known to give complete and comprehensive cover.

**An extension of the Agency and Service arrangements for "The Motor Cycle" policies is now being made, and applications are invited from agents who realise the value of specialised experience and the importance of maintaining the goodwill of their clients.**

Here is your opportunity of handling policies that every motor cyclist knows and the value of which he fully appreciates.

WRITE TO-DAY FOR FULL PARTICULARS.

Address—Agency Dept.,

The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED

Head Office:
77, Cheapside, London, E.C.2.
*Telephone: City 9831 and 9832.*
*Telegrams: "Autoinsure, Cent. London."*


## BODIES.

EDWARDES' Sporting Bodies, locker at bulk back, wonderful value; £4/15.—277, Camber Rd., S.E.5. [4

SIDECAR Bodies, all sizes, shapes and colo from £5; give us a trial.—33, Hackford Brixton. [4

BASTONES for Sidecar Bodies, all latest model stock from £4.—228, Pentonville Rd., Ki Cross, London, N.1. [5

VENUS Step Bodies, 2 dozen to clear; from each; great bargains.—Venus Sidecar Co., Seven Sisters Rd., Tottenham. 'Phone: 2102. [9

EDWARDES' Sidecar bodies, bulbous back, full painted any colour or design; £4/15. You not equal my value.—277, Camberwell Rd., S.E.5 [4

SPEEDY and Gardner, "The Speedy" 2-seater, single, £8; bodies to order; screens repai 12/-; aprons to order, 8/-; let us quote you. T supplied.—67, Effra Rd., Brixton. [2

ROYAL Leicester Sidecar Bodies fit any chassis, class finish; have a few coachbuilt bodies, c aoce lines from £5 each; extra good value.— Willowbrook Motor Co., Leicester [0

£3/15.—1922 bodies, complete from £3/15. seaters from £9. Tradesman's boxes from Write for particulars.—Robini Manufacturing Co and 3, Tulse Hill, Effra Rd., Brixton, S.W 'Phone: Brixton 1585. [4

£4/17/6.—New Douglas type Bodies, bulbous ba and upholstered in crocodile rexine; they req a finishing coat of paint only. We have contra for a large quantity, so can give the benefit to See Sidecar Attachment column.—Old Man Hep., 19, Wilcox Rd., South Lambeth, London, S.W 'Phone: 1958 Brixton. [1

SIDECAR Body Designs for the trade only. W ing, coloured pencil, or line drawings of ody designs, also working drawings, full-sized or to sca Cooper's Vehicle Journal, Designing Dept., establi designers to the coach trade for over 80 years. sult us when designing new ideas.—Dorset Ho Tudor St., London, E.C.4. [0

SPECIAL Offer.—Light coachbuilt body in finish, bulbous back and locker, £7/7. Tou de Luxe, £9/9. Many other models; come and your own selection. Several second-hand bodies excellent condition, from £3/10.—Light Car Motor Cycle Engineering Co., Ltd., 26, Tulse Brixton (half minute from Brixton Skating Ri 'Phone: Brixton 1292. [4

THE famous Cobb Speedman sidecar bodies are manufactured in 3 models; Sports at £2/12/6; Feather Touring at from £4; Speed Hogbus at from £5; all 3 types are the cheapes the world. Send for lists. We are now erectin additional factory at Burton Joyce to cope with business our good value for money methods are b ing us. If you buy from another firm you will ably be buying a body made on our premises, you will have to pay an enhanced price.—Vernon C 18, Midland Rd., Carlton, Nottingham. [

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the of the show; £14 to £50. Write for new catal

SANDUM (V-shaped) Wind Screen a hood, sc and apron; £2/15 and £3/18. Write for lis

SANDUM (V-shaped) Wind Screen.—Our South Lo agent writes: "An instantaneous success; out; send further supply." Agents, get in touch wit

SANDHAM Engineering Co., Ltd., 336, Gray's Rd., W.C.1. 'Phone: Museum 3427. [

MIDDLETON'S Patent Spring Wheel Sidecars guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis high-powered machines: Zenith, Harleys, Ind New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no culty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of kinds. Twisted motor cycle frames and promptly corrected.

SECOND-HANDS of various makes for sale. old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not safer and more comfortable, but are faste bad roads than rigids. They give to the bumps, bash into them.

MIDDLETON'S, London's oldest established sid makers, wholesale, retail, and export, 27, St Green Rd., Finsbury Park (near Tube). 'Phone, I sey 1584

CANE Sidecar, off Triumph; £5.—G., 28, Ham Rd., Highbury Barn. [

SWAN Sports, Triumph fittings, complete; of Scott, 25, Landford Rd., Putney. [

## SIDECAR ATTACHMENTS.

ASTONES for Sidecars, no better or cheaper house. All latest models in stock.

ASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

ASTONES. Sports model sidecar, complete, £17/10; several other models in stock, including dem, all at low prices.

ASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models tock; £25.

ASTONES for Sidecar Chassis, underslung £7/19/6. tandem chassis £14/10, anxiliary arms 14/-.— Pentonville Rd., King's Cross, London, N.1. one: 2481 North. 'Grams: Bastones, London. [3032

RITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

RITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

RITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

RITUBE Sidecars." One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. one: 5. [4195

AMBER Utility Models; £25.—Bright and Hayles, 78, Church St., Camberwell, London.

AMBER Utility Tandems; £27.—Bright and Hayles, 78, Church St., Camberwell, London.

AMBER Semi-touring Models; £18/10.—Bright and Hayles, 78, Church St., Camberwell.

AMBER Bulbous Back Models; £19/12/6.—Bright and Hayles, 78, Church St., Camberwell.

AMBER Lightweight Models; £16/10.—Bright and Hayles, 78, Church St., Camberwell.

AMBER Hexagon Sports Models; £25/17/6.—Bright and Hayles, 78, Church St., Camberwell. 1802

ARLEY Coachbuilt Sidecar; £12.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [4114

DECARS.—Several cheap, room wanted, fitted free.—57, Kenbury St., Camberwell, London. [3921

ICKER Sidecar, Gondola pattern, less tyre; £4/10.—R. Copping, Ipswich Rd., Colchester. [3996

GNS.—Lightweight Henderson, complete, as new; bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [4212

EATHERWEIGHT Canoelet Sidecar, smart; £10.—17, Heaton Rd., Mitcham, near Tooting Junction. [3884

IGHTWEIGHT Sidecar, good condition, new tyre fitted; £5.—23, Rowland Grove, Sydenham. [3366

OVER Sidecar and chassis, complete, new tyre and tube; a bargain, £12.—201, The Rye, Peckham. [3658

Seater Sidecar, black and gold, cost £42 few months ago; accept £22.—Snow, Laurel St., Dalston, E.8. [4542

ONTGOMERY Chassis, suit Harley, 4-point, unused; £6/10, bargain.—9, Church Rd., Harlesden. [4067

IDECAR Chassis, new, suit most makes, £5/19/6, complete to fit.—Edwardes, 277, Camberwell Rd., .5. [4243

NDIAN sidecar, for left-hand starter; £18; cost £42 last year.—Tuck, 154, Blackhorse Rd., Walmstow. [3968

IDECAR, large C.B., luxurious finish, little used, suit 6h.p. machine; accept £25.—39, Ashford ., Swindon. [3382

OOTHS Blackpool Bargains.—Limited number, new coach bodies, full size with locker, £5/17/6; ally £9/10.

OOTHS Blackpool Bargains.—New £9/10 coach bodies for £5/17/6; illustration free.—Booths tories, Blackpool.

OOTHS Blackpool Bargains.—Quantity new underslung chassis, 4-point attachment, £9/19/6; stration free.—Booths Motories, Blackpool.

OOTHS Blackpool Bargains.—Several shop-soiled sidecars, cheap. Hercules coach sidecar, /10/6; ditto Canoelet, £8/10/6; ditto Farlow, /10/6.

OOTHS Motories, 294, Waterloo Rd., Blackpool. [9318

HITLEY Sidecars, Coventry.—Three models, £25, £29/10, £32/10. Nothing on one wheel to al. Lists free. [0856

IDECAR, 1921, bulbous back, blue, underslung chassis; 14 gns.—12, Cornwall Mews, Glouces- Rd., S.W.7. [4579

NDERSLUNG Sidecar Chassis, £2; lamp set, 18/-; 4v. 100a. accumulator, 18/-.—Johnson, 172, enue Rd., Acton. [4107

OACHBUILT Sidecar, 28in. wheel, nearly new Dunlop, suit Harley or Indian; £6.—15, Carlton rrace, Child's Hill. [3754


# NOTE THIS!

OWING TO LOWER COST OF MATERIAL AND LABOUR WE ARE NOW ABLE TO ANNOUNCE A FURTHER

## REDUCTION

OF APPROXIMATELY

## 15%

IN THE PRICE OF

# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED

for

## 2 and 4 STROKE ENGINES

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

**The lightest, speediest, and simplest gear on the market for direct belt-driven 2 and 4 stroke engines.**

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

IMMEDIATE DELIVERY.

*Send for Illustrated Booklet.*

*What is your make?* *Write us.*

## NEW REDUCED PRICE

# £6-6-0

CARRIAGE PAID

## PHILIPSON & Co., LTD.

**Astley Bridge, BOLTON, Lancs.**

(Established over 50 years.)

'Phone, 147 Eagley. 'Grams, 'Safety, Bolton.'


## SIDECAR ATTACHMENTS.

P. and M. Chassis, complete, enamelled, tyre and tube sound; £4.—19, Audrey Rd., Ilford. [4249

LIGHT sports sidecar, as new, with Easting complete; bargain, £15.—Hobbs, 332, Wandsworth Bridge Rd., Fulham. [3606

3 GNS.—Good wicker sidecar, modern design, sound, good Dunlop.—20, Treen Avenue, Hogger's Corner, Barnes, S.W.13. [4238

HENDERSON Model A Coachbuilt Sidecar, brand new, unused; cost £20, £14.—29, Montford Place, Kennington, S.E.11. [4145

WATSONIAN Lightweight Sidecar, splendid condition; £9/10; exchange large 2-seater.—Saunders, 49, Riverside, Kingston-on-Thames. [4258

EXTENDED Payments accepted for sidecars; models for all makes.—Send for catalogue, etc., Rideezi Sales, Ltd., 5, Victoria St., S.W.1. [0829

SIDECARS complete from £15, Millford, Douglas, etc., the above are fitted with the finest bodies on the market.—33, Hackford Rd., Brixton. [4570

LICHT Coachbuilt Sidecar, dark green, quite as new, quick detachable, good tyre; £5; not Sundays.—Cheesman, "Highfield" Eden Bridge, Kent. [4183

TRADESMAN'S Pointed Box Sidecar, complete, excellent condition throughout, 3-point; £9.—143, St. Margaret's Rd., St. Margaret's, Middlesex. [3264

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 60 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note: Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

JUST a few left.—Our 10-guinea coachbuilt sidecar, complete with fittings and Clincher non-skid tyres.—Comfy Sidecars, 789, High Rd., Leytonstone. [2226

MILLFORD chassis, large touring body, Eastling, grid, splendid condition, suit Triumph or higher power; £12.—48, Crant Rd., Wealdstone, Harrow. [3590

C.B. Bulbous Rennoc, Sidecar, 4-point attachment, for Triumph, with Bluemel windscreen and Ace disc, little used; £20.—C.B., 11, Pleasant Place, N.1. [4527

1919 Sunbeam Sidecar, complete, hood, screen, grid, lamp, excellent condition; £18, bargain.—Craswell, Wig-Wam, Wolsey Rd., Ashford, Middlesex. [4135

MONTGOMERY Sidecars. — Aluminium Sporting model in stock; prices from £17/10. Trade supplied.—Houchin, 189A, High St., Peckham, S.E.15. [3777

COLLINS and Son for Sidecars, new bulbous back models complete with renovated underslung chassis, with fittings for any machine, from £12/10.—Below.

COLLINS and Son.—2-Seater bulbous back coachbuilt models, with renovated underslung chassis, from £15.—Below.

COLLINS and Son.—New Montgomery Chassis, fitted with our 1922 bulbous De Luxe coachbuilt body, supplied with fittings for any machine, £18/10.—Below.

COLLINS and Son.—New Mills-Fulford Chassis, with bulbous back coachbuilt body, supplied with fittings for any machine, £17/10.—Below.

COLLINS and Son specialise in frame and chassis repairs; all work guaranteed; send for catalogue. Open weekdays till 8.30, Sunday mornings till 1 o'clock.—Below.

COLLINS and Son will take your present sidecar in part payment of any model; a few second-hand sidecars in stock.—Collins and Son, rear of 84, High St., Putney, S.W. [4085

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

## SIDECAR ATTACHMENTS.

PINNACLE Sidecars for comfort, durability, and elegance, a model for every purpose. See displayed advertisement.—W. G. Fearn and Co., Albion Works, King's Cross. [4563

COMFY Sidecars, strong underslung chassis, coach built body bulbous back with locker, quick detachable fittings, Clincher tyre; price 18 gns.—Comfy Sidecar Co., Leytonstone. [3079

BRAND New Henley Coachbuilt Sidecar, suit 4h.p., mat, apron, slightly shop-soiled, 14 gns.; nearly new Derwent coachbuilt sidecar, £9/15.—110, Upper Richmond Rd., East Sheen. [4206

WATSONIAN R34, deep green, specially strong, 5-point attachment chassis, stream line, lamp, windscreen, perfect; £15; tyre unpunctured; offers.—Nisbet, Easington, Weybridge. [4698

TORPEDO sidecar, underslung, 4-point attachment, £10; sidecar outfits for Douglas, Triumph, P. and M., etc., in stock; let us quote you.—De Cort and Flynn, 39, Essex Rd., London, N.1. [2757

WILLOWBROOK Royal Leicester Sidecars, smartest designs, first-class finish; prices from 17 gns. Write for catalogue. Repairs undertaken, hoods, wind screens, etc.—The Willowbrook Motor Co., Leicester. [0335

SANDHAM Elite, bulbous back, adult and child's bucket seat, new Dunlop heavy tyre and tube, 2 new windscreens, all as new; £24/10 complete, or chassis only, £12/10. — Kitson, Electricity Works, Twickenham. [3956

LANCASTER Sidecars.—Superb coachbuilt sidecars complete from 14 gns.; bodies only from 4 gns. A good selection in stock. Call and inspect.—The Lancaster Motor Co., 158, Norwood Rd., West Norwood, S.E.27. 'Phone: Streatham 2541. [3328

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co Ltd., 236, High Holborn, W.C.1 [0388

PLUS One Sidecars are supplied in any colours for fitting to any make of machine; Millford chassis if desired; bodies only are supplied, and fit A.J.S., New Imperial, Royal Ruby, B.S.A., James, Indian, Excelsior, Harley, Reading-Standard, Henderson. Do not forget one of these outfits carried 2 fully grown adults through the London-Exeter run.—W. E. Line, late Coppen Allan, 89, Gt. Portland St. Langham 1601. [3515

LIGHT Car and Motor Cycle Engineering Co., Ltd. —New chassis, light type, £7/7, complete with all fittings. Special coachbuilt body to suit, £5. Heavy chassis, new, with all fittings, £10/10. A number of Millford chassis, in excellent condition, from £4/10. Several Millford chassis, with renovated bodies, in new condition, £9.—26, Tulse Hill, Brixton (half minute from Brixton Skating Rink). Phone: Brixton 1292. [4463

OLD Man Hep has 1,000 Douglas underslung chassis, renovated and complete, to suit all makes of machines, for £5; or fitted with a brand new Douglas type bulbous backed body, for £10/10 (these bodies are upholstered with good quality Rexine, but require a last coat of paint); this has been left for travelling on rail; send for photo, enclosing stamp. We cannot be beaten for our prices. 'Phone: 1958 Brixton. (See Body column.)—19, Wilcox Rd., South Lambeth, London, S.W.8. [5055

JONES' Garage, Broadway, Muswell Hill, N.10, for all makes of new and second-hand sidecars from £7/10 complete. Montgomery new sports, £23/10; also touring and featherweight models. Langford picnic spring wheel models, new, £29/15 only; Harley and Indian specials at £27/10. Large selection. Also special mudguards to fit to body, with brackets, 15/-, any colour, no rattle. High-class bodies from £6/15.—'Phone Hornsey 2917, or call. Open all Saturday. Also at 4, Woodside Parade, North Finchley, N. [4623

P. and M. chassis, complete with new bulbous back body, new guards, fittings, etc., £14. Millford chassis, complete with new bulbous back body, new guards, fittings, etc., for Triumphs, B.S.A.'s, etc., £15. Douglas chassis, complete new bulbous back body, £15. New underslung chassis, complete with new bodies, from £16/10. Lightweights, all complete, brand new, from £11/10. Write for particulars. Extended payments.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone: Brixton 1585. [4452

## RUNABOUTS AND CYCLE CARS.

LIGHT Car Chassis, complete, less engine, tyres, channel section; £10/10.

TUBULAR Chassis, 3-wheeler, wheels, part steering, springs, axles; £3.

SPECIALLY built 6-8h.p. Riley, air-cooled engine, powerful, run little, mechanical valves, beauty; £11.

3-SPEED Reverse Gear Box, splendid condition; £5; offers considered; 9 to 5.30, Sats., 12.—Beecroft, 14, Meanwood Rd., Leeds. [3287

# BASTONES

**ESTABLISHED 16 YEARS.**

***No Better or Cheaper House***

## USCO RUBBER NON-SKID COVERS.

Manufactured by the Dominion Tyre Co.

| | List Price | Our Price |
|---|---|---|
| 20×2½ to fit 26×2¼ Heavy | 53/- | 28/6 |

## GOODRICH Safety-Tread COVERS (Extra Heavy)

| | |
|---|---|
| 26×2¼ .. .. .. .. | 28/- |
| 26×2½×2¼ .. .. .. | 36/- |
| 26×2½ .. .. .. .. | 35/- |
| 550×65 .. .. .. .. | 36/- |
| 650×65 .. .. .. .. | 40/- |
| 700×80 for 650×65 rim .. | 48/- |
| 28×3 .. .. .. .. | 48/- |
| 710×90 .. .. .. .. | 55/- |
| 815×105 .. .. .. | 80/- |

## CLINCHER Rubber Non-Skid COVERS.

| | |
|---|---|
| 24×2¼ De Luxe Junior .. | 20/- |
| 26×2⅜ De Luxe Heavy .. | 25/- |
| 26×2⅜ Extra Heavy .. .. | 27/- |
| 26×2½×2¼ Heavy .. .. | 27/- |
| 650×65 Dreadnought 3-ribbed | 39/- |
| 700×80 to fit 650×65 De Luxe Extra Heavy | 47/- |
| 28×3 De Luxe Extra Heavy.. | 37/6 |

## MISCELLANEOUS COVERS.

| | |
|---|---|
| 26×2 Englebert Passenger .. | 17/6 |
| Bergougnan Heavy .. | 18/6 |
| 26×2¼ Hutchinson T.T. .. | 23/- |
| 26×2⅜ .. .. .. .. | 25/- |
| 26×2¼ Bergougnan (Heavy) .. | 20/- |
| 26×2⅜ Kempshall Anti-Skid .. | 30/- |
| 26×2½ Midland Rubber Non-Skid .. .. .. | 26/- |
| 26×2½ Bergougnan Heavy .. | 23/6 |
| 26×2½ Wood Milne Extra Heavy.. .. .. | 23/6 |
| 650×65 Wood Milne Heavy .. | 18/6 |
| 26×3 Englebert Rubber Stud | 25/- |
| 26×2½ Michelin Fine Ribbed.. | 21/- |
| 26×2½ Englebert (wired edge) | 25/- |
| 26×2¼ Rom. Rubber, Non-Skid | 29/- |
| 26×2¼ „ Combination .. | 40/- |
| 26×2¼ Goodyear Diamond Tread | 26/- |
| 26×2⅜ Skew Rubber, Non-Skid | 35/- |
| 28×2 Clincher A Won (wired edge) | 20/- |
| 28×3 Hutchinson Super-Studded | 64/3 |
| 700×80 Super Chain Ex. Heavy | 42/- |
| 30×3½ Prudential Rubber Non-Skid .. .. .. | 59/6 |

## TUBES.

**Goodrich, Clincher, Hutchinson and Red Fox.**

| | | |
|---|---|---|
| 24×2 and 24×2¼ .. | each | 4/3 |
| 26×2¼ and 26×2½ .. | each | 5/9 |
| 650×65 700×80 and 28×3 .. | each | 7/6 |

*The above new Clearance lines are sent on approval against remittance. Carriage Paid.*

**Hours—9 till 6; Sat., 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

'Phone: 2481 North. 'Grams: 'Bastones, London.

## RUNABOUTS AND CYCLE CARS.

LITTLE Midland Light Car, 8h.p. J.A.P., wa cooled, tax paid; £100.

2¾h.p. T.D.C., good tyres, accessories; £1 Smith, 126, Market St., Tottington, B Lancs. [4

LATE 1920 G.N., fully equipped, tax paid.—Ackr Market Sq., Basingstoke. [4

WAUCHOPE'S, 9, Shoe Lane, London.—5-6 1914 Carden Monocar; £50. [2

48 GNS.—1920 A.V., dickey, lamps, excellent c dition.—2, Madrid Rd., Barnes. [4

MORGAN Grand Prix, as new, lavishly equipp £150.—52, Thornhill Rd., Islington. [3

A.C. Sociable 1911, good engine, tyres, and runn order.—1, Hut, Lampton, Hounslow. [4

WAUCHOPE'S, 9, Shoe Lane, London.—7-8 Carden De Luxe, 1921, 2 speeds; £87/10 [2

G.N., touring model, immediate delivery; £22 Ratcliffe Bros., 200, Great Portland St., W. [4

1921 De Luxe Carden, full equipment, original tyr £67/10.—24, Balliol Rd., North Kensingto [3

CARDEN 2-seater on order, not wanted. Who wa my order?—Wood, Toftrees, Fakenham, Norf [4

FOR Sale.—Santler 3-wheeler cycle cars and li cars, 11b.p.; agents wanted.—Santler, Malv Link. [3

MORGAN 1920 Grand Prix, water-cooled M.A engine, lamps, horn, colour blue; £135 Below.

1920 G.N. standard touring, dynamo lighting, ho etc., excellent order; £145.—Below.

G.N. standard touring, 1920, dynamo lighting, ho etc.; £135.—Elce, Ltd., 15-16, Bishopsg Avenue, Camomile St., E.C.3. 'Phone: Ave 5548. [0

1922 8h.p. Rover; cash, terms, or exchanges Shepherd, Enfield Highway. Tel.: Walth Cross 31. [0

BEDELIA.—The new 1922 model 8-10h.p., cooled or water-cooled to choice. Immedi deliveries.

BEDELIA.—Air-cooled model, £185; water-coo model, £195; side-by-side armchair seats, 3 spe and reverse, 5 detachable wheels, hood, screen, lam tools, jack, and pump included; trial free.

BEDELIA.—Cash or easy terms. Your old car motor cycle taken in part payment.

BEDELIA.—Catalogue free from L. N. Palm Sole Concessionnaire for the British Empir Palmer's Garage, Tooting [1

COVENTRY Premier, Cycle Car, tax paid; £ or exchange combination. — Day, "Friar Chelmsford. [3

TAMPLIN Monocar, 1919, in splendid tune well equipped; £70 or near.—Bunting's Exchar Wealdstone. [4

1921 De Luxe G.N., dynamo lighting, superb co tion, very smart; £130.—24, Balliol Rd., No Kensington. [3

MORGAN, 4-seater, water-cooled, fast, equip accelerator; £135.—1a, Redcliffe Rd., So Kensington. [4

8h.p. Rover.—1922 model, early delivery; exchange Walbro Motor Cycle Co., Saffron Wald 'Phone: 45. [7

MORGANS Always in Stock.—The West of Engl Agent, Gibb, 100, Northgate, Glouces 'Phone: 852. [8

1921 T.B. 3-wheeler, interchangeable wheels, 1 sp well equipped, taxed; £120. — 24, Balliol North Kensington. [3

1921 A.V. Light Car, dickey, 8h.p. engine, al lntely smartest on road, taxed; 65 gns.—79, ford Hill, Balham. [4

A.V. 1921 8h.p., 2-speed, minus woodwork (bu and engine remains; best offer ever £8 Madrid Rd., Barnes. [4

1916 Alldays, Dyno lighting, 4-cylinder, 2-3-sea suit doctor; £160; motor cycle part.—Cen Garage, Hunstanton. [4

G.N., 1921, mileage 1,000, as new, dynamo, e £135, nearest. — James, c/o Bradmores, 4 Harrow Rd., Paddington. [4

MORGAN.—New 1922 Models in stock.—Age Birkenhead Motor Works, Old Bidston Birkenhead. 'Phone: 2047. [2

COVENTRY PREMIER.—1922 model, early livery; exchanges.—Walbro Motor Cycle Saffron Walden. 'Phone: 45. [7

MORGAN 1921 De Luxe, J.A.P. W.C., overhau and repainted, tax paid; £140.—Baker, 9, Be ley Rd., Westbury Park, Bristol. [3

THE MOTOR CYCLE

ESTABLISHED IN 1903

TWENTIETH YEAR OF PUBLICATION

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## The T.T. and the Public.

AT this period of the year it is not uncommon to find in our letter bags a small proportion of missives protesting against the Tourist Trophy races, on the grounds that they are valueless to the general public. The fact that there have been fewer than usual of these communications this year may perhaps be regarded as indicative of a more general realisation of their importance.

Only superficial observers imagine that the race is run purely for advertisement and immediate gain, and it is safe to say that not a single firm which enters for this classic event fails to learn some lesson of value which is later reflected in the standard product.

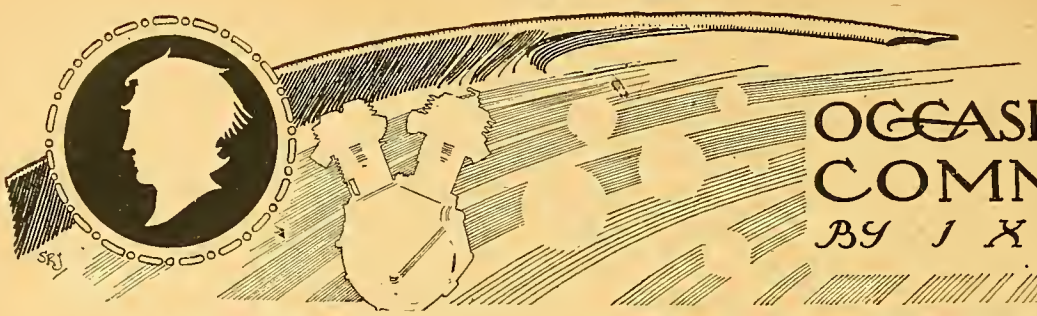
There are few solo mounts of high repute which do not owe a large measure of their success to lessons learned in the T.T., and the Isle of Man course is ideal for developing the very features which the tourist most appreciates. No motor cycle stands a chance of success over the sinuous course unless it steers perfectly, accelerates rapidly, and is fitted with first-class brakes. The necessity for large tyres, sound gears which change easily, and practical transmission, have already been proved. The effect of the long race on engine design, both as regards cooling and lubrication, has been of incalculable benefit, and still further improvements in these respects are likely to accrue as a direct result of the forthcoming races.

In addition, the Junior event has been mainly responsible for the high state of efficiency to which the modern 350 c.c. mount (perhaps the most popular solo machine of to-day) has attained. The Lightweight race, so diligently fostered by *The Motor Cycle*, has grown considerably in importance, and already the 250 c.c. engine has been brought to a state of perfection which would have been considered almost impossible only a few years ago. It is largely through the Tourist Trophy races that motor cycles are perfected and power output increased apace from a given cubical capacity. Thus the cost of road transport is being steadily reduced as smaller engine sizes become practicable.

## A First-class Utility Mount.

WHILE there is a steady demand for motor cycles of the very highest grade, a survey of general conditions indicates that low and moderately priced machines are the ones most sought after. This is as might be expected, for a large number of people are unable to afford just those few pounds extra which are required to purchase the very best. Very considerable efforts have been made by manufacturers to reduce their prices to the lowest point, and figures are now stabilised. Is there a way of giving the enthusiast a chance of buying "the best" at a reduced figure? Quite frequently it is the enthusiast who is most hardly hit, for he is often impecunious, and every shilling makes a difference to him. He will go without many luxuries in life to obtain a first-class mount, and also forgo a number of luxuries on his machine provided he can obtain the essentials he desires. It might be possible to produce a standard first-grade motor cycle without front stand, without carrier, with slightly less elaborate chain guards and mudguards, and with foot rests instead of aluminium boards, and thus effect that reduction which brings a machine within the reach of thousands more prospective buyers. This is no new idea, and some few manufacturers have already adopted the notion, selling the resultant product as a sports model. But the idea seems capable of expansion. The best of everything and no fitting which is not strictly necessary should be the motto of any manufacturer attempting to satisfy the call for a first-class utility mount.

An index to the advertisements in this issue will be found on the page facing the back cover.



# OCCASIONAL COMMENTS

BY IXION

## A Chiel Takin' Notes.

THE croakers say that the crag-and-chamois type of trial will shortly become moribund, as happened to pedal-cycle competitions thirty years ago. I don't think so. Why? With pleasure. Last Thursday I hied me to the nearest main line railway station. Travelling per o.h.v. Triumph, I naturally arrived well before the train. Standing in the booking hall I spotted two neighbours of mine—public school boys aged perhaps seventeen or so. They arrived per baby two-strokes—and to judge from their slippered feet, dishevelled hair, and other clues which my Sherlock Holmes brain read like an open book, they had not yet breakfasted. They had come to collect their weekly copies of the Blue 'Un off the local newspaper train at 8 a.m. rather than wait till the local newsagent handed in the papers at their own door (ten miles away) four hours later. In other words, the growing manhood of the country presents the pastime annually with thousands of recruits whose main obsession is to get hold of some sort of motor cycle and smash it up in sporting events. So the freak trial may very well survive many years after it has ceased to serve any utilitarian purpose.

## An Appeal to Chivalry.

ONE of our fair readers makes an irresistible appeal to my chivalry. Will I please put a couple of anatomical pointers to designers of drop-frame machines intended for feminine riders? The first is that they should ascertain the mean, normal, or average length of the feminine leg? They will find it is appreciably shorter than the male. They fail to allow for this in their frame layout, with the result that the fair *motorcycliste* can only straddle her mount on tiptoe. I am credibly informed that there are ladies on the stage who can remain on tiptoe by the hour, and indeed acquire much wealth and fame by demonstrating this ability. But my correspondent is not an Adeline Genée, and after a few seconds of the exercise her machine generally collapses sideways with a sickening thud. Secondly, will the aforesaid designers kindly set their sisters astraddle the machines they design, and note where the lady's ankles come. According to my correspondent the odds are several billions to one that the ankle will be adjacent to the knobblesome end of the footrest or footboard spindle. Let the designers then reflect that a slim feminine ankle, clad in filmy stockings of a champagne tint, is adorable; but that a thick ankle, reminiscent of the fetlock of a drayhorse afflicted with glanders, is a noisome object. Wherefore every fair motor cyclist wisely wears the thinnest stockings obtainable. So let the designer attire his own ankles in similar stockings, and then try to rivet over the end of the aforesaid footrest spindle with his ankle bone. He will suffer such acute pain that he will promptly alter the design. 'Nuf sed?

## Just One More.

I AM glad to find that the ladies are sitting up and taking notice. Here is another epistle in one of those large, sprawly hands. It is almost as anatomical as the last. Our fair reader has a baby two-stroke. It has a brake. The brake is operated by a pedal. The business end of the pedal terminates in a disc. The disc is the size of a threepenny-bit, as the designer makes a great point of saving weight. The lady also has a foot. It is shod in a boot. With a heel. The heel is equal in area to a halfpenny. In the interests of grace and comeliness.

Yesterday this reader found herself undecided whether to ride into a narrow gap between two cars. Because a motor bus was approaching the gap from the opposite direction. Meanwhile, a Brough Superior was approaching at speed from astern—straight for her bustle. So with her heel (see above) she felt for her brake pedal (see above, as before). The heel did not find the brake pedal in time. Luckily, the machine was insured. The lady refuses to wear shoes with larger heels. So—obviously—the trade must fit brake pedals with larger plates. And why shouldn't they?

## Gadgets—Their Weight——

A NUMBER of clever people who attempt to transfer money from our pockets to theirs do not always pay sufficient attention to the weight or dimensions of their gadgets. On the one hand it is folly to burden a lively and manageable motor cycle with half a hundredweight of extras, and yet there are plenty of machines on the road which are disfigured to this tune. On the other hand, it is a physical impossibility to squeeze into two pannier bags all the outfit which some accessory makers consider it desirable we should carry. Here are a few examples, good, bad, and indifferent, all of which are recommended to me by various people for use on my sports single:

| | |
|---|---|
| Two fishtails for exhaust pipes | 5 lbs. (Absurd!) |
| Chain rivet extractor ... ... | 3½ oz. (Excellent!) |
| Ditto (another make) ... ... | 16 oz. (I think not!) |
| Electric hooter (*sans* battery) ... | 2 lbs. 7 oz. |
| Variable jet, with control ... | 15 oz. (Worth it.) |
| Mechanical oil pump (complete) | 2 lbs. (Ditto.) |
| Spare bulb case ... ... ... | 3¼ lbs. |

*Ixion's "MOTOR CYCLE REMINISCENCES" are available in book form, price 2s. 9d. post free, from "The Motor Cycle" Offices, Dorset House, Tudor Street, E.C.4.*

**Occasional Comments.—**

These few trifles tot up to nearly 15lb. The catalogue of many a rider's gadgets includes a dynamo, two hooters, a mascot, two or three club plaques, a spare tube and case, a speedometer, and possibly several other odds and ends. Many of these extras will be seen figuring on baby two-strokes. How can we expect a designer to rack his brains in reducing the weight of his machine when he beholds his customers recklessly piling on heavy stuff with both hands? He will naturally conclude that we don't care a split-pin what she weighs.

### ——and Size.

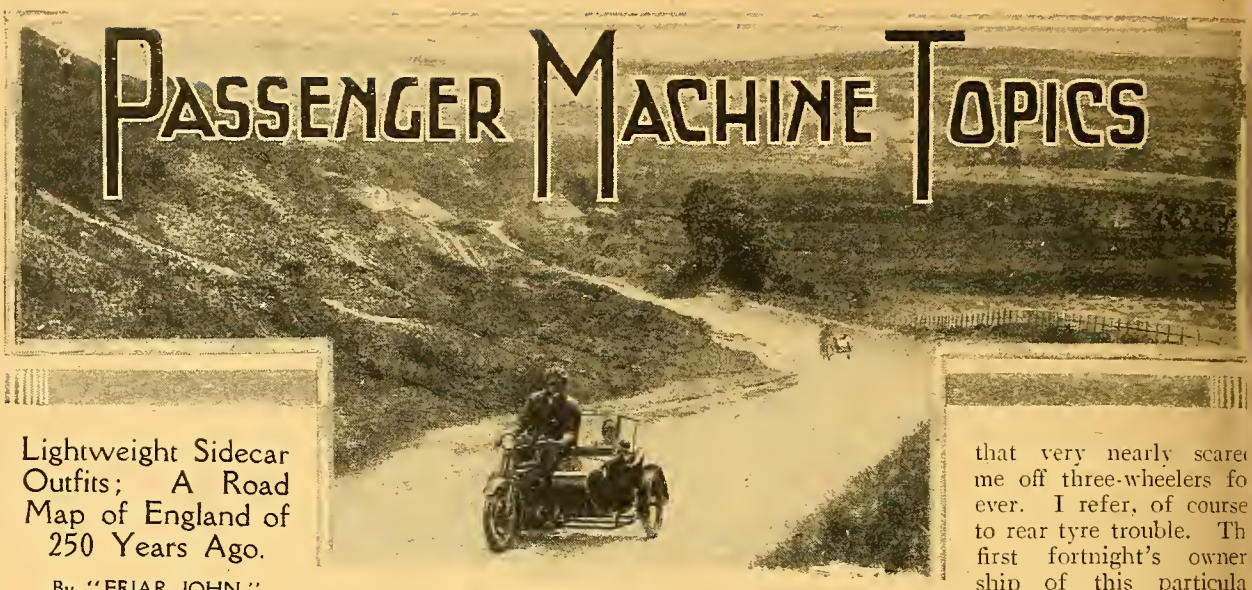
ONLY less important is the size of these gadgets. One well-known rivet extractor, when packed, occupies a space $4\frac{1}{4} \times 3 \times 1\frac{1}{4}$in., whereas one I carry when dismantled consists of one bit $1 \times 1\frac{1}{4} \times \frac{3}{8}$in. and three tiny parts which will slip in anywhere. The only decent carrier for spare electric bulbs which I have seen is designed exclusively for sidecar work, being a cylinder $5\frac{1}{4}$in. long $\times$ $2\frac{3}{4}$in. in diameter. In the course of a year I receive numerous accessories which I should be glad to carry on the road, but which are eternally condemned to a clip on the garage wall.

### Wanted a Tyre Lever.

A CORRESPONDENT remarks with some justice that the steady increase in the size of motor cycle tyres is creating a demand for compact but powerful tyre levers. For twenty years, as he states, motor cyclists have been able to make shift with ordinary cycle tyre levers, of which the trio of "one-minute" instruments have been easily the best. Most of the 1,000 c.c. machines equipped with large tyres are attached to sidecars, with their facilities for storing a set of car size levers if desired. Nowadays quite a number of solo machines are shod with 3in. covers, practically the equivalent of the 80 mm. car tyre, which no owner or mechanic would dream of tackling with his fingers or a 4in. lever. This reader ran over half a bottle on his first outing with 3in. tyres, and was quite unable to remove the cover until a passing car owner took pity on him. I suggest that the machine with 3in. tyres needs a longish pannier bag, in which a set of powerful levers can be packed.

A FAMOUS TEST HILL IN THE SCOTTISH TRIALS. A fine panorama from Amulree, showing Armstrong Graham on his 269 c.c. Harper Runabout. This little machine, which created great interest, made a good climb. D. Bell (800 c.c. A.J.S.) who is seen following, made light work of this once-dreaded gradient.

# PASSENGER MACHINE TOPICS



## Lightweight Sidecar Outfits; A Road Map of England of 250 Years Ago.

By "FRIAR JOHN."

A READER said recently in the correspondence column, that he had accomplished 5,000 miles on a lightweight outfit without any trouble. Such a testimonial entirely unsolicited is a tribute to an increasingly popular class of machine, even though the record is nothing unusual. It adds to that popularity and brings the merits of the class before the public in the same way as Eric Williams' run in the Victory Cup trial did when he accomplished 41 m.p.h. at Brooklands after a gruelling test on several hills on a 2¾ h.p. sidecar. So long as weight in the shape of heavy hoods, luggage carriers, spare wheels, and the like, is not piled on to these light sidecars they will continue to find a ready market. The upkeep and original cost of a 2¾ h.p. two-stroke outfit are half that of a completely equipped 5-6 h.p. sidecar, and as values are becoming more stabilised and money more valuable, so the cheap outfit will loom as a possible purchase to many who have refrained up to the present from investing in a sidecar.

◈ ◈ ◈ ◈

ONE of *The Motor Cycle* Press photographers covered nearly 12,000 miles last year on his sidecar: in one week recently his mileage was 660. In this distance he had one involuntary stop; yet one frequently hears statements from four-wheeler plutocrats, and also men who ride nothing but solo mounts that the sidecar falls short in reliability compared with a car. The sidecar outfit is as reliable as a car providing it is sensibly shod; it must be acknowledged the biggest percentage of roadside stoppages have in the past been caused by punctured tyres, but the folly of fitting undersized tyres has long been recognised, and this recognition, together with the immense improvement in belt and chain manufacture, has reduced roadside stops to a minimum.

◈ ◈ ◈ ◈

APROPOS of tyre trouble, last year I drove a Morgan for many thousands of miles, and eventually laid one bogey low, a bogey, I must admit, that very nearly scared me off three-wheelers for ever. I refer, of course, to rear tyre trouble. The first fortnight's ownership of this particular de luxe model was purgatory. I started every ride—after my first 300 or 400 miles—in mortal terror of a sudden hard and ominous bumping of the rear wheel, so persistent was the mysterious deflation of the rear tyre. After taking the wheel out several times on the road—an easier job than many pessimists would have us believe—and finding no puncture whatever, I naturally concluded that the creeping tyre must have caused the trouble whilst on its illegitimate journeying round the rim in spite of security bolts. It had, of course, stretched the tube at the valve, letting out the air without splitting the rubber. On discussing the matter with Mr. H. F. S. Morgan, he said the Leosco "tube saver" would remedy the trouble, and afterwards sent me one to try. From the moment of fitting it I was immune from tyre bother, not even having a puncture whilst the machine was in my possession. I believe all Morgans are now fitted with the band, but the tip is of such real value, not only to Morgan owners but to owners of heavy sidecars, that it is worth repetition.

◈ ◈ ◈ ◈

THERE is little doubt that the originator of the T.O.M. windshield has had more than one thorough soaking whilst driving in the face of heavy rain—it is so purely utilitarian. But this device, although not handsome, is rather less forbidding than the metal shield.

Legshields, which keep the rider free from mud and create a forced draught of air upon the cylinders, are the first part of the equipment. These shields do not rattle and are quickly detachable. The remainder of the device is a complete shield made of twill, which will keep the driver of the motor cycle almost as dry as the passenger in the sidecar.

A small aero windscreen is mounted on the top of two uprights which extend the shield. The model illustrated is fitted to a 4 h.p. Triumph, but a rather improved form was fitted to a Harley-Davidson, which has hand muffs incorporated. Another advantage of

**Passenger Machine Topics.—**

the shield is that if the machine is left out in the rain the whole fitting can be hinged backwards to cover the top of the tank and the saddle, since the supports are pivoted on the top tube.

The T.O.M. windshield can be obtained from the T.O.M. Syndicate, c/o Sir Walter Townley, K.C.M.G., 3, Temple Avenue, London, E.C.4.

ON the last day in April I drove my sidecar to that lovely stretch of the Thames between Staines and Windsor. It is an uncommon bit of roadway, running as it does close to the riverside for a mile or so. Stationed well from the road, I watched the hundreds of motorists pass by, and saw but one knock-kneed outfit. I say "stationed well from the road," for several thoughtless individuals had parked their machines on the exceptionally narrow road itself, causing trouble and real danger to passing cars and motor cycles.

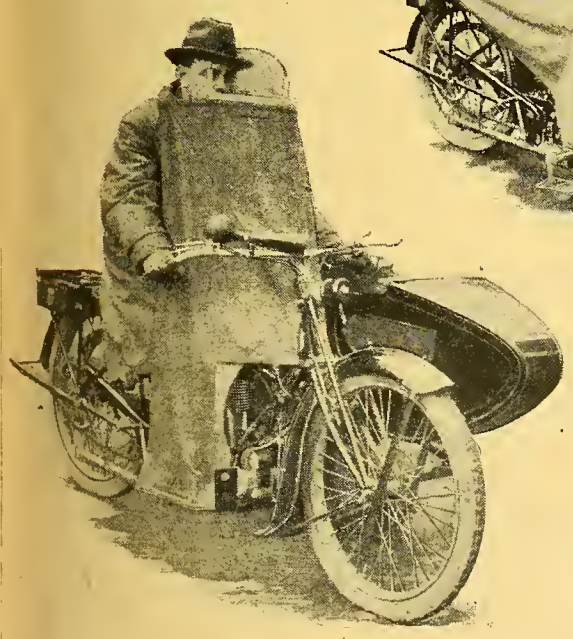
The most noticeable thing in connection with the passing sidecars, and perhaps the most commonplace, was the number of passengers carried. Two, three, four, five and six, I saw accommodated on various outfits, and truly remarkable was the ingenuity displayed in "packing." In one instance a laughing boy of eight or so sat straddled across the tank in front of the driver, another boy was on the carrier, the mother and yet another kiddy occupied the sidecar. This must have been the outfit that carried six up, but I cannot recollect how the other youngster was disposed—but it was a single-seater sidecar and a 4 h.p. Triumph machine that bore valiantly this cheerful load of humanity. Yes, just as happy were they as members of a big Daimler saloon that rolled by at the same time, an occupant of which was a painted lady smoking a cigarette in a foot-long ivory holder, aye, or even a prince who had passed by in a landaulet just before. Truly all the world was awheel.

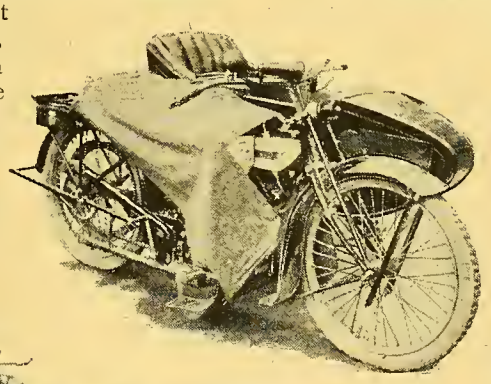
I must record also the unique sight of a daintily furclad lady seated in a small dicky seat, with a child (also dressed in black fur with a touch of crimson somewhere) occupying the big A.J.S. sidecar. Why? Of course my passenger was very interested, and so were many other people. "I ask you," was one pertinent remark that floated to me from a group nearby. The only answer I can find is that the lady must have liked it.

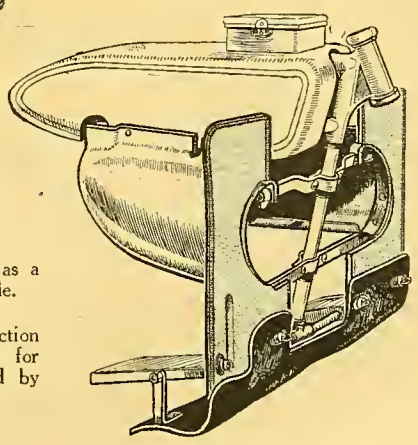
VOLUMES have been written on the romance of the road, and writers still endeavour to say things about it without appearing trite or poetical. "The great open road," the "gay free road," are expressions which have now grown hackneyed. But even matured beings who love the road—and what a fascination has the highway—have to restrain themselves when on the romantic subject of great highways, especially on a fine May morning when the machine is running well and the road—probably an old Roman highway—has a surface like a billiard board.

There is nothing poetical, however, in the "Story of the Road Book," the first part of which was published in *The Autocar* of April 29th; but it is a story which will interest every sidecarist. The author speaks of the "Road Books of Cæsars," and touches on the evolution of the road guide up to the time of the famous "Britannia" of Ogilby's, published in 1675. Intensely interesting are the details of Ogilby's survey. It appears that he "perambulated" all the roads he dealt with, measuring them to the statute mile with his "wheel dimensurator." But the beauty of this old guide—it weighed 10½lb.—is its engraved strip maps showing "heaths and woods that have long disappeared," the gibbets and gallows of the roadside, and the "smiths' shops," which were the equivalent in those days of our garages.

This story of the "Britannia" is a romance of the road indeed and worth reading.







(Left.) When the T.O.M. windshield is in position no interference with the engine cooling is caused, for there is an opening through which air is admitted to the engine.

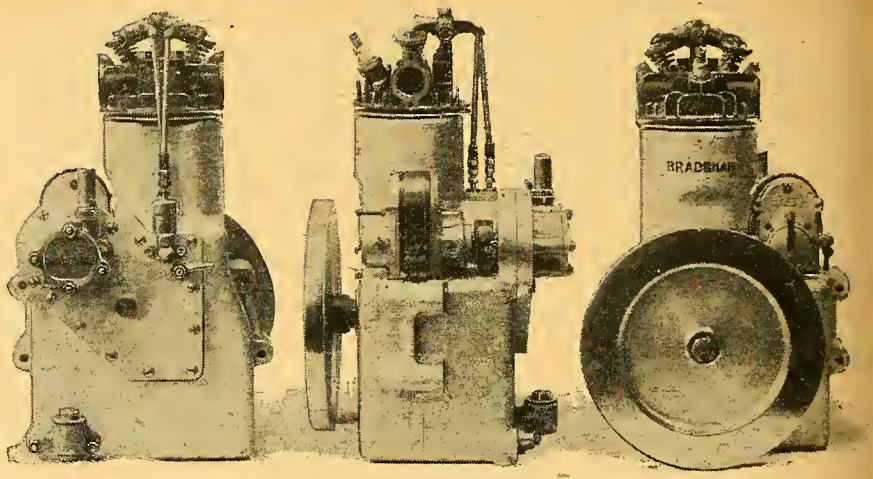
(Top.) Utilising the screen as a protective cover for the saddle.

(Right.) Complete protection from mud and mechanism for the rider's legs is provided by the lower part of the shield.

# OIL COOLING AND ITS MERITS.

## Notes on the Construction and Performance of the 350 c.c. Single-cylinder Bradshaw Engine.

IN the minds of one section of motor cyclists there appears to be some mystery in connection with oil cooling. If these notes succeed in dispelling such notions they will, at any rate, have accomplished a part of their object, for the 350 c.c. Bradshaw engine is as simple and as straightforward a piece of mechanism as can be imagined.

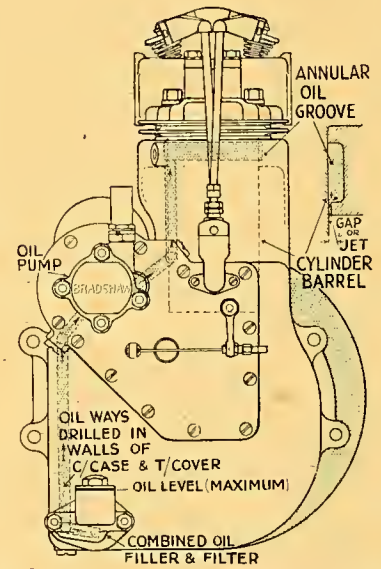



Three elevations of the 350 c.c. Bradshaw engine, showing the oil pump and indicator, also the arrangement of push-rods and valve rockers.

### Strength of Construction.

As far as the working parts are concerned, the engine is normally and even massively constructed as regards wearing surfaces, though the reciprocating parts are kept as light as possible consistent with reliability. A stiff one-piece crankshaft with integral balance weights runs in plain bearings with an additional double row ball race on the driving side. The big end is split horizontally, and the short aluminium piston is fitted with a scraper ring in the skirt which plays an important part in the functioning of the cooling system. Both valves are mounted in the detachable cast-iron head, and are inclined towards the centre of the combustion space. Valve operation is by means of a short stiff camshaft having two separate cams, through suitable rockers and adjustable tubular push rods.

Apart from the scraper ring on the piston, which is common on most car and aircraft engines, the only additional working part to the normal motor cycle engine is the simple valveless rotary plunger type of oil pump driven from the spindle of the magneto gear wheel, the magneto itself being carried on a platform directly behind the cylinder and driven through a simple coupling.




Lubrication diagram, showing the lead from the oil base to pump and from pump to annular recess surrounding the cylinder barrel.

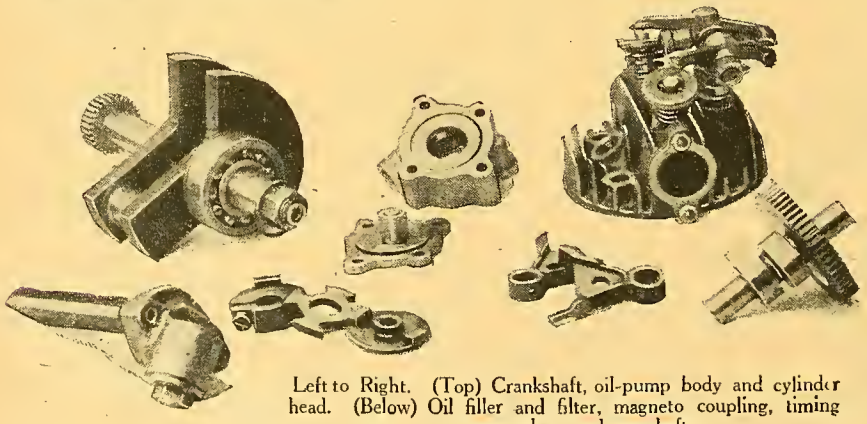
### Oil Cooling System Described.

Now for the features which are responsible for the neat but somewhat unusual appearance of the engine. The cylinder consists of a simple cast-iron barrel having a flange at the upper end. This barrel is sunk into a cylindrical extension of the aluminium crank case, and is held therein by the cylinder head holding-down bolts, the walls being well clear of the surrounding case except for a collar at the top. The action of the combined lubricating and cooling system is simply this. The capacity of the oil pump (5.1 pints per minute at 2,000 r.p.m.) is very much greater than is necessary for the lubrication of the working parts, and the oil is led direct to an annular chamber surrounding the top of the cylinder barrel. From the lower edge of this space the oil is allowed to escape downwards over the barrel, and is then thrown all over the inside of the engine, including the walls of the cylinder and crank case, finally returning to a well in the engine base to be circulated again.

During its continuous circulation from and to the sump, the oil absorbs heat from the working parts, a proportion of which is dissipated through contact with the aluminium walls of the crank and cylinder case. It is therefore obvious that a large wall area is desirable, since there is no external oil radiator—in fact, there is not even an external oil pipe to leak or fracture from vibration. Everything about the oiling system is simple, and it is practically impossible for trouble to occur; if, however, there is a shortage of oil, an indicator on the pump at once gives warning of the trouble.

### A Quart of Oil in Circulation.

It is impossible to over-fill the oil sump, which holds 2.4 pints, owing to the position of the filling cap at the correct oil level, and the pump should be everlasting, since it operates under ideal conditions and is of the simplest construction, having no spring-loaded valves.



Left to Right. (Top) Crankshaft, oil-pump body and cylinder head. (Below) Oil filler and filter, magneto coupling, timing gear rockers and camshaft.

**Oil Cooling and its Merits.**—Through the courtesy of Mr. Gilbert Campling, of 90, Jermyn Street, W.1, we have been able to handle a standard production engine on the road, and our tests were spread out over several days so as to obtain a fair idea of the engine's capabilities in normal use. Details of the experimental frame in which the engine was fitted are unimportant, since it is not intended for the market. Suffice it, then, that it was fitted with a clutch and two-speed gear having a top ratio of 5.5 to 1 and all-chain drive with no shock absorber; a Claudel-Hobson single-lever carburetter supplied the mixture.

After our initial experience—or rather inexperience: no kick-starter was fitted and the carburetter was inadvertently over-flooded — the engine invariably started easily, and throughout our test ran smoothly and faultlessly.

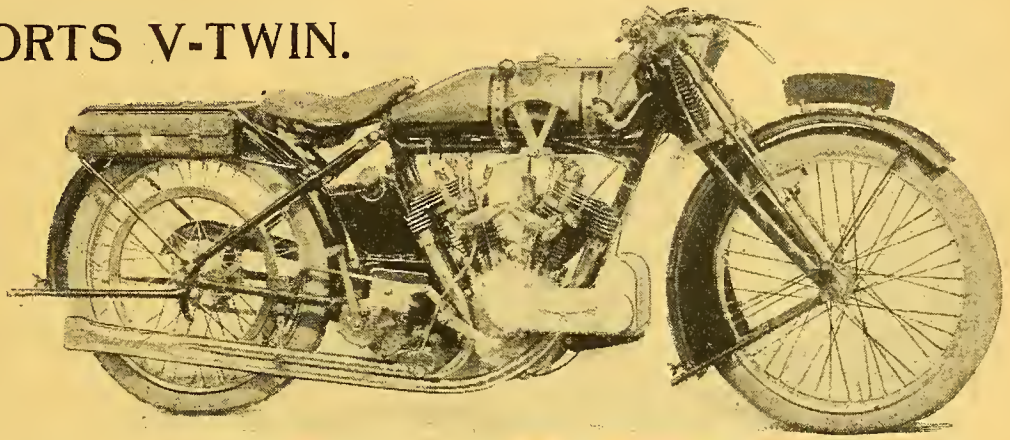
**Impressions.**

When the oil well is quite full there was a slight tendency to smoke when starting up or after descending hills with the throttle closed, but we had been warned when taking over the machine that the scraper ring fitted to this particular engine was imperfect. In spite of this slight tendency to smoke, however no plug trouble was experienced. Noise from the overhead valve gear is considerably less than that from many side-by-side valve units, and the power is beyond dispute.

A figure in the neighbourhood of 45 m.p.h. (by speedometer) is attainable on ordinary roads and one can fly up hills of 1 in 9 to 1 in 10 at well over the legal limit. In short, our experience goes to prove that the 350 c.c. Bradshaw is an engine to be reckoned with, and that it is capable of holding its own both in touring and competition fields. We look forward to a closer acquaintance.

# A NEW SPORTS V-TWIN.

## Martinsyde Range Extended by the "Quick-Six." A Speedy 739 c.c. Solo Mount.



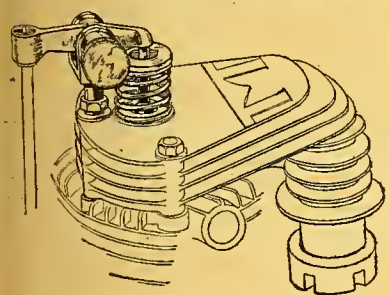
A speed machine which looks its part and is appropriately named the "Quick-Six."

TO be added to the list of attractive sports models already on the market is the "Quick-Six" Martinsyde, the happy name for which the well-known rider, H. H. Bowen, head of the firm's technical department, is responsible.

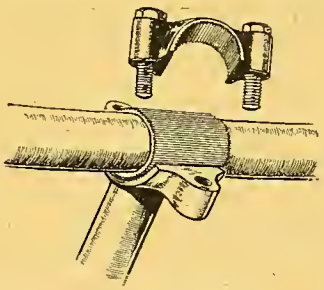
It was this machine which behaved so well in the recent Kop Hill climb, winning its class at 56 m.p.h. on the occasion of its first appearance in public.

**Improved Cylinder Heads.**

Considerable improvement has been made in the design of the cylinder head, which is detachable. Instead of the exhaust issuing from the cylinders at an acute angle the detachable head incorporates a special exhaust cage, heavily ribbed with radiating fins, while the addition of streamline ports adds greatly to the efficiency. Of course, the distinctive Martinsyde feature of overhead exhaust and side inlet is retained. Ricardo pistons are fitted, and each flywheel is machined and accurately balanced. All reciprocating parts have been lightened, while the connecting rods are of nickel steel and machined all over.



New detachable exhaust valve cage with a ribbed extension.



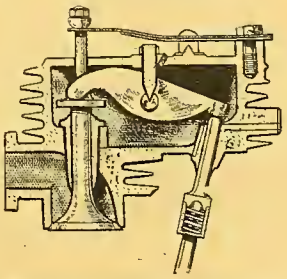
How the adjustable handlebars are provided with a positive lock by means of a knurled clip.

Another feature which is worthy of mention is that the length of the cylinder has been so designed that the top ring just emerges into the head by 10-1,000ths of an inch, thus preventing any ridge being formed at the top. A plain copper washer is employed to ensure gas-tightness at the head joints, this being found to be quite as efficient as a copper and asbestos washer. The same type of washer is also employed for the exhaust cage. Cone-type compression valves are fitted instead of compression taps, as these have been found to be far more satisfactory.

A close-ratio gear box is fitted, the ratios being in the proportion of 1, 1.5, and 1.8; the actual gears are: top 3.6, second 5.4, and bottom 9.1 to 1.

**Foot-controlled Oil Pump.**

A separate oil tank is now fitted, and in future models the oil pump will be foot-operated, while in the final design both brakes will be of the dummy belt rim variety, with compensating arrangement on the shoes to ensure a parallel movement. The price of the machine is £150, and it is manufactured by Martinsyde, Ltd., Maybury Hill, Woking, Surrey.



An experimental valve gear embodying leaf springs.

# NOTES ON ELECTRIC BULBS.

## Of Interest to Motor Cyclists using Electric Lighting Sets.

ELECTRIC bulbs in use at the present time are almost invariably of the incandescent type, consisting of a glowing filament enclosed in a glass globe.

Attached to the base of the bulb is a brass cap which fits in the lampholder and holds the globe rigid.

The cap also contains the contacts for conveying the current to and from the filament.

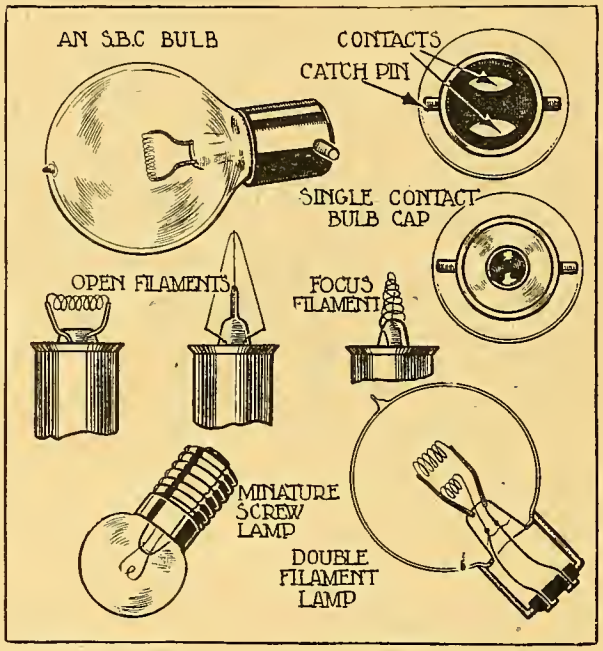
There are four standard lamp caps and holders in use in this country, viz. : (1) The Edison screw, (2) the large bayonet cap (L.B.C.), (3) the small bayonet cap (S.B.C.), and (4) the miniature screw cap.

The first is only used on very large bulbs, and the second is the size commonly employed in house lighting. For automobile lighting, the small bayonet cap is generally employed. The cap consists of a piece of brass tube provided with two small pins which engage in slots in the holder. Underneath the cap will be found one or two metal contact pieces which press against spring plungers in the holder.

Most S.B.C. bulbs are double contact—*i.e.*, the current enters by one contact and leaves by the other—but a number of single-contact lamps are in use, and in these the current leaves by way of the cap itself.

These bulbs are often used on motor cycles having earth return lighting systems.

The miniature screw cap is provided on small bulbs for pocket lamps, dash lights, etc. The current enters by the centre contact and leaves by the screw portion ; unfortunately they have the disadvantage of being liable to unscrew under vibration.




Various filaments, bulbs and bulb caps mentioned by the writer.

### Three Classes of Bulbs.

Incandescent lamps fall into three classes : (*a*) Carbon filament, (*b*) metal filament, and (*c*) gas-filled. The carbon filament was the earliest type, but is now practically obsolete.

A carbon lamp consumes about 4 watts per candle-power, whereas an ordinary metal filament takes only about 1 watt per candle-power, and a gas-filled lamp about half this amount. The watt, it may be mentioned, is a unit of power, 746 watts equal one horse-power.

The watts taken by a lamp or other apparatus may be found by multiplying the pressure (volts) by the current (amperes). For example, suppose a lamp takes 1 ampere at 6 volts, then the total watts will be 6, and if the efficiency of the lamp is 1 watt per candle-power, the candle-power will also be 6.

As their name implies, metal filament bulbs have filaments of very thin high-resistance metal, which attain a white heat when the proper current passes.

To prevent the filament burning away, the air is exhausted from the glass globe. "Half-watt" or gas-filled lamps differ from the previous kind, in that the globe contains some inert gas, such as nitrogen, instead of being exhausted ; this allows the filament to be run at a higher temperature, thus giving a much brighter light.

### Focus Filaments.

With respect to the shape of the filament, makers differ somewhat, but generally filaments may be divided into two types : (*a*) open, (*b*) focus filament.

The former is better for general lighting, but for headlamps the focus type is to be preferred, as the source of light is concentrated.

Some bulbs are provided with two filaments, either of which may be switched on at will, the one giving a bright light, and the other just a glow.

Lamps are generally marked with their volts and watts thus : 12 v. 6 w.

As before mentioned, the watts consumed give an indication of the candle-power, and for the general run of motor cycle lighting bulbs, excepting gas-filled or "half-watt," candle-power and watts may be read synonymously.

It is essential that the proper voltage be given when ordering, as a lamp of too low voltage will light very brightly, and quickly burn out. On the other hand, if the voltage of the bulb is higher than that of the circuit, it will only give a dim light ; but the current consumption will be less and the filament less highly stressed. A tail lamp suffering frequently from vibration is sometimes quite satisfactory with a bulb of the next higher voltage.

If the volts and watts are known, the current may be found by dividing the former into the latter, thus :

$$\frac{\text{watts}}{\text{volts}} = \text{amperes.}$$

A 12 v. 6 w. lamp, for example, takes a current of 0.5 ampere.

S. F. PHILPOTT.

# T.T. NOTES and NEWS

## Details of many New Racing Mounts. The Search for Efficiency.

AT 5 a.m. on Monday next, the 15th, practising for the great blue riband event will commence in the Isle of Man. Interest in the races is keener than ever.

* * * *

Safety helmets have been long compulsory for competitors in the T.T. This year the Gamage T.T. Safety Helmet has been accepted as the official head gear for competitors in the races.

* * * *

The 494 c.c. Douglas entered by Frank Whitworth, Ltd., in the Senior T.T. Race will be ridden by A. Jones, of Bargoed, S. Wales, who rode an Ivy in last year's Junior Race, covering two laps in 47 minutes, averaging 47½ m.p.h., the record speed for a two-stroke.

* * * *

Also entered by Frank Whitworth, Ltd., is an Ivy to be ridden by J. A. Jones, of Rhondda Valley, who is an ex-air pilot. He acted as a despatch rider in 1914, and after two years transferred to the Air Force, gaining his certificate as a sergeant-pilot.

* * * *

On the Monday prior to the Junior Race the Manx M.C.C. are organising a monster fancy dress or masked T.T. ball to take place at the Palace, Douglas, from 8 p.m. to 2 a.m. Many keen motor cyclists going to the races will no doubt take part in this social gathering.

* * * *

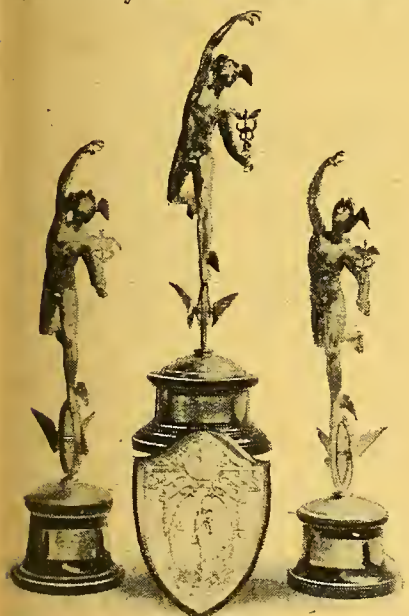
Those in need of spare parts or complete Burman gears will find them at the Braddon Garage, Athol Street, Douglas. Burman & Sons, Ltd., will open their depot on May 15th.

* * * *

Velocette T.T. machines will be very similar to that employed at Brooklands, the engine having a bore and stroke of 63×80mm. (249 c.c.), a deeply ribbed cylinder with two widely spaced exhaust ports, and a detachable aluminium head of considerable thickness. An aluminium piston is employed, having two narrow rings at the top, and plain bearings are used throughout the engine in conjunction with the well-known Velocette mechanical lubrication system. Chain drive is used throughout via a three-speed countershaft gear box giving ratios of 4.9, 7.1, and 9.3 to 1. A shock absorber is incorporated in the rear hub, and both front and rear brakes are of the internal expanding type. The cylinder is offset from the crankshaft centre by ¼in.

* * * *

Frame modifications to the Velocette include a wheelbase lengthened by 1½in., a 1½in. lower engine position, and



THE COVETED TROPHIES. This year, in addition to the Senior and Junior Trophies, there is a replica for the 250 c.c. Lightweights, which hitherto have competed for "The Motor Cycle" Cup. The shield is the Nisbet award for the most plucky performance.

## T.T. MEMORANDA.

### PRACTISING.

PRACTISING commences at 5 a.m. Monday next, May 15th.

No practising will be permitted after 7 a.m., or on Sundays.

### THE COURSE.

Douglas, Bray Hill, Quarter Bridge, Union Mills, Crosby, Ballacraine, Ballig, Kirkmichael, Ballaugh, Sulby, Ramsey, Snaefell, Keppell Gate, Hillberry, Cronk-ny-Mona, Governor's Bridge, Douglas.

DISTANCE.—37¾ MILES.

### NUMBER OF CIRCUITS.

Lightweights (250 c.c.), 5 laps. Total, 188 m. 6 fur.

Junior (350 c.c.), 5 laps. Total, 188 m. 6 fur.

Senior (500 c.c.), 6 laps. Total, 226 m. 4 fur.

### LAST YEAR'S SPEEDS.

Winner of *The Motor Cycle* Cup (250 c.c. Class), D. G. Prentice (New Imperial) averaged 44.9 m.p.h.

Junior Trophy was won by Eric Williams (349 A.J.S.) at an average speed of 52 m.p.h.

Senior Race winner, H. R. Davies (349 A.J.S.) averaged 54.49 m.p.h.

### FASTEST LAPS, 1921.

Lightweights.—D. G. Prentice (249 New Imperial), 49 min. 21 sec. (2nd lap).

Junior.—H. R. Davies (349 A.J.S.), 41 min. 4 sec. (5th lap).

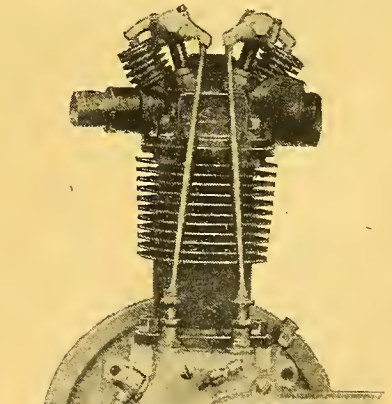
Senior.—F. G. Edmond (499 Triumph), 40 min. 8 sec.° (4th lap).

° Record for the course.

### Time and Speed Table for the T.T. Course.

*Time per lap at speeds from 40 to 60 m.p.h.*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 40 | m.p.h. | ... | ... | 56 | mins. | 38 | secs. |
| 41 | ,, | ... | ... | 55 | ,, | 15 | ,, |
| 42 | ,, | ... | ... | 53 | ,, | 56 | ,, |
| 43 | ,, | ... | .. | 52 | ,, | 41 | ,, |
| 44 | ,, | ... | ... | 51 | ,, | 29 | ,, |
| 45 | ,, | ... | ... | 50 | ,, | 20 | ,, |
| 46 | ,, | ... | ... | 49 | ,, | 14 | ,, |
| 47 | ,, | ... | ... | 48 | ,, | 12 | ,, |
| 48 | ,, | ... | ... | 47 | ,, | 11 | ,, |
| 49 | ,, | ... | ... | 46 | ,, | 14 | ,, |
| 50 | ,, | ... | ... | 45 | ,, | 18 | ,, |
| 51 | ,, | ... | ... | 44 | ,, | 25 | ,, |
| 52 | ,, | ... | ... | 43 | ,, | 34 | ,, |
| 53 | ,, | ... | ... | 42 | ,, | 44 | ,, |
| 54 | ,, | ... | ... | 41 | ,, | 57 | ,, |
| 55 | ,, | ... | ... | 41 | ,, | 11 | ,, |
| 56 | ,, | ... | ... | 40 | ,, | 27 | ,, |
| 57 | ,, | ... | ... | 39 | ,, | 44 | ,, |
| 58 | ,, | ... | ... | 39 | ,, | 3 | ,, |
| 59 | ,, | ... | ... | 38 | ,, | 23 | ,, |
| 60 | ,, | ... | ... | 37 | ,, | 45 | ,, |



Overhead valve 350 c.c. Blackburne engine for the T.T. The deep radiating fins and the extension of the vertical fins of the head on to the exhaust port are special features.

**T.T. Notes and News.—**

Brampton racing forks. The capacity of the petrol tank is approximately 2½ gallons, while over a quart of oil is carried in the engine base, the latter being sufficient for the complete race. 24in. wheels will be retained, and it is probable that 2½in. tyres will be fitted. A point of interest is the fact that a silencer will in all probability be retained instead of the more normal straight-through exhaust pipe.

* * * *

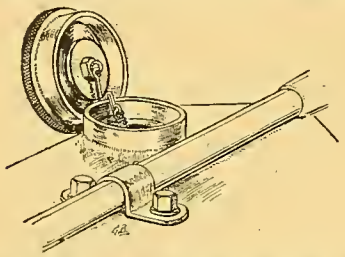
The Velocettes in the lightweight race will be ridden by R. N. Judd, G. Denley, and S. Jones.

* * * *

The Blackburne engines are not purely for racing, and have been developed with a view to fast touring work.

* * * *

Rudge-Whitworth, Ltd., will have their I.O.M. headquarters at Homefield,



Large filler caps on the Rudge are held in position by coil springs; when open they can be hooked over the edge of the filler.

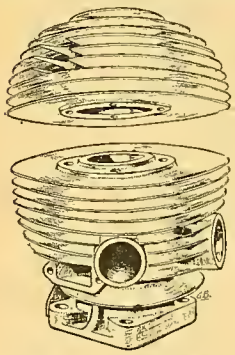
Palace Terrace, Queen's Promenade, Douglas.

* * * *

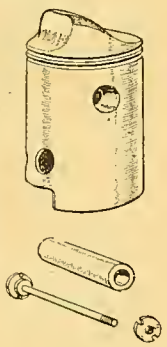
Blackburne engines will be well represented in the T.T. Races this year, as they will be fitted to more than half a dozen different makes.

* * * *

J. H. Mahlers has been in the Rudge drawing office for several years. He was a despatch rider in France attached to the R.F.C., and was wounded in the foot. He is one of the Rudge team.



Very deep ribs and two widely spaced exhaust ports are features of the Velocette T.T. machines. The detachable aluminium head is held down by four studs and has very thick walls so as to provide an easy heat flow.



An aluminium piston with two narrow rings is fitted to the T.T. Velocette. The hollow gudgeon-pin is retained by a light central bolt and washers.

Advocates of plain bearings have lost their stronghold of example, for in the Blackburne engines rollers are now used in the big end and on the flywheel side of the main shaft, while there is a ball bearing on the timing side.

* * * *

O. M. Baldwin entered for the T.T. in 1920, but retired in the third lap. He has had considerable racing experience. He obtained the rank of Flight-Commander R.A.F. during the war, gained the D.F.C., Croix de Guerre and bar, and is a Chevalier of the Légion d'Honneur.

* * * *

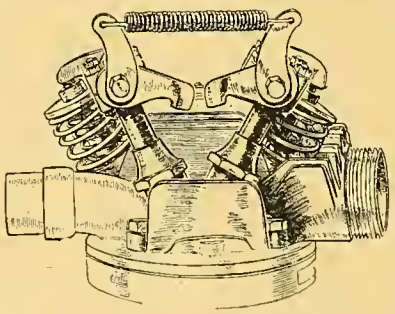
Only recently R. B. Ewens was in the experimental department of the Rudge works. He won the Lycett Trophy in 1914, and frequently rode as a member of the Coventry and Warwickshire M.C. team. He was a despatch rider during the war, attached to the A.S.C., and was for four years in France.

* * * *

Cooling has been carefully studied on the T.T. Blackburne engines, the fins on the head being much deeper than last year's and being extended to the exhaust port, which is of considerably larger dimensions. A domed piston of aluminium alloy is provided with two rings.

* * * *

The 350 c.c. Blackburne o.h.v. model (71×88 mm.) has undergone slight modifications. Among the chief features may be mentioned the valve gear, which is of the same design but somewhat lighter than previously. Two valve springs are



Cooling fins are now cast above the exhaust port of the cylinder head of the new 350 c.c. Blackburne.

fitted, one inside the other, in the case of each valve, while the inlet pipe is set on the skew, allowing room for an extension pipe to the carburetter.

* * * *

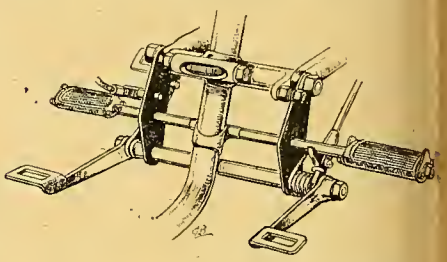
So far as the 500 c.c. T.T. Blackburne engine is concerned, it is practically the same as that used last year except for a few minor improvements.

* * * *

For the lightweight T.T. Burney & Blackburne, Ltd., have produced a 250 c.c. engine which is identical with the one which so signally distinguished itself in records on the track on a Sheffield-Henderson. It has the standard type of head and many parts used in the 350 c.c. engine, but machined so as to be considerably lighter in weight. Both this and the 350 c.c. model are declared to be capable of showing over 100lb. m.e.p. at nearly 5,000 r.p.m.

* * * *

Motor cyclists passing through Liverpool will find every accommodation at the garage of Victor Horsman, Ltd., 4, Brownlow Hill. There is ample accommodation



An expanding rear brake is operated by pedal from each side of the New Imperial T.T. frame.

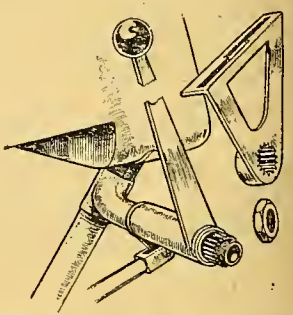
for any number of motor cycles, and in the event of anyone arriving late in Liverpool the premises will be kept open by arrangement, the usual closing time being seven o'clock.

* * * *

Applications for reserved seats in the A.C.U. grand stand should be made as soon as possible to the clerk of the course, A.C.U. local office, Hotel Peveril, Douglas, I.O.M. Prices of tickets for each race are as follows: Block A, just behind the Royal Box, rows two and three, 20s.; rows four, five, and six, 15s. Blocks C to F, first two rows, 10s.; last four rows, 7s. 6d. Members of the A.C.U. need only pay half these prices on production of their membership cards.

* * * *

A rider following just behind another competitor in the T.T. races is often liable to suffer from stones and grit thrown up by the back wheel of the machine in front. This year Easting Windscreens, Ltd., 132, Steelhouse Lane, Birmingham, are again manufacturing a specially designed handle-bar screen, which they will supply free to any entrant in any one of the T.T. races. Easting Windscreens will have a representative in the island after May 21st.



At the front end of the Rudge tank is mounted a change speed lever operating in a gate, adjustable to the rider's convenience. The rod is connected to a rocking quadrant over the gear box.

**T.T. Notes and News.—**

Outwardly the most striking feature in the design of the T.T. 348 c.c. J.A.P. engine is the enormous increase in the radiating surface, which enables the maintenance of power on full load on the mountain course, which is a far more important point in the T.T. than the capability of attaining high speeds over short distances.

* * * *

An aluminium piston with two rings at the top is used on the J.A.P. engines; the connecting rod is of special material and very light; the valves are of generous dimensions, while the exhaust port is 1⅜in. in diameter and of equal size to that of the 998 c.c. twin. Roller bearings are provided throughout, and other noteworthy features are light hollow tappets and compound valve springs. The aluminium fir cone exhaust valve cap radiators, which were seen for the first time on last year's J.A.P. engines, have become standard practice.

* * * *

The lightweight T.T. J.A.P. engine of 249 c.c. capacity remains much the same as last year's model, except that the radiating surface has been increased, a lighter connecting rod has been fitted, and a slightly modified piston with two piston rings of heavier section is used.

* * * *

As evidence of the influence of the T.T. on design may be instanced the fact that valve steels suitable for high quality valves have been produced for the J.A.P. engine after much careful experiment.

* * * *

In the Senior race the J.A.P. name will be represented by a twin-cylinder engine, of which the cylinders are two of the 249 c.c. type, making a total capacity of 498 c.c.

* * * *

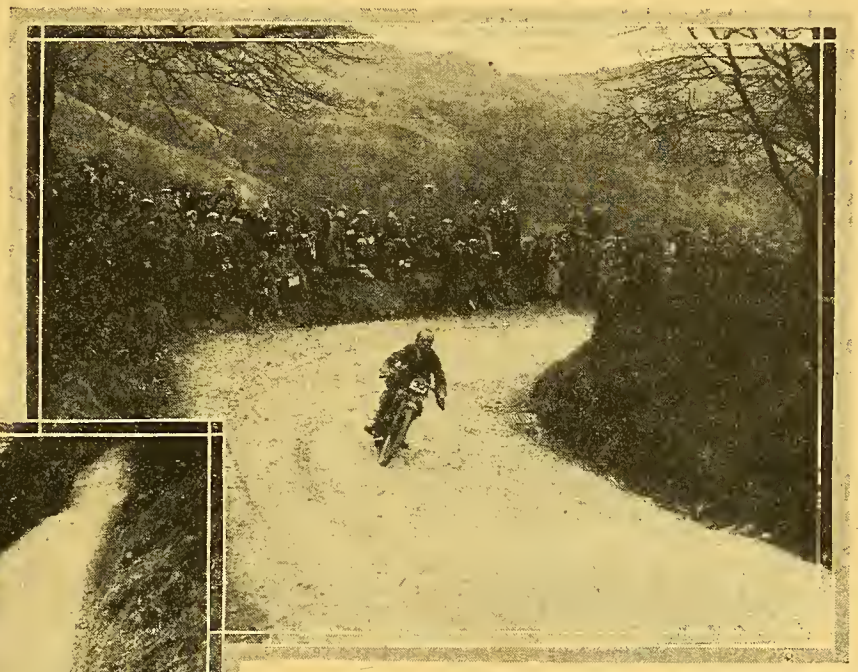
Altogether some nineteen J.A.P. engines will be seen in the T.T. Races. In the Junior class these will be fitted to the New Imperials, Dot and Diamond; in the Lightweight 249 engines will be seen on the Diamonds, New Imperial, Francis-Barnett, and Invicta; while the 500 c.c. twins will be fitted to the N.U.T., New Imperial, and New Gerrard.

# ON SUTTON BANK.

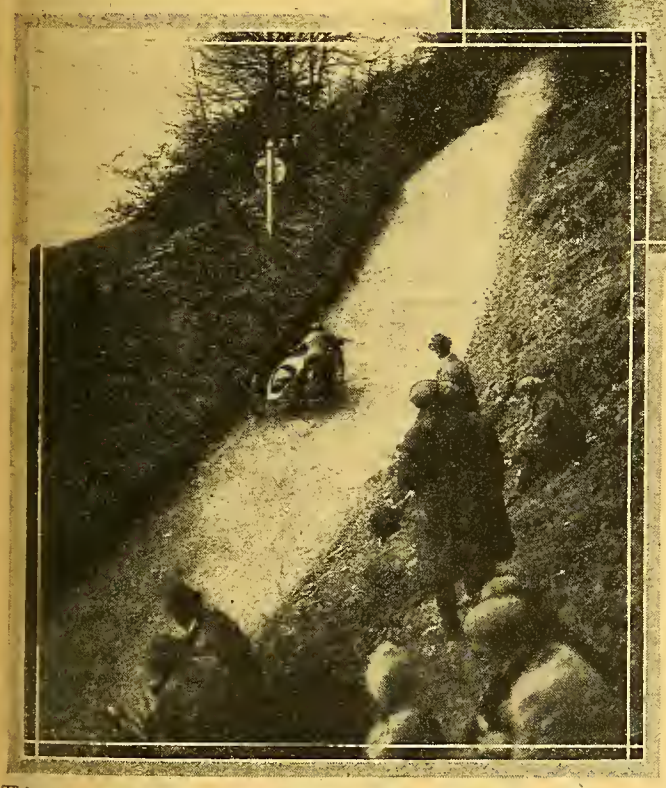
## A Yorkshire Hill Climb.

POSTPONED on April 22nd owing to the continuous rain, which made the surface almost unrideable, the York and District M.C. held its Sutton Bank Hill-climb, on the 29th of last month.

The meeting was a successful one, large crowds of spectators were present, and some high speeds were achieved, C. P. Wood, on a 532 c.c. Scott, coming within one-fifth of a second of the record for the hill. The results follow:



Donald Watson rounding the hairpin on his 532 c.c. Scott Squirrel.



This illustration of Sutton Bank gives a good idea of the imposing gradient of the famous Yorkshire hill. R. T. Cawthorne (490 Norton sidecar) making fastest time in his class.

SOLO UP TO 275 c.c.—F. W. Dosser (249 Velocette), 1m. 40⅕s.; Frank Reynard (249 Monopole), 1m. 49⅖s.

SOLO UP TO 350 c.c. (AMATEURS).—E. Wilkinson (349 A.J.S.), 1m. 27⅘s.; G. B. Gibson (349 Douglas), 2m. 18⅕s.

SOLO UP TO 350 c.c.—E. Wilkinson (349 A.J.S.), 1m. 30s.; Frank Reynard (249 Monopole), 1m. 35⅗s.

SOLO UP TO 560 c.c. (AMATEURS).—W. Wilkinson (Sunbeam), 1m. 24⅖s.; E. Wilkinson (349 A.J.S.), 1m. 24⅗s.

SOLO UP TO 560 c.c.—C. P. Wood (532 Scott), 1m 22⅖s.; C. N. Sadler (490 Norton), 1m. 22⅘s.

SOLO UP TO 750 c.c. (AMATEURS).—W. Wilkinson (499 Sunbeam), 1m. 22⅕s.; E. Wilkinson (349 A.J.S.), 1m. 22⅖s.

SOLO UP TO 750 c.c.—C. P. Wood (532 Scott), 1m. 17⅘s.; R. T. Cawthorne (490 Norton), 1m. 20⅗s.

UNLIMITED (AMATEURS).—E. Wilkinson (349 A.J.S.), 1m. 21s.; Donald Watson (532 Scott), 1m. 33⅗s.

UNLIMITED.—Fred W. Dixon (988 Harley-D.), 1m. 17⅘s.; R. T. Cawthorne (490 Norton), 1m. 18⅕s.

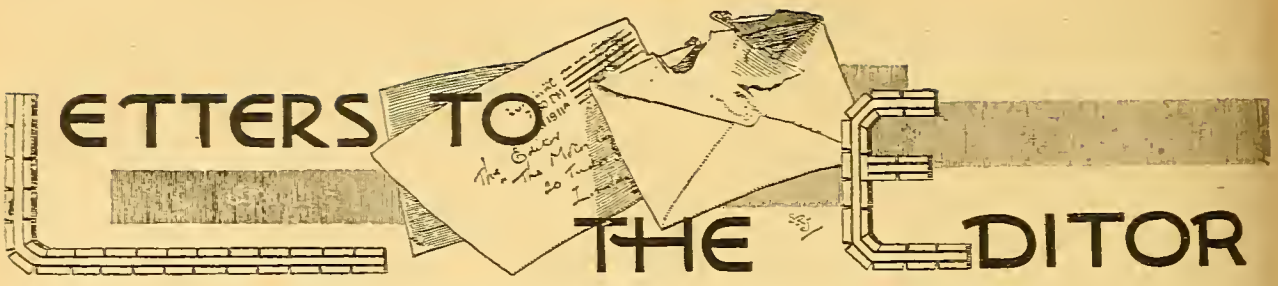
SIDECARS AND THREE-WHEELERS UP TO 560 c.c. (AMATEURS).—J. H. Illingworth (490 Norton), 1m. 56⅗s.; Wilfred Wells (499 Sunbeam), 2m. 18⅗s.

SIDECARS AND THREE-WHEELERS UP TO 560 c.c.—R. T. Cawthorne (490 Norton), 1m. 36⅖s.; C. P. Wood (532 Scott), 1m. 48⅗s.

SIDECARS AND THREE WHEELERS UP TO 750 c.c.—C. P. Wood (532 Scott), 1m. 34⅖s.; R. T. Cawthorne (490 Norton), 1m. 35⅗s.

SIDECARS AND THREE-WHEELERS UNLIMITED (AMATEURS).—J. H. Illingworth (490 Norton), 1m. 56⅖s.

SIDECARS AND THREE WHEELERS UNLIMITED.—Fred W. Dixon (988 Harley-D.), 1m. 26⅖s.; R. T. Cawthorne (490 Norton), 1m. 34⅗s.; Wilfred Wells (499 Sunbeam), 1m. 51⅕s.




The Editor does not hold himself responsible for the opinions of his correspondents.

Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.

## THE AMATEUR ROAD RACE.

Sir,—I have read with much interest your observations in connection with this proposed event, and I think you will agree that to imperil in the slightest degree the organisation of the regular T.T. event by sandwiching another event in between would have been the very height of folly, and I, as one member of the Competitions Committee, would oppose it to the limit of my power.

I venture to state that if the Isle of Man Club had been prepared to accept an open event to be held on the Friday, the majority of the Competitions Committee would have been disposed to recommend that a permit be granted on that date; and further, I have not the slightest doubt that the vast majority of the officials concerned in the T.T. events would have been only too glad to have lent all the help they possibly could. Speaking personally, nothing would have given me greater pleasure than to have helped them in any capacity they would have cared to place me in.

Furthermore, whilst I am one of the very last who would kow-tow to the manufacturers in any shape or form, yet we are bound to recognise that the T.T. event is, after all, largely a manufacturers' event, and we must in all fairness give considerable ear to their observations.

It is a most expensive undertaking for all the manufacturers who are concerned in the event, and is undoubtedly the greatest opportunity they have got of putting to the test all their best and newest ideas, having for their ultimate object the improvement of the motor bicycle.

T. RUTHERFORD.

Sir,—As a keen amateur motor cyclist of sixteen years' experience, I wish to criticise the A.C.U.'s attitude regarding the above, as I have noted with great disappointment that the A.C.U. has refused a permit for the event. The objections raised are paltry and very selfish, and the refusal is sure to create anti-A.C.U. feeling.

The A.C.U. is dependent for its very existence upon the subscriptions of amateurs, and yet deliberately refuses their requirements. For some time past it has been a well-known fact that the A.C.U. has supported the trade, and thought more of its own honour and glory than the needs of the poor private owner.

Pre-war the Union made a special concession to private owners entering the T.T. by accepting their entries at a lower fee, but this has now been abolished, and the private owner placed on the same level as the trade, with the result that the poor amateur has been practically wiped out of the event, the entry fee of 21 guineas being beyond the means of the majority. Further, what chance has the amateur, with his one machine against the trade entries, with numerous machines and a well-equipped temporary workshop on the spot?

Now, when a race is promoted genuinely for amateurs, instead of the A.C.U. giving every assistance and support, permission is promptly refused. This raises the question as to whether the Union is for the interests and benefit of the motor cycling public or for the trade. If the latter, then the former should cease their subscriptions. This action would certainly bring the Union to its senses.

The latest propaganda of the A.C.U. is: What is the best method of ensuring that every motor cyclist in the kingdom should become a member of the A.C.U.? The answer to this question is: Reorganise the Union in such a way that it is a genuine benefit, and not a hindrance, to the amateur.

The time has now arrived when motor cyclists should seriously consider further financing the Union until the Union so regulates its policy as to cater for their requirements in a straightforward manner, unbiased by any other influence.

Wetheral. AMATEUR.

Sir,—I cannot refrain from expressing my regret at what seems to me the extremely short-sighted policy of preventing the Amateur Road Race, an event that may possibly create more interest in the ranks of the motor cycling public than even the T.T. I have heard this put forward as a reason for its prohibition, *i.e.*, that the T.T. may be overshadowed. Surely this is an inadvertent admission that the amateur event may be more important. Let this be so or not, the policy of the trade certainly should be to encourage the sport among amateurs, even at the expense of events where professional riders predominate.

The initiative of the Manx M.C.C. is to be commended as much as the mistaken policy of the particular A.C.U. committee concerned is to be deplored, and I am of opinion the matter is of sufficient importance to warrant calling a special meeting in order to grant a permit for the Friday following the Senior race.

The idea of shelving an important matter because one or two members had left the meeting when this alternative was suggested seems very feeble handling of it. It would have been so simple, possibly, to have recalled the hurrying ones, or else to have called another meeting at an immediate date, but the line of least resistance seems to have been taken at the expense of the interest of thousands and, I firmly believe, of ultimate loss to the trade. Is it even now too late?

JAS. L. NORTON.

## 4 H.P. (?) AEROPLANES!

Sir,—With reference to the letter from "Nutherumph," on page 541 of the issue of April 27th, *re* 4 h.p. aeroplanes, may we correct a slight error in same?

The A.B.C. engine referred to was a "Gnat," designed and produced throughout in our own works, and had no connection with Fiat Motors, Ltd. Probably your correspondent has in mind the fact that this latter firm made for us, under licence, a certain number of our 3½ h.p. engines, for which there was such a large demand throughout the war.

A.B.C. MOTORS (1920), LTD.

Sir,—With reference to "Nutansplitpin's" and "Nutherumph's" letters on the above subject, the small Farman machine that the latter saw was the Farman "David," or sports model. It is still being made, and it is fitted with a 35 h.p. Anzani, and two of these machines were flying at the recent Nice aviation meeting.

The day of the 4 h.p. aeroplane is very, very distant. Assuming the complete machine could be built for a total weight of 200 lbs. (a very low estimate), it would have a weight of 50 lb. per h.p.—an absolutely unheard-of figure.

A machine much nearer the mark would be the de Pischof Avionette, which was produced early in 1921. This was a small biplane, with a flat twin Clerget of 16 h.p. The following are a few details: Span 17ft., length 11ft. 6in., height 4ft. 3½in., area 80⅔ sq. ft., weight empty 225 lb., weight per sq. ft. 2.78 lb., weight per h.p. 14 lb.

The performance is quite good (actual tests—not estimated): speed range, 56 to 60 m.p.h., climb to 4,000ft. in 52min., consumption of petrol 1.3 gall. per hour, and oil practically nothing.

This is the sporting type of machine to go for, instead of wasting time with 4 n.p. machines, which at the present day are practically impossible. The de Pischof is essentially a one-man machine, the upkeep is simple and inexpensive, and I am sure, owing to its simple construction, it could be marketed at less than £100. I should have mentioned that a very ingenious feature about it is the speed with which the wings can be dismantled or re-erected.

PHILIP J. ROBINSON.

## *SHAFT DRIVE'S UNPOPULARITY.*

Sir,—Anything more completely at variance with the facts than the statement of Mr. W. A. Weaver in your issue of the 27th the subscriber does not readily recall. To avoid any misconception his actual words are quoted:

"The reason for the shaft drive being left severely alone by manufacturers is simply because it is not, and cannot be made, as efficient as the chain drive. The difference is anything from 15% to 20%, according to design, and may be even greater after prolonged wear."

Has Mr. Weaver really had any, and if so just how much, riding experience on shaft-driven motor cycles? It is suggested that he has had none. He cannot be driving a chain-geared car—nobody does—and he cannot possibly have compared the two drives on a precision testing machine, for he would then know better. He is challenged to produce his evidence.

The present writer had three years (1910, 1911, and 1912) riding on two F.N. shaft drive single-cylinder machines and his experience *in those years* was that the gear box, change speed, clutch, and axle drive were absolutely beyond praise and roadworthily perfect.

So far as transmission efficiency is concerned, there is little or nothing to choose between an oil-bath chain drive and the standard shaft drive when both are new, but when both are old the former will give up altogether, and the latter will go on not materially impaired in efficiency. There is, of course, no comparison at all between open chain and shaft drives.

The foregoing encomium applies to the standard bevel drive, but it is submitted that a still better drive is possible with worm gear intelligently applied.

In the meantime the real reason why shaft drive is not used has nothing whatever to do with transmission efficiency. It is purely a question of mental inertia. The chain drive on the motor cycle is easily applied without any serious expenditure of "grey matter," whereas the shaft drive involves changes. The chain drive persisted for long on passenger cars—it has now gone utterly; it still persists on some few out-of-date petrol lorries, but it is rapidly going, and it persists on some electric commercial vehicles, and it is going there too.

Some day a bright British designer will wake up to the possibilities of shaft drive, and, if well backed, he will mop up the market—home and Colonial. W. L. SPENCE.

Sir,—Surely Mr. Weaver does not wish to convey that the transmission efficiency of a chain is 15 to 20 per cent. higher than the efficiency of a shaft drive; or, if he does, it would be interesting to know what he considers to be the efficiency of a good shaft drive and spiral bevel. I estimate it at about 93 per cent., so, if a chain is 15 to 20 per cent. higher in its efficiency, it would seem that by adding a sufficiency of chains between engine and road wheels the effective power of the engine could be increased *ad infinitum*.

Possibly Mr. Weaver wishes to say that a good shaft drive has an efficiency of 93 per cent., and a good chain has an efficiency of 94 per cent. This is a difference in transmission losses of about 17 per cent., and a difference in transmission efficiency of 1 per cent.

As to the effects of wear—I have seen a 1910 F.N. shaft transmission with the bevels practically as good as new. In what condition would a twelve-year-old chain be?

Why not be candid and admit that the ordinary single- or four-stroke twin engine has a torque which fluctuates too violently to permit of the advantages of shaft transmission being availed of? CECIL WEBB.

Sir,—Mr. Weaver's explanation of the unpopularity of the shaft drive is very wide of the mark. Where does he obtain his figures of relative loss of efficiency?

If he will turn up any recognised up-to-date book of engineering data he will find that, given a well-designed shaft and bevel drive, properly adjusted and accurately cut, there is only an initial difference of less than 5% in comparison with a chain drive in first-class order; I say initial advisedly, because the efficiency of a chain, and in particular of an unprotected chain, drops rapidly, whereas the efficiency of a shaft and bevel drive, if initially sound, tends to improve, and remains highly efficient during the greater part of its life if kept in proper adjustment.

The disadvantage of the shaft and bevel drive as applied to most motor cycles is that it makes a greater demand for an even torque than does a chain drive, which in itself provides a little springiness tending to eliminate the effect of dead centres. This, however, only affects the question of comfort, and does not in any way concern the question of mechanical efficiency.

On the other hand, this defect automatically disappears under the more even torque of multi-cylinder engines.

What killed the shaft drive pedal bicycle was its deadness, due to the uneven torque of pedalling over the dead centres. This latter shows up to a slighter extent in a chain-driven bicycle owing to the natural spring of a properly adjusted chain. Tension a chain drive bone hard, and it has exactly the same deadness as the shaft drive pedal cycle had in the old days.

On the other hand, in the new shaft-driven F.N. pedal cycle the hollow driving shaft is made of spring steel, and is so designed as to give just the requisite springiness in the drive to eliminate the deadness which killed former shaft-driven pedal cycles. I have been told by some of our leading cyclists who have made prolonged trials of the new machine that it is ideal.

No, sir, the main reasons why shaft drive and bevel is not generally adopted for motor cycles as it is for cars are:

(i.) It is difficult to design and expensive to manufacture.

(ii.) On account of its demand for an even torque, it is more suitable for use with multi-cylindered engines than singles or twins.

(iii.) Many motor cyclists fear it is complicated and difficult to adjust (which it is not).

(iv.) There is much unthinking and unknowledgable prejudice to overcome, and propaganda is hard and expensive work. A. ERNEST GELDER.

Sir,—Referring to Mr. Weaver's letter about shaft drive, he certainly gives a very wrong impression of its efficiency by comparing its use against chain drive in pedal cycles. Whereas, in the humble push cycle which has its drive geared up, four bevels are necessary against two chain gear wheels (and I presume it is in the gearing where the loss of power takes place, not in the shaft itself), in the case of a motor cycle, only two bevel gears are necessary against four chain sprockets, so it is absolutely wrong to compare them on this basis. Moreover, in the gear box of a shaft-driven motor cycle, the power is transmitted straight through on all ratios, while on the usual chain-driven machine on the lower ratios, the drive is taken right round the layshaft, and even on top gear this is turned idly and must take up some power.

I fancy the reason why shaft drive is not fitted on British machines is due to the obstinacy of manufacturers, as it is not the only thing which requires incorporating in designs. This is shown by the fact that this drive is incorporated in Belgian, Danish, American, and Australian machines.

Sheffield. BELT OR BEVEL.

### *T.T. AND 1,001st NUMBER.*

**On June 1st "The Motor Cycle" will celebrate its 1,001st consecutive issue. Nearly twenty years ago, when this journal was first published, the motor cycle movement was only just developing. The 1,001st issue of "The Motor Cycle" will contain many special articles and illustrations of exceptional historical interest; and, appearing on the date of the Senior Tourist Trophy event, particulars of the T.T. Races in the Isle of Man will form a feature.**

***Orders for copies of this enlarged issue should be placed in good time—Fourpence as usual.***

### COMPARATIVE INSURANCE RATES.

Sir,—With reference to the increased insurance rates for motor cycles, I suggest that an increase of 20 per cent. be paid by owners under, say, 35 years of age, and that a decrease of the present rates of 20 per cent. be due from riders over 35. I have noticed during my ten years' experience of traffic riding that motor cyclists in the late "thirties" are, as a rule, less rash and reckless on the road; also they have more riding experience to their credit. I have been insured since 1912, and I have yet to make my first claim. JOHN J. BARTON.

### TYRE MILEAGE.

Sir,—I notice your correspondent, "Brundell-Buster," is inquiring about the mileage of tyres. I have just discarded a Dunlop "Heavy" which covered 14,000 miles with only three punctures. I had this tyre on the rear wheel of a 3½ h.p. Sunbeam (weight 320lb.) for six thousand miles. After two punctures I put it on the front, where it has had only one puncture, which was caused by the canvas breaking, owing to my keeping the tyre soft.

Quite half the mileage was done over sandy, gritty roads. The tread is still all there and quite thick.

Its fellow, which commenced its career at the same time, lasted 10,000 miles. This one was on the rear wheel for 4,000 miles. STUART T. BARKER.

### ST. JACOB'S LADDER.

Sir,—Referring to the note on p. 510 of your issue of the 20th ult., describing a climb up Jacob's Ladder in the Peak, I may say that I climbed the greater part of this track last autumn on my 3½ h.p. N.U.T., fully equipped (weight about 300lb.). My lowest gear, however, was 10.5 to 1, and with this I was not able to get up a certain grassy bank near the top. With a gear of about 14 to 1 the whole climb would not present much difficulty. At the commencement of the climb is a very narrow bridge, which can be crossed if the handle-bars are not more than about 27in. wide (mine were too wide, of course!), otherwise one has to go through the stream, a bit of bog, and up a steep bank. I saw the wheel tracks of another machine on the path. CYRIL STYNING.

### TAXATION.

Sir,—If it be impossible to get the authorities to alter the basis of motor taxation, could not something be done for the benefit of our overseas friends?

As an example of the hardship that is caused to them: A client of ours came home on leave from Gibraltar during the last week in February and returned there in the middle of April. He purchased a new outfit directly he arrived here, and has had to pay six months' tax, or £2 10s., for 51 days' riding.

We feel sure that you will agree with us, that a tax of 1s. a day is *not* the way to encourage the sport of motor cycling. STANLEY MOTOR CYCLE CO., LTD.
(Stanley A. Bevington, Director.)

### ARTIFICIAL OBSTACLES IN AN OPEN TRIAL.

Sir,—Mr. Prince mentions my "amusing" letter. I am sorry that I cannot see the humour in this connection, and I think I am not alone in this view, but I am prompted to reply not on this count, but because Mr. Prince makes a statement which I am sorry to say is untrue.

Mr. Prince says: "Respecting Gorsey Bank watersplash, . . . this time, under easier conditions, more than one-half the competitors succeeded, and he failed. Hence the squeal."

This is an untrue statement, as I did not fail, for the simple reason that before encountering this second obstacle I was so disgusted that I had withdrawn from the trial. Actually I came along to the splash after my withdrawal, and used the footbridge to cross, not wishing for a repetition of the severe chill gained on the occasion of the Paskell Cup Trial, with a resultant week in bed. On the evening prior to the recent event, the splash was perhaps a couple of inches deep; as to whether organisers should allow artificial obstacles to be created in open trials will no doubt be decided by the body which protects the sport.

The Paskell Cup Trial, may I remind your correspondent, was not an open event, and therefore has no bearing on the present instance. J. A. NEWMAN.

### TWO-STROKE EFFICIENCY.

Sir,—Mrs. Jennison and "H.V.S." apparently consider that the exploded gas in a cylinder has to be cooled to atmospheric temperature before ejection, and that the ideal engine is that with the greatest heat losses. The "ratio" of volume to cooling area matters not at all; in fact, theoretically, it should be as great as possible, when the gas can be ejected when almost at its maximum temperature.

It is the ratio of internally exposed area to cooling area which is important, and this is practically constant.

Apparently Mrs. Jennison would favour a return to the almost obsolete T head cylinder, on account of its favourable "ratio," and shun the popular o.h.v. on account of its high volume to cooling area "ratio." The 350 c.c. engine which won the Senior T.T., which Mrs. Jennison instances, with its spherical combustion head, has the most "unfavourable ratio" of any, yet that does not seem to have spoilt its speed capabilities. In theory a cylinder should be of non-conductive material, in order to retain the heat. BUNNIE.

Doncaster.

### BROKEN FORK SPRINGS.

Sir,—I much regret to find that such a practical man as Kenneth H. Leech, in his experience on "Tuning a 4 h.p. Triumph," on page 506, makes a most unthoughtful statement as: "A bus with a link fork, having a broken spring, could not be ridden."

May I have the pleasure of tendering him a little experience?

On the usual morning's inspection I found the near side spring cracked, so gave the bike a run, and on cornering at a fair speed it broke altogether, and very lucky, too, I had a sidecar on.

I managed to inter-coil about 10 inches of similar wire, and rode home three days later without a hitch, with 12 stone on the saddle and 13 stone in the sidecar, together with a hefty weight of luggage.

I may mention that on a later occasion my steering head broke at the top; on this occasion I managed to rope the forks up tight with a spanner between the steering column and fork girders, and also wired the handle-bars, for steering, from the bottom links to the carburetter lever clamp on one side, and to the exhaust lever clamp on the other.

In this way I reached home at a pace of about 8 m.p.h., a distance of about 14 miles.

These are cases which may happen to the 9.999th individual, and during the last two years I have had bad luck in this direction, so I have decided to take down my mascot (His Lordship) on authorised advice from the village parson. REDDISH.

Stockport.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*,

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle*.
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# Current Chat

## Special Features.

THE SCOTTISH TRIALS DESCRIBED.
PASSENGER MACHINE TOPICS.
T.T. NOTES AND NEWS.

### Times to Light Lamps.

| | | |
|---|---|---|
| May | 11th .. .. | 9.35 p.m. |
| „ | 13th .. .. | 9.39 „ |
| „ | 15th .. .. | 9.42 „ |
| „ | 17th .. .. | 9.45 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### North London Police Activity.

Edgware, Canons Park, and Brockley Hill are scenes of police examination of driving licences and machine equipment.

### Another Continental Racing Track.

Building has already begun on a motor-racing track at Glostrup, near Copenhagen, which it is hoped will be opened on July 16th.

### A Speedy Three-Wheeler.

Driving a J.A.P.-engined Morgan, E. B. Ware recently gained the flying five-miles record at Brooklands, doing 83.6 m.p.h., while he accomplished the 10-miles (standing start) at 79.26 m.p.h. These speeds are exceptionally good for a three-wheeled machine.

### Open Exhausts in the States.

They are troubled with noisy machines out in the United States just as we are in this country. An American writer's opinion is stated as follows: "What peculiar kink in a man's mental processes makes it perfectly all right for him to open the muffler and race a motor on a quiet Sunday morning and proceed to shatter the peace and tranquillity of the neighbourhood simply because he is abroad, is beyond us."

THE NEXT STAGE!

*MOTOR CYCLISTS interested in small or large cars should read*

The Autocar

Every Friday 4d.

*the forerunner of all motoring journals. Founded in 1895, it remains the largest and most successful automobile paper, and enjoys the greatest circulation. It is universally accepted as the representative British motoring journal.*

(7)

### Efficient Silencers Called For.

Just beyond the Finchley Road Metropolitan Railway Station the police are active against riders of noisy motor cycles; they are apparently operating chiefly after dark.

### What Really Happened?

According to a well-known daily paper a London rider had just descended Pembury Hill, near Tonbridge, Kent, when his gear box caught alight, and the machine was enveloped in flames. Like many other motor cyclists we are wondering how it happened.

### Touring Facilities in Norway.

Norway has now joined the list of nations which issue the *Carnet de Douane* and the International Touring Pass, which are obtainable from the A.C.U. and the A.A. & M.U. The issue of these documents considerably facilitates touring in foreign countries.

### From a Provincial Paper.

"For sale, 10 h.p. Henderson, *Dynamic* lighting, etc., ——" and in the same column, "Late Douglas Combination, Easting Speedometer, Cheap."

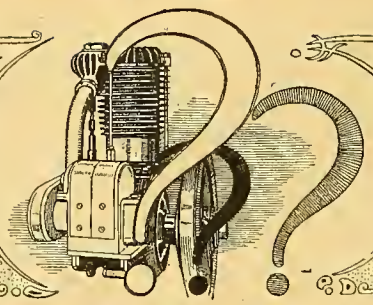
With the last item, presumably the fitting of this new make of speedometer has so completely altered the design that it has ceased to be a Douglas mount, hence the "late."

### Fact!

It is on record that a motor cyclist took to a dealer in one of the northern towns a highly-priced machine with the complaint that it would not go. Examination proved the motor cycle to be in perfect running order, so far as mechanism was concerned, and there seemed no possible reason why it should not run; however, taking a peep into the oil tank, the discovery was made that the owner had filled up with paraffin oil as a lubricant, with a result that needs no amplification.

A large number of motor cyclists responded to the Earl of Denbigh's recent invitation to the public to view his daffodils at Newnham Paddox.

# QUESTIONS AND REPLIES



A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### SOME CURIOUS QUESTIONS.

(1) Is it compulsory to have lighted lamps on a motor cycle when on private property? (2) Is it out of order to hire a motor cycle with a private licence instead of hackney carriage? (3) My machine was smashed on private property by a car, the owner of which said he would pay for repairs if not excessive. I have now received a letter from his insurance company urging me to reduce my claim. (4) I also put a claim in for £1 a day loss of trade, but the insurance company contends I was out of order in doing hire work with my private licence.—R.H.

(1) It is not compulsory to have lights on a motor cycle if it is definitely on private property. (2) It is not illegal to allow anyone to hire your machine by arrangement, but you cannot ply for hire in the streets unless you have a hackney carriage licence. (3) It is difficult to say whether you will be successful in resisting the amendment suggested by the Insurance Co. If your machine was on private property various questions appear to be involved, such as whether you had any right thereon, and the same question applies to the car which ran into you. Also, is traffic normally allowed to use the private property on which you were? (4) From this question we imagine that you were running your machine as a public hire vehicle, although you do not say so definitely. If this is so we do not advise you to allow the case to be carried to court, as you would probably lay yourself open to proceedings for running an unlicensed hackney carriage.

### TWO-STROKE LUBRICATION METHODS.

A two-stroke Villiers engined machine which I have purchased has an oiling system quite unlike that peculiar to this make as illustrated in "Two-Stroke Motor Cycles." It has an amateur arrangement from the drip feed to the induction pipe. Is this satisfactory, and if so, how many drops per minute does the engine need at about 15 m.p.h.? The late owner said he used the petroil system.—W.K.B.

The lubrication system wherein the oil from the drip feed is led to the induction pipe between the carburetter and the cylinder is quite satisfactory. Set the drip feed to give about 30 drops per minute at the speed mentioned; you can easily increase or decrease the supply from this setting if the engine appears to need more oil or if it smokes at the exhaust, respectively. The petroil system also gives good results.

## Important Dates.

**Sat., May 13th—Northern Centre A.C.U. Open Reliability Trial.**
**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd. and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist M.C.C. 200 Mile Sidecar Race, Brooklands.**
**Fri., June 23rd. and Sat., June 24th—Irish Twenty-Four Hour Open Trial**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### CYCLE CAR QUERIES.

(1.) How does one adjust the bevels in the transmission of a cycle car, as mine are clearly too deeply meshed? (2.) I cannot persuade the clutch to free itself so as to allow a silent or quiet engagement of low gear when starting. Should tightening up the clutch springs effect this, and should the clutch be lubricated; if so, with what sort of oil?—A.H.K.

(1.) Your questions would be best submitted to the makers of the machine, and this applies specially to the first one. The bevels should be in correct adjustment when the machine leaves the works and if they do not run easily and silently after a reasonable amount of "running in" the bevel pinion must be adjusted but it is unlikely that you will be able to effect a cure yourself. (2.) This trouble, to a greater or less degree, is not uncommon on comparatively crude machines, and the fitting of some kind of clutch stop would be an advantage; increasing the tension of the clutch springs will make the trouble worse rather than better. If it is possible to do so without making the clutch slip, it would be better to slack off the springs as far as possible. The clutch cone should be dressed with Collar oil, if it has a leather face. If it is a fabric clutch no oil or grease must be used.

### CHECKING MAGNETO AND VALVE TIMING.

(1.) On a 5 h.p. 45° twin Minerva which I have, the exhaust valves have ⅛in. tappet clearances and the exhaust tappets have ⅛in. more lift than the inlet. There are no signs of excessive wear. If possible, give me the complete valve timing, as I would like to check it all over. (2.) The magneto of the same machine was originally a clockwise one, however, I reversed it myself. I turned the magneto round and retimed the slip ring, but I am running it with the clockwise breaker; what should I do? I expect it will break up in time. (3.) Are motor cycle engines timed on top dead centre when fully retarded?—J.W.

(1.) Time the engine so that the exhaust valves close as the piston reaches top dead centre and the inlet valves are just commencing to open at the same time. Old engines frequently require greater valve clearances than modern ones. (2.) You do not mention the make or type of magneto. Some contact breakers may be run in the opposite direction to that intended without serious damage. (3.) The ignition should be timed so that the spark occurs when the piston is on top dead centre of the compression stroke with the magneto control two-thirds retarded.

### GEARS AND JET SIZE ON DOUGLAS.

On my 2¾ h.p. three-speed Douglas I use two engine-shaft sprockets, one with 16 teeth and the other with 17, giving me gears of 5⅔ to 1 and 5⅓ to 1 respectively. At present I am running with 5½ to 1 gear, and find that the engine knocks slightly on corners and hills; this tendency is aggravated when I have a pillion rider. The bike has only run about 750 miles since its last overhaul and is doing 100 m.p.g. with two up; which gear is best to use for solo, which for pillion, and which is most suitable size jet to use in the Amac carburetter? —C.C.B.

For all-round running, you would find the 5⅔ to 1 top gear more satisfactory as it will give better acceleration from low speeds without seriously diminishing the normal road speed. The best jet size is a matter for experiment; probably No. 26 for reasonable power and economy.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned. Requests for experiences should be accompanied by a stamp.*

"F.H.P." (Bristol).—Binks jet sizes on 348 c.c. sports A.J.S.

"O.S.B." (Whitchurch).—Binks on 992 c.c. M.A.G.; Easting on Matchless sidecar.

"SCOUT" (London, N.W.2).—Schebler on Indian Scout.

"R.R." (Croydon).—A.B.C., 496 c.c. N.U.T., and 595 c.c. Douglas solo.

"E.H.B." (Nottingham).—348 c.c. Coventry Eagle, all-chain sports model; light sidecar or pillion.

"A.T.B." (Tonbridge).—348 c.c. Massey-Arran, Blackburne, three-speed, all chain.

"W.S.J." (Newcastle).—Quadrant with sidecar; power, accessibility, and front fork springing.

"G.H." (Wigan).—220 c.c. Velocette, three-speed.

"R.M." (Exeter).—1920 499 c.c. Sunbeam with light Henderson sidecar.

"D.F." (Shawbury). — L.S.D. Runabout: suitability for a lady, reliability, etc.

"T.C." (Aberdeen).—348 c.c. Wooler (touring model).

"F.E.P." (East Dulwich).—595 c.c. Douglas sidecar; running costs (200 miles per week).

"S.J.S." (Brixham).—Carden two-seated in hilly country; consumption; is Binks advisable? comfort.

"E.J.G." (Putney).—Clandel jet sizes on 348 c.c. Douglas and m.p.g.

"G.M.S." (Keith).—A.B.C., consumption, accessibility, reliability.

"W.W." (London, W.2).—Chemical decarbonisers.

"L.S." (Upper Clapton).—1920 or '21 Bleriot Whippet; also 1920 2¾ h.p. Levis with Enfield gear.

"M.O.G." (Cambridge).—Atmos or other automatic carburetter on 1098 c.c. Morgan-M.A.G.

"V.H.H." (Leicester). — 348 c.c. Wooler: speed, climbing, starting.



## SIDELETS

### Oiling Chains.

The County Chemical Co., Ltd., of Birmingham, claim that a considerable saving in time and oil is effected by the use of Chemico chain lubricant—a solid stick of graphite and grease encased in tin foil contained in a cardboard tube.

### Success Indeed.

Out of eighty gold and 120 silver medal winners in the London-Land's End trial, forty-seven and seventy-five competitors respectively used Castrol oils. In these numbers must be included both cup winners.

### Enterprise.

A little booklet containing about 20 gummed labels bearing the company's name and address, so as to save people the trouble of addressing envelopes, postcards, or labels, is being sent out by Barimar, Ltd., 10, Poland Street, London, W.1.

### Dry Batteries.

Genuine Hellesen dry batteries, which have been temporarily unobtainable owing to industrial trouble in Denmark, can now be delivered in all types and sizes from stock by A. H. Hunt, Ltd., H.A.H. Works, Tunstall Road, East Croydon, Surrey.

### Gears for Moto-Rêve Machines.

For readers who own Moto-Rêve machines, the Motor Supply Co., 223A, High Street, Lewisham, London, S.E.13, inform us that they are in a position to supply an engine shaft multi-speed gear of the expanding pulley type, with free engine to fit to all the older types of M.R. engines; no structural alteration is necessitated.

### In France and Italy.

G. Pinney, the French rider of a 499 c.c. o.h.v. Triumph, recently made fastest time in all classes and won the 500 c.c. class in a Grand Prix race at Dijon, and on the same type and make of machine P. Opessi tied for first place in the 500 c.c. class in one of the leading Italian events, the Gran Premio di Centaurie (1,000 kilometres) between Milan, Trieste, and Salsomaggio.

### A Fair Offer.

Thanks to the confidence which the makers, W. J. Ritchie and Co., John Street, Sheffield, have in the Argus silencer, they offer to re-imburse any motor cyclist to the amount of his fine should he be proceeded against on the score of excessive noise. This sporting offer holds goods if the silencer is fitted as supplied; incidentally, on full throttle running, loss of power due to back pressure created by this fitment, as compared with an open exhaust, does not exceed 5%.

### Competition in the Channel Islands.

In the Jersey Easter reliability trial a 348 c.c. Wolf-Blackburne, ridden by Miss N. Niles, secured first place, the lady winning a gold medal and silver cup.

### An Award Amendment.

The silver medal award which H. Greaves (4¼ h.p. Beardmore-Precision sc.) gained in the Victory Cup trial has been amended, and the rider is now credited with a gold.

### Found on the Road.

"Probably having an interest in Scotland" is the enigmatic way Mr. R. Lister, Long Preston, Yorkshire, describes the owner of a tool kit which he discovered near Hellifield.

### Puncture Sealing Tubes in Demand.

Owing to the great call for the Challenge puncture sealing inner tubes, the makers, J. P. Cochrane and Co., Ltd., of Edinburgh, are having to extend the department producing them.

### A Price Correction.

Some misapprehension appears to exist regarding the price of the 998 c.c. Indian machines. The Chief model costs £160 with electric equipment, and the Standard type £140; the latter has the spring frame. With sidecars the prices are £199 and £175 respectively.

### British Flat-twin Successes Abroad.

At Batavia, in Java, a 3½ h.p. o.h.v. Douglas machine gained four firsts and a silver cup in a speed test; at Sellick's Beach, in the South Australian speed trials, C. S. Lindsay, on a machine of the same type, broke six Australian records (mile and half-mile) and secured two firsts, a second, and fourth; and at the Circuito di Cremain, a 146 km. (90½ miles) race in Italy, P. Freschi won the 500 c.c. class, also on a 496 c.c. o.h.v. Douglas.

### Catalogues Received.

Hazlewood's, Ltd., Albion Mills, Coventry, catalogue of Hazlewood machines.

Burney and Blackburne, Ltd., Atlas Works, Bookham, Surrey. A useful booklet of hints and tips for users of Blackburne-engined motor cycles; a list of spare parts, with prices, is included.

Norrish and Pidcock, Ltd., 27, Chancery Lane, London, W.C.2. A booklet describing the Pidko twist grip handlebar controls, and a spring frame, footrests for pillion riders, and a golf cap which incorporates an eye-protector.

Hepworth and Grandage, Ltd., 14, Snow Hill, Birmingham. Hepworth Rings: A booklet dealing with piston rings in general and giving exact dimensions of piston rings suitable for practically every motor cycle engine on the market.

Shell-Mex, Ltd., Shell Corner, Kingsway, London, W.C.2 Two folders; one a price list of Shell lubricating oils, and the other describing the variable compression engine at Ricardo's engine-testing laboratory at Shoreham, used for testing Shell motor spirit.

# The SCOTTISH "6 Days" DESCRIBED-

At the double bend on Amulree. E. R. C. Scholefield (1,100 c.c. New Hudson) approaching the corner where enthusiasts gathered to watch and criticise the driving on the worst portion of the hill.

## Varied Weather Conditions; Hills that have Lost their Terrors; Snow-bound Passes Necessitate Route Diversions.

### THE INITIAL STAGE.

**Route: Edinburgh, Stirling, Crieff, Aberfeldy, Dalnacardoch, Pitlochry, Kenmore, Perth.**

**Test Hills: Sheriffmuir, Amulree, Trinafour, Kenmore.**

THIS year provided a violent contrast in weather with last. The 1921 event opened with blistering heat. For 1922 the week-end brought April weather, and the Scottish April would be termed winter south of the Tweed. Raw cold, a grey sky, and frequent storms mingled with sleet and hail accompanied us most of the way. "Ah, weel, we'll be able to see the potholes now they're fu' of watter," said a Scot philosophically. They could be seen well enough, but as far as Amulree they could not be dodged, for the entire width of the road was potholes, and it came as a real relief to enter the "tiger country," where sodden turf and living rock, and miniature moraines were exchanged for lorry-shattered macadam.

### Nerves and the First Hill.

The first observed hill, Sheriffmuir, just outside Stirling entailed no penalties except for the special awards, and was therefore expected to prove a real teaser. Actually it is an easy second-gear hill, some three miles long, with four or five short steepish knuckles, a number of shallow gullies, and a few boulders. It was not particularly soft or loose, and the bulk of the entry toyed with it quite contemptuously. There was a little over-anxiety, as usually occurs on the first hill of a trial, and some men were therefore clumsy, but the majority displayed an almost monotonous masterfulness. Watson-Bourne pushed his big Brough-Superior up at speed, while Humphries on the Velocette made perhaps the star ascent, his riding being perfect, and his speed immense for so small an engine. Amongst the sidecars the palm should be awarded to the P. and M. four-speeders. But the real eye-opener for the spectators, here, as on other colonial sections, was Colonel McKechnie's spring frame. The veteran inventor sat bolt upright, and his body appeared to progress in an absolutely straight line parallel to the angle of the hill, utterly devoid of bounce, dither, or tremor, whilst beneath his immobile body the cycle was bucking like a broncho. The least observant of the spectators was forced to note the strange contrast between his placid ease and the involuntary lurches of the other riders.

We marked over a hundred ascents as good. Foster's 698 c.c. Raleigh sidecar stopped mysteriously for half a minute. Lockhead (496 Ariel) got into a muddle during a gear change and fe Carfrae's Rudge-Multi was overgeare and he had to run. Both Harper ru abouts stopped at the same point, a parently owing to the extreme length the hill heating up their tiny engine for they went up easily after a sho cool. Meanwhile they were responsib for a huge baulk, through which Mi Hardee steered her machine very de terously.

The Henderson sidecar stuck a needed assistance on restarting. Th Ner-a-car climbed slowly without ve much in hand. The rest of the ent was on velvet, and of the *débutant* the little Raleighs and the Barr a Stroud engines deserve special mention

More rain, hail, and potholes mark the ride through Crieff to Amulree.

### Amulree Again.

There is really no reason why a modern motor cycle should fail Amulree; yet year after year it pr vides a first and very real stumblin block in these trials. 1922 was no e ception, there were no fewer than failures, and a considerable amount "footing" in addition, yet only a sma arc on each corner was at all loose.

It would be wrong to say that Harpe runabouts made clean climbs, but the certainly made clean ascents. Among th

**ıe Scottish "6 Days" Described.—**

·rge percentage which lost no marks, it difficult to classify the outstanding ·rformances—except as a spectacle exssive speed earned no bonus—but unıubtedly the following made the greatest ·ipression on the onlookers: A. F. ıownie (800 A.J.S. sc.), A. L. Downie 48 Raleigh), H. Greaves (348 Beardore B. and S.), D. S. Alexander (992 atchless sc.), B. H. Cathrick (499 unelt), G. Grinton (988 Harley-D. sc.), L. Sealey (557 B.S.A.), L. Newey 92 Ariel sc.), W. Woodcock (992 Ariel .)—the last-mentioned pair in a brief ·ilstorm—Mrs. Knowles (348 A.J.S.), G. ıott (992 Matchless sc.), W. Moore (532 ·ott—easily best of his team—W. Westıod (499 Triumph), Bert. Kershaw 48 New Imperial), J. M. Philpot (249 ·locette)—after missing a gear change wer down—D. Parsons (992 Matchless ·.), C. A. Henshaw (550 Hawker), R. ·wis (555 P. and M. sc.), P. Cunningım (555 P. and M. sc.), G. M. Townsd (555 P. and M. sc.), J. A. Watsonıurne (964 Brough Superior), F. B. ickson (964 Brough Superior), R. P. ınsom (496 Lea-Francis)—very symetrical cornering—W. S. C. Walker (736 ıuglas sc.), A. Lea (496 Lea-Francis), ıd J. Richardson (556 Lea-Francis sc.).

**Excitement for the Spectators.**

There was no lack of incident, amusg or otherwise. S. M. Greening (346 ·ancis-Barnett), jeopardised the chances the very consistent F.B. team by arging the bank; he bounced in the r, but it is doubtful if he stopped. urtling round the upper bend fully 10 .p.h. faster than anyone else, J. D. ·ice (532 Scott), fell a victim to the w of gravity, smashing his left footard completely in the tumble which reılted from his dashing tactics.

E. R. C. Scholefield (1,100 New Hudn), encored Greening's performance, but iled to get away so quickly, baulking Carfrae (499 Rudge-Multi)—who, inıdentally, deserves much praise for ing there at all on a 7 to 1 low gear. B. Fairley (494 Douglas) wobbled and ll heavily; W. Wilkie (728 Henderson .), shed his passenger and then failed, d R. M. Wishart (482 New Gerrard) ıpped.

At this point one of the cars stuck on e second bend, which effectively ended plucky attempt, which almost promised be successful, of F. W. Giles (800 J.S. sc.) to climb the hill on one ılinder (caused by a valve spring breake). Then F. W. Becker (688 cKechnie sc.) quite unsuccessfully tried negotiate the inside of the initial ·irpin—rather a striking contrast to ıl. McKechnie's imposing solo ascent. ·ter a series of masterly wobbles, H. ıld (346 Francis-Barnett) fell, and, to ·d to his discomfiture, baulked another ·der entered by himself, J. Boyd (499 ıulson). A few moments later J. Bodngton (1,098 Morgan), overturned, ·ppily without damage to himself or ssenger. From the onlooker's point of ew the fun ended here, although many splayed some interest in Mrs. Jansen's ther late and slightly wobbling but ean climb on the 211 c.c. Ner-a-car.

On Sheriffmuir, between Stirling and Crieff, a new hill included in the first day's run. (Top.) H. Greaves (348 Beardmore B. & S.) and A. G. Cocks (598 Beardmore Precision sidecar). (Centre.) D. S. Alexander (992 Matchless sidecar) on a bad stretch. (Bottom). A. F. Downie (800 A.J.S. sidecar) on one of the lower bends.

**The Scottish "6 Days" Described.—**

### Down the Afternoon's Test Hill.

Down Kenmore to the Aberfeldy lunch stop provided all varieties of road surface, and, in addition, an opportunity of prospecting "t'other side of Amulree," in readiness for the afternoon. Passages had been cut through two snowdrifts.

Trinafour provided little work for the club observers' pencils, the only stoppages being J. Shepherd (976 Chater Lea sc.), J. G. Porter (269 New Gerrard), and R. P. Ransom (496 Lea-Francis); several of the solo men footed but quite unnecessarily.

### Improved Driving Methods.

By the time Kenmore was reached on the return journey, practice on three official hills and umpteen unofficial hills had wrought a revolution in driving methods, and accurate handling now allowed the willing machines to display their real quality. Farr (557 B.S.A.), and Lea (496 Lea-Francis), hit the famous reef of rock on the worst corner, and stampeded the spectators without spoiling their own marks. Danskin (998 Rudge sc.), appeared to stop momentarily quite low down. Colonel McKechnie was again wonderfully steady.

Both the 269 c.c. Harpers foolishly cut the stiffest corner, and were all but stopped in consequence; their engines gobbled up the straights with ease. The Zenith-Bradshaw and all the Martinsydes were impressive. This once formidable climb has completely lost its terrors. Easily graded roads, with a considerable amount of mixed going concluded a very rough 188 miles at Perth.

## NOTES.

Who got the cheers on the hills?

Mrs. Knowles, Mrs. Jansen, and Mrs. Hardee (their sex).

The Harper Runabouts (being unconventional).

Col. McKechnie (the steadiness of his spring frame).

---

A special meeting of competitors had to be called on Monday night. They had been riding on the dye used for marking the roads, and being wet it stuck to their tyres and disappeared before the late men came round

---

A. H. Alexander took the opportunity of running-in his T.T. Douglas in the Trials.

---

Lady Spectator on Hairpin: "What's this coming up? Is it a motor crab?". (Answer: A Harper Runabout.)

---

## SECOND DAY.

**Route: Perth, Forfar, Laurencekirk, Banchory, Ballater, Bridge of Avon, Grantown.**

**Test Hills: Cairn o' Mount, Cabrach, Bridge of Avon.**

EVERYBODY expected a picnic on Tuesday, as it was known that snowdrifts had compelled the officials to cut out the main colonial section. To a certain extent these hopes were fulfilled. A strong breeze and bright sun had dried the roads by breakfast time, and the highway from Perth to Brechin is a veritable speedway where even a Brooklands 1,000 c.c. racer could be given its head. But beyond Brechin the organisers had inserted a cunning little detour, including four water splashes, round the last of which Cairn o' Mount was tackled by an acute hair pin. Then the weather broke, and a heavy storm churned the going into grease which was so thick that tyres could only cut it at speed; and nobody likes speed upon grease.

Cairn o' Mount is a very simple climb with a maximum grade of 1 in 6 and two mild hairpins. Few riders needed bottom gear, and many climbed much of it on top. Once round the right-hand hairpin and on the steepest portion of the hill proper belt-slip made itself known to several. Although Chase's (Dunelt sc. passenger wiped the belt vigorously the outfit soon came to a stop. (The second sidecar outfit of this make made an excellent ascent). For the same reason A. Rollason (496 Ariel) was compelled to paddle but did not stop.

Higher up the two-mile climb two fairly acute bends provided another point of vantage for the inquiring onlooker—perhaps of more value than the lower, for steeper, portion, for by now the smaller engines were beginning to feel the effects of the long, low-gear grind. Hugh Gibson (348 Raleigh), and A. Watson (992 Ariel sc.), both stopped, the latter owing to a choked petrol pipe; and J. D. Price (532 Scott) was noted climbing with his palm placed against the air inlet gauze.

### Good Ascents of Cairn o' Mount.

Among the most imposing ascents noted during our observations on the upper reaches were Eric Barnett's (346 Francis-Barnett), and J. A. Watson-Bourne's (964

On the lower portion of Kenmore. B. L. Bird on his 770 c.c. B.S.A. sidecar at the commencement of the hard climb.

### The Scottish "6 Days" Described.—

Brough-Superior). R. Carfrae (499 Rudge-Multi) found it necessary to run, but not for long. Quite a good climb was made by the first Harper runabout.

#### Speeding to Lunch.

From Banchory another speedway—the lovely Deeside road—led to lunch at Ballater. After lunch the going slowly deteriorated, its main feature for some time being huge shallow potholes full of water, and several yards across, so that everybody got pretty wet. Nearing Cabrach the course became really colonial.

*The Motor Cycle* representative climbed Cabrach Hill and found the official car stalled at the summit by a drift 6ft. deep. Route markings were hastily altered, and the men sent over a lower saddle of the ridge a mile or two to the east. More storms followed, and the concluding sections were a nightmare, never to be forgotten by the participators. The roads were naturally vile, narrow, rutted, stony and precipitous—the last few yards of the drop to Bridge-of-Brown are as nearly vertical as a road can be. Where the surface was not inches under water it was either thinly filmed with treacherous grease or plastered with deep sticky mire. Overhead frequent hail-storms bombarded us with missiles which fell like splintered glass.

#### Hill Climbing and Hail.

Many of the riders climbed the last observed hill—Bridge of Avon—under these conditions, skidding all over the road, and unable to see more than two or three yards ahead. The mud in a dip halfway along this curious hill was measured to be 14in. deep at one point, and men found themselves labouring downhill on bottom gear. The day's journey totalled 195 miles, and several veteran competitors described it as the most exhausting trip they had ever made.

If Bridge of Avon had been included in the route of an average one-day trial and the day was dry it would not have been worth observing. On Tuesday, however, it came after nearly 200 tiring miles; and the day was not dry. Not many competitors had passed before a high velocity hail-storm began, which was not only difficult to drive in but further served to liquefy the clayey upper stretch of the hill, leaving it in a most unpleasant condition.

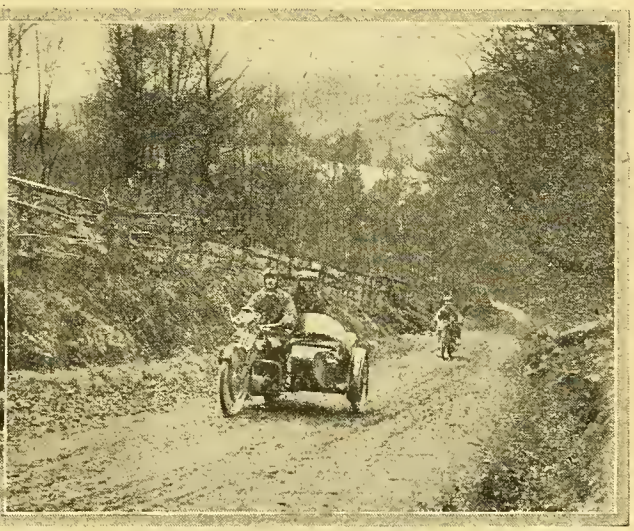
However, perhaps the nature of the test may be more exactly labelled by explaining that out of three apparently local non-competing motor cycles which essayed the climb two failed!

The great majority of the actual competitors climbed surely and well, but the two Harpers both met their Waterloo, low down, one, it is true, owing to wheel spin only. The passengers in W. G. Donaldson's Rover sidecar and F. J. Watson's Ariel betook themselves to their respective carriers, but perhaps needlessly; and F. W. Giles (800 A.J.S. sc.) bounced in his own inimitable manner, again probably unnecessarily.

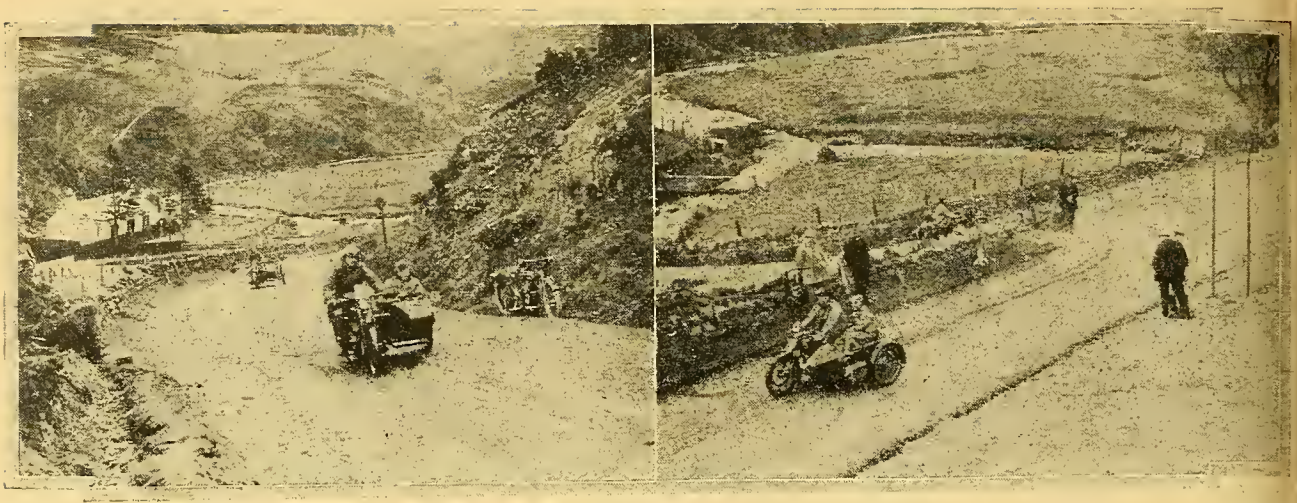
Of the teams, the Rudges, B.S.A.s, and P. & M. sidecars were consistently good. Mrs. Knowles (349 A.J.S.) and Mrs. Jansen (211 Ner-a-car) also made

Geo. Nott (992 Matchless sidecar) and W. Woodcock (992 Ariel sidecar) on the worst bit of Kenmore. A fine view of Loch Tay is obtained from this point.

On a bit of rough going above Kenmore. W. Wilkie on a 1300 c.c. American Henderson sidecar.



Another view of Kenmore. W. G. Donaldson on a 654 c.c. Rover sidecar, and H. Greaves following on a 348 c.c. Beardmore B. & S.



CAIRN O' MOUNT ON THE SECOND DAY'S ROUTE.

G. M. Townsend (555 P & M. sidecar) on the lower part of the hill. W. H. Bashall (678 Martinsyde sidecar) followed by his brother, J. T. Bashall, on a sister mount.

quite clean ascents, although the latter appeared to have some difficulty in keeping a perfectly straight course.

## NOTES.

On Tuesday's run one official piled up two sidecar outfits, an indication of the ordeal which successful competitors survived in triumph.

After 170 miles on Tuesday, Mrs. Knowles looked very tired, and said she was bored with "all this main road." After the concluding colonial section (which few men ever wish to see again under similar conditions) she was wreathed in smiles.

Many of the teams lost their clean sheets on Tuesday, but particular commiseration was bestowed on the Francis-Barnett crew in their loss of D. A. Atkin through a cush hub going very much wrong.

Punctures were very common in the Banchory area—among others G. M. Black and H. Collins, on 490 c.c. Nortons, were unfortunate—but on the whole the hail and rain prevented excessive tyre trouble.

Owing to the glutinous nature of the section just previous to Cairn o' Mount and to the hill itself, many were late at the Banchory check. Additionally it was alleged that this section was, variously, two to four miles longer than the route card said.

Before the last man left Perth on Tuesday morning the first man was checking in at Forfar, thirty miles away, a fact which reveals the size of the entry.

After the Harper runabouts had climbed Amulree, a trader solemnly insisted on peeping under their aprons. He explained that he suspected the aprons were fitted to conceal an auxiliary pedalling gear.

## THE THIRD DAY.

**Route: Grantown, Farr House, Drumnadrochit, Fort Augustus, Kyllachy, Grantown.**

**Test Hills: Abriachan, Glendoe, Inverfarigaig.**

THE roads had dried surprisingly quickly, and if main roads had been adhered to, the ride to Abriachan would have been dull, and for once the riders might have gazed at the great *massifs* of snow-capped mountains to the north. But a small section of sporting moorland track had been introduced as a surprise packet. It included many acute twists on a very narrow road, some deepish sand and awkward little humps, so timekeeping was not too simple.

Never was Abriachan in a better condition. Therefore, considering that the failures in 1921, when it was rather loose on the unguarded upper bend, were negligible, it was not expected to do much damage this year. Nor did it.

On towards Fort Augustus, and lunch, the route lay over ground which ought to be familiar to all previous Scottish competitors, but which, nevertheless, is as crooked in direction as the scenery is magnificent. Several competitors passed Drumnadrochit before the checker had arrived, but all turned back in good time except A. H. Alexander (348 Douglas), who discovered his mistake seven miles further on—and then got in on time!

### Test Hill Improved by Wet Weather.

Three miles on in the afternoon's run came Glendoe, also in excellent condition, and apparently improved by recent showery weather. There were only seven failures, but the clean ascents varied considerably in merit.

Competitors at Dufftown buy filling up with petrol and oil. In the foreground are W. Chase (499 Duncit sidecar), W. Moore (532 Scott), and R. Carfrae (499 Rudge Multi).

**The Scottish "6 Days" Described.—**

On the whole, those who earned a "V.G." in our representative's notebook had shown up well on previous hills.

**Outstanding Performers on Glendoe.**

In this case the stars were: B. L. Bird (770 B.S.A. sc.), J. H. Walker (770 B.S.A. sc.), A. H. Alexander (494 Douglas), L. L. Sealey (557 B.S.A.), Mrs. Knowles (349 A.J.S.)—drawing a salvo of cheers from the onlookers—R. B. Clark (494 Zenith-Bradshaw)—particularly impressive, but noisy—R. R. Grindlay (499 Rudge)—on second gear until round the right-hand bend—E. A. Barnett (346 Francis-Barnett), G. W. Scott (532 Scott)—best of his team—W. H. Bashall (678 Martinsyde sc.), A. A. F. Symes (678 Martinsyde sc.), J. T. Bashall (678 Martinsyde sc.)—the three last-mentioned in the order named—Bert Kershaw (248 New Imperial)—slightly slipping his clutch but making a faultless climb—J. M. Philpot (249 Velocette), J. Stirling (349 A.J.S.), Mrs. Hardee (992 Matchless sc.), H. Collins (490 Norton), J. A. Watson-Bourne (976 Brough Superior), W. E. McKechnie (688 McKechnie), L. Payntor (490 Norton), R. M. Wilson (348 A.J.S.), J. M. Philipps (499 Sunbeam), D. White (347 G.R.I.), J. Wallis (688 Coventry Victor), J. R. Fellows (499 Sunbeam), and J. Boddington (109 Morgan).

Several of the sidecars suffered from wheel-spin, but C. W. Valling's (499 Dunelt sc.) was the only one actually to fail from this cause.

**Touch and Go.**

It was touch and go with: E. Foster (698 Raleigh sc.), F. T. Sibley (499 Rudge sc.)—much clutch slipping saving him—D. B. Calder (249 New Imperial), G. K. Hubbard (346 New Imperial)—the New Imperials also being saved by dint of clutch slipping—R. Lewis (555 P. and M. sc.)—G. M. Townsend's similar outfit failed owing, it seemed, to a delayed gear change—J. B. Sanderson (292 Hawker)—commenced mis-firing low down, but to everyone's amazement pottered slowly up without a stop—and Mrs. Jansen (211 Ner-a-car). A. Lea (496 Lea-Francis) failed to get away at first attempt after a baulk. J. Richardson (564 Lea-Francis sc.), R. Carfrae (499 Rudge Multi), and W. G. Donaldson (654 Rover sc.) failed altogether.

The picturesque nature of the country at Bridge of Avon will be gathered from the above illustration which shows J. M. Philipps (499 Sunbeam), and A. Shepherd (292 O.K. Junior), about to ascend the hill.

E. Foster (698 Raleigh sidecar) at Achbreck. Snow is to be seen on the distant hills.

Whilst the sidecars were forced to take the water-splash at Cairn o' Mount, solo riders could avoid doing so by means of the footbridge. The brothers H., A. H., and J. R. Alexander riding in company.

The famous corkscrew at Inverfarigaig was in better condition than in 1921, but got badly cut up by the time half the men had gone up. The reversing of the cars on the hairpins and the skid-cornering of the sidecars rapidly destroyed the surface. This year the check was at the top instead of at the bottom as in 1921, and the men came up as they pleased.

### Confusion on Inverfarigaig Corkscrew.

A great deal of baulking resulted, in which the cars were the chief offenders; some of them were atrociously handled, one actually reversing eleven times on the hill, whilst another rammed Horwood's Ariel and threw the rider right over his handle-bars into the heather.

The hill presented a fantastic spectacle at intervals; from the same standpoint all six hairpins are visible, and as many as fifteen riders were dotted over the hill simultaneously, including solos, sidecars, and cars, variously engaged in footing, bouncing, reversing, or quietly waiting for a baulk to clear. To the eyes of a spectator some of them were travelling to the right and others to the left. It was quite impossible to say dogmatically who footed and who did not, and the following notes cannot be based on complete views of each ascent.

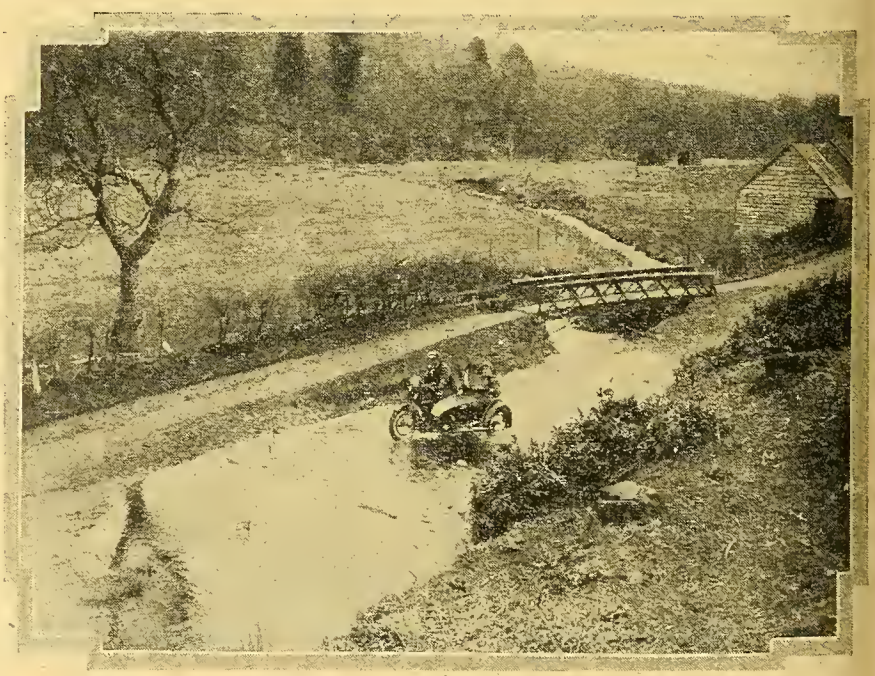
### Three-wheelers Shine.

Emphatically the best impression was made by the three Morgans driven by Boddington, Carr, and Sawtell. Sidecars were skid-cornering in alarming fashion: cars were reversing and wheel-spinning: half the solo machines were plunging and floundering. But the three Morgans went up placidly without an atom of fuss. Amongst the solo machines we personally credited star ascents to Batten (420 Beardmore B. and S.), Paynter (490 Norton), Ransom (496 Lea-Francis), Wilson (348 A.J.S.), Hardman (499 Wilkin), Sleven (249 Velocette), and Wilson (348 Edmund B. and S.). Very good climbs were apparently registered by N. Downie, Rollason, and Lochhead (496 Ariels), Farr (557 B.S.A.), Gibson, Hadfield, and A. Downie (348 Raleighs), R. B. Clark (494 Zenith-Bradshaw), Barnett (346 Francis-Barnett), G. M. Black (490 Norton), and Kershaw (248 New Imperial). Colonel McKechnie was very steady, but came up late when the road was cut to pieces, and had to foot a trifle. Mrs. Jansen kept a foot trailing in readiness, but made an excellent climb. Mrs. Knowles ascended in her usual perfect style, and her climb was neater than most of the men's. Stirling (348 A.J.S.) had ill-luck in breaking his front chain on the hill.

The best sidecar ascents were not a pretty sight and were calculated to frighten ignorant spectators, as the passenger was usually in some gymnastic attitude or other, and the front wheels did not seem to possess much control of the machines. At the fourth hairpin several machines all but plunged clean over the edge of the road, and others rammed the bank, whilst Mrs. Hardee's Matchless first tried to climb the bank and then lay down on its side. Nearly all the sidecars got up, but what with bouncing, skidding, wheel-spin, and the antics of the occupants the spectacle was not edifying. Among the best performances we noted D. and H. Alexander (992 Matchless sc.), Bird (770 B.S.A. sc.), Cocks (598 Precision sc.), Shepherd (976 Chater-Lea sc.), Newey and Woodcock (992 Ariel sc.—the latter surely broke all records by passing another sidecar on the hill), Townsend (555 P. and M. sc.), Hubbard (539 Rex Acme sc.), and the two Dunelts, which were thoroughly impressive, especially in view of their small engines.

### Cars and Motorcyclists Mixed.

Many men were baulked, especially by the cars which were sent up haphazard in order of entry, a blunder which ought not



J. H. Walker (770 B.S.A. sidecar), in the shallow water-splash at Cairn o' Mount.

**The Scottish "6 Days" Described.—**

to be repeated on such a hill. Poor Horwood was placidly negotiating the second hairpin when a car ran violently into him and hurled him off the road. He made a neat ascent half an hour later. The driving, on the whole, was much better than in 1921, many of the solo men making perfectly clean ascents without taking their feet off the rests.

Once over the hill rain began to fall, and time was difficult to keep in the next section, which was full of abrupt twists.

### NOTES.

F. W. Becker (5-7 McKechnie Victor sc.) was "caused to retire" on Wednesday owing to a skid which buckled his sidecar wheel.

Latest *coué*ism: Every day at every check everybody gets faster and faster.

The E.D.M.C.C. might do worse than adopt the A.C.U. regulation as to noisy exhausts. The entry included some terrible ear-splitters, and some of the smaller engines were the worst offenders.

Above Loch Ness a number of the competitors had to brake hard to let a herd of wild deer cross the road.

Fauconbridge, after experiencing gear box trouble at Kenmore on Monday, rode the whole way to Aberfeldy on bottom gear.

On Wednesday three champions, all confidently tipped as certain "golds," packed up. A. F. Downie (magneto), J. A. Newman (timing gear), and G. Grinton (broken chain stay).

Easy going at Bridge of Avon. S. H. Hubbard on a 998 c.c. Rex-Acme sidecar.

The Harper runabouts were greatly missed at mid-week. One of them seized an engine bearing late on Tuesday, and the other was charged over by another competitor outside Grantown on Wednesday. Their obvious merits have impressed the riders and spectators alike.

Any lingering doubts as to which was the worst hill—Inverfarigaig or Glendoe—have now been settled definitely "in favour of" the former.

One of the many ticklish corners on Inverfarigaig observed by interested spectators. W. E. McKechnie (688 McKechnie)

### FOURTH DAY.

**Route: Grantown, Bridge-of-Brown, Achbreck, Cabrach Castle Newe, Ballater, Banchory, Cairn o' Mount, Charterstane, Aberdeen.**

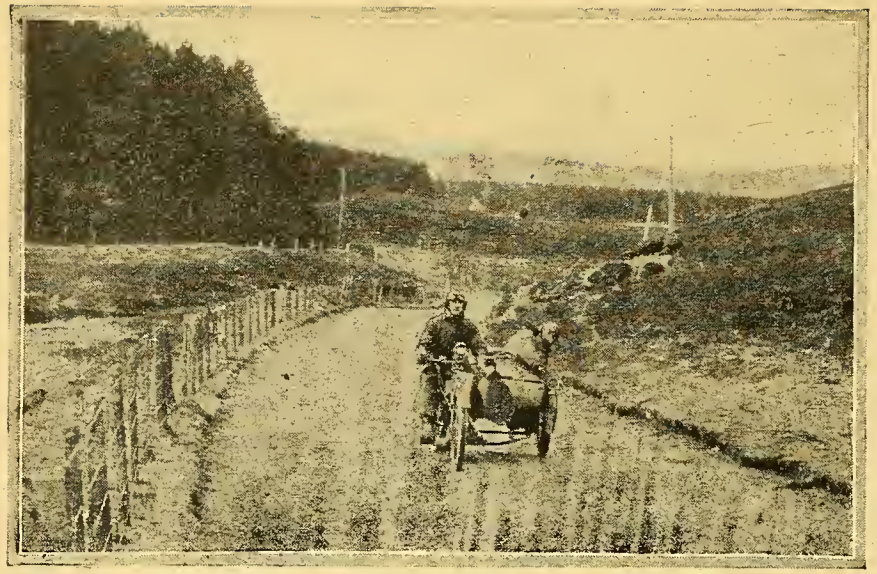
**Observed Hills: Bridge-of-Brown Cairn o' Mount.**

THE easiest day so far was the general opinion at the conclusion of Thursday's run. Yet there were twelve absolute failures (including some who had not previously lost marks) on the first hill, Bridge-of-Brown.

To a large extent the route followed Tuesday's course in the reverse direction, but the first fifteen miles were drier than then, and the lower reaches on the steepest portion of the observed hill were in fair surface order. There was not a single failure here, although some had little to spare; these included Donaldson (654 Rover sc.) and Vallings (499 Dunelt sc.). A few hundred yards higher up, however, things began to happen, for the surface deteriorated into a squelchy mire, glutinous to a degree seldom met with on British roads. Slogging was the rule rather than the exception, and the following stopped completely: N. W. Downie (496 Ariel), Donaldson (Rover sc.), Greaves (348 Beardmore B. & S.), Chase (499 Dunelt sc.), Vallings (499 Dunelt sc.), E. S. Astley (988 Rudge sc.), Barnett (346 Francis-Barnett), Carfrae (499 Rudge), W. H. Bashall (678 Martinsyde sc.), and Scott (532 Scott). Greaves, Bashall and Barnett had previously ranked among the very best performers on the hills, and Bashall had actually climbed the 1 in 3 initial rise on second gear.

**Touring Conditions for a While.**

Thereafter the trial became temporarily a tour, as the riders sped over fair roads



A scene on Thursday's run. F. T. Sibley (499 Rudge sidecar) midst picturesque surroundings.

flanked in the distance by sunlit snow-clad mountains. There was certainly no excuse for the loss of marks on time between Grantown and the lunch stop at Ballater; nor was there in the afternoon, when the reverse side of Cairn o' Mount, which was observed, formed the only difficult section. Nevertheless, there was quite a number of retirements, and it was evident that the gruelling of the first two days was beginning to tell. R. R. Grindlay (499 Rudge) was compelled by the club to retire owing to a fractured rear stay, J. Boyd (499 Coulson) wisely gave up at Ballater, for his plug had blown out and punctured the petrol tank. Mrs. Jansen (211 Ner-a-car) also was reported missing amid general expressions of regret, for hers had been a plucky ride. Bird (770 B.S.A. sc.) was towed into Aberdeen from Stonehaven with a broken frame tube.

## FIFTH DAY.

**Route : Aberdeen, Laurencekirk, Forfar, Perth, Dollar, Falkirk, Murrayfield Car Terminus, Edinburgh.**

**Observed Hills :** *Nil.*

THE selectors of a trials route never enjoy an entirely free hand. The necessity for hotel and garage accommodation at midday, as well as at night, imposes fixed points, especially in Scotland. Subject to these limitations, the E.D.M.C.C. intended to use Friday to develop any latent weaknesses in the machines originating from the bucketing which they had sustained earlier in the week.

For this nefarious purpose two ingredients were judiciously blended in the route from Aberdeen to Edinburgh, viz., assorted potholes and speed stretches of irresistible temptation. Dame Nature came to their assistance by setting a stiff sou'-wester to blow hard in the men's faces, so that engines of 350 c.c. needed continuous full throttles to average 20 m.p.h. between Aberdeen and the lunch stop at Perth.

The road undulates mildly as far as Stonehaven, and is broad, flat, and fine-surfaced for the rest of the 84 miles into Perth. The small machines were compulsorily all out—for example, Mrs. Jansen had to keep the Ner-a-car very hard at work, and some of the two-stroke riders found a Brooklands attitude advisable. On the other hand, the men with big engines were unable to resist temptation, though the gale slowed them to a maximum of 40 m.p.h. Petrol consumptions were 25 per cent. higher than they had been in the mountains up north; but nobody grumbled, so long as the sun shone. The sensation of the morning was the phenomenal travelling of the two little Harper runabouts. Both were running unofficially, one because of a mysterious bearing seizure, the other because a motor bicycle—with a prejudice for the conventional—had rammed it amidships. But they certainly astounded the many experts engaged in the trial. They weigh 280lb. They offer more wind resistance than any bicycle. Their engines are merely the standard Villiers, with a special cylinder designed by Mr. Harper. Yet they butted steadily into the teeth of the gale all morning at 30-35 m.p.h., and even such speed mounts as the Brough-Superior had no easy job to overhaul and pass them.

### Parking in the Open at Perth.

The fine weather fortunately lasted out the morning, for during lunch at Perth the machines were parked in the open on the river embankment. Engines had been subjected to a semi-Brooklands test all morning : after lunch came the turn of the frames. The road authorities are evidently doing their best to improve the surfacing in the industrial districts, and the trial traversed quite a lot of good

A quintette on the road at the end of Loch Ness. J. D. Price (532 Scott), G. M. Black (490 Norton), W. Moore (532 Scott), P. H. Johnson (499 Rudge) and J. Richardson (556 Lea-Francis sidecar).

**The Scottish "6 Days" Described.—**

roads: and there is a marked improvement in the Stirling area since 1921; nevertheless, the riders grew quite callous about potholes which would cause a scandal in southern England.

### Individual Incidents.

Mrs. Knowles was still going strong for her gold on the little A.J.S. Archie Cocks on the Beardmore-Precision sidecar was another unfortunate. He broke the "sleeve spring" of his spring fork earlier in the week, and had conducted a spirited controversy thereafter with the judges as to whether or not a couple of tyre levers strapped to a fork "reinforce" it. In the rules any "reinforcement" of a frame disqualifies for a gold medal, but so far Cocks had brandished Nuttall's dictionary at the judges' heads in vain. This controversy will now never be settled, as Cocks broke his chain stay after lunch, and so retired. Perhaps the clearest case of "hard lines" was the retirement of Bert Kershaw's New Imperial on Cairn o' Mount during the fourth day's ride. Beautifully handled, it had performed as well as anything in the trial. Suddenly during the climb up the Cairn it apparently seized. In a hasty diagnosis the gear box and magneto were disconnected, when the engine proved to be perfectly free. The magneto armature, as one rider put it, had "burst"! R. B. Clark was also in trouble after lunch. In his hands the only Zenith-Bradshaw competing was certainly registering a quite outstanding performance. Its misconduct was trivial from a touring standpoint—merely the fracture of the cup washer confining an inlet valve spring. But Clark had no spare aboard, so he cleverly removed the sturdy standard spring and substituted the light spring from his tyre pump, the valve now operating automatically. His maximum speed was thereby reduced 20 m.p.h. or so, and it remained to be seen whether in this enfeebled condition his engine would be equal next day to two very teasy hills—Tynron and Blackford.

---

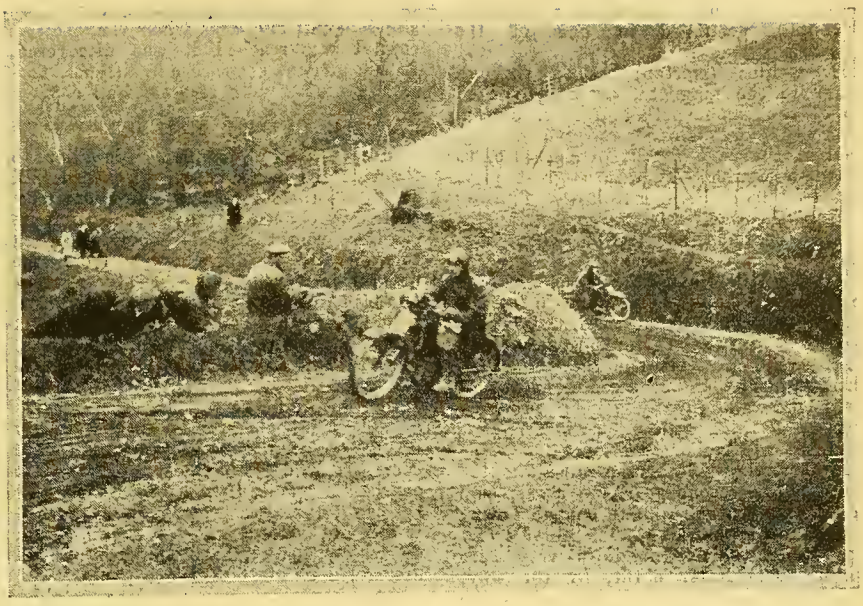
## SIXTH DAY.

**Route: Edinburgh, Broughton, Talla Linns, Cappercleugh, Moffat, Durisdeer, Tynron, Penpont, Wanlock Water, Biggar, Edinburgh.**

**Observed Hills: Talla Linns, Tynron, Blackford Hill.**

THERE had been much uncertain speculation on Friday night as to the difficulty of the last day's run, but as it turned out the terrors of the day proved to be quite different from those anticipated by the majority. Almost impenetrable rain took the place of an almost unclimbable hill, as Tynron was popularly supposed to be, and, although the number of golds lost was not very great, one or two "certainties" went the way that certainties so often go.

Since it was last included in a competition, Tynron has been thoroughly re-surfaced by the local authorities, who, far from asking the Edinburgh Club's permission, had not even notified that body of their intention!



E. A. Barnett (346 Francis-Barnett) and S. M. Greening (346 Francis-Barnett) rounding an acute bend on Glendoe, one of the two "worst" hills in the trial.

### Last Day's Early Start.

Again starting at the unpleasantly early hour of seven a.m.—which incidentally proved too early for L. Paynter (Norton), who turned up half an hour late but was allowed to start, the run degenerated into a "semi-colonial" section before the first check at Broughton, but 20 m.p.h. was only difficult to those who were troubled with punctures. Section No. 2 brought the first observed hill, Talla Linns, a flint-strewn, second-gear climb, and seven miles of colonial going, including three water-splashes. E. W. Choldcroft (349 A.J.S.) took rather a serious toss here, but pluckily carried on for the honour of his team; W. H. Hardman (499 Wilkin) also came off, but not so heavily; and W. Westwood (499

Three solo riders attacking Abriachan, an observed hill on the the third day, and this year in good condition.

**Scottish "6 Days" Described.—**

Triumph) grounded in one of the splashes.

H. Collins (Norton) retired through water in the magneto, probably picked up at the same spot; and Mrs. Jansen (Ner-a-car) was forced to give up the trial at the next check, owing, also, to magneto trouble. It was a great pity, for she had been heroically fighting against the most adverse circumstances; not the least of her troubles being two quite inoperative brakes.

Tynron Hill, fortunately, is situated in less exposed country and the rain became more desultory. What mud there was, too, was of the surface variety, and neither the gradient nor the bends are extraordinary. The ascents, however, were not all equally good; probably anxiety, coupled with Friday's terrifying rumours, was responsible.

E. S. Astley (998 Rudge sc.) attempted the climb on second gear, but a suspicion of konking warned him to change down; on the other hand, F. T. Sibley's 499 c.c. Rudge sidecar made a very sure climb. The latter outfit, by the way, had been doing very well throughout the event, although Sibley was handicapped by the loss of his rear mudguard; there was a layer of mud some inches deep on his neck before the finish.

Probably the fastest and neatest climb of the afternoon was made by J. D. Price (532 Scott), but the other Scotts were not so good, one of their riders, R. W. Stanfield, "footing" once. As usual, Carfrae (499 Rudge Multi) made a very gallant attempt, but although he lost no marks on Talla he had perforce to dismount on Tynron.

### Two Fine Sidecar Ascents.

Of all the excellent ascents by the Martinsyde outfits, W. H. Bashall's was the fastest, which means that it was very fine indeed; and, again, Cunningham was slightly faster than his P. and M. team mates.

A. L. Downie (348 Raleigh) was the first failure. Arriving very late, G. K. Hubbard (346 New Imperial) almost came to a standstill, but managed very cleverly to wriggle up, by shutting off his air with the palm of his hand. Evidently suffering from an elusive magneto defect, R. Humphries (249 Velocette), who retired later in the day, made quite an excellent climb with his engine cutting out every eighth revolution.

Then came the surprise of the day. J. A. Watson-Bourne (Brough-Superior) attempted to get up on one cylinder, the other going out of action on account of water draining down the h.t. lead to the plug; he failed, but did not take his feet off the rests until his speed was down to 0 m.p.h. Finally, Shepherd (348 O.K.), who had "lost" his bottom gear earlier in the trial, lost his gold on Tynron.

Excepting one or two sidecar passengers who were inclined to indulge in unnecessary acrobatics, the remainder displayed little anxiety.

There was another check at Penpont, and the run back to Edinburgh, over main roads, was a pleasant contrast to the outward journey. The rain soon stopped entirely, and when the Scottish capital was reached it was discovered, to the general surprise and disgust, that it had been dry there almost all day.

### The Sting in the Tail.

Most of the hills being familiar to the veterans in the entry, Blackford Hill furnished the Edinburgh leg-pullers with their only chance of putting the wind up the Southrons this year. They succeeded tolerably well, quite apart from the natural nervousness induced by a steep climb in the very last mile of a Six Days. They alleged it contained a patch of 1 in 2½; that sidecars only cleared the wall by an inch; and so forth. The rain cleared as the trial neared the suburbs of Edinburgh, and at last the riders spied an abrupt hill crowned by an observatory up which wound a hard, smooth path some 7ft. wide, looking steep enough to overbalance and topple backwards. To the right the breast of the hill was hollowed out into a natural grand stand, on which thousands of the citizens had assembled to gloat over our panic.

An imposing array of constables whistled and semaphored to the starting marshals, who sent the men up one at a time. Between whiles they tried to prevent the crowd from sliding bodily down the glazed turf on to the road, with only partial success, for many competitors climbed into an ever-retreating bottleneck of human figures. Local riders fussed about the competitors. "Sidecars *must* have lots of weight on both wheels. Passenger on the carrier or she won't drive. Driver well forward on the tank or she won't steer!"

### Not so Bad as Reported.

Actually the ascent was not half so formidable as it looked. The surface was excellent, except for a narrow paved V gully or two; and the maximum grade is probably a few yards of 1 in 3¾. Where so many failed (thirteen in all), some detailed description seems indicated. The B.S.A. sidecars scorned the hill. The Barr and Stroud engines were slow—wisely so, as later events proved. N. Downie took his Ariel up cautiously; his brother, A. L., was much faster on the little Raleigh, but his magneto was apparently exhausted by the furious burst, and gave up sparking at the summit; it was lucky that he could coast in to the last check. The four Alexander brothers, who of course know the hill well, then ascended at speed amidst delirious cheers from their many friends in the crowd. The sole surviving Dunelt romped up. The B.S.A. solo team took no risks, climbing well within their power, as did Gibson (348 Raleigh) and Choldcroft (349 A.J.S.), the latter sobered by his toss earlier in the day.

### Disappointing the Sensation Hunters.

By this time the crowd was growing a little disappointed at the men's facile conquest of an abnormal hill, but Lochhead (496 Ariel) comforted them by obviously having nothing in hand; whereupon Newey and Woodcock (992 Ariel sc.) apparently pottered up on second. Mrs. Knowles made a splendid climb, throttling down to clear a sister machine just ahead. Sibley (499 Rudge sc.) was all out. Astley on the big Rudge sidecar roared up dangerously fast, grazed the wall, recovered, began to knock, and finished sedately. Barnett (346 Francis-Barnett) came up halfway on second gear, and Graham Black (490 Norton) raced up much too fast, thrilling the crowd. Hereabouts the amazing Harper runabouts came up unofficially at speed. They were so tickled at their success that they repeated the attempt, and, to the huge delight of the onlookers, one of them missed a gear change near the foot, and disappeared backwards round the corner at speed. A series of good climbs followed—Scotts, Martinsyde outfits, Calder on the New Imperial, Philpott's Velocette, Westwood's o.h.v. Triumph. Then excitement commenced. The chain of Lewis's P. and M. sc. jumped off and he failed. A car stuck halfway up, and had to be pushed up the rest, boiling vigorously. Carfrae's Rudge Multi was overgeared; he very nearly jockeyed it up with foot-slogging, a slack belt, and clutch slip. Then Watson-Bourne attempted his usual stunt climb, but his wet glove slipped off the bar when the huge machine bucked at the gulley, and he crashed heavily on full throttle. R. B. Clark forgot to turn on his petrol after the stop at the foot, and all but got up on one float chamber full. Ramsay's Velocette had not lasted as well as its stable companion, and failed. Shepherd's O.K. had been minus its bottom gear since noon on Thursday, and did well to finish on second and top; Blackford was naturally too much for it. Other failures were the G.R.I., Gold's Francis-Barnett, Sawtell's Morgan, Evans's 348 Raleigh, and Ball's A.J.S. sidecar. But the entry as a whole had to be careful not to come up too fast.

### The Finish.

After the finish the club entertained the riders at a smoking concert in the Dunedin Rooms. The chief features were the presentation of the medals (already—by some miracle—engraved with the names of their winners), and the showing of a cinema film of the Monday's ride, including Amulree and Kenmore Hills. Speeches were commendably short, and Mortimer Batten brought down the house in replying to the toast of "The Competitors." He said they had all enjoyed the Six Days, but were jolly glad it wasn't a Seven Days.

In to-morrow's issue of *The Autocar* the performances of the light cars are described.

---

## WANTED—A NAME.

SO rapid has the development of the caterpillar track vehicle been that it is time some appropriate name was coined. Have any of our readers any ideas on the subject? It will be remembered that a short time back we described a very interesting motor cycle with endless tracks in lieu of road wheels.

# THE SCOTTISH SIX DAYS TRIALS. OFFICIAL RESULTS.

121 Motor Cycle Entrants. 119 Starters. 59 Gold Medals. 14 Silver Medals. 4 Bronze. 42 Retirements. Team Prizes; Solo, A.J.S. Sidecars, Martinsyde and Matchless riders tie.

A.J.S.
D. S. Ball (800 sc.). *Gold medal.*
D. Bell (800 sc.). *Gold medal.*
E. W. Choldcroft (349). *Gold medal.*
F. W. Giles (800 sc.). *Gold medal.*
Mrs. Knowles (349). *Gold medal.*
J. Stirling (349). *Gold medal.*
R. M. Wilson (349). *Gold medal.*
A. F Downie (800 sc.). *Retired 3rd day.*

AMERICAN HENDERSON.
W. Wilkie (1300 sc.). *Retired 2nd day.*

ARIEL.
N. W. Downie (496). *Gold medal.*
H. E. Norwood (496). *Silver medal.*
R. N. Lockhead (496). *Gold medal.*
L. Newey (992 sc.). *Gold medal.*
A. Rollason (496). *Gold medal.*
W. Woodcock (992 sc.). *Gold medal.*
F. J. Watson (992 sc.). *Retired 3rd day.*
A. Brown (992 sc.). *Retired 2nd day.*

BEARDMORE-PRECISION.
H. M. Batten (420). *Gold medal.*
H. Greaves (348). *Gold medal.*
A. G. Cocks (598). *Retired 5th day.*

BROUGH-SUPERIOR.
F. B. Dickson (964). *Gold medal.*
J. A W. Bourne (964). *Silver medal.*

B.S.A.
M. C. Breese (557). *Gold medal.*
A. A. Farr (557). *Gold medal.*
H. S. Perrey (770 sc.). *Gold medal.*
L. L. Sealey (557). *Gold medal.*
J. H. Walker (770 sc.). *Gold medal.*
B. L. Bird (770 sc.). *Retired 4th day.*

CHATER-LEA.
J. Shepherd (976 sc.). *Retired 3rd day.*

COULSON.
J. Boyd (499). *Retired 4th day.*

COVENTRY VICTOR.
J. Wallis (688). *Retired 4th day*

DOUGLAS.
J. R. Alexander (496). *Gold medal.*
A. B. Fairley (496). *Gold medal.*
J. A. Newman (496). *Retired 3rd day.*
W. S. C. Walker (736 sc.). *Retired 2nd day.*

DUNELT.
B. Cathrick (499 sc.). *Gold medal.*
C. W. Vallings (499 sc.). *Retired 4th day.*
W. Chase (499 sc.). *Retired 3rd day.*

EDMUND.
G. H. Wilson (348). *Gold medal.*

EXCELSIOR.
D. Scott (269). *Retired 1st day.*

FRANCIS-BARNETT.
E. A. Barnett (346). *Gold medal.*
S. M. Greening (346). *Gold medal.*
D. A. Atkin (346). *Retired 2nd day.*
H. Gold (346) *No award.*

G.R.I.
D. White (346). *Bronze medal.*

HARLEY-DAVIDSON.
R. S. Macrae (998 sc.). *Retired 3rd day.*
G. Grinton (998 sc.). *Retired 3rd day.*
J. M. Watson (580). *Retired 1st day.*

HARPER RUNABOUT.
R. O. Harper (269). *Retired 3rd day.*
A. Graham (269). *Retired 2nd day.*

HAWKER.
C. A. Henshaw (550). *Silver medal.*
J. B. Sanderson (292). *Retired 3rd day.*
H. Goring (292). *Retired 1st day.*

LEA-FRANCIS.
A. Lea (496). *Silver medal.*
H. R. Ransom (496). *Silver medal.*
J. Richardson (556 sc.). *Silver medal.*

MARTINSYDE.
W. H. Bashall (678 sc.). *Gold medal.*
J. T. Bashall (678 sc.). *Gold medal.*
E. H. Gifford (498). *Gold medal.*
A. A. F. Symes (678 sc.). *Gold medal.*

MATCHLESS.
A. H. Alexander (992 sc.). *Gold medal.*
H. Alexander (992 sc.). *Gold medal.*
D. S. Alexander (992 sc.). *Gold medal.*
G. Nott (992 sc.). *Gold medal.*
D. Parsons (992 sc.). *Gold medal.*
Mrs. Hardee (992 sc.). *Silver medal.*

McKECHNIE.
W. E. McKechnie (688). *Retired 6th day.*
F. W. Becker (688 sc.). *Retired 3rd day.*

MORGAN.
W. A. Carr (1098). *Gold medal.*
J. Boddington (1098). *Silver medal.*
H. E. Sawtell (1098). *Silver medal.*

NER-A-CAR.
Mrs. Jansen (211). *Retired 6th day.*

NEW GERRARD.
J. G. Porter (269). *Retired 4th day.*
R. M. Wishart (482). *Retired 4th day.*
J. A. Porter (482). *Retired 2nd day.*

NEW HUDSON.
E. R. C. Scholefield (1098). *Retired 1st day.*

NEW IMPERIAL.
D. B. Calder (248). *Gold medal.*
G. K. Hubbard (248). *Silver medal.*
B. Kershaw (248). *Retired 4th day.*

NORTON.
L. Paynter (490). *Gold medal.*
W. E. Smithie (490). *Gold medal.*
G. M. Black (490). *Silver medal.*
H. Collins (490). *Retired 6th day.*
R. M. Knowles (490). *Retired 5th day.*

O.K. JUNIOR.
A. Shepherd (292). *Bronze medal.*

P. AND M.
P. Cunningham (555 sc.). *Gold medal.*
R. Lewis (555 sc.). *Gold medal.*
J. M. Townsend (555 sc.). *Gold medal.*

RALEIGH.
H. Gibson (348). *Gold medal.*
C. Guthrie (698). *Gold medal.*
A. L. Downie (348). *Silver medal.*
R. Evans (348). *Silver medal.*
W. A. Hadfield (348). *Retired 6th day.*
E. Foster (698 sc.). *Retired 5th day.*

REX-ACME.
S. H. Hubbard (539 sc.). *Gold medal.*

ROVER.
W. G. Donaldson (654 sc.). *Retired 6th day.*

ROYAL SCOT.
J. Donaldson (420). *Retired 2nd day.*

RUDGE.
E. S. Astley (998 sc.). *Gold medal.*
T. T. Sibley (499 sc.). *Gold medal.*
C. N. Faulconbridge (998 sc.). *Retired 1st day.*
R. R. Grindlay (499). *Retired 3rd day.*
P. H. Johnson (499). *Retired 3rd day.*
W. L. Danskin (998 sc.). *Retired 2nd day.*
R. Carfrae (499). *No award.*

SCOTT.
W. Moore (532). *Gold medal.*
J. D. Price (532). *Gold medal.*
G. W. Scott (532). *Gold medal.*
R. W. Stanfield (532). *Gold medal.*
A. Pearson (532). *Retired 1st day.*

SUNBEAM.
J. R. Fellows (499). *Gold medal.*
J. M. Philipps (499). *Gold medal.*
R. Spence (499). *Gold medal.*

VELOCETTE.
J. M. Philpott (249). *Gold medal.*
E. W. Ramsay (249). *Gold medal.*
A. G. Mitchell (220). *Silver medal.*
R. Humphries (249). *Retired 6th day.*
T. F. Sleven (249). *Retired 6th day.*

WILKIN.
W. H. Hardman (499). *Gold medal.*

ZENITH-BRADSHAW.
R. B. Clark (496). *Gold medal.*

# FRUITS OF CO-OPERATION.

## Great Expansion of Raleigh Activities at Nottingham.

IT is refreshing in these days to find a factory in such a happy state of activity as is the Raleigh plant at Nottingham. Referring to the fact, Sir Harold Bowden attributed the success of the firm to the co-operation which existed between the staff and employees, which had enabled the firm to turn out high grade goods at a low figure.

At a luncheon given on Friday last to celebrate the opening of a new wing, there were present the Rt. Hon. W. C. Bridgeman, M.P. (Minister of Mines), who performed the opening ceremony, and many well-known figures in the world of wheels, in addition to some 200 members of the Press.

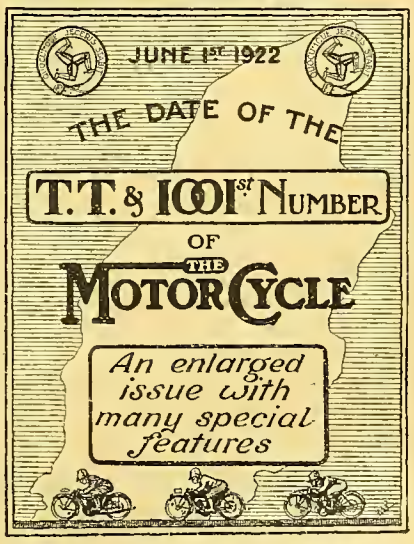
In his opening speech the Rt. Hon. W. C. Bridgeman, M.P., dwelt upon the difficulties of post-war reconstruction and the wonderful manner in which the Raleigh Company had recovered owing to co-operation, hard work, and a thoroughly efficient chief.

Others speakers were J. C. Gould, Esq., M.P., Major J. D. Barnsdale, Colonel Sir Joseph Reed, Valentine Knapp, Esq., Sir J. C. Percy, D.L., J.P., and W. G. Howard Gritten, Esq., M.P. After lunch the visitors were divided into parties and conducted round the extensive and up-to-date factory.

Although a great part of the factory is devoted to the production of Raleigh all-steel bicycles, even tubes and steel lugs being manufactured on the premises, motor cyclists found much of peculiar interest to themselves.

The Raleigh flat twin and 2¾ h.p. single-cylinder engines were to be seen undergoing bench tests. After an hour's "running in" the engines are coupled to a Froude brake, the larger engine being scheduled to produce 13.9 h.p. at 3,400 r.p.m. and the smaller 6.5 h.p. at 3,000. Frame-building to jig, liquid brazing, and coslettising processes all attracted interested spectators, and while passing through the orderly departments devoted to the manufacture of the well-known Sturmey-Archer gear, one could not help wondering if the T.T. winner's gear box was amongst the rows of boxes awaiting despatch.

A few of the leading statistics in connection with the Raleigh plant are not without interest. A gas producer plant for power, heating, and lighting has been installed, the total h.p of engines used in the factories being 2,640. The output of the factories when in full swing is up to 100,000 cycles, 10,000 motor cycles, 250,000 cycle hub gears, and 50,000 motor cycle countershaft gears.



# A PRELIMINARY CANTER.

## T.T. Mounts and Riders in Long Distance Races at Brooklands.

G. Dance (499 Sunbeam) taking the lead, closely followed by J. Emerson (496 Douglas) at the start of the Brooklands Senior T.T. race.

AT the B.M.C.R.C. May meeting on Saturday last there were really only two scenes in the picture, the Brooklands Junior and Senior T.T. races of twenty-six laps (70½ miles) and thirty laps (81½ miles) respectively. Between these two was the mere *entr'act* of a three-lap scratch race for machines not exceeding 1,000 c.c., and the meeting closed with the all-comers' passenger handicap of five laps.

Naturally, with the Isle of Man T.T. races in the offing, not a few prospective contestants in the Manx events seized the opportunity of giving their mounts a try-out on the Weybridge track. Not only was the opportunity an excellent one for the riders, but the conditions prevailing on Saturday all contributed to the thorough enjoyment of the large numbers of spectators present.

### Lightweights and Juniors.

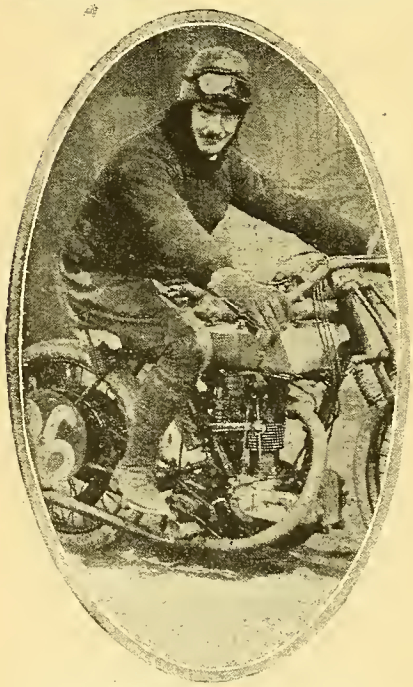
Out of thirty-four entrants in the Junior event, twenty-nine faced the starter, and it was not long before it became apparent that C. G. Pullin (346 Douglas) had the speed which had made him favourite. He was not having it all his own way, however, for a crowd of Blackburne-engined machines pressed him closely. E. Remington (349 Blackburne) was setting a cracking pace, while A. Fraser and G. H. Williams (348 Sheffield-Hendersons) both were possible winners if Pullin failed to keep his place for an instant. Meanwhile, the 250 c.c. class was in the midst of its own battle. W. D. Marchant, the Sheffield-Henderson record-breaker, was going like the wind, albeit seriously challenged by J. V. Prestwich on the 249 c.c. New Imperial, when a stone or fragment of metal was thrown up on to his oil tank and temporarily stopped his progress. Fraser also suffered a setback, his throttle wire breaking—clearly the luck of the Sheffielders was out.

Sometimes the spectacular riders gain all the attention while a steady man misses notice. King Smith, for example, was steadily pushing ahead on the 247 c.c. Morris two-stroke, and the O.K.-Juniors and New Imperial contingent were all keeping well up.

### The Pace that Kills.

After the first half-hour the stayers began to be distinguishable, as man after man dropped out. E. Longden (348 D.O.T.) suffered a fall, and his machine caught fire. J. Whalley (348 Massey-Arran) was seen no more after his third lap. Tudor Thompson (350 Douglas) rolled in with his front cover off at the fourteenth lap, and T. Eve (350 Douglas) and A. A. Swan (249 New Imperial) both stopped in their seventeenth laps, the former shedding his engine chain and the latter coming into the depots with a bad misfire.

Clearly now it appeared to be Pullin's race, for at his twenty-first lap only Remington (Blackburne) was at his heels, although Williams and Fraser (Sheffield-Hendersons), Dequin (348 Ivy), and Prestwich (New Imperial), the J.A.P. exponent, pressed uncomfortably.



A fast lightweight single. The o.h.v. 348 c.c. Blackburne and its rider, E. Remington, who won the Brooklands Junior T.T. Race by a short head at 61·63 m.p.h.

Hour Record Breaker. J. Emerson on his 496 c.c. o.h.v. Douglas after winning the Brooklands Senior T.T. Race, and breaking the 50 miles and 1 hour records, the latter at a speed of 78·91 m.p.h.

**A Preliminary Canter.—**

Then the unexpected happened. On the last lap one of Pullin's tappets seized, and his lead was insufficient to enable him to do any more on one cylinder than to run in a close second behind Remington, with Williams and Fraser third and fourth. In the 250 c.c. class Prestwich was miles an hour faster than anyone else, and finished easily a winner. Result :

CLASS A, NOT EXCEEDING 250 C.C.

1. J. V. Prestwich (249 New Imperial), 56.83 m.p.h.
2. A. King Smith (247 Morris), 48.41 m.p.h.
3. W. Handley (250 O.K.-Junior), 47.16 m.p.h.

CLASS B, NOT EXCEEDING 350 C.C.

1. E. Remington (349 Blackburne), 61.63 m.p.h.
2. C. G. Pullin (346 Douglas), 61.07 m.p.h.
3. G. H. Williams (348 Sheffield-Henderson), 59.89 m.p.h.

Other finishers:—A. Fraser (348 Sheffield-Henderson), R. Dequin (348 Ivy), H. Le Vack (349 J.A.P.), F. J. Price (350 Diamond), C. Reyersbach (349 Trump-Jap).

**A Walk-over.**

The next event, a three-lap scratch race for machines not exceeding 1,000 c.c., only attracted H. Le Vack (998 Zenith-Jap), C. F. Temple (988 Harley-Davidson), and R. N. Stewart (998 Trump); the latter's machine had a British Anzani engine. At the start Stewart got away well, but Le Vack at once took the lead, but when the banking was reached Temple had shown his form, and to all intents and purposes the race became a promenade. Result :

1. C. F. Temple (988 Harley-Davidson), 86.89 m.p.h.
2. H. Le Vack (998 Zenith-Jap).
3. R. N. Stewart (998 Trump).

Quite a number of actual machines for the Island took part in the 500 c.c. T.T. event, including Douglas, Sheffield-Henderson, Triumph, Rudge, and Sunbeam; if the majority of them meet with the same fate as they did on Saturday the Senior T.T. will prove more disappointing than it did last year; for in this track event of 81½ miles eleven machines stopped either completely or for replenishments and adjustments, and out of the field of sixteen starters only four finished in limit time.

**"Seniors" Tried Out.**

At the fall of the flag G. Dance (492 Sunbeam) and F. G. Edmond (499 Triumph) got away beautifully, but J. Emerson (494 Douglas) almost immediately showed superior acceleration and gained a lead he never lost. Pullin and Anstice (496 Douglases) came in together at their third laps—more tappet trouble, so it was said—F. B. Halford (498 Triumph) wobbled rather badly at times, and had two stops for oil—one on his fourth lap! R. E. Dicker (499 Rudge) broke a valve on his eleventh lap, and E. Scarle (499 Sheffield-Henderson), who was going really well, suffered a cruel stroke of ill-luck—the valve spring cup shearing out its centre, allowing the valve to drop into the cylinder. J. Connor (482 Scott) was gradually improving his speed, but oiled a plug on the ninth lap; subsequently he settled down to a steady "63," and kept it up. H. Nicholson (496 Martinsyde) met his Waterloo in valve trouble at his thirteenth lap. Sheraton (490 Norton) and Wallace (496 Duzmo) were consistent but slow.

**Flat-twin Leading the Field.**

When Dance (Sunbeam) and Woodhouse, Halford and Edmond (Triumphs) had completed their tenth laps, Emerson's Douglas was screaming along in its eleventh circuit—clearly he had the pace to win. When two-thirds of Emerson's race was over Dance had disappeared, and at the start of his last lap Halford, Edmond, Gayford (496 Douglas), Connor (Scott), and Sheraton (Norton) were respectively four, five, six, eight, and eight laps behind him; and his luck, speed, and fine riding all held good. Result :

1. J. Emerson (496 Douglas), 78.93 m.p.h.
2. F. B. Halford (498 Triumph), 68.89 m.p.h.
3. F. G. Edmond (499 Triumph), 66.79 m.p.h.

Also finished:—V. Gayford (496 Douglas).

**Emerson Breaks Hour Record.**

During the race Emerson broke the fifty-mile British record for fifty miles in 38m. 5.07s. (78.77 m.p.h.); also the hour record, covering 78 miles 1,601 yards at a speed of 78.91 m.p.h.

**The Passenger Handicap.**

Last on the programme was a five-lap passenger handicap for sidecars and two-seated cycle cars. Handicap events at Brooklands are a hopeless confusion to watch. With such things as the limit man starting his third lap as scratch leaves the mark it is almost impossible to gauge the progress of the race. Result :

1. O. de Lissa (994 Motosacoche sc.), 68.90 m.p.h.
2. G. F. Bainbridge (745 Martinsyde sc.).
3. H. Le Vack (996 Zenith-Jap).

There were fourteen starters.

# A.C.U. AND THE TRADE.

## Influence of Manufacturers and Safety in Trials Discussed at Motor Cyclists' Parliament.

IN the movement for the adoption of the reports of various Management Committees, proposed by Prof. Low at the second general Committee meeting of the A.C.U. on Friday last, a paragraph which read as follows : " Agreed to recommend appointment of a joint committee with the trade to make recommendations on any matter as to which there might be difference of opinion as between the A.C.U. and the B.C. and M.C.M. and T.U., Ltd." (commonly known as the Motor Cycle Manufacturers' Union), was criticised by Mr. K. S. Topping.

Mr. Topping thought that such a joint committee was undesirable, as it inferred a possibility of an excess of trade influence in the Auto-Cycle Union. The Chairman pointed out that the idea was merely to get the opinion of the trade; it would certainly not tend to cause the trade to influence unduly or dominate the A.C.U., and Mr. S. L. Bailey declared it was the sole desire of the Manufacturers' Union to work in unison with the A.C.U.

Arising out of a matter appearing in a Management Committee's report, Mr. B. Marians asked if every effort had been made to persuade the insurance companies not to increase their premiums. The Secretary replied in the affirmative.

Prof. Low then moved the adoption of the h.p. rating sub-committee report, which, as was recently reported, recommended that the horse-power of motor cycle engines should be equivalent to 1 h.p. per 100 c.c. capacity.

A member then asked if the A.C.U. was aware that motor cycle insurance costs were based on the manufacturers' stated horse-power and that the new rating might result in still higher premiums.

The Secretary assured the meeting that the matter had not escaped the Union's notice. The report was then adopted.

Mr. J. W. G. Brooker then moved the various reports of the Competitions Sub-committees. Referring to these, Mr. Alec Ross called attention to the sportsmanlike attitude of the Manx M.C.C. in withdrawing their proposed amateur race.

**To Safeguard Competitors and Spectators.**

Major Vernon Brook then proposed : " That the A.C.U. steward for any open events shall be taken over the course the day before the event, or on some preceding day, in order that he may cut out any part of the course which he may consider unsuitable, either from the point of view of danger to competitors, or unsuitability for an open event held under A.C.U. rules."

Mr. J. N. Longfield stated that he thought that the adoption of such proposals would infer that the A.C.U. was interfering too much, and that the matter should be left to the stewards of the meeting.

Mr. S. L. Bailey and Mr. Dawes spoke in support of the last speaker, while Mr. T. Rutherford also opposed the motion.

The motion was finally withdrawn, to be submitted to the competitions committee, which, the proposer said, " should only issue permits on condition that the public and competitors should be safeguarded."

Correspondence from the Rev. J. M. Philpott was then read. In this he referred to anomalies in the titles of certain Centre trials, which led people to believe that these were organised by the A.C.U. and not by the centres. It was agreed that in the announcement of such events the centre's name should appear first.

## BRITISH RIDER WINS LIEGE HILL CLIMB.

At the Liège international hill climb last week-end G. S. Boston (349 A.J.S.) secured the two premier awards, the John Bull cup and the cup presented by the Belgian journal *La Wallonie*.

# CLUB NEWS.

## Activity in Clubland. Many New Clubs.

### Bath and West of England M.C.

Members of this club recently gave an outing to 200 patients of the Ministry of Pensions Hospital, fifty vehicles being used.

### Bohemian M.C.C. (Southampton).

Owing to the retirement of Mr. Gunnell, Mr. F. W. Kirby, of 28, Norfolk Road, Southampton, is now the secretary of the club.

### A New Club at Thetford.

A motor club is being formed at Thetford, Norfolk, with Mr. F. G. Edmonds, Edmonds' Motors, Norton House, Thetford, as secretary.

### South Wales Centre (A.C.U.).

So as to avoid clashing with the T.T. races, the South Wales Centre has decided to hold its one hundred miles race on Pendine Sands in July. This will allow T.T. competitors to take part.

### Clitheroe and District M.C.C.

The radius governing membership to the above club has been extended from four miles to eight miles, and the secretary will be pleased to hear from any new prospective members. The membership fee is 7s. 6d.

### A New Birmingham Club?

A number of motor cyclists in North Birmingham, Walsall and District are about to form a motor-cycle club, which it is proposed to organise on unique lines. The hon. sec. (pro. tem.), Mr. W. C. Baker, of 3, New Street, Birmingham, will be pleased to forward particulars on request.

### Bishop Auckland and District M.C.

An entry of 75 was received for this club's recent hill-climb, which was witnessed by over 1,500 spectators.

The results were as follows :—

500 c.c. Class.—1, C. W. Smith (3½ Sunbeam), 34⅘sec.; 2, B. Gummerson (o.h.v. Triumph), 39⅕sec.

Sidecar Class, 500 c.c.—1, Percy Bell (2¾ Dot), 60⅕sec.

2¼h.p. Class.—1, Foster (Velocette), 52 sec.; 2, H. Chilton (Royal Enfield), 66 sec.

2¾h.p. Class.—1, Percy Bell (Dot), 43 sec.; 2, Joyson (Invicta), 49 sec.

### Bristol M.C. and L.C.C.

The Second "Mystery" Trial was held over a 40-mile course around Bath, and took the form of a speed-judging contest, there being seven sections to be run at schedule speeds, which varied from 23 m.p.h. to as slow as 6 m.p.h., the latter being two miles of level road, non-stop. There were 32 starters. Result :—

1st and Secretaries' Cup.—E. Spencer (3½ Douglas), 5 min. error.

2nd, Silver Medals.—Four tied, 6 points error. A. B. Fuller (3½ Douglas), A. E. Tozer (3½ Rudge sc.), F. Wheeler (4½ Ariel sc.), — Laurence (Douglas).

The King Cup event, of May 20th, has been postponed to June 17th, to avoid clashing with the South-Western Centre open event.

## Week-End Club Events.

*May 11th.—Kelso and District M.C.C. Social Run and Picnic (with Berwick M.C.).*
*May 11th.—North Wales M.C.C. Fast and Slow Hill Climb.*
*May 11th.—Gloucester M.C. and L.C.C. Visit to Douglas Motor Works, Bristol.*
*May 11th.—Mid Bucks M.C.C. First Trophy Run.*
*May 13th.—Essex County and Southend A.C.—Acceleration Test.*
*May 13th.—Reigate, Redhill and District M.C.C.—Hill Climb.*
*May 13th.—Coventry and Warwickshire M.C.—South Birmingham M.C. Trial (Centre).*
*May 13th.—South Birmingham M.C.C.—Trial open to the Midland Centre.*
*May 13th.—Woolwich, Plumstead and District M.C.C.—South Eastern Counties Inter-Club Team Trial.*
*May 13th.—Sheffield M.C.C.—Picnic, Cutthroat Bridge.*
*May 13th.—Coventry Triangle Club.—Run to Little Packington.*
*May 13th.—Eastbourne and District M.C.C.—Woolwich, Plumstead and District M.C.C. Team Trial.*
*May 13th.—West Kent M.C.—Night Trial.*
*May 13th.—Croydon and District M.C.C.—Hill Climb.*
*May 13th.—Coatbridge, Airdrie and District M.C.G.C.—Flying Half Mile (Open).*
*May 14th.—Bradford M.C. and L.C.C.—Wilson Cup (No. 2).*
*May 14th.—Essex M.C.—Picnic and Old Crocks' Hill Climb.*
*May 14th.—Colne and District M.C.—Run to Ingleton.*
*May 14th.—Leeds Motor Union.—Run to Castle Howard and Kirkham Abbey.*
*May 14th.—Manchester Motor Club.—Social Run.*
*May 14th.—Lune Valley M.C.C.—Reliability Trial for Elms Trophy.*
*May 14th.—Wolverhampton M.C.C.—Social Run.*
*May 14th.—Wallington and District M.C. and L.C.C.—Social Run.*
*May 14th.—Bridgnorth and District M.C.C.—Run to Stourport.*
*May 14th.—Rochester, Chatham and District M.C. and L.C.C.—Run to Secret Hill.*
*May 14th.—Exeter M.C. and Junior C.C.—Run to Lustleigh Cleave.*
*May 14th.—Prestwich and District M.C.—Half-day Reliability Trial.*
*May 14th.—Bulwell M.C.—100 Miles Reliability Trial.*
*May 14th.—Barrow and District M.C.—Hill Climb.*
*May 14th.—Coventry Triangle Club.—Run to Warmington.*
*May 14th.—Sheffield M.C.C.—Run to Ashover and Matlock.*
*May 17th.—Kelso and District M.C.C.—Speed Trial.*
*May 17th.—Leeds Motor Union.—Impromptu Run from City Square.*
*May 17th.—York and District M.C.—York Races.*
*May 18th.—Bulwell M.C.—Run to Belper (River Gardens).*
*May 18th.—Worcestershire M.C. and District M.C.C.—Opening Social Run (Official Visit to Morgan Motor Works).*

### Bridgnorth and District M.C.C.

A change of secretary has been made by the above club, Mr. D. Wilkinson, St. James's Villa, Bridgnorth, now officiating.

### Wolverhampton M.C.C.

The results of this club's first trial of the year, held on the 30th ult., are as follows :

1st.—E. Wheeler (4¼ Sunbeam sc.), total error 19⅘sec.

2nd.—R. S. Hill (2¾ H.B.), total error 21sec.

3rd.—Dr. R. S. Harvey (8 Matchless sc.), total error 36⅖sec.

1st Lady.—Miss E. M. Watton (2¼ Velocette), total error 7min. 2⅘sec.

E. Wheeler also won the Corke Silver Cup, Sheppard Silver Cup, and two Gold Medals; R. S. Hill, a Club Silver Medal; Dr. Harvey, a Club Bronze Medal; and Miss E. M. Watton, a Club Silver Cup.

### Lichfield and District M.C.C.

The adjourned general meeting was held on April 21st at the Swan Hotel, Lichfield, when the officers for 1922 were elected. The honorary secretary is Mr. H. Hoskison, jun., Fradley, Lichfield.

### Uxbridge and District L.C. and M.C.C.

For the Bayliss Cup event at the end of last month a fixed gear trial was arranged which included a starting test. The course was one of approximately fifty miles, and included nothing in the way of freak hills. The winner was A. H. Milward (2¾ Wooler) with a loss of only three marks.

### Sheffield and Hallamshire M.C. and L.C.C.

Members of the above club ran to Nottingham in glorious weather for the purpose of visiting the works of the Raleigh Cycle Co., Ltd. The party were shown the processes of manufacture employed in making cycles, motor cycles, and gear boxes, and a most enjoyable and instructive time was spent by all who participated in the run.

### Sunderland and District M.C.

Favoured with perfect weather, over three thousand spectators attended the recent hill-climb at Tunstall Hope Hill, which was in better condition than it has been for years, consequently the times were the fastest on record. Results :

350 c.c. Class.—1, J. T. Jabbora (2¾ Sunbeam), 19⅗sec.; 2, H. L. Young (2¾ A.J.S.), 20½sec.

600 c.c. Class.—1, F. Turvey, Jnr. (o.h.v. Triumph), 17½sec.; 2, J. Kish (3½ Sunbeam), 17⅗sec.

Unlimited.—R. Loughtou (3½ Douglas), J Kish (Sunbeam), tied, 17⅗sec.

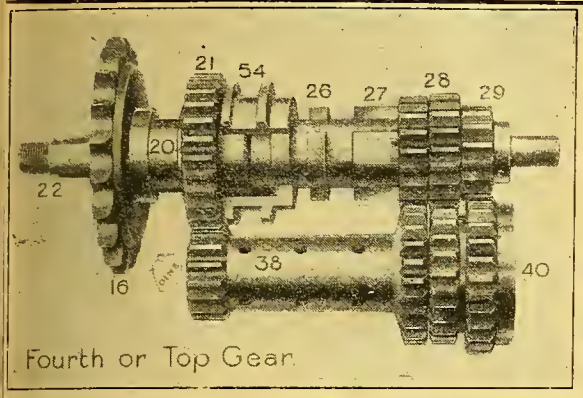
### North Wales M.C.C.

On the last Thursday and Saturday in April the club held a petrol consumption test. There was a fair entry, and competitors were supplied with one pint of petrol and were required to travel from Denbigh to Colwyn Bay and back, or as far as the spirit would carry them. All tanks were sealed. The provisional results are : 1, W. Edwards (2¾ New Imperial), figure of merit 79.6, m.p.g. 189.6; 2, J. H. Davies (3½ Sunbeam), figure of merit 68.5, m.p.g 132.8; 3, L. S. Jones (3½ B.S.A. sc.), figure of merit 58.5, m.p.g. 75.2.

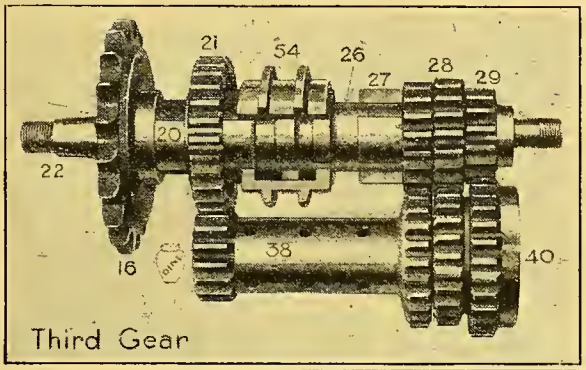
### Ayr M.C.C.

A hill-climb was held on Holm Brae, Dundonald, on Saturday, April 15th. It was run on the knock-out principle, and as a large entry competed some fine finishes were witnessed. The results were :—Two-stroke class, A. Marr (2½ Victoria); 500 c.c. R. P. Lees (3½ Rover); 500 c.c., experts barred, J. A. L. Sangster (3½ N.U.T.); 1,000 c.c., Jas. Allan (3½ Douglas); 1,000 c.c., experts barred, A. F. Aberdein (3½ Sunbeam).

An open hill-climb willl be held on May 27th. Entry forms may be had on application to Thomas Gilchrist, Ashgrove Street, Ayr.

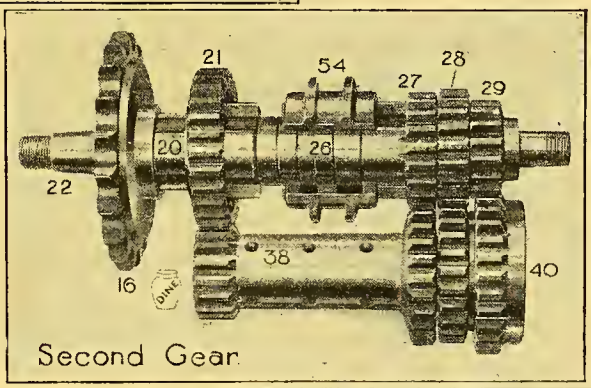


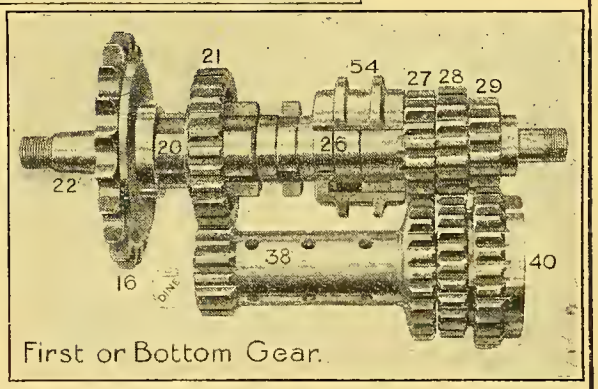

# FOUR SPEEDS IN REGULAR STEPS




ARE OBTAINED BY

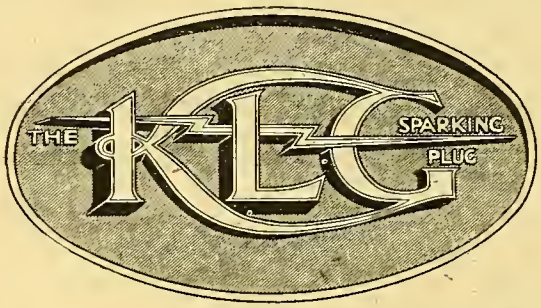
# ONE SLIDING DOG




## in the Jardine FOUR SPEED Gear.

John Jardine Ltd., Deering Street, Nottingham. 'Phone: 3295 3296 Nottingham.




THE BROOKLANDS SENIOR T.T. RACE.

# 1st, 2nd & 3rd

PLACES WON ON

# K.L.G. Plugs

1st Mr. J. EMERSON (Douglas)
2nd Major F. B. HALFORD (Triumph)
3rd Mr. F. C. EDMOND (Triumph)

**IN THE COURSE OF HIS MAGNIFICENT RIDE**

**Mr. J. EMERSON on his 500 c.c. "Douglas" also broke the WORLD'S RECORD for 50 MILES and 1 HOUR**

*Sole Manufacturers of K.L.G. Plugs:*
THE ROBINHOOD ENGINEERING WORKS, LTD.,
PUTNEY VALE - - - - - - - - LONDON, S.W.15.
*Sole Export Agents:*
S. SMITH & SONS (M.A.), Ltd., Central Works, CRICKLEWOOD.

*Stocked in Chest sizes—*
*34, 36, 38, 40, 42, 44.*
*Any other size, 7 days.*

# "GOOD-SERVICE" ARMY TRENCH COATS

## AT 68/6 EACH

Made from GUARANTEED Government Materials by a former War-time Contractor.

**New Triple-Proof Gabardine, smart check permanent lining, interlined OIL SKIN, with an ALL WOOL Camel Fleece detachable lining.**

For Spring—Summer—Autumn or Winter Wear. These coats are offered in the usual civilian style. Government materials combined with the knowledge of work hands whose experience was gained in War-time production of this type of coat, and who know "what is required" in

## OFFICERS' ARMY TRENCH COATS,

are embodied in the manufacture of the "GOOD-SERVICE" Coat (illustrated). With fleece lining detached coat can be used as a smart Summer raincoat. With lining attached it gives all the advantages of an Ulster

## 50% BELOW TO-DAY'S PRICES.

IF YOU CANNOT CALL, take advantage of our SATISFACTION GUARANTEE OFFER, which gives you an opportunity of COMPARING the value offered in the "GOOD-SERVICE" Coat against inferior garments now on the market.

**In response to numerous inquiries, we now offer similar Coats, less fleece lining, AT 52/6 EACH.**

**Don't Miss this Unique Opportunity —— Call or Mail To-day.**

*OUR GUARANTEE.* ***Should the garment purchased fail in any way to come up to expectations, WE GUARANTEE to refund remittance IN FULL without further question, provided the garment is undamaged and returned in seven days.***

*State chest (over vest) and height measurement when ordering.*

**THE SERVICE COMPANY (LONDON), LTD.,** 289-293, HIGH HOLBORN, LONDON ——— W.C.1

# Tube Protector

## No More Punctures!

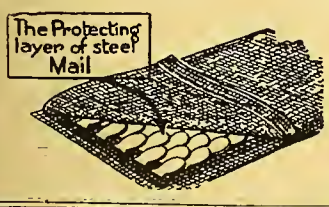
You will never again be stranded with a punctured tyre—never again dread bits of glass, flint, and nails, if you fit the **TUBE PROTECTOR.**

The Tube Protector is a flexible layer of thin pieces of hard metal (arranged as in a coat of mail) enclosed in canvas, and fits between the outer cover and the inner tube of your tyre. No matter what sharp matter pierces the outer cover, it cannot penetrate the Tube Protector —cannot possibly pass through to the inner tube.

The Tube Protector is easy to fit, is light in weight, and causes no friction. It allows you to wear down the outer cover to almost nothing. Think of the saving in time, money, labour, and patience.

Ask your dealer to fit TUBE PROTECTORS to your motor cycle tyres.

**PARTICULARS ON APPLICATION.**



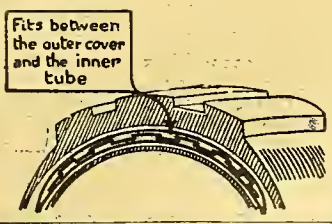

**Liberal terms to factors and retailers.**

**PROTECTORS for MOTOR CYCLES, 17/11 each.**

**Sole Agents:**

**A. Stuart Morris & Co.,**

**Head Office: 101, Leadenhall St., E.C.3**



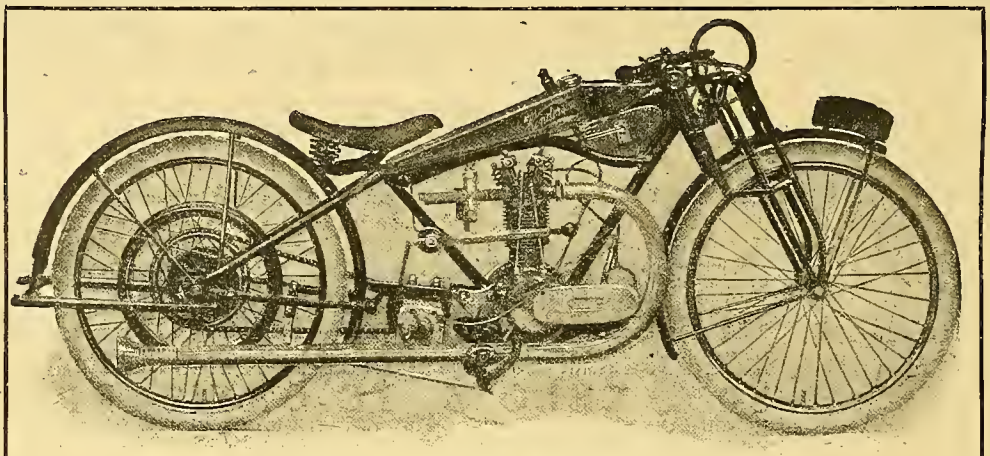
# THE "SPEED" MACHINE OF THE YEAR.

GUARANTEED TO EXCEED 70 M.P.H.

PRICE

**£110**

SPECIAL HIGH COMPRESSION ALUMINIUM PISTON, RACING CAM, ETC., SUPPLIED FREE OF CHARGE WITH EACH MACHINE.



2¾ h.p. (o.h.v.) Sheffield-Henderson

THE MACHINE THAT IS GAINING AWARDS IN ALL SPEED EVENTS.

HAS LOW RIDING POSITION AND WILL STEER PERFECTLY AT ABNORMAL SPEED.

**AT THE OPEN HILL CLIMB AT KOP ON APRIL 29th THESE MACHINES GAINED 2 FIRSTS AND 3 SECONDS.**

WRITE FOR FULLY ILLUSTRATED CATALOGUE AND NAME OF NEAREST AGENT:—

## HENDERSON MOTORS, LTD, 73, Fitzwilliam St., SHEFFIELD.

Sole London Agents:—MESSRS. ALLEN BENNETT MOTOR COY., LTD., CROYDON.

*Are you interested in*

## *LIGHT CARS?*

Readers of "The Motor Cycle" who are considering the purchase of a small car will find all the information they desire in the pages of

**The Autocar**

Every Friday. FOURPENCE

"THE AUTOCAR" deals with *every* phase of motoring, and very fully covers the small car movement.

All the known makes of light cars are advertised in "THE AUTOCAR."

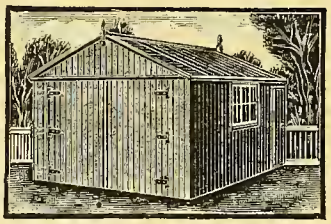
Bargains in second-hand light cars are more likely to be secured through "THE AUTOCAR" than any other medium

Because—

**More second-hand light cars are offered for sale in "THE AUTOCAR" than in any other motor journal.**

Published by Iliffe & Sons Ltd., Dorset House, Tudor St., London, E.C.4.

SATISFACTION GUARANTEED



## MOTOR CYCLE HOUSES.

| Length. | | Width. | | Eaves. | Price. | Floor extra. |
|---|---|---|---|---|---|---|
| 8 | × | 6 | × | 6 ft. | £8 10 0 | £1 15 0 |
| 9 | × | 7 | × | 6 ft. | £10 5 0 | £2 5 0 |
| 10 | × | 8 | × | 6 ft. | £12 5 0 | £2 3 0 |

*Write for List "C."*

¾In. red deal matchboards on strong red deal framing.
Match boarded roof, covered outside with extra good quality felting.
Double doors complete with all fittings.
Windows made to open at the top, glazed with 21 oz. glass.

BROOKES BROS., Edith Rd., Smethwick, B'ham

"THE MOTOR CYCLE"

## ROUTE BOOK

With 32 pages of Road Maps of England and Wales, Scotland, and the London District.

2/6 net, by Post 2/10.

From Iliffe & Sons Ltd., Dorset House, Tudor St., London, E.C.4

# 200 Enquiries from a 1" advertisement.

"YOU will be pleased to know that from my last 1" single column advertisement in *The Motor Cycle* advertising my R.A.F. Flying Coats and A.S.C. Motor Drivers' Coats, I received **over 200 enquiries,** including many cheques and money orders.

**"I think your paper wonderful,** and for reaching the motor cyclist, it is certainly 'the goods'."

*H. J. Bleach,*
*Marmion Road, Southsea.*

# Matchless

THE PERFECT PASSENGER MOTORCYCLE

# WHITELEYS Special Show

Whiteleys draw attention to the newest success of this wonderful guaranteed machine in the great

## LONDON—LAND'S END EASTER TRIAL

91 *Sidecar starters in this strenuous trial,*
*——————only 17 obtained gold medals.*

## 20 MATCHLESS Machines

**gained :—**

THE CAPTAIN'S CUP
10 GOLD MEDALS
9 SILVER MEDALS

*Let Whiteleys demonstrate the 'Gold Medal' machine ——you cannot buy better !*

FOR PRICES SEE PAGE FACING.

*It's worth while watching the "Matchless"!*

# LONDON—LAND'S END.

Recognised as the most strenuous trial of the year. We entered **four machines**, which were ridden and tuned by members of our staff. All finished, and gained the following awards:

**Two Gold Medals.** **Two Silver Medals.**

**DUNELT. O. S. Bridcutt. Gold Medal.** **BROUGH SUPERIOR. J. D. Marvin. Gold Medal.**
**MATCHLESS. B. S. Allen. Silver Medal.** **ARIEL. Segrott. Silver Medal.**

Our experience in competitions and trials is at your disposal. Every second-hand machine is thoroughly overhauled, and new machines tested and tuned before delivery.

We arrange the easiest of easy payments to suit your individual requirements, and payments may be spread over a period of **18 months.**

A full practical upkeep service is automatically placed at your disposal as soon as you become an A.B. client.

**Here are a few of the machines we actually have in stock ready for immediate delivery. Full list of Second-hand models sent post free on request.**

| | |
|---|---|
| A.J.S., 7 h.p. combination | £175 0 |
| ALLON, 2¾ h.p., 2-sp., clutch and kick-starter | £60 0 |
| ARIEL, 3½ h.p., Sports, 3-speed | £87 0 |
| BROUGH SUPERIOR, Sole London Agents: | |
| 8 h.p., O.H.V. | £160 0 |
| 8 h.p. Side Valve | £150 0 |
| Delivery ten days. | |
| 8 h.p. Combination | £180 0 |
| Delivery ten days. | |
| 6.5 h.p. | £125 0 |
| Delivery seven days. | |
| 6.5 h.p. Combination | £150 0 |
| Delivery seven days. | |
| B.S.A., 4½ h.p., all chain | £110 0 |
| B.S.A., 4½ h.p., all chain combination | £142 0 |
| B.S.A., 7 h.p. Combination | £164 0 |
| CALTHORPE, 2¾ h.p., single speed | £36 0 |
| CALTHORPE, 2½ h.p., 2-speed, clutch | £45 0 |
| CALTHORPE, 2¾ h.p., J.A.P., 2-speed | £65 0 |
| DOUGLAS, 2¾ h.p., 2-speed, all on | £68 0 |
| DOUGLAS, 3½ h.p., O.H.V. Sports | £115 0 |
| DUNELT, 4¼ h.p., 3-speed, clutch and kick-starter | 82 gns. |
| DUNELT, 4¼ h.p., Combination, spare wheel and tyre | £113 0 |
| ENFIELD, 8 h.p. Combination | £140 0 |
| HARLEY-DAVIDSON, 7-9 h.p. Combination | £185 0 |
| HUMBER, 4½ h.p., 3-speed Sports | £100 0 |
| LEVIS, 2½ h.p. Sports | £48 0 |
| LEVIS, 2¾ h.p. Model G, 2-speed, clutch and kick-starter | £68 0 |
| MASSEY-ARRAN, 2¾ h.p. Blackburne, 2-speed, clutch and kick-starter | £72 10 |
| MASSEY-ARRAN, 2¾ h.p., O.H.V., Blackburne | £99 15 |
| MATCHLESS, Sports Model J | £130 0 |
| MATCHLESS, Model H | £170 0 |
| MATCHLESS, Model H, 2-seater | £175 10 |
| MATCHLESS, J Sports Combination | £160 0 |
| MATCHLESS, J Touring Combination | £150 10 |
| MORGAN runabouts, all models from | £150 0 |
| NEW IMPERIAL, 8 h.p. Combination | £145 0 |
| NEW IMPERIAL, 2¾ h.p., 3-speed, all chain | £73 0 |
| NEW IMPERIAL, 350 c.c., I.O.M., Sports | £84 0 |
| NORTON, 3½ h.p., 3-speed Sports | £115 0 |
| NORTON, Big Four Combination | £153 0 |
| O.K., 2¾ h.p., single-speed | £39 18 |
| O.K., 2¾ h.p., 2-speed | £55 13 |
| O.K., 2¾ h.p., 2-speed, clutch and kick-starter | £60 18 |
| P. & M., 3½ h.p., 4-speed combination, all on | £150 0 |
| ROVER, 8 h.p. Car | £220 0 |
| SCOTT, 3¾ h.p., Touring or Squirrel | £110 0 |
| RUDGE, 3½ h.p., Multi, I.O.M. | £77 0 |
| SHEFFIELD HENDERSON, Sole London Agents: | |
| 2¾ h.p., Standard Touring or Sports | £83 0 |
| 2¾ h.p. O.H.V. Blackburne, guaranteed 70 m.p.h. | £110 0 |
| SUNBEAM, 3½ h.p., Sports | £136 10 |
| SUNBEAM, 3½ h.p., Touring | £126 0 |
| TRIUMPH, 3½ h.p., O.H.V. | £120 0 |
| TRIUMPH, 4 h.p., chain-cum-belt | £105 0 |
| TRIUMPH, 4 h.p., all chain | £115 0 |
| ZENITH-BRADSHAW, 3½ h.p. | £113 0 |
| ZENITH, 5 h.p., Sports | £110 0 |

SWAN, MILLFORD, HENDERSON Sidecars, Shop-soiled, at Reduced Prices.

## JACKSON'S IMPERVO.

**Positive permanent cure against punctures. Stops leaks while you ride. No motor cyclist should be without it. Used by our riders in the London-Exeter, London-Land's End and numerous other trials. Medium size tin for *2 Tubes 10/-*.**

## WEX CARBURETTER.

**Used by our riders in all recent trials. The most wonderful instrument on the market. We are fitting agents. 14 days' trial.**

Make a note of our address and whenever in need of advice, assistance, spares, accessories or a machine, write, 'phone or call and you will get immediate and continuous satisfaction. Stockists of Sturmey-Archer, Morgan, Villiers, Blackburne, Jap, Douglas, Triumph, and P. & M. spares.

## ALLEN-BENNETT MOTOR CO., LTD.,

***The Motor Cycle Specialists.***

**9, 10, 11, ROYAL PARADE, WEST CROYDON.**

**'Phone: Croydon 2450, 2451. 'Grams: "Track, Croydon." Open Saturdays until 7.30 p.m.**



*In answering this advertisement it is desirable to mention "The Motor Cycle."*

## MOTOR CYCLES FOR SALE.

### Bat.

BAT-J.A.P. 1916 5-6h.p., discs, chain drive, Canoelet sidecar, good condition; £60.—217, Belsize Rd., Kilburn. [5294

BAT Motor Cycle, single-speed, 8h.p. J.A.P. engine, Bosch magneto, 700×80 rear tyre; £22.—Day, 26, Kilda's Rd., N.16. [4989

BAT 6h.p. Sporting Combination, electric lights, torpedo sidecar, Klaxon, good order; £50.—34, Hereford Rd., Westbourne Grove. [5566

BAT-J.A.P. 6-8h.p., 1913, 3-speed clutch, C.B. sidecar, Bosch, B. and B., trial; nearest £50; must sell; appointment.—Vallis, 129, Cator St., S.E.15. [5168

6h.p. Bat-Jap Combination, Mills-Fulford 2-seater sidecar, Cowey speedometer, gear box, engine 36614, running order; £55.—Gammage, Highfield, Tutbury, Burton-on-Treat. [5159

1919 GNS., exchange.—1920 Bat-Jap 8h.p., 3 speeds, kick, spring frame, sporting sidecar, screen, equipped, fast.—Seabridge, Hansler Rd., East Dulwich Edenham 2452. [4635

BAT-J.A.P. Combination, 1920, 6h.p., 3-speed, Henderson sidecar, perfect condition, full equipment, little used; any trial; £85.—Somerset Bros., Thornton Heath Pond. [4866

BAT-J.A.P. 5-6h.p., single gear, sporting, hand clutch, Bosch, Binks, adjustable pulley, copper exhaust, good throughout, all on; £45.—Miller, 32, Cornhill Rd., Brixton, S.W.2. (P) [5382

BAT Combination 1921, 6h.p., electric, acetylene lighting, Griadlay touring sidecar, Griadlay screen; this combination has been carefully used, and is in perfect condition throughout; owner must sell through illness; bargain, £115.—Apply Picklin, 46 St., Warrington. [5092

### Beardmore.

BEARDMORE-PRECISION.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [4833

1921 (late) 3½h.p. Beardmore, delivered end Feb. 1922, as new, fully equipped, tax paid, done about 800 miles; good reason for selling; £55.—Bailey, "Advertiser" Office, Peterborough. [5059

BEARDMORE-PRECISION Combination, 3½h.p., 2-stroke, spring frame, 3in. tyres, variable jet, Lucas headlamp and horn, new August, 1921, done 1,600 miles; £90.—Puddy, 24, Lancaster Rd., Stroud Green, London. [5127

BEARDMORE-PRECISION, July, 1921, spring frame, 26×3 Palmer cord heavy, flat rims, Schrader valves, Brooks B170, cast aluminium combined legshields and footboards, 350 c.c. special T.-S. engine, gear, clutch unit, mechanical lubrication, guaranteed 45 m.p.h., Cox Atmos or Binks, Lucas C.O.R., perfect mechanical order, appearance equal to new; £69.—Ellocott, 41, Whitchurch Rd., Cardiff. (D) [4713

### Blackburne.

BLACKBURNE 4h.p., 1919, thoroughly overhauled; £70.—Ratcliffe Bros., 200, Gt. Portland St., W. [5715

1920 4h.p. Blackburne and coachbuilt sidecar, 3-speed, clutch and kick starter, all-chain drive, hood, windscreen, electric lamps, horn, speedometer, legshields, tax paid Dec., splendid order and condition; £85.—D. and S. Autocar Co., 33, The Parade, Golders Green. [5743

### Blackburne.

BLACKBURNE Engine Spares from stock.—Maudes' Motor Mart, 100, Great Portland St., W.1. [5258

### Bown.

1916 Bown's Baby 2-stroke, very fast, tyres as new, Dixie, Amac, lamps, horn, tax paid; quick sale, £18.—Cundy, 111, High St., Aldeburgh. [4875

### Bradbury.

BRADBURY 2¾h.p. Lightweights; £60; in stock.—Clifford Motories, Eastwood, Notts. [4653

4h.p. Bradbury Combination, 2-speed, Bosch magneto, all on; £47.—Institute, Stoke-under-Ham, Somerset. [5027

F.O.C.H. have a 3½h.p. Bradbury Combination, 3-speed, countershaft, kick starter; bargain.—5, Heath St., Hampstead (near Tube). [5073

BRADBURY 1915 6h.p. Combination, 3-speed, countershaft, 700×80 tyres, fully equipped, good condition; £65; any trial.—84, Milward Rd., Hastings. [4806

BRADBURY 6h.p. 1921 Twin, 3 speeds, chain drive, hand and foot controlled clutch, new and unused; £92.—Eagles and Co., 275, High St., Acton, London. [5778

2¾h.p. Bradbury, new 1922, £60; 4h.p. model, £92; 4h.p. combination, £118/10; easy terms or exchange.—Wanchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5898

1921 4h.p. Bradbury, 3-speed, all chain, delivered Christmas, never ridden; owner medically ordered lightweight; accept £84.—Stuart White, Halton, nr. Leeds. [4856


# No Lock-Out AT PARKER'S

WE ARE ALWAYS OPEN TO DO OUR UTMOST FOR THE MOTOR CYCLING FRATERNITY.

**CASH—EXCHANGES—**

**DEFERRED PAYMENTS.**

| DEPOSIT | and | 12 INSTALMENTS OF | CASH PRICE |
|---|---|---|---|
| £15 | **NEW HUDSON.** 3½ h.p. 1914 model T.T. equipped, tax paid.... | £1 15 10 | £35 |
| £25 | **B.S.A., 1916.** 4½ h.p. and sidecar. 3-speed, all-chain, equipped, tax paid.... | £3 11 8 | £65 |
| £20 | **B. & M.** 3½ h.p. and sidecar, 2-speed clutch, fully equipped, tax paid.... | £3 2 9 | £55 |
| £15 | **CLEVELAND, 1920.** 3 h.p. 2-speed, K.S. Clutch, fully equipped | £2 13 9 | £45 |
| £15 | **BRADBURY** and C.B. sidecar, **1914.** 2-speed, K.S. and clutch, fully equipped, tax paid | £2 13 9 | £45 |
| £30 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p., electrically equipped Combination, speedometer, screen, tax paid ..... | £3 1 3 | £120 |
| £10 | **DOUGLAS, 1914.** 2¾ h.p., 2-speed, fully equipped, good condition ..... | £2 4 9 | £35 |
| £40 | **SUNBEAM, 1918.** 3½ h.p. Combination, 3-speed, K.S., clutch, equipped ..... | £5 7 6 | £100 |
| £25 | **N.U.T., 1920.** 3½ h.p., 3-speed, K.S., clutch, Lucas dynamo lighting, new condition. | £6 S 5 | £95 |
| £35 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p., electrically equipped, comb., hood, screen, speedometer, new condition ..... | £8 17 1 | £135 |
| £15 | **ROYAL ENFIELD, 1913.** 6 h.p. and sidecar, fully equipped ..... | £2 13 9 | £45 |
| £20 | **ALLDAYS-ALLON, 1921.** Combination, fully equipped, speedometer, as new ..... | £4 8 7 | £70 |
| £35 | **ZENITH** SPORTING COMBINATION. Fully equipped, Ace discs, absolutely as new | £7 19 5 | £125 |

**BOLTON:** Bradshawgate. Tel. 1348.

**MANCHESTER:** 245, Deansgate. Tel. Cen 864.


## MOTOR CYCLES FOR SALE.

### Bradbury.

28 GNS No Offers.—Sporting 4h.p. Bradbury, Bosch, Amac, round tank, knee grips, discs, new tyre, just overhauled and re-enamelled, sound condition, ride 50 miles to purchaser.—Barrett, 77, Hartsholme Drive, Swanpool, Lincoln. [5548

*Spare Parts.*

BRADBURY Spares and Repairs.—Agents, Bright and Hayles, 78, Church St., Camberwell. [8030

### Broler.

BROLER 2¾h.p., 2-speed, kick start, clutch, 1920, splendid machine; sacrifice, £35.—17, Byron St., Ilkeston. [4661

### Brough.

£30.—Brough, 6h.p., and Canoelet sidecar.—Clifford Wilson, 177, Westminster Bridge Rd., S.E.1. [4602

NEW 1922 3½h.p. sports model overhead valve flat twin Brough; £105; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [6031

£33.—1917 3½h.p. Brough twin, 3-speed Sturmey countershaft, clutch, K.S., crank case cracked.—King, Egrove Farm, Oxford. [5360

1920 5-6h.p Brough Combination, Henderson sidecar, 3-speed, kick start, F.R.S. lamps, Cowey horn, Tan-Sad, spare chain, run about 1,500 miles, like new, in perfect condition; cost £185; take £115.—Dewhirst, 12, Euston Rd., Morecambe. [3339

### Brough Superior.

BROUGH SUPERIOR and Swan sporting sidecar, as new; £140.—Rae, Annickvale, Saltcoats. [4344

BROUGH SUPERIORS.—Order your new mount from us. We are the Brough experts. Specially tuned to order Mark I., 8h.p., side valve, £150; sporting combination, with screen, step, mat, and apron, £180; Mark I., 90mm. bore, o.h.v., £160; Mark II., 6.5h.p. M.A.G. engine, £125; Mark II. combination, £150. Special Service Agents; lists.—G. and J. Dawson, The Ideal Garage, Cambridge. 'Phone: 993 [0834

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½ o.h.v., 3-speed, clutch, and kick starter, £160; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P engine, same price; Mark II 6.5, mag, 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Beonett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0733

*Spare Parts:*

SPARES.—All engine, gear box, and frame spares for Brough Superior in stock; write for lists.—G. and J. Dawson, The Ideal Garage, Cambridge. [0835

### Brown.

BROWN, 2½h.p., new magneto, tyre, belt, splendid order, tax paid; £16.—Apply 49, North St., Portslade. [5292

### B.S.A.

B.S.A.—New and second-hand models.—B.S.A. Specialists.

COUNTY Cycle and Motor Co., Broad St., Birmingham. [4678

B.S.A. 1916, 3-speed, K.S., countershaft; £43; exchange.—2, Coutts Rd., E. [5497

B.S.A. 4h.p., 3-speed, countershaft; £33.—18, Lavender Rd., Wallington, Surrey. [5428

1922 Lightweight 6-7h.p. B.S.A., with No. 4 sporting sidecar, at list price. Below.

1921 6-7h.p. Combination, overhauled by B.S.A. Co. and in absolutely new condition; spare wheel; 120 gns. Below.

1920 4½h.p., all chain drive, with coachbuilt sidecar, equipped, licensed for year; 70 gns; deferred payments or exchanges.—Edwards, 50, Harrington Rd., S. Kensington. [6010

4¼h.p. B.S.A., Millford sidecar, chain drive; £60.—8, Deanery Rd., Stratford, E.15. [5299

£46.—4½h.p. B.S.A., 3 speeds, Binks, lamps, horn, perfect.—Jenkins, Hairdresser, Griffiths Town. [5305

B.S.A. 3½h.p., Bosch, perfect condition; nearest £35 secures.—H. N. Webster, High St., Kelvedon. [5208

ROBERTSON'S Motors, Ltd.—1921 B.S.A., shop-soiled, Model A; £118.—157b, Gt. Portland St., W.1. [6075

1918 B.S.A. 4¼h.p., with Empire sidecar, good condition; what offers?—7, High St., Builth Wells. [4979

WANCHOPE'S, 9, Shoe Lane, London.—4¼h.p. B.S.A. combination, 1919-20, 3 speeds, etc.; £77/10. [5877

## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. 3½h.p., 2-speed, free engine, pedal starter, equipped; £28.—Moss, Wem. [5782

NEW 1921 4¼h.p. B.S.A. Combination and accessories; £125.—Bounds Garage, 223, High Rd., Kilburn. [5015

B.S.A. 1922, all models, immediate delivery.—Hucklebridge, 133, Sloane St., Chelsea. Tel.: Victoria 451. [7454

B.S.A. 1919 (November) 4¼h.p. Combination, excellent order, electric lamps; £75.—Clark, 7, Exhibition Rd., S.W.7. [4618

B.S.A. 1919 4¼h.p., 3-speed, all-chain drive, good running order; best offer.—Hale, 46, Harrington Gardens, S.W.7. [5312

1922 B.S.A. model, H2, in stock; terms or exchange.—Shepherd, Enfield Highway. Tel.: Waltham Cross 31. [0860

B.S.A.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6292

B.S.A. 1921 4¼h.p., 3-speed, hand clutch, kick start, all-chain drive, tax paid; £78.—Maude's, 100, Great Portland St., London. [5275

1922 6h.p. B.S.A. Model E, No. 3 sidecar, shop-soiled only; £150.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [5726

1921 B.S.A. 4¼h.p., K2, 2-seater sidecar, accessories, spares, condition, examination; £107/10.—20, Glisson Rd., Cambridge. [5658

B.S.A. 4¼h.p. 1920 Combination, Eastlog; £80, or nearest; Morgan wanted.—Hunt, Valkyrie, Northcroft Rd., Ealing. Tel.: Ealing 555. [5190

1920 4¼h.p. B.S.A., 3-speed, fully equipped, guaranteed mechanically sound; £68.—37, Arlington Rd., Surbiton. 'Phone: Kingston 1274. [5227

B.S.A., 1922, brand new, 4¼h.p., Model H2, in stock; £110; easy payments arranged; exchanges.—Wilkins Simpson, opposite Olympia, London. [5834

B.S.A. 4¼h.p Combination, 1915, lamps and accessories, in excellent running order, 1922 tax paid: £55.—The Studio, 118, High St., Slough, Bucks. [4863

1919 4¼h.p. B.S.A. Combination, complete, Eastings, two lamp sets, tools, tax paid December, fine running; £70, quick sale.—23, Whitfield St., W.1. [6084

1915 4¼h.p. B.S.A., 3-speed gear box, fully equipped, licensed, insured; particulars on application; £55.—Walker, T6, Pembroke College, Cambridge. [4961

B.S.A. 1921 6-7h.p., D.A. lighting, speedometer, Tan-Sad, tax and insurance paid, perfect, suitable for heavy sidecar work; £110.—43, Lysias Rd., Balham, S.W.12. [5303

£57.—B.S.A. Combination, 1915-16, 4¼h.p., 3 speeds, clutch, kick starter, lamps, licence, Easting, accessories, splendid condition.—63, Solon Rd., Brixton. [5506

B.S.A. 6-7h.p. Twin, new June, 1921, spare wheel, Stewart speedometer, Easting windscreen, mileage 750, as new; £150, bargain.—109, Kingsland High St., N.1. [4741

1921 B.S.A. Combination, 4¼h.p., only done 70 miles, lamps, Easting screen, horn, spares, etc., tax paid; £100.—A. S. Hellier, 35, Princes Gate Mews, South Kensington. [4919

1921 B.S.A. 6-7h.p. Twin Combination, special large sidecar, interchangeable wheels, Lucas lighting, Easting windscreen, absolutely as new, must sell; best offer.—143, Peckham Rye, S.E. [5934

B.S.A. Combination 6-7h.p., late 1921, Magdyno lighting, horn, low mileage, windscreen, spare wheel, perfect condition, as new; £140.—Rhosha Motor Co., South St., Romford. Tel.: 584 [5772

1919 4¼h.p. B.S.A. Combination, Empire coachbuilt sidecar, windscreen, lamp sets and horn, tax paid December, 1922, in nice running order; £80.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [5737

4¼h.p. New 1922 B.S.A., all chain, £110; 4¼h.p. chain and belt model, £107; 4¼h.p. combinations, £142 and £139; 6h.p. twin combination, £164.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5906

B.S.A. 1922 models for immediate delivery; best prices allowed for machines in part payment; also two 4¼h.p. model K Combinations in stock, 3 speeds, kick starter; £65 and £75 each.—Eagles and Co., 275, High St., Acton, London. [5777

B.S.A. 6-7h.p. Combination, new September, 1920, acetylene electric lighting, hood, Cameo screen, speedometer, spare wheel, new tyres, spares, tax and insurance paid, in excellent condition; any trial or examination; £165; buying car.—28, Poppleton Rd., Leytonstone. [4883

1921 B.S.A. 6-7h.p. Combination, B.S.A. No. 1 sidecar, Magdyno lighting, spare wheel, luggage grid, Easting Royal, Cowey speedometer, electric horn, splendid condition; £140; (private owner).—Seen, 16, King's College Rd., Hampstead, 3 mins. Swiss Cottage, Met. 'Phone: Hampstead 6782. [4738

H. F.

# EDWARDS

& CO.

**101, GREAT PORTLAND STREET, W.1**

Tel. Mayfair 4027.

## WONDERFUL BARGAINS

SEVERAL BRAND NEW (Shop Soiled)

**2¾ DOUGLAS 47 Gns.**

TRADE SUPPLIED.

Several Brand-New 1921 5 h.p.

**ZENITH - SPORTS**

**76 Gns. (listed £110)**

Also MAKER'S USUAL GUARANTEE.

Several Brand New 5-6

**ZENITH COUNTERSHAFT**

Models, Clutch, Kick-Start,

**84 Gns.**

Listed £118. Maker's Guarantee.

1922 3½ h.p.

**ZENITH BRADSHAW**

Belt drive, Brand New (shop soiled),

**95 Gns. Listed £113.**

**NEW SIDECARS FOR ABOVE MACHINES FROM 17 Gns.**

### SECONDHAND COMBINATIONS.

| | | Gns. |
|---|---|---|
| 1917 | **B.S.A.** Comb., equipped | 50 |
| 1918 | 4 h.p. **TRIUMPH** Comb., fully equipped.. | 70 |
| 1920 | **HARLEY,** electric model and Harley sc., hood, screen, Tan Sad | 115 |
| 1920 | American **EXCELSIOR** Comb. 7 h.p., electric model, speedometer, hood.... | 75 |
| 1921 | **O.K.** 2¾ comb., 2-speed, clutch, excellent condition. List price £97 10s., our price | 67 |
| 1920 | 4¼ h.p. **B.S.A.,** No. 2 sc., fully equipped.. | 89 |
| 1921 | 8 h.p. **BLACKBURNE,** with K3 Cancelet sc. | 100 |
| 1921 | 3½ h.p. **SUNBEAM** and Sunbeam sc., speedometer, licensed, fully equipped | 120 |

### SECONDHAND SOLOS.

| | | |
|---|---|---|
| 1920 | 3½ h.p. **N.U.T.** Magdyno Lighting, horn, etc. Indistinguishable from new .... | 84 |
| 1921 | **ENFIELD,** 2-stroke, as new ..... | 44 |
| 1916 | 2¾ h.p. **J.A.P.- CALTHORPE.** Equipped and taxed ..... | 26 |
| 1918 | 4 h.p. **TRIUMPH,** 3-speed Sturmey.... | 56 |
| 1919 | **TRIUMPH,** Sports Model, Phillipson Pulley, licensed, horn, knee grips, in good condition ..... | 58 |
| 1918 | **ALLON,** equipped, licensed, good condition ..... | 26 |
| 1913 | **DOUGLAS,** 2-speed, licensed, good condition ..... | 27 |
| 1920 | 3½ h.p. **ARIEL,** equipped legshields, etc.. | 65 |
| 1921 | 2¾ h.p. **KINGSBURY,** 2-stroke, 2-speed, clutch, fully equipped..... | 35 |

**Deferred Payments & Exchanges on any of the above.**

**WANTED—SOLOS and COMBINATIONS.**

Cash waiting.

## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. 6-7h.p., Model A, with No. 1 sidecar, brand new as uncrated, 3-speed, chain drive, 28×3 detachable wheels, with spare wheel and tyre, luggage grid and wheel carrier, Palmer cord tyres, spring seat pillar, splendid mount; list £190, sacrifice at £165.—Rivett, 236, High Rd., Leytonstone. [4905

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7539

THE Promptest Firm for B.S.A. Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3161

B.S.A. Spares can be had by return, post free, from Jones Garage, B.S.A. Agents and Spares Service Depot Broadway, Muswell Hill, N.10. [0805

THE B.S.A. Specialists—On the Spot.—Our spares service is unrivalled—write for catalogue!—County Cycle and Motor Co., Broad St., Birmingham. [4677

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all B.S.A. spare parts always in stock. Write for free spare part list, stating year of manufacture. [0750

### Calcott.

CALCOTT, about 1916, 2¾h.p., fully equipped, good condition; £18, snip.—143, Raveoshury Rd. Earlsfield, S.W. [5781

### Calthorpe.

CALTHORPE-J.A.P. 2¾h.p., 1916, good running order, trial; £35.—Simmons, 85, Llogfield Rd. East Grinstead. [4723

1917 Calthorpe-Jap 2¾h.p., Enfield 2-speed gear tax paid; ride away; £29.—8, Strathmore Rd. Wimbledon Park. [5459

CALTHORPE 2¾h.p., 2-speed, 2-stroke, excellent condition, trial; £25; 3-speed cycle part.—Mackenzie, 92, Ingelow Rd., S.W.8. [5156

CALTHORPE-PRECISION 2¼h.p., 2 speeds, countershaft, lamps, horn, splendid running order; £20. 91, Fairfield Rd., Bow, E.3. [4811

1920 2¾h.p. Calthorpe-Jap, 2-speed gear, very little used, perfect in every respect; £35.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [5811

1920 Calthorpe-Jap 2¾h.p., 2-speed, lighting set new tyres, licensed, almost as new; sacrifice, £39.—2, Saltaire Villas, Portugal Rd., Woking. [4737

CALTHORPE 1922 4h.p. twin J.A.P. Combination, lamps, horn, licence paid for year, unused; listed £120; accept £115, all on, for quick sale.—Motor Co., Ltd., Hereford. [4825

### Campion.

CAMPION De Luxe, 2¾h.p. J.A.P., Sturmey 2-speed, clutch, kick starter, Dunlops, Cowey, legshields, electric lighting, new condition, mileage 700; £55; seen after 5.—T., 34, Huddleston Rd., Tufnell Park, N.7. [4800

### Carfield.

CARFIELD 1920 2¾h.p. 2-stroke, 2-speed, lamps, etc.; £34.—Urquhart, 371, Earlsfield Rd., Earlsfield, S.W. [4845

### Cedos.

CEDOS 2¼h.p., 2-stroke, 2-speed gear, slightly shop-soiled; £50.—Box 1266, c/o *The Motor Cycle.* [5711

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Cedos; unequalled service, repairs, etc. [3149

### Centaur.

CENTAUR 3h.p., Druids, Seaspray, M-L magneto, tax paid, running order; £9.—3, Epsom Rd., Croydon. [4791

### Chater-Lea

CHATER-LEA 1914 8h.p., 3-speed and clutch, with 2-seater sidecar, hood and screen; £49.—Sessions, Earswick, near York. [4826

CHATER-LEA 8h.p. Combination, overhauled by makers, C.B. sidecar, Easting, etc.; £60; after 6 p.m.—1, East Acton Lane, Acton. [5240

CHATER-LEA Combination, 6h.p. J.A.P., 2-speed, clutch, etc., just overhauled; £35, or near offer; any time.—98, Wellington St., Woolwich. [4848

8h.p. Chater-Lea, 3-speed, chain driven, good condition, all on, tax paid; £55.—G. Cubbage, The Pells, Upper Hughenden Rd., High Wycombe. [4810

1921 Chater-Lea Combination, 8h.p., 3-speed, clutch and K.S., new and unscratched, 4 detachable wheels, spring seat pillar, sidecar screen; £35 below list; £135.—South Eastern Garage, Herne Hill, S.E.24. [5055

### Cleveland.

1920 2¾h.p. Cleveland, 2-stroke, 2-speed, clutch, K.S., tyres unpunctured, machine as new, lamps complete; £39.—Box 2, Smith's Bookstall, Redhill Station. [5920

1922 Cleveland, electrically equipped, spot light, luminoons rear speedometer, Fentress pillion, splendid condition; £65, bargain.—37, Atherton Rd., Forest Gate, London. Tel. Maryland 2213. [5544

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Douglas.

.O.C.H. have a 1919 4h.p. Douglas Solo, fully equipped, tax paid and insured, excellent con- on; bargain.—5, Heath St., Hampstead (near pe). [5072

OUGLAS 4h.p. Combination, 1920, complete with lamps, tax paid, etc., in good condition and fect running order; £75.—Green, 202, Trinity Rd., 7.17. [4980

OFFAT, Yeovil.—What we don't know about Douglas M.C.'s—nuf sed. New 1922 models, res and repairs; exchanges. Agents since 1908. one: 50. [5724

920 4h.p. Douglas Combination, first-class condi- tion throughout, Easting windscreen, lamps, etc.; 5, or near offer; private owner.—16, High St., ntwood. [4836

OUGLAS, £26; 2¾h.p., 2-speed, perfect order, Reynolds chain, 9½ft. of 1in.×1¾in., new con- ion; offer.—Write or call, 16, Meadow Place, South nbeth Rd. [5306

921 Douglas Combination, equal to new, speedo- meter, lights, all accessories, full insurance, nsferable, and tax paid; 100 gns.—Gosden, 13, High , Worthing. [5002

919 Douglas Combination, 4h.p., perfect condi- tion, lamps, speedometer, mirror, horn, 3- ed, tax paid for year; £85.—Buchanan, 16, West , Trowbridge. [5910

GNS.—Posh 2¾h.p. Douglas, believed 1915, 2 speeds, disc wheels, Lucas lamp, very smart, n in accident, but repairable.—Ewers, Newton Rd., rton-on-Treat. [5685

OUGLAS 1922 models, 2¾h.p., £68; 4h.p. solo, £110; 4h.p. combination, £135; prices include accessories; delivery from stock.—Rivett, 236, High ., Leytonstone [2266

919 late Douglas, almost new condition, electric horn, mudshield, plated exhaust, lamps, all ac- sories; bargain, £47.—119, Newington Butts, Ele- ant and Castle. [5911

OUGLAS Combination 4h.p., 3 speeds, etc., equal to new, tyres perfect, hood and screen; reasonable er considered; having bought Enfield.—6, Waldeck ., West Green, N. [5040

OUGLAS 1920 2¾h.p., 3 speeds, C. and K.S., Miller lamps, in new condition, only been 500 les; £73; exchanges.—Homac's, 243, Lower Clapton ., N.E. Dalston 2408. [5848

LI CLARK can give you good service both in new machines and spares; try me. I may be useful you. The pioneer agent for Douglas motors.—196 eltenham Rd., Bristol. [0016

ARGAIN.—Special 1918 Douglas 2¾h.p., 3-speed, clutch and K.S., lamps, horn, first-class condition roughout; £48 lowest; or exchange higher power.— , Grand Parade, Harringay. [5517

OUGLAS 2¾h.p., 2-speed, 1914, engine re-bored and new pistons, etc., fully equipped and taxed, ivately owned; £33; trial, etc., by appointment.— x 1181, c/o *The Motor Cycle.* [4742

OBERTSON'S Motors, Ltd.—Douglas 1921 2¾h.p., 3-speed accessories, tax paid, £60; 1916 (new in 18) 4h.p. combination, electric lamps, tax paid, 58.—157b, Gt. Portland St., W.1. [6076

915 2¾h.p. Douglas, Bosch, Amac, re-enamelled maker's colours, new cylinders, pistons, etc., st over £20, good tyres, excellent condition; 40 gns., nearest.—Treehy, Boar's Hill, Oxford. [4951

914 2¾h.p. Douglas, 2-speed, clutch, and kick starter, all lamps, horn, tax paid December, lendid order and condition; £32.—D. and S. Auto- r Co., 33, The Parade, Golder's Green. [5745

OUGLAS 1919 4h.p., 3-speed, foot clutch, kick start, chain-cum-belt drive, Empire sidecar, com- ete with lamps, speedometer, tax paid; £88.— audes', 100, Great Portland St., London. [5271

h.p. Douglas 3-speed Combination, engine No. 7903, new tyres, copper exhausts, enamel and ating as new, licensed, lamps and horn, very smart t; £65.—58, Blagdon Rd., New Malden. [5663

922 2¾h.p. Douglas, 2-speed gear, lamps and generator, me anical horn, pillion seat, knee ips, etc., licence fully paid, ridden under 100 iles; £60.—157, Burntwood Lane, Earlsfield, S.W.17. [5420

HALIFAX.—Douglas 1922 models at reduced prices. 2¾h.p. twin, £68; 3½h.p. sports, £115; 4h.p. ombination, £135; 6h.p. combination, £165. Liberal tchanges.—Motor Exchange, Horton St., Halifax. [5813

917 (late) Douglas 2¾h.p., overhauled and in perfect order, P. and H. lamps, tank, handle- ars, etc., re-enamelled and plated, really reliable achine; £40.—34, Hereford Rd., Westbourne Grove. [5568

FOR Douglas 1922 2¾h.p. and 4h.p. combinations, get in touch with us; we are North London agents nd give you the best of service; all spares in stock; no W.D. rubbish.—Jones Garage, The Broadway, Muswell Hill. [0736

**This is the most complete Tyre Outfit ever offered, for the reason it is more than a tube repairing outfit as offered by other firms, having all the necessary requirements for cover repairs. Containing 1 cover patch, 9 assorted tube patches, wire brush for cleaning, 1 roll cover canvas, 1 insulating tape, valve tubing, large tine of solution and chalk. 3/6 POST FREE.**

# TYRES

**SPECIAL NOTICE**

**If you expect a reliable article you must pay a reasonable price. Experienced motor cyclists will tell you to be let down on the road is an expensive experiment. All goods offered by us are guaranteed to give satisfaction.**

**FREE** To each purchaser we will present AN IGNA SPARKING PLUG for each cover bought. This advertisement must be mentioned.

| Size. | Make. | Our Price. | List Price |
|---|---|---|---|
| 24×2 | **Palmer,** ribbed | 21/- | 29/6 |
| 24×2½ | **Clincher de Luxe,** ex. heavy.. | 28/9 | — |
| 26×2 | **Englebert,** Passenger, rub. std | 17/6 | 53/- |
| " | **Englebert,** Touring, rub. std.. | 14/- | 46/3 |
| 26×2½ | **Bates,** special hvy., wired-on. | 32/6 | 38/6 |
| " | **Bates,** special heavy, beaded. | 26/6 | 40/- |
| " | **Dunlop,** heavy rub. std. .... | 28/6 | 37/3 |
| " | **Clincher de Luxe,** heavy..... | 24/6 | 35/6 |
| 26×2⅜ | **Dunlop,** heavy rubber std.... | 29/6 | 41/6 |
| " | **Avon,** Tricar rubber studded. | 26/- | 40/3 |
| " | **Hutchinson,** rubber studded .. | 25/- | 49/6 |
| " | **Clincher de Luxe,** ex. heavy | 24/6 | 47/6 |
| 26×2½ / ×2¾ | **Clincher de Luxe,** ex. heavy | 35/6 | — |
| " | **Clincher de Luxe,** heavy .. | 32/- | — |
| " | **Heavy,** rubber studded..... | 27/6 | — |
| 26×2½ | **Goodrich,** safety tread ..... | 40/- | 52/6 |
| " | **Bates,** special heavy ..... | 26/6 | 56/- |
| " | **Clincher de Luxe,** heavy..... | 25/- | 28/3 |
| *26×3 | **Elite,** extra heavy, 3-rib.... | 58/- | 66/- |
| | * Fits 650×65 Rims. | | |
| 26×3 | **Hutchinson,** ribbed ..... | 32/6 | — |
| 650×65 | **Goodrich,** safety tread ..... | 40/- | 67/6 |
| " | **Clincher de Luxe,** ex. heavy | 30/- | 64/6 |
| " | **Goly,** rubber non-skid ..... | 21/6 | 63/- |
| 700×80 | **Beldam,** Bulldog ..... | 61/- | — |

## BELTS

**IN STANDARD LENGTHS**

| | ½ in. | ¾ in. | ⅞ in. | 1 in. | 1½ in. |
|---|---|---|---|---|---|
| Bates Avon .. etc., per foot .. | 1/- | 1/5 | 1/9 | 2/- | 2/6 |

## TUBES

**BEST QUALITY GUARANTEED.**

| | | | | | |
|---|---|---|---|---|---|
| 24 × 2, | 4/9 | 26 × 2⅜, | 5/3 | 26×2½, | 5/6 |
| 26 × 2, | 4/9 | 26 × 2½ | 5/6 | 28×3, | 8/- |
| 26 × 2½, | 5/- | × 2¾ | | 700×60, | 6/ |

**These Special Clearance Lines are sent on 7 days' Approval against remittance. CARRIAGE PAID**

YOU CANNOT BUY FROM A BETTER FIRM

ORDER THE ELITE WAY

LONDON'S LEADING TYRE HOUSE.

PHONE: Victoria 6553 & 6554

264-66, VAUXHALL BRIDGE Rd. LONDON, S.W.1

& AT 44, SURBITON Rd. KINGSTON-ON-THAMES

Please address all orders to Vauxhall Bridge Rd.

PHONE: Kingston 3355.

Hours of Business——9 till 6; Sat., 9 till 1.

*Steele*

## MOTOR CYCLES FOR SALE.

### Douglas.

DOUGLAS 1915 2¾h.p., overhauled, tuned, fast. lamps, speedometer, watch, footboards, shields, chain cover, 2in. polished exhaust, W.S.R., tools, many spares; £34—124, Southwark Park Rd., S.E.16. [5218

1919 Douglas 4h.p. Combination, electric light, Lucas dynamo, windscreen, speedometer, Tan-Sad, engine overhauled, new cylinders fitted, tax paid; £87.—Colyer, Burnham, Claygate, Surrey. 'Phone: Esher 351. [5166

LATE 1920 2¾h.p. Douglas, 3-speed, K.S., clutch, all on, small mileage, like new, tax paid, ride away, will exchange for combination or solo; cash adjustment; private owner.—Wallingford, Newtown, Montgomeryshire. [5230

1920 2¾h.p. 3-speed Douglas, clutch and kick starter, Lucas lamps, Cowey, legshields, etc., absolutely as new, £64; W.D. models, reconditioned, 80% new parts fitted, lamp, horn, etc., £50.—Daw, Douglas Agent, 114, Brixton Hill. [5395

KICKHAM, Stokes Croft, Bristol, the Douglas Agent with real experience and knowledge of a Douglas. Successes during 1920 on this mount: 38 firsts, 17 seconds, and 8 thirds, also 6 special trophies. Let me deal with your order. Unequalled service, repairs, etc. [3150

2¾h.p. new 1922 Douglas, 2-speed, £68; 2¾h.p. 3-speed, clutch and kick start, £82; 4h.p. combination, £135; 6h.p. combination, £165; 3½h.p. sports model, £115; all fully equipped; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5904

DOUGLAS Agents.—1922 models in stock at the reduced prices; 2¾h.p., 2-speed, £68; 2¾h.p., 3-speed, clutch, kick-starter, £82; 3½h.p. Sports model, £115; 4h.p. Combination, £135; 6h.p. Combination, £165. All these machines are fully equipped with lamps, horn, licence-holder, tools, etc. Call at our showrooms to discuss the matter. Your old machine taken in part exchange.—Knight and Wheatley, 4, The Pavement, Coulsdon, Surrey. 'Phone: Purley 1277. [5659

*Spare Parts*

DOUGLAS Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7541

ROBERTSON'S Motors, Ltd., can supply all usual Douglas spares requirements.—157b, Gt. Portland St., W.1. [6077

DOUGLAS spares; large stocks of genuine Douglas spares; dealers supplied at trade rates.—Rivett, 236, High Rd., Leytonstone. [2267

DOUGLAS Spares.—We hold a complete stock for all models; post free. Douglas Agents and spare part stockists.—Jones Garage, Broadway, Muswell Hill, N.10. [0803

FRANK WHITWORTH, Ltd., 139, New St., Birmingham.—Complete stock, genuine guaranteed Douglas spare parts; prompt attention, immediate dispatch lowest cash prices. [4657

### Duzmo.

BRAND New 1921 3½h.p. O.H. Valve Sports Duzmo, 2-speed, all chain, long exhaust, real hot stuff, will get you a few golds; reduced from £123 to £95; brand new single-speed Duzmo, reduced from £98 to £75. We have two only. They carry maker's guarantee. Real bargains. First cheque secures. Exchanges. Immediate delivery of 1922 models. Catalogues with pleasure.—Stanworth Motors, Higham, Burnley, Lancs. [5063

### Economic.

£10, and deferred payments, buys new Economic motor cycles, or £34 cash; extraordinary value.—Write Direct Sales, 69, Newman St., W.1. [7446

ECONOMIC.—We can give you immediate delivery of this wonderful low-priced machine; variable gear model, £34; or on easy payments. Please send P.C. for catalogue.—South Eastern Garage, Herne Hill, S.E.24. [5056

ECONOMIC.—The Marvellous Flat Twin, with variable gear, within the reach of all; £10 down, balance easy terms, or £34 cash. Catalogues with pleasure.—Personally tested by Sam. E. Clapham, 27, Stockwell St., Greenwich, S.E.10. [3051

### Edmund.

£45.—Practically indistinguishable from new, 1920 2¾h.p. Edmund-Jap, spring frame, 2-speed, clutch, chain drive, tax paid, any trial; bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [5411

EDMUND.—The handsomest and most efficient machine made. Call and inspect latest Barr-Stroud models.—Robbins, Edmund Service Depot, 295, Harrow Rd., W.9. 'Phone: Hampstead 4601. [5192

### Enfield.

ENFIELD 2-stroke, 1921, tax paid; £38.—Clark, 7, Exhibition Rd., S.W.7. [6029

BRAND New Enfield Combination; £114.—24, Balliol Rd., North Kensington. [5198

NEW 1922 Enfield Combinations in stock.—Bounds Garage, 223, High Rd., Kilburn. [5014

## MOTOR CYCLES FOR SALE.
### Enfield.

**1921** Enfield, 2-speed, kick start, Magdyno; £47.—75, Richmond Rd., Barnsbury. [5288

WAUCHOPE'S 9, Shoe Lane, London—6h.p. Enfield Combination; £67/10. [5894

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

WAUCHOPE'S, 9, Shoe Lane, London.—2¼h.p. Royal Enfield, 1921, 2 speeds; £42/10. [6883

NEW 1921 Enfield Lightweight and accessories; £50. —Bounds Garage, 223, High Rd., Kilburn. [5017

ENFIELD 2¾h.p., running order, lamps, etc.; £28. —35, Vernon Gardens, Seven Kings, Essex. [5114

3h.p. Enfield, fast, all on; £38 or offer, consider exchange.—Roberson, 88, Eleanor Rd., Hackney. [5577

ENFIELD Sports 2-stroke; £55.—Longman Bros., 17, Bond St., Ealing. Official district agents. [6007

ENFIELD 3h.p. Twin, 2-speed, all chain, Bosch, Amac; £29.—27, Constantine Rd., Hampstead. [4805

WAUCHOPE'S, 9, Shoe Lane, London.—8h.p. 1917-18 Royal Enfield Combination, 2 speeds; £85. [5884

**1919-20** Enfield Combination 8h.p., tax paid; £70. —Tromans, Bellows Makers, Black Heath, Birmingham. [5082

ENFIELD Combination, as new, Easting; £100; guaranteed.—Stanley, 30, Canterbury-rd., Kilburn, N.W.6. [5912

ROYAL Enfield, 2¼h.p., 1921, 2-speed clutch, as new, lamps, tools, etc.; £38/10.—19, Valnay St., Tooting. [5430

ENFIELD Lightweight, 2-speed, K.S., all on, tax paid, perfect order; £42.—97, Rosebery Rd., Muswell Hill. [5324

**1922** 2¼h.p. Enfield, not done 200, horn, tax paid, unscratched; £47/10.—Wates, 39, Thrale Rd., Streatham. [5927

ENFIELD 1914 2¾h.p. twin, 2-speed, good condition; £25.—Houchio, 189A, High St., Peckham, S.E.15. [5973

£20.—Enfield 2¾h.p., twin, all on, new Amac, tax paid year, good running order.—Scott, Nurseries, Warminster. [5314

ROYAL ENFIELD 1919 2¼h.p., 2-speed, chain drive, all lamps, tax paid; £38.—Maudes', Walsall Garage, Walsall. [5279

DAN GUY, Weymouth.—Enfield 1921 8h.p., Mag dyno, double-seated sidecar, hood and screen, guaranteed perfect; £125. [0818

ENFIELD, 2¾h.p. twin, 2-speed, free engine, all-chain; £25; by appointment.—Short, 25, Garfield Rd., Battersea, S.W. [5457

ENFIELD.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport 'Phone: 607. [6290

ENFIELD Combination, tax paid, hood, screen, horn, Lucas lighting, speedometer, etc.—Mathews, 76, Holland Rd., Harlesden. [5390

ENFIELD 1921 2¼h.p., 2-stroke, mileage under 200, perfect condition, all accessories; £45.—Thompson, Cyprus Villas, Garforth, Leeds. [4807

CROYDON and District.—Sole official appointed agent for Royal Enfields.—A. F. Pulling, 175a, London Rd., Croydon. 'Phone, 1619. [6951

**1922** Enfield Combination, brand new, fully equipped, tax; £135, or exchange late Morgan.—Purcell, 73, Regent St., Gloucester. [4909

ENFIELD-J.A.P. 6h.p. Combination, new tyres, hood, screen, lamps, speedometer, tax paid; £65.—195, Longley Rd., Tooting Junction. [4042

**1919** 8h.p. Enfield Combination, excellent condition, 700×80 Dunlop Magnums; £80, must sell.—Howich, Keeper's Corner, Burstow, Surrey. [5593

ENFIELD 2¼h.p., 2-speed, 1921, fully equipped, tax paid, indistinguishable from new; £42.—Hillier, 216, Portobello Rd., North Kensington. [4959

IN Stock.—1922 8h.p. Enfield Combination, £140; also 2¼h.p. model, £55; cash or deferred.—D. and S. Autocar Co., 33, The Parade, Golders Green. [5738

**1920** Enfield Combination, dynamo lighting, lavishly equipped, as new; £98; quick sale and bargain.—143, Ravensbury Rd., Earlsfield, S.W.18. [5780

**1914** 6h.p. Enfield, J.A.P., combination, 2-speed, engine, gears, completely overhauled, tax paid; £55; offers.—12, Imperial Parade, Henley-on-Thames. [5562

**1922** Enfield Magdyno Combination, used one month, every possible accessory, taxed; cost £172; accept £132.—24, Balliol Rd., North Kensington. [5196

ENFIELD 1921 8h.p. Vickers Combination, Magdyno lighting set, condition and appearance perfect; £130.—Mucklow, 84, Grove Park Ter., Chiswick. [3601

# Harrods
# MOTOR CYCLES
## ON EASY TERMS

All the following machines are available from stock and may be obtained on Harrods Convenient System of Easy Payments. Details and latest lists free

## NEW SOLO MACHINES

| | | |
|---|---|---|
| 2¾ h.p. | **ALLDAYS-ALLON** ... ... | **£60** |
| 4¼ h.p. | **B.S.A.**, Belt Drive ... ... | **£107** |
| 4½ h.p. | **B.S.A.**, Chain Drive... ... | **£110** |
| 2¼ h.p. | **ENFIELD**, Two-speed model | **£55** |
| 2¾ h.p. | **FRANCIS-BARNETT**, 2-sp'd etc. | **£73** |
| 2¼ h.p. | **LEVIS**, Popular model ... | **£48** |
| 2¾ h.p. | **NEW IMPERIAL**, Chain, etc. | **£73** |
| 2¾ h.p. | **NEW IMPERIAL**, Belt, etc. | **£69** |
| 1¾ h.p. | **McKENZIE**, Lightweight | **£27 6s** |
| 2½ h.p. | **O.K. JUNIOR** ... | **£39 18s.** |
| 2½ h.p. | **O.K.**, 2 sp., clutch, etc. | **£60 18s.** |
| 2¼ h.p. | **SUN VITESSE**, single speed | **£44 2s.** |
| 2½ h.p. | **SPARK**, single speed ... | **£39 18s.** |
| 2½ h.p. | **SPARKBROOK**, single sp'd | **£54 12s.** |
| 2¼ h.p. | **TRIUMPH**, Two-speed ... | **£65** |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | **£105** |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | **£115** |

## NEW COMBINATIONS

| | | |
|---|---|---|
| 4½ h.p. | **B.S.A.**, Belt Drive, No. 3 s/c | **£139** |
| 4½ h.p. | **B.S.A.**, Chain Drive, No. 3 s/c | **£142** |
| 8 h.p. | **ENFIELD** ... ... ... | **£140** |
| 8 h.p. | **MATCHLESS** ... ... | **£170** |
| 6 h.p. | **HAZLEWOOD** ... ... | **£118** |
| 8 h.p. | **NEW IMPERIAL** ... ... | **£145** |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | **£155** |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | **£145** |
| 3½ h.p. | **INVICTA** and Sidecar ... | **£110** |

## SHOP-SOILED MODELS AT SPECIAL PRICES

| | |
|---|---|
| 4½ h.p. **HUMBER**, Flat Twin, 3 sp., clutch & k.s. | **£100** |
| 2¾ h.p. **WOOLER**, Flat Twin, Brooklands Sports model, fully equipped... | **£69** |
| 4½ h.p. **HUMBER COMBINATION.** Flat Twin Engine, 3-speed, etc. ... | **£130** |

## SECOND-HAND

| | |
|---|---|
| 1¾ h.p. **YOUNG** Cycle, with Motor Attachment, single speed and clutch ... | **£17 10** |
| 2¼ h.p. **LEVIS**, Popular Model... ... ... | **£42** |
| 5/6 h.p. **HAZLEWOOD**, Combination, Speedometer. Thoroughly overhauled ... ... | **£75** |

***All machines sent Carriage Paid to nearest Railway Station from London***

**HARRODS MOTOR SALES DEPT**
**116–118 Brompton Road London SW1**
*(Opposite the Main Building)*

## MOTOR CYCLES FOR SALE.
### Enfield.

**1920** Enfield, 2¼h.p., 2-speed, lamps, horn, tax pa 1922; £35.—23, London Rd., Salisbury. [55

ENFIELD, 1922, brand new 8h.p. Combinatio in stock; £140. Easy payments arranged. E changes.—Wilkins Simpson, opposite Olympia, Lo don. [583

**1922** Enfield Combination for immediate deliver standard, £140; 2-seater, £145; easy paymen 4% extra.—Premier Motor Co., Aston Rd., Birmin ham. [301

**1921** 8h.p. Enfield Combination, dynamo lightin condition and appearance perfect, all accessorie many spares unused; £128.—140, Elgin Rd., Seve Kings. [591

ENFIELD 1921 6h.p. dynamo lighting, 2-spee all-chain drive, Enfield sidecar, fully equippe tax paid; £125.—Maudes', 100, Great Portland St London. [527

£85.—6h.p. Enfield Combination, 1918, hood, screen pillion, 700×80 tyres, legshields, snip, goo throughout; Saturday or Sunday.—10, Finsbury Mar ket, E.C.2. [524

**1916** 3h.p. Enfield Twin, recently overhauled b makers at cost of £18, lamps, horn, speedometer tools, condition perfect; £45.—Heath, 49, Fleetwoo Rd., Leicester. [553

ENFIELD, 1922, brand new, 2¼h.p., 2-speed, kick starter, in stock; £57. Easy payment arranged. Exchanges.—Wilkins Simpson, opposit Olympia, London. [583

**1921** Royal Enfield, 8h.p. Vickers engine, hood screen, Lucas dynamo lighting, unscratched £130.—Hillier, (side bell) 9, Wallingford Avenue North Kensington. [550

6h.p. Enfield Combination, in perfect condition fully equipped, tax paid, enamel and plating a new, any trial given; £65.—Bythesea Villa, Newtown Trowbridge, Wilts. [543

ROYAL ENFIELD 1922 2¼h.p., 2-stroke, chai drive, 2-speed, all lamps, horn, tax paid, per fectly new; £56.—Hellyer, Three Swans Garage, Win chester St., Salisbury. [472

ENFIELD, a really high-class 8h.p. combination £140; 2¼h.p., 2-speed, £55. Write for catalogu and particulars of easy payments.—P. J. Evans, Joh Bright St., Birmingham. [598

ENFIELD, 1922, brand new 8h.p. Combination Magdyno lighting; £158; in stock. Easy pay ments arranged. Exchanges.—Wilkins Simpson, op posite Olympia, London. [583

ENFIELD 1921 8h.p. Combination, Easting, electri lamps, absolutely as new; £130, or exchange.— Newnham Motor Co., 223, Hammersmith Rd., W.6 Phone: Hammersmith 80. [238

**1915** 3h.p. Enfield, overhauled, re-enamelled an plated at Enfield works July, 1920, cost £40 since only done 1,500 miles, perfect, equipped; £65.— Latham, Haydock, St. Helens. [486

ENFIELD, 1922, brand new, 2-stroke, 2¼h.p., new Sports model, just arrived, secure now; £55 Easy payments arranged. Exchanges.—Wilkins Simp son, opposite Olympia, London. [583

ENFIELD, 1921, 2¼h.p., 2-stroke, 2-speed, perfec condition, new tyres, electric lighting (battery) tax paid; £42; inspectable by appointment.—W. Fry 418, Strand, W.C. Regent 3815. [545

ENFIELD-J.A.P Combination 8h.p., Magdyno, hood screen, speedometer, many spares, tax paid to De cember, mileage 4,000.—Rolls, 4, Little Cadogan Place Pont St., S.W.1. Victoria 4422-3. [477

ENFIELD 1917-18 6h.p. Combination, engine No 57942, Lucas dynamo lighting, horn, new cover and tube back wheel, tax paid June; £95.—Penn, 82 Meadvale Rd., Ealing. 'Phone: 11767 Central. [503

**1922** Royal Enfield Combination, Lucas dynamo lighting set, horn, etc., brand new, £158; 1921 2¼h.p. Enfield, 2-speed, lamps, speedometer, etc., £45.—Daw, Enfield Agent, 114, Brixton Hill. [539

ENFIELD Combination, overhauled, Easting, lamps, Binks, Tan-Sad, tools, overalls, spares include extra driving chain, tyres, valves, pistons, connecting rods; £60; write or call.—J. L. Furneaux, Whitbread and Co., Scrubbs Lane, Willesden. [5023

100 GNS.—1921 Royal Enfield Combination, 8h.p. Vickers engine, new Dunlop Magnum tyres, Stewart speedometer, P. and H. lamps, legsbields, windscreen, tax paid.—Smith's, 86, Chalk Farm Rd., (opposite Chalk Farm Tube Station). [5699

8h.p. Enfield Combination, September, 1920, in perfect condition, with Easting windscreen, speedometer, Tan-Sad, electric lighting equipment, spare tyre, chain, etc., done 5,000 miles; sole reason for sale, owner buying car; £110.—Vicar, Chirbury, Shropshire. [5578

*Spare Parts.*

ENFIELD Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7542

ENFIELD Spares and Repairs a speciality.— Pulling's Garage, London Rd., Croydon. 'Phone, 1619. [6952

## MOTOR CYCLES FOR SALE.

### Indian.

POWERPLUS Indian Combination, very posh and fast, discs, long exhausts, Binks; exchange lwer power or solo and cash.—Ewers, Newton Rd., irton-on-Trent. [5690

INDIAN Spring-frame Coachbuilt Combination, 7-9h.p., 1914, perfect condition, expert examina-on welcomed; £55; see Exchange.—"Wendnyne," lwyn Rd., Maidenhead. [5112

INDIAN 1916-17 Powerplus Combination, 3-speed, electric lights and horn, T.T. and touring bars; arest offer to £60; any trial.—A. D. F., 46, Arrol d., Beckenham, Kent. [3073

7-9h.p. T.T. Powerplus Indian, 3-speed, etc., with lamps, horn and all tools, recently overhauled id very fast, does 60; 60 gns; after 6.—3, Wel-gton Square, Chelsea. [5184

INDIAN 4h.p. Scout, Model G.E.21, equipped with dynamo lighting, speedometer, and electric horn, ew machine, fully guaranteed; £110.—P. J. Evans, hn Bright St., Birmingham. [5988

BARGAIN.—Indian Combination 5-6h.p. 1917, 3-speed, K.S., perfect, sporting cane sidecar, all on; 50 (no dealers); seen except Saturday and Sunday.—aughan, 46, Victory Rd., Wimbledon. [4731

1920 Powerplus 7-9h.p. Indian Combination, T.T. bars, nickel-plated exhaust pipe, silver discs, ectric light, Millford sidecar and accessories; £98.—kroyd, 5, Clements Gardens, Cambridge. [4718

7-9h.p. Indian Combination, 1916, done under 4,000 miles, English controls, 2 pairs Indian andle-bars, spare chain, speedometer, etc.; £75.—hompson, 10, Dnrham Rd., Sidcup, Kent. [5093

£45.—7-9h.p. Indian Combination, 2 speeds, clutch, kick starter, nearly new Millford touring side-ar, luggage grid, lamps, overhauled, splendid condi-ion; exchange solo.—63, Solon Rd., Brixton. [5507

INDIAN 7-9h.p., clutch model, new engine, kick start, lamps, all accessories, just overhauled, plendid condition, tax paid, too fast for owner; 45.—21, Sutton Hall Rd., Carr Vale, Chesterfield. [4858

1920½ 7-9h.p. Powerplus Indian Combination, dy-namo lighting, legshields, exceptional engine nd appearance, absolutely reliable, any trial; cost 230; 98 guineas.—Gwinn, Walton Lodge, Clevedon. [5001

INDIAN 7-9h.p. o.h.v. S.H. petrol tanks (less in-jector), 12/-; 28x3 front wheels (less fittings), 5/6; huge stock of new and S.H. spares from stock; tamp.—Indian, 45, Handcroft Rd., W. Croydon, urrey. [5289

1920 latest Indian coachbuilt combination, dynamo lighting, Powerplus engine, 3-speed, clutch, kick, spring frame, hood, screen, lamps, speedometer; ost 235 gns., sell cheap 89 gns.—Alfred, 77, Arthur d., Wimbledon Park. [5877A

SNIP.—1915 7h.p. Indian, 3 speeds, kick starter, spring frame, lamp sets, horn, tax paid December, 922, engine completely rebushed and overhauled last ear, little used since, nice order; £40.—Walbro Motor ycla Co., Saffron Walden. 'Phone: 45. [5733

7-9h.p. Indian, spring frame combination, 1916, 3-speed, clutch, kick start, Hedstrom carburetter, orto windscreen, hood, speedometer, Klaxon, Lucas amps, tools, licensed, fast, reliable, excellent condi-ion throughout; £75, offer or exchange.—31, Marl-orough Rd., Richmond. [5555

INDIAN 1921 7-9h.p. Combination, electric and gas lighting, electric horn, speeds, luggage carrier, De Luxe sidecar, Easting and sidecar cover, paint nd tyres as new, only done 4,617 miles; £130, or ear offer.—Sparke's, 7-13, Upper Gloucester Place, N.W.1. 'Phone: Padd. 2900. [4771

INDIAN 7-9h.p. Combination, 1921, spring frame, hand and foot clutch, kick starter, dynamo light-ng, hood, windscreen and side curtains, speedometer, mileage under 4,500, perfect condition, any trial, ax paid to Dec. 1922; best offer over £100.—Pollard, Broomfield Rd. Garages, Chelmsford. [5064

INDIAN Combination, 7-9h.p. Powerplus, practic-ally new, delivered less than 2 months ago, done 300 miles, not yet run in, fine large Millford sidecar, fitted electric light, special Easting screen, fully equipped, new apare tube, tools, fully insured and tax paid for year; £140.—A. C., 47, Hereford Rd., Westbourne Grove, London, W.2. [3315

SENSATIONAL Bargain.—Indian, 7-9h.p., spring frame, dynamo lighting, with Henderson Elite sidecar, electric horn, speedometer, Sterling legshields, aluminium number plates. This superb outfit was purchased in February, and is absolutely new, having run only 229 miles. Full year's tax paid; £135.—Delancey Street Garage, Camden Town, N.W.1. [5220

LANGFORD'S, Indian Specialists, can supply all 1922 models. In stock.—4h.p. Scout, £112; Millford Junior sidecar, £134; Swan sports, £137/10; De Luxe, £147; 7h.p. combination, £175, with dynamo and speedometer; Chief, £199, with ditto; exchange your present machine for one of these magnifi-cent models; we can allow you highest prices; write, call, or 'phone for full particulars.—Langford's, 37, Cricklewood Broadway, N.W.2. Hampstead 8616. [5404


Ride a Douglas while you pay

We will supply you with a Brand New Model, fully equipped, and guaranteed as makers' specification.

Only £17 down

and Balance in 12 monthly payments of **£4 11s.**

The following Douglas Models may also be obtained on our extended payment system:—

2¾ h.p. Two-speed, Deposit ..... **£17**
and 12 monthly payments of **£4 11s.**

2¾ h.p. Three-speed, Deposit ..... **£21**
and 12 monthly payments of **£5 10s.**

3½ h.p. Solo Sports Model, Deposit ..... **£30**
and 12 monthly payments of **£7 10s.**

3½ h.p. Sports Model fitted with Sports Sidecar, Deposit ..... **£35**
and 12 monthly payments of **£9 2s. 6d.**

4 h.p. Solo, Deposit ..... **£28**
and 12 monthly payments of **£7 5s.**

4 h.p. Combination, Deposit ..... **£35**
and 12 monthly payments of **£9.**

6 h.p. Combination, Deposit ..... **£42**
and 12 monthly payments of **£11.**

**L.S.D. LIGHT CAR.**

This sturdily-built car is real value for money. Complete ready for the road,

**£165**

or **£42 10s.** down and balance in 12 monthly payments of **£11 2s. 6d.**

**MORGANS IN STOCK FROM £150**

**IMMEDIATE DELIVERY OF ALL DOUGLAS MODELS.**

**WHOLESALE DISTRIBUTORS FOR LONDON AND SURREY.**

**TRADE SUPPLIED.**

**A. H. LAKEMAN LTD.**

**26, LONG ACRE, W.C.2.**

'Phone No.: Gerrard 1383.


## MOTOR CYCLES FOR SALE.

### Indian.

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7544

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Indian spare parts always in stock. Write for free spare part list, stating year of manufacture. [0754

INDIAN.—The Dennla Accessories Stores, 89, Brixton Rd., London ('Phone: Brixton 3129), supply all parts from stock, new and second-hand. They also specialise in Indian repairs. [6788

INDIAN Spares.—New and second-hand for all models; all second-hand spares sent on approval; write, call, or 'phone; we can save you money.—Langford's, 37, Cricklewood Broadway, N.W.2. Hampstead 8616. [5405

### Ivy.

MAUDES' Motor Mart for 1922 Ivys. All depots. [5268

£18.—2¾h.p. Ivy 2-stroke, Villiers, splendid running order.—King, Egrove Farm, Oxford. [5357

1919 2½h.p. Ivy, fitted brand new 2-speed, licensed, lately overhauled.—Brewster, Southbourne, Hants. [4973

### James.

DAN GUY, Weymouth.—1922 7h.p. James De Luxe Combination, £160; 2-stroke, kick start, £60; in stock. [0819

4¼h.p. James Combiuation, 3 speeds, kick starter, lamps, horn, etc.; bargain, £55.—74, Brighton Rd., Surbiton. [6066

F.O.C.H. have a James 4¼h.p. Combination, Lucas dynamo set; also 1920 4¼h.p. solo.—5, Heath St., Hampstead (near Tube). [5069

1920, late, 5-6h.p. James Combination de Luxe, new condition; any trial; £110.—Fairhurst, Behind 68, Standishgate, Wigan. [5318

W. WHITBY and Son.—Immediate delivery of new James models; no waiting; list free on request.—7, The Vale, Acton, W.3. [3312

JAMES 1920, 2-stroke, 2 speeds, fully equipped, tax paid; £35. Exchanges.—Homac's, 243, Lower Clapton Rd., N.E. Dalston 2408. [5849

1920-21 James 5-6h.p. de Luxe Combination, lavishly equipped; £87/10, bargain.—Goad, 122 Maida Vale. 'Phone: Hampstead 1353. [5863

1921 5-6h.p. James Combination, speedometer, lamps, Klaxon, tools and accessories, perfect condition; £98.—Pashley, Asfordby St., Leicester. [4801

JAMES 1920 4¼h.p. De Luxe Combination, electric light, Bicks, speedometer, Easting, tax, insurance paid, splendid condition; trial; £95, near offer.—Clark 4, Homecroft Rd., Sydenham. [5041

JAMES 3½h.p. T.T. Twin, new July, 1921, 3-speed, chain drive, hand and foot clutch, kick starter, Lucas lamps, horn, perfect condition; bought car; sacrifice, £79.—Adie, 53, Hagley Rd., Birmingham. [5329

JAMES Combination, 1920, 5-6h.p., 3 speeds, C. and K.S., all-chain drive, luxurious bulbous sidecar, equipped, lamps, horn, speedometer, luggage carrier, in absolutely new condition, guaranteed, tax paid; £110. Exchanges. Homac's, 243, Lower Clapton Rd., N.E. Dalston 2408. [5850

*Spare Parts:*

JAMES Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4830

WHITBY'S for James spares and service; agents for last 16 years.—7, The Vale, Acton. Phone: Chiswick 1513 [3311

### J.E.S.

J.E.S., in running order, year's licence paid; £16.—Baker, 44, Clifton Rd., Luton. [5146

J.E.S. Lightweights.—These machines run on the smell of petrol.—Gibb, Gloucester [8122

£14.—1h.p. J.E.S., in special built curved top tube frame, good condition.—61, Wandle Rd., Croydon. [5194

### Kelecom.

3½h.p. Kelecom, excellent condition, Bosch magneto, new B. and B., lamps, etc., real sporting mount; £25.—59, Nelson Sq., Blackfriars. [5661

### Kenilworth.

WAUCHOPE'S, 9, Shoe Lane, London.—1¼h.p. Kenilworth motor cycle, suitable for lady; £37/10. [5885

### Kerry.

KERRY 6h.p. Twin, Bosch, 3 speeds; £18.—Capt. Collins, Sunbury Common. [5573

5-6h.p. Kerry Abingdon, fully equipped, tax paid; £15/10.—17, Heaton Rd., Mitcham. [5649

### Kingsbury.

KINGSBURY, new, 2-speed, licensed December; nearest £38/10.—H., 34, Belgrave Gate, Leicester. [5048

## MOTOR CYCLES FOR SALE.

### Kingsbury.

1921 2¾h.p. Kingsbury, 2-speed, all chain, new and unused; 39 gns.—Below.

ANOTHER 1921 Model, hardly done 100 miles; 35 gns.; deferred payments or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [6012

### Lea-Francis.

LEA-FRANCIS 1916 Combination, 3½h.p. J.A.P., 3-speed, K.S., perfect order; £65, sale or part exchange higher power.—Redgrove, Gargoyle Wharf, Yoark Rd., S.W.18. Battersea 1482. [5596

LEA-FRANCIS, 1920, 3½h.p. twin J.A.P., Montgomery, electric and acetylene, Bonniksen W.S.R., Easting, Tan-Sad, spares, just overhauled, fine condition, tax paid December; £75.—11, Tapsfield Rd., Crouch End. [5026

LEA-FRANCIS 1921 3¾h.p. Combination, with special Middleton sprung chassis, lamps, horn, and other accessories; in splendid condition; very little used; price £80.—Apply London Motors, 61, Holborn Viaduct, E.C.1. [6045

### Levis.

PREMIER Motor Co. for 1922 Levis.

POPULAR 2¼h.p. single gear Levis, £48; Model S, 2¼h.p., 2-speed, clutch, £58; Model G., 247 c.c., 2-speed clutch £56; kick starter, £2 extra; easy payments, 4 per cent. extra; carriage paid to any address; all models in stock for immediate delivery.—Premier Motor Co., Aston Rd., Birmingham. [3021

TRY Julians of Reading.—All Levis models in stock. [5704

LEVIS 1917, new Dunlops, splendid condition; £27, or near.—Gunn, King's Ride, Camberley. [5104

19 GNS.—2¼h.p. Levis, good tyres, tax, enamel poor.—Ewers, Newton Rd., Burton-on-Trent. [5683

1920 2¼h.p. Levis, equipped, engine overhauled by makers; £32, offers.—Briggs, Annandale, Ilkley. [4762

WE are the Agents for London, S.W. Choose from our stock.—Knight's, 126, Upper Tooting Rd., S.W.17. [0778

LEVIS.—All models, by one who knows them. Call write, or 'phone 852.—Gibb, 100, Northgate, Gloucester [8123

LEVIS, 1919 (June), well equipped, excellent condition throughout; £30.—10, King's Rd., Kingston-on-Thames. [5545

LEVIS, 2½h.p., 2-speed, footboards, Bosch, splendid order, appearance. — Particulars, King, Lismore, Ireland. [4912

LEVIS 2¼h.p., 1921, Sturmey 2-speed, clutch, speedometer, all accessories; £40, or near.—Hardy, Beaverwood Rd., Chislehurst. [4970

FOR 1922 Levis, the most reliable and neatest 2 stroke upon the road, send or call at Jones Garage, The Broadway, Muswell Hill, N.10. [0786

LEVIS. All 1922 models. Send your orders along; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10 [7943

1921 Model S Levis, 2-speed, clutch, lamps, horn, licence paid, condition guaranteed as new; £45; cash only.—Premier Motor Co., Aston Rd., Birmingham. [6033

LEVIS (May, 1921) 2¼h.p., 2-speed, clutch, first-class condition throughout, fully equipped; £45.—Graham, East Lodge, Wargrave Manor, Wargrave, Berks. [5244

211 c.c. Levis, October, 1919, single speed, silencer and direct exhaust, specially lightened engine, has exceeded 50 m.p.h., winner of many medals; £30.—Symonds, Buckhurst, Cornwall Rd., Sutton, Surrey. [5427

*Spare Parts:*

LEVIS.—All spares or complete 1922 model cycles from stock, carriage paid.—Jones Garage, Broadway, Muswell Hill, N.10. [0807

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all Levis spare parts always in stock. Write for free spare part list, stating year of manufacture. [0753

### Lloyd.

LLOYD'S 4½h.p., clutch model, re-enamelled and plated, splendid condition; £23.—George, 31, Somerford Grove, 'Spurs Ground, Tottenham. [5029

### L.M.C.

1920 L.M.C. 6h.p. Twin Combination, tools, acetylene lighting, any test, tax paid; £75 cash.—Penfold, 4, Claremont Rd., Seaford, Sussex. [4867

### Martin.

1921 Tourist Trophy 2¾h.p. Martin-Jap, 3-speed, chain drive, complete for road, lamps, tools, horn, etc., winner two firsts Brooklands, several seconds and thirds, third Junior Tourist Trophy race, Brooklands; tuned by Cyril Pullin; ran in Tourist Trophy race, May 6th; cost over £200; price £65, including spares.—Capt. Miller, Brooklands Track, Weybridge. [4740


# TURNERS

SPECIAL PURCHASE OF
COWEY SPEEDOMETERS
(Not Trip)

**£3 3s. 0d. each.**

Send make of machine and size of tyre

*We are stockists for the following Manufacturers' goods:*

AMAC, BINKS, BROWN & BARLOW, SENSPRAY — Carburetters and Parts
BOWDEN WIRE Ltd. — Brakes & Parts
BRAMPTON, DRUID — Fork Parts
BRITISH HUB CO. — Hub Parts
B.S.A., DOUGLAS, J.A.P., LEVIS, TRIUMPH, VILLIERS — Engines and Machine Parts
BEST & LLOYD — Lubricators and Parts
LUCAS, MILLERS, POWELL & HANMERS — Lamps & Parts
RENOLDS - Chains & Parts
STURMEY ARCHER Gear Parts
TAN-SAD - Seats & Parts

*NOTE:—*
**London Agents for LEVIS SPARES**

SIDECAR LUGS and FITTINGS
in endless variety

CAMEO, EASTING — Windscreens and Fittings

*We also have large stock of Accessories and one of the most varied assortments in London. We shall be pleased to quote you for your requirements.*

**180, 181, 182, Railway Approach**
Est. 1901. **SHEPHERD'S BUSH, W. 12.** 'Phone: Western 6177


## MOTOR CYCLES FOR SALE.

### Martin.

MARTIN-J.A.P. 2¾h.p., o.h.v., drip, Bosch, Dru 3-speed Sturmey hub, equipped, licensed, fa £35; exchanges.—Bradshaw, Litton Mill, Buxton. [5

### Martinsyde

MARTINSYDE.—Immediate delivery of 1 models. Cash, exchange, or deferred payment Kays, 8, Bond St., Ealing. [4

MARTINSYDE Combination, 6h.p., new last J hardly used, all on; £120, or nearest.—Surg 27, Sydney St., South Kensington. [5

F.O.C.H. have a 1921 Martinsyde Combinati completely equipped, excellent condition; barg —5, Heath St., Hampstead (near Tube). [5

ROBERTSONS Motors, Ltd., are the London M tinsyde Service Agents; trial runs arrang spares stocked.—157b, Gt. Portland St., W.1. [6

FOR a 1922 Martinsyde 3½h.p. Sports or S Combination get in touch with the North Lon agents, Jones Garage, The Broadway, Muswell H N.10. [0

MARTINSYDE 1921 Combination, luxurio equipped, with speedometer also, mileage 1,5 £97/10.—Hillier, 216, Portobello Rd., North K sington. [4

IN Stock.—1922 6h.p. Martinsyde Combinat £160; also 3½h.p. sports model, £110; cash deferred.—D. and S Autocar Co., 33, The Par Golders Green. [5

MARTINSYDE 1922 Sports Model for immed delivery; £110. Best price allowed on excha deals.—Newnham Motor Co., 223, Hammersmith W.6. 'Phone: Hammersmith 80. [2

MARTINSYDE 1921 6h.p. Combination, mile 800, accessories, electric lighting, windscre tax paid; nearest £140; delivered 100 miles, roa Wilson, 115, West View Rd., Barrow-in-Furness. [5

### Massey-Arran.

KICKHAM, Stokes Croft Bristol, Sole Dist Agent for Massey-Arrans; unequalled service, pairs, etc. [3

### Matchless.

TRY Julians of Reading.—Matchless Model J, T ing, in stock. [5

MAUDES' Motor Mart, London, Exeter, Wal and Norwich. Largest Matchless agents. [5

MATCHLESS 8h.p. double sidecar, all on, ma ficent condition.—553, Lordship Lane, Dulw [5

1922 Matchless Combination, dynamo lighting shop-soiled only; listed £188, accept £18 Below.

1920 Matchless Combination, dynamo lighting hood, screen, speedometer, spare wheel, e accept £120.—Daw, Matchless Agent, 114, Brix Hill. [5

MATCHLESS, 1922, Magdyno, 2-seater, all ac sories, tax paid; offers.—207, Rye Lane, P ham. [5

MATCHLESS Combination 6h.p., J.A.P., per condition; sacrifice £60.—Furminger, Hacken East Grinstead. [4

MATCHLESS.—All models from stock; highest change allowances.—Agents, R. B. Clark and 7, Exhibiton Rd., S.W.7. [4

MATCHLESS.—All models from stock. Offi Agents, deferred payments.—Bambers. 2, E bank St., Southport. 'Phone: 607 [6

MATCHLESS Combination, H Model, Magdyno, new, Easting, speedometer, all on; £125.—E ton, 96, Westbourne Terrace, W.2. [4

SHEFFIELD Agent for Matchless. All models stock. Sporting models £130, standard mo £170.—A. J Stacey, 12, Ecclesall Rd., Sheffield [0

£150 is the price of a new Matchless Combinat see our showrooms, all models in stock; cash payments.—Knight's, 126, Upper Tooting Rd., S.W [0

MATCHLESS-J.A.P., late 1914, 4h.p., twin sidecar, 3-speed and clutch, kick start, Bo Binks; £50.—Weller, 25, St. Thomas St., Winche [4

MATCHLESS, 1922, brand new Model H2, stock; £170. Easy payments arranged. changes.—Wilkins Simpson, opposite Olympia, don. [5

TASSELL, 1a, Bloomfield Rd., Plumstead. Matchless Combinations; deferred payme spares of all dates; trade supplied where agents appointed. [2

MATCHLESS Combinations, all models for im diate delivery, exchanges or deferred ments if required.—Edwards, 50, Harrington South Kensington. [6

1921 Matchless-Mag, Magdyno lighting, h speedometer, leg shields, all perfect, cannot distinguished from new; £155.—Tassell, 1a, Bl field Rd., Plumstead. [4

## MOTOR CYCLES FOR SALE.

### Norton.

ORTON Big Four De Luxe Combination (1921 model), original tyres, 700×80, Lucas 8-guinea tric lighting set, the complete outfit as new, mile- about 2,000, cost about £190; for quick sale, :5, or near offer; any trial, here or near.—Jones tor Co., King St., Mold, Flintshire. [5537

### N.S.U.

6h.p. N.S.U., 2-speed; £25; ride away.—79, Tottenhall Rd., Palmers Green. [5328

.S.U., re-enamelled, ride away; £16.—38, Orchard Rd., Sunbury-on-Thames. 27c 'bus to Reservoir t. [5929

914 N.S.U. 3½h.p. Twin, 2-speed, spring frame, splendid condition; £24.—37, Arlington Rd., biton. [5228

IGHTWEIGHT.—First cheque secures N.S.U. 2¾h.p. twin motor cycle, complete, Bosch, wants usting; cheap, £10.—Hall, Preston Rd., Chorley. [6036

### N.U.T.

920 (October) Standard 3½h.p. N.U.T., splendid condition inside and out, Brooks cantilever, ips, scarcely used; £85, or offers.—Boulton, Saffron lden. [5418

.U.T. 1920 (June) 3½h.p., Magdyno, Ace discs, Lucas electric horn, Cowey trip, spares, mileage 988 new; £85; tax paid, insured.—C. A., 59, Griffiths , Wimbledon, S.W.19. [5621

### O.K.

916 O.K. 2½h.p., 2-speed countershaft, perfect order; £19/10.—1, Priery Rd., Kew. [5978

12.—O.K. 4-stroke, Albion 2-speed, in good running order.—8a, Culverden Down, Tunbridge lls. [5552

920 O.K., complete with lamps, horn, etc., licence, perfect condition; £28.—Holden, 384, alley New Rd., Blackburn [5012

921 2¾h.p. O.K. Junior, 2-speed, clutch, kick start, lamps, horn, splendid condition; £40.—sley, Warford St., Newtown, Manchester. [5431

922 2½h.p. O.K.-Villiers, single speed, shop-soiled, £32; ditto, 2½h.p., 2-speeds, kick starter, shoped, £50.—Walhro Motor Cycle Co., Saffron Walden. tone: 45. [5728

### Omega.

920 Omega-Jap 2¾h.p., 2-speed, kick start, hand clutch; any trial; £37.—1, York Rd., Birkdale. [5450

921 2¾h.p. Omega, 2-speed, clutch, kick start, lamps, Klaxon, just as new; £45.—120, Fairdge Rd., Highgate, N.19. [5428

MEGA 1922 Models; prices from £39/10. Write for catalogue, London Motors, 61, Holborn Viact, E.C.1. Your old machine taken in part payat, for cash, or on deferred terms.

MEGA 1922 Models for earliest deliveries. Write London Motors, 61, Holborn Viaduct, E.C.1. e distributing agents for:—Norfolk, Northamptonre, Huntingdonshire, Cambridgeshire, Hampshire, tlandshire, Bedfordshire, Berkshire, Buckinghamre, Oxfordshire, Suffolk, Essex, Hertfordshire, Sus:, Surrey, Kent (with the exception of 20 miles lius of London). [3772

920½ 2¾h.p. Omega-Jap, 2-speed, hand clutch, kick start, lamps, horn, all accessories, various ires, just been completely overhauled; £45 or irest reasonable offer.—Lane, Codsall, Staffs. [4917

### Peco.

OMBINATION, 1916, Service Peco 2¾h.p., 2- speed, clutch, K.S., excellent condition; £45. so 2-speed Albion gear; £3/15.—117, Sheen Lane, rtlake. (D) [5617

### P. and M.

. and M. 1921 3½h.p. Combination, lamps, horn; £78.—Below.

. and M. 1916 3½h.p. Combination, lamps, horn, etc.; £50.—Elce, Ltd., 15-16, Bishopsgate venue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0069

. and M., incomplete, late model; £16.—37, Seedley Rd., Pendleton, Manchester. [4707

920 P. and M. Combination, fully equipped, tax paid, perfect; £75.—Green, 656, Old Kent l. [5307

VAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. P. and M. and sidecar, 1919, fully equipped. tax id; £75. [5886

. and M. 1918 Combination, good condition, lamps; £40; evenings.—68, Canford Rd., Clapham, S.W. att. 1855. [5528

918 P. and M., with sporting sidecar, complete lamps, tax, tools; £50; exchanges.—26, York d., Woking. [4963

. and M. Combination, 3½h.p., W.D., lamps, horn, speedometer, good condition.—Write, Wiggin, Pitt lub, Cambridge. [6020


# The finest stock of secondhand mounts in London

OUR stock of *guaranteed* second-hand Motor cycles and Combinations is wonderfully comprehensive. Prices are based absolutely rock-bottom and every machine sold has been through the hands of an expert. You are assured of value for every penny you spend because it is our desire to retain your goodwill.

**LIGHTWEIGHT BARGAINS.**

1920–1 3½ h.p. **ARIEL**, 3-speed, with all accessories, speedometer, screen, tax paid, nearly new condition ..... £95 0
1920–1 2¾ h.p. **ENFIELD**, 2-stroke, 2-speed, clutch, footboards ..... £45 0
1917 2¾ h.p. **NEW IMPERIAL**, J.A.P. engine, 2-speed, footboards, lamps, horn, speedometer ..... £39 0
1920 2½ h.p. **CLYNO**, 2-speed, hand clutch, lamps, horn, nice order ..... £38 0
1920 2¾ h.p. **NEWTON**, Union engine, 2-speed, footboards, legshields, accessories ..... £38 0

**SOLO BARGAINS.**

1918 4 h.p. **TRIUMPH**, 3-speed, countershaft, lamps, horn, good order ..... £82 10
1914 4 h.p. **REX**, 3-speed Sturmey-Archer gear, clutch, kick-starter, nice order ... £40 0
1921 4 h.p. **NORTON**, 3-speed, Big-4 model, good condition ..... £90 0
1919 4 h.p. **DOUGLAS**, 3-speed, clutch, kick-starter, lamps, Klaxon, condition excellent ..... £70 0
1919 4 h.p. **TRIUMPH**, 3-speed, clutch, kick-starter, lamps, horn, speedometer, tax paid ..... £75 0
1919 4½ h.p. **BLACKBURNE**, 3-speed Burman gearbox, lamps, horn, tax paid, very fine order ..... £67 10

**COMBINATIONS.**

1918 8 h.p. **ENFIELD**, very fine order, lamps, horn, hood, screen ..... £90 0
1919 4 h.p. **DOUGLAS**, 3-speed combination, latest clutch, screen, accessories, tax paid, discs ..... £85 0
1920 3¾ h.p. **SCOTT** and coachbuilt sidecar with bulbous back, lamps, Klaxon, nice condition ..... £90 0
1916 10 h.p. **HENDERSON**, 4-cyl. and Millford Empress sidecar, lamps, speedometer, Klaxon, in going order but requires few adjustments ..... £60 0
1917–8 6 h.p. **CLYNO**, 3-speed combination, overhauled and renovated as new, accessories ..... £95 0
1918 8 h.p. **ROYAL RUBY**, J.A.P. engine, 3-speed, all-chain, with sidecar and accessories ..... £98 0

**If you do not see what you require above, please write us stating the type of machine you wish to purchase. Our stock is constantly changing and we shall be pleased to send full list on application.**
**Every machine is overhauled and guaranteed in good order.**
**Extended Payments from one fifth of the cash price deposit, and the balance in 12, 15, or 18 monthly instalments.**
**Our stock of new 1922 models for immediate delivery include, Ariel, B.S.A., Calthorpe, Douglas, Enfield, Humber, Martinsyde, McKenzie, New Imperial, Norton, O.K., Rudge-Multi, Royal Ruby, Stanger, Triumph, Zenith.**
**Best exchange offer on your present machine and Extended Payments if desired.**

*The Service Company Ltd.* (LONDON)

289–293, HIGH HOLBORN, LONDON, W.C.
(Few doors west of Chancery Lane.)


## MOTOR CYCLES FOR SALE.

### P. and M.

P. and M. 1918 Combination, lamps, horn, tax paid; £45; engine No. 7033.—A. Cooper, 63, Avenue Rd., Camberwell, S.E.5. [5950

P. and M., Milford C.B. sidecar, electric lighting, fully equipped, good condition; £40, or near.—55, Drakefield Rd., Balham. [5462

49 GNS.—1919 P. and M. Combinations, excellent condition, fully equipped; after 5 p.m.—4, Elm Gardens, Hammersmith. [5956

P. and M. Combination, 1918, perfect condition, lamps, horn, speedometer, tax paid; £60, or near offer.—50, High Rd., Balham. [4704

1918 P. and M. Solo, £30; 1918 combination, renovated, £55; first cheque secures.—Beardwood, 147, Burlington St., Liverpool. [5721

1920 P. & M. (not R.A.F. pattern), Lucas lighting and horn, Cowey speedometer, Tan-Sad, tools, etc.; £55.—Brockbank, 58, Lord St., Southport. [5870

P. and M., 1917, and sidecar, 3½h.p., 2 speeds, K.S., all-chain drive, lamps, Easting, tax paid; £45.—Hemac's, 243, Lower Clapton Rd., N.E. Dalston 2408. [5852

P. and M., late 1917-18, newly plated and stove enamelled makers' 1922 colours, guaranteed equal to new throughout, not scrap; £60.—57, Firs Hill Rd., Pitsmoor, Sheffield. [3523

DECEMBER, 1918, P. and M., all on, electric lighting, licensed to December 31st, selling owing to health, seen by appointment, any trial; £45.—148, Croydon Rd., Caterham, Surrey. [4818

A GOOD Investment.—1919 P. and M. kick start combination, reconstructed and re-enamelled makers' colours July, 1921, new December, 1921, Royal Leicester sidecar, outfit equipped, including hood, side curtains, windscreen, tax paid, exceptionally smart, for solo and cash, or sell £66.—41, Elmwood Rd., West Croydon. [5535

*Spare Parts.*

P. and M. Spares Specialist. Every part in stock; cheap.—Inman, Durham Rd., Seaforth, Liverpool. [4992

P. and M.—All parts in stock for P. and M.'s, send stamp.—P. and M. Specialist, H. Beardwood, 147, Burlington St., Liverpool. [0839

### P. and S.

1921 Pearson and Sopwith 3¼h.p., 2-stroke, 2 speeds, clutch, kick starter, accessories, tax paid; £40.—Daw, 114, Brixton Hill. [5396

P. and S., 2¾h.p. J.A.P. 1920, purchased new June, 1921, 2-speed, kick start, mileage 1,500, licensed, all on, spare tyre; £42.—11, Roslyn Av., Kenbury St., Camberwell. [5378

### Precision.

4¼h.p. Twin Precision, 3-speed, clutch, kick start, lamps, coachbuilt sidecar, windscreen, splendid condition; £40.—40, Warley Rd., Blackpool. [5433

BARGAIN.—1922 brand new 8h.p. Precision, Sturmey 3-speed, clutch, kick start, unused; £55 cash.—89, East Hill, Wandsworth. Battersea 443. [5231

### Premier.

3½h.p. T.T. Premier, perfect condition, lamps, horn, tax paid; £22.—Laurel Farm, Headington, Oxford. [5456

PREMIER Motor Cycle, 3½h.p., 3-speed, kick start, with or without sidecar.—R. Barnes, Lambourn, Berks. [4700

4h.p. Premier countershaft Combination, fully equipped, perfect; £38.—17, Heaton Rd., Mitcham. [5647

3½h.p. Premier, T.T. model, Bosch magneto, fine engine, large tank; at price of component parts, £14 cash.—58, Blagdon Rd., New Malden. [5662

PREMIER 7-9h.p. Combination, 3-speed, tax paid, good going order; £70, or offer; write appointment.—H. Marden, 13, Shirlock Rd., N.W.3. [4754

*Spare Parts:*

PREMIER Spares and Repairs.—We claim to be the most competent firm to supply spares and execute repairs to Premier moter cycles. We served in the Premier works, and know this machine from A to Z. We hold the most varied stock of parts for it in the world. We are the only traders who can claim to supply every part for a Premier machine. Our prices are rock bottom, and our service unsurpassable. Write us full requirements; you will receive our reply per return.—Forfield Motors, Forfield Place, Leamington Spa. [3167

### P.V.

P.V.—Astounding value is represented by our new range of popular models, incorporating our famous spring frame and Villiers or J.A.P. engines. Prices from £45. Lists from agents or P.V. Motor Cycles, Ltd., Forest Hill, London. [2384

### Quadrant.

1922 Quadrant 4½h.p. Combinations; £100. Agents for Cambridge.—Wallis and Easten, 104, Mill Rd., Cambridge. [0825

## MOTOR CYCLES FOR SALE.

### Quadrant.

WAUCHOPE'S, 9, Shoe Lane, London.—4½h.p. Quadrant Combination, 3 speeds, kick start and clutch model, 1920; £77/10. [5887

£65.—Quadrant, 4½h.p. combination, overhauled and guaranteed.—Clifford Wilson Mfg. Company, 177, Westminster Bridge Rd., S.E.1. [4603

FRANK WHITWORTH, Ltd., Distributors, 139, New St., Birmingham.—Quadrant £100 4½h.p. Combination, delivery from stock. [0767

£105.—1922 Quadrant combination, used few demonstrations only, licence paid, Lucas accessories, screen, special finish.—Clifford Wilson Mfg. Company, 177, Westminster Bridge Rd., S.E.1. [4599

£45.—Quadrant coachbuilt Combination 1912, engine overhauled makers, Brampton, windscreen, luggage carrier, 3-speed hub, trial, appointment; offers.—35, Fourth Av., Queen's Park, Paddington. [5158

### Radco.

MAUDES' Motor Mart for 1922 Radcos. [5265

NEW 1922 Radco 2¼h.p., single speed, £35/14; 2-speed clutch, kick starter, £47/2; carriage paid to any address.—Premier Motor Co., Aston Rd., Birmingham. [6035

RADCO 1916, completely overhauled, P. and H. lamp set, Bosch, new B. and B. carburetter, splendid order, tax paid year; £22.—18, Elam St., Lilford Rd., Camberwell. [5645

### Raleigh.

PREMIER Motor Co. for 1922 Raleighs.

IMMEDIATE delivery of 2¾h.p. 4-stroke lightweight, 2-speed, £68; 3-speed, £73; also 5-6h.p. flat twin, spring frame, detachable wheels, solo, £130; sidecar combination, £165; easy payments, 4 per cent. extra; free delivery to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0866

MAUDES' Motor Mart for 1922 Raleighs. [5266

JULIANS of Reading have Raleigh 2¾h.p. Model in stock; £68. [5707

RALEIGH, brand new 1922 2¾h.p. model, actually in stock; £68.—Moss, Wem. [5783

RALEIGH 2¾h.p., 2-speed, kick start, in stock; £68.—Clark, 7, Exhibition Rd., S.W.7. [1280

RALEIGHS.—All models; delivery now.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3693

RALEIGH 1921 6h.p. solo, new, unused; £115 or nearest offer; exchange considered.—Godwin Bros., Woking. [3910

1922 Raleighs, 2¾h.p. and Combinations, delivery anywhere, always in stock.—Clifford Motories, Eastwood, Notts. [4654

RALEIGH.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [4836

RALEIGH 2¾h.p., 2-speed, kick start, 1922, tourist model, in stock; £68, or easy terms.—Talbot Garage, Market St., Stourbridge. [4776

RALEIGH.—Immediate delivery of 1922 models; exchanges or deferred payments arranged.—Edwards, 50, Harrington Rd., South Kensington. [6015

BRAND New 1922 2¾h.p. Raleigh, 2 speeds, kick starter, £68; or with light sidecar, £85; in stock.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [5729

RALEIGH.—2¾h.p., 3h.p., and 5-6h.p. solos and combinations from £68. Cash or deferred payments; old machine taken in part payment.—London Motors, 61, Holborn Viaduct, E.C. 'Phone: City 4230. [3769

RALEIGH Lightweights and Combinations for immediate delivery. Best prices allowed on exchange deals. We have been agents for Raleigh machines for over 15 years, and can offer best service and deliveries. Newnham Motor Co., 223, Hammersmith Rd., W.6 'Phone: Hammersmith 80. [2369

### Reading-Standard.

1921 10h.p. Reading-Standard Combination, dynamo lighting, shop-soiled, unregistered; £135.—Brockbank, 58, Lord St., Southport. [5872

1920 10h.p Reading-Standard Combination, dynamo lighting, speedometer, etc., been stored, otherwise nearly new; bargain, 100 gns.; seen Saturday; appointment preferred.—87, Walton Rd., East Molesey, Surrey [5644

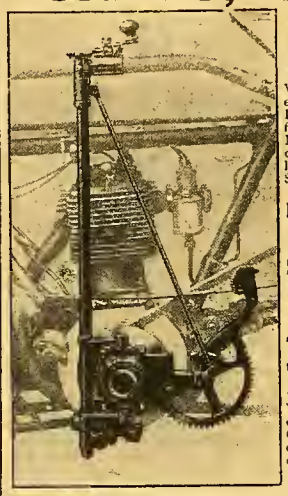
### Rex.

5-6h.p. Rex and Chassis; £25; tax paid.—74, Durban Rd., Beckenham, Kent. [5387

REX 5-6h.p., running order; £20 or offer.—26, St. George's Rd., Kilburn. [4906

REX 3½h.p., Bosch, Amac, lamps, tax, disc wheels, splendid condition; £30.—266, Hornsey Rd., Holloway [5383


# GRADO, LTD.



**Special Prices.**

**Kick-start Model £6.**

Variable gear, free engine, kick-start. Here is our world-famed kick-start Model for all machines from 3 to 10 h.p. Delivery from Stock.

**Plain Model £5 0 0.**

**Lightweight Plain Model £4 5 0.**

**Two-stroke Countershaft Model £8 8 0.**

Variable gear, free engine, handle start Complete with chain, both sprockets and starter.

*Postage Free.*

## The Grado Concentrix Valve Grinder.

**Grinds Valve Absolutely Central.**

**VALVE CAP and SPARKING PLUGSIZ.**

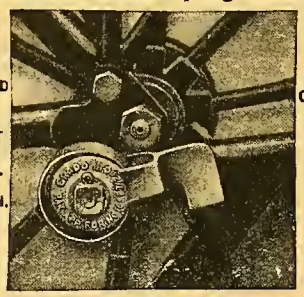
American and English Threads.

**PRICE 6/6 Post Free**

**Requires No Effort. No need to take off Cylinder.**

## The Grado Stand Spring Return.

STAND CANNOT FALL DOWN.



ORDER ON TO-DAY.

**Price 5/9 Post Free.**

## The Grado Valve Facer.

*Postage 1/- extra*

**Price 20**

**LONDON: 26, Cross St., Hatton Garden, E.C.1.**
**NORTHERN & MIDLAND ORDERS: 66, Pershore Street, Birmingham.**


## MOTOR CYCLES FOR SALE.

### Rex.

REX 3½h.p., fixed, replated, enamelled, ride away, taxed; £18.—7, Palmerston Rd., Southfields, S.W.18. [5177

1921 Rex Combination, Lucas accessories, used demonstration only; bargain, £120.—Tewkesbury Garage, Tewkesbury. [4922

BARGAIN.—3½h.p. Rex Combination, 2-speed, 2 new tyres, new belt, new carburetter; £20.—43, Eltisley Av., Cambridge. [6043

6h.p. Rex Combination, just overhauled, ride away best offer; after 6 p.m.—14, Heath Terrace Maidstone Hill, Greenwich. [4788

£16/10.—Rex 3½h.p., running order; also 2¾h.p Grado gear, £18; take push cycle part.—57 Kenbury St., Camberwell, London. [5467

1913 Rex Combination 6h.p., little used, in splendid order; any trial; £45, or nearest.—Lynton All Saints' Rd., King's Heath, Birmingham. [5186

REX-J.A.P. 4h.p., just overhauled, variable gear B. and B. 2-jet carburetter, Bosch magneto, lamp set, mechanical horn.—A. Petherick, Lydford, Devon. [5238

REX Combination, 5-6 h.p., 2-speed and starter exceptionally good condition throughout, very smart appearance; £38.—157, Burntwood Lane, Earlsfield, S.W.17. [5427

5-6h.p. Rex Twin, chain driven, 2-speed, handle start, coachbuilt sidecar; £35; entertain exchange with cash, late 4h.p. combination.—Carslake, Deans hanger, Stony Stratford. [5594

1921 Rex, Blackburne engine, 2¾h.p., Sturmey Archer 2-speed, kick starter, excellent condition, mileage 300, tyres as new, fully licensed; price £59.—S., 1, Veronica Rd., Balham, S.W.17. [4703

1921 8h.p. Rex Combination, Blackburne engine 3-speed, clutch and kick starter, all chain drive, detachable wheels and interchangeable, all lamps, horn, speedometer, tax paid till December splendid order and condition; £115.—D. and S. Auto car Co., 33, The Parade, Golder's Green. [5744

1922 Rex-Acme, latest model G, immediate delivery. 'Phone: Greenwich 751. All-chain drive 8h.p. Blackburne engine, Sturmey-Archer gear with special clutch, interchangeable and detachable wheels Ferodo band brakes, spring seat-pillar, etc., specially designed chassis, with luxurious sidecar; a combination bristling with refinements at £150, complete Call and inspect same in my showrooms, catalogue with pleasure.—The agent for all high-class productions is Sam E. Clapham (Motors), 27, Stockwell St Greenwich, S.E.10. [3054

### Rover.

ROVER 3½h.p., 3-speed, countershaft, clutch, kick starter; £55, bargain.—Moss, Wem. [5781

ROVER 1919 Combination, well equipped, taxed £68.—Clark, 7, Exhibition Rd., S.W.7. [4611

ROVER 1915, equipped, perfect, tax paid; £34, or near; owner bought combination.—20, Wincheste St., Coventry. [5455

ROVER 1918 6h.p. Combination, windscreen, electric light, etc.; £85.—Andrewes, Chilcomb Rectory, Winchester. [4911

ROVER Combination 3½h.p., chain drive, new last July, mileage 600; 95 gns., complete.—46, S George's St., Canterbury. [5655

1916 3½h.p. Rover, countershalt, 3-speed, in excellent condition; £55, or close offer.—136, Londo Rd., Kingston-on-Thames. [5184

ROVER 1918 3½h.p. T.T., Philipson, splendid con dition; £50.—Springfield, Albany Crescent, Clay gate. 'Phone: City 7090. [5433

£29.—Rover 3½h.p. 1914, K.S., electrics, speedo mete etc.; sidecar Easting, new tyre, £5/10.— 81, Richmond Rd., Thornton Heath. [5184

£20, or near offer.—3½h.p. Rover, tax paid for yea lamps, horn, etc.; any trial; East Grinstead di trict.—Box 1258, c/o *The Motor Cycle.* [5484

ROVER 1920, 3½h.p., 3 speeds, clutch, kic starter, fully equipped, brand new condition £70; exchanges.—63, Solon Rd., Brixton. [5550

1920 Rover, Phillipson, equipped, speedometer excellent condition, very fast; 55 gns.; or e change 16H Norton, etc.; cash either way.—War 139, Mare St., Hackney. [5151

38 GNS.—Rover 1914 3½h.p., 3 speeds, with coachbuilt sidecar, Binks carburetter, 3 lamps horn, etc., tyres practically unsoiled; full year's ta paid.—Delancey Street Garage, Camden Town, N.W. [5224

ROVER 6h.p. Combination, new August, 1921 small mileage, fully equipped, speedometer, ta paid 1922, perfect order, condition as new; £90; e change 1921 Matchless, cash adjustment.—Jones, Rosemount, Wallington. [5604

1918 Rover, 2¾h.p. Villiers engine, B. and carburetter, Bosch magneto, 2-speed, Dru forks, touring frame, thoroughly overhauled, perfe condition, all accessories; £30, or near offer.—7, Pe broke Villas, Keasington, W.8. [5151

## MOTOR CYCLES FOR SALE.

### Rover.

VER 1917 3½h.p. Combination, lamps, horn, etc.; £65.—Elce, Ltd., 15-16, Bishopsgate Avenue, mile St., E.C.3. 'Phone: Avenue 5548. [0068

VER 3½h.p., late 1920, as new, owing absence nly ridden 500 miles, complete Lucas lamps, license holder, spare belt, outer cover, inner tools, etc., fitted variable jet, sidecar attach- special sprung footboards, excellent condition; Leeson, "Waverley," Albury Park Rd., Tyne- [5317

*re Parts:*

VER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4832

### Royal Ruby.

AL RUBY, 2¾h.p. J.A.P., 2-speed, splendid condition; £40.—Monk, New Rd., Harlow. [4864

AL RUBYS.—Prompt delivery from Barlow nd Son, Monton, Eccles. Tel.: 160 Eccles. [3694

AL RUBY 2¾h.p. Sports model, new, in stock; 60.—Virgo, 156, High St., Hounslow, W. Tel.: [5656

0 3h.p. Royal Ruby, spring frame, 1922 3-speed gear box, tax, equipped, insured; £55.—Arnall, Longton, Preston. [5035

AL RUBY Combination, lamps, speedometer, spares, licence paid; price £100.—Hawkins, x Garage, Exeter. [5242

. Ruby Combination, new 1920, fully equipped, censed, insurance December.—92, Atwood Rd., ary, Manchester. [5636

1 Royal Ruby 2¾h.p., 2 speeds, clutch, K.S., lamps, etc., licensed, insured, little used; ; £50.—Box 1256, c/o *The Motor Cycle*. [5482

AL RUBY Combination, 8h.p., luxurious outfit, August, 1921, accessories, licensed; what offers? nester.—Box 1250, c/o *The Motor Cycle*. [5076

AL RUBY 8h.p., J.A.P., 1919, Combination ith all accessories, little used; seen by appoint- —Fidler, Council Offices, Hayes, Middlesex. [5311

—Royal Ruby Combination, 1919, 8h.p. J.A.P., 3 speeds clutch, kick starter, fully equipped, e, splendid condition.—63, Selon Rd., Brixton [5510

. Royal Ruby Combination, new March, 1920; 100; 3 speeds, lamps, accumulator, screen, Tan- original tyres unpunctured.—130, Northfield Av., [5298

AL RUBY 2¾h.p., 2-speed, free engine, fitted with P. and H. lamps, tools, new tyre, pillion n carrier, tax paid, take two anywhere, any nation and trial; £30.—Hancock, 84, College alisbury. [4918

2 8h.p. Royal Ruby—the spring frame combina- tion par excellence—fitted with interchangeable pare wheel, luggage and petrol carrier, Easting m screen, lamps, horn, etc., all on, at £185; liate delivery from the agent for all high-class , as usual.—Sam E. Clapham (Motors), 27, well St., Greenwich 'Phone 751 [5893

2 8h.p. Royal Ruby Tandem, 2-seater Combina- tion, Lucas dynamo lighting, Cowey trip speedo- Lucas horn, Easting Sandum screen, handle- atch, fitted with interchangeable and spare wheel, ge and petrol carrier, ordered at Show, delivered akers on March 4th; cost over £230; will accept ; perfect and as new, tax paid for year.—Dentist, Tufnell Park Rd., Holloway. [5425

### Rudge.

.p. Rudge, single speed model; £26.—Cross, Agent, Rotherham. [6053

DGE-MULTI, clutch, exceptional bargain, smart; 32 gns.—67, Ferolea Rd., Balham. [5937

AUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Rudge-Multi, 1919, I.O.M. model; £50. [5888

DGE-MULTI in Stock; £77; exchanges arranged, highest prices allowed.—Clark, 7, Exhibition Rd., [4620

.—1915 3½h.p. Rudge-Multi coachbuilt Combina- ion, beautiful condition.—King, Egrove Farm, d. [5356

DGE-MULTI 3½h.p. Combination, good condi- tion; £50; no offers. — 166, Garratt Lane, 8. [4850

22 3½h.p. T.T. Rudge, brand new, in stock; £77.—Wilkins Simpson, opposite Olympia, on. [5841

. Rudge-Multi 1920, tax paid, lamps, accessories, splendid condition; £60, offers.—158, Venner Rd., nam. [5089

.p. Rudge-Multi, 1920, just been overhauled; £75, or exchange A.B.C. or Triumph.—F. Cope, Cop, Staffs. [4939

DGE-MULTI 3½h.p., Nov. 1920, all on, tax, in- surance paid, perfect condition; £50.—46, Milden- Rd., Clapton. [4726

# *What you want and How you want it*

It is a great convenience to find in our showroom a selection of motor cycles embracing such a variety of models that you can with ease select one which exactly suits your requirements.
It is also pleasing to find that you can suit your own convenience in buying it and that you are saved all the bother of Registration and other formalities.
If you have a machine to dispose of before getting a new one it simplifies matters if you can effect an exchange, or should it be inconvenient to pay cash for your purchase it is nice to be able to arrange for settlement in a way that suits you.
All these advantages and many others are yours if you send your enquiry to

**THE EASTERN GARAGE CO.**

For the 1922 season we have contracted for the following makes, and we shall be pleased to send you our list of new models in stock.

**A.J.S.**
**ALLON.**
**ARIEL.**
**B.S.A.**
**HAWKER.**
**INDIAN.**
**LEVIS.**
**MATCHLESS.**
**MARTINSYDE.**
**METRO-TYLER.**
**N.U.T.**
**NEW IMPERIAL.**
**QUADRANT.**
**ROYAL ENFIELD.**
**RALEIGH.**
**RUDGE.**
**SCOTT.**
**SUNBEAM.**
**TRIUMPH.**
**ZENITH.**

—

**LIGHT CARS.**
**B.S.A.**
**BAYLISS-THOMAS.**
**ROVER.**

### SECONDHAND MACHINES,

Completely overhauled and guaranteed, and equally reliable as when they left the works new.

**MATCHLESS,** 1921, 8 h.p. Comb., dynamo lighting, electric horn, speedometer, leg shields, screen, sidecar step, spare wheel and tyre, tax paid, as new ..... £160
**ROVER,** 1919, 3½ h.p., 3 speeds, clutch and kick starter, lamps, horn and Millford Skiff sidecar £76
**ROVER,** 1920, 5-6 h.p. countershaft 3-speed gear, all chain drive, lamps, horn, speedo- meter, windscreen, Tan-Sad seat, and Millford Empress sidecar ..... £116
**ARIEL,** 1920, 3½ h.p. Comb., 3 speeds, clutch and kick starter, tax paid ..... £80
**"F. N.,"** 1920, 2½ h.p., 2 speeds, clutch and kick starter, shaft drive, lamps and horn.... £40
**ENFIELD,** 1915, 2¼ h.p., 2-stroke, 2 speeds, lamps, horn, tax paid ..... £33
**GLYNO,** 1918, 6 h.p. Comb., 3 speeds, clutch and kick starter, detachable wheels ..... £95
**NEW IMPERIAL,** 1918, 8 h.p. Comb., 3 speeds, clutch and kick starter, speedometer, lamps horn, hood, screen ..... £75
**BROUGH,** 1920, 5 h.p., 3 speeds, clutch and kick starter, lamps, horn, speedometer, Hen- derson Elite sidecar, Easting screen, tax paid £110
**ENFIELD,** 1916, 6 h.p. Comb., lamps, horn, luggage grid ..... £65
**DOUGLAS,** 1916, 4 h.p. Comb., 3 speeds, clutch and kick starter, lamps, horn ..... £68
**METRO-TYLER,** 1921, 2½ h.p., 2 speeds, lamps, horn, mirror, discs, College leg shields, tax paid ..... £45
**DOUGLAS,** 1913, 2¾ h.p., 2 speeds, lamps, horn, tax paid ..... £30
**MATCHLESS,** 1920, 8 h.p. Comb., lamps, horn, screen, hood, spare wheel and tyre, tax paid.. £110

# The Eastern Garage Co.

**(Official Repairers to R.A.C., A.C.U., A.A. and M.U.),**

**418, Romford Road, Forest Gate, E.7.**

Telephone: 490 East Ham. Telegrams: "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### Rudge.

1922 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, Muswell Hill, N.10. [0791

3½h.p. New 1922 Rudge, I.O.M.; £77; easy terms or exchange.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5905

1922 Rudge, I.O.M. model, immediate delivery from stock.—Sam E. Clapham (Motors), 27, Stock- well St., Greenwich, S.E.10 [1816

RUDGE, clutch, Binks, Cowey, lamps, horn, etc., all spares, tax 30/- paid, fast, reliable; £30.— 24, Salisbury Rd., Seven Kings. [5191

£77 is the price of a new Rudge. Get it from the Agents; in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17 [0836

RUDGE-MULTI, new T.T. models, 3½h.p., £77, in stock.—Hills' Garage, 13, Crooklog, Bexley Heath, S.E. 'Phone: Bexley Heath 263. [5287

3½h.p. Rudge-Multi Combination, splendid condi- tion, any trial; seen by appointment; 40 gns.— G.P.C., 7, Florence Ter., Ealing, W.5. [5613

RUDGE 1919 5-6h.p., Multi gear, chain-cum-belt drive, Rudge sidecar, complete with lamps; £75. —Maudes', 100, Great Portland St., London. [5270

RUDGE 7-9h.p., complete with Mills-Fulford De Luxe sidecar, hood, screen, speedometer, lamps, and licence paid; £90.—Ratcliffe Bros., 200, Gt. Port- land St., W. [5717

3½h.p. Rudge, 1920, fine condition, pedal starter, Lucas lamp, Cowey speedometer and horn, both T.T. and touring bars; £64.—Elm House, Elm, Wis- bech, Cambs. [4722

3½h.p. I.O.M. Rudge-Multi, 1920, Cowey trip speedo- meter, Lucas lamps, first-class condition, low mileage, tax paid; £60.—Bull, 22, Wivertree Rd., South Woodford. [3809

1921 Rudge-Multi 3½h.p., I.O.M., practically new, done 500, special inlet adjuster, pedal starter, equipped, licensed; £60; letters only.—117, Bromley Rd., Catford, S.E.6. [4815

1920 (November) 3½h.p. Rudge-Multi Combination, brand new sidecar, all accessories, speedometer, tax and insurance paid; £70.—Dearman, 7, Regent Place, Westminster. [5423

RUDGE-MULTI 5-6h.p. (Oct. 1919), mileage 5,000, equipped, large touring sidecar, sprung luggage grid, etc., Easting, splendid condition; £65.—78, Battersea Rise, Clapham Junction. [4727

RUDGE-MULTI 3½h.p. 1922, dropped handlebars, pedal starter, under 100 mileage, insured, licensed, too fast for owner; best offer over £72.—1, Ashcombe Rd., Weston-super-Mare. [4813

1921½ Rudge T.T., I.O.M., no pedals, oversize back tyre, lamps, horn, and long exhaust, fast, and in excellent condition; £65, or near.—Bray Lodge, Snakes Lane, Woodford Green, Essex. [5116

NOVEMBER, 1919, 3½h.p. Rudge-Multi and Sport- ing Canoelet sidecar, speedometer, horn, tax paid, stored nearly two years, mileage 3,000; nearest £50; evenings.—Wallace, 8c, North End Rd., Golders Green, N.W.11. [5454

RUDGE 7-9h.p. Combination, 1920, little used, fully licensed, complete with lamps, speedometer, windscreen, luggage carrier, horn, tools, and spares, in excellent condition, practically new, any trial; 100 gns., or near offer.—Manager, Far Famed Cake Co., Ltd., Rifle St., Poplar, E. Tel.: 297 East. [5120

CHEAPEST Rudge Combination in England. Rudge-Multi, late 1919 (cost solo £80, receipt shown), with coachbuilt sidecar, 3 lamps, 2 gene- rators, Klaxon horn, 2 spare tyres and tubes, £2/2 tool kit, pump, etc. Full year's tax paid; £49/10.— Delancey Street Garage, Camden Town, N.W.1. [5219

*Spare Parts:*

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3163

### Saltley.

£35.—1922 2¾h.p. Saltley, 2 speeds, fully licensed, new.—89, East Hill, Wandsworth. [5235

### Scott.

1915 Scott, perfect, complete; £40; exchange A.C. Sociable.—87, Mayfield Rd., Sanderstead. [5919

SCOTTS, either model. West of England Agent is Gibb, 100, Northgate, Gloucester. 'Phone: 852. [R126

WAUCHOPE'S, 9, Shoe Lane, London.—3¾h.p. Scott and sidecar, 1914-15, 2 speeds, etc.; £45. [5889

SCOTT 1912, made as new, splendid machine, quick sale, £23; bargain.—Box 1263, c/o *The Motor Cycle*. [5481

F.O.C.H. have a 1920 Scott, brand new condition; also 1914 combination.—5, Heath St., Hampstead (near Tube). [5068

SCOTT 3¾h.p. 1920, 2-speed, kick start, all-chain drive, Binks carburetter; £70.—Maudes', Walsall Garage, Walsall. [5277

## MOTOR CYCLES FOR SALE.

### Scott.

PLACE your Order now for the new 3-speed model Scott and ensure early delivery.—Millards, Sheffield Rd., Chesterfield. [3371

SCOTT Squirrel, 1922, Brooklands model, scarcely used, D.A. lighting, tax paid; £90.—145, Widmore Rd., Bromley, Kent. [5876

1920 3¾h.p. Scott, splendid condition, electric lighting, speedometer, T.T. bars; £69.—16, Pont St., S.W.1. Victoria 7904. [5376

1919 Scott 3¾h.p., 2-speed, kick start, horn, licensed, small mileage; lowest, £55.—Beesley, Warford St., Newtown, Manchester. [5432

1915-16 3¾h.p. Scott Combination, windscreen, Binks carburetter, etc., exceptional bargain; £48, to clear.—Maudes', 100, Paris St., Exeter. [6064

SCOTT 3¾h.p., November, 1918, licensed, insured, decarbonised, fully equipped; £63; no dealers; after 7 or Sunday morning.—53, Bethel Rd., Welling. [5922

SCOTT, 1915, fitted with Phœnix sidecar, splendid condition, chains new, complete with lamps, tax paid; seen evenings; 50 gns.—48, Frankfurt Rd., Herne Hill, S.E. [5181

SCOTT 1920 3¾h.p. Combination, new Easting windscreen, all accessories, equivalent to new; owned and driven by an expert; £92/10.—Apply London Motors, 61, Holborn Viaduct, E.C.1. [6046

1920 Sports Scott, Binks, lamps, horn, licensed, in very good mechanical condition, enamel and plating excellent, new tyres; £57 or near offer.—Peacock, Chadwell Avenue, Chadwell, Essex. [4884

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8352

SCOTT Combination, 1920, just overhauled by makers at cost of over £20, electric light, windscreen, speedometer, tyres new; £100; would accept good lightweight in part exchange.—45, Archer Lane, Sheffield. [5620

SCOTT 1914 3¾h.p., not used during war, Bosch magneto, Binks carburetter, original tyre on front, engine recently overhauled by Scott firm, licensed December, 1922; £40.—Wannop, Little Blencowe, Penrith. [5392

SCOTT Combination, late 1920, 2-speed, kick-starter, electric lighting, Easting screen, tools, etc., condition excellent, tax paid; accept £97/10 quick sale.—Wilkins Simpson, opposite Olympia, London. [5847

1920 (Sept.) Sports Scott, double pole plugs, electric and acetylene lighting, Cowey horn, big bore flexible exhaust, posh tone, very fast, full tax; 70 gns.; exchanges.—Kent's, 417, Lord St., Southport. [5609

1919 Scott 3¾h.p. Combination, duplex frame, spring saddle, petrol tank under top tubes surmounted by aluminium cover-plate, lamps, horn, etc., Rennoc 60 gns, R.34 sidecar, windscreen; a real bargain; 75 gns.—Edwards, 50, Harrington Rd., South Kensington [4455

1920 Scott, with exceptionally comfortable Rideezi sidecar, carries Scott's recent guarantee 85 m.p.g. and 45 m.p.h. solo, fitted magnificent oversize Rapson non-puncturable tyres throughout, special pedals (detachable), lady's use, lamps, etc., tax and insurance to December; £80.—M.H., 208, Upper Parliament St., Liverpool. [5536

3¾h.p. Scott, 1920, special model, sloping tank and duplex tubes from steering head to saddle pillar, tank holding 2¼ gallons has aluminium cover plate holding double oil drips and speedometer driven from back wheel, automatic oiling to all chains and engine, spring seat pillar, new 650×65 tyres, F.R.S. Major lamp, horn, and all tools, licensed, Watsonian A aluminium sidecar and windshield, overhauled by makers last February; bargain at £115 for cash; photo if desired.—Worsley, 25, St. Cuthbert's, Bedford. [5641

*Spare Parts.*

SOUTH London Scott Service Depôt.—Scott Spares: Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone 1129. [8353

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock Write for free spare part list, stating year of manufacture. [0751

### Singer.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. 1910 Singer, 2 speeds; £25. [5890

£18/10.—2½h.p. Singer, enclosed Bosch, splendid running order, taxed 1922.—King, Egrove, Oxford. [5355

SINGER Combination 4½h.p. 1917, 2-speed, countershaft, Bosch, B.S.A., licensed, good condition; bargain, £45.—Ranford Garage, Malvern. [4779

SINGER 3½h.p., 2-speed, clutch, coachbuilt sidecar, tools, lamps, spares, excellent condition, 4 years' war stored, ride away; £45.—Tarry, Ticehurst, Sussex. [5161

You will save

money, trouble, and gain much that is worth having by consulting Layton Garages on any problem connected with the sale of a Motor Cycle—whether you have £40 or £140, or more, to spend. By doing this you will be assured of experienced disinterested advice, directed solely to helping you to get the right machine—new or used—for your needs, and the best possible value for your outlay.

*New 1922 Models.*

ARIEL, B.S.A., BROUGH-SUPERIOR, DIAMOND, DOUGLAS, EDMUND, ENFIELD, HUMBER, INDIAN, MASSEY-ARRAN, MATCHLESS, NORTON, RUDGE, SCOTT, TRIUMPH, and VELOCETTE.

Layton service is known and appreciated the whole world over. Its advantages can reach you wherever you may be. Write us, therefore, and let us show you how they can benefit YOU.

In addition to these 1922 Models we can offer you

UNIQUE BARGAINS

in second-hand machines, solo and sidecar. They are all perfect in every respect, and sold with the guarantee of our name and repute.

*Liberal Extended Payment and Exchange Terms.*

Layton Garages

90, High St., OXFORD.
And at Bicester.

581 and 784 Oxford.
35 Bicester
"Integrity." Oxford and Bicester.

*J. W. Tollady,*
*General Manager.*


## MOTOR CYCLES FOR SALE.

### Singer.

SINGER 2¼h.p., perfect order, fully equipped; £25. —168, Wandsworth Rd., S.W.8. [5440

SINGER 2¾h.p.; £19; just overhauled, all accessories, tyres good, well finished machine, bargain.—1, Trinity Church Rd., Castelnau, Barnes, S.W.13. [4847

SINGER Combination, 4½h.p., 2 speeds, countershaft, all-chain drive, tax paid; £45. Exchanges.—Humac's, 243, Lower Clapton Rd., N.E. Dalston 2408. [5855

SINGER Combination 1914, 3-speed, clutch, new sidecar body, bulbous back, plating, enamel, and condition as new, tax paid; £31.—Derrington, Grafton Rd., New Maldeo. 'Phone: 256. [5991

*Spare Parts.*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

### Sirrah.

SIRRAH 1922, Union 2¾h.p. engine, 2-speed, clutch kick start, Canoelet Minor sidecar, Cameo equipped, taxed, run 500 miles only, unscratched cost £92, sacrifice, 68 gns.; exchanges.—Peter Gordon Ltd., 110, Upper Richmond Rd., East Sheen. [5799

### Southey.

SOUTHEY 2½h.p. 2-stroke Motor Cycles, 2-speed kick starter and clutch, complete with lamps horn, licence holder and tools; price £60.—Southey and Co., Berkhamsted. [3320

### Spark.

SPARK 1922 models, Villiers engine, flywheel mag neto, £39/18; also 2-speed, kick starter model in stock, £52/10.—Eagles and Co., 275, High St Acton, London. [5774

### Sun.

SUN-VITESSE, late 1920, licence paid, mileage 1,000 £35.—Hilder, 22, Sackville Rd., Bexhill. [5584

SUN-VITESSE 1916, 2-speed, good condition, lamps licensed; £27.—W. J. Wilson, Station Rd., Aspley Guise, Beds. [5010

SUN-VILLIERS, good condition, fast and sporty, licensed 1920; bargain for quick sale, £22.—4 Longland, Blisworth. [5594

1921 (Oct.) Sun-Vitesse, done 400 miles, equipped taxed; gift, £29/10; exchanges.—Kent's, 417 Lord St., Southport. [5611

FOR Sale, J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S 60 gns. Send for catalogues. Trade supplied.—Jones Garage, Broadway, Muswell Hill, N.10. [0794

### Sunbeam.

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Sunbeam, 1917, 3 speeds; £75. [5894

CROSS, Effingham Square, is agent for Sunbeam for Rotherham. New models from stock. [6054

LANDUDNO.—Kelly Bros., 108, Mostyn St Agents. Sunbeams in stock. 'Phone: 277. [3311

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs etc [3144

3½h.p. Sunbeam 1918, fully equipped, splendid condition; £60, bargain.—Carr, 8, Alphington St Exeter. [4974

SUNBEAM, 1921, 3½h.p., brand new, list price £155: offers wanted.—Ginger, Sunbeam Agent Banbury. [4154

SUNBEAM 1922 light sporting model, complete equipped, licensed, guaranteed as new; £125.—Moss, Wem. [5784

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. 1922 Sunbeam, only ridden 400 miles, cost £140; price £115. [5894

1921 3½h.p. Sunbeam, Montgomery sidecar, lamp horn, speedometer, licence paid; bargain, £120. Wessex Garage, Exeter. [5240

SUNBEAM 3½h.p. Combination (1919); £90; full equipped, good condition, trial, taxed.—18 Grove Rd., Balham, S.W.12. [5044

8h.p. Sunbeam and sidecar, shop soiled only, spare wheel and tyre; sacrifice, £185.—Harris, 5 Upton Lane, Forest Gate, E.7. [4434

SUNBEAM and sidecar, 8h.p., 3-speed, all-chain drive, lamps, tyres new; £70; any trial.—Bay 91, St. Peter's St., St. Albans. [4834

1921 Brand New Sunbeam, light touring model list price, £136/10; first cheque £125 secures —J. B. Milburn, Ltd., Penrith. [5374

8h.p. Sunbeam Combination, dynamo lighting, spare wheel, hood, screen, etc.; £125.—Seen at Wauchope's, 9, Shoe Lane, London, E.C. [5894

3½h.p. Sunbeam, 1920 touring model, small mileage lovely condition, insured till March, tax paid £100.—Joliffe, 11, Wellington Rd., South Ealing. [5344

## MOTOR CYCLES FOR SALE.

### Sunbeam.

21 3½h.p. Sunbeam, speedometer, lamps, leg-shields, detachable wheels, etc., excellent condi-; £108.—Maudes', 100, Paris St., Exeter. [6060

.p. Sunbeam, with extra large Gloria sidecar, com-ilete lamps, speedometer, hood, ready to go any-re; £110.—53, Leslie Park Rd., Croydon. [5297

'NBEAM 1919 3½h.p., 3-speed, kick start, hand clutch, all-chain drive, Sunbeam sidecar, all s, speedometer, screen; £105.—Maudes', Walsall ge, Walsall. [5283

9.—Sunbeam Combination, 3½h.p., 3 speeds, clutch, kick starter, new sidecar, lamps, licence, ing, apron, accessories, splendid condition.—63, n Rd., Brixton. [5511

21 3½h.p. Sunbeam solo, condition like new, licensed December 31st, 2 Lucas lamps, inter-geable wheels; £105, no offer; exchanges.—198, St., Hammersmith. [5752

20 3½h.p. Sunbeam Combination, Lucas electric lamps, speedometer, mudshields, spare wheel, ct condition; £130, or offers.—Wyncote, Cleator Warbrick Hill, Blackpool. [5300

NBEAM 3½h.p. 1920 Combination, sporting c.b., fully equipped electric and acetylene, Cox or ad B., condition perfect, full tax; 114 gns.—Barron Rd., Northfield, Birmingham. [4902

h.p. New 1922 Sunbeam Light Solo, £136/10; 3½h.p. T.T. model, £136/10; 3½h.p. new 1922, pattern model, £126; easy terms and exchange.—chope's, 9, Shoe Lane, London. 'Phone: Holborn [5900

'NBEAM 1921½ 3½h.p. Sports, ridden only in few competitions, gold medal winner London-Exeter, pped, taxed, mileage 1,500; 105 gns.; exchanges.—r Gordon, Ltd., 110, Upper Richmond Rd., East n. [5791

NBEAM 3½h.p. Sports, light solo combination, new November, 1921, accumulator lighting, kick er, speedometer, full equipment, tax paid, owner og car; accept reasonable offer.—Dufty, 115, Un-ham Rd., Leicester [1933

TE 1920 3½h.p. Sunbeam Combination, just received from makers after complete overhaul, re-nelled, unused 1922 sidecar (Sunbeam), spares. ssories; £137/10; any examination.—Tregelles, 31. olk Av., Southampton. [4710

.p. Sunbeam Combination, 1919, little and carefully used, smart and sound, just overhauled and nelled throughout makers, all accessories; about 5, or exchange for nearly new 2-seater; cash ad-nent.—12, Park St., Cambridge. [5575

.p. Sunbeam Combination, 1918, well kept, overhauled, detachable wheels, triple tank, tyres good, Klaxon lamps, sidecar newly upholstered, ing, 2 luggage grids, licence paid; £105, or est.—Edwin, 50, Abbotts Park Rd., Leyton, E.10 [5123

21 3½h.p. Sporting Model Sunbeam Motor complete with lamp, generator, horn, and usua es, cast aluminium plates, new in April last, and in ptimally good condition, tyres unpunctured; nearest to £110.—Geoffrey Smith, *The Motor Cycle*, ntry [X428

.p. Sunbeam Combination, 1920 model, mechanically perfect, dynamo lighting and horn, dometer, spare wheel, 3 nearly new Dunlops, iscreeo, Tan-Sad, spare chain, etc., unused since October; £150 or near offer.—Dr. Livingstone, nt Lodge, Worplesdon, Surrey. [3292

NBEAM Combination, 1917, 8hp., 3 speeds, C. and K.S., Lucas dynamo, Lucas electric horn, ey speedometer, watch, leg guards, Binks carburetter, Sports sidecar, in really splendid order, s excellent, guaranteed; £110.—Homac's, 243, er Clapton Rd., N.E. Dalston 2408. [5854

### Taplin.

20 Taplin, 3h.p. Dalm engine, 2-speed, gear box, equipped, licensed, makers' certificate, 54 h.; £38; after 7.30.—Torrome, 10, Cathcart Hill, 9. [3717

### T.D.C.

ORTING 2¾h.p. T.D.C. 1920, specially tuned, C.A.V., knee grips, long exhaust, photo; £25/10, s.—20, Frankfort St., Birmingham. [5152

### Torpedo.

ORPEDO-PRECISION 2¾h.p., 2-speed, countershaft, splendid condition throughout, guaranteed; .—7, Cowdrey Rd., Wimbledon. [5762

### Triumph.

REMIER Motor Co. for 1922 Triumphs.

MEDIATE delivery of type H, 4h.p., 3-speed, £105; type S.D., chain drive, £115; type R., .p., overhead valve, £120; type L.W., lightweight, ; sidecars from £20 to £50; easy payments, 4 per . extra; free delivery to any address.—The Premier or Co., Aston Rd., Birmingham. [0867

ULIANS of Reading have Triumph-Ricardo in stock; £120. [5708


MANUFACTURERS' STOCK

MAKINKOT BRAND

*TO BE CLEARED.*

Fawn double texture, interlined rubber,

MOTOR SUITS

THESE suits are made of Fawn double texture cloth, interlined rubber.

The seams are cemented, sewn and taped, making these absolutely waterproof.

Will stand any amount of hard wear.

The jackets are made double-breasted, with belts and wind cuffs

The Motor Leggings are made fastening with clips and straps, and have wind gussets in leg.

These suits actually cost over 30/- to manufacture without any profit, but we have several thousands to clear

Every suit is guaranteed absolutely waterproof, and should these not meet entirely with your approval, we guarantee to return your money in full, if returned within seven days.

SPECIAL PRICE,

29/11 Carriage 1/- extra.

We have also several thousands heavy Twill Suits to offer. These are made of the heavy Twill used for making Motor Hoods, and are one of the finest suits made for motor cycling, interlined rubber. They are made with sewn and cemented seams, and taped, also the seams of these suits are striped, making these garments absolutely waterproof, and we are prepared to give a guarantee that these are absolutely impossible for water to penetrate through. The Motor Leggings are made in the same way with wind gussets, fastening with clips and straps. The Suits are in sizes 34, 36, 38, 40, 42 and 44 chest, lengths inside leg are 27, 29, 31. Please state when ordering by post, measurements of chest, length inside.

50/- Carriage 1/- extra.

Orders to be addressed—

*The* LANCASHIRE and CHESHIRE RUBBER Co.

MAKINKOT HOUSE,

30, Thomas Street,

LIVERPOOL.

'Phone 4891 Bank, Liverpool.


## MOTOR CYCLES FOR SALE.

### Triumph.

MAUDES' Motor Mart for 1922 Triumphs. [5267

1922 Triumph-Ricardo Model in stock; £120.—Below.

1921 4h.p. S.D. Model Triumph-Gloria Combination, indistinguishable from new, electric lighting, Cowey speedometer, tax paid, £130; 1919 Model HT. and sidecar, Easting, lamps, tax paid; £80.—Daw, Triumph Agent, 114, Brixton Hill. [5393

1921 S.D., all chain Triumph and Gloria, all accessories; £112.—Below.

1919 H. Triumph and sidecar, all accessories; £80.—Below.

1917 H Triumph and Montgomery sidecar; bargain, £68.—Harry Nash, 365, King St., Hammersmith. [5519

WE can deliver Triumph 1922, new, model S.D.; £115.—Below.

WE can deliver Triumph 1922, new, model H.; £105.—Below.

TRIUMPH 1919, splendid condition, new tyres, 3 months' guarantee; £75.—Below.

TRIUMPH (1919) renovated throughout, grand bargain; £65.—Below.

TRIUMPH Combination 1918, new sidecar, apron, etc.; £70.—Below.

ANY of the above machines supplied on extended payments; buy from Triumph Agents.—The Hackford Engineering Co., 33, Hackford Rd., Brixton, S.W.9. [5947

NEW 1921 4h.p. Triumph, Model H; £95.—Bounds Garage, 223, High Rd., Kilburn. [5016

£14.—Triumph 3½h.p., expanding pulley, lamps; bargain.—29, Victory Rd., Wimbledon. [4894

£20.—Triumph 3½h.p., T.T., Bosch, Amac, guaranteed perfect.—19, Norland Sq., W.11. [4878

TRIUMPH-RICARDO in stock; £120.—Premier Motor Co., Aston Rd., Birmingham. [0868

1920 Triumph Combination, beautifully equipped; £80.—24, Balliol Rd., North Kensington. [5201

1918-19 Triumph, not re-conditioned model, all on; £60.—Tewkesbury Garage, Tewkesbury. [4923

1918 Countershaft Triumph, fully equipped, smart; £48.—24, Balliol Rd., North Kensington. [5197

TRIUMPH 1920 Fixed Gear Sports, practically unused; £55.—Clark, 7, Exhibition Rd., S.W.7. [4617

TRIUMPHS.—Prompt delivery and service.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3692

WAUCHOPE'S, 9, Shoe Lane, London.—4h.p. Triumph, 1920, Model H, 3 speeds, etc.; £85. [5892

1921 Baby Triumph, perfect condition, lamps, horn, accessories; £45.—35, Woodside Green, S.E.25. [4999

F.O.C.H. for Triumphs; latest models in stock; also 1921 solo.—5, Heath St., Hampstead (near Tube). [5067

£18.—Triumph 1911 3½h.p., equipped, tax paid, bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [5413

CROSS, Effingham Square, is agent for the Trusty Triumph for Rotherham. All models from stock. [6052

TRIUMPH Combination 4h.p., accumulator lighting; £80.—5, Busbey Hill Rd., Camberwell. Two knocks. [4947

TRIUMPH 1912, splendid condition, Druids, lamp, horn, licensed; £23.—Thomson, Taviot Crescent, Hawick. [4714

£16.—3½h.p. Triumph, single speed, Bosch, B. and B., good running order.—King, Egrove Farm, Oxford. [5354

BARGAIN.—1920 Triumph Combination, very smart, equipped; 82 gns.—67, Fernlea Rd. Balham. [5936

£19.—3½h.p. Triumph Sports, clutch, K.S., variable gear, tax, ride away.—Ewers, Newton Rd., Burton-on-Trent. [5682a

1920 Triumph Combination, beautiful condition; £82.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [5967

15 GNS.—3½h.p. Triumph, fine order, coachbuilt sidecar, £6.—Fisher, "Roseleigh," Heston, Hounslow. [5435

4h.p. Triumph, approximately 1918, 3-speed, etc., in excellent condition; £68.—Maudes', 100, Paris St., Exeter. [6061

SNIP.—1920 Baby Triumph; £35; fully equipped, taxed, excellent; exchanges.—Kent's, 417, Lord St., Southport. [5608

TRIUMPH, disc wheels, sloping frame, very sporting, single gear; £30, very cheap.—19, The Pavement, Chadwell Heath. [5674

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH 1920 4h.p., 3-speed, kick start, hand clutch, Gloria sidecar; £100.—Maudes', Walsall Garage, Walsall. [5282

1918 4h.p. Countershaft Triumph, fully equipped; £48.—Hillier (side bell), 9, Wallingford Ave., North Kensington. [5500

£27.—T.T. Triumph, clutch, licensed, latest tank, copper exhaust, smart, perfect; bargain.—89, East Hill, Wandsworth. [5233

£65.—4h.p. Triumph, tax paid, accessories, guaranteed.—Clifford Wilson, 177, Westmr Bridge Rd., S.E.1. [4600

1920 Triumph, Mills-Fulford sidecar, taxed, fully equipped, guaranteed; £85.—51, Upper Richmond Rd., Putney. [5135

MOFFAT, Yeovil, Official Triumph Service Agents.—1922 models from stock; exchanges; all spare parts. 'Phone: 50. [5725

1914 Triumph, 3-speed, all on, 28×3 tyres, discs, perfect order, Stepney district; £45.—Box 1238, c/o *The Motor Cycle*. [4934

1921 Triumph all-chain 4h.p. Combination, Sporting Montgomery, discs, excellent and very smart; £105.—Below.

1918 Triumph 4h.p. Countershaft Combination, whole renovated as new, excellent lot; £67/10.—Below.

1917 Triumph 4h.p. Countershaft, just renovated and in fine condition throughout; £48/10.—Below.

1920 Triumph 4h.p., W.D. model, renovated by Triumphs, exceptionally fine condition throughout, lamps, tax paid, tools, etc.; £68/10.—Goad, "Norman" Lodge," 122, Maida Vale. 'Phone: Hampstead 1353. [5861

RICARDO-TRIUMPH actually in stock, new; first £120 secures.—Moffat, Triumph Service Agent, Yeovil. 'Phone: 50. [5722

TRIUMPH 1921 Type H, fully equipped, licence paid, perfect condition; £85.—Ratcliffe Bros., 200, Gt Portland St., W. [5714

TRIUMPH, good 3½h.p., sidecar, and lamps, in running order; £30.—J. Tutton, 27, Riverhall St., Wandsworth Rd., S.W. [5921

BRAND New Triumph, Model H, unused, unregistered; £85; carriage paid 100 miles.—51, Upper Richmond Rd., Putney. [5132

TRIUMPH 1919 4h.p., 3-speed, kick start, hand clutch, Hughes sidecar, all lamps; £105.—Maudes', Walsall Garage, Walsall. [5285

1920 4h.p. Triumph, T.T. sporting, N.S.U. 2-speed, also spare pulley, like new; £78.—Maudes' 100, Paris St., Exeter. [6062

1921 Triumph-Henderson, excellent condition hood, Cameo, accessories; £110. — Chilton House, Sudbury, Suffolk. [3563

3½h.p. Triumph, clutch model, new cylinder and piston, tax paid, splendid condition; £32.—22, Bengeo St., Hertford. [4734

TRIUMPH Combination or Solo for sale, thoroughly overhauled, bargain, trial.—Apply, 145, Blackhorse Lane, Walthamstow. [4981

IN Stock.—1922 4h.p. Triumph, model H, £105; cash or deferred.—D. and S. Autocar Co., 33, The Parade, Golders Green. [5740

TRIUMPH Combination 1913, all accessories, just overhauled and enamelled; £35.—Peppercorn, 7, South Grove, Highgate Hill. [5007

TRIUMPH 1921, Model H., licensed, mileage 700, solo, unpuactured, fully equipped; £90.—Woodward, Hampton Rd., Solihull. [5315

1919 countershaft Triumph Combination, 4h.p., tax paid, excellent condition; nearest £78.—6, Thurlow Rd., Hanwell, W.7. [5290

TRIUMPH Combination 1921, Dunhill sidecar, all accessories, tax paid; £110.—Mr. Underhill, 33, Hackford Rd., Brixton, S.W.9. [5949

IN Stock.—Triumph-Ricardo, also Model H. Exchanges or deferred payment.—Edwards, 50, Harrington Rd., South Kensington. [6017

1921 Baby Triumph, new condition, 2-speed, lamps, tools, tax paid, Dunlops; £52/10.—Gordon, 14, Court Rd., West Norwood, S.E. [5009

1919 Triumph, Gloria chassis, fully equipped, Easting, taxed, guaranteed as new; £82/10.—51, Upper Richmond Rd., Putney. [5136

TRIUMPH 4h.p., countershaft, perfect condition, complete Tan-Sad, stirrups, tax paid; £70.—4, Kempshott Rd., Streatham Common. [4787

1918 Triumph Combination, full equipment, beautiful outfit, guaranteed; £69/10.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [5964

TRIUMPHS.—Every model in stock, including overhead valve; delivery immediate.—W. Brandish and Sons, The Triumph Garage, Coventry. [5985


# FOLLOW THE LEAD

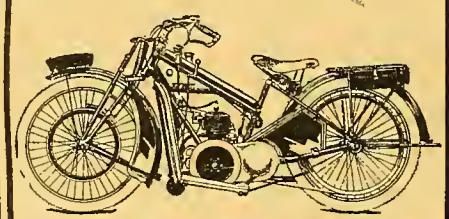
of others and put : your trust in :

# 'IVY' MOTORS

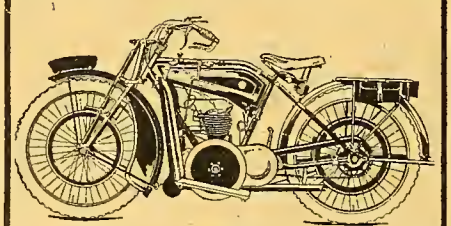
—They don't fail you!

Their classy and distinctive appearance stamps them as aristocrats of their type.

Made in various models, but in one quality only.



**The Ladies' Favourite — Dainty and Superb. 2½ h.p., 2-speed Gear - £62**



**Ivy Three—All-Chain Drive, 3-speed Gear, Cush Hubs - - - - - £77**

## S. A. NEWMAN, Ltd.,

IVY MOTOR WORKS,
ASTON CROSS, BIRMINGHAM

London: MAUDES' MOTOR MART,
Great Portland Street.

*Art Catalogue post free on request.*


## MOTOR CYCLES FOR SALE.

### Triumph.

£23.—3½h.p. Triumph, Bosch, 1921 B. and B., tyr belt excellent, recently re-enamelled and ov hauled.—5, Thames View, E. Molesey. [55

72 GNS.—Late 1920 Triumph, indistinguishal from new, fully equipped, registered; gift; af 5 p.m.—4, Elm Gardens, Hammersmith. [59

1922 4h.p. Triumph Model H, 3 speeds, careft used, 200 miles only; £95.—Walbro Mot Cycle Co., Saffron Walden. 'Phone: 45. [57

CROYDON Agents Triumphs, all new models a large range of second-hand in stock.—Moor Presto Motor Works, North End, Croydoo. [08

1918 Countershaft Triumph, Canoelet sidec lamps, tools, spares, licesed December; £ or offer.—32, Pitcairn Rd., Mitcham, Surrey. [47

1922 Triumphs, all models. Still the finest sidg Catalogues with pleasure.—Sam E. Claphs (Motors), 27, Stockwell St., Greenwich, S.E.10. [46

TRIUMPH Countershaft, 1918, renovated, spleod condition, trial; £65; sidecar, £3/10; t paid.—Seen at 49, North St., Portslade, Sussex. [52

TRIUMPH 1921 (March), Canoelet sports sidec lamps, horn, etc., not used since October, almc new condition; 95 gns.—T.A.D., Penrhyn, Enfield. [47

1920 Triumph, countershaft, speedometer, electi lighting, excellent condition throughou licensed; £70.—23, Tivoli Rd., Crouch End, N.8. [55

TRIUMPH.—Immediate delivery of all 1922 mode including the 3½h.p. Type R, o.h.v. engine; £12 —From P. J. Evans, John Bright St., Birmingham. [59

TRIUMPH Model H, 1918, just completely ov hauled, well equipped, tax, splendid conditio £65 or near.—Sykes, King's College, Cambridge. [52

BABY Triumph, end 1920, Lucas accessori Stewart speedometer, perfect condition; £5 seen by appointment.—E., 119, High St., Croydon. [48

SHEFFIELD Agent for Triumphs; all models stock for immediate delivery.—J. A. Stace Triumph Service Depot, 12, Ecclesall Rd., Sheffield. [08

TRIUMPH.—Longman Bros., 17, Bond St., Ealin Tel.: 689. Official district agents. All mode exchange; deferred payments. Write, 'phone, or ca [60

TRIUMPH Combination 4h.p., 3-speed, countersha gear, kick start, late model windscreen, lugga grid, etc.; £60.—63, Arlingford Rd., Brixton, S.W. [50

COUNTERSHAFT Triumph, as new, fully guara teed, bargain, £75; 1918 Triumph, very litt used, £65.—26, Tulse Hill, Brixton. 'Phone: Brixt 1292. [58

TRIUMPH 1922 Models R. and SD. in stock; de very immediately.—Elce, Ltd., 15-16, Bishop gate Avenue, Camomile St., E.C.3. 'Phone: Aveo 5548. [00

TRIUMPH 4h.p., grand machine, ready for instan and continuous work, complete lighting, tool spares, supreme bargain; £50.—Fryer, Doveridg Derby. [47

TRIUMPH Combination 1922, lamps, horn, tax pai smart turnout done 500 miles; what offers?- Mr. Norchi, 59, South Island Place, Clapham Rd S.W.9. [59

BARGAIN.—July, 1921, Triumph-Gloria, speed meter, hood, Tan-Sad, Triplex screen, unscratche 114 gns.—Garaged at Bedford Garage, Bedford Hil Balham. [59

1921 2¼h.p. Triumph, fully equipped; exchang higher powered, geared solo; sell £50; by a pointment.—Guille, 69, Bristol Rd., Edgbaston. Bi mingham. [51

TRIUMPH 1920, renovated, horn, speedometer, T. bars, electric lighting, Ricardo piston, spare watch; after 7 pm.; £69.—35, Tooting Bec Garden Streatham. [47

TRIUMPH Combination 1914 4¼h.p., just bee thoroughly overhauled, Sturmey-Archer 3-speed tyres good, excellent condition.—Thomas, 55, Chnrc St., Oswestry. [47

1917-18 Triumph Combination, countershaft, 3-speed lamps, horn, tax paid, coachbuilt sidecar Easting windscreen, overhauled; £72. — The Firs Westfields, Hereford. [48

4h.p. Countershaft Triumph, engine No. 26462 Bristol sidecar, all accessories, Easting, guarat teed perfect, just overhauled; £78/10. — Spencer Weston Hotel, Bath. [49

TRIUMPH 3½h.p., as new, tank, D.R. bars, mud guards, controls, and enamel all new, tax paid perfect condition; £35, or near offer.—9, Meado Rd., Pinner, Middlesex. [51

TRIUMPH, early 1921, Dunhill sidecar, the whol in excellent condition, good tyres, largest P.E lamp, 2 generators, Klaxon, new belt, spares; £95.- 81, Manor Lane, Lee, S.E. [48

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Triumph.

1922 Model S.D. Triumph, lamps, horn, speedometer, Tan-Sad, brand new, ridden 8 miles; price £110, or near offer.—2, Adelaide Villas, Nether St., North Finchley, N.12. [5020

BRAND New 1922 4h.p. Triumph Combination in stock, complete with new coachbuilt sidecar, lamps and horn; £125.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [5736

1919 Triumph, Canoelet sidecar, Easting windscreen, electric lighting set, spares, excellent condition; 80 gns.; owner bought car.—Stubbs, c/o Newsum, Icebridge Heath, Lincoln. [4760

1965.—Triumph, 1916, countershaft Combination, 1920 sidecar, tax paid, insured, all accessories, tires, good condition; after 6 p.m.—Barrow, 67, Elfour Rd., Highbury, N.5. [5214

TRIUMPH and Sidecar, 1920, fully equipped, Lucas lamps, horn, Cameo screen, spring footboards, in perfect order; £95.—Homac's, 243, Lower Clapton Rd., N.E. Dalston 2406. [5856

TRIUMPH, 4h.p., 1920 T.T. model, fixed engine, accumulator electric lighting, mechanically excellent, tyres good, tax paid; accept reasonable offer. Duffy, 115, Uppingham Rd., Leicester. [3329

1922 Triumph, SD Model, in perfect condition, only used few hundred miles, licence paid to end of Mar, fitted with lamps and horn; a genuine bargain, £100, or near offer.—Fryer, Leominster. [5746

ROBERTSONS Motors, Ltd.—1921 Triumph, all chain, Millford sidecar, accessories, tax paid, £105; chain-cum-belt, Millford sidecar, accessories, tax paid; £95.—157b, Gt. Portland St., W.1. [6081

TRIUMPH 1920, Gloria de Luxe coachbuilt sidecar, hood, screen, etc., all lamps, speedometer, tool kit, original tyres good, mileage 3,000, tax paid; £100.—145, Widmore Rd., Bromley, Kent. [4936

TRIUMPH, 1913, clutch and N.S.U. 2-speed, discs, mudshields, in splendid cooditioo, new tyres, £40, licence paid; light coachbuilt sidecar, £10.—Wilkinson, 7, St. Herbert St., Keswick, Cumberland. [4889

1918 Triumph 4h.p., countershaft, with lamps, horn, tax paid, etc., perfect condition, enamel and plating like new; £56.—T.M.C., 20, Oxford Mews, Litchborne St., Edgware Rd., London, W.2. [5764

VAUCHOPE'S, 9, Shoe Lane, London.—Triumph and sidecar, 4h.p., 1914, 3 speeds, etc., £50; also 4h.p. 1914 Triumph solo, 3 speeds, £40; and a 4h.p. 1918 W.D. model, 3 speeds, etc., £65. [5893

£30 GNS.—Triumph, 4h.p., countershaft, 1917, engine No. 50523, renovated, Duulop tyres, P. and H. lamps, horn, pump, tools, etc.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [5700

4h.p. Triumph, late 1918, good, fully equipped, Tan-Sad, etc., or would exchange with cash for 9h.p. Harley combination, must be good, not later 1920.—Cecil Oxley, Oliver House, Whitehall Lane, Grays. [5623

PARKER'S Motors can supply all Triumph 1922 models at list prices and give an insurance policy against mechanical breakdown for 12 months free cash, deferred, or exchanges.—194, Balham High Rd. S.W.12. [3139

TRIUMPH 3½h.p., clutch model, re-enamelled as new, thoroughly overhauled, new T.T. handle-bars, Mac, lamps, and horn, perfect inside and out, very best; any trial; £29, or near.—68, Rattray Rd., Effra Rd., Brixton. [5606

TRIUMPH-GLORIA Combination 1919½, perfect countershaft, lavishly equipped, speedometer, lamps, Dunlops, Easting, luggage grid, hood, Tan-Sad, etc., spares, insured, tax paid; £97/10.—31, Ferndene Rd., Herne Hill. [4757

TRIUMPH 1919 Countershaft No. 64945 Combination, coachbuilt, new chassis, gas and electric, spares, tax and insurance, property doctor; £80, or near offer.—Seen, Atlas Garage, 27, Ardleigh Rd., Dalston, N. (P) [4881

1918 Triumph Countershaft Combination, Watsonian, windscreen, fully equipped, many spares, perfect condition, any trial, licensed and insured; £75, or nearest.—Champion, Lower Burnhams, Little Bookham, Surrey. [5107

1921 Triumph, S.D. combination, purchased Triumph Co. January last, done under 1,000 miles, electric lighting, spare accumulator, hood, screen, Cowey speedometer, legshields; £120.—9, Kenilworth Court, Putney. [5232

66 GNS.—1920-21 Triumph, 4h.p., countershaft, model H, practically indistinguishable from brand new, licensed, equipped; accept modern Lightweight part; after 5 p.m.—20, Treen Avenue, Hogger's Corner, Barnes, S.W.13. [5251

TRIUMPH 4h.p., 3-speed, 1920 model, Lucas lighting, Ace discs, Cowey speedometer and horn, spare cover, tube, belt, chain sprocket, valve, barrel spring, perfect condition; any trial; £75.—C. F. Attleave, Westfield, Finchley, N.3. [4854

TRIUMPH countershaft model 1921, Whitley commercial convertible sidecar, excellent business or pleasure outfit, perfect condition, legshields and full equipment; £98, or offer.—Cornercroft, Ltd., Ace Works, Vecqueray St., Coventry. [4824


# The Juno Cycle and Motor Co.

*Proprietors:*
METROPOLITAN MACHINISTS Co., Ltd.
248, BISHOPSGATE, LONDON, E.C.2.

TELEPHONE: BISHOPSGATE 2195.
TELEGRAMS: QUILLS AVE LONDON.

ESTABLISHED OVER FORTY YEARS

## THE VERY BEST!

**A.J.S., ARIEL, B.S.A., CHATER LEA, DOUGLAS, ENFIELD, INDIAN, LEVIS, MATCHLESS, NORTON, RALEIGH, RUDGE.**

**SUN VITESSE.**

IN STOCK—NO WAITING.

## McKENZIE

**LIGHTWEIGHT MOTOR CYCLES.**

The little chap with a big heart.

Low price. Cheap running. Easy Payments.

26 Guineas cash, or

£6 0 0 deposit and 12 monthly payments of £2 0 0

Any Motor Cycles, Combinations (or Sidecars), can be supplied on our well-known GRADUAL PAYMENT SYSTEM.

Particulars on Application.

## CARBURETTERS.

Binks, £3 15 0. B. & B., 67/- & 72/-. A.M.A.C., 60/- & 72/-. Senspray, 67/- & 72/-. B. & B., shop-soiled, 50/-.

Sidecar Bodies, Sandum or Venus, from £5 15 0.

Underslung or step chassis from £7.

EVERYTHING FOR THE MOTOR CYCLIST AT REASONABLE PRICES.

NOTE.—Our large postal department ensures despatch per return post on all orders accompanied by remittance.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| Goggles. Triplex per pr. | 12 6 | W. S. R. Jets, all sizes | 8/6 & 10 6 |
| One piece noninflam - | 1 9 | Lycetts Motor Cycle Saddles | 1 9 0 |
| Rubber - - | 1 3 | Renolds Chain, ½ × ¼, per ft. | 5 6 |
| Chenille edged oblong glasses | 2 0 | Renolds and Coventry spares in stock. | |
| Bluemels 1921 Windscreen | 3 0 0 | Tan-Sads | 1 10 0 |
| Orto Hoods - | 3 5 0 | Bowden extra air inlets, complete - | 17 6 |
| Spring Shackles, set of four - | 5 6 | | |
| P. & H. Lamp Sets - - | 1 12 0 | | |

**FREE.** 96 pp. illustrated motor list with all latest price reductions. Call or write, Dept. M/C, address as above.


## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH-GLORIA Combination 1920, splendid condition, expert inspection invited, speedometer, Easting, spring footboards, legshields, Tan-Sad, Lucas lamps, Klaxon, watch, mirror, spares, tax paid end year; £120; evenings only.—22, Boscastle Rd., Highgate Rd., N.W.5. [5034

3½h.p. 1922 New Triumph, o.h.v., £120; 4h.p. combination, all chain, £155; 4h.p. S.D. solo, £115; 4h.p. combination, chain-cum-belt, £145; 4h.p. Model H, £105; 2¼h.p. Junior Triumph, £65; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5903

1920 4h.p. Triumph Combination, 3 speeds, best Montgomery sidecar with apron, luggage grid, locker in back, 8-volt electric lamp sets all round. Klaxon, brand new heavy tyres just fitted, tax paid December 1922, slightly used only; £115.—Walbro Motor Co., Saffron Walden. 'Phone: 45. [5735

TRIUMPH Combination 4¼h.p. 1918, just renovated, 3-speed Sturmey gear, engine shield, P. and H. lamps, tools, Millford chassis, smart sidecar, tyres unworn, Cowey speedometer, Cameo windscreen, side screens, tax paid; £80, or offer; trial evenings.—Conday, Ruskin Walk, Herne Hill, S.E. [5033

*Spare Parts.*

TRIUMPH Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7545

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [1247

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; gear overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10. [0809

SEND to the Rhosha Motor Garage, South St., Romford, for Triumph and Sturmey-Archer spares. No disappointing delays; every part in stock. Repairs by skilled mechanics. We are official service agents. Telephone: Romford 584. [7766

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Velocette.

PREMIER Motor Co., for 1922 Velocettes.

IMMEDIATE delivery of Model E.2 2-speed, £65; E.3 3-speed, £72/10; E.L.2 lady's open frame, £68; all with clutch and kick starter; easy payments, 4 per cent. extra; carriage paid to any address.—Premier Motor Co., Aston Rd., Birmingham. [3020

VELOCETTE 1921 2¼h.p., 2-speed, all-chain drive, tax paid; £48.—Maudes', Walsall Garage, Walsall. [5278

VELOCETTE 2¼h.p., extraordinary hot stuff, lamp, horn, tax, perfect bargain; £16.—187, Elm Rd., New Malden. [5963

2¼h.p. New 1922 Velocette, all models, from £65; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5899

VELOCETTE 2¼h.p., 2-speed, 1921, unused Bonniksen speedometer, legshields, Lucas lamps, absolutely new; 48 gns; cost £80.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. [6008

VELOCETTE.—Last 2 late 1921 models, 3-speed, £60; ladies', £57/10; splendid opportunity, take it now.—O'Donovan Motors, 76A, Gt. Portland St., W.1. [4235

### Verus.

VERUS-BLACKBURNE 4h.p., December, 1920, sports, all accessories, splendid condition; £65.—116, Ichmery Rd., Catford. [4816

1920 Verus 2¼h.p., single-speed, good as new, electric light outfit, good accessories, suit overalls (5ft. 6in.), insurance, tax paid; lot cost over £75; 40 gns., no offers; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [1020

### Victoria.

VICTORIA, 1920 Toranda Sidecar, 3½h.p. J.A.P., clutch, kick-start, lamps, horn, screen; 63 gns.—Edwards, 50, Harrington Rd., South Kensington. [6016

### Vindec.

VINDEC, 2-speed, 2-stroke, in excellent condition; £27.—40, Replingham, Southfields, S.W.18. [5697

VINDEC 2-stroke, 2-speed, 2½h.p., fully equipped, O.K. condition; £30.—13, School Lane, Addlestone, Surrey. [5372

### Villiers.

2¾h.p. Villiers 2-stroke, lamps, licensed, nice little bus; £22; exchange.—Malvern Rd. Garage, Thornton Heath, Surrey. [6058



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue of Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Werner.

2¾h.p. Werner, excellent running order, tax paid; £10/10.—17, Heaton Rd., Mitcham. [5650

£22.—Werner 4h.p., fast, powerful, any trial; lightweight part.—57, Kenbury St., Camberwell, London. [5468

### Wolf.

WOLF, 2-stroke, 2¾h.p., less carburetter; £17/10, or near offer secures.—Rex, Middle St., Taunton. [5619

WOLF 3h.p., 1915, overhauled; through death; £17.—Fairhurst, Behind 68, Standishgate, Wigan. [5320

### Wooler.

1920 Wooler, good running order, tax paid; £33. Brockbank, 58, Lord St., Southport. [5869

WOOLER 2¾h.p. flat twin, 1920, 2-speed, clutch, fully equipped, beautiful mount; £45.—Telford Garage, 47, Streatham Hill, London, S.W.2. [5873

### Zenith.

H.
F.
EDWARDS and Co.

50 Harrington Rd., South Kensington, offer several brand new unused 1921 5h.p. Sports Zeniths, with makers' full guarantee, at 76 gns.; listed at £110. Your machine taken in part exchange, or £27 down, and 12 instalments of £4/14/7. Also several brand new 1921 countershaft 5-6h.p. models, clutch, kick start; 85 gns. Listed at £118. Your machine taken in part exchange, or £30 down and 12 instalments of £5/6/2. [6017

F.O.C.H. for Zeniths; latest models in stock.—5, Heath St., Hampstead (near Tube). [5066

ZENITH 5h.p. countershaft, first-class order, all on; £58.—Hooydonk, Oakengates, Letchworth. [4798

ZENITH Combination, 6h.p., lamps, horn, tax paid; £50.—James, 46, The Green, Kew, Surrey. [5093

8h.p. Zenith Sports, December, 1919, perfect condition, accessories; £65.—6, Alexandra Rd., Bedford. [55

ZENITH 5h.p. Sports, 1921, new and guaranteed, few only left; 76 gns.—Clark, 7, Exhibition Rd., S.W.7. [4615

1920 5-6h.p. Zenith Sports Combination, in excellent condition; nearest £75.—16, Creber St., E. Dulwich. [5776

4h.p. Zenith-Gradua, splendid condition, trial, complete, licensed; £20; offers.—Preston, Lambton St., Monton, Eccles. [5301

ROBERTSONS Motors, Ltd.—1922 shop-soiled Zenith-Bradshaw, Gradua gear; £100.—157b, Gt. Portland St., W.1. [6082

6h.p. Zenith Combination, 2-seater sidecar, all accessories, perfect running order; £80, or near offer. —Baker, High St., Ealing. [4964

ZENITH 1915 3½h.p. J.A.P., new back tyre and belt, pillion, taxed, decarbonised; £35.—38, Lansdowne Gardens, Stockwell. [4969

ZENITH 1922 8h.p. Combination, clutch model, fully equipped; best offer over £135.—Griffith, 19, Purley Rise, Purley, Surrey. [5121

ZENITH Sports 8h.p., June, 1920, good condition and tyres, tax paid, fully equipped; offers.—80, Station Rd., Hampton, Middlesex. [5323

EXCHANGE 3½h.p. Zenith Combination, clutch, K.S., for 2-speed Henderson; sell; best offer.—Flat 7, 122, Southampton Row, W.C.1. [5933

ZENITH Combination, Gradua, 1920, any trial, guaranteed, all accessories; £105, or offer.—"Lochvoil," Gloucester Rd., New Barnet. [5119

5h.p. Sports Zenith, 1920-21, speedometer, horn, and all tools, very good condition, any trial; £75, or near offer.—Barker, 19, Rookfield Av., Muswell Hill, N.10. [5595

ZENITH-BRADSHAW 1922, actual show model, belt drive, licence, lamp, spares, ridden 500 miles; £100; Wimbledon.—Box 1249, c/o *The Motor Cycle*. [5077

ZENITH 1921 8h.p. Countershaft Combination, speedometer, lamps, horn, taxed, new condition, under 1,000 miles; £115.—Clark, 7, Exhibition Rd., S.W.7. [4613

ZENITH-GRADUA 4-5h.p. Twin, just overhauled and bushed, perfect running order and condition, tax paid; £50.—Wyeth, The Hollies, East Oakley, Hants. [5032

ZENITH-J.A.P., 1920, 5-6h.p. sporting Combination, electric light, screen, speedometer, accessories, insured, low mileage; offers.—12, High Lane, Chorlton-cum-Hardy [3308

78 GNS.—1920-21 5h.p. Zenith-Swan Sporting Combination, tax paid, insurance, completely equipped, brand new condition.—Surman, 12, Brooks Rd., Chiswick. [5516


# AMAZING OFFER!

# SPEED

## 80 m.p.h.

**Guaranteed by Brooklands Certificate.**

# DOUGLAS SPORTS MODEL

## Timed by Mr. C. G. PULLIN.

I have been successful in completing arrangements with Mr. C. G. Pullin, the 100 m.p.h. record holder, to tune up a limited number of 3½ h.p. Sports Models. These machines will be passed at Brooklands, and arrangements have been made with the timekeeper to certify the speed of each and to issue a certificate. Mr. Pullin's retaining fee is exceptionally high and obviously above the pocket of the average purchaser. However, I have decided to spread the cost over a number of machines, charge it to publicity and make only a nominal charge to purchasers for timing, carriage to Brooklands, track fee, certificate fee, etc.

The cost will be **£3,** which, with the new price of the Sports Model at **£115,** gives you the fastest 3½ h.p. in the world at the lowest price of all for the Sports Model.

**REMEMBER** The Douglas Sports has detachable and interchangeable wheels, two shock absorbers, 650 × 65 tyres, all-steel lug frame, reliable brakes, and is also a real touring 'bus, with kick starter, 3-speed gear handlebar, control clutch, all lamps.

**REMEMBER** only a very limited number of PULLIN TIMED MODELS will be sold.

**REMEMBER** you can win any speed event against the "cracks" at 80 miles per hour.

Write about my special offer of 1922 2¾ h.p. 2-speed models, 55 miles per hour, at **£69.**

*W. G. Coram*

**THE DOUGLAS SPECIALIST AND OFFICIAL AGENT,**
**140, VICTORIA STREET, BRISTOL**
*(Late Douglas Motors, Ltd.)* *Tel. 3792*

**E.I.C.** Magneto Service Depot for West of England. All spare parts for any model by return.

**A.C.U.** Official Repairer. Any repair finished in one week. Any spare part by return of post.

**Any spare part for any model Douglas or Williamson from 1908 upwards by return of post without fail. Douglas Repairs completed, including a complete rebuilding and enamelling in seven days.**


## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH, 1919, 8h.p. J.A.P., with Dunhill coa built sidecar, hood, screen, lamps, etc., tax pi till end of year; £8/15.—Wilkins Simpson, oppos Olympia, London. [58

ZENITH-BRADSHAW 1922 Sports, new conditi fully equipped and insured; £97; or exchar suitable combination.—Philipps, Andenne, Pearl Av., Southampton. [47

1919 Zenith 8h.p., sporting, electric lighting, doul oiling, special 4in. plated exhaust, special dis tax, exceptionally smart; £65.—Goad, 122, Maida Va 'Phone: Hampstead 1353. [58

ZENITH 1920 6h.p. Sports, luxuriously equipp everything as new, guaranteed perfect conditic £68; exchange combination, cash adjustments.— Riverdale Terrace, Richmond. [59

ZENITH-BRADSHAW 1922, 3-speed, all-chain dri in stock; £119. Best prices allowed on exchan deals.—Newnham Motor Co., 223, Hammersmith R W.6. 'Phone: Hammersmith 80. [23

6h.p. Sports Zenith, 1915, discs, large exhau enamelled red 4-64 m.p.h. on top gear of 3½ recently overhauled, excellent condition; £50.—Hol sey Tavern, High St., Hornsey, N. [55

ZENITH Combination, 4h.p., J.A.P., Gradua ge lamps, horn, tyres excellent, engine overhaul at J.A.P.'s, guaranteed perfect; £60.—Homac's, 24 Lower Clapton Rd., N.E. Dalston 2408. [58

BARKER'S Motors can supply 1922 Zeniths, models, at list prices, and give an insuran policy against mechanical breakdown for 12 mont free. Cash, deferred or exchanges.—194, Balham Hi Rd., S.W.12. [31

1920 8h.p. Zenith Combination de Luxe, counte shaft model, electric lighting, discs, whee speedometer, and accessories, perfect condition; £9 no offers.—Smith, 9, Johnson St., Notting Hill Ga W.11. [59

£52/10.—Sports Zenith, 8h.p., latest colours, bla and red, all accessories, engine rebush throughout, good tyres, belt, very fast and sport perfect condition; will ride 50 miles to purchase privately owned; offers; after 8.—Mumford, 83 Trinity Rd., Balham. [51

ZENITH 1920, 8h.p. Twin J.A.P. Countersha Combination, luxurious coach-built sidec Cameo windscreen, lighting set, horn, Tan-Sad, speed meter, oversize tyres, etc., most splendid conditi throughout; only needs seeing.—Sidney, 769, Romfo Rd., Manor Park, London, E. [54

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, Bond St., Ealing. [48

### Ladies' Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., B mingham, distributing agents for the Lady's Iv daintiest of all ladies' machines; £62, complete. Sen for list. [07

6h.p. L.M.C. 1920, suspension frame, beautif Grindlay spring wheel sidecar, under 7,000 mile hardly scratched cost £193; near Lewes; £110.—Bo 1216, c/o *The Motor Cycle*. [48

DOUGLAS Lady's 2¾h.p., 2-speed, absolutely pe fect condition, done 2,000 miles, recently returne from makers complete overhaul, worn parts replace replated, enamelled, used once since, new tyres, tube XL-All saddle, speedometer, complete; £55.—Reil Ryada, Milford-on-Sea, Hants. [49

VELOCETTE 1922 Models, with clutch and kic starter, for immediate delivery; 2-speed, £6 3-speed, £75; all black weatherproof finish, all-chai drive, open frame, giving very low position; the ide ladies' mount; easy payments, 4% extra; illustrate catalogue free on request.—Premier Motor Co., Asto Rd. [30

### Miscellaneous.

7-9h.p. Harley-Davidson Combination, new chassi new carburetter, etc.; £95.

1921 2¾h.p. Martin-Jap, 2-speed and kick starter £65.

2¾h.p. New Imperial, 2-speed model, recently ove hauled; £38.

2¾h.p. Douglas, 2-speed, £45; Scott motor cycle, ta paid, £48.

1921 Ladies' Velocette, as new, 2-speed; £55; i perfect condition, reasonable trial or examinat tion.—Edmondson's Garage, Ltd., 28, Main St Keswick. [476

8h.p. J.A.P. Twin, as new; £18.—12, Broadway Muswell Hill, N.10. 'Phone: 668 Hornsey. [401

SPORTING J.A.P. 3½h.p., cut down frame, speci tank, long exhaust, perfect; £20.—1, Priory Rd Kew. [597

5-6h.p. J.A.P. Combination, just overhauled; ar trial; £50.—Fairhurst, Behind 68, Standishgat Wigan. [531

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.
### Miscellaneous.

ECISION, running, £15; also Fafnir and Rex, £20.—441, Seven Sisters, Tottenham. [4940

3 3½h.p. Rover Combination, 3-speed, pedal starter, in perfect condition; £55.—Below.

14 2½h.p. Premier, new condition, tax paid; bargain, £18.—Below.

14 3½h.p Singer, 3-speed, all accessories, as new; £42.—Below.

12 3½h.p. B.S.A., 2-speed, free, restored and bushed by makers, not run since; £30.—Below.

21 8h.p. Bat-Jap Combination, electric lighting, sidecar screen, tax paid, only wants seeing; .—South Eastern Garage, Herne Hill, S.E.24. [5057

VES Garage, The Broadway, Muswell Hill, N.10, nd Woodside Parade, North Finchley.

TICE.—We are open all day every Saturday, and have all makes in stock. Write, call or 'phone sey 2917 for big bargain list.

19-21 Ariel, 3½h.p., and sidecar, Mr. F. E. Jones's competition gold medal machine, spetuned; £80.

20 Radco, 2½h.p., 2-speed, fully equipped, perfect little 'bus; £30.

VER, 5-6h.p., Sports solo, 3-speed, all-chain, shop-soiled, otherwise new 1921; £110.

DGE I.O.M., shop-soiled, £70; 8h.p. Enfield Combination, Magdyno, 1921, indistinguishable new, £145.

19 P. and M. Combination, exactly as new, equipped; £70. Hobart-Villiers, shop-soiled; 10.

20 Ariel, 3½h.p., equipped, £72/10; also second-hand and new sidecars from £7/10.

21 Matchless, Model H, Magdyno Combination, spare wheel, speedometer, Easting, every acry, indistinguishable from new, very exceptional t; £145.

19 2¾h.p. Douglas, 2-speed, fine sporting little bike, as new; £37/10.

19 4h.p. Douglas Combination, first-class condition, any trial given; £79/10.

VER (big single) Combination, our special bargain of the week, brand new, fully equipped, for the road, an extremely attractive demonstraoutfit, unused, slightly shop-soiled; £87/10; cash free tuition.

18 Douglas 2¾h.p., 2-speed, in excellent condition; £27/10.

Y of the above can be had for one-quarter down, balance in 6 or 12 payments; all guaranteed 3 hs. Send for particulars.—Jones Garage, Broad-Muswell Hill, N.10. Motor 'bus from Highgate inshury Park. [5999

LACKPOOL Bargains.—1922 Rudges, 1922 Ariels, 1922 O.K.s, 1922 New Imperials, 1922 Quadrants, Royal Rubys. Quick deliveries. Good price for machine; exchange.—Booths' Motories, 294, erloo Rd., Blackpool.

LACKPOOL Bargains.—1919 New Imperial, 2 speeds, kick starter; £45/10.—Booth's Motories.

LACKPOOL Bargains.—P. and M. Combination, £47/10/6; 6h.p. Rex Combination, £27/10/6.—hs' Motories, Blackpool.

LACKPOOL Bargains.—Clyno Combination, lamps, screen, spare wheel, £69/10/6; 8h.p. Premier bination, screen, hood, £49/10/6.—Booths' Mot-, 294, Waterloo Rd.

LACKPOOL Bargains.—Good Trump, £18/10/6; N.S.U. lightweight, £13/10/6; 4h.p. Douglas bination, £59/10/6.—Booths' Motories.

LACKPOOL Bargains.—A.J.S. Combination, lamps, screen, £49/10/6; G.N. 1920 car, dynamo lightfully equipped, £140/10/6.—Booths' Motories.

LACKPOOL Bargains.—1920 Matchless Combination, detachable wheels, £120/10/6; A.J.S. and ar, £59/10/6.—Booths' Motories.

LACKPOOL Bargains.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, /10/6; 1920 Sun, 2 speeds, kick starter, /10/6.—Booths' Motories.

LACKPOOL Bargains.—1920 Wooler, £49/10/6; 3½h.p. Humber, £20/10/6; P. and M., /10/6; Indian Combination, disc wheels, /10/6; 6h.p. 3-speed Rudge, £35/10/6.—Booths' ories.

LACKPOOL Bargains.—2-speed O.K., £24/10/6; 1919 Douglas, £45/10/6; 1919 4h.p. Douglas bination, £79/10/6; 4h.p. Douglas, £55/10/6; Tamplin, £79/10/6; 1920 Morgan de Luxe, dometer, water-cooled magneto engine, £155/10/6. eral others cheap. Push cycles taken in exchange. or cycles purchased for cash.—Booths' Motories, Waterloo Rd., Blackpool. [5060


# NOTE THIS!

OWING TO LOWER COST OF MATERIAL AND LABOUR WE ARE NOW ABLE TO ANNOUNCE A FURTHER

## REDUCTION

OF APPROXIMATELY

## 15%

IN THE PRICE OF

# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED

for

## 2 and 4 STROKE ENGINES

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

**The lightest, speediest, and simplest gear on the market for direct belt-driven 2 and 4 stroke engines.**

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines wilhout any alteration to the machine or "staggering" of the engine.**

IMMEDIATE DELIVERY.

*Send for Illustrated Booklet*

*What is your make?* *Write us*

## NEW REDUCED PRICE

# £6-6-0

CARRIAGE PAID

## PHILIPSON & Co., LTD.

**Astley Bridge, BOLTON, Lancs.**

(Established over 50 years.)

'Phone, 147 Eagley. 'Grams, 'Safety, Bolton.'


## MOTOR CYCLES FOR SALE.
### Miscellaneous.

WANDSWORTH Motor Exchange.—Fine selection motor cycles, combinations, prices right; exchanges; easy terms.

WANDSWORTH.—Cheap machines is our motto; cheap machines, nothing dear, all cheap.

WANDSWORTH.—Easy terms. The only firm to give immediate delivery first deposit.

WANDSWORTH.—Singer, clutch model, 3½h.p., magneto, low built; only 22 gns.; easy terms.

WANDSWORTH.—Rex, 3½h.p., 2 speeds, low built, drive away; 22 gns.; easy terms.

WANDSWORTH.—F.N. 5-6h.p., clutch model, shaft drive, runs splendidly; 28 gns.; easy terms.

WANDSWORTH.—Indian (late), Powerplus 7h.p. twin, 3 speeds, spring frame; 55 gns.; terms.

WANDSWORTH.—Indian 7h.p. twin, 2 speeds, clutch, beautiful condition; 46 gns.; easy terms.

WANDSWORTH.—Henderson, clutch model, 8h.p., 4-cylinder, chain drive; cheap, 39 gns.; easy terms.

WANDSWORTH.—Indian lovely coachbuilt combination, 7h.p., 3 speeds, disc wheels, lamps, hood, screen; 65 gns.; easy terms.

WANDSWORTH.—Triumph coachbuilt combination, 4h.p., 3 speeds, lamps, speedometer; 59 gns.; easy terms.

WANDSWORTH.—Scott, 1920, latest, nearly new coachbuilt combination, fully equipped; 85 gns.; terms.

WANDSWORTH.—Triumph, 1920, almost brand new machine, 3 speeds; 89 gns.; easy terms.

WANDSWORTH.—Douglas 1921 4h.p., 3 speeds, clutch, nice condition; offers; easy terms.

WANDSWORTH.—Indian 1921 beautiful coachbuilt combination, dynamo lighting, hood, screen; 110 gns.; terms.

WANDSWORTH.—P. and M. 1918 3½h.p., 2 speeds, lamps, fine machine; 49 gns.; easy terms.

WANDSWORTH.—Humber coachbuilt combination, 4½h.p. twin, 2 speeds, countershaft; 39 gns.; easy terms.

WANDSWORTH.—Premier coachbuilt combination, 3½h.p., 3 speeds, clutch, lamps; 39 gns.; easy terms.

WANDSWORTH.—Levis 1918 2¼h.p., 2 speeds, lamps, nice condition; 35 gns.; easy terms.

WANDSWORTH.—Motosacoche 2½h.p., magneto, variable gear, nice little runabout machine; 19 gns.; terms.

WANDSWORTH.—De Dion 2¾h.p., magneto, tax paid, runs splendidly; very cheap, 16 gns.; terms.

WANDSWORTH.—10 beautiful coachbuilt sidecars from 8 gns. each; wickers 4 gns. each.—Below.

WANDSWORTH.—Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686. [5826

2¾h.p. Villiers, 2-stroke, 2-speed, tax paid, perfect condition; £38, near offer.—12, Wemyss Rd., Blackheath. [5106

J.A.P. 2¾h.p., Bosch magneto, good tyres, low built, smart appearance; bargain, £12.—15, Deal Rd., Tooting. [5224

J.A.P., overhead valve, 3½h.p., new tyres, low built, splendid running order; £14.—15, Deal Rd., Tooting. [5225

MOTOR Cycle in good order, 2-stroke, £15; also 3½h.p. 3-speed, £16.—H. R. Hall, High Rd., Whetstone, London. [4773

3h.p. Motor Cycle, lamps, Klaxon, licensed 1923, fast; £25, or near offer; evenings.—Green, Haven, Windsor Walk, Weybridge, Surrey. [4859

FORGE Garage, 74-76, Brighton Rd., Surbiton; 'phone: Kingston 3025; have the following machines for sale or exchange at bargain prices:—

FORGE.—Triumph 4h.p., late 1921, countershaft, 3 speeds, elaborately equipped; £75; or exchange.

FORGE.—Indian Combination, 3-speed, 5h.p., nearly new tyres, practically new condition, runs well; £50; or exchange.

FORGE.—Metro-Tyler 1922, 2-stroke, 2-speed, clutch and kick starter, only run few miles; £40; or exchange. [6067

1919 4h.p. Combination, electric lighting, Easting, accessories, mileage under 2,500, plating like new; bargain at £85.—Treasure House, Torquay. (D) [5022

HALIFAX.—50 second-hand machines and combinations; cash, exchange, or deferred payments; get list.—Halifax Motor Exchange, Horton St., Halifax. [5814

1920 2¾h.p. Douglas, £48, licensed; 1918 4h.p. Douglas combination, windscreen, hood, all on, £65, licensed; 1920 James Big Twin, licensed, exchanges, sell £95.—17, Vernon Rd., Mortlake. [5546

## MOTOR CYCLES FOR SALE.
### Miscellaneous.

5-6h.p. Clyno Combination, 3-speed, K.S., reconditioned, in good running order, £65; 3½h.p. B.S.A., 2-speed, K.S., engine in splendid condition, £35.—Benton, Chediston St., Halesworth, Suffolk. [5639

1921 Coventry Victor 5-7h.p. Combination, perfect condition, Bluemel windscreen, tax paid, pillion, lamps, and tools; also 2¾h.p. motor cycle, good running order, also coachbuilt sidecar, good Dunlop tyre; exchange considered.—Abbey, Watton, Norfolk. [5771

BARGAINS in Motor Cycles and Sidecars.—A limited number of 1920 and 1921 shop-soiled models, all well-known makes; best offer secures in each instance. Send for list or call and inspect.—Mebes and Mebes, 144, Gt. Portland St., W.1. 'Phone: Langham 2230. [4921

F.O.C.H. for secondband cycles, combinations and runabouts at bargain prices. Exchanges arranged. Any new cycle, combination or car supplied, cash or deferred payments.—Fair Offer Car House, 5, Heath Street, Hampstead (near Tube). 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1611

PETER GORDON, Ltd., 110, Upper Richmond Rd., East Sheen.—Connaught 2¾h.p., 2-speed, 27 gns.; Trump-Jap 4h.p., 3-speed, 26 gns.; Triumph 3½h.p., clutch, 29 gns.; Precision 4h.p., 2-speed, 19 gns.; all taxed for year and fitted lamps, horn, tools. Also see Clyno, Douglas, Norton, Sunbeam advertised. Open Sundays. Exchanges. [5796

RADCO 1921 2½h.p., 2-speed, clutch, kick start, etc., perfect, £32; Enfield 2-stroke, 1921, 2-speed, fully equipped as new, £35; Douglas 2¾h.p., 2-speed, 1917, fully equipped, disc wheels, a snip, £34; Enfield combination, 6h.p., Magdyno lighting, electric horn, fully equipped, windscreen, a smart and reliable outfit, £60; Rudge 3½h.p., free engine, fully equipped, tax paid, £22; Rex combination, 5-6h.p., 2-speed, good running order, £38; Enfield 3h.p. 2-speed, M.A.G. engine, fully equipped, recently overhauled, only wants seeing, £39. —Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [5820

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigden, 130, Euston Rd. [0795

ROBERTSONS Motors, Ltd., for many years have specialised in this class of work. If machine is purchased, full amount of hire up to one week is allowed.—157b, Gt. Portland St., W.1. [6083

## MOTOR CYCLES WANTED.

T.B.

WANT

500 COMBINATIONS and Solos, any make, guarantee top prices given.—T. and B. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5564

WE

ARE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination. We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 314, Euston Rd. [0815

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London Museum 5391. [0332

BEST

PRICES

GIVEN.

H. F. EDWARDS and Co., 50, Harrington Rd., South Kensington, will purchase for spot cash your motor cycle or combination. Call, write, or 'phone Ken. 3709. [0604

AMAUDES' Motor Mart are purchasers for spot cash of late models Sunbeam, Triumph, Douglas, Norton, and Morgans.—Maudes', 100, Great Portland St., London. [1128

GOOD Combination; cash waiting.—497, Old Ford Rd., Old Ford. [5934

SOLO or Combination, good condition.—14, Swaton Rd., Bow. Tel.: E.3155. [5955

£20 offered for good motor cycle.—Full particulars, 43, Shaftesbury Rd., Gosport. [4913

WANTED, Motor Cycle about £10, running order. —Box 1255, c/o *The Motor Cycle*. [5352

WANTED, good motor cycle, cheap for cash.—Full particulars, 40, Walford Rd., N.16. [4843

# REWARD

# Motor Cycle Stolen

## TRIUMPH
## 2¼ h.p. Junior

Frame No.
260947

Registered No.
XA 7869

# A Reward of £5

will be paid by

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED, 77, Cheapside, London, E.C.2, to the first person giving information leading to the recovery of the property stolen and the apprehension of the thief or thieves.**

## MOTOR CYCLES WANTED.

PALMER'S Garage, Tooting.—The pre-eminent for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a offer at sight.

PALMER'S Garage, Tooting.—You will be sur a good cheque if you sell your machine at Pal Garage.

PALMER'S Garage, Tooting.—Thousands of have sold their machines here.

PALMER'S Garage, Tooting, make a specialit motor cycles in the weekly auction sale Thursday at 2.

PALMER'S Garage, Tooting.—No garage char incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect mach from any London railway station. The au sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer accepted, machine can be included in auction held every Thursday.

PALMER'S Garage, Tooting.—You fix the price we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling mission, 7½%, not chargeable unless machi sold. If no sale, a nominal auction fee is cha for motor cars 20/-, motor cycles under £50 value ditto over £50 value 10/-. When we effect a sale charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. 208 Streatham. T.A.: Palmer's Garage, Too

WANTED, motor cycle, any condition, cheap; waiting.—61, Grand Parade, Harringay.

SPORTING Twin Solo, gears, known make prefe cash to £25.—Box 1275, c/o *The Motor Cy*

WANTED, good solo or combination, reasonat Manning, 30, Canterbury Rd., Kilburn, N.W

WANTED, countershaft Triumph, cheap for cas Maynard, 161, Bowes Rd., Bowes Park, N

TRIUMPH-GLORIA Combination, cheap for cas A. E. Woodcock, 14, Park Ave., Palmers Gr N.13.

MATCHLESS 1921-22 2-seater wanted; equipped.—Apply, 153, Trafalgar Rd., Greenw S.E.10.

TRIUMPH Countershafts, any condition, cash exchange.—Ward, 51, Upper Richmond Putney.

WANTED, Harley, A.J.S., similar combinat about 1916; £4 £50.—Lambert, 1, Pitl Croydon.

WANTED, 3½h.p. single, any reputable m must be cheap.—Read, 37, Ennismore Ave Chiswick.

COMBINATION, late model, perfect; chea Letters, "Experience," 30, Mildmay Gr Canonbury, N.

WANTED, 3½-4h.p. late solo, Coulson or o make; cash; write particulars, price.—52, A andra Villas, Bradford.

2¾h.p. Douglas, New Imperial, etc., also combina 4 and Morgan, 1921-22, water-cooled; chea H., 63, Solon Rd., Brixton.

RELIABLE late model, 2-stroke, cheap for c other kind (preferably Triumph) would intere Waterfall, 196, King's Rd., Reading.

PETER GORDON, Ltd., are cash buyers of modern machines, call or write. Open Sunda 110, Upper Richmond Rd., East Sheen.

WANTED, good motor cycle with sidecar or livery box, detachable, must be good condit cheap for cash.—Moss, Billinghurst, Sussex.

ELCE, Ltd., 15-16, Bishopsgate Avenue, Camo St., E.C.3, are buyers of late model solos, binations, cash or exchange. Send details.

LATE Harley, Matchless, or Stevens Combina wanted, reasonable, no rubbish; private bu Also solo Triumph, cash.—20, Archway, Walmer W.10.

WANTED, Second-hand Combination; must cheap and in good condition; no dealers; let only; full particulars.—W., 23, Chimes Av., Pal Green, N.13.

1922 Combinations, A.J.S., Harley-Davidson, and M., Martinsyde, or Blackburne, equipped, cheap for cash.—Butcher, 128, St. Leon Rd., Poplar.

WANTED for Cash, 6 combinations, Enf Triumph, A.J.S., or similar, 1919-1921, mus reasonably cheap.—Letters only, Marcel, 10, Broad Chambers, Ilford.

COMBINATION, A.J.S. or Sunbeam, 1920, mus guaranteed mechanically perfect; £90 cash ing for best outfit offered.—Write full particulars, 1261, c/o *The Motor Cycle*.

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES WANTED.

LD Sovereigns paid for best bargain offered, solo or combination.—King, Egrove, Oxford. [5353

NTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. nce immaterial.—Bunting's Motor Exchange, lstoe. [0828

SH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, or 'phone, Short and Gloss, Ltd., 485-493, Upper mond Rd., East Sheen, S.W. 'Phone: Richmond and 2363. [0372

ANTED to Purchase outright, for cash, bankrupt stocks; W.D. spares, miscellaneous spares, cycles, any make.—Send full particulars, Mc- and Platt, 57, Great George St., Liverpool. ne: 1092 Royal. [6060

CIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Brad-, Martinsydes, Zeniths. — Wandsworth Motor Ex-e, Ebner St., Wandsworth (Town Station). e: Latchmere 4686.

/L, F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted. —Wandsworth Motor Exchange, Ebner St., lsworth.

D Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth n Station). [4559

.C.H. always have cash waiting for sound machines of all types; highest prices and courteous treatment assured.—Fair Offer Car House, 5, t Street, Hampstead (near Tube). 'Phone: ostead 3752. Hours 9-7, including Saturdays. [1610

ANTED.—Motor cycles and combinations for immediate cash, new or second-hand. Bring your ioe to us for a cash offer; high prices paid on spot. Write, 'phone, or call if possible.—Forge ge, 74-76, Brighton Rd., Surbiton. 'Phone: ston 3025. [3169

ANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover ner light car. Best prices allowed, extended pay- arranged.—Vivian Hardie & Lane, Ltd., 23/24, stock St. (off Bleoheim St.), Bond St., W.1 ne: Mayfair 6559. [0772

WAYS Wanted, immediately, any number of econd-hand machines and combinations; a com- t representative will be sent to inspect and com- purchase after preliminary negotiations; cash good prices paid.—Longman Bros., 17, Bond St., g. Telephone: 689. [3046

.S. Specialists.—Wanted, your present motor cycle in part exchange for any new model stock. No waiting. Distance no object. Best s allowed for second-hand machines. Deferred ents, see column advertisement.—Bambers, 2, ank St., Southport. 'Phone: 607. [4925

IEL Specialists.—Wanted, your present motor cycle in part exchange for any new model stock. No waiting. Distance no object. Best s allowed for second-hand machines. Deferred ents, see column advertisement.—Bambers, 2, ank St., Southport. 'Phone: 607. [4927

FIELD Specialists.—Wanted, your present motor cycle in part exchange for any new model stock. No waiting. Distance no object. Best s allowed for second-hand machines. Deferred ents, see column advertisement.—Bambers, 2, ank St. Southport. 'Phone: 607. [4924

ATCHLESS Specialists.—Wanted, your present motor cycle in part exchange for any new model stock. No waiting. Distance no object. Best s allowed for second-hand machines. Deferred ents, see column advertisement.—Bambers, 2, ank St., Southport. 'Phone: 607. [4931

I.A. Specialists.—Wanted, your present motor cycle in part exchange for any new model stock. No waiting. Distance no object. Best s allowed for second-hand machines. Deferred ents, see column advertisement.—Bambers, 2, ank St., Southport. 'Phone: 607. [4926

UGLAS Specialists.—Wanted, your present motor cycle in part exchange for any new model stock. No waiting. Distance no object. Best s allowed for second-hand machines. Deferred ents, see column advertisement.—Bambers, 2, ank St., Southport. 'Phone: 607. [4930

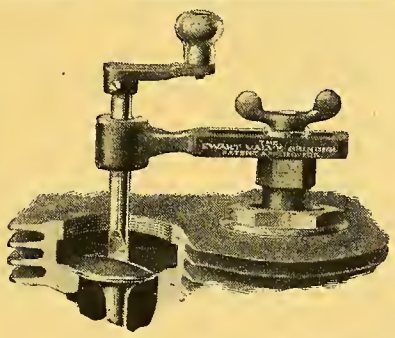
RTON Specialists.—Wanted, your present motor cycle in part exchange for any new model stock. No waiting. Distance no object. Best s allowed for second-hand machines. Deferred ents, see column advertisement.—Bambers, 2, ank St., Southport. 'Phone: 607. [4929

IUMPH Specialists.—Wanted, your present motor cycle in part exchange for any new model stock. No waiting. Distance no object. Best s allowed for second-hand machines. Deferred ents, see column advertisement.—Bambers, 2, ank St., Southport. 'Phone: 607. [4928

ND your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash telegraphed immediately on receipt. Nearest on Wimbledon. We will collect from any London on. Machine can be included in auction sale if ed.—Sole address: Palmer's Garage, Tooting. [5829

# The EWART Valve Grinder

**enables you to re-grind your valve in five minutes**



It saves all the fag and bother usually entailed in Valve Grinding. It automatically ensures accuracy and dead centring. Do the valve grinding yourself with the aid of the EWART and save time and money.

Regular attention with the aid of the EWART will vastly improve the running power of your cycle. This handy tool is thoroughly well made of best materials. The standard pattern is supplied to fit all types of motor engines both English and foreign.

Supplied conveniently packed in box complete with tube of paste for 10/-, post free. Extra tubes of paste 1/-, post free.

Stocked by leading motor dealers. The trade are invited to write for terms.

**New Ways Limited**

**Middleton Hall Road,**

**King's Norton, Birmingham.**

## MOTOR SCOOTERS.

KINGSBURY Scooters and Spare Parts.—Beaufort Works, Richmond Rd., Twickenham. [2231

A.B.C. Skootamota, new, unsoiled, latest model; £23, sacrifice.—Frank Whitworth, 139, New St., Birmingham. [4658

2h.p., Kingsbury scooter, with seat, carrier, tools, horn, as new; £25.—Rogers, 42, Church Rd., Heudon. [5170

## MOTOR ATTACHMENTS.

1922 Yonng Motor, special bicycle; no agents; price £24.—13, Eardley Rd., Streatham. [5019

YOUNG Cycle and Engine, perfectly new, horn, stand; nearest £20.—Heney, Samdiacre. [4717

WALL Auto-Wheel, good condition, recent.—Wallace, The Platanes, Champion Hill, S.E.5. [5342

J.E.S. Auxilary Set, perfect condition, £9; with bicycle, £12.—J. Hulland, Bampton, Devon. [5018

SIMPLEX Attachment and special duplex cycle, in new condition; £30.—Apply, X., 7, Victoria St., S.W.1. [4750

1921 Ladies' and Gent.'s Cycles, Young motor attachment complete; £20 each.—8, Ripon Rd., Plumstead, S.E. [4960

LADY'S Enfield, with 1921 Simplex attachment, as new; £15 or separate.—Owen, 129, West Bromwich Rd., Walsall. [6021

AUTO-WHEEL (Wall, Model de Luxe), with Chater-Lea cycle, licence paid; £15.—Withers, Church Rd., Ashtead, Surrey. [4778

NEW Shop-soiled Autoped Scooters, dynamo lighting, 1½h.p.; bargain. £12/10 each.—Percy and Co., 314, Euston Rd., N.W.1. [5994

SIMPLEX Attachment and Cycle complete, hardly used, been stored, original show model; £15.—9, Kenilworth Court, Putney. [3233

WALL Anto-Wheel, in new condition, very little used; approval with pleasnre; what offers?—Thornbank, Lymm, Cheshire. (D) [5046

LOOK.—New 1½h.p. air-cooled Whippet scooter, engine, suitable cycle attachment, scooter, mowing machine, etc. Note, 4-stroke and brand new, with carburetter and magneto; £8/10; worth treble; offered subject unsold.—Wortham-Blake and Co., Walthan Cross. [5825

## HOODS, WIND SCREENS, ETC.

COLLINS and Son for hoods, screens, and aprons; hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreens, complete with apron; 22/6, 30/-, and 35/-; sent on approval against cash; carriage 1/6 extra.—Below.

COLLINS and Son stock all known makes of windscreens; we have a few second-hand Standard Eastings, fitted with new celluloid, from 45/-.—Below.

COLLINS and Son fit celluloid panels to any windscreen in few hours, new aprons, side curtains, etc.; open weekdays till 8.30, Sunday mornings till 1 o'clock.—Collins and Son, rear of 84, High St., Putney, S.W. (D) [6025

V-shaped Windscreens, £3/18; small size, £2/15.—Bright and Hayles, 78, Church St., Camberwell. [8026

SANDUM V windscreens in stock; £2/15; trade supplied.—Houchin, 189A, High St., Peckham, S.E.15. [5975

HERCULES Hoods and Aprons; write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [0853

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3239

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

ROBINI Manfc. Co.—The Bower adjustable windscreen, registered, with coverall apron, 30/-, carriage paid; beware of imitations; celluloid panels fitted; Eastings, 16/6; aprons made to order, 10/-. 'Phone: Brixton 1585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. [5803

## BODIES.

CAMBER Sidecar Bodies; from £4/17/6.—Bright and Hayles, 78, Church St., Camberwell. [8024

RENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

COLLINS and Son for coachbuilt bodies, all models in stock, from lightweights to 2-seater.—Below.

COLLINS and Son are actual manufacturers, and give twelve months' guarantee with every body made by them.—Below.

COLLINS and Son repair, repaint and upholster at moderate charges, first-class work guaranteed; estimates free; send for catalogue.—Collins and Son, rear of 84, High St., Putney, S.W. [4084

## BODIES.

COACH Body, bulbous back, upholstery and paint new; £2.—32, Queens Rd., Leigh, Essex. (D) [5774

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5131

WILLOWBROOK Bodies to fit any chassis; prices from £5 upwards; write for designs.—Willowbrook Motor Co., Leicester. [0336

COACH Bodies Repainted and Upholstered from £3; repainted only from 30/-.—Bright & Hayles, 78, Church St., Camberwell. [5995

COBB Speedman Famous Sporting Bodies at £2/12; Baby racing models, light and heavy touring at correspondingly low prices; send for lists.—Vernon Cobb, 18, Midland Rd., Carlton, Nottingham. [5167

£3/15.—1922 bodies, complete, from £3/15; 2-seaters from £9; tradesmen's boxes from £8. Write for particulars. 'Phone: Brixton 1585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. [5802

£4/17/6.—Douglas Type Bulbous and Locker under Seat, upholstered and brand new, send for photo, owing to contract we can offer at price. 'Phone: 1958 Brixton.—19, Wilcox Rd., South Lambeth, London, S.W.8. [6026

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Designing Dept., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—Dorset House, Tudor St., London, E.C.4. [0004

LIGHT Car and Motor Cycle Engineering Co., Ltd.—Light coachbuilt bodies, bulbous back and locker, from £7/7. Touring de Luxe from £9/9. Many other models in stock. Customers' old sidecars taken in part payment. Second-hand bargains. Genuine Enfield body, indistinguishable from new, £7. Millford bodies renovated as new from £4.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292 (½ minute from Brixton Skating Ring). [5808

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines; Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone, Hornsey 1584. [0522

SCOTT Sidecar complete, off Triumph; £7/10.—135, Brook St., Stepney, E.1. [5340

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6

BASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock.

BASTONES for Sidecar Chassis, underslung £7/19/6. tandem chassis £14/10, auxiliary arms 14/-.—228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. 'Grams: Bastones, London. [6049

SCOTT Sidecar, bargain; £5/10.—Grey and Levin, 5, The Boulevard, Balham, S.W. [4898


# Your Pillion Passenger

will also appreciate the advantages afforded by

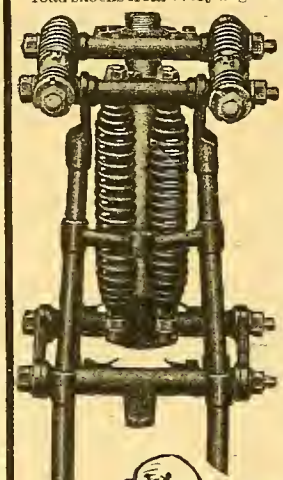
## The BRAMPTON Bi-Flex SPRING FORK.

whilst you will be relieved of all anxiety for her safety and comfort.

By reason of its exclusive dual action and the unique combination and arrangement of coil springs—acting in compression—the Brampton Bi-Flex Spring Fork provides a revelation in how luxuriously comfortable motor cycling can be made.

The liberal margin of strength which the springs of the Brampton Bi-Flex possess in excess of any possible road requirement ensures that the initial high standard of efficiency of the Fork is maintained in use.

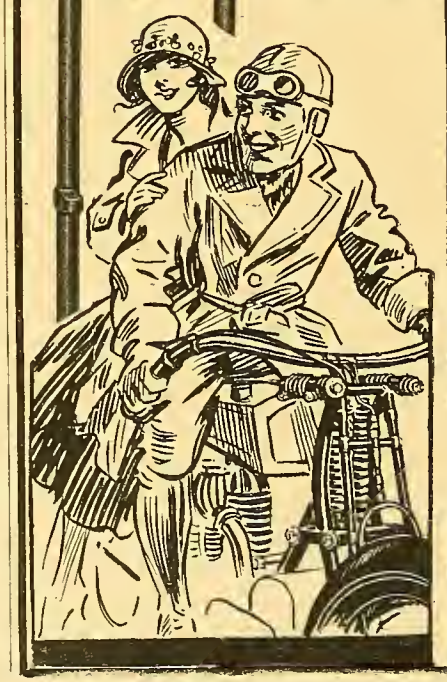
The Brampton Bi-Flex Spring Fork never tires—is always instantly responsive to, and completely absorbs within itself vibration and road shocks from every angle at which resistance is encountered.



Insist upon your new machine being fitted with the Brampton Bi-Flex Spring Fork.

Measurement forms and descriptive booklet illustrating models for motor cycles, from 2¼ h.p. and upwards, may be obtained on request.

**Brampton Bros. Ltd., Oliver Street, Birmingham.**




## SIDECAR ATTACHMENTS.

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [4195

CAMBER Utility Models; £25.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Utility Tandems; £27.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER Semi-touring Models; £18/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Bulbous Back Models; £19/12/6.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Lightweight Models; £16/10.—Bright and Hayles, 78, Church St., Camberwell.

CAMBER Hexagon Sports Models; £25/17/6.—Bright and Hayles, 78, Church St., Camberwell. [8023

LIGHT Montgomery sidecar, complete, re-enamelled, new body; £12/10.—Houchin.—Below.

MONTGOMERY Sidecars from £17/10; sporting model in stock; trade supplied; district agent.—R. G. Houchin, 189A, High St., Peckham, S.E.15. [5976

9 GNS.—Lightweight Henderson, complete, as new.—Smith's, 86, Chalk Farm Rd., N.W.3. [5414

SIDECAR, good condition; £7; room wanted.—Platts, 602, King's Rd., Fulham, S.W.6. [5475

CANOELET Minor Sidecar, complete, good condition; £10.—Barker, 10, Algernon St., Grimsby. [5039

CANOELET Roomy Coachbuilt Sidecar, 4-point, off Sunbeam; £8.—Torrome, 10, Cathcart Hill, N.19. [5074

CANOELET Sidecar, first-class condition, only 400 miles; £13/10. — Box 1237, c/o *The Motor Cycle*. [4933

MONTGOMERY, 2-seater green sidecar body, new condition; £12.—42, Ealing Park Gdns., South Ealing. [4846

6 h.p. Enfield Sidecar, £8/10; also 3½h.p. Rudge-Multi Combination; £49.—21A, Brent St., Hendon. [4873

GLORIA Chassis, 4 fixings, petrol carrier, tyre, etc., off Triumph; £5/10, offers.—Stuart's Garage, Methven [4716

A.B.C. Sidecar, hood, screen, lamp, excellent order; £25, carriage paid, or offer.—Howdens, Seedsmen, Inverness. [5140

BOOTHS Blackpool Bargains.—Limited number, new coach bodies, full size, with locker, £5/17/6; usually £9/10.

BOOTHS Blackpool Bargains.—New £9/10 coach bodies for £5/17/6; illustration free.—Booths Motories, Blackpool.

BOOTHS Blackpool Bargains.—Quantity new underslung chassis, 4-point attachment, £9/19/6; illustration free.—Booths Motories, Blackpool.

BOOTHS Blackpool Bargains.—Several shop-soiled sidecars, cheap; Hercules coach sidecar, £9/10/6; ditto Canoelet, £8/10/6 ditto Farlow, £8/10/6; cane body, 22/6.—Booths Motories, 294, Waterloo Rd., Blackpool. [5061

SIDECAR Chassis, underslung, suit Douglas, with new cover and tube; £5/10.—Allison, 46, Church Rd., Acton. [5332

MONTGOMERY coach-built Sidecar, almost new, fit 4h.p. Douglas; £12/10.—64, Framfield Rd., Hanwell, W.7. [5491

MONTGOMERY Sidecar, No. 2, cost £27; £15, off Triumph; original tyre.—Newman, Watton Place, Hertford. [5588

£6/10.—Red Coach Sidecar, all connections; guaranteed new condition.—61, Ambleside Drive, Southend-on-Sea. [4874

WHITLEY Sidecars, Coventry.—Three models, £25, £29/10, £32/10. Nothing on one wheel to equal. Lists free. [0856

SPORTING Middleton, painted black, little used; accept any reasonable offer.—Millward, 26, Rutland Court, S.W.7. [4706

COACHBUILT Sidecar, underslung, well upholstered, good condition, 4-point attachment; £8.—Bennington Park, Stevenage. [4765

MILLS-FULFORD Sidecar, fully underslung, 650x65, 6h.p. touring; any time; £7.—152, Crystal Palace Rd., E. Dulwich, S.E.2. [5038

BRAMBLE Touring Sidecar in good condition, complete with all connections; £8.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [5809

SPORTING Reanoe Coachbuilt Sidecar, excellent condition, purple and gold; £11; after 6.—51, Arodene Rd., Brixton Hill. [594

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2370 and 2371 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephones:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## The Influence of Car Design.

FOR the first time on record interconnected front and rear brakes will be used in the Tourist Trophy races. Backed by the fact that this innovation has been introduced by a firm with a high reputation and wide racing experience, this step is of peculiar interest. It has often been remarked that developments in automobile practice exert an important influence upon modern motor cycle design. Here is another example to the list already quoted. In the car world four wheel braking systems are becoming increasingly popular, especially on high-powered cars of leading rank, and the adaptation of an equivalent system for two wheelers introduces great possibilities for the future. The type of brake and amount of leverage utilised are of the utmost importance, but the advantages of checking both wheels when a hurried stop is necessary are too obvious to need emphasis on our part. Just as the rear brakes of cars first come into operation, retardation of the front wheels following, the motor cycle system is similarly arranged. It is not improbable that a similar system will be developed for touring cycles, as it would be particularly valuable where heavy sidecar outfits are concerned.

## Why Not Three Cylinders?

AMONG motor cycle designers, undoubtedly there is a revival of interest in engines having more than two cylinders. This is perhaps a natural sequel to the remarkable development of the small-capacity single-cylinder engine. As our readers are aware, this type of engine has been fostered by *The Motor Cycle* and brought to a high stage of efficiency by the 250 c.c. class in the Tourist Trophy races—a class which, prior to this year, has competed for the trophy presented by this journal, but which now enjoys a Tourist Trophy of its own.

Post-war T.T. races have proved that engines of quite small capacity are capable of fulfilling all the demands placed upon them; hence designers are considering multi-cylinder engines in order to obtain a more even torque than is possible with engines of the single- and twin-cylinder type.

Several firms have been experimenting for some time with four-cylinder machines, and several more have designs on paper, while the four-cylinder two-stroke described in our issue for February 23rd takes development one stage further.

But why four cylinders? The two most popular types of engines in use at the present time are two- and four-stroke single cylinders. A four-cylinder two-stroke provides eight impulses to the single-cylinder four-stroke's one, and the single-cylinder two-stroke's two. Motor cyclists will be quite content for the present with a torque equal to a six-cylinder car engine. A three-cylinder two-stroke will provide such a torque. Probably manufacturing difficulties attendant upon the production of a three-throw crankshaft with throws set at 120° preclude its consideration as a commercial proposition. But the three cylinders need not be in line.

As a compromise the three-cylinder radial engine has many advantages, since it can be made lighter and cheaper, and if set across the frame it is more easily cooled. Where two-strokes are concerned the three-cylinder radial with double diameter pistons is a simple, cheap, and easily cooled proposition, and would provide three evenly spaced impulses per revolution.

Developments in multi-cylinder engines will be eagerly awaited by a large section of the public, and we shall not be surprised if more is heard on the subject before the year is out.

An index to the advertisements in this issue will be found on the page facing the back cover

## Life's Little Worries.

MY machine, being a speedster, was naturally unprovided with a magneto shield. Its magneto, being "waterproof," was naturally unprovided with any device to prevent dirt and water from penetrating the enormous and tight-fitting bush in which the timing lever works (beg pardon, should work). The owner, being lazy, had naturally omitted to caulk the circular gap at the weather end of this bush with vaseline, as all good motor cyclists do. The weather, being British, was naturally wet with an unparalleled wetness. The occasion was a big trial—at least, the fifty-ninth minute of the eleventh hour of the eve of the trial. The ignition thus became fixed instead of variable. The engine was of the rather extra hot stuff order, *i.e.*, it conks bitterly at anything under 40 m.p.h. unless the ignition is well retarded, and it overheats to a rich plum colour if you run it with the ignition permanently retarded. It took two capable men two hours to get that timing lever working nicely. I wonder why magnetos continue to be made with bushes which seize at such slight provocation; why they are called "waterproof" in spite of this weakness; and why apparently knowledgable manufacturers continue to mount such magnetos where a destroyer carries its ram. Yes, the gap is *full* of petroleum jelly now, thank you.

## Don't Laugh.

MESSRS. PONK-PONK went into liquidation, and their assets were purchased by Road Destroyers, Ltd. Before this interesting transaction, Mr. Smith purchased a 3½ h.p. Ponk-Ponk, which was not unsatisfactory if we except the rear hub, the defects of which were partly responsible for the liquidation. Road Destroyers, Ltd., presently advertised their revised edition of the 3½ h.p. Ponk-Ponk as being absolutely it, and Mr. Smith noted that the new model boasted a different hub. He communicated with them at Christmas, and they covenanted to fit a new pattern hub to his back wheel, which was immediately dispatched. A deep silence then brooded over Messrs. Road Destroyers, Ltd., broken only by a brief note at the end of February to the intent that castings were expected shortly. After that, silence brooded for another two months, and, indeed, is still brooding. Poor Smith is professionally compelled to motor daily. In the early stages of the affair, while he yet lived in hope, he hired a car from day to day. Later, becoming mildly pessimistic, he bought a second-hand W.D. Douglas. He now writes to me to inquire:—

i. What is the most remunerative way of disposing of a 3½ h.p. Ponk-Ponk with only one wheel?

ii. Whether there is any justice in England by which he can exact a lingering and exquisitely painful revenge from Road Destroyers, Ltd.

I don't often talk Latin, but the following line is said to be untranslatable, and it just fits this tragedy:—

*Sunt lacrimæ rerum, et mentem mortalia tangunt.*

## Engines Going "Fey."

SEVERAL readers contribute instances of engines going "fey," and two or three of the experiences were with Rudges, like the incident originally quoted. One modest reader, describing himself as "a novice of two years' standing" (I know *lots* of experts of one year's standing), had a Rudge keep up 40 m.p.h. on the throttle, which usually produces 15 m.p.h.; his solution is rarefied air on a lofty road. Another Rudgeite uses rather a dirty fuel distilled locally and containing occasional brown crystals of naphthalene; he considers that his compression is too high for his normal load, and that the "mad minute" occurs when a flake of carbon gets on to a valve seating and reduces the compression to the ratio which chances to be ideal for the work in hand. Veteran riders will remember more than one prehistoric engine which pulled better under full load if a deft tweak were given to the valve lifter. But I cannot say that either solution really satisfies me. Any more?

## Won't Steer.

AN unhappy reader enquires why his new machine—of first-class make—evinces a marked tendency to shoot across the road against his will, prefers the crooked path of wobbledom to the straight course, and lies down incontinently at the sight of a spot of moisture on the tar. Knowing the machine in question to be impeccable as a general rule, I can only make one or two suggestions. Either there is something radically amiss with his steering-head bearings, which should be immediately inspected by a capable mechanic, or else—if the machine has misbehaved since delivery—the frame was possibly bashed about by the railway company in transit. Some years ago I signed at a railway station for no less a machine than a Norton, and when I took the road I found it all but unsteerable. Thinking I was sickening for D.T. I put a friend up on her, and he returned from a *very* brief trip with numerous grey hairs. So we cocked our respective eyes along the frame, and found

*Ixion's "MOTOR CYCLE REMINISCENCES" are available in book form, price 2s. 9d. post free, from "The Motor Cycle" Offices, Dorset House, Tudor Street, E.C.4.*

**casional Comments.—**

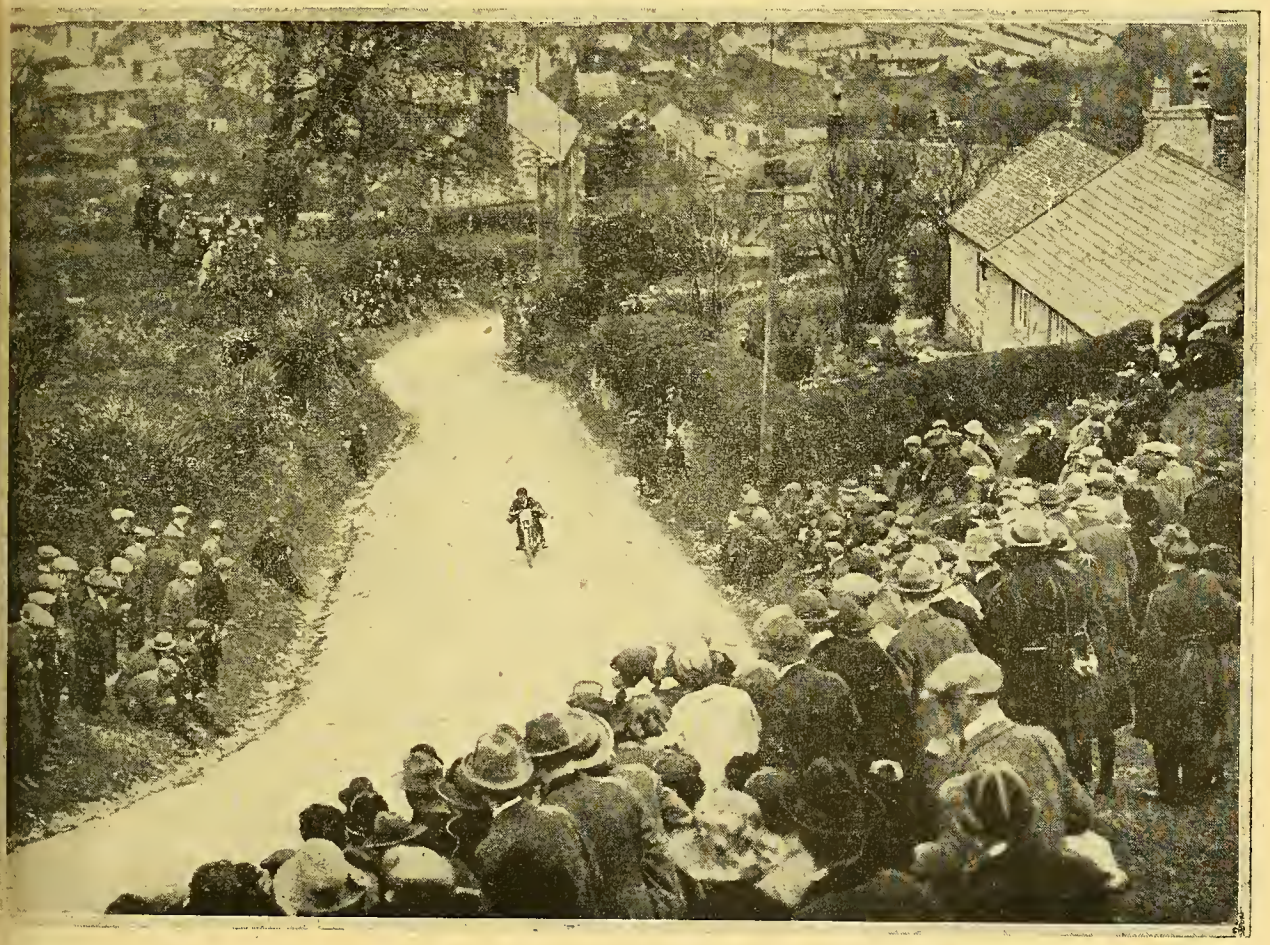
hat the front wheel was heeling hard over for a speed rner to the right whilst the rear wheel was evidently ying to beat all records round the right-hand hairpin Porlock; moreover, the two wheels were well out f track. Now nobody would suspect Norton's of de-vering one of their seventy-milers in that kind of me. If their frame-builders ever slip up, their testers e to the needful. The deduction was irresistible—e railwaymen had been rather petulant in handling hat is not a lightweight. Norton's met me very hand-mely in the matter, and I daresay my correspond-nt's makers will do as much for him if he can lay is hand on his heart, say that he has never had a ss, and that the machine was erratic when it stepped ut of the guard's van.

## Bonnie Scotland!

THE Scottish Trials remind me of those far-off days when I was young enough to compete in them. One night at a crowded hotel I shared bed with a braw Scot. We were roused at 5.45 a.m., nd the operation of dressing was, naturally, mingled ith curses. "Have a wee nip?" said my room-mate, proffering a corpulent flask. I declined (for the illumination of Scottish readers let me explain that Southrons seldom imbibe strong waters at 6 a.m.). The Scot looked extremely puzzled for a moment—he could not conceive why anybody should decline good whisky at any hour. Then a sudden smile of comprehension illumined his features. He made a fresh dive into his bag and produced a smaller flask containing Kümmel. When I again declined, he ceased to know me. (For the edification of Southern readers, let me explain that Kümmel is the Scot's next morning remedy for a neet which was ower Scotch.)

## Bad Consciences.

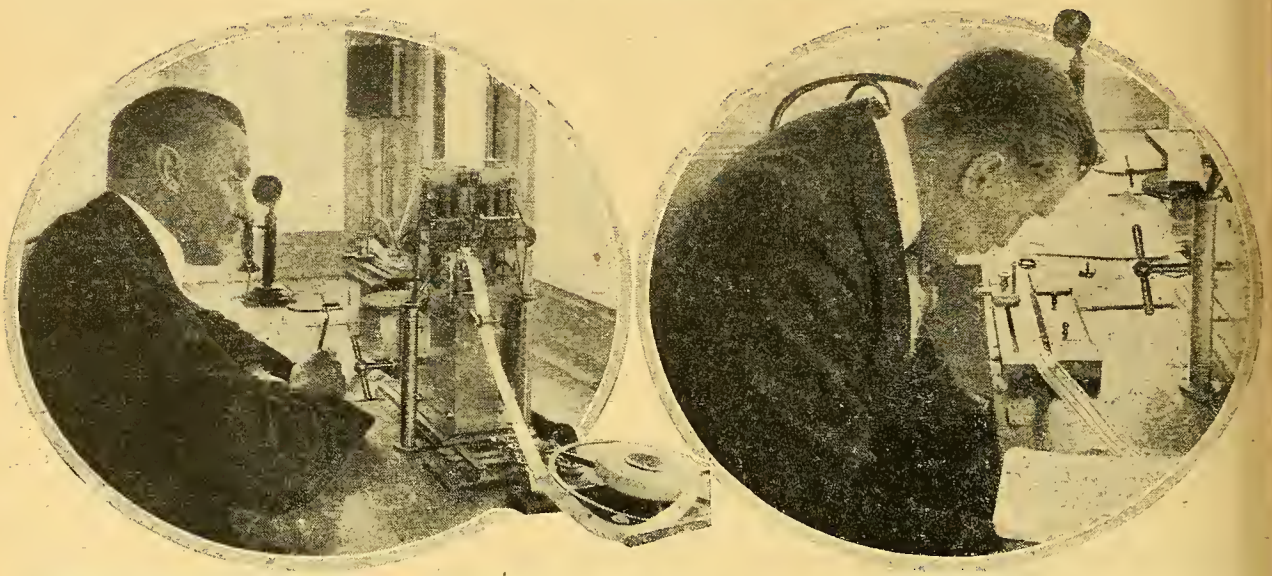
AS a rule I am the kindliest of men. Normally I am capable of just three emotions—fear, amusement and love. But for once I dipped my pen in wormwood, viz., on April 6th, anent a reader who found his engine had become so obsolete in eighteen months that spares were already unobtainable. Hear the amusing sequel. The managers of three separate repair departments wrote to me privily, enquiring if they were the culprits. But the actual offender did not write; he is still slapping the pocket which holds his nefarious gains.



Public interest in hill climbing contests is getting more pronounced, for whenever a meeting is held in fairly close touch with a populated district bigger crowds than ever gather. H. H. Jones (349 c.c. A.J.S.) making a good climb in the Liverpool M.C.'s recent hill climb at Pen-y-Ball, Holywell.

# TIMING HIGH SPEED RECORDS.

## Over Short Distances Modern Machines Demand Great Timing Accuracy. A Description of the Brooklands Electrical Timer.



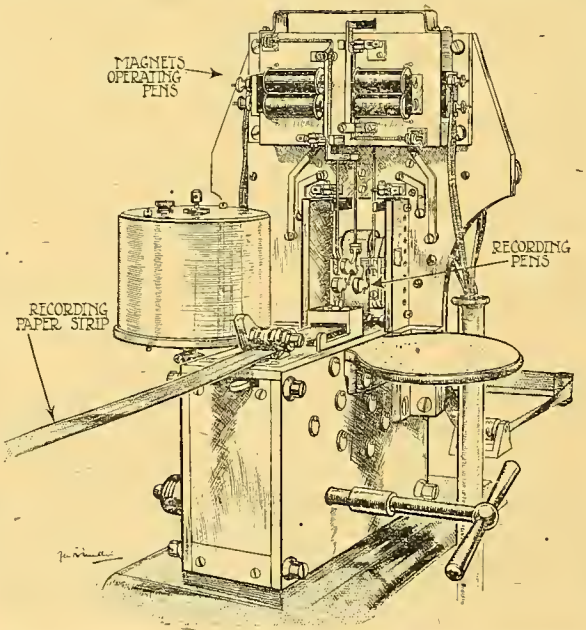
TIMING A BROOKLANDS RECORD ELECTRICALLY. (Left.) The tape passing through the recording machine. (Right.) Measuring the markings by vernier and magnifying glass.

PEOPLE closely connected with speed performances in the motor cycle world have long realised that for the modern high speed records hand-timing by stop watches is quite inadequate. Stop watches usually have subdivisions of the second to no smaller degree than the fifth, and with this comparatively crude measurement of time it is really surprising that such accurate results are obtained. Of course, it is obvious that there is no guarantee on which particular one-fifth the chronograph hand will stop when a time is taken. Supposing a motor cyclist takes 37.2s. to cover a mile; if the timekeeper should be one-fifth second late in stopping the watch as the line is crossed there is a resultant error of over half a mile an hour.

### How Electrical Timing Works.

There is no doubt, however, that our timekeepers are extraordinarily accurate and wonderfully reliable, but however skilful they may have become through long practice, it is impossible to get over the difficulty of the watches to which we have referred. There seems to be little doubt whatever that records in the future will be electrically timed only. There is in existence at Brooklands at the present time a wonderful electrical timing apparatus which was designed by General Sir Capel Holden and Sir Reginald Elphinstone.

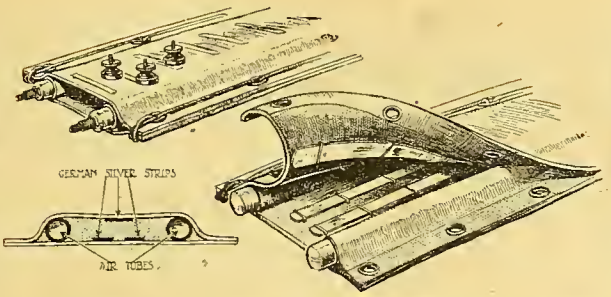
Many years ago we published a description of the instrument, through which passes a paper strip moved by a very delicately governed piece of clockwork mechanism at a uniform speed. Three fine pens mark three parallel ink lines on the paper; of these, the two outer pens are actuated by electro-magnets and contacts connected to wires leading to two timing strips on the track. The centre pen is controlled by electro-magnets and contacts working in connection with a pendulum situated in the lower storey of the timekeeper's hut.




Detailed sketch of the electrical timer. The paper strip passes under the recording pens at a predetermined rate of speed controlled by accurate clock mechanism.

When the motor cyclist passes over the first timing strip on the track the magnets cause the right-hand pen to make an indentation on the line, and when he passes the finishing strip the left-hand pen makes a similar mark on its own particular line. As regards the centre line the pen which draws this makes an indentation at

**Timing High Speed Records.**—intervals of every two seconds. The centre line, therefore, registers time, the top line the starting, and the bottom line the finishing moment. The distance, therefore, between the starting indentation and the following two-second mark added the distance between the finishing mark, and the preceding two-second indentation gives an accurate measure of time, which, added to the total number of complete two-second intervals between the two, gives the time for the whole distance. The measurements are made in a special instrument by means of a magnifier and a vernier scale.




Lightly inflated air tubes separate the metal contact strips which are placed across the track at Brooklands in the path of the record-breaking motor cycle.

### Track Contact Strips.

Now as regards the strips on the track. These are German silver contacts separated by air tubes in which there is a very light pressure of air. In the case of a motor cycle it has been found that such a light vehicle is apt to jump clear of the strip owing to the unevenness of the track, and may miss it altogether. Also, if there is a very slight miscalculation in the adjustment of the strip—that is to say, if too much air is inserted in the tubes—the machine is too light to record its passing. We are, however, assured by Colonel Lloyd that if the necessary precaution is taken of delicately adjusting the strips and the instruments themselves it is quite possible to take motor cycle records with certainty.

There is, however, an alternative, and that is to do away with the tapes and to employ timekeepers to tap an electrical contact the moment the machine crosses the line. At first thought the reader may be inclined to imagine that it might be just as well to employ hand-timing as to follow this method, but this is really not the case. Even though the human element is employed in deciding the moment the vehicle passes the mark, the timing must be superior to hand-timing because owing to the system employed fractions recorded may be in hundredths of a second. In Colonel Lloyd's own words, "Given accurate machinery, hand-timing is exact enough, the only objection to the usual practice being the impossibility of using watches reading to a smaller fraction than one-fifth second."

# THE NATURALIST ON A MOTOR CYCLE.

## Showing that Keen Observation adds immensely to the Interest of a Run in the Country.

A GENTLE wind blows from the south to-day, and there is something in the air that savours of a better season at hand. Light feathery wisps of cloud are wafted across the clear blue of the sky, and the cawing of rooks is borne across the meadows from the distant elms.

The little twin-cylinder pulls evenly, and its exhaust is a joy to hear. The engine is throttled down so that the country may be observed and a quick stop made if there is anything of special interest to be seen. Here the way dips down and passes through a wood where the air feels chill and damp, then up the hill and on to the cross-roads where a black and white signpost stands up gauntly by the pool. On the post is a yellowhammer, for curiously enough they appear to love this vantage point, and on a hot summer's day their monotonous chant "a little bit of bread and no cheese" sounds very sweet to the passer-by.

The chaffinches are about in great numbers to-day, and they fly off the hedgetop at one's approach, their many-coloured coats showing up brilliantly in the bright sunshine. Down by the marshy lands that border the river it is a pleasure to leave the motor cycle and wander along one of the many dykes. Here the lapwings manœuvre around with their weird cries of alarm. Later on, however, they will become even more excited at the approach of the wayfarer, and at times appear as though they contemplate a massed attack.

Along the little river there is also great activity, and it is no surprise to see some sandpipers evidently prospecting for suitable nesting sites. The small bushes on the bank harbour many linnets, and their combined notes sound quite cheery after the silence of the dark season.

Late afternoon brings rain clouds over the horizon, and towards dusk the countryside takes on a dreary aspect. It is wise now to hasten homewards, and the little "bus" responds well to the opened throttle. Soon the rising wind drives the first drops of rain into the face, and, speeding down the slope into the village, it is comforting to see the glow from the window telling that fireside comforts await within. T. L. W.

---

AN inter-club trial is to be organised by the Motor Union of Liège, which will be called the Defence of Liège. Clubs competing will be those sent by France and Holland, as well as those of Belgium, and valuable cups have been offered to the winning Belgian club by various journals. Considerable interest is being taken in the event by the Belgian army staff and by the Minister of National Defence. The trial consists of an attack on Liège, which is to be defended by the town clubs against the country clubs, and will take place on June 4th, between the hours of 11 and 1. On the Monday there will be a meeting of motor cyclists in the University, while motor cyclists will also be invited to visit one of the famous forts of Liège.

# SIX DAYS in SCOTLAND

R. Lewis (555 c.c. P. and M. sidecar) starting the climb of Abriachan. The lower road skirts the banks of Loch Ness.

## Views on the Scottish Six Days' Trials from three different Aspects: An Onlooker's, a Competitor's, and an Engineer's.

### IMPRESSIONS OF A PRESSMAN.

I ALWAYS go up to the Scottish Six Days in the mood with which a very young rabbit crosses the Portsmouth Road for the first time. I always return feeling like the parrot which got out of its cage and devoured the whole of the tipsy cake, so blithe am I that the annual ordeal is over. This is a disgusting confession to make now that the audacious Mrs. Knowles has lifted a solo gold, whilst Mrs. Jansen was only prevented from finishing by the hardest of hard luck. So let me hastily explain my cowardice.

In the first place, I am next door to a grandfather. In the second, I live on tarred roads, and hardly ever see a "sticky bit" by this date in the season. In the third place, some fools say—and actually believe it—that the Scot has no sense of humour. He has as keen a sense of humour as anybody on earth. It may be a perverted humour, but it is there. He catches us when we come off the night mail, all bleary and dazed with a long railway journey; and he proceeds to exert the full force of that massive intellect with which all Scots are notoriously blest, to put the "breeze up" us. I always fall an easy victim.

Usually he effects his nefarious purpose by lurid accounts of the new hills. By 1922 this wheeze had got rather stale; besides, we were getting to know his hills. So this winter the Edinburgh Committee met in secret conclave, and decided to date the trial for May—and May in Scotland is to an English May as having your dud tooth frozen by the dentist is to eating a pound of marzipan.

We stepped off the train at Waverley Station, and all the familiar faces were there to greet us. Our Northern friends stepped forward and wrung us by the hand with the air of the lawyer at the funeral, who knows officially that your favourite aunt has left her millions to a home for lost cats. We wondered at the reverent reserve of this welcome. The Scots began rather mysteriously to curse the A.C.U. for dating the T.T. so awkwardly; to curse the R.S.A.C. for holding light car trials; to curse the Scottish hotel proprietors; to lament the record tardiness of the Highland spring.

As I said before, we have just completed an all-night journey in a stuffy train, and such courage as we possessed was of the 2 a.m. variety. Our faces grew more and more anxious. Our eyes began to bulge. And the hateful Scots grew more and more sympathetic. Floods had washed the bridges away—

**ix-Days in Scotland.—**

ut no matter, they would bank-upt the club in purchasing lanks rather than that we hould wet the soles of our feet. ll the sheep north of Perth were ying cold and stiff under 20ft. of now. The Edinburgh Club was obly chartering tractors and snow loughs—under *no* circumstances ere we to get anxious. But, of ourse, we did; and not until the eek was well advanced did we ealise that the entire atmosphere as one gigantic leg-pull. Yet nethinks that when the club reasurer comes to settle the bill for he 75 gold medals, the boot may airly be deemed to adorn *our* leg. )ne thing I know—the 1923 Scot-ish will obviously be some trial; hey won't hand round 75 golds gain without a struggle. When ts date is announced, I shall get married, or kill ff my umpteenth grandmother, or figure as "reason-bly absent," as they say at Sunday schools, on some ground or other.

E. W. Choldcroft (349 c.c. A.J.S.) and Mrs. Knowles riding a similar machine on Tynron Hill.

And so to our muttons. None of the new hills were vorth yellow ochre except Blackford. Doric cruelty gain. Fancy keeping back the worst new hill to the enultimate mile of the trial. But even Blackford only topped the dud engines and the unfortunates. Before hill can defeat the modern rider on a modern engine hree factors must be present, and all three must be aised to the *n*th power; they are:

1. Surface. 2. Gradient. 3. Corners.

Note once more the wiliness of the Scot. Whatever e may say about Glendoe, he knows that Amulree is is worst hill. So he sends you up it on the first day, efore you have graduated as a chamois trying to nibble edelweiss whilst fleeing from the hunter up a glacier. From both sides. And even then he only trips up the beginners. Inverfarigaig? Any ordinarily good rider can climb it "feet on," provided (*a*) he has been up it once before, and (*b*) no medal hinges on a clean climb, but it is a snorter when you meet it for the first time, and a gold is attached to your behaviour. Also the second corner on Amulree is never a cast-iron certainty for anybody except perhaps George Dance and Bert Kershaw.

However, the weather was kind to the Edinburgh treasurer at one spot. I have not infrequently "blinded" over the section between Grantown and Bridge of Avon both ways. This year there was a great plucking out of grey hairs over the shaving-glasses next morning. The ride into Grantown on the Tuesday had the Bodmin Moor stretch in the Land's End knocked out in the first round; the weather was the same in both cases, but the Scottish bit undulated like a lariat when a cowboy is sending half-hitches down it, the road varied from glue to vaseline in consistency, and resembled in surface a shellhole after two siege guns have been extricated.

Tynron Hill proved an easy task. W. Woodcock (Ariel sidecar) between the two more difficult portions.

On the return journey next day things were better, until we reached the normally easy bit at the top of Brig o' Brown. Here there was a hundred yards of stuff resembling deliquescent concrete, some 9in. deep. It pulled up cars as if their gear boxes had jammed. As to the two-wheelers, my friends all said at lunch, "Did you see me go up Brig o' Brown?" "No?" "I never took my feet off." But I didn't believe them. I never put my feet on.

To give readers an idea of the hills, the writer's o.h.v. Triumph has a bottom gear of 11.08 to 1.

**Six Days in Scotland.—**

On this she ticked easily up the test hills with the spark fully retarded and the throttle in slow running position. As some solo machines had emergency gears of 20 to 1, and even less, steering was obviously the chief obsession for solo men, just as wheel slip most bothered the sidecarists.

If the need for skid-cornering were eliminated, the percentage of sidecars to finish would instantly become higher than the percentage of motor bicycles, because a number of the two-wheelers are outed as the result of falls on grease and on colonial sections, a trouble from which sidecars are immune.

There was a fair amount of really bad riding—I say "riding" because men ride with their heads as well as with their hands. Taking hills too fast. Taking awkward hills close behind another competitor. Wasting time, and then blinding to make it up. Blinding without any excuse whatsoever. Missing the way through sheer carelessness. It would be a sound education for any trials novice to ride a few miles behind such an expert as Bert Kershaw. His entire attention is concentrated on the job in hand. He never goes one mile an hour faster than is necessary.

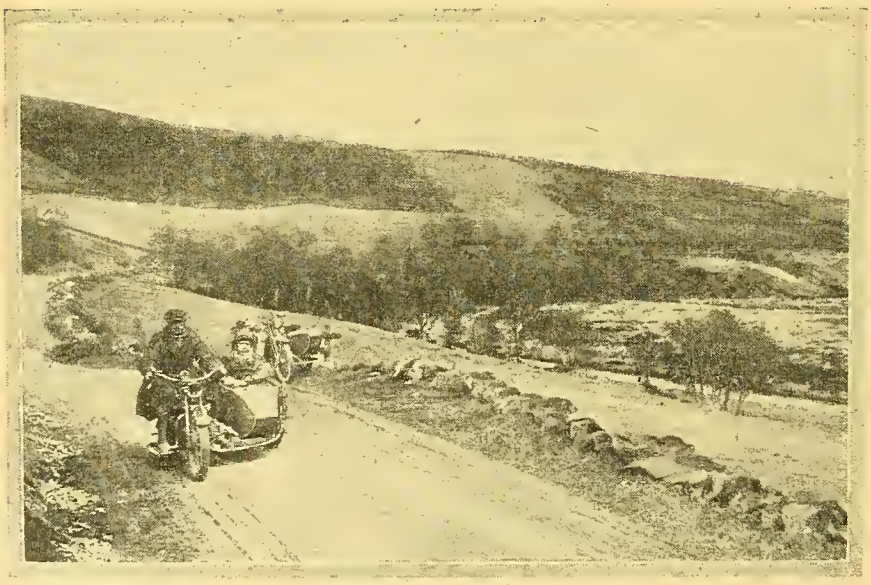
Enormous crowds of interested spectators watching A. A. F. Symes (678 c.c. Martinsyde sidecar) climbing Blackford Hill.

### Contrasted with 1921.

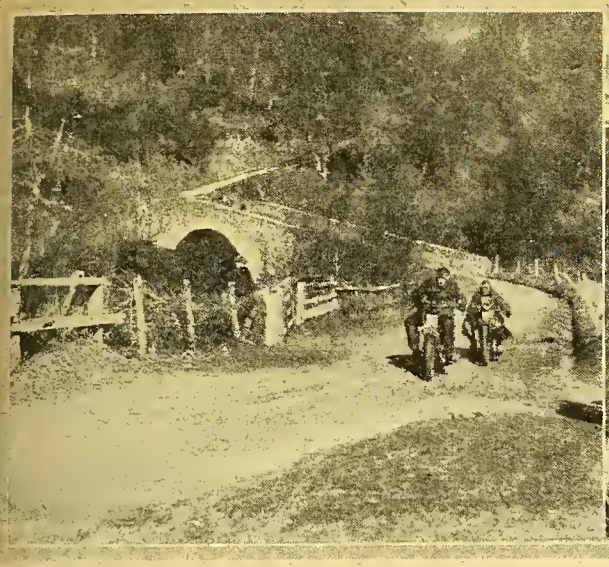
There were two marked contrasts with 1921. There were hardly any protests—the rules had been framed very clearly. There were far fewer jokes. At most official stops in a Scottish the air is a-buzz with really comic incidents. Perhaps the cold and the hail and the rain dried up our spirits, but anyhow we didn't laugh half as much as usual.

Turning to more personal matters, I jogged round on one of the first o.h.v. Triumphs, and had the most comfortable ride of my experience. Never before have I returned to Edinburgh without a few aches and pains somewhere; but a good riding position, 3in. Dunlops, and a Druid fork have changed all that. The clearance of this machine is a little low for rough riding—the footrests got cock-eyed in a rut before ever she went North, and ere long the exhaust pipes fouled a rock reef, and had to have a giant poker hammered down them one night.

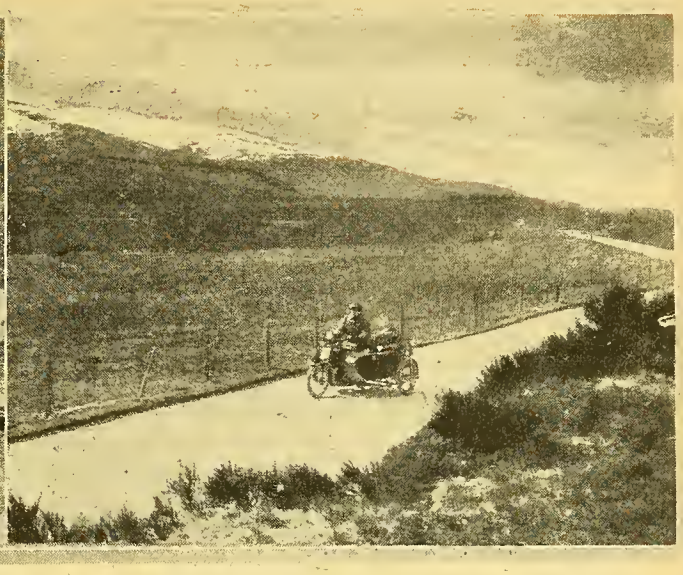
The top gear was too high for fancy roads, and I shall fit a smaller sprocket on the next jaunt of the kind. But even on the highest set of gears fitted to this model there was never the least anxiety about hill-climbing, and the only drawback was that a lot of second gear was required. The Triumph rear brake is so firm and trusty that the front one need not have been there. The fuel consumption varied between 100 m.p.g. and 60 m.p.g. according to wind, speed, and road; just over one quart of Speedwell "White Ideal" was used. The engine certainly needed decoking at the end of the trial, but had been by no means clean at the start. The only spare part which I carried was a K.L.G., and its sister in the fastness amidst the four valves was so insulted at the precaution that she never sooted up or misfired.



Campbell McGregor, the energetic secretary of the Edinburgh club, used quite a number of vehicles in his efforts to get round the trials. He is shown in a Douglas sidecar which served him for a time.



On the lower, steeper, but actually easier section of Brig o' Brown: W. E. McKechnie (688 c.c. McKechnie) and J. Boyd (550 c.c. Coulson) climbing well.



Returning on the fourth day by a circuitous route to avoid the snow-blocked Cabrach: D. S. Ball (800 c.c. A.J.S. sidecar).

Engine starting is a first time job after the heaviest day. Tappets were adjusted once, chain once. The small bolt securing the front mudguard to the fork sheared and was replaced. I can heartily recommend this machine for docile riding as well as for speed work, merely specifying that a small sprocket is desirable for ordinary touring unless ample use is to be made of the gear lever.

As the weather was bad, some details about clothing, etc., may be of interest. An Aquamac coat kept me bone-dry all the week as to my upper, topped by one of the cheap Ledux helmets, made out of proofed hood fabric. For legwear I tried the Trewso with spring steel side fastenings. These were equally waterproof, but one of the springs occasionally jumped out of its socket, careful fitting being necessary with this design; two inches of a seam also came unstuck, and one of the instep straps went "west." Rubber goloshes over ordinary boots. A pair of 2s. 6d. hedger's gloves—so cheap that you don't mind losing them, so obviously worthless that nobody steals them, quite warm, and tolerably waterproof.

ROAD RIDER.

## AS A COMPETITOR SAW THE TRIAL.

FEW, if any, trials have occurred in which the public might so safely pin their faith as a genuine test of machines as the recent Scottish "Six Days." While run on the simplest lines, it has, nevertheless, been a most searching trial of road-worthiness. Usually there is a chance for the crack rider on an indifferent machine, but in this case there was none. A machine requiring constant attention was bound to go to the wall.

The immense distances covered, the nature of the country traversed, the shortness of the checks, and a hundred other elements entered into the remorseless process of weeding out the unfit.

It has been said that premier awards were too numerous. This is not so. Only those who took part in the trial or who followed it can realise the terrific gruelling that machines and riders underwent. That there should be so high a percentage of premier awards is perhaps the most astounding proof we have had of the efficiency of present-day machines.

### Impressions of the Highlands.

Looking back on the trial, now that it belongs to one's impressions of the past, one finds the mind a chaos of disordered impressions—miles and miles of moorland road, with range after range of rugged indigo beyond, dazzling panoramas of widespread lochs, with the storm-swept hills on every side. At times we could see the storms sweeping the heights all round us, but for the most part they were kindly and left us alone. One sees again the rocky, pine-capped outcrops which make the Highlands so beautiful, and here and there we skirted for miles some majestic mountain torrent, the beauties of which were almost depressing in their grandeur. We saw so much each day that there lives, as I say, merely a disordered chaos, fleeting impressions, one quickly succeeding another, but making the aggregate something very much worth remembering.

### A Comparison.

I have said that the trial was a simple one—a simplicity rendered possible by the fact that a Highland trial needs no frills to weed out the unfit. The distance and the nature of the country do it, and I suppose this is the longest Scottish "Six Days" ever held. The revision of the route, owing to the snow on the heights, did not improve matters for the competitors. The distances covered in the Scottish are always much greater than those covered in the English

trials. I consider it a far more exhausting trial, and I think this last Scottish was certainly more trying than the English of two years ago. In that trial I won a gold; had my luck been as bad last week I might have won a silver, but more probably a bronze. Indeed, I am doubtful whether I should have finished the trial at all.

### Stiffening up the Rules.

The Scottish officials have always been famed for their fairness and their friendly disposition towards the riders. They set a stiff course, but having done that they seem to want as many as possible to survive it safely. This year the same genial spirit prevailed. The officials were our friends.

The rules, however, had been considerably stiffened up. We were allowed five minutes each way instead of three; we were allowed to fail on one hill. Having made these generous amendments, we were given quite clearly to understand that we had received just about all that we were going to get.

Last year the competitors formed the habit of protesting on any grounds whatever. Anyone who failed protested as a matter of course. Some were heard, and no reasonable protest was turned down. This year any rider who handed in a protest which was considered frivolous was most unpopular. The entry was so big, trade riders so numerous, each, naturally, eager to do the best for his employer, that weakness of any kind would have been the utmost folly. And no weakness was shown.

### Wonderful Organisation.

After any big trial it is usually easy to place a critical finger on some weak spot in the organisation—possibly an official lack of confidence in its own route selection, a sad error in judgment, an unfairness in some experimental method of marking. Invariably there is a chance for the expert grumbler to spread himself.

Looking back on this trial, however, I fail to see a single hitch in the working. One did not hear any criticism. Campbell McGregor, who has organised every "Six Days" but one, is certainly a wonderful man at the job, and his many assistants are keen and efficient as himself. This year, however, the smooth working of the trial calls for special praise, since everything had to be altered at the eleventh hour owing to the snow. Yet there was no hitch. We received our route cards with printed slips gummed over the altered sections. The colour car with its gigantic coffee grinder went ahead, always an hour or so in front of the first competitor. It marked the route faultlessly—no one was lost—and at night we saw our names on the garage wall, indicating the hotel to which we were to go. The baggage car had already arrived, and away we went without doubt or question to our allotted resting places, which generally more than fulfilled our requirements. Strenuous though the trial was, the riders were given every available comfort and relieved of all outside anxiety, and there was never the least hustle with regard to obtaining petrol and oil.

### Examination of Spares.

The preliminary examination of spares was much more rigidly carried out this season than ever previously. Only such replacements as sheer bad luck or legitimate mishap might demand were allowed. Nevertheless, this proceeding was not without its touches of humour. I saw an official snatch a piston and connecting rod complete from a competitor's kit and threaten to brain him with it.

When it came to my turn I told the burly official what I had—a few chain links, two spare plugs, a spare tube, etc.

"Open that bag," he ordered.

I did so. His face fell. "Och!" he exclaimed, "this man's too cunning. Come on, Ronald."

"Then," I added, "I've got in my pocket a ——"

"Hold your tongue, man," ordered the spare parts examiner genially. "We're no' going to feel in your pockets."

And they were gone.

On another occasion I blinded through a check, thinking I was late. An excited official ran out, waving something which looked like an Indian club, save that it was black and might indeed have been something quite different.

"Go back, man, go back!" he shouted.

Tam-o-Shanters were very popular, many of the competitors preferring them to more orthodox headgear. C. Guthrie (348 c.c. Raleigh), D. S. Ball (800 c.c. A.J.S. sidecar), and R. Evans (348 c.c. Raleigh) at the lunch stop in Perth.

**Six Days in Scotland.—**

"D'you ken you're nearly five minutes ear-r-rly?" I went back, and I am glad I did not miss that check. It was a cold day up there on the roof of the world, and there is nothing like a swing (I almost said swig) of the Highland club to warm one.

### Heroines of the Trial.

Many times during the trial, especially during the rocky and interminable descents at the end of a long day, when for miles one's weight was thrown on one's wrists over difficult going, I thought to myself that if any lady competitor survived she deserved a special award. Among the lady soloists only Mrs. Knowles completed the course, and everyone congratulated her, for she has tried hard in previous trials, generally suffering the most aggravating bad luck. She has shown what her sex can do in yet another walk of life, and she is the first lady to gain a solo gold in the Scottish. Mrs. Jansen was no less of a heroine.

Finally, I feel that a word is due regarding the Barr and Stroud Precision which I rode for the makers, though having no interest in this concern. The new sleeve-valve engine certainly fulfils expectations. Its wonderfully silent tick-over was widely commented upon, and at the checks, where other riders were waiting, I could not tell whether or not the engine was going except by looking down at the fly-wheel. It is a very sturdy puller. On the third day I broke my magneto Bowden, but did not trouble about repairing it, as the engine cannot be made to pink, and pulls to its last gasp whether at full advance or full retard. Unquestionably, a great future for this engine. It cannot be made to overheat, and, so far as I can judge, it is as good as the poppet valve in every respect, and a great deal better in many ways. Both Greaves and myself did 70 miles to the half gallon over one of the most difficult sections of the route, and oil consumption was negligible. On the whole, the handy little Beardmore-Precision proved an ideal machine for the job. It is sturdy, light, and comfortable, and my only grumble was that the steering required a little getting used to. By the end of the second day I had ceased to notice this peculiarity.

So the most important and probably the most strenuous trial ever held in Scotland has come to an end, and though the good old hardy annual of "never again" was on everybody's lips when we checked in at Blackford, drenched to the skin in spite of trench coats and tarpaulins, we already find ourselves wondering what next year will hold.

H. MORTIMER BATTEN.

## "EXPERIENTIA DOCET"—THE TECHNICAL LESSON.

THERE has never been held a fairer test for the motor cycle than this year's Scottish Six Days' Trials. Neither freakish nor too easy, they were just sufficiently severe to uncloak weaknesses in any detail, while almost completely eliminating the too often deceptive "luck" element.

All the hills were such as the average private owner might meet in his holiday tour; all the roads were such as motors must frequently traverse; and the weather, too, was not out of the ordinary, although happily well varied. Why, then, the reader asks, did 43 motor bicycles and sidecar outfits retire, and of the remainder of 121 starters only 59 gain gold medals? The real reason embodies several factors, and, paradoxical as it may seem, the least of these is the unreliability of the defaulting 43 and only slightly less guilty 18 which received the lesser awards under severe but, nevertheless, possible touring conditions.

### Six Days of Grinding Tests.

The Scots have a proverb that "Mony a mickle mak's a muckle," which translated implies much the same thing as the better-known saying regarding the cumulative effect of little drops of water on a stone. This is what happened in the Trials.

Six successive days of grinding, but by no means insurmountable, tests, of hard riding (for the 20 m.p.h. schedule left no margins whatsoever, and tyre trouble had to be guarded against), of mixed roads and often adverse weather conditions, had a greater mass effect than three "super-freak" English one-day trials in succession, *or 6,000 miles of holiday touring.* It is perhaps only possible to realise this fully after "following" the Trials by motor cycle—and there were three representatives from *The Motor Cycle* office who did this during the week—but the fame of some of the names, men and machines, which rank in the list of retired, must also bring it home to those who follow competition matters with any regularity.

### Unnecessary Speeding.

In the second place, there was not a little very amateurish and some thoroughly bad driving. There was also much "blinding." It was not necessary to arrive at a short distance check more than half an hour ahead of time to be prepared for any eventuality that was not a serious mechanical breakdown. Fewer "broken frames," "broken chain stays," and "broken sidecar spindles" would have adorned the results sheet if this rule had been recognised and acted upon.

Fourthly (or thirdly, if unnecessary speeding be classified as bad driving), many of the starters did not realise the nature of the event they had entered for, and came North without making any special preparations whatsoever. With a first-class machine, of course, this should not have made much difference. For example, the writer a few hours before leaving town for the Trials was forced to make a change of mount; and; purchasing only a spare inner tube, he filled up an entirely strange Sports Sunbeam with fuel, rode it to Edinburgh, and then right round the Trials at nearer 30 m.p.h. than 20 with no more trouble than three punctures, a broken exhaust pipe (in a deep water-splash), and the necessity to adjust the rear brake twice. This incidentally serves to emphasise the excellence of the 100 per cent. special gold medal Sunbeam success in the competition proper.

But amongst the lightweights, the low capacity sidecar outfits, or those machines with the magneto in a very exposed position, a little attention to weather-proofing and to tyres might have improved the percentage of gold medal winners to starters.

**Six Days in Scotland.—**

Getting down to statistics we are able to extract from the detailed results the following interesting figures:

COMPARATIVE PERCENTAGES.

| | Started. | Finished. | Percentage. |
|---|---|---|---|
| Motor bicycles ... ... | 79 | 52 | 65% |
| Sidecars ... ... | 40 | 22 | 55% |
| Three-wheelers ... | 4 | 3 | 75% |
| Cars ... ... ... | 25 | 23 | 92% |

CAUSES OF RETIREMENTS.

(*Motor bicycles, sidecars, and three-wheelers only.*)

| | |
|---|---|
| Broken frames or chain stays ... ... ... | 10 |
| Engine failures or breakages ... ... ... | 10 |
| Magneto failures ... ... ... ... | 5 |
| Gear box or transmission ... ... ... ... | 7 |
| Sidecar wheels or spindles... ... ... ... | 3 |
| Collisions or fails ... ... ... ... ... | 4 |
| Cause unknown ... ... ... ... ... | 4 |
| | 43 |

Considered together these tables make curious reading, and, at a glance, rather unpleasant reading for the sidecar enthusiast. But things are not really as bad as they seem. The chief reasons for the sidecar retirements were fractured frames, chain stays or sidecar spindles, and these were almost all caused or aggravated by skid-cornering at speed which no private owner on tour over the same ground would think of indulging in; although the latter would very likely climb the same hills on the same machines as the competitors used—excepting, perhaps, Inverfarigaig, which would be, what many called it, "Infra-dig." At the same time there is no disguising the fact that the task was just beyond the capabilities of some of the sidecar people, who probably acted unwisely in entering, and thereby discrediting, machines which give every satisfaction under more ordinary conditions. This is borne out when it is remembered that the solo riders had to contend with the further difficulty of avoiding spills on surfaces of the consistency and instability of the Brig-o'-Brown slough of despond.

Engine failures were common to all types of vehicle, and were of several different varieties. Among so many starters the number eliminated for this reason only serves to emphasise the reliability of the rest.

Retirements owing to magneto trouble, however, call for an enquiry, for we have long been taught to regard this instrument as the acme of reliability. In most cases the root cause was lack of weatherproofing; the remedy is obvious.

Transmission breakdowns ranged from broken gear quadrants, *via* seized layshafts, and stripped low gear pinions to stretched and weak rear chains and defective cush hubs. When these are split into their individual causes the unreliability factor becomes almost negligible.

Sidecar wheels and spindles may have given way through faulty design, workmanship, or material, but skid-cornering again is the more likely cause.

### Amazed Everybody.

One or two remarks on actual happenings may not be out of place. There was more than one case of distinct hard lines, where really meritorious performances were camouflaged by sheer bad luck. The Harper runabouts, for example, amazed everybody on the first two days; one was put out of the running on Tuesday with mechanical trouble, easily rectified, maybe, but nevertheless a fair knock-out blow; the other was the unoffending party to a collision; both completed the course with flying colours, unofficially. Watson-Bourne had retained a clean sheet until Saturday afternoon, his Brough Superior showing up particularly well on the hills; then he shorted a plug on Tynron because—a lesson to be learnt here—of water collecting under his tank and draining down the h.t. wire; then he fell off on Blackford owing to a slip with a wet gloved hand.

Mrs. Jansen's mount was unsuited to its task in several ways, and although Mrs. Jansen herself earned real fame for her dogged pluck, the Ner-a-car proved too long in wheelbase, and, in this particular case, under-geared.

Considering that it was his first trial and that he was by far the oldest competitor, Col. McKechnie has every reason to feel proud of his demonstration of the suspension of the big solo mount bearing his name.

Regarding the medallists little need be said; the award list (published last week) speaks for itself. Special attention, however, may excusably be directed to Sibley's small capacity Rudge outfit and Hubbard's only slightly larger Rex-Acme; both retained absolutely clean sheets. Dickson's gold on a Brough Superior with a $7\frac{1}{2}$ to 1 bottom gear also deserves praise. For the rest, as we have said, the results need no amplification.

### When and Why They Retired.

**Monday.**

H. Goring (292 Hawker), collision, etc.
C. N. Falconbridge (998 Rudge sc.), gear box.
A. Pearson (532 Scott), fall.
E. R. C. Scholefield (1,100 New Hudson), accident.
D. Scott (292 Excelsior), cause unknown.
J. M. Watson (584 Harley-D.), cause unknown.

**Tuesday.**

W. L. Danskin (998 Rudge sc.), sidecar spindle.
D. A. Atkin (346 Francis-Barnett), cush hub.
A. Brown (992 Ariel sc.), sidecar spindle.
A. Graham (269 Harper Runabout), engine.
J. A. Porter (482 New Gerrard), valve rocker.
W. Wilkie (1,300 American X sc.), overgeared, etc.
W. S. C. Walker (736 Douglas sc.), chain.
J. Donaldson (420 Royal Scot), frame.

**Wednesday.**

A. F. Downie (800 A.J.S. sc.), magneto.
R. S. Macrae (988 Harley-D. sc.), frame.
G. Grinton (988 Harley-D. sc.), frame.
J. A. Newman (496 Douglas), timing gear.
F. J. Watson (992 Ariel), gear box.
P. H. Johnson (499 Rudge), chain stay.
R. R. Grindlay (499 Rudge), chain stay.
R. O. Harper (269 Harper Runabout), collision.
J. B. Sanderson (292 Hawker), lubrication.
F. W. Becker (688 McKechnie sc.), sidecar wheel.

**Thursday.**

B. L. Bird (770 B.S.A. sc.), frame.
C. W. Vallings (499 Dunelt sc.), frame.
John Shepherd (976 Chater-Lea sc.), gear quadrant.
B. Kershaw (248 New Imperial), magneto.
J. G. Porter (269 New Gerrard), frame.
R. M. Wishart (482 New Gerrard), cause unknown.
J. Boyd (499 Coulson), valve cap blew out.
J. Wallis (688 Coventry Victor), connecting rod.

**Friday.**

A. G. Cocks (598 Beardmore-Precision sc.), chain stay.
E. Foster (698 Raleigh sc.), frame.
R. M. Knowles (490 Norton), piston.
W. Chate (499 Dunelt sc.), magneto.

**Saturday.**

W. G. Donaldson (654 Rover sc.), cause unknown.
W. A. Hadfield (348 Raleigh), magneto.
H. Collins (490 Norton), magneto.
R. Humphries (249 Velocette), connecting rod.
W. E. McKechnie (688 McKechnie), engine.
Mrs. Janson (211 Ner-a-Car), magneto.
T. F. Sleven (249 Velocette), engine.

A. McL.

# NEW O.H.V. TWIN ENGINES.

## Two New Medium-size Blackburne Twins with Overhead Valves.

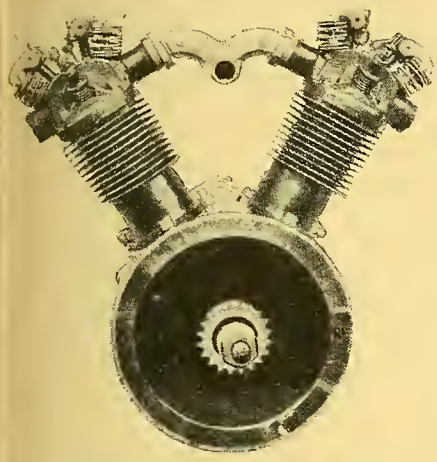
THERE is no doubt that it is a modern tendency to favour the small high-efficiency type of engine. It is generally speaking more easy to get the utmost efficiency out of a small engine than out of one of larger capacity. The small engine, moreover, is necessarily lighter, more economical and, if properly designed, can be induced to give practically the same results as one of larger size.

Messrs. Burney & Blackburne have certainly done wisely in introducing a new 5-6 h.p. overhead valve engine suitable for sports models and fast sidecar outfits. The engine is composed of two 350 c.c. cylinders, and may be had in two patterns: short stroke, 71×88 mm., 696 c.c., or long stroke, 71×97 mm., 768 c.c.

In general appearance it is decidedly attractive. The cylinders are set at 60°, and the arrangement of the valve gear is almost identical with that of the well-known 350 c.c. T.T. engine. The model under consideration can be supplied either with cast iron or aluminium pistons and with ordinary or special cams, with which, its manufacturers claim, it is possible to attain over 80 m.p.h. The flywheel is light and very close to the crankcase, the chain sprocket being carried on the outside. Notwithstanding, the main bearing dimensions, $2\frac{15}{16}$ in., have not been interfered with.

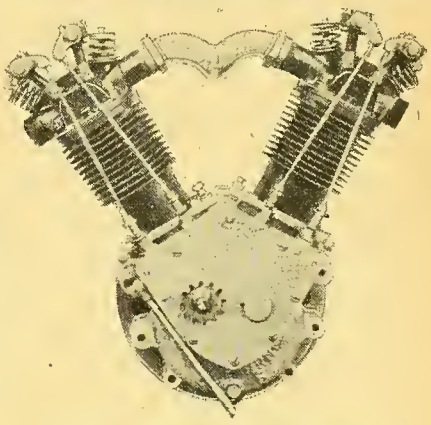
The timing gear is of simple design, there being one cam wheel for each cylinder and a single cam for each inlet and exhaust.

On the cylinder head the fins are deep and numerous, while the exhaust ports are of ample dimensions.



A new long stroke Blackburne twin with overhead valves, with a bore and stroke of 71 × 97 mm. = 768 c.c.

An engine which has not been previously dealt with is the new 8 h.p., which since reference was last made to it in these pages has undergone one or two alterations. Chief among these is the fitting of an entirely new cylinder head with greatly increased radiating surface, deeper fins being fitted, while the design of the ports has been considerably improved.



The cylinder heads have been entirely redesigned and the makers claim 80 m.p.h. has been attained by this model.

# 70 M.P.H. ON 1 IN 12.

## Fast times at the East Midland Centre Hill Climb.

A fine day, good organisation, a suitable hill, and good riding combined to provide a crowd of some two thousand spectators with an interesting afternoon on the 6th inst., when the Loughborough and District M.C.C. held a hill climb open to East Midland Centre A.C.U. Clubs.

Since the upper part of the hill, which has a gradient of about 1 in 12 (without corners) was somewhat "rutty," a section of one half-mile of excellent surface was chosen on the lower slopes. Solo machines were allowed about 75 yards to "get going," and passenger machines had a flying start of approximately one furlong. Some fine riding was witnessed, but the struggle for fastest time of the day soon became a battle between a few first-class men and machines. As each rider ascended the hill in every class for which he was entered there were plenty of opportunities for getting to know the road, but considering the fact that a fast wind was blowing down the hill the times were wonderfully consistent. Outstanding performances were made by F. Sisson (3½ Norton), H. M. Barron (3½ Norton), K. S. Topping (3½ Norton), H. Petty (3½ Norton), G. le Champion (3½ Sunbeam), J. R. Sylvester (2¼ Velocette), T. E. Norris (2¾ Sheffield Henderson), P. Turnhill (3½ Norton), and N. A. Wheeler (2¾ Massey Arran).

### RESULTS.

**Not exceeding 550 c.c. Sidecars (on time).**

*Section A* :—
H. M. Barron (3½ Norton sc.) } 31⅗ sec.
K. S. Topping (3½ Norton sc.) } (tied).

*Section B* :—
F. Sisson (3½ Norton sc.), 27⅕ sec. (walk over).

**Class 2.—Not exceeding 550 c.c. Sidecars (on formula).**

*Section A* :—
K. S. Topping (3½ Norton sc.).
H. S. Harvey (3½ Norton sc.).

*Section B* :—
T. E. Sibson (4 Dunelt sc.) (walk over).

**Class 3.—Passenger machines unlimited (on time).**

*Section A* :—
H. Harvey (3½ Norton sc.), 31⅘ sec.
K. S. Topping (3½ Norton sc.), 33⅗ sec.

*Section B* :—
F. Sisson (3½ Norton sc.), 27⅖ sec.
F. T. Hatton (6 Douglas sc.), 33⅕ sec.

**Class 4.—Passenger machines unlimited (on formula).**

*Section A* :—
K. S. Topping (3½ Norton sc.).
H. M. Barron (3½ Norton sc.).

*Section B* :—
F. T. Hatton (6 Douglas sc.).
H. J. Woodgate (10 Morgan).

**Class 5.—Solo two-strokes up to 350 c.c. (on time).**

*Section A* :—
A. Bowerman (2¼ Velocette) } 41⅗ sec. (tied).
J. Savory (3 Ivy) }

*Section B* :—
J. R. Sylvester (2¼ Velocette), 38⅕ sec. (walk over).

**Class 6.—Solo machines up to 350 c.c. (on time).**

*Section A* :—
T. E. Norris (2¾ Sheffield Henderson), 28⅕ sec.
N. A. Wheeler (2¾ Massey Arran), 33 sec.

*Section B* :—
H. Bemister (2¾ Coulson), 31⅖ sec.

**Class 7.—Solo machines up to 550 c.c. (on time).**

*Section A* :—
T. E. Norris (2¾ Sheffield Henderson), 27 sec.
H. M. Barron (3½ Norton), 27⅕ sec.

*Section B* :—
F. Sisson (3½ Norton), 24⅘ sec. (fastest time of day).
N. Black (3½ Norton), 27⅕ sec.

**Class 8.—Solo machines up to 750 c.c. (on time).**

*Section A* :—
H. M. Barron (3½ Norton), 26 sec.
G. le Champion (3½ Sunbeam), 27⅕ sec.

*Section B* :—
F. Sisson (3½ Norton), 25⅘ sec.
H. Petty (3½ Norton), 26⅕ sec.

**Class 9.—Solo machines unlimited (on time).**

*Section A* :—
H. M. Barron (3½ Norton), 25⅖ sec.
P. Turnhill (3½ Norton), 28⅕ sec.

*Section B* :—
F. Sisson (3½ Norton), 25⅖ sec.
H. Petty (3½ Norton), 26 sec.

**Class 10.—Solo machines unlimited (on formula).**

*Section A* :—
H. M. Barron (3½ Norton).
P. Turnhill (3½ Norton).

*Section B* :—
F. Sisson (3½ Norton).
F. T. Hatton (6 Douglas).

NOTE.—"Section A" for amateurs and those who have never been placed first in an open hill climb or speed trial. "Section B" for all others.

# CHANGES IN THE LONDON-EDINBURGH.

## Start of Run at Hendon instead of Highgate.

INSTEAD of starting from Highgate, the competitors in the M.C.C. London-Edinburgh run on Friday, June 2nd, will leave the London Country Club, near Hendon, and will proceed towards the latter place, passing under the Midland railway line. They will then take the second turning to the left, cross the Great Northern branch to Edgware, pass through Page Street, continuing through Mill Hill past the school, and on to Highwood Hill. Here a turn to the right will be followed by a turn to the left, the Elstree-Barnet road being entered at Barnet Gate, a blind corner at which great care must be exercised. The route then turns right for Barnet, turns left on entering the town at the end of the Ornamental Gardens, passes through Union Street, and enters the Great North Road between the church and the Salisbury Hotel.

In the early morning, at the Doncaster control, competitors will be handed stiff number cards (size 6in. × 7in.) provided with eyelets and strings, which must be tied over the front glasses of the headlamps.

In their own interests competitors are requested to be punctual, and to ride in their numerical order on entering Ambleside previous to making the climb over Kirkstone Pass. By doing so, they will avoid baulking and greatly assist both their fellow-competitors and the officials. No excuse for being baulked will be allowed if competitors are more than three minutes early or late of their schedule time over this particular portion of the road. More than 200 entries have already been received for the run; entries close on Saturday.

# RESULTS OF THE TRAVERS TROPHY TRIAL.

THE results of the recent Travers Trophy Open Reliability Trial have now been published by the Newcastle and District M.C., which organised the event on behalf of the North-Eastern Centre (A.C.U.).

B. Kershaw, the winner of the Trophy, put up a very consistent performance on his 248 c.c. New Imperial.

Results, subject to confirmation by the A.C.U., are :—

THE TRAVERS TROPHY, with enamelled gold medal and cheque for £50, presented by Messrs. Travers, Ltd., Newcastle:—Bert Kershaw (248 New Imperial).

GOLD MEDALS.—R. Wilson (490 Norton), A. W Byers (349 A.J.S.), F. Turvey, Jun. (600 Humber), H. J. Stretton-Ward (499 Triumph), G. Grinton (988 Harley-D. sc.), E. Welsh (633 Norton).

ALAN ROBSON SHIELD, with enamelled gold medal for fastest time in hill climb:—Hugh Mason (494 N.U.T.).

For Best Performance by a member of the Newcastle and District M.C.:—R. Wilson (490 Norton).

For the Best Performance by a private owner on a machine under 300 c.c.:—T. R. Wilkinson (346 New Imperial).

For the Best Performance by a Private Owner on a passenger vehicle:—Major J. D. Johnson (7h.p. Jowett car).

For the Best Hill Climb performance on formula by a private owner:—T. W. Toovey (490 Norton sc.).

SILVER MEDALS.—F. G. Price (346 Diamond), T. R. Wilkinson (346 New Imperial), S. Bell (348 Beardmore B. and S.), R. Ellis (494 N.U.T.), Hugh Mason (494 N.U.T.), R. Bowness (494 N.U.T.), R. C. Bennett (269 Federation), L. A. Bees (348 Beardmore-Precision), A. Dixon (499 Rover), J. E. Reed (348 Wolf), C. L. Nordman (292 New Imperial), T. H. Weaver (736 Verus sc.), G. M. Townsend (555 P.-and M. sc.), B. L. Bird (770 B.S.A. sc.), B. Bourke (598 New Hudson sc.).

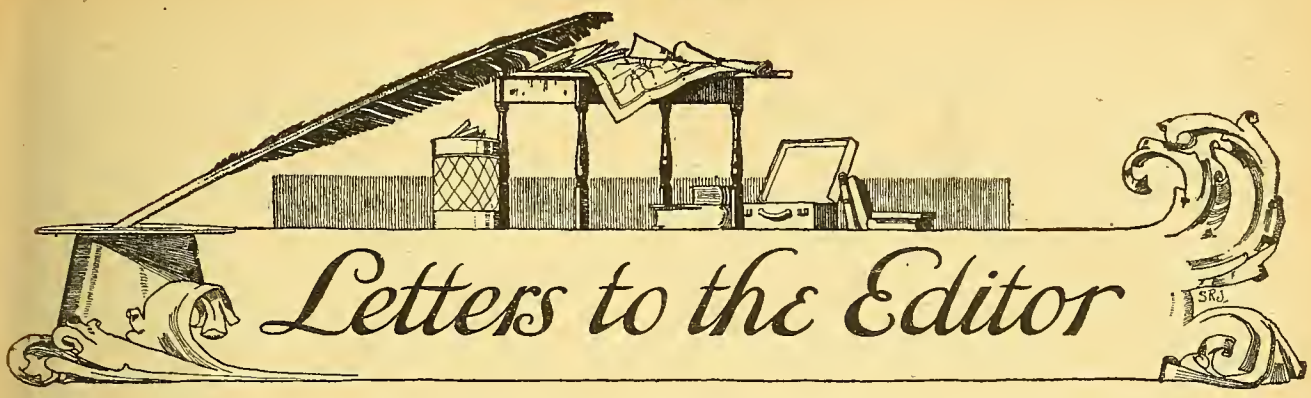
BRONZE MEDALS.—J. G. Doye (398 A.B.C.), A. Brewis (494 N.U.T.), K. J. F. Dixon (499 Sunbeam), Hugh Gibson (348 Raleigh), H. Adams. (248 Invicta), R. W. Loughton (248 Francis-Barnett), F. Stevens (348 Coulson), Davidson-Hall (249 Velocette), P. J. Bishop (348 Excelsior), Kaye Don (490 Norton), G. Greaves (490 Norton), C. W. Crosier (292 Invicta), Charles Webb (499 Sunbeam), Harold Pichard (490 Norton), Charles Webb (746 James sc.), Thacker (——), L. Newey (992 Ariel sc.), J. H. Walker (770 B.S.A.), T. W. Toovey (490 Norton).

## A FRENCH D.R.S. CLUB EVENT.

A TWENTY-FOUR-HOUR motor cycle road race for all classes of machines from 250 c.c. solo to 1,000 c.c. sidecar will be held in the eastern suburbs of Paris from May 27th to 28th. The event is being organised by the French Despatch Riders' Club, and has attracted thirty-four competitors. British machines are represented by a couple of 500 c.c. Triumphs, a 600 c.c. Triumph sidecar, and a Rover in the same class. The English rider Bartlett will start on a 500 c.c. Gnôme and Rhône, a machine on British lines

A very short circuit only seven miles from the gates of Paris has been secured for this unusual type of race. The start will be given at six o'clock on the Saturday morning, and the race, it is expected, will finish at six o'clock on the following morning.

AN ARDUOUS CLUB EVENT.—Competitors in Noah's Ark Watersplash, which was included in the Ipswich and District M.C.C. trial. E. T. Elliott (976 c.c. Matchless sidecar) and A. G. Mann (492 c.c. Sunbeam).



# Letters to the Editor

The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

## *AN AMATEUR ASSOCIATION.*

Sir,—The A.C.U. has decided to refuse permission to the promoters of an Amateur T.T. Surely this, from a union or club which, after all, derives the money upon which its very existence depends from amateurs, is getting a bit too much of a good thing?

If the A.C.U. has decided to foster professionalism to such an extent, and in preference to the amateur members, the sooner that a new amateur sporting riders' club is formed, the better. I think that all your readers will agree that it is a remarkable thing that they have dared to oppose the interest of that section of the community that they are supposed to represent.

If the A.C.U. intends to continue along these arbitrary lines it will soon realise to its cost that it is better to follow out the bold statements made in its advertisements than to collect subscriptions from motor-cyclists, and then ignore them until next collecting day comes round.

After all, this high-handed action, behind which can be seen the manufacturers' dictation, only goes to prove that there is a time in the history of every union when only real service to its members can give stability, and if this is ignored, it surely means ultimate downfall.

It is high time that a new association, representing the motorists (private) of the kingdom, was started.

Hull. AT-4320.

Sir,—Though not a prospective entrant for the Amateur Race, I was looking forward to the event very much, wondering what certain machines could do in amateur hands.

There is no need for me to go over the objections raised by the A.C.U.; I think the word "influence" would meet the case. I back up "R.I.C.-Umph," who ought to have signed himself "R.I.P." PRO-UMPH.

Norwich.

Sir,—I read with interest the letter from "R.I.C.-Umph." There appears to be no doubt that the A.C.U. does not encourage amateur sport among motor cyclists as it should.

In the majority of sports there is certainly a line drawn between amateurs and professionals, but in motor cycling it is generally a hard task to distinguish between an amateur and a professional rider, and an amateur could easily enter for an A.C.U. event, thinking that it was for amateurs, and find himself up against professional riders with specially built and tuned machines.

The A.C.U. advertised in your issue of the 6th ult. for suggestions as to the best method of ensuring that every motor cyclist in the Kingdom should become a member of that body. I should suggest that the answer to this advertisement is obvious. Let the A.C.U. ask itself whether it caters for the ordinary amateur rider. If one looks through the list of A.C.U. trials and the winners thereof, it is apparent that the majority—especially the big events—are held for the benefit of the Trade.

I should very much like to see an amateur association formed for the whole of the United Kingdom, as amateur motor cyclists are practically out of the running in all big events in the sporting side owing to these events being swamped out with professional riders on specially built and tuned machines.

Should the idea of an amateur association be carried out, I should have much pleasure in being a member and giving it all the support possible, and I am sure that there are hundreds of motor cyclists who would only be too pleased to join an association which would be for amateurs only.

Burton-on-Trent. A.M.I.M.E., M.I.A.E.

Sir,—I note the suggestion of "R.I.C.-Umph" of the formation of a purely amateur association. I may say that I sent a shillingsworth to the A.C.U. a week or two back, suggesting that to attract more members to that body it must divide membership into two hard and fast classes, amateur and "pro," the same strict rules to define an amateur as in the few of our really clean sports. At present to all outward seeming the A.C.U. is run "to or for," and "by, with or from," the trade, and to the sporting amateur is only a hindrance. There is every possibility of motor cycling becoming a clean national sport. There seems in this year of grace every possibility of it becoming on a par with professional football and run like horse racing, only organised "stables" and professional riders having a chance. Already the jargon of the "stable" is creeping into notes on the T.T.

Unless the A.C.U. can realise that the private owner makes the manufacture of motor cycles possible, and becomes a riders' union and not a traders' union, motor cycle sport is doomed. Unless a separate body takes charge of the sport on strict and pure amateur lines, F.I.C.M., A.C.U., and international records (official!) are no more to the vast body of sporting private amateurs than are the much advertised wins of freak machines. How about a .

Festiniog. NATIONAL AMATEUR M.C.C.

Sir,—May I say that I am entirely in sympathy with "R.I.C.-Umph's" suggestion as to the formation of a separate body to control the amateur side of the sport? I have no objection to the motor trade, in which, indeed, I have many friends, nor have I any to competing against their riders, and it is obvious that the A.C.U. has no easy job. But there is no denying that the A.C.U. is somewhat autocratic in its methods, and that at the expense of the amateur. The T.T. races are beyond the capacity of the majority of amateurs, possibly as regards riding ability, certainly as regards cost.

I would suggest, therefore, that there is room for an amateur body, organising hill-climbs, reliability trials, and perhaps a road race, open to all amateurs, but to amateurs only, and freed from allegiance to the A.C.U.

In conclusion, I would repeat that the amateur need have no quarrel with the Trade, but surely it is time that the A.C.U., most of whose membership is composed of amateurs, woke up and did something for the people who keep it in existence. COCASSE.

London, W.1.

### DEFINING A LIGHTWEIGHT.

Sir,—I was glad to see by *The Motor Cycle* that there is to be a Lightweight T.T. this year, but why not make it a *real* L.W.T.T. by limiting the weight of the machines entered to 125lb.? EDMUND CANBY.

Geneva.

### ABOUT HEAT.

Sir,—In reply to Mr. W. E. Marsh's letter, my example of enclosing the cylinder in a glass box was only intended to represent a rough method of preventing the heat losses due to the air-currents, leaving only radiation losses, and not an accurate experiment. I hardly thought it necessary to stress that. The average man knows that glass is sufficiently transparent to heat waves to make it necessary to silver the inside of a Thermos flask, and if I had suggested a rock-salt or ebonite box (both of which are very much more transparent to the long waves than glass) it would have obscured rather than illuminated the point. And I intentionally said "practically transparent" to avoid such a side issue being raised.

But if Mr. Marsh is desirous of accuracy in inessentials his own statement that "glass will only transmit wave lengths whose size is about $5.9 \times 10^{-5}$ cm," must be examined.

Jena glass No. 0.451 has, according to Rubens' figures, a refractive index of 1.5430 for a wave length of 24900 A.U., and a refractive index cannot be measured if the body will not transmit the wave length; and 24900 A.U. can hardly be considered "about" 5900 A.U.

As for the part where my "mistake is most evident," I will not occupy your space further than to quote from text-books, as I am tacitly advised; except to remind Mr. Marsh that I expressly pointed out that I did not mean the usual convection currents produced by the rising of the, heated fluid—which words, however, Mr. Marsh omits in his quotation from my letter, thereby rendering it a misquotation.

(1) "Convection—the transference of heat through the change of position of the heated body."—"Century Dictionary."

(2) "Heat may be propagated by the actual visible transference of matter . . . this method of propagation is called convection."—"Watson's Physics."

(3) "Heat may be propagated by conduction. In this case the heat is conveyed by matter, but no visible motion of the matter itself takes place; the heat is usually considered as propagated by the warmer molecules heating the neighbouring colder molecules, and so on."—"Watson's Physics."

(4) "If convection is prevented we find that liquids are generally to be ranked with the worse conducting solids. Gases are also bad conductors, worse even than liquids."—"Poynting and Thomson—Heat."

In conclusion, I apologise to your readers for a letter of no interest to the majority, and one which I tried to avoid by the wording of my original one—and failed. P. BREWSTER.

Sir,—I have been much interested, and even entertained, by the correspondence arising out of the instructive and illuminating article on the "Radiation of Heat," by "E. N. J."

The correspondents do not seem to be agreed among themselves as to the physical explanation of the facts. Mr. Brewster makes some interesting statements, but is sufficiently answered by Mr. Marsh. Mr. Edwards also enters the arena, and "warns your readers" against an experiment the original author does not appear to have proposed, and on which "Niger" makes a comment.

But by far the most humorous letter is that of "Enil Maerts." This writer seems, not only to have exercised considerable ingenuity in inverting a common phrase for nom-de-plume, but in attributing to the author a statement not even remotely implied, much less made, by him. I refer to the first three lines of his letter. "Central Heating" is, I fancy, a common phrase applied to the warming of large buildings, not usually to motor cars of the ordinary type.

If I may be allowed a serious word in conclusion, I would like to say, as one not entirely unacquainted with the subject, that the experiments described by "E.N.J." are not only illuminating, but convincing. S.

### IMPROVING OUR ROADS.

Sir,—I have seen one or two letters regarding the abominable practice of tarring the roads and scattering loose gravel on the tarred surface. I should like to add my protest to the others. I have come to the conclusion, after ruining one pair of socks per day for a week in riding over the roads tarred in this manner, the tarry stones being flung back over my feet and legs from the front wheel, that the British public, or that section of the public that uses the roads, must have infinite patience to stand this inefficient method of road-mending year after year in the way it has done. If the roads must be tarred and spread with gravel, they might at least be rolled afterwards. This would break up the stones at once instead of leaving it to the traffic to do, to the intense annoyance of cyclists, motor cyclists, and car owners. C. S. BOOTH.

Sir,—Touching upon the question of our present day road surfaces, why not build our steam-rollers to a weight specification, keeping in mind the weight of the heaviest loaded vehicle using the roads, with the whole of its weight concentrated on two fairly narrow tracks.

Allowance should also be made for an increase in traffic and heavier transport in the future.

If the above problem was considered we should probably see on our road repairs steam rollers of twice or thrice their present weight. Macadam under great pressure and tar sprayed should give a good hard surface. PB-3547.

Wallington.

### SHAFT DRIVE AND REAR SPRINGING.

Sir,—The spring frame and shaft-drive combination is never seen on the road. I maintain that it is not a feasible design, there being too much weight on one side of the wheel, which would result in the wheel failing to maintain its alignment in a vertical plane, uneven tyre wear, uneven wear of the bearings of the spring frame and skids. Is this so? It might be counteracted by (*a*) a corresponding dead weight on the other side of the wheel; (*b*) springs of different relative strengths. The old T.A.C. or T.M.C. employed this combination, nevertheless—with what success?

G. KINGDON.

IN THE MONTH OF MAY ON THE DEVIL'S ELBOW. The original plan was to include this hill in the Scottish trials, but as there was a likelihood of one or two competitors complaining of the Arctic conditions illustrated by this recent photograph it was cut out of the route.

### SIDECAR ALIGNMENT.

Sir,—Recent editorial comments upon the frequency with which one meets badly set-up sidecar outfits prompts me to send you a few lines which, if given the hospitality of your columns, may help many a worried owner to locate the cause of his inability properly and permanently to line up his outfit.

Last summer I had a touring sidecar made by a well-known English firm to suit an American heavyweight cycle. The complete car and chassis cost practically £50. The first thing I had to do was to add another plate to each of its four springs, though my passenger is but 9 st. Then I found it impossible to get the car lined up so that it would stay "put," and not until early this spring (I confess it with some shame, since I am not precisely a novice, after forty years' general mechanical experience) did I discover the cause.

I finally discovered that the chief remaining difficulty with the car was—the shanks of the three bent connections to the cycle were all fully 1-16 in. less in diameter than their corresponding holes, or sockets! No matter how tightly I screwed up the nuts on the shanks. I found that, since *they were parallel,* I could rotate each one by hand with comparative ease!

Should not these shanks, and of course their corresponding holes, or sockets, have Morse tapers? It seems to me an elementary requirement. At any rate, I proceeded to get as near the Morse taper as would remove the cause of my difficulty in the following way.

First cleaning up each shank, I made and "sweated" on a tubular mild steel liner of 1-16 in. sheet. Working entirely by hand, with files and carborundum (and of course a lot of patience), I finally arrived at a taper fit at each of the three bends, and since lining up the job two months ago I have had no further trouble in this connection.

J. ATKINSON.

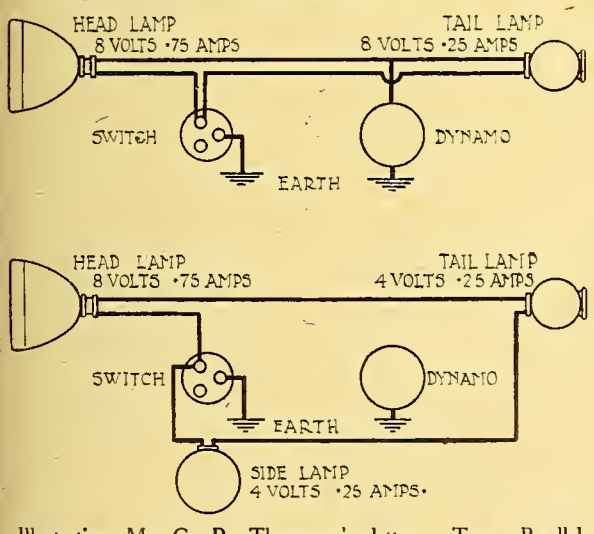
### "DYNAMOS FROM OLD MAGNETOS."

Sir,—With reference to the article by "W. R.," I find it to be somewhat misleading, and likely to complicate matters for the amateur, instead of simplifying them. I do not think it necessary to go into complicated calculations in Ohm's law. If the converted magneto is capable of generating 1 ampère at 8 volts, then the combination of lamps should be—8 volts .75 amp. for the head-light, and 8 volt .25 amp. for the tail-light. Lamps of less than .5 amp. *can* be obtained at any electrical engineer's. This combination is suitable for parallel wiring, and the fact of either lamp burning out or breaking would *not* cause all the available current to flow round the remaining lamp, which would simply draw its proper current from the generator.

If a light for a sidecar is desired, the combination would be slightly different. Head-light, 8 volts .75 amp., tail-light, 4 volts .25 amps., and side-light 4 volts .25 amps., but the side and tail-lights would have to be wired in *series.* This arrangement would still keep the maximum current down to 1 amp., and the head and tail-lights would not be reduced at all. Another advantage of this arrangement would be, that the side-light would serve as a tell-tale to the tail-light, in that, if either lamp burns out or breaks, the remaining lamp will not light, so that the driver seeing his side-light burning knows definitely that his tail-light is also burning.

I enclose a rough sketch of connections to illustrate my point.

GEO. R. THOMPSON.




Illustrating Mr. G. R. Thompson's letter. Top: Parallel system, providing head and tail lamps only. Bottom: Series parallel system for three lamps.

### TEMPERAMENTAL ENGINES.

Sir,—I have a 1921 T.T. Rudge Multi, which over a certain stretch of road invariably goes "mad" for a distance of five miles.

The road in question is particularly high, and the air is usually cooler there than in the surrounding country; this may account for a sudden burst, which apparently seems to be "all out" on a touring throttle opening. The machine romps uphill and down dale with seemingly no limit to its capabilities.

Apart from this fact, I have found the engine extremely temperamental. Sometimes sluggish and unwilling, and at others, against even a head wind, it slogs away with remarkable endurance.

Up to the present I have resigned myself to the fact that it was the driver and not the machine, but the experiences of other correspondents give me hopes that I shall eventually attain my ideal, viz., 60 on the road; not on paper.

Manchester. MULTI.

### H.P. RATINGS.

Sir,—With regard to your leader, whilst agreeing with the idea of calculating the horse-power on the cubic capacity at 100 c.c. per h.p. in the case of ordinary four-stroke machines. I should like to raise the point with your readers as to how two-stroke machines would be treated.

I believe I am right in saying that a two-stroke machine develops about 50 per cent. more power actually than a four-stroke machine of the same capacity. SOLO.

Cobham.

[In practice nowadays there is very little to choose in the comparative efficiency of two-stroke and four-stroke engines of the same "cubic capacity."—ED.]

### SHAFT AND CHAIN DRIVE COMPARED.

Sir,—Although Mr. Weaver may be a designer of motor cycles, while I am merely a rider, I cannot allow his letter to pass unchallenged.

Any pocket-book or treatise on mechanics gives, I think, an efficiency of at least 97 per cent. for a gear drive.

Absolute transmission silence and an ideal lay-out is provided by an "under" worm and shaft drive, and Mr. Lanchester claims an extremely high efficiency for worm gears cut in accordance with his principles.

An efficiency of 97 per cent. leaves very little margin for improvement, and I doubt if a chain in an oil bath could improve on it. The 15 to 20 per cent. superiority which Mr. Weaver claims I confess myself unable to understand. The average cycle chain is quite unprotected, and exposed, as it is, to all grit and dirt, its efficiency under such circumstances is not likely to reach 97 per cent. Even if well smothered in grease, etc., the dust, which then sticks all the more, gets pushed and worked through into the chain to a considerable extent.


## T.T. AND 1,001st NUMBER.

**On June 1st "The Motor Cycle" will celebrate its 1,001st consecutive issue. Nearly twenty years ago, when this journal was first published, the motor cycle movement was only just developing. The 1,001st issue of "The Motor Cycle" will contain many special articles and illustrations of exceptional historical interest; and, appearing on the date of the Senior Tourist Trophy event, particulars of the T.T. Races in the Isle of Man will form a feature.**

*Orders for copies of this enlarged issue should be placed in good time—Fourpence as usual.*

When in addition to being open the chain is neglected, the horse-power which it wastes must be enormous. Such chains, when removed, can almost be used as fishing-rods.

I bought a shaft-driven machine solely on account of its transmission, and though I swear at the machine for many reasons my faith in its transmission has proved completely justified, and my wrath is never directed thereto.

A shock-absorber is, however, very necessary on a single-cylinder, shaft-driven machine.

I think that most of the prejudice against the shaft drive lies with the manufacturers, not with the public. F. N.

Sir,—How anybody in the trade could state that the difference in efficiency between shaft drive and chain drive is 15 to 20% beats me, and the poor layman will surely be wondering how it is that ninety-nine out of every hundred motor cars running about are fitted with a form of drive showing such an awful comparison with the chain drive. It would be interesting to learn where Mr. Weaver obtained his information.

As a matter of fact, the difference between bevel and chain drive is less than 1%. But, so far as motor cycles are concerned, it does not rest here.

The comparative tests have been made with simple single chain drive, *i.e.*, one chain running over two chain wheels. Chain-driven motor bicycles are fitted with *two* chains, which involve the use of *four* chain wheels, so that the loss in transmission is doubled, which makes all the difference.

Incidentally, there are extra shafts and their attendant bearings needed to accommodate the extra chain wheels, and where there are bearings there is friction.

There are motor bicycles made in which the transmission is a mixture of both bevel gearing and chain, and others which drive from engine to gear box through a train of gear wheels and from gear box to back wheel by chain. Neither of these machines are exactly unpopular.

Mr. Weaver states that "the success of the modern motor cycle is undoubtedly due to the fact that for its power it is capable of doing much more work than any other machine on the road, and this is chiefly because of its higher transmission efficiency."

Does Mr. Weaver seriously think that the transmission of a modern motor bicycle is higher than that of a motor car with shaft and bevel gearing? I opine that no engineer will agree with him.

So far as the F.N. shaft-driven motor bicycle is concerned, far from finding it unpopular, its popularity increases each succeeding year, and has done since it was first manufactured in 1905.

In conclusion, perhaps I may be permitted to refer to a referendum of well-known trade personages taken by *The Motor Cycle* in 1913, and concerned with the type of motor bicycle of ten years hence. The analysis showed:

Twenty-one plumped for shaft drive.
Eleven for chain drive.
Seven for belt drive.

HARRY G. BELL,
Sales Manager, F.N. (England), Ltd.

## *STEREOTYPING THE RELIABILITY TRIAL.*

Sir,—I notice from your last issue that the Competition Committee of the A.C.U. will shortly be considering the question of the inspection of the trials courses got out by the various centres for open competition. The suggestion emanates from Major Vernon Brook, and coming as it does from such a good sportsman, and so experienced an authority, it is worthy of the closest consideration.

Personally, however, I cannot help but feel that this is the first blow to be struck at the liberties of the centres. Trial courses are at present the outcome of the deliberations of some half-dozen or so, and it does seem a little arbitrary to have one representative from headquarters empowered to override the considered judgment of the many who are on the spot, and have had every opportunity of seeing men and machines working previously under given conditions. The whole question of the advisability of the inclusion of certain sections is entirely a matter of opinion. I have in mind a recent trial in which the promoters wavered whether to include a certain hill, but ultimately did so. An experienced A.C.U. steward termed it "freakish," but certain Pressmen thought it quite reasonable, but branded as "freakish" another "tit-bit" about which there had been no hesitation. The present proposal goes to stereotype the reliability trial, but to allow a free hand to the Centres makes for the provision of a variety of types, which is the spice of competition life, and also gains the confidence of the local public. Organisers know very well that all the opposition which there is to courses of a certain nature comes only from the same côterie of unsporting competitors.

Various promoters have various objects before them. There are those who take numbers alone as the criterion of success, and who try to attract a good entry annually by building up a reputation for the supply of "cushy golds." But there are others who take spirit, sport, and progress as their ideals, and endeavour to further the evolution of the motor cycle by tackling new problems and exploring new territory. Approval or disapproval will be reflected in the support accorded to future events, but it is for each centre to work out its own destiny along whichever of the courses it chooses to take, without having to submit to the fatherly advice of some well-meaning person sent by headquarters.

The whole question can be traced to the want of firmness of the Union in the Six Days' Trial of 1920 at Darlington, and it would be a very ill-advised step indeed to force such a weak-kneed policy on to the local centres, for I am convinced that a certain clique is at the bottom of the whole business.

I am aware that it has been objected that some trials have failed entirely to be of any service as media of propaganda. But such a statement is based on the belittlement of the powers of discernment of the public. One thing is certain. The growing general interest of late years in these events is making it more and more unnecessary to give the reminder: "This is not a race," and that increasing interest will soon be demanding to know the relative values of these trials, to sort out the gold from the dross, and to differentiate between their respective worths—on the one hand between those in which there is a real earnestness of purpose, and on the other between those of insincerity and "gallery play," in which nothing is attempted unless success is assured beforehand.

There is such a tendency now prevalent that it may not be long before it is left to the closed local event and the private owner to illustrate the possibilities of the modern machine and to the open trial to provide a monotonous, idle, and vain procession of sparkling mounts.

Let it not be said that by restraining the centres the Auto Cycle Union, perhaps unwittingly, did anything which might possibly be interpreted as the pandering to commercial interests by a body which has so justly declared that it stands for the betterment of the motor cycle, for sport and for the interests and guidance of the general public.

K. S. TOPPING.
Hon. Sec., East Midland Centre, A.C.U.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# LESSONS FROM LIEGE.

## British Clubman gives his views on an important Continental Competition.

BRITISH competition riders are apt to regard all but the most important Continental motor cycle events in a chary mood. Therefore the experiences of Mr. J. N. Longfield, the Chairman of the Yorkshire Centre A.C.U., at *L'épreuve Internationale, Côte de Mont-Theux*, held on the 6th inst. by the Liége M.C.C., should prove interesting, Mr. Longfield's story follows :—

"It had often been my wish to go over to Belgium or France to see how the clubs on the Continent organised and ran their hill climbs, so I jumped at the opportunity of accompanying Geoffrey Boston and his cousin when they went over to Belginm for the *Côte de Mont-Theux* event.

"We left London at 8.30 on the previous Friday morning, and arrived at Liége about 8.30 the same evening, being met by M. Maurice Bury, the energetic secretary of the local club, who placed at our disposal two cars, one for the little A.J.S. and sidecar and the other for onrselves.

"Early next morning we left Liége for the hill, which was situated on the main Liége-Spa road, about twenty kilometres from Liége.

"The first point which impressed us on arrival was the absolute suitability of the hill. Starting with a perfectly level run, for the flying start, of approximately half a kilometre on fairly good *pavé*, the climb proper commenced about 500 yards before the one and only bend, this bend being a perfect curve to the left and just difficult enough to test the rider's ability in cornering. After this curve the hill continued to well over a kilometre past the finish, at an average gradient of about 1 in 8. The surface was the most perfect I have ever seen, and consisted of hard macadam; I do not think there was a loose stone from the start to the finish.

"Timing was by synchronised watches, the length of the climb being one kilometre. The timekeepers were in telephonic communication with each other,

Great enthusiasm and excellent organisation prevailed at the Mont Theux hill climb—as witness the roped course—when G. S. Boston (349 c.c. A.J.S.) succeeded in winning both the sidecar and solo trophies. Boston sweeping up in the passenger class.

and red and white flags were used to indicate when each competitor could start. The whole of the course was roped on both sides of the road, from the beginning of the flying start to well past the finish; there was also a large body of gendarmes distributed around the roped section. There was no single incident of competitors or organisers becoming worried or perturbed by spectators, although there were a large number of the latter present. Great care had been exercised in roping the curve.

### Punctuality.

"The climb started at exactly the advertised time, 10.30 a.m. Each class was given a certain speed to attain, the rider who exceeded that speed by the greatest amount being the winner of the trophy. Medals were also given for the best increase in each class. All the sidecars went up first, and on the last man reaching the summit, they all returned to the starting point, when they had another run. After the sidecars abont a quarter of an hour was allowed for sidecars to be removed, gears altered, etc.; then the solos had two runs up each. There was absolutely no delay, the programme was strictly adhered to, and the whole event was over by 1 p.m., although there were in all over ninety ascents. In short, it was one of the best organised events it has ever been my fortune to witness.

"Boston carried all before him, winning the *Coupe la Wallonie* outright, and the *Coupe John Bull*, the latter to be held for one year. His solo times were only beaten by one or two of the 1,000 c.c. machines, and then by nowhere near a sufficient margin to entitle the latter to the cups. His victory was a most popular one, the Belgians in particular showing their admiration and pleasure.

"I have only three criticisms to make, and they are : (1) I consider the solo machines should have gone up before the sidecars; (2) a more organised park should have been arranged for competitors behind the starting line; and (3) on completion of the ascent competitors should have been marshalled right off the road."

# ROYAL MOTOR RACE MEETING.

IN aid of the Middlesex Hospital and the Industrial Welfare Fund the Royal motor race meeting, to be held at Brooklands by the Essex M.C. on Saturday next, has received most excellent support. It will be under the direct patronage of H.R.H. the Duke of York, himself a motor cycle enthusiast, who has entered a Trump-Anzani and a Douglas, to be ridden by his chauffenr. The meeting will be attended by the Duke of Athlone and nnmerous other royal personages, and is expected to attain much prominence socially.

The first motor cycle event is "The Duke of York Three-lap Junior Handicap," distance about 8½ miles, for solo machines not exceeding 500 c.c. For this event thirty-six entries have been received. For the equivalent "Senior" handicap, for machines not exceeding 1,000 c.c. (entries in this class may be limited to machines with an observed speed of 70 m.p.h. or more), fourteen entries have been sent in. The last race in which motor cycles will take part is the Essex three-lap passenger handicap over the same distance for 1,000 c.c. sidecars and three- or four-wheeled cycle cars up to 1,100 c.c. There are nineteen entries.

In addition there will be several car events. Racing begins at 1.30 p.m., but the gates will be opened to the public at 11.15 a.m. Admission is 5s., but tickets purchased before Saturday from Mr. A. G. Reynolds, 95, Fillebrook Road, Leytonstone, London, E.11, cost 4s.

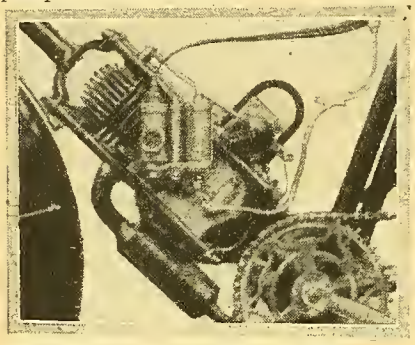
Those who purchase tickets before the day may participate in a competition for a 4 h.p. Harley-Davidson, value £115, presented by Mr. Duncan Watson.

# A TRUE LIGHTWEIGHT.

THERE has always been a very considerable demand for a really light motor cycle to fill the intermediate gap between the pedal cycle and the lightweight motor cycle. From time to time various machines have been designed and marketed to fill this need, and the most recent addition to this class is the Airolite, which is about to be marketed by the Small Engines Company, of 131, Coventry Road, Birmingham.

The manufacturers are responsible for the Simplex 1¼ h.p. pedal cycle attachment, and it is a similar power unit which is now built up in the frame of the lightweight illustrated.

Having a bore and stroke of 50.8 mm. × 50.8 mm. (103 c.c.), the engine is of the normal three port two-stroke type, but an overhung crankshaft is employed and is carried on two ball bearings in a phosphor bronze shell. The bearings

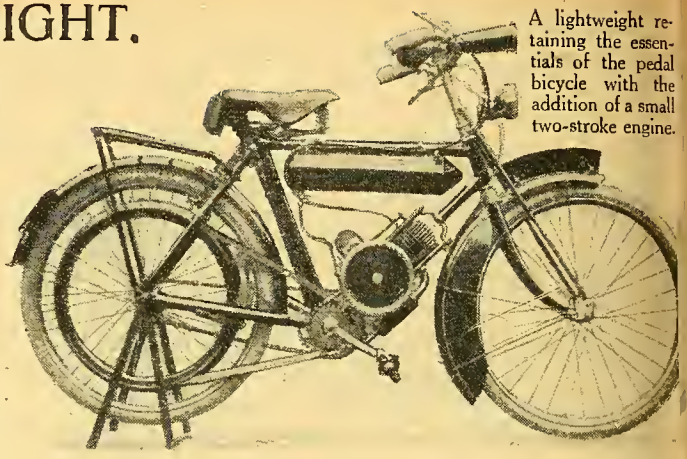


The 50·8 × 50·8 mm. two-stroke engine which is carried within the front member of the frame.

**The Airolite, a Pedal-assisted Two-Stroke Motor Cycle of 1¼ h.p.**

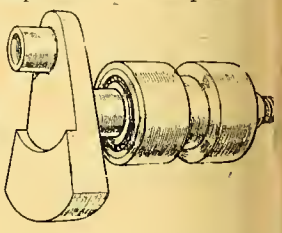
are widely spaced, and the gap is bridged by part of the shell which surrounds the crankshaft, and forms an additional plain bearing and compression retainer. This engine unit is held between four long bolts which form part of the down tube of a strengthened cycle frame. It can be very easily detached or moved with its clamping plates for the purposes of chain adjustment. On the rear plate is mounted a Fellows' "Baby" magneto, and from the crankshaft there is a chain drive to a ball-bearing countershaft. This countershaft, which also carries the belt pulley for the final drive, is mounted on an extension of the pedal crank bracket, and in no way interferes with the pedalling gear. The cycle parts are neat and strong, and are specially manufactured by a very well-known firm of cycle and motor cycle manufacturers.

Including luggage carrier, tool bag, number plates, etc., the whole machine weighs less than 70lb., and sells at the very moderate figure of 27 guineas.



A lightweight retaining the essentials of the pedal bicycle with the addition of a small two-stroke engine.

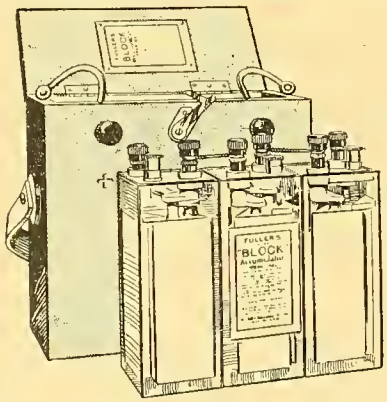
It is claimed that the tiny engin will propel a rider of normal weight u all ordinary hills without pedal assist ance, and that it will attain a speed o 15-20 m.p.h. on level roads. Such machine should meet with a very larg demand, for there is an immense num ber of potential motor cyclists who hav no desire for high speeds, and are some what afraid of the weight of the mor usual type of motor cycle. With a view to appealing to this public the control have been simplified as far as possible.



Two ball bearings in a phosphor-bronze shell support the overhung crankshaft.

## INEXPENSIVE LIGHTING BATTERY.

MANY motor cyclists who do not wish to go to the expense of a dynamo lighting outfit are disposed to invest in battery lighting with a battery of proved efficiency and of large capacity. Such a lighting battery can be obtained at a very reasonable cost in the shape of the Fuller block accumulator supplied to the Services during the war, which are of 6 volt, 20 amps, actual capacity. They are practically one-third cheaper than the list prices, and are sold in an excellent box with a leather handle, being highly suitable for sidecar outfits. The electrodes of the cells are so constructed that they are free from injury caused by vibration, short-circuiting, and sulphating. The batteries supplied are genuine block type Fullers in 2-volt cells, sold in groups of three, at the price of £2 19s. 6d., by The City Accumulator Co., 79, Mark Lane, London, E.C.3.

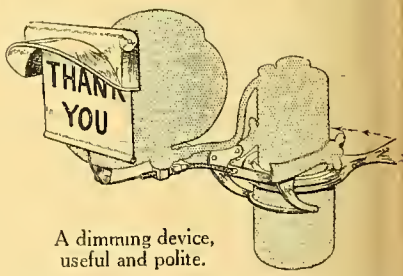



Fuller block accumulator sold by the City Accumulator Co. complete with box.

## A GAS LAMP DIMMER.

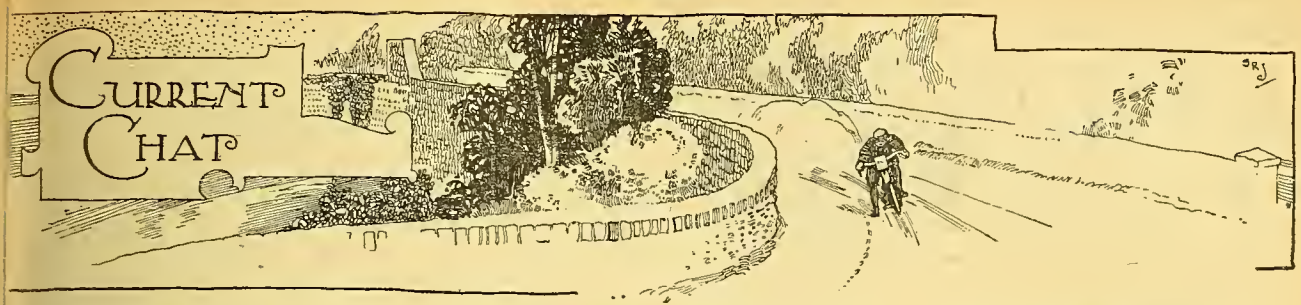
TO dim or not to dim, is even yet a much-discussed question, but whatever be the rights of the case there is undoubtedly a large percentage of riders whose natural courtesy demands that they should cut out the offending rays on approaching a vehicle travelling in the opposite direction. Even if one's own lamp is not of unduly high power it is pleasant to be able to acknowledge the dimming of headlights on an approaching car

With this end in view a simpl "shutter" has been designed by Mr. T Wheadon, of Mentone Road, Parkstone Dorset, for use with acetylene lamps. A special hood is made for the lamp front and within this hood lies a miniatur roller blind normally held in the con cealed position by a spring. The lowe edge of this blind is attached by means of a Bowden cable to a lever surrounding the generator, and by moving this lever in




A dimming device, useful and polite.

a clock-wise direction the blind can be lowered in order to cut out the dazzling rays. In the example which we have examined the blind was inscribed with the words "Thank you," presumably as an acknowledgement of the courtesy of others.




## Times to Light Lamps.

| | | |
|---|---|---|
| May | 18th .. .. | 9.46 p.m. |
| „ | 20th .. .. | 9.48 „ |
| „ | 22nd .. .. | 9.51 „ |
| „ | 24th .. .. | 9.55 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### British Win in Italy.

In the Cremona Circuit a private owner, Ernesto Sironi, was successful in carrying off the first prize on a Norton.

### Paris-Pyrenees Trial.

On account of the late spring, which has resulted in the passes of the Pyrenees being still covered with snow, the trial will be postponed until June 11th to 18th.

### No Consumption Tests in Six Days Trials.

Owing to difficulties in organisation there will be no petrol or oil consumption test during this year's A.C.U. Six Days Trials.

### For Naval Officers.

To suit naval officers' leave, July 7th and 8th have been finally settled as being the most convenient dates for this year's Arbuthnot Trophy trial.

### Safety in Competitions.

So as to avoid accidents to competitors or spectators, the Auto Cycle Union has sent notices to clubs urging that due precautions should be taken in the running of closed hill climbs.

### Isle of Man Car Races.

Exactly the same length of course—37¾ miles—and the identical roads as those in the motor cycle races are to be used in the car races organised by the R.A.C. on June 22nd.

### New President of Manufacturers and Traders Society.

Lt.-Col. J. A. Cole, O.B.E., J.P., deputy chairman and managing director of Humber, Ltd., has been elected president of the Society of Motor Manufactures and Traders in succession to Sir Alfred Mayes-Smith.

### Double Twelve-Hours Records.

In place of continuous twenty-four hour records official recognition will now be made of two twelve hours' consecutive records. Between each there will be twelve hours' rest, during which time the machine must not be touched.

### Yorkshire's Rough Riding Trial.

Arrangements have been made with the Auto Cycle Union to hold the Scott Trial this year on September 9th.

### Oil in New Zealand.

Oil has been discovered in Murchison, N.Z. A Nelson motorist writes most enthusiastically about it, as he considers the oil to be of fine quality.

### A Motor Track for Spain.

At Barcelona, which is the centre of the automobile movement in Spain, there is talk of erecting a speed track. Plans have already been got out for a two kilometre course.

### A Belgian Trial.

A reliability trial of some 80 miles in extent was recently organised by the Moto-Club de la West Flandre. It comprised a slow test and a speed test over one kilometre. Results were: 1, Breslau (Norton); 2, Givelet (Indian Scout); 3, Gauchie (Norton).

### Freak Consumption.

Most petrol consumption trial results may be taken with the proverbial grain of salt. Recently, an event in Christchurch, N.Z., was won by the rider of a 580 c.c. twin, which covered forty-four miles on slightly less than a pint of petrol —356 m.p.g., which just shows what can be done by taking the matter seriously.

### Two Important Continental Competitions.

Two competitions to be held on the Continent this year which especially merit the attention of British manufacturers are, among the speed events, the Grand Prix of the U.M.F., to be held on July 12th, and, among reliability trials, the International Six Days Trials, August 3rd to 9th. Particulars can be obtained from the Secretary of the Auto Cycle Union, 83, Pall Mall, London, S.W.1.

### Toll Gates.

Feeling that time is opportune for general action directed towards the abolition of road tolls, the Automobile Association has approached all the interested highway authorities. Its representatives have been well received, and, though the financial difficulties involved are considerable, it is felt that the sooner they are faced the better. The Association holds that the payment of toll charges conflicts with the accepted policy that the special tax on motor vehicles—at present iniquitous because it is not proportionate to use—gives the right to free passage on the roads.

## Special Features.

TIMING HIGH SPEED RECORDS.
SIX DAYS IN SCOTLAND.
T.T. NOTES AND NEWS.

### The Tourist's Machine in Spain.

Motor cycles and sidecars may be introduced into Spain for touring purposes if they are provided with a triptych issued by the Automobile Association and Motor Union of London under guarantee of the Credit Lyonnais in Madrid.

### Road Improvements in North Wales.

Formerly narrow, tortuous, and hilly, the old main road from Llandudno to Conway has been improved and rendered suitable for modern conditions. In the region of Tyn-y-Coed hill the carriageway has been widened and a footpath added. Improvements have also been made in the road from Llandudno Junction and Conway to Llandudno, while the danger which existed at the Llanthos cross road near Colwyn Bay has been removed.

### Daffodils.

In the springtime one hopes to find the daffodils "beside the lake beneath the trees," but one hardly expects to find them in the heart of London. Yet, the other afternoon, the yellow flowers made a small portion of Pall Mall resemble the Promenade des Anglais at Nice after the battle of flowers. The occurrence was accidental, for a motor cyclist, careering gaily westwards, suddenly shed the contents of a florist's hamper, and scattered the highway with these beautiful emblems of spring.

### Closing a Recent Trial Route.

As originally intended the route of the Western Centre A.C.U. One Day Trial, which goes down to history as the "Arctic Trial," was laid up Rectory Lane and over a rough colonial section known as Cadbury Camp, in the vicinity of the lunch stop at Clevedon, Som.; being snowbound, of course, this part was omitted.

The landowners have since erected a fence and gate, with warning notices apparently with the object of closing this section to public use; as it has been a well-used track for many vehicles, to say nothing of walkers and cyclists, for many years past, naturally objection is being raised by the local authorities; it is stated to have been the main coach road to Clevedon at one time.

# CLUB NEWS

1. W. Ashworth (499 c.c. Rudge) climbing Pen-y-Ball, Holywell, at the Liverpool M.C. Hill Climb.

### Buxton and District M.C.

Speed trials for May 28th have been arranged at Rushup Edge, Chapel-en-le-Frith, commencing 2 p.m., over a flying half-mile distance. The secretary is Mr. R. H. Millington, Buxton.

### Gateshead and District M.C.C.

A new club has been formed at Gateshead and given the name of the Gateshead and District M.C., and already boasts about twenty-five members.

It is intended to confine the club's activities to social runs.

### Bristol Sports Club (Motor Section).

For the Douglas Cup one-day run on May 21st over a route laid in the Wye Valley the first prize will be the Douglas Cup and gold medal, and the five following runners-up will each receive a gold medal. Entry forms must be sent in to-day to Mr. F. Lane, Black Swan Hotel, Eastville, Bristol.

### Stourbridge and District M.C.C.

The opening run of the 1922 season took place on April 30th, in the form of a trail-less trial, over 40 miles of main road, with two time checks and a stop and re-start test included. A secret check was taken to determine winners. Results:

1, H. E. Wilson (Sunbeam sc.); 2, H. K. Palfrey (Triumph); 3, F. Ferriday (Omega). The winner's error was 1m. 32s.

### Pietermaritzburg M.C.C.

Bright but gusty weather favoured the 'Maritzburg club's first trial to Camperdown and back for the Mountford Trophy. First on handicap: C. H. Young (3½ Triumph), but a splendid performance was put up by R. Blackburn's A.B.C., the rear springs of which collapsed just as he reached home. The smallest machine in the race was a 211 c.c. Cedos, ridden by A. R. Morcom. The second and third competitors in the event were H. B. Loader (Harley-Davidson) and R. G. Goodwin (2¾ Royal Ruby).

### Punjab M.C.C.

A most successful gymkhana meeting was held on the 9th ult., upwards of thirty members taking part. British machines scored all round. In the "bending" R. McV. Hofford (Douglas) was first, A. J. Walenn (Triumph) second; "tilting the ring," R. McV. Hofford (Douglas) and J. Evans (Douglas) first and second respectively; "catching the ball," T. O'Leary first. The above results prove the flexibility and controllability of the British engine as compared with those of foreign manufacture.

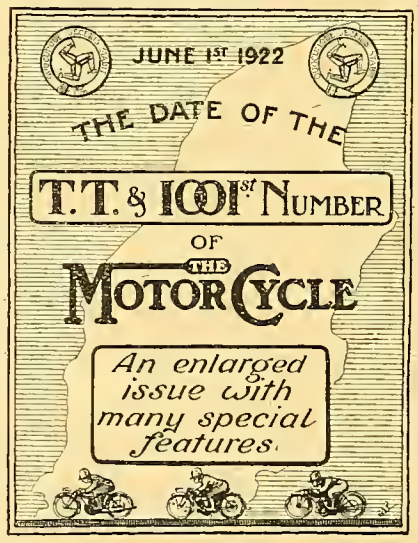
### Neath and District M.C.

The second speed final of the season will be held in the beautiful grounds of Margam Park (kindly lent by Captain Fletcher, J.P.), on May 20th, at 2.30 p.m.

All classes will be catered for, and entries are to be taken on the course.

### Bulwell M.C.

Although the weather was far from promising, 16 members turned up to take part in a paper-chase on the 23rd ult. The trail was laid by F. H. Wallis, who finished at the Peacock, Belvoir Castle, where the competitors had tea. W. Bales (2¾ Raleigh) was adjudged the winner of the prize given by one of the members.




### North London M.C.C.

On Monday, May 1st, the club was "at home" at the town headquarters, Ye Olde Gate House, Highgate, and a most interesting and amusing evening was spent. This is the third social that has been held, and judging by the attendance these functions are becoming very popular, and they are now being held on the first Monday in each month.

### Wellington M.C. (New Zealand).

Successful racing was a feature of the first meeting held this year on the Miramar course, which was in fair order In the five-lap solo race the results were: Southwood (Triumph), Dimock (Triumph), Goddard (A.J.S.). In the five-lap sidecar class McAustin (Harley-D. sc.), Clouston (Harley-D. sc.), and Thompson (Harley-D. sc.). Harley-Davidsons were first, second, and third in the relay race. The maximum number of points was scored by Dimock (Triumph).

### Croydon and District M.C.C.

In spite of indifferent weather conditions the opening run of the above club was attended by a large and representative number of riders. Numerous well-wishers gathered to give the club a send-off, and after an official photograph had been taken, a start was made for Bletchingley, where tea was taken at the club country headquarters. Tea was followed by a short musical programme and a surprise competition for the best-kept machine was won by D. Knight (Sunbeam). The skilful handling of their machines by the two lady members augurs well for their success in the club competitions during the year.

A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### IGINE WON'T STOP ON THROTTLE.

The engine of my 490 c.c. single will not run slowly, and, although I have lowered the needle of the B. and B. variable jet carburetter to its fullest extent, the engine will not stop on the throttle. No air leaks are present. How can I improve this?—C.H.J.

r leaks or an excessively rich mixture e usually the cause of the engine refus- g to run smoothly; it may be, however, at the throttle barrel is badly worn in e carburetter, or that for some reason it prevented from closing off absolutely ıen the lever is in the closed position; amine the control cable carefully, as me of the strands may be broken, thus eventing the throttle from reaching the nit of its travel.

### TYRE TROUBLES.

I have had a good deal of trouble lately with my 650 × 65 mm. tyres on a 499 c.c. Rudge, yet they are apparently in good condition. Could you suggest any cause for these mishaps?—H.G.P.

ou do not say definitely what form your re trouble takes, but the assumption is at you have had more than an ordinary ımber of punctures If the punctures e due to nails, etc., you cannot alto- ether blame the tyres, as even the best covers may be pierced at times. If outside puncturing agent has caused ıe trouble, it may be that the ends of ıe spokes project through the nipples the rim and so puncture the tube, or a uantity of grit may have dropped into ıe covers at some time when the tyres ere refitted. Various attachments are ıarketed to deflect nails, etc., and some the modern puncture sealing inner ıbes are quite satisfactory articles.

### AN OLD ENGINE.

Twelve months ago I bought a motor cycle, and it has never run satisfactorily. It is a 2¾ h.p. four-stroke. I have recently overhauled it and fitted the following parts: cylinder, valves, rings, connecting rod, bushes, and jet, and have had the crank-pin and shaft ground up true. It has been returned as follows: magneto retarded, with piston on top centre of expansion stroke; exhaust valve closing on top of exhaust stroke, inlet valve opening immediately after and remaining open until bottom of induction stroke. The petrol level is 1-16in. below the top of the jet (No. 34), and the gear is 6 to 1. I should like to know if it is timed correctly, also if the balance is affected by the fact that the new connecting rod is ¼oz. heavier than the broken one. I can only get about 30 m.p.h. on level, and the machine will not climb even a small incline. When the machine is on the stand and I turn the back wheel with my hand I can just pull the engine over compression. Is this good enough?—A.C.

The valve timing appears to be correct; the magneto should be timed so that the spark occurs on top dead centre of the compression stroke with the ignition control two-thirds retarded. The slightly greater weight of the new connecting rod will not make any appreciable difference to the balance of the engine. It is possible that the new parts which you have fitted are not properly run in; maybe the piston or one of the bearings is rather tight. The engine may not develop its normal power until it has been run some distance. The compression also will probably improve as the new parts become bedded in with continued running. The new piston and rings especially will be some time before they come into their best condition; from your description, however, there does not appear to be anything wrong in this direction.

## Important Dates.

**Sat., May 20th—S.-Western Centre A.C.U. Open Reliability Trial.**
**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sun., June 11th, to Mon., June 19th—Paris-Pyrenees Trial.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 Mile Sidecar Race. Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### SPECIAL PISTON AND VALVES.

(1) Which is preferable for sprint racing—an aluminium alloy or steel piston? (2) If I have two valves made of tungsten steel would I be able to have the stems drilled out, and the head hollowed slightly, or would it cause breakage?—F.V.J.

(1) It is impossible to say which is preferable, some of the best results having been obtained with ordinary cast iron pistons, as well as with those of special metals and design; it does not follow that the mere substitution of a steel or aluminium piston will convert an otherwise ordinary machine into a record breaker. (2) You could no doubt have the heads of any valves suitable for your engine slightly hollowed without fear of breakage, but it is doubtful whether the stems could be drilled with any advantage.

### GEAR RATIOS.

My mount being a W.D. 5-6 h.p. Clyno is geared 5¾ to 1 on top. I want to make this higher for solo work, and would like the top ratio to be about 4¼ to 1. Will you please give me the number of teeth required on the engine-shaft sprocket for that gear.—N.S.

As you do not give the sizes of the sprockets used in the transmission of your machine, we are unable to answer your question, but you can easily calculate the required size of any sprocket in the drive by the formula:

$$\text{Gear Ratio} = \frac{\text{Product of Nos. of teeth on driving sprockets.}}{\text{Product of Nos. of teeth on driven sprockets.}}$$

### SIMPLICITY AND COMFORT—NOT SPEED.

Being anxious to buy a cheap motor cycle, and having had no experience with engines, I am asking for advice. What I want is something quite simple and easily controlled, and more or less foolproof. Twenty miles an hour would be the maximum pace I should ever want, and probably 10-15 m.p.h. would be my usual speed. I am rather old to take to motor cycles (50 years), but think a motor scooter undignified for a man. What I really want is some sort of machine to take me short journeys with a certain amount of comfort. I study the advertisements in your paper regularly, but all manufacturers appear to make speed the most important thing, and what I want is simplicity and comfort, and a fairly silent engine. Speed or high power do not interest me.—W.B.D.

For obvious reasons we cannot specify one make in preference to all others on the market, but you can scarcely go wrong if you choose your mount from any of the old-established and first-class makes of either two-stroke or four-stroke machines between 2¼ and 2¾ h.p., selecting one equipped with two-speed gear, clutch, and kick-starter. Such a machine you would find perfectly easy to control and manipulate, and although most of them are capable of exceeding 30 m.p.h., there is no need to use this speed if you do not require it. For pleasant slow running qualities, yet having ample power in reserve for hill-climbing, we think a 2¾ h.p. four-stroke machine with outside flywheel would suit you best. Before making your final selection, you would be well advised to obtain "Motor Cycles and How to Manage Them," as the chapter therein on selecting a machine will aid you in your choice.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned. Requests for experiences should be accompanied by a stamp.*

R.R. (Croydon).—532 c.c. Scott standard solo.

J.R. (Milton Bridge).—Ner-a-Car.

R.W.M. (Cirencester).—482 c.c. Scott Squirrel solo and sidecar: jet sizes, plugs, and lubrication.

G.R.H. (Newcastle-on-Tyne).—247 c.c. Velocette: lubrication, speed, value of 15.5 to 1 low gear, plugs.

K.G.S. (Sandbach).—349 c.c. A.J.S. semi-sports.

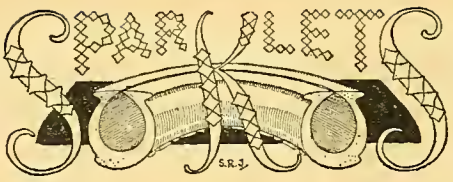
TWO-STROKE (Kettering). — 350 c.c. Beardmore: petrol and oil consumption, plugs, suitability for sidecar.

C.F.B. (Cambridge).—B. and S.-engined machine: suitability for sidecar; also 348 c.c. and 550 c.c. Hawker-Blackburne.

G.C.H. (Peshawar).—532 c.c. Scott sidecar: also use of oversize tyres.

T.H.R. (Lewisham).—Any rear springing attachment for 500 c.c. machine.

F.C. (Northampton).—293 c.c. Connaught: alternative carburetters.



### An Echo of the London-Land's End Trial.

On further consideration the M.C.C. Committee has allowed G. Baxter (678 Martinsyde) to be transferred to the gold medal class.

### A Price Correction.

In our issue of April 27th, on p. 554 it was stated that the new Sports Coventry Eagle was offered at £67, but it was not clear that this price referred to the chain-cum-belt model only; the all chain drive machine which was illustrated costs £80.

### Douglas Prices Reduced.

The new prices of Douglas machines, in every case fully equipped, are as follows: 2¾ h.p. two-speed, £68; 2¾ h.p. three-speed, £82; 3½ h.p. Sports, £115; 4 h.p. solo, £110; 4 h.p. sidecar, £125; and 6 h.p. high-efficiency sidecar, £165.

### A Reference Map.

We have received a copy of the Zone and Population Map of the British Isles, a most useful print for reference purposes in any office. At 1s. 3d. each, which covers price of cylinder and packing, copies may be obtained from the Dorland Advertising Agency, 16, Regent Street, S.W.1.

### Tyres on the Race Track.

In the Brooklands T.T. Races on Saturday, May 6th, the winner of the Junior Race, 250 c.c. Class, J. V. Prestwich (New Imperial), and W. Handley (O.K. Junior), who gained the third place, both used Dunlop tyres. In the Senior Race, 500 c.c. Class, the same make of tyre was fitted by F. B. Halford (2nd place, Triumph) and F. G. Edmond (3rd, also on a Triumph).

### Paints and Preparations.

For motor cyclists who overhaul their own machines, Quickways, of 30, City Road, London, E.C.1, have a number of preparations, among which may be mentioned Unit lacquers, which can be used for freshening up the red glass of tail lamps. Another compound is Argentum, which deposits silver when rubbed on to a clean metallic surface. We have tried this, with considerable success.

### Found on the Road.

A parcel dropped from a Douglas on the Farningham Road, by Swanley, on May 7th, may be recovered on application to "The Cottage," Warren Road, Bexley Heath.

Fishing tackle found at Ferrybridge, Yorks., is in the care of Mr. R. Woodward, Low Street, South Milford, Yorks.

A pair of gold rimless glasses, believed to have been dropped from a sidecar on April 30th, is reported by Mr. J. W. Grant, Milgate Park, Bearsted, Maidstone.

### British Excellence Recognised Overseas.

At the Malaya-Borneo exhibition Zenith Motors, Ltd., were awarded a first-class diploma for their exhibit.

### New Tyre for Motor Cycles.

A "cable" tyre is being placed on the motor cycle market by D. Moseley & Sons, Ltd., of Ardwick, Manchester.

### Business Enterprise.

In their endeavour to put forward the attractions of British-made motor cycles, Douglas Motors, Ltd., have been enterprising enough to have their 1922 catalogue printed in a number of foreign languages. So far, the catalogue has been issued in French, Italian, Dutch, Norwegian, and Swedish, while a special edition has been got out for the overseas dominions.

### For Brooklands Visitors.

An attractive little publication has been issued by the Brooklands authorities, in which the attractions of the car and motor cycle racing on the track are clearly set forth. There is a map of roads leading to Brooklands, particulars regarding catering, and the attractions of Brooklands as a week-end resort. A plan of the track and a fixture list for 1922 are included in the booklet, which is tastefully illustrated by photographs which have appeared in *The Autocar* and *The Motor Cycle*. It may be obtained from the Brooklands Automobile Racing Club, 83, Pall Mall, London, S.W.1.

### Catalogues Received.

Robert W. Coan, 219, Goswell Road, London, E.C.1: A new booklet issued by the pioneers of cast aluminium number plates.

Humphries & Dawes, Ltd., Hall Green Works, Birmingham: A folder giving details of the 348 c.c. O.K. Junior with Blackburne engine.

W. H. Brookes Bros., Edith Road, Smethwick, Birmingham: Motor Houses; catalogue giving details of motor cycle houses of all sizes and types.

The Service Co., Ltd., 289, High Holborn, London, W.C.: In addition to possessing all the qualities desirable in a good catalogue the Service publication goes a good deal farther, as it contains numerous hints and tips.

### Additions to the Editor's Bookshelf.

THE MICROSCOPE, by Chas. E. Heath, F.R.M.S. (Percival Marshall and Co. 1s. 6d.)

C.T.C. HANDBOOK AND GUIDE. (Cyclists' Touring Club, 280, Euston Road, N.W.1.)

PRACTICAL ENGRAVING ON METAL. (Percival Marshall and Co. 1s. 6d.)

THE SIMPLEX MOTOR CAR REGISTER, by Col. Stanley Barry, C.M.G., C.B.E., D.S.O., M.V.O. (Sifton, Praed and Co. Ltd. 3s. 6d.)

FIXTURE LIST OF AGRICULTURAL SHOWS. ("Agricultural Gazette," Dorset House, Tudor Street, E.C.4.)

SUMMONS HEADINGS FOR POLICEMEN. (Police Review Publishing Co. 8d.)

ELECTRICAL MEASURING INSTRUMENTS, by H. G. Yarrill. (Percival Marshall and Co. 2s. 6d.)

# T.T. Notes and News

## Riders and Machines Already Testing their Capabilities on the Course.

IN the cold dawn of Monday this week the first practising for the T.T. Races commenced. All the entrants were not represented, but morning by morning the number is growing.

* * * *

The Unity Motor and Engineering Works, 7, Oldham Street, Liverpool (situated off Renshaw Street, by St. Luke's Church, and half a minute from the Adelphi Hotel), offers facilities to the stranger in Liverpool. The garage is open from 8 a.m. to 10 p.m. Motor cycles are stored for 1s. a night, and side-car outfits 1s. 6d. a night.

* * * *

Few provincial cities can claim such a continuous representation each year in the Isle of Man as Bristol. Douglas machines have always figured in the races, E. Kickham was second in 1912, and with S. L. Bailey ran each year in the earlier contests. F. G. Ball, another Douglas Bristolian, was also a competitor in those days; Philip Grout, then the secretary of the Bristol club, was Chief Marshal in the island in 1913. Last year the two brothers, F. and H. Thorpe, were in the Douglas team. This year's event has brought forward two new men from the western city, G. H. Tucker, of the Norton team, and one of his staff, V. Anstice, who is to ride a Douglas.

* * * *

At least two Bristol clubmen, private owners, were making preparations to ride in the Amateur Race, had it been arranged.

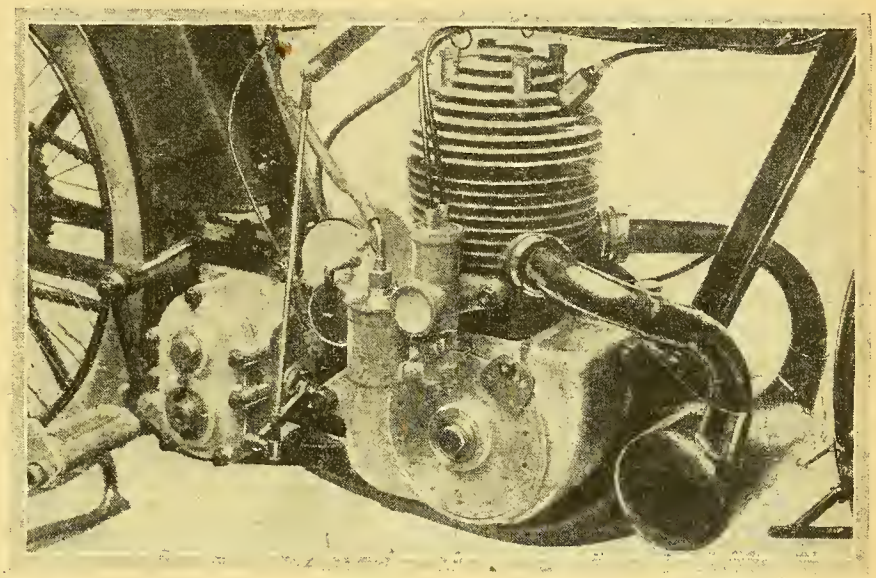
* * * *

As their headquarters, New Imperial Cycles, Ltd., have chosen the Nursery Hotel, Onchan, two miles from Douglas. The company has taken the whole hotel, has a private garage, and a private entrance to the course. The racing colour is Imperial green.

Norman Norris will again be riding the 348 c.c. Ivy entered by Maudes' Motor Mart in the T.T. Races. He rode for the same firm last year, and also made a splendid performance on the same machine in the 500 mile race at Brooklands, winning his class.

Aluminium is in great and greater demand in engine construction, especially as the material for cylinder heads; it is so used on the new T.T. Ivy. Six bolts hold the head on to the cylinder barrel.

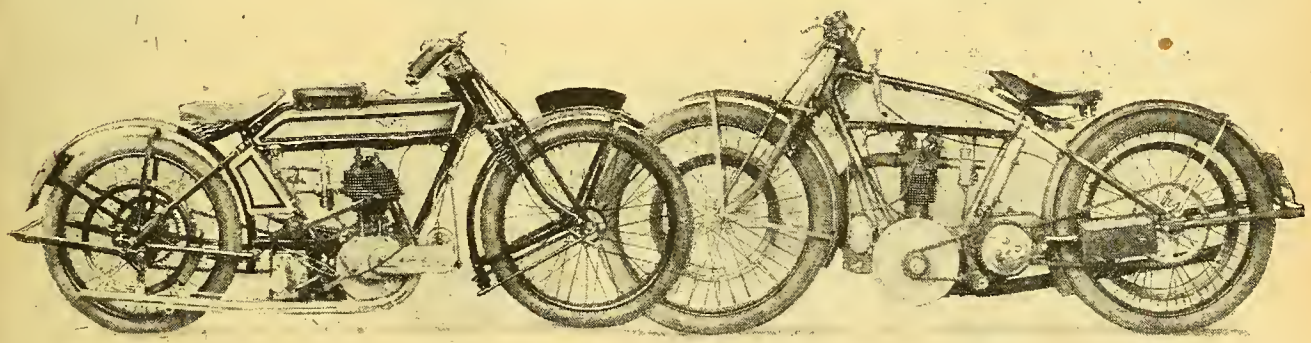
Roller main bearings are a new feature, but the big end is plain.



The T.T. Velocette power unit which has a bore and stroke of 63 and 80 mm. respectively (249 c.c.).— The silencer shown may replace the "T.T." straight-through exhaust pipes.

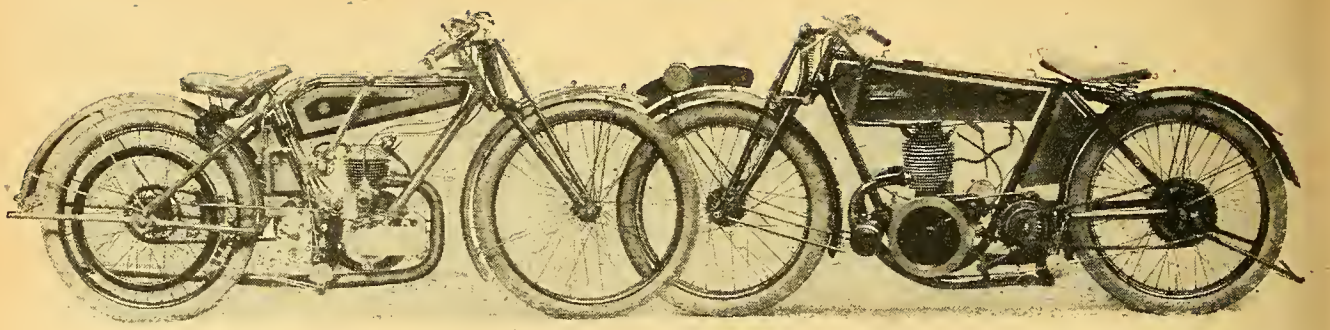
All-chain drive is fitted on the Ivy, two machines having Moss foot-controlled gears, an improvement on those used experimentally last year, and two carrying Sturmey-Archer boxes. The ratios in each case are approximately 4¼, 5, and 7 to 1. The frame is of standard design.

Special oiling arrangements are a feature of the O.K.-Junior machines for the T.T. A separate oil pump is carried on the saddle tube, and from this there is an adjustable drip feed to the front chain. Both hand and foot pumps supply the engine.



A T.T. Norton with side-by-side valve engine; a separate oil tank and an expanding front hub brake are fitted.

An O.K. fitted with an o.h.v. 248 c.c. Blackburne engine and Burman 3-speed gear.



One of the Ivy T.T models with aluminum cylinder head. The oil pump is operated by Bowden wire and lever from the handle bar.

The frame of the T.T. Velocette has been lengthened by 1½in., enabling a lower engine position to be adopted.

# T.T. MEMORANDA.

## PRACTISING.

NO practising is permitted after 7 a.m., or on Sundays.

## THE COURSE.

Douglas, Bray Hill, Quarter Bridge, Union Mills, Crosby, Ballacraine, Ballig, Kirkmichael, Ballaugh, Sulby, Ramsey, Snaefell, Keppell Gate, Hillberry, Cronk-ny-Mona, Governor's Bridge, Douglas. (37¾ MILES.)

## NUMBER OF CIRCUITS.

Lightweights (250 c.c.), 5 laps. Total, 188 m. 6 fur.

Junior (350 c.c.), 5 laps. Total, 188 m. 6 fur.

Senior (500 c.c.), 6 laps. Total, 226 m. 4 fur.

## LAST YEAR'S SPEEDS.

Winner of *The Motor Cycle* Cup (250 c.c. Class), D. G. Prentice (New Imperial) averaged 44.9 m.p.h.

Junior Trophy was won by Eric Williams (349 A.J.S.) at an average speed of 52 m.p.h.

Senior Race winner, H. R. Davies (349 A.J.S.) averaged 54.49 m.p.h.

## FASTEST LAPS, 1921.

Lightweights.—D. G. Prentice (249 New Imperial), 49 min. 21 sec. (2nd lap).

Junior.—H. R. Davies (349 A.J.S.), 41 min. 4 sec. (5th lap).

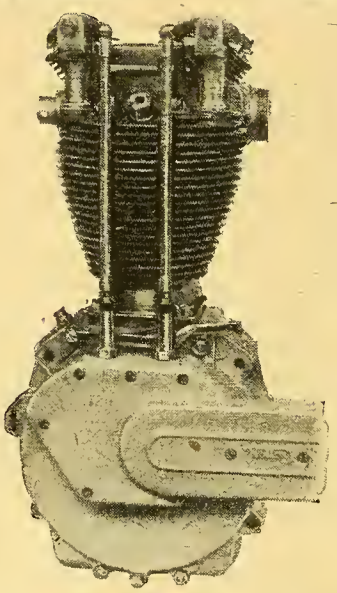
Senior.—F. G. Edmond (499 Triumph), 40 min. 8 sec.* (4th lap).

* Record for the course.

## Time and Speed Table for the T.T. Course.

*Time per lap at speeds from 40 to 60 m.p.h.*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 40 | m.p.h. | ... | ... | 56 | mins. | 38 | secs |
| 41 | ,, | ... | ... | 55 | ,, | 15 | ,, |
| 42 | ,, | ... | ... | 53 | ,, | 56 | ,, |
| 43 | ,, | ... | ... | 52 | ,, | 41 | ,, |
| 44 | ,, | ... | ... | 51 | ,, | 29 | ,, |
| 45 | ,, | ... | ... | 50 | ,, | 20 | ,, |
| 46 | ,, | ... | ... | 49 | ,, | 14 | ,, |
| 47 | ,, | ... | ... | 48 | ,, | 12 | ,, |
| 48 | ,, | ... | ... | 47 | ,, | 11 | ,, |
| 49 | ,, | ... | ... | 46 | ,, | 14 | ,, |
| 50 | ,, | ... | ... | 45 | ,, | 18 | ,, |
| 51 | ,, | ... | ... | 44 | ,, | 25 | ,, |
| 52 | ,, | ... | ... | 43 | ,, | 34 | ,, |
| 53 | ,, | ... | ... | 42 | ,, | 44 | ,, |
| 54 | ,, | ... | ... | 41 | ,, | 57 | ,, |
| 55 | ,, | ... | ... | 41 | ,, | 11 | ,, |
| 56 | ,, | ... | ... | 40 | ,, | 27 | ,, |
| 57 | ,, | ... | ... | 39 | ,, | 44 | ,, |
| 58 | ,, | ... | ... | 39 | ,, | 3 | ,, |
| 59 | ,, | ... | ... | 38 | ,, | 23 | ,, |
| 60 | ,, | ... | ... | 37 | ,, | 45 | ,, |



The experimental overhead valve Norton, which may be used as well as the side valve model in the Senior T.T. race.

Most noticeable in the O.K. plans for the T.T. is the fitting of a 248 c.c. Blackburne engine; four-stroke engines have not previously been fitted on any of the O.K. productions since the war.

* * *

Other details on the O.K. are the Burman gear box, with three ratios of 6, 8, and 11 to 1, and internal V belt drum brakes on both wheels. In the steering head ¼in. balls are being used, the tyres are 26×2¼in. Dunlops, and the front wheel is carried in a Druid fork. Either Amac or Atmos carburetters will be employed.

* * *

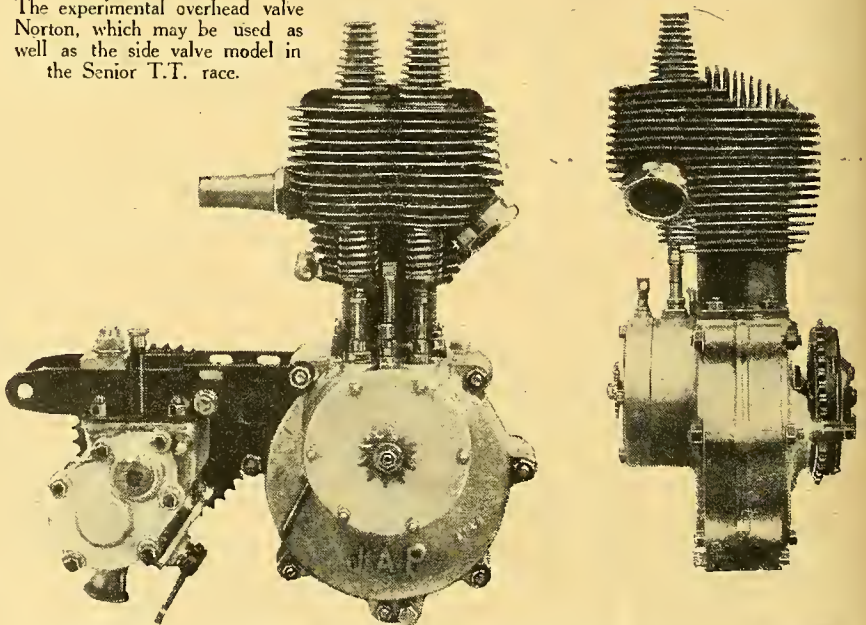
Oil tanks on the saddle tube are to be used on the Ivy. This location for the lubricant container grows in popularity. On this make the oil pump is worked by lever and wire from the handle-bar.

* * *

The Atholl Motor Garage are making arrangements to meet all boats arriving at Douglas with petrol for Rudge riders.

* * *

J.A.P. headquarters will be at the Atholl Garage, Douglas.




A typical example of the standard 349 c.c. J.A.P. engine for the T.T. races. The end view clearly shows the generous amount of radiating surface and the 1½ in. diameter exhaust port, the same size as that of the 998 c.c. engine.

## T.T. Notes and News.—

In the official list of entries the Ivy team now consists of G. N. Norris, T. A. Joues, and P. Newman.

* * * *

The 2¾ h.p. H.B., entered by its manufacturers, Hill Bros., of Wolverhampton, is to be ridden by R. S. Hill.

* * * *

Those in need of repairs to or spare parts for Sturmey-Archer gears will find the manufacturers' expert at the Modwena Hotel, Loch Promenade, Douglas.

* * * *

The interests of users of Blackburne engines, Burman gear boxes, and Vici carburetters will be looked after in the I.O.M. by Mr. S. W. Cole, O.B.E., whose headquarters will be at the Villiers Hotel, Douglas.

* * * *

Reference was made in our issue of May 4th to the mechanical pump fitted to New Imperial machines. We are requested to state that this interesting device is fully patented

* * * *

All Rudge riders visiting the island are invited to call upon Rudge-Whitworth, Ltd., at their headquarters, Homefield, 77, Palace Terrace, Queen's Promenade, Douglas. Every visitor will receive a Rudge souveuir.

* * * *

In outward appearance the 3½ h.p. T.T. Beardmore-Precision differs but slightly from the bigger standard model. Actually, however, the bore and stroke of the T.T. engine is 81 × 96, and a close ratio gear box is incorporated in the engine unit. A detachable cylinder head is retained, and the shape of this head has been a matter for careful research. An unusual feature lies in the arrangement of the carburetter and inlet pipe, for in order to obtain an easier sweep for the gas, the pipe and carburetter body are inclined, though a float chamber is, of course, arranged vertically. At the present moment no decision has been made as to whether Cox or Amac carburetters will be used.

* * *

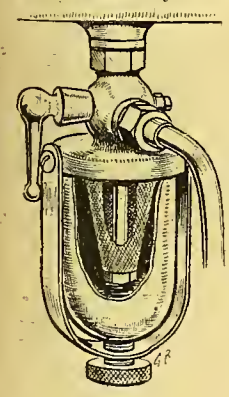
Steel lugs are standard on the Beardmore, but in order to make the machine more handy for the T.T. the wheelbase has been shortened to 52in., and the whole frame has been slightly lowered. This has necessitated a slight bend in the saddle tube; the saddle itself is of special construction, and is attached to the steel tank by a short leaf spring, the rear saddle springs being attached to the frame by a special clip. As usual, band brakes are used on both wheels, but the rear brake is operated from pedals on either side of the machine.

* * *

For racing purposes it has been found that the full motion of the Beardmore front springing is unnecessary, and consequently the vertical part of the leaf spring has been replaced by a light steel box girder. The engine has a compression ratio of approximately 5 to 1, and it is probable that a larger oil sump will be employed, carrying approximately 6 pints of oil, which should be more than sufficient for the full course. In addition to this the petrol tank is enlarged by suitable extensions until its capacity is something over 2½ gallons, 650 × 65 mm. tyres will be used, and but for the fact that stand, mudguards, stays, etc., are somewhat lighter than usual, the rest of the Beardmore-Precision remains much as usual. The mechanical lubrication system, which is a feature of the touring model is, of course, retained. The use of standard parts is a special feature of this machine, since it is the intention of the firm to turn out a high-speed machine suitable for sale to the general public.

* * *

Motor cyclists taking their machines to the Island should apply for temporary licences to the purser on the steamer when embarking at Liverpool. The Highway Board inspector will meet passenger steamers on arrival at Douglas, and if the application forms are properly filled up and the fees for registration and drivers' licence (2s. 6d. and 1s. respectively) are ready, very little delay will ensue. Motor cyclists are requested

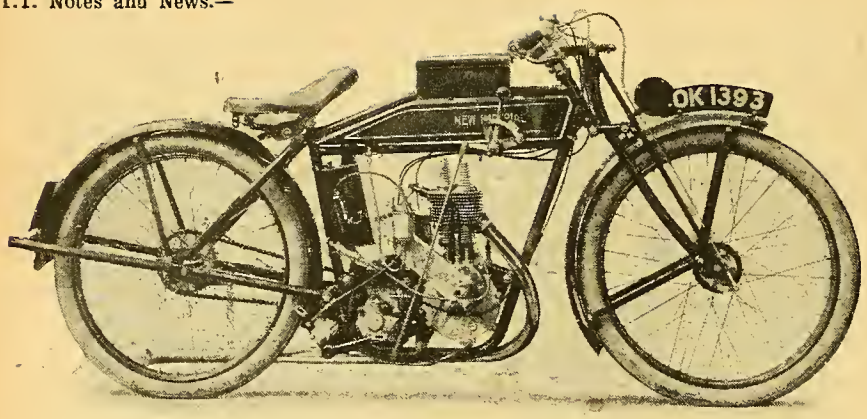


Detachable in the same way as several acetylene generators, a large petrol filter is fitted to the T.T. Beardmore-Precision.

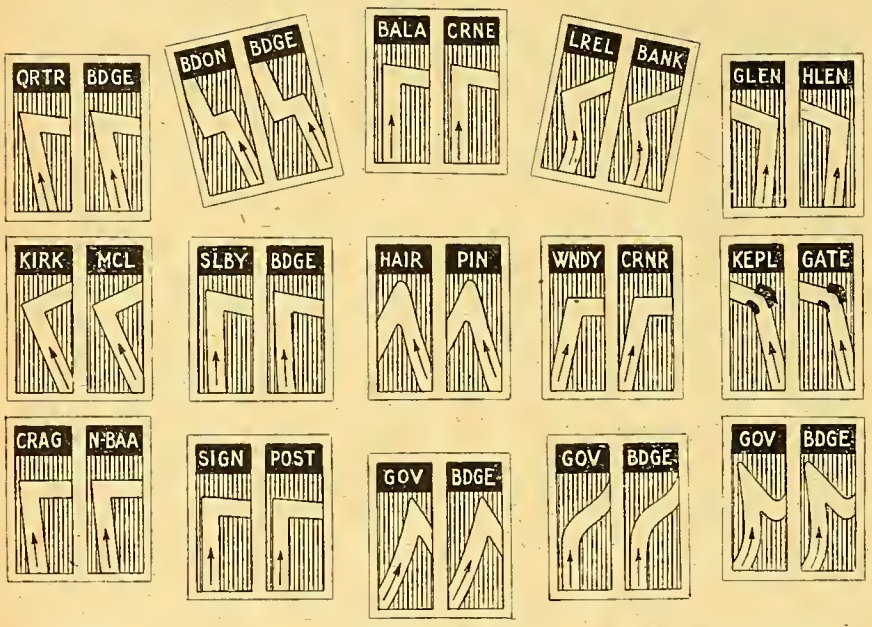
## IMPROVING THE T.T. COURSE

At various parts of the T.T. course, the Isle of Man authorities are carrying out improvements which will not only increase the safety margin for the competitors but will tend to raise the possible speeds. It will be seen that Windy Corner, once a most deceptive danger point, is practically eliminated; the width of the road at Keppel Gate is increased 100%; and Sign Post Corner is greatly improved.

**T.T. Notes and News.—**




A business-like mount is the T.T. New Imperial with which its makers hope to win the lightweight event again.




Large warning signs which are placed on both sides of the road at all dangerous parts of the course. The abbreviations indicate the location and the diagrams the nature of the bend.

to tender the exact fees. Machines will not be disembarked unless the forms are filled up and the fees paid. The certificate must be carried in the licence-holder, but to enable motorists to get to their destination on arrival it should be placed in the lamp or in some other conspicuous place.

* * * *

The identical Indian machines used in last year's T.T. Race will compete again this year. The Indian headquarters will be at the Queen's Hotel, Queen's Promenade, Douglas, with E. A. Bridgman in charge.

* * * *

The Coulson T.T. machines are already on the road, and have so far undergone their preliminary tests satisfactorily. It has been decided that Showell mechanical oil pumps shall be used with an auxiliary foot pump in case of emergencies. Druid forks, Webb internal-expanding brakes front and rear, M-L magneto, Hutchinson tyres, and Burman gears are features of the Coulson racing machines. The saddle position is peculiarly low, being only 25in. above ground level. Only slight modifications to the spring frame have been found necessary to suit chain drive, which is now used for the first time on this make. The new Coulson has been laid out by Mr. L. Nicholson.

* * * *

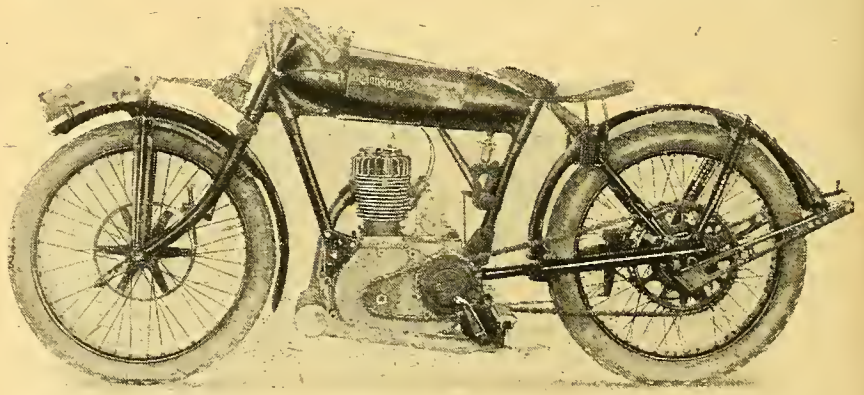
In general appearance the engine of the 3½ h.p. T.T. New Hudson closely resembles that of the well-known sidecar machine, though the bore and stroke of the smaller engine are 79.5×100 mm. respectively. Internally also very little change has been made, but a roller bearing big end is employed, and the main shafts run in ball bearings. In addition to this, two concentric springs are used for each valve, and the sparking plug lies behind the inlet pipe, ribbed valve caps being fitted over both inlet and exhaust valves.

* * * *

On the racing New Hudson a modified type of aluminium piston gives a compression ratio of approximately 5 to 1 and an external exhaust lift is fitted in place of the usual decompressor; 3in. filter caps are fitted to the two-gallon petrol tank, and a handle-bar controlled pump sucks oil from a half-gallon tank. The drive is through a close ratio Sturmey-Archer gear box, a shock absorber being fitted to the crankshaft. It has not yet been decided whether 650×65 mm. or 700×80 mm. tyres will be used. The carburetter is a B. and B., and both brakes are of the internal expanding type.

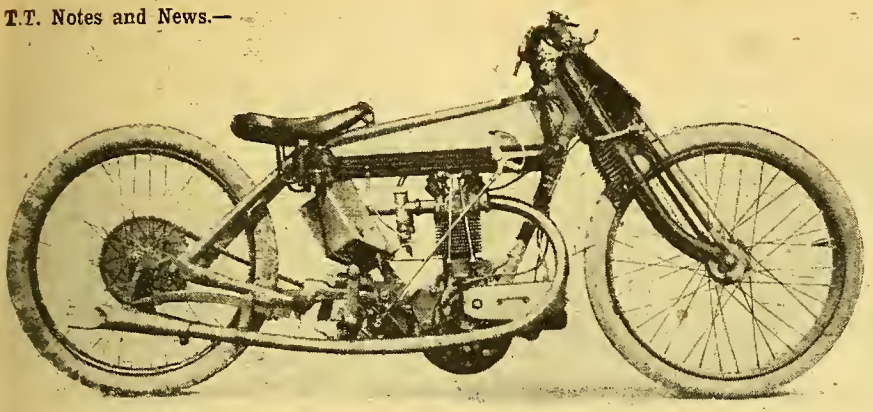
* * * *

The little standard New Hudson which was entered in last year's T.T. distinguished itself. This year some slight modifications have been made to the engine; the bore and stroke of which will be 63×80 mm. A roller bearing big end and a ball bearing crankshaft will be employed, and a copiously drilled flywheel lies between the crankcase and the primary chain drive. A three-speed Sturmey-Archer gear box, handle-bar controlled oil pump, and 24×2¼in. tyres, form part of its equipment. The petrol tank is designed to carry 1½ gallons of



A slightly smaller edition of the sidecar Beardmore Precision, the T.T. Model is an "all steel" production, as might be expected from the first half of its name.

**T.T. Notes and News.—**



Although the well-known Coulson rear springing is retained in the T.T. model of this make, there are several modifications in other details.

petrol and half a gallon of oil. Transmission is by chain throughout.

* * * *

At first sight one is struck with the enormous size of the A.J.S. exhaust pipe, which has an internal diameter of 1⅝in. On account of the small and compact design of the motor cycle, the diameter of the exhaust pipe appears even greater than is actually the case. Broadly speaking, there is not very much change from last year's T.T. machine, though a new cylinder head has been designed with modified rocker gear, and the size and design of the cams are very striking. From centre to tip the cam is, to all intents and purposes, equal to the radius of the gear wheels, and each cam is carried on a pair of ball bearings. Further than this, a single row roller bearing big end replaces last year's double row type. Steel flywheels are retained, and either last year's steel piston or an aluminium piston with four narrow rings will be used.

* * * *

The compression of the A.J.S. is slightly higher than in last year's machines, which won both Junior and Senior events, being 5.7 to 1, and a slightly larger exhaust valve is now fitted. Another alteration lies in the use of 650 × 65 mm. tyres. As before, the head is detachable and is held on by a steel strap. The valve rockers are provided with return springs.

* * * *

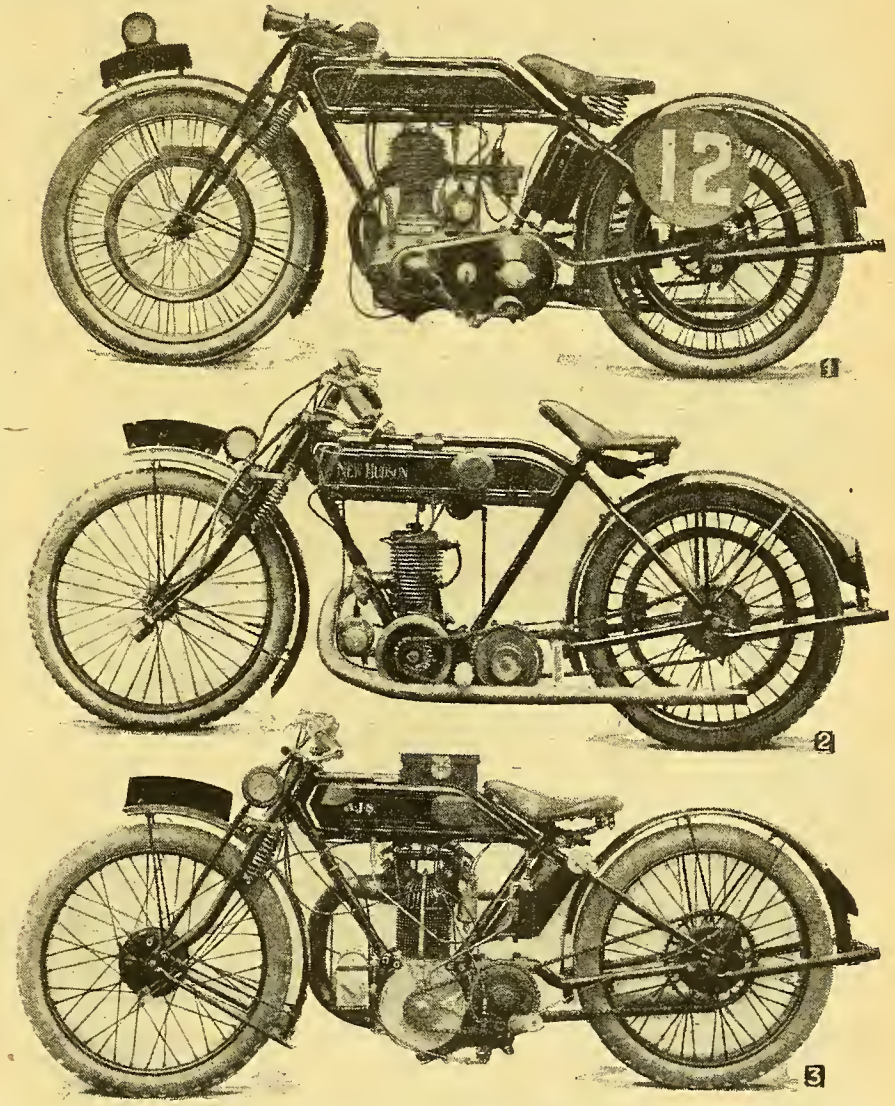
A slightly lower saddle position has been obtained for the A.J.S. riders, and one of the most unusual features of this Wolverhampton production is the fact that both front and rear internal expanding brakes are interconnected and will be applied by the same pedal. In addition to this a hand control is fitted to the front brake. An oil tank is carried behind the saddle tube, and a foot oiler employed. The three-speed gear box provides ratios of 4.93 to 1, 6.05 to 1, and 9.26 to 1. The specification includes Amac carburetter and Lucas magneto.

* * * *

There is strikingly little alteration from the standard sporting Sunbeam to be seen in the machines which will race on the first of next month. The 77 × 105.5 mm. engine remains to all intents and purposes unchanged, though it is possible that a modified slipper type piston may be used. This piston will have but a single ring, as is usual in Sports Sunbeam practice. The most visible alteration lies in the ¾-gallon oil tank fitted behind the saddle tube; the main tank capacity is thus considerably increased and now holds the full two gallons.

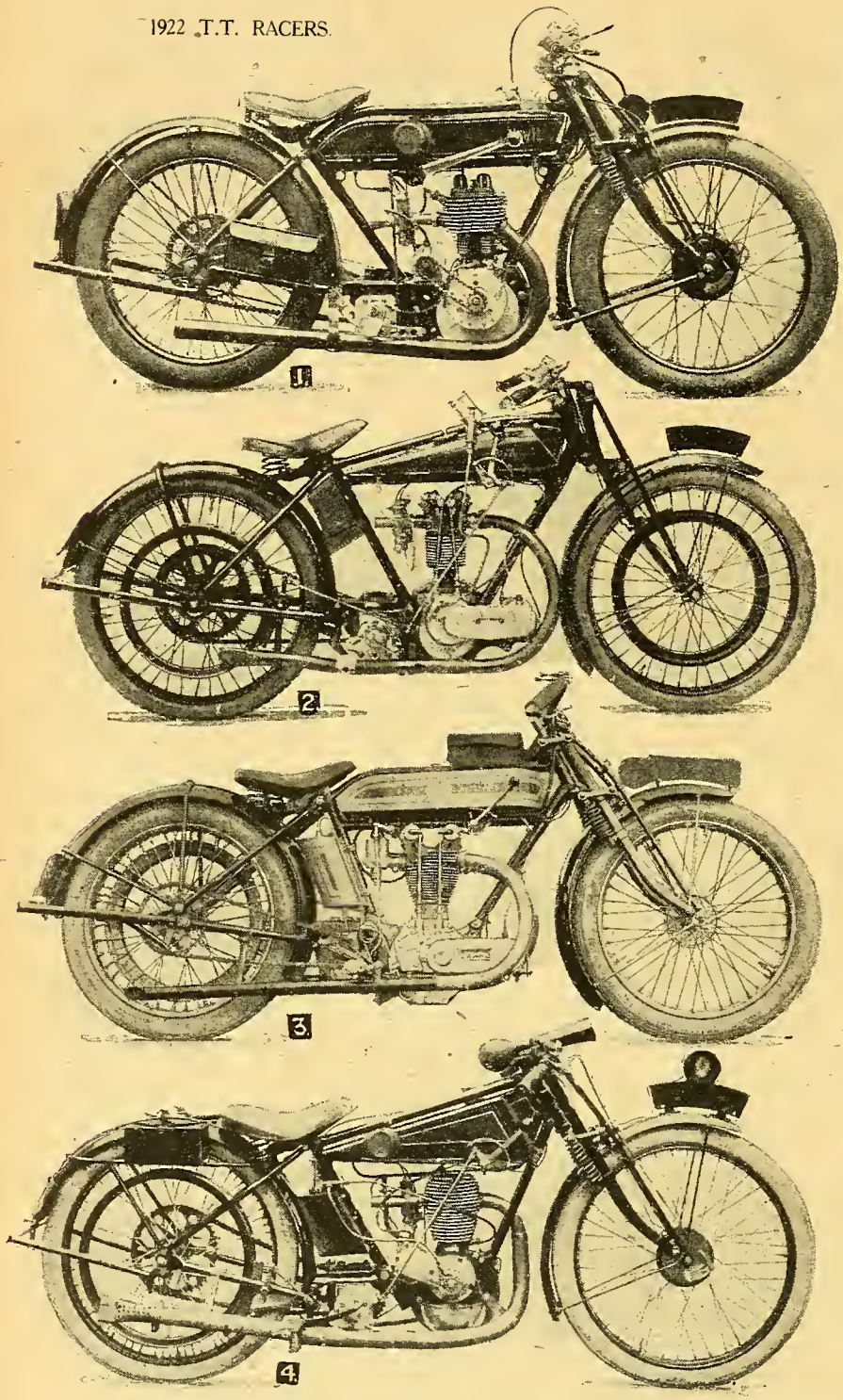
* * * *

Sunbeam motor cycles will be fitted with mechanical lubrication, thus adding the weight of their reputation to a steadily growing feature, and the Showell pump has been decided upon; a foot-operated pump is supplied for emergencies. Either 26 × 2⅜in. or 26 × 2½in. tyres will be fitted, and the close ratio gear box will provide gears in the neighbourhood of 4.3 to 1, 5.9 to 1, and 8.2 to 1. Brakes are of the internal V type on both wheels, as is usual in Sunbeam motor-cycles, but the rear brake may be operated by a pedal on either side of the machine.




1. With the exception of an auxiliary oil tank and mechanical lubrication, the standard long stroke Sunbeam remains unchanged for the T.T. race. 2. A long stroke engine (68 × 80 mm.) and a primary drive "outside" the flywheel are features of the T.T. two-stroke New Hudson. 3. Interconnected front and rear brakes are used in the latest A.J.S.

1922 T.T. RACERS.



1. A new-comer to the Senior race, the New Hudson is a serviceable-looking mount. Note the deep radiating fins and large Dunlop cord tyres.
2. An o.h.v. Blackburne engine, Burman gear, internal V brakes, and unusual top tube design are noticeable items on the 250 c.c. T.T. Rex.
3. Another view of the T.T. Triumph, already illustrated in "The Motor Cycle," showing, in this case, the lubrication system and the external band brake on the front wheel.
4. Engined with a standard Barr & Stroud unit, the Diamond for the Junior event is to all intents and purposes the same as the marketed sports model.

Details of the Triumph machines for the Island have already been published exclusively in *The Motor Cycle*, but hitherto it has not been possible to describe the lubrication system. This is of the dry sump type. A double piston oscillating pump of simple design is driven off the inlet half time wheel, forcing oil from a separate tank on the saddle tube through a series of ducts and washers into the drilled crankshaft. Thence the lubricant is conveyed under pressure to the big-end, the surplus being splashed on the cylinder walls, etc. As soon as it drains to the bottom of the crank case it is sucked out through a hollow crank case bolt by the same pump and returned to the top of the oil tank.

* * *

The only filter in the system is in the bottom of the tank, but in practice the oil remains cool and clean throughout, and the actual consumption is extraordinarily low. The tank holds just over two quarts, which will suffice for well over 1,000 miles. An indicator bar tells whether the pump is working or not. An auxiliary hand pump is regarded as unnecessary.

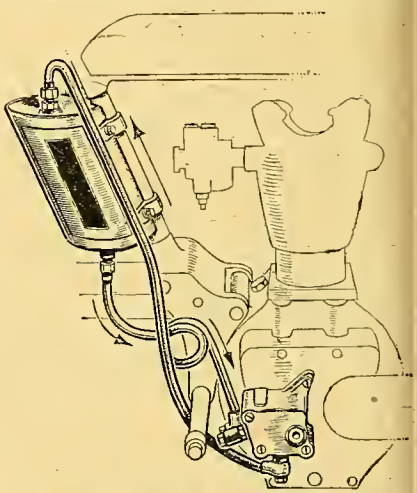
* * *

Between $\frac{1}{4}$ in. and $\frac{5}{8}$ in. flywheel clearance is allowed, almost entirely eliminating any loss of power due to oil-drag. Incidentally, of course, the return pump relieves crank case pressure and withdraws any floating gas or fumes which may be there; this may be proved by removing the oil-tank filler cap after the engine has been running.

In our illustrations ordinary oil-piping is shown, but this will be eventually replaced with Petroflex or some similar flexible tubing.

* * * *

Though it has been impossible to push through the special racing Barr & Stroud engine intended for use in the Tourist Trophy, the makers of the Diamond motor cycle have decided to run a standard Barr & Stroud engine in the Junior race. So as to be in keeping with the engine, the rest of the machine also



Simplicity is not lost in the new Triumph system of dry-pump lubrication to be used on the racing mounts.

**T.T. Notes and News.—**

...ill be standard except for detail modifi...ations. Even the pannier two bags and ...arrier normally nsed on the sports Dia...ond will be retained. Alterations con...ist of a petrol pipe draining the tank ...rom both front and rear, an auxiliary oil ...ank behind the saddle tube, foot-rests ...laced somewhat further rearward, and a ...lose ratio Burman gear box with ratios ...pproximately $4\frac{3}{4}$, $5\frac{1}{2}$, and $7\frac{1}{2}$ to 1.

* * * *

Webb front brake and direct action, in...ernal V rear brake with two operating ...edals, 26×2½ in. tyres, and Best mechan...al lubrication are employed on the Dia...ond. The petrol tank has a capacity of ...ust over 2 gallons, and half a gallon of ...il is carried.

* * * *

For the lightweight race a smaller Dia...ond will be run, fitted with 64.5 × 6 mm. side-by-side valve J.A.P. engine. ...gain, Best mechanical lubrication will be ...itted, and also a close ratio Burman ...ngine box. Tyres are 26 × 2¼in. an Amac ...arburetter is fitted, and the brakes are ...imilar to those on the larger model. This ...ittle machine, with its sloping top tube ...nd low saddle position, is a very neat ...iece of work, and so as to avoid difficult ...ipe bends a large aluminium casting ...eads the exhaust gases from the cylinder ...o a comparatively straight tail pipe.

* * *

Those who go to the start to witness ...ractising should keep clear of the ...oadway between Bray Hill and Gover...ior's Bridge. The grand stand will be ...vailable during practice.

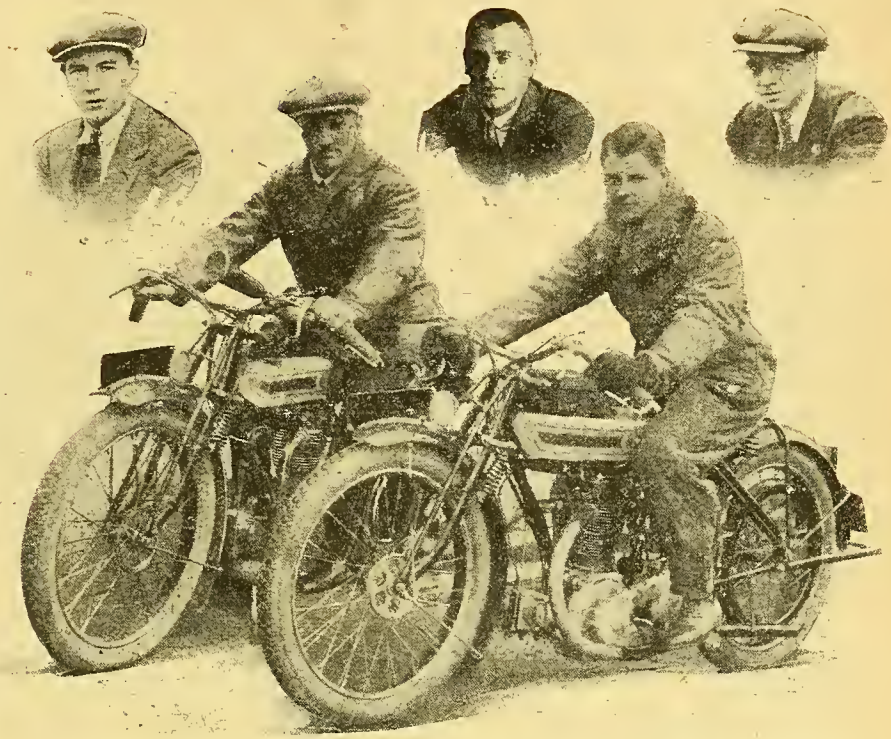
## COMMENCEMENT OF PRACTICE.

...N fine weather, with strong south-west wind, practising started on Monday. Over fifty machines were on the ...ourse, many of which completed two ...ircuits. Fastest time was achieved by ...ugh Mason, a reserve rider of a ...N.U.T., who completed the course in ...4 min. 1 sec. The next fastest circuit ...as made by Duggie Brown, the Manx ...Norton rider, taking 45 min. 12 sec. ...On their second circuits, Norman Black ...(Norton) registered 46 min. 1 sec., ...Davidson (Indian), 50 min. 5 sec., De ...La Hay (Sunbeam), 49 min. 23 sec., ...Greenwood (Sunbeam), 49 min. 36 sec. ...In the lightweight class Padley on a ...Henderson recorded 54 min. 14 sec., and ...n Junior, Horsman (Raleigh), 52 min. ...50 sec., Remington (Edmund), 53 min. ...14 sec.

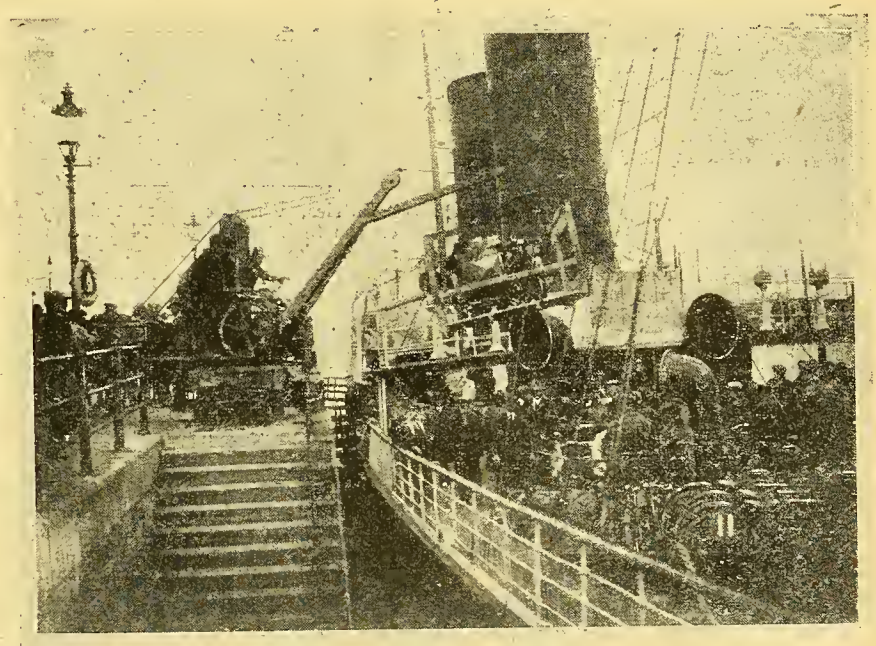
The New Hudsons made a first appear...ance, as also did Sun, Scott-Squirrel, ...and six Rudge machines, all standard, ...some of which completed the circuit in just over 56 min.

The attendance around the course was almost a record. Great enthusiasm was manifested in the forthcoming races. The course on the whole is very good excepting one or two bumpy places which require attention. Some eighty competitors are already on the island.

Sidecar owners were greatly pleased with the small crane on the pier, which avoided the necessity of detaching side...cars during the voyage.



A STRONG TEAM. Triumph riders upon whom many eyes are focussed at the present time. The mounted men are F. G. Edmond and F. B. Halford, both experts with notable performances to their credit. The former made the record lap last year and Halford, until quite recently, held the 500 c.c. hour record. (Above.) W. Brandish jr., whose lap times last year did not vary 10 seconds (he finished 13th), H. R. Harveyson, and G. H. Kirby (reserve).



A CRANE AT LAST! Although the I.O.M. authorities were willing to instal a crane for the convenience of motor cyclists during the T.T. races, the British government refused to sanction the money for its erection. The Manx authorities, however, have overcome the difficulty by erecting a land derrick which is shown raising a sidecar outfit complete.

# A SUCCESSFUL WORKS TRIAL.

## Delightful Afternoon's Sport on B.S.A.s. Seventy-three Starters.

IN order to encourage a spirit of friendly rivalry, the B.S.A. Co. organised a half-day trial for those of their employees who owned B.S.A. machines. Their efforts were rewarded by an entry of 86, and 73 actually faced Mr. Alec Ross, who officiated as starter. Amongst the actual starters were ten solo machines, five 10 h.p. B.S.A. air-cooled light cars, and four Daimler cars, the remainder being sidecar outfits of powers varying from 3½ h.p. to 8 h.p. Commander Herbert, R.N., was mounted on an interesting experimental outfit, which might be described as a "light eight," for it consisted of the 8 h.p. B.S.A. engine in the "light six" frame. In addition, the machine was fully equipped with windshield, legshields, and horizontal metal shields to prevent draughts from rising behind the windshield. At the start B.S.A.s of all ages and descriptions were gathered in an imposing array outside the Small Heath works, and at 2.1 p.m. the first man was despatched to Stratford-on-Avon. The 59 miles course was intentionally an easy one, as many riders had had no previous competition experience. Following the Broadway road the first time check was at Aston-sub-Edge, and this was immediately followed by an acceleration test on the neighbouring hill.

### Good Acceleration.

Some good performances were noticed at this point, particularly by L. L. Sealey (4¼ solo), C. Wykes (4¼ sc.), F. Howard (6 sc.), and Commander Herbert, R.N. (8 sc.). As might be expected, however, in a friendly trial of this description, there was a good deal of bungling and stopping of engines. A right-hand turn after the top of the hill led upwards over slightly loose surface to the top of Weston-sub-Edge Hill, and after descending to the village the route led up Saintsbury through Snowshill to Broadway, up Willersey and down Saintsbury, thence to the finish at Stratford-on-Avon. This loop caused outward-bound competitors passing those on the return journey —not a very satisfactory proceeding on narrow hilly roads. On Saintsbury Hill some of the sidecar outfits performed splendidly, particularly R. H. Cox (4½ sc.), A. Allis (6-7 sc.), J. Leek (6-7 sc.), F. Howard (6 sc.), and F. Thorpe (6-7 sc.). At the bend on this hill F. Walker (4¼ sc.) came too fast on his homeward run, and overshot the road, causing the outfit to turn over with more or less serious damage to both occupant and driver. This was the only incident which occurred to mar a splendid day's outing. The ascent of Willersey Hill caused no serious trouble, and the homeward journey from Stratford was uneventful. Tea was arranged at the Swan's Nest Hotel, and of the 73 starters all but four finished. The B.S.A. Co. are to be congratulated on their enterprise and on the response which was accorded to their efforts.

No less than 73 competitors, all mounted on products of the B.S.A. factory, took part in last Saturday's trial organised in connection with these works. A scene at the start.

## RULES FOR THE 200 MILES SIDECAR RACE.

COMMENDABLY concise and clear regulations are now available for the 200 miles sidecar race to be held on June 17th at Brooklands by the Ealing and District M.C.C.

In effect there will be three separate races—for 350 c.c., 600 c.c., and 1,000 c.c. sidecar outfits—and the starting times will be so arranged that all the runners should finish reasonably near to each other. Each class has its own trophy, the awards being the "Three-fifty," "Six hundred," and "Thousand" Cups; there is also a special gold medal for the first private owner in each category.

Seventy-four laps of the track (201.11 miles) will constitute the race in each case, and the following time allowances have been fixed :—

| | | |
|---|---|---|
| 350 c.c. | ... 6 | hours (=33 m.p.h.) |
| 600 c.c. | ... 5 | hours (=40 m.p.h.) |
| 1,000 c.c. | ... 4½ | hours (=47 m.p.h.) |

Entries, which close at ordinary fees on the 27th inst., cost £4 4s., plus 21s. subscription if not already paid, and should be sent to Mr. J. A. Masters, 22, Norland Square, W.11.

## IN AID OF CHARITY.

AN official sweepstake on behalf of the Manx hospitals is being run in connection with the T.T. races. As there are three separate races there will be three first, three second, and three third prizes. The value is £500 first, £200 second, and £100 third, while there will be a prize of £5 to each holder of a ticket drawing any competitor other than first, second, or third, in any one race who finishes within half an hour of the winner. The sweepstake will be drawn at the Fort Anne Hotel, Douglas, at 3 p.m. on Monday, May 29th. Tickets (5s.) are only available to members of the A.C.U. or of clubs affiliated to it. These may be obtained from the A.C.U. headquarters, the Peveril Hotel, Douglas, Isle of Man.

## IMPORTS AND EXPORTS.

THE value of imported motor cycles and accessories was £8,580 for the month of April, a low figure compared with the corresponding month in 1920 and 1921, when the figures were £46,703 and £18,440 respectively.

MARCH IMPORTS.

| | 1920. | 1921. | 1922. |
|---|---|---|---|
| Value of motor cycles | £34,370 | £5,836 | £3,492 |
| Value of parts and accessories ... ... | £12,333 | £12,604 | £5,088 |
| | £46,703 | £18,440 | £8,580 |

Motor cycles and accessories to the value of £84,648 were exported last month, a slightly higher figure than is the average for the four months of this year.

MARCH EXPORTS.

| | 1920. | 1921. | 1922. |
|---|---|---|---|
| Value of motor cycles | £85,350 | £92,923 | £61,326 |
| Value of parts and accessories ... ... | £40,618 | £26,785 | £23,322 |
| | £125,968 | £119,708 | £84,648 |

# JOY RIDING IN THE LAKE COUNTRY.

## Cumberland County M.C.C. Open Trial. Successful One-Day Event.

IF the open event held last Saturday on behalf of the Northern Centre (A.C.U.) by the Cumberland County M.C.C. can be criticised in any way, it is only to complain that so much gorgeous scenery should be scampered through at such a headlong pace.

The weather was fine throughout—traces of mist immediately before lunch being almost unnoticed—and because the climatic conditions were so delightful, the scenery, glistening lakes, fresh spring green on the trees, and snow-capped tops made all the more demand for attention; indeed, we suggest that next year the Alan Trophy shall be awarded the writer of the best descriptive essay on the beauties of the route, providing he has qualified for this eliminating test by completing the course at 12 m.p.h.!

But to deal seriously with the matter in hand. All but four of the 54 entrants started out from Carlisle, the first man leading off at 9 o'clock.

### Easy Going.

For the first twenty miles, although the rather loose stony Catlands hill was observed, the conditions gave the key to what was to follow the greater part of the day; the roads were dry, the surfaces good or middling, seldom downright bad.

Next came Bassenthwaite village and another minor observed hill, then fifteen more easy miles into the Newlands valley. Newlands Hawse, the pass leading to Buttermere, is a long, trying climb, rather loose as to surface in places. It commences with a wicked double hairpin termed the Devil's Elbow, and the two miles from this point to the summit had to be climbed non-stop.

D. W. Rhodes (Scott Sociable) at the Devil's Elbow, Newlands Hawse.

Almost every competitor succeeded in doing this, although on the Elbow R. Pape (348 Wilkin) steadied with his foot, H. E. Banks (482 Scott) was a little hesitant, and A. Greenwood (976 Brough Superior) attempted too great speed and side slipped on the upper hairpin.

On the higher slopes and at the summit it was almost impossible to distinguish between the performances. Pape again wobbled and almost came off, but the rest were able to play with the gradient.

Exceptionally good climbs were made by J. A. Newman (496 Douglas), B. Kershaw (248 New Imperial)—wonderfully speedy for his engine capacity—P. L. Mayo (248 Coventry Eagle), A. D. Reid (499 P. & M.), W. Westwood (499 Triumph), and S. Bell (348 Beardmore B. & S.).

Passenger machines were equally good, and on the Devil's Elbow only D. W. Rhodes (578 Scott Sociable) showed any signs of lack of power; whether it was necessary for himself and passenger to concentrate weight on the back wheel is known only to himself.

Both the other three-wheeler entrants—F. S. Spouse (T.B.), and J. J. A. Dias (Morgan), came up the hill with power in hand—but the star climb was undoubtedly made by Duncan Bell, whose 348 c.c. A.J.S. sidecar simply romped up the hill.

A. Greenwood (Brough-Superior) leading G. Hill (Triumph) and L. Dixon (Norton) up Kirkstone Pass.

### Northwards Again.

From Buttermere a detour northwards was made, working in another observed hill, Moser Fell, before turning south to Keswick. From the latter place the line of the main road, *via* Thirlmere, to Ambleside, was followed, but a deviation to take in Rak[illegible] How, a double-hairpin

Red Bank hill was not so difficult as this picture, of B. Bourke (New Hudson sidecar) approaching the worst bend, would make it appear.

grassy climb, was made, which brought the competitors out by Thirlspot. Spouse (T.B.) provided great excitement on Rake How by overturning.

Before running into Dungeon Ghyll (Langdale Valley), for lunch, Red Bank had to be climbed. The surface was excellent, and the majority roared up the once dreaded 1 in 4 at high speed.

Here the ascents of J. H. Walker (557 B.S.A.) and B. L. Bird (557 B.S.A.) called for special comment; the manner in which these two riders handled their by no means lightweight mounts could only be described as masterly. The riding of their team mate, H. S. Perrey, was only slightly less commendable. W. R. Haggas (499 Triumph) also showed how well he can ride; D. Wright and H. Jackson (Sunbeams) came up fast in close company, while the Matchless sidecar team, Ellis, Ross, and O'Brien, brought their machines up at comfortable touring speeds.

### A Strenuous Hour.

Up to the lunch control 20 m.p.h. was the speed that had to be maintained, but for the first sixteen miles after the stop one hour was allowed—it was needed! From Elterwater Village, Little Langdale was entered, and from Colwith Bridge to Oxenfell was a confused medley of ups and downs, right and left hairpins, reefs and outcrops of rock, farmyards and grass. Observations were out of the question, the road was so narrow that a stop was impossible—a stationary machine would have stopped the trial.

Tilberthwaite Hill is a curiosity; the riders enter one gate in a farmyard, turn in the yard itself, and attack the hill through another gate beside the one through which they have passed.

### Had it Rained——!

Had the weather been wet Tilberthwaite would have been the Waterloo of many; as it was it was fairly easy. Dungeon Ghyll was reached again via Blea Tarn Pass, a rough-gullied descent with four gates which tried the brakes to the utmost; then came Foolstep, a short jump from one altitude to another which fooled no one in his step, then to Ambleside and over Kirkstone Pass on the run. To prospective London-Edinburgh competitors who will have to climb the pass on Whit Saturday it may be comforting to learn that only one or at the most two riders failed to make clean ascents on Saturday. It is impossible to designate those who made good climbs; almost all did so well that comparisons would be invidious.

After Kirkstone, Ullswater was left, near Dockray, for Troutbeck, and a byway course, involving one watersplash, brought the competitors, after an enjoyable tour, to the finish some ten miles from Carlisle. After the final check, a formula hill-climb was held to decide the winner in the very likely event of a tie.

*First Class Awards:*—A. F. Morton (4 Harley); J. P. Bennett (3½ Sunbeam); J. A. Newman (3½ Douglas); A. D. Reid (3½ P. and M.); W. T. Tiffen (2½ Velocette); W. Westwood (3½ Triumph); W. Wells (3½ Sunbeam); B. Kershaw (2¼ New Imperial); W. F. Wannop (3½ Sunbeam); R. Watson (3½ Martinsyde); J. H. Walker (4¼ B.S.A.); B. L. Bird (4¼ B.S.A.); H. S. Perrey (4¼ B.S.A.); J. G. R. Edmondson (2¼ Velocette); L. Edmondson (2¾ Massey-Arran); G. Henderson (4 Triumph); G. Hill (3½ Sunbeam); W. R. Haggas (3½ Triumph); L. Dixon (3½ Norton); C. Webb (3½ Sunbeam); D. Wright (3½ Sunbeam); G. M. Townsend (4¼ P. and M. sc.); D. W. Rhodes (5-6 Scott Sociable); T. J. Ross (7 Matchless sc.); F. O'Brien (7 Matchless sc.); A. E. Pape (3½ Triumph sc.); G. E. Jackson (4¼ Beardmore-Precision); G. D. Barker (7 A.J.S. sc.); G. H. Wilson (2¾ Edmund); R. J. Brooks (3½ Triumph); J. J. A. Dias (8 Morgan); D. Bell (2¾ A.J.S. sc.).

*Second Class Awards:*—R. R. Grindlay (4½ Humber); R. Pape (2¾ Wilkin); B. Cathrick (4½ Dunelt); K. Hodgson (3½ Triumph); S. Bell (2¾ Beardmore-Precision); J. Dall (2¼ Sun-Vitesse); H. Jackson (3½ Sunbeam); B. Bourke (4½ New Hudson sc.).

*Third Class Awards:*—P. L. Mayo (2¼ Coventry Eagle); A. Greenwood (8 Brough-Superior); A. J. Smith (2½ Calthorpe); J. W. Burton (7-9 Harley-Davidson sc.); F. S. Spouse (T.B. 3-wheeler); F. Ball (7 A.J.S. sc.); I. G. Bethwaite (3½ Zenith); J. Monkhouse (6 A.J.S. sc.).

## THE LAW AND BRAKES.

RIDERS of Harley-Davidsons, Indians, and other motor cycles which are fitted with two brakes, both of which operate on the same wheel of the machine, will be interested in the Chertsey magistrates' interpretation of the Act. They have held that the Act provides for a brake to be fitted to each wheel, and that two on the back wheel do not comply with the Act.

This decision was arrived at on Wednesday, when a London motor cyclist was summoned for riding a motor cycle at Addlestone which was not fitted with two independent brakes. Defendant pleaded not guilty, saying his machine, a Harley-Davidson, had two independent brakes fitted to the back wheel. The constable in his evidence admitted that this was so, but the Clerk advised the Bench that the Act stipulated a brake on each wheel, and the Bench supported this and imposed a fine of 19s. 6d.

# BIRMINGHAM INTER-CLUB TRIAL.

## 201 Miles Route causes Few Retirements in South B'ham M.C Event.

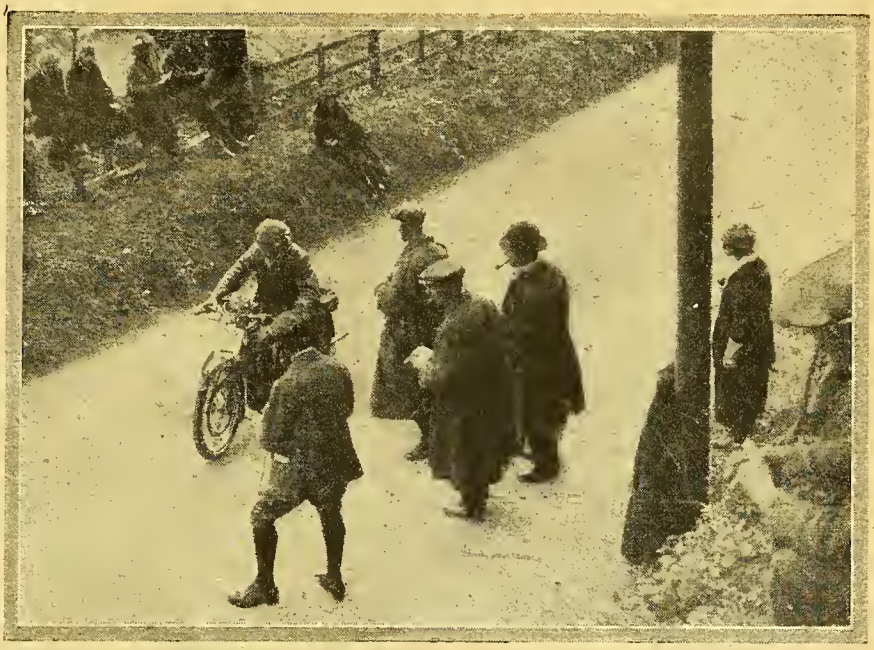
THIRTY-FOUR out of the forty-seven entrants completed the 201 mile course of the inter-club trial held by the South Birmingham M.C. on Saturday. Satisfaction was generally expressed with regard to the choice of route which, although long, was fair. The major portion was divided into non-stop sections so that in the event of trouble the competitors had little chance of making up time.

Starting from Bearwood at 9 a.m., the riders had to cover 100 miles through the Clee Hills district *via* Tenbury to the lunch-stop at Bromyard, there being no observed hills on this part but five non-stop sections. The return journey was through Evesham, Shipton, and Stratford to the 8 o'clock finish at Stonebridge.

### Brake Test Failures.

In this latter half were held "stop and re-start" and "low gear speed" tests on Sunrising Hill. Most did well here, but the next, a brake test on Edge Hill, provided quite a number of failures. The riders had to cover a measured stretch at speed, their time being taken for the distance; having passed the second tape they had to pull up quickly on the hill marks being deducted according to the number of feet overrun.

Several riders were early in trouble, for Hagley Hill, which is only two miles from the start and is usually fairly easy, caused two or three to foot-slog. R. C. Cooper (Allon), however, did not get even so far, for he seized his gear box right at the start.



In the stop and re-start test, A. W. Thrush (499 c.c. Sunbeam) preparing to accelerate.

Finishers:

S. G. Orford (348 Henley-Blackburne).
W. Johnson (292 Allon).
F. Whitworth, Junr. (348 Ivy).
J. C. Edkins (349 Sports Pax).
W. R. Bown (250 Bown-Jap).
H. Greaves (349 Beardmore-Precision).
A. D. Mayo (350 Coventry Eagle).
L. G. Green (349 Verus).
J. W. Moxon (350 Monopole).
S. B. Knox (349 Henley).
T. A. Ward (350 Sirrah-Blackburne).
T. H. Bonham (245 Calthorpe).
J. Drew (750 Brough-Superior).
F. V. Wood (370 Connaught).
J. S. Bacon (492 Sunbeam).
A. C. Cope (494 Douglas).
H. J. Stretton-Ward (499 Triumph).
A. W. Thrush (499 Sunbeam).
Bert Garner (499 Triumph).
P. R. Budd (550 Triumph).
J. Rowan (499 Sunbeam sc.).
T. H. Richards (986 Brough-Superior sc.).
T. R. Gibbins (980 Acme sc.).
Alan Watson (499 Sunbeam sc.).
A. E. Salway (292 O.K. Junior sc.).
H. G. Uzzell (998 New Imperial sc.).
S. Wright (600 Humber sc.).
W. J. Montgomery (986 Brough-Superior sc.).
L. A. Bees (596 Beardmore-Precision sc.).
A. P. McGowran (550 Triumph sc.).
F. A. Boggis (550 Triumph sc.).
W. Ridley (1093 New Hudson).
H. F. S. Morgan (985 Morgan).
F. G. Mann (1000 Morgan).

# LONDON—COVENTRY—LONDON.

## North-West London M.C. Classic Trial held for Seventeenth Time.

THE members of the North-West London M.C. decline any suggestion of abandoning the old classic London—Coventry—London Trial, now in its seventeenth year, but it is found increasingly difficult to provide anything of a serious nature which will yet bring the two cities within the scope of a twelve hours' trial. The timekeeping marking has been stiffened up appreciably, and the inclusion of a tricky eleven miles non-stop in the Chilterns helped to make it something more than a joy ride.

Twenty competitors started out from Hendon at 7 a.m. on Saturday, and at West Wycombe all but one were enjoying something like a second breakfast outside the first check. The secret non-stop followed immediately, and included several hills sufficiently steep, up or down, to make the 20-mile schedule an effort. Bilney (2¼ Holroyd) stopped on Small Dean with a slipping belt, descended, and roared up after adjustment. Burton on one of the cars stopped, but nobly ditched himself to prevent baulking. L. A. Goddard (Matchless sc.) was going well on Kop when his gear-box seized up, and he retired temporarily, but rejoined the procession, travelling well later. Miss Buchan (2¾ A.J.S.) lost her way, and arrived late at Risborough, apart from which her running and time-keeping throughout the day were perfect.

### Excellent Arrowing.

The course was excellently arrowed by the Bucks Club, in which service the Banbury Club assisted further on. Sutcliffe (Morgan) tore off a tyre twice in a very dreadful "colonial" portion; incidentally this lane, which was composed of hard-baked mud billows and ruts, proved a joy to the treasurer, for many a first-class award disappeared hereabouts. Whitefield (Beardmore-Precision) disappeared after the non-stop, and Burton shed a wheel after Sunrising, but resumed.

### Main Road Return.

A contented party made good use of the two hours' lunch interval at the King's Head Hotel, Coventry.

The return journey was uneventful, being almost wholly over main roads.

Results (subject to official confirmation):—

*First Class Awards.*—A. J. Rowe (Morgan), F. V. Edwards (4 Harley-Davidson), E. W. T. Howard (3½ Sunbeam), and H. W. Deacon (3½ Sunbeam).

*Second Class Awards.*—J. L. Johnson (Triumph), C. King (Triumph), H. E. K Sawtell (Morgan), Bilney (2¼ Holroyd), A. Cartwright (3½ Sunbeam).

*The Best Performance Cups.*—Solo: E. W. T. Howard (3½ Sunbeam). Passenger: A. J. Rowe (Morgan).

# CURRENT CHAT (continued from p. 645)

### An Unclaimed Fortune!

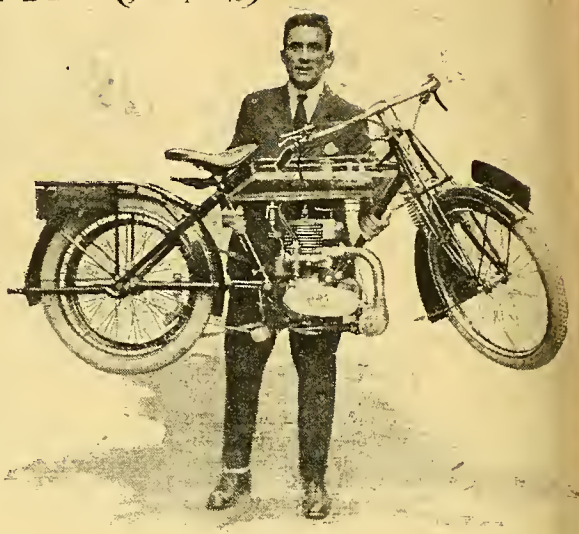
The sum of £8 awaits the owner of the undecipherable signature against "75" in the "gold medallists" competition held in connection with the Scottish Trials. Application should be made to Mr. Fraser, c/o the Edinburgh M.C., 6, Castle Terrace, Edinburgh.

### Scottish Echoes.

In this issue there appears a seven-page article on various aspects of Scotland's most important motor cycle trial, but that does not quite exhaust the available news regarding the event. New Imperial Cycles, Ltd., wish it to be known that their two medals (gold and silver) were gained with standard "light tourist" models, not sports machines; A. H. Alexander's gold-medal winning mount was, of course, a Douglas; and Harry Gold (2¾ Francis-Barnett) gained a bronze medal. Incidentally the Glasgow Western M.C.C. gained the club team prize for the second year in succession.

### A LIGHTWEIGHT THAT IS LIGHT.

One of the pioneer two-strokes, the Connaught, is among the lightest of fully equipped motor cycles. The single gear model weighs but 135lb. A slightly larger type, which has a 370 c.c. engine, is proving itself to be an efficient sidecar mount; it survived the London-Land's End trial, and, although at first reported as an absentee, secured a silver medal. It was the only 2-stroke lightweight sidecar to secure an award.



# CLUB NEWS (continued from p. 646)

### Burton M.C. and L.C.C.

On Whit-Monday (June 5th) the club will hold a reliability trial over a course of 97 miles round Ashbourne district. This trial will count for the Baldock Cup, and the awards to be won outright are gold, silver, and bronze medals of A.C.U. approved pattern.

### Sheffield and Hallamshire M.C. and L.C.C.

Extremely successful half-mile speed trials were held on Ringinglow Road, Sheffield, on the 6th inst before a large crowd of spectators. Despite a high wind some good times were put up, the fastest time of the day being made by R. Flint (3½ Norton) in the solo 750 c.c. Expert Class, his time being 30 secs. from a standing start. Three of the Sheffielders who are riding in the T.T. were competing, viz., Jack Haslam, L. Padley, and R. Flint.

### Leinster M.C.

The club held an open novices' trial on Saturday last over a course of approximately one hundred miles in Co. Wicklow. The route was not a very severe one, and as the weather conditions were favourable, the proportion of finishers was high. Forty-four riders took part in the event, and thirty-two of them completed the course on time. Eight of the finishers reported stops in the non-stop sections, of which there were two, but on the other hand there were only two failures to make clean ascents of the observed hill, the Devil's Elbow, at Glencullen.

### Luton and South Beds A.C.

Very successful speed trials, the first of the season, were held on Saturday at Luton Hoo. Results:

275 c.c. CLASS.
A. A. Swann (New Imperial), 23½ secs.
H. Brosse (Reyre-Newson), 23⅖ secs.

350 c.c. CLASS.
H. Brosse (Reyre-Newsoo), 22⅘ secs.
A. A. Swann (New Imperial), 23 secs.

## Week-End Club Events.

*May 18th.—Bulwell M.C.—Run to Belper (River Gardens).*
*May 20th.—North London M.C.C.—Annual Hill Climb.*
*May 20th.—Darlington and District M.C.C.—Social Competition.*
*May 20th.—Coatbridge, Airdrie and District M.C.C.—Run to Callander.*
*May 20th.—Bristol M.C. and L.C.C.—King Cup Trial.*
*May 20-21st.—Atherton and District M.C.C.—Run to Llandudno.*
*May 20th.—Dumfries and District M.C. and C.C.—Hill Climb for Hop-Bell Cup.*
*May 20th.—Kelso and District M.C.C.—S.A.C.U. Meet at Callander.*
*May 20th.—Coventry Triangle M.C.—Run to Birdinbury.*
*May 20th.—Wallington and District M.C. and L.C.C.—Hill Climb.*
*May 20th.—Essex M.C.—Royal Meeting at Brooklands.*
*May 20th.—Gloucester M.C. and L.C.C.—Run to Symonds Yat.*
*May 20th.—Neath and District M.C.—Speed Trials.*
*May 20th.—Redditch and District M.C.C.—Reliability Trial (open to Midland Centre A.C.U.).*
*May 21st.—Bristol Sports Club—Douglas Cup Trial.*
*May 21st.—Colne and District M.C.—Run to Hardcastle Crags.*
*May 21st.—York and District M.C.—Run.*
*May 21st.—Coventry Triangle M.C.—Run to Northend.*
*May 21st.—Reigate, Redhill and District M.C.C.—Run to Hastings.*
*May 21st.—Sheffield M.C.C.—Run to Lincoln.*
*May 21st.—Newcastle and Northern M.C.—Team Trial.*
*May 21st.—West Kent M.C.—Afternoon Run to Wateringbury.*
*May 21st.—Leeds Motor Union—Reliability Trial.*
*May 21st.—Rochester, Chatham and District M.C. and L.C.C.—Run to Crowley Common.*
*May 21st.—Barrow and District M.C.—Reliability Trial.*
*May 21st.—Brighton and Hove M.C.C.—Reliability Trial for Dobson Challenge Cup.*
*May 24th.—Darlington and District M.C.C.—Speed Judging Competition.*
*May 24th.—York and District M.C.—Old Crocks. Climb.*
*May 24th.—Leeds Motor Union.—Impromptu Run.*
*May 24th.—East London M.C.C.—Reliability Trial.*
*May 24th.—Ashford M.C. and L.C.C.—Hill Climb.*
*May 24th.—Lune Valley M.C.C.—Hill Climb.*
*May 25th.—Worcester M.C. and District M.C.C.—Evening Main Road Reliability Trial.*
*May 25th.—Gloucester M.C. and L.C.C.—Secret Destination Trial.*

550 c.c. CLASS.
E. C. Marshall (Matchless), 17⅖ secs.
C. G. Dunham (Norton), 18⅖ secs.

750 c.c. CLASS.
H. Saddington (James), 17⅖ secs.
E. C. Marshall (Matchless), 17⅖ secs.

UNLIMITED.
G. J. Reed (Enfield), 15⅘ secs.
C. E. Baragwanath (M.A.G.), 17 secs. } Tie.
W. A. Baragwanath (Zenith), 17 secs. }

SIDECARS UP TO 550 c.c.
J. Hill (Douglas), 22 secs.
T. B. Dorders (Norton), 23⅓ secs.

UNLIMITED SIDECARS.
C. E. Baragwanath (M.A.G.), 17⅓ secs.
O. De Lissa (Motosacoche), 19⅓ secs.

STANDARD MACHINES RIDDEN BY OWNERS.—SOLO.
G. J. Reed (Enfield), 14⅖ secs.
H. Saddington (James), 18 secs.

SIDECAR.
O. De Lissa (Motosacoche), 19⅓ secs.
J. Hill (Douglas), 21⅓ secs.

### North London M.C.C.

Results of the petrol consumption test held on the 6th inst. are now to hand:

350 c.c. SOLO.
1. G. Richardson (2¼ Velocette), 169 m.p.g.
2. S. Forbes-Robertson (2¾ Royal Ruby), 140 m.p.g.
3. T. W. Sullivan (2¾ Levis), 115 m.p.g.

350 c.c. SOLO.
1. R. R. T. Bowen (4 Triumph), 116 m.p.g.
2. C. E. Morris (3 A.B.C.), 115 m.p.g.
3. W. D. Mallet (3½ Sunbeam), 109 m.p.g.
4. C. F. Baker (3½ Zenith), 90 m.p.g.

PASSENGER MACHINES.
1. J. Hawkins (3½ Ariel sc.), 97 m.p.g.
2. R. H. Rivers (4¼ B.S.A. sc.), 82½ m.p.g.
3. W. A. Henderson (5·6 James sc.), retired.

### Newcastle and District M.C.C.

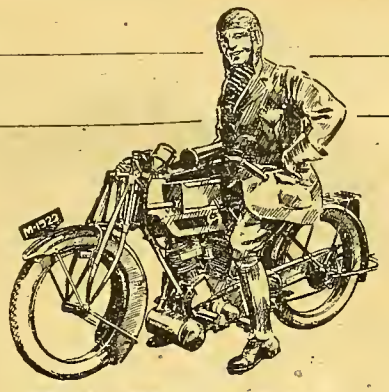
There were 31 entrants in the novices' trial, held on the 7th inst., which was open to all clubs affiliated to the North Eastern Centre A.C.U. Six competitors qualified for the premier award, an enamelled club gold medal, with the result that a secret check between Belsay and Newcastle had to be resorted to so as to ascertain the winner. Results:

1, R. W. Riseborough (10 Morris Cowley); 2 (Gold Club Medal), J. E. Thompson (Dunelt sc.); 3, R. J. Toovey (Norton sc.).

*SPECIAL SHOW OF*

**Matchless**

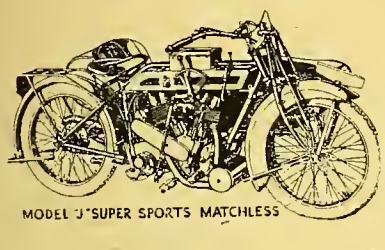
THE PERFECT PASSENGER MOTORCYCLE



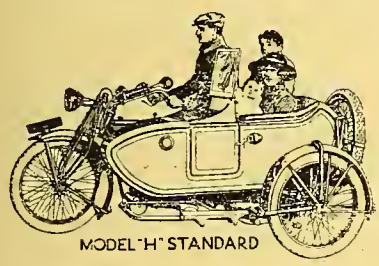
# Every model on show *at* WHITELEYS

**Originated in the earliest days of motor cycling, the Matchless has kept ahead of every development and its excellence to-day is testified by the results of recent trials, as instance—LONDON *to* EXETER: 24 Matchless entrants gained 20 gold and 2 silver medals**

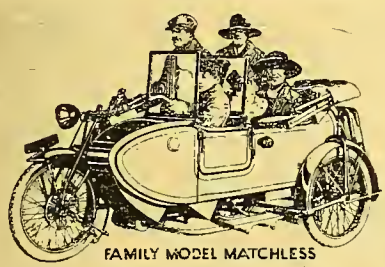
***Whiteley's Showrooms have a full range of Matchless Models***



MODEL "J" SUPER SPORTS MATCHLESS



MODEL "H" STANDARD



FAMILY MODEL MATCHLESS

(Stripped and variously equipped) and, in addition, a considerable stock is carried in reserve so that we offer the great advantage of INSTANT DELIVERY. Even if you are unable to visit this show in person, you may order by correspondence during this special week, for Whiteleys own experts are here to advise and will see that your machine is in perfect tune before despatch.

***Prices—either cash or deferred payments include free delivery anywhere in Britain***

MODEL "J" SOLO SPORTS MODEL — CASH **£130**
(or £26 : 4 : 0 deposit and 12 monthly payments of £9 : 1 : 8)

MODEL "J" SPORTS SIDE-CAR COMBINATION — **£160**
(or £32 deposit and 12 monthly payments of £11 : 4 : 0)

MODEL "H" STANDARD COMBINATION — **£170**
(or £34 deposit and 12 monthly payments of £11 : 18 : 0)

MODEL "H" STANDARD COMBINATION. Complete with dynamo lighting, hood, luggage carrier, spare wheel and tyre, side-car step, leg guards, horn, and wind screen — **£204 : 17 : 6**
(or £41 : 1 : 6 deposit and 12 monthly payments of £14 : 6 : 8)

FAMILY MODEL COMBINATION — **£175 : 10 : 0**
(or £35 : 10 : 0 deposit and 12 monthly payments of £12 : 5 : 0)

FAMILY MODEL COMBINATION. Complete with dynamo lighting set, hood, two wind-screens, spare wheel and tyre, horn, leg-shield, and side-car step — **£211 : 17 : 6**
(or £42 : 7 : 6 deposit and 12 monthly payments of £14 : 16 : 8)

MATCHLESS "H," with Commercial Carrier Side-car — **£170**
(or £34 deposit and 12 monthly payments of £11 : 18 : 0)

***Whiteley's Deferred Terms are only 4 per cent. on the cash price, as quoted above.***

**WM. WHITELEY LTD., QUEENS ROAD, LONDON, W.2**

TELEGRAMS: "MONTGOMERY SIDECARS COVENTRY."

TELEPHONE 470 COVENTRY.

# MONTGOMERY SIDECARS

SOLE MANUFACTURERS:

## W. MONTGOMERY & CO.,

SIDECAR SPECIALISTS.

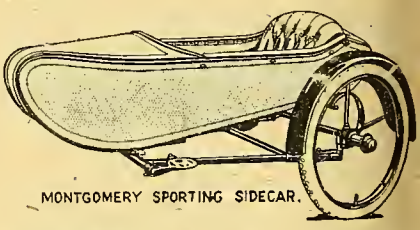
LEICESTER CAUSEWAY. COVENTRY.

SOLE PROPRIETOR: W. MONTGOMERY.

**The Motor Cycle Manufacturer's idea of a Sidecar is a big, heavy affair which slowly, but surely, wears the heart out of your engine and a big hole in your pocket.**

Montgomery Sidecars are the product of a firm who have specialised in Sidecars for over 20 years. Whatever make of Motor Cycle you choose, insist on a Montgomery Sidecar for distinguished appearance, easy steering, comfort of passenger, moderate cost and excellent road service.

*Art catalogue free on request.*



MONTGOMERY SPORTING SIDECAR.

**Price £23 10 0 complete.**

# Sun Motor Cycles

# ALWAYS A WINNER

ON

## THE SUN VITESSE ROTARY VALVE CYCLE

**DUBLIN AND DISTRICT MOTOR CYCLE HILL CLIMB ON HANDICAP: "Sun Vitesse" did the fastest time in the 300 c.c. class and was placed second.**

**STOCKPORT AND DISTRICT MOTOR CLUB: In their closed hill climb at Axhead, Buxton. B. Caldwell secured First Prize in the 275 c.c. class.**

NO MOTOR CYCLE MADE HAS A BETTER PERCENTAGE OF FIRST-CLASS AWARDS than the Rotary-Valved SUN VITESSE—the motor cycle that has removed the *Curse of Vibration.*

## Price from 47 Guineas.

*NEW LIST JUST OUT—SEND FOR ONE AND OUR LIST OF AGENTS.*

THE SUN CYCLE & FITTINGS CO., LTD., ASTON BROOK ST BIRMINGHAM.

The Famous

"JAMES"

Take delivery now of your New Machine and "run it in" in time for the Whitsun tour.

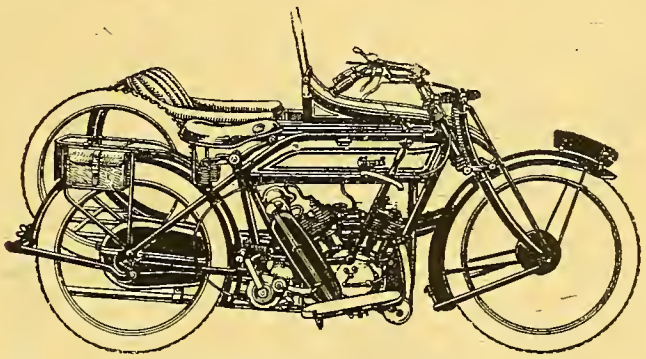
**THE JAMES CYCLE CO., LTD.,**
**Greet, Birmingham.**

*Showrooms.*
**London: 22, Holborn Viaduct, E.C.1.**
**Birmingham: Broad Street Corner.**

# "The Best You Can Buy."

**MODEL No. 10, 7 h.p.**
**COMBINATION DE LUXE.** **£160**

All-enclosed chain drive. 3 speed countershaft gear.
Hand and Heel Clutch. Interchangeable wheels, etc.



Write for full Catalogue of this and other James Models.

**IMMEDIATE DELIVERY——NO WAITING.**

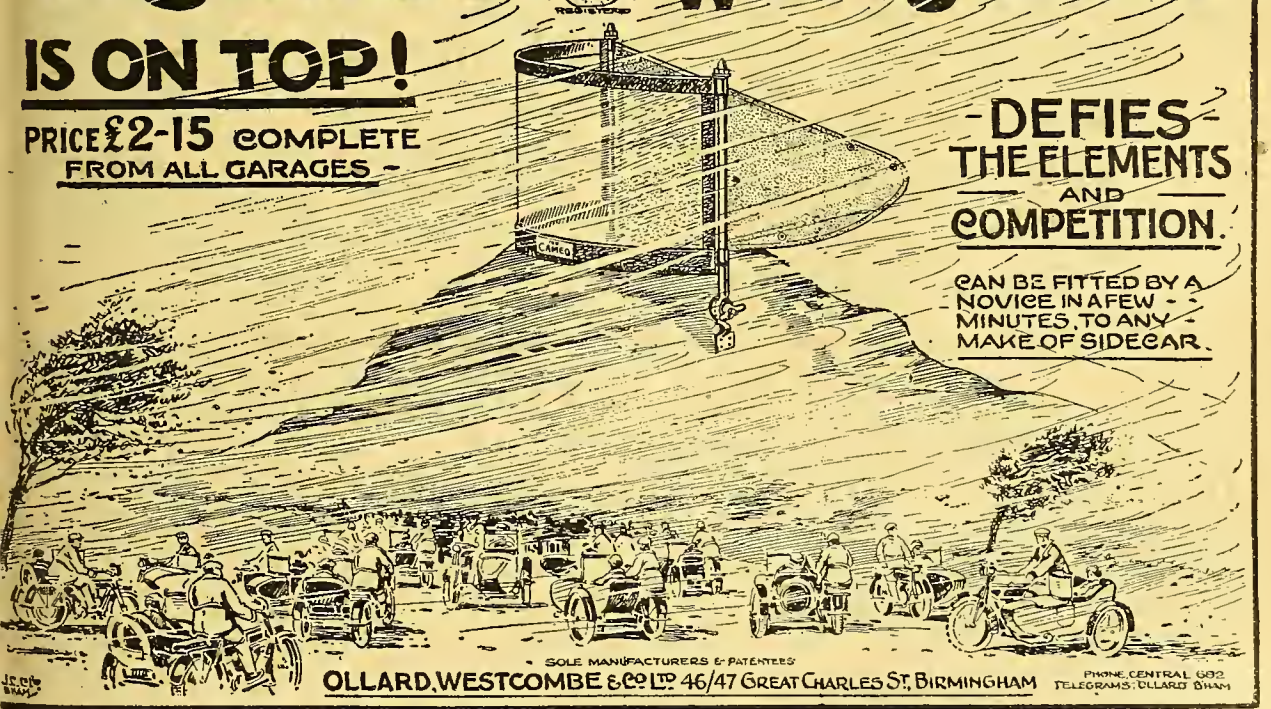
# The CAMEO WIND SCREEN.

## IS ON TOP!

PRICE £2-15 COMPLETE
FROM ALL GARAGES

DEFIES
THE ELEMENTS
AND
COMPETITION.

CAN BE FITTED BY A NOVICE IN A FEW MINUTES TO ANY MAKE OF SIDECAR.




SOLE MANUFACTURERS & PATENTEES
OLLARD, WESTCOMBE & Co LTD 46/47 GREAT CHARLES ST. BIRMINGHAM
PHONE CENTRAL 602
TELEGRAMS: OLLARD BHAM

The

# Humber

4½ H.P.
FLAT TWIN

## For All-round Excellence

EVER since the introduction of the Humber 4½ h.p. Flat Twin model it has given entire satisfaction to a very large number of riders. On no machine will the motor cyclist find so much pleasure and so little trouble. Its uniform reliability, remarkable silence, attractive specification and competitive price all combine to satisfy the discriminating rider, while the new Sporting model makes a special appeal to the sporting cyclist.

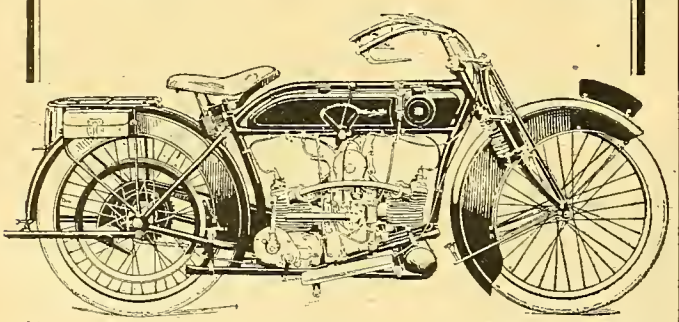
*Finished, if required, in black without extra charge, the Flat Twin is ideal for all-weather work.*

4½ h.p. Flat Twin Solo Model - - - £110
4½ h.p. Flat Twin Sports Model - - £100
4½ h.p. Combination Outfit- - - - £144

***Get a Humber; it will take you anywhere, any time.***

**HUMBER LTD., Coventry.**

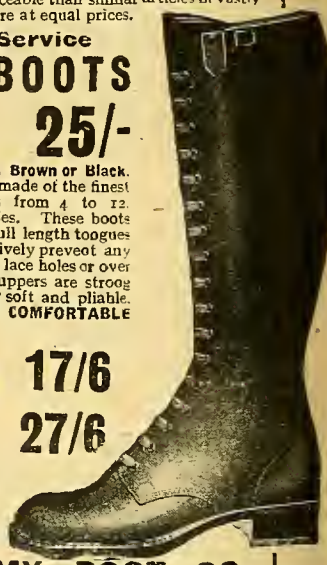
**LONDON:**
**City Showrooms: - - - 32, Holborn Viaduct, E.C.1.**
**Export Dept.: Humber House, 94, New Bond Street, W.1**
**Repair & Service Depot: Canterbury Rd., Kilburn, N.W.6**



**GREATER VALUE**
**than ever given before**
A limited quantity of this wonderful boot for disposal to the readers of "The Motor Cycle" at
**30% Less than any previously quoted prices**
Every boot is brand new, Absolutely Waterproof, and easy to slip on and off. Far more serviceable than similar articles of vastly inferior materials sold elsewhere at equal prices.

**Officers' Field Service**
**TRENCH BOOTS**
**Our Price - 25/-**

*Postage and Packing, 1/6.* In Brown or Black. All sizes. Guaranteed to be made of the finest Government Leather. Sizes from 4 to 12. Smaller sizes suitable for ladies. These boots reach to the knee, and have full length toogues and side buckles, which effectively preveot any water penetrating through the lace holes or over the tops of the boots. The uppers are strong and stout, and yet extremely soft and pliable. **The SMARTEST and MOST COMFORTABLE Trench Boot procurable.**



**BRITISH ARMY BOOTS 17/6**
**OFFICERS' BLACK or BR. WN BOOTS 27/6**

Send Postal Order or Cheque, and state size required.

**LONDON ARMY BOOT CO.,**
Government Contractors,
(Dept M.C.) 186, Bishopsgate, London, E.C. 2
*(Adjoining Bishopsgate Street Police Station.)*

# Policies Covering

*all the*

# RISKS INCURRED

*by*

# MOTOR CYCLISTS

*are issued by*

**PROVIDENT ACCIDENT AND GUARANTEE COMPANY, LTD.**

**54-55, Coleman St., London, E.C.2**

Telegrams: Perpend, Ave, London.
Telephone. London Wall 5306 (4 lines)

# CHEMICO

## The BEST the World produces

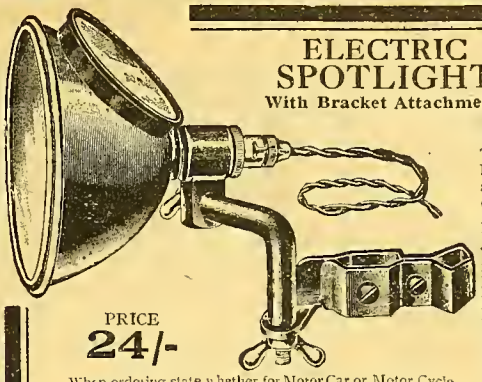
**You get more miles to the gallon with COOLIE MOTOR CYCLE OIL.**

It's not the PRICE per gallon, but the MILES per gallon, that determine the cost of your Lubricating Oil, and it is when judged by mileage that COOLIE Motor Cycle Oil shows how little it really costs. Not only that, but its combustion is so perfect that an engine lubricated with COOLIE Oil can be run for longer periods without decarbonising than when lower grade oils are used, effecting a saving in maintenance cost which must be subtracted from the initial cost of COOLIE Oil. Get the best running from your engine by using COOLIE Oil. It is obtainable from most Garages and Cycle Dealers, but if you have any difficulty in obtaining supplies write us direct, giving the name of your usual Garage, and we will see you are supplied.

***Prices—***

***½ gal. tin, 5/5. 1 gal. tin, 8/5***

**THE COUNTY CHEMICAL CO., LTD., BRADFORD STREET, BIRMINGHAM.**



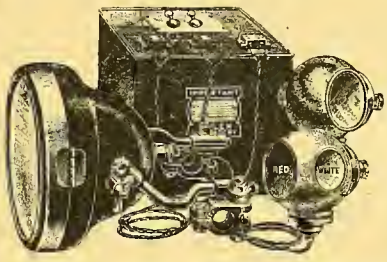
## ELECTRIC SPOTLIGHT

**With Bracket Attachment.**

**Handsome Appearance.** The light can be thrown in any desired direction. Easily detachable for use as an inspection lamp. Fitted with Driving Mirror, Bracket, Cord, Bulbholder, and Switch Adaptor.

PRICE **24/-**

When ordering state whether for Motor Car or Motor Cycle.




## "VOLEX" DRY BATTERY MotorCycle & Sidecar LIGHTING OUTFIT.

**British Made.**

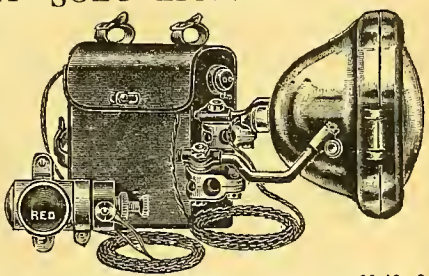
"Volex" Dry Battery Lighting Sets are the ideal no-trouble outfit. No other battery outfit will give results equal to the "Volex." **These sets give from 9 to 12 months' service, in ordinary intermittent use, without renewal batteries.**

**Specification.**—6-volt "Volex" Dry Batteries in metal container, Switchboard, Head Lamp (5½in. front), Side and Tail Lamps, Cord and Bulbs.

No. Mc/490, as illustrated .. .. ... ... Price **£6 10 0**

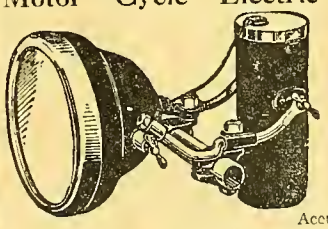
## "VOLEX" SOLO LIGHTING SETS.

Made upon the same principle as our "Volex" Combination Set. Head Lamp is provided with 6 volt bulb giving an exceptionally brilliant light, and ample light is provided in the rear lamp.



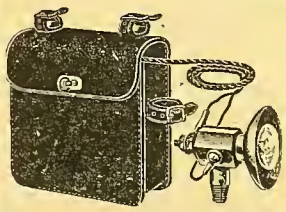

**Head and Rear Set,** 5½ in. Head Lamp, M10/10. .. ... **£4 10 0**
Head Set only, M10/7 ... ... ... ... ... ... **£4 0 0**

## The "RAYONITE" Motor Cycle Electric Self-contained Head Lamp.



**Recommended for Home and Export.** A Brilliant Light at Will. Comprises Head Lamp, 5½in. front, Bulb, Bracket, and strong Metal Container holding the "Volex" Dry Battery. Price **£3 10s.** Also supplied with very efficient Accumulator, **14/-** extra.

Head and Rear Lamp Outfit complete with Accumulator, Price **£4 12s. 6d.**



## ACETYLENE to ELECTRIC Conversion Set.

Complete Outfit as illustrated, with 4-volt "Volex" Aero Dry Battery in Leather Satchel with Conducting Cord and Bulb. Price **31/-.**

Do. with 6-volt "Volex" Aero Battery. Price **37/-.**

**Sectional List M 203 A post free on request.**

**Ward & Goldstone** PENDLETON MANCHESTER LTD

## Important to Motor Cyclists.

THE
**EVERSURE FOOT RESTS**
FOR
**PILLION RIDERS**

ENSURE AN EVEN BALANCE

NO SIDE SLIPPING.

Can be fitted in a few minutes.

Adaptable to fit on back stay of all machines.

*Special terms to trade.*

**PILLION RIDERS**

RIDE WITH EASE AND SAFETY

**7/6 PER PAIR.**

POSTAGE 9d

Standard size to suit ⅞" round and 1" D Section tubes. When ordering please state which kind required.
Delivery from Stock.

*Sole Manufacturers and Patentees:*

**A. J. DAWSON, Ltd.**
CLAY LANE,
COVENTRY.
Tel. No. - 1343.

# MOTOR CYCLE SENSATION

## STUDY THESE PRICES.

**A.E.L. J.A.P.**

293 c.c., 2½ h.p. with 2-Speed Gear Box, Clutch and Kick-Starter - - - - - - **£50**

**A.E.L. VILLIERS**

2-Stroke 2½ h.p., with 2-Speed Gear Box, Clutch and Kick-Starter - - - - - - **£48**

**A.E.L. BLACKBURNE**

350 c.c., with overhead valves, 2¾ h.p., complete with 2-Speed Gear Box, Clutch and Kick-Starter - - - - - - - - - - **£70**

**Gent.'s Cycle - - - £6 : 0 : 0**
**Lady's Model Cycle - £6 : 10 : 0**

SEVERAL DISTRICTS STILL OPEN FOR BONA FIDE AGENTS.

**We challenge our competitors to deliver machines of the same equipment at anything near our prices.**

Catalogue upon application to—

**The Coventry Nut & Bolt Mfg. Co., Ltd.**
MOOR STREET, COVENTRY.

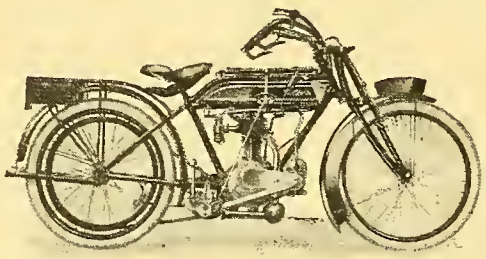
# VICTORIA

*"The VALUE FOR MONEY" MOTOR CYCLE*

2¾ h.p. 350 c.c. J.A.P. or BLACKBURNE Engine. (Fixed Gear) **£60**

3 Speed Countershaft Gear, with clutch and kick starter, chain-cum-belt - - - - - - **£70**

Combination Model - - - **£85**



*Particulars of this and other models obtainable from*

**VICTORIA MOTOR & CYCLE CO., LTD.,**
Victoria Works, Dennistoun, GLASGOW.
'Phone: 514 Bridgeton. 'Grams: "Bicycle, Glasgow."

*Know your Speed & Mileage!*

**Model 42** (*as illustrated*)—Black finish. Nickel-plated bezel. Indicates speeds to 60 miles per hour. Total mileage counter to 10,000 and repeats. Quickly reset trip-counter.
**Price £5 5 0** (or without trip model 40) **£5 15 0**

Back wheel drive for Triumph, **5s.** extra. Back wheel drive for Indian or Harley-Davidson, **10s.** extra.
*Manufactured by*
**NORTH & SONS, Ltd., WATFORD,** & 14, Soho Sq., London, W.1

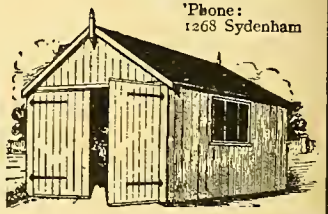
NORTHS BRITISH MADE
Watford
**SPEEDOMETERS** for Motor Cycles.

**A. TURRELL & SONS,** PORTABLE BUILDING WORKS FOREST HILL, S.E.23.

'Phone: 1268 Sydenham

| Lth. ft. | Wth. ft. | Height to Ridge ft in. | Height to Eaves ft. in. | £ | s. | d. |
|---|---|---|---|---|---|---|
| 7× | 5 .. | 7 0 .. | 5 0 | 7 | 5 | 0 |
| 8× | 6 .. | 7 6 .. | 5 3 | 9 | 0 | 0 |
| 9× | 7 .. | 8 0 .. | 5 6 | 11 | 7 | 0 |
| 10× | 8 .. | 8 4 .. | 5 9 | 12 | 19 | 0 |
| 12× | 8 .. | 8 4 .. | 6 0 | 17 | 5 | 0 |
| 14× | 8 .. | 8 7 .. | 6 3 | 21 | 0 | 0 |
| 16× | 9 .. | 8 9 .. | 6 4 | 26 | 0 | 0 |
| 18× | 9 .. | 8 9 .. | 6 4 | 31 | 0 | 0 |
| 20× | 10 .. | 9 0 .. | 6 6 | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ¾in. tongued and grooved matchboards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed: 21oz. glass. Flooring: Strong joists, one inch boards. All bolts supplied for erecting house.

# MOMENTS of JOY

**The enthusiasm of the critical moments of joy will lose their zest if your passenger arrives cold, wet, or dusty.**

**Not one element contributes more to your pleasure and sense of motoring security than the knowledge that your sidecarist will be efficiently protected whilst getting there and back. The discriminating motorist demands an "Easting." It prevents ruined clothes and provides infallible protection from any weather conditions, wind, rain, dust, cold, and broken glass.**

An unsolicited testimonial from U.S.A.:—

"The other night we took the Sideback to the theatre in a pouring rain. Friend wife arrived dry. The Easting was tipped clean up and the rain seems to be picked up by the wind and spilled behind the Sidecar.—F. R. P."

**REDUCED PRICES**

| | | |
|---|---|---|
| ROYAL | - - | £5 0 0 |
| STANDARD | - | £3 18 0 |
| BABY | - - - | £3 0 0 |

*SPECIAL NOTE—Complete sets of Royal fittings for converting "Standard" models to "Royal," giving simplified adjustment to any position—and quick, easy entry or exit, price* **45/-**.

*New Celluloids can be fitted and returned in three days. Royal and Standard* **20/-**, *Baby* **16/-**.

Trade EASTING Mark

**EASTING WINDSCREENS LTD.,**
**132, STEELHOUSE LANE, BIRMINGHAM.**

*London Office and Service Depot:*
**24, FINSBURY SQUARE, LONDON, E.C.2.**
*Telephone:* *Clerkenwell* 1904.

WHOLESALE STOCKISTS: AUSTRALIA—J. J. Wilkins & Sons, 586, George St., Sydney. IRELAND—C. E. Jacob, 18, Great Brunswick St., Dublin. SCOTLAND—Of all factors.

Sole Manufacturing Rights in U.S.A.: Messrs. Shillan, Beck & Co., Inc., 68–72, East 131st St., New York.

# 15/- REDUCTION

## COX "ATMOS" CARBURETTER

## A UNIQUE OFFER to the Motor Cycling Public from now until June 30th.

The average motor cyclist does not realise what it costs to the manufacturers of machines and accessories to have same throughly well represented in a race like the T.T. in the Isle of Man, and such like events. The cost is very heavy indeed, and many who are not actually connected with the trade have a reasonably good idea of the expenditure entailed.

The Directors of Cox Carburetters, Ltd., have decided—that as the speed capabilities of the Cox "ATMOS" were amply proved last year, winning as it did:

**13 WORLD'S RECORDS,**
**40 SILVER CUPS,**
**250 GOLD MEDALS and**
**100 OTHER AWARDS, also**
**1st in 1921 T.T. FLYWEIGHT CLASS "THE MOTOR CYCLE" CUP and FASTEST LAP,**

and as it is a carburetter really designed to give the ordinary rider that pleasure of driving flexibility and economy, no fuel carbon, and longer engine life—that instead of spending more money to prove what has already been amply proved, to consider the ordinary user, that from now until June 30th next, to offer 500 Cox "ATMOS" motor cycle carburetters to the public at a reduction of **15/-** per instrument, making the retail price—

**£3 15 0 instead of £4 10 0**

**Since our advertisement on May 4th announcing this special offer, we have received a great increase in orders from Agents and private owners.**

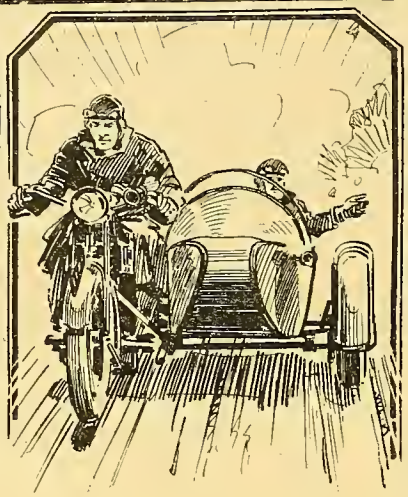
**In consequence, it is expected that before this advertisement appears, that the 500 Carburetters will be sold, in which case the offer will not extend to June 30th**

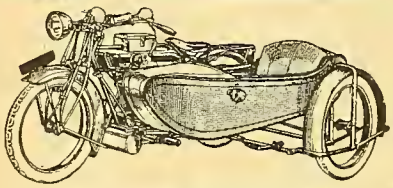
**NORTH-EASTERN CENTRE OPEN RELIABILITY TRIAL, 22ND APRIL, 1922,**
**"TRAVERS" TROPHY VALUE 200 GUINEAS,**
**WON ON 2¼ NEW IMPERIAL FITTED COX "ATMOS."**

**COX CARBURETTERS, LTD.,**
**LOWER ESSEX STREET,**
**BIRMINGHAM.**

# Matchless

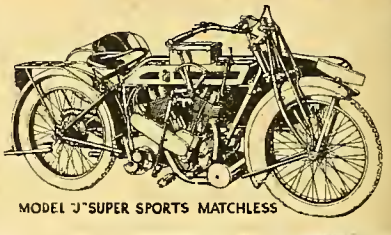
THE PERFECT PASSENGER MOTORCYCLE





Model "J" Sports with Sidecar.

PRICE £160
or Easy Payments.



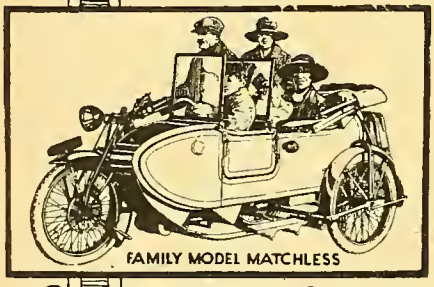
MODEL "J" SUPER SPORTS MATCHLESS

PRICE £165
or Easy Payments.

We ride the "Matchless" because we know there is no better machine on the market and we can recommend it from actual experience.

Our showrooms have a full range of "Matchless" machines and our arrangements with the manufacturers enable us to offer Immediate Delivery.

We are the official "Matchless" Service Agents for our district and can fully meet all your requirements.



FAMILY MODEL MATCHLESS

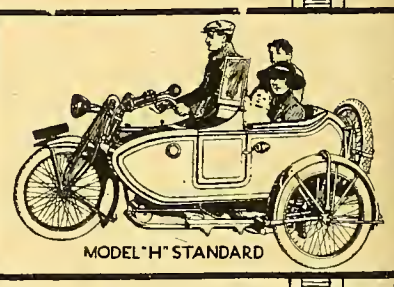
PRICE £175 10
or Easy Payments.

We shall be glad to arrange Easy Payments over a period of

18 MONTHS

if you so desire.

Our system of Easy and Extended Payments is most satisfactory and helpful. Remember—Easy Payments are only 4% extra, and Extended Payments mean only ¼ down and the balance paid over a period of 12–18 months.



MODEL "H" STANDARD

PRICE £170
or Easy Payments.

## Allen-Bennett
Motor Company Limited.

'Grams:
"Track, Croydon."

9, 10, 11, Royal Parade,
WEST CROYDON.

'Phones:
Croydon 2450, 2451.

## MOTOR CYCLES FOR SALE.

### Ariel.

1921 (November) 4½h.p. Ariel Combination, all chain, Lucas accessories, pillion, first-class condition; £125.—Wilson, 4, Claudius Rd., Colchester. [7002

1915 3½h.p., 3-speed, clutch, kick start, Ariel combination, overhauled, new cylinder and piston, lamps, horn, licensed; £50, or near.—G. George, "Louvain," Duncombe Rd., Godalming, Surrey. [6194

ARIELS, the most reliable machines on the road, all models from stock; spare parts sent anywhere; trade supplied.—F. Speakman, Ariel Expert, Ariel Garage, 7, Rochdale Rd., Harpurhey, Manchester 'Tel. 325 Cheetham Hill. [6155

ARIEL Specialists.—Wanted, your present motor cycle in part exchange for any new model in stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Portbank St., Southport. 'Phone: 607. [4927

*Spare Parts:*

ARIEL Spares for all models, post free. Ariel Agents, and Spares Service Depot.—Jones Garage, Broadway, Muswell Hill, N.10 [0804

### Arno.

1915.—4h.p. Arno Combination, 3-speed, clutch, good condition.—Holt, 139, Saltram Crescent, Paddington. [6544

### Bat.

4h.p. Bat; offers; nearest £12 secures.—Darke, Sycamore Place, North Malvern. [6683

1921 8h.p. Bat-Jap Combination, electric lighting, sidecar, screen, tax paid, £125.—7, Norwood Rd., Herne Hill, S.E.24. [8447

1914 Bat-Jap 8h.p. coachbuilt Combination, fully equipped, excellent condition; £65, or near offer.—8A, Culverden Down, Tunbridge Wells. [8176

1919 GNS., exchange.—1920 Bat-Jap 8h.p., 3 speeds, kick, spring frame, sporting sidecar, screen, tipped, fast.—Seabridge, Hansler Rd., East Dulwich. Sydenham 2452. [4635

### Beardmore

1920 (June) Beardmore-Precision, all on, taxed; £44; exchanges.—Keats, 417, Lord St., Southport. [7096

4½h.p. Beardmore-Precision, spring frame, used 6 to 12 months; £50.—Howling, 180, Staines Rd., Wembury, Middlesex. (D) [6613

BEARDMORE, late 1920, spring frame, unscratched, as new; cost with lamps £110, nearest £65.—47, Hamilton Rd., Reading. [6672

BEARDMORE-PRECISION.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [4833

NEW 1922 Beardmore-Precision 3½h.p. Sports model, 2-speed, clutch, kick starter; £65; easy payments 4 per cent. extra.—Premier Motor Co., Aston Rd., Birmingham. [8454

£53/10.—1921 Beardmore-Precision 3½h.p., 2-speed, and double sprung frame, all chain drive, perfect, as new; exchange late Triumph, Rudge, Douglas.—34, Bonsley Rd., Wandsworth. [6615

### Blackburne.

4h.p. Blackburne and New Hudson Sidecar; £150.—Muckalt, Sedbergh. [6415

1922 8h.p. Blackburne, fully equipped, not soiled; £85.—102, Westwood Rd., Earlsdon, Coventry. [8343

1921 Blackburne 4h.p., chain drive, perfect condition, speedometer; £80.—F. Corby, 19, Prospect Rd., Marlow. [6629

1922 Blackburne 8hp. Combination, dynamo electric, spare wheel, insured, unscratched; £160, cost £200.—55, Mafeking Rd., Southsea. [6787

BLACKBURNE 1921 8h.p. Combination, Lucas magdyno, Eastiug, speedometer, luggage carrier and spare wheel, excellent order; £125.—The Layton Garages, 30, Holywell St., Oxford. [8305

1920 4¼h.p. Blackburne and coachbuilt Sidecar, 3-speed, clutch and kick starter, all-chain drive, hood, windscreen, electric lamps, horn, speedometer, wingshields, tax paid December, splendid order and condition; £85.—D. and S. Autocar Co., 33, The Parade, Golders Green. [8286

BLACKBURNE-HOSKINSON 2¾h.p de Luxe Lightweight, 1921, 3-speed, kick start, hand clutch, mechanical lubrication, oversize tyres, spring pillar, every conceivable accessory and spare, tax paid, just overhauled, mechanically better than new; £60; bought cycle car.—Write, Vosper, 30, Essex St., W.C.2. [8428

*Spare Parts:*

BLACKBURNE Engine Spares from stock.—Mandes' Motor Mart, 100, Great Portland St., W.1. [8324

### Bradbury.

BRADBURY 4h.p. Grado gear, licensed, all on; £23.—17 Heaton Rd., Mitcham. [6598

BRADBURY 4h.p., in good condition; bargain, £25.—33, Victoria St., Burnham, Somerset. [6293


# LONG or SHORT SKIRTS

OPINIONS OF COURSE DIFFER ON THIS POINT; BUT THE POINT ON WHICH ALL ARE IN ENTIRE AGREEMENT IS, THAT FOR A GOOD MACHINE AND GOOD "AFTER-PURCHASE-SERVICE" YOU MUST VISIT

# PARKER'S

| DEPOSIT. | | INSTALMENT. | CASH PRICE |
|---|---|---|---|
| £20 | **DIAMOND, 1921.** 2¾ h.p. J.A.P., 2-speed, K.S., clutch, Lucas accessories, tax paid, new condition ..... | £3 2 9 | £55 |
| £25 | **B.S.A., 1916.** 4½ h.p. and sidecar. 3-speed, all-chain, equipped, tax paid.... | £3 11 6 | £65 |
| £20 | **P. & M.** 3½ h.p. and sidecar, 2-speed clutch, fully equipped, tax paid.... | £3 2 9 | £55 |
| £15 | **CLEVELAND, 1920.** 3 h.p., 2-speed, K.S. Clutch, fully equipped | £2 13 9 | £45 |
| £15 | **BRADBURY,** 3½ h.p., and C.B. sidecar, N.S.U. 2-speed, equipped, tax paid .... | £1 9 10 | £35 |
| £40 | **B.A.T.,** 6 h.p., New (shop-soiled) Combination, 3-speed, K.S., clutch ..... | £10 6 1 | £155 |
| £30 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p., electrically equipped Combination, speedometer, screen, tax paid ..... | £8 1 3 | £120 |
| £50 | **HARLEY-DAVIDSON.** 7-9 h.p., New (shop-soiled) Combination, 3-speed, K.S. clutch.... | £9 10 5 | £160 |
| £40 | **SUNBEAM, 1918.** 3½ h.p. Combination, 3-speed, K.S., clutch, equipped ..... | £5 7 6 | £100 |
| £25 | **N.U.T., 1920.** 3½ h.p., 3-speed, K.S., clutch, Lucas dynamo lighting, new condition. | £6 5 5 | £95 |
| £35 | **HARLEY-DAVIDSON, 1920.** 7-9 h.p., electrically equipped, comb., hood, screen, speedometer, new condition ..... | £8 17 1 | £135 |
| £35 | **ZENITH** SPORTING COMBINATION. Fully equipped, Ace discs, absolutely as new | £7 19 5 | £125 |

**BOLTON:** Bradshawgate. Tel. 1348.

**MANCHESTER:** 245, Deansgate. Tel. Cen. 864.


## MOTOR CYCLES FOR SALE.

### Bradbury.

1913 4h.p. Bradbury, 2-speed, guaranteed, taxed; 19 gns.—Royal Garage, Castle Gate, Blackpool, S. [6816

4h.p. Bradbury, 2-speed, clutch, lamps, horn; £28/10 for quick sale.—198, King St., Hammersmith. [6145

1913 4h.p. Bradbury C.B. Combination, windscreen, equipped; 25 gns—Royal Garage, Castle Gate, Blackpool, S. [6817

BRADBURY 4h.p., about 1913, 2 speeds, kick starter, sports sidecar; £35.—Eagles and Co., 275, High St., Acton, London. [8111

F.O.C.H. have a 3½h.p. Bradbury Combination, 3-speed, countershaft, kick starter; bargain.—5, Heath St., Hampstead (near Tube). [5073

1920 4h.p. Bradbury and Sidecar, 3-speed, clutch, and kick start, lamps, horn, speeds, tax paid; nearest £90.—Hawley, 12, High St., Kettering. [6251

BRADBURY 1915 6h.p. Combination, 3-speed, countershaft, 700×80 tyres, fully equipped, good condition; £65, any trial.—84, Milward Rd., Hastings. [4806

BRADBURY 1914 4h.p. Combination, Cameo windscreen (overhauled £20), not used much since; bargain, £30.—Dobell, 50, Bridge Lane, Golders Green, N.W. [6883

2¾h.p. Bradbury, new 1922, £60; 4h.p. model, £92; 4h.p. combination, £118/10; easy terms or exchange.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [8491

BRADBURY 4h.p., Sturmey-Archer 3-speed, coachbuilt sidecar, Cameo windscreen, Lucas lamp set, etc., good tyres; £45.—Knowling, Leather Seller, 1, High St., Slough. [7072

BRADBURY Combination, 4½h.p., 2-speed, new belt, new lamps, re-enamelled, licensed till June, perfect order, absolute bargain; 40 gns.; after 6 p.m. —34, Terrace Rd., Upton Manor, E.13. [6237

*Spare Parts:*

BRADBURY Spare Parts and Repairs.—Agents, Bright and Hayles, 78, Church St., Camberwell. [8247

### Brough.

1916 Brough 3½h.p., flat twin, recently overhauled, new tyres, new belt, 3 speeds, very fast, accessories; nearest £55.—Coombs, St. Catherine's, Guildford. [6393

3½h.p. Brough, o.h.v., aluminium pistons, racing camshaft, electric lighting, spares, exceeded 66 m.p.h. Brooklands; £50.—Taylor, Woodlawn, Kingston Vale, S.W.15. [6756

3½h.p. Brough, 1916, o.h.v., 3-speed Sturmey-Archer, horn, lamp, just overhauled and in first-class order, licence December, insured; £65, or offer.—Address, "Brough," Wm. Porteous and Co., Glasgow. [6386

### Brough Superior.

BROUGH SUPERIOR and Swan sporting sidecar, as new; £140.—Rae, Annickvale, Saltcoats. [4344

BROUGH SUPERIORS.—Order your new mount from us. We are the Brough experts. Specially tuned to order. Mark I., 8h.p., side valve, £150; sporting combination, with screen, step, mat, and apron, £180; Mark 1., 90mm. bore, o.h.v., £160; Mark II., 6.5h.p. M.A.G. engine, £125; Mark II. combination, £150. Special Service Agents; lists.—G. and J. Dawson, The Ideal Garage, Cambridge. 'Phone: 993 [0834

ALLEN-BENNETT Motor Co., Ltd., Service Depot, and sole London agents for the Brough Superior, the sporting rider's ideal.—Immediate delivery of 1922 models at reduced prices. Mark I., 90×77½ o.h.v., 3-speed, clutch, and kick starter, £160; Mark I., sporting combination, step, mat, screen, etc., £180, or with special side valve J.A.P. engine, same price; Mark II. 6.5, mag., 72×90, 3-speed, clutch, and kick starter, £125; sporting combination, step, mat, screen, etc., £150. Demonstration models in stock. Catalogues sent post free on request.—The Allen-Bennett Motor Co., Ltd., 9-10-11, Royal Parade, London Rd., West Croydon. 'Phone: Croydon 2450. [0733

*Spare Parts:*

SPARES.—All engine, gear box, and frame spares for Brough Superior in stock; write for lists.—G. and J. Dawson, The Ideal Garage, Cambridge. [0835

### Brown.

FOR Sale, 2¼h.p. Brown, 3-speed, clutch, new tyres and tubes, 1922 tax paid, ride away; £15.—83, Little Albany St., N.W.1. [6879

### B.S.A.

B.S.A.—New and second-hand models.—B.S.A. Specialists.

COUNTY Cycle and Motor Co., Broad St., Birmingham. [4678

B.S.A. belt-drive model, new; £107.—The Morris Garages, Oxford. [8135

B.S.A. chain-drive model, new; £110.—The Morris Garages, Oxford. [8134

**All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue B.11**
**Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. 4½h.p., all chain, shop-soiled; £95.—Robinson, 207, Rye Lane, Peckham. [6777

1922 6-7h.p. B.S.A., Model E, with No. 4 sidecar, brand new; £155.—Below.

1921 6-7h.p. Combination, overhauled by B.S.A. Co., in absolutely new condition, spare wheel, equipped; 120 gns., exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [8476

B.S.A. 1913, clutch, K.S., Bosch, all on, private owner; £30.—'Phone: Battersea 1265. [6907

ROBERTSON'S Motors, Ltd.—1921 B.S.A., shop-soiled, Model A; £118.—157b, Gt. Portland St., W.1. [6075

NEW 1921 4¼h.p. B.S.A. combination and accessories; £125.—Bounds' Garage, 223, High Rd., Kilburn. [8546

4¼h.p. B.S.A. Combination, screen, lamps, etc., new tyres; £75.—Hammond's Garage, Handforth, Cheshire. [6127

1912 3½h.p. 2-speed sporting B.S.A., perfect running order; £28.—5, Norwood Rd., Herne Hill, S.E.24. [8446

B.S.A. 1922, all models, immediate delivery.—Hucklebridge, 133, Sloane St., Chelsea. Tel.: Victoria 451. [7454

1913 3½h.p. B.S.A. Combination, equipped, tax paid; £23 gns.—Royal Garage, Castle Gate, Blackpool, S. [6807

MOTORIA, Regent Parade, North Finchley.—1922 models B.S.A. in stock; deferred payments; repairs. [6483

B.S.A. 1919 (November) 4¼h.p. Combination, excellent order, electric lamps; £75.—Clark, 7, Exhibition Rd., S.W.7. [4618

1922 B.S.A. model, H2, in stock; terms or exchange.—Shepherd, Enfield Highway. Tel.: Waltham Cross 31. [0860

B.S.A.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6292

1920 B.S.A., 3-speed, fully equipped, taxed, splendid condition; £58.—'Phone: Kingston 1274.—37, Arlington Rd., Surbiton. [8231

4¼h.p. B.S.A. Combination, perfect, taxed, 3-speed, kick start, spares, lamps, speedometer; 56 gns.—61, King's Av., Watford. [6087

B.S.A. 1922 models for immediate delivery.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7015

B.S.A. 4¼h.p., 2-speed, all on, perfect condition, £30; C.B. sidecar to fit, £8/10.—Caretaker, Chelsea Gardens, Pimlico; after 5. [6419

29 GNS.—B.S.A., clutch model, enclosed magneto, B. and B., low position, fast (after 8 o'clock).—53, Swaffield Rd., Wandsworth. [6668

1921 4¼h.p. B.S.A. and Sidecar, lamps, horn, Easting, perfect condition; £115.—Elliott, 29, Finstock Rd., North Kensington. [6583

B.S.A. 1921 and Sports Sidecar, all accessories, very little used and a bargain at £90.—The Layton Garages, 30, Holywell St., Oxford. [8301

B.S.A. 1920 4¼h.p., with 1922 sidecar, equipped, taxed, electric lighting, perfect; £90, or offer. 6, Selwyn Rd., Walton-on-Thames. [6262

B.S.A. 4¼h.p., 1915, with sidecar, fully equipped, splendid condition; £60; machine at Emsworth.—Box 1360, c/o *The Motor Cycle*. [6347

1920 B.S.A. 4¼h.p. Combination, chain drive, perfect condition; £75; must sell.—Howick, Keeper's Corner, Barstow, Surrey. [6934

B.S.A. 1920 4¼h.p. Combination, fully equipped, electric lighting, tools, etc., excellent condition; £100.—6, Broadway, Northampton. [6314

B.S.A. 4¼h.p. Combination, splendid engine, tyres, almost new, screen, lamps, spares; £60.—Shepherd, "Welney," Farnborough, Kent. [8335

B.S.A., 4¼h.p., 3-speed combination, kick start, speedometer, Tan-sad, in excellent condition; £75.—14, Phœnix St., Euston, N.W.1. [8479

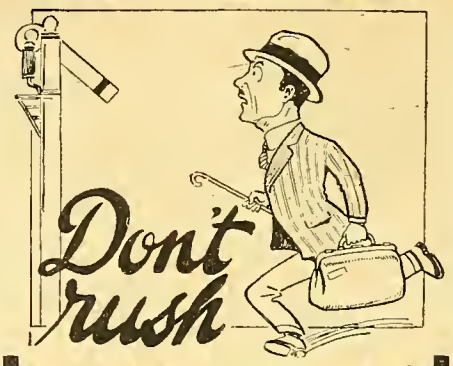
B.S.A. 1922, brand new 4¼h.p., model H2, in stock; £110; easy payments arranged; exchanges. Wilkins Simpson, Opposite Olympia, London. [6348

B.S.A. 3½h.p. 1911, free engine, sound condition, all accessories; what offers?; seen after 6.—Hitch, 60, Harleyford Rd., Vauxhall, S.E.11. [6616

1920 B.S.A. 3½h.p., T.T. model, brand new, just uncrated; £50.—W.J.C. Motor Exchange, 5, Addison Av, Holland Park, W.11. Park 2071. [8406

B.S.A. 4¼h.p., 1921, Grindlay sidecar, Easting screen, lamps, horn, etc., tax paid, like new; £100.—Cope, 15, Upper Hagley Rd., Birmingham. [7075

4¼h.p. B.S.A., combination, absolutely as new, done 200 miles only, lamps, tools, tax paid; £95.—Rhind and Co., Stone Place, Rusholme, Manchester. [8486




**and buy a "dud."**

INVESTIGATE WHAT

# BAMBERS

CAN OFFER.

1921 7 h.p. **A.J.S.** comb., 2-seater, dynamo lighting, every conceivable accessory, mileage 2,500, as new ..... **£150**

1921 5/6 **ROVER** comb., all-chain drive, lamps, horn, Easting, exceptionally good condition ..... **£120**

1921 8 h.p. **ENFIELD** comb., dynamo lighting, hood and screen, etc. ..... **£130**

1921 4¼ h.p. **B.S.A.** comb., electric lamps, horn, etc., perfect condition..... **£105**

1920 5/6 h.p. **RUDGE** comb., lamps, horn, Tan-Sad, Easting, new condition .. **£85**

1920 6 h.p. **ENFIELD** comb., electric lamps, speedometer, new tyres, beautiful turnout ..... **£108**

1920 4 h.p. **HARLEY-DAVIDSON** comb., lamps, horn, speedometer, small mileage, bargain ..... **£110**

1920 2½ h.p. **METRO-TYLER**, De Luxe model, fully equipped, only run 50 miles ..... **£50**

1920 2¾ h.p. **EDMUND**, 2-speed, all-chain, lamps, horn, very good condition .. **£45**

1919 8 h.p. **SUNBEAM** Sporting comb., electric lamps, horn, etc., etc., beautiful turnout ..... **£110**

1919 4 h.p. **DOUGLAS** comb., lamps, horn, etc., very good condition ..... **£78**

1919 6 h.p. **JAMES** comb., fully equipped, Easting, excellent condition ..... **£85**

1915 7/9 h.p. **HARLEY-DAVIDSON** Sporting comb., exceptionally fast..... **£75**

**MANY MORE.**

**WE HAVE ONE OF THE LARGEST STOCKS OF NEW MACHINES IN ENGLAND.**

**A.J.S., ENFIELD, DOUGLAS, B.S.A., MATCHLESS, ZENITH, ARIEL, etc. FROM STOCK.**

**EXCHANGE SPECIALISTS.**

**2, EASTBANK STREET, SOUTHPORT.**

**'PHONE 607.**

## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. Combination 4¼h.p., carefully used, excellent condition, all accessories; £65; consider lightweight part exchange.—29, Shambles, Nottingham [8349

B.S.A. 6-7h.p. Twin Combination, new last January, mileage 300, tax paid, fully insured to end of year, accessories; £145.—Cole, 245, High Rd., Kilburn, N.W.6. [6243

1921, July, 4¼h.p. all-chain B.S.A. and Sidecar perfect condition, as new, Cowey speedometer etc.; £115.—Brodey, San Toy, Mount Pleasant, Weybridge. [6684

B.S.A. 6-7h.p., No. 1 sidecar, out August, 1921, mileage 400, screen and hood as new, leaving England; £155.—Jeffreys, 5, Eaton Row, Victoria, S.W.1. [8378

B.S.A. 1920, exceptionally fine condition, complete with Easting, lamps, speedometer, and coachbuilt sidecar; £84.—The Layton Garages, 30, Holywell St., Oxford. [8300

B.S.A. Combination, 1915-16, 4¼h.p., 3-speed, clutch, kick start, lamps, accessories, splendid condition; £65, or nearest.—Sims, Station Rd., Longfield, Kent. [6979

B.S.A. 1915 4¼h.p., all-chain Combination, 3-speed, kick start, Binks, Tan-Sad, tools, spares, ride away, tax paid; £50, or offer.—Hazelwood, 27, Doggett Rd., Catford. [6392

1919 B.S.A. 4¼h.p. all-chain Combination, luxurious Dunhill sidecar, tax paid, insured, screen, hood, lamps, splendid condition; 75 gns.—67, Gore Rd., Hackney. [6690

B.S.A. 1921 4¼h.p., Model H2 and No. 3 sidecar, all chain drive, with accessories, very small mileage, condition as new; £115.—G. Blizard, 15, Ebury Bridge Rd., S.W. [6822

1921 4¼h.p. All Chain B.S.A., Lucas lamps, horn, all accessories, tax paid, absolutely first-class condition; any trial; £76.—2a, Beardell St., Upper Norwood, S.E.19. [6766

1920 B.S.A. 4¼h.p., bulbous sidecar, hand or foot clutch, purchased new 1921, receipt shown, used week-ends, appearance equal new, spares; £95.—92, Romford Rd., Stratford. [6402

LATE 1920 4¼h.p. B.S.A. chain-driven Combination, fully equipped, registered, discs, in perfect condition; a genuine bargain, 77 gns; after 5 p.m.—4, Elm Gardens, Hammersmith. [6748

B.S.A., 4¼h.p., 1920, 3 speeds, chain-belt, complete, lamps, horn, speedometer, fully insured, taxed, as new; £70; genuine bargain.—Thomas, 26, Church Hill Rd., Walthamstow. [8483

4¼h.p. B.S.A. Combination, all chain, electric lighting, hood, screen, all on, nearly new, mileage 1,200; must sell, £87/10, or nearest; any evening.—258a, Latimer Rd., North Kensington. [6123

1922 B.S.A. H2 Combination, in stock, spring pillar, Cowey, Lucas horn, licence; £155, or exchange New Morgan, L.S.D., G.N., or Rover, cash adjustment.—Foulkes, Shawbury, Salop. [8348

B.S.A. 4¼h.p. Combination, No. 3 sidecar, 1921; August, lamps, speedometer, spares, Klaxon, tax paid for year, all but new; £115, or offer; seen any time.—Ley, 16, Tuscan Rd., Plumstead, S.E. (P) [6562

B.S.A. 1919 Combination 4¼h.p., 3-speed, chain drive, hood lamps, horn, accessories complete, electric lighting, tax paid, trial, splendid condition; 85 gns.—149, Lansdowne Rd., Seven Kings, Essex. [8560

B.S.A. 4¼h.p., 1918, coachbuilt sidecar, all chain, 3-speed, kick start, screen, lamps, speedometer, Klaxon, first-class condition, insured to March, 1923; £75, or nearest.—20, Victoria Rd., Alexandra Park, N. [6286

4¼h.p. New 1922 B.S.A., all chain, £110; 4¼h.p. chain-and-belt model, £107; 4¼h.p. Combination, £142 and £139; 6h.p. twin combination, £165.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [8489

B.S.A. 1920 Combination, 4¼h.p., chain-cum-belt, Easting screen, speedometer, lamps, horn, spares, belt, tube, valve, licensed, overhauled at works this year; £97/10.—Ritchie, Kirkpatrick-Fleming, Lockerbie. (D) . [6324

1921 4¼h.p. B.S.A., all-chain drive, and No. 3 sidecar, electric lighting, spring seat pillar, speedometer, windscreen and hood, spare tube and valve, first-class order, not ridden since August, 1921; £135.—Heath, Bedale, Yorks. [6498

B.S.A. 1922 models for immediate delivery; best prices allowed for machines in part payment; also two 4¼h.p. Model K Combinations in stock, 3 speeds, kick starter; £65 and £75 each.—Eagles and Co., 275, High St., Acton, London. [8105

B.S.A. 6-7h.p. 1921 model, improved No. 1 sidecar and special windscreen, Lucas magdyno lighting, spare wheel, speedometer, electric horn, luggage carrier, new set Dunlop Magnums, just overhauled, as new; price £160.—Diment, Engineers' Club, Coventry St., W. [6910

842 All letters relating to advertisements should quote the number at the end of each advertisement and the date of the issue

Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Douglas.

4 p. Douglas 1920 Combination, disc wheels, as new; £95, or offer.—Sharpe, 29, Upper Addison Gdns, W.14. [6209

DOUGLAS 1920 2¾h.p., 3-speed, K.S., clutch, all on, excellent condition; £60.—21, West Hill, Sydenham, S.E. [6343

16 2¾h.p. Douglas, 2-speed, lamp, licensed, tool bags, reliable; £30.—Pride, 156, Stockwell Rd., Brixton, S.W.9. [8360

16 2¾h.p. Douglas, new tyres, etc., excellent condition; £38.—Wagstaff, 105, Woodside Rd., Bowes Park, N. [6828

DOUGLAS.—1922 models for immediate delivery. Cash, exchange, or deferred payments.— Kays, 8, Bond St., Ealing. [4834

DOUGLAS 1912 2¾h.p., 2-speed, all on, taxed, excellent running condition, trial; £24.—Gibbs, Bedfont, Middlesex. [6091

4 p. Douglas Combination, late model, electric lights, Easting, as new; £80.—Eton, 260, Balham High Rd., Balham. [8166

DOUGLAS 2¾h.p., 2-speed, lamp and generator, horn, ready to ride away; £25 cash.—Pullen, 11, Sittingbourne. [6404

16 2¾h.p. Douglas, lamps, horn, excellent condition, re-enamelled, plated; nearest £40.—8, Elven Rd., Ealing. [6573

DOUGLAS 2¾h.p., 1918, beautiful condition, fully equipped, perfect, licensed; £35 or exchange.—1 Priory Rd., Kew. [6688

DOUGLAS 4h.p. Combination, Bluemel screen, all on, tax paid, perfect condition; £80.—Clifton, Harrow Rd., Bedford. [4907

DOUGLAS 2¾h.p., 1919, Watford speedometer, electric lamps and horn; £50.—St. Olaves, Mulgrave Rd., Sutton, Surrey. [8267

DOUGLAS 4h.p. Combination, 1917-1918 type, fine condition; £50.—34, St. James' Rd., Wandsworth Common, S.W. [6561

20 Douglas 2¾h.p., 3-speed, fully equipped, smart; nearest £55.—Station Hotel, Bramley Rd., Latimer Rd. Station, Met. [6674

DOUGLAS Combination, 1920, 4h.p., fully equipped, clutch, kick start, good condition; £75.—Juleff, 7, Bexley Rd., Erith. [6780

16 Douglas, perfect condition, accessories, and tax paid; £33.—26, Tulse Hill, Brixton. Phone: Brixton 1292. [8328

33.—Smart Douglas, 2-speed, electric light, licensed, copper exhaust, Klaxon, perfect; bargain.—89, West Hill, Wandsworth. [6622

20 Douglas 4h.p. Combination, equipped, new condition; £73.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [8426

BARGAIN.—2¾h.p. Douglas, 1916, good running order, lamp, accessories, tax paid; £35.—Apply, Market St., Watford. [8293

DOUGLAS.—All models from stock. Official Agents, deferred payments.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [6289

DOUGLAS 1916, 2-speed, tax paid, lamps, horn, accessories, good condition; £35.—Cope, 15, Upper Ridgley Rd., Birmingham. [6143

4h.p. Douglas Combination, nearly new, ridden under 1,000 miles; offers wanted.—Clement, 65, Gordon Rd., S. Woodford. [6552

DOUGLAS 1920 2¾h.p., 3-speed, clutch, kick starter, perfect order, all on; 50 gns.—26, Webbs Rd., Battersea Rise, S.W. [6725

33.—Bargain, 1916 Douglas, 2 speeds, licensed, lamps, long exhaust, perfectly sound; snip.—East Hill, Wandsworth. [6619

20 Douglas 2¾h.p., 3-speed, clutch and kick start, lamps, Klaxon, excellent condition; £55.—79, Hamilton Mansions, Barnes. [8258

21 2¾h.p. Douglas, 3-speed, clutch, kick starter, as new, perfect, going abroad; 63 gns.—29, Corrinne Rd., Tufnell Park. [6578

ATE Douglas Combination, speedometer, Easting, very smart turnout; bargain, must sell, 58 gns. '9, Bedford Hill, Balham. [8385

DOUGLAS Combination 1917-18, tax paid for year, all accessories, and perfect; £60; after 6.30.—97, Malvern Rd., West Kilburn. [6752

3h.p. Douglas, everything fitted, in perfect condition, by appointment; £35.—Sherman, 4 corator, High St., Southall. [6641

DOUGLAS 1922 Solos and Combinations in stock —Ageots, Birkenhead Motor Works, Old Bidston Birkenhead. 'Phone: 2047. [2388

3h.p. Douglas, 2-speed, not W.D., equipped and licensed, smart machine; £32.—Baker, 42, Aomere Rd., Earlsfield, S.W. [6860

h.p. Douglas, 3-speed, kick start, re-conditioned and guaranteed, accessories; £65; consider lightweight rt.—Crown Garage, Weybridge. [6853

# Harrods MOTOR CYCLES

## ON EASY TERMS

All the following machines are available from stock and may be obtained on Harrods Convenient System of Easy Payments. Details and latest lists free

## NEW SOLO MACHINES

| | | |
|---|---|---|
| 2¾ h.p. | **ALLDAYS-ALLON** ... ... | **£60** |
| 4¼ h.p. | **B.S.A.**, Belt Drive ... ... | **£107** |
| 4½ h.p. | **B.S.A.**, Chain Drive... ... | **£110** |
| 2¼ h.p. | **ENFIELD**, Two-speed model | **£55** |
| 2¾ h.p. | **FRANCIS-BARNETT**, 2-sp'd etc. | **£73** |
| 2¼ h.p. | **LEVIS**, Popular model ... | **£48** |
| 2¾ h.p. | **NEW IMPERIAL**, Chain, etc. | **£73** |
| 2¾ h.p. | **NEW IMPERIAL**, Belt, etc. | **£69** |
| 1¾ h.p. | **McKENZIE**, Lightweight | **£27 6s.** |
| 2½ h.p. | **O.K. JUNIOR** ... | **£39 18s.** |
| 2½ h.p. | **O.K.**, 2 sp., clutch, etc. | **£69 18s.** |
| 2¼ h.p. | **SUN VITESSE**, single speed | **£44 2s.** |
| 2½ h.p. | **SPARK**, single speed ... | **£39 18s.** |
| 2½ h.p. | **SPARKBROOK**, single sp'd | **£54 12s.** |
| 2¼ h.p. | **TRIUMPH**, Two-speed ... | **£65** |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | **£105** |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | **£115** |

## NEW COMBINATIONS

| | | |
|---|---|---|
| 4½ h.p. | **B.S.A.**, Belt Drive, No. 3 s/c | **£139** |
| 4¼ h.p. | **B.S.A.**, Chain Drive, No. 3 s/c | **£142** |
| 8 h.p. | **ENFIELD** ... ... ... | **£140** |
| 8 h.p. | **MATCHLESS** ... ... | **£170** |
| 6 h.p. | **HAZLEWOOD** ... ... | **£118** |
| 8 h.p. | **NEW IMPERIAL** ... ... | **£145** |
| 4 h.p. | **TRIUMPH**, Chain Drive ... | **£155** |
| 4 h.p. | **TRIUMPH**, Belt Drive ... | **£145** |
| 3½ h.p. | **INVICTA** and Sidecar ... | **£110** |

## SHOP-SOILED MODELS AT SPECIAL PRICES

| | |
|---|---|
| 4½ h.p. **HUMBER**, Flat Twin, 3 sp., clutch & k.s. | **£100** |
| 2¾ h.p. **WOOLER**, Flat Twin, Brooklands Sports model, fully equipped... | **£69** |
| 4½ h.p. **HUMBER COMBINATION.** Flat Twin Engine, 3-speed, etc. ... | **£130** |

## SECOND-HAND

| | |
|---|---|
| 1¾ h.p. **YOUNG** Cycle, with Motor Attachment, single speed and clutch ... | **£17 10** |
| 2¼ h.p. **LEVIS**, Popular Model... ... ... | **£42** |
| 5/6 h.p. **HAZLEWOOD**, Combination, Speedometer. Thoroughly overhauled ... ... | **£75** |

*All machines sent Carriage Paid to nearest Railway Station from London*

**HARRODS MOTOR SALES DEPT**
**116-118 Brompton Road London SW1**
*(Opposite the Main Building)*

## MOTOR CYCLES FOR SALE.

### Douglas.

54 GNS.—1920 Douglas 2¾h.p., 3-speed, clutch and kick start, P. and H. lamps. Klaxon, new condition.—2, Madrid Rd., Barnes. [8257

DOUGLAS Combination, 4h.p., 1916, good condition, great snip; 40 gns.—Longman Bros., 17, Bond St., Ealing. Telephone 689. [6004

DOUGLAS 1922, brand new, 2-speed, all on, lamps, horn, licence holder, etc.; £68 cash.—Wilkins Simpson, Opposite Olympia, London. [6354

DOUGLAS 1918 4h.p. Combination, recently overhauled, splendid condition; 65 gns, offers.—12, Cambridge Park Mews, Twickenham. [6138

19 GNS.—Posh 2¾h.p. Douglas, 1914, 2 speeds, discs, Lucas, very smart, wants new frame.—Ewers, Newton Rd., Burton-on-Trent. [6655

1920 Douglas Combination, exceptionally beautiful machine, electrics, scuttledash, screen; £95; photograph.—3, Bellevue Rd., Ealing. [7091

DOUGLAS Lady's 2¾h.p., 3-speed, hand clutch, Amac, as new, £60; Douglas 1918 4h.p. combination, £65.—Chenhall, South-Brent. [7033

£25; Guaranteed.—Douglas, 2-speed, 1914, splendid condition, spares, tools, lamps, ride 50 miles.—265, Franciscan Rd., Tootiog, London. [6182

1921 (late) Douglas 2¾h.p., fully equipped, tax, mileage 300, unscratched; £57/10.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [8151

1918 Douglas 2¾h.p., 2-speed, tax paid, condition as new; £45.—The Q.S. Motor Co., 7, Gloucester Mansions, Cambridge Circus, W.C.2. [6202

2¾h.p. Douglas, 1915, new tyres, lamps, footboards, licensed 1922, mechanically perfect; £30.—17, Sussex Rd., New Malden, S.W. [6465

BARGAIN.—Douglas 1919 2¾h.p., 2-speed, fully equipped, overhauled, fast, owner going abroad; £40.—1, Lunham Rd., Upper Norwood, S.E. [6881

DOUGLAS 4h.p. Combination, 3-speed, clutch, and kick starter, windscreen, excellent order. After 7. —Wheeler, 83, Beauval Rd., East Dulwich. [6577

1919 2¾h.p. Douglas, Miller lamps, Klaxon, footboards, tax paid, excellent condition; £42.—9, Buckingham Rd., South Woodford, Essex. [6820

1919 Douglas 2¾h.p., 2 speeds, lighting set, horn, whole machine in excellent condition, tax paid; nearest £45.—18, Wherstead Rd., Ipswich. [6883

SOUTHPORT, 1920 (December), 3-speed, Douglas, superb condition, kick starter, all on; 59 gns.; exchanges.—Kents, 417, Lord St., Southport. [7097

EXCEPTIONALLY fine 1919 Douglas 2¾h.p., perfectly equipped, speedometer; 49 gns., or exchange.—284, South Lambeth Rd., Stockwell. [6963

DOUGLAS 1921 2¾h.p., tax paid, fully equipped, perfect condition, recently overhauled; £55, no offers.—Yearron, 29, Downscourt Rd., Purley. [6181

1920 4h.p. Douglas Combination, well equipped, including electric lighting, condition splendid; £95.—Brunsdon, 44, Wellington St., Gloucester. [7046

DOUGLAS 2¾h.p., 2-speed, 1921, fully equipped, speedometer, tax paid, mileage 200; £57/10.—Hillier, 216, Portobello Rd., North Kensington. [8275

55 GNS.—1921 2¾h.p. Douglas, 2-speed, all on, including £8 extras, speedometer, etc., condition as new.—108, Tressillian Rd., Brockley, S.E. 4. [6216

DOUGLAS 2¾h.p., 2-speed, all on, 1921, condition and working equal to new, tax paid to December; bargain, £59.—Bawn, Longcroft Rd., Devizes, Wilts. [6228

1915 Douglas 2¾h.p., aluminium discs, Cowey speedometer, lamps, horn, tax paid; £33.—Ward, South Western Garage, New Malden, Surrey. [6772

1920 Douglas 2¾h.p., 3-speed, P. and H. lamps, Cowey horn, Bonniksen speedometer, excellent condition; £60.—89, Hertford Rd., Edmonton, N.9. [6952

1919 4h.p. Douglas Combination, all accessories, including windscreen, low-generator, etc., year's tax paid; £80, or offer.—249, South Norwood Hill, S.E. [6418

DOUGLAS 2¾h.p., just reconditioned at £20 cost, tax paid 1922; bargain, £33, all on; owner buying combination.—Lamb, 1, King St., Twickenham. [6261

DOUGLAS 4h.p. 1915, 3 speeds, clutch, kick starter, re-conditioned throughout, all accessories; £50.—Eagles and Co., 275, High St., Acton, London. [8109

1917 4h.p. Douglas combination, 3-speed, kick start, Easting, Tan-Sad, tax December, 1922, all lamps, guaranteed perfect order; £45.—1, Priory Rd., Kew. [8390

LATE 1920 Douglas 2¾h.p., 3-speed, clutch, kick start, fully equipped, Binks, tax and insurance paid, excellent condition; £65.—Jones, Yockleton, Salop. [6221

DOUGLAS, 1921, 2¾h.p., 3-speed, K.S., only done 600 miles; £68 or exchange 2-stroke.—1, Pembury Mews, Pembury Rd., near Bruce Grove, Tottenham. [8394


Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Douglas.

F.O.C.H. have a 1919 4h.p. Douglas Solo, fully equipped, tax paid and insured, excellent condition; bargain.—5, Heath St., Hampstead (near Tube). [5072

4h.p. Douglas, 3 speeds, clutch, and kick starter, tax paid to June, recently overhauled, Bosch magneto; £48, or nearest.—50, Undine St., Tooting, S.W.17. [6754

DOUGLAS 4h.p. Combination, 1919, electric lighting, new sidecar; nearest £70.—Station Hotel, Bramley Rd., Latimer Rd. Station, Met. 'Phone: Park 3875. [6673

MOFFAT, Yeovil.—What we don't know about Douglas M.C.'s—nuf sed. New 1922 models, spares and repairs; exchanges. Agents since 1908. 'Phone: 50. [5724

DOUGLAS 2¾h.p., perfect condition, free engine, 2-speed, kick start, clutch, all on, tax paid; sacrifice, £32/10.—Walker, 2, Atherfold Rd., Clapham, S.W. [6594

DOUGLAS 1920 4h.p. Combination, equipped, windscreen, hood, lamps, indistinguishable from new; £85, or exchange.—Hillier, 216, Portobello Rd., North Kensington. [8276

DOUGLAS 1922.—All models for instant dispatch. Wonderful reductions in prices. Write for lists and full particulars.—Herbert Robinson, Ltd., Green St., Cambridge. [6530

DOUGLAS 3½h.p. Sports Model, specially tuned engine, in stock; £115 complete; exchanges or easy payment terms.—Herbert Robinson, Ltd., Green St., Cambridge. [6531

DOUGLAS 1922 models, 2¾h.p., £68; 4h.p. solo, £110; 4h.p. combination, £135; prices include all accessories; delivery from stock.—Rivett, 236, High Rd., Leytonstone. [2266

4h.p. Late Model Douglas and Sidecar, finish and mechanical condition as new, plated exhaust, first-class combination at moderate price.—Fisher, Driftway, Epsom. [6608

DOUGLAS 4h.p. Combination, late 1918, practically new, unscratched, new tyres, accessories, Easting, tax paid; £70, nearest.—88, Gloucester Place Mews, Portman Sq., W.1. [6602

4h.p. Douglas, 1918, newly plated and stoved enamelled, new heavy Dunlop tyres, tubes, guaranteed equal to new throughout; £66.—57, Firshill Rd., Pitsmoor, Sheffield. [6450

ELI CLARK can give you good service both in new machines and spares; try me. I may be useful to you. The pioneer agent for Douglas motors.—196, Cheltenham Rd., Bristol. [0016

DOUGLAS 2¾h.p., 1918, 2-speed, 28 gns.; also 1919 combination 4h.p., 3-speed, as new, 68 gns.; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. Open Sundays. [8552

ROBERTSON'S Motors, Ltd.—Douglas 1921 2¾h.p., 3-speed accessories, tax paid, £60; 1916 (new in 1918) 4h.p. combination, electric lamps, tax paid, £68.—157b, Gt. Portland St., W.1. [6076

DOUGLAS 1919 4h.p. Combination, electric light, Lucas dynamo, windscreen, speedometer, Binks, very good tyres, tax paid; £87.—Colyer, Burnham, Claygate, Surrey. 'Phone: Esher 351. [6997

43 GNS.—4 h.p. Douglas Combination, 1918 type (Burlington), acetylene and electric lamps, year's licence, perfect, any trial; after 5 p.m.—20, Treen Avenue, Hoggers Corner, Barnes. [8541

LUXURIOUS Douglas Combination, 1920-21, little used and shines like new, licensed, speedometer, Auster screen, perfect; £105; offer considered.—Carter, The Nook, St. Mary's Av., Wanstead. [6410

IF you want to go to Brighton, with your girlie holding tighton, do not venture on a crock, case it lands you on a rock; get a Douglas, and don't worry, from Knight and Wheatley's, Coulsdon, Surrey.

2¾h.p. 2-speed, £68; 2¾h.p. 3-speed, clutch, kick starter, £82; 3½h.p. sports model, £115; 4h.p. combination, £135; 6h.p. combination, £165; we have new and secondhand machines in stock.—Below.

CALL at our showrooms and inspect; machines taken in part exchange.—Knight and Wheatley, 4, The Pavement, Coulsdon, Surrey. 'Phone, Purley 1277. [8435

1920 4h.p. Douglas Combination, purchased brand new January, 1921, Easting, speedometer, lamps, horn, guaranteed perfect and unpunctured, any trial; £90.—Cutchee, Paddock Rd., Oxhey, Herts. [6750

£68.—New 1922 Douglas Models in stock for immediate dispatch. Each machine complete with best quality lamps, horn, licence-holder, pump, tools, etc.—Herbert Robinson, Ltd., Green St., Cambridge. [6529

DOUGLAS 4h.p., 3-speed, clutch, kick start, engine No. 5590, undershield, legshields, specially built large sidecar with hood, screen, and dash, lighting sets and equipment, nice outfit, fully licensed and insured March last (£95), any trial; £85, or near offer; exchange considered.—Harris, Builder, Harpenden. [6783

Sole London and District Agents for A.J.S., Excelsior & Duncit Motorcycles

# GENUINE WHITSUN BARGAINS

## 4 H.P. TRIUMPH (W.D.)

We have secured a limited number of W.D. Triumphs fitted with countershaft gear and T.T. bars. Enamelled Triumph colours. All in thorough mechanical order and nice condition generally.

## £60

Or with Watsonian Sidecar, **£85**

## 2¾ H.P. ZENITH

Brand new 1921 Flat Twin Zenith, with Gradua gear, carrying maker's usual guarantee.

## £55-10-0

An ideal Solo mount. Usual price, £93 9

## 5 H.P. ZENITH

Brand new 1921 Clutch Model D Zenith, with kick-starter and countershaft, carrying maker's usual guarantee. A splendid dual purpose mount.

## £88

Usual price, £121. Can be fitted with extra strong Watsonian Sidecar to match, price **£115**

**DEFERRED PAYMENTS only 4% extra.**

**Send for Bargain List of shop-soiled and carefully used machines—it will pay you.**

**H. TAYLOR & Co., Ltd.**

Showrooms—
Motorcycles and Cars,
**52-53, Sussex Place, South Kensington.**
Accessories, Spare Parts and Repairs,
**21a, Store Street, Tottenham Court Road, W.C.1**
Wholesale—
**38, ALFRED PLACE, W.C.1.**
Garage—Tottenham Court Road, W.1.
Phones: Accessories & Repairs, Museum 1240
Motorcycles and Cars, Kensington 7260
Telegrams: "Dynametro, Westcent, London."

## MOTOR CYCLES FOR SALE.

### Douglas.

HALIFAX.—Douglas 1922 models at reduced rate 2¾h.p. twin, £68; 3½ sports, £115; 4h.p. co hination, £135; 6h.p. combination, £165. Liber exchanges.—Motor Exchange, 25, Horton St., Halifa [81

WANTED, reasonable offer for late 1921 4h. Douglas sporting combination, splendid turnou any trial, no obligation; no dealers.—98-100, Mar horse Road, or 20, Verulam Av., Walthamstow, E.1 [68

FOR Douglas 1922 2¾h.p. and 4h.p. combinatio get in touch with us; we are North London agen and give you the best of service; all spares in stock; W.D. rubbish.—Jones Garage, The Broadway, Muswe Hill. [07

1921 2¾h.p. Douglas, guaranteed under 1,000 mil speedometer, special copper exhaust pipe, Ta Sad, quite equal to new; 60 gns.—Brnton Me Garage, 18, South Bruton Mews, Bond St., W. Ma fair, 4282. [83

4h.p. Douglas Combination, 1917, 3 speeds, ki start, renovated sidecar body, smart turnout, £5 2¾h.p. Douglas, 2 speeds, 1917, aluminium discs, a on, perfect, £33; both tax paid.—406, Garratt Lan Earlsfield, S.W.18. [69

DOUGLAS 1916 2¾h.p., 3-speed, new heavy Dunl and tube, C.A.V. magneto, Amac carburette run 4,100 miles, enamel hardly scratched, tax pai electric head lamp, Watford speedometer.—Clou Boxford, Newbury. [67

DOUGLAS (not W.D.) 1915-16 2¾h.p., 2-spee clutch, kick start, Lucas horn, lamps, Stewa trip, footboards, Tan-Sad, taxed year, excellent co ditiou, stored 4 years, genuine; 44 gns.—30, Carlt Rd., Leytonstone. (P) (D) [61

DOUGLAS 2¾h.p., uncrated, 1919, 2 speeds, cou tershaft, full lamp set, horn, aluminium le shields, tax paid for the year, in very good conditic throughout; any trial and examination; £32/10.— Watson, Victoria Rd., Aldeburgh, Suffolk. [81

WAUCHOPE'S, 9, Shoe Lane, London, 1914.– 3½h.p. Douglas and sidecar, 2 speeds, £32/1 also 2¾h.p. 1921 Model Solo, 2 speeds, £65; anothe 2¾h.p. 1921, 3 speeds, clutch, and kick starter, £7 and 2¾h.p., 2-speed, 1915, £27/10; extended pa ments arranged. [85

KICKHAM, Stokes Croft, Bristol, the Dougla Agent with real experience and knowledge of Douglas. Successes during 1920 on this mount: 3 firsts, 17 seconds, and 8 thirds, also 6 specia trophies. Let me deal with your order. Unequalle service, repairs, etc. [315

2¾h.p. New 1922 Douglas, 2-speed, £68; 2¾h.p., speed, clutch, and kick start, £82; 4h.p. com bination, £135; 6h.p. combination, £165; 3½h. sports model, £115; all fully equipped; easy terms an exchange.—Wauchope's, 9, Shoe Lane, Londo 'Phone: Holborn 5777. [84

DOUGLAS Specialists.—Wanted, your present moto cycle in part exchange for any new mode from stock. No waiting. Distance no object. Be prices allowed for second-hand machines. Deferre payments, see column advertisement.—Bambers, Eastbank St., Southport. 'Phone: 607. [493

DOUGLASES.—2¾h.p., reconditioned, absolutely a new, practically all new parts fitted, the fines value obtainable anywhere, £45, all on; deferred term if desired; before purchasing elsewhere come and in spect and let us give you a trial and convince yoursel —The Sulina Garage Co., 73, New Park Rd., Brixto Hill, S.W.2. 'Phone, Streatham 40. For Dougla spares see our advertisement under " Parts and Acce saries." [852

*Spare Parts.*

DOUGLAS Spares.—Immediate delivery.—Kays, Bond St., Ealing [754

ROBERTSON'S Motors, Ltd., can supply all usua Douglas spares requirements.—157b, Gt. Portlan St., W.1. [607

DOUGLAS spares; large stocks of genuine Dougla spares; dealers supplied at trade rates.—Rivett 236, High Rd., Leytonstone [226

DOUGLAS Spares.—We hold a complete stock fo all models; post free. Douglas Agents and spar part stockists.—Jones Garage Broadway, Muswell Hill N.10. [080

FRANK WHITWORTH, Ltd., 139, New St., Bir mingham.—Complete stock, genuine guarantee Douglas spare parts; prompt attention, immediat dispatch lowest cash prices. [465

### Duzmo.

DUZMO 1921 3½h.p., o.h.v. engine, direct dri drive, very fast demonstration machine, only ru about 50 miles, guaranteed; £65.—John Wallace, Er field Highway. [677

### Economic.

ECONOMIC.—We can give you immediate deliver of this wonderful low-priced machine; variabl gear model, £34; or on easy payments. Please sen P.C. for catalogue.—South Eastern Garage, Her Hill, S.E.24. [505

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

VICTORIA, Regent Parade, North Finchley.—Harleys 1922 models in stock; deferred payments; repairs. [6478

HARLEY-DAVIDSON, electric model, fully equipped, August, 1921, mileage under 3,000, unscratched condition and appearance, new; great bargain, £125.—Longman Bros., 17, Bond St., Ealing. Telephone 689. [8438

HARLEY Combination Sports, very fast, T.T. bars, Klaxon, speedometer, D.A. lighting, kick start, disc screen, overhauled, fitted new pistons, rings, bearings, etc., tyres and enamel good; £95, or near.—40, Star Rd., West Kensington. [8374

HARLEY 4h.p., late 1920, 3 speeds, clutch, K.S., rear drive speedometer, Klaxon, lamps, spot light, small mileage, tyres unpunctured, perfectly sound throughout, splendid appearance, taxed; £80.—17, Allfarthing Lane, Wandsworth. [6695

HARLEY-DAVIDSON, 7-9h.p., Canoelet sidecar, electric, discs, Eastlig screen, fully licensed, special enclosed overhead valves, any trial, very smart; £; photo.—40, Linhope St., Upper Park Place, Ber St., N.W.1. 'Phone: Padd. 2854. [6770

1921 (late) 7-9h.p. Harley-Davidson Combination, dynamo model, guaranteed absolutely unscratched, special engine just tuned by Brooklands expert; £150. This machine is guaranteed as represented in advertisement.—13, Arragon Gardens, Streatham. [6728

HARLEY-DAVIDSON.—All models from stock. 4h.p. flat twin, special clearance price, 1921, new, reduced from £150 to £115; combination, reduced to £175; the greatest value ever offered; exchanges, deferred payments.—Longman Bros., the real Harley experts, 17, Bond St., Ealing. Tel.: 689. [6001

HARLEY-DAVIDSON Combination, electric model J, complete with hood, screen, speedometer, lamps, etc., delivered July, 1920, only ridden in summer, condition as new, overhauled last month, fully insured, licensed to end of year; £160; cost £275.—Apply by letter, Burns, 63, Teignmouth Rd., Cricklewood; or 'Phone: Willesden 2203. [6563

1914 Harley-Davidson Combination 1921, dynamo lighting, disc fitted, speedometer, Klaxon and brass horns and mirror, spares, 2 chains, 3 plugs, tips, Dunlop EH tyre, and tools, Capjon and Mudd sidecar (£86), with dickey seat, triplex windscreen, disappearing hood, and mascot, insurance, indistinguishable from new; £185; A.A.A. bargain.—11, Prior Rd., Cricklewood. [6103

HARLEY-DAVIDSON, 1916. 7-9h.p. Combination, Gloria coachbuilt sidecar, 3 speeds, countershaft, hand and foot clutch, kick start, mechanical horn, parcel can carrier, luggage grid, hood, windscreen, all paid for year, nearly new tyres all round, oversize rear wheel; specially tuned for speed, and is extremely fast; in splendid condition throughout and really good outfit; any trial and examination welcomed; £55, a bargain.—R. Watson, Victoria Rd., Debenham, Suffolk. [8183

*Spare Parts:*

HARLEY Spares.—Immediate delivery.—Kays, 8 Bond St., Ealing. [7543

### Hawker.

1921 Hawker 2¾h.p., 2-speed, dynamo lighting, tax paid, perfect; £32.—164, Revelstoke Rd., Wimbledon Park, S.W. [6716

### Hazlewood.

1914 2¾h.p. Hazlewood-Jap, 3-speed, tax paid; 23 gns.—Royal Garage, Castle Gate, Blackpool. [6811

HAZLEWOOD-J.A.P. 2¾h.p., Armstrong 3-speed, clutch, Bosch, B. and B., accessories, splendid running condition; £35.—82, Inverness Av., Westcliff. [6394

HAZLEWOOD-J.A.P. 5-6h.p. Twin Combination, indistinguishable from new, perfect in every way, screen, speedometer, lamps and spares, tax paid year; seen after 6; sacrifice, £90.—Moore, 18, Marlboro' Rd., N19. [6885

1920 Hazlewood Combination 5-6h.p., 3-speed, clutch, and kick starter, belt and chain drive, just thoroughly overhauled, speedometer and horn; £5; easy payments.—Harrods Motor Cycle Dept., 118, Crompton Rd., London. [6587

### Henderson.

PICKHAM, Stokes Croft, Bristol, Sole District Agent for Hendersons; unequalled service, repairs, etc. [3145

1920 Henderson Combination, Lucas, Stewart speedometer; any trial; £125; as new.—Bell, Pine St., Thornton-on-Tees. [7043

HENDERSON Combination, electric light, splendid order, all accessories, must sell; £65.—Woolger, 1, High St., Three Bridges, Sussex. [7049

IMMEDIATE Delivery.—1922 Henderson de Luxe, dynamo lighting, electric horn, etc.; £175.—Pioneer Motors, Ltd., 50, Grindlay St., Edinburgh. [1408

# *Do you realize*

that the "Lock-out" in the engineering trades has once again partially crippled the motor cycle industry.

The damage is done, and if an immediate settlement of the dispute could be effected there would still be a shortage of motor cycles for some time.

If you are considering buying a new machine you would do well to decide at once and place your order, as delay will result in disappointment.

Unfortunately we in common with other Agents are already unable to quote deliveries of certain makes, but at present we can supply most models of the following.

## NEW 1922 MODELS

A.J.S.
ALLON.
ARIEL.
B.S.A.
HAWKER.
INDIAN.
LEVIS.
MATCHLESS.
MARTINSYDE.
METRO-TYLER.
N.U.T.
NEW IMPERIAL.
QUADRANT.
ROYAL ENFIELD.
RALEIGH.
RUDGE.
SCOTT.
SUNBEAM.
TRIUMPH.
ZENITH.

**LIGHT CARS.**
B.S.A.
BAYLISS-THOMAS.
ROVER.

**Exchanges and Deferred Payments Arranged.**

Our list of

## "SECONDHANDS"

contains an excellent selection of motor cycles which we guarantee in sound mechanical condition.

It shows clearly the cash price and deferred purchase figures for each machine, and we should be pleased to send you a copy if it would interest you.

## The Eastern Garage Co.

**(Official Repairers to R.A.C., A.C.U., A.A. and M.U.),**

**418, Romford Road, Forest Gate, E.7.**

Telephone: 490 East Ham. Telegrams: "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### Henderson.

HENDERSON 1920 10h.p., 4-cylinder Combination, lamps, horn; £115.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0065

£55.—Henderson combination, 8-10h.p., 4 cylinders, 2 speeds, clutch, kick starter, 1915-16, short wheelbase model, Swan touring sidecar, fully equipped.—63, Solon Rd., Brixton. [6971

HENDERSON Combination, 1921, Model K, 3-speed, reverse, dynamo lighting, Tan-Sad, Sandum 2-seater sidecar, spring wheel, V-shaped windscreen; nearest £150.—37, Dunsmore Rd., Stamford Hill, N.16. [6391

NEW 1922 Model De Luxe Henderson, just arrived; dynamo lighting set, electric horn, £175; or, complete with Millford bulbous back sidecar, £210; easy payments only 4% extra; free delivery to any address.—Premier Motor Co., Aston Rd., Birmingham. [6032

BARKER'S Motors are agents for the luxurious 4-cyl. Hendersons; all new models at list prices supplied carry a free insurance policy against mechanical breakdown for 12 months. Spare Parts supplied. Cash, deferred, or exchanges.—194, Balham High Rd., S.W.12. [3138

1921 Henderson (late), electric dynamo lighting, electric horn, Mills-Fulford large bulbous sidecar with their patent hood and screen, luggage grid, air cushion, original tyres as new, taxed, spares, outfit perfect in every way, and fully guaranteed; £152/10, or exchange lower power.—51, Upper Richmond Rd., Putney. 'Phone Putney 2754. [8559

ROBERTSONS Motors, Ltd., the original Henderson Importers, offer the following: 1921 electric, with reverse, Cowey trip, Millford tandem sidecar with 2 screens, scarcely used, £170; 1921 Standard, in perfect order, tax paid, £110; 1920 electric combination, Tan-Sad, just completely overhauled, £135; 1920 Standard Capjon and Mudd, £80; sidecar, Cowey trip; and all accessories, £135; 1920 Standard combination, all accessories, tax paid, £120; 1915 Standard, with luxurious sidecar, speedometer and accessories, £75.—157b, Gt. Portland St., W.1. [6078

*Spare Parts:*

ROBERTSONS Motors, Ltd., the Henderson Experts, have the largest representative stock in the country.—157b, Gt. Portland St., W.1. [6079

### Hobart.

1921 Hobart, new, shop soiled; £39.—Shepherd, Enfield Highway. Tel.: Waltham Cross 31. [0859

HOBART, late 1920, 2-speed, countershaft, all on, tax paid full year; £45.—97, Cox St., Coventry. [4855

HOBART Combination, 3½h.p. Twin, 3-speed and clutch, windscreen, lamps, etc., tax paid; £40, or near offer.—44, Jubilee Rd., Watford. [6422

1922 Hobarts, all models. Catalogues with pleasure from the agent; Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [4633

HOBART 1920, 2-stroke, 2-speed, complete with lamps, Cowey horn, Watford, splendid running order; bargain, £40, or nearest.—Carpenter, 64, Sydenham Rd., Croydon. [6217

1916 Hobart-Villiers 2-speed, accessories, new tyres, electric head lamp, dynamo, excellent condition and appearance; £27, or part exchange racing push bike.—D., 7, Leighton Rd., Ealing. [6379

### Humber.

HUMBER-CENTAUR 1914 3½h.p., runs excellently, equipped, taxed; £19.—Clark, 7, Exhibition Rd., S.W.7. [4610

HUMBER 2-speed coachbuilt Combination, new gears; £38, or near offer.—48, Walton Rd., East Molesey, Surrey. [6114

HUMBER 1919 Flat Twin, handle start, clutch, lamps, horn, perfect condition; £40.—Mansell, Beechurst, Sutton. [6215

3½h.p. Humber, 3-speed, clutch, enamel perfect, any trial, lamps, horn; £27.—Ford, Sotwell, near Wallingford, Berks. [6111

1920 Humber 3½h.p., 3-speed, clutch, K.S., not run 400 miles, as new; £72, offers.—Shires, Quarmby Lodge, Huddersfield. [6398

4h.p. Humber 3-speed, kick start, tax, insurance; £35, or offer; also Canoelet sidecar.—1, Cecil Villa, Victoria Rd., New Barnet. [6427

HUMBER 4½h.p. sports model; £100; immediate delivery.—D. J. Shepherd and Co., Enfield Highway. Tel.: Waltham Cross 31. [0843

HUMBER 3½h.p., 2-speed, clutch, starter, Bosch, B.B., Cowey, lamps, etc., perfect; £38, bargain.—Hayes, 27, Highbury New Park, N. [6825

3½h.p. T.T. Humber, licensed, new rear portion, take any size gear box; £22.—137, Highfield, North Wingfield, near Chesterfield. (D) (P) [6945

3½h.p. Humber Combination, 1913, in good reliable condition, bargain, £35; also G.W.K. 2-seater, £130.—Elms, West Hanningfield, Chelmsford. [6306

## MOTOR CYCLES FOR SALE.

### Humber.

HUMBER 3½h.p. Flat Twin, late 1919, carefully used 6,000 miles, perfect condition, licensed; £62; exchange.—Malvern Rd. Garage, Thornton Heath, Surrey. [8263

HUMBER 1913 3-speed Combination, fully equipped, good condition, reliable, numerous spares; nearest £40.—"Holmwood," Park Rd., New Barnet. [6553

£35, or near.—4h.p. Humber, 3-speed, clutch, kick start, Magnums, Bosch, B. and B., brass exhaust with cutout, any examination; East Grinstead district.—Box 1367, c/o *The Motor Cycle*. [6487

NEW Humber Flat Twin, offered as shop soiled, 4½h.p., 3-speed, clutch, and kick starter, £100; or with sidecar and Easting screen, £132/10; easy payments.—Harrods Motor Cycle Dept., 118, Brompton Rd., London. [6589

1920 (late) 3½h.p. Flat Twin 3-speed Humber cycle, with passenger and carrier sidecars, tax paid for year, perfect condition; 75 gns.—Can be seen by appointment at Mugswell Farm, Coulsdon, Chipstead, Surrey. [6340

4½h.p. Humber 1920 combination, Brooks' cantilever spring saddle, aluminium number plates, Lucas horn, luxurious sidecar, Easting, very smart turnout, not been used this year; £100 or nearest.—115, St. George's Rd., Stoke, Coventry. [8480

### Indian.

INDIAN 1915, 2-speed, good condition; £35.—16, Cecil Court, W.C.2. [6548

INDIAN 1919 Powerplus, 3-speed, clutch, lamps, etc.; £55.—202, Maxey Rd., S.E.18. [6569

5h.p. Indian Combination, guaranteed throughout; £65; or sell solo.—30, Wokingham Rd., Reading. [6485

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Indians; unequalled service, repairs, etc. [3144

£60.—Indian Powerplus 1919, 3-speed, etc., licensed, overhauled.—Waterfield, 29, Craven Hill Gardens, W.2. [5050

S.O.S.—Brand new Indian Scout, unridden, money urgently required; £90; gift.—Bustin, Chilton, Thame. [6405

BARGAIN.—1916 3-speed Indian, tax paid, perfect order, good condition; £30.—Box 1376, c/o *The Motor Cycle*. [8202

INDIAN 7-9h.p. 1916-1917, 2 speeds, clutch, excellent condition, tyres new condition; £45.—Rose's Garage, Uxbridge. [8245

INDIAN 5-6h.p., 3-speed, clutch, K.S., recently overhauled, tax paid; £35.—Long, 3, Cromwell Rd., Teddington. [7001

1914 Magnificent Indian Combination, lovely sidecar, screen, etc.; 27 gns.—Royal Garage, Castle Gate, Blackpool, S. [6819

7-9h.p. Indian, 1916, clutch model, overhauled, tyres and enamel good; £38.—Dear, 72, King's Av., New Malden, Surrey. [6890

INDIAN Combination, kick start, 2-speed, new tyres, lamps, tools; no reasonable offer refused.—Surgery, 484A, Fulham Rd., S.W.6. [6397

1920 Indian Scout and Henderson Featherweight sidecar, perfect running order, any reasonable trial; £90.—Pawsey, Rayne, Essex. [6832

INDIAN Combination, 1919, all on, good appearance, splendid mechanical condition; a gift at £65.—406, Garratt Lane, Earlsfield, S.W.18. [6949

£50, nearest.—7-9h.p., 3-speed Indian Coach Combination, 1915, running order, K.S., needs attention; evenings.—7, Croydon Rd., Penge. [6936

1919 Powerplus Combination Indian, electric lights, Easting, etc., perfect; £65.—Railtoo, 47, South King St., Manchester. City 2417. [8174

7-9h.p. Indian Combination, 2-speed, clutch, 1914-15, windscreen, accessories, overhauled, smart; £55; lighter solo and cash.—28, Bourne Rd., Bexley. [8412

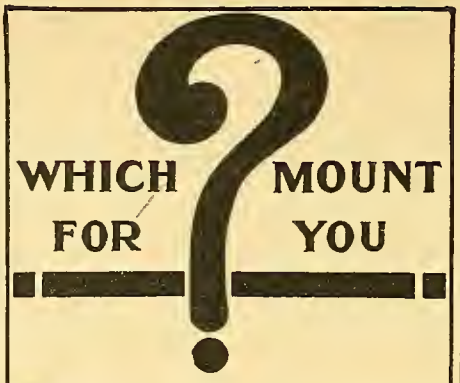
INDIAN, 5-6h.p., electric light, horn, K.S., 3-speed, splendid condition, tax, insurance paid; £49; offers.—Slater, 27, Southbrook Rd., Lee, S.E. [6678

INDIAN Combination 1920, dynamo lighting, discs, tax paid, perfect condition, only done 4,000 miles; £98.—Webb, 30, High St., Hampstead. After 7 p.m. [6491

INDIAN 1916 7-9h.p. Combination, Swan sporting sidecar, hood, Easting, clutch, 2-speed, handle starter, all on; £50.—Clarke, 47, Celtic St., Hall St., Stockport. [6763

7-9h.p. Indian Combination, almost new, splendid condition, mileage 1,200, spares, accessories, must sell; £100.—Ashworth, 24, Oswald St., Rochdale, Lancashire. [6606

1920 Indian Powerplus Combination, engine 73R.172, dynamo, electric and bulb horns, 3-pane windscreen and side curtain, hood and side curtains, mileage 4,000, all tools, spares; £110.—Sleat, c/o West Bros. Garage, Cranbrook Rd., Ilford. Phone: 740. [6250

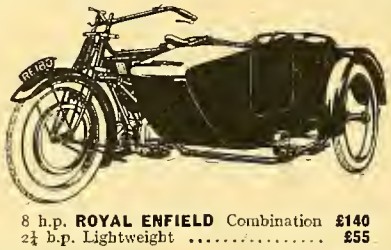




**Whatever you require in Motor Cycles, you can get at "THE Birmingham House for Motorists." All the leading machines are here "ready for the road"—you can carefully examine them at your leisure and select the one most suitable.**

## Note these NEW mounts

**A.J.S., ENFIELD, TRIUMPH, JAMES, NORTON, B.S.A., MASSEY-ARRAN, N.U.T., INDIAN, DOUGLAS, HUMBER, EDMUND, ROVER, ARIEL, NEW IMPERIAL.**

**All models of above makes are in stock—come and choose your mount NOW and be ready for the Holidays.**



8 h.p. **ROYAL ENFIELD** Combination **£140**
2¾ h.p. Lightweight ..... **£55**

**WE are here to assist you—and our aim is to give you entire satisfaction—when you purchase and afterwards.**

**Expert tuition free—exchanges arranged—deferred payments on easiest terms—registration, insurance, and all necessary details arranged with the least trouble and expense**

# P.J.EVANS

**81-91, John Bright Street, Birmingham.**
Phone: Midland 2910. Grams: "LYTCAR" B'ham.

THE Birmingham House for Motorists.

*Clinton-Wall.*


## MOTOR CYCLES FOR SALE.

### Indian.

INDIAN 1919 Combination, as new, mileage 2 tyres unsoiled, 60 per hour, bus if desired; £ —Bunting's Motor Exchange, Wealdstone. Clo Sundays. [8

INDIAN coachbuilt Combination, 7-9h.p., 1914, speed, clutch, etc., first-class condition; o wanted; seen any evening.—"Wenduyne," Alwyn Maidenhead. [8

INDIAN Combination, June, 1920, mileage 3,0 electric lighting, condition as new; £105.—Ma ger, "Cabinet" Whisky Stores, Birkbeck Rd., ston, London. [5

INDIAN.—4h.p. Scout Model G.E.21, equipped w dynamo lighting, speedometer, and electric ho new machine, fully guaranteed; £110.—P. J. Eva John Bright St., Birmingham. [6

1918-19 7-9h.p. Indian with 1921 Montgomery si car, fully equipped with lamps, horn, to etc., fast machine, any trial; nearest £70.— Fredericks Rd., Custom House. [6

POWERPLUS Indian Combination, 1919-20, dyna lighting, speedometer, Klaxon, Easting, d 3,000, new condition, tax paid to December; 90 g —Davis, 1, Wellington Buildings, Bow, E.3. [67

1920 7-9h.p. Indian Powerplus Combinati dynamo equipped, overhauled by Godfrey's F ruary, insured, trial after 5 or Saturday afterno £95.—Wade, 37, Cawley Rd., Hackney, E.9. [6

LANGFORD'S, Indian Specialists, can supply 1922 models. In stock.—4h.p. Scout, £1 Millford Junior sidecar, £134; Swan sports, £137/1 De Luxe, £147; 7h.p. combination, £175, with oamo and speedometer; Chief, £199, with ditto; change your present machine for one of these magn cent models; we can allow you highest prices; wri call, or 'phone for full particulars.—Langford's, Cricklewood Broadway, N.W.2. Hampstead 8616. [67

*Spare Parts*

INDIAN Spares.—Immediate delivery.—Kays, 8, Bo St., Ealing. [75

GODFREY'S', Ltd., 208, Great Portland St., Lond W.1.—Complete stock of all Indian spare pa always in stock. Write for free spare part list, stati year of manufacture. [07

INDIAN.—The Dennis Accessories Stores, 89, Br ton Rd., London ('Phone: Brixton 3129), supp all parts from stock, new and second-hand. Th also specialise in Indian repairs. [67

INDIAN Spares.—New and second-hand for models; all second-hand spares sent on approv write, call, or 'phone; we can save you money Langford's, 37, Cricklewood Broadway, N.W.2. Ham stead 8616. [67

### Invicta.

1921 2¾h.p. Invicta-Jap, 2-speed, clutch, kicke £49.— 78, Brewery Rd., Plumstead. [62

1921 Invicta Combination, Abingdon King Di engine, lamps, electric and acetylene, 3-spe Sturmey, etc., fitted aluminium disc wheels, lo exhaust, an exceptionally smart outfit, tax pai £87/10.—Rhind and Co., Stone Place, Rusholme. [61

### Ivy.

1921 Ivy 2½h.p. 2-stroke, 2-speed, as new.—16 Temple St., Dalston, E.8. [63

1919 2½h.p. Ivy, fitted brand new 2-speed, license lately overhauled. — Brewster, Southbourn Hants. [49

### James.

1921 James, 2-speed, 2-stroke, as new; £45.—1 St. Charles Square, W.10. [66

F.O.C.H. have a James 4¼h.p. Combination, Luc dynamo set; also 1920 4¼h.p. solo.—5, Heath S Hampstead (near Tube). [50

4¼h.p. James, sporting solo, condition, appearan new, trial; £22.—75, Oakfield Rd., Peng S.E. 'Phone: Avenue 1001. [82

1922 7h.p. James Combination, unused, dynam spare wheel, dickey; best offer, any time.- 253, Munster Rd., Fulham. [61

W. WHITBY and Son.—Immediate delivery new James models; no waiting; list free request.—7, The Vale, Acton, W.3. [33

1920 James Combination 4¼h.p., lamps, speed meter, etc., very little used, and perfect every way; a really good turnout; £95.—2, Elm Pa Rd., Finchley, N.3. [69

4¼h.p. James Combination, 3-speed countershaft, chain, tax paid, lamps, just thoroughly ove hauled; bargain, £45; exchanges.—Whisstock a Lingley, Woodbridge, Suffolk. [61

JAMES 3½h.p. coachbuilt Combination, 1914, Stu mey 3-speed, clutch, lamps, and equipment, pe fect condition, tax paid; 47 gns.—Truran, 44, Hosa Rd., Marius Rd., Balham, S.W. [63

JAMES Combination 5-6h.p., September, 191 splendid condition, Tan-Sad with back, loggag and petrol carrier, spare tyre and tube, all lamp £65.—Smith, Willow Cottage, Potters Bar. [65

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue**
**Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Ner-a-Car.

T-A-CAR, new engine, horn, speedometer; £45, fers.—McKenna, Meyrick Crescent, Colchester. [6109

T-A-CAR, new September 1921, only run a few iles, tax paid; £45.—Tilleys, The Esplanade, outh. [7093

### New Comet.

—Genuine brand new 1922 New Comet, 2-speed, lutch, kick starter, unpacked.—89, East Hill, nsworth. [6621

V COMET 2-stroke, condition better than new, nly done few miles; bought car; what offers?— Gray's Inn Rd., London, W.C. [0845

### New Hudson

V HUDSON 1921 2¼h.p., single speed, new; £40.—33, Victoria St., Burnham, Somerset. [6294

22 Hudson de Luxe, £63. Also Popular model, £50.—Shepherd, Enfield Highway. Tel.: am Cross 31. [0861

0 New Hudson lightweight, lamps, 2-speed, tax paid; £35.—Rhind and Co., Stone Place, Rusholme, Manchester. [8485

W HUDSON, 2-stroke, 1919, 2-speed, excellent condition throughout; £28.—157, Burntwood Earlsfield, S.W.17. [8113

7 4h.p. New Hudson C.B. Combination, 3-speed, K.S., real smart lot; 39 gns—Royal Garage, Gate, Blackpool, S. [6809

W HUDSON Combination, 6h.p, 3 speeds, Binks, lamps, horn, speedometer, mileage under 5,000; £-8, Martin Rd., Slough. [6319

.—1920 2¼h.p. New Hudson, 2-speed, equipped, smart.—W.J.C. Motor Exchange, 5, Addison Av., nd Park, W.11. Park 2071. [8407

21 New Hudson 2½h.p., 2-speed, large P.H. lamps, Klaxon, year's tax, excellent condition; £36.— King's Rd., Kingston-on-Thames. [6607

h.p. New Hudson, 2-stroke, 2-speed, lamps, speedometer, good condition, tax paid; 30 gns.— er, 61A, Byne Rd., Sydenham, S.E.26. [6892

W HUDSON motor cycles.—London Depôt, 45, ray's Inn Rd., London, W.C.2. Immediate delivery odels. Spares stocked. Trade supplied. [0851

W HUDSON 3½h.p., N.S.U. 2-speed, excellent machine, in thorough order; £30.—Ingledew, 37, y St., Strand, W.C. 'Phone: Holborn 6400. [6268

22 New Hudson 10h.p light car, £230; 4½h.p. combinations, £125, solo, £100; 2¼h.p. 2-speed lar, £50; De Luxe, £63; exchanges and deferred ents entertained; sole agents for Cambridge.— is and Easton, 104, Mill Rd., Cambridge. [0824

### New Imperial.

Y Julians of Reading.—New Imperial No. 3 model in stock. [5705

AUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. New Imperial, 1922, No. 2 model; £60. [8509

EFFIELD Agent for New Imperial Motor Cycles; all models in stock.—J. A. Stacey, Ecclesall Rd., field. [0813

h.p. New Imperial, 1919, 2-speed gear, lamps, etc.; £35.—A. Williams, 19, Portland St., tenham. [6377

GNS.—New Imperial, 2¾h.p., 2 speeds, B. and E., good tyres, reliable (after 8 o'clock).—53, ffield Rd., Wandsworth. [6671

19 New Imperial 2¾h.p., 2 speeds, lamps, tax, excellent condition; £35.—Goad, 122, Maida e. 'Phone: Hampstead 1353. [8152

20 New Imperial 2¾h.p., 2-speed, tax paid, lamps, horn, etc., good running order; offers.— 1337, c/o *The Motor Cycle.* (D) [6274

22 New Imperial, all chain, 3-speed, clutch, K.S., all on, done 1,500 miles; bargain, £65. offers.—Box 1303, c/o *The Motor Cycle.* [6170

EW IMPERIAL-J.A.P. 2¾h.p., 2-speed, lamps, horn, just overhauled, tax paid, splendid condoo; £30.—Yeo, 92, Lyford Rd., Wandsworth Com, S.W.18. [6289

IMEDIATE Delivery of New Imperial, new 1922 models, No. 3, all-chain drive, £73; No. 6 Super rts, £84; 8h.p. combination, £145; easy payments extra.—Premier Motor Co., Aston Rd., Birmingha. [6034

EW IMPERIAL-J.A.P. 8h.p Combination, 1919 (December), small mileage, condition and appeare equal new throughout, full set fittings and res, tax paid, any examination invited, owner ght car; 90 gns., or nearest.—Groom, Snape Bridge, mundham. [6955

### Spare Parts

EW IMPERIAL Spare Parts.—London stockist's. Rey, 173, Gt. Portland St. 'Phone: 'Langham 57. Open till 7.30 p.m., 4 o'clock Saturdays. [0855


# BUY TO-DAY

*This Offer cannot be repeated.*

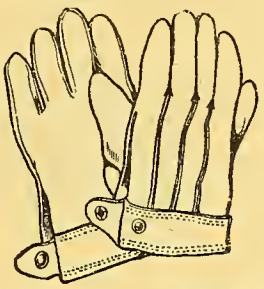
**15,000 pairs Best Quality Horsehide**

## DRIVING GLOVES

*(As illustrated.)*

| Pairs | | Per Pair |
|---|---|---|
| 1 | at | 3/2 |
| 3 | ,, | 2/11 |
| 6 | ,, | 2/10 |
| 12 | ,, | 2/9 |

Post Paid.



Made from Best Quality Hide, one Stud fastener at wrist. Soft and pliable. In Light Tan and Grey

Value 6/6.

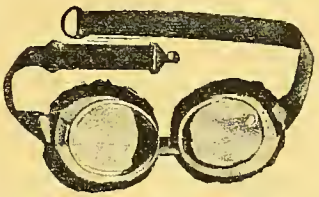
Trade Supplied. IF CALLED FOR **2/8**

GENUINE

## "TRIPLEX" SAFETY GLASS GOGGLES

*(As illustrated)*

Collapsible pattern. Gauze sides, chenille trimmed. White or tinted lenses. Ideal for wearing over spectacles.



Worth 15/-. Post free **9/6**

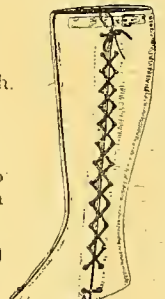
## LEGGINGS

*(As illustrated.)*

Stout Fawn Twill Mackintosh. Absolutely waterproof. Worth 12/6 a pair.

**All sizes for Ladies' wear.**

**Gents'** and **Youths'** in 12" to 14". Calf sizes. For use with Breeches. Ideal for Drivers and Pillion Riders, at **2/6**



Post rates: 1 pr. 9d., a pair. 3 prs. 1/-, 6 prs. 1/6.

**144 only TAN CHROME**

## LEATHER HELMETS

With peak, adjustable chin strap and ear rolls. Fleece lined. **5/6**

Worth 10/6. Post 6d.

The Service Company Ltd (LONDON)

**289-293, High Holborn, London.**


## MOTOR CYCLES FOR SALE.

### New Scale.

1922 New Scale Combination, 3½h.p. Beardmore Precision engine, absolutely unused; £65.—Railton, 47, South King St., Manchester. City 2417. [8172

### Norton.

PREMIER Motor Co. for 1922 Nortons.

NO. 9, 3½h.p., £80; 16H., 3-speed, £115; Big Four, 3-speed, £120; sidecars from £22; easy payments, 4 per cent. extra; free delivery to any address.—Premier Motor Co., Aston Rd., Birmingham. [0865

TRY Julians of Reading.—Norton, Model 16 H. in stock. [5701

NORTON, Model 9, Dec. 1921, all on; £65.—A. Williams, 19, Portland St., Cheltenham. [6376

1921 Norton, C17, absolutely as new, licensed; £85.—8A, Culverden Down, Tunbridge Wells. [8179

1921 3½h.p. T.T. Norton Elect, light, tax paid; 49 gns.—Royal Garage, Castle Gate, Blackpool, S. [6810

1920 T.T. Norton, well equipped, very fast, superb condition; £54.—24, Balliol Rd., North Kensington. [6698

1922 Norton, 16H, latest type, unridden, as received from makers, tax paid; £105.—Box 1372, c/o *The Motor Cycle.* [6836

THE Layton Garages can give immediate delivery of the famous 16H Model Norton.—The Layton Garages, 30, Holywell St., Oxford. [8316

1916 Norton 16H, 3-speed, countershaft, equipped, excellent condition, fast; £62/10.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [8150

NORTON, 1920, Big Four, Lucas lamps, Klaxon, Cowey, Tan-Sad, perfect condition, tax paid; 80 gns.—Head, Midgehole, Hebden Bridge [7007

NORTON 1921¾ 16H, absolutely as new, taxed, equipped; 85 gns.; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [5790

BIG Four Norton Combination, late 1920, special 1921 sidecar, screen, and scuttle, all accessories, any trial; £90.—Hollinghurst, 477, Oxford St., W.1. [6827

1920 (late) 3½h.p. Norton combination, Canoelet K4 sidecar, dynamo lighting, fast, powerful, as new, guaranteed; £80.—51, Upper Richmond Rd., Putney. [8558

DE Luxe Big 4 Norton Combination, tax, all accessories, Easting, looks and goes like new; £105; offers considered.—Jeffryes, The Nook, St. Mary's Av., Wanstead. [6409

BARGAIN.—Norton 1917 3½h.p., 3-speed, Ricardo piston, new valves, rockers, just overhauled, fast, owner going abroad; £60.—1, Lunham Rd., Upper Norwood, S.E. [6880

1922 16H. Norton, delivered this month, lamps, Klaxon, tools, owner buying combination; first £105/10 secures.—Pritchard, 2, "A" Camp, Larkhill, Salisbury. [6884

NORTON 1921, No. 9 T.T., very fast, not done 1,500 miles, equal to new; £65, or offer; good reason for selling.—Apply, Dibben, King's Arms, Amesbury, Wilts. [6258

NORTON 1921 (June) 16H, as new, perfect running order, very fast, real hargain, legshields; £85, or nearest offer; at Deal, Kent.—Box 1368, c/o *The Motor Cycle.* [6495

NORTON 1921 16H, speedometer, taxed, winner many speed trials, £85; 1920 Big 4, Magdyno, 1921 Norton sidecar, taxed, mechanically perfect, £105.—Clark, 7, Exhibition Rd., S.W.7 [4611

1921 Big Four Norton Combination, 1922 tank, new tyres, Lucas lamps, knee-grips, Easting screen, full kit, spares, splendid condition; £115.—22, Johnson Ter., New Washington, S.O. [6090

BIG 4 Norton Combination, late model, 3-speed countershaft, with lamps, horn, etc., 700×80 tyres, perfect condition, and the last word in efficiency and economy, taxed and insured until 1923 for £100; accept £78:—30, Crystal Palace Park Rd., Sydenham. [8271

NORTON Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Easthank St., Southport. 'Phone: 607. [4929

BUY your new Norton from the rider agent. Carriage paid to any address in British Isles. Machines for competition tuned free of charge; good results guaranteed. I specialise in Norton motor cycles. Send for catalogue.—G. H. Tucker, Norton Specialist, Redcliffe Hill, Bristol. 'Phone: 4042. [6509

NORTON 3½h.p., Special Jucker 4-speed gear box, clutch, kick starter, Bonniksen speedometer, Clavrite horn, latest Binks carburetter, spare engine sprocket for racing, will climb anything where wheels will grip, condition and appearance perfect, complete with all tools; £75 lowest; photo.—Riach, Charlcombe Grange, Bath. [6913

## MOTOR CYCLES FOR SALE.

### Norton.

3½h.p. Norton (July, 1921), Philipson pulley, hand control, slipper piston, Cox Atmos carburetter, F.R.S. Major lamp, Lowe generator, automatic oiling, spare belt, aluminium fish-tail on exhaust, Bonniksen speedometer; original cost £130; £65, or near offer; owner buying car.—The Kingston (Surrey) Motor Co., Ltd., 84, Eden St., Kingston-on-Thames. [6260

*Spare Parts.*

NORTON Spares, per return from stock; postage paid on orders of £2 value; we carry huge stocks.—G. H. Tucker, Norton Rider Agent, Redcliffe Hill, Bristol. 'Phone 4042. [6508

### N.S.U.

N.S.U. 2¾h.p., M.V. magneto, all on, tax; £12/10; running order.—80a, High St., Bexley. [8413

N.S.U. 3½h.p. 1914 Model de Luxe (85×88mm.), spring frame, 2 speeds, kick starter; £30; also 6h.p. twin, 2-speed gear; £30.—Eagles and Co., 275, High St., Acton, London. [8109

### N.U.T.

BRAND New N.U.T., Lucas Magdyno Lighting and horn; £86, bargain.—37, Canterbury Rd., Ball's Pond Rd., Dalston, N.1. [8427

### O.K.

1916 O.K., 2¼h.p., 2-speed, countershaft, perfect order; £19.—1, Priory Rd., Kew. [8389

1920 O.K. Junior, 2-speed; £36, or nearest offer.—Particulars, 12, Stracey Rd., Harlesden, N.W. [6278

O.K. Union, 1919, fully taxed, insured, perfect condition; £25, or offer.—Lemon, Cheapside, Woking. [6188

71½% Discount off of new 2-speed Villiers flywheel magneto O.K.—Taylor, Cycle Agent, Kettering. [7009

1915 O.K. (o.h.i.v.), re-bored, smart, discs, Binks, tyres good, year's tax; £22.—Hickman, Crown St., Acton. [6901

1916 O.K. Junior, 4-stroke, 2-speed, tax, good tyres and running condition; £24.—23, Barratt Avenue, Wood Green. [6773

### Omega.

OMEGA Lightweight Combination, 2¾h.p., new June, 1921, good condition, tax paid; carriage paid, £55, cost over £90.—Dalby, Edstone, Kirbymoorside. [6681

SPECIAL 293 c.c. Omega-Ja 1, 2-speed, clutch, K.S., guaranteed 60 m.p.h., many spares, etc.; £50, or near offer.—Giles, Magdalene College, Cambridge. [6724

OMEGA 1921 2¾h.p., fully equipped, new tyres, Tan-Sad, machine hardly used; owner going abroad; £35, or nearest offer.—2, Granville Square, King's Cross Rd. [6179

1921 Villiers 2¾h.p., Albion 2-speed, clutch, kick starter, speedometer, lamps, Klaxon, mileage 3,000; £45. 1919 Triumph combination wanted.—70, Moncrieff St., Peckham. [6175

### P. and M.

P. and M. 1918; £45, or close offer.—43A, Tennyson Rd., Kilburn. [6739

1918 P. and M. Combination, good condition; £35.—64, Church St., Edgware Rd. [8383

P. and M. Combination, 1921, unused, shop-soiled; £110.—The Morris Garages, Oxford. [8121

£23.—3½h.p. P. and M., 2 speeds, clutch, good running order.—King, Egrove Farm, Oxford. [8527

P. and M., late model, electric lamps, Klaxon, etc.; £42; fine machine.—35, Freegrove Rd., Holloway, N.7. [6118

P. and M. 1919, re-enamelled, plated, equipped, polished chain case; £47/10.—38, Sherriff Rd., West Hampstead. [6762

P. and M. 1919½, never drawn sidecar, good condition; £35.—McLucas, 9, Norfolk Mansions, Santos Rd., Putney. [6384

1918 (late) P. and M. Combination, excellent condition, licensed, runs perfect; £46.—308, Battersea Park Rd., S.W.11. [7041

P. and M. 1920, lamps, horn, tax paid, and in first-class order; bargain at £65.—The Layton Garages 30, Holywell St., Oxford. [8310

P. and M. 1916 3½h.p. Combination, lamps, horn; £50.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0066

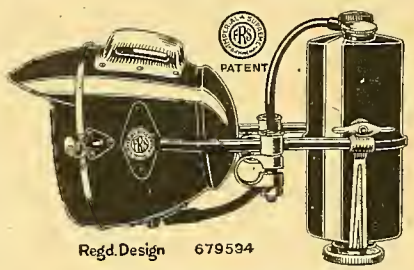
P.M. (Aug. 1919), good condition, from maker's last year, spares, overalls, tax paid; £60, or offer.—87, Glengall Rd., Kilburn, N.W.6. [6092

P. and M. 1918 Combination, fully equipped, rebushed, 1922 colours; £48; evenings.—5, Canal Grove, Canal Bridge, Old Kent Rd., S.E.15. [8351

P. and M. 1918 (certificate), 1920 sidecar, year's licence, lamps, grid (new Easting, chains, tyre), written guarantee; £62.—30, Ferme Park Stroud Green. [6957


F.R.S. ACCESSORIES

The ever-increasing demand for F.R.S. Accessories is due to their outstanding superiority—first in 1909, they are still first to-day, as comparison will convincingly prove.




**The famous F.R.S. Streamline Projector Se:**

50% more powerful than any other.

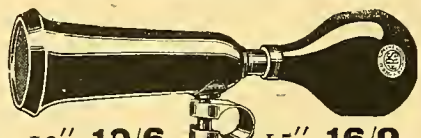
F.R.S. hold the World's Record for Beam Power—and have done so since 1909. The scientifically ground optical lens fitted to F.R.S. lamps is a special and exclusive feature—the whole surface is so worked that every portion gives reflection of equal intensity.

The F.R.S. Headlight is delightful to ride behind—it gives a continuous and unvaried, powerful, penetrating, WHITE beam which illuminates the road far ahead.

7" "MAJOR" Set, 1,000 ft. Beam, 90/-

6" "BIG" 63/- 5" "JUNIOR" 45/-

When comparing the F.R.S. with any other lamp bear this important fact in mind, that the body diameter of the smallest size is 5 INCHES.



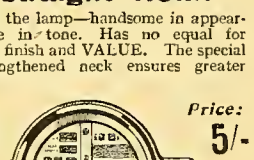
13" 10/6 15" 16/9

**F.R.S. Straight HORN**

—as supreme as the lamp—handsome in appearance, distinctive in tone. Has no equal for absolute quality, finish and VALUE. The special bulb with strengthened neck ensures greater durability.

**The F.R.S. Licence Holder**

Price: 5/-



—another example of F.R.S. supremacy. Has no loose nuts and bolts, sharp edges or ugly clips. Secured together by ONE patent binding rim and ONE large nut. Absolutely watertight, adjustable to any angle, made of BRASS throughout. Supplied in any finish.

GUARANTEED GOODS. Cash with Order.

Our guarantee is your safeguard. Money returned, either through your dealer or direct, if you are not perfectly satisfied in any direction. Ask for complete list.

**F.R.S. LAMPS, Ltd., Vere St., BIRMINGHAM**

**LONDON:** 7, GRAPE STREET, (off Shaftesbury Av.)

**Glasgow:** H. R. Woodside, 65, West Regent St. **Belfast:** G. Beers 11, Bedford Street.

*Clinton-Wall.*


## MOTOR CYCLES FOR SALE.

### P. and M.

1918 P. and M. Combination, 3½h.p., 2-s chain drive, horn, lamps, good condition, hauled recently; £48.—Cable, 89, Grundy St., lar, E.14. [

1916 P. and M. and Coachbuilt Sidecar, in pe order, tyres all good, fully licensed for 1 £42/10; viewed by appointment—30, Golders Gar London, N.W.11. [

P. and M. 1918, overhauled by makers, Mills ford sidecar, new condition, screen, luggage Lucas lamps and horn, tyres little used, tax 60 gns.—308, King's Rd., Chelsea. [

RENOVATED P. and M. Motor Cycles, ex R.. thoroughly overhauled, fitted with many parts; solo £45, combination £55; exchanges.—Porter and Co., Whitchurch, Salop. Tel.: 74. [

P. and M. (June, 1920), not R.A.F., ratchet brake, mechanical lubrication, Millford sid lamps, horn, screen, any reasonable trial in hilly trict; nearest £80.—Weller, 10, Grange St., Burto Trent. [

P. and M. Combination, December, 1919, pe condition, overhauled, electric lighting, sp meter, Millford sidecar, Easting, luggage grid, tyres; bargain, £8!—Taylor, 180, Wightman Harringay, N.8. [

*Spare Parts.*

P. and M. Spares Specialist. Every part in st cheap.—Inman, Durham Rd., Seaforth, Liver [

P. and M.—All parts in stock for P. and M.'s; stamp.—P. and M. Specialist, H. Beardwood, Burlington St., Liverpool. [

### Perry.

£100.—Perry 1914 8h.p., very good condition, hauled £40 1920.—Bennett, 47, Magdalen Wandsworth. [

### Peugeot.

1912 3½h.p. Peugeot, tax paid; 18 gns.—F Garage, Castle Gate, Backpool, S. [

### Pierce-Arrow.

PIERCE-ARROW 8h.p., 4 cylinder, 2 speeds, cl shaft and bevel drive, in sound mechanical c small mileage, tyres nearly as new, weight u 200 lbs. unladen, £100; sidecar to fit, £11.—L Clapton, Woodbridge, Suffolk. [

### Pope

POPE 7-9h.p., 3-speed, clutch, kick start, o.h.v. on, small mileage, tyres unpuncture; £4 30, Bywater St., Chelsea. [

1917 Pope 8-10h.p., good condition, low mil ideal combination machine; £65, nearest —Field, Jasmine House, Kettering. [

### Precision.

BARGAIN.—Brand new 8h.p. Precision, 3-s Sturmey, countershaft, clutch, kick starter; —89, East Hill, Wandsworth. [

### Premier.

£17.—3½h.p. twin Premier, new Dunlop, tax pa King, Egrove Farm, Oxford. [

3½h.p. Premier, single-speed, running order; —42, Saville Rd., Silvertown, East. [

PREMIER 3½h.p., recently overhauled, multi g year's tax, higher power wanted; £30, near —16, Stanley Gardens, Belsize. [

1914 2¼h.p. Premier, mechanically perfect, scratched, tax paid, great bargain; £1 3, Norwood Rd., Herne Hill, S.E.24. [

£23.—1914 2¾h.p Premier, 3-speed, clutch, exceptional condition, smart appearance; ph stamp.—Bacon, Offington Lane, Worthing. [

1914 Premier 3½h.p., 3-speed and clutch, Kla lamps, Binks, Bosch, footboards, in good or £28, or offers.—Knowles, Arcade, Lancaster. [

3½h.p. 1914 Premier, 2-speed, clutch, countersl overhauled, new tyres, lamps, horn, licen £24, bargain.—Malvern Rd. Garage, Thornton He Surrey. [

*Spare Parts:*

PREMIER Spares and Repairs.—We claim to be most competent firm to supply spares and exe repairs to Premier motor cycles. We served in Premier works, and know this machine from A t We hold the most varied stock of parts for it in world. We are the only traders who can claim supply every part for a Premier machine. Our p are rock bottom, and our service unsurpassable. W us full requirements; you will receive our reply return.—Forfield Motors, Forfield Place, Leamin Spa. [

### P.V

P.V.—Astounding value is represented by our range of popular models, incorporating famous spring frame and Villiers or J.A.P. engi Prices from £45. Lists from agents or P.V. M Cycles, Ltd., Forest Hill, London. [



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Scott.

TT Sociable 1921, done only 1,400 miles, in ew condition, delivery at Bradford; price £165. erville. 30, Ormidale Terrace, Edinburgh. [6545

'10.—Scott 1920 (September) 3¼h.p. Model, ab-olutely perfect, mileage under 2,000, a sacrifice, , horn, etc.; or exchange.—G. H. Tucker, Red- Hill, Bristol. 'Phone: 4042. [6510

TH London Scott Service Depôt.—'Phone Croy-don 1129 for demonstration runs; immediate de-; prices from £105.—John R. Kinsey and Co., 350-352, Lower Addiscombe Rd., Croydon. [8352

22 Model Scott Squirrel, all-chain drive, speedo-meter, large lighting set, M-L, Amac, watch, ge 2,500, very fast and fond of (k)nuts; £85; by appointment.—72, High St., Tunbridge Wells. [6246

20 (September) Sports Scott, double-pole plugs, electric and acetylene lighting, Cowey horn, big-flexible exhaust, posh tone, very fast, full tax; s; exchanges.—Kents, 417, Lord St., Southport. [7098

TT Combination, late 1920, 2-speed, kick tarter, electric lighting, Easting screen, tools, condition excellent, tax paid; accept £97/10 sale.—Wilkins Simpson, Opposite Olympia, Lon- [6361

19 Scott 3¼h.p. Combination, duplex frame, spring saddle, petrol tank under top tubes sur-ted by aluminium cover-plate, lamps, horn, etc., oc 60 gns., R.34 sidecar, windscreen; a real ain; 75 gns.—Edwards, 50, Harrington Rd., n Kensington. [4455

TT Squirrel 1922 3½h.p., actual Olympia model, acetylene and electric head and tail s, extra heavy Dunlops not done 300 miles, ine only done 1,400, spare sprocket, piston , plugs, covers, and tubes, insurance policy to of year, also tax paid, suit of overalls, wonder-bargain; £85; no offers.—Bridgwater Motor Co., gwater, Somerset. [6231

*are Parts:*

UTH London Scott Service Depôt.—Scott Spares: Scott Repairs.—John R. Kinsey and Co., Ltd., 352, Lower Addiscombe Rd., Croydon. 'Phone [8353

DFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Scott spare parts ys in stock. Write for free spare part list, stating of manufacture. [0751

### Singer.

AUCHOPE'S, 9, Shoe Lane, London.—2½h.p. 1910 Singer, 2 speeds; £25. [8499

GNS.—Singer coachbuilt combination, 3 speeds, clutch, enclosed magneto, B. and B., good tyres, (after 8 o'clock).—53, Swaffield Rd., Wandsworth. [6670

NGER 2-seater, 1915, 10h.p., electric light, re-cently overhauled, repainted, excellent condition; £180, or nearest offer.—Tanner, High St., toabury. [6230

GNS.—Singer, 3½h.p., 3-speed, fast, sporting machine, mechanical condition, tyres and belt llent, full year's tax paid.—Delancey St. Garage, den Town, N.W.1. [6851

*pare Parts:*

IE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

### Southey.

UTHEY 2¼h.p. 2-stroke Motor Cycles, 2-speed, kick starter and clutch, complete with lamps, n, licence holder and tools; price £60.—Southey Co., Berkhamsted. [3320

### Sparkbrook.

'ARKBROOK 1920, Villiers engine, flywheel mag-neto, 2-speeds, all accessories; £39.—Eagles & 275, High St., Acton, London. [8107

### Sun.

N, Sturmey-Archer; like new, all on; £40.—Mere-dith, Market St., Northwich. [6489

3h.p. Sun-Vitesse, lamps, horn, as new; £32/10.—Levene, 17, High St. South, East Ham. [6887

21 Sun-Vitesse, 2 speeds, clutch, kick start, fault-less; £42.—Bennett, 38, Cowley Rd., Oxford. [6171

UN 1920 2-stroke, 2-speed, kick start, horn; £38.—Elce, Ltd., 15, Bishopsgate Av., Camomile St., .3. 'Phone: Avenue 5548. [0071

OR Sun, J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, gle Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., gns. Send for catalogues. Trade supplied.—Jones rage, Broadway, Muswell Hill, N.10. [0790

### Sunbeam.

UNBEAM 3½h.p. 1922 model; 120 gns.—The Morris Garages, Oxford. [8125

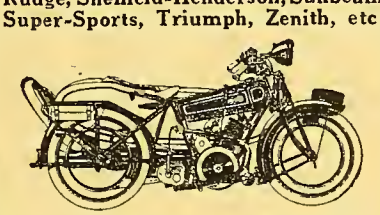
920 3½h.p. Sunbeam Combination, perfect; £130. —Radford, 20, Westminster Rd., Coventry. [6534


# EXTENDED PAYMENTS OVER 18 MONTHS.

YOU deal direct with us and we will supply *ANY MAKE* of machine either new or second-hand on these terms, or by arrangement to suit your individual requirements. A full practical upkeep service is automatically placed at your service as soon as you become an A.B. client.

**The following New Machines actually in Stock.**

**A.J.S. Combination, Allon, Ariel, Brough Superior, B.S.A., Calthorpe, Douglas, Dunelt, Enfield, Humber, Levis, Massey-Arran, Matchless, Morgan, New Imperial, Norton, O.K., P. & M., Rover 8 h.p. Car, Scott, Rudge, Sheffield-Henderson, Sunbeam Super-Sports, Triumph, Zenith, etc.**



4 h.p. Combination Interchangeable wheels and Spare. Cash **£113 8s.** or **£30 down,** the balance in **18 monthly instalments of £5 2s. 0d.**

**REBUILT DOUGLASES.**

The following machines have been entirely rebuilt with new parts in our own works, re-enamelled and plated maker's colours, new tyres, etc. Fully equipped with Lamps, Horn, Licence-holder, Pump, Toolbags, Tools.

2¼ h.p. 2-speed, **£50** or **£12 down, and 18 monthly instalments of £2 6s. 6d.**

4 h.p., 3¾-speed, **£70** or **£17 10s. down and 18 monthly instalments of £2 17s. 6d.**

4 h.p. and brand-new bulbous back sidecar, **£87 10s.** or **£22 10s. and 18 monthly instalments of £3 12s. 6d.**

*FULLY GUARANTEED FOR 3 MONTHS. MAY WE SEND YOU A PROPOSAL FORM?*

**Make a note of our address and whenever in need of advice, assistance, spares, accessories, write, 'phone or call and you will get immediate and continuous satisfaction.**

**ALLEN-BENNETT MOTOR Co., Ltd.,**

**9, 10, 11, Royal Parade, West Croydon.**

*'Phone:* Croydon 2450, 2451. *'Grams:* "Track," Croydon.


## MOTOR CYCLES FOR SALE.

### Sunbeam.

CROSS, Effingham Sq., is agent for Sunbeams for Rotherham; new models from stock. [8145

LANDUDNO.—Kelly Bros., 108, Mostyn St., Agents. Sunbeams in stock. 'Phone: 277. [3311

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs, etc. [3143

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Sunbeam, 1917, 3 speeds; £75. Extended pay-ments. [8506

3½h.p. Sunbeam Combination (1915), particulars on application.—Rogers, "Holmwood," Honiton, Devon. [6744

SUNBEAM, 1921 Sports, winner fourteen competi-tions, one this week, equipped, taxed; 98 gns.—Below.

SUNBEAM, 1920, 3½h.p., T.T.; absolutely un-scratched; 85 gns., year's tax; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. Open Sundays. [8549

8h.p. Sunbeam Combination, as new, 1920, all on; £130.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [6131

8h.p. 1921 Sunbeam Combination, brand new, mag-dyno lighting; price £215.—Tilleys, The Esplan-ade, Weymouth. [7092

LATE 1921 3½h.p. Sunbeam Combination, run 3 months, any trial; £135.—19, Richmond Grove, Levenshulme, Manchester. [6327

3½h.p. Sunbeam Combination, 1916, tax paid, com-plete lamp, horn, speedometer, etc.; £65; good condition.—Hole, Broadway, Burgess Hill. [6108

4¼h.p. Sunbeam, Colmore Cup model combination; advertiser will give £3 to whoever takes his delivery new.—Box 1323, c/o *The Motor Cycle.* [6210

T.T. 1922 Sunbeam, licensed, ridden 50 miles; £130, or nearest offer; sole reason selling, owner unable ride this season.—Eardley, Pontymoel, Pontypool. [6326

8h.p. Sunbeam, 2-seater, sidecar, hood, windscreen, speedometer, Klaxon, lamps, excellent condition; £130.—Haslemere, Hammers Lane, Mill Hill, N.W.7. [8373

1919 Sunbeam Combination, Cowey speedometer, windscreen, licensed, spare tubes, excellent con-dition; £90, near offer.—1B, East Dulwich Rd., S.E. [6758

SUNBEAM 1921 3½h.p., sports model, legshields, lamps, etc., tax paid and very carefully used; £110.—The Layton Garages, 30, Holywell St., Oxford. [8303

1920 Sunbeam Combination 3½h.p., fully equipped, only 1,500 miles, perfect condition; £150, or nearest offer; Brighton.—Box 1302, c/o *The Motor Cycle.* [6169

8h.p. Sunbeam Combination (May, 1921), spare wheel, tyre, legshields, Easting screen, etc.; 135 gns.; owner going abroad.—Goldsack and Holness, Sandgate, Kent. [6463

SUNBEAM, early 1921, 8h.p., and sidecar, electric light, hood, screen, spare wheel, all tools, in thorough order; £150.—Watkins, Garage, Eccleston St. East, Victoria. [6369

LATE 1921 Sunbeam 3½h.p., semi sporting, mile-age 700, as new, stored winter, Cowey horn, speedometer, lamps; £110; appointment.—1, Albany Gardens, Richmond. [6435

1919 8h.p. Sunbeam Combination, in excellent con-dition, tax paid, hood, screen, spare wheel, speedometer, lamps, etc.; £120; exchanges.—Whisstock and Lingley, Woodbridge, Suffolk. [6140

8h.p. Sunbeam Combination, dynamo lighting, elec-tric horn, spare wheel and tyre, luggage carrier and extras, as new, tax and insurance paid; £175, or offer.—Derngate Motor Co., Northampton. [3501

3½h.p. New 1922 Sunbeam Light Solo, £136/10; 3½h.p., T.T. model, £136/10; new 1922 new pattern model, £126; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [8500

SUNBEAM 3½h.p. 1920 (late), sporting Cancelet sidecar, legshields, Lucas lamps and horn, 700×80 tyres, Watford, absolutely unscratched and mechanically perfect; £115.—Wolverson, Horseley Fields, Wolverhampton. [6632

1922 3½h.p. Sunbeam, 3-speed, clutch and kick starter, enclosed chain drive, all lamps, tax paid December, machine only done 40 miles, condition as new; £120.—D. and S. Autocar Co., 33, The Parade, Golders Green. [8285

SUNBEAM Combination, 8h.p., M.A.G. engine, hood, screen, apron, dynamo lighting, electric and bulb horns, speedometer, spare wheel, luggage carrier, all accessories; £145, or nearest.—Hallett, Albion Works, Albion St., King's Cross. (P) [8357

88 GNS.—3½h.p. Sunbeam (1919), Henderson side-car, very fully equipped, D.A. lighting, Bonniksen, special valve covers, etc., gold medal win-ner, just plated, enamelled, insured, year's tax, clean, reliable.—130, London Rd., Kingston-on-Thames. [6686

## MOTOR CYCLES FOR SALE.

### Sunbeam.

1921 3½h.p. Sporting Model Sunbeam Motor Cycle, complete with lamp, generator, horn, and usual spares, cast aluminium plates, new in April last, and in exceptionally good condition, tyres unpunctured; nearest offer to £110.—Geoffrey Smith, *The Motor Cycle*, Coventry. [X4285

SUNBEAM 8h.p. Combination, Olympia Show model, cost £259/10, receipt shown, hood screen, spare wheel, windscreen, speedometer, Cowey mechanical horn, excellent condition, little used; bargain, £200; Raleigh lightweight part exchange considered.—Kenward, 69, St. James' Park, Tunbridge Wells. [6515

### T.M.C.

T.M.C. Motor Cycle and Coachbuilt Sidecar, 7h.p., 4-cylinder, water-cooled engine, spring frame, 3-speed countershaft, shaft driven, auto oiling, windscreen, lamps, horn, heavy tyres practically new, and one spare brand new, good condition; £39/10.—W. Partington, 7, Chapel St., Salford. Telephone: 2422 City. [6522

### Torpedo.

TORPEDO 2¾h.p., 2-speed, all on, perfect; £22.—17, Heaton Rd., Mitcham. [6597

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE delivery of type H, 4h.p., 3-speed, £105; type S.D., chain drive, £115; type R., 3½h.p., overhead valve, £120; type L.W., lightweight, £65; sidecars from £20 to £50; easy payments, 4 per cent. extra; free delivery to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0867

JULIANS of Reading have Triumph-Ricardo in stock; £120. [5706

BABY Triumph, 2-speed, tax paid; £29.—64, Church St., Edgware Rd. [8382

TRIUMPH 4h.p., 3-speed, excellent order; £60.—46, Chaucer Rd., Herne Hill. [6195

TRIUMPH 4h.p. belt-drive model, new; £105.—The Morris Garages, Oxford. [8130

TRIUMPH 3½h.p., 4-valve engine, new; £120.—The Morris Garages, Oxford. [8132

1913 Triumph, fixed engine, good running order; £18.—16, York St., Dover. [8225

TRIUMPH 4h.p. chain-drive model, new; £115.—The Morris Garages, Oxford. [8131

TRIUMPH 4h.p. 1918, first-class condition, spares; £52.—49, Tonsley Hill, S.W.18. [6586

TRIUMPH-RICARDO in stock; £120.—Premier Motor Co., Aston Rd., Birmingham. [0868

BABY Triumph, good order, tax paid; £35.—Shepard, 108, The Crescent, Slough. [6942

TRIUMPH 4h.p., countershaft, 3-speed, clutch, lamps; £46.—1, Priory Rd., Kew Green. [6628

TRIUMPH, 1918, 3-speed, etc., guaranteed perfect; £55.—33, Hackford Rd., Brixton, S.W. [8422

£16.—3½h.p. Triumph, Bosch, B. and B., good running order.—King, Egrove Farm, Oxford. [8531

TRIUMPH Combination, W.D., renovated; £45.—Littlewod, Sherman Rd., Bromley, Kent. [6147

1918-19 Triumph, not re-conditioned model, all on; £60.—Tewkesbury Garage, Tewkesbury. [4925

1918 Countershaft Triumph, perfect, fully equipped; £48.—24, Balliol Rd., North Kensington. [6696

1920 Baby Triumph, Cowey speedometer, lamps, Klaxon; £40.—11, Ruskin Avenue, Kew. [6731

1921 Triumph 4h.p., all chain, countershaft, equipped, tax, absolutely as new; £90.—Below.

1920 Triumph 4h.p., countershaft, fully equipped, not W.D., fine condition, £75; or with sidecar, £85.—Below.

1918 Triumph 4h.p., countershaft, fully equipped, guaranteed condition, £50; with sidecar, £60.—Below.

T.T. Triumph 3½h.p., dropped frame, Mabon clutch, excellent condition; £28.—Goad, "Norman Lodge," 122, Maida Vale. 'Phone: Hampstead 1353. [8153

7½% Discount off of new 4h.p. all-chain drive Triumph.—Taylor, Cycle Agent, Kettering. [7008

TRIUMPH 1920 Fixed Gear Sports, practically unused; £55.—Clark, 7, Exhibition Rd., S.W.7. [4617

TRIUMPHS.—Prompt delivery and service.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3692

1920 Triumph Combination, Easting, very posh lot; sacrifice, 82 gns.—79, Bedford Hill, Balham. [8386

1921 S.D. All-chain Triumph and sidecar chassis; £95.—Hewett's Quay, Barking. East Ham 755. [6322

TRIUMPH, 3-speed, sidecar; £35 or offer.—Whitaker, 209, Northend Rd., West Kensington. [6988


# NOTE THIS!

OWING TO LOWER COST OF MATERIAL AND LABOUR WE ARE NOW ABLE TO ANNOUNCE A FURTHER

## REDUCTION

OF APPROXIMATELY

## 15%

IN THE PRICE OF

# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED

for

## 2 and 4 STROKE ENGINES

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

**The lightest, speediest, and simplest gear on the market for direct belt-driven 2 and 4 stroke engines.**

**We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

**IMMEDIATE DELIVERY.**

*Send for Illustrated Booklet.*

*What is your make?* *Write us.*

## NEW REDUCED PRICE

# £6-6-0

CARRIAGE PAID

## PHILIPSON & CO., LTD.

**Astley Bridge, BOLTON, Lancs.**

(Established over 50 years.)

'Phone, 147 Eagley. 'Grams, 'Safety, Bolton.'


## MOTOR CYCLES FOR SALE.

### Triumph.

CROSS, Effingham Sq., is agent for the tru Triumph for Rotherham; all models from sto [8

F.O.C.H. for Triumphs; latest models in stock; 1921 solo.—5, Heath St., Hampstead (near Tut [60

£75.—Triumph Combination, 1919, 4h.p., tax pa splendid condition.—6, Thurlow Rd., Hanw W.7. [6

TRIUMPH Models H. and S.D. in stock for mediate delivery.—A. Williams and Co., Chelt ham. [63

TRIUMPH, countershaft, 1919, equipped; £50 wi ing for good machine.—22, Pretoria Rd., Chi ford. [82

1918 Countershaft Triumph, in splendid or throughout; £50.—Lamb, Dutton House, I minster. [60

1918 Triumph Combination, fully equipped, g condition; £60.—James, 482, Harrow Rd., P dington. [8

22 GNS.—Triumph 3½h.p., thoroughly overhau excellent condition throughout.—Rose's Gar Uxbridge. [8

1918 Triumph Combination, all on, taxed, insur £58.—James, c/o Bradmores, 482, Harrow R Paddington. [6

1920 Baby Triumph, as new; £45; tax pai Joseph Rhind and Co., Stone Place, Rushol Manchester. [6

TRIUMPH Combination, 1914, 3-speed, good co tion, any trial; £55.—11, Brougham I Dalston, E.8. [8

MOTORIA, Regent Parade, North Finchle 1922 models Triumph in stock; deferred p ments; repairs. [6

4h.p. Triumph-Gloria Combination, 1919, lan spares, etc., tax paid; £89.—Doman, Kingsfi Dartford, Kent. [6

TRIUMPH JUNIOR 1921, perfect condition, accessories; £45.—Eagles & Co., 275, High Acton, London. [8

TRIUMPH-RICARDO, £120; just delivered, 3-sp countershaft, hand clutch.—E. H. Macmil King's Langley. [6

TRIUMPH-RICARDO, brand new; sell, or excha new Norton, Sports Sunbeam.—Wilkinsons, E neers, Doncaster. [6

IN Stock, Triumph-Ricardo, also Model H; prices given for exchanges, deferred terms on plication.—Below.

1919 4h.p., 3-speed, clutch, and kick-start, lan speedometer, horn, knee grips, licensed year, new tyres, in superb mechanical condition appearance; 65 gns.—Edwards, 50, Harrington South Kensington. [8

£19.—3½h.p. Triumph Sports, clutch, K.S., vari gear, tax, ride away.—Argyle Lodge, Newton Burton-on-Trent. [6

£16.—Triumph 2-3h.p., magneto, B.B. carburet perfect; exchange 3½h.p. less engine.—7, cent St., Crewe. [6

3½h.p. Triumph, Grado gear, Tan-Sad, lamps, fine order; £30; push cycle part.—220, St., Merton, S.W. [6

TRIUMPH 3½h.p. Combination, torpedo side sporting lot, perfect condition; £30.—128, Sir wood Rd., Tooting. [6

1918 4h.p. countershaft Triumph, fully equip £48.—Hillier, Side Bell, 9, Wallingford North Kensington. [6

1920 Triumph, Mills-Fulford sidecar, taxed, equipped, guaranteed; £85.—51, Upper R mond Rd., Putney. [5

3½h.p. 1913 Triumph, 3-speed, S.A. and clutch good order, lamps, tools; £30.—Richards, W St., Church Gresley. [6

TRIUMPH, 1914, Coachbuilt Combination, 3-sp all on, tax paid year; £45.—2, Fulbrook M Tufnell Park, N.19. [7

1918 Triumphs.—Ten, fully equipped, any t from £45.—204, Ladbroke Grove, W 'Phone: Park 5541. [7

MOFFAT, Yeovil, Official Triumph Service Agen 1922 models from stock; exchanges; all s parts. 'Phone: 50. [5

TRIUMPH Combination, 3-speed, kick start; gns.; take lightweight part.—57, Kenbury Camberwell, London. [6

3½h.p. Triumph, light sidecar, N.S.U., 2-sp lamps, speedometer; £32; after 6.—Sharp, Vorley Rd., Highgate. [6

TRIUMPH Countershaft, 3 speeds, clutch, start, Gloria sidecar, tax paid; £65.—Hole, Park Lane, Carshalton. [5

IN Stock, 1922 4h.p. Triumph, Model H; £ cash or deferred.—D. and S. Autocar Co., 33, Parade, Golders Green. [

## MOTOR CYCLES FOR SALE.

### Villiers.

.—Villiers 2-stroke, any trial; take push cycle part.—57, Kenbury St., Camberwell, London. [6797

### V.S.

Combination 5-6h.p., 2-speed, clutch, pedal start.—29a, Riley St., Chelsea. [6720

### Williamson.

p. Williamson-Douglas, 2-seater sidecar, hood, screen, complete, take 4 anywhere; sacrifice, £75. ittock, Council Houses, Radstock. [6468

h.p. Williamson, water-cooled, underslung, coach combination, 2-speed, all-chain drive; tax paid, lent condition; £55.—H.A., 5, Upperton Rd., tow, Essex. [6102

### Wolf.

2.—4h.p. Wolf-Jap, 1915, 3-speed countershaft, taxed.—Luff, 9, Victoria Rd., Staines. [6401

OLF 2¾h.p., Albion gears, free engine, new tyres, excellent order; £22; lamps.—68, Gloucester Camden Town. [8101

21 2¾h.p. Wolf-Villiers, 2-speed, Sturmey-Archer, clutch, kick start, fully equipped, taxed; £52. ne: Kingston 1274.—37, Arlington Rd., Surbiton. [8229

### Wooler.

OOLER 2¾h.p., new appearance, sound condition, fully equipped, tyres good; £45.—Telford Garage, Streatham Hill, London, S.W.2. [8187

20 2¾h.p. Wooler, variable gear, spring frame, just overhauled, perfect, equipped; £42/10.— gle, Rozel, Hendon Av., Finchley, N.3. [6824

W Wooler 2¾h.p. Flat Twin, Brooklands Sports model, complete with lamps and horn, offered as h soiled; £69; a bargain; easy payments.—Harrods r Cycle Dept., 118, Brompton Rd., London. [6588

### Zenith.

WARDS and Co.,

Harrington Rd., South Kensington, offer several brand new unused 1921 5h.p. Sports ths, with makers' full guarantee, at 76 gns.! ld at £110. Your machine taken in part exchange, 27 down, and 12 instalments of £4/14/7. Also ral brand new 1921 countershaft 5-6h.p. models, h, kick start; 84 gns. Listed at £118. Your hine taken in part exchange, or £30 down and nstalments of £5/6/2. [6017

LAN GRUZELIER, Zenith Specialist.

GNS.—Brand new 1921 5h.p. Sports Zeniths.

GNS.—Brand new 1921 5h.p. countershaft models.

E can give you immediate delivery of any 1922 model, and the advantage of a specialised ser- backed by the experience of Allan Gruzelier and t. F. C. Townshend.

ND us your enquiry to Ulster Chambers, 168, Regent St., W. [8149

O.C.H. for Zeniths; latest models in stock.—5, Heath St., Hampstead (near Tube). [5066

20 8h.p. Sports Zenith Combination, as new; £85.—Chattan House, Harrogate. [6416

ENITH 6h.p. 1919 Sports; sell or exchange.— Sheppard, 108, The Crescent, Slough. [6943

.p. Zenith-Jap, licensed, well shod; £32; or ex- change lightweight.—Matthews, Ockley, Surrey. [8199

ANKRUPT Stock.—One only, 8h.p. Zenith, brand new; sacrifice, £90.—Bustin, Chilton, Thame. [6406

ENITH 1921 5-6h.p. Twin Sports, Gradua gear, unused, shop-soiled; £104.—The Morris Garages, ford. [8124

ENITH 1921 3½h.p. Bradshaw, Gradua gear, un- used, shop-soiled; £100.—The Morris Garages, ford, [8123

ENITH 8h.p. Combination, 1921, electric, wind- screen, new condition; offers.—Capt. Rumsey, racks, Devizes. [6312

OBERTSONS Motors, Ltd.—1922 shop-soiled Zenith-Bradshaw, Gradua gear; £100.—157b, Gt. rtland St., W.1. [6082

0mm. bore Zenith, 80 m.p.h.; £55. — W.J.C. Motor Exchange, 5, Addison Av., Holland Park, 11. Park 2071. [8405

56.—Zenith 8h.p. Sports 1918, completely over- hauled, Stewart, Binks, Tan-Sad, new tyres.—84, x Rd., Willesden. [6539

921 (late) Zenith 8h.p., o.h.v., unused 8 months, as new, perfect aluminium sidecar, lamps, nniksen, fully equipped, cost £200; accept nearest 45; 5-70 m.p.h., licensed.—Mitchell, Lindens, rnham. [6236


JAMES
GROSE
LTD.,

Established 1876.

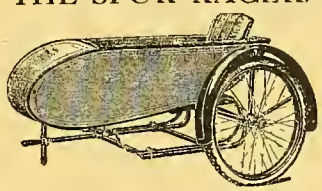
'Phones: 7712 Central. 1297 North. City 3634

OLD JEWRY, CHEAPSIDE, E.C.2,
and at 255-257, Holloway Road, N.;
8, New Bridge Street, E.C.

## SIDECARS

We specialise in Sidecars, and can supply from Stock to fit almost any make of machine, and will fit free of charge.

THE SPUR RACER.



This sidecar is very light and strong, it only weighs 60 lbs. complete, therefore specially suitable for lightweights, two-strokes, etc. The Body is well upholstered and fitted with two small lockers. The Chassis is fitted with large C springs, and quick detachable connection, wide mudguard, and any size wheel and tyre. Price complete

**£13 13 0**

DELIVERY FROM STOCK.

## MOTOR CYCLES

*Any make supplied.*

| | |
|---|---|
| **DOUGLAS ALLON,** 1922 | £68 |
| **MATCHLESS,** J combination 1922 | £150 |
| **MATCHLESS,** H or K combination 1922 | £170 |
| **HARLEY-DAVIDSON,** 1919, 7-9 Combination, Speedom eter, Lamp, Tools, etc. | £100 |
| **SPUR,** 2-speed, 1922 | £50 |
| **SPUR,** 2¾ h.p. Jap, 2-speed, clutch and kick-starter, lamp, horn, and licence paid | £60 |

**RUBBER AND CANVAS BELTING.**

½in., 1/- per foot; ⅜in., 1/- per foot; ⅝in., 1/- per foot; 1in., 1/9 per foot; 1¼in., 2/3 per foot.

**HEAD LAMP SETS.**

5in. front with Mirror Reflector, complete with large generator and double arm bracket. Finished in Black or N.P.

**20/-**

## SIDECAR CHASSIS.

The **SPUR,** complete with all fittings, mudguards, wheel, etc. ..... £7 7 0
The **SPUR Heavy,** undersling, fitted with 4-point connection, valanced mudguard, etc. £10 10 0
The **SPUR Tandem,** specially suitable for Harleys and heavy twins, will take family body, etc., built of heavy gauge tubing, 3-leaf spring, 5-point connection, valanced mudguard, with special fitting any size wheel ..... £16 16 0
The **SPUR Indian,** specially made for sprig frame Indian 4-point connection, valanced mudguard, 28in. wheel, finished in Indian red, complete ..... £15 15 0

**A Special Show of Sidecars is always on view at our Holloway Road Branch, which closes at 1 o'clock Thursdays and 9 o'clock Saturdays.**


## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH 1921 8h.p. Sports, fully equipped, and in first-class order; £75.—The Layton Garages, 30, Holywell St., Oxford. [8311

ZENITH-GRADUA 4h.p., good condition, lamps, horn, tax; £35, offers; exchange.—Fuller, 19, Trafalgar Square, Chelsea. [6311

ZENITH-BRADSHAW, Gradua Gear, 1922 model, shop soiled; £98; exchange entertained.—Eagles and Co., 275, High St., Acton, London. [8110

ZENITH, 5h.p., new and guaranteed few only left, sports model, 76 gns.; countershaft model, 84 gns.—Clark, 7, Exhibition Rd., S.W.7. [8471

ZENITH and Gloria Car, electric light, hood, screen, speedometer, as new; 100 gns. or offer.— Write or call, 30, Westbourne St., Sloane Sq. [8411

£57/10.—Zenith Combination, 5h.p. twin, forward countershaft, clutch, kick starter, good tyres, new Watsonian sidecar.—8, High St., Wandsworth. [8253

1920 (late) 8h.p. Zenith sports combination, fully equipped and guaranteed, new condition, perfect; £82/10.—51, Upper Richmond Rd., Putney. [8557

1922 Zenith-Bradshaw, 3-speed, all-chain; lamps, speedometer, taxed December, new condition; £90.—58, Buckingham Palace Rd., S.W.1. Victoria 4688. [6935

ZENITH 6h.p. Motor Cycle and Coachbuilt Sidecar 1913, in good order, reliable machine; £45.— Andrews, Camden House, New Dalton St., St. Albans, Herts. [6476

ZENITH, 6h.p. Twin J.A.P., Millford sidecar, lamps, windscreen, Klaxon, tax paid, perfect; £60, or offer.—221, Winchester Rd., Higham's Park, Chingford. [6542

5h.p. Zenith Sports Model, December, 1919, complete with lamps, new tyres, tax, etc., in perfect condition; £60.—Eton, 260, Balham High Rd., Balham. [8165

ZENITH, 1921, 8h.p. countershaft combination, speedometer, lamps, horn, taxed, new condition, under 1,000 miles; £110.—Clark, 7, Exhibition Rd., S.W.7. [8472

ZENITH Sports 1920 8h.p., electric lamps, horn, beautiful appearance, tyres perfect, special plating; £75 cash, offers.—Nisbet, "Easington," Weybridge. [6664

1921 Special O.H.V., 8h.p. Zenith, faultless condition, late property famous racing crack; nearest £87/10.—C. A., 49, Bedford St., Strand. Gerrard 4672. [8419

8h.p. Zenith Sports Combination, 1920½, lamps, horn, speedometer, spares, re-enamelled by Zenith's; £100; perfect condition.—102, Cherryhinton Rd., Cambridge. [6316

ZENITH 1919 8h.p. J.A.P., with Dunhill coachbuilt sidecar, hood, screen, lamps, etc., tax paid till end of year; £89/15.—Wilkins Simpson, Opposite Olympia, London. [6356

ZENITH-BRADSHAW, 1922 model, 3-speed, all-chain drive, slightly soiled; £112.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7012

LATE 1916 8h.p. Zenith and Sidecar, lamps, horn, tools, perfect running order, tax, insurance paid; £70, or exchange lightweight.—J. Coles, Crooks Farm, Sway, Hants. [6235

ZENITH 5-6h.p., Sports model, 1915, just delivered direct from Zenith works after overhaul; great bargain, 38gs.—Longman Bros., 17, Bond St., Ealing. Tele. 689. [8441

1919 Sports Zenith 5h.p., kick start, clutch, fully equipped, spares, new belt, tyres perfect, recently overhauled, excellent sporty condition, very fast.—Jones, 15, Portland Place, Leamington. [6373

6h.p. Zenith Combination, electric lamps, sidecar, 2-seater, almost new (cost £57), 2 screens, large, beautiful model, fast, any trial, taxed for year; quick sale, £55.—57, Quarrendon St., Parsons Green. [6784

ZENITH 1920 8h.p., sports model, Lucas dynamo lighting, Ricardo pistons, speedometer, perfect condition; £83.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7022

ZENITH 1916 8h.p. Combination, Swan Sporting sidecar, numerous accessories, good mechanical condition, not posh looking, unused since 1917; £65. —J. Sachs, 4, Bamborough Gardens, Goldhawk Rd., London, W. [6894

BARKER'S Motors can supply 1922 Zeniths, all models, at list prices, and give an insurance policy against mechanical breakdown for 12 months free Cash, deferred or exchanges.—194, Balham High Rd., S.W.12 [3141

ZENITH, 90 bore special and Middleton sports sidecar, exceptionally fast, previously owned, tuned, and ridden by I. P. Riddocks, the well-known 'Varsity rider, winner of many handicaps and hill climbs; £100.—The Layton Garages, 30, Holywell St., Oxford [8302

## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH 1921 8h.p., clutch combination, electric throughout, luggage grid, Easting, speedometer, special pillion, every spare, tax paid, guaranteed as new; nearest £150; trial 6 p.m.—252, St. Ann's Rd., S. Tottenham. [6199

1920 8h.p. Countershaft Zenith, Swan sporting sidecar, disc wheels, plated tank, 3in. Magnum tyres, fully equipped, trial by appointment; price £170, nearest offer; fully insured.—King, Mawgan Lodge, Reading Rd., Farnborough, Hants. [6457

8h.p. Zenith (June, 1920), clutch, countershaft, kick start, speedometer, Tan-Sad, Klaxon, Lucas lamps, tax paid 1922, perfect condition, only done 2,000 miles, any examination, trial by appointment; £75.—Walters, Harold Gardens, Wickford, Essex. [6843

ZENITH 1920 8h.p. Twin J.A.P. Countershaft Combination, luxurious coachbuilt sidecar, Cameo windscreen, lighting set, horn, Tan-Sad, speedometer, oversize tyres, etc., most splendid condition throughout, only needs seeing; £92.—Sidney, 769, Romford Rd., Manor Park, London, E. [7074

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4829

### Ladies' Motor Cycles.

£32.—1921 2¾h.p. Lady's Excelsior 2-stroke, perfect condition.—King, Egrove Farm, Oxford. [8532

LADY'S motor cycle, perfect, new condition; bargain.—Grattan, Port Hill, Hertford, Herts. [6448

2¾h.p. Lady's New Imperial Motor Cycle, C.K.S., perfect condition; £36.—Craig, Preesgweene, Oswestry. [6239

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

VELOCETTE 1922 Models, with clutch and kick starter, for immediate delivery; 2-speed, £68; 3-speed, £75; all black weatherproof finish, all-chain drive, open frame, giving very low position; the ideal ladies' mount; easy payments, 4% extra; illustrated catalogue free on request.—Premier Motor Co., Aston Rd. [3023

### Miscellaneous.

7-9h.p. Harley-Davidson Combination, new chassis, new carburetter, etc.; £95.

1921 2¾h.p. Martin-Jap, 2-speed and kick starter; £65.

2¾h.p. New Imperial, 2-speed model, recently overhauled; £38.

2¾h.p. Douglas, 2-speed, £45; Scott motor cycle, tax paid, £48.

1921 Ladies' Velocette, as new, 2-speed; £55; in perfect condition, reasonable trial or examination.—Edmondson's Garage, Ltd., 28, Main St., Keswick. [4768

JONES Garage, The Broadway, Muswell Hill, N.10, and Woodside Parade, North Finchley.

NOTICE.—We are open all day every Saturday, and have all makes in stock. Write, call or 'phone Hornsey 2917 for big bargain list.

1919-21 Ariel 3½h.p. and sidecar, Mr. F. E. Jones's competition gold medal machine, specially tuned; £80.

ROVER 5-6h.p. Sports Solo, 3-speed, all-chain, shop-soiled, otherwise new, 1921; £110.

RUDGE I.O.M., shop-soiled, £70; 8h.p. Enfield Combination, Magdyno, 1921, indistinguishable from new, £145.

1919 P. and M. Combination, exactly as new, equipped; £70.

HOBART-VILLIERS, shop-soiled; £42/10.

1920 Ariel 3½h.p., equipped, £72/10; also second-hand and new sidecars, from £7/10.

1919 2¾h.p. Douglas, 2-speed, fine sporty little bike, as new; £37/10.

1919 4h.p. Douglas Combination, first-class condition, any trial given; £79/10.

ROVER, new, 5-6h.p., 3-speed, all-chain, and special coachbuilt sidecar, fully equipped to special order (now cancelled), unused, complete price £135. Our special bargain of the week; many more, see display advertisement. For new machines, send for list.

ANY of the above can be had for one-quarter down, balance in 6 or 12 payments. All guaranteed 3 months. Send for particulars.—Jones Garage, Broadway, Muswell Hill, N.10. Motor 'bus from Highgate or Finsbury Park. [8538

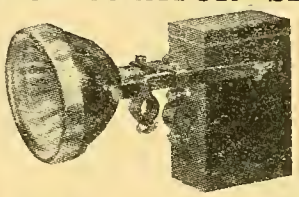
£25.—4h.p. J.A.P., clutch, Bosch, Amac, lamps, horn, tax paid.—33, Balham Rd., Edmonton. [8235

SPORTING J.A.P., 3½h.p., drop frame, special tank, long exhaust, very fast; £20.—1, Priory Rd., Kew. [8388


# ASTRA

HIGH CAPACITY

## ACCUMULATOR SET.



Solo, **£3 18 6**

Sidecar, **£4 15 6**

**Head Lamp:** 6in. front, adjustable focus, fitted with high efficiency 8 c.p. bulb. **Accumulator:** 4 volt, 40 amp., specially strengthened for motor cycle work. **Tail Lamp** combining detachable inspection lamp and complete with bulb. **All Lamps fitted with self-contained switches. Wired up** with best quality twin rubber covered cable, ready for instant fitting.

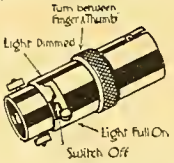
**LAMP SETS** complete but without accumulator: Solo, £2 11 6; Sidecar, £3 8 6.

*The above sets can be converted to Dynamo Sets for £7 10 2 extra, including all standard fittings.*

### "AN UNQUALIFIED SUCCESS"

To quote a Private user's unsolicited opinion of the **ASTRA DIMMER SWITCH & CURRENT ECONOMISER.**

State voltage and candle-power of headlamp bulb when ordering.

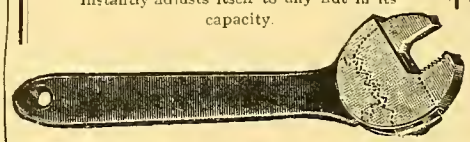



Price, **7/6** Post Free.

Instantly fitted without alteration to any lamp with standard double contact holder and adaptor. Fits between adaptor on headlamp lead and back of lamp.

**THE "MILESTONE" SELF ADJUSTING SPANNER.**

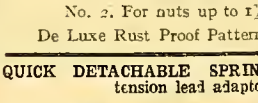
"The greater the pressure, the tighter the grip." Instantly adjusts itself to any nut in its capacity.



Prices: No. 1. For nuts up to 1 in., **3/6** } *Post*
No. 2. For nuts up to 1½ in., **6/-** } *Free.*

De Luxe Rust Proof Pattern, **6d.** extra.

**QUICK DETACHABLE SPRING GRIP, high tension lead adaptor.**



Price, **1/-** Post Free.

**For any Sparking Plug** with screw on terminal. Special internal fastening for high tension wire.

*TRADE INQUIRIES INVITED.*

**CATALOGUE OF DYNAMO LIGHTING SETS LAMPS & ACCESSORIES from**

**THE ASTRA DYNAMO Co.,**
**110, Victoria Street, London, S.W.1.**
Telephone: Victoria 7544 and 7545.


## MOTOR CYCLES FOR SALE

### Miscellaneous.

£35.—4h.p. J.A.P. Combination, J.A.P. engine, able outfit, tax 50/-, trial given.—W. H 17, Thames St., Hampton.

FORGE Garage, 74-76, Brighton Rd., S 'phone, Kingston 3025), have the f machines for sale or exchange—

FORGE Matchless, 1921, model H, comb fully equipped, with hood, screen, lam shields, etc., very small mileage, as new; £12.

FORGE Matchless, 1920 combination, in e condition, equipped; £100, or exchange.

FORGE Douglas combination, 4h.p., 1918, u lent running order, good tyres, equipped; exchange.

FORGE Clyno combination, 8h.p., J.A.P. en seater sidecar, hood, screen, speedometer, etc., in excellent condition; £70, or exchange.

FORGE Triumph, 3½h.p., clutch model, run bargain; £22, or exchange.

FORGE Garage, 74-76, Brighton Rd., S 'Phone, Kingston 3025.

WANDSWORTH Motor Exchange.—(Grea gains.) Motor cycles, combinations selection; exchanges; easy terms.

WANDSWORTH.—Cheap Machines is our Cheap machines, nothing dear; all cl

WANDSWORTH.—Easy terms. The only give immediate delivery first deposit.

WANDSWORTH.—Triumph 3½h.p., magnet clutch; drive away; only 22 gns. terms.

WANDSWORTH.—Premier 3½h.p., magnet condition, licensed, drive away; 26 gns. terms.

WANDSWORTH.—Rex, beautiful coachbuil bination, 5h.p. twin, 2 speeds, lamps hauled, newly enamelled; 45 gns. Easy terms

WANDSWORTH.—Humber coachbuilt Combi 4½h.p. twin, 2 speeds, kick, lamps, painted; cheap, 42 gns. Easy terms.

WANDSWORTH.—Premier coachbuilt Combi 3½h.p., 3 speeds, licensed, lamps; 3 Easy terms.

WANDSWORTH.—P. and M. 1918 3½ speeds, kick; only wants seeing; 4 Terms.

WANDSWORTH.—Levis 1916 2¼h.p., good runs beautifully; cheap, 29 gns. Easy

WANDSWORTH.—New Hudson 1921 2¼ speeds, almost new; 46 gns. Easy te

WANDSWORTH.—Indian 7h.p. twin, 2 first class condition; 46 gns. Easy te

WANDSWORTH.—Indian 7h.p. twin, 3 spring frame, newly enamelled; 5 Terms.

WANDSWORTH.—Indian (late) Powerpl speeds, spring frame, powerful; 55 gns. terms.

WANDSWORTH. — F.N., magnificent m 5-6h.p., 2 speeds, disc clutch, newly ena newly plated; 55 gns.

WANDSWORTH.—Scott (latest) coachbuilt bination, twin water-cooled, absolutely a gns. Easy terms.

WANDSWORTH. — Triumph (latest) 4h speeds, absolutely as new, unscratch gns. Terms.

WANDSWORTH.—A.B.C. (latest) coachbuil bination, twin, 4 speeds, lamps, speed 79 gns. Terms.

WANDSWORTH. — Henderson (latest), lighting, 10 h.p., 4 cylinders, 3 spee gns. Easy terms.

WANDSWORTH.—Indian (latest) coachbuil bination, dynamo lighting, everything 89 gns. Easy terms.

WANDSWORTH.—Singer (clutch model), dropped frame, drive away; 22 gns. terms.

WANDSWORTH.—F.N., 5-6h.p., 4 cylinders disc clutch, runs splendidly; cheap, 2 Terms.

WANDSWORTH.—10 fine coachbuilt Sid Grindleys, Glorias; also wickers; prices —Below.

WANDSWORTH.—Exchanges.—Wandsworth Exchange, Ebner St., Wandsworth. Station.) 'Phone: Latchmere 4686.

F.O.C.H. for secondhand cycles, combinatio runabouts at bargain prices. Exchang ranged. Any new cycle, combination or ca plied, cash or deferred payments.—Fair Offe House, 5, Heath Street, Hampstead (near 'Phone: Hampstead 3752. Hours 9-7, in Saturdays.



**All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES WANTED.

ALWAYS Wanted, immediately, any number of second-hand machines and combinations; a competent representative will be sent to inspect and complete purchase after preliminary negotiations; cash and good prices paid.—Longman Bros., 17, Bond St., Ealing. Telephone: 689. [3046

WANTED, your old motor in part payment for any make of new machine, Triumph, James, Matchless, Zenith, etc.; also any machine supplied on deferred payments; we have a big demand for second-hands, so can allow best prices.—Wandsworth Autocart, 8, High St., Wandworth. [8255

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address, Palmer's Garage, Tooting. [8140

## MOTOR SCOOTERS.

FOR Sale.—Grigg scooter, quite new; £23.—8, Council Houses, Brackley. [6921

KINGSBURY Scooters and Spare Parts.—Beaufort Works, Richmond Rd., Twickenham. [2231

WANTED, Motor Scooter, latest model, self-starter. —Francis, 28, Partridge Rd., Cardiff. [6229

BEAUTIFUL Kingsbury Scooter, seat attached, as new; £16.—84a, Harley Rd., Harlesden. [6924

A.B.C. Skootamota, new, unsoiled, latest model; £23, sacrifice.—Frank Whitworth, 139, New St., Birmingham. [4658

SKOOTAMOTA (Camplings), perfect condition, not ridden 50 miles; what offers?—Croft, 1, Herschel St., Slough. [6283

AUTO-SCOOTER, perfect, £8, or exchange 2-stroke; cash adjustment.—Allston, Lyndhurst, Mauland Av., Harpenden. [8195

A.B.C. Scootamota, latest model, unsoiled, inspection invited; nearest £24; tax paid, room wanted.—Hilliard, Harlow, Essex. [8226

NEW Shop-soiled Autoped Scooters, dynamo lighting, 1½h.p.; bargain, £12/10 each.—Percy and Co., 514, Euston Rd., N.W.1. [8464

## MOTOR ATTACHMENTS.

AUTO-WHEEL (late), new tyre, perfect; £5/10.—10, Baronsmead Rd., Barnes. [6863

£17.—1921 Youngs Attachment on gent.'s cycle, perfect.—King, Egrove Farm, Oxford. [8533

YOUNG Attachment, new, perfect condition, must sell; £15.—Huntly, "Beaulieu," New Barnet. [6288

MOTOR Attachment (Young), 1921, tax paid; £10/10.—18, Kirkside Rd., Blackheath, London. [6371

WALL Auto-Wheel, good running order, new parts, cheap; £7/10.—Thompson, Dhoon, Hoghton, Preston. [8214

GENUINE Wall Auto-wheel, complete, splendid condition; £10.—Murray, 37A, Charles St., Hatton Garden, Holborn. [8341

YOUNG Motor and Cycle, in splendid condition, electric light, etc., licensed for 1922; £24, or near offer.—Mattock Motor Co., Mattock Lane, Ealing, W.5. [8212

YOUNG Attachment on Gent.'s Model-de-Luxe Cycle 1922, lamps, horn, year's licence, not ridden; cost £33; accept any fair offer.—Rev. Arthur, Buckland, Faringdon, Berks. (D) [6505

MATCHLESS 1921 8h.p. M.A.G. Special Engine, dynamo lighting, fully equipped, single-seater sidecar, Eastlig screen; seen by appointment Sunday next.—112, Rectory Lane, Tooting. [8517

## HOODS, WIND SCREENS, ETC.

COLLINS and Son for hoods, screens, and aprons; hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreens, complete with apron; 22/6, 30/-, and 35/-; sent on approval against cash; carriage 1/6 extra.—Below.

COLLINS and Son stock all known makes of windscreens; we have a few second-hand Standard Eastings, fitted with new celluloid, from 45/-.—Below.

COLLINS and Son fit celluloid panels to any windscreen in few hours, new aprons, side curtains, etc.; open weekdays till 8.30, Sunday mornings till 1 o'clock.—Collins and Son, rear of 84, High St., Putney, S.W. (D) [6025

V-SHAPED Windscreens, with apron, from £2/15.—Bright and Hayles, 78, Church St., Camberwell. [8248

HERCULES Hoods and Aprons; write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [0853

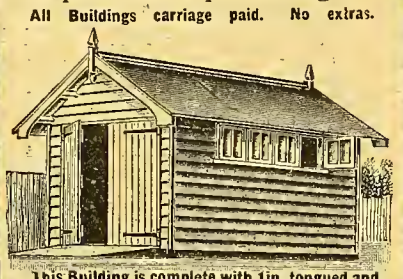
EASTING Windscreen, brand new Royal, guaranteed perfect; genuine bargain, £3/10.—Lloyd, 27, Hamilton Ter., Milford Haven. [6186

BENT Hoops, hood fittings, straps, turnbuttons, twills, etc.; hardwood polished wind screens, 27/6.—Henry Jones, 778, High Rd., Tottenham, London. [3239

# STOP

**at this and compare prices and quality. Invitation to inspect before purchasing.**

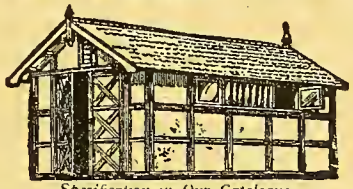
**All Buildings carriage paid. No extras.**



**This Building is complete with 1in. tongued and grooved floor, ¾in. match-boards or weather-boards, 3in. framing, strong boarded roof, best pluvex felt. Building treated with weather-proof composition. Prices, complete and carriage paid to any station in England and Wales.**

| | | | | | |
|---|---|---|---|---|---|
| 8× 6 | £8 0 0 | | 16×10 | £27 0 0 | |
| 10× 8 | £13 0 0 | | 18×10 | £33 0 0 | |
| 12× 8 | £17 10 0 | | 20×10 | £37 10 0 | |
| 14×10 | £23 0 0 | | 20×12 | £40 0 0 | |

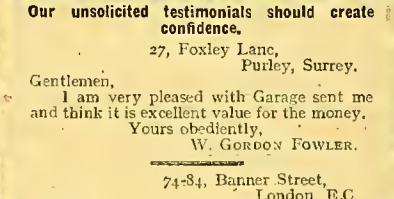
**OLYMPIA MODEL ASBESTOS BUILDING.**



*Specification in Our Catalogue.*

| | | | |
|---|---|---|---|
| 12× 8 | £23 10 0 | 18×10 | £42 10 0 |
| 14×10 | £32 15 0 | 20×12 | £46 15 0 |
| 16×10 | £37 15 0 | | |

Delivered with iron roof complete. Fire-proof and sound-proof.



**Our unsolicited testimonials should create confidence.**

27, Foxley Lane,
Purley, Surrey.

Gentlemen,

I am very pleased with Garage sent me and think it is excellent value for the money.

Yours obediently,
W. GORDON FOWLER.

74-84, Banner Street,
London, E.C.

Dear Sirs,

The Garage arrived and is quite satisfactory and we have recommended several people in Wembley to place their orders with you. You have already supplied a gentleman through our recommendation.

Yours faithfully,
CHATER LEA, LTD.,
(Motor Experts).

30, Brewery Street,
Pembroke Dock,
South Wales.

Dear Sirs,

Building received, and very well satisfied with it. Many thanks.

Yours faithfully,
A. PARKES.

**Illustrated Catalogue Free.**

**SOUTH-WESTERN APPLIANCE Co.,**
**High Street, Fulham, London, S.W.**
Telephone: PUTNEY 2771.

## HOODS, WIND SCREENS, ETC.

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2321

ROBINI Manufacturing Co.—The Bower adjustable windscreen, registered, with coverall apron, 30/-, carriage paid. Beware of imitations. Celluloid panels fitted, Eastings, 16/6; Coverall aprons made to order, 10/-.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone: Brixton 1585. [8164

## BODIES.

LIGHT Car and Motor Cycle Engineering Co., Ltd.

LIGHT Coachbuilt Bodies, bulbous back and locker, from £7/7; Touring de Luxe, from £9/9. Many other models in stock. Customers' old sidecars taken in part payment. Second-hand bargains. Genuine Enfield body, indistinguishable from new, £7; Millford bodies, renovated as new, from £4.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. (Half-minute from Brixton Skating Rink.) [8327

RENNOC Sidecar Bodies, actual manufacturers, 35 models, also several clearance, cheap to clear.

RENNOO Co. specialise in repairs, repainting, and upholstering.—Rennoc Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. [2320

COLLINS and Son for coachbuilt bodies, all models in stock, from lightweights to 2-seater.—Below.

COLLINS and Son are actual manufacturers, and give twelve months' guarantee with every body made by them.—Below.

COLLINS and Son repair, repaint and upholster at moderate charges, first-class work guaranteed; estimates free; send for catalogue.—Collins and Son, rear of 84, High St., Putney, S.W. [4084

BARGAIN.—Coachbuilt body, nearly new, apron, suit single; £6/10.—Webber, Eastleigh, Honiton. [7037

LARGE Bulbous Body by Dunhill, 2 lockers, with Easting screen; £6/10.—9, Church Rd., Harlesden. [7054

EDWARDES Sporting Bodies, bulbous back, large locker, beautifully upholstered; £4/15.—277, Camberwell Rd., S.E. [8361

BASTONES for Sidecar Bodies, all latest models in stock from £4.—228, Pentonville Rd., King's Cross, London, N.1. [5131

WILLOWBROOK Bodies to fit any chassis; prices from £5 upwards; write for designs.—Willowbrook Motor Co., Leicester. [0326

EDWARDES Sidecar Bodies, bulbous back, full size, painted any colour; £4/15; my value cannot be beaten.—277, Camberwell Rd., S.E. [8362

CAMBER Sidecar Bodies from £4/17/6; bodies repainted and upholstered from £3.—Bright and Hayles, 78, Church St., Camberwell. [8249

CANE Sidecar Body, enclosed front, side door, very good condition; £2/17/6.—Marshall, 45, Lockford Lane, Stonegravels, Chesterfield. [7025

POSTCARD Saves Pounds re Bodies, hoods, screens, upholstering, painting; few secondhand bodies.—Works, 132, Crystal Palace Rd., East Dulwich. [8400

BODIES.—Models fitted to any chassis same day; hoods, screens, aprons, repairs.—T. Williams, Manufacturer, 9, Lower Chatham St., Oxford Rd., Manchester. [6869

GARDNER and Speedy, 2-seater, £9. Single, £6. Bodies to order. Painting and re-upholstering as new, £2/15. Screens repaired, 12/-. Terms to the trade.—67, Effra Rd., Brixton. [8556

MATCHLESS 1921 Sidecar Body and Hood only for sale, in splendid condition; £14, or near offer, or exchange for 2-seater body with cash adjustment.—Rhosha Motor Co., South St., Romford. Tel.: 95 [8291

COBB Speedman Famous Sidecar Bodies are the cheapest on the market. Made by highly skilled trade union labour from sound and seasoned timber; to match your machine from £2/12/6 carriage paid; no extras.—Vernon Cobb, 18, Midland Rd., Carlton, Nottingham. [6870

£3/15.—Great bargains in bodies, beautifully finished, from £3/15; 2-seaters, adaptable for 2 adults, or 1 adult and child, from £9; all bodies finished to order. Write for particulars.—Robini Manufacturing Co., 1 and 3, Tulse Hill, Brixton, S.W.2. 'Phone: Brixton 1585. [8153

SIDECAR Body Designs for the trade only. Working, coloured pencil, or line drawings of original designs, also working drawings, full-sized or to scale.—Cooper's Vehicle Journal, Designing Dept., established designers to the coach trade for over 80 years. Consult us when designing new ideas.—Dorset House, Tudor St., London, E.C.4. [0004

£4/17/6.—250 Douglas type, bulbous backed, and locker under seat, brand new, bodies upholstered in rexine; £4/17/6 each; owing to contract, we have bought right, so sell right; they simply require a finishing coat to complete; photo sent on request and stamp. 'Phone: 1958 Brixton.—19, Wilcox Rd., South Lambeth, London, S.W.8. [8468

## SIDECAR ATTACHMENTS.

S FOR SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the talk of the show; £14 to £50. Write for new catalogue.

SANDUM (V-shaped) Wind Screen a hood, screen, and apron; £2/15 and £3/18. Write for list.

SANDUM (V-shaped) Wind Screen.—Our South London agent writes: "An instantaneous success; sold out; send further supply." Agents, get in touch with us.

SANDHAM Engineering Co., Ltd., 336, Gray's Inn Rd., W.C.1. 'Phone: Museum 3427. [0019

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines; Zenith, Harleys, Indians, New Imperials, Sunbeam, Blackburnes, etc.

INDIANS with kick starter on left present no difficulty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks promptly corrected.

SECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on bad roads than rigids. They give to the bumps, not bash into them.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud Green Rd., Finsbury Park (near Tube). 'Phone, Hornsey 1584. [0522

BASTONES for Sidecars, no better or cheaper house. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6.

BASTONES. — Sports model sidecar, complete, £17/10; several other models in stock, including tandem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models in stock.

BASTONES for Sidecar Chassis, underslung £7/19/6. tandem chassis £14/10, auxiliary arms 14/-.—228, Pentonville Rd., King's Cross, London, N.1. 'Phone: 2481 North. 'Grams: Bastones, London. [6049

LIGHT Coachbuilt Sidecar; £6/10.—Kennard, 78, Yerbury Rd., Holloway, N.19. [6846

COACHBUILT Sidecar, in good condition; £4.—123, Alexandra Rd., Hampstead. [6722

TRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

TRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

TRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

TRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmansworth. 'Phone: 5. [4195

LIGHT coachbuilt sidecar, new body, coverall apron; £8.—82, Church Rd., Mitcham. [6849

CAMBER.—Utility model; £25.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER.—Utility tandems; £27.—Bright and Hayles, 78, Church St., Camberwell, London.

CAMBER.—Semi-sports model; £17/10.—Bright and Hayles, 78, Church St., Camberwell. [8251

£6.—Good sound coachbuilt sidecar, fit any machine.—King, Egrove Farm, Oxford. [8535

SIDECARS.—Several, cheap; room wanted.—57, Kenbury St., Coldharbour Lane, London, S.E. [6800

NEW Coachbuilt Sidecar; £17/10, cost £35.—3, Carlton Rd., Putney Hill. 'Phone: Putney 61. [6158

SIDECAR, coachbuilt, re-upholstered, in new condition; £10/10.—76, Dalling Rd., Hammersmith. [6848

SIDECAR, coachbuilt, complete, medium, £7/10; light Canoelet, £7/10.—17, Heaton Rd., Mitcham. [6600

1922 Watsonian Sports Sidecar, complete, windscreen; bargain, £19.—422, High Rd., Leyton, E.10. [6240

9 GNS.—Lightweight sporting Henderson sidecar, complete, perfect.—Smith's, 86, Chalk Farm Rd., N.W.3. [7029

CHATER light sidecar chassis, springs, excellent condition, best offer.—18, Woodbine Crescent, Stockport. [7039

A.B.C. Sidecar, hood, screen, lamp, excellent order; £25, carriage paid, or offer.—Howdens, Seedsmen, Inverness [5140

# BASTONES

**Established 16 Years.**

***No Better or Cheaper House***

| | | |
|---|---|---|
| 24×2 | **Clincher de Luxe,** Heavy | 22/6 |
| 24×2¼ | **Hutchinson,** Super Stud | 26/- |
| 26×2 | **Englebert,** Passenger Rubber Stud | 17/6 |
| | **Bergougnan,** 3-ribbed, Heavy | 18/6 |
| 26×2¼ | **Hutchinson,** T.T., Rubber Stud | 23/- |
| | **Clincher de Luxe,** Heavy | 24/6 |
| | **Midland,** Rubber Stud, Heavy | 24/- |
| | **Rom,** Rubber Stud, Heavy | 26/- |
| | **Goodrich,** Safety Tread, ex-Heavy | 28/- |
| | **Rom** Combination | 37/- |
| 26×2½ | **Hutchinson,** T.T., Rubber Stud | 25/- |
| | **Midland,** Rubber Stud, Heavy | 25/- |
| | **Kempshall,** Anti-skid, Heavy | 30/- |
| | **Clincher de Luxe,** Heavy | 25/- |
| | **Clincher de Luxe,** ex-Heavy | 27/- |
| 26×2½ to fit 26×2¼ | **Goodrich,** Safety Tread | 36/- |
| | **Dominion,** UscoRubber, non-skid, Heavy | 28/6 |
| | **Dominion,** Corrugated, Heavy | 30/- |
| | **Dominion,** Nobby Tread, ex-heavy | 36/- |
| | **Hutchinson,** T.T., Ribbed | 30/- |
| | **Midland,** Ribbed, Heavy | 30/- |
| | **Hutchinson,** Super Stud, ex-Strong | 55/3 |
| 26×2½ | **Bergougnan,** 3-ribbed, Heavy | 23/- |
| | **Goodrich,** Safety Tread | 35/- |
| | **Midland,** Rubber Non-skid, Heavy | 26/- |
| | **Hutchinson,** T.T., Rubber Stud | 26/6 |
| | **Wood-Milne,** ex-Heavy | 19/6 |
| 26×2½ | **Michelin,** Fine Ribbed | 20/- |
| | **Hutchinson,** T.T., Rub. Stud | 29/- |
| | **Skew,** Rubber, Non-skid | 30/- |
| | **Englebert** (Wired Edge) | 25/- |
| | **Clincher de Luxe,** ex-Hvy. (Wired Edge) | 39/- |
| 26×3 | **Midland,** Ribbed, ex-Heavy | 35/- |
| 650×65 | **Wood-Milne,** Special Heavy | 18/6 |
| | **Goodrich,** Safety Tread, ex-Heavy | 40/- |
| | **Clincher Dreadnought** | 36/- |
| | **Clincher de Luxe,** ex-Heavy | 35/- |
| 700×80 | **Clincher de Luxe,** Heavy | 42/- |
| | **Goodrich,** Safety Tread, ex-Heavy | 48/- |
| | **Super Chain,** ex-Heavy | 42/- |
| | **Clincher Cross,** ex-Heavy | 48/- |
| | **Clincher Cross,** Fine Ribbed | 44/- |
| | **Hutchinson,** Super Stud, ex-Strong | 61/- |
| 28×3 | **Goodrich,** Safety Tread, ex-Heavy | 48/- |
| | **Hutchinson,** Super Studded, ex-Heavy | 64/3 |
| 29×2¾ | **Fisk,** Rubber, Non-skid, ex-Heavy | 42/- |
| | **Goodyear,** Rubber Stud, ex-Heavy | 40/- |

## TUBES.

**Goodrich, Clincher, Hutchinson,** and **Red Fox.**

| | | |
|---|---|---|
| 24×2 and 24×2¼ | each | 4/3 |
| 26×2¼ and 26×2½ | each | 5/6 |
| 700×80, 28×3 and 650×65 | each | 7/6 |
| Goodyear Butted 28×3 | each | 7/6 |

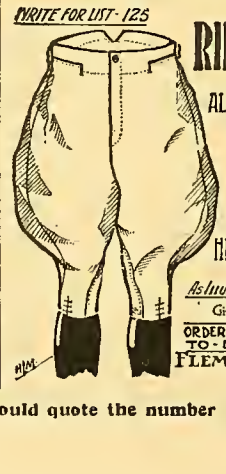
*The above New Clearance Covers and Tubes are sent on approval against remittance CARRIAGE PAID.*

**Large stock of Sidecar Bodies and complete Sidecars to be cleared at low prices, also full range of MONTGOMERY Sidecars in stock.**

**HOURS—9 till 6: Saturdays 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

'Phone: 2481 North. 'Grams: Bastones, London.



*WRITE FOR LIST-125*

## RIDING BREECHES

MADE FROM ALL-WOOL KHAKI SERGE

DOUBLE SEATS LACED KNEES

PER **14/3** PAIR.

Postage 1/-

DITTO MADE FROM HEAVY ALL WOOL BEDFORD CORD

WITH LEATHER OR SELF STRAPPINGS

*As Illustrated* **32/6** POSTAGE 1/-

Give Waist measurement & Height.

ORDER YOURS TO-DAY.

These are easily one of the finest bargains ever offered to readers of the Motor Cycle.

FLEMING BROS. REDCAR. SATISFACTION MONEY REFUNDED.

## SIDECAR ATTACHMENTS.

SCOTT Sidecar, ex-W.D., complete; £5/10.—W. J. Motor Exchange, 5, Addison Avenue, Holla Park, W.11. [84

BOOTHS Blackpool Bargains.—Limited number, n coach bodies, full size, with locker, £5/17/ usually £9/10.

BOOTHS Blackpool Bargains.—New £9/10 coa bodies for £5/17/6; illustration free.—Boot Motories, Blackpool.

BOOTHS Blackpool Bargains.—Quantity new und slung chassis, 4-point attachment, £9/19/ illustration free.—Booths Motories, Blackpool.

BOOTHS Blackpool Bargains.—Several shop-soil sidecars, cheap; Hercules coach sidecar, £9/10/ ditto Canoelet, £8/10/6 ditto Farlow, £8/10/6; ca body, 22/6.—Booths Motories, 294, Waterloo R Blackpool. [50

WHITLEY Sidecars, Coventry.—Three models, £ £29/10, £32/10. Nothing on one wheel equal. Lists free. [08

CANOELET Sidecar, nearly new, storm cover, tings, screen, very smart, bargain; £13.—89, E Hill, Wandsworth. [66

INDIAN 1919 spring-frame sidecar, excellent finis apron, lockers, carrier, toolbox; £15.—Hamly Limpsfield, Surrey. [85

HEAVYWEIGHT Matchless sidecar, windscreen, e cellent condition throughout £12/10.—Downin 19, Regent St., Kettering. [66

MONTGOMERY No. 1 Sidecar, 1921, comple apron and fitting, off Triumph; 9 gns.—B 1373, c/o *The Motor Cycle*. [69

EXTENDED Payments accepted for sidecars; mode for all makes.—Send for catalogue, etc., Rides Sales, Ltd., 5, Victoria St., S.W.1. [08

WHITLEY Sidecars, second-hand, suitable for and M. machines only; only a few left; £9 ea net.—Maudes', 100, Great Portland St., London. [62

RENNOC Sidecars, bodies, hoods, screens, large stock in London, actual manufacturers throug out. Send for our catalogue, 32 pages, 80 illustration

PHŒNIX Sidecars.—All spare parts in stock by t Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for India motors, with left-hand kick starters, and ca deliver.

RENNOC Co. have 50 second-hand and clearan sidecars, bodies, hoods, etc., all to clear at knoc out prices. Note; Write for special clearance list.

RENNOC Co. have the finest selection of comple sidecars in the trade.

RENNOC Co. undertake repairs to any make of sid car; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all make English and American.

RENNOC Co. again ask you to send for the catalogue, the most comprehensive issued by ar manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upp Holloway, N.19. 'Phone: Hornsey 1589. [231

1919 Sunbeam Sidecar, complete, hood, scree grid, lamp, excellent condition; £18, bargain. Craswell, Wig-Wam, Wolsey Rd., Ashford, Middlesex [64

COLLINS and Son for Sidecars, new bulbous ba models complete with renovated underslung cha sis, with fittings for any machine, from £12/10. Below.

COLLINS and Son.—2-Seater bulbous back coachbui models, with renovated underslung chassis, fro £15.—Below.

COLLINS and Son.—New Montgomery Chassis, fitte with our 1922 bulbous De Luxe coachbuilt bod supplied with fittings for any machine, £18/10. Below.

COLLINS and Son.—New Mills-Fulford Chassis, wit bulbous back coachbuilt body, supplied with fi tings for any machine, £17/10.—Below.

COLLINS and Son specialise in frame and chass repairs; all work guaranteed; send for catalogu Open weekdays till 8.30, Sunday mornings till o'clock.—Below.

COLLINS and Son will take your present sidec in part payment of any model; a few second-ha sidecars in stock.—Collins and Son, rear of 84, Hig St., Putney, S.W. [40

GLORIA Sidecar, 1916, with Easting windscree good tyre, in good general condition, fit late Triumph; £10.—Gittins, Blaby Rd., Enderby, n Leicester. [66

SPORTING Lightweight, Watsonian sidecar, co plete with all fittings, new tyre; whole in ne condition; first £6 secures.—Tennant, 37, Lewis S Stranraer. [61

SPORTING Sidecar Body, equal to new, locker back, convenience for carrying bags, windscree suit any machine; £7.—Youngs, 22, Racton Rd., Fu ham, S.W.6. [66

## IGNITION, LIGHTING, ETC.

THE Central Ignition Works, London.—Surplus magnetos, not converted from ex-W.D. starter magnetos.

MAGNETOS for All Motor Cycles.

BOSCH twins types: Z.A.2, £3/10; Z.U.2, £4/10, enclosed, waterproof, variable ignition.

BOSCH Singles; £3/10.

M.L. singles only, enclosed waterproof, variable ignition, £3/10.

B.I.C. single and twin, enclosed waterproof, variable ignition, £3/5.

THOMSON-BENNETT single and twin, enclosed waterproof, variable ignition, £3.

RUTHART, singles only, enclosed waterproof, variable ignition, £2/10.

C.A.V. single and twin, enclosed waterproof, variable ignition, £3.

C.A.V. and Ruthart Magnetos, fitted with genuine Rudge driving spindles. C.A.V., £3/7/6; Rutbart £2/6.

THESE magnetos were formerly made exclusively for Rudge motor cycles, so that you can in no way doubt their entire efficiency.

BOSCH Sparking Plugs, suitable for all English cars and motor cycles, long and short reach, 1/6 each. Carriage on each plug, 2d. on orders up to 6, over 6, carriage free.

REPAIRS accepted for all magnetos.

SPARES Stocked, all types.

ALL goods despatched by the Central are forwarded on approval against cash. If dissatisfied, your cash refunded within 24 hours.

GUARANTEE.—We guarantee all our magnetos for a period of twelve months, and will willingly replace or repair any magneto that should prove defective within that period.

CARRIAGE on all magnetos, 1/6.—The Central Ignition Works, 14, Loughborough Rd., Brixton, London, S.W. Tel.: Brixton 210. [5875

RELIANCE Magneto Repairing Co. (the largest London repair depot) for repairs and new magnetos.—See below.

RELIANCE Guarantee to Return your magneto within 3 days, if necessary 24 hours, with a 12 months' written guarantee.

RELIANCE Test Every Magneto after repair under all running conditions, and, as we contract for many of the largest concerns, you need have no hesitation in placing your repairs and orders with us.

RELIANCE Manufacture and Stock Spare Parts for all magnetos. Special line, genuine platinum points for every make, 12/- per pair.

RELIANCE will be pleased to give advice, free of charge, upon any question concerning ignition troubles, as we place our long-standing experience at your disposal, and old and new customers may be certain of getting the usual promptness and courtesy we have always endeavoured to give.—Reliance Magneto Repairing Co., 283, St. John St., London, E.C.1.

RELIANCE Magneto Repairing Co., 283, St. John St., London, E.C.1, for new and second-hand magnetos.

THOMSON-BENNETT Magnetos, brand new, enclosed waterproof type, singles, suit any engine, price £3; twins, 45, 48, 50, 55, 60, 180 degrees, for Douglas, Clyno, etc., price £3. See our guarantee below.

C.A.V. Magnetos, waterproof, new and unused, singles and 180 degrees twins, suitable for Triglas, O.K., Calthorpe, A.J.S., Enfield, Levis, New Imperial, Scott, Velocette, or any lightweight. These magnetos are of the finest workmanship throughout. Price £3. See our guarantee below.

BEFORE Sending Elsewhere, send a P.C. for our small interesting booklet showing a full range of magnetos to suit every engine, with full particulars and prices.—See below.

GUARANTEE.—Every magneto, no matter what the price or make, is guaranteed by us. Not only a guarantee that same is in good order at time of sale, but a plainly written statement that we guarantee each machine against all defects for a period of 12 months. This, we maintain, justifies us in charging a few shillings more than certain of our competitors.

RELIANCE Cordially Invite Customers to their works to see any of the above on test. Magneto list giving full particulars, sent upon application. It will pay you to deal with a firm of repute.—Reliance Magneto Repairing Co. (1914), 283, St. John St., London, E.C.1. Telephone: Clerkenwell 4290. Telegrams: Remagco, Isling, London. [3682

SPARKING Plugs, new, 1/6 each; copper-asbestos washers, 3/9 gross; motor lubricating oil, 2/-gallon.—Ignition, 69, Lower Essex St., Birmingham. [6604


# Challenge Oils

FOR SATISFACTORY LUBRICATION.

STOKE NEWINGTON, LONDON, N.16.



*Try*

# HEPWORTH'S

*The Piston and Ring Specialists*

for

**Regrinding Motor Cycle Cylinders and Fitting New Pistons, Pins, and Rings**

**PRICES.**

**A.J.S., 4 and 6 h.p.; Ariel 3½ h.p.; Bradbury 4 h.p.; B.S.A., 4½ h.p. and Dome head; Blackburne 2¾ and 4 h.p.; Indian 7-9 h.p. and Powerplus; Jap 2¾, 6, 8, and 10 h.p. Norton; Premier 3½ h.p.; Precision 8 h.p.; Rudge 3½ h.p.; Triumph 3½ h.p. (Dish head), 4 h.p. (Flat head), and 1914 Dome head; 35/- each.**

**Douglas 1914-20 2¾ h.p. 36/- pair.**

**Douglas 3½ & 4 h.p. 46/- pair.**

**First Class Material and workmanship and quick delivery.**

*Carriage F.O.R. Bradford.*

Please Send Old Piston with Cylinder

**HEPWORTH RINGS**

**conform to Air Board Chemical Analysis and Physical Test.**

*HEPWORTH PISTON RINGS were used on the Napier "Lion" engine in the D.H.9 Biplane, which broke the world's altitude record, and also on the same type of engine which was fitted to the machine winning the British Aerial Derby, 1921.*

**HEPWORTH & GRANDAGE, Ltd.**
Wakefield Road, BRADFORD.


## IGNITION, LIGHTING, ETC.

ACCUMULATORS.—Quality right; price right; write for list; trade supplied.—Adams Bros. (Longton), Ltd., Accumulator Manufacturers, Longton, Staffs. [1284

ANY Motor Cycle Magneto repaired, no matter what condition, provided complete, for 30/-; 24 hour service.—Kays, Electrical Dept., 8, Bond St., Ealing, W. [4838

CHELTENHAM.—Repairs to magnetos, self-starters, lighting plants, etc.; London experts employed.—Norwood Magneto Works, 85, Bath Rd., Cheltenham. 'Phone: 1256. [0758

DASH Switchboards, 4-way, with ammeter, 20/-; with ammeter and voltmeter, 35/- each nett.—Leslie Dixon and Co. (Dept. M.1), 9, Colonial Av., Minories, E.1 [0760

MAGNETOS Overhauled and Repaired from 15/- to 35/-; returned as new in 2 days and guaranteed for 12 months.—Turner Bros., Magneto Repair Service, Summerseat, Manchester. [5371

DOUGLAS Magnetos, new, 2¾h.p., 45/-; singles, for Triumph, etc., 50/-; approval against cash.—Lynwood Garage, 85A, Upper Tooting Rd., S.W. 'Phone: Streatham 2839. [4869

JEBRON Contacts, used by Messrs. Collier Bros., platinum, for blades, screws, etc., cures misfiring; Jebron screws, fit Bosch magneto, 10/6 pair; old screws, any make, Jebronised, 4/9 each, return post.

JEBRON Contacts, used by Messrs. Collier Bros., Colver, Martin, making world's records.—Jebron, 38, Herbert Rd., Woolwich, London, S.E.18. [0002

LUCAS Lighting Set, off Enfield, head, tail, side lamp, with brackets, accumulator, cut-out, switchbox, 6v. 6a. dynamo with housing, electric horn; £8/10, perfect.—Dawson, Butcher, Stanford-le-Hope, Essex. [6244

C.A.V. Magnetos.—Extraordinary bargains. Brand new 180° twin or single cylinder, 38/6, carriage free. Every magneto thoroughly tested before despatch; approval against cash. Kindly state rotation required.—Langford's, 37, Cricklewood Broadway, London, N.W2.. [6712

LION, the British Magneto backed by over 10 years' experience. The ideal magneto for single-cylinder engines up to 3h.p., light in weight and absolutely waterproof; retail price, £4. Trade prices and terms on application.—The Britannic Electrical Co., Ltd., 10, Warstock, near Birmingham. [6172

SURPLUS Magnetos, with written guarantee one year: M-L single, 35/-; B.I.C. ditto, 42/-; Bosch ditto, 45/-; C.A.V. single or twin, 50/-; Thomson-Bennett ditto, 60/-. We specialise in repairs and spares for all makes. Lists, 2d. stamp. Deal with experts and avoid certain disappointment.—Whitdale Magneto Service, Cherry Orchard, Croydon. 'Phone: Croydon 1625. [6490

BRAND New Thomson-Bennett Magnetos, type AC2 180° anti clock, 45/-; Splitdorf Model EU single anti clock, 38/-; large type Dixies, single clock or anti, 30/-; 50°, 55°, 180°, 35/-. All the above are guaranteed perfect. None of these magnetos are converted or reconstructed starter mags. They are the genuine article.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd. 789. [3103

THE Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government, and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can mostly return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock, all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1. 'Phone: Museum 1158. T.A.: Kumagnelec, Ensroad, London. [2445

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repairs and spares. All repairs are tested on an approval A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock; charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034. T.A.: Magdyno, Ensroad, London [0263

## TYRES.

POST your repairs to-day and have them back in 2 days.—Below.

2/6 upwards we charge for repairing your burst tyres; tubes from 1/-.—Below.

OLD covers made equal to new again, retreaded with rubber studs, and guaranteed to wear as good as new; prices 10/6, 12/6, 15/6, 17/6, and 20/-.—Below.

JUST attach tally and band in to post office to-day, addressed to below.

PHŒNIX Tyre Repairing Co., 224, Sherlock St., Birmingham. [8436

## TYRES.

BULL'S Rubber Co., Ltd., 3, Upper St. Martin's Lane, W.C.2 (adjoining Aldridge's).

'PHONE Gerrard 1347 for tyres and accessories of all kinds at cut prices.

26×2 Avon Stonehenge, 20/-; 26×2¼ Avon, Clincher and Belgrave, etc., from 22/6; 26×2¼ Wood-Milne Keygrip, 4-ply, 38/-; 26×2⅜ (fit 2¼) Clincher E.H., 27/6; Wood-Milne Keygrip, 4-ply, 40/-; 28×3 Clincher, rubber studded, sidecar, 30/-; tubes, all sizes, 6/-.

LET us know your requirements, or call Bull's. [0869

26×3 Dunlop Extra Heavy, 30/-.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. [8431

EMANUEL'S For Tyre Bargains.—From Manufacturers', Bankrupt, and Surplus Stocks.—Below.

24×2.—Hutchinson rubber studded, 22/3.

24×2¼.—Clincher de Luxe heavy rubber studded, 22/3.

24×2¼ Bates, special heavy 3-ribbed; £29/9.

26×2¼ Hutchinson, Brooklands R.S.; 19/6.

26×2½×2¼ Bates, special heavy rubber non-skid; 43/7.

28×3 Bates, special 3-ribbed heavy; 50/8.

29×3½ (to fit 28×3 American rims), heavy rubber non-skid; 52/5.

26×2.—Continental standard and ribbed, 16/6; Wood-Milne Key-grip, 18/6; Hutchinson Brooklands rubber studded, 26/9; Palmer cord heavy, 34/6.

26×2¼.—Moseley heavy ribbed, 20/6; Bates special heavy beaded, 28/3; Macintosh chain heavy, 32/3; Palmer cord 3-ribbed heavy, 34/9; Dunlop Magnum heavy, 36/-.

26×2⅜.—Dunlop retreaded grooved, 20/6; Palmer cord 3-ribbed extra heavy, 35/3; Dunlop Magnum heavy, 35/9; Clincher de Luxe extra heavy, 24/3.

26×2½ (to fit 2¼ rims).—Emanuel's All-weather, 25/9; Hutchinson rubber studded or ribbed, 33/-; Bates special 3-ribbed extra heavy, 56/-.

26×2½.—Wood-Milne 3-ply, 13/6; Wood-Milne 4-ply extra heavy, 16/6; Rom. Combination, 38/9; Dunlop rubber non-skid, 41/-; Hutchinson rubber non-skid or ribbed, 29/9; Emanuel's extra heavy rubber non-skid, 45/-; Englebert passenger rubber, 32/-.

28×2½.—Hutchinson ribbed, 25/-; Spencer Moulton rubber non-skid, 30/-.

28×3 (to fit 2½ rims).—Dunlop heavy rubber non-skid, 45/-.

28×3.—Macintosh chain tread heavy, 27/6; Dunlop sidecar, 37/6; Dunlop heavy rubber studded, 44/-; Fisk extra heavy rubber studded, 46/-; John Bull extra heavy rubber studded, 68/-.

650×65.—Wood-Milne special key-grip, 14/6; Wood-Milne 4-ply extra strong, 25/-; Emanuel's rubber non-skid extra heavy, 26/6; Palmer cord light car, 40/-; Burnett grooved, 30/-; Dunlop steel studded, 45/-.

700×80 (to fit 650×65 rims).—Bates special heavy 3-ribbed, 52/6; John Bull extra heavy rubber non-skid, 55/-; Clincher grooved, 47/6.

EXTRA Heavy Rubber Studded Non-skid, 42/6.

NEW Tubes, all sizes, 7/-; clearance, 5/6 each.

H. EMANUEL and Co.—Stores, 37a, Balls Pond Rd., Dalston, N.1. Office, 27, Belgrade Rd., Stoke Newington, N.16. Tele.: Dal. 3161. [0832

INNER Tubes, 26in.×2⅜in., 2 Hermatic, 1 Palmer, good condition; 5/- each.—Box 1402, c/o *The Motor Cycle*. [8514

MOTORISTS.—Try our 3,000 mile retreads, repairs, etc., carriage paid.—Buxton Vulcanising Co., Buxton, Derbyshire. [9293

28×3 Pedley Clearance Covers, 39/6, list 70/-; 24×2¼ covers and tubes, 16/3 to 22/-, carriage paid.—Davies, Union St., Wednesbury. [4452

THE Difference between a good retread and a bad one is its mileage. Try us Watch results.—Melton Rubber Works, Melton Mowbray. [0636

SCOTTISH readers will find it advantageous to purchase their tyres from McArthur, Hill and Co., new address: 436, Argyle St., Glasgow. Lists post free. [6514

MISS DOOLEY.—New 28×3 Moseley Heavy Covers, not blemished in any way, price 35/- each, carriage extra; also new 28×3 Wood-Milne, extra strong, price 30/- each, carriage 1/6.

MISS DOOLEY.—Tubes: New 28×3 Dunlop butt-ended, or Palmer endless, 5/- each; 26×3 Dunlop butt-ended and endless, 5/- each. Immediate delivery.—Please apply to Miss E. Dooley, 33, Killyon Rd., Clapham, S.W.8. [5805

# *Instructions for* amateurs to enamel *a Motor Cycle*

*A COPY of the above leaflet will gladly be sent to those writing to Jenson & Nicholson, Ltd., Publicity Dept., Robbialac Works, London, E.15. Robbialac Whitby Black and special motor cycle colours available, such as Indian, Harley-Davidson, Matchless, etc. Colour card free.*

**—ROBBIALAC TRANSPARENT.**—After enamelling with Robbialac, a final coat of Robbialac Transparent will give an absolutely superfine finish.

**—ROBBIALAC BRUSHES.**—To get the best results with Robbialac Enamel and Robbialac Transparent Finish, it is essential to use the Special Robbialac Brushes.

ROBBIALAC

**Is sold by all Cycle Agents**

WILLIAMS & JAMES

CYLINDER GRINDING MACHINES.

GLOUCESTER

## Cylinders reground and fitted with new Pistons complete.

**Two Stroke.**

| | |
|---|---|
| Enfield, Triumph, Levis, Velocette, Ivy, New Hudson, Allon, O.K. Union, Villiers... | T.D.C., 50/- ea. |

**Four Stroke Singles.**

| | |
|---|---|
| 2¼ and 2½ Jap, Premier and F.N. ... ... | 38/- ea. |
| A.J.S., Norton, 3½ Humber and Triumph... | 45/- ea. |
| 3, 3½ and 4 b.p. Jap, Premier, Rover, Rudge | 48/- ea. |
| 3½ and 4½ Precision, James and Bradbury | 50/- ea. |

**Four Stroke Twins.**

| | |
|---|---|
| 2¾ Douglas, Enfield and 3 b.p. Jap ... ... | 58/- pr. |
| 3½ and 4 Douglas, 5 and 6 Jap, and 3½ James | 70/- pr. |
| 5/6 Indian, A.J.S., Humber, Rudge, Brough, 8 and 10 h.p. Jap, 7/9 Indian, Harley-Davidson, Clyno, A.B.C. ... ... ... ... ... ... | 80/- pr. |
| Four Cylinder F.N. ... ... ... ... | 115/- set. |

**Other Singles, 50/-. Twins, 80/-.**

*Prices include return carriage.*

## TYRES.

ECONOMIC Tyre Co.—We have the following gain lines in clearance and blemished covers goods sent on seven days' approval against remitt carriage paid.

ECONOMIC.—24×2¼ (also oversize for 2in. Clincher heavy Junior de Luxe; 20/-.

ECONOMIC.—26×2¼ Dunlop heavy (warran 37/3; Firestone extra heavy, 28/6; Bates s heavy, 27/6; special heavy tubes, 6/-.

ECONOMIC.—26×2⅜ Palmer cord heavy, Clincher extra heavy de Luxe, 26/6; Hut son T.T., 29/-; special heavy tubes, 6/6.

ECONOMIC.—26×2½×2¼ Dunlop extra heavy ranted), 55/3; Clincher heavy de Luxe, R.O.M. Rubberstud, 25/-.

ECONOMIC.—26×2½ O.S. Bates special heavy, special heavy tubes, 7/-.

ECONOMIC.—28×3 Fisk extra heavy Rubber 42/6; Michelin Cable, 82/6; Goodyear Dian 72/3; tubes, 6/6.

ECONOMIC.—650×65 Palmer cord light car, Goodrich Safety (warranted), 39/6; special tubes, 7/-.

ECONOMIC.—700×80 Beldam V Rubber Non extra heavy (warranted), 50/-; Goodrich S (warranted), 50/-; Avon extra heavy Rubber 42/6; tubes, 6/6.

ECONOMIC.—Fully warranted Dunlop Rubber 24×2, 22/6; 24×2¼, 24/9; 26×2, 24/6; 26. 25/9.

ECONOMIC Tyre Co., 314, New Cross Rd., S (near Town Hall.) 'Phone: New Cross Repairs and Re-treading. [

BURST Motor Cycle Tyres, chafed beads, remon made perfect, tube vulcanising, butt-ends f retreading; send for list.—Melton Mowbray R Works, Melton Mowbray. [

STARTLING Offer of our well-known Cycar co guaranteed 6,000 miles or replaced fre charge: 26×2¼, 43/-; 26×2½, 45/6; 26×2¼, fit 53/6; 28×3, 62/6; 650×65, 54/-; 700×80, 69 Herbert Robinson, Ltd., Green St., Cambridge.

CLEARANCE and Shop-soiled Bargains.—J John Bull, 29/-; 26×2¼ John Bull, 30/-; lop, 30/-; Dunlop extra heavy, 35/-; Palmer, 26×2⅜ Dunlop heavy, 30/-; extra heavy, Palmer, 30/-; 26×2½, fit 2¼, Dunlop heavy, 26×2½ Bates, 30/-; Moseley, 35/-; 650×65 extra heavy, 27/6; 29×3½, to fit American Bates 50/-, Dunlop 50/-; 700×80 Matchless, rubber studded, 40/-.—Herbert Robinson Ltd., St., Cambridge.

CLEARANCE Tubes, best make.—24×2¼, 26×2, 3/6; 26×2¼, 3/6; 26×2½, 3/6; 26; fit 2¼, 4/-; 26×2⅜, 4/-; 26×3, 4/-; 650×65, 4 Herbert Robinson, Ltd., Green St., Cambridge. [

CENTRAL Garage for fair dealing. All cover vertised under are guaranteed in stock and be despatched within one hour on receipt of c and, what is more, we will send with all clea lines a portable vulcaniser free of charge; no n cyclist should be without one.

26×2.—Dunlop heavy, 36/6; Palmer cord (oversize), 32/6.

26×2¼.—Firestone, 30/-; Macintosh, 27/6; E.H., 30/-; Clincher E.H. (oversize), Clincher Junior, 19/-; Palmer cord E.H., 32/6; and Stonehenge, 21/6; Goodyear E.H., 26/6; Milne E.H. combination, 22/6.

26×2⅜.—Dunlop heavy, 30/-; E.H., 37/9; tricar, 27/6; Hutchinson, 30/-; Beldam 30/-; Bates E.H., 30/-; Clincher de Luxe (for 28/-.

26×2½.—Palmer cord E.H., 32/6; Avon H., Avon Durolith, 32/6; Clincher E.H., Wood-Milne E.H., 16/6.

26×2½×2¼.—Palmer cord H., 32/6; Clinche Luxe, 28/-; Hutchinson T.T., 36/6; Avon 28/-; heavy, 25/-.

26×3×2½.—Dunlop heavy, 37/6; Wood-M heavy, 25/-.

28×2½.—Clincher Dreadnought E.H., 40/-.

28×3.—Avon E.H., ribbed, 40/-; Clipper 3-r E.H., 35/6; Clincher E.H., ribbed, 42/6; lop sidecar, 30/-; Macintosh chain tread, Kempshall, 28/6; John Bull E.H., r.n.s., 68/-.

650×65.—Goodrich (guaranteed) safety 38/6; Palmer cord, 44/-; Rom Square E.H., 37/6; Wood-Milne heavy, 14/6.

700×80.—Collier limousine E.H., 72/6; Fires 43/-; Dunlop E.H., ribbed, 57/6; super heavy, 44/-; Englebert passenger, 32/-; Milne E.H., 37/6.

TUBES.—Small sizes, 5/6; 28×3, 6/3; 650×65 700×80, 7/3.

CENTRAL Garage always open; any covers sen 7 days' approval against cash, plus 1/6 car —302, London Rd., Thornton Heath.

## TYRES.

RE Repair Specialists.—H.F. process throughout, including retreading burst covers. Every kind of ir to tyres and tubes in 24 hours, retreads in 4 —The Motor Tyre Co., 66, High St., West Brom- [2060

OOD Second-hand Covers, all sizes, 12/6 each; New Beldam covers, 26×2¾ for 2¼, 26×3 for 25/- each; 28×3, 35/- each; 650×65, 40/- each; ×80, 45/- each; new Avon steel studded covers, 0., 700×65, 35/- each; steel tow ropes, complete, each.—Homerton Rubber Works, Brooksby's k, Homerton, E 9 [0331

EW Covers.—26×2¼ Clinchers, 20/-; Dunlops, 26/-; Avons, 25/-; Palmers, 26×2¾, 29/-; 2½ Sunstones, 32/6; 26×3 Dunlops, 40/-; ditto bioation, 50/-; Dunlop 650×65, 35/-; 28×3 chinson, 30/-; Clinchers, 35/-.—Murray, 37a, rles St., Hatton Garden, Holborn. [8340

RAND Offer of tyres, sent on 7 days' approval against cash, plus 1/6 postage. 26×2¼ Avon, 6; Firestone, 32/6; Goodyear, 26/6; Clincher, ; Wood-Milne Combination, 22/6; 26×2¾ cher E.H., 28/-; Dunlop heavy, 30/-; E.H., 37/6; n, 27/6; 26×2½×2¼ Clincher E.H., 28/-; Avon ., 30/-; Palmer cord, 32/6; 26×3×2½ Dunlop y, 37/6; 28×3 Avon ribbed E.H., 40/-; Dunlop ar, 30/-; Macintosh, 26/6; 650×65 Goodrich, 5; Palmer cord, 44/-; Rom square tread, 37/6; ×80 Avon E.H., 44/-; Wood-Milne E.H., 37/3; lebert, 32/-. Tubes, small sizes, 6/-; others, 7/3. L these covers are guaranteed by us.—Alwin Tyre Co., 37, Red Lion St., High Holborn. [8371

ECIAL Offer of Clearance Covers.—26×2 Hutchinson Brooklands stud, 15/-; 26×2¼ New Clincher Luxe stud, 15/-; Avon Stonehenge stud, 18/-; n Durolith 4-ply, 25/-; Avon 3-rib T.T., 18/-; 2 2¾ Dunlop heavy stud, 30/-; 26×2½ extra heavy lop, 30/-; Spencer Moulton steel stud, 17/6; 3 Hutchinson T.T. stud, 27/6; Beldam non-skid, 2 ; 28×2¼ Diamond non-skid, 30/-; 28×3 Avon olith stud, 40/-; Avon 3-rib extra heavy, 37/6; eley stud, 32/6; Fisk rubber non-skid, 40/-; 5×65 Hutchinson 3-rib, 27/6; Stepney road grip, 4-; Dunlop plain, 25/-; Dunlop grooved, 30/-; 7×75, to fit 700×65—Hutchinson 3-rib, 27/6; 7×80 Firestone grooved, 50/-; Firestone plain, 45/-; s for any size motor cycle cover, 5/6. These rs are guaranteed by us. Postage is included in above prices.—Maudes' Motor Mart, 100, Great land St. Museum 7676. [8321

## TANKS.

ANKS for B.S.A., new, 38/6; 1910, 1921.—Coventry Tanke s, Ltd., Hearsall Works, Coventry. [2243

ANKS to Triumph, new, 38/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [2244

ANKS Re-enamelled from 15/6.—Bright and Hayles, 78, Church St., Camberwell, London. [8250

ANKS for Humber, 1921 pattern, to fit 1912; 38/6.—Coventry Tankers, Ltd., Hearsall Works, ntry. [2242

OVENTRY Tankers, Ltd., makers to the principal manufacturers; petrol tanks for any style supplied a capacity.—Hearsall Works, Coventry. [2245

ANKS of every description replaced, repaired, and re-enamelled. Quick service, moderate charges.—bert Robinson, Ltd., Green St., Cambridge. [6526

ANKS Made or Repaired, re-enamelled, lined, transferred; handle-bars, etc., plated. Established 30 s.—Attwood's, 86, Rosebery Av., London, E.C.1. [7073

ANKS re-enamelled to pattern; high-class work only.—D. Jenkins and Sons, 6, Richard St., Atkin- St., Deansgate, Manchester Established 25 years [2245

ANKS Renovated Makers' Colours; Triumph, Douglas, etc.; 16/6; carriage extra.—Robini Manufacng Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, .2. [8160

ENITH Tank for 3½h.p., just been overhauled, enamelled, maker's colours, Park Tank Works; 38/-; accept 60/-, less fittings 50/-.—Hunter, berton, Boston. [6085

ANKS Repaired or Re-enamelled, partition leakage, rebuilds, and all repairs undertaken; enamng, makers' colours, and transfers guaranteed.—k Tank Works, 1e, Paradise Rd., Highbury, N.5. [6691

ANKS of every description replaced, repaired, re-enamelled at our own works; all kinds of ngs stocked; quick service and reasonable charges. strated list free.—A. Green, Water St., Chapel St., ford, Manchester Tel.: 2191 Central. [0256

VERY'S Stock Tanks for Douglas, Hazlewood, B.S.A., Triumph, Omega, enamelled makers' urs, plated fittings, 40/-, complete; other design or pe to order. 12 months' guarantee with every tank.— don Street Tank Works, Coventry 'Phone: 1774. '0770

ANKS.—All kinds made to order, 32/6 each, including 2 plated fillers, 2 taps. Delivery 14 s, carriage paid. Satisfaction guaranteed or money urned. Enamelling, one colour, 10/6; two colours, /6.—Order forms from H. Peel, The Liverpool Tank spital, 5, Smithdown Lane, Paddington, Liverpool [6521


**The Manufacturers of the**

**CYKELAID**

**MOTOR POWER UNIT**

FOR

**PEDAL CYCLES**

beg to thank all readers of *The Motor Cycle* who have enquired for particulars of this production, and have to say that IN ORDER TO ENABLE THEM TO COMPLETE NECESSARY WORKS EXTENSIONS THEY HAVE DECIDED NOT TO SUPPLY ANY FURTHER UNITS FOR THE TIME BEING.

The CYKELAID, although very successful in its present form, will then be superseded by a stronger, simpler, and greatly improved Model at a LOWER PRICE.

**All future productions will be guaranteed over a considerable period, and will be well worth waiting for. Prospective users are requested to watch for further announcements.**

Sole Makers:

**THE SHEPPEE MOTOR Co. Ltd.**
**59, Thomas Street, YORK.**

'Phone 496. 'Grams: "Motors, York.



**TO**

**Matchless**

THE PERFECT PASSENGER MOTORCYCLE

**OWNERS**

We are now supplying a

**Joliac**

GRAPHITE

**LUBRICANT**

Specially designed for the makers for use on the following parts :—

All Spring Frame Joints, including Front Fork Spindles.

The Clutch.

The Hubs.

Packed in 1 lb. tins—2/3 each.
If your dealer does not stock send your order direct to us.

**GRAPHITE PRODUCTS, Ld., 218-220, Queen's Rd., Battersea, LONDON, S.W.8.** . . . . . .


## TANKS.

TANKS, Radiators, Repaired or Replaced.—Hughes, 373, New John St. West, Birmingham. [8996

## BELTS.

BELTS.—Clipper, new, 8ft.×¾, 11/6 8ft. 6in.×¾, 12/3; 8ft. 6in.×⅞, 14/-.

JOHN BULL or Bates Standard (new), in any length. —¾in., 1/11; ⅞in., 2/3; 1in., 2/8; 1⅛in., 3/2, per foot.—H. Emanuel and Co., 37a, Balls Pond Rd., N.1. [0854

BASTONES.—Brand new clearance Clincher belts, ¾in., 6ft. 6in. lengths, 7/- each, plus 1/- postage. —See below.

BASTONES for New Belts.—Dunlop, round top, ¾in., 1/10; ⅞in., 2/2; 1in., 2/8; 1⅛in., 3/2 per foot. John Bull, ¾in., 1/11; ⅞in., 2/3; 1in., 2/8; 1⅛in., 3/2 per foot. Pedley, ¾in., 1/9; ⅞in., 2/-; 1in., 2/6; 1⅛in., 3/- per foot. Buffalo bide and chrome, ⅞in., 1/9; 1in., 2/-; 1⅛in., 2/3 per foot; plus 1/- postage.—228, Pentonville Rd, King's Cross, London, N.1. [8450

BRAND New Clearance Belts, ¾×6ft. 6in., made by Palmer; 7/- each.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd. 789. [3104

DAVIES, Union St., Wednesbury.—Belts, 6ft. 6in.×1in., 10/3; 7ft. 6in.×⅞in., 11/9; Dunlop clearance; carriage paid; approval; other sizes in stock. [6272

BALATA and Chrome Combination V Belts, suitable for all classes of motor cycles, ¾in., 1/4; ⅞in., 1/6; 1in., 1/9; 1¼in., 2/- per foot. Fasteners 9d. each. Postage 1/-.—W. Pollin & Son, Hollington, St. Leonards-on-Sea. [6818

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All brand new and guaranteed Dunlop, round top: ¾in., 1/10 ft.; ⅞in., 2/2 ft.; 1in., 2/8 ft.; 1⅛in., 3/2 ft.; John Bull, ¾in., 1/11 ft.; ⅞in., 2/3 ft.; 1in., 2/8 ft.; 1⅛in., 3/2 ft.; any length cut. Clearance belts, 6ft. 6in.×¾in., 10/-. [6523

CENTRAL Garage offer.—Brand new Dunlop belting in standard sizes sent on approval against cash, plus 1/- postage. ¾in., 1/7 foot; ⅞in., 1/10 foot; 1in., 2/2 foot; 1¼in., 3/2 foot; Dunlop fasteners, all sizes, 1/3; punches, 2/9, all sizes. We have a few 6ft. 6in×⅞in. Pedley at 10/-.—Central Garage, 302, London Rd., Thornton Heath. [8370

## CARBIDE.

BEST Quality Carbide, 28lbs., 8/6, drum free; any quantity supplied from ½lb., tins to 2cwt. drums; only the best brands stocked; trade inquiries invited. —Dargue, 57, Grey St., Newcastle-on-Tyne. [9140

## PATENT AGENTS.

J. E. S. LOCKWOOD, 3, New Street, Birmingham. 'Phone: 5816 C. Patents guide free. [7976

FREE, 100 Page Patent Guide, postage 6d.—The Consulting Patent Agency, 253m, Gray's Inn Rd., London. [2416

PATENTS Advice, handbook free.—King, Registered Patent Agent, 146a, Queen Victoria St., E.C. 35 years' references. [0129

W. BRYSON, B.Sc., Assoc.M.Inst.O.E., Chartered Patent Agent, 29 Southampton Buildings, London, W.C.2 'Phone: Museum 3651 [9242

H. N. & W. S. SKERRETT (H. N. Skerrett, Fellow of the Chartered Institute of Patent Agents, A.I.Mech.E., A.I.A.E., Associate I.E.E., etc.; W. S. Skerrett, A.I.E.E., Registered Patent Agent).—Patents, designs, and trade marks.—24, Temple Row, Birmingham. Tel.: Central 1038. T.A.: Skerrett, Birmingham. [1534

## PATENTS.

WE Buy, Sell, and Finance Inventions and Patents, and advise on their marketing.—Send postcard for full particulars to Dept. C., Inventors' Sales Agency, 22-24, Spencer Av., Coventry. [1432

## CLUB ANNOUNCEMENTS.

*Space can always be obtained under this heading for announcements required by Clubs. Rate 3d. per word, minimum 3/-.*

SECOND London Rally. Motor Cycles and Cars. Hendon Aerodrome, Whit Monday, from 2 p.m. Novel competitions, many valuable prizes. Exhibition of new and unconventional machines. Aeroplane flights; military bands. Admission 1/3; motor vehicles free. [4772

## AGENCIES.

WANTED, local representatives, fine opportunity for those with motor cycle.—Tyneside Pillion Seat Works, 10, Union St., North Shields. [3299

THE Mohawk Cycle Co., Ltd., require sole agents for their celebrated motor cycles in districts where they are not already represented.—Write for lists and terms to Mohawk Cycle Co., Ltd., 275, Alexandra Rd., Hornsey, N.8. [1923

EXCEPTIONAL opportunity for live salesmen to handle good-selling speciality on commission basis; must have established connection garages, accessory factors, and retailers; good commission to right men.—State ground covered and full particulars to Box 1370, c/o *The Motor Cycle*. [6511

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at competitive rates.—Ernest Bass, 40, Chancery Lane, W.C.2. 'Phone: Museum 2234. [0005

ROYS, LTD., Insurance Brokers.—Agents for all companies and Lloyd's.—Competitive rates for motor insurance.—170, Gt Portland St London [0055

ECONOMY With Security.—Comprehensive policies from £3; Morgans, £6; prompt settlements.—A. R. Broadhurst, 65A, Holborn Viaduct, E.C.1. [6560

NO Increase in Motor Cycle Rates.—For prospectus and full particulars, write or 'phone, P. A. Porter and Co., 33, Palewell Pk., East Sheen, S.W.14. 'Phone: Richmond 511. [8466

"THE Motor Cycle" Insurance Policy is the policy authorised by "The Motor Cycle," and covers motor cycles or cycles and sidecars used for private purposes. Complete comprehensive cover. Maximum benefits, minimum rates. Full particulars and prospectuses on application.—The Autocar Fire and Accident Insurance Co., Ltd., 77, Cheapside, London, E.C.2. [0007

## TUITION.

TUITION Free to purchasers of new or second-hand machines; deferred payments; large selection leading makes. Open till 8; Saturdays, 9.—Motoria, 15, Regent Parade, Tally-Ho, Finchley. [9797

## SITUATIONS VACANT.

MOTOR Cycle Salesman required, S.W. London, must have practical experience second-hand trade.—Box 1404, c/o *The Motor Cycle*. [8555

WANTED, travellers to introduce new belt fastener, excellent commission, all districts except London.—Holroyd and Collier, 21, Grosvenor Rd., Aldershot. [6850

MOTOR Trade.—Wanted, a first-class sales manager, competent to take complete charge, if necessary, of a large retail motor business; a sound practical experience and thorough knowledge of the trade absolutely essential.

SALARY and Commission up to £1,000 a year offered to a thoroughly competent man.—Apply by letter only, stating qualifications; full particulars of previous experience, and copies of testimonials, to H. Stuart Henderson, Incorporated Accountant, Temple Courts, 55, Temple Row, Birmingham. [6344

## SITUATIONS WANTED.

FIRST-CLASS Salesman-Mechanic, 15 years' experience, all makes, expert tuner and demonstrator, A.M.I.A.E.—D., 60, Kingscote Rd., Addiscombe. [6279

FOREMAN-MECHANIC, 37, wants change, competent, thorough, conversant all branches, cars, motor cycles, 7 years' chargehand leading agents; references.—Pearse, 19, Gayton Rd., Hampstead. [8182

ADVERTISER, 14 years' experience in motor cycle trade, extensive and sound up-to-date knowledge design, production (all branches), repairs, high-efficiency tuning, etc., seeks post; 35; highest references.—Box 1183, c/o *The Motor Cycle*. [4746

EXPERT Motor Cycle Tuner and Tester, 10 years' experience, seeks post. Competition riding and track work. Extensive theoretical and practical knowledge of high-efficiency tuning, carburation and ignition. Well educated and good appearance. Excellent references.—Box 1320, c/o *The Motor Cycle*. [6213

## FINANCIAL.—PARTNERSHIPS.

WHOLE Contents of motor and general engineer's business, complete with all tools, accessories, spares, must be cleared, expiry of lease; exceptional opportunity for anyone commencing and extending business; sale or any exchange, or would invest whole as share in garage or engineering concern.—56, Century Rd., Walthamstow, E.17. [6862

## BUSINESSES AND PROPERTY FOR SALE, TO BE LET, OR WANTED.

CYCLE and Motor Cycle Accessories Business for Sale, lock-up shop, in growing town near London, North.—Box 1383, c/o *The Motor Cycle*. [8190

MOTOR and Motor Cycle Garage (Kent) for Sale; sound connection; health only reason for selling; £325.—Box 1389, c/o *The Motor Cycle*. [8178

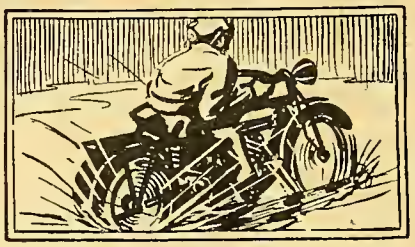
STOCK, material, tools, patterns, name, etc., of sidecar manufacturers for sale; low price for quick sale; London district.—Box 1369, c/o *The Motor Cycle*. [6496

FOR Sale, shop and tenement (with garage), suitable for cycle and motor business, situate in High St., Sawston, Cambs.; offers invited.—Apply, Co-operative Society, Sawston, Cambs. [6334

## HOTELS AND APARTMENTS.

I.O.M., Ramsey.—Mitre Hotel, central position, garage, tariff.—Apply Manageress. [6335

DOUGLAS, Collingwood Broadway.—Personal supervision; apply for illustrated tariff.—Mrs. Rigby. [4758

# Banish Wet Weather Belt Troubles

Don't blame your engine if it seems to lack power. Probably the belt slips, especially in wet weather, in which case 10%-40% of your engine output is lost. You can put things right by applying

**Erusa**

to the belt. This will make a great improvement. The engine will pull better, and the belt will never slip, even when soaking wet. We guarantee it! Order a tin to-day.

*If your dealer cannot supply from stock send 1/6 (plus 4d. postage) and we will forward a tin by return.*

**Thomas & Bishop, Ltd.,**
**37, Tabernacle Street London, E.C.2.**

**ASPINALL'S**

# CYCLE BLACK

**(AIR DRYING)**

Lieut. ———, R.N., writes:—

***"A pint of your Cycle Black and a lick of Varnish has made my 1915 Studebaker look like a new car."***

NOTE.—A small tin of Cycle Black will do the same for your motor cycle combination.

Stocked by ironmongers and accessory dealers everywhere.

**ASPINALL'S ENAMEL Ltd.,**
**NEW CROSS, S.E.14.**

Varnish Works, Mitcham. Telephone: New Cross, 42 & 206.


## HOTELS AND APARTMENTS.

DOUGLAS.—Stafford House, Queen's Promenad private hotel, near garage.—Write tariff, Tatte sall. [14]

DOUGLAS.—Manningham Private Hotel, favouri motorists' house, centre of bay.—Thos. Hop Manager. [34]

DOUGLAS.—The Crawford, private hotel, centr promenade, 80 bedrooms.—L. Wordsworth, Pr prietress. [34]

DOUGLAS.—Santa Rosa Private Hotel; modera terms, tariff on application.—E. O'Conne Manager. [35]

DOUGLAS: Ravenscliffe Central Promenade; pe sonal supervision; terms 10/6 per day.—Reside Manageress. [59]

DOUGLAS.—Avondale Private Hotel, central pr menade, excellent cooking, comfort, reasonat terms.—Proprietor. [34]

BUCKLEY'S, "Ratcliffe," Empress Drive, Centr Promenade, Douglas.—Accommodation for T. races. Few minutes to enclosure. Terms moderate. [20]

DOUGLAS.—Cliff View, Premier Private Hot central promenade, 100 rooms, billiards, expe chef; terms from 12/6 per day. Telegrams: "Cl few."—J Ridehalgh, Manager. [34]

CRAWLEY, Sussex.—Albany Hotel (main Londo Brighton Rd.). Large gardens; luncheons a teas on lawn. Electric light, garage. Terms f week-end, 12/6 a day; for week or longer on app cation. [64]

## GARAGES.

BLACKPOOL.—Garage at Claremont Gara General St., North Shore. Proprietor's person supervision. [75]

## STOLEN.

DOUGLAS.—Substantial reward for information to the present whereabouts of Douglas mot cycle combination, 4h.p., 1920, frame 10866, engi 9963, sidecar painted sky-blue; Douglas cycle (sol 2¾h.p., engine 36985.—Bingham, "Truro," Windm Rd., Clapham, London. [47]

## NOTICES.

TO Accessories Houses.—Mailing list, 1,200 priva motor cyclists customers, not catalogue hunter what offers?—Box 1390, c/o *The Motor Cycle*. [81]

## PERSONAL.

NORTH London motor cyclist desires compani with 2-stroke for week-ends, holidays.—Box 137 c/o *The Motor Cycle*. [65]

## GENERAL TRADE.

CYCLE and M.C. Frames made to the trade.—Lu and Co., 80, Ashted Row, Birmingham. [42]

AUCTION Sales.—Palmer's Garage, Tooting, t oldest solely motor auction rooms in Londo Terms 7½%, not chargeable if machine unsold. Mot cycles and cars bought and sold for cash. Near goods stations, Falcon Lane, L. and N.W.R.; Wimb don, L. and S.W.R. and G.W.R.—Sole addre Palmer's Garage, Tooting, London. [8]

## WANTED.

WANTED, 4h.p. countershaft bottom near stay 126, Antill Rd., Bow. [63]

MORGAN, 1915-22, water-cooled; cheap, cash wa ing.—H., 63, Solon Rd., Brixton. [69]

WANTED, Douglas 1911, flywheel and cranksha perfect.—Apply 42, Linden Rd., Leeds. [62]

STURMEY-ARCHER 3-speed Gear Box, cheap. Mudridge, 225, Franciscan Rd., Tooting. [65]

WANTED, Cycle Car Chassis, engine or withou cheap.—28, York Rd., Battersea, S.W.11. [61]

SIDECAR Wanted, Clyno or Paragon preferred. 67, Northolt Rd., South Harrow, Middlesex. [81]

WEST NORWOOD!—Let me sell your car for yo —Douglas S. Cox, A.S.M.M., West Norwood [83]

WANTED, Incomplete P. and M.'s or parts, a quantity.—Inman, Durham Rd., Seaforth, Live pool. [49]

OLD Breach Loading Central Fire Guns Wante 12 or 16 bore.—Box 1,301, c/o *The Moto Cycle*. [61]

CYLINDER for 6-7h.p. N.S.U. twin engine, 19 1912.—Cornwell, 11, Doune Gardens, Cathca Glasgow. [64]

CARBURETTER, ⅞in., barrel fitting; 30/- offer Saturday, Sunday.—Pewham, 3, Salusbury R Kilburn. [64]

COUNTERSHAFT Triumph Crank Case, also f wheels with shafts.—Strettell, Heron Rd., Mea Cheshire. [85]

WANTED, Cylinder and Piston complete, for 19 3½h.p. Premier.—Wm. Munro, Tullich, Delf Ross-shire. [61]

## WANTED.

ANTED, 2-speed Gear Box, suitable for chain and belt.—Apply, Matthew Taylor, Littlehill, Hurlore Ayrshire. [6176

AMPTON Forks, complete, suit 3½h.p. combinaion, and baby Easting.—Eller, Fore St., Kingser ell, Devon. [8343

ANTED, Cylinder, Piston, and Connecting Rod for 3½h.p. Singer.—Grampain View, Balnagask d, Aberdeen. [6255

ENTRIC Clutch for 7-9h.p. Indian 1911 model, perfect condition only.—Gray, 15, Mount Gold Pla Plymouth. [6605

RTING Swan, Montgomery, etc., to fit Sports cott; good condition, cheap.—13, Queen St., ri end, Glam. [6116

ANTED, Scott Radiator and gear shields; sale, 1912 Scott frame, perfect, 50/-.—John Gelder, or Marton, Carlisle. [7088

ANTED, hood, windscreen, and Tan-Sad (good condition); approval against cash.—17, Homelands ar South, Sunderland. [6345

ANTED, Tradesmau's Box without chassis; or exchange Millford coach body.—Dart, 53, Richo Rd., Kingston-on-Thames. [6793

ANTED, for cash or exchange, Morgaus, 1915-21; also Rovers and G.N.'s.—Elce, Ltd., 15-16, Bisite Av., Camomile St., E.C.3. 'Phone: Avenue 54 [0069

ANTED, A.B.C. Skootametas, must be brand new; state how many in stock and absolute w price for a quantity.—Archie Pitt, 9, Commerall d., Southampton. [6932

RGAN and G.N. Cycle Cars purchased for cash, exchanged, or sold on commission.—J. Smith and o. Motor Agents, Ltd., 52-54, Hampstead Rd., N. Tel.: Museum 5938. [8292

h.p. A.C., V-twin engine, 90-bore o.h.v. J.A.P. referred; also Sturmey-Archer 3-speed gear box, plete, any condition; must be cheap.—Turner, 43, on field Rd., East Ham. E.6. [8269

ANTED, 1915 2¾h.p. Douglas crank case, sound, also gear box case. Wanted, countershaft ri ph crank case and S.A. gear box, incomplete.—o 129, Park Laue, Carshalton. [7064

ANTED, Morgan, not later than 1920; exchange 4¼h.p. James, good condition, fully equipped, en yres, Canoelet sidecar, newly painted, cash adis ent.—Clarke, Valeside, Tealby, Lincoln. [8347

RMEY-ARCHER 2- or 3-speed gear box; also ngine 3½h.p. to 8h.p., single or twin, and pair or forks; cheap for cash.—19, Wilcox Rd., South an eth, London, S.W.8. 'Phone: 1958 Brixton. [7260

## EXCHANGE.

Light Car 8h.p., 1921, for motor combination. 67, Fernlea Rd., Balham. [8384

CHANGE Furniture, value £42, for motor cycle, ash.—1, Priory Rd., Kew Green. [6627

CHANGE Auto-scooter and Cash for 2-stroke.—Box 1386, c/o *The Motor Cycle*. [8193

GLAS 2¾h.p., enamel unscratched, for single-2-stroke.—20, Grove Rd., Hitchin. [6189

CHANGE 30cwt. Lacre Van for combination or unabout.—79A, Clapham Rd., S.W.9. [6926

CHANGE your present machine for a new car or motor cycle at Kays, 8, Bond St., Ealing. [4837

2 Triumph, chain drive, for good machine and cash.—Cheetham, 83, Water Lane, Preston. [6152

T 12-14h.p. Landaulet, 4-speed, new tyres, splenid condition, exchange combination; sell £100.—

T 20-30h.p. Landaulet 7-seater, splendid condion, any trial; exchange combination or solo and s £85.—Below.

T 15-20h.p. Touring Car, 7-seater, splendid conition, exchange combination or solo and cash; ll 100.—Ward, South Western Garage, New Malden, n. [5217

ER 8h.p., Bosch, Binks, perfect; £28; exchange olo or combination.—Guinchard, 179, York Rd., lton. [6986

9 Sparkbrook 2-speed, 1912 Douglas, good order, for Ford tonner, or sell £70.—Turk, Benener Kent. [6920

CHANGE Indian 5h.p., for 3½h.p. Triumph referred; sell £32.—47, Alexandra Rd., Addleo Surrey. [6190

V Triumph Lightweight Wanted, Triumph 4h.p., Lea-Francis, Rudge, near value.—6, Brislee Av., outh. [7055

CHANGE First-class Combination, with cash, for light 2 or 4-seater of good make.—Newnham, 223, ammersmith Rd., W.6. 'Phone: Hammersmith 80. [7019


Road Dangers

POT HOLES

RUTS AND RIDGES

ROADS UNDER REPAIR

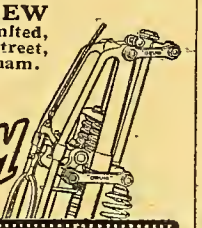
LOOSE STONES AND BOULDERS

The finest rough-road remedy is the DRUID Spring Fork.

**The DRUID Fork takes all the shocks—completely absorbed within itself—none leaking through to the rider.**

Your "safety" policy is to "Demand DRUID Forks"—and get them!

**A. DREW & Co., Limited, Leopold Street, Birmingham.**



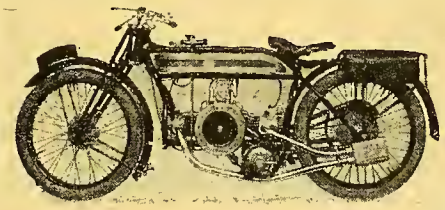
—and the Remedy

DRUID FORKS

R. H. S.


# EXCHANGES

**GOOD ALLOWANCE MADE FOR YOUR PRESENT MOUNT IN EXCHANGE FOR ANY OF THE FOLLOWING MAKES:**



**ENFIELD, DOUGLAS, NORTON, INDIAN, MATCHLESS, NEW IMPERIAL, B.S.A., LEVIS, P. & M., VELOCETTE, N.U.T., DIAMOND, O.K., QUADRANT, ZENITH, SHEFFIELD-HENDERSON, HENLEY, SPARKBROOK, A.E.L., HARPER RUNABOUTS and MORGAN RUNABOUTS.**

# ALEXANDER'S

**113-115, LOTHIAN RD., EDINBURGH, 272-274, GT. WESTERN RD., GLASGOW.**

## EXCHANGE.

EXCHANGE 1918 4h.p. Douglas for I.O.M. Rudge or fast single.—Eastlea, Westhall Rd., Warlingham, Surrey. [8575

EXCHANGE 1915 Indian and cash for later pattern Indian or Harley-Davidson.—16, Cecil Court, W.C.2. [6549

WEST NORWOOD!—Sixty cars for exchange (see Miscellaneous). List. Call.—Douglas S. Cox, West Norwood. [8333

EXCHANGE Gent's Cycle or Lady's Swift, or both, for 2-stroke; cash adjustment.—Box 1388, c/o *The Motor Cycle*. [8196

EXCHANGE 3½h.p. Zenith-Jap, Gradua gear, good condition, for combination.—Moore, 27, Lower Grove, Wandsworth. [6458

TRIUMPH and sidecar, 1918, just renovated throughout, for Enfield combination.—3, Bowater Place, Blackheath, S.E.3. [6786

CENTAUR Engine 2¾h.p., good condition, a.i.v., for good 2-stroke engine; sell 50/-.—Aubrey, Pavilion, Wick, N.B. [7069

EXCHANGE O.K. 2¼h.p., 2-speed, value £25, for 3½h.p., Rover preferred.—4, Aynscombe Mart, High St., Orpington. [6995

EXCHANGE 5h.p. twin magneto motor cycle, good condition, for scooter and little cash.—Box 1375, c/o *The Motor Cycle*. [8201

NEW 7-9h.p. Rudge-Multi Twin; exchange for motor cycle parts; stamp for reply.—Britnell Bros., 43-45, High St., Fulham. [6795

INDIAN 5-6h.p., clutch, discs, T.T. bars, 2in. exhaust, 2 carburetters; for T.T. Norton.—29, Richmond Rd., Basingstoke. [6389

EXCHANGES, 2- and 4-seater light cars for combinations.—Morland Motors, Sheen Lane, S.W.14. 'Phone: Richmond 1112 [1420

EXCHANGE, with cash, Tan-Sad with foot and back rests, for electric lighting set (combination).—3, Queen St., Dukinfield. [6266

BLERIOT Whippet, excellent condition, for late model Triumph or Norton combination.—14, Shaftesbury Rd., Highgate. [6233

EXCHANGE New 5-6h.p. Raleigh Combination for good 4h.p. Douglas combination and cash.—Holdway, Copie, Bedford. [7047

1914 8h.p. Chater-Lea, 3-speed countershaft, for lower power, countershaft.—Fishwick, 167, Greenfield Rd., St. Helens. [7036

EXCHANGE Singer Boot Repairing Machine for J.E.S. set or autowheel.—Porter, Central Stores, North Tamerton, Holsworthy. [6232

EXCHANGE Solo 4h.p. Douglas, fully equipped, small cash, for hot-stuff single.—M., 29, Greenhill Park, Harlesden, London. [6980

EXCHANGE brand new Norton 16H, 3½h.p., chain drive, 1922, unused, for combination, or solo, if cheap.—Shaw, Durkar, Wakefield. [6867

6h.p. Rover, single cylinder, 2-seater, new up-to-date body, Zenith, Bosch, Stepney; exchange motor cycle, sell £50.—Cooke, Kingsclere. [6431

VELOCETTE (sales column) and cash for modern B.S.A. combination, sound condition.—Walters, 61, Westow Hill, Upper Norwood. [6859

RUDGE-MULTI, T.T., clutch, kick starter, fully equipped, original enamel, faultless; exchanges; sell £45.—63, Solon Rd., Brixton. [6975

EXCHANGE 5h.p. Minerva, 3 speeds, all on, good order, for lightweight; or sell £32.—Hogger, Grasmere Cottage, Barnet Gate, Herts. [6466

HENDERSON 10h.p., equipped, as new, combination; exchange for Harley, Douglas, Triumph; sell £80.—72, High Rd., Streatham, S.W. [6252

EXCHANGE Straker-Squire 3-ton Lorry, drop-sided body, splendid condition, for good combination.—Eton, 260, Balham High Rd., Balham. [8169

1920 Rudge-Multi Speedometer, unpunctured, and A.B.C. Skootamota, both taxed, or cash; A.B.C., Scott preferred.—A., 6, Essex Grove, E.17. [7035

HARLEY 7-9h.p. Combination, 2-seater, windscreen, lamps, exchange good Douglas combination; sell £70—2, Tennyson St., Battersea. [6467

1920 A.J.S. 6h.p Combination, all accessories, spare wheel, etc., equal to new; £115, exchange lower power and cash.—12, Garfield St., Leicester. [6429

TWO Head Lamps and Generators, 5½in. fronts, back lamp; exchange electric head lamp; sell 45/-.—Whittaker, 140, Rochdale Rd., Bury. [6400

EXCHANGE Alldays 2-seater Car and New Hudson, 4h.p. J.A.P. combination, for family outfit; cash adjustment.—9, Granville Rd., London, N.12. [6387

IXION 3-speed, electric lights, tax paid, good condition, new tyres; exchange, Triumph, Harley preferred.—28, Hopedale Rd., Charlton, S.E.7. [6871

EXCHANGE 1918 4h.p. Triumph Combination, good condition, for 6h.p. Zenith or Enfield; sell £70.—Farr, 27, Seward Rd., Hanwell, W.7. [8344

## EXCHANGE.

EXCHANGE 1914 3½h.p. 3-speed Rover, lightweight Watsonian sidecar, and £10, for twin combination.—Batchelor, Redbourne Rd., Hemel Hempstead. [6460

EXCHANGE Humber Lightweight, perfect order, including tyres, ride away, for combination and cash; no rubbish.—113, Kenilworth Ave., Wimbledon. [6575

1921 Sports Motor Cycle, 3½h.p. Douglas engine, tax paid, perfect running, and cash, for G.P. Morgan; or sell £60.—424, High Rd., Leyton, E.10. [6242

EXCHANGES a Speciality!!! 2- and 4-seater cars from £50 to £500!—Seabridge, 35, Hansler Rd., East Dulwich. Call, write, or 'phone, Sydenham 2452 [7939

FOR Combination, 6in. lathe by Muir, S.C., complete, pillar drill, large, workshop dynamo, shafting, etc.—Engineer, 15, King William St., Greenwich. [8260

EXCHANGE 10-12h.p. 4-cyl. Belsize 2-seater, with dickey, for combination.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7020

1916 Alldays Cloverleaf 2-3-seater, dynamo lighting, 6 detachables, all fittings and accessories, for Triumph and little cash.—Pearce, Surveyor, Hunstanton. [6834

ALLDAYS 11h.p., 4-seater, flush-top body, new Claudel-Hobson, remarkably good condition, unscratched; exchanges considered.—63, Solon Rd., Brixton. [6976

TRIUMPH, Type H, Montgomery combination, 1921, engine 73788, and cash for 1921 5-6h.p. Raleigh solo or combination.—Hepworth, Francis Rd., Stechford. [6956

EXCHANGES or Offers invited for the following 1921 new machines; B.S.A., Beardmore, New Imperial, Levis.—S. E. Porter and Co., Whitchurch, Salop. [1945

1916 3½h.p. Premier Combination, 3-speed, countershaft; exchange best lightweight and cash offered.—3, Green Terrace, Rosebery Avenue, E.C.1. [6782

4h.p. overhead-valved competition all-chain solo, 2 speeds, clutch, taxed, guaranteed; £34; exchange lightweight; after 6 p.m.—255, South Lambeth Rd., S.W.8. [6791

EXCHANGE 3½h.p. 2-speed free engine Humber for 2¾h.p. 2-speed 2-stroke, give little cash for good machine; sell Humber £33.—75, Edridge Rd., Croydon. [6918

EXCHANGE Ford Landaulet, detachable wheels, good tyres, in splendid condition, for good combination and cash.—Eton, 260, Balham High Rd., Balham. [8167

COTTON-BLACKBURNE 1922 2¾h.p., 2-speed, clutch, kick start, all accessories, tax £69/10, or exchange 2-stroke and cash.—288, Sangley Rd., Catford. [6802

INDIAN Powerplus 1919 Combination, very posh and fast, discs, long exhaust, Binks; exchange lower power and cash.—Ewers, Newton Rd., Burton-on-Trent. [6657

EXCHANGE 1-ton Van, box body, solid tyres on rear, ready to go anywhere, for combination or solo; cash either way.—Eton, 260, Balham High Rd., Balham. [8170

5-Seater Touring Car, central gate change, C.A.V. dynamo lighting set, electric horn, in splendid order, exchange for good combination.—Crown Garage, Weybridge. [6855

EXCHANGE 7-9h.p. Twin, 2 speeds, clutch, chain drive, for lower power or exchange power unit for lower power unit; after 6.—198, Vallance Rd., Bethnal Green. [8525

G.W.K. 10h.p. 2-seater, with 1920 engine, smart, discs, electric lights, tax, new tyres; value £110; exchange combination and cash.—Ewers, Newton Rd., Burton-on-Trent. [6656

ELECTRIC lighting set, as new, complete, 3 lamps, 8 v. accumulator; exchange for Fallolite, D.A., or acetylene set for combination.—58, Dynevor Rd., Stoke Newington. [6333

C.A.V. Magneto 1921, unused single, clock or anti-clockwise; will exchange same for speedometer to fit 26in. wheel.—J. B. Bennett, Anchorage, Shotton, Chester. [6499

INDIAN Powerplus, 1920, dynamo lighting, speedometer, splendid condition; £40 and lightweight; seen Westhourne Park.—Billingsley, Oxford House, Wormley, Herts. [8392

1921 Carden 2-seater, electric light, sprung seat, hood and screen, perfect condition; exchange heavy combination, solo and cash.—C. Thompson, Builder, 64, Matthias Rd., N.16. 'Phone: Dalston 2108. [6978

CHEVROLET 4-seater, brand new, unused, guaranteed perfect, heavy Goodyear tyres, electric throughout; exchange late big combination and cash; genuine proposition given and expected; state fully or bring.—Queen's Hotel, Grays, Essex. [6547


HIGH HOLBORN 236
WEST CENTRAL AGENCY.
A FEW DOORS FROM KINGSWAY.
Phone: 4676 Holborn.

DEPOT FOR THE
"ARIEL"
The Motor Cycle that holds the Record for RELIABILITY
We carry a large stock of
ARIEL SPARES
and can give IMMEDIATE DELIVERY
MAKE A NOTE OF OUR ADDRESS

PARAGON Patent
FOLDING SIDE CAR
SAVES STORAGE
WHEN FOLDED COMBINATION WILL PASS THROUGH 30 INCH DOORWAY.

CALL & SEE IT DEMONSTRATED
GRADUAL PAYMENTS
arranged to suit customers' convenience
WINCYCLE COMPANY, LTD.,
236, HIGH HOLBORN, LONDON, W.C.1.
(A few doors from Holborn Tube Station.)



Alexander
The Great Man for Bargains!

NEW MACHINES (Shop-soiled).

| | |
|---|---|
| P. & M., the pride of the R.A.F. | £85 |
| WOOLER 2¾ Flat Twin Tourist | £55 |
| DIAMOND, single speed, 2-stroke | £38 |
| RUDGE-MULTI | £69 |
| BLERIOT WHIPPET Light Car | £130 |

SECOND-HAND BARGAINS.

| | |
|---|---|
| TRIUMPH Comb., Gloria sidecar, fully equipped, screen, tax paid, a beauty | £120 |
| CALTHORPE 2-stroke, go anywhere, tax paid | £20 |
| CLYNO 2-stroke, 2-speed | £35 |
| TRIUMPH C.B. | £120 |
| A.J.S. Comb. (Aug., 1921), like new, equipped spare wheel, tax paid, mileage 500 | £155 |
| 5-6 RUDGE-MULTI Comb. | £80 |
| 3½ BEARDMORE PRECISION 2-stroke, 2-speed, clutch, kick start, tax paid, as new | £55 |

Agents for A.J.S., DOUGLAS, DIAMOND, P. & M., RUDGE-WHITWORTH, also BLERIOT WHIPPET Light Cars.

C. R. ALEXANDER,
Hale, ALTRINCHAM.
Estd. 1910.


## EXCHANGE.

EXCHANGE 2-seater Alldays, wire wheels, w drive, all lamps, 3 spare tyres, tools, etc., combination or solo and cash.—Eton, 260, Bal High Rd., Balham. [8

3½h.p. P. and M. Sports Sidecar, footboards, tyres, just overhauled, for 6-8h.p. or 7-9h.p. bination requiring overhauling;—London.—Box 1 c/o *The Motor Cycle*. [8

CLYNO.—Reconditioned machines, complete tions, excellent condition, as new; exchange cars or motor cycles; adjustments.—Hearn Bros., Brixton Hill, S.W.2. [8

MORRIS-COWLEY 1917 Coupé, Lucas ele lighting, upholstered Bedford cord; combina wanted and cash; private.—43, Brailsford Rd., T Hill, Brixton, S.W.2. [8

RUDGE-MULTI, excellent condition, 1916, clu pedal start, exchange twin Enfield or Douglas, cash adjustment; call.—Mulcaster, Barking Road, Plaistow. [8

1918 4h.p. Countershaft Triumph, new P.H. la new rear tyre and tube, exceptional condit for 8h.p. Zenith; sell £65.—Downview Garage, Worthing. 'Phone: 569. [8

EXCHANGE Harley Combination, 1918, overha and perfect throughout, for Indian or chea seater and cash.—Langford's, 37, Cricklewood Br way, N.W.2. Hampstead 8616. [8

EXCHANGE.—Any make of new car or motor supplied; your present machine accepted in payment.—Newnham Motor Co., 223, Hammersi Rd., W.6. 'Phone: Hammersmith 80. [7

EXCHANGE 1920 Pearson and Sopwith, 2-sp lighting set, horn, etc., and cash, for Dougla Triumph Combination, 1920 or later.—Walker, Romford Rd., Manor Park, London, E. [7

BAT-J.A.P. 6-8h.p., 2-speed, clutch, Mills-Ful sidecar, electric light, hood, lamps, just hauled; bargain, £45; or exchange lightweight cash.—2, Limes Ave., Mill Hill, N.W.7. [8

HERBERT ROBINSON, Ltd., Green St., bridge, will take your present car or combina in part exchange for a new model. We give a deal for cash. Exchange or easy terms. [8

INDIAN Combination, 7-9h.p., Powerplus, 1 complete with lamps, etc., in extra good dition throughout; £75, or exchange for solo mach —157, Burntwood Lane, Earlsfield, S.W.17. [8

ZENITH 6h.p. Coachbuilt Combination, f equipped, almost new tyres and belt, in s did order, for higher power, cash adjustment sidered; sell £85.—34, Seymour Rd., N.8. [8

PIANO, upright, practically new, splendid t valued 55 gns., offered in exchange for late m combination; cash adjustment either way; Match A.J.S., or Enfield preferred.—Box 1322, c/o *The M Cycle*. [8

EXCHANGE Late Model Ford Char-a-banc, D body, Michelin detachable wheels, new 3 tyres, plated fittings, splendid condition, for combination and cash.—Eton, 260, Balham High Balham. [8

ROVER 3½h.p. 1920 Tourist model, countershaft speed, clutch, etc., brand new never ridden, change for Baby Grand piano, well-known m Letter first instance.—Advertiser, 144, Gt. Port St., W.1. [8

EXCHANGE 15.9h.p. S.C.A.R. 2-3-seater Coupe, dickey, dynamo lighting and starter, for bination or smaller car and cash.—Newnham M Co., 223, Hammersmith Rd., W.6. 'Phone: Ham smith 80. [7

1915 7-9h.p. Indian C.B. Combination, 3-sp K.S., electric lights and horn, excellent dition, stored 4 years, for solo Norton, Triu Zenith; sell £70.—Downview Garage, West Worth 'Phone: 569. [8

SCOTT 3¾h.p., water-cooled, 2 speeds, 1912, chain, engine overhauled by makers, cost £40 (receipt shown), very powerful; exchange 2-stroke or 2¾h.p. Douglas.—Mead, Draper, A sham, Bucks. [8

PETER GORDON, Ltd., have Norton, Sunbea Harleys, Douglases, Triumphs, A.J.S., etc., exchange; cash either way. List free. See small vertisements. Open Sundays.—110, Upper Richm Rd., East Sheen. [8

1919 Tamplin, 2-seater, 8h.p., 3-speed, £70; 3-w Runabout, similar to Coventry Premier, 9 3-speed and reverse, £120; 3½h.p. Rudge, cl model, £21; exchange combination.—Brown, Dar Rd., Ingrow, Keighley. [8

HENDERSON Combination, 10h.p., 4-cylinder, cellent condition, spring luggage and can car Easting, etc., licence paid, any trial, for mec power combination, single or twin. Seen after Derby Arms Garage, East Sheen. [8

LIGHT Car, 4-cylinder, 3 speeds, reverse, enc valves, automatic lubrication, central change, 2-seater, re-painted, new tyres, new b electric lighting; sell £140; exchange modern bination.—1, Townley Rd., S.E.22. [8

THE MOTOR CYCLE

ESTABLISHED IN 1903

TWENTIETH YEAR OF PUBLICATION

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## The Tourist Trophy Races.

BEFORE the next issue of *The Motor Cycle* is in the hands of our readers the Lightweight and Junior Tourist Trophy races will have been won and lost. In spite of the indifferent weather conditions prevailing for the first week's practising some very good speeds have been attained by these small machines, and it is anticipated that, once again, records will be broken, thus testifying to the increasing efficiency of the 250 c.c. and 350 c.c. motor cycle engine. Last year's win of a Junior mount in the Senior event proved that these small engines were equal at least to the 500 c.c. type on the Isle of Man course. Next week's races may decide several momentous questions.

## Mechanical Lubrication.

THE practical utility of road racing has oft formed the subject of discussion; no finer example of its true worth can be quoted than the general adoption of mechanical oil feed for next week's Tourist Trophy races. The majority of competing machines will be fitted with some form of oil pump delivering lubricant direct to the crank case and thus relieving the rider of much responsibility. This is a step in the right direction, eliminating as it does the personal factor in the all-important matter of lubrication. At least one leading make of motor cycle will have dry sump lubrication with a constant flow of oil to and from the engine, while another machine holding a high position in public favour has a foot-controlled oil pump only because its own rather novel mechanical system of oiling was developed too late to be incorporated in the T.T. models.

It is true that at present auxiliary hand pumps are still incorporated in most designs as a stand-by, but as further experience is gained these secondary systems will be found unnecessary for normal use in the hands of the public, and there is little doubt that, with a general adoption of mechanical lubrication, ensuring a steady and even flow of oil, there will be less trouble caused by carbonisation and unevenly lubricated engines.

## Inter-Club Rivalry.

THE enormous increase in the number of inter-club events this year is a very happy sign that the purely sporting side of the motor cycle competition world is not being so wholly swamped by commercialism as one or two other recent happenings might cause the uninitiated to believe.

There is everything to be said for, and nothing against, the encouragement of this type of trial. When men ride for the honour of their clubs the affair breeds only the best type of friendly rivalry, and true sportsmanship is present to an even greater extent than in a competition confined to the members of only one club. Not that the latter usually lacks a thoroughly sporting spirit, but, nevertheless, the very essence of sportsmanship is only brought out when the participants in the contest are struggling for more than mere laurels for themselves.

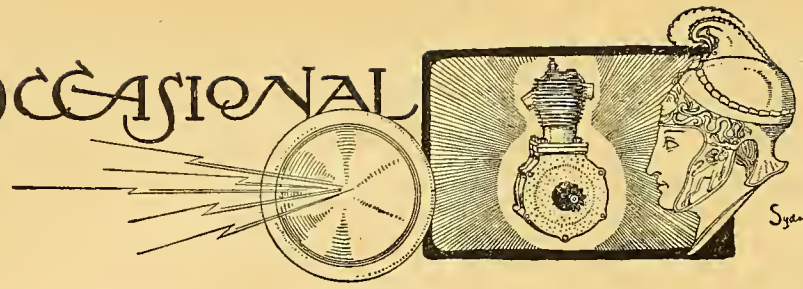
To any secretary who is worried by the apathy of his members we commend the suggestion that he endeavours to arrange, say, a team event or hill climb with some neighbouring club or clubs. He will find that it will prove a very enjoyable affair and a wonderful reviver of interest to boot.

Next month, the 24th prox., the annual club team championship event of the Motor Cycling Club is down for decision. This is the fifteenth trial for *The Motor Cycle* Challenge Cup, and usually attracts the pick of the amateur motor cycling talent of this country to do battle for their respective clubs.

An index to the advertisements in this issue will be found on the page facing the back cover.

# OCCASIONAL COMMENTS

By "IXION"




## How Not to Skid.

AFTER taking a tremendous toss the other day on a greasy road, I consulted three tame experts as to the secret of verticality on grease. The first remarked "Speed! Keep the throttle wide open, and she'll cut through it!" The second said, "Stand on the footrests and leave the bike to balance herself!" The third replied, "Get a hard saddle. These modern comfy saddles chuck your weight all over the place, and, of course, she wobbles." In the multitude of counsellors there may be wisdom.

## Not for the Stunt Merchant.

A GAP in the competition programme is shown up by the entry of two Harper Runabouts in the Scottish trials: for this machine is designed for the lady of the villa, the tennis court, the boulevard, and the golf links, rather than for the professional stunt-merchant. Nevertheless, the pair did miraculously well. The whole design is extraordinarily ingenious, and readers should study it in detail when they meet a Harper in the flesh. A machine which cannot skid, climbs practically anything, weighs next to nothing, and runs on air (almost) is bound to make good. It has a mechanical starter, interchangeable wheels, detachable rims, straight-sided tyres, and all manner of gadgets, while the suspension is admirable. A famous T.T. rider told me he had done his best to capsize a Harper without success. Several of the leading agents tell me they could sell it by the hundred if its price were a little lower; they are all great admirers of it from the technical and practical standpoints.

## Some Engine!

NEW engines always fascinate motor cyclists, though we seldom buy them till we get public proof of their stamina. I have often heard of the G.R.I., but I did not make its intimate acquaintance till the Land's End run, when it was hampered by a lathe hand who had turned its piston to .003in. clearance instead of .008in. I pricked up my ears, because its weary owner remarked that he never carried a spare valve, didn't take any stock of stainless steel, and would guarantee his common or garden 3% nickel steel valve till the last trump blows. So I naturally investigated. This quaint engine has only one valve, which alternately lets in the cold gas and lets out the hot flame. These two streams are prevented from mistaking the carburetter for the silencer by an unlubricated rotary valve, which shepherds everything to its proper destination, and is itself in a sheltered position aloof from the combustion chamber. So no part of the engine ever gets really hot.

## More to Come.

BUT this is only half the tale. A nice cool valve is interesting enough. But during the war I saw a little of various frantic attempts to supercompress the charge in aero engines, with a view to compensating for the frightful loss of power which occurs when an engine is flown to 20,000ft. or so. The Germans evolved one engine with a compression ratio of about 6 to 1 (if memory serves me aright). We promptly shot down a sample, but couldn't make it work on any known fuel, and decided that the German must run it on rum and milk, or some other weird mixture. Five to 1 is regarded as quite a high compression ratio at ground level, and 6 to 1 as the outside edge of the absolute stunt limit. But the G.R.I. people calmly adopt 6.5 to 1 as their standard touring compression. If you aren't engineer enough to know what that means, dear reader, let me say that the more you compress one gasified drop of petrol before you fire it, the bigger punch you'll get when it goes off; it's just the difference between the same boxing glove with (*a*) my left inside it and (*b*) Dempsey's left inside it. So the G.R.I. people get 16.8 b.h.p. at 4,200 r.p.m. out of their 500 c.c. engine, and can easily run it on paraffin if they want to. With an everlasting valve, too. Why isn't it in the T.T.? I hear they will use a ratio of over 7:1 on Brooklands ere long.

## More Anatomy.

A FAIR correspondent requests me to issue a comprehensive invitation to all motor cycle manufacturers producing ladies' machines. Will they please attend the next dance in their neighbourhood? If invitation, this will be easy; if subscription, Motorina will forward cost of tickets on request (limit, 1s. 6d.). On reaching the hall, will these makers select an average British girl apiece (not golf or hockey champions), make the running fierce, presently sit out a dance, and retire to a secluded corner of the conservatory. Having proceeded thus far, the next order of the day is to overcome natural bashfulness, take the fair damsel's hand, and toy with it. While toying with the hand, stroke the thumb and forefinger, making careful note of the span. On return to business next morning, let the several manufacturers measure the span required to operate the handlebar clutch levers of their ladies'

*Ixion's "MOTOR CYCLE REMINISCENCES" are available in book form, price 2s. 9d. post free, from "The Motor Cycle" Offices, Dorset House, Tudor Street, E.C.4.*

**Occasional Comments.—**

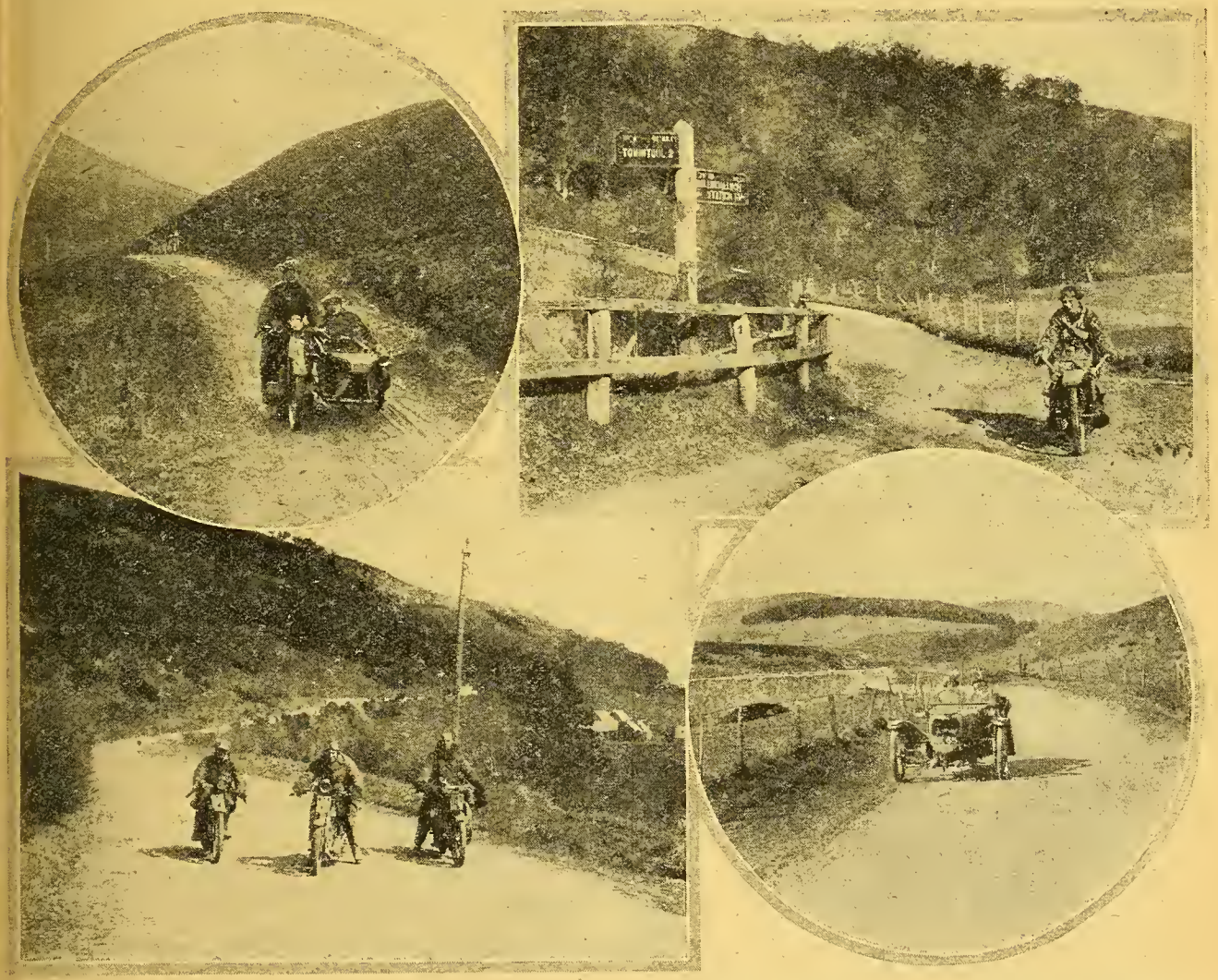
models. They will then realise why, when a lady motor cyclist changes gear, she creates a noise like pushing a length of railway line against the teeth of a high-speed circular saw.

### Ungallant!

IN an obscure provincial club two of the keenest members are Mr. and Mrs. Smith, both of whom compete in club events when their engagements permit. Each of them owns a sidecar, and it occasionally happens that only one of them can get away at a time. The other week Mr. Smith had his day off, competed in the club's petrol consumption trial for a plated toast-rack presented by the local brewer, and managed to upset his outfit on a corner. Mrs. Smith was away from home, staying with her mother, and she incautiously addressed the daily affectionate postcard to "Turnover Smith, Esq." I say "incautiously," for on the next Saturday Mrs. Smith competed in the club's speed-judging trial, *and she, too, turned over*! Fact! I hear this sporting lady is afraid to go home.

### My Idea for a Six Days.

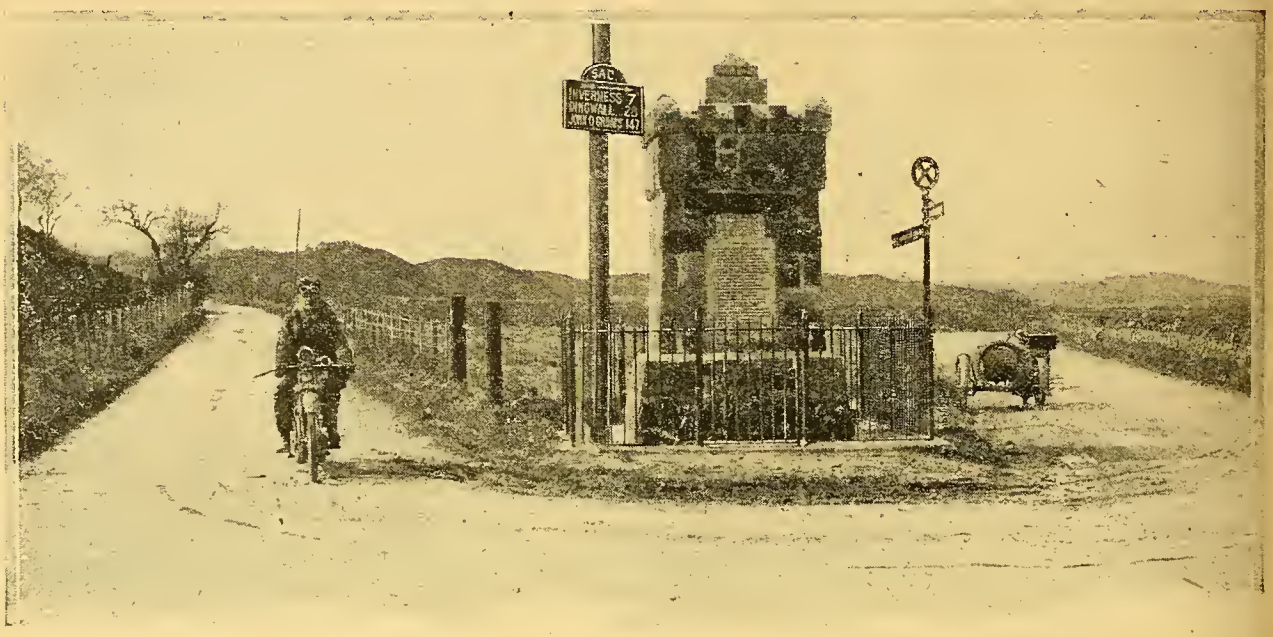
I AM fed up with the current type of Six Days' Trial, in which machines are first racketted over a brief colonial section to start things breaking, and then burbled for a week over easy main roads to give the damage time to develop. Club secretaries tell me that their hands are tied by the problems of hotel accommodation. Well, here's my remedy. Rent a couple of large fields, in the Western Highlands, for preference. Erect three large marquees to serve as (1) official garage, (2) official mess, (3) official bar. Hire bell tents *ad lib.* for the competitors; boy scouts or ex-service men to cook. Then make the boys climb freak hills and shudder over colonial sections all day and every day for the entire week.



OVER THE MOORS AND THROUGH THE VALLEYS OF SCOTLAND. (Top.) J. Richardson (592 c.c. Lea Francis sidecar) on the moors near Tomintoul and Mrs. Jansen (211 c.c. Ner-a-Car) at Bridge of Avon. (Bottom.) A trio near Lumsden. W. E. Smithie (490 c.c. Norton), J. R. Fellows (499 c.c. Sunbeam), and C. Guthrie (698 c.c. Raleigh). The circle shows W. A. Carr on a De Luxe Morgan near Dufftown. All were competitors in the recent Scottish Trials.

# ON SCOTTISH HILLS.

## How a Sports Sunbeam stood up to Eleven Days' Hard Riding Without Attention.




At Craggie Inn, seven miles from Inverness. At the corner is a massive granite war memorial.

THERE is no more enjoyable means of getting about than on a sporting solo motor cycle. The writer makes the statement with a sad heart, for he has just had his own machine, which is of this type, stolen! But this article relates to a borrowed Sunbeam, taken, in fact, from the Editor's garage at a moment's notice for the most strenuous trial to date of 1922.

Glittering like a show-room model, and almost as "new" internally, the Sunbeam—actually of 1921 vintage, Sports type, and with perhaps 1,500 miles to its credit—was dragged into the rain some three days before the Scottish trials started, replenished with petrol and oil, burdened with much luggage and a rider and headed for Edinburgh. For the following eleven days its feelings, if any, had perforce to be entirely neglected, and it received no more attention than a labourer gives to his wheelbarrow. But pressmen win no gold medals!

### Hard and Fast Driving.

Lubricating oil and petrol were supplied as available. For the rest, it was simply driven—hard and fast.

At the end, and after one or two minor attentions, it was ready for the same journey again. Such service after such treatment is surely noteworthy.

Involuntary stops, there were three. The first, very involuntary indeed, deserves record in detail, for it was rather a remarkable road accident. After seeing the riders up Trinafour, I overtook the tail-end competitors on the Pitlochry-Perth road, intending to run straight into Perth. At the point where the route made a detour for Aberfeldy I was batting along at an easy pace perhaps 30 yards behind Mrs. Hardee, the lady Matchless driver. In front of both of us was the yellow streak of dye running round the sudden right-hand turn to Aberfeldy. My route was straight on, but Mrs. Hardee's was to the right. Naturally, therefore, I kept right on her heels, intending to slip by, inside, as she turned off. Unfortunately she missed the turn, pulled up suddenly, and drew to the left to turn in the road. There was not time to pull up dead, and less than two seconds to decide whether to pass the Matchless inside or outside. "Inside" had it; but the passage was too narrow, and the Sunbeam's front number plate got gently scraped off by a low stone wall.

I have given considerable space to this incident because a thorough analysis of the circumstances fails to show how it could have been avoided. Like a quarrel, an accident sometimes takes two to make it; more usually one at least is very much to blame; but in this case it appeared to be inevitable. Probably the brakes of the Matchless were fractionally better than the Sunbeam's, and perhaps the former was braked fractionally before the latter.

### Unfairly Branded.

This, then, was my first involuntary stop; and a particularly annoying one, for it branded the "beam" as one of the fallen—there were many bent mudguards and footrests before the week was over—whereas a machine steadier on uncertain going is not made. Two punctures, both nails, and repaired without removing the wheel, complete the list of troubles.

Returning, therefore, to the no-trouble miles, there are one or two particularly noteworthy characteristics

**On Scottish Hills.—**

of the machine which call for a word or two. Its controllability, or perhaps, more exactly, the layout of controls combined with riding position, is remarkably fine; and this factor, I think, accounts for the absence of any desire to wave one's legs on such an atrociously unsteady surface as, say, the Bridge of Avon—Granton section on the second day. Actually I am convinced that the Sunbeam steers no better than any other purely solo mount of the same type; but the rider becomes, centaur-like, so much part of the machine that the rear wheel may skid violently—it did occasionally on treacherous surfaces in the Scottish—without causing him to lose confidence in its eventual stability. It is a machine that will convert the average duffer into a good rider, in the "observed colonial section" sense, after his first hundred or so miles in the saddle.

### Comfort to Body and Mind.

It has two minor faults only from the point of view of a pressman who covers a strenuous trial every second week or so and who has not yet found perfection. It is undertyred; 26 × 3in. or even 28 × 3in. tyres are a wonderful comfort to body and mind, and I have yet to be convinced that the larger section covers roll more readily on certain or any types of road. Secondly, if the rear brake had a greater frictional area and were more heavily built all round it would require less frequent adjustment.

For the rest, it is almost impossible to comment adversely. Although de-coking must have been sadly needed before the week was half out, I made gold-medal climbs of all the hills. On Inverfarigaig, true, I footed twice, and on the first occasion, too, the Sunbeam was not entirely guiltless; the drip feed pump at the end of its stroke fouled the handle-bars, thus failing to allow sufficient steering lock to preserve a wobbling balance.

The average speed must have been pretty good; on Saturday, for example, the writer saw every competitor up the first hill of the afternoon, Tynron, and was back in Edinburgh before "No. 1" had climbed Blackford—and this sort of thing had been going on all the week.

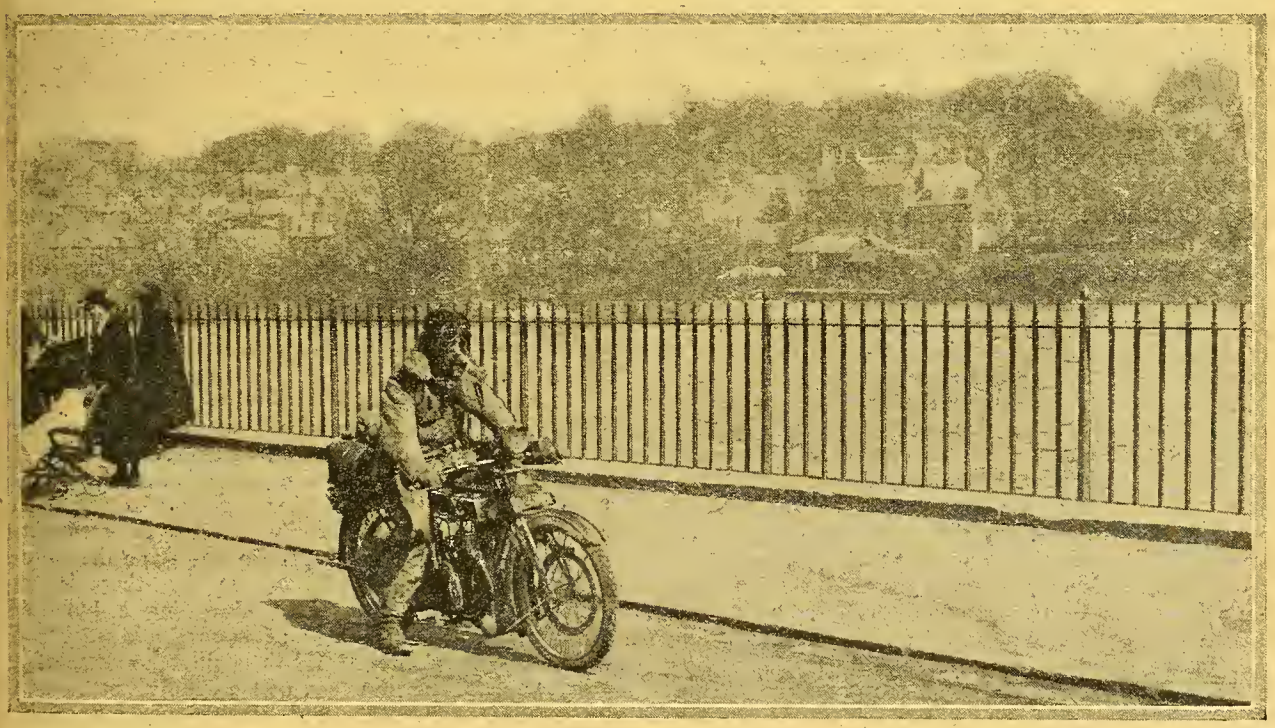
### Where a Kick-Starter is Needed.

Two or three yards paddle down the nearest convenient slope always served to get going from cold; but in their 1922 model the makers themselves have recognised that a kick-starter is well worth its weight in metal on certain occasions. My procedure after a stop for observations on a hill was simply to run down and turn round, but the latest type would certainly have been more convenient.

Petrol consumption averaged 65 m.p.g.; which under the circumstances was not at all unsatisfactory, but the compulsory mixture of many lubricants—it was nearly Ford oil, one day—made the figure in this respect rather high, and is a practice to be avoided.

Competitors' own views and the list of retirements, commented upon last week, agree to prove that the event was a searching test of mechanical fitness. In my case, as I have attempted to show, this severity was increased quite 50 per cent. Yet during the whole time I was able to forget my mount, concentrating on the trial and the full appreciation of Scotland's magnificent scenery.

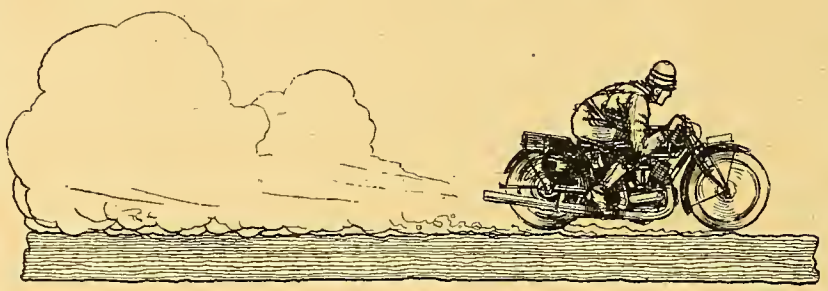
Thus, my opening remark that there is no more enjoyable means of getting about than on a sporting solo motor cycle. And for the last four words I might fairly substitute "Sports Sunbeam." A. McL.



On the banks of the Tay at Perth. The motor cyclist is fully prepared for rainy weather.

# WHO WILL WIN?

## Chances of Riders and Machines in the Lightweight and Junior T.T. Races discussed by "Michael Kirk."



THE probable winner of the Lightweight Race takes more finding than "the lady" in the three card trick. The pace of this race is comparatively slow (the record lap is 9m. 13s. slower than the Senior record), and, so far as jockeyship goes, lots of men are class enough to score in a no-trouble ride; in fact, in the 250 c.c. event the machine deserves more credit than its rider, whereas in the two bigger categories I personally award the bulk of the honour to the man.

### Battle of Proprietary Engines.

Another difficulty is that about half the entry will use the same engine (J.A.P.); nobody knows more about tuning this engine than its makers, and they will doubtless put their knowledge at the disposal of all their customers. Last year the J.A.P. engine had a comfortable margin of speed over the best two-strokes—the Levis, Ivy, and Velocette. But during the interval some of these two-strokes have been hotted up quite remarkably, and they stick sustained speed much better than they used to do. I have not seen much of the Levis lately, but it is the Abraham from whom most two-stroke bicycles are descended, and it is sure to be there or thereabouts at the end of the fifth lap.

For the Velocette I have the most unfeigned respect—the last one which I sampled had been supplied to a private owner, and showed the kick of quite a warm 500 c.c.

### Outside v. Inside Flywheels.

The Blackburne engines have had many a tussle with the J.A.P.'s in all sizes, and have often held their own; this year's unit is extremely attractive. Outside those who must provide the favourite, there are lots of promising outsiders, amongst which the Sun-Vitesse has proved its ability to stay the course.

To get down to a tentative decision, I must admit that the prospects of a two-stroke winning outright do not appeal to me; they got very close last year, but the four-stroke has equalled all their progress since. So I expect to see a J.A.P. or Blackburne engine win. Allowing for the usual chapter of misfortunes, a big entry has the best chance, and the New Imperial disposes of seven riders, including last year's winner in D. G. Prentice, and a second string whom I personally regard as the second best all-round rider in the country—Bert Kershaw. Kershaw may not be a super-speedster, but he is quite fast enough to win this event, and he will make no blunders. If I were a bookie I should regard this pair as likely to beat the field between them. Danger may be specially apprehended from the Sheffield-Henderson duo. This latter organisation gets the last ounce of punch out of the o.h.v. Blackburne engine, and is out to establish a unique speed reputation in the baby class. If J. C. Whalley is half as good a man as his brother, the Massey-Arran will get a run for its money. Wade looks the fastest of the Diamond crowd, Davison should lead the Levis string, and there remain two more teams which look formidable to a prophet who has not yet seen much practice. The O.K. trio are all good men: North has finished as high as tenth in a Senior race; Hall and Handley are first-raters without Manx experience. The Velocette I shall tip as the speediest two-stroke; we all know that Judd can sit anything on wheels over Brooklands, and Denley rode well last year.

## THE JUNIOR RACE.

The Junior race looks much less open than the Lightweight. To follow the stable in form is always a good rule, and the A.J.S. demonstrated so colossal a superiority last year that a 1922 failure would be a real shock. They are more likely to have hotted up their 1921 engine than to have spoilt it by any minor alterations. They dispose of seven riders, including last year's second, third, and fourth, the 1921 Senior winner, *plus* useful men in Harris and Longman, a promising *débutant* in Grinton, and Chambers, whom I do not know. One or two of these men, notably Harris, are faster than the "book" indicates—able to startle us all if they have the luck to get a non-stop in the race. Backing any stable against this crowd would be as plucky as pitting a cadet corps against the Prussian Guard. Of course, H. R. Davies and the others get no younger, and youth must be served.

### Single v. Twin.

However, when I scrutinise what they have to beat I can only find isolated individuals whose chances seem poor on paper, though a few hours on the mountain in those chilly Manx morning mists might fetch out my pencil. For example, I shall be very surprised if the Douglas people do not stage the absolutely fastest machine in the race; but there is not much weight to play with in designing a hot-stuff Junior, and over five laps of bounce and racket I prefer the chances of a solid little single to those of a small twin. Still, the race will certainly not be won by anybody till Pullin and Haslam are out of it. Whalley has already earned his spurs in the select company of men who can ride hard without running

**Who Will Win?—**

undue risks. With a non-stop he can win outright. Le Vack is another threatening entry, but I always think that his track work is just half a class above his road speeding. Victor Horsman, too, carries my money oftener at Brooklands than he does in the Island, and the Sheffield-Henderson riders would create a real surprise if they outrode the A.J.S. stable, though I quite expect their machines to streak round the course.

I have omitted lots of dark horses, and am quite prepared to look exceedingly foolish if in practice some budding George Dance creates a reputation and rides the rest of the field off their legs in the actual race. But it must be recognised that Junior speed is now getting precious near the limit which the course will hold. When the field begins to circle at this kind of bat, there are always two or three men who stand out in a class by themselves; and if they get anything like a clean run, the trophy is in their pockets.

### Last Year's Senior Winner.

The A.J.S. team includes in H. R. Davies possibly the finest road-racing man whom our sport has yet produced, and behind him there are two or three others very nearly as good. The merest trifle will deprive a man of all chance of victory—one tiny miscalculation at a corner which is hardly worth calling a corner, one small nail standing up on its nasty little head in the roadway, one infinitesimal little flaw in any of a hundred bits of metal, one small error of temperature in cooking a piece of steel, one slip of a tool in the machine shop—so the isolated individual, however formidable, can never be wisely fancied to defeat a large team.

Honestly, I do not consider it as healthy either for sport or industry that all the honours should stay in one hand. When the Roman generals of ancient days rode in their triumphal chariots to the Capitol after a great victory, a slave stood behind them and whispered in their ear, "Remember that thou too must die!" Not for ever will the hitherto invincible A.J.S. monopolise the Junior and make the Senior entrants fear a defeat which is also a humiliation. But I can see no ground for supposing that the A.J.S. runs very grave risks of losing the Junior this season. If the Douglas people had entered a bigger team of picked men, the struggle might have been more equal. As things are, I should expect to see a solitary representative of some other make—probably a Douglas—contesting the issue fiercely with a regular horse of the A.J.S.; and in such cases the odds are usually on the big battalions. Nevertheless, the Douglas is incontestably our revviest engine nowadays, and it has not won a T.T. since 1912. Watch it; but not, I think, too hopefully, considering its small entry.

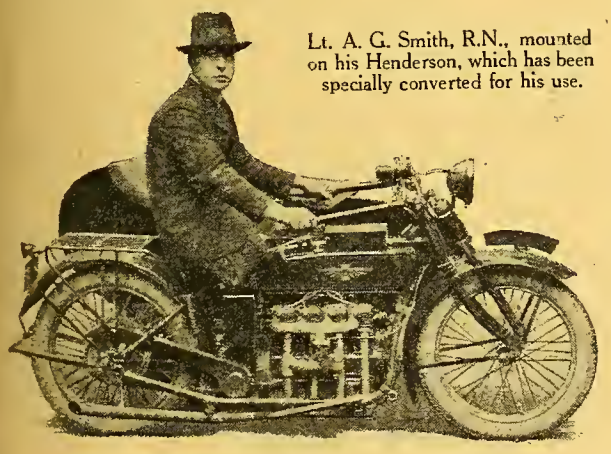
---

# A DISABLED RIDER'S MOUNT.

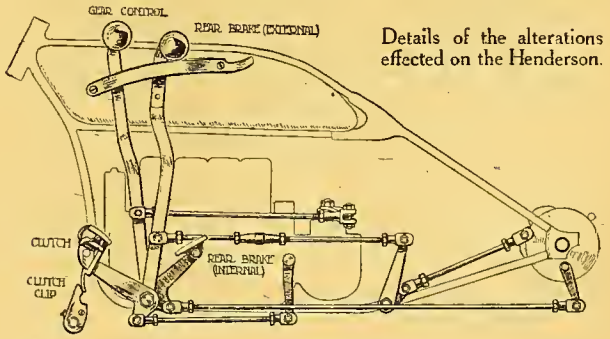
## Transposing Controls on a Four-cylinder Henderson.

THE owner of the Henderson illustrated had his leg completely severed above the knee owing to the breaking of a cable on board one of H.M. ships. Being an enthusiastic motor cyclist he was afraid that he would be able no longer to indulge in his favourite pastime. However, thanks to the ingenuity of Messrs. Robertson's Motors, Ltd., he is not only able to ride but to enjoy thoroughly the possession of the latest model 1922 Henderson.

Following American practice the kick-starter is on the near side of the machine, and this is, of course, an advantage to the owner, but the chief alteration has been in the conversion of the hand lever actuating the clutch in conjunction with the clutch pedal to control the external brake, the lever working in a ratchet so that the machine may be left with the brake on when on a gradient, and the introduction of a clip to the clutch pedal, so as to hold it permanently out of engagement. This clip only comes into action at the bottom of the travel of the pedal, allowing the clutch to be used in the ordinary way for starting and gear changing. If, however, it is intended to hold the clutch out permanently, the foot is firmly pressed down and the clutch is held out.



Lt. A. G. Smith, R.N., mounted on his Henderson, which has been specially converted for his use.

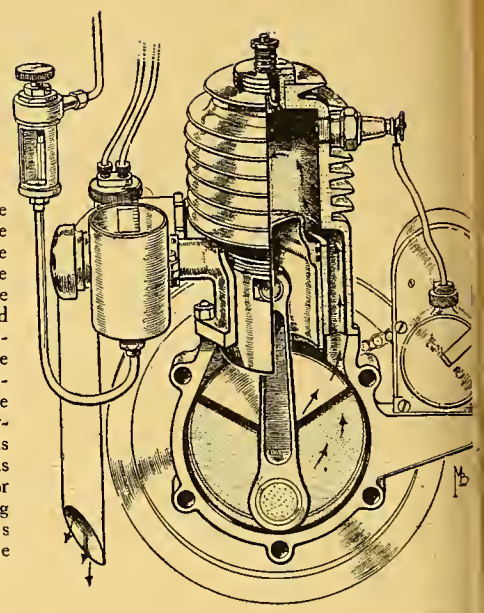



Details of the alterations effected on the Henderson.

Lt. Smith's machine is fitted with a welded luggage carrier, the surface of which consists of flat strips, so that any small parcel can be carried conveniently.

# TWO STROKE ENGINES IN PRACTICE.

## Carburetter and Ignition Adjustments as they Affect Engine Performance on the Road.



A two-stroke engine of the three-port type shown with the piston in the exhaust and transfer position of the cycle of operations. The carburetter arrangement is that which was employed for determining the figures quoted in the article.

MOST average riders are more concerned with what can be got out an engine than with its theoretical thermal efficiency, and knowledge is wanted on how to get the best results. This desire for knowledge is specially manifested by owners of two-stroke machines, and it is the aim of the present writer to deal with a few of the strange problems connected with this increasingly popular type of engine from a practical point of view.

The question of the design of the engine, or the size and location of the ports, is rather outside the scope of these notes, particularly since the rider cannot, as a rule, vary the designer's ideas.

### Importance of Carburation.

The first, and perhaps most important subject is that of carburation. Carburation is a process whereby liquid petrol is converted into petrol vapour, and mixed with the correct quantity of air to form an explosion mixture. The chief difficulty lies in these words, "correct quantity." Too little air, causing a rich mixture, will lead to "four-stroking," and it should be noted that "four-stroking" is invariably due to excess either of oil or petrol. On the other hand, too much air, or a weak mixture, will lead to "spitting back." Consideration of the problems involved i complicated by the fact that there is often a ver narrow margin between "four-stroking" and "spittin back" mixtures (see fig. 1).

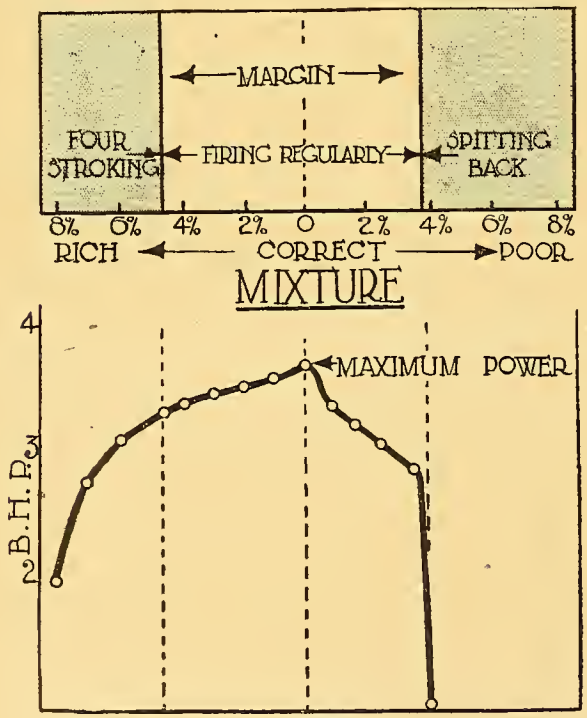



Fig. 1.—Above is shown diagrammatically the effect on the engine's running of weak and rich mixtures. Below is the power curve obtained during the same test.

In obtaining the results on which the diagram i based an experimental air-cooled two-stroke engine o 70 × 76 mm. bore and stroke was mounted on th bench, and arrangements devised for cooling it by a fan, and a Prony type brake was arranged to operate on the rim of the flywheel, so that the brake horse power could be determined.

A well-known make of single jet carburetter wa used, but it was provided with a proprietary variable jet.

The needle valve and float were dispensed with, and petrol was fed to the float chamber through a sight drip feed.

A gauge was fitted to the float chamber with a mark at the correct level—1-16in. below top of jet.

The engine was run up to 2,000 r.p.m. with an approximately correct jet setting; the throttle and air levers were then kept constant and the petrol valve adjusted so that the level in the float chamber was correct and remained steady. The drops were then counted over a period of one minute, and this was taken as 100.

Next the jet was opened slightly, and further adjustment of the petrol valve was made, so that level remained steady, and the drops again counted and expressed as a percentage on the original figure. Various other readings were taken, and in addition the b.h.p. for each setting was determined.

The engine speed, of course, varied, but not more than 10% over the whole range of the test.

### Effect of Rich and Weak Mixtures.

From the diagram it will be seen that, for a mixture 4¾% rich, the engine commenced to four-stroke, and for a mixture 3½% poor, it commenced to "spit back," and stopped at 4% poor.

**Two Stroke Engines in Practice.—**

Thus the comparative narrowness of the margin is seen. The upper part of fig. 1 should be studied in conjunction with the graph in the lower part of the drawing, which gives the b.h.p. at each jet setting. It will be seen the curve slopes more steeply on the poor side than on the rich; thus, a rich mixture, say, 3% rich, will cause less loss of power than a mixture even 2% poor. And, no doubt, the high consumption of some two-strokes is due in part to continually running with a rich mixture. Note, however, that maximum power was obtained for the correct mixture.

The requirements of a two-stroke engine are simple, but often difficult to realise.

It must be remembered that before a start can be made air must be displaced from the induction pipe, crank case, transfer passage, and cylinder, and replaced by explosive mixture.

On a cold morning especially the petrol vapour will condense on the way, and by the time the mixture has reached the cylinder it will be too weak to fire.

### Essential for Easy Starting.

So there must be an excess of petrol to ensure a start in anything like reasonable time. This is requirement one—rich mixture for starting.

For running, however, the mixture should be just right, and remain so for any engine speed.

When dealing with this subject it is only too easy to go off into technicalities, which do not help the average rider much. So we will proceed to see how these requirements can be met in practice.

It may be noted that *any* modern carburetter, if once correctly set, will satisfy these requirements. The difference between the various types is merely typical of efforts to save the rider trouble by giving him one lever to manipulate instead of two and a variable jet, or something of that kind.

Some carburetters, however, especially the automatic variety, are designed to give a fairly correct mixture at all engine speeds; and, if we get one to work within the limits of, say, 2% either way, we shall not be doing badly, and such an instrument would be useful for a novice.

There are many methods of altering mixture strength: Among them we may mention these:

1. Altering jet size.
2. Altering choke-tube size.
3. Altering petrol level.
4. Altering the air supply externally.

Our requirements are: a rich mixture temporarily for starting, and weaker one for running.

The usual method is to flood the carburetter for starting, *i.e.*, to raise the petrol level for a short time. This method is wasteful, and if "petroil" lubrication be used, is filthy. One rider of a well-known make of two-stroke, of 247 c.c. capacity, recently complained to the writer of a consumption of 60 m.p.g. He was a commercial traveller, and often made forty starts per day, flooding violently for each!

Another method, which is rather better, is to cut off most of the main air supply by stuffing a rag into the air inlet, or by using a leather or metal cap over the carburetter inlet; or by a light throttle valve in a piece of thin tubing, replacing the cap.

### Experience Must Guide.

As to the running, it is essential to keep the mixture correct, and to the beginner who asks how one is to tell when it is so, the answer must be "experience," and the answer to the former—well, in most carburetters the air lever gives ample range. But in some it does not, and a variable jet, preferably handle-bar controlled, should be fitted, if possible; indeed, any carburetter is improved by such a fitment. Only three positions are needed—one rich for starting, normal for running, and rather weak for downhill work.

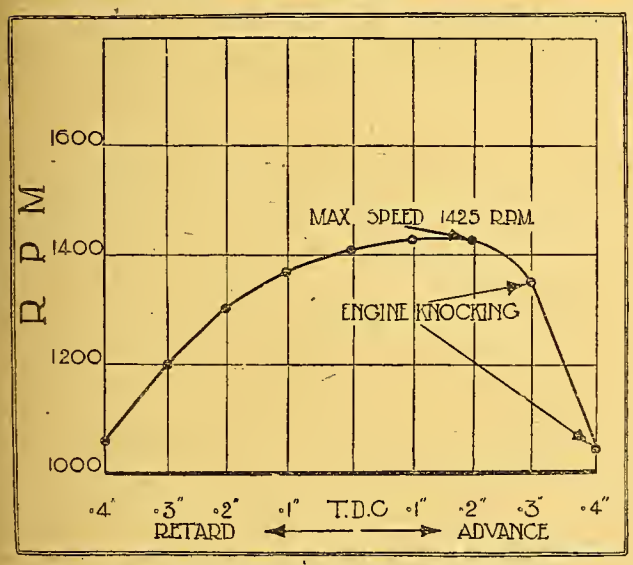



Fig. 2.—Demonstrating the effect on engine speed obtained by progressively advancing the firing point from 0·4in. late to 0·3in. early; the engine running light on a fixed throttle opening.

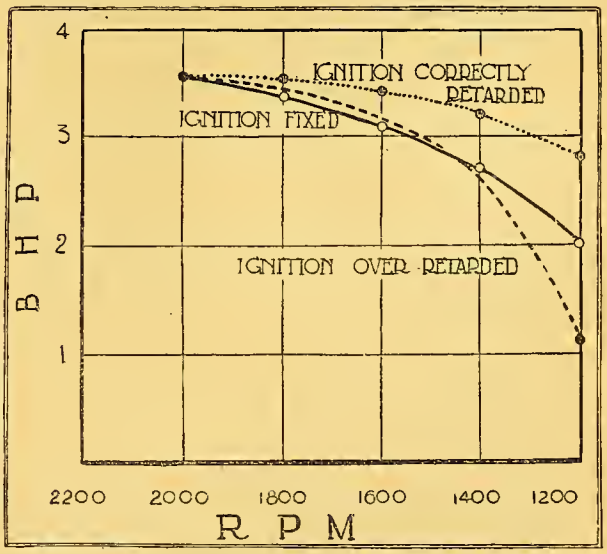



Fig. 3.—When hill-climbing on a fixed carburetter setting it is necessary to retard the spark as the speed falls off; this diagram shows how the engine power is affected by ignition control under a test bench reproduction of climbing conditions.

**Two Stroke Engines in Practice.—**

An intelligent use of the jet and air lever will do a great deal towards getting the best results on the road.

### Ignition and Its Effect.

Spark timing has considerable bearing on the satisfactory working of two-stroke engines, which are extremely sensitive to minute variations.

A two-stroke engine requires one spark per revolution, and the usual practice is to drive the magneto at engine speed (as compared with half-engine speed in most four-strokes), and thus a smaller and lighter type of magneto may be utilised.

The speed of the magneto also tends to give easy starting, and good slow running, and so the magneto should not be immediately blamed if these conditions are absent. When dealing with magnetos, "leave well alone" is a good motto, unless there is something obviously wrong.

There is no need to go into the question of the design of the magneto, or its working, as there are many text-books which explain all this.

### Care of the Magneto.

There is, moreover, no special point to be emphasised in the upkeep of the magneto. Lubrication is usually effected by grease packed in the housing of the ball bearings, which will last for some twenty to thirty thousand miles. At the end of this period the grease may be replaced if necessary; and the correct grease to use is purest vaseline, which should be chemically neutral, free from water, and contain no grit.

The magnets of modern magnetos do not lose magnetism after many years' running, thanks to the tungsten and other alloy steels which have been specially introduced.

Any trouble with dirty points is invariably due to a faulty condenser, or to over-lubrication; the latter is not likely to occur unless oil is added by the rider in large quantities.

### Sparking Plugs.

In some two-stroke engines a suitable plug is very hard to find. It has been noted that a two-stroke engine tends to run hotter than a four-stroke, and it is this point which causes most of the minor troubles connected with sparking plugs.

If the plug has thin points, or electrodes, they very soon get white-hot, and fire the charge long before the proper moment—and it should be remembered that the plug has only half the time to cool in a two-stroke that it has in a four-stroke.

On the other hand, if the electrodes are heavy, and thick, they keep cool; but if there is any excess of oil present in the cylinder the plug becomes "oiled up" and useless.

No two makes of engine are alike in their preference for a plug.

There are some in which any type of plug may be used, notably the Scott (water-cooled). But there are others in which only one type of plug will give satisfaction, and this must be found by experiment, and, possibly, expensive trials. The makers do not always send out the best type of plug with the machine—the writer has personally experienced two cases of this. In one case, the plug ran thirty miles, and in the other eighteen miles before giving up the ghost.

Plugs of the non-detachable type are best avoided.

### Timing the Spark.

The average two-stroke is extremely sensitive to the timing of the spark, and usually can be timed rather earlier than in four-stroke practice. The best all-round setting is: Piston on top dead centre; spark fully retarded; points just open.

For low engine speeds, the spark can be kept pretty well retarded, and for fast work should be advanced. A two-stroke magneto should have as wide a range as practicable. There was a time when many single-speed two-stroke machines were sent out with fixed ignition! The makers have learnt better now.

### Advantages of Wide Ignition Range.

The results of some further experiments with the air-cooled engine referred to earlier will no doubt prove of interest as to this point.

A special arrangement was devised whereby the spark could be varied over a wide range, without vitiating its strength to any serious degree; this involved the use of two magnetos, which, by a high-tension distributer, could be connected to the plug at will.

Fig. 2 shows the effect of variation of timing on engine speed when running light, and speaks for itself. The throttle opening was constant during this experiment.

In diagram 3 the results of a further experiment are shown. Unfortunately, it was not found possible to get a series of consistent readings for this test; however, a general idea is given. The ignition was kept constant at 0.2in. advanced, *i.e.*, before t.d.c. The engine was run up to 2,000 revs. with a light load on the brake.

The b.h.p. was determined; and the load then increased, so that the engine speed dropped, the throttle opening being constant. The b.h.p. was found to be less, and kept on decreasing as the load was increased, and engine speed dropped (see full line, fig. 3.).

### Retarding Spark on Hills.

The test was then repeated, but as the load was increased the spark was gradually retarded to 0.2in. after t.d.c. at the end of the test. It will be seen that the power curve did not drop to anything like the same extent (as dotted line).

Unfortunately, owing to trouble with undue heating of the brake at the heavier loads, the test had to be abandoned for the time being.

It will thus be seen why retarding the spark on a hill is beneficial to the engine (both in a two-stroke and four-stroke), and the writer has not seen this graphically explained elsewhere, though, of course, it may be. The average rider retards his spark on a hill from habit more than anything else, but if he retards it too far he may find himself as bad, or worse than, before. The heavy dotted line shows the effect of over-retarding the spark under the same conditions.

GEO. F. JONES.

# In the Doone Country.

The Castle Rock, which dominates this end of the Valley of Rocks; the far side is a sheer cliff some three hundred feet high.

## A Romantic District Embracing both Coastal and Inland Scenery of the Most Attractive Nature.

BEGGAR'S ROOST and the hamlet at its foot, Barbrook Mill, have loomed large in the pages of *The Motor Cycle* of late; the inclusion of his hill in the London-Land's End Trial of Easter ast gave this charming corner of North Devon much ree advertisement.

Lovers of Exmoor, who know their "Lorna Doone," ill remember that Jan Ridd and Uncle Reuben rode *ia* "Brendontown, Illford Bridge, and Babbrook, o avoid the great hill at Lynmouth."

"Illford Bridge" is known now as Hillsford Bridge, on the Watersmeet Road out of Lynmouth, nd the "Babbrook" mentioned by Blackmore is the luster of cottages on the turbulent brook at the foot f Beggar's Roost Hill, now named Barbrook Mill.

Jan and his uncle were going this way to "Ley Manor," now known as Lee Abbey—a private board-ng establishment in these days, but then the mansion f the Baron de Whichehalse—their purpose being 'to lay an information, and sue a warrant against he Doones, and a posse to execute it."

### Worthy of a Visit.

Lee Abbey is situated, delightfully, on the coast ear the end of the Valley of Rocks, though there s no thoroughfare for motors beyond the lodge at the nd of the valley road; in spite of this it is a romantic pot well worth a deviation from Lynton.

The curious rock formations in the valley are well lescribed by Blackmore—"at the right hand is an pward crag, called by some the 'Castle,' easy enough o scale, and giving great view of the Channel. Facing this from the inland side and the elbow of the valley, a queer old pile of rock arises, bold behind one another and quite enough to affright a man, if it only were ten times larger; this is called the Devil's Cheese Ring."

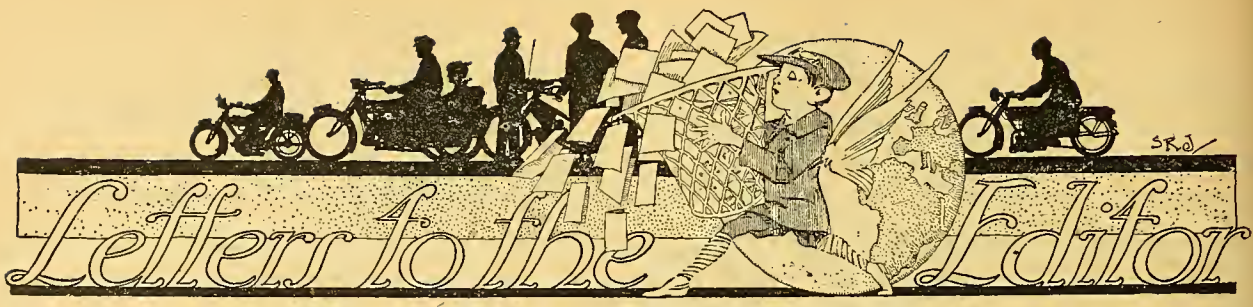
### Within the Devil's Cheese Ring.

Here it was that Jan Ridd went in fear and trembling to visit old Mother Melldrum, "a certain wise woman" who "kept her winter in this vale of rocks within the Devil's Cheese Ring"; Jan went from the Doone valley, through Lynmouth, on foot, for fear she should cast a spell on his horse if he rode; one can only conjecture what would have happened could he have ridden a motor cycle. Whilst there, seeking the witch's advice anent Lorna Doone, he saw a "black he goat" disputing possession of the crag. Castle Rock, with "a fine fat sheep"; Jan made a great attempt to save the sheep, but as he reached them the goat hurled the sheep over the cliff to the wave-washed rocks below; Jan was so enraged that he seized the goat by its hind legs and threw it after its victim.

Whether the many entrancing pages written by Blackmore around this beautiful corner of Devon are founded on fact, or, as seems more probable, merely the product of a lively imagination, captivated with the romantic spirit of the Doone country, matters little nowadays; it is taken for granted by the majority of tourists who love the book, whether true or not.

For a short motor cycling holiday, in spite of the big hills, a visit to this district, to seek out the scenes of the history of "Gert Jan" and "Lorna," is hard to beat.

WESTERNER.




The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *IS TOWING ILLEGAL?*

Sir,—Seeing the letter of Mr. G. A. Weatherill *re* trailers, I think it is up to all motorists to get the proposed regulation altered, whether it applies to them or not. Stopping a trailer being used on a motor cycle is taking away a certain amount of freedom which we have. I do not know of any other vehicle which is not allowed on the road. The next thing might be the prohibition of sidecars!

Under that regulation, too, I suppose no motor cycle would be allowed to tow a machine, which, when attached in that manner, would become a trailer.

P. S. COLLYER.

### *"COOLING TOWERS."*

Sir,—Referring to the numerous finned air-cooled valve caps now on the market, I note that, as yet, they have not a generally accepted name.

In view of this I beg to suggest the term "cooling towers." I think that this is appropriate in that most of these appliances are made in the form of a miniature "tower" of radiating fins. C. F. CAUNTER.

### *EQUITABLE INSURANCE.*

Sir,—With regard to the question of insurance, I consider that a 10 per cent. rebate is ridiculously inadequate in the case of an experienced rider who has been insured for years, and who has in that time made no claim.

Ten per cent. less than the last renewal would be far more equitable. Thus, for a policy originally £10, the renewals would be £9, £8 2s., £7 6s. for subsequent years.

This takes account of the driver's previous history—he is judged by results.

Also, as the effect of this system would be cumulative, it would afford every encouragement to the motorist to keep a "clean sheet." REVS.

Glasgow.

### *INACCESSIBLE DRIVING CHAINS.*

Sir,—At least 75 per cent. of the sidecar outfits on the road carry the rear driving chain between the cycle and sidecar.

Can a fellow-reader kindly give an explanation of this practice?

Surely it is enough to repair a broken chain on the offside of the machine, without being compelled to squeeze between the sidecar and the machine? A. M. KNIGHT.

### *SALT'S ACTION ON ENAMEL.*

Sir,—It may interest you and your readers to know that it is not necessary to go to East London, South Africa (page 588), to find streets watered with salt water.

There are salt water mains in the streets of Blackpool, Lancashire, and this water has for over twenty years been used for watering the streets of the town. I have never heard of any complaints about the effect on enamelling, but the fact remains that the enamel on the mudguards of my 1921 machine is already in a parlous state, peeling off in big patches. However, I do not attribute this to the salt water on the streets—it leaves a slight white deposit on the road surface—but to the fact that I believe the mudguards were enamelled when damp. There is rust under the enamel.

Blackpool. FR 3128.

### *WHAT IT COSTS.*

Sir,—Possibly some figures relating to the running costs of a moderately old machine may be of interest.

The outfit is a 4¼ h.p. Model K 1916 B.S.A., with Canoelet sidecar, bought new in October, 1916, and since driven only by myself. No record was kept during the years 1917 and 1918, during which the mileage amounted to 3,800 miles.

| | 1919. | 1920. | 1921. |
|---|---|---|---|
| Petrol | £6 4 8 | £5 14 9 | £4 5 3 |
| Oil | 2 0 0 | 2 6 8 | 2 17 5 |
| Repairs | 3 8 6 | 2 15 0 | 4 7 0 |
| Spare Parts | 2 0 2 | 2 0 11 | 6 2 4 |
| Tyres and Belts | 13 1 6 | 7 2 7 | 7 1 9 |
| Licences, Insurance | 5 11 0 | 5 5 2 | 10 2 6 |
| Improvements, etc. | 2 0 0 | 2 14 0 | 4 1 6 |
| Miscellaneous | 2 17 5 | 1 15 0 | 3 9 0 |
| Total Cost per Annum | £37 3 3 | £29 14 1 | £42 6 9 |
| Miles run | 3,253 | 3,293 | 2,764 |
| Cost per Mile | 2¾d. | 2¼d. | 3½d. |
| Gallons Petrol Used | 41 | 44 | 39 |
| M.P.G. Petrol | 79 | 75 | 71 |

"Petrol" includes all used for cleaning (rather lavish) and general uses. "Miscellaneous" includes special clothing, garaging on tour, &c. Each year's mileage includes about 1,500 miles of serious touring, extending over about three weeks in hilly country with sidecar and passenger; the rest short runs, 80 per cent. with sidecar. K.B.1112.

Liverpool.

Sir,—Perhaps the following running costs may be of interest to your readers:—

Machine, 8 h.p. Sports Zenith, delivered August 4th, 1920.

| | | | |
|---|---|---|---|
| First cost | £139 | 0 | 0 |
| Present estimated value | 90 | 0 | 0 |
| Depreciation | £49 | 0 | 0 |
| Lamps and Horn | 4 | 5 | 0 |
| Licences | 8 | 5 | 0 |
| 127¼ gallons Petrol | 19 | 15 | 10½ |
| Belts | 6 | 15 | 0 |
| Tyres | 6 | 12 | 2 |
| Maker's Engine Overhaul | 2 | 17 | 4 including carriage |
| 8¾ Gallons Lubricating Oil | 3 | 18 | 1 |
| Sundries | 0 | 16 | 7 |
| Police | 0 | 2 | 6 |
| | £102 | 7 | 6½ |

Mileage=10,968, or 2¼d. per mile, all in.

FRANK G. HOWARD.

Sir,—The following is an actual brief account for running a 2¼ h.p. two-stroke single-geared lightweight for one year:—

| | £ | s. | d. |
|---|---|---|---|
| Tax on motor cycle | 1 | 10 | 0 |
| Driving Licence | 0 | 5 | 0 |
| Insurance (3rd party, fire, and theft for 2 drivers) | 3 | 4 | 0 |
| Petrol, 5 gallons at 3s. 6d. | 0 | 17 | 6 |
| Petrol, 11 gallons at 3s. | 1 | 13 | 0 |
| Petrol, 26 gallons at 2s. 6d. | 3 | 5 | 0 |
| Oil (2¼ gallons) | 1 | 0 | 7 |
| Two belts and fasteners | 1 | 9 | 6 |
| Tyre and tube | 2 | 14 | 0 |
| Spare parts, repairs, etc. | 5 | 2 | 2½ |
| Total Cost | £21 | 0 | 9½ |

Approximate mileage, 4,000. Cost per mile, 1¼d. A.B.

Leeds.

### SUPERFLUOUS FORK SPRINGS!

Sir,—It may interest your readers to know that I have ridden my N.U.T. a good thousand miles with both springs broken.

One of them cracked as the result of an accident just outside Paris, and while the machine was being straightened out some small boys drew my attention to the fact. I certainly was rather worried as to what might happen if it broke, and it was very likely to do so. Spares could not be obtained there, so I carried on with the original intention of finishing my tour to the south of France. It was not long before it did break, but it did not matter, and a few miles further on the other broke in sympathy.

I arrived home without any more trouble, and it was some two or three weeks before I could get fresh springs from the makers. L. ERNEST H. HILL.

### TEMPERAMENTAL ENGINES.

Sir,—In regard to the several letters complaining of sluggishness in running, and at times the engine going "mad," perhaps my experience of an elusive trouble and its disappearance may be of value. In a piston the vertical side at the top of it should be turned a shade less than that between the rings, and also of the skirt. Some pistons are turned a little less than they should be to allow for expansion under heat of the cylinder head, and the result is that when the piston gets a particular heat, which varies in different cylinders, this becomes tight, yet the oil does not allow it to seize. I always like to see the piston, from the top edge of the top ring to the top of the cylinder head, black: where one can see that the combustion reaches it, and there is no valid reason why it should touch the sides of the cylinder wall at all. I should be very glad to hear if our correspondents find that this is the cause of their trouble. VERITAS.

Wallasey.

Sir,—I had a 1913 single-cylinder 3-speed James outfit which once "went mad" in a hilly district. It began roaring up hills on top which should have required middle gear after the initial rush. After a few miles of this I spotted the cause—an unscrewed float chamber top, which permitted flooding (B. and B. old bottom-feed type).

I think some of the symptoms so far described are traceable to a petrol level which is temporarily either higher or lower than normal. Experiments with a glass float chamber in a bench test might show that some carburetter needle valves only pass sufficient petrol when the level is considerably lowered. Excessive road vibration is a disturbing factor: so also is stiffness in the working of the needle valve, and a ledge on which it may stick.

W. R. DEUCHAR.

Sir,—Although utterly ignorant of any deeply technical part of motor cycling, might I traverse on your valuable space to suggest that inequalities of road surface temporarily upset the petrol level in the carburetter, thus altering the mixture and accounting for the sudden increase in power noticed by your correspondents who write under the heading of "Temperamental Engines." I have a 1912 Triumph, and my experience is exactly the opposite. Above 20 m.p.h. it runs with the utmost regularity; however, when throttled down to fifteen, the exhaust note suddenly changes, the speed drops to ten, and the engine seems to pull with far less exertion than at the higher speed.

C. W. HUCKS.

Sir,—While riding my A.B.C. I suddenly found myself slowing, so opened the throttle to keep up my previous rate of travel. After proceeding quite happily in this manner for some distance, thinking that a head wind had been responsible for the previous slowing down, without a warning I suddenly began to "chase the horizon."

On examination I found a piece of fluff in the petrol pipe.

Doncaster. HORIZON CHASER.

Sir,—"MX 599" states that after descending moderately steep hills (using air brake) he is agreeably surprised at the marked increase in power upon re-opening the throttle. This increase in power, however, is only maintained for about 200 yards, when the engine assumes its "old self" again. Now, this is not such a curious phenomenon as "MX 599" imagines, but is the natural result of practical conditions prevailing at the time. The solution is this, that, after coasting downhill with "air brake" in operation, the piston is cooled—so guarding against contortion. The inert gas is cleared out of the clearance space, which provides for better combustion. Thus, you have an engine running under high ideal conditions—for a period as long as it takes to say— "JACK ROBINSON."

Coventry.

### MOTOR CYCLE TAXATION.

Sir,—Through the medium of *The Motor Cycle*, I desire to draw attention to the injustice of the present basis of motor taxation.

The motor tax was instituted for the repair and upkeep of the roads, but under the present system those who use and wear the roads most (in proportion) pay the least.

The owner of a 4 h.p. cycle and sidecar (tax £4), using his outfit for early-closing days and occasional week-ends (mileage per year, say, 3,000), is penalised as compared with another user, travelling 10,000 to 50,000 miles per annum, and this applies to all users of the road, whether cars or cycles.

The motor associations might take up this question. If they were more militant in regard to the iniquity of this motor tax they would regain many of their lost members, of whom your humble servant is one. LLOYD PITNEY.

Sir,—There are many motor cyclists to-day who cannot afford to pay the year's tax down, so are forced to pay by the quarterly system.

Now, by doing this the Government takes the liberty of making these cyclists, who are not over-run with wealth, pay more, whereas the man who has capital gets his licence cheaper by taking the full year.

Again, I feel that pedal cycles should be taxed 5s. per year. Why should they have the free use of the road?

G. J. HICKLING.

Sir,—Can nothing be done to abolish the highly unfair method of taxation on motor cycles?

I have just taken out my licence until the end of the year and find that I have to pay the same (£3) as if I had taken it out on January 1st. F. FAIRBAIRN.

OUR ENTHUSIASTIC READERS. Some time ago there was published under "Summary of Correspondence" a three line request of Mr. G. Emmanuel for information as to the postal address of a way-side temperance hotel in Wales which he had visited previously. Dozens of readers volunteered information, which was forwarded to the enquirer, and now two correspondents on an Easter tour made a special stop for photographs, "in the hope," they say, "of setting Mr. Emmanuel's mind at rest." The address of the house is: Minffordd Temperance, Talyllyn, near Corris S.O., Merionethshire.

Sir,—So much has been said against the present system of motor cycle taxation that perhaps a word in its favour might come as a welcome change.

After careful calculation it appears that if a rider of a lightweight exceeds 2,000 miles in the year, averaging, say, 100 m.p.g., he actually pays more under the old system—£1 Post Office duty and 6d. per gallon tax on petrol—than under the present scheme.

With regard to a heavyweight solo machine and a sidecar outfit, averaging, say, 75 and 50 m.p.g. respectively, the mileage to be covered to equalise the amounts paid under the old and new systems works out at 3,000 miles per year.

I would venture to suggest that the vast majority of motor cyclists easily cover these fairly moderate mileages in the course of a year, and if the tax suits the majority, why the immediate necessity to have it altered? TAXI.

Kidderminster.

### 'BUS INSPECTORS' SIDECARS.

Sir,—Mr. C. H. Stephenson criticises the alignment of the B.S.A. outfits used by the inspectors of the Bristol Tramways and Carriage Co., Ltd., which he saw when passing down west at Easter.

As the author of the article dealing with their work, which appeared in your issue of March 30th last, I must take the liberty of differing on this point; I have inspected this fleet of sidecars quite recently, have travelled as passenger in one of them, and see them almost every day, and I can only suggest that he must have seen one on a heavily cambered road, which frequently gives the impression of bad alignment. Certainly there is no visible fault in the alignment of these vehicles, they are too well looked after to permit careless treatment of that sort; further, the exceptional tyre mileage of these outfits, a fact commented on by "Ixion" in the issue of the 4th, is sufficient proof that there is little wrong with the alignment. WESTERNER.

Bristol.

### TUNING A 4-H.P. TRIUMPH.

Sir,—With reference to the remarks of "Arieumph," I think it would be much more to the point if correspondents when writing on this subject would qualify their statements by giving full particulars of the performance of their cycle or engine before and after modifications have been carried out, with gear ratio and any other particulars likely to be of general interest. To merely inform all and sundry that motor cycle X.Y.Z. lapped Brooklands at 60 m.p.h. does not prove anything; in my opinion, any 4 h.p. motor cycle geared to suit the engine's h.p. curve should reach the above figure.

The article by Mr. K. H. Leech appeared to me to be written primarily for 4 h.p. Triumph sidecar owners, and described the methods adopted by the author to improve the engine's power curve. In this connection I would like to state that I have just completed a set of cams on the lines described by Mr. Leech, and fitted them to my 1916 4 h.p. Triumph sidecar outfit; no other modifications of any description have been introduced.

The results substantiate the statements made by Mr. Leech at various times to a remarkable degree. To sum up, the benefits obtained are as follows:—

*Slow Running.*—Engine will tick over at from 120 to 150 runs per min. when running free.

*Flexibility.*—Engine will pull a loaded sidecar at any speed down to about 8 m.p.h. without snatch, knocking, or pinking.

*Acceleration.*—All that can be desired.

*Consumption.*—Appears to be the same as heretofore, *i.e.*, about 75 to 80 miles per gallon, according to speed, district, and load.

*Power.*—In this connection the benefits must be experienced to be believed. Hills that have in the past necessitated second gear are now romped over in top gear, and the power at all speeds is considerably more than before the alteration. The engine appears to run cooler at ordinary touring speeds, and I no longer listen for knocking and pinking when opened out to about 35 m.p.h.; in fact, knocking is conspicuous by its absence.

In conclusion, I have no hesitation in thoroughly recommending this modification to those possessing the necessary theoretical and practical mechanical skill to carry out the alterations successfully.

My methods differed considerably from those described by Mr. Leech, but that is by the way; finally, I should like to tender my thanks to Mr. Leech, and to *The Motor Cycle* for publishing such an instructive article.

Portsmouth. A.M.I.Mech.E.

### ELECTRICAL TIMING.

Sir,—Of special interest to myself and many others in motor cycle club life are the different methods employed in the electrical timing of speed events, hill-climbs, etc. I have seen numerous methods of electrical timing in operation, but none reliable which the human element does not enter into. Take, for an instance, a stop-watch actuated at the finishing point by an electro-magnet, which is controlled at the starting point by button or road contact, and at the finish by closing the circuit when the cotton is broken. The pressure required to start and stop the watch; the time lost in operating electro-magnet from the start, even though a compensation battery is used; and the condition of the watch after it has been in use half an hour, all have to be taken into consideration, and do not tend to give accuracy in timing, and a stop-watch is a delicate and sensitive instrument.

To my mind, the best effort that has been advanced up to the present is the electrical chronograph, used at Brooklands, giving us the time in twentieths of seconds, but I fail to see why the apparatus should be operated by hand, even though they be the hands of A.C.U. experts. I submit it has been proved that it takes one-twentieth of a second for the brain to deliver to the hand; thus, we actually lose one-twentieth before the starter has touched the button. Further, I submit that it takes another four-twentieths of a second before the chronograph actually starts to register. Thus, we are one-fourth of a second out in starting, and if this be a flying start, I venture to state the rider is from ten to twenty yards over the line before the graph commences. The same adjustment in time also applies to the finishing point. To argue it is the same for everyone is getting away from facts. The condition of the timekeeper's brain is not always the same.

No doubt there is great difficulty in laying contact strips for short distances on Brooklands, but, unless they rule out the human element altogether in timing, they must always be open to severe criticism. G. C. ASHBY.

### FREAK GEARS ON A TOURIST'S MACHINE.

Sir,—I noted with interest "A.E.M.'s" complaint about his gear ratios, as my machine has the same defect.

When I chose the Martinsyde I did not inquire what the ratios were, for the machine was so well designed and finished that I took it for granted that they would be suitable. It is incomprehensible to me that a man who could design a masterpiece like the Martinsyde, showing as much care in its construction, and more thought in its design, than a Rolls-Royce car, could fit it with a second gear on which it can attain little over a quarter of its maximum speed.

However, I don't think the designer is the culprit, but the trials' organisers who send their riders through ditches and up banks instead of giving them a chance to demonstrate the utility, economy, and handiness of their mounts.

Kent. JAY CAI SEE.


## T.T. AND 1,001st NUMBER.

**Next week "The Motor Cycle" will celebrate its 1,001st consecutive issue. Twenty years ago, when this journal was first published, the motor cycle movement was only just developing. The 1,001st issue of "The Motor Cycle" will contain many special articles and illustrations of exceptional historical interest; and, appearing on the date of the Senior Tourist Trophy event, particulars of the T.T. Races in the Isle of Man will form a feature.**

***Orders for copies of this enlarged issue should be placed in good time—Fourpence as usual.***

### DOUBLE POLE PLUGS.

Sir,—With reference to Mr. H. Mortimer Batten's article on double-pole plugs in Scott machines, I should like to say that I have tried Lodge double-pole plugs on my 1920 Scott outfit, which certainly improved the running in all respects as well as petrol consumption. However, my porcelains and plug points gave up the ghost at 300 miles, which was the cause of my reverting to single plugs.

J. W. CLAMP.

### "THIS IS PERFECTLY TRUE."

Sir,—A few weeks ago a friend of mine made the journey from a Kentish village to Chester, a distance of about 225 miles, on a Baby Triumph. He had to catch the Holyhead train at Chester, and to do this he made an almost non-stop journey. He did not alight for refreshment of any description, and as he neglected to take goggles his eyes were bloodshot, his face was filthy with dust, and, being half asleep, he looked rather a sorry object. Eventually he stopped to enquire how much farther he had to travel. The woman from whom he enquired replied: "Well, as far as I know, it's about eighty miles; *but if you have many more* you won't get there at all."

This is perfectly true. ALAN ARTHUR.

### IRISH TRIALS.

Sir,—I note in your issue of the 4th inst., reporting the Dublin M.C.C. hill-climb on the 29th ultimo, you go on to say that "despite the political situation the Dublin Club continues to hold successful and well supported events, although some of the longer distance trials have had to be abandoned this year." In reply I beg to say that this is not quite correct, as none of our long distance trials have yet been abandoned, nor do we intend to do so. Our principal trials, such as the Irish Open 24 hours' Trial, in June, will be held, but the course slightly altered from the original, so as to obviate at night the necessity of crossing from the "Free State" border to that of "Northern Ireland." We also intend to hold our Two Days' Trial in August to Glengariffe and back.

WM. H. FREEMAN,
Hon. Sec.

### SPEED VARIATIONS ON THE T.T. COURSE.

Sir,—Ixion, in an article in *The Motor Cycle*, dated June 23rd, 1921, wished that some first-class rider would do a lap of the Manx course with a recording speedometer fitted giving a graph of his speed variations. May I echo this wish? Will somebody please carry out this stunt this year? A. A. W.

### THE A.C.U. CONTROL OF TRIALS.

Sir,—My attention has been called to the letter in *The Motor Cycle* for May 18th over the signature of my friend Mr. K. S. Topping, on the subject of reliability trials.

It is quite true that at the next meeting of the Competitions Committee of the A.C.U., the question of some kind of control being taken by the Union over *open* reliability trials will be considered as the result of a proposal I made before the General Committee of the Union, on the subject, being referred to the Competitions Committee. An almost unanimous vote was carried in favour of the subject being thoroughly gone into by this Committee. I fully appreciate most of the points in Mr. Topping's letter, though I must say I am afraid he has missed the mark in some of his insinuations.

My whole object in bringing this matter forward is in order to safeguard the future of competitions in the hands of local Centres of the Union, and here I may mention that being Chairman of the Midland Centre I have the interest of this centre, at least, at heart, as will be readily understood, though motor cyclists in other centres, not knowing me, might not appreciate this fact after having read Mr. Topping's letter.

In my opinion, the question needs very careful consideration for the following reasons:—

(1) Open trials are held "under the auspices of the Auto-Cycle Union," and as such the Union is, or should be, responsible for the proper conduct of such trials.

(2) Open trials in which freak gradients and freak surfaces are included—Mr. Topping knows the sort I refer to—are liable to result in all trials, whether open or otherwise, being looked upon as a farce.

(3) Genuine amateurs will not, or cannot afford to, enter trials in which these freak tests occur, for fear of damage to their machines, even if it were possible to sort out the amateurs and the trade riders, which in my opinion it is not.

(4) The majority of entrants in open trials are trade riders, for the reason given in (3). The trade is becoming tired of freak tests and may refuse to enter trials of any kind unless it is protected by someone obviously the Union, against being called upon to submit to such tests, without any prior warning. If protection is given then trials organisers generally can be assured of good entries, though such protection need not mean the elimination of really stiff gradients and other severe tests which will help to improve the breed of the motor cycle for the benefit of the average motor cyclist.

(5) Accidents have happened as the result of inclusion of freak tests, or the use of dangerous hills, and the Union, as the parent body, is responsible, and may some day be called upon to carry this responsibility.

(6) If the Union is to control the sport—and all sport is controlled by some body or other, from football to horse racing or pigeon flying—though such control need not be grandmotherly or repressive, it must have some say in the matter of arranging the course.

I could give many more reasons, but I hope these will suffice to show that there are real reasons why the Union should exercise its right in these matters, particularly in the case of centres which are not over-experienced in the organisation of open trials.

I do not suggest for one moment that a trial such as that which the Yorkshire Centre will shortly run off should be restricted in any way by the Union—except where there is real danger to competitors or other road users, and here undoubtedly it is the duty of the Union, as a national organisation, to step in if necessary—providing that it is announced beforehand that the trial will include "Colonial sections" or the like, as riders will then please themselves as to whether they enter or not, knowing what they are likely to be up against.

My whole object in bringing the matter forward is to prevent the possibility of all trials becoming taboo by both trade and private riders on account of their being too "freakish," a tendency which becomes more and more pronounced each year. Ordinary club trials are not in question at all, but if open trials are to receive the support in the future which they have received in the past they will have to be run on proper lines or they will soon be a thing of the past, and it is up to the A.C.U. to see that this possibility does not go any further.

There is plenty of scope for purely sporting trials, up house-sides if you will, as club events, and by becoming a member of a club, usually by paying a small subscription, all and sundry, trade or private riders, can participate, and there need be no interference from the Union, except where the Union feels that it should use its guiding influence in the case of a club organising a trial which will possibly bring about police activity, or in some manner bring discredit on the sport.

Apologising for the length of this letter.

R. VERNON C. BROOK,
Chairman, Midland Centre Auto-Cycle Union
Member Competitions Committee, Auto-Cycle Union.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

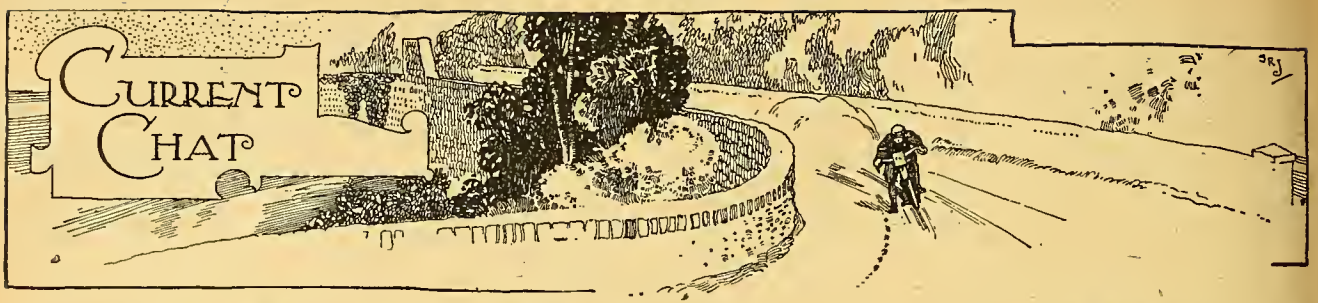
**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle*.
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.




## Times to Light Lamps.

| | | |
|---|---|---|
| May 25th | .. .. | 9.56 p.m. |
| „ 27th | .. .. | 9.59 „ |
| „ 29th | .. .. | 10 1 „ |
| „ 31st | .. .. | 10 3 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### No. 1,000.

This is the 1000th issue of *The Motor Cycle*. Next week's Special Number will contain many articles of historical value.

### The Second 500 Miles Race.

Every endeavour has been made to secure all classes finishing together in the 1922 500 miles race, which will probably be about 6 p.m.

### Club Championship for 1922.

Entries close on June 10th for the M.C.C. Team Trial for *The Motor Cycle* Challenge Cup. This event will be run off on Saturday, June 24th. Further details will be published in due course.

### Sidecar Trailers.

Many readers have written protesting against the recommendations that trailers towed by sidecar be disallowed. Considering the comparatively few trailers in use with sidecars it is rather surprising that the committee concerned mentioned them at all.

### More Norton Records.

On the 10th inst. R. N. Judd and D. R. O'Donovan, taking turns in riding, succeeded in considerably adding to the many successes gained by the Norton. In 3 hours they covered 192 miles 1,574 yards in 4 hours 256 miles 1,668 yards. They also gained the 200 miles record in 3 hours 6 min. 26.60 sec. The average speed was 64.36 m.p.h. Further performances were prevented by the breaking of an exhaust cam spindle.

### Exhaust Pipe Design.

We have on several occasions commented upon the risks run by motor cyclists who carry silencers which are not in accordance with the law. The other evening we noticed a 2¾ h.p. Douglas with a carefully designed exhaust system, which was by no means standard. Ordinary diameter pipes of burnished copper led from the exhaust ports to two separate chambers with bell-shaped mouths, and open ends of much larger diameter. Such an arrangement was no silencer at all, but might more aptly be called "a megaphone."

### Nortons on the Continent.

In addition to entering for the Grand Prix at Strasbourg, on July 12th, four Nortons have been entered in the 500 c.c. class in the Belgian Grand Prix, a most sporting little event to be held near Spa on July 23rd.

### Staff Machine Stolen.

On Thursday (11th) an o.h.v. Triumph, belonging to a member of *The Motor Cycle* staff, was stolen from the north end of John Carpenter Street, opposite Dorset House, Tudor Street. The machine carried the registration numbers "H.P.3460," and was fitted with a Lucas Magdyno (upright), Bonniksen trip speedometer, double Pedley handle-bar grips, and knee-grips. The engine and frame numbers respectively are: 79938 and 318358.

### A Warning.

The Chief Constable of the County of Hertford writes asking us to warn motor cyclists to drive carefully through Markgate on the St. Albans—Dunstable road. Owing to complaints having been made with regard to motor vehicles travelling at a speed dangerous to the public the Chief Constable is taking special action to deal with the matter by placing a control there, and he proposes to prosecute drivers against whom a *prima facie* case is established. The Chief Constable states that he is satisfied that in many cases the offences are due more to thoughtlessness than to wilful disregard of the law, and adds that when last year we gave publicity to similar complaints arising at Welwyn, there a marked improvement immediately followed.

THE NEXT STAGE!

*MOTOR CYCLISTS interested in small or large cars should read*

The Autocar

Every Friday **4d.**

*the forerunner of all motoring journals. Founded in 1895, it remains the largest and most successful automobile paper, and enjoys the greatest circulation. It is universally accepted as the representative British motoring journal.*

## Special Features.

T.T. NOTES AND NEWS.
THE TWO-STROKE ENGINE IN PRACTICE.
WHO WILL WIN?

### Noisy Exhausts.

For using a noisy motor bicycle in Hampstead a reader of this journal was recently convicted and fined £5. The fine appears to have been unnecessarily high.

### Who is the Oldest Motor Cyclist?

Mr. E. Blackburn, an octogenarian, but nevertheless enthusiastic member of the Middlesbrough and District M.C., claims to be the oldest active motor cyclist in the country. Where are the centenarians?

### Enlarged Scope for 'Varsity Club.

An important change has been made in the constitution of the Oxford University M.C.C., and membership is now open to anyone who is a past member of the University. The club has also been enlarged to admit owners of cars, and with this end in view its title will henceforth be the Oxford University M.C. Particulars may be obtained from the Rev. M. P. Sargent, Saint Edward's School, Oxford.

### Important Irish Trial.

On Whit Monday (June 5th) the Cork and District M.C. is holding an open trial (under permit from the M.C.U. of Ireland), which it is suggested might be conveniently attended by English riders returning from the T.T., who could reach Cork by a direct boat from Liverpool on Whit Sunday. Some of the finest scenery in the South of Ireland will be included in the route, the award list is attractive, and entry costs only 25s., or for members 20s. Fuller particulars may be obtained from Mr. R. S. Russell, 4, Princes Street, Cork.

### Ner-a-Cars and Harpers in the T.T.

Under the ambitious heading of "Motoring and Aviation," there appear, in *The Edinburgh Evening News* of May 10th, some comments on the Scottish Six Days Trials, characterised, to say the least, by a most amusing air of innocence. The following extract is certainly a gem, which needs no further adornment from us: "One will await with interest the performances of the Ner-a-car and the (Harper) runabouts in the Isle of Man T.T. races, a test which, although not so severe, brings out to the full the capabilities of any vehicle."

### he Junior T.T. Race Report.

Next week's issue will contain a report f the Lightweight and Junior T.T. races nd will be available in the Isle of Man ie day after the event.

### olice Traps in Oxford.

An Oxford correspondent warns readers f *The Motor Cycle* of police traps in ligh Street, Oxford, in the ten-mile mit, and on all the main roads leading nto the city.

### \ Belgian Hill Climb.

At the Mont-Theux (Belgium) hill-limb, Pisart, Jr., on a Coventry Eagle ightweight, was classified first among the uniors, winning the gold medal offered by the firm of Gillet.

### Looking Ahead.

There is a motor cycle club in the North which has already "issued" one or two nvitations for its annual dinner to be held n *December next*. "This ensures being irst and getting *the people you want*," says the secretary.

### Dogs in the Southampton Area.

Motorists are reminded that any dogs which are taken within a radius of fifteen miles from Southampton will not be permitted to leave the area, and any motorists taking a dog out of the area are liable to serious penalties.

### Ether as a Fuel.

A correspondent who has been experimenting with ether as a fuel writes that he has found it quite satisfactory as regards starting, but once the engine got warmed up pre-ignition ensued. He is of the opinion that it vaporizes too readily for practical use.

### A Record Entry.

When in 1920 381 entries had been received for the London-Edinburgh run, it was thought to be a wonderful entry. This year, however, despite the proximity of the T.T. Races, the record has been broken by twelve, no less than 392 having been received (129 motor bicycles, 110 sidecar outfits, 20 three-wheelers, and 133 cars).

### Fugitives from Justice.

A "hold-up" of motor traffic in Nottingham on a recent Saturday for police examination of licences and registration numbers was responsible for numerous humorous incidents. What amused the minions of the law as much as anything, however, was the action of several motorists, who "got wise" of what was happening and turned tail quickly to fetch their forgotten licences.

### The 500 Miles Race.

Instead of there being one prize for this year's 500 miles race to be run off at Brooklands on September 23rd, there will be a separate prize for each class. The classes will be started at different times so that an endeavour will be made for all to finish together. Entries are limited to fifteen per class, so that immediate application should be made to the Secretary, The British Motor Cycle Racing Club, 83, Pall Mall, London, S.W.1. Classes will be distinguished by riders wearing jerseys of various colours.

### First Aid on Brooklands.

At all long distance B.M.C.R.C. race meetings a travelling marshal with a first-aid outfit in a sidecar is to patrol the track.

### An Undue Noise Ban.

Notts County Council have made a by-law to prevent trippers and other parties from creating annoyance or any disturbance in the towns and villages of the country. Among other things prohibited are "horns and other noisy instruments. loud singing or any outcry."

### 50 Mile Race at Pendine.

On Whit Monday (June 5th) a 50 mile race for machines of any capacity will be included in the programme of the Carmarthen and Dist. M.C. and C.C.C. meeting on Pendine Sands. Two silver cups figure on the award list, further particulars of which may be obtained from the joint secretaries at the Nelson Hotel, Carmarthen.

### Unconventional Machines Sought.

For his club's Second London Rally on Whit Monday at Hendon Aerodrome, Mr. Alan W. Day, the secretary of the North London M.C.C., wishes to get in touch with owners of interesting and unconventional machines, a display of which will be a feature of the meeting. Mr. Day's address is "Claremont," Ballards Lane, Finchley, N.3.

### Simplification of Traffic Signals.

Since the introduction of a new "stop" signal in Nottingham there has been some little confusion, due mostly to many motorists not being aware of the change and not quite understanding what is meant when a policeman on point duty raises his right arm above his head to stop all approaching traffic or extends his left arm to hold up traffic in the rear.

### The Pastime in South Africa.

Organised by the Cape Peninsula M.C. and C.C., the Kloof hill-climb was a great success. The distance of the climb was one and a quarter miles. Each competitor was allowed to make two attempts, the faster performance of the two being recorded on his behalf. Fastest time of the day was made by J. W. du Toit (Harley-Davidson). Results were as follows: Class A, J. W. du Toit (Harley-Davidson). 397; L. M. Cran (Harley-Davidson sc.), 389; E. Lawrence (Harley-Davidson sc.), 385. Class B, L. E. Hamerton (Indian Scout sc.), figure of merit 398; J. Buyskes (Triumph), 319; A. F. du Toit (Indian), 317.

### Next B.M.C.R.C. Meeting.

Short distance races will be features of the third B.M.C.R.C. members' meeting on June 10th. The programme will consist of three 2-lap races, three 5-lap races, a 2-lap passenger handicap, and a 3-lap private owners' handicap open to any member who signs the private owner declaration on the form of application for or renewal of a 1922 membership, riding any class of machine which is his own private property. Licences and registration books must be offered for inspection at the start of the race. The final event at 5 p.m. will be a 5-lap passenger handicap, open to sidecars and two-seater cycle cars of any class.

### The Cremona Circuit.

While the Norton ridden by Sironi was the winner in the Cremona race run in April with another Norton second ridden by Col. Ricci Giuseppe, it now appears that in the second race run off on May 7th the winner rode a Sports Sunbeam. Sironi, however, was a hot favourite, but the breaking of his left handle-bar reduced his speed and brought him to second place. Five Nortons finished, winning the special team prize.

### Matter Out of Place.

Recently a correspondent sent us a piece of battered steel wire which he had discovered in his Triumph crank case. At the time we were unable to account for its presence, but since then Mr. T. W. Loughborough, Secretary of the A.C.U., was driving home his Morgan, which had just been fitted with a new and very carefully tuned engine, and shortly after beginning his journey he suffered from a stuck-up exhaust valve. He freed it, continued, and was again delayed from the same cause. Having had his toolkit stolen, he was unable to do anything on the road, but proceeded to the nearest garage on one cylinder. The inlet valve gear was dismantled and a 4in. piece of steel wire was found underneath the exhaust valve. The explanation is that this steel wire was used for checking the timing, and had, unfortunately, been dropped through the compression tap. This most likely accounts for the trouble experienced by the Triumph owner.

### The U.M.F. Grand Prix.

Entries for this important Continental fixture are now closed at ordinary fees. They close at double fees (800 francs) on June 15th, and must be forwarded through the A.C.U., 83, Pall Mall, London, S.W.1. On the whole, Great Britain is well represented in this race; in the 250 c.c. class there are a Massey-Arran, a New Imperial, and a Levis; in the 350 c.c. class an Englishman, Bartlett, will ride a French A.B.C., and in the 500 c.c. class there will be three Nortons, three Sunbeams, and two Triumphs.

Entries at ordinary fees stands as follows:—

250 c.c. CLASS.

| | |
|---|---|
| Armor. | Levis (G. S. Davison). |
| Thomann. | Isoard Liadois (Isoard) |
| Motosolo (Clech) | Velocette (Cottin). |
| Massey-Arran. | Velocette (Nel). |
| New Imperial (Bert Kershaw). | Yvel's (Froment). |
| | Chauvière (Chauvière). |

350 c.c. CLASS

| | |
|---|---|
| Alcyon. | Garelli. |
| Alcyon. | Garelli. |
| A.B.C. (Bartlett). | Garelli. |
| Yvel's (Vernisse). | |

500 c.c. CLASS.

| | |
|---|---|
| Norton. | Sunbeam (Bennett). |
| Norton. | Sunbeam (de la Hay). |
| Norton. | Sunbeam (Chappaz). |
| Alcyon. | Triumph (Pinuey). |
| Alcyon. | Triumph (Edmond). |
| Alcyon. | Motosacoche. |
| Peugeot (Péan). | Motosacoche. |
| Peugeot (Gillard). | Griffon (Borgotti). |
| A.B.C. (Naas). | |

It will be noted that Italian machines will compete for the first time in the U.M.F. Grand Prix. The Garelli is a most original machine, to the performances of which we shall look forward with interest.

### Newcastle and Northern M.C.C.

Something like 120 members turned out for the first social run of the amalgamated club, which was very successful.

### Gravesend and District M.C.C.

Great public interest was taken in the club's recent ninety-mile trial, which was organised on the lines of the old A.C.U. Quarterly trials, an idea which proved a big success in practice.

### West Kent M.C., Rochester and District M.C.C. and Canterbury and District M.C.C.

Another joint hill-climb will be held by these clubs on the Cut, 2¾ miles from Maidstone, on the 28th inst. Private owner riders only will be catered for. The other Kent clubs are invited to co-operate; fuller information is obtainable from Capt. G. Maund, 1, Clarendon Terrace, King Street, Maidstone, Kent.

### East South Wales Centre A.C.U.

Ideal weather favoured the first reliability trial on the 6th inst., which included Thefadoc Hill as the chief test piece.

Four teams qualified for the team prizes with more than 285 marks, as follows: Tredegar, Abergavenny A, Eastern Valleys A, Blaina A. A vase for the best sidecar performance, and a bowl for the best solo performance, were not awarded pending the settlement of a dispute.

### Liverpool M.C.

Some excellent sport was witnessed at the hill-climb at Pen-y-Ball, Holywell, carried out in the presence of some hundreds of spectators. The arrangements were capital, although it would appear to be necessary for a more strict watch being maintained on the whole of the hill. G. G. Barnard, riding a 499 c.c. Sunbeam, got away in fine style, and with a remarkably good rush combined with clever cornering passed the timekeeper at 34 4-5sec., the speed working out at approximately 41 m.p.h.—not bad for a hill averaging something like 1 in 5 and with sections of about 1 in 4.

RESULTS.

Classes 1 and 2 (350 c.c.).—1, J. Cooke (2¾ N. Scale), 40⅕ sec.; 2, H. Jones (2¾ A.J.S.), 43⅕ sec.; 3, S. Hughes (2¾ Sunbeam), 44⅕ sec.

Class 3 (500 c.c. expert barred).—1, H. Gaskell (3½ Triumph), 38⅕ sec.; 2, J. Ashworth (3½ Rudge), 40 sec.; 3 (tied), S. I. Banner (3½ Sunbeam), 40⅕ sec., and E. Sinclair (3½ Sunbeam), 40⅕ sec.

Class 4 (500 c.c. general).—1, G. Barnard (3½ Sunbeam), 34⅕ sec.; 2, G. F. Burns (3½ Sunbeam), 35⅕ sec.; 3, H. Gaskell (3½ Triumph), 38⅕ sec.

Class 5 (750 c.c. expert barred).—1, H. Gaskell (3½ Triumph), 38⅕ sec.; 2, S. I. Banner (3½ Sunbeam), 40⅕ sec.; 3, Copley (3½ Norton), 41⅕ sec.

### Southampton Bohemian M.C.C.

South Harting Hill was the scene of the club's second hill-climb, formula results of which were as follows:

SOLO.

1. H. W. Hands (3½ Norton).
2. R. Mines (3½ Kynock).
3. R. James (2½ A.J.S.).
4. E. Hitchins (11 Henderson).

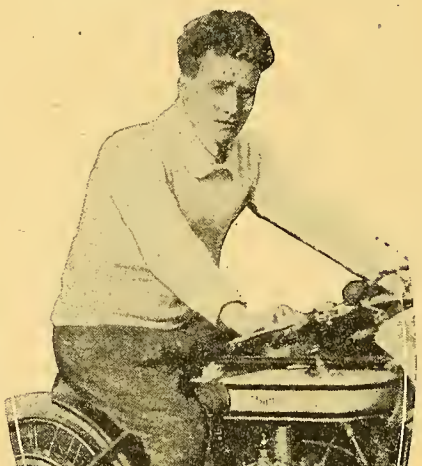
SIDECARS.

1. H. Dale (8 Ruby sc.).
2. W. Matou (8 Sunbeam sc.).
3. R. Burtenshaw (3¾ Scott sc.).
4. A. Saunders (7 F.N. sc.).

### North-West London M.C.

Eighteen competitors in the recent optional route competition started from Long Ditton, determined to circumvent the wily map planner, who had fixed the four points to be visited at a schedule of 20 miles per hour over roads justly assumed to be almost impossible. In contrast with last year's results three were actually successful in combining the necessary judgment with speed:

O. B. Smyth (3½ Sunbeam).
A. H. Love (3½ Norton).
J. D. Sangway (5 Zenith).



Frank Sisson and the 490 c.c. Norton on which he won six firsts in the recent Loughborough and District M.C.C. hill climb making fastest time of the day in both solo and passenger classes.

### Lewes and District M.C.C.

On the 14th inst. the club held a reliability trial over a secret 80 miles course within a 10 miles radius of Lewes. There was a good entry, and the results were as follows:—

300 c.c.—1, W. J. Hylands (2¼ Verus).
Unlimited Solo.—1, W. H. Law (2¾ Coulson B).
Sidecars Unlimited.—1, R. G. Martin (2¾ Royal Ruby).
Ladies' Class.—1, Miss E. M. Dunford (2¼ Sports Royal Enfield).
Cycle Cars.—1, L. Humphries (8 G.N.).

### North Wales M.C.C.

On Thursday, May 11th, the club held a fast and slow hill climb near Llandegla when quite a good number of competitors faced the starter. The winner was the competitor who could show the greatest margin of time between his fast and slow climb, using the same gear in each case gears and clutches were, of course, sealed. Results:

1, W. Edwards (3½ Scott Squirrel); 2, S. W. Smith (3½ Scott Squirrel); 3, W. J. Kellett (3½ Sports Sunbeam).
Silver medal for best 350 c.c. machine.—G. Jones (2¾ A.J.S.).

### Atherton and District M.C.C.

Ideal weather favoured the first speed trial and hill climb of this newly-formed club, and a very enjoyable time was spent on the Yorkshire moors on the afternoon of the 7th inst. A mile was measured on the famous "Bills o' Jacks" hill, which has an average gradient of 1 in 8, and is four miles long. F. Barford and W. Morrison, on an 8 h.p. Dot-Jap, and a 3½ h.p. Norton respectively, tied for the best time of the day in 1m. 20s. J. Mansley (2¾ Douglas) won the first for the lightweights, his time being 1m. 45s.

Mr. T. P. Speakman, "Journal" Office, Atherton, the hon. secretary, will be pleased to receive applications for membership.

### Redditch and District M.C.C.

Results of the hill climb on the 26th ult. have now been announced, as follows:—

350 C.C. SOLO.

Time.—1st, B. Kershaw (2¼ New Imperial).
Formula.—1st, B. Kershaw (2¼ New Imperial).

600 C.C. SOLO.

Time.—1st, J. Bacon (3½ Sunbeam); 2nd, E. Smith (3½ Norton).
Formula.—1st, B. Kershaw (2¼ New Imperial); 2nd, J. Bacon (3½ Sunbeam).

UNLIMITED SOLO.

Time.—1st, J. Bacon (3½ Sunbeam); 2nd, E. Smith (3½ Norton).

600 C.C. PASSENGER.

Formula.—1st, C. Brown (3½ Triumph sc.).

UNLIMITED PASSENGER.

Formula.—1st, C. Brown (3½ Triumph sc.).

# ANNOUNCING THE T.T. RESULTS.

## An Alphabetical List of Prominent Positions where "The Motor Cycle" series of Telegrams will be displayed next Tuesday and Thursday.

IT is not every motor cyclist who can afford the time to visit the Isle of Man in order to witness the Tourist Trophy races—but all are interested in this blue riband event.

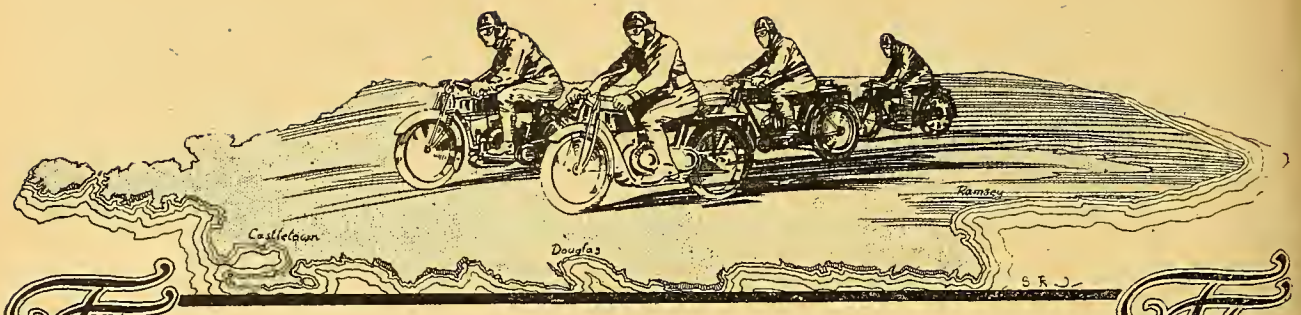
*The Motor Cycle* telegrams, which are displayed in prominent positions, have always been appreciated, for only by their aid are many thousands of our readers able to follow the progress of the races by the positions of the riders at the conclusion of each lap.

This year the list of places where these telegrams will be displayed has been considerably extended, and would have been even larger but for the fact that there is a limit to the number which can be handled expeditiously by the Post Office officials.

*In order that motor cyclists may follow the progress of the Tourist Trophy Races on Tuesday and Thursday of next week, "The Motor Cycle" is following its usual practice of circulating by telegrams all over the country the respective lap positions. A list of addresses where these telegrams will be displayed is appended.*

**Aberdeen.**—Cruikshank, 13-19, Rose Mount, Viaduct.
**Ammanford (Carm.).**—Harries, Ironmongers.
**Aylesbury (Bucks.).**—Ebora's Garage, 44, Walton Street.
**Bala (N. Wales).**—Jones Bros., Henblas Garage.
**Bedford.**—J. Crawley and Sons, Motor Engineers, 4, St. Mary's Street.
**Birkenhead.**—H. J. Marston's, 50, Argyle Street.
**Birmingham.**—Amac, Ltd., Aston Cross; Colmore Depot, 31, Colmore Row; County Cycle and Motor Co., 307, Broad Street; H. Cutler and Son, Haodsworth Motor Depot, 247, Soho Road; P. J. Evaos, 81, John Bright Street; Iliffe and Sons Ltd., Guildhall Buildings, Navigation Street; James Cycle Co., Ltd., 9, Broad Street Corner; The Premier Motor Co., Aston Road; Veloce, Ltd., Victoria Road, Six Ways, Aston Manor; Wm. Watson, Sunbeam Depot, Chamberlain Square; Frank Whitworth, Ltd., 139, New Street; J. J. Woodgate, Small Heath Park Motor and Cycle Depot.
**Blackburn.**—Slaters, 3, Lord Street (Market Place); J. Walsh and Co., Central Garage, Sudell Cross.
**Blackpool.**—Brown and Mallalieu, Metropole Garage, General Street.
**Bolton.**—Stanley Parker and Co., Bradshawgate.
**Bournemouth.**—P. W. Surplice, Poole Hill.
**Bradford.**—A. Hodgson, 10, Horton Road; Eric S. Myers, 52, Manningham Lane; Chas. Sidney, Ltd., 142, Manningham Lane.
**Brecon.**—Fryer Bros. and Co., Motor Cycle Agents.
**Brighouse.**—Blackburne's, 13, Bradford Road.
**Bristol.**—E. Kickham, 43, Stokes Croft; G. H. Tucker, Redcliff Hill; J. S. Willway and Sons, Ltd., St. Augustine's Bridge.
**Bromley (Kent).**—J. L. Love and Co., 21, Park Road.
**Burnley.**—W., H. Harrison, The Motor House; J. Hebden and Sons, 149, St. James' Street.
**Bury.**—Jack Pilling, 1, Rock Street.
**Cambridge.**—Herbert Robinson, Ltd., 32, Green Street.
**Cardiff.**—Alexander Thom, 201, City Road.
**Carlisle.**—Graham and Roberts, Botchergate.
**Carmarthen.**—Carmarthen Motor Cycle and Cycle Car Club, Nelson Hotel.
**Cheltenham.**—H. E. Steel, Ltd., Automobile Engineers, High Street; A. Williams and Co., 19, Portland Street.
**Chester.**—Marston's, 26-31, Bridge Street.
**Coventry.**—Iliffe and Sons Ltd., 19, Hertford Street.
**Darlington.**—C. G. S. Buist, Grange Road; Cleveland Car Co., Ltd., Grange Road.
**Doncaster.**—Gray and Raynes, 10, Cleveland Street; J. H. Wilkinson and Son, 19, Silver Street.
**Dorchester.**—W. G. Churchill, Motor and Cycle Engineer, The Grove.
**Dublin.**—J. J. Kelly, 27, Batchelor's Walk; F. A. Wallen, Trinity Street Garage.
**Dudley.**—Whorton and Christopher, 220, Wolverhampton Street.
**Dundee.**—Meldrum's, Esplanade.
**Dunfermline.**—D. R. Engineering Co., Ltd., Hospital Hill.
**Eastbourne.**—George Doull and Co., 48, Grove Road.
**Edinburgh.**—Alexander and Co., 113-5, Lothian Road; Rossleigh, Ltd., 32, Shandwick Place.
**Exeter.**—Maude's Motor Mart, 100, Paris Street; P. Pike and Co., Ltd., The Garage, St. Thomas.

**Glasgow.**—Alexander and Co., 272, Great Western Road; V. Jennings and Co., Ltd., 86, Mitchell Street; Palmer Tyre, Ltd., 2, Royal Exchange Square.
**Gloucester.**—W. B. Gibb, 100, Northgate Street.
**Grantown-on-Spey.**—W. G. Donaldson, 26, High Street.
**Gravesend.**—The Premier Motor Garage, 25a, Stoae Street.
**Grimsby.**—Jas. Plastow, 13, Osborne Street.
**Halifax.**—Halifax Motor Exchange, 25, Horton Street.
**Hereford.**—Fryer, Ltd., Dragon Garage.
**High Wycombe.**—Davenport Vernon and Co., Ltd., 14-15, High Street.
**Hove.**—Hewett Bros., 94, Western Road.
**Huddersfield.**—Earnshaw and Co., 10, Cloth Hall Street.
**Hull.**—Gray Bros. and Kemp, Ltd., 362, Anlaby Road; W. L. Thompson, Ltd., 83, Anlaby Road.
**Ipswich.**—Egertons, Engineers and Coachmakers, Northgate Street.
**Keswick.**—J. Hodgson, 31, Main Street.
**Kettering.**—Harry Taylor, Cycle Agent, Montague Street.
**Leeds.**—A. U. Greenwood, 39-41, Woodhouse Lane; W. Mitchell, The Motor House, Roundhay Road; Palmer Tyre, Ltd., 1, New York Road.
**Leicester.**—Tom Cann, Ltd., 88, Woodgate; The Colmore Depot, 62, High Street.
**Liverpool.**—J. Blake and Co., 110, Bold Street; Colmore Depot, 24, Paradise Street; Hitchings, Ltd., 74, Bold Street; Victor Horsman, Ltd., 7, Mount Pleasant; O. Wade, Camden Street.
**Llandrindod Wells.**—Tom Norton, Ltd., The Automobile Palace.
**London.**—The Allen-Bennett Motor Co., Ltd., 9, Royal Parade, London Road, West Croydon; Auto Cycle Union, 83, Pall Mall, S.W.1; Automobile Association and Motor Union, Fanum House, Whitcombe Street, W.C.2; The Avon India Rubber Co., Ltd., 343-5, Euston Road; Benetfink and Co., Ltd., 107, Cheapside, E.C.2; Burlington Motor Cycle Co., Ltd., 7, South Side, Clapham Common, S.W.4; James W. Carr and Co., Ltd., 35, Queen Victoria Street, E.C.4; S. E. Clapham (Motors), 27, Stockwell Street, Greenwich, S.E.10; H. Collier and Sons, Ltd., 44, Plumstead Road, Plumstead, S.E.18; Coppen, Allan and Co., 89, Great Portland Street, W.1; Croydon and District M.C.C. Headquarters, Swan and Sugar Loaf Hotel, South Croydon; Douglas Motors, Ltd., 39, Newman Street, W.1; Eagles and Co., 275, High Street, Acton, W.; The Eastern Garage Co., 418, Romford Road, Forest Gate, E.7; H. F. Edwards and Co., 50, Harrington Road, South Kensington, S.W.7; W. H. Elce and Co., 15, Bishopsgate Avenue, Camomile Street, E.C.3; A. W. Gamage, Ltd., Holborn, E.C.1; Godfrey's, Ltd., 208, Great Portland St., W.1; James Grose, Ltd., Old Jewry, E.C.; James Grose, Ltd., 8, New Bridge Street, Ludgate Hill, E.C.4; James Grose, Ltd., 255, Holloway Road, N.17; Homac's, 243 Lower Clapton Road, E.5; Hutchinson Tyres, 70, Basinghall Street, E.C.2; Iliffe and Sons Ltd., Dorset House, Tudor Street, E.C.4; Jones' Garage, The Broadway, Muswell Hill, N.10; D. C. Lamb, 387, Euston Road, N.W.1; D. C. Lamb, 50, High Road, Wood Green, N.; Longman Bros., 17, Bond Street, Ealing Broadway, W.5; Maude's Motor Mart, 100, Great Portland Street, W.1; Norman Reid, Barrett and Co., Ltd., 6, Warwick Street, Regent Street, W.1; Palmer Tyre, Ltd., 119, Shaftesbury Avenue, W.C.2; E. Parnacott, Penge Lane, Penge, S.E.20; Phelon and Moore, Ltd., 4, Berners Street, W.1; Robertson Motors, Ltd., 157b, Great Portland Street, W.1; The Service Co., Ltd., 289, High Holborn, W.C.1; The South Eastern Garage, Herne Hill, S.E.24; Stanleys Motor Cycle Co., Ltd., 173, Railway Approach, Shepherd's Bush; H. Taylor and Co., Ltd., 52, Sussex Place, South Kensington, S.W.7; H. Taylor and Co., 21a, Stores Street, Tottenham Court Road, W.C.1; The Trader Publishing Co., Ltd., 139-40, Fleet Street, E.C.4; Turner's Stores, 180, Railway Approach, Shepherd's Bush, W.12; Wauchope's, 9, Shoe Lane, Fleet Street, E.C.4; Wm. Whiteley Ltd., Queen's Road, W.2; F. J. Youngs, 2, The Parade, High Road, Kilburn, N.W.6.
**Luton.**—Dickinson and Adams, Motor Engineers, High Town Road.
**Maidstone.**—Rootes, Ltd., Len Engineering Works.
**Malvern.**—W. and B. Woodyatt, Ltd., The Garage.
**Manchester.**—The Colmore Depot, 200, Deansgate; Tom Davies, 229, Deansgate; J. W. Conrlay, 3, Burgon's Building, Fallowfield; Iliffe and Sons Ltd., 199, Deansgate; The Ruby Cycle Co., Ltd., 162, Deansgate; Stanley Parker and Co., 245, Deansgate.
**Mansfield.**—Reg. Lucas, Esq., The Garage, Brunts Street.
**Middlesbrough.**—Fred W. Dixon, Park Garage, Linthorpe Road.
**Morecambe.**—Yates and Topping, Grand Garage.
**Neath.**—Kimble and Ash, London Road Garage.
**Newcastle-on-Tyne.**—Travers, Ltd., 77, Pilgrim Street; The Percy Motor Co., Ltd., 72, Northumberland Street; "Dene" Motor Cycle Co., Haymarket; Hugh Mason and Co., Ltd., N.U.T. Works, Derwenthaugh.
**Newport (Mon.).**—W. L. Davies, 71, Commercial Street.
**Northampton.**—Chas. Ashby, St. Crispin Works, Clare Street.
**Norwich.**—R. O. Clark, 2a, Upper King Street; Maude's Motor Mart, The Norwich Garage, 108, Prince of Wales Road.
**Nottingham.**—Atkey's Motor Cycle Depot, opposite Victoria Station; Whitfield and Mosley, Carrington Street.
**Nuneaton.**—Sam Robbins, Ltd., Leicester Road.
**Oxford.**—The Morris Garages, Oxford.
**Peterborough.**—Turnhill, North and Co., 55, Broad Street.
**Perth.**—Maclarlane's Motor Depot, 22, South Methven Street.
**Plymouth.**—P. Pike and Co., Ltd., 33, Union Street; Frank Snell, Cycle Supply Stores, Frankford Street.
**Pontymister (Mon.).**—Marsh's S.P.Q.R., 131, Commercial Street, Pontymister, Risca, Mon.
**Portsmouth.**—Palmer Tyre, Ltd., 49, High Street.
**Preston.**—Loxham's Garages, Ltd., Fishergate; Marks and Brown, Ltd., 215, Lancaster Road.
**Reading.**—H. Julian, 84, Broad Street.
**Rugby.**—Sam Robbins, Ltd., Bilton Road.
**Ryde.**—Downing and Donovan, Motor and General Engineers, Union Street.
**St. Albans.**—Dudley R. Clarke, 98, London Road.
**St. Ives.**—Parker and Son, Station Road Garage.
**Sheffield.**—Dan Bradbury, 224, London Road; Henderson Sidecars, Aero Works, Fitzwilliam Street; F. B. Roper, 166, London Road.
**Sherborne.**—Dyer's Motor and Cycle Works, The Parade.
**Shrewsbury.**—J. C. Pickering, 49, Mardol.
**Southampton.**—The Birmingham and Coventry Cycle Co., 149-51, Above Bar.
**Southport.**—R. Bamber and Co., Ltd., 2, East Bank Street; H. F. Brockbank, 58, Lord Street.
**Stevenage.**—Stevenage Motor Co., Ltd., Stevenage, Herts.
**Stockport.**—Talbot Garage, Ltd., Mersey Square.
**Stratford-on-Avon.**—Young and Somers, 21, Wood Street.
**Sunderland.**—Grimshaw Leather and Co., Ltd. Union Street.
**Torquay.**—Nunn, Farmer and Co., 73, Union Street.
**Taunton.**—Hewin's Garages and Engineering Co., Ltd., Corporation Street.
**Tunbridge Wells.**—R. Carey, 16-17, Crescent Road; Read Bros., 46, Goods Station Road; G. E. Tunbridge, 2, Vale Road.
**Walsall.**—The Colmore Depot, Stafford Street; Maude's Motor Mart, The Walsall Garages, Wolverhampton Street.
**Walthamstow (Essex).**—D. C. Lamb, 151, High Street.
**Weston-super-Mare.**—D. Read and Co., Orchard Street.
**Wisbech.**—Crabtree and Sons, Ltd., Motor Engineers.
**Wolverhampton.**—Cyril Williams, Chapel Ash Depot.
**Worcester.**—W. J. Bladder, 52, Sidbury; Eric Williams, Ltd., The Motor Cycle Depot.
**Wrexham.**—North Wales Motor Exchange.
**Yeovil.**—James Moffat, Town Hall Garage.
**York.**—Smith Bros., Walmgate; The Scott Motor Cycle Co., Ltd., Saltaire, Shipley.




# T.T. NOTES AND NEWS.

## The Practising Reviewed. Form of Men and Machines Improve Day by Day. Unfavourable Weather Conditions. Organisation Complete. Compiled from the Daily Reports of "The Motor Cycle" Staff in the Isle of Man.

ALTHOUGH high speeds are not expected in the early stages of the practising, some of the riders on their very first lap put up some very good speeds. Norman Black (Norton), for example, completed a circuit on Monday of last week in 46m. 1s., averaging over 49 m.p.h., while D. M. Brown the popular Manx rider, on a sister mount beat Black's time by nearly a minute. On his first lap he averaged nearly 48 m.p.h., and completed a second circuit at 50 m.p.h.

* * * *

There are no twins entered for the lightweight race, and only two (Douglas) in the Junior. In the Senior event Douglas, Scott, New Gerrard, and N.U.T. are the only representatives of the multi-cylinder.

* * * *

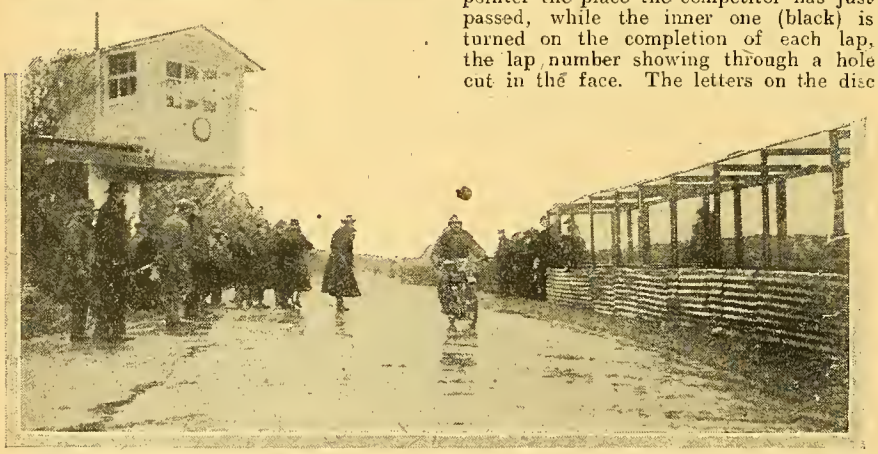
Dr. Hopwood, the private owner Levis rider, had trouble with his machine early last week. He has an assembled machine with a four-stroke engine in a Levis frame. This machine is reported to be named the Leboh—a title which conceals a reference to the qualities of the engine.

* * * *

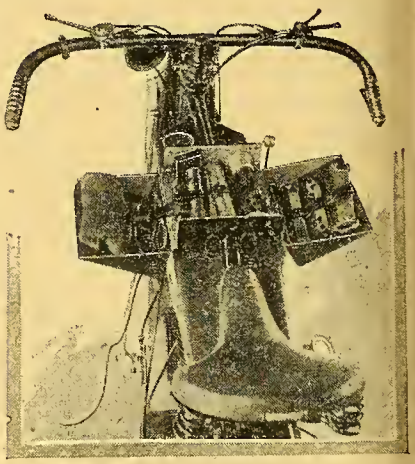
## AN IMPROVED SCORING BOARD.

Those who watch the races from the grand stand will have less difficulty in following the progress of the riders than hitherto.

Competitors' numbers will be placed between two rows of discs, while above there is a yellow disc, which is swung into view on the competitor reaching Governor's Bridge. Below this is the route disc, on which there are two dials. Of these the outer shows by means of a pointer the place the competitor has just passed, while the inner one (black) is turned on the completion of each lap, the lap number showing through a hole cut in the face. The letters on the disc will signify: O, start; B, Ballacraine; S, Sulby; R, Ramsey; B, Bungalow, C, Craig-ne-Baa. Beneath these discs are painted the competitors' speeds for each lap.



In the early hours of dreary wet mornings competitors and spectators turned out for the practising. G. W. Tucker (490 c.c. Norton) arriving after a run over the course.



An excellent idea: the tool case on the T.T. Rudge machine. Conveniently placed and instantly opened without the tools dropping on the ground.

* * * *

## O.H.V. JAP ENGINES.

In recent times in describing J.A.P. racing engines we have emphasised the fact that they have closely followed standard practice, and, notwithstanding, remarkable successes have been obtained. However, for this year's T.T. Races J. A. Prestwich & Co. have evolved a special single-cylinder engine which is probably one of the dark horses in the event.

**T. Notes and News.—**

Due to the enormous radiating fins, ıe 350 c.c. unit resembles one of much ırger capacity. A detachable head is rovided, the bottom fin of which is conderably larger than the rest. This head held on to the cylinder by means of ng bolts screwed into the head casting ith nuts near their base. When these uts are unscrewed the bolts fall down rough holes in the crank case to the epth of about 1in., allowing the cylinder head to be easily withdrawn.

The most remarkable feature of the ngine is that though it has overhead alves it occupies no more space than a ide valve engine—in fact, the one we inpected was fitted in the same New Imerial frame as accommodates the stanard type engine.

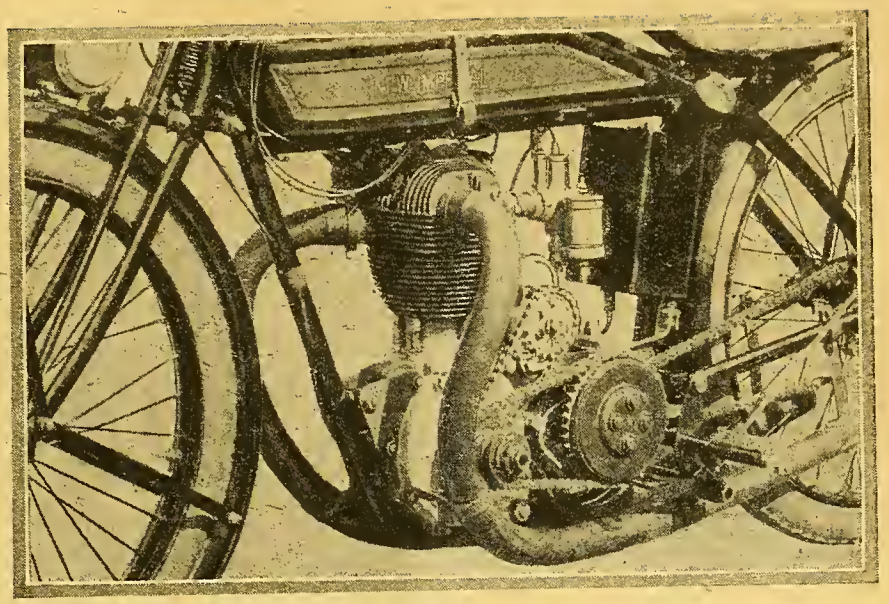
* * * *

A double bevel drive is employed to ctuate the cam gear of the new J.A.P. ngine, and is enclosed in an aluminium asing, the rockers extending at right ngles to the machine and protruding hrough the casing. Since the valve gear lesign is the subject of a patent details annot be disclosed at the moment. A ravity drip feed is employed to lubriate the valve gear, and any excess drains down the shaft into the lower bevel gear case. Situated at the base of the latter is the relief oil pipe which is directed on to the front chain, while the rear chain is lubricated by means of a drip feed at the bottom of the main oil tank.

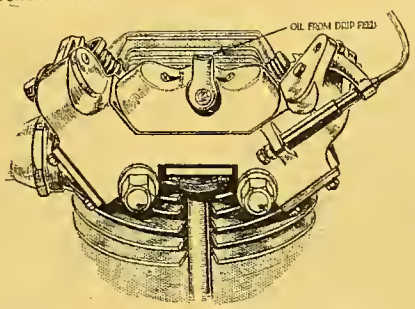
Two oil tanks are employed, one on the top tube for the valve gear and the other on the saddle tube, which is provided with a pump, foot-operated and delivering the oil to the side of the cylinder. Throughout the engine ball and roller bearings are employed, roller bearings being fitted to the drive side of the main shaft. There is only one plain bearing in the engine, and that is the gudgeon pin.

So as to enable the exhaust gases to be got rid of as quickly as possible two huge exhaust pipes, each 1¾in. in diameter, are fitted.

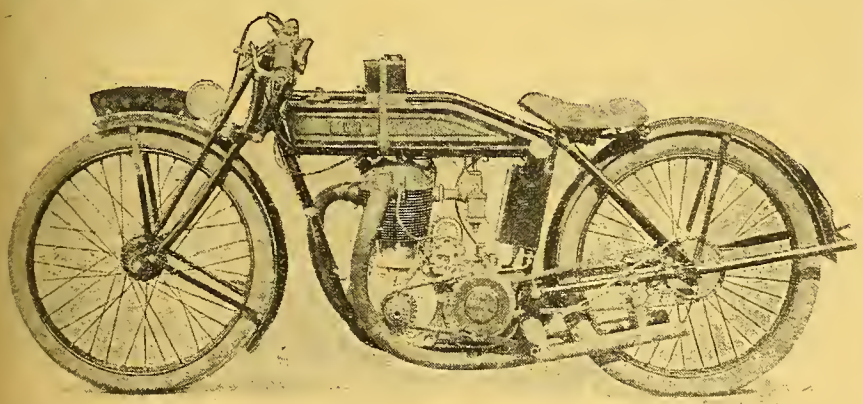
An aluminium piston with domed top and two rings is employed. The valves are set at 90°, and the head is of spherical pattern. The exact dimensions of the engine are 74×80 mm., 348 c.c., while the compression ratio is 5 to 1. Designed only five weeks ago, this engine will be fitted to a New Imperial, and will be ridden by H. Le Vack in both Junior and Senior races.



A startling J.A.P. departure. It will be noticed that the engine, though fitted with overhead valves, occupies no more space than a side valve engine.




Compactness in design is one of the features of the new J.A.P. overhead valve gear. Note the neat exhaust lifter arrangement and the drip feed to lubricate the internal mechanism.



One of the dark horses of the T.T. A New Imperial fitted with the new 348 c.c. o.h.v. J.A.P. engine. Observe the large twin exhaust pipes.

So far as the rest of the machine is concerned, the transmission is by chain, and a chain from a sprocket mounted on the main shaft is employed to drive the magneto, otherwise the machine follows New Imperial T.T. practice.

It should be remembered that it was a J.A.P. engine that brought the New Imperial success in last year's 250 c.c. event by the winning of *The Motor Cycle* Cup by D. G. Prentice.

* * * *

Special arrangements have been made by the Chief Constable of Liverpool on the instance of the Auto-Cycle Union, by which motor cyclists who will be crossing to the Isle of Man will be able to reach the point of embarkation with their machines without hindrance. Riders should proceed by way of Prince's Parade and No. 7 Bridge.

* * * *

The A.C.U. has also made arrangements for ample garage accommodation in Liverpool. Messrs. Theo and Co., of Hatton Garden, Liverpool, have undertaken to store a considerable number of motor cycles at 9d. a night and motor bicycles with sidecars at 1s. 7d. a night. Messrs. Blake and Co. store motor cycles at their Hope Street branch at 1s. per night.

* * * *

The official programme is now ready. This useful document is profusely illustrated with photographs from *The Motor Cycle*, including a complete history of the T.T. Races from their inception in 1907. It is worth recording that the T.T. Races owe their origin to a suggestion made by the late Mr. H. W. Staner, editor of *The Autocar* and managing editor of *The Motor Cycle*, at an A.C.U. dinner in the early part of 1907. The programme can be obtained, price 6d. a copy, from the Secretary, The Auto-Cycle Union, 83, Pall Mall, London, S.W.1.

## SCOTTS PRACTICALLY STANDARD.

In general outline the Scotts for the Senior Race follow the standard lines of the Squirrel models. They have special oiling arrangements, however, and are equipped with Webb internal-expanding front brakes, large capacity tanks, and several detail improvements.

* * * *

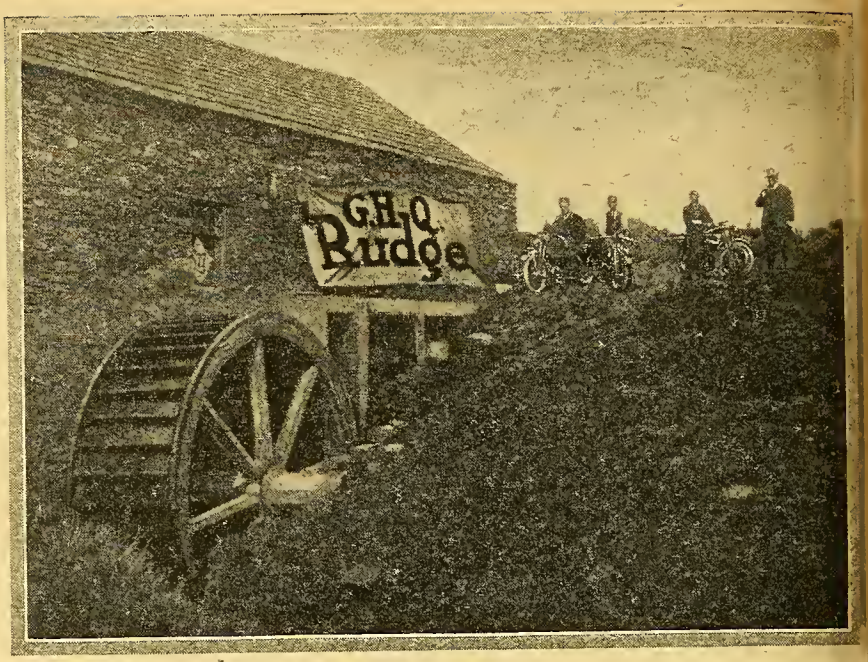
The Scott engine has a new form of intake combined with the two transfer port covers, and the carburetter stub is bolted on. Oil for the engine is carried in a tank mounted on the top main tube of the frame, and it is fed through a separate gravity drip to each crank case. Normally, the oil reservoir is the interior of the two principal frame members, but this is used on the T.T. mounts to carry lubricant for the gear and for the two primary chains, on which it is allowed to drip by gravity. A detail improvement to the machine which is worthy of note is the V machined in the rear chain sprocket, in which the brake shoe beds.

* * * *

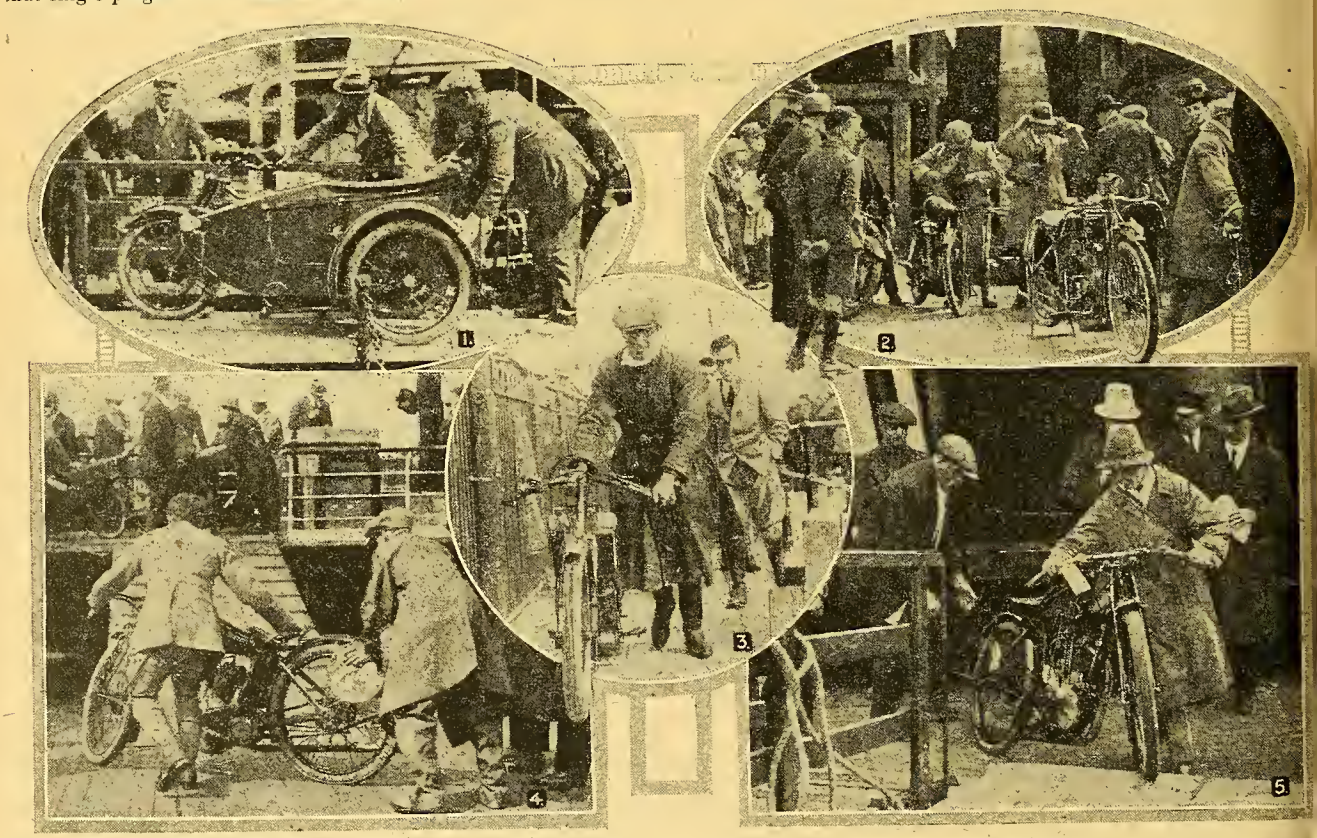
Special mention must be made of the neat fitting of the Webb expanding front brake, which is applied with some considerable neatness.

* * * *

Although the Scotts have been run in practice with two spark magnetos and two plugs in the heads it is quite likely that single plugs will be used in the races.




Where the Rudge secrets are kept. An old watermill used as a garage by a Coventry contingent which hopes to repeat the Rudge success of 1914.




BUSY SCENES ON THE QUAYSIDE AT LIVERPOOL AND DOUGLAS. Competitors embarking with their machines. (1) Not a speed mount but a vehicle that will be appreciated in and around Douglas. (2) International entrants arriving—the Indian team awaiting their turn to embark. (3) C. P. Wood and his Scott arrive at Douglas. (4) F. W. Dixon takes his Indian aboard at Liverpool. (5) Bert Kershaw with his New Imperial.

**T. T. Notes and News.—**

Mr. G. E. Taylor will be in charge of Messrs. Best & Lloyd's interests in the Isle of Man, and will be found at their depot, Arbory House, 21, Christian Road, Douglas, from to-day.

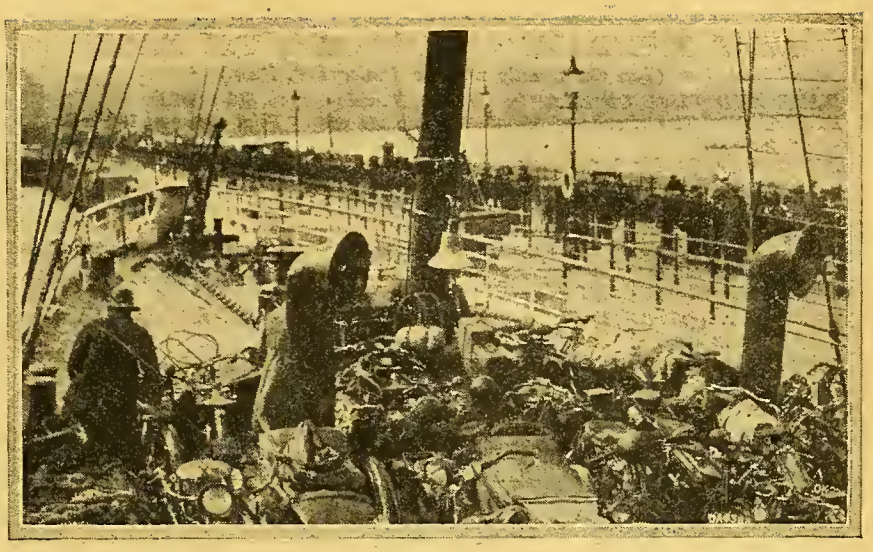
* * * *

Lodge Plugs, Ltd., will be represented by Mr. F. W. Cave at the Sefton Hotel, Douglas.

* * * *

To mark the return of the Rudge to the T.T. Races in the I.O.M. its manufacturers offer a prize of a dress in Rudge green, value ten guineas, to the first young lady over eighteen years of age to guess the number of corners in the T.T. course, and to the first motor cyclist who solves the said problem correctly a prize worth five guineas to be selected from the stock of the Athol Motor Garage or any shop in Douglas. The judges are Messrs. G. J. A. Brown and V. A. Holroyd. A coupon obtainable from Rudge-Whitworth, Ltd., must be filled in and prizes claimed at the Rudge headquarters, Homefield, 77, Palace Parade, Queen's Promenade, Douglas, on Wednesday, May 31st, before 12 noon.

* * * *



After a stormy passage. Quite a number of the racing machines suffered through their soaking on the decks of the Isle of Man steamers.

## THREE BRAKES WITH ONE CONTROL.

No passing glance must be given to the Indian machines, for they are thoroughly workmanlike, and proved themselves so in last year's Senior event. Moreover, the star rider, F. W. Dixon, is a motor cyclist of outstanding capability. Dixon's machine is fitted with a special braking system of his own devising; not only has it got the usual two rear brakes, one internal and expanding and the other a contracting band, but the front wheel has been specially fitted with a Webb expanding brake. All three are controlled from the one pedal on the right-hand side of the machine.

The pedal pulls on the internal back brake by a direct coupled rod, and operates the contracting band through a rod and spring device fractionally later than the other brake, the degree of lag between the two being controllable by a wing nut, while riding if need be. Pulled also by the pedal is the wire control for the Webb front-wheel brake, but the outer casing of the control is divided, the ends abutting in stops capable of being separated by a small cam plate carried on the fork girders. This cam is controlled by the lower of a pair of ordinary carburetter levers. According to the setting of this lever (which virtually alters the length of the brake cable outer casing), the front brake may be made to operate coincidently and powerfully with the back brake, or later and less powerfully, as required. This setting will be made as experience dictates long before each individual corner is reached.

Beautifully made and fitted, this ingenious device gives evidence of the serious bid which Dixon intends to make this year for the race he came so near to winning last year.

* * *

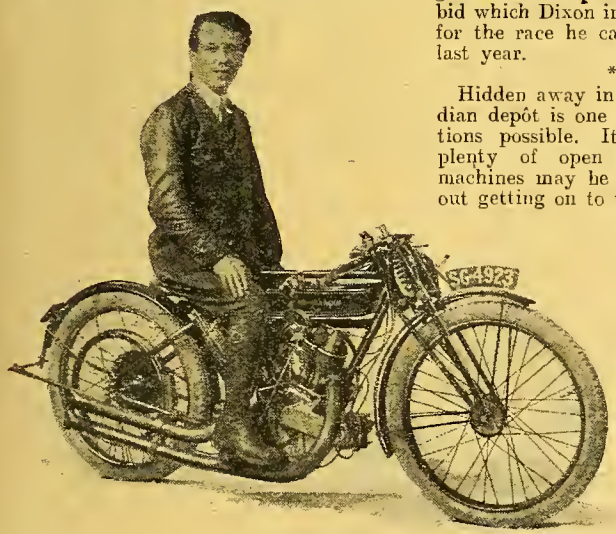
Hidden away in a huge quarry, the Indian depôt is one of the most useful locations possible. It is secluded, but has plenty of open space on which the machines may be "chased around" without getting on to the public roads.

## A PRIVATE OWNERS' RENDEZVOUS.

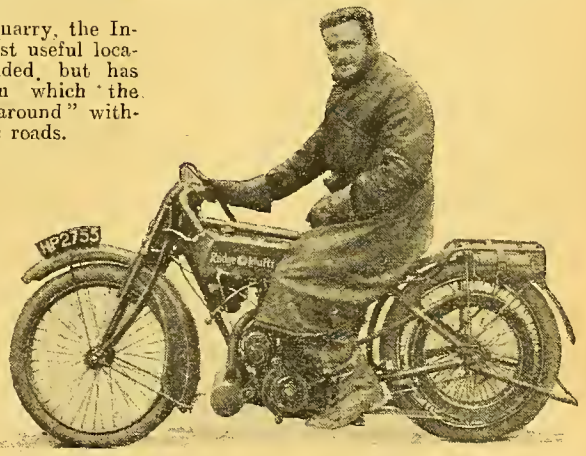
In a dark warehouse, situated in one of those curiously contorted back streets behind the promenade, the Norton private owners, under the care of Graham Walker (who is practising on the o.h.v. model to be ridden by Vandervell), are a cheerful little community. Spared the ill-luck which dogged their earlier days last year, the men are confident of a high percentage of success.

* * *

The Norton machines are quite a sight as they stand in a long row outside the headquarters while the riders take their early breakfast. Meanwhile, the daily work in the garage, which is open to the street, provides unbounded entertainment for a horde of urchins who are ardent Norton enthusiasts. Mrs. Knowles is keenly interested in the progress of the work, and is assisting in the preparation of her husband's machine.



J. A. Porter and his 500 c.c. twin New Gerrard, a shapely machine for the Senior event. A special racing side valve J.A.P. engine is fitted snugly in the frame.



W. L. Danskin—well known as a Trials rider—one of the Rudge team mounted on a Multi model; the only representative of all-belt drive in the Senior race.

## NEXT TUESDAY'S LIGHTWEIGHT T.T. RACE.

*(Ran concurrently with the Junior T.T. Race.)*

*DATE AND TIME OF START: 10 a.m., Tuesday, May 30th, 1922.*

*DISTANCE: Five circuits of 37 miles 6 furlongs each. Total distance, 188 miles 6 furlongs.*

*FIRST PRIZE: The Lightweight Tourist Trophy, to be held for one year. £30 in cash, small replica of trophy, and special gold medal.*

*SECOND PRIZE: £20 in cash.*

*THIRD PRIZE: £10 in cash.*

*TEAM PRIZE: To be won by a nominated team, the members of which must all finish the course within thirty minutes of the winner.*

*PRELIMINARY EXAMINATION: Monday, May 29th—*

*Nos. 1-25: 9.30 to 10 a.m.; Nos. 26-50: 10 to 11 a.m.; Nos. 50 up: 11 a.m. to 12 noon.*

*WINNERS OF "THE MOTOR CYCLE" CUP WHICH THE LIGHTWEIGHT TROPHY REPLACES.*

*1921 ... D. G. Prentice (New Imperial), 44·82 m.p.h.*

*1920 ... R. O. Clark (Levis), 38·87 m.p.h.*

*Fastest Lap: B. Kershaw (New Imperial) 49 m. 7 sec. = 46·11 m.p.h., 1921.*

## ENTRIES—THE RIDERS AND THEIR MOUNTS.

| No. | Entrant | Make | No. of Cyls. | Bore Stroke m.m. m.m. | Cubic Capacity c.c. | Driver. |
|---|---|---|---|---|---|---|
| 1 | New Imperial Cycles, Ltd. | New Imperial .. | 1 | 64.5×76 | 249 | D. G. Prentice |
| 2 | J. Joynson.. .. .. | Invicta .. .. | 1 | 64.5×75 | 245 | Entrant |
| 3 | The "Sun" Cycle and Fittings Co., Ltd. .. .. | Sun Vitesse.. .. | 1 | 64 ×70 | 225 | Gus Kuhn |
| 4 | Humphries & Dawes, Ltd. | O.K. Junior .. | 1 | 60 ×88 | 249 | N. Hall. |
| 5 | New Imperial Cycles, Ltd. | New Imperial .. | 1 | 64.5×76 | 249 | D. B. Calder |
| 6 | New Imperial Cycles, Ltd. | New Imperial .. | 1 | 64.5×76 | 249 | |
| 7 | Harold Petty, Ltd. .. | Diamond .. .. | 1 | 64.5×76 | 249 | H. Petty |
| 8 | G. E. Tottey .. .. | New Imperial .. | 1 | 64.5×76 | 249 | Entrant |
| 9 | Veloce, Ltd. .. .. | Velocette .. .. | 1 | 63 ×80 | 249 | S. J. Jones |
| 10 | The "Sun" Cycle and Fittings Co., Ltd. .. .. | Sun Vitesse.. .. | 1 | 64 ×70 | 225 | M. Bishop |
| 11 | Butterfields, Ltd. .. | Levis .. .. | 1 | 67 ×70 | 247 | G. S. Davison |
| 12 | Veloce, Ltd. .. .. | Velocette .. .. | 1 | 63 ×80 | 249 | G. Denley |
| 13 | London Motors .. .. | Coulsou .. .. | 1 | 64 ×77 | 248 | C. W. Fairweather |
| 14 | The "Sun" Cycle and Fittings Co., Ltd. .. .. | Sun Vitesse.. .. | 1 | 64 ×70 | 225 | W. H. Lord |
| 15 | New Imperial Cycles, Ltd. | New Imperial .. | 1 | 64.5×76 | 249 | B. Kershaw |
| 16 | R. W. Loughton .. .. | Francis Barnett .. | 1 | 64.5×76 | 249 | Entrant |
| 17 | J. C. Whalley .. .. | Massey Arran .. | 1 | 60 ×88 | 249 | Entrant |
| 18 | Butterfields, Ltd. .. | Levis .. .. | 1 | 67 ×70 | 247 | P. Pike |
| 19 | The D. F. & M. Eng. Co., Ltd. .. .. .. | Diamond .. .. | 1 | 64.5×76 | 249 | T. Simister |
| 20 | L. B. Henderson .. .. | Sheffield-Henderson | 1 | 60 ×88 | 249 | W. D. Marchant |
| 21 | New Hudson, Ltd. .. | New Hudson .. | 1 | 63 ×80 | 249 | E. Mundey |
| 22 | C. W. Johnston .. .. | New Imperial .. | 1 | 64.5×70 | 249 | Entrant |
| 23 | C. H. Hopwood .. .. | Levis .. .. | 1 | 67 ×70 | 247 | Entrant |
| 24 | Butterfields, Ltd. .. | Levis .. .. | 1 | 67 ×70 | 247 | F. W. Applebee |
| 25 | London Motors .. .. | Coulson .. .. | 1 | 64 ×77 | 248 | L. Nicholson |
| 26 | E. H. A. Humphries .. | O.K. Junior .. | 1 | 60 ×88 | 249 | W. L. Handley |
| 27 | The D. F. & M. Eng., Co., Ltd. .. .. .. | Diamond .. .. | 1 | 64.5×76 | 249 | O. Wade |
| 28 | C. Edwards .. .. | New Imperial .. | 1 | 64.5×76 | 249 | Entrant |
| 29 | Veloce, Ltd. .. .. | Velocette .. .. | 1 | 63 ×80 | 249 | R. N. Judd |
| 30 | Humphries & Dawes, Ltd. | O.K. Junior .. | 1 | 60 ×88 | 249 | F. C. North |
| 31 | Young & Somers .. .. | Rex Acme .. .. | 1 | 60 ×88 | 249 | D. Young |
| 32 | L. B. Henderson .. .. | Sheffield-Henderson | 1 | 60 ×88 | 249 | L. Padley |

### TEAMS IN THE LIGHTWEIGHT RACE.

1. DIAMOND: H. Petty (No. 7), T. Simister (No. 19), O. Wade (No. 27).
2. LEVIS: G. S. Davison (No. 11), P. Pike (No. 18), F. W. Applebee (No. 24).
3. NEW IMPERIAL: D. G. Prentice (No. 1), D. B. Calder (No. 5), B. Kershaw (No. 15).
4. O.K. JUNIOR: N. Hall (No. 4), W. L. Handley (No. 26), F. C. North (No. 30).
5. SUN: G. Kuhn (No. 3), M. Bishop (No. 10), W. H. Lord (No. 14).
6. VELOCETTE: S. J. Jones (No. 9), G. Denley (No. 12), R. N. Judd (No. 29).

Generally, the Nortons are as fast as any, especially down the mountain, and a win, now long overdue, would be more than popular.

* * *

Manxmen estimate that the value of the T.T. Races to the Island is at least £50,000.

* * *

Rudge, Kirk-Onchan, is the telegraphic address of the Rudge Garage, The Old Mill, 77, Royal Avenue, Glen Onchan.

A hearty invitation is extended to visitors to inspect the Massey-Arran machines at the Massey-Arran Motor Co.'s headquarters, Irwell House, next door to the Sefton Hotel, Douglas.

* * *

Some ten years ago the Colmore Depot, who have entered two Douglases this year, discovered a new competition rider who had just come from abroad and entered him for the T.T. He put up a very good performance, though he did not actually win. This was Mr. S. L. Bailey, who is now general manager of Douglas Motors, Ltd.

* * *

The Hawthorns, 4, Cambridge Terrace, Douglas, will be the headquarters of Veloce, Ltd. Their racing colours will be black and gold.

* * * *

The following table shows how the different makes are represented in the races:

| | Lightweight Race. | Junior Race. | Senior Race. |
|---|---|---|---|
| A.J.S. ... ... ... | — | 7 | 3 |
| Beardmore-Precision | — | — | 3 |
| Cotton ... ... ... | — | 3 | — |
| Coulson .... ... | 2 | 2 | — |
| Diamond ... ... | 3 | 1 | — |
| Dot ... ... ... | — | 2 | — |
| Douglas ... ... | — | 2 | 5 |
| Duzmo ... ... | — | — | 1 |
| Edmund ... ... | — | 3 | — |
| Francis-Barnett ... | 1 | — | — |
| H.B. ... ... ... | — | 1 | — |
| Indian ... ... | — | — | 4 |
| Invicta ... ... ... | 1 | — | — |
| Ivy ... ... ... | — | 4 | — |
| Levis ... ... ... | 4 | — | — |
| Massey-Arran ... ... | 1 | 2 | — |
| New Comet ... ... | — | 1 | — |
| New Gerrard ... ... | — | 1 | 1 |
| New Hudson ... ... | 1 | — | 2 |
| New Imperial ... ... | 7 | 1 | 1 |
| New Scale ... ... | — | 4 | — |
| Norton ... ... ... | — | — | 14 |
| N.U.T. ... ... ... | — | — | 1 |
| O.E.C. Blackburne ... | — | 1 | — |
| O.K.-Junior ... ... | 3 | — | — |
| Raleigh ... ... | — | 1 | — |
| Rex-Acme ... ... | 1 | — | — |
| Rudge ... ... | — | — | 8 |
| Scott ... ... ... | — | — | 5 |
| Sheffield-Henderson ... | 2 | 2 | 2 |
| Sunbeam ... ... | — | — | 12 |
| Sun-Vitesse ... ... | 3 | — | — |
| Velocette ... ... | 3 | — | — |
| | 32 | 38 | 62 |

* * * *

It will be seen from the above that only two makes are represented in all three races, *i.e.*, the New Imperial and the Sheffield Henderson.

* * * *

If H. W. Hassall (Norton) has not sufficiently recovered from his recent accident to ride, his place may be taken by Tony Vandervell, and if this happens the latter will be the first motor cycle T.T. competitor also to take part in the car T.T., in which he is to drive a Talbot.

* * * *

Most striking feature of the fleet of 349 c.c. A.J.S. machines is the size of the exhaust pipes—apparently about 2½in. diameter—quite big enough to keep rabbits in! The machines left Liverpool early last week, and suffered somewhat from the sea-water bath they received on a particularly rough crossing.

* * * *

New Imperial, Massey-Arran, and O.K.-Junior machines also received more sea-water than was good for their condition.

* * * *

During the T.T. Races the Alder Garage, Queen's Drive, Stoneycroft, Liverpool, is capable of storing a large number of motor cycles. Its proprietors will be glad to send their representative to help motorists to embark their machines.

* * * *

A newcomer to the T.T. Races is the New Gerrard, entered by J. A. Porter, of The Motor Mart, Edinburgh. Porter's mount for the Junior has a Blackburne o.h.v. engine, while in the Senior a twin J.A.P. will be used.

# A WEEK ON THE T.T. COURSE.

## Unfavourable Weather precludes Highest Speeds in Practice. Notes on Men and Machines in the Isle of Man.

AFTER a good start the first week of practising tailed away rather, and was taken fairly quietly by the majority.

On the second and third mornings the weather was "impossible," therefore it did not seem as though practising had started in earnest until Thursday morning, when there was a fine turn-out of about eighty riders.

Until Thursday, also, no great speeds were possible, and even then there was a considerable mist on the mountains. In many places the condition of the roads is not at all conducive to speed. Looseness characterises almost the whole of the mountain climb out of Ramsey, and the quantity of loose stones in the vicinity of the Gooseneck has demanded attention which will no doubt be given.

The competitors, of course, were somewhat dispirited by the earlier mornings' weather. After working hard on their machines they merely took them out to get thoroughly filthy, yet without the satisfaction of testing their speed, for the mountain mists reduced the range of visibility to a few yards, and in many places the surface was greasy in the extreme, especially at the corner below Craig-ny-Baa, and also on a particularly soft section between Hilberry and Cronk-ny-Mona.

Amongst the smaller machines, however, A.J.S. and New Imperial, in the 350 c.c. and 250 c.c. races respectively, are prime favourites. The latter, however, are threatened somewhat dangerously by some of the Blackburne-engined mounts, which appear to be very healthy, although their practice speeds have not been high.

### A Week's Practice.

On Monday, the 15th inst., the first morning of practice, 22 Senior, and a large number of Junior and Lightweight machines were on the course. Some good lap times were achieved, as the following figures testify:—

SENIOR.

| | M. | S. |
|---|---|---|
| T. C. de la Hay (Sunbeam) ... ... | 49 | 22 |
| D. M. Brown (Norton) ... ... ... | 45 | 12 |
| G. H. Tucker (Norton) ... ... ... | 51 | 44 |
| C. Greenwood (Sunbeam) ... ... | 49 | 36 |
| Reg. Brown (Sunbeam) ... ... ... | 50 | 0 |
| W. Hollowell (Norton) ... ... ... | 51 | 30 |
| G. E. Cowley, jun. (Norton) ... ... | 52 | 0 |
| G. M. Black (Norton) ... ... ... | 53 | 45 |
| C. Waterhouse (Sunbeam) ... ... | 51 | 47 |
| A. Carton (Norton) ... ... ... | 50 | 30 |
| N. Black (Norton) ... ... ... | 46 | 1 |
| R. M. Knowles (Norton) ... ... | 53 | 21 |
| D. H. Davidson (Indian) ... ... | 50 | 5 |
| V. Anstice (Douglas) ... ... ... | 50 | 25 |

RESERVES.

| | M. | S. |
|---|---|---|
| H. Mason (N.U.T.) ... ... ... | 44 | 1 |
| O. Baldwin (Rudge) ... ... ... | 54 | 40 |
| A. E. Taylor (Rudge) ... ... ... | 54 | 15 |
| H. Riddell (Rudge) ... ... ... | 51 | 28 |
| —. Ewens (Rudge) ... ... ... | 59 | 42 |
| —. Sutcliffe (Rudge) ... ... ... | 56 | 10 |
| G. E. Strange (Sheffield-Henderson) ... | 49 | 20 |

## *NEXT TUESDAY'S JUNIOR T.T. RACE.*

*(Run concurrently with the Lightweight T.T. Races.)*

*DATE AND TIME OF START: 9.30 a.m., Tuesday, May 30th, 1922.*
*DISTANCE: Five circuits of 37 miles 6 furlongs each. Total distance 188 miles 6 furlongs.*
*FIRST PRIZE: The Junior Tourist Trophy, to be held for one year. £30 in cash, small replica of trophy, and special gold medal.*
*SECOND PRIZE: £20 in cash.*
*THIRD PRIZE: £10 in cash.*
*TEAM PRIZE: To be won by a nominated team, the members of which must all finish the course within thirty minutes of the winner.*
*PRELIMINARY EXAMINATION: Monday, May 29th.*

*PREVIOUS WINNERS.*

| | | |
|---|---|---|
| *1921* | *Eric Williams, A.J.S. (74 × 81 mm. = 348 c.c.)* ... ... ... | *52.1 m.p.h.* |
| *1920* | *Cyril Williams, A.J.S. (74 × 81 mm. = 348 c.c.)* ... ... | *40·7 m.p.h.* |
| *1914* | *Eric Williams, A.J.S. (74 × 81 mm. = 348 c.c.)*... ... ... | *46·6 m.p.h.* |
| *1913* | *H. Mason, V twin N.U.T.-J.A.P. (60 × 61 mm. = 344 c.c.)* | *43·7 m.p.h.* |
| *1912* | *W. H. Bashall, flat twin Douglas (60·7 × 60 mm. = 350 c.c.)* | *39·6 m.p.h.* |
| *1911* | *P. J. Evans, V twin Humber (60 × 60 mm. = 340 c.c.)* ... | *41·5 m.p.h.* |

*FASTEST LAP: H. R. Davies (A.J.S.). Time, 41 m. 4 s. = 55·15 m.p.h., 1921.*

## ENTRIES—THE RIDERS AND THEIR MOUNTS.

| No. | Entrant. | Make. | No. of Cyls. | Bore m.m. | Stroke m.m. | Cubic Capacity c.c. | Rider. |
|---|---|---|---|---|---|---|---|
| 33 | A. J. Stevens & Co. (1914), Ltd. | A.J.S. | 1 | 74 | ×81 | 348 | H. R. Davies |
| 34 | C. G. Pullin | Douglas | 2 | 57 | ×68 | 346 | Entrant |
| 35 | Jackson & Booth, Ltd. | Massey-Arran | 1 | 71 | ×88 | 348 | A. Booth |
| 36 | Maudes' Motor Mart | Ivy | 1 | 75 | ×79 | 349 | N. Norris |
| 37 | The Osborn Eng. Co., Ltd. | O.E.C. Blackburne | 1 | 71 | ×88 | 348 | J. Bance |
| 38 | D. Hall | New Scale | 1 | 71 | ×88 | 348 | Entrant |
| 39 | Dot Motors | Dot | 1 | 70 | ×90 | 346 | A. W. Muirhead |
| 40 | S. Woods | Cotton | 1 | 71 | ×88 | 348 | Entrant |
| 41 | The Cotton Motor Co. | Cotton | 1 | 71 | ×88 | 348 | F. G. Morgan |
| 42 | L. B. Henderson | Sheffield-Henderson | 1 | 71 | ×88 | 348 | E. Searle |
| 43 | A. J. Stevens & Co. (1914), Ltd. | A.J.S. | 1 | 74 | ×81 | 348 | G. Kelly |
| 44 | A. J. Stevens & Co. (1914), Ltd. | A.J.S. | 1 | 74 | ×81 | 348 | T. M. Sheard |
| 45 | Roberts & Hibbs | New Scale | 1 | 71 | ×88 | 348 | G. E. Cowley |
| 46 | Victor Horsman, Ltd. | Raleigh | 1 | 71 | ×88 | 348 | V. Horsman |
| 47 | Porter's Motor Mart | New Gerrard | 1 | 71 | ×88 | 348 | J. A. Porter |
| 48 | C. Edmund & Co. (1920), Ltd. | Edmund | 1 | 71 | ×88 | 348 | E. Remington |
| 49 | A. J. Stevens & Co. (1914), Ltd. | A.J.S. | 1 | 74 | ×81 | 348 | F. A. Longman |
| 50 | L. B. Henderson | Sheffield-Henderson | 1 | 71 | ×88 | 348 | G. A. Strange |
| 51 | New Imperial Cycles, Ltd. | New Imperial | 1 | 70 | ×90 | 346 | H. Le Vack |
| 52 | The D. F. & M. Eng. C., Ltd. | Diamond | 1 | 70 | ×90.5 | 346 | F. J. Price |
| 53 | A. J. Stevens & Co. (1914), Ltd. | A.J.S. | 1 | 74 | ×81 | 348 | G. Grinton |
| 54 | Frank Whitworth, Ltd. | Ivy | 1 | 75 | ×79 | 349 | T. A. Jones |
| 55 | Roberts & Hibbs | New Scale | 1 | 71 | ×88 | 348 | R. Gray |
| 56 | C. Edmund & Co. (1920), Ltd. | Edmund | 1 | 71 | ×88 | 348 | G. W. Shepherd |
| 57 | London Motors | Coulson | 1 | 71 | ×88 | 348 | A. E. Taylor |
| 58 | A. J. Stevens & Co. (1914), Ltd. | A.J.S. | 1 | 74 | ×81 | 348 | H. F. Harris |
| 59 | Roberts & Hibbs | New Scale | 1 | 71 | ×88 | 348 | S. A. Dale |
| 60 | Dot Motors | Dot | 1 | 70 | ×90 | 346 | C. Parkinson |
| 61 | C. Edmund & Co. (1920), Ltd. | Edmund | 1 | 71 | ×88 | 348 | G. Browne |
| 62 | A. H. Haden | New Comet | 1 | 70 | ×76 | 292 | |
| 63 | S. A. Newman, Ltd. | Ivy | 1 | 75 | ×79 | 349 | P. A. Newman |
| 64 | Massey-Arran Motor Co., Ltd. | Massey-Arran | 1 | 71 | ×88 | 348 | J. Whalley |
| 65 | R. Lucas | Coulson | 1 | | | | Entrant |
| 66 | The Cotton Motor Co. | Cotton | 1 | 71 | ×88 | 348 | H. F. Brockbank |
| 67 | Jack Haslam | Ivy | 1 | 75 | ×79 | 349 | R. G. E. Flint |
| 68 | A. J. Stevens & Co. (1914), Ltd. | A.J.S. | 1 | 74 | ×81 | 348 | H. Chambers |
| 69 | Jack Haslam | Douglas | 2 | 60.5 | ×60 | 342 | Entrant |
| 70 | Hill Bros. | H.B. | 1 | 71 | ×88 | 348 | |

## TEAMS IN THE JUNIOR RACE.

1. A.J.S.: H. R. Davies (No. 33), G. Kelly (No. 43), H. F. Harris (No. 58).
2. EDMUND: E. Remington (No. 48), G. W. Shepherd (No. 56), G. Browne (No. 61).
3. NEW SCALE: G. E. Cowley (No. 45), R. Gray (No. 55), S. A. Dale (No. 59).
4. IVY: G. N. Norris (No. 36), T. A. Jones (No. 54), P. A. Newman (No. 63).

## A Week on the T.T. Course.—

JUNIOR.

| | M. | S. |
|---|---|---|
| V. Horsman (Raleigh) ... ... ... | 52 | 38 |
| E. Remington (Edmund) ... ... | 53 | 14 |
| G. W. Shepherd (Edmund) ... ... | 57 | 0 |
| G. Browne (Edmund) ... ... ... | 57 | 0 |

LIGHTWEIGHT.

| | M. | S. |
|---|---|---|
| D. Young (Rex-Acme) ... ... ... | 52 | 2 |
| L. Padley (Sheffield-Henderson)... ... | 54 | 14 |

RESERVES.

| | M. | S. |
|---|---|---|
| G. S. Davison (Levis) ... ... ... | 58 | 28 |
| P. Pike (Levis) ... ... ... ... | 56 | 1 |

In connection with the above practice times, it should be remembered that any time over 56m. 38s. is less than 40 m.p.h., while the best time recorded—D. M. Brown (Norton), 45m. 12s.—equals approximately 50 m.p.h. Last year's Senior race was won by a Junior machine at an average speed of 54 m.p.h.

### The Heroes.

Yes, they deserve that title, the brave thirty or so who faced a practice lap on Tuesday morning.

Starting away from the grand stand, the riders had a blinding rain carried by a biting wind driving full in their faces. In consequence no times worth considering can be reported, although several got round in about the hour or a little over.

All the machines on the course were in the Senior Class, except three Levises (or is the plural Levii?). The first of them to come round was the veteran F. W. Applebee, who is 60 years of age, and he was followed by Dr. Hopwood, who went straight on at speed.

At 6.45, too late for further starters, the rain was clearing away.

SENIOR TIMES.

| | M. | S. |
|---|---|---|
| T. C. de la Hay (Sunbeam) ... ... | 59 | 3 |
| W. Hollowell (Norton) ... ... ... | 59 | 15 |
| S. A. Crabtree (Sunbeam) ... ... | 52 | 53 |
| A. Carton (Norton) ... ... ... | 57 | 40 |
| N. Black (Norton) ... ... ... | 52 | 55 |
| R. Bownass (N.U.T.) ... ... ... | 56 | 43 |
| V. Olsson (Sunbeam) ... .. ... | 63 | 20 |
| G. Stead (Indian) ... ... . | 57 | 35 |

### The Third Morning.

Hopes that fine weather would prevail for the third morning of practice brought out about 60 riders, half of them being Senior men and the rest equally divided in the two smaller categories. Although the rain held off for a little while the hopes of the previous night shortly dissolved away before an increasing downpour. Again at 7 a.m., when practising finished, the light became brighter and the rain abated.

No startling times seemed possible, and the riders reported much grease on the corners and heavy mists on the mountain.

The following makes were out on the course: Sun, Levis, New Imperial, Sheffield-Henderson, O.K. Junior, Ivy, Diamond, A.J.S., Dot, Edmund, Douglas, Triumph, Indian, Norton, Scott, Sunbeam, Rudge, and New Hudson.

The best time by a Senior rider was 50m. 2s. by D. S. Alexander (Indian), while G. Grinton (A.J.S.) with 54m. made the fastest time in the Junior class, and C. W. Johnson (New Imperial) 59m. 20s. among the Lightweights.

### The Fourth Day.

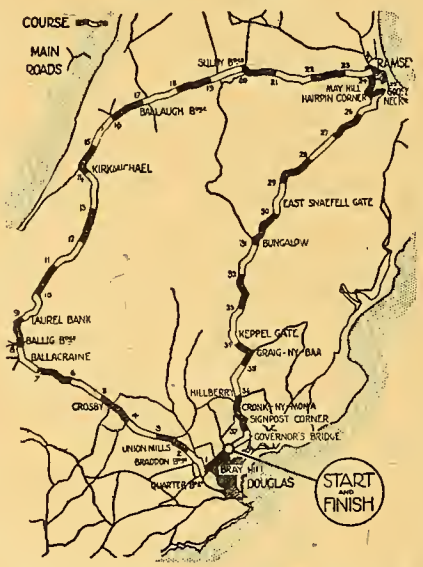
It may really be said the practising started in earnest on Thursday morning last, for by five o'clock over 70 machines were in readiness to go. They were despatched from Douglas with celerity, 75 men starting in less than 25 minutes.

A thick mist enveloped Snaefell, but, despite the gloom, the atmosphere was mild and still. The roads were somewhat sticky after the soaking of the two previous days.

Hugh Mason, who rides astonishingly well for one who has not been so long in the game, made an extraordinarily fast lap, taking but little over 40 minutes by amateur timing (56 m.p.h.), although the timekeepers declared it at 47. Brockbank, whose Cotton machine was not yet available, caused some amusement by starting on a standard o.h.v. Triumph borrowed from a private owner for the occasion and equipped with lamp and horn.

Some good cornering was to be seen at Hilberry and Cronk-ny-Mona, and some of the machines are going really well.

THE T.T. COURSE.




The A.J.S.s accelerate splendidly; the Scotts appear to be fast on the level; and Nortons, Sunbeams, and Indians all possess obvious speed. As yet the Rudge and Triumph machines did not appear to be exceptionally fast, but perhaps they were being taken round gently. The same might be said of the New Hudson, Beardmore, and Sun-Vitesse.

### 210 Laps by 90 Riders.

Dry roads favoured good speeds on Friday morning, and at 5 a.m. there was a big assembly of riders in the paddock. They were dispatched with celerity and watched with interest by large crowds which occupied most vantage points. 210 laps by 90 riders were timed. Unfortunately rain commenced again about 6.20, and the downpour gradually increased until late in the morning, when the roads were awash again; in fact, the weather was altogether dispiriting. Coulson and Scale made their appearance, and several new riders were out.

The lap times showed some improvement as the atmosphere was clear during the first hour. In the lightweight class the following times were recorded:—Simister (Diamond), 52m. 50s.; Young (Rex), 51m. 35s.; Tottey (New Imperial), 51m. 50s.; Padley (Sheffield Henderson), 52m. 38s.

In the Junior class Howard Davies made two fast laps—42m. 15s., and 43m. 40s. Another A.J.S. machine took about 44m. The Senior times were:—F. G. Edmond (Triumph), 42m. 30s.; Alexander (Indian), 42m. 40s.; Norman Black (Norton), 43m. 3s.; Ollerhead (Douglas), 43m. 50s., and Hollowell (Norton), 43m. 58s.

### Saturday's Practising.

Saturday morning saw the late arrivals on the course. Pullin (Douglas) and Le Vack (New Imperial) with the o.h.v. J.A.P. engine were out, and the Invicta and Francis-Barnett made their appearance.

Once again the Scott has a sporting chance of a place, if not a win. Langman is putting in some good speeds, and his cornering is superb; nervousness is a word obviously not in his dictionary.

Fast laps in Saturday's practising were made by: (Lightweights) J. C. Whalley (Massey-Arran), 52m. 42s.; R. W. Loughton (Francis-Barnett), 52m. 48s.; D. Young (Rex-Acme), two laps just over 51 minutes; and W. Handley (O.K.), two laps of 49 and 47 minutes respectively.

(Junior): T. M. Sheard (A.J.S.), two laps of 45½m. and 42½m.; E. Remington (Edmund), two laps of 45½m. and 47½m.; H. F. Harris (A.J.S.), three laps of approximately 47m., 47m., and 44m.; and R. Wilson (A.J.S.), 45m. 15s.

Amongst the Seniors, Bennett (Sunbeam) made a record practice lap of 41½m. Other good Senior times were: S. A. Crabtree (Sunbeam), 44m.; W. Johnson (Sunbeam), 44m.; G. W. Walker (o.h.v. Norton), 44m.

At the end of last week the best six lightweights were:—

R. W. Lynton (Francis-Barnett), 52m.; J. C. Whalley (Massey-Arran), 52m.; T. Simister (Diamond), 51m.; D. Young (Rex-Acme), 51m.; L. Padley (Sheffield-Henderson), 52m.; and W. L. Handley (O.K.), 46m.

The best lap times among the Junior riders were made by:—

H. R. Davies (A.J.S.), 42m.; G. Kelly (A.J.S.), 42m.; F. A. Longman (A.J.S.), 41m.; H. F. Harris (A.J.S.), 44m.; R. Wilson (A.J.S.), 45m.; and E. Remington (Blackburne), 45m.

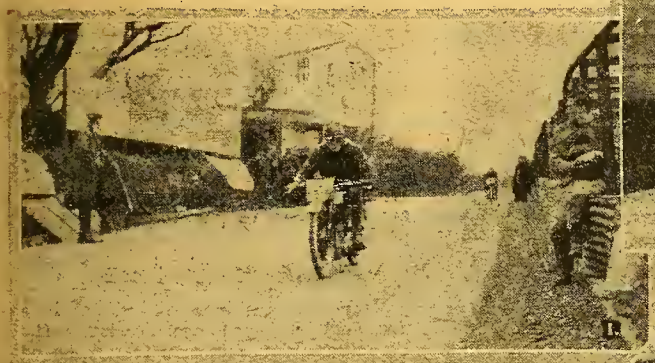
### Last Monday's Practising.

The practising on the morning of last Monday was carried out under more chilly, damp and dismal conditions than ever, but over a hundred men started. Few covered more than a single circuit, however, for although fine weather was encountered on the Ramsey side of the mountain, thick wet mists enveloped the top stretches. Every make entered was on the course, the week-end having been a very busy time at the various garages.

This week will be devoted to finishing touches, but better conditions than prevailed last week are needed before the riders can thoroughly test their ability in fast cornering and open throttle down the mountain. Several machines after completing their first circuit on Monday last refused to re-start, and everyone agreed that they were wiser than the riders themselves.

# ON THE T.T. COURSE.

(1) W. Johnson (Sunbeam) on a morning spin. (2) An A.J.S. rider, A. Downie at Cronk-ny-Mona. (3) At Hilberry Corner; W. Woods, a reserve rider, on a 490 c.c. Norton.


1.

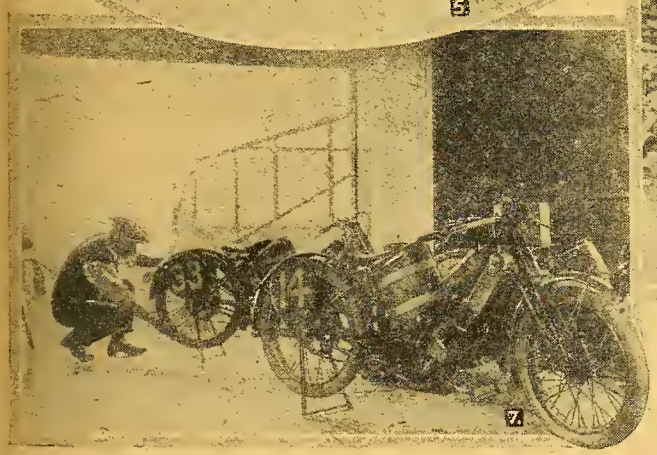
2.

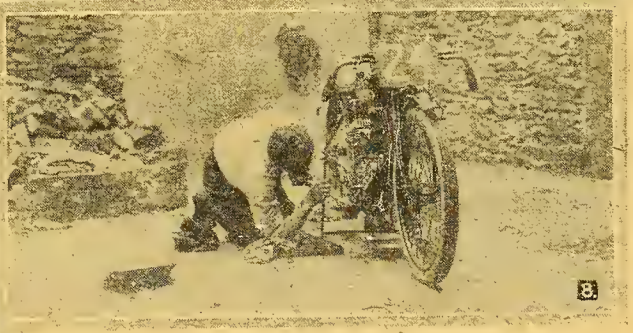
3.

4.

5.

6.


7.


8.

(4) E. Mundey (496 c.c. New Hudson) at the replenishment cages. (5) "Juniors" at the Norton depot. (6) J. Haslam (342 c.c. Douglas) preparing to start on a second circuit. (7) Activity at the Scott depot. (8) F. W. Dixon busy on his Indian.

# ROYAL RACE MEETING AT BROOKLANDS.

## A Brilliant Day on the Track. H.R.H. The Duke of York, Patron of the A.C.U., among the Entrants.

ON Saturday last His Royal Highness the Duke of York gave his patronage to a motor cycle race meeting at Brooklands. Accompanied by Wing-Commander Greig, M.V.O., he arrived at the track just after three o'clock, and was received by the Earl of Athlone, Col. F. Lindsay Lloyd, Alderman and Mrs. Duncan Watson, Messrs. A. G. Reynolds, H. P. E. Harding, and D. S. Parsons.

Princess Alice Countess of Athlone, Lady Mary Cambridge, Dame Ethel Locke-King, and Mr. Walter Kewlay (Secretary of the Middlesex Hospital) were also present.

Royal weather fittingly graced the first Royal race meeting ever held at Brooklands, and the brilliant sunshine seconded the efforts of the Essex Motor Club to secure a good attendance for the benefit of the Middlesex Hospital and the Industrial Welfare Society. The crowd was not up to the average of the ordinary car meetings, but was larger—and more fashionable—than a B.M.C.R.C. gate.

"Mixed" programmes of car and cycle races are never ideal, for the cycles are best watched from the fork and the cars from the stands in the paddock; as only foot transport is allowed between these two points of vantage nobody can watch all the events with ease and comfort.

### An Obstinate Car.

The car events were full of interest for motor cycling spectators. For example, Chitty-Bang-Bang refused to start at the parade of the second race; and on being well and truly pushed in motor cycle fashion a solitary blackleg cylinder fired once, and instantly converted the nearside pusher into a full-blooded negro. In the race the leviathan reduced one of her back cord tyres to the likeness of a fur boa.

The Duke of York chatting with S. E. Wood, who rode a 988 c.c. Trump-Anzani, entered by the Royal patron of the meeting.

Three motor cycle events figured on the card. The first, an 8½ mile race for solo machines not exceeding 500 c.c., attracted 40 entries, of whom 26 started. Emerson's Douglas was scratch, conceding 6s. to Judd on the o.h.v. Norton. The handicappers loyally gave the Duke of York's standard Douglas a good start, but S. E. Wood met trouble early in the race. The limit man was Glandfield on a Morris with 3m. 24s. start. A number of "clever" amateurs were awarded intermediate handicaps, and a shrewd judge remarked, "I shall not bet on this race; if any of those boys in the middle know anything they've got the race in their pocket."

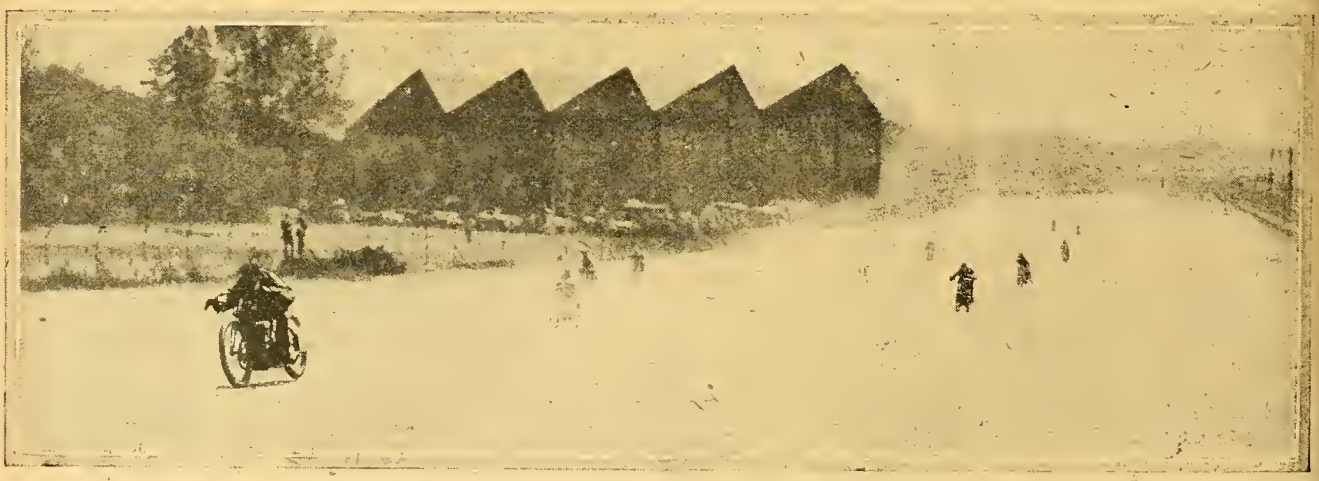
### Modern Racing Practice.

Very few machines even distantly approached standard specification. It is becoming quite Victorian to rely on only one carburetter for a twin-cylinder engine at Brooklands, and several of the Douglases used a pair, though Emerson still relies on one. Moser rode a machine compounded of an o.h.v. Triumph engine in a Duzmo frame. Bassett, another Cambridge undergraduate, leaves nothing unconsidered, and had even damped the coil springs of his saddle with bindings of elastic. When the betting opened, R. E. Dicker on the chain-driven Rudge was soon established a hot favourite, it being rumoured that he could lap at 75 m.p.h. The o.h.v. Norton ran him close in popular favour, and for once in history Brooklands bookmakers might be heard offering 100 to 1 against outsiders in a big field.

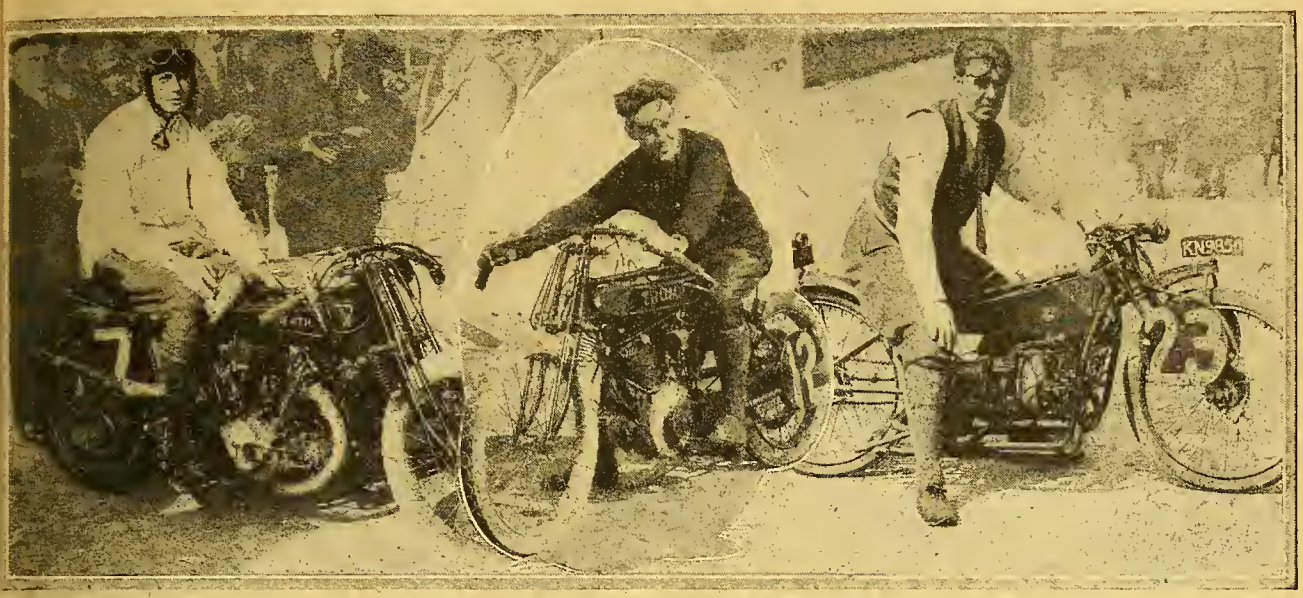
The race had not gone far before some of the middle division were noticed to be travelling so well that the scratch cracks had no chance of overhauling them.

Attention was distracted for a moment by a nasty-looking smash on the banking going up to the Members' Hill, where Moser and Sinnott touched each other and fell: fortunately neither was hurt.

Meanwhile with the aid of powerful glasses it was clear that the Rudge



At speed in the 500 c.c. class. C. Moser (499 c.c. Triumph) leading the field.



WINNERS OF THE MOTOR CYCLE EVENTS.

I. P. Riddoch (998 c.c. Zenith-Blackburne), winner of the Essex 3 lap passenger handicap.

J. Hall (748 c.c. Trump-Jap), who won the Duke of York 3 lap Senior handicap.

G. Maund, who, on his 398 c.c. A.B.C., beat many famous riders in the 3 lap Junior handicap.

(1m. 24s. start) could win if it could stall off one determined challenger from the rear. This it failed to do, and its pursuer turned out to be Capt. G. Maund, who, after being hotly criticised for the speed which he credited to his A.B.C., demonstrated his tuning ability by a comfortable victory. As S. J. Bassett's A.B.C. does a standing start lap at 70, enjoyed 16s. start from Maund, and was beaten by 100 yards, the latter's speed is evidently very hot for a privately-tuned mount. Nevertheless, the Rudge may be said to have come back to its old speed form, for Dicker did a flying lap in 75.2 m.p.h., which augurs well for the T.T. Emerson finished sixth.

1. G. Maund, 398 c.c. A.B.C. Speed, 71¾ m.p.h.
2. R. E. Dicker, 499 c.c. Rudge.
3. S. J. Bassett, 398 c.c. A.B.C.

The Duke's colours—scarlet jersey, blue stripes and sleeves—were borne on a Trump-Anzani of 988 c.c. in the 1,000 c.c. solo event. It enjoyed 18s. start of a sister machine ridden by Col. Stewart, and a Royal victory was quite hoped for, but Wood's luck was once more out. There were 17 starters, the two A.B.C. machines being heavily penalised for their earlier success. The race proved a runaway affair. Hall's Trump-Jap waltzed through the half-dozen men who started in front of it, and travelled much too speedily to let the backmarkers come up. On the last lap the rider peered round anxiously to see where Temple on the Harley was lying, and perceiving that no khaki blob was coming up with a wet sail, he eased off, actually riding one-handed for a few yards. Two Douglases hunted him home, but failed to concede the set starts.

1. J. Hall, 748 c.c. Trump-Jap, 72½ m.p.h.
2. J. Emerson, 494 c.c. Douglas.
3. S. L. Bailey, 494 c.c. Douglas.

The passenger race brought a motley crowd to the post, including six four-wheelers—Nash's G.N., a Salmson, Crouch, A.V. (side-by-side two-seater), Bleriot-Whippet, and a 760 c.c. Mathis car driven by Mrs. Percy Butler. As the latter was allotted a start of 3m. 45s. from the G.N. (scr.) in the programme, it was promptly made a hot favourite at 2 to 1 in a field of 17 starters.

Bookmakers and backers alike remained oblivious that the handicappers, discovering Mrs. Butler had fitted aluminium pistons, or some such aid to speed, had docked her start to 2m. 57s. Eventually her car stopped in the first lap. The field included plenty of quality—the G.N., Temple's Harley, De Lissa's famous M.A.G., and Harry Martin on an 8-valve Morgan with two carburetters; there were also a number of rather raw amateurs, more than half the entry stopping altogether before the 8½ miles were covered.

When the men got away, a middle-marker, distinguished by the glitter of his aluminium sidecar, was visibly cutting down the long-start men and holding the backmarkers off without much difficulty. The glasses identified him as Riddoch, and his Zenith romped home by over a mile. Honest riding, this! Few men would have troubled to win by so much. The victory was so absurdly facile that many spectators, ignorant of the lap-counting arrangements at the fork, imagined that Riddoch had turned down the straight a lap too soon. Incidentally, this misapprehension indicates the difficulty of following a motor cycle event from the paddock. Riddoch broke the 5m. record.

1. I. P. Riddoch, 998 c.c. Zenith-Blackburne, 76¾ m.p.h.
2. J. A. Masters, 989 c.c. Harley.
3. G. de Lissa, 996 c.c. Motosacoche M.A.G.

The Duke of York personally presented the prizes. So concluded a pleasant afternoon's sport, in which the handicapping of the motor cycle races fell far short of that in the car events.

## SOUTH WALES SPEED TRIALS.

EXTREMELY successful speed trials were held by the Neath and District M.C. in the beautiful grounds of Morgan Park on Saturday last. There were many spectators, a record number of entries, and the racing was the keenest witnessed on this course for many years. The fastest time of the day was made by C. Sgonina (Special), in 27 7-20s. Results:

STANDING START.

275 c.c. GENERAL.—1, R. E. Thomas (New Imperial), 43s.; 2, Luther J. Davies (Diamond), 43 31-40s.

350 c.c. GENERAL.—1, Luther J. Davies (Cotton), 38 20-40s.; 2, Handel Davies (Diamond), 40 16-40s.

600 c.c. GENERAL.—1, C. Sgonina (Sgonina Special), 32 32-40s.; 2, Tan Parker (Sunbeam), 33 33-40s.; 3, Luther Davies (Cotton), 35 34-40s.

750 c.c. GENERAL.—1, C. Sgonina (Sgonina Special), 33 32-40s.; 2, Tan Parker (Sunbeam), 34 1-40s.; 3, H. H. Bush (Norton), 34 2-40s.

UNLIMITED c.c. GENERAL.—1, Tan Parker (Sunbeam), 33 33-40s.; 2, H. H. Bush (Norton), 33 29-40s.; 3, C. Sgonina (Sgonina Special), 34 12-40s.

FLYING START.

350 c.c. GENERAL.—1, Luther Davies (Cotton), 31 29-40s.; 2, Handel Davies (Diamond), 32s.

600 c.c. NOVICE.—1, J. Parry (Sunbeam), 35 6-40s.; 2, W. Nell (Martin-Jap), 35 31-40s.

600 c.c. GENERAL.—1, C. Sgonina (Sgonina Special), 27 20-40s.; 2, H. H. Bush (Norton), 28 14-40s.; 3, Tan Parker (Sunbeam), 28 24-40s.

750 c.c. GENERAL.—1, Tan Parker (Sunbeam), 28 16-40s.; 2, H. H. Bush (Norton), 28 28-40s.; 3, C. Sgonina (Sgonina Special), 28 36-40s.

UNLIMITED c.c. GENERAL.—1, C. Sgonina (Sgonina Special), 27 14-40s.; 2, H. H. Bush (Norton), 27 26-40s.; 3, Tan Parker (Sunbeam), 28 24-40s.

SPEED JUDGING.—1, R. Marsh, 1m. 31s., error 1s.; 2, H. Church, 1m. 28.9s., error 1.1s.; 3, E. Jones, 1m. 31.8s., error 1.8s.

FASTEST TIME.—C. Sgonina, 65.81 m.p.h.

# FURTHER DEVONSHIRE FRIGHTFULNESS.

## Two "New" Hills as difficult as Beggar's Roost in S.W. Centre Open Trial.

Some idea of the gradient and height of Linkem Hill is given by this view of W. Bray (490 c.c. Norton) and A. E. Tozer (499 c.c. Rudge) breasting the summit.

ALTHOUGH the weather was fine and the roads dry, last Saturday's Open Trial of the South-Western Centre A.C.U. was quite in keeping with its official designation of "sporting." Two new hills, Rock and Hunter's Inn Mule Track (Mannacott), and one old favourite, Beggar's Roost, were responsible for the majority of lost golds, but any one of the other observed grades, mostly unfamiliar to competitions, would have been difficult enough, had it rained, to have failed half the entry. As it was, there was an entire absence of freakishness about the route, and those who did not retain full marks have little cause for complaint; in most cases they did not deserve to.

On the whole the solo entries shone more brilliantly; the sidecars suffered considerably from wheel-spin. Again, a commendable proportion of the competitors were genuine private owners—the proximity of the T.T. obviously barred many of the regular trade men—and it was heartening to note that some of the very finest performances on the hills were made by the amateurs. There was, in all, an entry of just one hundred.

Starting at 9 a.m. from Exeter, the route very quickly left the roads found on the average map and seldom returned until within hailing distance of the Barnstaple lunch stop.

There were three observed hills, Bickleigh, Linkem and Templeton, and two watersplashes—both, so the officials thought, disappointingly low—in the first thirty miles, but although Bickleigh caused some uneasiness and the splash just before Templeton some traces of belt slip it was not until Rock Hill that the fun began in earnest.

Almost dead straight and with a maximum grade of 1 in 4 or 1 in 5, the latter acclivity was rendered difficult by a fresh-water spring which bubbled out on to the steepest portion and lubricated the surface from there to the foot.

### Two Sports Models Excel.

The star turn of the morning was K. Delve (499 Triumph), who came up at a wonderful speed without wavering one hair's-breadth from the straight path, but L. Stagg, on a long-stroke Sunbeam, was not far behind in the matter of pace. J. S. Rogers (500 James) and D. Phillips (998 Harley-Davidson) also made outstanding ascents.

However, no marks were won by fast times, and recognition must be given to all of the following for sure, if sometimes unassuming, climbs:—Mrs. Jansen (211 Ner-a-car), W. G. Churchill (348 Verus)—overtook and passed a slower rider very cleverly—H. F. Youngs (Diamond-Jap), A. C. Westlake (348 Rex-Acme)—looking frightfully bored—T. G. Blundell (O.K. Junior), E. W. Spencer (494 Douglas)—quite fast—F. J. Adam (490 Norton), J. E. J. Whittaker (499 Sunbeam), H. C. Jennens (500 James)—these two equally fast—A. H. S. Love (490 Norton)—after a delayed change down—W. A. Le Brun (499 Rudge), W. F. Burnell (398 A.B.C.), J. H. H. H. Veasey (498 Zenith-Bradshaw), E. H. Williams (499 Triumph), P. V. Hare (494 Douglas), J. Pruen (494 Douglas), F. A. Harris (557 B.S.A.), H. C. Bouchier (498 Zenith-Bradshaw), T. A. Slann (550 Triumph), L. Peters (633 Norton), E. H. Jones (550 Triumph)—on second gear for some way—H. Collins (557 B.S.A.), G. W. Anstey (550 Triumph)—another late change—R. O. Bellasis (Scott), J. Caslake, jun. (986 Brough-Superior), G. R. Claridge (550 Triumph), S. Jones (600 Humber), J. Wooler (349 Wooler), A. Milward (349 Wooler), C. L. Sprosen (293 Connaught)—cheered for worming his way past three failures—F. V. Wood (370 Connaught)—fastest of his team—J. F. Anderson (293 Connaught), S. Warne (350 Precision-B. and S.), E. L. Herring (550 Triumph), G. L. Morrish (499 Sunbeam), S. W. Easton (398 A.B.C.), H. H. Nicholson (496 Martinsyde), J. T. Bashall (678 Martinsyde), A. A. Symes (678 Martinsyde)—all the Woking machines being excellent—S. G. Wheeler (490 Norton).

Others of the soloists lost no marks here, but they were not imposing, and many more lost marks for footing—they were even less inspiring. G. R. Pettinger (269 Newton-Villiers) paddled; A. E. Tozer (499 Rudge) fell off without reason; E. C. Collins (490 Norton) ran into the ditch; J. P. Webber (481 Scott) charged the bank; J. E. Mellor (496 Lea-

**Further Devonshire Frightfulness.—**

Francis) ran alongside the whole distance; W. C. Treloggen (Indian Scout) footed and failed; E. Hichens (1,301 Henderson) claimed a baulk for his first failure, and then came up and fell off again; H. H. Robinson (349 Wooler) restarted nicely after a stop; A. S. Gray (349 Beardmore) was allowed a baulk, although the reason was not very obvious; and W. J. C. Pope (550 Triumph), coming up among the sidecars, bumped the bank, but got away without stopping his engine.

Few words are required to sum up the sidecar performances. All failed through wheel-slip except E. A. Wright (499 Sunbeam sc.) and A. G. Halson (pre-war Bradbury sc.), both unaided by Parsons chains, and four Matchless outfits, driven respectively by Mrs. Hardee, G. D. Hardee, E. O'Brien, and F. J. Ellis, and all using chains.

**A Mule Track.**

Barring a secret check at Mullacott Hill, Hunter's Inn Mule Track provided the first excitement of the afternoon. This hill is quite a valuable discovery, for it provides (1) a somewhat startling approach, which does not leave one much time to think, (2) a long bottom gear grind rising to nearly 1,000ft. above sea level, and (3) a still more unexpected and very acute right-hand hairpin near the summit. An hour at the last-mentioned point was not ill-spent, but our observations must be brief, for it was more a driving test than one of reliability.

Mrs. Jansen provided a curtain-raiser by failing to "find" her emergency low gear, stopping, and then overturning backwards—a great pity, for previously she seemed to have discovered gold medal form at last. Particularly neat turns were made by P. L. Mayo (249 Coventry Eagle), W. G. Churchill (349 Verus), W. E. May (269 Excelsior), E. W. Spencer (494 Douglas), E. H. Williams (493 Triumph), J. H. H. Veasey (498 Zenith-Bradshaw), K. Delve (499 Triumph), L. Peters (633 Norton), E. H. Jones (550 Triumph), F. V. Wood (370 Connaught), H. H. Robinson (349 Wooler), E. L. Herring (550 Triumph), H. H. Nicholson (496 Martinsyde), S. W. Easton (398 A.B.C.), J. T. Bashall (678 Martinsyde), and A. A. Symes (678 Martinsyde).

Although nearly twenty of the soloists lost marks at this point, usually for footing, none of the sidecars experienced any real difficulty.

Beggar's Roost, the next, and, if we ignore Countisbury, the last, test piece, was in excellent condition, and general surprise was expressed by the spectators at the number of failures; incidentally, it was the sidecarists' turn again this time. C. G. Clapshaw (349 A.J.S.) and A. C. Smith (247 Sun Vitesse) were early in need of assistance, and J. E. Mellor (496 Lea-Francis) repeated his strenuous sprinting stunt. G. H. S. Earle (349 A.J.S.), G. R. Dettinger (269 Newton-Villiers), H. C. Jennens (499 James) and J. Wooler (349 Wooler) all were obliged to use their feet.

Among the lightweights, Mrs. Jansen and the three Connaughts were as good as any; but the Martinsydes and D. Phillips's big Harley undoubtedly were far and away the speediest of all.

As we have already mentioned, the sidecars enjoyed very mixed luck. S. Hall (998 Rudge sc.) made an imposing climb after a bad baulk; J. Durant (633 Norton sc.) was particularly good; E. S. Powell (799 A.J.S. sc.), assisted by a very plucky elderly lady passenger, was slow but clean; Mrs. Hardee was perhaps least perturbed of the Matchless sidecar entry; and E. J. L. Strong (998 Harley-Davidson sc.), atoned for an earlier failure on Rock. G. H. Goodall's Morgan also was in excellent fettle.

**Deserving of Commiseration.**

Of the seven or eight failures, C. Foward, the driver of a pre-war single-cylinder Bradbury outfit, deserves especial commiseration; he would probably have made a clean climb had his gear lever not jumped into neutral.

The finish was at Taunton, and we are inclined to agree with those who said that a two-mile section of road under repair between Williton and that town was rougher than anything else in the trial. Even at 10 m.p.h. it certainly was a frame-smasher.

For a newly-formed, and consequently somewhat impecunious centre, the arrowing and general organisation were exceedingly good, and we have seldom encountered such an entire absence of grumbling or complaints in an open event. Next year's open affair in this neighbourhood should be well worth entering.

# A DAY OF HILLS AND HAIRPINS.

OPEN to all members of the Midland Centre A.C.U. the Redditch club's trial which took place on Saturday last attracted but 48 starters. Of these, 39 completed the course. Had it not been for T.T. preparations and certain other counter-attractions, the event would have drawn a larger entry, as it certainly deserved to do. The 124-mile course, starting and finishing at Redditch, included the best-known Cotswold Hills in the morning run, while some of the Clent Hills were tackled in the afternoon. In addition to this, there were four water splashes, a stop and starting test, and a flexibility test.

Though small, the entry was fairly representative, and at the start we noticed the first chain-driven 2¾ h.p. Raleigh, ridden by F. W. Viles, who, with his companions, W. H. Hadfield and Hugh Gibson, on belt-driven Raleighs, led the field throughout the day. The inclusion of unknown water splashes had the effect of producing some weird exhaust-pipe arrangements, and the twin copper pipes turned up vertically at the end fitted to H. Stretton-Ward's o.h.v. Triumph were particularly noticeable. W. E. Smith's Norton had been similarly treated, and W. Johnson's 2½ h.p. Allon had an exhaust pipe and silencer well above the chain stay.

Gambles Lane (Rising Sun) was the steepest hill in the morning trip, and since the surface was dry, the performances were monotonously regular. Sudeley and Willersey hills were ascended on the return trip to Redditch, lunch being taken at the Unicorn Hotel. Within a mile of the start of the afternoon run lay a wide water splash some 10 in. deep at its worst, and having a heavy mud bottom for the last few yards. Here several riders met their Waterloo. The Raleigh team obviously had previous experience, for they all followed the easiest line and made clean crossings. Shortly after came an acceleration on a very suitable hill. It was required that thirty yards should be ridden at not more than 5 m.p.h., after which lay a fast stretch to the crest of the rise.

During the afternoon Swan Hill, Gravel Pit, Beacon, Shut Mill, and Walton Hill had to be ascended, while a final water splash within a few miles of the finish accounted for four or five failures.

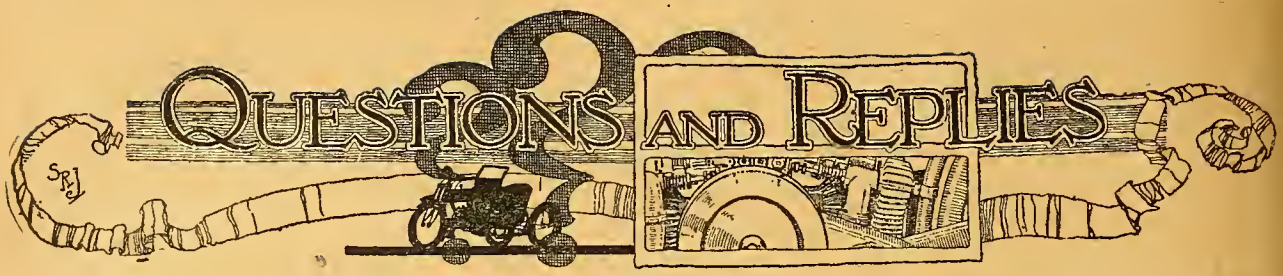
As the roads were dry the hills caused little trouble. F. Spouse (8 T.B.) treated the spectators to a fine display of acrobatics on Walton Hill hairpin, but, in spite of difficulties, he kept his engine running and climbed well. The course was well laid out and well marked; there were observers wherever necessary, and though in our estimation some of them were perhaps a little too lenient, the fault is so unusual as to be rather pleasing. Altogether the trial was a pleasant one which deserves larger support in future years.

## OFFICIAL SANCTION FOR IRISH ROAD RACES.

THE Irish Provisional Government has given its sanction to the holding of three motor cycle races in the Phœnix Park on Saturday, August 12th, in connection with the Irish Olympic (Fail-teann) Games, and has undertaken to provide the necessary number of soldiers to marshal the course of approximately five miles. The committee nominated by the chairman of the Southern Centre of the Motor Cycle Union has now finally settled the conditions of the contests, and the entry forms will be ready by the end of the present week.

The races are confined to Irishmen (birth, one year's residence, or Irish parentage), and there are no restrictions as to the types of motor cycles.

*Next Thursday—"The Motor Cycle" T.T. and 1001st Number—June 1st.*




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### ERECTING A GARAGE.

I anticipate purchasing a motor cycle and sidecar, and as my house has a wide side entrance (6ft. 6in.), I propose either covering this in for a depth of about 10ft. or else placing a portable structure (6ft. high) immediately behind the side entrance gates. Have I the power to do this without reference to the local authorities, or is it necessary to obtain their permission? It is a corner house.—B.R.

Whichever structure you decide to put up it will be necessary for you to get the approval of the local authority.

### PISTON RING GAP.

I wish to lower the compression of my old clutch Triumph. Will it pull better at slow speeds? (1.) If so, what size packing would you advise me to use? (2.) When the piston ring is in position, what size gap should there be? —E.R.

(1.) Try a $\frac{1}{16}$in. washer of Hallite or some suitable material. The effect would be to make the engine less likely to knock, but you might lose a little power at high speeds. (2.) About six thousandths of an inch for the top ring and four thousandths of an inch for the subsequent rings.

### REDUCING COMPRESSION RATIO.

(1.) Does lower compression make an engine more flexible? (2.) Does it tend to reduce knocking on hills? (3.) Does it improve hill-climbing or the reverse? My machine, an 8 h.p. twin, is inclined to knock under load with plenty of throttle in hand, and owing to this fact it is impossible to use all the power it appears to have in reserve. —F.C.B.

(1.) It all depends upon the existing compression of the engine. If this is very high and the engine is inclined to knock, reducing the compression would tend to make it more flexible, and (2.) to stop knocking on hills. (3.) In this case it would improve the hill-climbing slightly, though the machine would not climb quite so fast, and would probably be incapable of attaining such a high number of r.p.m. The knocking of which you complain can probably be cured either by using less air or a mixture of benzole and petrol, say half and half.

### CURING FOUR-STROKING.

My 211 c.c. two-stroke fails to two-stroke when starting off in first speed; even after three to four miles it is a trouble to start up, and it four-strokes until I change into second speed. It takes full air when running. What size jet do you advise?—W.T.

Probably the jet is on the large side; you might try the size or two smaller. The engine should be timed in the following manner: *Variable Spark*: Place the piston exactly on top of the compression stroke and connect up the magneto with the points just breaking and the ignition lever fully retarded. *Fixed Spark*: If for a hilly country, set the piston $\frac{5}{16}$in. before the top of the stroke; if for a flat country, $\frac{7}{16}$in. from the top of the stroke. When in these positions the points should be in the act of breaking.

## Important Dates.

**Tues., May 30th—Junior Tourist Trophy Race.**
**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sun., June 11th, to Mon., June 19th—Paris-Pyrenees Trial.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 Mile Sidecar Race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### DIRECTION OF MAGNETOS REGARDING ROTATION.

A question has arisen whether a magneto is clockwise or anti-clock—is it viewed from the driven end or the contact breaker end?—E.J.P.

The direction of rotation is obtained by viewing the magneto from the driving spindle end.

### EXTRA AIR TAPS AND THEIR EFFECT.

I have a 1918 4 h.p. Triumph which will take full air. (1.) Would it be advisable to fit an extra air inlet in the form of a compression tap on the induction pipe? (2.) Would I get greater mileage p.g.? (3.) Would I get more speed? (4.) Would I be able to coast downhill with the throttle shut, and not suck oil so much from crank case? —P.H.

(1.) This would be quite in order if you can ensure it being airtight when shut. (2.) You might get rather more miles to the gallon if your carburetter was adjusted on the strong side. (3.) The same remarks apply as regards speed. (4.) Yes, this is so.

### BENDING COPPER PIPE.

I have a length of 1¼in. copper pipe which I wish to use as an exhaust pipe for my motor cycle. Can you advise me as to the best way of bending this?—E.A.F.

The most satisfactory way is to fill the pipe with molten lead. It will then bend quite easily if the copper has been properly annealed by bringing it to a good heat and cooling it suddenly by plunging it into water.

### A MAGNETO CUT OUT.

Can I fit an ignition cut-out to my two-stroke (Thomson-Bennett magneto); and is the use of a cut-out detrimental in any way to either the engine or the magneto? —F.C.T.

Buy a magneto switch from any accessory firm, fit this to the handle-bars and connect it by means of a piece of low tension wire to the terminal on your contact breaker cover. If the contact breaker cover has no such terminal, procure one from the magneto manufacturers. The use of a cut-out and switch should be in no way deleterious to the engine or magneto.

### HEAVY OIL CONSUMPTION.

My 1919 490 c.c. Norton requires about a pumpful of oil every three to four miles, otherwise it refuses to climb hills, gets hot, and loses its compression. A hissing noise can be heard from the piston when the engine is turned over. The cylinder is not scored, and I recently put in new rings. (The oil used is one of the very best brands.) Can you tell me the cause of this excessive oil consumption?—J.H.C.

'erhaps the particular oil which you are sing is not quite suited to your engine, nd we should advise you to write to the akers asking their opinion as to the best il to use. We assume, of course, that ou have made quite sure that the piston s not unduly worn, and that the cylinder as not become oval; if the latter has appened new piston rings would not cure he trouble. Have you also made sure hat the oil pump delivers a full charge?

### CHAIN ADJUSTMENTS.

(1.) After about 300 miles I adjusted the chains of my 557 c.c. B.S.A. according to the instructions in the makers' book, as there was a whirring sound from the aluminium chain cases. When the chains are moved I find that at times both chains will tighten and then slacken again, and the whirring noise is still present. I thought that chains only tightened and slackened when they were worn badly or on worn cogs.—W.H.L.

(1.) It is difficult to imagine what causes the sound of which you complain; a machine of this type which we used was free from all transmission noises, except a certain amount of clashing from the shock absorber at very low speeds. Presumably you have made sure that the chains do not touch any part of the cases, and that the gear box is properly charged with oil. Adjust the chains so that they are correct at their tightest point; it is very seldom that chains are uniformly tight at all positions even when new.

### CHOOSING A MACHINE.

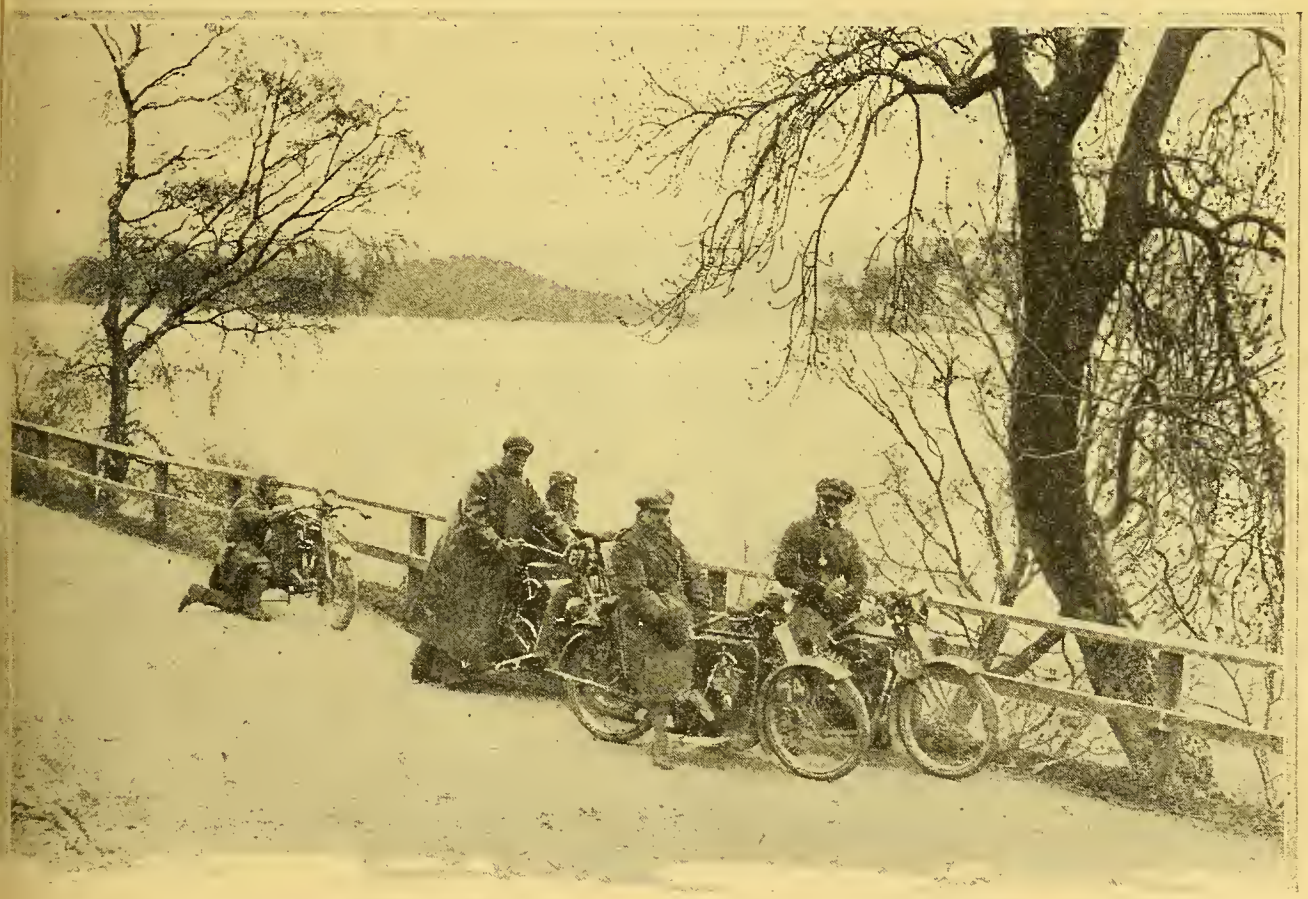
Will you give me advice on the purchase of a solo motor cycle for everyday use, to go backwards and forwards to business? I know absolutely nothing of motor cycles, having only used a pedal cycle up to now, and the distance I have to go is six miles each way, with only one hill, not a very steep one, so you see I only want quite a lightweight.—W.A.

A single-geared two-stroke machine should answer your purpose. Of course, a two-speed machine would be preferable, and in this class your choice is practically unlimited. For all-the-year-round riding an electric lighting set is strongly to be recommended, and such equipment can be supplied with almost every lightweight two-stroke on the market.

### TWO-SPEED GEAR RATIOS.

Will you let we know the gear ratios on my machine, which has a countershaft two-speed arrangement similar to the P. and M. gear? The engine-shaft has two sprockets both of 18 teeth and the countershaft has two sprockets, one with 40 teeth and the other with 28 teeth, and one belt pulley with 1in. belt, which gives a gear of 4½ to 1 with back-driving wheel. The driving rim on the back wheel is 20in. in diameter. I would like the top gear to be 5¼ to 1.—A.E.J.

Presumably, the countershaft pulley of your machine is of 7in. diameter, although you do not give this necessary information. If this size is correct your present gear ratios are 4.5 to 1 and 6.3 to 1. If you wish to have a top gear of 5¼ to 1, you will need a 15T sprocket on the engine-shaft driving to a 30T on the countershaft; the low gear will, of course, remain the same.



The Scottish "Six Days" does not consist of all hard riding. Competitors had time to appreciate the beauties of the country at certain points. Here are D. B. Calder (248 c.c. New Imperial), G. K. Hubbard (248 c.c. New Imperial), D. Parsons (992 c.c. Matchless sidecar) and J. D. Porter (269 c.c. New Gerrard) on the banks of Loch Ness.

A weather proofed machine in a Trial. Commander Herbert's B.S.A. sidecar in the recent Works Trial held by the B.S.A. company. There were 73 competitors.

### STARTING DIFFICULTIES.

I have purchased a 1920 500 c.c. single and sidecar second-hand and find it very difficult to start. There are no air leaks in the induction system. (1) The cap and gauge covering over the air inlet on the carburetter are missing, exposing the throttle and air slides (B. & B. carburetter). Is this partly the cause? (2) The tappet clearances are somewhat large, about $\frac{1}{8}$in. Would that contribute? What is the correct clearance, cold?—W.J.M.B.

The trouble in starting may be due to the congealing of the oil in cold weather. If there are no air leaks at the induction pipe unions these may occur through the inlet valve guide, which may be worn, in which case one of the many proprietary devices on the market might be fitted and would probably cure the trouble. (1) This may be a contributory cause, because the absence of the gauze allows more air to reach the carburetter. (2) The tappet clearances are ridiculously large; they should be about the thickness of the blue cover of *The Motor Cycle*.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned. Requests for experiences should be accompanied by a stamp.*

"B.P." (London).—4¼ h.p. Beardmore-Precision solo.

"C.E.A." (Birmingham).—Folding sidecars.

"R.A." (Eastbourne).—2¾ h.p. A.J.S. and 2¾ h.p. Raleigh.

"N.S." (Mont.).—3½ h.p. Norton with sidecar.

"M.R.M." (Edinburgh).—Stuart Morris tube protector on rigid frame machine with 650×65 mm. tyres.

"S.H." (Brighton).—3 h.p. A.B.C. with sidecar.

"K.S.J." (Dereham). — Montgomery spring fork.

"Y.Y.Z." (Newport).—A.B.C. and Scott with sidecars.

"H.H." (Repton).—348 c.c. o.h.v. Sheffield-Henderson; also 595 c.c. Indian Scout.

## SPARKLETS.

### Electric Lighting by Dry Battery.

A little time ago we made reference to the excellent dry battery lighting sets for sidecar outfits and motor bicycles supplied by Siemens Bros. and Co., Ltd. Under tests the makers have found that at the end of five weeks' use the illumination at the finish of a two-hour period was rather below the standard of the ordinary type of bulb, but further periods of lighting at a diminished brilliancy were obtained for another week. We are also assured that these batteries are quite capable of providing the required current for full illumination over extended periods of several hours continuously.

### A Price Reduction.

A reduction in price of the three-speed model 3½ h.p. Corona has been made; it is now listed at £65 by the Meteor Manufacturing Co., Ltd., 98, Tollington Park, London, N.4.

### Hints for Chain Users.

We recently referred to the Brampton booklet on the maintenance of chains; this is to be obtained from Brampton Bros., Ltd., Oliver Street, Birmingham.

### Catalogues Received.

A. F. Lewis, Engineer, Charlestown, Weymouth. Leaflet devoted to the Lewis epicyclic two-speed gear for the countershaft of machines up to 3½ h.p.

Douglas Motors, Ltd., Kingswood, Bristol. A handbook devoted to the 496 c.c. Sports Douglas, containing fully descriptive running and maintenance instructions.

### Additions to the Editor's Bookshelf.

SPECIFICATIONS FOR CONCRETE ROADS. (The Concrete Utilities Bureau, 35, Great St. Helen's, E.C.3.)

ELECTRIC ACCUMULATORS — THEIR CONSTRUCTION AND MANAGEMENT. (Cassell and Co., 1s. 6d.)

MOTOR DEALING. By A. R. Lucas. (The Willowbrooke Press.)

A HARDY ANNUAL. Some of the competitors in the 17th annual London—Coventry—London run organised by the North West London M.C. This event was described in last week's issue.

# -HARLEY-DAVIDSON SUPERIORITY

***is the reason that we receive so many letters of which the following is typical:***

Surbiton, 1/5/22.

It may interest you to know that it is just two years ago that I took delivery of my 1920 7-9 h.p. Harley-Davidson combination, and the really wonderful service that it has given me impels me to let you know a few details.

I am a rider of many years' experience, having driven most leading makes, but this is the first Harley-Davidson I have had. I can also add that I can now appreciate the truth of a saying that I frequently hear, viz., "Once a Harley rider—nothing else will do."

I can honestly say that, in all my motor cycling experience I have never had a machine that, for all-round reliability, comfort and efficiency, could compare with my present mount. I have covered over eleven thousand miles and am still using the original rear chain (one new front chain), have never had a puncture, and am still riding the original Goodyear tyres which have never been removed from the rims since I bought the machine.

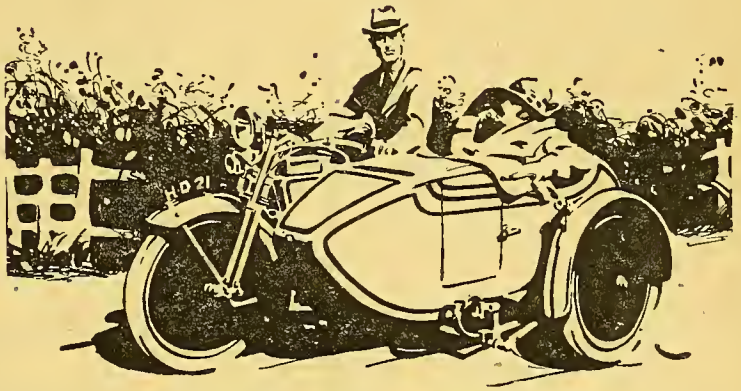
After two years of the finest motor cycling experience one could possibly enjoy, you will not be surprised, perhaps, to hear that I propose shortly to take delivery of a 1922 Harley-Davidson.

"Once a Harley rider. . . ."

Yours faithfully (Signed) WALTER SCOTT.

**HARLEY-DAVIDSON MOTOR CO., Ltd.,**

**74, Newman St., MOTOR HARLEY-DAVIDSON CYCLES London, W.1.**



***"Once a Harley rider—nothing else will do."***



# *Nothing short of Marvellous!*

**Referring to the writer's win in the Formula Hill Climb in the "Travers Trophy Trial":**

*Newcastle-on-Tyne.*

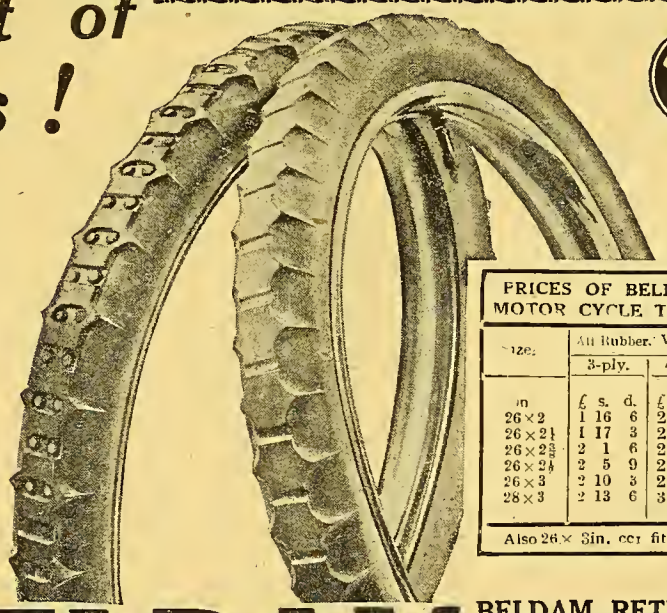
*"The road grip that this tyre obtained was nothing short of marvellous, considering the roads varied from grass sheep tracks to loose stones, and at Combe Bridge to that of slimy clay."—T. W. T.*

Try a set next time you need tyres, and you will find that "once used, always used" applies to Beldam Motor Cycle Tyres.

*Write for Latest Price List.*

The Beldam Tyre Co. (1920) Ltd., Brentford, Middlesex.

*Telephone: Ealing 125.*



| PRICES OF BELDAM MOTOR CYCLE TYRES | | | | | | |
|---|---|---|---|---|---|---|
| Size. | All Rubber. V Design | | | | | |
| | 3-ply. | | | 4-ply. | | |
| in | £ | s. | d. | £ | s. | d. |
| 26×2 | 1 | 16 | 6 | 2 | 3 | 0 |
| 26×2¼ | 1 | 17 | 3 | 2 | 5 | 6 |
| 26×2⅜ | 2 | 1 | 6 | 2 | 7 | 6 |
| 26×2½ | 2 | 5 | 9 | 2 | 14 | 0 |
| 26×3 | 2 | 10 | 3 | 2 | 16 | 9 |
| 28×3 | 2 | 13 | 6 | 3 | 0 | 9 |

Also 26×3in. oer fitting.

**BELDAM RETREADS**
are good for several thousands of extra miles.
*Write for Price List.*

# BELDAM

**All British**

**Motor-Cycle Tyres**

## *Best Possible Service.*

*It pays to buy your motor cycle from those who specialise in one or two well-chosen makes — concentrating all their energies on those machines only. We specialise in*

## *NORTON & Velocette*

***because we can recommend them as the foremost in their respective classes. We give personal service with every machine we sell, specially tuning it to your individual need. Competition 'buses' are tried out by Mr. O'Donovan himself on Brooklands track.***

¶ *All 1922 Models for immediate delivery anywhere. Cash or Deferred Payments.*

***O'Donovan Motors,***
*(D. R. O'Donovan & H. H. Beach)*
*76a, Gt. Portland St., W.1.*
*Museum 5890.*
*"Odonomote, Wesdo, London."*

NEWTON

# AERO OIL
## FOR RACING MOTOR CYCLES

Newton Aero Oil is a scientific blending of castor oil and other selected lubricants specially valuable for racing motor cycles. It is a result of 26 years' experience in the manufacture of lubricants. Newton Motor Oils for Touring Machines.

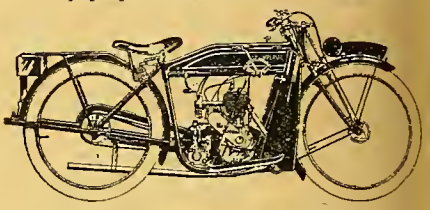
COMPARE THE PRICE—THE QUALITY IS INCOMPARABLE

*Write for prices to*

**A. E. NEWTON, LTD.**
**34, Victoria St. London, S.W.1.**
*Telephone: Victoria 2527—8.*
*Telegrams: Ancwtoyle, Vic, London.*

## FOR WHITSUN!

We are agents for the leading motorcycles, such as the 2¾h.p. 3-speed New Imperial costing .... **£73.**
With 24in. wheels for ladies .... **£73.**
Chain drive T.T. Model ..... **£84.**
2¼h.p. Sports Model ..... **£80.**



Our policy is to keep in touch with you so that you may obtain the best results. Call and inspect our stock, or write for current list.

**HOMAC'S**
**MOTOR AGENTS**
**243, Lower Clapton Road, LONDON, N.E.**
**'Phone: DALSTON 2403.**

# WANTED
## YOUR machine in Part Exchange for any of the following 1922 Models IN STOCK.

| | |
|---|---|
| Matchless Combinations, all models | £150 0 |
| Ariel de Luxe, electric | £173 10 |
| Ariel de Luxe, less electric lighting | £152 10 |
| Raleigh 5-6 h.p. Combination | £165 0 |
| Norton, all-chain, Montgomery Sports sidecar | £138 10 |
| B.S.A., 4½ h.p. K2 Combination | £139 0 |
| Ariel, 6-7 h.p. Special Combination | £125 0 |
| Ariel, 3½ h.p. Sports Combination | £112 10 |
| **SOLO.** | |
| Ariel, 3½ h.p. Sports | £87 10 |
| Norton, 3½ h.p. Sports | £80 0 |
| Norton, 3½ h.p., all-chain | £115 0 |
| Triumph S.D., all-chain | £115 0 |
| Triumph-Ricardo, 4-valve Sports | £120 0 |
| B.S.A., 4½ h.p., all-chain | £110 0 |
| B.S.A., 4½ h.p., chain-cum-belt | £107 0 |
| Douglas, 2¾ h.p., all on | £68 0 |
| Rudge I.O.M. | £77 0 |
| Stanger, 5 h.p. "V" 2-stroke, 3-speed | £97 0 |
| Sun-Jap, 350 c.c., 3-speed, chain | £76 13 |
| Sun-Jap, 2¾ h.p., 2-speed | £63 0 |
| Raleigh, 2¾ h.p., 2-speed | £68 0 |
| Levis | £48 0 |
| Sun-Vitesse, 2-speed, clutch | £57 15 |

Also many others.

**Open all Saturday.**

For shop-soiled and second-hand bargains (all guaranteed) see "Miscellaneous Motorcycles Columns."
'Phone: Hornsey 2917.

**JONES GARAGE,**
**Broadway, Muswell Hill,**
**and 4, Woodside Parade, North Finchley.**

The best service agents for

# DOUGLAS MOTOR CYCLES

**Immediate delivery**
**£68 (or £4 a month)**
**Old machines in exchange.**

# DOUGLAS SPARE PARTS

**Send to us.**
**We carry large stock—and dispatch next post.**

# FRANK WHITWORTH
**139, NEW STREET**
**BIRMINGHAM**
**The Douglas Agents.**
('Phone: Mid. 2221.)

By the courtesy of "The Motor Cycle"
## T.T. TELEGRAMS
Watch the Races Lap by Lap at
## LONGMAN BROS. Showrooms
**1, BOND STREET, EALING.**
Telephone 689.

We are Agents for all the leading makes and can give you expert practical service, advice, and high efficiency tuning.

### AGENCIES.

**Triumph, Norton, A.J.S., Sunbeam, Ariel, Rudge, B.S.A., Zenith, Matchless, Enfield, Harley-Davidson, Blackburne, Douglas, etc.**

### NEW MACHINES IN STOCK.

| | |
|---|---|
| TRIUMPH Chain-cum-Belt | £105 |
| TRIUMPH All Chain | £115 |
| ARIEL Sports Model, 3½ h.p. | £87 10s. |
| ENFIELD Comb. | £140 |
| ENFIELD Two-Stroke Sports | £55 |
| HARLEY-DAVIDSON, Equipped | £115 |
| HARLEY-DAVIDSON Comb. | £175 |

Terms to suit all pockets and everybody. Cash, Easy Payments and Exchange.

### SECONDHAND MACHINES.

We regret that we are unable to publish a list as they are in and out of our Showrooms too quickly to do so.

*Write, 'Phone or Call.*

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

DVERTISEMENTS in these columns rst 12 words 3/–, and 3d. for every ad- nal word. Paragraphs of under 8 words charged double rate. Each paragraph is ged separately. Name and address must ounted. Series discounts, conditions, and al terms to regular trade advertisers will noted on application.

stal Orders and Cheques sent in payment for rtisements should be made payable & Co. IFFE & SONS Ltd., and crossed sury Notes, being untraceable if lost in sit, should not be sent as remittances.

l advertisements in this section should be mpanied with remittance, and be addressed he offices of "The Motor Cycle," Dorset se, Tudor Street, London, E.C.4. To re insertion letters should be posted in to reach the offices of "The Motor Cycle," he first post on Friday morning previous to day of issue. Advertisements that arrive late for a particular issue or that are rded out will automatically be inserted in following issue unless accompanied by uctions to the contrary.

ll letters relating to advertisements should e the number which is printed at the end of advertisement, and the date of the issue hich it appeared.

he proprietors are not responsible for clerical rinters' errors, although every care is taken void mistakes.

## NUMBERED ADDRESSES.

r the convenience of advertisers, letters may be essed to numbers at "The Motor Cycle" Office. this is desired, the sum of 6d. to defray the cost of ration and to cover postage on replies must be added he advertisement charge, which must include the s Box ono, c/o "The Motor Cycle." Only the number ppear in the advertisement. All replies should be essed No. ooo, c/o "The Motor Cycle," Dorset House, r Street, London, E.C.4. *Readers who reply to Box No. tisements are warned against sending remittance through ost except in registered envelopes; in all such cases the / the Deposit System is recommended, and the envelope d be clearly marked "Deposit Department."*

the case of motor cycles offered for sale under a box ber, as it is unusual for these to be sold without first inspected by the intending purchaser, advertisers will tate business by embodying in their advertisements mention of the district in which the machine ad may be seen and tried.

## DEPOSIT SYSTEM.

rsons who hesitate to send money to unknown persons deal in perfect safety by availing themselves of our sit System. If the money be deposited with "The or Cycle," both parties are advised of this receipt.

he time allowed for a decision after receipt of the is is three days, and if a sale is effected we remit the unt to the seller, but, if not, we return the amount he depositor. Carriage is to be paid by the buyer, but he event of no sale each party pays carriage one way seller takes the risk of damage in transit. For all sactions up to £10, a deposit fee of 1/- is charged; on sactions over £10 and under £50, the fee is 2/6; over and under £75, 5/-; over £75 and under £100, 7/6 on all transactions over £100, 1%. All deposit ters are dealt with at Dorset House, Tudor Street, don, E.C.4, and cheques and money orders should be e payable to Iliffe & Sons Limited.

he letter "D" at the end of an advertisement is an cation that the advertiser is willing to avail himself of Deposit System. Other advertisers may be equally rous, but have not advised us to that effect.

## SPECIAL NOTE.

Readers who reply to advertisements and receive no wer to their enquiries are requested to regard the ce as an indication that the goods advertised have ady been disposed of. Advertisers often receive so y enquiries that it is quite impossible to reply to one by post.

## MOTOR CYCLES FOR SALE.

### A.B.C.

21 A.B.C., perfect condition, tax paid, all on, very fast; 60 gns.—Pollock, 274, Camden Rd., .1. [8730

## "GODFREYS CAN DO IT"

*Sole Agencies for Indian, Scott and Levis.*

**From our large and varied stock of NEW 1922 MODELS both SOLO and COMBINATIONS you will have no difficulty in obtaining at once the machine you require. This week we draw special attention to our offer of 1918 Type 'H' TRIUMPHS (W.D.), all thoroughly overhauled and guaranteed. SOLO - £60, or with Millford Sidecar - £75**
Only a limited number available.

**SECOND-HAND MACHINES. Thoroughly Overhauled and Guaranteed.**

| | |
|---|---|
| **INVICTA,** 1919, 2¾ h.p., 2-speed, accessories . | £42 |
| **NEW IMPERIAL,** 1920, 2¾ h.p., 2-sp. gear, J.A.P. engine | £48 |
| **TRIUMPH,** 1913, 3½ h.p., 3-sp. gear, clutch, accessories | £40 |
| **DOUGLAS,** 1916, 2¾ h.p., 2-speed, re-enamelled and plated | £52 |
| **CALTHORPE,** 1920, 2¾ h.p., J.A.P. engine, 2-speed gear, lamps, speedo., horn | £40 |
| **INDIAN SCOUT,** 1920, 4 h.p., lamps, horn, and speedometer | £79 |
| **TRIUMPH,** 1919, 4 h.p., Model H, 3-speed, clutch and K.S. | £79 |
| **LEVIS POPULAR,** 1915, 2¼ h.p., 2-speed gear | £32 |
| **A.J.S.,** 1915, 2¾ h.p., 3-sp., chain drive, full equipment | £42 |
| **SCOTT,** 1921, 3¾ h.p., Sports Model | £84 |
| **ZENITH-BRADSHAW,** 1922, 3½ h.p., belt drive, equal to new | £102 |
| **SCOTT,** 1915, 3¾ h.p., Standard Model | £49 |
| **DOUGLAS,** 1921, 2¾ h.p., 3-speed gear, with accessories | £68 |
| **A.B.C.,** 1920, 3 h.p., spring frame, 4-speed gear, accessories | £65 |
| **INDIAN,** Road Racer, 1915, 7 h.p., clutch Model | £55 |
| **TRIUMPH,** 1918, 4 h.p., Model H, T.T. handle bars | £60 |
| **DOUGLAS,** 1919, 4 h.p., with Douglas touring sc., with accessories, Rotax dynamo lighting set | £88 |
| **TRIUMPH,** 1918, 4 h.p., Type H, with Millford coachbuilt sidecar | £75 |
| **TRIUMPH,** 1919, 4 h.p., with Millford Skiff Sidecar | £96 |
| **B.S.A.,** 1921, 6-7 h.p., com. with Millford Empress Sidecar | £115 |
| **INDIAN,** 1915, 7 h.p., Model C, 3-speed gear, standard Indian Sidecar with bulbous back, accum. lighting | £84 |

EXCHANGES: Send full particulars of your present mount and we will quote you our best allowance price.

CREDIT TERMS: Our charge is 4 per cent. only (except in a few cases where manufacturers have special rates). One quarter down and balance in twelve equal monthly payments.

LIGHT CARS.
Rover 8 h.p. . . . £220
Bayliss-Thomas 10·5 h.p. £315

**GODFREY'S, LTD.**
The Service House for B.S.A., Indian, Scott and Levis Spare Parts.
**208, Gt. Portland St., London, W.1**
'Phone: Langham 1300 (2 lines).

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C. 1921, brand new; what offers?—Randall, Andover. [8982

A.B.C. Combination 1921, Swan, Lucas dynamo model, condition as new; £105.—8, Packington St., N.1. [9056

A.B.C., special sporting model, perfect, like new, must sell, owner out of work; £37.—1, Priory Rd., Kew. [1010

A.B.C., 1921, just overhauled, perfect condition, all accessories; £68, offers.—11, Clementina Rd., Leyton, E.10. [9584

PLATED Tank, 1920 A.B.C., splendid condition, equipped, fast; accept 66 gns., nearest; exchanges.—122, Lower Mortlake Rd., Richmond. [5583

ROBERTSON'S Motors, Ltd.—1920 A.B.C. (new in 1921) standard, with Henderson sidecar, accessories; £70.—157b, Gt. Portland St., W.1. [6072

A.B.C. 1920 3h.p., in new condition, all accessories; bargain, £68.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0073

62 GNS.—A.B.C., 1921, 4-speed, speedometer, Cowey lamp set, licensed 1922, as new throughout; exchanges.—12, Cornwall Mews, Gloucester Rd., S.W.7. [1053

A.B.C. 1920 Swan sporting sidecar, absolutely perfect condition, all on, any trial or inspection, mileage 2,000.—Campbell, 21, Lansdowne Terrace, Gosforth, Newcastle. [9466

SOLE distributors for the popular A.B.C. machines; price, £82 standard, £98 dynamo models. Best value in the trade. Early delivery.—Maudes', London, Exeter, Norwich, and Walsall. [9738

*Spare Parts.*

A.B.C. Spares.—We are the largest stockists of these parts. Trade supplied.—Maudes' Motor Mart, 100, Great Portland St., W.1. [9731

### Abingdon.

ABINGDON 6-7h.p. Combination 1920, coach body, hood, screen, S.A. gears, new tyres, lamp, horn, speedometer, recently overhauled, tax paid, full equipment; £110.—Lucas and Co., 390, High Rd., Chiswick. [9222

### Ace.

A.C.E. 1921 10h.p., with Middleton C.B. sidecar, spring wheel, screen, locker, speedometer, horn, lamps, tools, hardly used, excellent condition, any trial; £135.—21, Wontner Rd., Balham. [6804

### Acme.

ACME, 1914, 4h.p., 3-speed, clutch, perfect order, all on; £22.—55, Sheen Lane, Mortlake. [9166

### A.E.L.

PERFECTLY New 1922 A.E.L.-J.A.P. 2¾h.p., 2-speed clutch, kick start, £65; accept £55.—158, Venner Rd., Sydenham, S.E. [8890

### A.J.S.

TRY Julians of Reading for A.J.S. Lightweight or Combination. [5702

1922 A.J.S. 2¾h.p., B.I., in stock.—Mason, Motor Agent, Wellingborough. [8900

CROSS, Effingham Sq., is Agent for A.J.S.'s in Rotherham. Early delivery. [9691

SHREWSBURY Agent, A.J.S., early delivery.—Pickering, Mardol, Shrewsbury. [9608

2¾h.p. (this season) A.J.S., just from works; £85, plus carriage.—Randall, Andover. [8984

A.J.S. 1922 2¾h.p., Model B, in stock; £85.—Taylor's Garage, Wednesbury. 'Phone: 11. [9430

A.J.S. 1922 7h.p. Combination, in stock.—Moore, College St., Long Eaton. 'Phone: 300. [5109

A.J.S. 7h.p. Combination, new, immediate delivery —Rootes, Ltd., Maidstone. 'Phone: 460. [9938

A.J.S. 1922 2¾h.p Sports and 7h.p. Combinations in stock.—Clifford Motories, Eastwood, Notts. [6506

A.J.S. (new) 2¾h.p., B1 model, immediate delivery; £85.—Harrison and Bunkall, Chichester. [9136

DAN GUY, Weymouth.—1922 7h.p. A.J.S. Combination, £175; in stock. Dorset trade supplied. [0817

IN Stock.—1922 7h.p. A.J.S. combination; £175.—D. and S. Autocar Co., 33, The Parade, Golders Green. [9839

A.J.S. Combination, brand new, unregistered, must sell; offers wanted.—12, Wellington St., Eastwood, Notts. [9252

1921 A.J.S. Combination, as new, £135; ditto, 1920, as new, £115.—24, Balliol Rd., North Kensington. [9105

## MOTOR CYCLES FOR SALE.

### A.J.S.

MOFFAT, Yeovil, Official A.J.S. Agents.—Get in touch with us for prompt deliveries. Exchanges. 'Phone: 50. [5723

1914 A.J.S. Combination 6h.p., all chain, 3-speed, good condition; £65.—55, Montpelier Rd., Peckham, S.E.15. [9386

1920 A.J.S. Combination, spare wheel, hood, screen, electric lighting; £110.—17, St. Charles Square, W.10. [9256

A.J.S. Combination, late 1919, with spare wheel; £100, or nearest offer.—Powell, Cambrian Iron Works, Wrexham. [8564

A.J.S. 2¾h.p. Sports, new; immediate delivery; £85. —Homac's, 243, Lower Clapton Rd., Clapton, E.5. 'Phone: Dalston 2408. [9745

A.J.S. 6h.p. Combination, perfect order; £75; accept solo part exchange.—Woods, 78, Allfarthing Lane, Wandsworth, London. [9139

A.J.S. 1920 Combination, lavishly equipped, spare wheel, original tyres; £120.—Hillier, 216, Portobello Rd., North Kensington. [9467

A.J.S. Cambridgeshire Service Agents.—All models from stock; complete stock spares.—King and Harper, Bridge St., Cambridge. [9743

£76.—Late 1921 A.J.S. 2¾h.p., as new, mileage about 500, completely equipped, licensed; Essex.—Box 1526, c/o *The Motor Cycle*. [9904

A.J.S. 7h.p. Combination; £175. Secure delivery for Whitsuntide by placing your order with P. J. Evans, John Bright St., Birmingham. [8973

1922 2¾h.p. A.J.S., light touring, taxed, insured, completely equipped, new; £86/10.—Ward and Co., 51, Upper Richmond Rd., Putney. [5134

1916 6h.p. A.J.S. Combination, fully equipped, good condition; £90, or nearest.—Particulars, 101, Abbotsbury Rd., Weymouth. (P) [8601

1922 A.J.S. 7h.p. Combination for immediate delivery; £175, exchanges or easy payments.—Premier Motor Co., Aston Rd., Birmingham. [3016

B.1 Model A.J.S. in stock; £85. Authorised agents.—Clifford Wilson Mfg. Company, 177, Westminster Bridge Rd., S.E.1. Hop 210. [9924

1922, 2¾h.p. A.J.S., tax paid, lamps, not ridden 100 miles, owner buying combination.—Offers to J. C. Pickering, 49, Mardol, Shrewsbury. [9618

FOR A.J.S. 1922 models, 2¾h.p. solo, or 7h.p. combinations, get in touch with the N. London agents. —Jones Garage, The Broadway, Muswell Hill. [0785

ROBERTSON'S Motors, Ltd.—1921 A.J.S. electric combination, luxuriously appointed, Bonniksen speedometer; £155.—157b, Gt. Portland St., W.1. [6073

1920 A.J.S. Combination, spare wheel, hood, screen, lovely outfit; £115.—Hillier, (side bell) 9, Wallingford Avenue, North Kensington. [9317

1922 A.J.S. 7h.p. Combination, just delivered; immediate delivery.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0077

A.J.S. 4h.p. 1916, perfect condition, interchangeable wheels, spare; £75, near offer; trial appointment. —Luffman, 74, Walmer Rd., Fratton, Portsmouth. [8715

A.J.S. 1918 Combination, hood, screen, interchangeable wheels, splendid mechanical condition; £75. —James, c/o Bradmores, 482, Harrow Rd., Paddington. [9915

A.J.S. Combination 1920, as new, lamps, horn, windscreen, spare wheel, fully equipped, taxed; £120.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [9914

£70.—A.J.S. Combination 1916-17 5-6h.p., 3 speeds, clutch, kick starter, original enamel, fully equipped, little used, splendid condition.—63, Solon Rd., Brixton. [9340

A.J.S. 6h.p. Combination, 3-speed, etc, interchangeable wheels, recently overhauled, new appearance; £80, or lightweight and cash.—Snow, Laurel St., Dalston, E.8. [1013

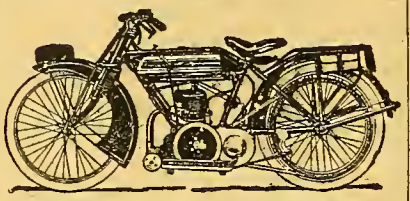
1922 A.J.S., 7h.p. combination, spare wheel, horn, side curtain, speedometer, electric lamps, fully insured, tax paid; £205.—Mulliner, St. James Square, Wolverhampton. [9447

1921 A.J.S. combination, 7h.p., mileage under 3,000, every luxury, lamps, spare wheel, speedometer, hood, sidescreen, &c.; nearest £140.—Penman, Mount Rd., Fleetwood, Lancs. [9604

A.J.S. 5-6h.p. Combination, fully equipped, speedometer, lamps, Tan-Sad, first-class order and appearance, any trial or examination; bargain, £65.—Batchelor, Town Hall, Staines. [9273

1922 2¾h.p. A.J.S. Semi-sports Model, only ridden very small mileage by expert, in beautiful order, tax paid till end of year, bulb horn, small lamp and generator, tyres unmarked; a bargain at £75, as these popular machines are practically unobtainable this year. —B. H. Davies, Lodsworth, Petworth, Sussex. [9085


# A Motor Cycle for £12



and balance in 12 payments of £2 9 2.

*Every well-known make in stock.*

## Second-hand Machines IN STOCK.

| | |
|---|---|
| 1920 **TRIUMPH**, 4 h.p., semi-T.T. bars, all acces | £69 10 |
| 1914 **TRIUMPH**, 3½ h.p., 3-speed gear, sidecar .... | £42 0 |
| 1919 **NEW IMPERIAL**, 8 h.p. comb., every acces. | £95 0 |
| 1920 **JAMES**, 4¼ h.p. comb. never used ..... | £97 10 |
| 1920 **P. & M.**, 3½ h.p., comb., never used..... | £97 10 |
| 1920 **AMERICAN EXCELSIOR**, 7-9 h.p. comb., elec. ltg., 1,000 miles only | £105 0 |
| 1914 **A.J.S.**, 6 h.p. comb., needing slight repair ... | £60 0 |
| 1920 **ENFIELD**, 6 h.p. comb., Lucas lamp ..... | £95 0 |
| 1920 **MATCHLESS** comb., 8 h.p., M.A.G. engine, dyno. ltg. ..... | £130 0 |
| 1912 **NEW HUDSON**, 2¾ h.p., 3-spd. (hub) lt. wt. ..... | £15 0 |
| 1914 **ZENITH** Gradua comb., needing repairs .. | £25 0 |
| 1920 **RUDGE**, 7-9 h.p. comb., Sporting sc. .. | Offers wanted |
| 1920 **MATCHLESS** comb., 8 h.p., J.A.P. engine ... | £100 0 |
| 1920 **MORGAN**, family model, every accessory . | £150 0 |
| 1921 **LEVIS**, 2-speed, hand clutch ..... | £47 10 |
| 1916 **LEVIS**, 2-speed, hand clutch ..... | £27 10 |
| 1917 **B.S.A.**, all-chain and B.S.A. sidecar ..... | £65 0 |
| 1915 **FORD** van, special body ..... | £50 0 |
| **WATSONIAN** sidecars, shop-soiled ..... | £8 10 |

**DISCOUNTS ALLOWED** if deferred payment account cleared in 2, 4 or 6 months.

**EXCHANGES.** Any make of machine accepted in part exchange. Generous allowances.

TRADE SUPPLIED.

# LAMB'S Ltd

**EUSTON ROAD, LONDON, N.W.** (Opposite Gt. Portland St. Stn.) 'Phone: Museum 4978.

**WALTHAMSTOW, LONDON, N.E., 151, High St.** 'Phone: Walthamstow 169 (2 lines).

**WOOD GREEN, LONDON, N., 50, High Road.** 'Phone: Hornsey 1956.


## MOTOR CYCLES FOR SALE.

### A.J.S.

A.J.S. 1920 Combination, spare wheel, hood, scr electric lighting, speedometer, horn, low m age 3,200, like new, spares, tax paid Decemt £125.—15, Jacksons Lane, Highgate. [8

7h.p. new 1922 A.J.S. Combination, just deliv from works, £175; also a second-hand 1920 C hination, same make, 6h.p. twin cylinder, 100 g easy terms and exchange. 'Phone: Holborn 577 [9

A.J.S. 1914 6h.p. Combination, fully equip speedometer, etc., overhauled and mechanic perfect, mileage 9,000, tax paid year; £80.—H Villa (opposite Ridge Rd.), Church St., Edmont [9

A.J.S. 5-6h.p., all chain, 2-speed, clutch, K.S., gine overhauled, new forks, frame, tank en elled, H.B., etc., plated, P.H. lamp generator, Stew horn, perfect; 55 gns.—Box 1510, c/o *The M Cycle*. [9

A.J.S. Combination, luxurious 1922 2-seater s car, all accessories, condition good as n reason for selling, owner's licence endorsed; Lon district; bargain, £95.—Box 1514, c/o *The M Cycle*. [9

1920 (Aug.) A.J.S. Combination, guaranteed distinguishable from new, just overhauled makers costing £30, spare wheel, etc., Lucas, ac sories; bargain, £135.—31, Claremont Rd., Alexan Park, Manchester. [1

A.J.S. 6h.p. Combination 1920 (December), excel condition, 3,300 miles, spare wheel unused, e tric lamps, Lucas horn, Watford trip speed, scr apron, tools; £150.—Castle, c/o 3, The Mall, Finch N.3. 'Phone: 1287 Finchley. [8

1920¾ A.J.S. 6h.p. Combination, dynamo mo lavishly equipped, Cowey speedometer horn, side screen, hood, Terry saddle, Tan-Sad, enamelled, recently overhauled by makers; any tr £145.—Dumas, Longford, Cannock. [6

A.J.S. 1921 7h.p. Combination, Lucas elec lighting, electric horn, speedometer, Binks huretter, hood, and special side curtain, spare wh unused, small mileage, good condition, tax pa £170.—31, Cecil Avenue, Wembley. [9

A.J.S. Standard Combination, June, 1920, accu lator lighting, speedometer, hood and screen, o run 2,000 miles; stored at Messrs. King's Gara Lynchford Rd., Aldershot; any trial given; £13 Apply J. P. Wills, Newdigate House, Bexhill. [8

A.J.S. Specialists.—Wanted, your present mo cycle in part exchange for any new mo from stock. No waiting. Distance no object. B prices allowed for second-hand machines. Defer payments, see column advertisement.—Bambers, Eastbank St., Southport. 'Phone: 607. [4

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bo St., Ealing. [7

### Alecto.

BRAND new 1921 3½h.p. Alecto 2-stroke mo cycles, 2-speed, clutch, and kick starter, lis £87/10; price to clear, £45.—114, Brixton Hill. [1

### Alldays.

ALLDAYS' Villiers, 1919, perfect; £17, lowes Seen 30, Canterbury Rd., Kilburn. [1

ALLDAYS' Allon 2¾h.p.; £27; splendid conditi —F. Symes, 22, Ceylon St., Battersea, S.W. [8

1919 Alldays' Allon, 2-speed, clutch, excellent c dition; 30 gns.—67, Fernlea Rd., Balham. [9

KICKHAM, Stokes Croft, Bristol, Sole Distr Agent for Allons; unequalled service, repa etc. [3

£38.—1920 Allon 2¾h.p., 2-speed, clutch, K.S., miles, perfect.—11, Mosely St., Barrow-in-F ness. [8

ALLDAYS' Allon, 1920, 2 speeds, clutch, ac sories; £40; take half down.—Bunting's change, Wealdstone. [9

FOR Sale.—2¾h.p. Allday Combination, f equipped as new, mileage 500; price £50.- Castlenau Place, Barnes. [8

ALLON 2¾h.p., excellent running order and c dition, foot-rests, T.T. bars, lamps; £2 Garage, 103, Castlenau, Barnes. [9

1916 2¾h.p. Allon, recently overhauled, long cop exhaust, splendid running order; £27.- Pimperton, Ingoldmells, Skegness. [9

1919 Allon, 2¾h.p., 2-speed, clutch, lamps, running order, fast, powerful; £38.—Victo 1977.—24, Page St., Westminster. [9

ALLDAYS' Allon 2¾h.p., 1917 model, delive 1918, good going condition and tyres; £25, offer.—Sykes, H.A.A.C., Newport, Salop. [8

ALLDAYS' 2-stroke, in excellent condition, eas perfect, nearly new tyres, fully equipped, tax £28.—51, Upper Richmond Rd., Putney. [9

ALLDAYS' Matchless, 2¾h.p. Villiers 2-str splendid condition, sporty model, tax paid; £ after 6 p.m.—7, Altenburg Av., West Ealing. [8

## MOTOR CYCLES FOR SALE.

### B.S.A.

13 B.S.A. Combination, engine just overhauled; bargain, £40.—Allin, 12, Bridge St., Cam-ge. [8840

W 1921 4¼h.p. B.S.A. Combination and acces-sories; £125.—Bonnds, Garage, 223, High Rd., urn. [9707

S.A. 1921, fully equipped and sports sidecar, equal to new; £90.—The Layton Garages, 30, Holywell Oxford. [9804

S.A. 1919 4¼h.p., 3-speed, all chain, lamps, etc., condition perfect; 60 gns.—7, Ashurst St., Batter-S.W.11 [8634

12 3½h.p. 2-speed sporting B.S.A., perfect run-ning order; £28.—5, Norwood Rd., Herne S.E.24. [8446

S.A. 1922, all models, immediate delivery.—Hucklebridge, 133, Sloane St., Chelsea. Tel.: oria 451. [7454

S.A. 4¼h.p. Combination, 1922, unused; reason-able offer under list price.—Box 1,546, c/o *The or Cycle.* [1059

OTORIA, Regent Parade, North Finchley.—1922 models B.S.A. in stock; deferred pay-ts; repairs [6483

22 4¼h.p. B.S.A., chain-cum-belt, in stock; £107, cash or exchange.—Foshach, Agent, Woodi-ge, Suffolk. [9508

S.A. 1919 (November) 4¼h.p. Combination, excel-lent order, electric lamps; £75.—Clark, 7, Exhibi-Rd., S.W.7. [4618

22 B.S.A. model, H2, in stock; terms or ex-change.—Shepherd, Enfield Highway. Tel.: tbam Cross 31. [0860

21 B.S.A. Combination, 4¼h.p., equipped, excel-lent condition; £85.—37, Canterbury Rd., Balls d Rd., Dalston, N.1. [8821

21 B.S.A. 4¼h.p. chain Combination, mileage 500; first cheque £110; would separate.—War-, 50a, Belvoir Rd., Bristol. [9221

S.A.—The Layton Garages have in stock all models; cash or deferred.—The Layton Garages, 30, Holy-St., Oxford. 'Phone: 581. [9814

GNS.—B.S.A., clutch model, enclosed magneto, B. and B., low position, fast (after 8 o'clock).—Swaffield Rd., Wandsworth. [6668

S.A. 1920 Combination 4¼h.p., Easting, 3-speed, chain-belt; £70.—Hunt, "Valkyrie," Northcroft , Ealing. Tel.: Ealing 555. [9309

7h.p. B.S.A., late 1921, tax paid, lamps, horn, condition as new; seen after 7 p.m.; £120.—Day, Kenley Rd, E. Twickenham. [8563

S.A. 1919 Model H, all chain, mechanically per-fect, seen any time; £70, or best offer.—Hall's age, Sutton Courtenay, Berks. [8952

S.A. 4¼h.p. 1921 Combination, all chain, electric lamps, accessories, spares, tax, mileage 3,000.—ns, 29, Wellington Park, Bristol. [8646

21 B.S.A., 4½h.p., chain drive, lamps, horn, taxed, any trial, perfect condition, as new; gns.—Bugler, North St., Beaminster. [1110

18 B.S.A. Combination, tax paid, lamps, tools, windscreen, first-class condition; £72/10.—Rhind Co., Stone Place, Rusholme, Manchester. [9670

19 B.S.A., 3-speed, countershaft, beautiful con-dition, complete accessories, year's licence; gns.—Fersfield, Westbury Rd., New Malden. [9460

S.A. 1920 4¼h.p. Combination, chain, Easting, Lucas lamps, horn, tax paid, excellent condition; gns.; evenings.—122, Dalston Lane, Hackney. [9291

S.A. 1919 Combination, 4¼h.p., windscreen, hood, Tan-Sad, legshields, lamps, 2 new tyres, licensed, irt, splendid condition; 78 gns.—14, Whitby Rd., ith Harrow. [9060

S.A. 6-7h.p. Twin Combination, new last Feb., mileage 130, tax paid, fully insured to end of r, lamps, Easting; £140.—Cole, 245, High Rd., burn, N.W.6. [8700

S.A. T.T., used week-ends only, guaranteed me-chanically sound, plating and enamel perfect, tipped, first £40; sidecar, new 1921, £15.—6, The een, Stratford. [8713

S.A., late 1920 combination, B.S.A. de luxe side-car, dynamo lighting, speedometer, condition ial to new; 86 gns.—Longman Bros., 17, Bond St., ling. Tel.: 689. [1101

1h.p. B.S.A. Combination, all chain, 1920 model, 4 3-speed, kick start, speedometer, Easting screen, lamps, etc., tax paid; £87/10.—Wauchope's, 9, oe Lane, London. [9880

21 B.S.A. 4¼h.p., chain-cum-belt, Cancelet sport-ing sidecar, Lucas accessories, tax paid, insured, A. July; £110, near offer.—J. Mason, 27, Rhodesia l., Leytonstone, E.11. [8681

S.A. 6-7h.p. combination De Luxe, 28×3 tyres, spare wheel, electric lighting, only ridden 100 les, perfect condition, as new.—Bartram, 53, Victoria l., Whalley Range, Manchester. [9789


# PREMIER MOTOR COMPANY

**Can To-day offer you**

**IMMEDIATE DELIVERY**

**from stock of over 80 NEW 1922 MODELS**

AT ALL PRICES From - **£35 to £175**

These machines are by the most famous manufacturers, and in some cases are now unobtainable elsewhere. Full list sent post free upon request.

**SOLO MACHINES.**

| | |
|---|---|
| **LEVIS,** 2½ h.p. "Popular" | £48 |
| **LEVIS,** Model S, 2-speed | £58 |
| **RALEIGH,** 2¾ h.p., 2-speed | £68 |
| **RALEIGH,** 2¾ h.p., 3-speed | £73 |
| **NEW IMPERIAL,** 2¾ h.p., 3-speed | £73 |
| **VELOCETTE,** E3, 3-speed | £72 |
| **TRIUMPH,** 4 h.p., chain-cum-belt | £108 |
| **TRIUMPH,** 4 h.p., chain drive | £113 |
| **JAMES,** 3½ h.p. "Sports" | £105 |
| **NORTON,** 16H, 3½ h.p., 3-speed | £115 |

**SIDECAR COMBINATIONS.**

| | |
|---|---|
| **RALEIGH,** 3 h.p., Montgomery | £95 |
| **TRIUMPH,** "H" Millford | £127 |
| **TRIUMPH,** "S.D." Montgomery | £138 |
| **ENFIELD,** 8 h.p., 2-seater | £145 |
| **ENFIELD,** 8 h.p., Magdyno | £158 |
| **NORTON** "Big 4 de Luxe | £153 |
| **JAMES** 7 h.p. de Luxe | £160 |
| **RALEIGH** 5-6 h.p. de Luxe | £172 |
| **TRIUMPH,** "S.D.C." Gloria, Magdyno | £175 |
| **A.J.S.,** 7 h.p., spare wheel | £183 |
| **HENDERSON,** 11 h.p., 4-cylinder, dynamo lighting, Millford | £210 |

**CYCLECARS.**

| | |
|---|---|
| **MORGAN** "Standard Popular" | £150 |
| **MORGAN** "Family," water-cooled | £191 |
| **ROVER** "8" | £220 |

**Principal Birmingham Agents for**

**HENDERSON, LEVIS, RALEIGH, TRIUMPH, VELOCETTE.**

Contracting Agents for A.J.S., ENFIELD, JAMES, NEW IMPERIAL, NORTON, etc.

Telephone :— Central 7367 (2 lines).

Telegrams :— "Primus, Birmingham."

**ASTON ROAD, BIRMINGHAM**


## MOTOR CYCLES FOR SALE.

### B.S.A.

B.S.A. Combination, late 1914, all chain, 3-speed gear box, kick start, tax paid, fully insured, hood, screen, Klaxon, lamps, etc., perfect, any trial; private owner.—55, High St., Marylebone, W.1. [9277

B.S.A. combination, with additional commercial body, completely overhauled at works, all spares, acces-sories, fully insured; £65; would entertain 2-stroke part payment.—322, Shobuall St., Burton-on-Trent. [9512

LATE 1920 4¼h.p. B.S.A. Combination, speedo-meter, hood and screen, legshields, Lucas electric lighting, in splendid running order, insured till July; nearest offer £80.—Apply, Goodall, Defford, Worcester. [8769

B.S.A. 1922 models for immediate delivery; best prices allowed on second-hand machines in part payment; see Exchange column.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [9634

B.S.A. 1921 6-7h.p. Combination, electric lighting, Cowey speedometer, Tan-Sad, Binks, luggage carrier, tax and insurance paid, perfect, mileage 3,600, any trial; £140; take good solo part.—Sackett, Theydon Bois. [8767

1920 B.S.A. Combination, fully equipped, beautiful condition, registered 1922, 75 gns.; also 1919 Combination, fully equipped and registered 1922, £69. Both bargains. After 5 p.m.—4, Elm Gardens, Ham-mersmith. [1037

1921 7h.p. B.S.A. Combination, Lucas, dynamo lighting, spare wheel, speedometer, Easting, magnificent turn out, new condition; cost £250, bar-gain £155.—31, Claremont Rd., Alexandra Park, Manchester. [1119

B.S.A. 4¼h.p. combination, believed 1916, 3-speed, countershaft, clutch, kick start, recently over-hauled, lamps, taxed; £55; exchange P. and M. or 5-6h.p. Rudge-Multi combination.—Frank Marshall, Hagg, Spilsby. [9523

B.S.A. 6-7h.p. 1921 model, improved No. 1 sidecar and special windscreen, Lucas magdyno light-ing, spare wheel, speedometer, electric horn, luggage carrier, new set Dunlop Magnums, just overhauled, as new; price £140.—Diment, Engineers' Club, Coven-try St., W. [6910

6h.p. new 1922 twin cylinder B.S.A. Combination, £164; also 4h.p. solo and combinations, all chain and chain-cum-belt, delivery from stock, in solos or combinations; delivery from stock on extended pay-ments and exchange.—Wauchope's, 9, Shoe Lane, Lon-don. 'Phone: Holborn 5777. [9879

B.S.A. Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4926

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7539

THE Prompt-est Firm for B.S.A. Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3161

B.S.A. Spares can be had by return, post free, from Jones Garage, B.S.A. Agents and Spares Service Depot Broadway, Muswell Hill, N.10. [0805

THE B.S.A. Specialists—On the Spot.—Our spares service is unrivalled—write for catalogue!—County Cycle and Motor Co., Broad St., Birmingham. [4677

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all B.S.A. spare part, always in stock. Write for free spare part list, stating year of manufacture. [0750

### Buchet.

BUCHET 2¾h.p., excellent condition, trial; £17/10. 294, Crystal Palace Rd., East Dulwich. [3747

### Calthorpe.

2½h.p. Calthorpe, 2-speed, excellent order; £21; trial.—Fairhurst, Behind 68, Standishgate, Wigan. [9265

1919 Calthorpe, 3½h.p. Precision engine, 2-speed, all-chain, equipped; £29.—Crown Garage, Wey-bridge. [9372

2¾h.p. Calthorpe-Jap, 2-speed, clutch, good condi-tion, licensed; £30.—120, St. Paul's Rd., N.W.1. [9354

MOTORIA, Regent Parade, North Finchley.—1922 models Calthorpe in stock; deferred pay-ments; repairs. [6479

NEW Calthorpe 2-stroke 2½h.p.; immediate de-livery; £36; exchange.—Percy and Co., 314, Euston Rd., N.W. [9655

£27/10.—3½h.p. Calthorpe-Jap, excellent condition, variable gear, lamps, horn, smart, reliable.—89, East Hill, Wandsworth. [9394

CALTHORPE 2¼h.p., 2-speed, overhauled, excellent condition, lamps, horn, tools; £27.—Write, Dakin, 110, Greenford Av., Hanwell, W.7. [8803

CALTHORPE-PRECISION 2½h.p., 2-speed, taxed, etc., as new, 1917, trial; £23.—C., 6, Thorley St., near Bishops Stortford, Herts. (P) [9683

## MOTOR CYCLES FOR SALE.

### Calthorpe.

1920 2¾h.p. 2-speed Calthorpe-Jap, tank just re-enamelled, good mechanical condition; £33.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [9829

CALTHORPE 3h.p. Combination, 2-speed, K.S., fitted with M-L Maglita set, shop-soiled only; £75.—P. J. Evans, John Bright St., Birmingham. [8977

CALTHORPE 1922 4h.p. twin J.A.P. Combination, lamps, horn, licence paid for year, unused; listed £120; accept £115, all on, for quick sale.—Motor Co., Ltd., Hereford. [4825

CALTHORPE-J.A.P. 2¾h.p. 1918, Enfield gear, all on, Hutchinson tyres, fully insured and tax paid; £40, or offer; write or call.—" Woodbine," Ernest Rd., Hornchurch. [8764

CALTHORPE 3h.p. Combination, 2-speed, clutch, 1921, Henderson sidecar, Easting, electric lights, horn, perfect; £59/10, offer.—29, Wheelwright Rd., Erdington, Birmingham. [9128

### Campion.

CAMPION De Luxe, 2¾h.p. J.A.P., Sturmey 2-speed, clutch, kick starter, Dunlops, Cowey, leg-shields, electric lighting, new condition, mileage 700; £55; seen after 5.—T., 34, Huddleston Rd., Tufnell Park, N.7. [4800

### Cedos.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Cedos; unequalled service, repairs, etc. [3149

### Chater-Lea.

CHATER-LEA 6h.p., J.A.P., 3-speed, splendid condition; £45 with sidecar.—Barrs, Walton-on-Naze. [9245

CHATER-LEA 8h.p. Combination, all on, ride away; £60, or near offer.—35, Caldervale Rd., Clapham, S.W.4. [8602

CHATER-LEA 8h.p. Combination, overhauled by makers, C.B. sidecar, Easting, etc.; £60; after 6 p.m.—1, East Acton Lane, Acton. [9407

SALE.—7h.p. Chater-Lea, lamps, horn, speedometer, spares, hooded family sidecar, excellent order; £80.—Woodroffe, Thurmaston, Leicester. [8766

CHATER-LEA Fafnir 3½h.p. Combination, 2-speed, clutch, in good condition; £35, offers.—Challis, 13, Terrace Rd., South Hackney. [1045

CHATER-LEA 8h.p., tandem sidecar, will hold 1 adult and 2 children, hood, lamps, speedometer; what offers?—141, Tufnell Park Rd., Holloway, N.7. [8894

CHATER-LEA Combination 8h.p., 3-speed, chains, kick, countershaft, recent £40 overhaul, powerful, reliable; £90, or offer.—Write, 1, Grove Av., Tunbridge Wells. [9459

CHATER-LEA 8h.p. Twin Sporting Solo or Sidecar, belt drive, single gear, adjustable pulley, fast machine, good condition; solo, £45; extra sidecar, £5.—74, Banner St., London, E.C.1. [9434

### Cleveland.

1920 Cleveland 3h.p., 2-speed, 2-stroke, clutch, K.S., speedometer, electric lighting, recently overhauled, working well; £40, nearest offer.—Lawton, Victoria Rd., Runcorn. [9437

### Clyno.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. Clyno, 1919, 2-speed; £37/10. [9849

1918 Clyno, interchangeable wheels, new tyres and tubes, perfect condition; £38. — 77, Haverstock Hill, Hampstead. [1055

1918 6h.p. Clyno, new condition, sidecar chassis, spare wheel, no body; £55; take piano and cash.—Russell, 25, Linom Rd., Clapham. [9321

1918 Clyno Combination, 3-speed, 4 detachable wheels, hood and apron, enamelled grey; £70.—Mack, 81, Lower Clapton Rd., Hackney. [9448

CLYNO 5-6h.p. Combination, 2 speeds, kick start, perfect; £50, or close offer; Lightweight part considered.—Box 1419, c/o *The Motor Cycle*. [8600

£45.—6-8h.p. Clyno, 3-speed countershaft, clutch, kick start, splendid order throughout.—Speechley, 86, Churchfield Rd., Acton, W.3. 'Phone: Chiswick 1902. [8941

CLYNO Combination, 1918, spare wheel, also spare tyre, tools, spares, just overhauled, enamelled, plated, excellent condition; £75.—10, Langley Lane, Vauxhall, S.W.8. [9381

CLYNO Combination 5-6h.p. 1918, 3-speed, clutch, kick start, spare wheel, lamps, also spare tradesman's box sidecar; £75.—Urquhart, 371, Earlsfield Rd., Earlsfield, S.W. [8826

1918 Clyno 8h.p., J.A.P., C.B. sidecar, interchangeable wheels, lamps, windscreen, excellent condition, trial, engine No. 62354; 68 gns.—72, Pembroke Rd., Kensington. [9533

8h.p. Clyno-Jap Combination, large 2-seater sidecar, Bluemels windscreen, electric light, 4 interchangeable wheels, first-class condition, any trial given, tax paid; £140, or near offer.—Elliott, Breach, Sidmouth. [8893


BAMBERS LIMITED

THE EXCHANGE SPECIALISTS

A FEW OF OUR HIGH-CLASS SECONDHAND MACHINES.

1921 7 h.p. **A.J.S.** comb., 2-seater, dynamo lighting, every conceivable accessory, mileage 2,500, as new ..... £150

1921 8 h.p. **ENFIELD** comb., dynamo lighting, hood and screen, etc..... £130

1921 5-6 h.p. **ROVER** comb., all-chain drive, lamps, horn, Easting, exceptionally good condition ..... £120

1921 4¼ h.p. **B.S.A.** comb., electric lamps, horn, etc., perfect condition..... £105

1920 7-9 h.p. **INDIAN** comb., dynamo, speedometer, electric horn, leg-shields, Easting, excellent condition £110

1920 6 h.p. **ENFIELD** comb., electric lamps, speedometer, new tyres, beautiful turnout ..... £105

1920 5-6 h.p. **RUDGE** comb., lamps, horn, Tan-Sad, Easting, new condition .. £85

1920 4 h.p. **HARLEY-DAVIDSON** comb., lamps, horn, speedometer, small mileage. Bargain ..... Offers

1920 2½ h.p. **METRO-TYLER,** De Luxe model, fully equipped, only run 50 miles ..... £80

1920 2⅜ h.p. **EDMUND,** 2-speed, all-chain drive, lamps, horn, very good condition ..... £45

1919 8 h.p. **SUNBEAM** Sporting comb., electric lamps, horn, etc., beautiful turnout ..... £110

1919 4 h.p. **DOUGLAS** comb., lamps, horn, etc., very good condition ..... £78

1919 6 h.p. **JAMES** comb., fully equipped, Easting, excellent condition..... £85

1915 7-9 h.p. **HARLEY-DAVIDSON** Sporting comb., exceptionally fast..... £75

SEND FOR FULL LIST.

OFFICIAL AGENTS FOR:
A.J.S., ENFIELD, DOUGLAS, B.S.A., MATCHLESS, ZENITH AND ARIEL MOTOR CYCLES.
NEW MODELS FROM STOCK.

NO WAITING.

DEFERRED PAYMENTS.

ANY MAKE OF MACHINE SUPPLIED

2, EASTBANK STREET, SOUTHPORT.

'PHONE 607.


## MOTOR CYCLES FOR SALE.

### Clyno.

1916 Clyno Combination, 3-speed, clutch, 4 int changeable wheels, engine and gear box ov hauled, fine order, dissolved acetylene, horn, license £55; seen Sunday, or letters.—Parker, 65, Clifton A Wembley Hill. [97

CLYNO 5-6h.p., 1916-17 models, rebuilt, replate enamelled black, 3 speeds, kick start, foot clute interchangeable wheels, chain drive, aluminium cas combinations, £68; solo, £57, as new; deferred ter or exchanges. One commercial 4 cwt. carrier, £75 Hearn Bros., 94, Brixton Hill, S.W.2. [62

*Spare Parts:*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bo St., Ealing. [75

### Connaught.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h Connaught, 1921, 2-speed; £45. [98

SHREWSBURY Agent, Connaught; exchanges. J. C. Pickering, Mardol, Shrewsbury. [96

1921 Connaught 2¾h.p., 2-speed, clutch, K. fully equipped, as new; £45, or nearest.— Park View, Wigan. [95

CONNAUGHT 2¾h.p., 2-stroke, excellent conditi good tyres, tubes; £28/10; tax paid.—Wats 29, Hilldrop Crescent, N. [92

CONNAUGHT, brand new, 1922, 2-stroke, Sturm Archer 3-speed, kick; £55.—Speechley, The Mo House, 86, Churchfield Rd., Acton, W.3. [89

1922 Connaught, the super 2-stroke, for sidecar solo; cash or easy terms; inquiries invited Sam E. Clapham (Motors), 27, Stockwell St., Gre wich, S.E.10. [32

### Coulson.

39 GNS.—1920 Coulson B., 2-speed, equipped, tax bargain.—284, South Lambeth Rd., Stockw [10

BARGAIN.—Brand new 4h.p. Coulson-Blackbur spring frame, Moss gears, clutch, k starter, horn, licensed, tools; £79.—40, Welling Rd., N.W.8. [91

1921 Coulson-Blackburne 2¾h.p., 3 speeds, k start, spring frame, equipped, year's t 58 gns.; exchanges.—Peter Gordon, Ltd., 110, Up Richmond Rd., East Sheen. Open Sundays. [9

COULSON-BLACKBURNE 2¾h.p., 2-speed Sturm clutch, kick start, lamps, horn, complete kit a spares, excellent condition, fast, reliable, insured a licensed for 1922; £50.—Bergne, 367, Upper Richm Rd., S.W.15. [9

COULSON 1922 models.—2½h.p., £67/10; 2¾h £78; 2¾h.p., o.h.v. (T.T. model), £95; 4¼h £95. Cash or deferred terms. Old machines taken part payment.—London Motors, 61, Holborn Viadu E.C.1. Telephone: City 4230. [90

### Coventry Victor.

1922 6-7h.p. Coventry Victor Combination, dem stration machine, as new; £120.—London Age Storer and Tait, 20, Bourdon St., Bond St., W.1. [10

### De Luxe.

1920 De Luxe 2-speed, 2¾h.p., 120 m.p.g., g appearance, mechanically sound, comple £32.—24, Brampton Rd., E. Ham, E.6. [10

THE Finest Value in the Motor World lies in superlative De Luxe Barr and Stroud. We save you £25 on the complete machine. See " Part advertisement.—Motorities, 191, Sweetman St., Wolv hampton. [8

### Diamond.

SHREWSBURY Agent, Diamond, early delivery models.—Pickering, Shrewsbury. [90

KICKHAM, Stokes Croft, Bristol, Sole Distr Agent for Diamonds; unequalled service, repa etc. [3

1920 Diamond-Jap., specially tuned engine, t hole condition; £45.—Green, Leys Av., Let worth, Herts. [8

1920 Diamond-Villiers 2¾h.p. splendid conditi little used, lamps, tools, etc., tyres unpu tured; £43.—Ashley, 5, Spencer Rd., East Ham. [8

ROBERTSON'S Motors, Ltd., are the London Home Counties Agents for the famous Diamo motor cycles, fitted with Barr and Stroud or J.A engines.—157h, Great Portland St., W.1. [8

### Douglas.

H.
F.
EDWARDS and Co.

50, HARRINGTON Rd., South Kensington, o several new, unused 2¾h.p. Douglas at b gain price; 47 gns! Your machine taken in part change, or £20 down and 12 instalments of £2/12 [6

MAUDES' Motor Mart, 100, Great Portland London, for Douglases. [97

## MOTOR CYCLES FOR SALE.

### Douglas.

Late 1920 Douglas Combination, with blue sidecar, all accessories, including Tan-Sad, speedometer, etc., £87/10, tax paid; also 3½h.p. 1914 Douglas, 2 speeds, £35; and 2¾h.p., 1915, 2 gears, £27/10.—Wauchope's, 9, Shoe Lane, Fleet St., [9353

DOUGLASES.—2¾h.p., reconditioned, absolutely as new, practically all new parts fitted, the finest motor obtainable anywhere, £45, all on; deferred terms arranged; before purchasing elsewhere come and inspect, or let us give you a trial and convince yourself. Hawkins Garage Co., 73, New Park Rd., Brixton Hill, S.W.2. 'Phone, Streatham 40. For Douglas parts see our advertisement under "Parts and Accessories." [8520

### Parts

DOUGLAS Spares.—Immediate delivery.—Kays, 8, Second St., Ealing. [7541

ROBERTSON'S Motors, Ltd., can supply all usual Douglas spares requirements.—157b, Gt. Portland St., W.1. [6077

Douglas, 1910; repairs, spares.—F. W. Allsopp, Douglas Specialist, 35, Clifford St., Leicester, S.E. [9000

DOUGLAS spares; large stocks of genuine Douglas spares; dealers supplied at trade rates.—Rivett, High Rd., Leytonstone. [2267

DOUGLAS Spares.—We hold a complete stock for all models; post free. Douglas Agents and spare parts stockists.—Jones Garage Broadway, Muswell Hill, [0806

FRANK WHITWORTH, Ltd., 139, New St., Birmingham.—Complete stock, genuine guaranteed Douglas spare parts; prompt attention, immediate despatch, lowest cash prices. [4657

### Economic.

ECONOMIC, 8 speeds; £34.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [8849

ECONOMIC.—We can give you immediate delivery of this wonderful low-priced machine; variable gear, model, £34; or on easy payments. Please send for catalogue.—South Eastern Garage, Herne Hill, S.E.24. [5056

ECONOMIC.—The Marvellous Flat Twin, with variable gear, within the reach of all; £10 down, and easy terms, or £34 cash. Catalogues with pleasure.—Personally tested by Sam. E. Clapham, 27, Powis Hill St., Greenwich, S.E.10. [3051

### Edmund.

EDMUND-J.A.P., 1921, all accessories, Enfield 2-speed gear, hardly scratched; £50.—The Layton Garage, 30, Holywell St., Oxford. [9808

EDMUND.—2¾h.p. Edmund, Blackburne engine, spring frame, all-chain drive; £90.—D. and S. Autocar Co., 33, The Parade, Golders Green. [9841

EDMUND, new 1922 spring frame, Bar and Stroud engine, all-chain drive, 3-speed clutch and kick start; £96.—Edwards and Davies, Malpas, Cheshire. [9463

EDMUND.—Backed by a £1,000 guarantee. Ask your agent to demonstrate latest Barr-Stroud model. All Edmund spares available.—295, Harrow Rd., W.9. [9164

EDMUND-BLACKBURNE, new, slightly shopsoiled, 2¾h.p., spring frame machine, Burman 2-speed gear, £68; similar machine with 2¾h.p. J.A.P. engine, £58.—P. J. Evans, John Bright St., Birmingham. [8978

### Enfield.

2½h.p. 1922, 2-stroke Enfield, K.S.; £57.—Randall, Andover. [8985

2 Enfield Combination, dynamo, in stock; cash or exchange.—Below.

1 Enfield Lightweight, lamps, speedometer, etc., little used; £45, tax paid.—114, Brixton Hill. [1033

ENFIELD 2-stroke, 1921, tax paid; £38.—Clark, 7, Exhibition Rd., S.W.7. [6029

ENFIELD Twin 3h.p., 2-speed, K.S.—View at 22, Kingswood Rd., Moseley. [9278

1915 Enfield, in new condition; £35.—Baets, 9, Wilton Mews, Belgravia. [9457

ENFIELD New Enfield Combination; £114.—24, Ballcol Rd., North Kensington. [9103

2 6h.p. Enfield Combination, accessories, tax paid; £70.—114, Brixton Hill. [1030

NEW 1922 Enfield Combinations in Stock.—Bounds, Garage, 223, High Rd., Kilburn. [9706

2½h.p. Enfield, 2-speed, 1920, good condition; £35. —15, Toller Drive, Bradford. (P) [9497

ENFIELD 1922 8h.p. Combination, new, in stock; £140.—Ginger, Enfield Agent, Banbury. [9592

ENFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

ENFIELD 2¼h.p. 1921, 2-speed, as new, lamps, tools, etc.; £37.—19, Valnay St., Tooting. [9358

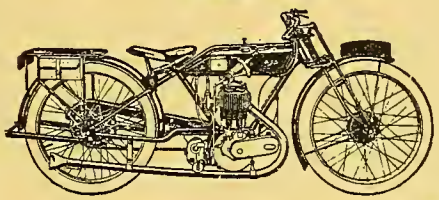

# Don't run needless risks.

GET IT AT

# TAYLORS

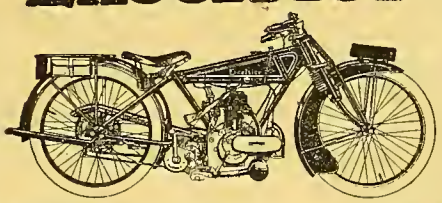
## Sole London Agents and largest suppliers of

# A·J·S



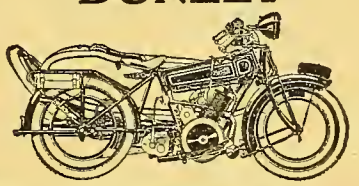
**A.J.S,** 2¾ h.p. Solo .. .. .. .. .. £85
**A.J.S.,** 2¾ h.p. Comb. .. .. .. .. £110
**A.J.S.,** 7 h.p. Comb. .. .. .. .. £175
**A.J.S.,** 7 h.p. 2-seater Comb. .. .. .. £185

# "Excelsior"



**EXCELSIOR,** 8 h.p. de Luxe Comb. .. .. £155 0
**EXCELSIOR,** 6 h.p. Combination .. .. £133 0
**EXCELSIOR,** 2¾ h.p. Blackburne .. .. £75 0
**EXCELSIOR,** 2½ h.p. Sports Model .. .. £39 18

# DUNELT



**DUNELT,** 4½ h.p. Combination, 2-stroke, spare wheel and tyre .. .. .. £113 8

**EASY PAYMENTS IF DESIRED.**

## H. TAYLOR & CO., LTD.

Showrooms—
Motorcycles and Cars,
**52-53, Sussex Place, South Kensington.**
Accessories, Spare Parts and Repairs,
**21a, Store Street, Tottenham Court Road, W.C.1.**
Wholesale—
**38, ALFRED PLACE, W.C.1.**
Garage—Tottenham Court Road, W.1.

Telephones: Accessories and Repairs, Museum 1240.
Motorcycles and Cars, Kensington 7260.
Telegrams: .. "Dynametro, Westcent, London."


## MOTOR CYCLES FOR SALE.

### Enfield.

ENFIELD Twin 3h.p. 1918, 2-speed, overhauled; bargain, £35.—Clissold, Iffley Rd., Oxford. [8717

1920 Enfield, 2¼h.p., 2-speed, lamps, horn, tax paid 1922; £32.—23, London Rd., Salisbury. [5550

ENFIELD 1918, o.v., mechanical oiling, K.S.; £38.—Wellsman, 45, Autrobus Rd., Chiswick, W.4. [9699

LATE 8h.p. Enfield Combination, excellent condition; £75.—17, St. Charles Square, W.10. [9258

NEW 1921 Lightweight Enfield and accessories; £60.—Bounds, Garage, 223, High Rd., Kilburn. [9708

1920 Enfield-Jap 6h.p. Combination, good condition, little used; £95.—25, Airedale Rd., Balham. [9995

ENFIELD 1921 2-stroke, very little used, appearance as new; £46.—Mylam, 197, London Rd., Croydon. [8919

3h.p. Enfield, 2-speed, chain drive, mechanical lubricating; £26.—Carter, Rose Bank, The Mount, Shrewsbury. [1124

MOTORIA, Regent Parade, North Finchley.—1922 models Enfield in stock; deferred payments; repairs. [6480

ENFIELD, 1920, 8h.p., Magdyno Combination, tax paid; £110; exchange Triumph C.S.—H. Rock, Cradley, Staffs. [9280

ENFIELD.—All models in stock, immediate delivery; cash or deferred.—The Layton Garages, 30, Holywell St., Oxford. [9816

ENFIELD 1921 Combination, Colonial model, brand new; accept £115.—The Layton Garages, 30, Holywell St., Oxford. [9799

1922 Royal Enfield 8h.p. Combination, Lucas Magdyno, horn; £158.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [8845

DAN GUY, Weymouth.—Enfield 1921 8h.p., Magdyno, double-seated sidecar, hood and screen, guaranteed perfect; £125. [0818

ENFIELD 2¼h.p., 2-speed, 1921, mileage 300, equipped, tax paid; £42.—Hillier, 216, Portobello Rd., North Kensington. [9470

£36.—1921 2-stroke 2-speed Enfield, bargain.—W.J.C. Motor Exchange, 5, Addison Ave., Holland Park, W.11. Park 2071. [9963

IN Stock.—1922 8h.p. Enfield Combination, £140; also 2¼h.p. model, £55.—D. and S. Autocar Co., 33, The Parade, Golders Green. [9838

1915 Enfield Combination, just overhauled and coachpainted, speedometer, Cameo; £75.—Warner, 3, Clyde Rd., Croydon. [9398

ENFIELD 2¾h.p. twin, good condition, 2-speed, clutch, new Dunlops; £25; tax paid.—26, Thornfield Rd., Shepherds Bush. [9130

ENFIELD 3h.p., 2-speed 1917, fully equipped, will take sidecar, any trial; £33.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [9772

£75.—1918 Enfield Combination, Easting, Tan-Sad, speedometer, lamps, lately overhauled, insured.—Harris, 19, The Park, Ealing, W.5. [8658

CROYDON and District.—Sole official appointed agent for Royal Enfields.—A. F. Pulling, 175a, London Rd., Croydon. 'Phone, 1619. [6951

ROYAL ENFIELD Combination 8-10h.p., perfect condition, tax and insurance paid; £90.—24, Palmerston Rd., Walthamstow, E.17. [8798

BRAND New 1922 Enfield Combination, unregistered, unscratched; take £135, or nearest offer.—Hosking, Lavadra, Okehampton, Devon. [6297

ROYAL ENFIELD 3h.p., 2-speed, fully equipped, too fast for owner; sell £38, or exchange modern 2-stroke.—3, Rhine Villas, Clacton-on-Sea. [8878

ENFIELD 6h.p. Combination, pleasure and trade box bodies, good running order and condition; £75.—Heybourn, Grand Garage, Maidenhead. [9152

ENFIELD.—Complete range of 1922 models for immediate delivery. Cash! Exchanges! Easy payments!—P. J. Evans, John Bright St., Birmingham. [8974

ENFIELD-J.A.P. 1920 8h.p. Magdyno Combination, insured March, new condition, only wants seeing; nearest £115.—14, Canonbury Rd., Ramsgate. [9600

ENFIELD 2¾h.p., 2-speed, fully equipped, tax paid, new Dunlop tyres; any trial; bargain, £25.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [9424

£50.—6h.p. Enfield combination, excellent condition and appearance, lamps, horn, tools, any trial.—Langford's, 37, Cricklewood Broadway, N.W.2. [9713

ENFIELD, 1922, immediate delivery of all models.—Standard, £140; Magdyno, £158; 2¼h.p. sports, £55.—The Layton Garages, 30, Holywell St., Oxford. [9811

1921 Enfield 2-stroke, kick start, as new, lamps, tax and insurance paid; £40; seen by appointment.—Chappell, 37, Prospect Hill, Walthamstow. [9977

## MOTOR CYCLES FOR SALE.

### Enfield.

ENFIELD 2½h.p., 2-stroke, 2-speed, 1921, electric lighting (battery), perfect condition, new tyres; £38.—Fry, 418, Strand, W.C.2. 'Phone: Regent 3815. [9070

1921 Enfield-Vickers Combination, electric lighting, Easting, small mileage, excellent condition; £110; after 6 p.m.—58, Osborne Rd., Forest Gate, E. [9161

ENFIELD Combination, 6h.p., dynamo lighting, hood, screen, accessories, recently overhauled and tyred, must sell, going U.S.A.—121, Forest Lane, Forest Gate. [9274

ENFIELD 6h.p. Combination, late model, about 1918, in very good condition; accept £65 cash for quick sale.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [1088

LATE 1921 Enfield 2-stroke, 2 speeds, kick start, fully equipped as new, tax paid; any trial given; 39 gns.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [9422

1917 Enfield Combination, 2-seater sidecar, fully equipped, tax paid, electric lighting, lot like new; 78 gns.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [9425

1920 6h.p. Enfield Combination, Magdyno, speedometer, Easting, Tan-Sad, spares, tax paid, insured, perfect condition; £110.—19, Ardfern Ave., Norbury, S.W.16. [9063

ENFIELD 1922 Solo and Combinations for immediate delivery; see Exchange columo.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [9635

ENFIELD 6h.p. Combination, J.A.P. engine, just overhauled, good accessories, folding windscreen, grand outfit; £70; take half down.—Bunting's Exchange, Wealdstone. [9756

ENFIELD 6h.p. Combination, pre-war, excellent running order, good general condition, lamps, speedometer, horn, strong luggage carrier; £70.—Brain, Strand, Bideford. [9511

1921-22 Enfield Combination, practically unused, dynamo, Easting screen, child's seat, taxed, lovely outfit; £125.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [9916

6h.p. Enfield Combination, in splendid order throughout, fully equipped with all lamps, Bluemel sidecar screen, tools, etc., all new tyres; £65; any trial.—Day, Okehampton. [8716

ENFIELD 1921 8h.p. Tandem Combination, 2 Cameo screens, Tan-Sad, speedometer, etc., tax paid, splendid condition; £130. Evenings.—343, Grove Green Rd., Leytonstone. [9078

ENFIELD Combination, late 1920, 8h.p., Magdyno, hood, screen, side curtains, mileage 5,000, tax paid, as new; £100.—Rolls, 4, Little Cadogan Place, Pont St., S.W.1. Victoria 4422-3. [8624

ENFIELD Combination, late model, completely overhauled, privately owned too fast present owner; cash offers wanted; G.N. 1920 also.—437, Brighton Rd., Croydon. Tel.: Purley 1067. [8811

6h.p. Royal Enfield Combination, 1917 (late), recently thoroughly overhauled and renovated like new throughout, electric lamps, Easting windscreen; £90.—White, 38, Bridge St., Banbury. [6136

ENFIELD Combination, 8h.p. new June, 1921, ridden 5 months, perfect, lamps, speedometer, Tan-Sad, windscreen etc., many spares, any trial; £95.—Major Dalton, c/o Caffyns, Bexhill. [8792

ENFIELD Combination, late 1921, 8h.p. Vickers engine, fully equipped, Easting, mileage 600, as new, tax paid, any trial, cost £170; sacrifice £125; no offers.—148, Henwick Rd., Worcester. [9510

1922 (April) Enfield Vickers Combination, mileage 100 only, guaranteed as new, full equipment, tax paid, cost £152; sacrifice £130, or exchange 1922 solo and cash.—Purnell, 73, Regent St., Gloucester. [8956

NEW 1922 Enfield 2-seater Combination, Magdyno lighting, horn, hood, windscreen; £172; an ideal outfit for the family man; easy payments only 4 per cent. extra.—Premier Motor Co., Aston Rd., Birmingham. [8455

ENFIELD 1917-18 6h.p. Combination, engine No. 57942, Lucas dynamo lighting, horn, Easting, new cover and tube, back wheel, tax paid June; £90.—Penn, 82, Meadvale Rd., Ealing. 'Phone: Central 11767. [9359

FOR Sale.—1921 8h.p. Royal Enfield Combination, including hood, screen, apron, mudshields, speedometer, Brooks cantilever saddle, Magdyno lighting, Tyneside pillion seat, all in first-class order, little used; £140, or near offer; owner buying a car.—Sheppard, 59, Northwick Rd., Evesham. [8664

ROYAL ENFIELD, 1921, Vickers 8h.p. engine, Lucas Magdyno combination, Smith's speedometer, horn, Sandum dual purpose 2-seater sidecar, windscreen, side screens, low mileage, licence and insurance paid, splendid order; sacrifice £130; private owner.—143, Sunderland Rd., Forest Hill, London, S.E. [9583

# 'WHITSUN' Awheel

## —get your mount at "The Birmingham House for Motorists."

Here you can obtain any leading make of motor cycle "right away"—either for cash or on our easy deferred payment system. Call NOW and ensure getting your mount in good time for "WHITSUN."

# ALL IN STOCK

## —ready for immediate use.

### SOLO Mounts :—

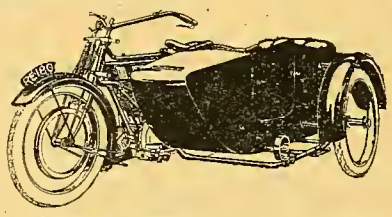
| | |
|---|---|
| **ENFIELD,** 2¼ h.p., 2-speed | £55 |
| **TRIUMPH,** 2¼ h.p., 2-speed | £65 |
| **JAMES,** 2¼ h.p., 2-speed | £55 |
| **NEW IMPERIAL,** 2¾ h.p., No. 3, 3-sp., K.S. | £73 |
| **TRIUMPH,** 4 h.p., Type H, 3-sp., K.S. | £105 |
| **MASSEY-ARRAN,** 2¾ h.p., B, 2-sp., K.S. | £72 10 |
| **ROVER,** 4 h.p., 3-speed, K.S. | £100 |
| **NEW IMPERIAL,** 2¼ h.p., No. 5, 3-sp. | £80 |
| **NORTON,** 3½ h.p., Model 16H | £115 |
| **N.U.T.,** 3½ h.p., Twin, 3-sp., K.S. | £100 |
| **ENFIELD,** 2¼ h.p., 2-stroke, Sports | £55 |
| **INDIAN,** 4 h.p. Scout, G.E.21, elec. equipped | £110 |
| **JAMES,** 3½ h.p., Twin Sports model | £105 |

### SIDECAR Outfits :—

| | |
|---|---|
| **A.J.S.,** 7 h.p. com., Inter wheels | £175 |
| **DOUGLAS,** 4 h.p. com., fully equipped | £135 |
| **ENFIELD,** 8 h.p. combination | £140 |
| **HUMBER,** 4½ h.p. combination | £144 |
| **INDIAN,** 7-9 h.p. com., elec. equipped | £175 |
| **JAMES,** 7 h.p. com., Inter wheels | £160 |
| **TRIUMPH,** 4 h.p., Type H, special sidecar | £125 |
| **ROVER,** 6 h.p. combination | £155 |

### SPECIAL BARGAINS.

| | |
|---|---|
| **CALTHORPE,** 3 h.p. com., 2-sp., K.S., with M.L. Maglita set complete | £75 |
| **EDMUND-BLACKBURNE,** 2 h.p., 2-sp., K.S. | £68 |
| Similar machine with J.A.P. engine | £58 |
| **HUMBER,** 4½ h.p. combination | £125 |
| **MASSEY-ARRAN,** 2¾ h.p. J.A.P., 2-sp., K.S. | £58 |
| **TRIUMPH,** 2¼ h.p., 2-speed | £55 |



8 h.p. **ROYAL ENFIELD** Combination £140
2¼ h.p. Lightweight £55

Expert Tuition free—exchanges arranged—deferred payments. We attend to registration, etc., and fix you up ready for the road.

# P.J.EVANS

*"The Birmingham House for Motorists"*

**81-91, JOHN BRIGHT ST., BIRMINGHAM.**

'Phone: Mid 2910. 'Grams: "Lytcar, B'ham."

## MOTOR CYCLES FOR SALE.

### Enfield.

ENFIELD 1922 Combination, Magdyno, ele horn, Bonniksen, hood and screen, tax paid 1922, indistinguishable from new, originally cost £ accept £142/10.—The Layton Garages, 30, Holy St., Oxford. [

1917-18 8h.p. Enfield Combination, stored 2 ye mileage 6,000, perfect condition, many provements, fully equipped, hood, screen, spares, macintosh suit, any trial; appointment; bought £90.—M., 369, Victoria Park Rd., London, E.9. [

8h.p. Royal Enfield Combination, new 1922 mo £140, and dynamo lighting; also sports 2½ 2-speed 2-stroke, £55; 1915 6h.p. combination speeds, £67/10; easy terms and exchange.—V chope's, 9, Shoe Lane, London. 'Phone: Hol 5777. [

1921 Enfield 8h.p. Double-seater Combination, dyno, speedometer, Lucas horn, lamps, mi foot Klaxon, pillion seat, picnic box, spare tyre carrier, special front screen, hood, side curtains, spares, sidecar seats, adult and 2 children; £1 6, Church Rd., Erith. [

ENFIELD Specialists.—Wanted, your present m cycle in part exchange for any new m from stock. No waiting. Distance no object. prices allowed for second-hand machines. Defe payments, see column advertisement.—Bambers, Eastbank St. Southport. 'Phone: 607. [

*Spare Parts.*

ENFIELD Spares.—Immediate delivery.—Kays Bond St., Ealing. [

ENFIELD Spares and Repairs a speciali Pulling's Garage, London Rd., Croyden. "P 1619. [

### Excelsior.

1918 British Excelsior Combination, 8h.p. J. electric light, in very good condition, espec engine; offers.—Colin Cooper, Markham, Dockma Chesterfield. [

1921 (Oct.) Excelsior Combination, 4½h.p. speed, hand clutch, accumulator lighting cellent condition, any trial; £85; tax paid.—E 37, Marine Terrace, Margate. [

BRITISH EXCELSIOR, 1921 De Luxe combina 8h.p. Jap, Magdyno lighting, speedometer, E four interchangeable wheels, legshields, discs, pe condition; £115.—Hughes, 95, Fernhead Rd., Kil W.9. [

### F.N.

6h.p. F.N., 2-speed, clutch; after 6 p.m.; £45. Dudley Rd., Southall. [

£12/10.—F.N. 2¼h.p., 2-speed, clutch, good ride away.—Comyns, Chemist, Carshalton. [

F.N., 4-cylinder, excellent running order; offers?—Moore, Park Hotel, Wood Vale, Oak, S.E.23. [

F.N. 1914 Combination, 7h.p., 3 speeds, kick st accumulator lighting, attractive in appea and mechanically as new; £75.—A.J.S., 32, B Park Rd., Brentford. [

LANGFORD'S, 37, Cricklewood Broadway, Lo N.W.2.—1922 8h.p. 4-cylinder F.N., with o.h.i.v. engine, 3-speed gear, and no-trouble shaft £135; 2½h.p., £55. Highest price for your p machine in exchange.

F.N.'s, 8h.p. new type, overhead valves, £135; sidecar, £174; 3h.p. new type, overhead valve kick starter, hand-controlled clutch and 2-speed £72; a 2½h.p., 2-speed, hand-controlled clutch kick starter, side valves, £55. Easy terms an change.—Wauchope's, 9, Shoe Lane, London. 'P Holborn 5777.

*Spare Parts.*

F.N. Spares.—We can supply for all models 1904; prompt attention to inquiries.—Lang 37, Cricklewood Broadway, London, N.W.2.

### Harley-Davidson

SHEFFIELD Agent for Harley-Davidsons; £120.—Stacey, 12, Ecclesall Rd.

1920 Harley-Davidson Combination, as new; 24, Balliol Rd., North Kensington.

1919 Harley Combination, 2-seater, not used £90.—81, Dundee Rd., South Norwood.

1922 Harley Combination, not been on road; cash wanted.—Box 1,545, c/o *The Motor*

HARLEY Combination, 2-seater, sidecar, taxed, must sell; 60 gns.—79, Bedford Hill ham.

1919 Harley Combination, bulbous back si perfect; £80; or exchange.—49, Dagmar Wembley.

MOTORIA, Regent Parade, North Finch Harleys 1922 models in stock; deferred ments; repairs.

HARLEY-DAVIDSON Combination, electric hargain, £85.—Whitehead, 113, Selhurst South Norwood.

## MOTOR CYCLES FOR SALE.

### Indian.

IAN 1915 7-9h.p. coachbuilt Combination, 3-eed, lamps, complete, tax paid· a bargain,· £49. ire, 6, Wrotham Rd., Camden Rd., London. [8743

p. Powerplus Indian Outfit, late 1920, Tandem idecar to match, take two adults, dynamo light-et, horn, speedometer, 2 screens, hood, all acces-perfect order, trial; have bought car.—K. Green, ornwall Av., Wood Green, N. [8704

IAN Combination, late 1920 Powerplus, dynamo, ecial tool box and· pillion seat, electrically lit ometer, ditto watch and amptmeter, aluminium elds and number plates; £105.—1, St. Leonard's Surbiton. [8663

IAN 7-9h.p. o.h.v. S frames, 28×3 front wheels, less fittings, 15/6; Pet tanks, less in-s, 12/6; every part for Indian spring-frame from stock, new and second-hand; stamp.—n, 45, Handcroft Rd., W. Croydon, Surrey. [9333

, cost £250; late 1920 7-9h.p. Powerplus Indian Combination, dynamo lighting, 3 electric lamps, ic horn, speedometer, ammeter, pump, tools, ields, tax paid, luxurious machine, any trial; nges.—Smith's, 86, Chalk Farm Rd., N.W.3. [9765

.9 7-9h.p. Powerplus Indian, 3-speed, clutch, K.S., large P. and H. lighting, mechanical horn, etal spring wheel, girder axle sidecar, recent anl. new bearings throughout, tools, fully in-. tax paid, beautiful condition; £75.—Trench, lay House, Southampton Row, W.C. Central [3920

SATIONAL Bargain.—Indian 7-9h.p., spring rame, dynamo lighting, Henderson Elite sidecar, ic horn, speedometer, Sterling legshields, alu-m number plates. This superb outfit was pur-l in February, and is absolutely new, having nly 229 miles. Owner bought car. Full year's aid; £135.—Delancey St. Garage, Camden Town, t. [9091

21 Colonial 7-9h.p. Powerplus Indian with Swan torpedo sidecar, electric and compressed gas ng, spot light, Ace seamless discs, direct plated sts. T.T. handle-bars, Triplex windscreen, all s, tools complete, so far untouched for speed or fully insured, tax paid, any trial, perfect; selling abroad; near £130.—Capt. Bullock, Maresfield Uckfield. [9176

CIAL Model Indian Scout, 1921, electric lights, yres like new, just thoroughly overhauled by s, do 70 m.p.h., ridden by Le Vack in many and competitions, winner of over 40 gold s and trophies; exceptional opportunity to se a really fast, all-round machine; £80, or ex-e combination.—30, Belsize Park Gdns., Hamp-'Phone: 5590. [1108

NGFORD'S, Indian Specialists, can supply all 1922 models. In stock.—4h.p. Scout, £112; rd Junior sidecar, £134; Swan sports, £137/10; uxe, £147; 7h.p. combination, £175, with dy-and speedometer; Chief, £199, with ditto; ex-e your present machine for one of these magnifi-models; we can allow you highest prices; write, or 'phone for full particulars.—Langford's, 37, ewood Broadway, N.W.2. Hampstead 8616. [9717

*re Parts:*

IAN Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7544

DFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all Indian spare parts in stock. Write for free spare part list, stating of manufacture . [0752

IAN.—The Dennis Accessories Stores 89, Brix on Rd., London ('Phone: Brixton 3129), supply arts from stock, new and second-hand They pecialise in Indian repairs [6788

IAN Spares.—New and second-hand for all odels; all second-hand spares sent on approval; call, or 'phone; we can save you money.—ord's, 37, Cricklewood Broadway, N.W.2. Hamp-8616. [9718

### Ivy.

Combination 3¾h.p., coachbuilt, tax paid, horn, mps; £38; cycle accepted part payment.—180, nock Rd., Islington. [9190

PE 1921 2½h.p. Ivy, 2-speed, clutch, and kick tarter, perfect condition, all accessories; £52/10, -J. R., 24, Sheffield Terrace, London, W.8. [8671

, June, 1920, 2½h.p., 2-speed, lamps, horn, tax id, excellent condition, unused since Christmas; after 5.30 p.m.—71 Manor Park, Lee, S.E.13. [8762

### Ixion.

DN-VILLIERS (1920), Sturmey gear box, clutch, ick start, Klaxon, footboards, tax paid, perfect ion; £38.—Hadden, 1a, Willowbrook Rd., Peck-[8570

### James.

IES 1920 3½h.p. Twin, brand new; £95, bar-gain.—Ginger, James Agent, Banbury. [9594

DOW, Wolsingham, Durham.—4¼h.p. James combination, 1919 model, windscreen, lamps; [9134

## BELOW IS A LIST OF

# New 1922 Models

## THAT ARE ACTUALLY IN OUR SHOWROOMS AND ARE THEREFORE AVAILABLE FOR

# IMMEDIATE DELIVERY

## MOTOR CYCLES.

| | |
|---|---|
| **A.J.S.,** 7 h.p., Model D Combination, with dynamo lighting | £195 |
| **ALLON,** 2¾ h.p., Standard Model | £60 |
| **ARIEL,** 3½ h.p., Sports Model | £87 10 |
| **ARIEL,** 3½ h.p., Sports Model with kick starter | £90 |
| **B.S.A.,** 4½ h.p., Model H2, All-chain | £110 |
| **B.S.A.,** 4½ h.p., Model H2, combination | £142 |
| **B.S.A.,** 4½ h.p., Model K2, Chain-cum-belt | £107 |
| **B.S.A.,** 4½ h.p., Model K2, Combination | £139 |
| **DOUGLAS,** 2¾ h.p., 2 speeds, All on | £63 |
| **DIAMOND,** 2¾ h.p., Model F, 2 speeds, cl., and k.s. | £60 18 |
| **DIAMOND,** 2¾ h.p., Model F, 3 speeds, clutch and kick starter | £65 2 |
| **EXCELSIOR,** 2¾ h.p., Blackburne engine, Sporting Model | £75 0 |
| **HAWKER,** 4½ h.p., and Sidecar, 3 speeds, clutch and kick starter, All-chain drive | £105 |
| **LEVIS,** 2¼ h.p., 2 speeds, clutch and kick starter | £60 |
| **MATCHLESS,** 8 h.p., Model H2, Standard Comb | £170 |
| **MATCHLESS,** 8 h.p., Model H2, Combination, with dynamo lighting | £188 |
| **MATCHLESS,** 8 h.p., Model J, with touring sidecar | £180 |
| **MATCHLESS,** 8 h.p., Model H, 2-seater Combination, with dynamo lighting | £193 10 |
| **NEW IMPERIAL,** 2¾ h.p., Model No. 2, Chain-cum-belt | £69 |
| **N.U.T.,** 3½ h.p., Twin, Model M, Chain-cum-belt | £100 |
| **N.U.T.,** 5 h.p., Model M, All-chain drive | £120 |
| **QUADRANT,** 4 h.p., Combination, Chain and belt | £100 |
| **QUADRANT,** 4 h.p., Combination, All chain | £105 |
| **ROYAL ENFIELD,** 8 h.p., Standard Combination | £140 |
| **ROYAL ENFIELD,** 8 h.p., Combination, with dynamo lighting | £158 |
| **ROYAL ENFIELD,** 2¼ h.p., 2 speeds | £55 |
| **ROYAL ENFIELD,** 2¼ h.p., 2 speeds, with kick-start | £57 |
| **RDVER,** 4 h.p., 3 speeds, All chain | £100 |
| **ROVER,** 4 h.p., with Corvette Sidecar | £120 |
| **SIRRAH,** 2¾ h.p., Blackburne engine, Model S3 | £67 |
| **TRIUMPH,** 4 h.p., Model H, Chain-cum-belt | £105 |
| **TRIUMPH,** 4 h.p., Model S.D., All-chain | £115 |
| **TRIUMPH,** 2¼ h.p., 2-stroke, 2 speeds | £65 |
| **ZENITH-BRADSHAW,** 3½ h.p., Model Gradua gear | £113 |

## LIGHT CARS.

| | |
|---|---|
| **ROVER,** 8 h.p., Standard Model | £220 |
| **CALCOTT,** 10 h.p., Standard Model | £359 |

## *EXCHANGES AND DEFERRED PAYMENTS ARRANGED.*

# The Eastern Garage Co.

**(Official Repairers to R.A.C., A.C.U., A.A. and M.U.),**

## 418, Romford Road, Forest Gate, E.7.

Telephone: 490 East Ham.

Telegrams: "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### James.

19[14] 4¼h.p. James, £28; or exchange lightweight. —Stevens, 46, Stroud Green Rd., Finsbury Park. [9345

19[20] 3½h.p. Twin James, lamps, and tax paid; £50.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [9830

4¼h.p. James Combination, 3-speed, licensed, excellent condition, accessories; £60.—48, Lincoln Rd., East Finchley, N.2. [9561

F.O.C.H. have a James 4¼h.p. Combination, Lucas dynamo set; also 1920 4¼h.p. solo.—5, Heath St., Hampstead (near Tube). [8990

JAMES late 1919 Combination, smart, in good running condition; £95; seen after 5.30 p.m.—C. M., 14, Thornehill Rd., Croydon. [8820

19[20] James Combination, 4¼h.p., accessories, excellent condition; £75.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [8322

JAMES 1915 Coachbuilt Combination, perfect, lamps, any trial; 40 gns. or offer; must sell.—56, Swallowfield Rd., Charlton. [9664

W. WHITBY and Son.—Immediate delivery of new James models; no waiting; list free on request.—7, The Vale, Acton, W.3. [5312

19[19] James, 2-stroke, 2-speed, horn, tools, new tyres, good running order; £22/10.—King, 4, Willow Walk, Short St., Cambridge. [9911

JAMES Combination, 4¼h.p. single, countershaft, 3 speeds, kick start, all-chain drive, after 6 o'clock; £45.—156, Archway Rd., Highgate, N.6. [9513

JAMES 2-stroke, as new, guaranteed perfect, fully equipped, and Tan-Sad, tax and insurance paid, any trial; £46.—Lucas, Sleight Potherne, Devizes, Wilts. [8954

JAMES Combination, 4¼h.p., 3-speed, kick start, lamps, horn, all accessories, good tyres, perfect condition.—Lee, 49, Kingsland Rd., Broadwater, Worthing. [9597

19[22] James 7h.p. Combination, De Luxe Model, spare wheels, etc., new; £160.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0078

JAMES (Vindec) 2-strokes, 2-speed, 2 machines, property husband and wife buying runabout, excellent condition, any trial; £35 and £40.—13, Beulah Rd., Tunbridge Wells [8852

JAMES 1918 4¼h.p. Combination, 3-speed, all-chain, equipped, taxed, exceptional condition; 58 gns.; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. Open Sundays. [9300

4¼h.p. James Combination, 3 speeds, countershaft, kick start, lamps, and other accessories, very smart leather upholstered sidecar, Triplex windscreen, etc., licensed; £85.—Percy, 25, Lindon Av., N.W.10 [8860

JAMES 3½h.p. Twin, new in 1919, just overhauled, little used, equal to new, electric lighting, shields, spares, tax paid, fast, powerful, and silent, must sell; £70, or near offer.—Siggers, 56, Denmark Hill, Camberwell, S.E. [8828

NEW 1922 James Model 8A Lightweight, clutch, kick starter; £60. 3½h.p. twin Sports model. 3-speed, chain drive; £105. 7h.p. De Luxe Combination; £160. Easy payments only 4 per cent. extra; delivery free to any address.—Premier Motor Co., Aston Rd., Birmingham. [8456

3½h.p. twin James combination, 3-speed gear box, kick start, hand and heel clutch, chain cases, Binks carburetter, new head and tail lamp set, knee-grips, sprung footboards, two new tubes, one new heavy back tyre, mechanical horn, front and rear stands, tools, &c. Tax paid end 1922. Sidecar very comfortable and just re-enamelled. Outfit in fine condition, only wants seeing; £73; without sidecar £63.—Stanton, 55, Bulstrode Rd., Hounslow, Middlesex. [9133

*Spare Parts:*

JAMES Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4830

WHITBY'S for James spares and service; Agents for last 16 years.—7, The Vale, Acton. 'Phone: Chiswick 1513 [5311

### J.E.S.

J.E.S. September, 1920, splendid condition; £20.—Knowles, 29, Woodchurch Rd., Stoneycroft, Liverpool. [9035

### Kerry.

KERRY 5-6h.p. Twin, fully equipped, tax paid; £14.—17, Heaton Rd., Mitcham. [9364

KERRY 2h.p. Light Motor Cycle; £5/19/6.—Madison Bargains, Littleover, Derby. [8650

KERRY 6h.p. Twin, Bosch, countershaft, 2-speed, all chain; £18.—Captain Collins, Sunbury Common. [9533

### Kingsbury.

KINGSBURY New 2¾h.p. 2-stroke, 2-speed, clutch, all-chain drive, must realise; £39.—155, Goldhawk Rd., Shepherd's Bush. [9712

## MOTOR CYCLES FOR SALE.

### Kingsbury.

KINGSBURY 1921 2¾h.p., 2-speed, speedometer, pillion seat, tax paid, all on, perfect condition; £35.—Leighton, 8, Princess Mews, Belsize Crescent, Hampstead. [6205

1921 2¾h.p. Kingsbury, 2-speed, all chain, new and unused, slightly shop-soiled; 39 gns.; deferred payments or exchanges.—Edwards, 50, Harrington Rd., South Kensington. [1097

### Lea-Francis

LEA-FRANCIS, 3½h.p. J.A.P., September, 1919, all on, perfect condition; £50.—Smallman, Enville, Stourbridge, Worcestershire. [8905

LEA-FRANCIS 1920 3½h.p., 2-speed, kick starter, H. and F. clutch, all lamps, horn, tools, etc., only done 400 miles, guaranteed perfect; £75.—T. Garner, Windyridge, Park Rd., Barnsley. [8835

£57.—3½h.p. Lea-Francis coachbuilt Combination 1916, 2-speed, clutch, speedometer, lamp, Binks, overhauled by makers.—W. J. C. Motor Exchange, 5, Addison Avenue, Holland Park, W.11. Park 2071. [9959

### Levis.

PREMIER Motor Co. for 1922 Levis.

POPULAR 2¼h.p. single gear Levis, £48; Model S, 2¼h.p., 2-speed, clutch, £58; Model G., 247 c.c., 2-speed clutch £56; kick starter, £2 extra; easy payments, 4 per cent. extra; carriage paid to any address; all models in stock for immediate delivery.—Premier Motor Co., Aston Rd., Birmingham. [3021

LEVIS 1915 2¼h.p., Amac, E.I.C., licensed; £20.—313, St. Ann's Rd., Harringay. [8861

WAUCHOPE'S, 9, Shoe Lane, London, for new 1922 Levis motor cycles on easy terms. [9870

LEVIS 2½h.p., 2-speed, all chain, very fast, footboards; £33.—29, Brunswick St., South Hackney. [9607

MOTORIA, Regent Parade, North Finchley.—1922 models Levis in stock; deferred payments; repairs. [6481

WE are the Agents for London, S.W. Choose from our stock.—Knight's, 126, Upper Tooting Rd., S.W.17. [0778

£18/10.—Levis 2¼h.p., 2-stroke, newly overhauled, complete, lamps, etc.—Johnstone, Dovemount, Hawick. [8761

LEVIS, 1921½, 2-speed, clutch, fully equipped, first-class condition; £43.—Graham, East Lodge, Wargrave, Berks. [9292

23 GNS.—Levis, good condition throughout, accessories, full year's tax paid.—Delancey St. Garage, Camden Town, N.W.1. [9094

LEVIS, late 1920, 2-speed, clutch, kick starter, new tyres, all accessories, tax paid; £42.—S., 12, Haydn Av., Purley, Surrey. [9605

LEVIS 2¼h.p., good condition, licensed, all on; 19 gns.—Appointment to 4, Holly Mansions, Fortune Green Rd., West Hampstead. [8940

LEVIS 1920, fully equipped, tyres, enamel, and plating perfect; £38, or near offer.—Write, A. E. Cooke, 91, College Rd., Kensal Rise, N.W. [9764

LEVIS. All 1922 models. Send your orders along; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [7943

FOR 1922 Levis, the most reliable and neatest 2-stroke upon the road, send or call at Jones Garage, The Broadway, Muswell Hill, N.10. [0788

LEVIS 1922 Model G2, 247c.c., Sturmey 2-speed, clutch, kick start, Lucas electric lighting, cast aluminium numbers, horn, spares, absolutely latest model, mileage under 500, enamel, etc., perfect; £65, exchange combination considered.—G. H. Peters, Windlesham Moor, Windlesham, Surrey. [8729

*Spare Parts:*

LEVIS.—All spares or complete 1922 model cycles from stock, carriage paid.—Jones Garage, Broadway, Muswell Hill, N.10. [0807

GODFREYS', Ltd., 208, Great Portland St., London, W.1.—Complete stock of all Levis spare parts always in stock. Write for free spare part list, stating year of manufacture. [0753

### L.M.C.

£25.—L.M.C. combination, variable gear, Bosch, B. and B., tax paid; after 6 p.m.—5, Grainger Rd., Isleworth. [8930

BRAND New 1921 6-8h.p., L.M.C., Sturmey-Archer gear box, final belt drive, cost £125; sacrifice £80.—Shaw, 130, Harehills Av., Leeds. [8931

L.M.C. 6h.p. Twin, Henderson sidecar 1919-20, 3-speed, kick start, acetylene bead, accumulator side rear, tools; £72.—Apply, Pangbourne's Garage, 64, York Rd., Twickenham. [9037

### Martin.

MARTIN-J.A.P. 2¾h.p., late model, 2 speeds, countershaft, clutch, free engine; £32; apply after 6o'clock.—156, Archway Rd., Highgate, N.6. [8860


# RIDEEZI

ANY MAKE OF

# MOTORCYCLE

SUPPLIED ON OUR

# NEW SCHEME

OF

## Eighteen Monthly Deferred Payments

which gives you the privilege of paying earlier and getting a discount.

*SEND for our Extended Payment Form. We also supply the famous Rideezi Sidecars on 12 Monthly Payments. Send for Sidecar Catalogue and Extended Payment Form*

# RIDEEZI SALES LIMITED

5, Victoria Street, LONDON, S.W.1.


## MOTOR CYCLES FOR SALE.

### Martinsyde.

IN Stock.—1922 6h.p. Martinsyde combination; £160.—D. and S. Autocar Co., 33, The Parade, Golders Green. [9640

MARTINSYDE.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [4835

F.O.C.H. have a 1921 Martinsyde Combination, completely equipped, excellent condition; bargain.—5, Heath St., Hampstead (near Tube). [8991

ROBERTSONS Motors, Ltd., are the London Martinsyde Service Agents; trial runs arranged; spares stocked.—157b, Gt. Portland St., W.1. [6080

MARTINSYDE Combination, 1920, hood, screen, speedometer, lamps, tax paid, original tyres; £85.—Hillier, 216, Portobello Rd., North Kensington. [9468

MARTINSYDE 1922 3½h.p. Twin Sports Solo, shop-soiled only; £104.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [9630

FOR a 1922 Martinsyde 3½h.p. Sports or 6h.p. Combination get in touch with the North London agents, Jones Garage, The Broadway, Muswell Hill, N.10 [0788

MARTINSYDE 6h.p. Combination, with accessories, very good condition; £105.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [9639

MARTINSYDE Combination, October, 1921, perfect as new, decarbonised, overhauled completely by makers.—Williams and Fry, 31, Buckingham Palace Rd., S.W.1. [9545

MARTINSYDE Solo and Combinations for immediate delivery; best prices allowed on machine taken in part exchange.—Newnham Motor Co., 223, Hammersmith Rd., W.6. [9629

MARTINSYDE Combination 1921 6h.p. twin, acetylene lighting, mechanical horn, in splendid order and condition, open to expert examination; £120.—Borer, Builder, Keston, Kent. [9588

### Massey-Arran.

KICKHAM, Stokes Croft Bristol, Sole District Agent for Massey-Arrans; unequalled service, repairs, etc. [314

MASSEY-ARRAN 2¾h.p., J.A.P., 2-speed, K.S., slightly shop-soiled; £58.—P. J. Evans, John Bright St., Birmingham. [8980

### Matchless.

TRY Julians of Reading.—Matchless Model J, Touring, in stock. [5700

CROSS, Effingham Sq., is Agent for Matchless motors in Rotherham. [9690

MATCHLESS Combinations.—Fine assortment of second-hand models.

1921 Double-seater Model, like new, dynamo lighting; 155 gns.; tax paid.

1920 Model H, dynamo lighting, full accessories, tax paid; £130.

1921 Sports Model, acetylene lighting, grand condition; £135.

1921 Standard Model H, acetylene lighting; £140.—Ross, 86, High Rd., Lee, S.E. [8955

SHREWSBURY Agent, Matchless, early delivery.—Pickering, Mardol, Shrewsbury. [9610

MAUDES' Motor Mart, London, Exeter, Walsall and Norwich.—Largest Matchless agents. [9730

1920 Matchless, M.A.G. dynamo, hood, screen, speedometer, spare wheel, tax paid; £120.—Below.

1922 Matchless H2, M.A.G. dynamo, brand new but shop-soiled, listed £190; accept £168.—Daw, Matchless Agent, 114, Brixton Hill. [1030

1914 7-9h.p. Matchless Combination, M.A.G., electric lamps, tax paid; £70.—Daw, 114, Brixton Hill. [1030

MATCHLESS Combination, 1915-16, enamelled plated like new; £82.—81, Dundee Rd., South Norwood. [8660

MATCHLESS.—Order your Matchless from the Linton Garages, 30, Holywell St., Oxford. Cash or deferred. [9830

1919 Victory Matchless Combination, new condition, equipped; £90; seen 30, Canterbury Rd., Kilburn. [1030

MATCHLESS.—All models from stock; highest exchange allowances.—Agents, R. B. Clark and Co., 7, Exhibiton Rd., S.W.7. [4660

MATCHLESS 1920 M.A.G. Combination, splendid condition, tax paid; £130.—Webber, 63, Glenparke Rd., Forest Gate, E.7. [8700

1919 Matchless combination, hood, screen, lamps, speedometer, spare wheel; £95, exchange light car.—18, Spring St., Brighton. [9100



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Rex.

X Combination 6h.p., 2-speed, running order; £30.—Orchard Villa, Staines Rd., Ashford Com. Middlesex. [8907

3 5-6h.p. Rex and sidecar, 2 speeds; £35 or near offer; ride away.—108, Sandymount Rd., on-Dearne. [8787

2 New Rex Acme 2¾h.p., 3-speed model; £56 10; easy terms and exchange.—Wauchope's, ve Lane, London. [9866

X Sports Model, 3½h.p., 2 speeds, clutch, enamel nd condition very good, fully equipped; £28.— 2, Southwood Lane, Highgate. [9157

4 8h.p. Rex Combination, 3-speed A.J.S. gear box, chain drive, fully equipped, licensed, any £40.—37, Arlington Rd., Surbiton. [9331

2 Rex-Acme, 2¾h.p. Blackburne, all-chain, 3-speed, kickstarter, instant delivery; £78/10. nges.—Kents, 417, Lord St., Southport. [9230

1 Rex-Blackburne 8h.p. Combination, dynamo lighting, interchangeable wheels, splendid outargain, £105; or exchange solo.—143, Ravens-Rd., Earlsfield, S.W. [9929

X 1921 8h.p. Blackburne Combination, latest type engine, dynamo lighting, special aluminium porting sidecar, Auster screen, beautiful condi- £120.—R. B. Clark & Co., 7, Exhibition Rd., Kensington. [1085

2 Rex-Acme, latest model G, immediate delivery. 'Phone: Greenwich 751. All-chain drive Blackburne engine, Sturmey-Archer gear with clutch, interchangeable and detachable wheels, band brakes, spring seat-pillar, etc., special ed chassis, with luxurious sidecar; a combinabristling with refinements at £150, complete. nd inspect same in my showrooms, catalogues pleasure.—The agent for all high-class produc- is Sam E. Clapham (Motors), 27, Stockwell St., wich, S.E.10. [3053

### Reynolds.

YNOLDS Open-frame Motor Cycle, passenger eat, 2-speed, clutch, kick start, demonstration cycle, run about 150 miles; £57/10.—Griffin, bbson St., Westminster. [1060

YNOLDS Runabout Motor Cycle, just delivered ew, cost £79; owner too nervous to ride; accept for quick sale.—Apply, Mrs. Thomas, Long- w Cottage, Moor Sarratt, Herts. [5798

### Rover

VER 1919 Combination, well enuinoed, taxed; 270.—Clark, 7, Exhibition Rd., S.W.7. [4614

9 T.T. Rover, all accessories, excellent condition; £45.—75, Cobham Rd., Seveo Kings. [9506

VER 3½h.p., overhauled, fast and powerful; £15; xchange.—284, St. James Rd., Old Kent Rd. [1015

p Rover Combination; £46; or exchange.— Southhill, Streatham Common North, S.W.16. [8612

VER 3½h.p., 3-speed, F.E.; bargain, £30, or ear offer—14, Elphinstone Rd., Winn's Av., amstow. [8635

VER, new T.T. model, just arrived from makers, ixed gear, 650 tyres; £75.—Brown, High St., Suttoo, Lincs. [9501

5 3½h.p. Rover, 3-speed hub gear, in good condition, tax paid, lamps, horn, etc.—Offers to Jones, Henblas, Bala. [7085

VER 5-6h.p. 1919 Combination, hood, screen, l accessories; £75; splendid condition.—Parks, ingley Rd., Catford, S.E. [9061

.p. Rover, 3-speed, countershaft, clutch, and kick start, condition almost as new; £55.—Rhind o., Stone Place, Rusholme. [9673

0 Rover 3½h.p. Combination, Canoelet sidecar, oversize tyres, long exhaust; bargain, £78.— 12, Bridge St., Cambridge. [8839

1 3½h.p. Rover Road Racer, Philipson pulley, including accessories and tax paid; £65.—Seen uchope's, 9, Shoe Lane, London. [9864

VER 1920 3½h.p., fully equipped and equal to new; the above represents exceptional value at The Layton Garages, 30, Holywell St., Oxford. [9802

VER 1920-21 Combination 5-6h.p., complete, mp, horn, spares, licence paid; 95 gns., or t.—Sleath, 137, Tachbrook Rd., Leamington [8853

.p. Rover Combination, 1919-20, electric lamps, owey, windscreen, dashboard instruments, tools, ondition; £92/10.—73, Windermere Rd., South [9711

.p. Rover Combination, 1914, Sturmey hub, Bosch, Amac, clutch, kick starter, carefully fully equipped, licensed; £52/10.—63, Palmer- Rd., East Sheen. [8805

VER Combination, 6h.p., 1920, horn, speedometer, lamps, windscreen, mileage 1,000, perfect ion, Sheffield district; £90 or near.—Box 1492, *he Motor Cycle.* [8737


# WATCH THIS COLUMN
EVERY WEEK FOR
# BANCROFTIAN CO.'S BARGAINS.

**Advertisers in "The Motor Cycle" from its first publication.**

**TYRES.**—Manufacturers' clearance stock, not W.D. Although clearance, they are new and perfect. Wood Milne extra heavy, 4-ply, 26×2½, combination, **35/-**. Pedley, 26×2¼, 3-ribbed, **25/-**. Hutchinson, 26×2¾, heavy T.T., **27/6**; Passenger, 26×2½ for 2½, **39/6**; 700×80 to fit 650×65 small car, heavy, **43/6**; light car, 750×75 for 28×3 rim, **42/-**; heavy Passenger, 26×3, **37/6**; extra strong Passenger, 28×3, **53/6**; 24×2 T.T. heavy, **25/-**; extra heavy, 3-ribbed, 700×65, **35/-**; 650×65 steel studded car type, **68/-**; original, **£6 6s.** Firestone, 20×2, Auto wheel, **21/-**; original, **45/-**; tube, **6/6**. Palmer, 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½ cord, **42/-**. Oylers, 650×65, ribbed square tread, heavy, in original packing, **27/6**; original, **45/-**. Clincher de Luxe, very heavy, 26×2½, **37/6**; 26×2 Junior de Luxe, **22/6**; 26×1¾, **17/6**. Hutchinson wired edge cover, 26×2½ and 26×2¼, **30/-** each. Postage 1/6.

**TUBES.**—24×2¼, **4/6**; 24×2, **4/6**; 26×2¼, **5/6**; 26×2½, **5/9**; 26×2⅜, **5/6**; 28×3, extra heavy, **7/6**; 700×80, **7/6**. Postage 9d.

**BELTS.**—Clincher clearance line, new, not W.D. ⅜", 6' 6", **8/6**; ⅜", 7' 6", **12/3**; 8' 6", **14/-**; 1", 7' 6", **16/-**; 8', **17/-**; 1⅛", 7', **18/-**; 8', **29/6**; 8' 6", **21/6**; Bates short lengths, ⅜", 5', **4/6**; 5' 6", **5/-**; ⅝", 4' 6", **5/-**; 5', **5/-**; 5' 6", **5/6**; 1", 2' 6", **3/-**; 3', **4/-**; 3' 6", **4/6**; 4' 6", **6 3**; leather belts, ⅜" at **2/6** per foot; belt fasteners, **9d.** and **1/-**. Postage 1/-.

**SPEEDOMETERS.**—Slightly shop soiled. Cowey with trip, **£4 15s.**; Stewart with trip (£6 6s. model), **£4 10s.**; Smith's with trip, **£4 10s.** Also Bonniksen in stock. All speedometer replacements in stock. Postage 1/6.

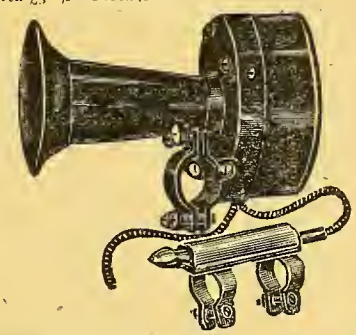
**TAN-SAD,** with back seat, **28/6**; original, **57/-**; only limited quantity. Carriage 3/6 extra.

**GOGGLES.**—Gennine Triplex, 45/- model, **10/6**; 25/- model, **5/6**. They are new and perfect. Postage 9d.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined, **7/11**; lined, **10/6**; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, **3/6**; Gloves, leather, wool lined, **4/6**. Above lines worth more than double. Limited quantities only. Order at once. Postage 6d.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coat with belt, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality, extra heavy, double texture waterproof material, dark fawn, new and fresh, only been made recently, not half-perished W.D. Our price to clear, **£2 2s.** Postage 1/6 extra. Could not be bought elsewhere under £4 10s. The greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**OILSKIN SUITS.**—Lined coat and long trousers, with bib, first-class quality, colour dark green, **17/6**, worth £3 3s' Postage 1/6.



**HORNS.**—Reliable Electric, Motor Cycle, up to 4-volt only, complete with wire and switch; usual price, 29/6, our price, **15/6**. Postage 1/3 extra. Smith's Electric Horns, black and nickel, in 6, 8, or 12 volts, large size, suitable for heavy combinations; original price, £2 15s.; our price, **30/-**. Postage 1/6. The greatest bargain ever offered. All new and perfect.

We can supply anything for the motor cyclist at competitive prices.

**BANCROFTIAN CO.,**
**78, BISHOPSGATE, LONDON, E.C.2.**
'Grams: "Chaikel, London." 'Phone: London Wall 9897


## MOTOR CYCLES FOR SALE.

### Rover

ROVER, Solo, in good running order; £12.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [9773

38 GNS.—Rover 1914 3½h.p., 3-speed, Binks carburetter, coachbuilt sidecar, 3 lamps, horn, etc., tyres practically unsoiled, full year's tax paid.—Delancey St. Garage, Camden Town, N.W.1. [9090

4h.p. 1922 Rover, genuine show model, 3-speed, H.C. & K.S., Lucas front and rear, Clayrite, W.S.R. jet, spare sprocket, tools, taxed end of year; £90.—Particulars, Brierley, 31, Mill Lane, Southport. [9347

ROVER 4h.p. 1914, 3-speed and clutch, new back tyre, new connecting rod and piston, Best and Lloyd, tax paid to Dec., insured, sporty and very reliable.—Sanders, White House, Upper West St., Reigate. [8632

1916 3½h.p. Rover combination, 3-speed, countershaft, K.S., clutch, extra heavy Dunlops, Easting, fully equipped, guaranteed perfect condition throughout; 55 gns.—27, Wandle Rd., Wandsworth Common, S.W.17. [9662

ROVER twin combination, enclosed chain, very roomy new body, locker, natural wood finish, electric light; this is an exceptionally good outfit, the pet of an engineer, any reasonable examination or trial; price 85 gns.—Apply after six, 47, Seymour Place, Edgware Rd., W.1. [9449

*Spare Parts*

ROVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4832

### Royal Albert.

ROYAL ALBERT Combination, 6h.p., 2-speed, condition as new; sacrifice £70 or near; exchange for solo and cash; trial any time; exchange offers invited.—Stace, Meopham Station, Kent. [8741

### Royal Ruby

1917 Royal Ruby 8h.p., 3-speed, K.S.; £50.—Captain Collins, Sunbury Common. [9534

ROYAL RUBY, 2¾h.p. J.A.P., 2-speed, splendid condition; £40.—Monk, New Rd., Harlow. [8892

ROYAL RUBYS.—Prompt delivery from Barlow and Son, Montoo, Eccles Tel.: 160 Eccles. [3694

ROYAL RUBY 1921 3h.p., spring frame, 2-speed, kick start, clutch, in good running order; £60.—Edwards and Davies, Malpas, Cheshire. [9464

ROYAL RUBY, 1921-21, spring frame, 2 speeds, kick start, every accessory, condition absolutely perfect, ride away; £55; after 7.—34, Summerfield Avenue, Brondesbury. [9214

ROYAL RUBY 1920 Combination, complete luggage carrier, windscreen, lamps, tax and insurance paid until 1923, absolutely O.K., no extra expense necessary, a very smart machine, trial; £112.—Glover, 26, Holland Rd., Brixton. [9499

1920 (July) 8h.p. Royal Ruby, specially tuned and fitted high-lift cams, Binks carburetter and Dunhill sidecar, whole in excellent condition, enamelled Indian red; cost over £240; sell £85, bargain.—G.M., Finchley Lodge, Gainsborough Rd., Finchley, N.12. [9636

1919 Ruby-Villiers, new Druids, haodle-bars and Klaxoo, fully equipped, pillioo, leg-shields, spring seat pillar, loog exhaust, knee-grips, mirror, excellent finish, tyres almost new, spare belt and tube, engine just overhauled by makers; £30 or offer.—West End Garage, West Byfleet. [8797

1922 8h.p. Royal Ruby—the spring frame combination par excellence—fitted with interchangeable and spare wheel, luggage and petrol carrier, Easting Sandum screen, lamps, horn, etc., all on, at £185; immediate delivery from the agent for all high-class makes, as usual.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich. 'Phone, 751. [5893

### Rudge.

RUDGE-MULTI, £28; another incomplete, £15.—Crown Garage, Weybridge. [9373

RUDGE, clutch model, good condition; £30.—146, Estcourt Rd., Fulham, S.W.6. [8751

RUDGE-MULTI, very smart, fast; must realise; first £32 secures.—67, Fernlea Rd., Balham. [1000

5-6h.p. Rudge-Multi, 1921, electric lighting, as new, 600 miles; offers.—81, Edward St., Nuneaton. [8760

5-6h.p. Rudge Combination, splendid condition, take 3 anywhere; £50.—Rev. Peacock, Buxton. [8566

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Rudge-Multi, 1919, I.O.M.; £50; easy terms. [9367

RUDGE 5-6h.p. Combination, 1920, tax paid, all on, Easting; £70.—223a, Hatfield Rd., St. Albans. [8621

RUDGE-MULTI in Stock; £77; exchanges arranged highest prices allowed.—Clark, 7, Exhibition Rd., S.W.7. [4620

3½h.p. Rudge-Multi, lamps, tax, first-class running order; £28/10.—Rhind and Co., Stone Place, Rusholme. [9674

## MOTOR CYCLES FOR SALE.

### Rudge.

1920 Rudge-Multi, absolutely as new, tax paid; £47/10.—Rhind and Co., Stone Place, Rusholme, Manchester. [9669

RUDGE-MULTI 3½h.p. 1916, new piston and bearings, excellent condition; £42.—30, Anson Rd., Cricklewood. [9110

£25.—Rudge Motor Cycle 3½h.p., splendid order throughout.—Speechley, 86, Churchfield Rd., Acton, W.3. [8942

3½h.p. Rudge-Multi Combination, coachbuilt, very reliable machine; £38.—Rhind and Co., Stone Place, Rusholme. [9675

1922 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, Muswell Hill, N.10. [0791

BRAND New I.O.M. Rudge, used once, every possible accessory; cost £90; accept £60.—24, Balliol Rd., North Kensington. [9104

NEW Rudge, 3-speed, chain drive, 3½h.p.; immediate delivery; £94; exchange.—Percy and Co., 314, Euston Rd., N.W. [9654

RUOGE-MULTI 3½h.p. (September, 1919), pedal starter, Klaxon, splendid condition; £60.—Letters, 51, Lennox Rd., Sheffield. [8667

1922 Rudge, I.O.M. model, immediate delivery from stock.—Sam E Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [1816

3½h.p. Rudge, clutch, recently overhauled and re-enamelled, good condition; £28, near offer.—282, St. Albans Rd., Watford. [9149

£77 is the price of a new Rudge. Get it from the Agents; in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17. [0836

1920 Rudge-Multi, in new condition, speedometer, lamps, etc., taxed year; £52/10.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [9917

1921 I.O.M. Rudge, little used, all on, speedometer, spare belt, beautiful condition, fast, tax; £60.—Box 1422, c/o *The Motor Cycle*. [8597

RUDGE-MULTI, 1921, mileage under 500, speedometer, all accessories, enamel unscratched, plating spotless, tax paid; £65.—12, Ditton Rd., Surbiton. [8587

1921 3½h.p. Rudge-Multi, I.O.M., as new, must sell; £62/10, near offer; fully equipped.—"Kensington Park Hotel," 139, Ladbroke Grove, W.10. [9521

RUDGE-MULTI, 3½h.p., T.T. 1921, pedal start, copper exhaust, Lucas, Tan-Sad, '22 tax, little used, perfect; £64 or offer.—39, Napier St., New Cross, S.E.8. [9406

3½h.p. I.O.M. Rudge-Multi, 1920, Cowey trip speedometer, Lucas lamps, first-class condition, low mileage, tax paid; £55.—Bull, 22, Wavertree Rd., South Woodford. [8449

RUDGE 3½h.p., free engine, a sound proposition, speedometer, and fully equipped, tax paid, good sporting mount; £22.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [9771

RUDGE Combination 5-6h.p., August, 1920, lamps, screen, tools, touring sidecar, takes 3 comfortably, like new, just decarbonised by makers, fast; £85, nearest.—75, Magdalen Rd., Wandsworth. [1035

3½h.p. Rudge-Multi, November, 1914, C.B. Millford sidecar, hood, lamps, and accessories, condition as new, any trial; £48, near offer.—Bootmaker, Station Approach, Sidcup. [9548

OCTOBER, 1919.—5-6h.p. Rudge-Multi combination, mileage only 5,000, Binks' carburetter, guaranteed sound condition, Klaxon, lamps, belts, leg-shields; £70.—Headmaster, All Saints' School, Coalville. [9581

RUDGE-MULTI Combination, tax paid, condition as new, coachbuilt sidecar, hood, cameo windscreen, reconditioned throughout, lamps, Klaxon, all on, good supply spares, including extra belt and one extra tube, new set tyres, complete, bargain; £60.—129, High St., Merton, S.W. [9414

*Spare Parts:*

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3163

### Scott.

F.O.C.E have a 1920 Scott, brand new condition; also 1914 combination.—5, Heath St., Hampstead (near Tube). [8988

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Scott and Sidecar, 1914-15, 2 speeds; £45; easy terms. [9868

SCOTT Combination, 1914-15, fully equipped; £65, or lightweight and cash; any trial.—78, Florence Rd., Southall. [9428

SCOTT, 1920, new condition, lamps, horn, speedometer, mileage under 5,000; £90.—92, Beverley Rd., Hull. (D) [9244

SCOTT 1921 (May), tax paid, all on, unscratched, mileage 1,200; £80, offer.—Turrell, 52, Berkeley Rd., Crouch End, N.8. [9135


*"What's in a Name?"*

# ALEXANDER'S
## is
# THE HOUSE
## THAT AIDS ECONOMISTS

JUST think of the many ways of saving money by dealing in the right market for all your wants. We do claim that we can help the cash economist in his motor cycle purchase. Dealing as we do in most makes of motor cycles and many light cars, conducting exchanges, distributing wholesale throughout our territory, we probably reach a turnover unequalled by any motor cycle trader in Britain.

We are always in a position to take advantage of any special manufacturers' offers for cash, which we in turn are able to offer to our clients. We carry largest possible stocks, and naturally at the end of the Season we are left with large stocks of previous Season's Machines which must be cleared quickly.

Our exchange business fills our saloons with Secondhand Machines which, owing to our large turnover, we are able to offer to the public without too closely considering profit.

The moral is that if you are wishing to economise,

## ALEXANDER'S
## IS YOUR MARKET

NOW THE BEST ADVICE we can give you is:—

Drop us a short note, stating your exact requirements, whether it be a lightweight, a medium weight or a sidecar combination of any power. State the approximate power, the approximate price you can afford. Mention any special requirement or specification. Perhaps we might put these hints into headings:—

MAKE .....
POWER .....
2 or 3 SPEED .....
WITH CLUTCH or WITHOUT .....
KICKSTART or NOT .....
SOLO or SIDECAR .....
PRICE .....
ANY OTHER REMARKS .....

You will get a reply by return, putting a list of suitable Machines before you without including such as are not likely to interest you. Our advice will also be at your service, in your selection.

And remember—if we do strongly recommend any Machine to you—you can take our assurance and our guarantee that our name goes with the purchase. We are proud of that name and we wish to preserve it as our best advertisement.

## THAT IS YOUR SAFEGUARD
## THE NAME OF
# ALEXANDER'S

We have hosts of testimonials from clients, our business methods cultivate them. One purchase at Alexander's is like sowing a seed of corn. It brings others. We have sown seeds from Land's End to John o' Groats.

## 113-115, LOTHIAN RD., EDINBURGH
## 272-274, GT. WESTERN RD., GLASGOW


## MOTOR CYCLES FOR SALE.

### Scott.

1922 Scott Squirrel, unscratched, carrier, L lamps and horn, £6 insurance, licensed; £ 70, Brunswick St., Dewsbury. [8

1921 Scott combination, sidecar just renovated, accessories and tax paid; £78.—26, Tulse Brixton. 'Phone: Brixton 1292. [9

SCOTT 1921 3¾h.p., complete all accessories, paid for 1922, excellent order; £80.—The La Garages, 30, Holywell St., Oxford. [9

£55.—Scott 3¾h.p., 2-speed, kick start, condition new, horn, licensed, small mileage.—Bee Warford St., Newtown, Manchester. [9

1921 Scott Squirrel, well kept, lamp, horn, spe meter, carrier, year's licence; £75.—Glen ning, 3, Lexham Gardens, Kensington. [9

SCOTT Squirrel, 1922, speedometer, Lucas lar mileage 450, perfect, as new, insured; £95.— Breese, Stafford Av., Melton Mowbray. [9

1920 Scott Combination, Watsonian R34 side P. and H. lamps and horn, complete, very order; £70.—Allin, 12, Bridge St., Cambridge. [8

SCOTT, 1920, in excellent condition, mechanic perfect, Binks, all accessories; £68, or exch N.U.T. or Lea-Francis.—Morgan, 49, York Rd., chin. [9

SCOTT Combination, 1920¾, mileage 3,000, b new condition, electric lighting, taxed; 68 g exchanges.—Peter Gordon, Ltd., 110, Upper Richm Rd., East Sheen. [9

1915 Scott with roomy sporting sidecar, app ance, tyres, and mechanical condition ex lent, fully equipped; lowest price £48.—Ramsay, Sussex Rd., Watford. [9

1920¾ Scott Standard Combination, speedom screen, luggage carrier, mechanically per mileage negligible, licensed December; £85, lowes 13, Penn Rd., Holloway, N.7. [9

SCOTT and Sidecar, late 1919, Easting, accesso tax, insurance, small mileage, excellent condit £75; or solo part exchange; private owner.—Pitt Aylton, Ledbury, Herefordshire. [8

£67/10.—Scott 1920 (September) 3¾h.p. Model, solutely perfect, mileage under 2,000, a sacri lamps, horn, etc.; or exchange.—G. H. Tucker, cliffe Hill, Bristol. 'Phone: 4042. [9

SOUTH London Scott Service Depôt.—'Phone don 1129 for demonstration runs; immediate livery; prices from £105.—John R. Kinsey and Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8

1920 Scott Sports 3¾h.p., very little used, Bi Lucas lamps, horn, tax, insurance, Bonnil copper exhausts optional, condition perfect, gua teed; £75.—Jessop, Wilmslow, nr. Manchester. [

1921 Scott Squirrel, absolutely unscratc original tyres, plated tank, engine No. 5 fitted with lamps, horn, and tax paid, decarbor once, guaranteed perfect; £75.—Stanley, 1, M Rd., Cambridge. [9

SCOTT 1920, engine No. 4263, and Rideezi Sp No. 2 sidecar, Watford speed, Lucas acety screen and spares, tyres in good condition, run well; would separate, solo £75, combination £9 near offer.—Clayton, 51, Chelsham Rd., Clapham. [

1922 April 3½h.p. Scott Squirrel, mileage u 500, very fast, specially tuned by ma Lucas lamps, horn, hand-controlled gears, specia haust pipe, guaranteed perfect, seen any time, paid; £90.—Jessop, Hawthorn Lane, Wilmslow, Manchester. [

1919 Scott 3¾h.p. Combination, duplex fr spring saddle, petrol tank under top tubes mounted by aluminium cover-plate, lamps, horn, Rennoc 60 gns., R.34 sidecar, windscreen; a bargain; 75 gns.—Edwards, 50, Harrington South Kensington [

SCOTT, 1913, with 1920 Scott sidecar, rebu new cylinders, pistons, chains, and gear double lubricator, Binks, semi T.T. bars, horn tric light Cowey, Cameo screen, perfect order, lic December, 1922; £60; buying car.—Saxon, 36, Way, Wavertree, Liverpool. [

*Spare Parts:*

SOUTH London Scott Service Depôt.—Scott Sp Scott Repairs.—John R. Kinsey and Co., 350-352, Lower Addiscombe Rd., Croydon. 'P 1129.

GODFREYS', Ltd., 208, Great Portland St., Lo W.1.—Complete stock of all Scott spare always in stock. Write for free spare part list, st year of manufacture.

### Singer.

WAUCHOPE'S, 9, Shoe Lane.—2¼h.p. S 1910; £20.

SINGER Combination, 4¼h.p., countershaft, lamps, speedometer; £42, offers.—81, D Rd., South Norwood.

## MOTOR CYCLES FOR SALE.

### Singer.

GNS.—Singer coachbuilt combination, 3 speeds, clutch, enclosed magneto, B. and B., good tyres, (after 8 o'clock).—53, Swaffield Rd., Wandsworth. [6670

NGER Combination, 4½h.p., 2 speeds, countershaft, all-chain drive, tax paid; £45; exchanges. mac's, 243, Lower Clapton Rd., Clapton, E.5. ne: Dalston 2408. [9751

*are Parts.*

IE Promptest Firm for Singer Spares.—Forfield Motors. Forfield Place, Leamington Spa. [3164

NGER Spares.—I have the genuine stock at the right price.—Alf. Holland, Hearsall Lane Corner, otry. 'Phone: 1945. [9935

### Southey.

UTHEY 2½h.p. 2-stroke Motor Cycles, 2-speed, kick starter and clutch, complete with lamps, licence holder and tools; price £60.—Southey Co., Berkhamsted. [3320

### Spark.

22 Spark, Villiers engine, flywheel, magneto, in stock; £39/18.—Toshach, Agent, Woodbridge, lk. [9509

### Sparkbrook.

ARKBROOK, 1921 Model, 2¾h.p., 2-speed and clutch, footboards, legshields, etc., open to examination; price £40.—E. Shuttler, Jones' , Gorley, Fordingbridge. [9159

### Sun.

N-VITESSE New 1922 2¾h.p., 2-speed, C., K.S., model, in stock; £57/15.—Below.

N-VITESSE 1920 2¾h.p. 2-speed 2-stroke, C., K.S.; £38.—Elce, Ltd., 15-16, Bishopsgate Av., omile St., E.C.3. 'Phone: Avenue 5548. [0068

h.p. Sun-Villiers, good condition, tax paid, all on; £25.—Houchin, 189A, High St., Peckham, 15. [8619

8.—3½h.p. Sun-Precision, 3 speeds, clutch (Sturmey), discs, fast.—King, Egrove Farm, Ox- [9892

N V.T.S. 2½h.p., recently overhauled by makers, perfect condition; £28 gns.—Edgell, 93, Coles- l Rd., Harlenden. [9461

R Sun, J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, e Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., gns. Send for catalogues. Trade supplied.—Jones ge, Broadway, Muswell Hill, N.10 [0790

### Sunbeam.

OSS, Effingham Sq., for Sunbeam in Rotherham. 1922 models from stock. [9693

h.p. Sunbeam, detachable wheels, brand new; what offers?—Randall, Andover. [8983

NBEAM Combination 3½h.p., £90 overhaul by makers; £130.—15, Victoria Ter., Hove. [8582

18 3½h.p. Sunbeam, mechanical condition as new; £62.—25, Linom Rd., Clapham. [9320

20 3½h.p. Sunbeam Touring, perfect condition; £100.—Dosser's, Sunbeam Agents, Slingsby. [9433

ANDUDNO.—Kelly Bros., 108, Mostyn St., Agents. Sunbeams in stock. 'Phone: 277. [3311

22 4½h.p. Sunbeam in Stock; solo or combination.—Mason, Motor Agent, Wellingborough. [8901

ICKHAM, Stokes Croft, Bristol. Sole District Agent for Sunbeams; unequalled service, repairs [3143

NBEAM 1921 3½h.p., touring model, brand new; £126, list £141.—Ginger, Sunbeam Agent, Ban- . [9589

NBEAM Combination, 6h.p., 3-speed, K.S., Easting, tax paid; 85 gns.—Bird, 10, Skipton St., 1. [9986

NBEAM.—Immediate delivery from stock; cash or deferred.—The Layton Garages, London Rd., Bi- er. [9820

19 3½h.p. Sunbeam Combination, Lucas, speedometer, hood, perfect; £85.—7, Gibson Sq., Lon- N.1. [9658

.p. Sunbeam Combination, 1919, as new, fully equipped, spare wheel; £110.—106, Sydney Rd., ibledon. [9417

AUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Sunbeam, 1917, 3 speeds; £67/10; extended ments taken. [9860

21 Sunbeam Sports, new condition, lamps, etc., specially tuned, 75 m.p.h.; £100.—Box 1522, *The Motor Cycle.* [9908

21 Semi-Sports Sunbeam, indistinguishable from brand new; £105.—Rhind and Co., Stone Place, holme, Manchester. [9671

NBEAM 3½h.p., 3 speeds, new 1921, speedometer, lamps, horn, tax paid, equal to new; £90. law, Durkar, Wakefield. [9405

# Be guided by experience

*and before purchasing elsewhere let us know your requirements.*

WE have a fine selection of really good second-hand machines and an up-to-date stock of new 1922 models of all the well-known makes.

Our exchange system saves you the trouble of disposing of your present machine privately, and if you require Extended payments, you cannot obtain fairer or better terms anywhere

## 1922 Models in Stock for Immediate Delivery.

| | | |
|---|---|---|
| **ARIEL,** 3½ h.p., 3-speed Sports model | £87 | 10 |
| **ALLON,** 2¾ h.p. | £60 | 0 |
| **B.S.A.,** from | £107 | 0 |
| **CALTHORPE,** 2½ h.p. | £36 | 0 |
| **DOUGLAS,** 2¾ h.p. | £68 | 0 |
| **DOUGLAS,** 4 h.p. Combination | £135 | 0 |
| **ENFIELD** Sports | £55 | 0 |
| **ENFIELD** Combination | £140 | 0 |
| **Ditto** with dynamo lighting | £158 | 0 |
| **MARTINSYDE,** 3½ h.p. Sports | £110 | 0 |
| **HUMBER,** 4½ h.p Sports | £100 | 0 |
| **MATCHLESS** Combination, Model J | £150 | 0 |
| **NEW IMPERIAL,** 2¾ h.p., Model 3 | £73 | 0 |
| **O.K. JUNIORS** from | 38 gns. | |
| **P & M** Combination, 4½ h.p., 4-speed | £130 | 0 |
| **ROYAL RUBY,** 2¾ h.p. Sports, all on | £70 | 0 |
| **STANGER,** 5 h.p. H.O.V. twin, 2-stroke, spring frame | £97 | 0 |
| **TRIUMPH,** Model H | £105 | 0 |
| **ZENITH-BRADSHAW,** all-chain drive | £119 | 0 |

Etc., etc.

## Special Bargains.

**Brand new 1921 5-6 h.p. flat twin Brough Combination, with hood, screen, Lucas lamps, etc., £135.**

**Brand new 1921 5-6 h.p. Zenith, Model D, with clutch and kick-starter, £88. (List price £118.)**

## Some Second-hand Machines.

| | |
|---|---|
| 1921 **NORTON** Big 4, 3-speed and accessories | £90 |
| 1919 **TRIUMPH,** 4 h.p., 3-speed, lamps, horn, speedometer, tax | £75 |
| 1919 **DOUGLAS,** 4 h.p., 3-speed and accessories | £70 |
| 1918 **TRIUMPH,** 4 h.p., 3-speed and accessories | £63 |
| 1920-1 **ARIEL** Combination, 3½ h.p., lamps, horn, tax, screen | £95 |
| 1920 **SCOTT** and coach-built sidecar, accessories | £90 |
| 1919 **DOUGLAS** Combination, lamps, screen, discs, tax | £85 |

Etc., etc.

*Please write and state requirements.*

**A MACHINE FOR EVERYBODY AND ANY PURPOSE.**

**The Service Company Ltd.** (LONDON)

**289-293, High Holborn, W.C.1**

Telephone: 6430 Holborn.

Telegrams: "Admittedly, London,"

## MOTOR CYCLES FOR SALE.

### Sunbeam.

SUNBEAM Outfit, 1920, Cowey speedometer and horn, F.R.S. lamp set, spares; 90 gns.—Humphrys, 269, Rye Lane, Peckham. [8829

3½h.p. Sunbeam, 1920, small mileage, lovely condition, insured till March; £95, or best offer.—Joliffe, 11, Wellington Rd., South Ealing. [9697

8h.p. C.B. Sunbeam Combination, October, 1919, just renovated, spare wheel, hood, screen, full kit; £120; exchanges.—Nicholls, Mill Rd., Cambridge. [9217

2¾h.p. Sunbeam, all chain, oil bath, 2-speed, kick start, lamps, legshields, tax, etc., exceptional condition; £43.—Maude's Motor Mart, 100, Paris St., Exeter. [9727

1921 3½h.p. Sunbeam, speedometer, lamps, legshields, detachable wheels, etc., excellent condition; £108.—Maude's Motor Mart, 100, Paris St., Exeter. [9723

SUNBEAM 1921 3½h.p. Sports Model, legshields, lamps, etc., tax paid, and very carefully used, bargain; £110.—The Layton Garages, 30, Holywell St., Oxford. [9806

SUNBEAM Combination, 1919, 3½h.p., complete with speedometer, lamps, and all accessories, excellent condition; £105.—17, Hall Rd., Handsworth, Birmingham. [8615

NEW Sporting 3½h.p. Sunbeam, not been ridden; £8 under list price; or will take late model 2¾h.p. in part exchange.—Clark, Mosley Hole Works, Willinhall Rd., near Wolverhampton. [8866

SUNBEAM 1914 2¾h.p., 2-speed, clutch, kick start, latest taper tank, copper exhaust, mechanical condition and enamel excellent.—7, Birkbeck Mansions, Birkbeck Rd., Hornsey, N.8. [9027

SPECIAL Sporting 3½h.p. Twin Sunbeam, M.A.G., delivered June last; cost £175; sell £100, near offer; Douglas lightweight part; evenings.—120, Marlborough Flats, Walton St., Chelsea, S.W.3. [9355

1919 3½h.p. Sunbeam Outfit, Watford, Easting, Lucas lamps, stored 18 months, condition as new, all accessories, tax paid, insured, trial; accept £115, or nearest.—Cranuage, Byfield, 5, High St., Bromley, Kent. [9143

SUNBEAM 1918 Combination 3½h.p., new Easting Royal windscreen, legshields, electric lighting, recently overhauled by Sunbeam people, re-enamelled, spares, etc., 10,500 miles, excellent condition; £90.—Garnett, 194, Chesterton Rd., Cambridge. [9179

1921 Sunbeam 8h.p. Combination, Lucas Magdyno, electric horn, spare wheel, speedometer, hood, screen, Tan-Sad, spares, mileage under 3,000, just overhauled by makers; cost £300 March, 1921; £165 net.—73, Acre Lane, Brixton. Seen Monday to Friday evenings, 6 to 8. [8862

1921 8h.p. Sunbeam Combination, Magdyno lighting, electric horn, Cowey horn and speedometer, sidecar fitted hood, windscreen, spare wheel, dashboard fitted watch, ampmeter, and lamp, also inspection lamp; new condition; seen by appointment; £275.—Griffin, 154, Warwick St., Pimlico. [8583

SUNBEAM Combination, 1917, 8h.p., 3 speeds, C. and K.S., Lucas dynamo lighting, Lucas electric horn, Cowey speedometer, watch, leg guards, Binks carburetter, sports sidecar, in really splendid order, tyres excellent, guaranteed; £110.—Homac's, 243, Lower Clapton Rd., Clapton, E.5. 'Phone: Dalston 2408. [9752

8h.p. 1920 Sunbeam Combination, electric lighting and horn, latest Binks, mechanical lubrication, 29×3½ back cover, Watford speedometer, Terry saddle, Tan-Sad with special foot rest, many other extras, fine condition throughout, carefully used; £175, or would exchange for Harley with C. and M. sidecar, must be perfect.—Cox, 1, New Upperton Rd., Eastbourne. [1071

### Swift.

SWIFT 3½h.p. Combination, Armstrong 3-speed hub, clutch, Bosch, lamps, horn, Easting screen; £35.—12, Warlters Rd., Camden Rd., Holloway. [9204

### T.M.C.

T.M.C. Motor Cycle and Coachbuilt Sidecar, 7h.p., 4-cylinder, water-cooled engine, spring frame, 3-speed countershaft, shaft driven, auto oiling, windscreen, lamps, horn, heavy tyres practically new, and one spare brand new, good condition; £39/10.—W. Partington, 7, Chapel St., Salford. Telephone: 2422 City. [6522

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE delivery of type H, 4h.p., 3-speed, £105; type S.D., chain drive, £115; type R., 3½h.p., overhead valve, £120; type L.W., lightweight, £65; sidecars from £20 to £50; easy payments, 4 per cent. extra; free delivery to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0867

JULIANS of Reading have Triumph-Ricardo in stock; £120 [5706

TRIUMPH.—All new 1922 models in stock, including new Type R.—Below.

TRIUMPH 1918 4h.p. Combination, lamps, horn, all accessories; £68.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.4. 'Phone: Avenue 5548. [0069

## MOTOR CYCLES FOR SALE.

### Triumph.

1921 Triumph in new condition, chain-cum-belt, tax paid, and all accessories; £78.

1919 Triumph combination with 1922 sidecar, speedometer, lamps, horn, and large front mudguard, tax paid, splendid condition; £80.

4h.p. countershaft Trinmph, absolntely as new; £70. 1918 Triumph, in splendid condition; £60.—26, Tnlse Hill, Brixton. 'Phone: Brixton 1292. [9825

MODEL H 1922 Trinmph, new, £105; also S.D. model, £115; cash or extended payments.—Below.

WE have several 1918, 1919 C.S. Triumphs, fitted new tyres, tubes, etc., and many fitted with 1922 S.A. gear boxes, splendid value, enamelled and plated, £65.—The Hackford Engineering Co., 33, Hackford Rd., Brixton, S.W.9. [9976

1921 Baby Triumph, as new, tax paid; £45.—Rhind and Co., Stone Place, Rusholme. [9672

TRIUMPH-RICARDO in stock; £120.—Premier Motor Co., Aston Rd., Birmingham. [0868

TRIUMPH, free engine model, nice condition; £25 nearest.—24, Albion Rd., Lewisham. [8777

1914 Trinmph, sidecar nearly new, tax paid; £50. —58, Mayhill Rd., Charlton, S.E.7. [9603

LATE 1920 4h.p. Triumph Combination, full accessories; £88.—Ross, 86, High Rd., Lee, [8959

1922 Baby Triumph, 2-speed; £65.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [8848

1922 Triumph 4h.p., Model H; £105.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [8847

1921 Triumph 4h.p., all chain, countershaft, equipped, tax, absolntely as new; £90.—Below.

1920 Triumph 4h.p., conntershaft, fully equipped, not W.D., fine condition, £75; or with sidecar, £85.—Below.

1918 Triumph 4h.p., conntershaft, fully equipped, guaranteed condition, £50; with sidecar, £60. —Below.

T.T. Triumph 3½h.p., dropped frame, Mahon clutch, excellent condition; £28.—Goad, "Norman Lodge," 122, Maida Vale. 'Phone: Hampstead 1353. [8153

TRIUMPHS.—Prompt delivery and service.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3692

1914 4h.p. Trinmph, Cancelet Minor sidecar; £60, or offer.—Glynne, 31, Leinster Gardens, W.2. [9350

1918 Conntershaft Trinmph, fully equipped, perfect; £46.—24, Balliol Rd., North Kensington. [9100

CROSS, Effingham Sq., is agent for the trnsty Triumph in Rotherham. All models from stock. [9694

1919, new September, Triumph Jnnior, in nearly new condition; £38.—Rose's Garage, Uxbridge. [9409

1919 Triumph Combination, fnlly equipped, lamps, Easting, etc., taxed; £75.—114, Brixton Hill. [1032

TRIUMPH-RICARDO, new, in stock, immediate delivery; £120.—Ginger, Trinmph Agent, Banbury. [9590

F.O.C.H. for Trinmphs; latest models in stock; also 1921 solo.—5, Heath St., Hampstead (near Tube). [8989

TRIUMPH-RICARDO in Stock, also Type H and S.D.—Mylam, 197, London Rd., Croydon. 'Phone: 2379. [8917

TRIUMPH, 1918, 3-speed countershaft, equipped; £48.—Hillier, 216, Portobello Rd., North Kensington. [9471

COUNTERSHAFT Trinmph, 3 speeds, K.S., perfect; £50 for quick sale; eveniogs.—49, Dagmar Av., Wembley. [9213

1918 Triumph, 3-speed, countershaft, in splendid condition; 38 gns.—64, Church St., Edgware Rd., W. [1112

1919 Trinmph Combination, conntershaft, perfect condition; £62/10, bargain.—9, Church Rd., Harlesden. [9211

1921 Baby Triumph, unused, electric lighting; £45. —James, c/o Bradmores, 432, Harrow Rd., Paddington. [9920

1918 Countershaft Triumph, 3-speed, clutch, perfect, taxed, equipped.—31, Nnrsery Row, Walworth, S.E.17. [9218

3½h.p. Triumph, T.T. bars, appearance and condition as new; £22/10.—60, Park St., Farnworth, Bolton. [8587

MOTORIA, Regent Parade, North Finchley.—1922 models Triumph in stock; deferred payments; repairs. [6482

TRIUMPH Jnnior 1920, excellent condition, almost as new, lamps, horn, licence paid; £42.—Perry, Mardeo, Kent. [9118

TRIUMPH, 51263, 3-speed, conntershaft, mechanically perfect, any trial; £58.—Ford, Watchmaker, Redhill. [9450


IF YOUR

A

B

C

MOTOR CYCLE

REQUIRES

REPAIRING

SEND TO

THE MAKERS.

The

Sopwith Aviation & Engineering Co., Ltd.

(*In Liqn.*)

Canbury Park Road,

Kingston-on-Thames.

Telephone: KINGSTON 1988.


## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH-GLORIA, 1920, hood, windscreen, spee meter, all lamps, &c., condition perfect, tax pa £100.—Below.

TRIUMPH combination, 1919, Swan sidecar, elect light, speedometer, splendid condition throu out, tax paid; 79 gns.—K.J. Motors, Bromley, Ke [9

1921 Triumph-Henderson, excellent conditi hood, Cameo, accessories; £90.—Chilton Ho Sudbury, Suffolk. [9

IN Stock, Triumph-Ricardo, also Model H; t prices given for exchanges, deferred terms on plication.—Below.

1919 4h.p., 3-speed, clutch, and kick-start, lan speedometer, horn, knee grips, licensed year, new tyres, in superb mechanical condition appearance; 65 gns.—Edwards, 50, Harrington South Kensington. [8

TRIUMPH 2¼h.p., 2-speed, new machine, sligh shop-soiled; only £55.—P. J. Evans, John Bri St., Birmingham. [8

£25 secures clutch model Triumph in good or Lucas lamp, horn, many spares.—Telts, Mall, Faversham [9

1920 Triumph, Mills-Fulford sidecar, taxed, f equipped, guaranteed; £85.—51, Upper R mond Rd., Putney. [5

MOFFAT, Yeovil, Official Triumph Service Agent 1922 models from stock; exchanges; all s parts. 'Phone: 50. [5

TRIUMPH Late 1919 Combination, very little u D.A. lighting, fully equipped; £90.—Mylam, London Rd., Croydon. [8

TRIUMPH 1919, Gloria Combination, Easting, paid, insured, new condition; £95.—37, Bo ary Rd., Walthamstow. [9

1918 Triumph 4h.p. Combination, lamps, h licensed, perfect condition; £65.—Fuller, Trafalgar Sq., Chelsea. [8

4h.p. Triumph, approximately 1918, 3-speed, in excellent condition; £68.—Mande's Motor M 100, Paris St., Exeter. [9

BRAND New Triumph, Model H, unused, unre tered; £85; carriage paid 100 miles.—51, U Richmond Rd., Putney. [5

£20.—Triumph 3½h.p., single speed, new l lamps, etc., excellent condition.—28, Mel Rd., Brixton Hill, S.W. [9

TRIUMPH Combination, 3-speed, kick start, trial; 38 gns., lightweight part.—57, Kent St., Camberwell, London. [9

TRIUMPH.—All models in stock for immediate livery; cash or deferred.—The Layton Gara 30, Holywell St., Oxford. [9

1913 3½h.p. Triumph and Millford Sidecar, so hut wants tuning up, complete lamps, etc.; —Cross, Agent, Rotherham. [9

COUNTERSHAFT Triumph, licensed, lamps, start, clutch, first caller; cash bargain, £4 89, East Hill, Wandsworth. [9

1918 countershaft Triumph, 4h.p., fully equip £48.—Hillier, (side bell) 9, Walling Avenue, North Kensington. [9

4h.p. Triumph Combination, 1918, tax paid, all splendid condition; £65.—L. Cowley, 4, Inver Mews, Queen's Rd., Bayswater. [8

BABY Triumph, 1919, lamps, 2 speeds, tax till December; 28 gns., great bargain.— Church St., Edgware Rd., W. [1

1918 Triumph Combination, good condition, equipped; £75, nearest.—1a, Marie Hc Brockley View, Forest Hill, S.E. [9

1919 Triumph, Gloria chassis, fully equip Easting, taxed, guaranteed as new; £77/1 51, Upper Richmond Rd., Putney. [9

1914 4h.p., all on and accessories, condition as ride away; £32; tax December, 1922.— Elsenham St., Southfields, S.W.18. [8

1921 Triumph, 4h.p. Model H, mileage 1; lamps, horn, speedometer, tax and insur paid; £95.—93, East St., Epsom. [9

TRIUMPH 4h.p., late 1914, 3-speed, clutch, ec overhauled, perfect throughout; 42 gns., or —119, Brecknock Rd., Tufnell Park. [9

TRIUMPHS.—Every model in stock, including head valve; delivery immediate.—W. Brandish Sons, The Triumph Garage, Coventry. [

1918 Triumph Countershaft Combination equipment, excellent condition; £63.—37, terbury Rd., Dalston Junction, N.1. [

1920 4h.p. Triumph, T.T. sporting, N.S.U. 2-sp also spare pulley, like new; £75.—Mat Motor Mart, 100, Paris St., Exeter. [

SMART 1919 Model H Triumph, original en and plate, done about 3,000 miles, lamps, £69/10.—365, King St., Hammersmith. [

## MOTOR CYCLES FOR SALE.

### Triumph.

20 Triumph Combination, Paragon folding side-car, Easting, absolutely smartest machine run-; 82 gns.—67, Fernlea Rd., Balham. [1002

CROYDON Agents Triumphs, all new models and large range of second-hand in stock.—Moore's to Motor Works, North End, Croydon. [0864

ART. Powerful, Renovated Triumph C.B. Com-bination, variable gears, complete screen, lamps, , etc.; £40.—169, Harvist Rd., Kilburn. [8896

IUMPHS, 1918 and 1917; forty to pick from, some in crates, brand new, from forty pounds. )4, Ladbroke Grove, W.10. Park 5541. [9742

19 Triumph Countershaft Combination, and equipment, excellent condition; £70.—37, Can-ary Rd., Balls Pond Rd., Dalston, N.1. [8823

IUMPH Combination, 1918, perfect condition, electric light, licensed year; £75; any trial.— n, Coronation House, Lambourn, Berks. [8637

22 Triumphs, all models. Still the finest single. Catalogues with pleasure.—Sam E. Clapham tors), 27, Stockwell St., Greenwich, S.E.10. [4634

17 Model H Triumph, countershaft, and Mont-gomery coachbuilt sidecar, good condition, s; £69/10.—365, King St., Hammersmith. [9982

14 Triumph Combination, 3-speed, good condi-tion, cheap.—Studio, 1A, Bloemfontein Rd., herds Bush, W. 'Phone: Hammersmith 215. [8830

TRIUMPHS, 1918, in perfect order, fully equipped; 20 1917, £40, fully equipped.— Ladbroke Grove, W.10. 'Phone: Park 5541. [9741

IUMPH 1920, Model H, fully equipped, tax paid, a very fast machine and in splendid order; —The Layton Garages, 30, Holywell St., Oxford. [9796

EFFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stacey, mph Service Depot, 12, Ecclesall Rd., Sheffield. [0812

19 Triumph Combination, Model H, Lucas lamps and horn, Cowey speedometer, Easting, per-condition; £85; after 6.—96, Pitfield St., N.1. [9462

IUMPH 1922 Combination, fully equipped, indis-tinguishable from new, recently cost £140; accept .—The Layton Garages, 30, Holywell St., Oxford. [9795

IUMPH 1921, Model S.D., lamps, horn, and Bonniksen, exceptional condition, little mileage; .—The Layton Garages, 30, Holywell St., Oxford. [9794

IUMPH 4h.p. Countershaft Combination, wind-screen, hood, child's seat, etc., nicely equipped; ; call for trial.—Snow, Laurel St., Dalston, E.8. [1014

IUMPH, late 1919 combination, speedometer, lamps, watch, &c., absolutely guaranteed condition; os.—Longman Bros., 17, Bond St., Ealing. Tel.: [1100

20 Triumph-Gloria Combination, all on and spares, equal to new; accept Lightweight part nent, or sell £120.—47, Bolton Rd., Kearsley, nr. on. [9520

5.—Triumph 4h.p., countershaft, 1918, engine No. 54273, recovated, new Dunlop tyres.—Smith's, Chalk Farm Rd, opposite Chalk Farm Tube ion. [9836

19 4h.p. countershaft Triumph Combination, electrically equipped, hood, perfect condition; .—Hillier, (side bell) 9, Wallingford Avenue, h Kensington. [9315

IUMPHS.—Cambridgeshire Service Agents. All models from stock, including 3½h.p. Sports rdo; complete stock spares.—King and Harper, ge St., Cambridge. [9744

IUMPH.—Immediate delivery of all 1922 models; sidecars to suit from £20. Write for catalogue particulars of easy payments.—P. J. Evans, John ht St., Birmingham. [8976

20, renovated by Triumph's, not run 5,000 miles, laid up last winter, condition perfect, T.T. lle-bars, College shields, Cowey, spare tyre, etc.; .—R. P. W., Barra, Chislehurst. [8059

IUMPH-GLORIA Combination, 1919¾, splendid condition, fully equipped, spares, insured April , tax paid December; £95.—Firth, 72, Umfre-Rd., Green Lanes, Harringay, N. [8812

OBERTSONS Motors, Ltd.—1921 Triumph, all chain, Millford sidecar, accessories, tax paid, 5; chain-cum-belt, Millford sidecar, accessories, tax ; £95.—157b, Gt. Portland St., W.1. [6081

IUMPH and Sidecar, 1920, fully equipped, Lucas lamps, horn, Cameo screen, spring footboards, erfect order; £90.—Homac's, 243, Lower Clapton Clapton, E.5. 'Phone: Dalston 2408. [9753

IUMPH-GLORIA Combination, 1921 type, S.D.C., all chain, Lucas electric lighting, wind-en, Bonniksen speedometer, new pattern mud-rds, very carefully used, condition guaranteed as ; £150, original cost over £220; specially picked hine.—Premier Motor Co., Aston Rd., Birming-. [8459


MANUFACTURERS' STOCK

MAKINKOT BRAND

*TO BE CLEARED.*

Fawn double texture, interlined rubber,

MOTOR SUITS

THESE suits are made of Fawn double texture cloth, interlined rubber.

The seams are cemented, sewn and taped; making these absolutely waterproof.

Will stand any amount of hard wear.

The jackets are made double-breasted, with belts and wind ruffs.

The Motor Leggings are made fastening with clips and straps, and have wind gussets in leg.

These suits actually cost over 30/- to manufacture without any profit, but we have several thousands to clear.

Every suit is guaranteed absolutely waterproof, and should these not meet entirely with your approval, we guarantee to return your money in full, if returned within seven days.

SPECIAL PRICE,

29/11 Carriage 1/- extra.

We have also several thousands heavy Twill Suits to offer. These are made of the heavy Twill used for making Motor Hoods, and are one of the finest suits made for motor cycling, interlined rubber. They are made with sewn and cemented seams, and taped, also the seams of these suits are striped, making these garments absolutely waterproof, and we are prepared to give a guarantee that these are absolutely impossible for water to penetrate through. The Motor Leggings are made in the same way with wind gussets, fastening with clips and straps. The Suits are in sizes 34, 36, 38, 40, 42 and 44 chest, lengths inside leg are 27, 29, 31. Please state when ordering by post, measurements of chest, length inside.

50/- Carriage 1/- extra.

Orders to be addressed—

*The* LANCASHIRE and CHESHIRE RUBBER Co.

MAKINKOT HOUSE,

30, Thomas Street,

LIVERPOOL.

'Phone 4891 Bank, Liverpool.


## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH-RICARDO, 1922, fitted Whitley super-sports sidecar, fully equipped, year's tax, used one week only; 138 gns.; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [9301

TRIUMPH Combination, new sidecar, taxed, fully equipped, plated parts new, beautiful condition, any trial; £73.—40, Linhope St., Upper Park Place, Baker St., N.W.1. 'Phone: Paddington 2854. [9369

1919 Triumph-Gloria Combination, all accessories, Easting, D.A. set, same owner since 1919, taxed, speedometer, engine overhauled; reasonable offer.—Ewbank, Holmwood, Limes Rd., Weybridge. [8856

£45.—Triumph Combination, perfect running, 3-speed, gears renewed throughout, original enamel, new tyres, and belt, all accessories, insured and taxed 1923.—145, Leander Rd., Brixton Hill. [9077

LATE 1918 Triumph, engine No. 56267, P. and M. sidecar, enamel indifferent, otherwise exceptional condition, fully equipped, year's tax and insurance, very reliable; £65.—17, Crescent Rd., South Wood-ford. [8679

1914 Triumph, 4h.p., free engine, Bosch magneto, lamps, horn, tax paid, recently renovated, in excellent condition throughout; £35 or near offer.—Can be seen Richardson's Garage, Rosslyn Mews, N.W.3. [9326

TRIUMPH Coachbuilt Combination, 1914, 4h.p., new cover fitted, others excellent, overhauled, enamel excellent, lamps, horn, etc., 3-speed Sturmey, J.S.; £40, or offer; must sell.—Foster, Victoria Rd., Garswood. [9932

TRIUMPH, Sept., 1920, small mileage, original front tyre still on, lamp, horn, and speedo-meter, and kneegrips, splendid condition; £60, lowest. —Jones, c/o Copus Motors, Edison Rd., Crouch End Hill, N.8. [9454

£60.—4h.p. Triumph, late 1918, condition and appearance equal to new, any examination and trial; exchange for good Indian and cash.—Langford's, 37, Cricklewood Broadway, N.W.2. 'Phone: Hamp-stead 8616. [9714

TRIUMPH 1910, renovated, with Mabon gear, speedometer, electric lamps, and coach-built side-car with adjustable windscreen; together or singly, what offers?—159, Barclay Rd., Warley Woods, near Birmingham. [9284

£35.—3½h.p. Triumph, C.B. Combination, 3 speeds, clutch, all accessories, taxed; also 3½h.p. clutch model, fully equipped, Philipson, £26; both splendid running order and cheap.—143, Ravensbury Rd., Earlsfield, S.W. [9930

TRIUMPH, October 1919, 4h.p. engine 65926, and Millford sidecar, all accessories, full insurance, exceptionally good condition, small mileage, privately owned; £80. Seen any time.—Hill, 89, High Rd., Woodford Green. [9410

1920 Triumph Combination, mechanically perfect, accumulator lighting, Cowey horn, aluminium shield, variable jet, insured, Dunlops; £90, near offer; higher power required.—Captain Williams, Falwood Barracks, Preston. (D) [8904

TRIUMPH, late 1921, all chain, Gloria Combina-tion, Lucas Magdyno lighting, tax paid, Bonnik-sen, luggage grid, absolutely as new; £145; present list price, £185.—Newnham Motor Co., 223, Hammer-smith Rd., W.6. 'Phone: Hammersmith 80. [9635

1920 4h.p. Triumph, 3-speed, with Dunhill limous-ette sidecar, electric lamps, variable jet, horn, windscreen, new tyres all round, licensed for year, perfect condition; 80 gns.; exchanges or deferred.— Edwards, 50, Harrington Rd., South Kensington. [1098

1918 Triumph 4h.p., 3-speed, countershaft, kick starter, hand clutch, engine and gear box over-hauled, cylinder re-bored, new piston, tools, lamps, horn, mirror, grips, perfect condition, new Dunlop, privately owned; £60.—Seen, "Lofts," Spital St., Dartford. [9505

TRIUMPH Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4928

1919 4h.p. Triumph Combination, Gloria sidecar and luggage grid, Sturmey-Archer 3-speed countershaft, Easting windscreen, hand and foot clutch and spares, tax paid for 1922, perfect order; £70, or near offer. Apply evenings.—43, Dudley Gardens, Northfields, West Ealing, W.13. [9346

TRIUMPH Motor Cycles and Combinations on easy terms.—New 1922 models, all on show, ready for immediate delivery; one-fifth down, remainder in 12 equal monthly payments; also good second-hand machines, 1921 and 1920 and earlier models, from £40.—Wauchope's, 9, Shoe Lane, London. [9861

TRIUMPH Combination, 4h.p., 1921, March, in exceptional condition, small mileage, guaranteed perfect, all accessories, including mechanical and bulb horn, speedometer, tools, spare tyre, belt, tax and insurance paid; £95; private owner.—Seen Cryspal Garage, Church Rd., Upper Norwood, S.E., any time. [9025

## MOTOR CYCLES FOR SALE.

### Triumph.

*Spare Parts:*

TRIUMPH Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7545

TRIUMPH Service Agents.—Every part in stock; trade supplied.—Clarke's, Motor Cycle Specialists, St. Albans. [9623

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [1247

TRIUMPH Spares.—Every part in stock, 1910 22; trade supplied.—W. L. Thompson, Ltd., 83, Anlaby Rd., Hull. Tel.: Cen. 2820. Telegrams: "Petrol." [8655

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; gear overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10. [0809

SEND to the Rhosha Motor Garage, South St., Romford, for Triumph and Sturmey-Archer spares. No disappointing delays; every part in stock. Repairs by skilled mechanics. We are official service agents. Telephone: Romford 584. [7766

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Trump.

1922 8h.p. Trump Combination, 3-speed, close ratio box with clutch, done under 400 miles, guaranteed perfect condition throughout and capable of over 70 m.p.h., sidecar, touring and racing tyres, sprockets, special J.A.P. Sports engine; £110, or near offer; any trial.—Box 1200, c/o *The Motor Cycle*. [4748

### Velocette.

PREMIER Motor Co., for 1922 Velocettes.

IMMEDIATE delivery of Model E.2 2-speed, £65; E.3 3-speed, £72/10; E.L.2 lady's open frame, £68; all with clutch and kick starter; easy payments, 4 per cent. extra; carriage paid to any address.—Premier Motor Co., Aston Rd., Birmingham. [3020

VELOCETTE 2¼h.p., complete, perfect running order; £28.—154, Hackney Rd., E.2. [9444

VELOCETTE 1921 2¼h.p., perfect, lamps, horn, tools, legshields; £55.—Mackalt, Sedbergh. [6414

VELOCETTE.—Immediate delivery of all models; cash or deferred.—The Layton Garages, 30, Holywell St., Oxford. [9822

VELOCETTE, 1920, 2-speed, lamps, horn, leg shields, condition as new; £40.—Pickering, Churncote, Bicton, Shrewsbury. [8772

1922 Special Sports Velocette, capable 65 m.p.h., winner 1st and 3rd Sutton Back hill-climb, many spares, perfect; £65.—Dosser's, Velocette Agents, Slingsby, Malton. [9432

1921 Velocette, 2-speed, chain drive, lamps, tools, perfect condition and appearance; ride away; £45; appointment only.—55, Queen's Gate Mews, Gloucester Rd., S.W.7. [9429

1921 Velocette, 2 speeds, adjustable jet, Bowden extra air aluminium, no plates, in first-class condition, tax paid for year; £45.—Marshall, 29, Westward Rd., S. Chingford, Essex. [9099

NEW 1922 Velocette, Model E3, 3-speed, clutch, kick starter, with special sports 247 c.c. engine, aluminium piston, etc.; £75 cash; one only for immediate delivery.—Premier Motor Co., Aston Rd., Birmingham. [1115

VELOCETTE 2¼h.p., 2-speed, 1921, guaranteed condition, not soiled, complete with Miller lighting set and horn, all accessories, taxed for 1922; any trial; ride to purchaser.—Write, Howard, Bell Bank, Hay, Herefordshire. [8694

£29/10.—Velocette, 1919, 2-speed, chain drive, automatic lubrication, aluminium footboards, T.T. handle-bars, brand new tyre on rear wheel, recently thoroughly overhauled, accessories.—Delancey St. Garage, Camden Town, N.W.1. [9093

### Verus.

VERUS, 1920, 2¾h.p. Blackburne, 2-speed, K.S., Lucas lamps, tax paid; £50.—H. Rock, Cradley, Staffs. [9281

### Vindec.

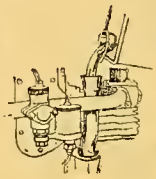
VINDEC Special 6h.p. twin, 2-speed, and clutch, minus cylinder and magneto; £10, or near offer.—Brice, 145, Waldegrave Rd., Brighton. [8932

### Wanderer.

WANDERER 2¾h.p., Bosch, B.B., S.F., splendid running order, and 2-speed; £15.—Skinner, 29, Malden Crescent, Chalk Farm. [9020

# DOUGLAS SPARES

**I guarantee to send any part by first post; being on the spot, if it is not in my huge stock I obtain the same day. Try my return post service.**



**EXCEPTIONAL QUALITY**

**Metal-armoured Tool-bags.** Two straps. Beautifully constructed and reinforced. Large size, for 4 h.p. Douglas, **10/6**, usual price, 20/-; 2¾ h.p. **7/6**, usual price, 11/-. A very limited supply. Money back if not satisfied.

**PATENTED TWIN RINGS**

15 per cent. increase in power, hold compression indefinitely, prevent carbonising, reduce oil consumption and reduce friction. All the racing men and trial riders are now using them. 4 h.p., **1/8**; 2¾ h.p., **1/6** each. Insist on having them fitted.

**A NEW TWIN RING PISTON**

Scientifically designed to prevent distortion. Four strengthening webbs and radiating fins, gudgeon pins supported correctly. Much lighter than standard pistons, yet double the strength. Piston with rings and gudgeon pin, **14/6**. J.S. writes: "I fitted the new pistons, and was astonished at the speed and power increase."

**ZOOM! ZOOM!!**

Are you Zooming it? This lovely exhaust pipe gives a lovely Zoom note and provides an expansion chamber many times the cylinder capacity; it silences without back pressure. The most efficient system yet devised; over 2,000 sets already fitted. Beautifully finished in polished copper plate, **30/-**. Nickel plated, **33/6**.

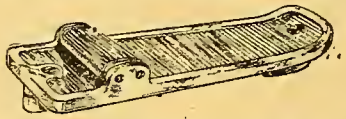
*The Spring in its normal position.*

*The Spring heavily loaded. Movement 4 inches.*

*Showing how the top leaves absorb both shocks and rebound.*

**UNBREAKABLE SIDECAR SPRING. GUARANTEED FOR 12 MONTHS.**

Double the comfort. Actual photographs reproduced showing the wonderful 4in. movement of the spring. You can practically turn this spring inside out, and it will return to its normal setting without fracture. Its secret is in its self shock-absorbing qualities, and it works both ways, thus taking the rebound, which is also absorbed by friction. Have one fitted to your chassis, and you'll be surprised at the added comfort. Price **17/6**.



**The Tony Combined Footboard and Footrests** *(Patented)*.

Made in burnished aluminium; polished edge, non-slipping surface, solid rubber pads, ideal riding positions and keep the boots clean. Adds greatly to the appearance of any Douglas. Substantially made and unbreakable. Price **30/-** per pair.

*W. G. Coram*

THE MAN ON THE SPOT
OFFICIAL DOUGLAS AGENT.
*10 years with Douglas Motors Ltd.*
**140, VICTORIA ST., BRISTOL.**
*Telephone:* 3792.

## MOTOR CYCLES FOR SALE.

### Werner.

WERNER 4h.p., fast, powerful, any trial; £20, push cycle part.—57, Kenbury St., Coldharbour Lane, London, S.E. [9338

### Wilkinson.

WILKINSON-T.M.C., 4-cylinder, W.C., spring frame, shaft drive, Zephyr pistons, 3-speed gear box, hand and foot control to clutch and new Cox Atmos carburetter, comfortable sprung bucket seat, coachbuilt Montgomery sidecar on sprung chassis, hood, screen, luggage carrier, perfect mechanical condition and well equipped; £110.—13, Queensdale Rd., Holland Park, London, W.11. [8604

### Williamson.

WILLIAMSON, 8-10h.p., water-cooled, latest Binks Bosch, 2-seater, fully equipped, equal new bargain, £30.—27, Stanley Rd., Wimbledon. [915

WILLIAMSON Combination, 1914, in excellent condition; will take it any distance; £60, or reasonable offer; exchange solo.—Thomas, 24, Townley Rd., East Dulwich, S.E.22. [865

### Wolf.

WOLF-VILLIERS 2¾h.p., tax paid, not done 3 miles; £40.—104, Thames Rd., Chiswick. [867

WOLF Motor Cycle, splendid condition; £28, bargain.—Flashman, 53, Ansdell Rd., Peckham. [869

WOLF-VILLIERS, 2-speed, just overhauled (cost £11), like new; £38.—82, Bingley Rd., Saltaire, Yorks. [925

### Wooler.

WOOLER Twin, spring frame, low mileage, perfect; £35.—10, Clarendon Rd., W.11. [932

1920 Wooler, excellent condition, only done 4,000 all on; £57/10.—Butterworth's Garage, Mill Lane, Brixton Hill. [956

WOOLER 2¾h.p., new appearance, sound condition, fully equipped, tyres good; £45.—Telford Garage, 47, Streatham Hill, London, S.W.2. [897

### Zenith.

H.
F.
EDWARDS and Co.,

50, Harrington Rd., South Kensington, offer several brand new unused 1921 5h.p. Sports Zeniths, with makers' full guarantee, at 76 gns., listed at £110. Your machine taken in part exchange or £27 down, and 12 instalments of £4/14/7. Also several brand new 1921 countershaft 5-6h.p. model, clutch, kick start; 84 gns. Listed at £118. Your machine taken in part exchange, or £30 down and 12 instalments of £5/6/2. [601

STOP Creeping about the Roads! Life's too Short.

COST over £180.—Zenith, July, 1921, mileage 4,800, 90×77½, o.h.v., J.A.P. competition engine built to special order, aluminium pistons, enlarged ports, superfine finish, long exhaust pipes; 28×3 Avons unpunctured, Brooklands pulley, detachable carrier, just enamelled black and red by Zenith's, 75 m.p.h. on the road, lamps, horn, Bonniksen, watch, full kit, valuable spares, tax paid and insured; offer.—Needham, Southwold, South Downs Rd., Hale, Cheshire. [862

1915 Clutch Model Zenith 5h.p.; £54.—Ross, 80 High Rd., Lee, S.E. [896

SHREWSBURY Agent, Zenith Bradshaw model in stock.—Pickering, Shrewsbury. [961

F.O.C.H. for Zeniths; latest models in stock.—Heath St., Hampstead (near Tube). [898

ZENITH 1921 5h.p., as new, £20 accessories, tax paid; offers.—"Rodendale," Windsor. [864

ZENITH New 1922 Models on easy terms.—Wanchope's, 9, Shoe Lane, London. [98

1914 Zenith-Jap 4h.p., excellent condition, £3 sidecar, £5.—9, Rollscourt Av., Herne Hill. [93

ZENITH 1920 5-6h.p. Sports, as new, fully equipped, tax paid; £69.—Storer and Tait, 20, Bourdon St., W.1. [10

ZENITH Sports 1919 4h.p., perfect condition, little used; £65, or offer.—22, Westwood Rd., Goodmayes. [87

1922 Zenith-Bradshaw, S.A. gear, 3-speed; £119.—Morriss and Co., Ltd., 139, Finchley Rd., N.W.3. [88

ZENITH 1920 8h.p. Sports, excellent order, and bargain at £70.—The Layton Garages, 30, Holywell St., Oxford. [97

1919 5h.p. Zenith Sports Model Combination, lamps, etc.; £70.—To be seen at Bourne Garage, Kilburn. [86

ZENITH 8-10h.p., countershaft, electric, Montgomery, under 7,000; £70. Also Indian. Bought car.—Gordon Parker, Mildenhall, Suffolk. [85

## MOTOR CYCLES FOR SALE.

### Zenith.

RTSONS Motors, Ltd.—1922 shop-soiled nith-Bradshaw, Gradua gear; £100.—157b, Gt. d St., W.1. [6082

TH 1919 Sports Combination, fully equipped, ced 1922, any trial; £65.—Hobart, Park Rd., ough, Hants. [8871

TH-BRADSHAW, new model B, specially ned, immediate delivery; £119.—Harrison and , Chichester. [9138

TH 1919 3½h.p. single, sporting model, excel- t condition, lamps and horn, any trial; £50. n, Marden, Kent. [9117

TH combination, 1919, 8h.p., countershaft, con- tion as new, all accessories; £95.—145, Wid- l., Bromley, Kent. [9587a

TH, 5h.p., new and guaranteed few only left, orts model, 76 gns.; countershaft model, —Clark, 7, Exhibition Rd., S.W.7. [8471

Zenith 8h.p. Combination, 1919, demonstra- model, bulbous sidecar, Lucas, Bonniksen.— Garage, High Rd., Lee, S.E.13. (P) [8609

'S Zenith, 8h.p., May, 1920, well equipped, pearance and running order as new; 70 gns. h, 6, Mount Pleasant Rd., Ealing. [9155

TH, Solo or Combination, 3½h.p., Binks, Bosch, .P., perfect running order, tax paid; £40, or offer.—Hind, The Rise, Sunningdale. [9075

Zenith, single, Bosch magneto, semi-T.T. bars, d tyres, tools, licensed 1922; £25, or offer.— ingholme Rd., Wealdstone, Middlesex. [9034

TH 8h.p. Sports, new June, 1921, Ace discs, accessories, handle starter, mileage 800, any 90.—Hansford, 56, Queen Anne St., W.1. [9112

TH Sports 8h.p., 1921 (July), perfect, ride ywhere, must sell, best offer; take Lightweight R. H. Diment, West Chaldon, Dorchester. [8865

Zenith-Bradshaw; £99; all-chain, 3-speed, per- fectly new, never ridden, perfect, unregistered, eed, must sell.—Slater, 88, King St., Black- [9538

Zenith Sports Model, December, 1919, com- e with lamps, new tyres, tax, etc., in perfect on; £60.—Eton, 260, Balham High Rd., Bal- [8165

TH 4-5h.p. Countershaft Combination, speedo- ter, lamps, horn, tax paid, insured, recently led; £70.—Hill, 47, Holland Mews, Hove, [9456

½ Zenith-Gradua 6-8h.p. Sports, 3in. tyres, fully uipped, taxed, new condition; 63 gns.; ex- .—Peter Gordon, Ltd., 110, Upper Richmond ist Sheen. [9303

TH-BRADSHAW, 1922, 3-speed, all-chain ve model, shop-soiled only; £110.—Newnham Co., 223, Hammersmith Rd., W.6. 'Phone: rsmith 80 [9631

TH, 5-6h.p., 1918, clutch, kick start, just over- auled, £10 spent on parts, in first-class con- lamps, horn, pump, taxed; £60.—J. Easter, ays, Swanley, Kent. [8754

TH 1921 5h.p. Countershaft Combination, atest type engine, fully equipped, licensed, l condition; £95.—R. B. Clark & Co., 7, Exhi- Rd., South Kensington. [1084

Zenith coachbuilt Combination, 3½h.p., kick rter, clutch, lamp, taxed, smart sporting out- J.C. Motor Exchange, 5, Addison Ave., Hol- ark, W.11. Park 2071. [9965

Zenith-Gradua 6h.p. Sports, in perfect con- dition, all accessories, and fullest spares, done miles, tax and insurance paid; £70, or offers. on, 9, Bath St., Dewsbury. [8966

TH 5-6h.p. late 1920; £65; just overhauled d rehushed, new belt, new tyres, unpuncturable enamel perfect, plated exhaust; owner ill.—6, y Gardens, Kensington, W.8. [9415

(late) Zenith, 8h.p., o.h.v., 5-70 m.p.h., alu- minium sidecar, fully equipped, lamps, Bonnik- ileage 1,200, as new, cost £200; accept reason- fer—Mitchell, Lindens, Farnham. [8788

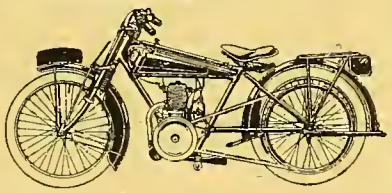
TH Combination, only 6 months old, 8h.p. untershaft, dynamo lighting, Easting, luggage Ace disc, oversize tyres, speedometer, spares; -Charlesworth, 10, Batchelor St., Chatham. [9580

5h.p. Sports Zenith (new March this year), with Royal Leicester sidecar, fully equipped, l for year, maker's guarantee not expired, in mechanical condition and appearance; 80 gns.; l payments or exchanges.—Edwards, 50, Har- t Rd., South Kensington. [1099

IAL Sacrifice, owner taking delivery of new achine.—1921 7-9h.p. Zenith-M.A.G., specially hroughout, winner innumerable medals, finished rooklands without trouble of any sort, fully ed, 80 m.p.h., Watford, etc., looks as new; £77.—Windermere, London Rd., Twicken- [8882

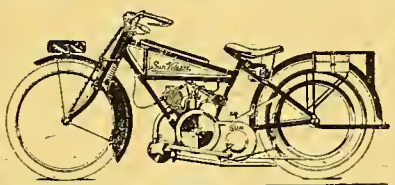
We would remind you that our Spares Service for Douglases is one of the special features of our business. We have every part in stock for these machines, and they are mainly ex-W.D. parts and consequently well below makers' prices. Drop us a line giving your requirements and we shall be pleased to quote you.

We are special agents for



CALTHORPE from £36

and



SUN VITESSE.

of which we shall be pleased to forward you a catalogue. Our agencies also include the following:

F.N.
B.S.A.
JAMES
VERUS
SIRRAH
MORRIS
DOUGLAS
TRIUMPH
MARTINSYDE

*Any of these machines can be supplied on our Deferred Payments System. 4% only charged for the convenience of paying as you ride.*

**BURLINGTON MOTOR CYCLE Co., Ltd.**
**7, South Side, CLAPHAM COMMON, S.W.4.**
'Phone: Brixton 2417. Wires: Burlington Motors, Clapham.
Just by Clapham Common Underground Station.


## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH Combination, 4h.p. J.A.P., Gradua gear, lamps, horn, tyres excellent, engine overhauled at J.A.P.'s, guaranteed perfect; £50.—Homac's, 243, Lower Clapton Rd., Clapton, E.5. 'Phone Dalston 2408. [9754

1920 8h.p. Sports Zenith, electric light and horn, 3in. rear cover, aluminium discs, tools, spares, numerous refinements, excellent condition and appearance, decarbonised, taxed; £75.—Jephson, Rosenhallos, Redhill. [9208

6h.p. Zenith, latest countershaft, clutch, kick starter, Millford sidecar, screen, lamps, accessories, mileage 300, bought April, unscratched, 50 m.p.h., 65 m.p.g.; reason selling; trial; bargain, £125.—Major Hunthach, Market Drayton. [8698

ZENITH 90-bore Special and Middleton Sports sidecar, exceptionally fast, previously owned, tuned, and ridden by I. P. Riddocks, the well-known 'Varsity rider, winner of many handicaps and hill climbs; £100.—The Layton Garages, 30, Holywell St., Oxford. [9805

1921 8h.p., Model H, Zenith Combination, clutch, kirk starter, Millford, Easting, lamps, F.R.S., streamline, Tan-Sad, condition perfect, sporty appearance, fast; genuine bargain, nearest £110 accepted.—Stock, Chief Engineer, Electricity Works, Hindhead. [9089

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4829

### Ladies' Motor Cycles.

ROYAL RUBY-J.A.P. 2¾h.p. 1917, as new, 2-speed, clutch, K.S., taxed, lady's model; £35.—C., 6, Thorley St., near Bishops Stortford, Herts. (P) [9682

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

1922 Lady's Model Ivy 2-stroke, hardly ridden, in lovely order, equal to new in appearance and mechanically, mechanical horn, no lamps, licensed and insured till end of year; a very cheap machine at £45.—B. H. Davies, Lodsworth, Petworth, Sussex. [9086

VELOCETTE 1922 Models, with clutch and kick starter, for immediate delivery; 2-speed, £68; 3-speed, £75; all black weatherproof finish, all-chain drive, open frame, giving very low position; the ideal ladies' mount; easy payments, 4% extra; illustrated catalogue free on request.—Premier Motor Co., Aston Rd. [3023

### Miscellaneous.

7-9h.p. Harley-Davidson Combination, new chassis, new carburetter, etc.; £95.

1921 2¾h.p. Martin-Jap, 2-speed and kick starter; £65.

2¾h.p. New Imperial, 2-speed model, recently overhauled; £38.

2¾h.p. Douglas, 2-speed, £45; Scott motor cycle, tax paid, £48.

1921 Ladies' Velocette, as new, 2-speed; £55; in perfect condition, reasonable trial or examination.—Edmondson's Garage, Ltd., 28, Main St., Keswick. [4768

JONES Garage, The Broadway, Muswell Hill, N.10, and Woodside Parade, North Finchley.

NOTICE.—We are open all day every Saturday, and have all makes in stock. Write, call or 'phone Hornsey 2917 for big bargain list.

1919-21 Ariel 3½h.p. and sidecar, Mr. F. E. Jones's competition gold medal machine, specially tuned; £80.

ROVER 5-6h.p. Sports Solo, 3-speed, all-chain, shop soiled, otherwise new, 1921; £110.

RUDGE I.O.M., shop-soiled, £70; 8h.p. Enfield Combination, Magdyno, 1921, indistinguishable from new, £145.

1919 4¼h.p. B.S.A., Model K, large Canoelet sidecar, fully equipped, licence paid; £80.

1920 Ariel 3½h.p., equipped, £72/10; also second-hand and new sidecars, from £7/10.

1919 4h.p. Douglas Combination, first-class condition, any trial given; £79/10.

1918 4h.p. Triumph, coachbuilt sidecar, fully equipped, our special bargain of the week; £77/10.

1921 new 3½h.p. Ariel (slightly soiled), with new Montgomery sports sidecar, very posh; £100.

1920 2¾h.p. Allon, fully equipped, speedometer, etc.; £47/10.

1915 Douglas 2¾h.p., equipped; £32/10.

1921 3½h.p. Ariel, demonstration model, equipped; £77/10.

ANY of the above can be had for one-quarter down, balance in 6 or 12 payments. All guaranteed 3 months. Send for particulars.—Jones Garage, Broadway, Muswell Hill, N.10. Motor 'bus from Highgate or Finsbury Park. [1063

## MOTOR CYCLES FOR SALE.
### Miscellaneous.

2¾h.p. Lightweight, 2-speed, 2-stroke, shop-soiled; £32.—Durant, Bourne, Farnham. [8689

J.A.P Combination, 3-speed, Easting, good condition, £55.—23, Speldhurst Rd., Bedford Park, W. [9228

1919 7-9h.p. Indian Motor Cycle, magnificent machine, used exceptionally little, £65; also 1 ditto combination, £85, or nearest offer.

BINKS Racing Carburetter, as new, £3; aluminium slipper piston for Norton, 1 ring missing, brand new, 15/-.—Sleight, 70, Pasture St., Grimsby. [8831

2¾h.p., 2-stroke (new engine), Druids, Amac, Exall; £12; good tyres, fast.—Shaw, Regent St., Wellington, Salop. [1122

PREMIER Combination, 3-speed, perfect, £43; Allon, 2-speed, 1916, needs half crankshaft, £28; Singer, £28.—189b, Lower Clapton Rd., Clapton. [8938

£40.—3½h.p. Sporting Twin J.A.P., overhead valves, 2-speed, clutch, lamps, speedometer, tax paid; photo.—Ebbutt, "Woodcote," Stafford Rd., Wallington. [8951

HALIFAX.—Fifty second-hand machines and combinations, cash, exchange or deferred payments. Get list.—Halifax Motor Exchange, Horton St., Halifax. [9844

FOR Sale, 1914 4h.p. J.A.P. 3-speed hub motor cycle, good condition, any trial, tax paid (30/-); £45, or offer.—Can be seen at 22, James' St., Coalville, nr. Leicester. [8883

3½h.p. Sunbeam Combination, 1919, £79; 3¼h.p. Alldays, 3-speed, countershaft, chain drive, £33; 3½h.p. Singer T.T., £25; all bargains.—Ayden, 159, Hornsey Rd., N.7. 'Phone: North 280. [9383

SALE or Exchange.—Douglas 2¾h.p., £16; another Douglas, £30; Radco 2-stroke, £19/10; Fafnir 3-speed, £29/10; Abingdon 3½h.p. Sports, £28/10. —79a, Clapham Rd., S.W.9. 'Phone: Brixton 3037. [9377

BLACKPOOL Bargains.—1922 Rudges, 1922 Ariels, 1922 O.K.s, 1922 New Imperials, 1922 Quadrants, 1922 Royal Rubys. Quick deliveries. Good price for your machine; exchange.—Booths' Motories, 294, Waterloo Rd., Blackpool.

BLACKPOOL Bargains.—1919 New Imperial, 2 speeds, kick starter; £45/10.—Booth's Motories.

BLACKPOOL Bargains.—P. and M. Combination, £47/10/6; 6h.p. Rex Combination, £27/10/6.—Booths' Motories, Blackpool.

BLACKPOOL Bargains.—Clyno Combination, lamps, screen, spare wheel, £69/10/6; 8h.p. Premier Combination, screen, hood, £49/10/6.—Booths' Motories, 294, Waterloo Rd.

BLACKPOOL Bargains.—Good Trump, £18/10/6; N.S.U. lightweight, £13/10/6; 4h.p. Douglas Combination, £59/10/6.—Booths' Motories.

BLACKPOOL Bargains.—A.J.S. Combination, lamps, screen, £49/10/6; G.N. 1920 car, dynamo lighting, fully equipped, £140/10/6.—Booths' Motories.

BLACKPOOL Bargains.—1920 Matchless Combination, detachable wheels; £120/10/6; A.J.S. and sidecar, £59/10/6.—Booths' Motories.

BLACKPOOL Bargains.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6; 1920 Sun, 2 speeds, kick starter, £39/10/6.—Booths' Motories.

BLACKPOOL Bargains.—1920 Wooler, £49/10/6; 3½h.p. Humber, £20/10/6; P. and M., £35/10/6; Indian Combination, disc wheels, £45/10/6; 6h.p. 3-speed Rudge, £35/10/6.—Booths' Motories.

BLACKPOOL Bargains.—2-speed O.K., £24/10/6; 1919 Douglas, £45/10/6; 1919 4h.p. Douglas Combination, £79/10/6; 4h.p. Douglas, £55/10/6; 1920 Tamplin, £79/10/6; 1920 Morgan de Luxe, speedometer, water-cooled magneto engine, £155/10/6. Several others cheap. Push cycles taken in exchange. Motor cycles purchased for cash.—Booths' Motories, 294, Waterloo Rd., Blackpool. [5060

NEW HUDSON Combination, £45; Norton, £70; 4-cylinder F.N., £30; Royal Enfield, £20; 3h.p. Lloyds, £5; 3½h.p. Triumph, £30; 4h.p. Precision, £30; 9h.p. J.A.P., £25; 3½h.p. Rover, £15; 3-speed Bradbury, £16; Indian, £70. Send stamped envelope for lists. This business and stock-in-trade for sale, the most successful of its kind.—Queen's Rd. Garage, Bradford. [8626

SHOW Models, new, slightly shop-soiled only.—One De Luxe T.D.C. 2¾h.p. motor cycle, fitted with Albion 2-speed gear, 26in. wheels, Dunlop tyres, Saxon forks, pan saddle, C.A.V. magneto, Amac carburetter, and aluminium footboards, reduced price £35; one superb Hockley 2¾h.p., 2-stroke, fitted with Albion 2-speed gear, 26in. wheels, Dunlop tyres, Saxon forks, tank with drip feed, pan saddle, C.A.V. magneto, B. and B. carburetter, and aluminium footboards, a handsome machine, take sidecar anywhere, reduced price £38. All parts made by leading manufacturers.—Address, Hockley Motor Co., 38a, Cecil St., Newtown Row, Birmingham. [1067

# Motor Cycle STOLEN.

## 3½ h.p. 1922 TRIUMPH No. 79938

## Frame No. 318358

## Registered No. H.P. 3460

**Triumph colour, Lucas Magdyno Lighting Set, Double Handle-bar Grips.**

**Stolen from John Carpenter Street, Tudor Street, London, E.C.**

# A Reward of £10:0:0

**will be paid by**

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED, 77, Cheapside, London, E.C.2, to the first person giving such information as will lead to the recovery of the machine and the apprehension of the thief or thieves.**

## MOTOR CYCLES FOR SALE.
### Miscellaneous.

F.O.C.H. for secondhand cycles, combinations a runabouts at bargain prices. Exchanges ranged. Any new cycle, combination or car s plied, cash or deferred payments.—Fair Offer House, 5, Heath Street, Hampstead (near Tub 'Phone: Hampstead 3752. Hours 9-7, includi Saturdays. [1

PETER GORDON, Ltd., 110, Upper Richmond R East Sheen.—Trump-Jap, 1914, 4h.p., 3-spe 26 gns. Triumph, 3½h.p., clutch, 29 gns. Dong renovated, 34 gns. Rudge, 3½h.p., clutch, 19 g Connaught, 2-speed, 25 gns. P. and M., renovat brand new engine, 34 gns., all taxed and equipp See also Douglas, Harleys, Zenith, Coulson-B., Mat less, Scott, James, Triumph-Ricardo, advertised. changes. Open Sundays. Telephone: Putney 28 [9

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, period.—Write terms, Fowler Brigden, 1 Euston Rd. [0

G.N. Light Car and Douglas Motor Cycle and Si car for hire; 8 gns. and £5 per week res tively; fully insured.—Rodwell, 8, Red Lion Sq., I born, W.C.1. Chancery 7272. [8

ROBERTSONS Motors, Ltd., for many years h specialised in this class of work. If machin purchased, full amount of hire up to one week allowed.—157b, Gt. Portland St., W.1. [6

## MOTOR CYCLES WANTED.

H

F

EDWARDS and Co.,

101, Gt. Portland St., W., are cash buyers solos, combinations, and Morgans. Hig prices given, distance no object. Call, write, 'phone: Mayfair 4027. [0

T.B

WANT

500 COMBINATIONS and Solos, any make, antee top prices given.—T. and B. M Co., Ltd., 372, Euston Rd. Museum 6581. [5

WE

ARE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combinat We pay cash on sight.—Write, call, or 'ph Museum 1337.—Percy and Co., 314, Euston Rd. [0

BEST

PRICES

GIVEN

H. F. EDWARDS and Co., 50, Harrington South Kensington, will purchase for spot your motor cycle or combination. Call, write 'phone Ken 3709. [0

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, w 'phone, or call. If country, send to Lo terminus. We collect free and send best cash off W. T. Dunn, Ltd., 326, Euston Rd., London. Mo 5391. [0

A

MAUDES' Motor Mart are purchasers for spot of late models Sunbeam, Triumph, Douglas, ton, and Morgans.—Maudes', 100, Great Portland London. [

GOOD Solo Wanted for cash.—Box 1527, c/o *Motor Cycle.* [

1921 A.J.S. Combination or Morgan.—Write Waterlow Rd., Highgate Hill. [

WANTED.—A good Combination or Solo.—24, liol Rd., North Kensington. [

2-STROKE, must be cheap, good order, mo —10, Baronsmead Rd., Barnes. [

WANTED, Lightweight, 1920 or later.—Full culars to 28, Albany Rd., N.4.

COMBINATION Wanted, good.—Call or write, Ravensbury Rd., Earlsfield, S.W.18.

WANTED, Triumph countershaft model, £45.—King, Egrove Farm, Oxford.

LIGHTWEIGHT, kick start, late model; cash ing.—4, Gaywood Rd., Walthamstow.

WANTED, Brough, flat twin model, any cond —Box 1534, c/o *The Motor Cycle.*

## MOTOR CYCLES WANTED.

ALFER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

ALFER'S Garage, Tooting, will make you a cash offer at sight.

ALFER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Alfer's Garage.

ALFER'S Garage, Tooting.—Thousands of men have sold their machines here.

ALFER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale, every Thursday at 2.

ALFER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

ALFER'S Garage, Tooting, will collect machines from any London railway station. The auction is held every Thursday, commencing 2 p.m.

ALFER'S Garage, Tooting.—If cash offer not accepted, machine can be included in auction sale every Thursday.

ALFER'S Garage, Tooting.—You fix the price we do the rest.

ALFER'S Garage, Tooting.—Terms:—Selling commission, 7½%, not chargeable unless machine is sold; no sale, a nominal auction fee is charged—motor cars, 20/-; motor cycles under £50 value, 10/-; over £50 value, 10/-. When we effect a sale charges are cancelled and commission returned.

ALFER'S Garage, Tooting.—Catalogue free. Telephone: 208 Streatham. Telegrams: Palmer's Garage, Tooting. [9952

AMED, Combination, Triumph preferred; cheap for cash.—28, Lenthall Rd., Dalston, E.8. [9098

AMED immediately, Lightweight, with gears, must be sound.—1, Othello St., Liverpool. [6868

AMED, Late Solos or Combinations for cash.—, Railway Approach, Shepherd's Bush. [8670

AMED, 1914 Triumph solo or B.S.A.—Particulars, Bevan, 32, Hemstal Rd., Kilburn. [8573

AMED, I.O.M. Rudge-Multi, late model; about —Watts, 261, Balham High Rd., S.W. [8724

AON motor cycle and Douglas 2¾h.p.; call; on waiting.—Green, Wine Merchant, Reigate. [9896

AMED, 7-9h.p. Indian solo or sidecar, cheap, cash.—2, Hawkswood Place, Kirkstall, Leeds. [9703

AWEIGHT machine, late models; about £40. —tters only, Treacher, 65, Pimlico Rd., S.W. [9062

AMED, good solo or combination, reasonable.—nning, 30, Canterbury Rd., Kilburn, N.W.6. [5914

AMED, 1916 American ⅛, T.T. handle-bars.—ite, Jacobs, 55, Dundonald Rd., Kilmarnock. [8633

AETTE Wanted, late model.—Full particu-, Hadden, 1A, Willowbrook Rd., Peckham, [1017

AMED, Sunbeam 3½h.p. model, 1915-1919, reasonable price.—Box 1533, c/o *The Motor* [9886

AMED, Harley-Davidson Combination, 1921, good condition.—George, 8, Mason's Avenue, [1057

AIPH Countershafts, any condition, cash or change.—Ward, 51, Upper Richmond Rd., [5133

AMED, 4h.p. Triumph countershaft, good, equipped, under £45.—Mann, 159, Ebury St., [9927

ALAS or Triumph Combination (late); no dlers.—Write, 31, Langdon Rd., Upper Hollo- .9. [9577

A Lightweight and Cash for 5-6h.p. or 7-9h.p. ian combinations.—7, Alwyne Rd., Canon- .1. [9515

A Wanted, not earlier than 1920; state lowest ce for cash.—Dewhirst, Great Baddow, ord. [9488

AMED, Motor Bicycle in running order; cheap spot cash.—Particulars, Willis, 16, Grosvenor E.5. [8701

AE Combination or Solo, late model, cheap, ate purchaser; London.—Box 1518, c/o *The cycle.* [9084

A M. Solo or Combination Wanted for cash; ers only.—Kenneth Kemp, 68, Belsize Park, N.W.3. [9763

A R Cycle. Value more consideration than ce. Private purchaser; cash.—Box 1321, c/o *tor Cycle.* [6212

AMED, Motor Cycle, any condition, not earlier than 1913, cheap, cash waiting.—61, Grand Harringay. [9530

AMED, good Combination, not earlier than 20; cheap for immediate cash.—Write, Will, mford Rd., E.12. [9201


# TURNERS

SPECIAL PURCHASE OF
**COWEY SPEEDOMETERS**
(Not Trip)

**£3 3s. 0d. each.**

Send make of machine and size of tyre

*We are stockists for the following Manufacturers' goods:*

AMAC, BINKS, BROWN & BARLOW, SENSPRAY — Carburetters and Parts
BOWDEN WIRE Ltd. — Brakes & Parts
BRAMPTON, DRUID — Fork Parts
BRITISH HUB CO. — Hub Parts
B.S.A., DOUGLAS, J.A.P., LEVIS, TRIUMPH, VILLIERS — Engines and Machine Parts
BEST & LLOYD — Lubricators and Parts
LUCAS, MILLERS, POWELL & HANMERS — Lamps & Parts
RENOLDS - Chains & Parts
STURMEY ARCHER Gear Parts
TAN-SAD - Seats & Parts

*NOTE:—*
**London Agents for LEVIS SPARES**
**SIDECAR LUGS and FITTINGS in endless variety**
CAMEO, EASTING — Windscreens and Fittings

*We also have large stock of Accessories and one of the most varied assortments in London. We shall be pleased to quote you for your requirements.*

**180, 181, 182, Railway Approach**
Est. 1901. **SHEPHERD'S BUSH, W. 12.** 'Phone: Western 6177


## MOTOR CYCLES WANTED.

WANTED, good modern Combination or Light Car for spot cash.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [9919

ROVER 3½h.p., 3-speed, all chain drive; also folding car.—Write particulars, price, cash, P., 52, The Drive, Ilford, Essex. [9195

WANTED, 1922 2¾h.p. A.J.S. Standard Sports, new condition essential; reasonable.—70, Minet Avenue, Harlesden. [9495

HARLEY-DAVIDSON, 4h.p. engine, complete with controls, carburetter, and magneto; state year and price.—J. D., 14, Convent St., Swansea. [8590

WANTED, second-hand coachbuilt Sidecar, moderate price, suit P. and M.—Collingwood, Garage, Limpsfield Grange, Limpsfield, Surrey. [9209

WANTED, a few high-grade Combinations and Solos; must bear strictest investigation.—Storer and Tait, 20, Bourdon St., Bond St., W.1. [1074

MODERN Motor Cycles and Combinations bought for cash or sold on small commission; send details first.—South Eastern Garage, Herne Hill, S.E.24. [1096

WANTED, Combination, 6h.p., must have spare wheel, not earlier than 1920, about £100, condition perfect; no dealers.—Sharp, 188, Blythe Rd., W.14. [8753

SECOND-HAND 3¾h.p. 2-speed Connaught or similar machine, with or without light sidecar; must be cheap; Northampton.—Write Box 1519, c/o *The Motor Cycle.* [9045

WANTED, Douglas or P. and M., any condition, also good combination or light car about £100; private buyer; after 7 p.m., or letter.—27a, Anerley Park, Anerley. [9171

WANTED, late combinations, solos, also Morgan runabouts, G.N.'s, Rovers; cash or exchange.—Elce, Ltd., 15-16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 554. [0076

PETER GORDON, Ltd., 110, Upper Richmond Rd., East Sheen, require motor cycles for cash, exchange, or part payment for new models. Open Sundays. Telephone: Putney 2865. [9303

WANTED, Combination, 4h.p. to 6h.p., in exchange for Buckingham 2-seater, 8-10h.p., hood, screen, etc., in nice order.—Hardy, 8, Breams Buildings, Chancery Lane. Holborn 4752. [9484

WE are cash buyers of G.N.'s, Rover and Morgan runabouts. Highest prices offered; distance no object.—J. Smith and Co., Motor Agents, Ltd., 52-54, Hampstead Rd., N.W.1. Tel.: Museum 5938. [9740

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [0828

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Braburys, Martinsydes, Zeniths. — Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted. —Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [4559

F.O.C.H. always have cash waiting for sound machines of all types; highest prices and courteous treatment assured.—Fair Offer Car House, 5, Heath Street, Hampstead (near Tube). 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1610

WANTED.—Motor cycles and combinations for immediate cash, new or second-hand. Bring your machine to us for a cash offer; high prices paid on the spot. Write, 'phone, or call if possible.—Forge Garage, 74-76, Brighton Rd., Surbiton. 'Phone: Kingston 3026. [3169

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Blenheim St.), Bond St., W.1. 'Phone: Mayfair 6559. [0772

ALWAYS Wanted, immediately, any number of second-hand machines and combinations; a competent representative will be sent to inspect and complete purchase after preliminary negotiations; cash and good prices paid.—Longman Bros., 17, Bond St., Ealing. Telephone: 689. [3046

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address: Palmer's Garage, Tooting. [9949

## MOTOR SCOOTERS.

SCOOTAMOTA, practically new; £15/10; nearest. —24, Albion Rd., Lewisham. [8778

BRAND New Autoped Scooter, dynamo lighting, 1½h.p.; £15.—Percy and Co., 314, Euston Rd., N.W. [9655

KINGSBURY Scooters and Spare Parts.—Beaufort Works, Richmond Rd., Twickenham. [2231

A.B.C. Skootamota, new, unsoiled, latest model; £23, sacrifice.—Frank Whitworth, 139, New St., Birmingham. [4658

UNIBUS, 1921, excellent condition, tax paid; £40, or near offer.—Light Motors, 28, Tavistock Rd., Plymouth. [8686

A.B.C. Skootamota, new February, 1921, perfect condition; £16, or offer.—Walton, Bohemia, Marlow, Bucks. [8785

AUTOPED Scooter 1916, electric lighting, splendid condition; £10.—Lawrence, Oak Lodge, Takeley, Essex. [9054

SCOOTAMOTA, in good working order; £17.—Apply Robertson's Motors, Ltd., 157B, Great Portland St., W.1. [9066

A.B.C. Skootamota, excellent running order, burn, licence holder, £10/10.—King, 4, Willow Walk, Short St., Cambridge. [9913

AUTOGLIDER, 1921 model, 2¾h.p., good condition, take 2 anywhere, 2 spare tyres and tubes, &c., tax paid; £15.—161, Kew Rd., Richmond, S.W. [1047

AUTOGLIDER, 2¾h.p. model D, clutch, upholstered box seat, fully equipped, rapid hill-climber, splendid condition; £38/10.—Box 1547, c/o *The Motor Cycle*. [9547

ELEVEN Only.—Genuine new A.B.C. Skootamotas; £17/17 each, till cleared; listed at £55.—The London and Norwich Cycle and Rubber Co., 7, White Lion St., Norwich. [8665

AUTOGLIDER, 1921, De Luxe model, with seat, coachbuilt body, Villiers engine, clutch, electric lights, equipment, new condition; £35.—Geo. Siddall, Stanton, Rowsley, Derbyshire. [9565

1921 Birmingham Guild Motor Cyclette, 18in. wheels, 1½h.p., overhead valves, all on, tax paid, perfect condition, suit lady or gentleman; £25; photo.—Avery, 77a, Palmerston Rd., Earlsdon, Coventry. [8802

## MOTOR ATTACHMENTS.

J.E.S. 1h.p. Unit and Bicycle; £13/10.—60, Lanercost Rd., S.W.2. [8833

1921 Young, fitted B.S.A. cycle, 25in., perfect, all on; £22.—48, Slade Grove, Manchester. [8854

AUTO-WHEEL, perfect running order, complete, new tyre; £6/15.—Wyatt Manning, Soham, Cambs. [8863

AUTO-WHEEL, 1921, and Quadrant 3-speed cycle, perfect condition; £18/10.—Mylam, 197, London Rd., Croydon. [8918

WALL (B.S.A.) Auto-wheel and Lady's Cycle, excellent engine; 12 gns.—14, Broxholm Rd., W. Norwood, S.E. [8647

YOUNG Motor Attachment, 1921 model, perfect condition; £10; with cycle, £17.—Howarth, High St., Heston, Middlesex. [8579

B.S.A. Pedal Cycle, 2-speed gear, fitted with a 1¼ h.p. 1921 motor attachment, viz., Auto-Wheel; £17/10; cash or easy terms.—Wauchope's, 9, Shoe Lane, Fleet St., London. [9857

## HOODS, WIND SCREENS, ETC.

CAMEO Windscreen, with apron; 30/-.—Rix, 149, Broadway, Cricklewood. [9029

COLLINS and Son for hoods, screens, and aprons; hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreens, complete with apron; 22/6, 30/-, and 35/-; seat on approval against cash; carriage 1/6 extra.—Below.

COLLINS and Son stock all known makes of windscreens; we have a few second-hand Standard Eastings, fitted with new celluloid, from 45/-.—Below.

COLLINS and Son fit celluloid panels to any windscreen in few hours, new aprons, side curtains, etc.; open weekdays till 8.30, Sunday mornings till 1 o'clock.—Collins and Son, rear of 84, High St., Putney, S.W. (D) [6025

SANDUM V windscreens, £2/15, in stock.—Houchin, 189A, High St., Peckham, S.E.15. [8618

V-SHAPED Windscreens, with apron, from £2/15.—Bright and Hayles, 78, Church St., Camberwell. [8248

HERCULES Hoods and Aprons; write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [0853

HOOD and Screen, excellent condition; £4/10, or nearest offer.—Taylor, 16, Guy's Cliffe Terrace, Warwick. [8915

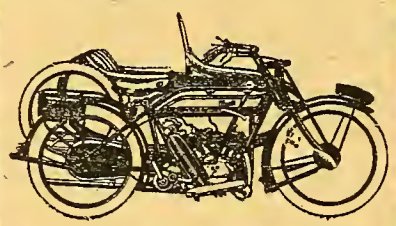
HAVING Purchased Quantity of Windscreens, I can supply at half prices, also aprons; stamp please enclose.—Edwardes, 277, Camberwell Rd., S.E. [9478

# RATCLIFFE BROS.

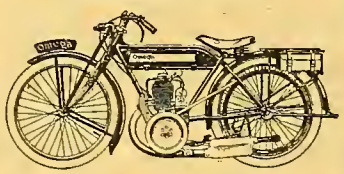
## 200, GT. PORTLAND ST., W

'Phone—Langham 1701.

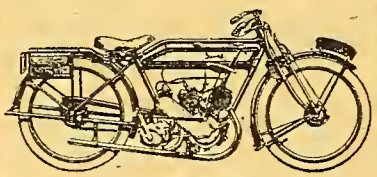
**Any make of machine can be supplied on our Payment out of Income Scheme. Write for full particulars, and state machine you are interested in.**



**JAMES No. 10.**
**£160 cash or £40 down and twelve monthly payments of £10 11s.**

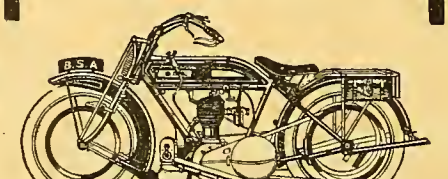


**OMEGA Model 6.**
**£39 10s. cash or £9 17s. 6d. down and twelve monthly payments of £2 12s. 1d.**



**JAMES Sports.**
**£105 cash or £26 5s. down and 12 monthly payments of £6 18s. 5d.**

**ALLON.**
**£60 cash or £15 down and 12 monthly payments of £3 19s. 1d.**



**B.S.A.**
**£107 cash or £26 15s. down and 12 monthly payments of £7 1s. 1d.**

**TRADE SUPPLIED.**

## HOODS, WIND SCREENS, ETC.

BENT Hoops, hood fittings, straps, turnbu twills, etc.; hardwood polished wind sc 27/6.—Henry Jones, 778, High Rd., Tottenham, don.

RENNOC Co.—We are actual manufacture hoods, screens, and aprons. Send for Rennoc Motors, Ltd., 155a, Marlborough Rd., Holloway, N.19.

ROBINI Manfc. Co.—The Bower adjustable screen, registered, with coverall apron, 30/- riage paid; beware of imitations; celluloid fitted, Eastings, 16/6; coverall aprons made to 10/-.—'Phone: Brixton 1585. Robini Manfc. 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2.

## BODIES.

RENNOC Sidecar Bodies, actual manufacture models, also several clearance, cheap to clea

RENNOC Co. specialise in repairs, repainting upholstering.—Rennoc Motors, Ltd., 155a, borough Rd., Upper Holloway, N.19.

COLLINS and Son for coachbuilt bodies, all in stock, from lightweights to 2-seater.—B

COLLINS and Son are actual manufacturers give twelve months' guarantee with every made by them.—Below.

COLLINS and Son repair, repaint and nphols moderate charges, first-class work guara estimates free; send for catalogue.—Collins and rear of 84, High St., Putney, S.W.

LIGHT Car and Motor Cycle Engineering Co., Medium touring, £7/7; heavy touring, touring de luxe, £10/10.

SECOND-HAND bargains.—Enfield body, ren as new, £7. Mills-Fulford body, renova new, £6. P. and M. body, renovated as new Tradesman's box carrier to fit Douglas chassis, 26, Tulse Hill, Brixton. 'Phone: Brixton 129 minute from Brixton Skating Rink.)

BASTONES for Sidecar Bodies, all latest mo stock from £4.—228, Pentonville Rd., Cross, London, N.1.

WILLOWBROOK Bodies to fit any chassis; from £5 upwards; write for designs.—W brook Motor Co., Leicester.

CAMBER Sidecar Bodies from £4/17/6; bod painted and upholstered from £3.—Brigh Hayles, 78, Church St., Camberwell.

FIFTY bodies, second-hand, upholstered best moid, touring shape, from £2 each; new, at £7, exceptional bargain; also a few to clear.—Sandums, 336, Gray's Inn Rd., W.

£3/15.—Great bargains in bodies, beau finished, from £3/15; 2-seaters, adapable f adults or one adult and child, from £9; all finished to order. Write for particulars.—1 Brixton 1585. Robini Manfc. Co., 1 and 3, Hill, Effra Rd., Brixton, S.W.2.

SIDECAR Body Designs for the trade only, ing, coloured pencil, or line drawings of designs, also working drawings, full-sized or to Cooper's Vehicle Journal, Designing Dept., esta designers to the coach trade for over 80 years. salt us when designing new ideas.—Dorset Tudor St., London, E.C.4.

£4/17/6.—250 Douglas type, bulbous backe locker under seat, brand new, bodies uphc in rexine; £4/17/6 each; owing to contract, w bought right, so sell right; they simply req finishing coat to complete; photo sent on requ stamp. 'Phone: 1958 Brixton.—19, Wilcox South Lambeth, London, S.W.8.

COBB Speedman Famous Sidecar Bodies £2/12/6, carriage paid; second-hand spor touring bodies from £2; bodies repainted, 25 upholstered, 30/-; alterations and repairs to e bodies; bodies built to customers' own designs at low prices.—Vernon Cobb, 18, Midland Rd., ton, Nottingham. Works: Burton Joyce.

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were ti of the show; £14 to £50. Write for new cata

SANDUM (V-shaped) Wind Screen a hood. and apron; £2/15 and £3/18. Write for

SANDUM (V-shaped) Wind Screen.—Our South l agent writes: "An instantaneous success out; send further supply." Agents, get in touch w

SANDHAM Engineering Co., Ltd., 336, Gray Rd., W.C.1. 'Phone: Museum 342

SUNBEAM Sidecar for sale, nearly new; £ Bramhall St., Cleethorpes.

SIDECAR off Harley, Easting; £15.—Flat 1 Southampton Row, W.C.1.

## SIDECAR ATTACHMENTS.

)LETON'S Patent Spring Wheel Sidecars are iaranteed 3 years.

)LETON'S Patent Unbreakable Chassis for gh-powered machines; Zenith, Harleys, Indians, iperials, Sunbeam, Blackburnes, etc.

ANS with kick starter on left present no diffi- y with Middleton's special model.

)LETON'S specialise in frame repairs of all ods. Twisted motor cycle frames and forks y corrected.

ND-HANDS of various makes for sale. Your l sidecar taken in part exchange.

)LETON'S Spring Wheel Sidecars are not only fer and more comfortable, but are faster on ds than rigids. They give to the bumps, not to them.

:HER'S Model, designed for particular precise ople predisposed to perfection *en pension*.

:OUGHLY Hygienic Upholstery, antiseptic, titoxinated, Thermogeoe stuffing both ends, cur- dash fitted with barometer, thermometer, ane- r, 5-day chronometer, vibration minimised .0, ; blood corpuscles relativity to other corpuscles ng statistically as they were before they did, peak; Triple Triple tyre for abnormal mileage ith long holidays; price, with vacuum dust and excluder, £257/9/2½; Alpine shaped hat to one feather at side, "not jaunty," 10/11½.

)LETON'S, London's oldest established sidecar ikers, wholesale, retail, and export, 27, Stroud d., Finsbury Park (near Tube). 'Phone, Horn- 4. [0522

'ONES for Sidecars, no better or cheaper house l latest models in stock.

'ONES.—Lightweight sidecars complete, to fit machine; £12/18/6.

'ONES. Sports model sidecar, complete. .7/10; several other models in stock, including all at low prices.

'ONES.—Distributing agents for the famous ootgomery sidecars, all the latest 1922 models .

'ONES for Sidecar Chassis, underslung £7/19/6. odern chassis £14/10, auxiliary arms 14/-.— entonville Rd., King's Cross, London, N.1 2481 North. Grams: Bastones, London. [6049

1921 Sporting Sidecar, locker, screen; sacrifice. 5.—21, Fordel Rd., Catford. [9558

UBE Sidecars are most unique. Scientifically igned, made of finest materials.

UBE Chassis, constructed of steel lugs, straight el tubes, with welded joints.

UBE Sidecars are light. Supplied with either rting or touring coachbuilt bodies.

UBE Sidecars. One price, £15/10. Write for klet.—Davis Bros., Church St., Rickmansworth. 5 [4195

.FORD chassis for Indian, complete with disc heel; £5/10.—Houchin.—Below.

TGOMERY Sidecars from £17/10. Sporting odel in stock. Trade supplied.—R. G. n, 189A, High St., Peckham, S.E.15. [8617

3ER.—Utility model; £25.—Bright and Hayles, Church St., Camberwell, London.

3ER.—Utility tandems; £27.—Bright and tyles, 78, Church St., Camberwell, London.

3ER.—Semi-sports model; £17/10.—Bright and tyles, 78, Church St., Camberwell. [8251

)AR, coachbuilt, nearly new, 28×3 tyre; £14. Hipsy House, West Norwood, S.E. [9167

.FORD C.B., off Triumph; £6/10.—534, Ful- am Rd., Walham Green (Basement). [9030

ERSLUNG Coachbuilt Sidecar, good condition; .—Johnson, 172, Avenue Rd., Acton. [9483

TING Canoelet, fitted Triumph; £5; exchange rger sidecar.—373, Acton Lane, Acton. [9419

CARS, several cheap, room wanted, fitted free. 57, Kenbury St., Camberwell, London. [9339

.—Canoelet Touring Sidecar, 4-point, suit h.p.—Torrome, 10, Cathcart Hill, N.19. [8995

)AR Chassis for Sale, new tyre, tube; £5/10. Beardmore, Hedge Place Rd., Greenhithe. [9187

'T C.B. Sidecar, underslung chassis, cover-all ron; £7/10.—11, Queen's Rd., Peckham. [1087

8ER coach sidecar, hood, fittings, tyre, good ondition; £5/10.—28, Ravenstone Rd., Hornsey. [9492

'ELD Sidecar, complete, £7; coachbuilt side- , complete, £7.—17, Heaton Rd., Mitcham. [9366

LFORD Sunbeam Sidecar, 28in. wheel, spring shion; £7/10.—107, Tylecroft Rd., North- [9361

IT Coachbuilt Sidecar; £6; suit any make achine.—1, Springfield Park Crescent, Catford. [9375

H. F.

# EDWARDS

& CO.

**101, GREAT PORTLAND STREET, W.1**

Tel. Maylair 4027.

# WONDERFUL BARGAINS

SEVERAL BRAND NEW (Shop Soiled)

## 2¾ DOUGLAS 47 Gns.

TRADE SUPPLIED.

Several Brand New 1921 5 h.p.

## ZENITH - SPORTS

## 76 Gns. (listed £110)

Also MAKER'S USUAL GUARANTEE.

Several Brand New 5-6

## ZENITH COUNTERSHAFT

Models, Clutch, Kick-Start,

## 84 Gns.

Listed £118. Maker's Guarantee.

1918 4 h.p.

## TRIUMPH, W.D.

Overhauled and reconditioned as new,

## 57 Gns.

## NEW SIDECARS FOR ABOVE MACHINES FROM 17 Gns.

### SECONDHAND COMBINATIONS.

| | | Gns. |
|---|---|---|
| 1921 | **O.K.** 2¾ comb., 2-speed, clutch, excellent condition. List price £97 10s., our price | 57 |
| 1921 | 8 h.p. **BLACKBURNE,** with K3 Canoelet sc. | 100 |
| 1921 | 6 h.p. **BRITISH EXCELSIOR,** wind screen, lamps, speedometer, licensed, Tan Sad. As new | 105 |
| 1920 | 6-7 h.p. **ARIEL** Comb., fully equipped. As new | 89 |
| 1921 | 7-9 h.p. **INDIAN,** Magdyno lighting, speedometer, Easting screen. Excellent condition | 97 |
| 1920 | **MARTINSYDE,** electric lights, screen | 90 |

### SECONDHAND SOLOS.

| | | |
|---|---|---|
| 1919 | **TRIUMPH,** Sports Model, Philipson Pulley, licensed, horn, knee grips, in good condition | 58 |
| 1920 | 3½ h.p **ARIEL,** equipped legshields, etc. | 65 |
| 1921 | 2¾ h.p. **A.J.S.** Equipped, licensed, speedo. | 72 |
| 1921 | 3½ h.p. **SUNBEAM.** Equipped, licensed, speedo. | 98 |
| 1920 | **DIAMOND,** 2-stroke. Licensed | 29 |
| 1921 | 2¾ **NEW IMPERIAL,** 3-speed, licensed, equipped | 53 |
| | **O.K.,** 2½ h.p., single-speed, equipped | 26 |
| 1921 | 3½ h.p. **RUDGE-MULTI,** lamps, horn, speedometer. As new | 59 |
| 1922 | 4 h.p. **INDIAN SCOUT,** lamps, Tan Sad, licensed. As new | 93 |

**Deferred Payments & Exchanges on any of the above.**
**WANTED—SOLOS and COMBINATIONS.**
Cash waiting.

## SIDECAR ATTACHMENTS.

BARGAIN.—Coachbuilt Sidecar, fit any motor, all couplings; £5.—Box 1523, c/o *The Motor Cycle*. [9907

BRAND new sidecar, Cooper body painted royal blue, for Triumph; £19.—H. Rock, Cradley, Staffs. [9282

CANOELET Sidecar, first-class condition, only 400 miles; £13/10.—K. Webster, Pear Tree Cottage, Boxmoor. [9082

1920 Sunbeam Sidecar off Triumph, complete, lamp, windscreen; £12/10.—Sworder, Wymondley, Stevenage. [9551

BOOTHS Blackpool Bargains.—Limited number, new coach bodies, full size, with locker, £5/17/6; usually £9/10.

BOOTHS Blackpool Bargains. New £9/10 coach bodies for £5/17/6; illustration free.—Booths Motories, Blackpool.

BOOTHS Blackpool Bargains.—Quantity new underslung chassis, 4-point attachment, £9/19/6; illustration free.—Booths Motories, Blackpool.

BOOTHS Blackpool Bargains.—Several shop-soiled sidecars, cheap; Hercules coach sidecar, £9/10/6; ditto Canoelet, £8/10/6 ditto Farlow, £8/10/6; cane body, 22/6.—Booths Motories, 294, Waterloo Rd., Blackpool. [5061

SPORTS Sidecar, Gloria type fittings, low body, disc, new, smart; £15.—Letters, 19, Cleveland Terrace, Darlington. [8589

WHITLEY Sidecars, Coventry.—Three models, £25, £29/10, £32/10. Nothing on one wheel to equal. Lists free. [0856

1921 Middleton Spring Wheel Sidecar, black and gold; best offer.—16, Stroud Green Rd., Finsbury Park. 'Phone: 1799. [9119

CANOELET Sidecar, light grey, 26in. wheel, new tyre, good condition; nearest £10.—Cox, 1, New Upperton Rd., Eastbourne. [1072

CANOELET C.B. Sidecar, roomy, comfortable, Easting fitted, good condition; £16.—81, Broxash Rd., Clapham Common, S.W.11. [9018

B.S.A. (£45 model), new Easting, guaranteed indistinguishable from new; £25, or near offer.—5, Holborn St., Sudden, Rochdale. [8568

EXTENDED Payments accepted for sidecars; models for all makes.—Send for catalogue, etc., Rideezi Sales, Ltd., 5, Victoria St., S.W.1. [0829

GREATEST Bargain ever Offered.—18 gn. sidecar chassis for £6, brand new, remains of contract.—Rustic Walk, Lower Bourne, Farnham. [8691

SPORTING Rennoc Coachbuilt Sidecar, excellent condition, purple and gold; £11; after 6 o'clock.—Mayes, 51, Arodene Rd., Brixton Hill. [9514

RENNOC Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers throughout. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock-out prices. Note; Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of sidecar; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19. 'Phone: Hornsey 1589. [2319

SIDECAR, coachbuilt, 4-point, new tyre, apron, electric lamps, accumulator, suit 3½h.p. or lightweight; £12/10.—2, Langley Court, Long Acre. [9985

P.M. Sidecars, new, £12; bodies, chassis, stoved, enamelled, plated fittings, tube, tyre, all fittings, £11/10.—Welding Co. 55, St. James Rd., Bermondsey. [1023

UNDERSLUNG Sidecar, semi touring model, with locker, quick, detachable fittings, complete, as new; £12/10.—73, Church St., Camberwell Green, S.E. [1104

BRAND New, latest underslung handsome bulbous coach, suit Triumph, similar; complete, £11/10, or separate.—Taylor, 637, Seven Sisters Rd., Tottenham. [8933

LUGGAGE Carriers.—We make to fit any pattern sidecar; trade enquiries invited.—Harbern Bros., Acetylene Welders, 37, Upper Highgate St., Birmingham. [8903

CANOELET Sidecar, Easting windscreen, lamp, Dunlop tyre, chassis repainted, all excellent condition; £16.—Wilkins, 19, St. David's Rd. South, St. Annes. [8592

## SIDECAR ATTACHMENTS.

COLLINS and Son for Sidecars, new bulbous back models complete with renovated underslung chassis, with fittings for any machine, from £12/10.—Below.

COLLINS and Son.—2-Seater bulbous back coachbuilt models, with renovated underslung chassis, from £15.—Below.

COLLINS and Son.—New Montgomery Chassis, fitted with our 1922 bulbous De Luxe coachbuilt body, supplied with fittings for any machine, £18/10.—Below.

COLLINS and Son.—New Mills-Fulford Chassis, with bulbous back coachbuilt body, supplied with fittings for any machine, £17/10.—Below.

COLLINS and Son specialise in frame and chassis repairs; all work guaranteed; send for catalogue. Open weekdays till 8.30, Sunday mornings till 1 o'clock.—Below.

COLLINS and Son will take your present sidecar in part payment of any model; a few second-hand sidecars in stock.—Collins and Son, rear of 84, High St., Putney, S.W. [4085

HAVING Purchased Quantity of Bat Parts, I can supply new chassis, less springs, £2 each; please enclose stamps.—Edwardes, 277, Camberwell Rd., S.E. [9477

CANOELET Light and Heavyweight Sidecars, good condition; £7/10.—Longrun Motor Company, Stanley Gardens Mews, Kensington Park Rd., W.11. Park 2151. [9968

MILLFORD 1920 Family Sidecar, windscreen, child's seat, hood, new condition, Dunlop 26 ×2½ new cover; bargain, £19.—123, Rugby Rd., Leamington. [8851

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 10h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

MONTGOMERY Sporting Sidecar, used 40 miles, black lined grey, made specially for 8h.p. Zenith; cost £26, accept £16.—Box 1520, c/o *The Motor Cycle*. [9912

WILLOWBROOK Sidecars for any machine, smartest designs, comfortable bodies; write for catalogue showing reduced prices from 16 gns.—Willowbrook Motor Co., Leicester. [0335

COMFY Sidecars, strong underslung chassis, coach built body, bulbous back with locker, quick detachable fittings, Clincher tyre; price 18 gns.—Comfy Sidecar Co., Leytonstone. [3079

SPRING Wheel, girder axle, Middleton, cost £24 1921, fits left-hand Indian or other 28×3 machine; good reason; £8; evenings; chassis only.—39, Westmead Rd., Sutton. [8837

CANOELET 1921 Sporting, K4, 12 gns.; brand new light-medium Henley, 13 gns.; good medium underslung coachbuilt, 9 gns.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [9305

HAWK Sporting Sidecar, new March, 1922, hardly used, dash, Auster Triplex screen, 3-way switch, step, fit any machine 4h.p. to 8h.p.; nearest £25.—Hansford, 56, Queen Anne St., W.1. [9113

LANCASTER Sidecars.—Superb coachbuilt sidecars complete from 14 gns.; bodies only from 4 gns. A good selection in stock. Call and inspect.—The Lancaster Motor Co., 158, Norwood Rd., West Norwood, S.E.27. 'Phone: Streatham 2541. [3328

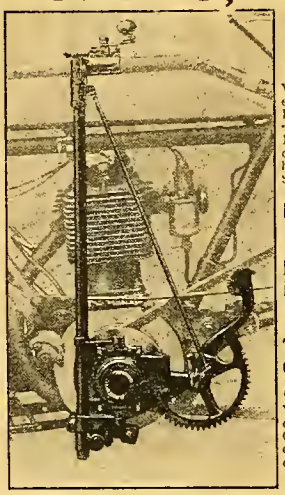
PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

LIGHT Car and Motor Cycle Engineering Co., Ltd.—Medium touring, complete, £15/15. Heavy touring, complete, £21. P. and M. sidecar, as new, £10. Touring sidecar complete, £4. Box carrier, complete with Mills-Fulford chassis, £5/10.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. (½ minute from Brixton Skating Rink.) [9824

DOUGLAS Chassis, shop-soiled bodies, special offer, £11/10; P. and M. outfits, new bulbous back bodies, fittings, etc., £14; outfit for Triumphs, B.S.A.'s, etc., new bodies, £15; lightweights, complete, brand new, from £11/10; 2-seaters, complete, from £14; extended payments. Write for particulars. 'Phone: Brixton 1585. Robini Manic. Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. [9650

OLD Man Hep has 1,000 Douglas underslung chassis, renovated and complete, to suit all makes of machines, for £5; or fitted with a brand new Douglas type bulbous backed body, for £10/10 (these bodies are upholstered with good quality Rexine, but require a last coat of paint); this has been left for travelling on rail; send for photo, enclosing stamp. We cannot be beaten for our prices. 'Phone: 1958 Brixton. (See Body column.)—19, Wilcox Rd., South Lambeth, London, S.W.8. [5035

## GRADO, LTD.



Special Prices.

**Kick-start Model £6.**

Variable gear, free engine, kick-start. Here is our world-famed kick start Model for all machines from 3 to 10 h.p. Delivery from Stock.

**Plain Model £5 0 0.**

**Lightweight Plain Model £4 5 0.**

**Two-stroke Countershaft Model £8 8 0.**

Variable gear, free engine, handle start Complete with chain, both sprockets and starter.

*Postage Free.*

### The Grado Concentrix Valve Grinder.

**Grinds Valve Absolutely Central.**

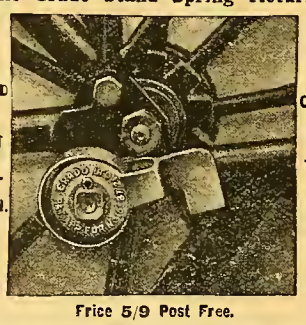
**VALVE CAP and SPARKING PLUG SIZE.**

American and English Threads.

**PRICE 6/6** Post Free

**Requires No Effort. No need to take off Cylinder.**

### The Grado Stand Spring Return.



STAND CANNOT FALL DOWN.

ORDER ONE TO-DAY.

**Price 5/9 Post Free.**

### The Grado Valve Facer.

*Postage 1/- extra*

**Price 20/-**

**LONDON: 26, Cross St., Hatton Garden, E.C.1.**
**NORTHERN & MIDLAND ORDERS: 66, Pershore Street, Birmingham.**

## RUNABOUTS AND CYCLE CARS.

REYNOLDS Runabout, shop soiled only; barg £60; 2 seats.—Helliar, Honiton. [8

MORGAN Grand Prix, as new, lavishly equipp £150.—52, Thornhill Rd., Islington. [3

CHATER-LEA Cycle Car, practically new; £60 exchange.—24, Albion Rd., Lewisham. [8

MORGAN 8h.p., M.A.G., 1920, o.e. £50 w extras; £155.—Durant, Bourne, Farnham. [8

1921 Carden, perfect condition, hood, scr lamps; £75.—Compton Works, Wickford. [6

G.N., touriog model, immediate delivery; £22 Ratcliffe Bros., 200, Great Portland St., W. [4

2-SEATER Car, complete, less engine; 18 g appointment only.—67, Mayola Rd., Clapton. [9

1921 De Luxe G.N., dynamo lighting, every ac sory; £130.—24, Balliol Rd., North Kens ton. [9

1917 G.P. Morgan-Jap, lamps, discs, etc.; £1 motor cycle part.—120, Sutherland Rd., C don. [9

2½h.p. 1915 De Luxe 2-stroke, overhauled, etc., perfect order; £18.—2, Windsor St., Leam ton. [9

1922 8h.p. Rover; cash, terms, or exchange Shepherd, Enfield Highway. Tel.: Walt Cross 31. [0

MORGAN De Luxe, W.C., J.A.P., small mile as new; £155.—93, Chiswick Rd., Lower monton. [8

BEDELIA.—The new 1922 model 8-10h.p., cooled or water-cooled to choice. Immed deliveries.

BEDELIA.—Air-cooled model, £185; water-co model, £195; side-by-side armchair seats, 3 sp and reverse, 5 detachable wheels, hood, screen, lam tools, jack and pump included; trial free.

BEDELIA.—Cash or easy terms; your old car motor cycle taken part payment.

BEDELIA.—Catalogue free from L. N. Palmer, Concessionaire for the British Empire.—Palm Garage, Tooting. [9

BLERIOT Whippet, dynamo, spare wheel, in top order; £85.—Grimes, 18, Bruton Place, B St., W.1. [9

1919 Carden (Triumph), 8h.p. J.A.P., Sturmey speed, almost new; £75.—77, Haverstock H Hampstead. [1

1920 8h.p. A.V. Bi-car, good condition; £70; change 3-speed Norton.—Eatough, Uckingt Shrewsbury. [8

A.C. Carrier, detachable wheels, fine body, perf order, drive away; bargain, £25.—89, East E Wandsworth. [9

MORGAN Runabout, Grand Prix model, 1913 h.p., water-cooled; £60.—Apply, G. Hyde, M tingham, S.E.9. [8

A.V. Monocar, 1921½, under 1,000 miles, good r ning order; £60, near offer.—Wood, Welburn A Headingley, Leeds [8

MORGANS.—Prompt delivery of 1922 mod Official agents. Trade distributors Kent, Ess City London.—Below.

G.N.—Immediate delivery of standard model; £2 dynamo lighting, etc.—Below.

G.N.—Dynamo lighting, horn, etc., choice of fo prices £125-£168; in guaranteed condition Below.

ROVER 1922 Standard and De Luxe Models, n in stock, dynamo lighting, etc.; prices £220 £245.—Below.

ROVER 1922 8h.p. Car, dynamo lighting, horn, e done few hundred miles only, as new through £197/10.—Below.

CARDEN Cycle Car, 1921, electric lighting, ho hood, etc.; £72/10.—Elce, Ltd., 15-16, Bisho gate Av., Camomile St., E.C.3. 'Phone: Avenue 554 [0

1920 2-seater Tamplin, £89/10; 8h.p. Morg hood, screen, £75.—Halifax Motor Exchan Horton St., Halifax. [9

T.B., 1921 (September), 10h.p. W.C. Blackbur 1922 starting, perfect; £140.—Kiog, Farm Kennington, Oxford. [9

GWK., 2-seater, recently overhauled, new f crankshaft, ball bearings; £90, near offer Moore, Selsey, Sussex. [8

1920-21 G.N., discs, spare wheel, dynamo lighti speedometer, well equipped; £130.—17, Charles Square, W.10. [9

£125.—1914 Morris-Oxford 2-seater, 4 cylinde W.C., 5 detachable wheels, beautiful conditi —King, Egrove, Oxford. [9

8h.p. Duo-Jap, variable gear, good tyres, relia equipped; must sell; £28.—Carter, Rose Ba The Mount, Shrewsbury. [1

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## The Tourist Trophy Races.

ON pages 731-734 of this issue the Lightweight and Junior Trophy Races are described. At the time these lines were penned the results were not known, but sufficient evidence has been forthcoming from the practising to justify the anticipation that, given favourable weather conditions, an increase in speeds over those in last year's event would be attained.

That a 350 c.c. engine is large enough for the all-round requirements of the average solo tourist has long been acknowledged, but it is on account of its development in the Tourist Trophy Races that this economical power unit has come to be accepted by those who a few years ago regarded any machine under the 500 c.c. type as a toy.

As regards the Lightweight class, the known and long-standing attitude of *The Motor Cycle* concerning 250 c.c. engines has been made manifest by the results. We are never tired of fostering the claims of the true lightweight motor cycle. Just as the 350 c.c. engine of to-day replaces the 500 c.c. power unit of yesterday, so will the 250 c.c. machine ultimately attain the same position By increasing engine efficiency, the T.T. races automatically encourage the production of smaller and more economical motor cycles for the ordinary rider, for a small engine permits the embodiment of lighter parts all round, and a lighter machine means greater economy in first cost, upkeep, and taxation.

True, the lightweight machines in this year's races were no lighter than the large motor cycles which competed in the first T.T. race in 1907. This is a fact which sometimes is used as an argument against the modern mount, but anyone comparing the respective specifications of 1907 and 1922 machines will appreciate that, considering the equipment and the convenience provided by it, the weights of present-day mounts, while still capable of reduction, are fully justified by the results obtained.

### The Senior Race.

The Senior race, held to-day (Thursday, June 1st), promises to excel all others in point of interest. Not only is there an international element present, but competitors with machines from overseas are among the prime favourites for first place. The races, however, are not so international in character as the public would like them to be, and it is to be regretted that representatives of France, Belgium, Holland, Italy, and Switzerland are not competing, especially since the original object of the Tourist Trophy Races was to prove the speed and reliability of British productions in competition with those of other countries.

Bench tests and scientific research help considerably. Brooklands, too, does a great deal to improve the power and stamina of engines; reliability trials demonstrate the roadworthiness of the machines themselves, but the Tourist Trophy Races combine the best qualities of all these testing media.

## Whitsuntide.

WHILE all, or almost all, the well-known people in the motor cycle world are this week attending either the T.T. races or London-Edinburgh run, or both, there remains, as our fixture list of week-end events would indicate, a great deal of activity among the three hundred or so local motor cycle clubs.

The roads, too, will be teeming with tourists, and if the weather keeps to its promise all previous "records" in this respect should be broken. There will, indeed, be few pneumatic-tyred wheels which will remain stationary all this week-end; but those that are turned by motor cycle engines will be particularly active.

An index to the advertisements in this issue will be found on the page facing the back cover.

## Our 1,000th Number.

I ALWAYS regret that I wasn't on the staff when No. 1 was published, even if only as office boy. At that date, as far as I can remember, I kept my pot boiling with eloquent articles on poultry and pigeons in a contemporary, whilst my secret muse nurtured itself by publishing verse of mingled amorous and humorous tendencies, treatises on war, and fiction of deplorable badness. Only in September, 1904, was this page first inflicted on a long-suffering public. What a staff we had in those days! They deserve to have things dedicated to them like the Early Christians, for only a man of remarkable faith and vision could believe in the motor cycle, as it then was. The originators of *The Motor Cycle* were not martyred for their opinions, because nobody took sufficient interest to be violent about it; but chaff, ridicule, contempt, and financial loss were their portion. But they stuck to their guns, they played their part in fostering and guiding the infant sport and industry. To-day, when all the roads of the world echo to our exhausts, when the motor cycle is every youngster's passion and dream, when manufacture employs thousands, they have their reward; and one or two of them have lived to see it. Where's a prophet who can outline the condition of motor cycling at the date when we publish our 2,000th number? I don't know how the rest of the staff propose to solemnise the anniversary, but I am trying to get hold of the wreck of a front-driven Werner and a trailer, and go out for 100 miles.

## Back to the Island Again.

HEIGHO! Before these lines appear in print I shall have felt the wind blowing over the dirty surge of the Mersey, smelt the mixed odours of the Manx boat (cooking, hot oil—and other smells), met those nasty cross seas an hour east of Douglas, watched the peak of Snaefell rear itself up over—I hope—a smoothish sea, gazed with dismay at those innumerable slimy green steps towering above the boat at low tide, bribed a few of those pirates calling themselves porters to lug my "Ric-Umph" on to the quay, and then, hey, for the Races! Are any of the dark horses top-notchers? Will the Rudge "come back" as it did in '13 and '14? Has the dear old Norton's turn for a slab of luck come at last? Scott, Triumph, Sunbeam—oh, dear! I think I'll listen to Mrs. Ixion, and leave all my spare cash at home this year; it is no race to bet on.

## Training for the T.T.

FOR weeks past the wiser entrants for the T.T. have been busily training physically. For some training means no drinks, for others beer instead of whisky, whilst regular hours and less or no tobacco are common precautions. Golf and ordinary motor cycling are popular, while a few riders prefer boxing, tennis, and even cricket. What awaits a man in the Island depends largely on his employers. Most riders prefer to tune their own machines. One such told me that when his machine was handed over to him in the Island for a previous race, it would not climb a grade of 1 in 15, so that he and all the other jockeys of his stable had a gruelling time, lapping in practice on tourist mounts, and spending the rest of the day in making new cams, etc., with very makeshift tools, only to find that each new part must be improved upon. Finally, they figured quite prominently in the event. Other stables practically maintain a separate staff for tuning, and tell the riders to forget all about motor cycles (if they can) as soon as the course is closed for each practice day.

## Not There.

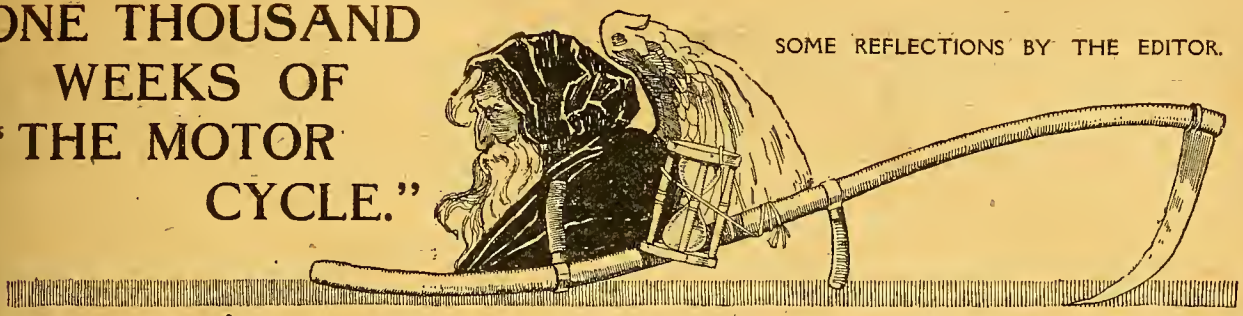
I WAS extremely disappointed at the absence of the Scott Sociable from the Scottish Six Days. Sidecars are notoriously tested to the limit in that arduous event, and ever since I tasted the indisputably beautiful and powerful running of the famous "Crab," I have wanted to see it pitted against the sidecars in what is little short of a test to destruction for all three-wheelers except the elect. If the A.C.U. reverse their 1921 policy and adopt a machine-smasher course for 1922, perhaps the Sociable will weigh in. My private acquaintances tell me that the Sociable is cheaper to run than most sidecars, that it does 70 m.p.g. anywhere, is light on oil and tyres, can be hosed down in five minutes, and does a hard season's work on one decarbonisation. In speed and climb it is pretty well up to the 1,000 c.c. class, in suspension and weather protection it is as good as anything on the road, and I always understand that its appearance was the only thing against it, like the defendant with the broken nose. But its sponsors cannot expect the world and his wife to recognise all these merits if they are studiously concealed under a bushel.

## A Featherweight Speedster.

HOW many people are aware that it is possible to buy a 60 m.p.h. machine, developing some 12 b.h.p. and substantial enough to hold together, which nevertheless weighs under 200 lbs. and only pays lightweight tax? I refer to the Scott Squirrel. I note that the makers employ a cute wrinkle for facilitating the handling of these machines by railway porters, when delivered by train. They thread a 16 in. bar through the top front sidecar connection lug, which completely obviates the usual trouble about finding a grip to lift the front end of the machine.

# ONE THOUSAND WEEKS OF "THE MOTOR CYCLE."

SOME REFLECTIONS BY THE EDITOR.



LAST week *The Motor Cycle* celebrated its thousandth consecutive number. Founded at a time when motor cycles were in their chrysalis stage, this journal has actively fostered and encouraged the development of a type of machine which we felt would eventually form the motor vehicle for the million.

The motor cycle industry has experienced serious trials, vicissitudes and set-backs. Originally modelled on the lines of a pedal bicycle, with its high frame, short handlebar and comparatively large wheels, it at first possessed a somewhat high centre of gravity which brought it into discredit on account of its consequent instability. The process of evolution towards its present form has been gradual, and we, who have closely watched its gradual perfection, sometimes marvel at our own early enthusiasm for its crude forerunners.

### Early Examples of Motor Cycles.

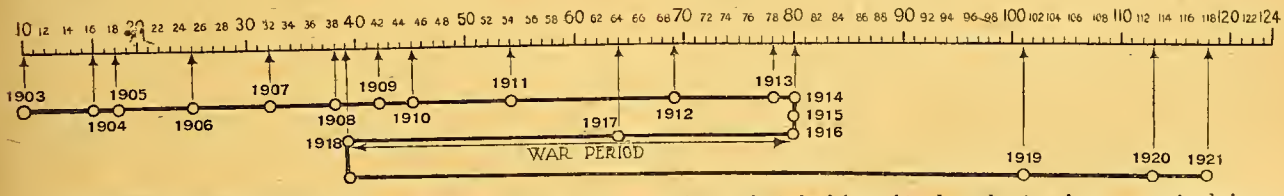
Originally motor cycles had only a single gear; their round or flat belts were unreliable. Gradually but surely the machine advanced towards perfection in reliability and comfort. Pedal gear was displaced by foot-rests and "kick" starters, rigid forks by comfortable spring forks, a stand to support the machine became a permanent fitting, luggage carriers were added when the machines were found to be capable of transporting the rider's necessary personal impedimenta, the old unreliable accumulator ignition system gave place to the entirely successful magneto; frames were lowered, change-speed gears—thanks to the campaign initiated by *The Motor Cycle* in 1906—became standard fittings; reliable and weatherproof forms of transmission made their appearance; and to-day we have a machine equal in reliability to any form of motor vehicle on the road, and one, too, capable of being run at an infinitesimal cost compared with that of the more pretentious car.

### The Passenger Machine Phase.

Hand in hand with the development of the mechanism and design of the motor bicycle itself, the solution of the passenger problem has progressed through its various stages. At first the demand in this respect was satisfied by a simple frail trailer. Subsequently the forecar, and next the tricar, became the vogue; latterly the sidecar has been introduced, and, despite its seemingly unmechanical layout, has proved entirely satisfactory and reliable, so much so that it is the most popular form of motor conveyance on the road to-day.

### A Case of Persistency.

On this auspicious occasion we may be pardoned for referring to the efforts that this journal has put forth in the directions indicated since Number One made its appearance on March 31st, 1903. We have often been paid the compliment that it was owing to the persistency of *The Motor Cycle*, together with the introduction of the high-tension magneto at a critical period, that rendered possible the great motor cycle industry that is in existence to-day. Fifteen or sixteen years ago motor cycles were in disrepute. They had failed to satisfy all at once the over-ambitious expectations that were entertained of them. They were but new to their work—a quite young introduction—but the daily Press, which is ever impatient of innovations, joined in a general condemnation of the seeming intruder. In this connection we have preserved among our records articles of a most damaging character that appeared in some of the newspapers of the time under such headings as "Death of the Motor Cycle," "Decline of Motor Cycles," "Failure of the Motor Cycle," etc. Years of long and patient advocacy and propaganda work were needed to live down these damaging aspersions and to counteract the prejudice that they created in the minds of the unreflecting public. For over six years *The Motor Cycle*, in face of such uncomplimentary references as those to which we have referred, stood alone, in hoeing, so to speak, a long furrow, by steadily fostering, encouraging, and assisting design, by free comment and constructive criticism, never wavering in our convic-



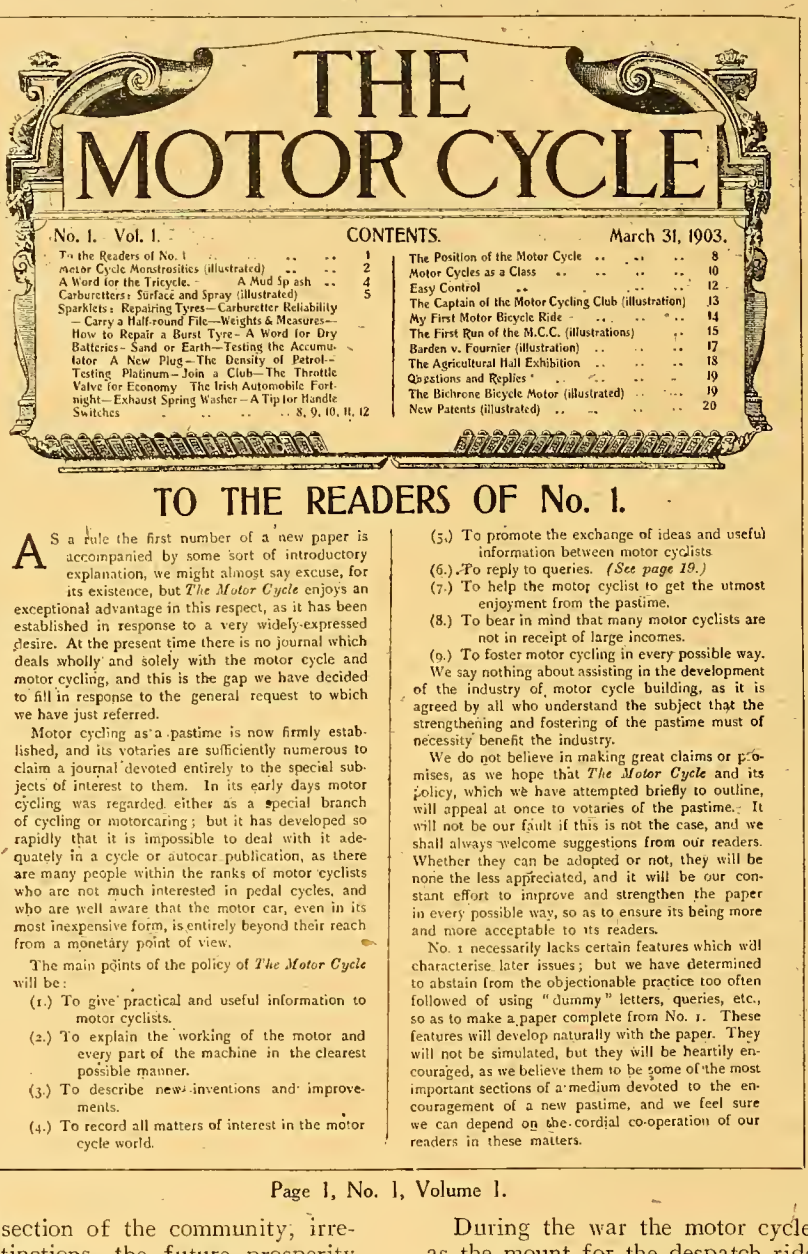

The continually increasing interest in motor cycles from the year 1903 onwards, may be judged from this chart showing the average circulation figures of "The Motor Cycle" in thousands. Incidentally the British Army's great call upon motor cyclists during the war is graphically conveyed by the figures recorded during 1914 to 1918.

**One Thousand Weeks of "The Motor Cycle."—**

tion that the motor cycle would win through and eventually triumph over its carping adversaries. Our optimism has been fully justified by results.

### Reaping Where Others Had Sown.

So soon, however, as the motor cycle had made good by becoming a practicable road vehicle, and the industry showed signs of attaining the huge dimensions it has now reached, those who had poured their scorn upon it and scoffed at it in the days of its weakness now bestowed their blessing, in order, as we suppose, to reap where others had sown. Be that as it may, the motor cycle industry has attained to the distinction of being in a position not only to provide the means of healthy recreation and enjoyment to hundreds of thousands of both sexes, but to give profitable employment to many thousands of workpeople. It is also a point worth noting that the persons who favour the motor cycle as a means of recreation or who use it in connection with their business are of the active and energetic type, upon whom almost more than upon any other section of the community, irrespective of social distinctions, the future prosperity and prestige of the British Empire mainly depends.



THE MOTOR CYCLE

No. 1. Vol. 1. CONTENTS. March 31, 1903.


To the Readers of No. 1 .. .. .. 1
Motor Cycle Monstrosities (illustrated) .. .. 2
A Word for the Tricycle. — A Mud Splash .. 4
Carburetters: Surface and Spray (illustrated) 5
Sparklets: Repairing Tyres—Carburetter Reliability—Carry a Half-round File—Weights & Measures—How to Repair a Burst Tyre—A Word for Dry Batteries—Sand or Earth—Testing the Accumulator—A New Plug—The Density of Petrol—Testing Platinum—Join a Club—The Throttle Valve for Economy—The Irish Automobile Fortnight—Exhaust Spring Washer—A Tip for Handle Switches .. .. .. .. 8, 9, 10, 11, 12
The Position of the Motor Cycle .. .. .. 8
Motor Cycles as a Class .. .. .. .. 10
Easy Control .. .. .. .. 12
The Captain of the Motor Cycling Club (illustration) 13
My First Motor Bicycle Ride .. .. .. 14
The First Run of the M.C.C. (illustrations) .. 15
Barden v. Fournier (illustration) .. .. .. 17
The Agricultural Hall Exhibition .. .. .. 18
Questions and Replies .. .. .. .. 19
The Bichrone Bicycle Motor (illustrated) .. .. 19
New Patents (illustrated) .. .. .. .. 20


## TO THE READERS OF No. 1.

As a rule the first number of a new paper is accompanied by some sort of introductory explanation, we might almost say excuse, for its existence, but *The Motor Cycle* enjoys an exceptional advantage in this respect, as it has been established in response to a very widely-expressed desire. At the present time there is no journal which deals wholly and solely with the motor cycle and motor cycling, and this is the gap we have decided to fill in response to the general request to which we have just referred.

Motor cycling as a pastime is now firmly established, and its votaries are sufficiently numerous to claim a journal devoted entirely to the special subjects of interest to them. In its early days motor cycling was regarded either as a special branch of cycling or motorcaring; but it has developed so rapidly that it is impossible to deal with it adequately in a cycle or autocar publication, as there are many people within the ranks of motor cyclists who are not much interested in pedal cycles, and who are well aware that the motor car, even in its most inexpensive form, is entirely beyond their reach from a monetary point of view.

The main points of the policy of *The Motor Cycle* will be:

(1.) To give practical and useful information to motor cyclists.

(2.) To explain the working of the motor and every part of the machine in the clearest possible manner.

(3.) To describe new inventions and improvements.

(4.) To record all matters of interest in the motor cycle world.

(5.) To promote the exchange of ideas and useful information between motor cyclists

(6.) To reply to queries. *(See page 19.)*

(7.) To help the motor cyclist to get the utmost enjoyment from the pastime.

(8.) To bear in mind that many motor cyclists are not in receipt of large incomes.

(9.) To foster motor cycling in every possible way.

We say nothing about assisting in the development of the industry of motor cycle building, as it is agreed by all who understand the subject that the strengthening and fostering of the pastime must of necessity benefit the industry.

We do not believe in making great claims or promises, as we hope that *The Motor Cycle* and its policy, which we have attempted briefly to outline, will appeal at once to votaries of the pastime. It will not be our fault if this is not the case, and we shall always welcome suggestions from our readers. Whether they can be adopted or not, they will be none the less appreciated, and it will be our constant effort to improve and strengthen the paper in every possible way, so as to ensure its being more and more acceptable to its readers.

No. 1 necessarily lacks certain features which will characterise later issues; but we have determined to abstain from the objectionable practice too often followed of using "dummy" letters, queries, etc., so as to make a paper complete from No. 1. These features will develop naturally with the paper. They will not be simulated, but they will be heartily encouraged, as we believe them to be some of the most important sections of a medium devoted to the encouragement of a new pastime, and we feel sure we can depend on the cordial co-operation of our readers in these matters.

Page 1, No. 1, Volume 1.

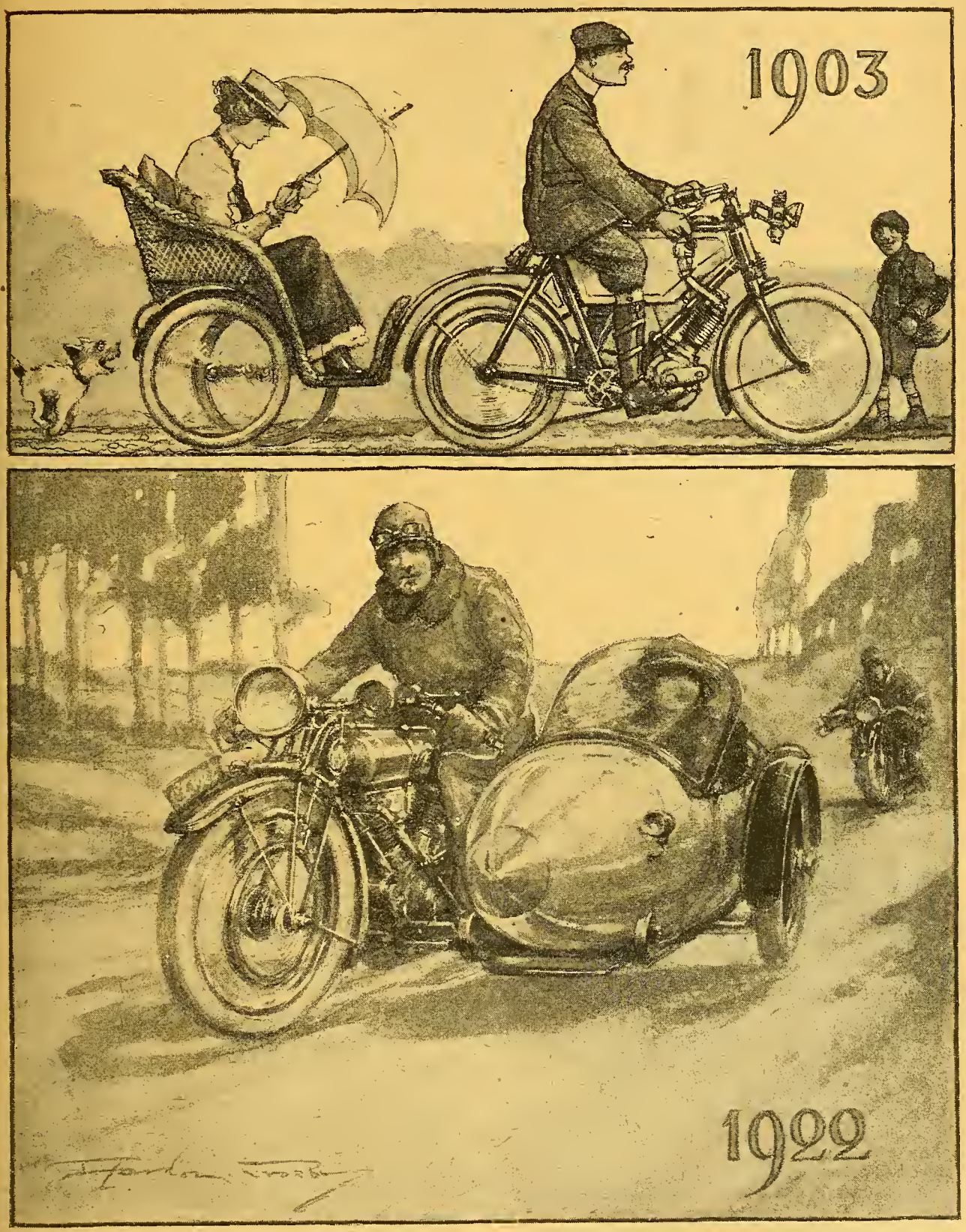
### An Essentially British Industry.

Besides all this, it is no small matter to be proud of that, by pertinacity in advocating the claims of, and focusing attention upon, the motor cycle, this journal has been the means of retaining for Great Britain an industry the products of which have a world-wide market. In other words, the motor cycle is an article in use the whole world over, and this country remains in unchallenged possession of the facilities for supplying that demand. While many other industries flag through foreign competition, the motor cycle industry more than holds its own. Possibly foreign countries may have been influenced by the pessimism of those who howled down the motor cycle in its early days, while manufacturers at home heeded our own counsel.

In peace time the motor cycle has been the means of training the minds of our younger generation in a mechanical direction, which proved of inestimable value to the country in time of war. Many of our most daring and resourceful airmen were recruited from the ranks of motor cyclists, whilst votaries of the single-track motor vehicle were found in every branch of the British Army, where their mechanical bent was found of the greatest value. Recognising the big part that motor cyclists were destined to play in the war, *The Motor Cycle* at the outset of hostilities opened a recruiting section, rendering services which formed the subject of a letter of warm appreciation from the Army Council.

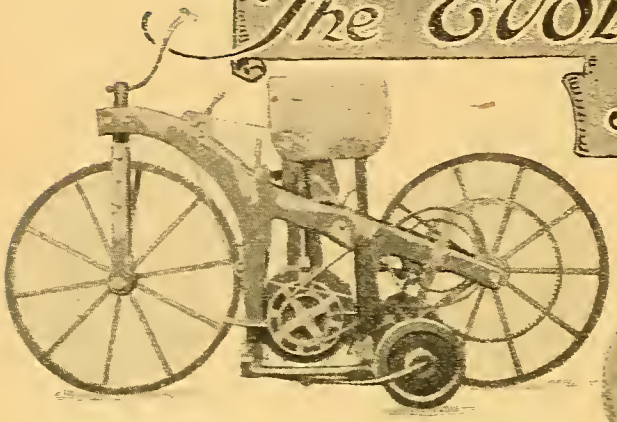
During the war the motor cycle replaced the horse as the mount for the despatch rider, and one successful campaign was carried out by an army mounted on the ubiquitous two-wheeler.

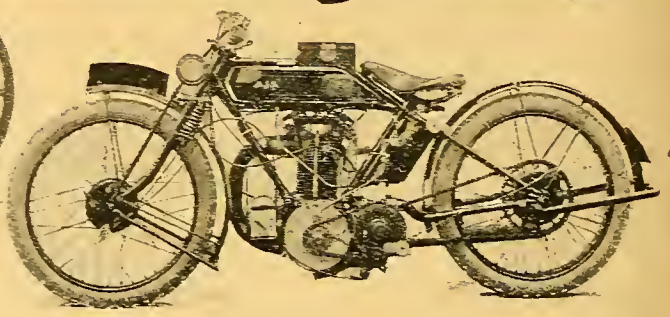
From small beginnings the motor cycle has grown to be part of our national life; from an exclusive coterie of about 10,000 riders in 1903, the number of actual motor cyclists registered in this country increased to the remarkable extent of over 370,000 by the end of 1921.




EVOLUTION.

# The Evolution of the Motor Cycle.

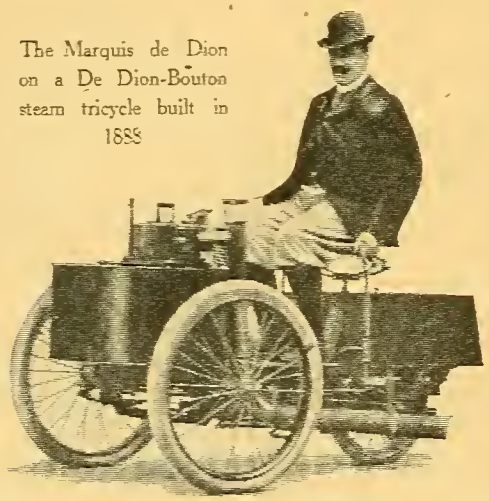




The first motor cycle, made by Daimler in 1885, compared with a modern T.T. mount—the A.J.S.

## Progress since 1885. An Historical Review. What will the Future bring?

TO a modern mind the oddest feature about the birth of the motor cycle is that it generally thrashed the prehistoric cars of that date in the leading competitions. This honour it sometimes shared with a steam omnibus invented by the Marquis de Dion, which derived its power from one of the boilers standardised for French torpedo boats, and

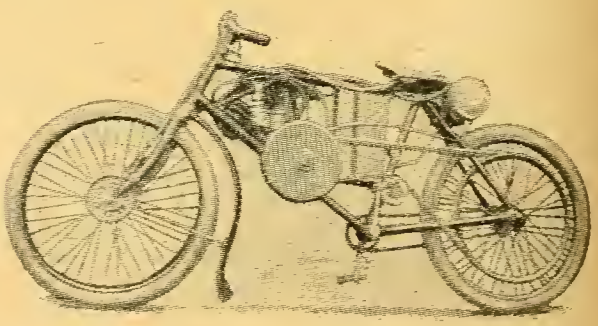


The Marquis de Dion on a De Dion-Bouton steam tricycle built in 1888

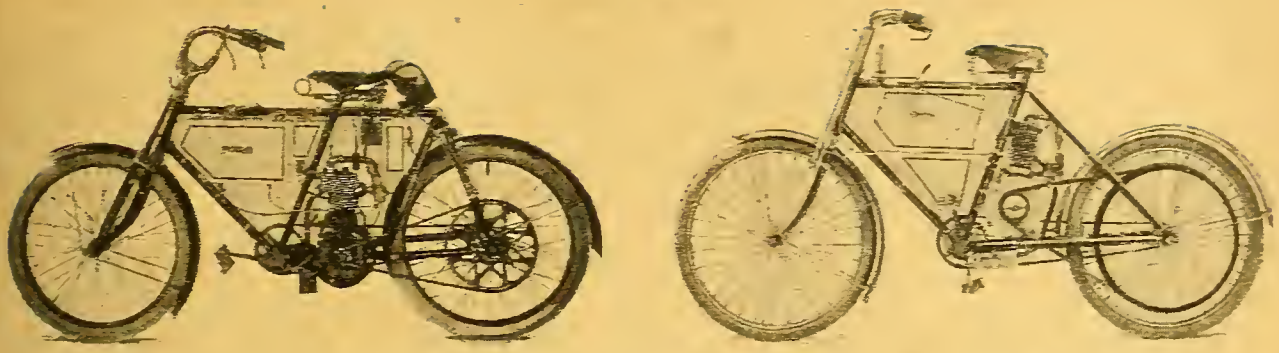
was thus less experimental than the average petrol vehicle.

Actual road vehicles were slow in appearing after Gottlieb Daimler invented his engines, and serious motor cycling commenced about 1895 with the Bollée tandem and the De Dion tricycle; Pennington's various motor cycles, notably a four-seated three-wheeler, of which the skeleton still adorns the conservatory of "The White Lion" at Cobham, enjoyed a great deal of publicity without ever "going into production," as we should put it nowadays. The De Dion tricycle had a small a.o.i.v. engine, mounted just behind the rear axle, which it drove direct through gears, and after a little wear it made almost as much noise as a threshing machine; pedalling gear was fitted and freely used, even against a wind on the level; oil was inserted by hand from a tin *via* a removable plug in the crank case; the carburetter was a small tank attached to the top tube, containing an inch or two of genuine 0.680 spirit, through which air was drawn; ignition was by a huge cylindrical non-trembler coil and dry batteries; the front brake was a spoon on the tyre, and the rear brake a band on the axle. From their first introduction these little machines were capable of nearly 20 m.p.h. on a good road, and were quite decently reliable.

Far more awkward to handle was the Bollée tandem, which had a very flabby engine laid horizontally along the rear chainstays. The frame was by no means rigid, yet it carried the bearings of the gear shafts. There was no clutch, and the rear wheel was bodily levered forward to slacken the flat belt whenever a free engine was required. When new the machine was drivable until the engine ran hot; when old, the gearshaft bearings were so vilely out of truth owing to frame distortion that the engine could not be expected to keep cool for more than a very few miles.



One of the early Clement motor bicycles with the small twin engine situated near the steering head.



1903 machines with their engines behind the bottom bracket. (Left.) The Bowden and (right) the Ormonde.

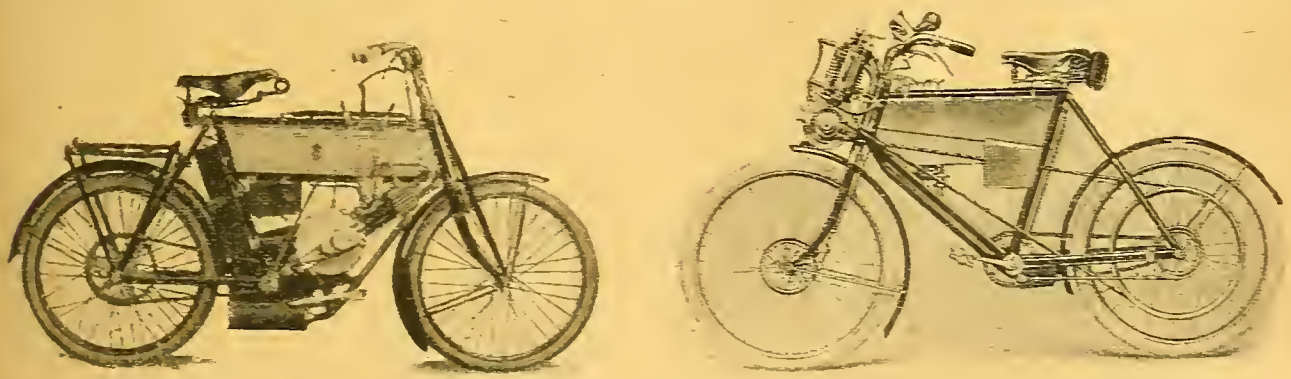
Meanwhile isolated motor bicycles began to appear here and there. Col. Holden produced a bijou four-cylinder, listed at about £75, with a tiny rear wheel driven direct by the connecting rods, if memory does not deceive me. I never had the pluck to buy one of these, but I was informed that they travelled at great speed for a few miles, after which a new back tyre was required. The Humber and Riley people turned out one or two machines, and the Hildebrand-Wolfmüller was exhibited, but frightened everybody who saw its jerky motion on the road.

### Earning Reputations.

Ere long three firms began to earn quite decent reputations. In France the famous Werner brothers produced a nice little bicycle, with an air-cooled engine mounted above the front mudguard, flanked by a wick carburetter resembling a biscuit tin, and a red-hot platinum tube used for ignition purposes; the drive was by a bootlace belt. Its most serious fault was top-heaviness, which caused it to lie down flat in the road at the sight of a spot of rain; the petrol then leaked on to the platinum tube, and the fire brigade appeared. In Belgium the Minerva people produced a tiny single-cylinder engine, attached by two clips to the front down tube of a light bicycle; rated at 1¼ h.p., it would be considered too small for a scooter nowadays. Presently the Singer Co. marketed both a tricycle and a bicycle, on which really creditable mileages were attained, Miss Muriel Hine being one of their first customers. Its power unit consisted of an auto-wheel, furnished with wide, dished aluminium spokes, and its reliability owed much to the Simms low-tension magneto. The auto-wheel was employed as the front wheel of the tricycle and the rear wheel of the bicycle, both being gear-driven; until vibration set up fatigue of the spokes, these machines ran regularly, though the noise and vibration were appalling.

### Early Britons.

Gradually the industry grew more stereotyped. The little Minervas were the first to make good. In England the 2¾ h.p. Excelsior, with an M.M.C. engine assembled into a splendidly built frame by Bayliss, Thomas, Ltd., set a new standard of power and workmanship. The Quadrant people worked on similar lines, producing first a 2 h.p., and then a 3 h.p. The Werner made an even better break, for in lieu of clipping the engine to the down tube they built it into the centre of the frame, though the correctness of their idea was not perceived for some time, as the Ormonde Co. elected to put their engine behind the saddle pillar tube. No sidecars yet existed, and passenger work was performed either with a two-wheeled trailing car carrying a wicker chair, or a fore-carriage slung between two front wheels. A few quadricycles were made, chiefly in France, though Dennis Bros., of Guildford, made a good example with the De Dion engine; the gear-driven tricycles died hard—they now had two-speed gears and engines with water-cooled heads, the best being the Ariel, which had its engine inside the wheelbase.



Early models of well-known machines. (Left.) A 1905 P. & M. which even at this early date had a two-speed gear. (Right.) The Enfield of 1902 with its engine over the front wheel but driving the rear wheel by means of a belt.

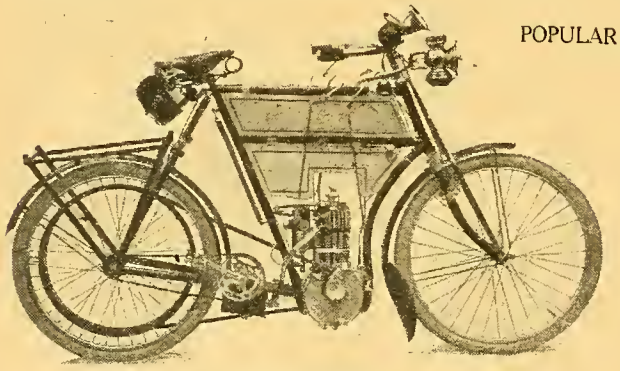
**The Evolution of the Motor Cycle.—**

By 1903, when *The Motor Cycle* was first issued, motor cycles were sufficiently numerous to claim their own governing body and a separate trial, instead of being sandwiched into car events. The Automobile Club formed a special motor cycle committee, and 100 miles were to be covered on each of ten days. The organisers were inexperienced, and their official garage was a small tent situated in a swamp within the grounds of the Crystal Palace. The Palace regulations forbade engines to be run inside the grounds, and the exit was up quite a steep hill. Twenty out of forty-three starters survived to compete in the concluding speed tests on the Palace track, where an average speed of 28 m.p.h. was attained, thanks to a liberal time allowance for tuning up after the road trial. Horseshoe brakes and belts were responsible for most of the roadside stops, for the engines of 1903, if weak, were moderately reliable. But the M.C.C. people ran the best trials at that date. They had gathered most of the keen men into their fold, and had fixtures nearly every week-end, and by 1904 machines were good enough for the first Edinburgh run to be held, though there was heavy betting against anybody getting through inside twenty-four hours. For some years vague regulations permitted this event to degenerate into something approaching a race. 1905 saw the *début* of the 3 h.p. Triumph, easily the best cycle built up to that date, though a few Northerners spoke heartily of the otherwise unknown P. & M., which actually had chain drive and a two-speed gear.

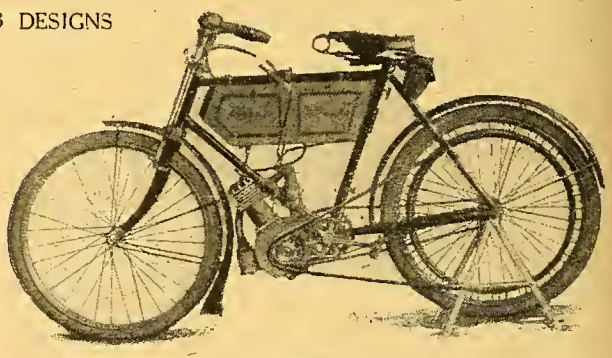
Year by year trials were stiffened up. In 1905 the Auto Cycle Club took us up Birdlip in the Six Days—there was no penalty for failure, and crowds of willing pushers were at hand. In 1906 the first End-to-End run was held, and three single-geared Douglas machines created a huge sensation. 1907 was a dead year, for the trade protested that the A.C.C. was going ahead too fast. 1908 produced the first Scott, with kick-starter and two-speed gear. In 1909 the Edinburgh Club did yeoman service to the industry by including lots of really bad hills in their first Six Days, and the A.C.U. offered a 25 mark bonus for clean ascents of test hills in their big trial. So every designer began thinking about variable gears, and if a miserably inadequate adjustable pulley was the first and most popular suggestion for a time, the tendencies at least were right. Recent comers to the sport will not credit how obstinately many makers, many riders, and many technical authorities combated the thesis that a decent motor cycle ought to be able to go over any main road under its own power.

Meanwhile, just as reliability trials emphasised the shortcomings of the bicycle itself, racing was slowly developing our engines. The pacing of push-bike records was the first racing opportunity of the motor bicycle, and the French used to turn out cumbrous monsters of over 20 h.p. Presently pure motor cycle races commenced at Canning Town and the Crystal Palace, Sam Wright, Harry Martin, Bert Yates, J. Crundall, and the Colliers being leading exponents. In 1904 we competed in an international race of 168

POPULAR 1903 DESIGNS

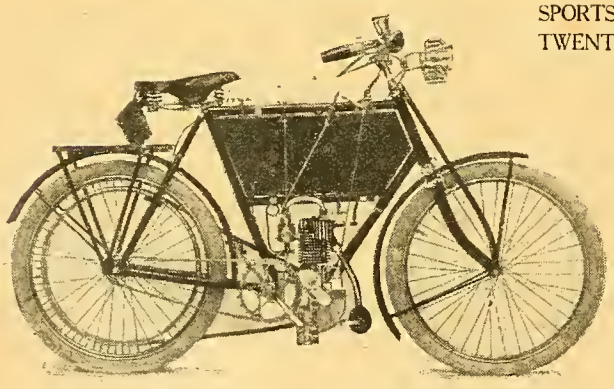


De Dion-Bouton.

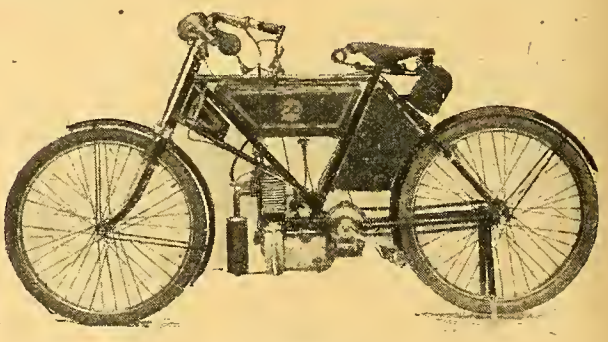


Minerva.

SPORTS MODELS OF TWENTY YEARS AGO.

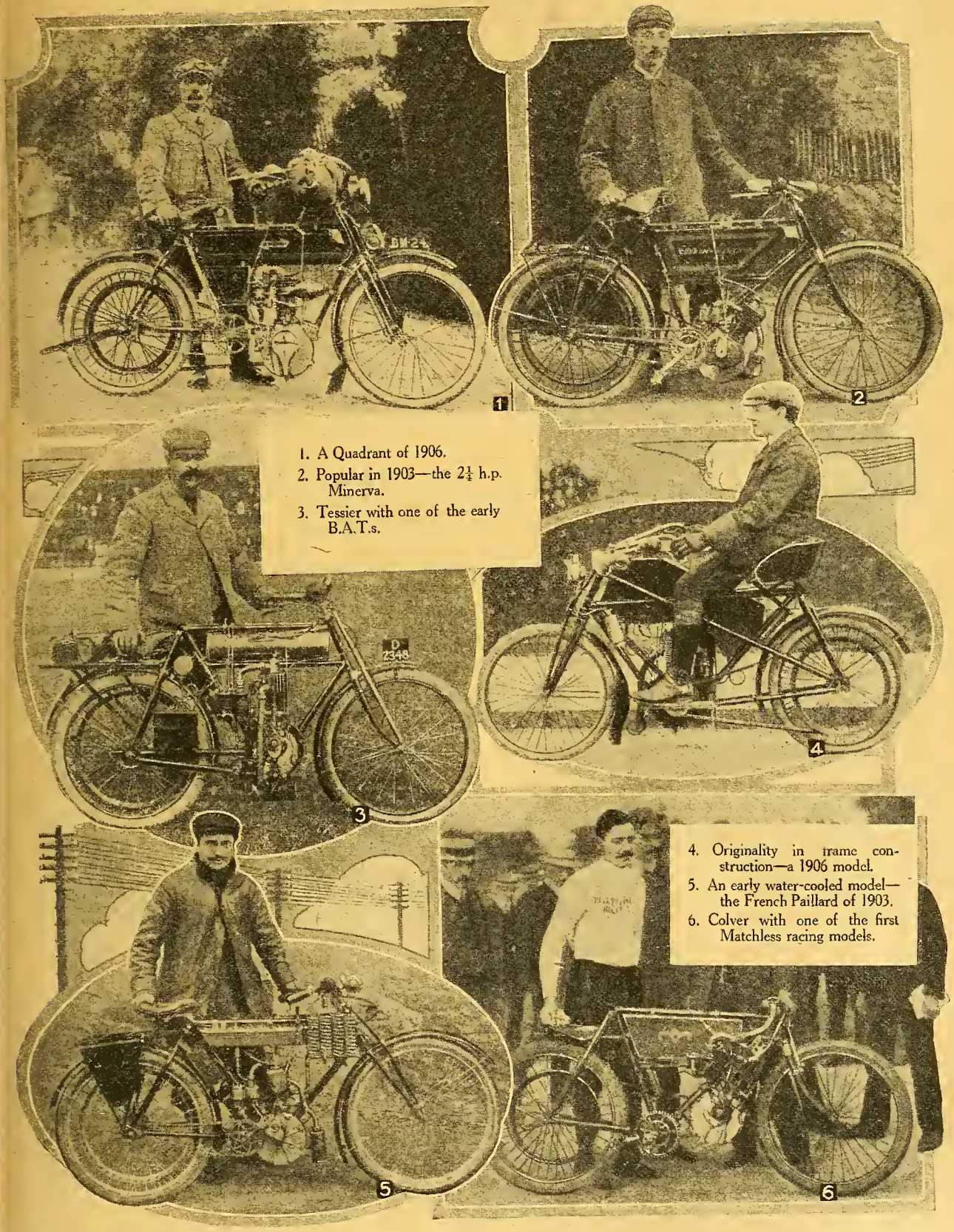


Peugeot.



Starley.

PIONEERS—MEN AND MACHINES.



1. A Quadrant of 1906.
2. Popular in 1903—the 2¼ h.p. Minerva.
3. Tessier with one of the early B.A.T.s.
4. Originality in frame construction—a 1906 model.
5. An early water-cooled model—the French Paillard of 1903.
6. Colver with one of the first Matchless racing models.

**The Evolution of the Motor Cycle.—**

miles at Dourdan. It was silly of us, for the French only gave us eight weeks' notice to prepare special machines under a weight limit of 108lb. Our team, consisting of a Quadrant, a J.A.P., and a Lagonda, was outclassed. The next year we got nineteen machines ready for an elimininating trial in the Island, most of them big twins, and all under 108lb. G. A. Barnes actually had a twin of 94 mm. × 100 mm. inside this weight. C. B. Franklin (J.A.P.) and Harry Collier were in the team, with Campbell on an Ariel; the International was run in Austria, and the native riders won with the aid of travelling sidecars full of spares.

Our humiliations in these international events had taught us the value of racing, and 1907 brought about the first T.T. race and the opening of Brooklands track. The lessons derived from such racing experience have unquestionably lifted our motor cycles to their present pre-eminence. The first Tourist Trophy race was a quaint business in all conscience. Thanks to the influence of the No. 8 hats on the Automobile Club Committee, it was run on a fuel ration, 1 gallon per 90 miles for singles, and 1 gallon per 75 miles for twins. Seventeen singles and eight twins started, Charlie Collier winning at 38½ m.p.h. At the finish the course was sufficiently littered with derelicts to make manufacturers study reliability. Brooklands did not see a motor cycle race till April 20th, 1908, when twenty-four machines started level, and a 9 h.p. Peugeot, geared 2⅝ to 1, was an easy winner at 63 m.p.h.

### Passenger Attachments.

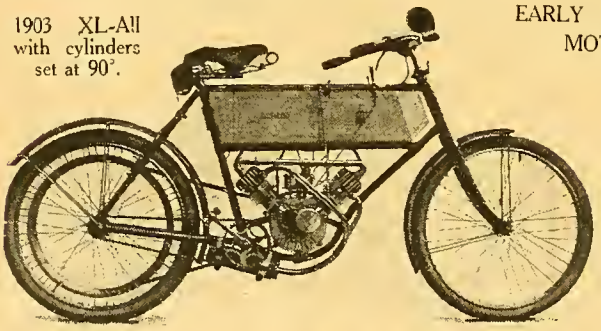
Trials and races thus combined to produce decent bicycles with powerful engines, and the way was slowly being paved for a satisfactory passenger-carrier. The trailer, once so popular, was never more than a temporary makeshift. Never too safe, it was completely unsociable, and its unfortunate occupant was exposed to the maximum of noise, smell, and dust. The forecar or tricar had greater possibilities than have ever been realised, and it is extremely odd that no example of this form of three-wheeler except the Morgan can claim an existence of any standing. Originally the fore-carriages were detachable, and we used to detach them several times a week, for, on the one hand, we were anxious to take our girls with us whenever the girls could come, and, on the other hand, having only one gear, we found it worth doing an hour's work to improve climbing powers for a solo run. About 1906 tricars blossomed into regular three-wheeled cars, complete with gear boxes. The Lagonda was the best; most of the others were disfigured by bad workmanship or items of clumsy design. But they did not go at all badly. I used to climb hills like Sutton Bank with consummate ease and at a good speed long before I could be sure of getting up on a bicycle.

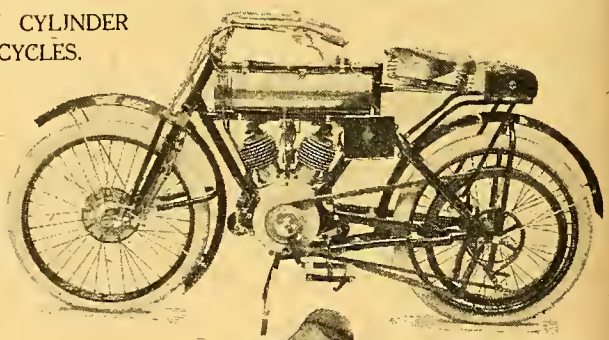
### Introduction of the Magneto.

The greatest single improvement ever introduced was the high-tension magneto, which I used, I believe, for the first time in the Edinburgh run of 1905. Prior to that date our ignition consisted of: (i) a shilling porcelain plug, which was never expected to last more than a few hundred miles; (ii) a 20 ampere-hour accumulator, stored in a compartment of the tank, from which numerous flimsy cables issued through small holes with knife-like edges; (iii) a coil, preferably of the trembler variety, because its buzz was an aid to diagnosing troubles; (iv) a contact-breaker operated by a cam on the engine, closely resembling a watch in the minuteness and number of its parts.

EARLY TWIN CYLINDER MOTOR CYCLES.

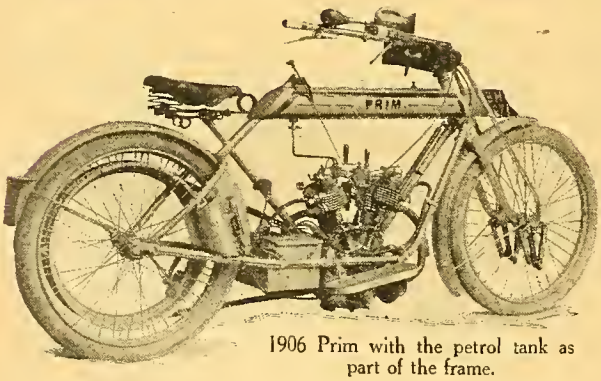
1903 XL-All with cylinders set at 90°.



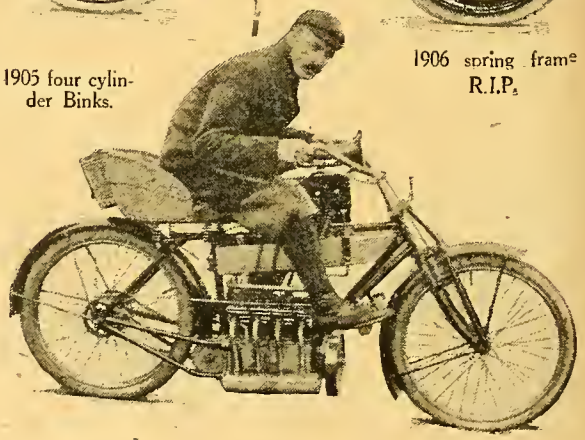


1906 spring frame R.I.P.

1905 four cylinder Binks.

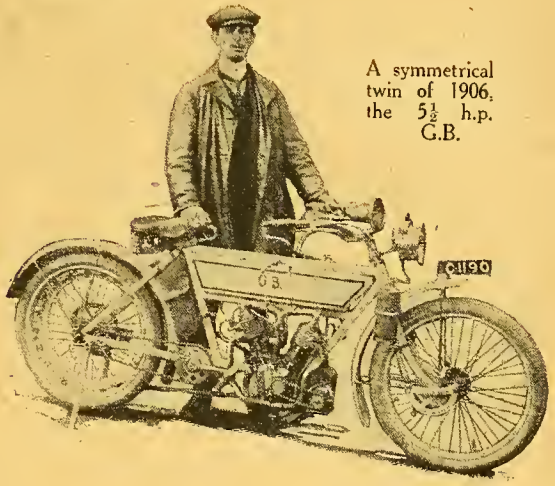



1906 Prim with the petrol tank as part of the frame.

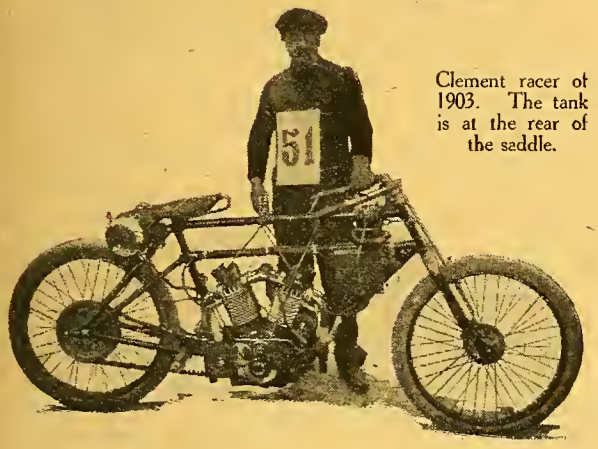


WELL-KNOWN TWINS OF THEIR DAY.

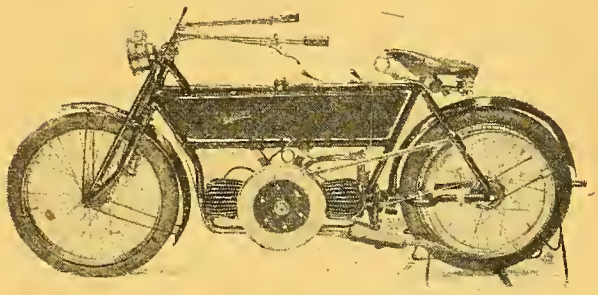
The 6 h.p. Riley, a 1906 model. Observe the riding position.



A symmetrical twin of 1906, the 5½ h.p. G.B.



Clement racer of 1903. The tank is at the rear of the saddle.



Predecessor of all the Douglases—the 6 h.p. Fairy, 1906.

and made of substances which I can only describe as metallic butter. Nobody dreamt of tackling a run without a pocket voltmeter and spare screws and blades for the contact-breaker, and profiteers used to sell us German silver points camouflaged as platinum. So deep-rooted was my ignition cynicism that years elapsed before I dared travel without a large plush-lined box of magneto spares, none of which were ever actually needed.

Passenger enthusiasts will regard all-chain drive as an introduction of equal merit with the magneto. As a keen soloist I still regret the almost complete disappearance of the belt. Admittedly it could give plenty of trouble even on two-wheelers. Long after "bootlaces" and even built-up leather V belts became obsolete, the combination of a heavy storm and a terrific gradient has caused me great anxiety on belt drive. On the other hand, can any modern motor-cycling sensation quite compare with the old experience of adventuring oneself on a long tour amidst the mountains with a single-geared belt drive? The machine was light to handle and would climb excellently on a low ratio, while the adjustable pulley probably enabled one to gear down to 6½ to 1 temporarily—of course, the belt would not stand many miles on so small a pulley.

The climbing of hills is not the only uncertainty that has disappeared from the sport. Time was when we used to take the road with as many as three spare belts furled round various portions of the machine; a spare 8 a.h. accumulator in a rabbit pocket; a cheap German gas lamp on the bracket, and a cycle lamp in a box on the carrier; plus two pockets and one toolbag full of spare parts. We might get home the same day; we might not get home till late on the morrow. All this uncertainty was very thrilling, and the road stoppages were not the least enjoyable part of the proceedings, for there was almost always a chance to get going, whereas if we "pack up" in 1922 it is generally a case of waiting for a kindly Ford van to happen along.

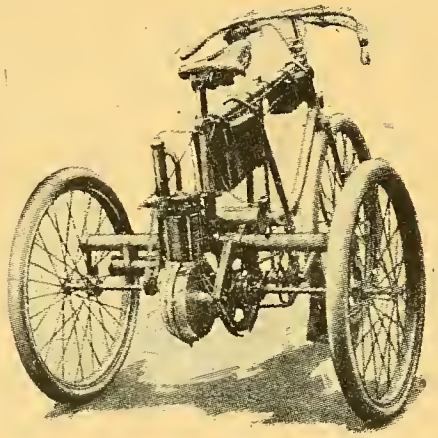
### The Modern Mount.

At the present time the motor cycle is so abominably perfect that serious trouble seems quite incredible until on some rare occasion it overtakes one. I personally start out on excursions of as much as two thousand miles into the wildest corners of Great Britain with no spare parts except a sparking plug, and I not infrequently return home with the virgin plug still under seal. So adequate are our machines that competitions have narrowed themselves down to three phases, two of which are entirely illegitimate. In one type riding is done to a split second schedule. In another the promoters' chief obsession is to multiply road surfaces on which 100-ton steel will unravel into its constituent fibres, or which would make vaseline feel like concrete. In the third type, pure speed decides the

**The Evolution of the Motor Cycle.—**

guerdon, and pure speed in these days demands a quadruple alliance, to wit, an engineering genius, an unrivalled plant, a syndicate with a profound pocket, and an unimaginative youth blessed with rubber muscles and a perfect gift of physical balance. How much better were the old days in which everybody had trouble, and he who fought it best came out on top.

It follows that competition work has very largely served its turn so far as the general progress of motor cycling is concerned. To-day the main tendencies of evolution point in other directions. Machines are very little more comfortable than they were twenty years ago, allowing for the pulverisation of our roads. We get bumped almost as much as ever. We still get dirty. Trusting to the new standards of reliability, we ride in winter and so we get rather cold. Then, as the pastime grows more and more utilitarian, hardy youngsters cease to be its only or its chief devotees. There is an increasing clamour for cheap, light machines suited for short-distance work in the hands of weak, elderly, or feminine owners. The scooter boom—silly and ill-timed—revealed the extent of this demand. Nothing looks specially like filling the gap, with the possible exception of the Harper Runabout, which is probably too expensive at present. Again, the problems of a passenger motor cycle have not yet been completely solved. A glance backward reveals the progress which has been made between, say, 1903 and 1922—the period of this journal's activities and influence. During these twenty years effort has been almost exclusively concentrated upon reliability, speed,



A De Dion tricycle of the type which several British manufacturers marketed in 1895.

A 1898 front driven Werner—a machine which all veterans are wont to quote as their first mount. It was capable of 16 m.p.h. on the level.

and hill-climbing. *The Motor Cycle*, as a disinterested observer, has made many suggestions, some of them remarkably fruitful—variable gears were a notable instance. But, broadly speaking, our suggestions have been listened to far more attentively when they were directly concerned with speed, climbing, and reliability, than when they affected weight, comfort, passengers, and price. Now that we have attained a miraculous standard of reliability; when we can climb any hill on a tenth part of our engine's output; the path of progress must swing in new directions.

**Finality?**

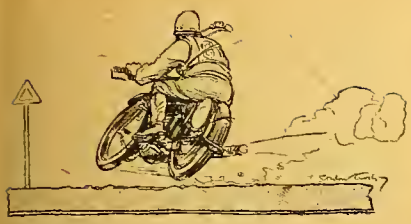
There are people who fancy finality has been attained. The motor cyclist of 1903 would have swooned with ecstasy if some fairy godmother could have dangled a 1922 Brough Superior before his eyes, shown him Pullin's Douglas "kilometring" at 100 m.p.h., or displayed a handful of chosen cracks creeping steadily up the Screw Hill. I have no doubt that if the readers of this issue could go to sleep till 1942, and then awake to see the current machines of that era, they would find equal progress had been made in the next two decades. By that time the "posh" mounts of to-day, perfect as we rank them, will seem crude and ridiculous, fit only to be consigned to some museum where man's earlier eccentricities, the front-driven Werner and the Bollée tandem, even now expectantly await them.

B. H. D.

## GUIDE TO ROAD CONDITIONS.

FROM time to time there appears in provincial newspapers a detailed statement of the condition of the roads in the counties within a reasonable radius. It is usually a useful guide to the state of the roads, but the western section appears singularly deficient in geographical accuracy. Under the heading of "Somerset" are the "Bristol to Gloucester" and the "Bath to Stroud" roads; except for a very few miles of the latter road, both these routes are in Gloucester. The Axminster to Bridport road, which is nearly all in Dorset, is given under Devon. Porlock Hill, which is in Somerset, is also placed under Devon.

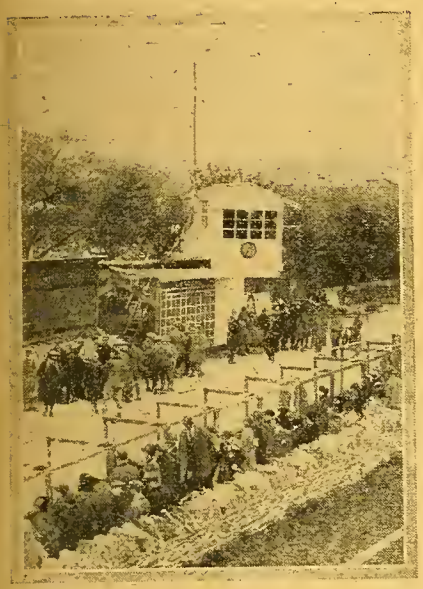
Exactly why the routes "Brendon to Porlock" and "Brendon to Simonsbath" should be given, whilst no mention is made of the main roads to these places from Lynton and Lynmouth, is inexplicable; Brendon is only a tiny village which few motorists touch.



# THE T.T. RACES.

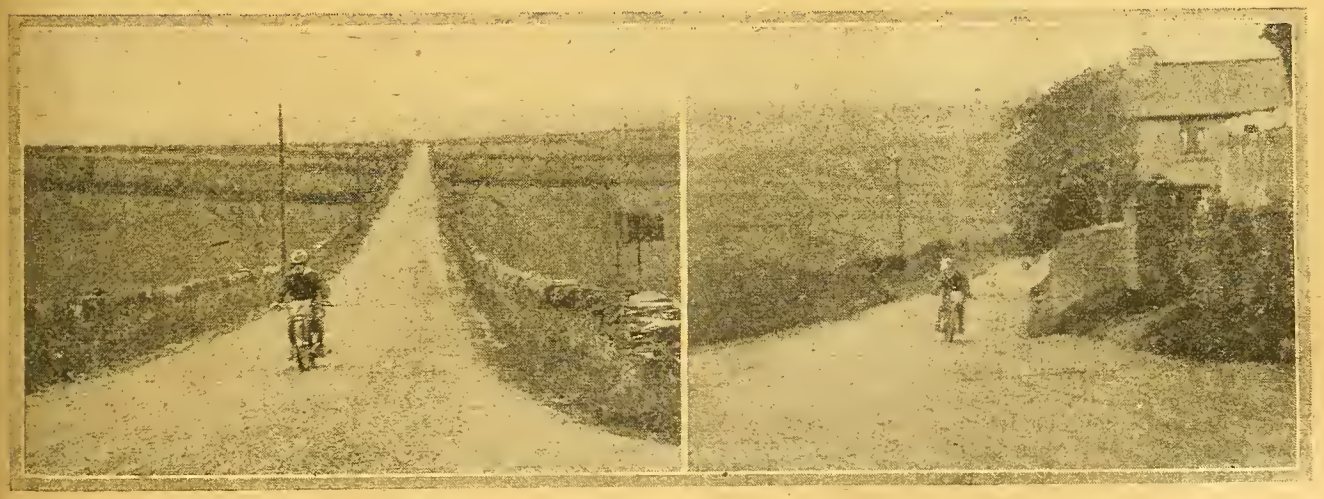
## Scenes During the Practising which Finished on Monday last.

The first corner on the course—Quarter Bridge. Located at the foot of Bray Hill, this bend calls for careful negotiation, but the road is fairly wide.



From the grand stand. The timekeepers' shelter where the speeds of the riders are recorded.

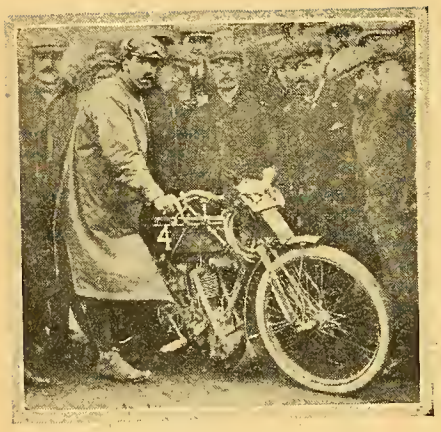
Enthusiasm is greater than ever this year, as is evidenced by this early morning crowd in the paddock during practising hours.



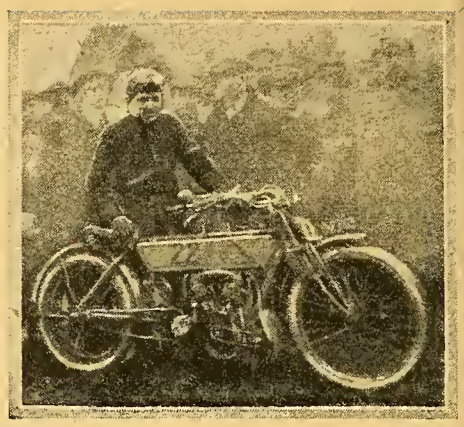
Junior competitors at Cronk-ny-Mona in the early hours.

# MILESTONES IN THE TOURIST TROPHY RACES.

## The Origin and History of this Classic Event.



C. R. Collier with his Matchless after winning the first T.T. race ever held—the single cylinder class in 1907. He also won the Senior event in 1910, averaging 50 m.p.h.



H. Rem. Fowler (Norton) who won the twin cylinder class in 1907. It is interesting to observe that in this first race the Matchless was a single and the Norton a twin.

NO motor cycle event throughout the whole world creates greater interest than the T.T.; its progress and results are followed with enthusiasm in every country.

It must not be thought that the T.T. was the first motor cycle race held in the Isle of Man. In 1905 the A.C.G.B.I., as the Royal Automobile Club was then called, had to find a suitable venue for the Gordon-Bennett race eliminating trials. England was out of the question; Ireland was willing to receive the club with open arms, but even Ireland had to bow before Parliament, and the chances of getting an Act passed to legalise the race were more than remote. Then the Isle of Man was considered. It was practically a foreign country with its own laws and its own Parliament, ready to legalise the closing of the roads, so a chilly, misty morning in May, 1905, witnessed the first I.O.M. motor cycle race, but so inefficient were the machines of those days that the event ended in a complete fiasco.

### Origin of the Motor Cycle T.T.

Previous to 1907 a car Tourist Trophy Race had been successfully organised and run by the A.C.G.B.I. It owed its origin to the enterprise of Lord Montagu of Beaulieu, who hit upon the idea of a race for "more or less" touring cars, and offered a valuable trophy to encourage the development of fast touring cars.

It is thus proved that the Auto-Cycle Union owes a debt of gratitude to the parent body. Now probably the boot is on the other leg, since from the first event in 1907 to the present races in 1922 the A.C.U. has never missed a T.T. (save during the war), while the R.A.C. has only held its Isle of Man races spasmodically; consequently for its events this year it is probably only too glad to learn at the capable and efficient hands of its prosperous offspring. Prompted by the success of the original Tourist Trophy and the important effect it had on motor car design, the late and ever-respected Mr. H. W. Staner, manager-editor of *The Motor Cycle* and editor of *The Autocar*, the soundness of whose judgment was acknowledged by all in the motoring movement, suggested to the A.C.U. (then the Auto-Cycle Club) at its annual dinner in 1906 that a motor cycle Tourist Trophy should be held. That this is so is officially acknowledged by the A.C.U.

WINNERS IN 1921.

Senior—H. R. Davies (A.J.S.), average speed, 54·49 m.p.h.

Junior — Eric Williams (A.J.S.), average speed, 52·11 m.p.h.

Lightweight—D. G. Prentice (New Imperial), average speed, 44·82 m.p.h.

### Donor of the First Motor Cycle Tourist Trophy.

On the way back from the last International Cup Race, held in Austria in the summer of 1906, the matter was ardently discussed by the Marquis de Mouzilly de St. Mars, Messrs. G. F. Sharp and H. Collier, sen. Monsieur de St. Mars, as he now prefers to be called, a Frenchman by birth and an Englishman in sympathy, gave the first trophy, modelled on the lines of the original given by Lord Montagu—a silver figure of Mercury standing on a winged wheel.

### Early Conditions.

Next ensued a long series of discussions on the proposed conditions of the race, and it was eventually decided to follow Automobile Club rules and limit the speed by petrol allowance: one gallon for 90 miles being allowed for singles, and one gallon per 75 miles for twins.

One "leg" of the old circuit is still retained in the present course, and that is the section from Ballacraine to Kirkmichael. The actual start was from St. Johns, close by the Tynwald Hill, on which new Manx laws are proclaimed at dawn. Ballacraine corner was a left-hand bend.

It is curious to read that in the first race C. R. Collier pedalled and one man

PAST WINNERS OF T.T. RACES.

J. Marshall (Triumph) Single, 1908. | H. Reed (Dot) Twin, 1908. | H. A. Collier (Matchless) 1909. | P. J. Evans (Humber) Junior, 1911. | O. C. Godfrey (Indian) Senior, 1911. | W. H. Bashall (Douglas) Junior, 1912. | F. A. Applebee (Scott) Senior, 1912. | Hugh Mason (N.U.T.) Junior, 1913. | H. O. Wood (Scott) Senior, 1913.

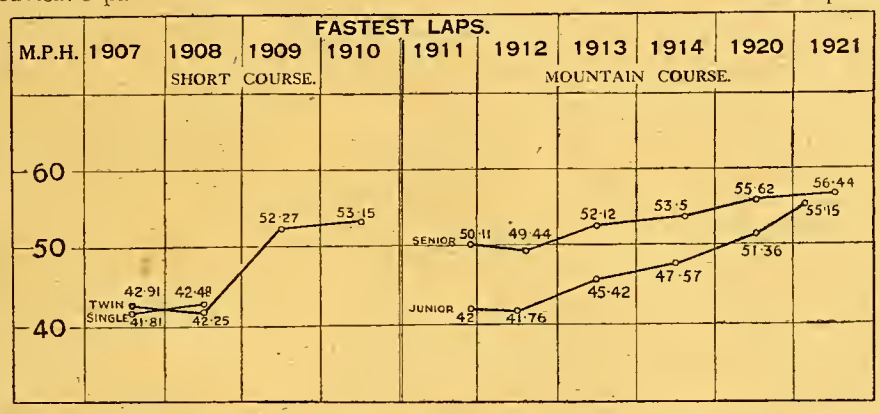
dismounted and ran on the Creg Willey's Hill. Next year pedalling was prohibited, and the fuel allowance was reduced.

### First Scoring Board.

In 1908 a scoring board was erected. The next year, 1909, marked a milestone on the road of progress, cubical capacity being utilised to limit the speed; single 500 c.c., twins 750 c.c.

We now enter into a new chapter of T.T. history. In 1911 the lightweight 350 c.c. machine, began to assert itself and demanded recognition. A second trophy was provided, and the Junior T.T. first saw the light.

C. G. Pullin (Rudge) Senior, 1914. | Cyril Williams (A.J.S.) Junior, 1920. | T. C. De la Hay (Sunbeam) Senior, 1920. | R. O. Clark (Levis) L'w'ght, 1920.




### Change Speed Gears

A very important result of the more difficult course now used was the rapid development of change-speed gears, no single-geared machine coming nearer than within sixth place of the winner in the Senior Race of 1911.

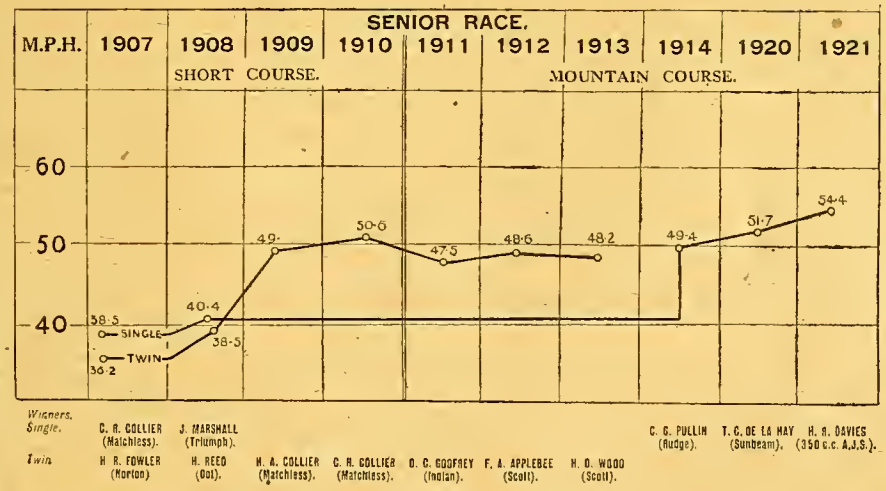
From 1913 onwards the speeds increased little by little, and in 1914 a single-cylinder won its first great victory from the twin, Pullin's Rudge averaging 49.4 m.p.h

### 250 c.c. Races.

A third important milestone marked the races in 1920, the first T.T. events held after the war. This journal again used its influence towards the development of design, and presented the Lightweight Cup for the competitor making the fastest time on a 250 c.c. machine, which was won by R. O. Clark (Levis).

Last year saw the fourth important milestone on the road of the T.T. history, namely, the winning of the Senior event by H. R. Davies's 350 c.c. A.J.S. at an average speed of 54.4 m.p.h.; in this race *The Motor Cycle* Cup was won by D. G. Prentice on a J.A.P.-engined New Imperial. This year (1922) the Lightweight Class formed a separate event in which the premier award was a replica of the original Trophy.

The graphs given on this page show the increase in the speeds of Senior machines.

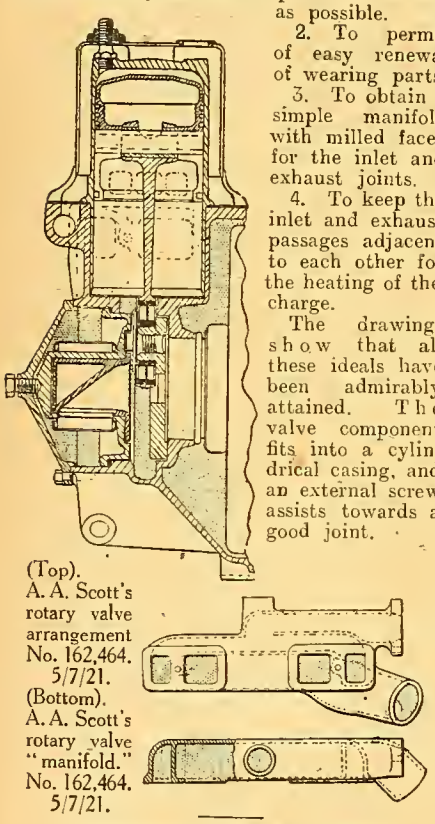



How speeds have increased since the first T.T. race in 1907. The top graph depicts the figures for the fastest laps each year and the bottom one the speeds of the Senior Race winners.

MANY of the patents described in these pages never reach the manufacturing stage; this cannot be said of the next on my list, which describes the rotary valve lay-out of the Scott Sociable engine. Mr. A. A. Scott explains at length in his specification that the design is inspired by four principal aims, viz.:

1. To utilise the weight of the valve and the pressure of the gases so that the vital surfaces may maintain a perfect fit as long as possible.
2. To permit of easy renewal of wearing parts.
3. To obtain a simple manifold with milled faces for the inlet and exhaust joints.
4. To keep the inlet and exhaust passages adjacent to each other for the heating of the charge.

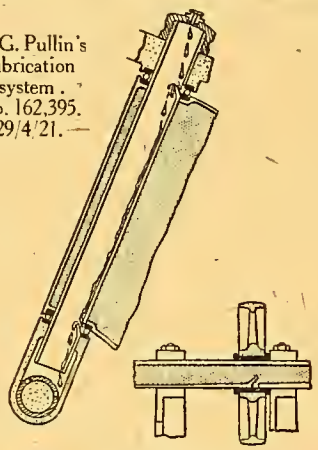
The drawings show that all these ideals have been admirably attained. The valve component fits into a cylindrical casing, and an external screw assists towards a good joint.



(Top). A. A. Scott's rotary valve arrangement No. 162,464. 5/7/21. (Bottom). A. A. Scott's rotary valve "manifold." No. 162,464. 5/7/21.

### Lubricating the Steering Head.

Most motor cycle designers occasionally imitate Nelson and turn a blind eye towards things which they do not wish to see. Mr. C. G. Pullin enjoys a well-earned reputation for conscientiousness, and is one of the very few men who refuse to ignore the unsatisfactory lubrication of the steering head. He improves it without wasting much money. At the top of the steering head he provides a shielded hole for introducing oil. Just above each of the two bearings he punches inwards a tongue cut out of the side of the tube on its rear face; this tongue catches the oil and turns it into the bearing. The base of the tube may be sealed

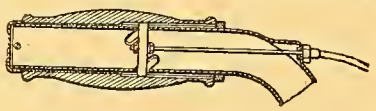


C. G. Pullin's lubrication system. No. 162,395. 29/4/21.

by a diaphragm level with the lower bearing, which diaphragm may take the place of the lower tongue; but if there is a pivoted cross-piece at the base of the head tube the diaphragm will be omitted.

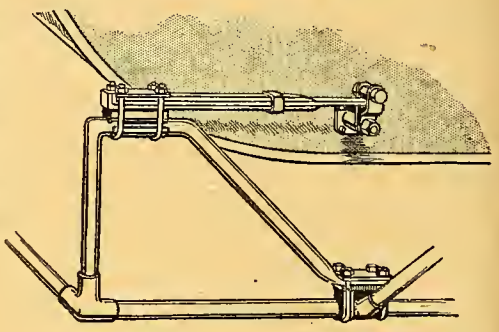
### Twist Grip Control.

A very simple form of twist grip control is protected by Messrs. Pullin and Groom, all of whose notions are worth the cost of patenting. The Bowden wire or light



C. G. Pullin's cable control. No. 163,397. 17/5/21.

control rod is introduced to the interior of the handle-bar at the point where it is bent back towards the grip. Two inclined slots are cut in the bar, and two pins or lugs on the wire, or rod, enter these slots. A sleeve and grip complete the equipment, which, undoubtedly, gives a pleasant form of control.



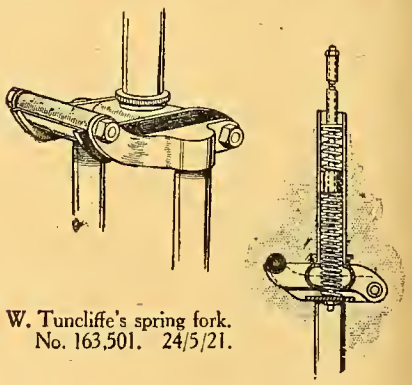
H. P. Martin's sidecar springing. No. 171,562. 24/11/21.

### Sidecar Springing.

Quarter-elliptic springs are of course, all the rage in the car world just now, and the Martinsyde people propose to utilise them for mounting a sidecar body on its chassis. Tubular brackets are provided above both longitudinal tubes of the sidecar chassis, and the thick ends of the quarter-elliptics are bolted to the tops of these brackets. The thin ends of the springs are attached to the chair by means of lugs and links. It appears that the construction should reduce the side roll to which many sidecar bodies are addicted at speed over rough going.

### Front Springing for Lightweights.

I never like opening a spring fork patent, because past experience has taught me the difficulty of sizing up a new fork until one has actually tested it on the road; forks have sold by the thousand



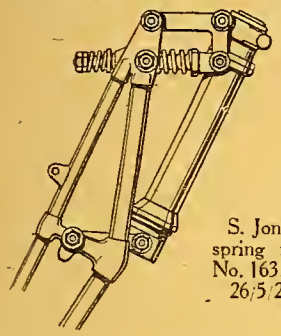
W. Tuncliffe's spring fork. No. 163,501. 24/5/21.

**Recent Patents.—**

which I personally should have turned down after a glance at the drawings. So I will only say of Mr. Tunnicliffe's fork that it is obviously a great deal more sightly than most of the spring forks now fitted to motor cycles. It should be noted that the rubber cushioning device in front of the fork crown only comes into action in the event of excessively violent rebonnds. Obviously, the device is intended for ultra-lightweight motor cycles (or pedal cycles), and, incidentally, it has been already adopted on the McKenzie machine.

### Front Fork Design.

A third spring fork is designed by Mr. Sydney Jones, and may be described in stud book parlance as being "by Druid out of Triumph." It has the most complicated linkage I have ever seen applied

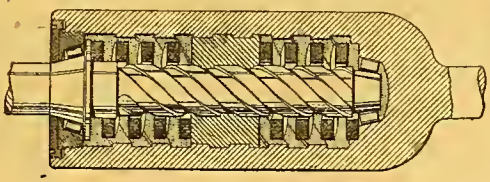


S. Jones' spring fork. No. 163,532. 26/5/21.

to a fork, and I am not in the least prepared to guess what it would feel like over a pothole. If Mr. Jones has made up a sample, I hope he will give me a chance to see how his hybrid rides.

### Worm Drive.

Cost might prove to be the only deterrent against Mr. W. W. Scott's spring worm drive coming into use on motor cycles. As all the world knows, the problem of devising a cheap and efficient shock absorber is partly to blame for the scarcity of shaft drive on motor cycles. The Scott layout is extremely simple, and should be efficient, bnt can hardly be cheap to make. The driving shaft terminates in a hollow pot, with an internal worm drive. The continuation shaft has an external worm cut upon it; the two shafts are connected by a sleeve machined with both internal and external

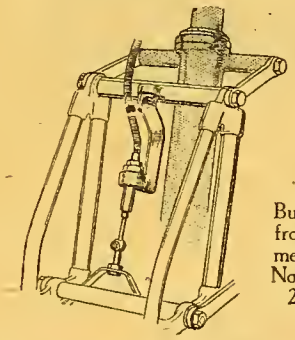


W. W. Scott's spring drive. No. 171,201. 17/11/21.

worm of the requisite "hands." Inside the "pot" are springs bearing against each end of the sleeve.

### Front Brake Adjustment.

Motor cyclists commonly nourish a whole catalogue of "grouses" against the stirrup type of front brake, viz., that the shoes interfere with tyre repairs, that the shoes may drop off, that the adjusters consist of small, delicate parts, and that the cable seldom shows as

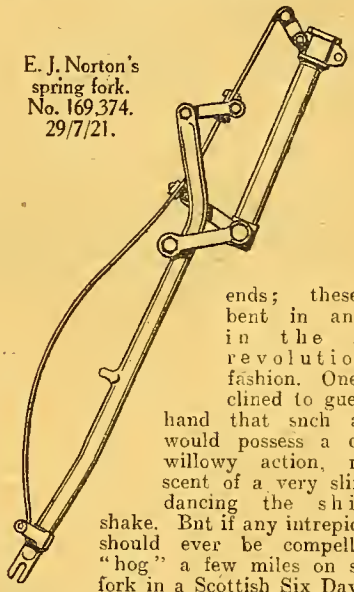


Butterfield's front brake mechanism. No. 170,491. 27/8/21.

long a life as other cables used on the machine. The last of these gronses is tackled by the new Butterfield patent, doubtless intended for application to Levis motor cycles. The spring box and adjusting device are usually mounted in a lug projecting from the top bridge of the spring fork. This method leaves a very short length of exposed cable. The up-and-down movement of the fork naturally imposes the maximum stress on such a short cable, and in many cases the cable actually fouls the head lamp or its bracket. The invention consists of utilising the lug on the top bridge of the fork to carry a bracket projecting downwards for several inches; the spring box and adjuster are mounted at the foot of this bracket, so that a much longer piece of cable is exposed. The fork movement therefore entails less wear and tear on the cable, which is also removed from its old proximity to the lamp.

### Front Fork Springing.

Mr. E. J. Norton has evolved a design embodying two single-leaf springs extending from the steering head to the fork



E. J. Norton's spring fork. No. 169,374. 29/7/21.

ends; these are bent in and out in the most revolutionary fashion. One is inclined to guess offhand that such a fork would possess a curious willowy action, reminiscent of a very slim girl dancing the shimmy shake. Bnt if any intrepid rider should ever be compelled to "hog" a few miles on such a fork in a Scottish Six Days, the probability is that the single-leaf springs would snap about half-way between the fork crown and their upper ends. The resnltant "fetch np" would probably be more abrupt than comfortable.

# A 500-MILE SPEEDWAY.

BRITISH manufacturers usually regard Canada as a doubtful market for the reason that the Dominion is so close to the United States. It will therefore come as a surprise to these makers, and also to a large number of our readers that there are no less than thirty members of a Toronto club who ride Triumphs. The secretary-treasurer of this club—the Brunswick M.C.C.—writes the following interesting notes on clnb life in Canada:—

"We have formed a large club here to be known as the "Brunswick Motor Cycle Clnb," with Mr. W. J. Porter, Toronto agent for the Triumph as president. We have abont thirty Triumph riders and 25 Reading Standard riders as members. The British machines are just coming into their own in Canada now by reason of the wisdom of Mr. Porter in equipping them with 28in. × 3in. tyres and discarding the old-fashioned acetylene lighting and installing electric generator sets. The only criticism I have of the Triumph is its somewhat noisy valve gear.

### International Rivalry.

"Mr. Porter has recently imported an o.h.v.-Triumph, and we are hoping to show up some of the big American machines this year in speed work. 'We have never had a fast English machine to compete, although we put it all over them when it comes to hill-climbs.

"We are rather amused over here at the constant reference to 'Colonial Sections.' Do you know that we have one road from Toronto to New York 550 miles long, concrete highway all the way? We averaged 45 m.p.h. last year in a midnight endurance run, Toronto to Syracnse, 360 miles."

Mr. Stewart advises ns that his club is a live organisation formed to promote the sport of motor cycling in Ontario, and that it is the intention to organise trials, hill-climbs, and economy tests. Correspondence with English clubs is invited.

# IRELAND'S CLASSIC TRIALS

On the famous double hairpin of Glengesh, regarded as the most difficult hill in Ireland.

A scene at Ballyvoy; the finish of the Irish End-to-End Trial. Mr. and Mrs. A. W. Mooney, for many years prominent figures in the big Irish competitions, are the sidecarists.

## History of the Big Events Organised by Irish Clubs. Possibility of Revival of Irish "End-to-End."

THE promise of more settled conditions, anyhow, than have existed during the past couple of years, has resulted in considerable activity amongst the Irish motor cycling clubs, and in view of the likelihood that many English motor cyclists who in the past have enjoyed the experience of taking part in an Irish trial may desire to renew their acquaintance with that country, some brief particulars of the classic reliability trials of the sister isle may not be regarded as out of place at the present moment.

None of the Irish trials has been in existence for as lengthy a period as some of the classic English events, and of the three competitions that may now be regarded as the classic events of the Irish year the End-to-End Trial of the Ulster Centre of the Motor Cycle Union is the oldest.

Although the End-to-End cannot boast of any great antiquity, when compared with some of the English events, its lineal history leads us back almost to the dark age of motor cycling. Its immediate predecessor was the Muratti Cup event, which was run over a course between Belfast and Dublin and back, and the Muratti in its turn sprang out of the inter-team contests between the Ulster and Southern Centres of the Union, which in the early days of the century were held between Belfast and Dublin.

The institution of the End-to-End contest was mainly due to the desire of the Ulster Centre of the Motor Cycle Union to promote an event which would attract English competitors. They hardly felt justified in holding an event that would make as great a claim on the time of the competitors as, say, the Scottish Six Days, and as a compromise a contest from Mizen Head in Cork to Fair Head in Antrim was selected. To the late Mr. Walter Good more than to any other individual the End-to-End is due. He induced the Palmer Company to put up a very valuable trophy for the event, and in addition gave to the organisation of the contest an amount of time that few persons would have been able to devote to such a competition. The End-to-End conditions have varied a good deal from year to year, but the basic idea of the contest has always been maintained. In the last event that was held, that of 1915, the route was divided into two sections, each section occupying approximately a day. Dublin was the resting place on the first night, and the trial ended in Belfast. The Palmer Cup in that year was won by W. H. Freeman, who, it may be added, was also successful in the same year in the Dublin "Twenty-four" and the Cork "Twenty."

It is confidently anticipated in Ireland that this year will see a revival of the event, but so far no definite decision with regard to the matter has been made by the Ulster Centre of the Motor Cycle Union. Reports as to the condition of the roads in the south of Ireland are still unreliable, and until a personal survey of the route has been made by some members of the committee it is likely a definite decision with regard to the matter will be postponed.

### The Dublin "Twenty-Four."

The Twenty-four Hours' Trial of the Dublin and District Club, while not an event of such long standing as the End-to-End Trial is nevertheless one of

**Ireland's Classic Trials.—**

considerable antiquity. The first trial took place in 1911, and, as has been the case with most of the contests since held, the ascent of Glengesh Hill in County Donegal was the crucial test of the trial. Glengesh is generally regarded as the severest hill in Ireland. It is certainly the steepest hill to be found on any main road in the country, and, apart from its gradient, it affords a peculiarly trying test by reason of the fact that there is a steady ascent of several miles before the actual climb of the hill commences. The presentation of a very valuable cup by the Rudge-Whitworth Company gave an added importance to the event, and on the first occasion it was put up for competition it was appropriately enough won by a rider of that make of machine, W. J. Henderson being the fortunate individual.

In 1914 the cup was won by A. W. Mooney, on a Bradbury sidecar, and in the following year there was a tie between T. Toole (3½ Rover) and W. H. Freeman (7 Indian). Both were regarded as joint holders of the cup, and by winning in 1916 Freeman made the trophy his own property. The contest of 1916 was not held over the usual course to Glengesh and back. Owing to the restrictions with regard to lighting then in operation, the route was from Dublin to Carlow and amongst the Wicklow Mountains. In 1920, owing to serious disturbances in the city of Londonderry the Co. Derry portion of the course had to be deleted, and the trial ran through Strabane to Letterkenny. Last year, owing to some of the roads in the County Donegal being impassable, the Donegal section of the route had to be cut out, and in lieu thereof the competitors were taken to the north-eastern portion of the County Antrim, where the Dan Nancy-Iscar section of the End-to-End was substituted. This year's trial will take place on June 23rd and 24th, and as the committee has already decided that the route shall embrace both the Dan Nancy section of the End-to-End and also the ascent of Glengesh it looks as if this year's trial will be quite the most important of the series.

### The Cork "Twenty."

No article dealing with Irish classic trials would be complete that did not include a reference to the Twenty Hours' Open Trial of the Cork and District Motor Cycle Club. Just as the Cork Club is the junior of the three senior organisations in Ireland, so its chief trial is the junior of the classic events, but in importance it is little behind the End-to-End Trial or the Dublin and District "Twenty-four." The event was first held in 1914, when it was run over a distance of 340 miles. Starting from Cork at 1 a.m. the route lay through Waterford, Clonmel, Killarney, Waterville, and Kenmare back to Cork. Ballaghisheen Pass in the Kerry Mountains was the test piece of the trial, being, in fact, the only observed hill on the route. The first contest, for which the Hutchinson rose bowl was offered as an award, was won by that consistent reliability trial winner, A. W. Mooney, on a 6 h.p. Bradbury sidecar, his wife being his passenger, as in many other competitions. An inter-team race run in connection with the event was won by the Cork Club.

In the following year the route was slightly altered, and Gowlane Hill, near Kenmare, was included for the first time. Secret checks were done away with, and a flexibility test was included to decide the placings, and to qualify for a gold medal a certain figure of merit had to be shown in the flexibility test. The competition was won by W. H. Freeman, of Dublin, on a 7 h.p. Indian, E. B. Russell (4 Triumph) and R. S. Russell (2¾ Douglas) being second and third respectively.

Owing to the war it was not found possible to continue the competition after 1915. It was revived in 1919, but the scarcity of new machines had a great effect on the entries. The route and conditions were practically the same as in 1915, except that the flexibility test was dropped, and those gaining full marks were offered gold medals or prizes of equal value. With most of the competitors mounted on crocks of pre-war or early war vintage, it was not surprising to find that only three riders completed the course without loss of marks, namely, J. Browne (2¾ Douglas), E. B. Russell (4 Triumph), and R. S. Russell (2¾ Sunbeam).

The conditions prevailing in the south of Ireland in 1920 made night riding impossible, and the fixture was consequently altered to a one-day trial. The western portion of the route of previous years was utilised, but Gowlane Hill was taken in the opposite direction. Although the route was shortened to approximately two hundred miles, it was considerably stiffened by the fifteen miles of "Colonial" going over Sheehy Mountain and the inclusion of a rough and twisty hill near Ovens. The placings were decided by an acceleration test from a standing start, the figures of merit being worked out by a formula which took into consideration the time, c.c., and weight. The first place was secured by a popular member of the promoting club, J. Healy, on a 4 h.p. Norton, A. D. Carton (3½ Sunbeam) being second, and R. A. Pericho (6 Martinsyde sc.) being third.

Last year the conditions in the south of Ireland made it impossible to hold the trial, but this year it is hoped to revive it. The Motor Cycle Union has already approved of the date fixed for the event, Whit-Monday, but the course and conditions have yet to be settled, and will largely depend on the condition of the roads in the South. The officers and committee of the club have already purchased a handsome and valuable silver cup to be won outright as the principal award, and in addition the usual valuable prizes will be offered. Riders from the English Midlands will have a unique opportunity of taking part in this year's event, as it is held after the Tourist Trophy Races. The direct Cork-Liverpool steamer leaves Liverpool on the Saturday and arrives in Cork on Whit-Monday, and there is a return boat leaving Cork on the following Tuesday. As the greater portion of the route of the trial lies in the western part of the County Cork and the County Kerry, the Cork "Twenty" offers a unique opportunity to visiting competitors who desire to see a little of the best of Irish scenery. There is a consensus of opinion that West Cork and the Kingdom of Kerry include within their bounds the best in the way of scenery that Ireland has to offer.

T.W.M.

# CURRENT CHAT.

## Special Features.

THE JUNIOR T.T. DESCRIBED.
EVOLUTION OF THE MOTOR CYCLE.
SIDECARS OF LONG AGO.
IRELAND'S CLASSIC TRIALS.

Many are the uses of the sidecar. In this case it is being employed to transport a load of happiness to the sea beach—and good fun too—judging from the expressions.

## Times to Light Lamps.

| | | | |
|---|---|---|---|
| June 1st | .. | .. | 10.5 p.m. |
| „ 3rd | .. | .. | 10.7 „ |
| „ 5th | .. | .. | 10.9 „ |
| „ 7th | .. | .. | 10.11 „ |

Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### No. 1,001.

With this issue we start our second thousand. What will motor cycles be like when we celebrate our 2,000th number?

### Tuesday's Races.

On page 731 of this issue will be found a description of Tuesday's Lightweight and Junior T.T. Races.

### An Unplaced Record Breaker.

Although not fast enough to beat his handicap at the Royal Brooklands meeting, C. F. Temple (998 Harley-Davidson) was sufficiently speedy to break the 5 mile record in the 1,000 c.c. solo class; his time was 3m. 5.04s. (97.28 m.p.h.)

### Of Interest to Antiquarians.

As part of the Selborne Society's travel scheme a motor tour is being planned for July 3rd to 15th, visiting Banbury, Leamington, Warwick, Shrewsbury, Ludlow, Hereford, Forest of Dean, Wye Valley, Gloucester, Cheltenham, Bath, Marlborough and Newbury. The guide is Mr. Charles H. Ashdown, F.R.G.S., a well-known antiquarian, who from personal knowledge we know to be well-qualified for the task. Details are in the hands of the Travel Secretary, 27, Vanbrugh Hill, London, S.E.5.

### 2nd Army D.R.s Re-union.

Provided there is a sufficient response to this appeal, a reunion of 2nd Army D.R.s will be held on June 9th, taking the form of a dinner and smoking concert in Liverpool. Inquiries should be addressed to Mr. F. A. Fox, Alexander Hall, Islington Square, Liverpool.

### Suggestion for Whit Monday.

Unattached motor cyclists desiring an interesting afternoon's entertainment on Whit Monday should certainly not forget the North London Rally at Hendon. A big attendance of motor cycle clubs is assured, but there are, in addition, many competitions open to all for trophies and prizes totalling £50. The grounds will be opened at noon, the affair starting officially two hours later.

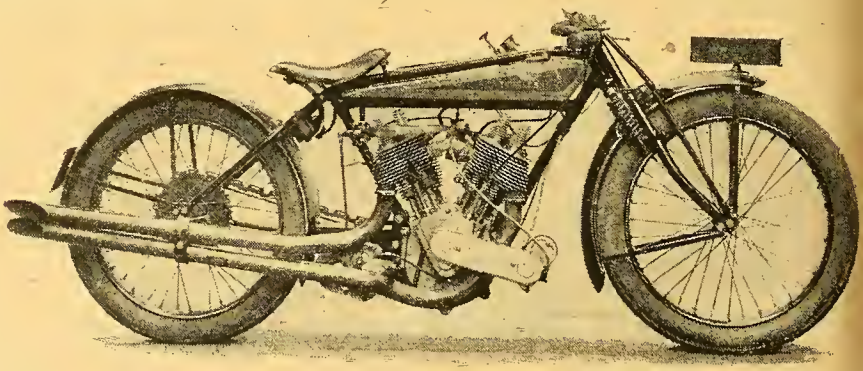
### Yorkshire's Open "Colonial" Trial.

Nothing if not thorough, the Yorkshire Centre A.C.U. is embodying quite a number of helpful and novel features in the regulations for its "Colonial" trial to be held on the 17th. Machines will compete only against other machines of the same class, and prices and weights will be included in the published results. Something exceptionally stiff in routes is to be expected—the course will be a secret one—but freak hills like Park Rash or Summer Lodge will not be included, and six variously mounted motor cyclist members of the competitions committee have already satisfied themselves that there is nothing "impossible" about the trial. Further particulars may be obtained from Mr. W. A. Dovener, 26, Beamsley Road, Frizinghall, Bradford.

### WHERE TO SEE THE LONDON-EDINBURGH.

ON page 735 there is a complete list of entries for the London-Edinburgh run, which starts to-morrow evening from Hendon. Readers, who wish to observe the competitors at any point, should consult the following timetable and guide:

Hendon.—7 p.m. Start.
Hatfield.—7.45 p.m.
Biggleswade.—9.0 p.m. Check.
Grantham.—12.20 a.m. Control and check. Breakfast.
Doncaster.—3.54 a.m. Check.
Ilkley.—6.30 a.m. Control and check. Second breakfast.
Settle.—8.44 a.m. Here competitors cross the river Ribble, proceed through Giggleswick, and over Buckabrow Hill.
Ambleside.—10.52 a.m. Check; beginning of non-stop section.
Summit Kirkstone Pass.—11.4 a.m.
Patterdale.—11.26 a.m. End of non-stop section.
Carlisle.—1 p.m. Check. Lunch.
Moffat.—4.4 p.m. Check and control. Tea.
Edinburgh.—7.10 p.m.



Designed by E. Poppe of the firm of White & Poppe, the big twin depicted above is intended solely for high speed solo work. The engine is the new 976 c.c. J.A.P. unit, which is giving excellent service in similar machines. A close ratio gear box is used in conjunction with a Brampton spring circle chain.

## Old Olavians' M.C.C.

A club is being formed for the Old Boys f St. Olave's School, Tower Bridge, London, S.E. 'ull particulars may be obtained from Mr. E. W. 'urner, 339, Clapham Road, S.W.9.

## Dartford and District M.C.

Under the above name a club has recently been ormed to foster motoring amongst motor cyclists nd car owners. A nominal subscription has been xed. Full particulars as to objects, programmes, tc., can be obtained by application to Mr. J. W. aylor, 46, Spital Street, Dartford.

## Preston (Brighton) M.C.C.

Another highly successful event was held on he 14th inst. This was a reliability trial over he South Downs. Results are now available as ollows:—

1. N. Cook (394 A.J.S.).
2. J. Packham (348 Douglas).
3. R. Firth-Kettle (398 A.B.C.).

## Wallington and District M.C. and L.C.C.

Thirty members attended the social run to the ull's Head Hotel, Ewhurst. Prizes for the best-ept machines were awarded to K. E. Bradfield (5 enith), J. C. Sanford (5 Rover sc.) and L. W. G. Vard (10 Morgan). After tea acceleration and low-running tests were held, resulting as ollows:—

ACCELERATION TEST.—1, Clifford Bowen 3 A.B.C.).

SLOW-RUNNING TEST.—Solos: 1, A. B. Lavy (3½ Sunbeam); Sidecars: 1, A. Leeding Sunbeam sc.).

## Isle of Wight M.C. and L.C.C.

The hill-climbing contests carried out on the 8th ult. were a distinct success, and in spite of a trong head wind some excellent times were made. Fastest time of the day—49.3 m.p.h.—was achieved by J. G. Hann, with a 980 c.c. New Imperial. Results:—

300 c.c. SOLO.—1, E. T. Witham (269 Sparkbrook); 2, H. W. Parnell (245 Levis).

350 c.c. SOLO.—1, C. F. Stagg (349 A.J.S.); 2, L. Copper (349 Douglas).

500 c.c. SOLO.—1, C. F. Stagg (349 A.J.S.); 2, Dr. E. F. W. Buckell (404 A.B.C.).

750 c.c. SOLO.—1, E. G. H. Morris (490 Norton); 2, E. J. Newcombe (678 N.U.T.).

UNLIMITED SOLO.—1, J. G. Hann (980 New Imperial); 2, E. G. H. Morris (490 Norton).

750 c.c. SIDECARS.—1, G. R. Scotney (734 Royal Enfield); 2, J. H. D. Allen (557 B.S.A.).

UNLIMITED SIDECARS.—1, G. R. Scotney (734 Royal Enfield); 2, A. L. Donovan (980 Royal Enfield).

LIGHT CARS.—1, W. Heber (998 Heber); 2, Dr. E. S. Craig (Morgan).

## Barrow and District M.C.

One hundred and two entries were received for the recent hill climb, results of which are appended:—

275 c.c. SOLO MACHINES.—1, B. Turner (Velocette), 33⅛s.; 2, B. Parkinson (Diamond), 36⅗s.; 3, W. B. Dall (Omega), 38⅖s.

350 c.c. SOLO MACHINES.—1, B. Parkinson (Diamond), 28s.; 2, G. Roberts (Sheffield Henderson), 29s.; 3, J. C. Dearden (Massey Arran), 29⅘s.

500 c.c. SOLO MACHINES.—1, H. Jackson (Sunbeam), 25⅘s.; 2, A. Hawkins (Norton), 26⅛s.; 3, B. Hill (Scott), 27⅖s.

750 c.c. SOLO MACHINES.—1, H. Jackson (Sunbeam), 26s.; 2, A. Hawkins (Norton), 27⅕s.; 3, C. Whiteside (Scott), 27⅖s.

UNLIMITED SOLO MACHINES.—1, H. Jackson (Sunbeam), 25⅖s.; 2, P. Baron (Indian), 26⅘s.; 3, A. Hawkins (Norton), 27⅕s.

600 c.c. SIDECAR MACHINES.—1, H. Jackson (Sunbeam), 30½s.; 2, G. Roberts (Norton), 34⅓s.; 3, R. Dixon (Douglas), 37s.

UNLIMITED SIDECARS.—1, H. T. Wilson (Norton), 37⅓s.; 2, R. Dixon (Douglas), 38⅗s.; 3, B. Fisher (Norton), 44⅘s.

FASTEST TIME OF THE DAY.—Harold Jackson (Sunbeam), 25⅛s.

## West Birmingham M.C.C.

Results of the recent half-day reliability trial were as follows:—

RILEY CUP.—P. B. Cranmore (3¾ Scott). Awarded the second time in succession, and automatically becoming his own.

UNDER 350 c.c. CLASS.—F. Terry (2¼ Velocette).

UNDER 500 c.c. CLASS.—W. C. Shelton (3½ Sunbeam).

UNLIMITED CLASS.—Miss L. Ball (3¾ Scott).

SIDECAR CLASS.—A. C. Cope (6 Rex sc.).

## Sheffield and Hallamshire M.C. & L.C.C.

On May 14th the club held a highly successful social run to Grindon, in the beautiful Manifold Valley. Members amused themselves by making ascents of Grindon Hill during the afternoon. This was one of the hills included in the 1914 Six Days' Trials, and is notable for its rough surface and three acute hairpin bends. The dry weather, however, robbed it of most of its terrors, one sidecar machine making the ascent with six on board.

## Week-End Club Events.

*June 3rd.—Bristol M.C.C.—Run to Bournemouth.*
*June 3rd.—Gloucester M.C. and L.C.C.—Run to Zoological Gardens, Bristol.*
*June 3rd.—Dumfries M.C. and C.C.—Run to view London-Edinburgh Competitors at Moffat.*
*June 3rd.—Birmingham M.C.C.—Lycett Trophy Trial to Land's End.*
*June 3rd.—Oxford M.C. and Oxford University M.C.C.—Speed Trials.*
*June 3rd.—Atherton and District M.C.C.—Run to Pickmere.*
*June 3rd.—Prestwich and District M.C.C.—Speed judging competition.*
*June 3rd.—Exeter M.C. and J.C.C.—Inter-club Trial.*
*June 3rd.—West Kent M.C.—"Lucky-bag" Trial.*
*June 3rd.—Coventry Triangle M.C.—Run to Hunningham.*
*June 3rd.—Kelso and District M.C.C.—Run to London-Edinburgh Trial.*
*June 3rd and 4th.—Sheffield M.C.C.—Run to Stratford-on-Avon.*
*June 4th.—Atherton and District M.C.C.—Run to Buxton.*
*June 4th.—Colne and District M.C.—Run to Pateley Bridge.*
*June 4th.—Coventry Triangle M.C.—Run to Fish Hill and Broadway.*
*June 4th.—Leeds Motor Union.—Week-end run to District.*
*June 4th.—Manchester M.C.—Run.*
*June 4th.—Southampton M.C.C.—Run to Highcliffe.*
*June 5th.—Carmarthen and District M.C.C.—Welsh Speed Championships.*
*June 5th.—Cork and District M.C.C.—One day Trial.*
*June 5th.—Ilkley and District M.C.C.—Social Event.*
*June 5th.—Eastbourne and District M.C.C.—Inter-club Hill Climb.*
*June 5th.—Bulwell M.C.—Run to Bakewell and Buxton.*
*June 5th.—Gloucester M.C. and L.C.C.—Reliability Trial to Bournemouth.*
*June 5th.—Exeter M.C. and J.C.C.—Run to Slapton Sands.*
*June 5th.—North Lodnon M.C.C.—Inter-club rally at Hendon.*
*June 6th.—Bulwell M.C.—Run to Bottesford and Belvoir.*
*June 7th.—York and District M.C.—Gymkhana.*
*June 7th.—Leeds Motor Union.—Run from City Square.*
*June 8th.—Bridgnorth and District M.C.C.—Hill Climb.*
*June 8th.—Gloucester M.C. and L.C.C.—Hill Climb at Chatcombe.*

## Warrington M.C.

On July 15th-16th this club is holding a trial to Holyhead and back, open to all clubs in the Cheshire Centre A.C.U.

## Kidderminster M.C.C.

A recent petrol consumption trial attracted a large number of entries and provided the following interesting figures:—

| | m.p.g. |
|---|---|
| 1. J. Bush (2¼ Velocette) ... ... | 185 |
| 2. W. Elliot (4 Triumph) ... ... | 152 |
| 3. F. J. Adam (3½ Norton) ... ... | 150 |

## Cumberland M.C.C.

Results of the recent reliability trial of the Western Section in the Lake District were:—

HEAVY SOLO CLASS.—Gold medal: A. Marley, Cockermouth (Triumph), lost half a mark. Silver medal: K. Hodgson, Keswick (Triumph), lost one mark. Bronze medal: L. Harrison, Carlisle (Sunbeam), lost five marks.

LIGHTWEIGHT CLASS.—Gold medal: Leslie Edmondson, Keswick (Massey-Arran), lost no marks. Silver medal: John G. R. Edmondson, Keswick (Velocette), lost five marks. Silver medal: W. Tiffen, Carlisle (Velocette), lost five marks.

The silver cup presented by the organiser, Mr. J. Wilkinson, Workington, for best performance on any machine up to 500 c.c., was won by L. Edmondson on a 2¾ h.p. Massey-Arran.

## Tiverton M.C. and L.C.C.

Holne Hill, Chevithorne, was selected for the club's first hill-climb. There were 29 entries, and competitors were divided into six classes. The length of climb was just under half a mile. T. Williams (499 Triumph) made the fastest time (33s.). L. Stagg (Sunbeam) won the Committee's Cup for the best performance. Other results:—

FORMULA.—1, L. Stagg (Sunbeam), 35s.; 2, T. Williams (Triumph), 33s.; 3, W. Pincott (A.B.C.), 40⅕s.

SIDECARS UNDER 500 c.c.—1, D. Physick (Norton), 48⅖s.; 2, E. Wood (Norton), 49s.

SIDECARS, UNLIMITED.—1, D. Physick (Norton), 48¼s.; 2, E. Wood (Norton), 47⅕s.; 3, F. H. Tidball (Indian Scout), 54s.

SOLO, UNDER 350 c.c.—1, J. Eddy (A.J.S.), 45s.; 2, R. Mawson (Rex-Acme), 1m. 4s.; 3, N. Parminter (Sparkbrook), 1m. 11⅘s.

SOLO, UNDER 500 c.c.—1, L. Stagg (Sunbeam), 35s.; 2, T. Williams (Triumph), 35s.; 3, W. Pincott (A.B.C.), 40⅕s.

SOLO, UNLIMITED.—1, L. Stagg (Sunbeam), 34s.; 2, W. Pincott (A.B.C.), 40⅕s.; 3, T. Williams (Triumph), 33s.

## North London M.C.C.

Results of the Staley Cup Trial, held on May 13th, are now to hand:—

*Staley Cup and Gold Medal.*—R. L. Richardson (3½ Alecto).

*Gold Medal.*—S. M. Greening (2¾ Francis-Barnett).

*Silver Medals.*—C. E. Morris (3 A.B.C.), R. H. Baxter (2¼ Radco), F. G. Mattock (7 A.J.S.), R. W. Greaves (8 Brough Superior sc.), W. A. Schooley (3½ Zenith-Bradshaw), R. H. May (4¼ B.S.A.), J. W. Auckland (8 Brough Superior sc.).

*Bronze Medals.*—L. P. Walter (4 Triumph), A. J. Beaurain (3½ Sunbeam), F. J. Youngs (2¾ O.K.), F. E. Jones (8 Matchless sc.), A. M. Powell (5-6 M.T.), C. D. Malby (10 Morgan), H. V. Bateman (10 Henderson sc.), H. R. Harveyson (4 Indian Scout sc.).

The annual climb, held on May 20th, resulted as follows:—

SOLO UNDER 350 c.c.—G. Richards (2¼ Velocette), *bronze medal*, 56s.

SOLO UNDER 600 c.c.—*Silver medal*, E. C. Gordon (3½ Triumph), 43⅗s.; *bronze medal*, G. H. Ruscoe (3½ Norton), 45s.

UNLIMITED SOLOS.—*Silver medal*, R. McAndrews (2¾ Douglas), 41s.; *bronze medal*, E. C. Gordon (3½ Triumph).

SIDECARS UNDER 600 c.c.—*Bronze medal*, E. C. Gordon (3½ Triumph), 60⅗s.

UNLIMITED SIDECARS.—*Bronze medal*, R. W. Greaves (8 Brough Superior), 45⅗s.

FASTEST TIME OF THE DAY.—R. M. McAndrews (2¾ Douglas), 41s.

## Warrington M.C.

At the club's first run of the season, between thirty and forty motor cycles made the journey. The prizes for the best average turnouts were awarded to: 1, Kinsey (1914 Indian); 2, Guest (1915 Lea-Francis); 3, A. Collins (7 A.J.S. sc.).

## Norfolk M.C. and L.C.C.

Great enthusiasm prevailed at the club's most recent climb on Ringland Hill, held on the 18th ult. Fastest time of the day was made by A. G. Fenn on a 499 c.c. o.h.v. Triumph rebuilt for speed work; but S. M. Greening (Francis-Barnett) also made a surprisingly good show.

## Lee, Lewisham, and District M.C. and L.C.C.

Particular disappointment is felt by this newly-formed club owing to the accident to one of its members when proceeding to the recent South-Eastern Counties Team Trial. This unfortunate incident apparently upset the luck of the club, but it hopes to do better next time.

## Darlington and District M.C.

On May 20th a merry crowd assembled for "Snakes and Ladders"; this proved a great success, the winners being H. R. Porter, first; E. C. Tomkins and J. H. Simpson tied for second. The Booby prize went to a Scott T.T. rider, J. W. Hett, with minus 102 marks! The club is grateful to *The Motor Cycle* contributor who suggested the game.

## Dolgelly and District M.C.C.

Some thirty motorists and motor cyclists have been enrolled by this club, which has recently been formed with headquarters at the Royal Ship Hotel, Dolgelley, Merionethshire. It is proposed to have a run with a novelty competition on Whit-Monday, June 5th. The Rev. M. R. Smith, Llanelltyd Vicarage, Dolgelley, and Mr. W. O. Chambers, N. P. Bank, Dolgelly, are acting as joint hon. secretaries.

## Newcastle and District M.C.

Arrangements have now been made for the seventeenth annual all-night run from Newcastle to Edinburgh and back, which takes place on June 17th-18th, and is generally one of the most successful ventures of the season. It not only attracts a great deal of interest from Northern motorists, but also from the public, for last year thousands turned out to see the start from the Grand Hotel, Barras Bridge, Newcastle.

## East Lothian M.C.C.

A very successful outing in the form of a hill-climb on Meg's Bank, near Gifford, was held on the 13th ult. The weather was at its best, and some good sport was witnessed. The following is the prize list:

STANDING START.

| | | Actual time. | Handi-cap. | Result. |
|---|---|---|---|---|
| 1. | J. McRorie (4½ Humber) | 24⅖s. | +2 | 26⅖s. |
| 2 | W. Romanel (3 A.B.C.) | 27⅕s. | +2 | 29⅕s. |
| 3. | J. Rattray (2¾ A.J.S.) ... | 35⅕s. | −5 | 30⅕s. |

FLYING START.

| | | | | |
|---|---|---|---|---|
| 1 | W. Romanel (3 A.B.C.) | 19s. | +2 | 21s. |
| 2. | J. Rattray (2¾ A.J.S.) | 27s. | −5 | 22s. |
| 3. | J. C. Patullo (4 Triumph) | 25⅖s. | scr. | 25⅖s. |

FASTEST TIME OF DAY.—W. Romanel (3 A.B.C.), 19s.

After the hill-climb, a game of "Snakes and Ladders" was played, which was a source of great enjoyment to all members. Tea at Gifford completed a splendid afternoon's outing.

## Redditch and District M.C.C.

Results of the reliability trial described in *The Motor Cycle* last week have now been issued as follows:

TERRY CHALLENGE CUP AND GOLD MEDAL (best performance on any machine).—C. Brown (3½ Triumph).

PRESIDENT'S CHALLENGE CUP and GOLD MEDAL (best performance by Redditch member).—C. Brown (3½ Triumph).

GOLD CENTRE MEDALS (100% marks).—F. W. Viles (2¾ Raleigh), W. H. Hadfield (2¾ Raleigh), T. Featherstone (2¾ A.J.S.), W. E. Smith (3½ Norton), C. Brown (3½ Triumph), W. Brown (4 Triumph), J. S. Bacon (3½ Sunbeam), H. Stretton-Ward (3½ Triumph), G. Kimberley (3½ James), J. Doshor (8 Enfield), T. Ward (2¾ Sirrah), W. Probert (2¾ Verus), F. Sibley (3½ Rudge), S. Wright (4 Humber), B. L. Bird (4¼ B.S.A.), J. Cave (8 G.N.), J. W. Meredith (8 T.B.), and W. Ridley (10 New Hudson).

SILVER MEDALS (90% marks).—J. A. Newman (4 Douglas), J. W. Moxon (2¾ Monopole), R. Cooper (2½ Alldays Allon), R. Ransom (3½ Lea-Francis), P. Johnson (3½ Rudge), E. Slader (2¾ Beardmore), J. H. Walker (4¼ B.S.A.), L. Green (2¾ Verus), T. Weaver (2¼ Sirrah), H. Uzzell (8 New Imperial), H. Collins (3½ Norton), H. Perrey (4¼ B.S.A.), F. Spouse (8 T.B.), E. Sidwell (8 Bayliss-Thomas), and F. Mann (8 Morgan).

## Liverpool M.C.

Held on the 21st ult., the amateur trial for the Blake Cup resulted in three riders of solo machines tieing for first place; Miss Cottle (Triumph), G. F. Burns (Sunbeam), and J. H. Fox (Norton).

In the sidecar class first place fell to T. H. Roberts, who put up an excellent performance on a Dunelt.

## Sheffield and Hallamshire M.C. and L.C.C.

The annual trial for the Stacey Trophy was held over a 60 miles course in Derbyshire. Over 200 people watched the competitors ascend Litton Slip Road, which had to be climbed three times. Only one failure was recorded here, although the bad bend at the bottom was treated with respect by all the competitors. A still larger crowd assembled at the finish at Monsal Head. Official results:—

1. Stacey Trophy and Replica: C. W. Hayward (3½ Sunbeam).

2. Gold Medal: G. H. Gregory (8 Sunbeam and sidecar).

3. Silver Medals: W. Kantlahner (4 Wilker), C. W. Ward (3½ o.h.v. Triumph), A. Blake (3½ Martinsyde).

Lightweight Prize (not exceeding 292 c.c.): L. Haywood (2¼ Levis).

## Central Cornwall M.C.C.

Speed trials on Davidstowe Moors, near Camelford, opened the competition season of the club. Beautiful weather prevailed, and the course was an admirable one. Each competitor was timed over a half-mile stretch electrically, this apparatus being designed and made by Mr. B. Gordon Williams, of St. Austell, one of the joint hon. secretaries of the club. It worked splendidly. Some fine times were recorded, the fastest being that of C. R. Endicott (Plymouth) on a Sunbeam, who covered the course in 23⅕s., well over 70 miles an hour. Results:—

SOLO EVENTS (not exceeding 350 c.c.).—1, P. Phillips, St. Austell (New Imperial), 29⅗s.; 2, O. G. Whitlock, Holsworthy (2¾ A.J.S.), 30s.

Not exceeding 300 c.c.—1, E. G. Browne, Plymouth (2¼ New Imperial), 27⅕s.; 2, P. Phillips, St. Austell (2¼ New Imperial), 30s.

Special class for Douglas machines.—1, W. Hosking, St. Austell, 34⅗s.; 2, E. D. Lean, Truro, 36⅖s.

Special Triumph class.—1, Symons, Charlestown, 28⅕s.; 2, Grant, Devonport, 29⅗s.

Not exceeding 650 c.c.—1, C. R. Endicott, Plymouth (3½ Sunbeam), 23⅕s.; 2, P. Phillips, St. Austell (3½ Norton), 24⅕s. At the first trial these two riders tied with 24s. each.

SIDECARS (not exceeding 650 c.c.).—1, J. Illingworth, Devonport (3½ Norton sc.), 29⅕s.; 2, H. F. Benny, Bodmin (3½ Sunbeam sc.), 32⅖s.

Unlimited.—1, J. Illingworth, Devonport (3½ Norton sc.), 31s.; 2, H. F. Benny, Bodmin (3½ Sunbeam sc.), 32⅕s.

## Mid-Bucks M.C.C.

There were 28 starters out of an entry of 28 when, on May 11th, the club held its first trophy run over a 50-mile course starting and finishing at Aylesbury Market Square.

It was very successful, despite complications introduced by a stray cow, just at the foot of the steep rise past Chequers, the residence of the Prime Minister. It will be seen that the winner only dropped four points out of a possible 100 throughout the route. The Mayor of Aylesbury (Ald. J. Robinson) acted as starter. Results:—

1. G. Janes (Triumph) ... ... 96
2. D. H. Musgrave (Humber) ... 94
3. G. F. Parrott (Triumph) ... 90

## Croydon and District M.C.C.

The first members' hill climb was held at Buggs Hill, near Caterham.

The proceedings passed off without a hitch of any description. Fastest time of the day was made by T. Hornby, a private owner riding a Harley-Davidson, who carried off both the Private Owner and Trade cups.

The results on formula were:—

350 c.c. SOLO (PRIVATE OWNER).—1, W. N. Peet (2¾ A.J.S.), silver medal; 2, M. Jones (2¾ Douglas), bronze medal; 3, W. Simmons (2¾ Douglas).

350 c.c. SOLO (GENERAL).—1, A. J. Winstanley (2¾ Blackburne), silver medal; 2, M. Jones (2¾ Douglas); 3, A. F. Pulling (2¼ Enfield).

500 c.c. SOLO (PRIVATE OWNER).—1, M. Jones (2¾ Douglas), silver medal; 2, A. C. Scarff (3½ Rover); 3, L. Goddard (3 Enfield).

500 c.c. SOLO (GENERAL).—1, W. J. Henney (2¾ Blackburne), silver medal; 2, R. L. Briggs (3 A.B.C.); 3, M. Jones (2¾ Douglas).

LADIES' SOLO.—1, Miss F. Davis (2¼ Enfield), silver medal; 2, Miss S. Sedgwick (2¼ Enfield); 3, Miss E. Tidy (2½ James).

UNLIMITED c.c. SOLO (PRIVATE OWNER).—1, D. F. Brown (3½ Sunbeam), silver medal; 2, M. Jones (2¾ Douglas), bronze medal; 3, T. Hornby (7-9 Harley-Davidson).

UNLIMITED c.c. SOLO (GENERAL).—1, A. J. Winstanley (2¾ Blackburne), silver medal; 2, R. L. Briggs (3 A.B.C.), bronze medal; 3, T. Hornby (7-9 Harley-Davidson).

500 c.c. SIDECAR (GENERAL).—1, H. S. Jerome (3 A.B.C. sc.), silver medal; 2, W. J. Henney (3½ Sunbeam sc.); 3, A. C. Scarff (3½ Rover sc.).

UNLIMITED c.c. SIDECAR (PRIVATE OWNER).—1, H. S. Jerome (3 A.B.C. sc.), silver medal; 2, W. Bucknell (8 Matchless sc.), bronze medal; 3, L. J. Bucknell (8 Enfield sc.).

UNLIMITED c.c. SIDECAR (GENERAL).—1, H. S. Jerome (3 A.B.C. sc.), silver medal; 2, W. Bucknell (8 Matchless sc.), bronze medal; 3, A. Attwood (4 Hawker sc.).

WHAT MIGHT BE.—If the test hills in the reliability trials were always as accessible to a populous district as Blackford Hill, Edinburgh, scenes such as the above would no doubt be much more common than at present.

# WHO WILL WIN?

## Possibilities in To-day's Senior T.T. Race discussed by "Michael Kirk." Danger from America?

PHEW! What a question! Ring for some iced water, and wet those towels again, please, Mary. Now for it! Let's clear the table a little to start with. I think that if there is one cast-iron certainty about the race it is that no 350 c.c. machine will come near winning. Last year that magnificent rider, H. R. Davies, literally forced his small A.J.S. into first place, but he was aided by a number of "green" engines and certain misjudgments on the part of faster men. This year the little 'uns are up against a galaxy of the best riders on earth, mounted above engines matured by two or three years of concentrated and continuous experiment.

Unless I am a fool, a 500 c.c. winner is assured. If you agree, let us sort out the top-notchers. Douglas? Looks rather as if this firm were concentrating on the Junior Race—no Pullin, no Emerson—a dark horse in Anstice, who is a newcomer to the Island, and that unlucky sportsman, Alfie Alexander, who has not finished the course in his last six essays.

Indians? The same buses as last year with F. W. Dixon, Duggie Alexander, D. H. Davidson, and another up. Well, I don't know what you think. Some people say Dixon takes too many risks. To my mind, his riding isn't half so dangerous as it looks. I don't think anybody can get round the Manx course faster than he can without taking a good many more chances than he takes. I would tip him to win outright if I knew what his machine could do, and, of course, he won't tell me that.

### Unluckiest of All.

I pass over a number of small entries, and come to the unluckiest Manx visitors of all—Nortons. Our premier speed singles for years, they have nothing but a second place to their credit since Rem Fowler's win on the now forgotten Norton twin fifteen years ago. Their turn is long overdue. They will stage the largest team in the race—fourteen men—if all goes well. Duggie Brown and Hassall are supposed to be their fastest pair, with Shaw little behind, and Cawthorne is regarded as their most promising novice. Everybody would enjoy a Norton win, and Hassall would be my selection to effect one.

The Rudge has come back at last. Neither the names of its riders nor its long abstinence from first-class speed work inspire any special terror. But where the T.T. is concerned, you can never judge Rudges by the book. They have a quiet way of suddenly producing a speed with which nobody credits them, and equally of turning out half a dozen unknown riders, all of whom can ride like blue ruin. On paper I would not give a sooted plug for their chances this year. They have eight riders, of whom only that genial giant Watson-Bourne boasts any Manx record worth mentioning. But I have not forgotten 1913 and 1914. Until the times for the first lap go up to-day, others besides myself will be half-expecting another nonchalant miracle from the Rudge factory.

Scotts? I have heard one who ought to know remark that the Scott frame is worth ten seconds per lap in the Island; and he was promptly contradicted by another expert with a curt "You mean twenty?" I know the Scott crowd were profoundly disappointed that they did not win in 1921, and during the interval they have coaxed a good deal more speed out of the Squirrel engine. In Clarence Wood they have at least one rider who is in the absolutely first flight; and a top-notcher on the 1922 Scott needs nothing but a clean run to win outright in dazzling time. The trouble with the Scotts is that they are either in front or nowhere.

### Another Terrifying Team.

Sunbeams will parade yet another terrifying team. It is a toss-up whether George Dance is or is not a finer T.T. man than Dixon. Certainly the finest all-round rider we have, his luck in the T.T. has always been out; in 1920, a broken valve; in 1921, a toss up Glen Helen when a friend's shout distracted him. After the race George remarked grimly to me that he should never take his eyes off the road again, even if the last trump sounded during the race. Personally, my secret dream is that F. W. Dixon, C. P. Wood, and George Dance should all be blessed with a non-stop; given that, let me watch the last lap, and then die. But Dance is by no means the only Sunbeam hope. T. C. de la Hay has won one Senior outright.

Finally, we come to the Triumph entry. Edmond put up a record lap in 1921, and this is the only public ground on which he can be ranked as the equal of some of the men whose chances have been analysed above. Personally, I regard Edmond's ride last year as magnificent. He struck any quantity of trouble, and yet put up two simply terrific laps—it is so hard to keep a cool head when you are anxious. I think Edmond may just about win if his machine can carry him, but I should have more hopes of him if I definitely knew that his engine was faster up the mountain than one or two of his rivals'. Brandish rode like a champion last year on a machine which wanted nursing, and was never fast enough to finish very high. Genial Harveyson we all know as a crack speedman whose luck has never been quite in.

Well, I suppose readers will expect a definite conclusion from me, though my secret convictions are sicklied o'er with pallid doubts, and I am as reluctant to make a definite statement as the author of "Philosophic Doubt" or a diplomatic archbishop. But if you will have it, I wouldn't put a copper on the race at any price—it is far too open. If somebody who was just going to the South Pole lent me a fiver to invest, I would invest it between F. W. Dixon and the Sunbeam's first string. But there wouldn't be any rash optimism about the bet, you know.

# THROUGH FEMININE GOGGLES

One of the most consistently successful lady competitors—Mrs. Hardee, who now uses a Matchless outfit, and proves that she can drive as well as any of the stronger sex.

## How to Attain Success in Motor Cycle Competitions.

TO-DAY, when practically all forms of sport are indulged in by women, it is surprising that more of them do not take up the sporting side of motor cycling. It is healthy, thrilling, intellectual, and is a sport that can be indulged in at all seasons. Considering the joy a motor cycle can give, it is not unduly expensive.

The essence of all sport is achievement, and, like all other sports, to achieve success one must enter wholeheartedly into it. Neither must one be disheartened by failure. The ability to meet failures happily is the true test of a sportsman.

In the majority of districts there are not sufficient lady riders to justify clubs arranging special events for them, and it is therefore necessary for ladies wishing to ride to enter into competition with men.

These remarks are addressed to my sisters of the wheel, and to them I say:

Our contributor, Mrs. M. C. Jennison, who has distinguished herself in speed trials.

## Useful Hints by a Well-known Lady Competition Rider.

Do not make the mistake of expecting special concessions because you are a woman. You have no right to them, and remember that the average club man looks upon you as an interloper at first. He is a gentleman and will treat you with courtesy, but try to remember that if you make an "exhibition" of yourself he is sure to think something about "a pack of women" spoiling the club events.

If you decide to go in for sporting work, learn to *ride* a motor cycle first, and afterwards enter in the smaller club events.

I had taken down and re-erected a motor cycle engine complete before I was permitted to have a ride on one. I had been riding twelve months before entering my first competition, and had been riding in competitions two years before winning a medal. I was fortunate to have for a mentor a very bad-tempered engineer (I hope he will not

**Through Feminine Goggles.—**

read this), who never hesitated to give me the masculine view of the proceedings.

### Small Beginnings.

To start with, at all events, ride a low-powered machine. Unless you are of exceptionally fine physique you will find a high-powered machine beyond your capabilities, and nowadays a 250 c.c. machine is ample for everything except sidecar work, and can be tuned to attain speeds at which you will have all your work cut out to hold it.

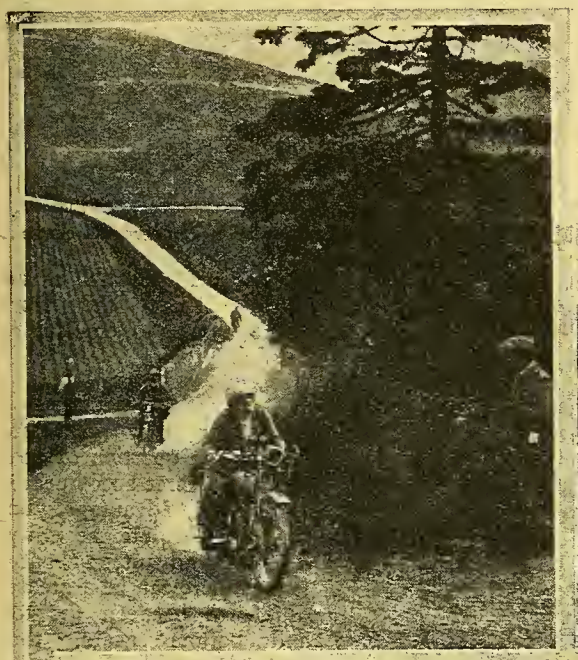
There is a large choice of machines available up to 350 c.c., and you may choose a machine with either a two-stroke or four-stroke engine. The two-stroke engine has the merit of simplicity, but it is a rather more difficult machine to tune for hill-climbs, etc. (By this I mean that experimental tuning on the two-stroke is more expensive. There are, however, one or two very fine examples of sporting two-strokes on the market which do not need any experimental tuning.)

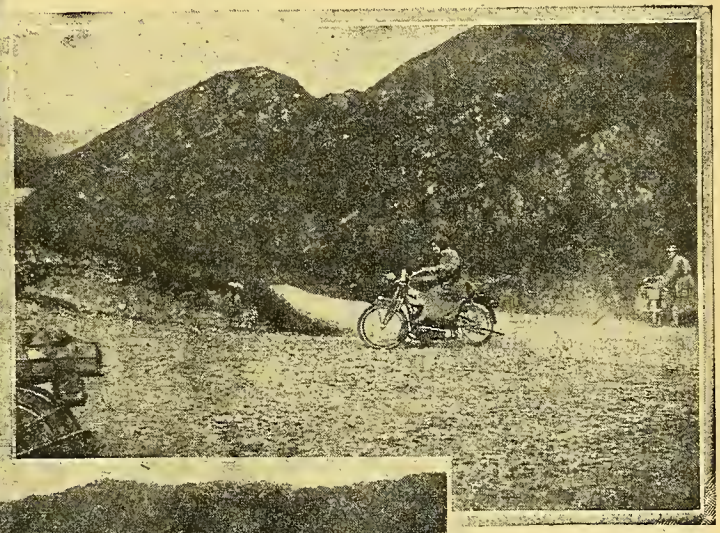
Among the four-stroke machines I strongly advise beginners to start with a single-cylinder engine. They are easier to tune than multi-cylinder engines. It is preferable to choose a machine fitted with a two-speed gear and clutch for sporting work; it ensures a quick get-away at hill-climbs and speed trials, and the clutch is an invaluable adjunct in reliability trials.

It is the general practice amongst sporting riders to use a two-lever carburetter, but the writer uses, and strongly advises the use of, a single-lever automatic carburetter.

### Misfiring.

At open speed trials it is the rule rather than the exception for machines to misfire for the first half-dozen yards, and there is really no necessity for this. It is generally due to the use of high petrol levels,





Top, left: One of the several lady competitors in the 1914 Scottish Six Days Trials, Miss M. Beck (Bat-Jap) on Cockbridge. Top, right: Mrs. R. Lord (Rex), who as Miss Muriel Hine, was probably the first lady to take up motor cycle competition work seriously. Bottom: Another lady in the 1914 Scottish event, Miss Hammett (Douglas) on Applecross.

Mrs. Baxter, another lady Scottish Trials competitor of pre-war days.

large jets, and other misconceptions regarding carburation. A *good* single-lever carburetter can be tuned to fire over the first compression and give the maximum of acceleration without misfiring, and, this can be done a week before the event if necessary. There is no time to twiddle levers to correct carburation during the 26 or 27 seconds occupied in covering the half-mile. Five yards of misfiring at the beginning of the half mile means 2/5s. on the time, and this will probably lose you the first place.

If your machine is fitted with a decent magneto, don't interfere with it, and don't make the mistake of timing it too fast. Of far more importance than the magneto is the sparking plug used. Consult the maker of your machine as to the best type of plug to use, and *use* it, but discard it immediately it starts to misfire. Do not use fancy plugs for sports work—there are plugs on the market for which claims are made that are ridiculous. Do not waste any time with "gadgets," such as spark-gaps, dopes, and other patent appliances. These are no doubt very excellent, but they are out of place for competition work.

Whilst on the subject of speed, do not talk glibly of 50 m.p.h. Buy a Bonniksen, and put the hand twelve successive times to 40 on the dial, choosing a straight, clear road for the purpose. Then get off and think about it, remembering that you have been at speed for one minute, and during this time you have covered two-thirds of a mile.

Miss Wilson (Velocette) as she appeared at Staxton Brow hill climb. (Inset.) Miss Marjorie Cottle (Triumph), a lady who excels in freak trials.

### Tuning for Reliability Trials.

Tuning for reliability trials requires rather different methods, as, although the machine may be required to show a good turn of speed (such as for an acceleration test), yet more attention must be paid to minute details in order to get good "all-round" results. In modern trials it is very essential that both brakes should be in good order. On many machines sold at the present time, the front brake is not so efficient as it should be.

Miss Phillips (Connaught), a competitor in Northern hill climbs.

### Three-Speeds.

Another very important item is the question of gear ratios. A three-speed gear is a decided advantage, but not an absolute necessity. The chief advantage about it is that there can be a greater difference between the top and bottom gears, thus enabling one to use a very low bottom gear on the "Colonial sections" without having to sacrifice a good deal of speed on the top gear. If the machine is chain-driven, the chains should be cleaned and afterwards adjusted. Do not forget the following details:

Oil the hubs, adjust and lubricate the steering head and spring forks, clean out the insides of the mudguards, drain the tank, and cleanse the carburetter and petrol pipe.

If there are likely to be water-splashes, cover the high-tension terminal with stiff grease. If you are riding a belt-driven machine, pay special attention to your belt. It is very essential to practise riding if you are to succeed in reliability trials. Take your machine out on rainy days and practise riding in muddy by-lanes. Also find a hairpin bend on a steep by-road, and ride round this repeatedly until you can do it with confidence and without removing your feet from the rests.

**Through Feminine Goggles.—**

Try to cultivate the habit of keeping your feet on the footrests instead of steadying yourself by foot-slogging. Undue foot-slogging is not only very untidy, but actually tends to cause skidding.

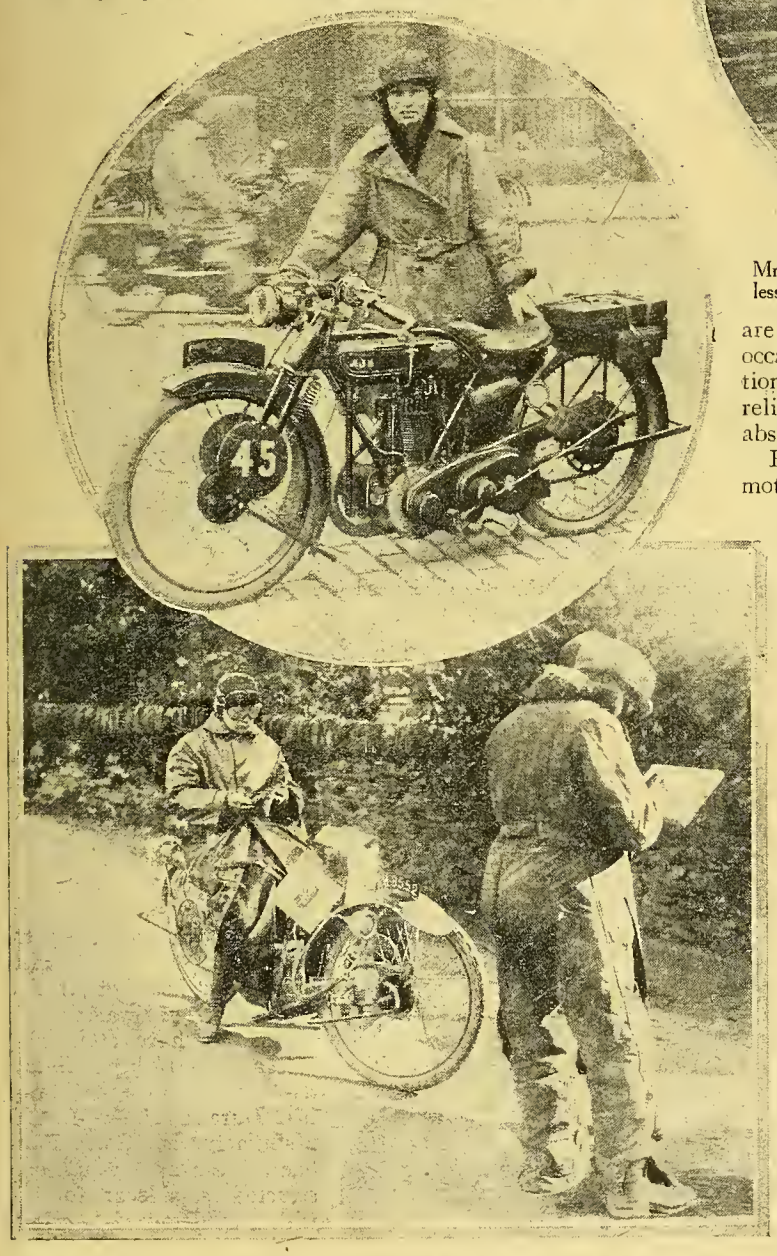
### Clothing.

I should add a few words about clothing. There is certainly no necessity to wear anything more than a divided skirt for ordinary touring and pleasure runs; but this is quite unsuitable for sporting work, and is a big handicap. Well-cut riding breeches and a woollen jumper are *comme il faut*, if only because they are the most appropriate garments for sporting occasions. The same garments, with the addition of a waterproof coat, are also the best for reliability trials, where freedom of movement is absolutely necessary.

Finally, if you are to succeed as a sporting motor cyclist, you must put in many hours of hard work, and not be discouraged by failures. You must understand your own machine, and the final adjustments should never be left to anyone else.

The effort is well worth while, for after your first win you will know indeed the joy of living. MARY C. JENNISON.

Mrs. Bell's many successes on her A.J.S. outfit are none the less meritorious because they were accomplished in Scotland.



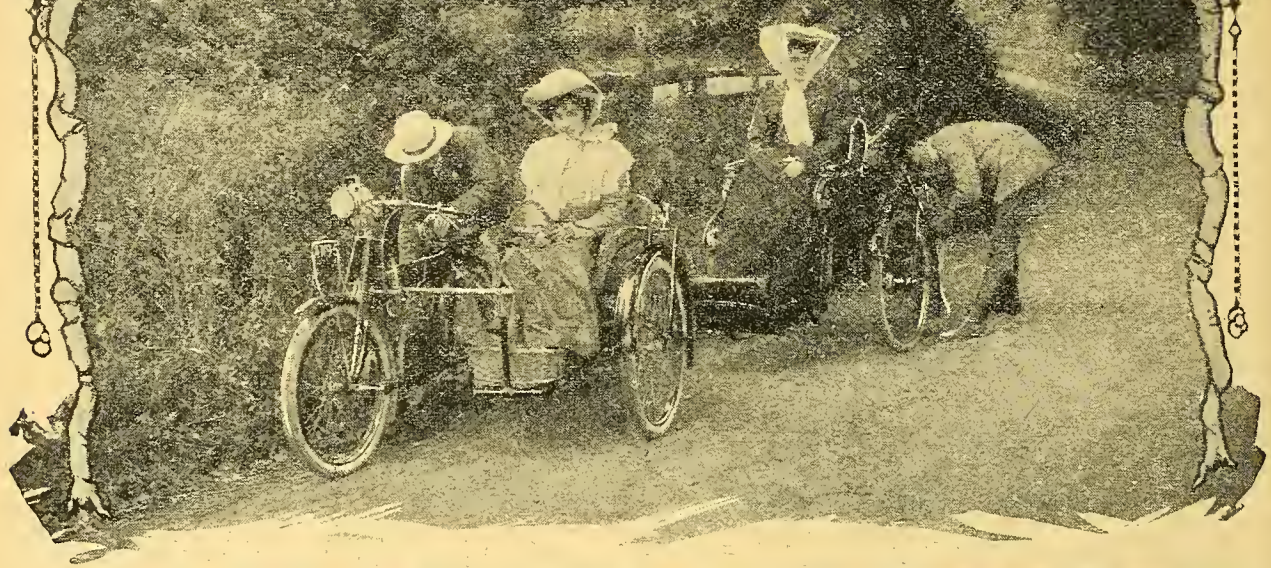
Top. Mrs. Olive Knowles (A.J.S.), the only lady gold medallist in this year's Scottish Trials. Below: Mrs. Jansen (Ner-a-Car), whose name appears most often of any lady motorist on the programmes of the big trials nowadays; she earned undying fame for her pluck in last month's six day event in Scotland.

## CLASSIC SOUTH AFRICAN EVENT.

IN the race from Durban to Ladysmith and back, organised by the Natal M.C., a brilliant win was made by H. P. Loader (7-9 Harley-Davidson), who gained the Rudge Trophy, a cash prize of £50, a gold medal and a certificate, also the Harley-Davidson Trophy for the fastest time for a machine over 600 c.c. The second man, R. Blackburn, riding a similar machine, but with a sidecar attached, won the Indian shield, a cash prize of £25, a gold medal and a certificate, while the third man, J. Booth, mounted on a Triumph Junior, gained a cash prize of £10, a gold medal and a certificate.

An annual event of considerable importance in South Africa, the Durban—Ladysmith contest is generally noted for its extremely strenuous nature, the road surfaces in particular being more suitable for inclusion in a sporting trial than a race.

# Side Cars of Long Ago

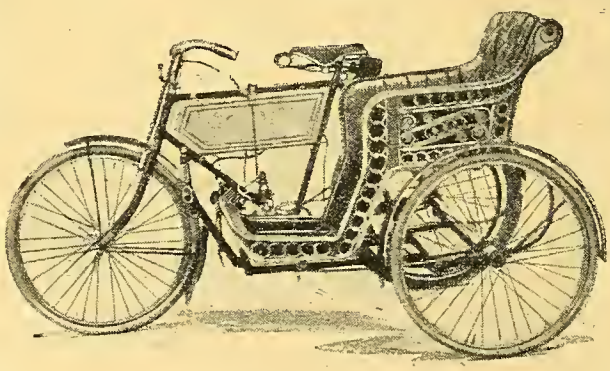


On the road in 1904. For many years the two types of three wheelers shown—the sidecar and forecar—fought for supremacy, the latter in the end being completely discarded.

## Questions Regarding the First Sidecar. Was it Attached to a Pedal Cycle or Motor Cycle? Breaking Down Prejudice.

*"Ah, now side by side* together *we glide*
*O'er mountain, by valley, through sweet countryside;*
*Together in truth—not he away there*
*And she, all forgotten, dust smothered in rear."*

ALTHOUGH not exactly a slogan, these four lines of doggerel answered very well in 1903 as a battle cry—or trade cry, to be more accurate. They were published together with an illustration of the first sidecar ever advertised in *The Motor Cycle*. That was early in 1903, and the enterprising firm was Components, Ltd., Birmingham, the makers of the present-day Ariel. This company was astute enough to recognise that the sidecar would eventually oust the trailer and "quad," and advertised their production as the "Liberty" Sociable attachment, an appellation emphasising its companionableness more than the bare word sidecar would have done.



The first sidecar ever advertised in "The Motor Cycle"—the "Liberty" Sociable, marketed by Components, Ltd., in 1903.

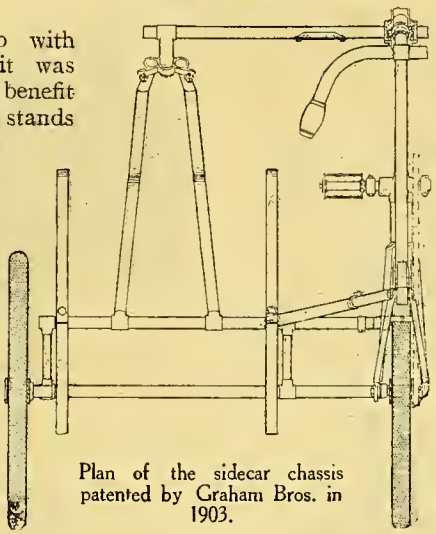
The actual patentee, however, of this device was Mr. W. J. Graham, of Messrs. Graham Bros., Enfield, who protected the design in January, 1903, and sold it to Components, Ltd. This sidecar was first shown on the Stock Exchange walk to Brighton attached to a 3½ h.p. Minerva. An interesting point in connection with the patent was that the idea came to Mr. Graham in the midst of a sleepless night, and was immediately jotted down on paper. This negatives the probability of Mr. Graham having ever heard of Mr. Dan P. Morgan, of Swansea, who claims to have attached a sidecar to a 1½ h.p. Minerva as long ago as 1901, or of Mr. Durant, of the L.A.D. Manufacturing Co., Farnham, Surrey, who constructed a sidecar for use with a tandem pedal cycle as far back as 1888.

Credit must go to the man who first thought of the idea, but greater credit to the men who conceived the same idea

**Sidecars of Long Ago.—**

independently, and backed it up with business zeal and enterprise, for it was owing to their perspicacity that we benefit as we do to-day. Among these men stands Mr. W. Montgomery, who used a sidecar in 1902 and founded a sidecar business in those early days, strong in the belief that it was a sound proposition.

When the old drawings and photographs are examined it cannot be said either that the sidecar has altered fundamentally since it was first evolved. Of course, in comfort the modern body is quite a different thing, but the chassis design remains much the same as in 1903. Not until Alfred Scott departed from the beaten track with deliberate and clever independence did anyone show much originality in the design of a triangulated chassis. The fetish of detachability has, of course, kept designers to an orthodox chassis design, but now that owners seldom detach their sidecars there is no excuse for adherence to old plans and methods, which make for inaccessibility. The most glaring instance of this is the fitting of the chain case on the near side of a machine *designed solely for sidecar work*.



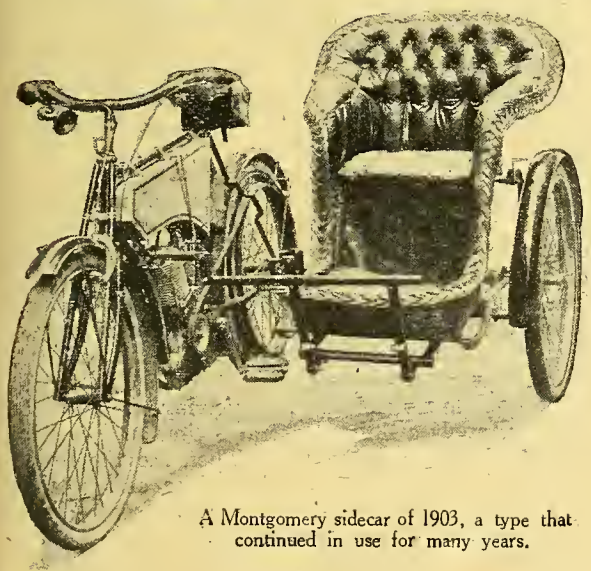
Plan of the sidecar chassis patented by Graham Bros. in 1903.

Attached to a 1903 3½ h.p. Minerva, this Graham sidecar attracted attention at the first Stock Exchange Walk to Brighton.

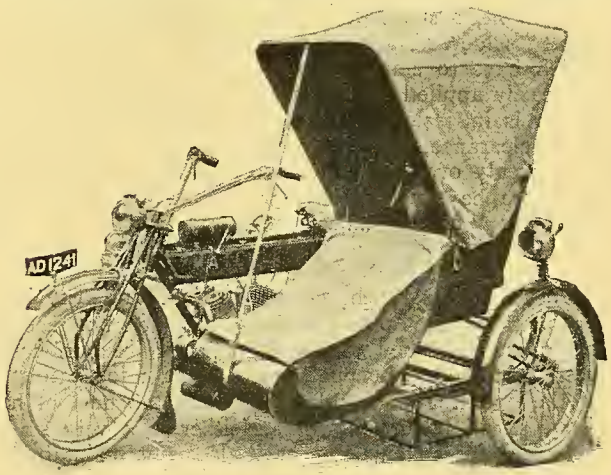
A 1904 model, in which the passenger is exposed almost as much as the driver of the machine, as was the case with all the old sidecars.

In spite of its undoubted advantages the sidecar was slow in gaining favour. The tricar and the "quad" were usurped with no crashing of cymbals, and several years went by before the prejudice against the sidecar's unsymmetrical appearance was overcome. In July, 1905, *The Motor Cycle* gave the sidecar an "extended trial in order to determine for its own satisfaction the most suitable form of attachment," and emphasised in its favour the matters of storage and freedom from side-slip compared with the trailer, and also the lower h.p. required to propel a sidecar compared with the power needed for a tricar. In conclusion the writer said, "Altogether, it has answered all our expectations."

There is a certain amount of restraint in that favourable summing-up which probably reflects the general



A Montgomery sidecar of 1903, a type that continued in use for many years.



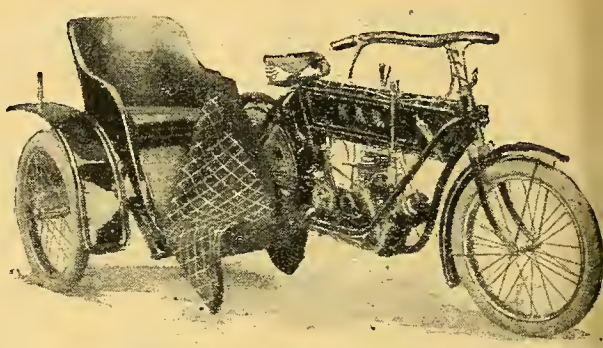
A "wind scoop" on a 1909 Matchless. Messrs. Collier & Sons were alive to the comforts of the passenger thirteen years ago, as will be gathered from the illustration showing an extremely "roomy" hood.

**Sidecars of Long Ago.—**

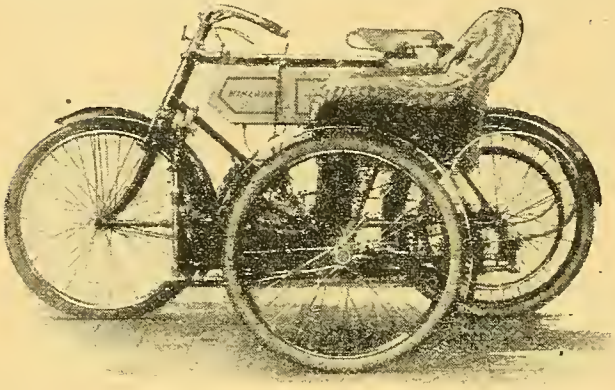
feeling existent at that date, although we believe the writer was far more convinced of its ultimate popularity than many fellow motor cyclists were.

### Why the Sidecar Scored.

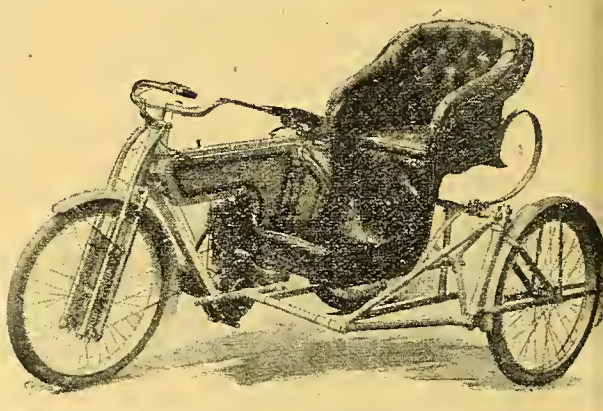
From that time—July, 1905, onwards—sidecars entered the big trials, competing with the forecars, more than holding their own in spite of their "unmechanical" design. Compared with the three-wheeler, too, the sidecar outfit in those days was infinitely cheaper, and possibly it was that advantage, together with the talking point of "quick detachability," that gave it supremacy in the end. It is certainly in a very strong position now.



Probably the first coachbuilt sidecar. It follows in design the wicker type popular at that time—1905.



An experimental model with the sidecar wheel almost midway between the two cycle wheels.



The first model of the castor wheel type, which became at a later date comparatively popular.

MILLFORD SIDECARS OF 1903 AND 1905.

# SOLDERING FOR AMATEURS.

A SLIGHT knowledge of soldering is extremely useful to the motor cyclist, as it enables him to fit new Bowden wire nipples, coned pipe unions, and the like for himself. The only requisites are a copper bit, a small pot of liquid flux, and a stick of "soft" solder. Hard solders are only needed for jobs which have to stand a good deal of heat, which is not easily applied in the amateur's garage; and a soft solder is intrinsically preferable for a long joint with little clearance, as it is more easily persuaded to coat evenly over the entire face. Soft solder should therefore be specified, as the ironmonger will often hand out "hard," unless the buyer is careful.

### Not enough Flux.

Pocket outfits, such as the Britinol and Fluxite, are used by many motor cyclists; but I do not recommend the combined solder-cum-flux for inexperienced users, as there is not enough flux to see the job through if the operator makes blunders about the heat of his iron, as all beginners will. Neither is a very small bit ideal for an amateur, as it does not maintain its heat for long, and may have to be heated at some distance from the work.

To learn the correct heat for the iron is the beginner's invariable trouble. At first he gets his bit too hot, and the solder is either destroyed or liquefie and runs right off the work. Then he does not ge his iron hot enough, and the solder refuses to ru obediently. Finally, he strikes the happy mean, an the solder does what he wants. The old hand alway does two things to his bit before he uses it. On takin it from the fire, he holds it near his cheek to judg the temperature; then he rubs the tip on a piece o old brick to remove any dirt which might foul th solder.

### Repairs to Nipples.

In handling Bowden wires, be careful to solder th strands together before cutting the damaged end off otherwise they will unravel, and prove awkward t thread through the nipple, besides being weakened The old nipple can be used again, as the solder i it will melt under the combined influence of heat an flux. To fit a nipple, thread the soldered end of th wire through the nipple so that it projects, say, ⅛in grip nipple in a vice, tap the projecting wire ends dow radially, apply a little solder at a time until the join is full of solder to the top. Then file the head o the nipple off neatly. If the solder ceases to ru apply more flux—want of flux is a more probabl cause of trouble than cooling of the bit.

ROAD RIDER.

# GUIDE TO TO-DAY'S SENIOR T.T. RACE.

TIME OF START: 10 a.m.
DISTANCE: Six circuits of 37½ miles. Total Distance, 226 miles 4 furlongs.
PRIZES: 1st, The Senior Tourist Trophy to be held for one year, £30 in cash, a large silver medal, and special gold medal; 2nd, £20; 3rd, £10.
TEAM PRIZE: A small replica of the Trophy to be awarded to a nominated team, members of which must all finish the course within 30 minutes of the winner.
CLUB PRIZES: Small replicas of the Trophy will be awarded on points to the teams, nominated by an affiliated club, of three motor cycles driven by members of the nominating club which, in the Lightweight, Junior and Senior Races respectively, give the best performances.

Few thirty-seven mile circuits could be selected in any part of the British Isles which would give greater variety in riding conditions. Acute and dangerous corners are negotiated at Quarter Bridge, Ballacraine, Sulby Bridge, Ramsey, Keppel Gate, and Governor's Bridge. The first 10 miles are undulating, but the next ten are almost level, slightly falling grades predominating. Ramsey Hairpin precedes a three mile climb which averages 1 in 11, and a slight upward grade follows for a further four miles at an average altitude of 1,500 feet above sea level.

# The Blue Riband of the Motor Cycle World.

## Details of To-day's Great Race. Lap Times and Winners of Previous Competitions for the Senior Tourist Trophy.

TO-DAY the classic event of the motor cycle world will be decided. At 10.0 a.m. the first competitor in the Senior Tourist Trophy race will be despatched on his 226 miles race against time. The course is chosen to find out the most desirable features needed in the motor cycle for the man who would ride in ease and comfort without fear of mechanical trouble, for the racing machine of to-day is the father of the touring mount of to-morrow.

### Previous Winners.

1921. H. R. Davies, single-cylinder A.J.S. (74×81 mm.=348 c.c.), 54.49 m.p.h.
1920. T. C. de la Hay, single-cylinder Sunbeam (85×88 mm.=499 c.c.), 51.79 m.p.h.
1914. C. G. Pullin, single-cylinder Rudge (85×88 mm.=499 c.c.), 49.4 m.p.h.
1913. H. O. Wood, 2-cylinder, 2-stroke Scott (69.8×63.5 mm.=486 c.c.), 48.2 m.p.h.
1912. F. A. Applebee, 2-cylinder, 2-stroke Scott (69.8×63.5 mm.=486 c.c.), 48.6 m.p.h.
1911. O. C. Godfrey, 2-cylinder Indian (70×76 mm.=584 c.c.), 47.5 m.p.h.
1910. C. R. Collier, 2-cylinder Matchless (85.5×58 mm.=666 c.c.), 50.6 m.p.h.
1909. H. A. Collier, 2-cylinder Matchless (85×65 mm.=738 c.c.), 49.0 m.p.h.
1908. Singles: J. Marshall, Triumph (84×86 mm =476 c.c.), 40.4 m.p.h. Twins: H. Reed, Dot (75×75 mm.=662 c.c.), 38.5 m.p.h.
1907. Singles: C. R. Collier, Matchless (85×76 mm.=431 c.c.), 38.5 m.p.h. Twins: H. R. Fowler, Norton (75×75 mm.=662 c.c.), 36.2 m.p.h.

### Limits of Motor Cycles in Previous Senior T.T. Races.

1907. Singles and twins raced separately. Singles were limited to one gallon of fuel per 90 miles; twins, one gallon for 75 miles.
1908. Singles and twins raced separately. Fuel limits: Singles, one gallon per 100 miles; twins, one gallon per 80 miles.
1909. Fuel limits abaodoced. One class only. Capacity limits: 500 c.c. singles, 750 c.c. twins.
1910. One class only. Capacity limits: 500 c.c. singles, 670 c.c. twins.
1911. Capacity limits: 500 c.c. singles, 585 c.c. twins.
1912 to 1922. Capacity limit, 500 c.c. for all types.

### The Types that have Won.

1907.—Separate classes for singles and twins.
1908.—Separate classes for singles and twins.
1909.—1st, V twin; 2nd, V twin; 3rd, single.
1910.—1st, V twin; 2nd, V twin; 4th, single.
1911.—1st, V twin; 2nd, V twin; 3rd, V twin.
1912.—1st, twin 2-stroke; 2nd, single; 3rd, V twin.
1913.—1st, twin 2-stroke; 2nd, single; 3rd, V twin.
1914.—1st, single; 2nd, single and twin tied; 3rd, V twin.
1920.—1st, single; 2nd, single; 3rd, single.
1921.—1st, single; 2nd, single; 3rd, single.

### Some Details of the 1921 Race.

The winner's lap times:
1st, 41m. 17s. 2nd, 41m. 53s. 3rd, 42m. 55s.
4th, 41m. 9s. 5th, 42m. 2s. 6th, 41m. 6s.
Total: 4h. 9m. 23s. Average speed: 54.49 m.p.h.
Fastest lap of any competitor: F. G. Edmond (Triumph), 40m. 8s.=56.44 m.p.h. (record).

### TEAMS.

1. A.J.S.: H. R. Davies (No. 1), G. Kelly (No. 48), O. Wade (No. 52).
2. BEARDMORE PRECISION (riders not selected at time of going to press): (No. 13), (No. 37), (No. 40).
3. INDIAN: D. S. Alexander (No. 22), F. W. Dixon (No. 24), D. H. Davidson (No. 42).
4. NORTON: D. M. Brown (No. 3), J. W. Shaw (No. 39); (3rd man not selected at time of going to press).
5. RUDGE (not yet selected).
6. SCOTT: C. P. Wood (No. 5), Ivor Thomas (No. 49), H. Langman (No. 66).
7. SUNBEAM: T. C. de la Hay (No. 2), A. Bennett (No. 44), G. Dance (No. 61).
8. TRIUMPH: W. Brandish (No. 4), F. B. Halford (No. 47), F. G. Edmond (No. 64).

## TABULATED LIST OF 67 ENTRIES FOR TO-DAY'S SENIOR T.T. RACE.

**56 Four-Stroke Singles. 5 Two-Stroke Twins. 1 Four-Stroke V Twins. 5 Four-Stroke Flat Twins.**

| No. | Entrant. | Make and H.P. | No. of Cyls. | Bore mm. | Stroke mm. | Cubic Capacit c.c. | Driver. |
|---|---|---|---|---|---|---|---|
| 1 | A. J. Stevens & Co. (1914) Ltd. | 2¾ A.J.S. | 1 | 74 | ×81 | 348 | H. R. Davies |
| 2 | John Marston, Ltd. | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | T. C. de la Hay |
| 3 | Norton Motors, Ltd. | 3½ Norton | 1 | 79 | ×100 | 490 | D. M. Brown |
| 4 | The Triumph Cycle Co., Ltd. | 3½ Triumph | 1 | 85 | ×88 | 499 | W. W. Brandish |
| 5 | The Scott Motor Cycle Co., Ltd. | 3½ Scott Squirrel | 2 | 70 | ×63·5 | 486 | C. P. Wood |
| 6 | Alexander & Co. | 3½ Douglas | 2 | 68 | ×68 | 499 | A. H. Alexander |
| 7 | G. H. Tucker & Co. | 3½ Norton | 1 | 79 | ×100 | 490 | G. H. Tucker |
| 8 | Rudge-Whitworth, Ltd. | 3½ Rudge | 1 | 85 | ×88 | 499 | O. M. Baldwin |
| 9 | Rudge-Whitworth, Ltd. | 3½ Rudge | 1 | 85 | ×88 | 499 | A. E. Taylor |
| 10 | Norton Motors, Ltd. | 3½ Norton | 1 | 79 | ×100 | 490 | H. W. Hassall |
| 11 | John Marston, Ltd. | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | C. Greenwood |
| 12 | John Marston, Ltd. | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | W. R Brown |
| 13 | F. E. Baker, Ltd. | 3½ Beardmore Precision. | 1 | 81·1 | ×96 | 495 | — |
| 14 | Ilkley M.C. and L.C.C. | 3½ Scott Squirrel | 2 | 70 | ×63·5 | 486 | G. Clapham |
| 15 | Victor Horsman, Ltd. | 3½ Norton | 1 | 79 | ×100 | 490 | V. Horsman |
| 16 | W. Hollowell | 3½ Norton | 1 | 79 | ×100 | 490 | Entrant |
| 17 | G. E. Cowley, Junr. | 3½ Norton | 1 | 79 | ×100 | 490 | Entrant |
| 18 | Alexander & Co. | 3½ Norton | 1 | 79 | ×100 | 490 | G. M. Black |
| 19 | C. Waterhouse | 3½ Sunbeam | 1 | 85 | ×88 | 499 | Entrant |
| 20 | The Triumph Cycle Co., Ltd. | 3½ Triumph | 1 | 85 | ×88 | 499 | H. R. Harveyson |
| 21 | Rudge-Whitworth, Ltd. | 3½ Rudge | 1 | 85 | ×88 | 499 | J. A. Watson-Bourne |
| 22 | W. H. Wells | 3½ Indian | 1 | 79·3 | ×100·8 | 498·82 | D. S. Alexander |
| 23 | T. Sinister | 3½ Norton | 1 | 79 | ×100 | 490 | Entrant |
| 24 | W. H. Wells | 3½ Indian | 1 | 79·3 | ×100·8 | 498·82 | F. W. Dixon |
| 25 | L. B. Henderson | 3½ Sheffield-Henderson | 1 | 85 | ×88 | 499 | |
| 26 | W. Watson | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | G. S. Davison |
| 27 | S. A. Crabtree | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | Entrant |
| 28 | A. Carton | 3½ Norton | 1 | 79 | ×100 | 490 | Entrant |
| 29 | Rudge-Whitworth, Ltd. | 3½ Rudge | 1 | 85 | ×88 | 499 | H. Riddell |
| 30 | New Imperial Cycles, Ltd. | 2¾ New Imperial | 1 | 70 | ×90 | 349 | H. Le Vack |
| 31 | Norton Motors, Ltd. | 3½ Norton | 1 | 79 | ×100 | 490 | N. Black |
| 32 | Hugh Mason & Co., Ltd. | 3½ N.U.T. | 2 | 54·5 | ×76 | 498 | R. Bowmass |
| 33 | Harold Petty, Ltd. | 3½ Scott | 2 | 69·85 | ×63·5 | 486 | J. H. Simpson |
| 34 | Norton Motors, Ltd. | 3½ Norton | 1 | 79 | ×100 | 490 | R. T. Cawtborne |
| 35 | W. H. Dunwoody | 3½ Rudge | 1 | 85 | ×88 | 499 | H. Burrill |
| 36 | R. M. Knowles | 3½ Norton | 1 | 79 | ×100 | 490 | Entrant |
| 37 | F. E. Baker, Ltd. | 3½ Beardmore Precision | 1 | 81·1 | ×96 | 495 | |
| 38 | T. H. Dickinson | 3½ Duzmo | 1 | 89 | ×79 | 491 | Entrant |
| 39 | Norton Motors, Ltd. | 3½ Norton | 1 | 79 | ×100 | 490 | J. W. Shaw |
| 40 | F. E. Baker, Ltd. | 3½ Beardmore Precision | 1 | 81·1 | ×96 | 495 | |
| 41 | V. Olsson | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | Entrant |
| 42 | W. H. Wells | 3½ Indian | 1 | 79·3 | ×100·8 | 498·82 | D. H. Davidson |
| 43 | L. B. Henderson | 3½ Sheffield-Henderson | 1 | 85 | ×88 | 499 | J. Thomas |
| 44 | John Marston, Ltd. | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | A. Bennett |
| 45 | Porter's Motor Mart | 3½ New Gerrard | 1 | 85 | ×85 | 482 | J. A. Porter |
| 46 | Vic Anstice | 3½ Douglas | 2 | 68 | ×68 | 499 | Entrant |
| 47 | The Triumph Cycle Co., Ltd. | 3½ Triumph | 1 | 85 | ×88 | 499 | F. B. Halford |
| 48 | A. J. Stevens & Co. (1914), Ltd. | 2¾ A.J.S. | 1 | 74 | ×81 | 348 | G. Kelly |
| 49 | The Scott Motor Cycle Co., Ltd. | 3½ Scott Squirrel | 2 | 70 | ×63·5 | 486 | Ivor Thomas |
| 50 | Colmore Depot | 3½ Colmore-Douglas | 2 | 68 | ×68 | 499 | F. T. Hatton |
| 51 | Frank Whitworth, Ltd. | 3½ Douglas | 2 | 68 | ×68 | 499 | A. W. Jones |
| 52 | O. Wade | 2¾ A.J.S. | 1 | 74 | ×81 | 348 | Entrant |
| 53 | Rudge-Whitworth, Ltd. | 3½ Rudge | 1 | 85 | ×88 | 499 | J. H. Mathers |
| 54 | New Hudson, Ltd. | 3½ New Hudson | 1 | 79·5 | ×100 | 496·5 | B. Bourke |
| 55 | Rudge-Whitworth, Ltd. | 3½ Rudge | 1 | 85 | ×88 | 499 | R. B. Ewens |
| 56 | W. H. Wells | 3½ Indian | 1 | 79·3 | ×100·8 | 498·82 | C. Stead |
| 57 | G. Cowley, Senr. | 3½ Sunbeam | 1 | 85 | ×88 | 499 | Entrant |
| 58 | W. Johnson | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | Entrant |
| 59 | J. H. Illingworth | 3½ Norton | 1 | 79 | ×100 | 490 | Entrant |
| 60 | New Hudson, Ltd. | 3½ New Hudson | 1 | 79·5 | ×100 | 496·5 | E. Mundey |
| 61 | John Marston, Ltd. | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | G. Dance |
| 62 | Rudge-Whitworth, Ltd. | 3½ Rudge | 1 | 85 | ×88 | 499 | W. L. Danskin |
| 63 | Massey-Arran Motor Co., Ltd. | 2¾ Massey-Arran | 1 | 71 | ×88 | 348 | J. Whalley |
| 64 | The Triumph Cycle Co., Ltd. | 3½ Triumph | 1 | 85 | ×88 | 499 | F. G. Edmond |
| 65 | Colmore Depot | 3½ Colmore-Douglas | 2 | 68 | ×68 | 499 | S. Ollerhead |
| 66 | The Scott Motor Cycle Co., Ltd. | 3½ Scott Squirrel | 2 | 70 | ×63·5 | 486 | H. Langman |
| 67 | Alec Jackson | 3½ Sunbeam | 1 | 77 | ×105·5 | 492 | Entrant |

# CURRENT CHAT (continued from p. 709)

### This Year's "Petrol St. Leger."

The Doncaster and District Motor Cycle Club, whose "Petrol St. Leger Meeting" last season was such a great success, has arranged for its first speed trial to be held on the Sandall Beat Road, adjoining the Racecourse, on Saturday, June 17th.

### Overheard Last Week.

Friend (to amateur motor cyclist, after his first run): "Well, how have you managed, old man?"

Amateur motor cyclist, with enthusiasm: "Fine! Passed everything on the road. Never been in top gear once!"

### Police and Derby Speed Events.

Numerous complaints have been received by the Derbyshire Police regarding the conduct of motorists (not always competitors) at hill-climbs in Derbyshire, and Ruislip Edge is already closed to speed events. According to the secretary of the Buxton club the whole country will soon be in the same state unless there is a general improvement at these affairs.

### Midland Centre's Change of Policy.

There will be nothing of a freakish nature in the route of the Midland Centre A.C.U. open trial to be held on June 24th; in fact, "it will be in the nature of an enjoyable day trip amongst very nice scenery." No indication has, as yet, been given as to how the awards will be allotted, but full particulars will be available shortly from Mr. J. E. Spencer, 27, Priory Street, Coventry.

### The Secret Places of the Dashboard.

H. G. Wells' latest novel, "The Secret Places of the Heart," contains much psycho-analytic meditation upon which it is neither our province nor desire to comment, but we certainly think that one of the guilty parties might derive more benefit from a course of motor driving lessons. According to this month's instalment of the serial form, "he had come round a corner at five-and-twenty miles an hour, and had *stopped his spark* and pulled up neatly within a yard of the fore wheel of a waggon that was turning in the road . . ." The italics are not Mr. Wells'.

### 93 Motorists Fined in Two Hours.

The Manchester City magistrates established something like a record recently. In a matter of two hours they fined no fewer than 93 motorists for various offences under the Motor Car Act, of which the following is an analysis:—

| | |
|---|---|
| Not licensed | 22 |
| No finance licence | 30 |
| Dangerous driving | 11 |
| No front plate | 3 |
| No rear plate | 2 |
| Not producing licence | 2 |
| Using unregistered car | 1 |
| No licence attached | 2 |
| Altering registration book | 1 |
| Front number not as required | 1 |
| Not keeping an accurate record | 1 |
| Front number obscured | 2 |
| Not giving warning for order of approach | 1 |
| Rear lamp not burning | 5 |
| Aiding the use of an unregistered car | 1 |
| Not inserting registered owner's name | 1 |
| Failing to stop | 1 |
| No white light | 2 |
| Rear number obscured | 1 |
| Rear number plate not clear | 1 |
| No red light | 1 |
| Quitting | 1 |

### Freak Trials and the A.C.U.

*Apropos* the correspondence which has appeared in our pages relating to open "freak" routes, a correspondent suggests that room for complaint might be removed if the A.C.U. stewards covered the course on a motor cycle. An observer who merely goes from point to point does not obtain a true idea of the nature of a trial; especially is this the case when this official's vehicle happens to be a car.

### International Six Days' Trial Poser.

Norway is anxious to send a team to compete in the International Six Days Trials, to be held in Switzerland from August 3rd to 9th. Unfortunately, the rules state that an international team must be composed of machines manufactured in the country entering, and Norway has no indigenous make. The matter, however, is being left to the Swiss Motor Cycle Union to decide as to whether or not Norway should be allowed to enter the British machines which they desire to ride.

Entries for this event close on July 1st at ordinary fees—manufacturers' entries 300 francs (£13 0s. 5d.), private owners 150 francs (£6 0s. 2½d.)—and at double fees on July 20th. They should be sent c/o the Auto Cycle Union, 83, Pall Mall, London, S.W.1.

### A Swedish Event.

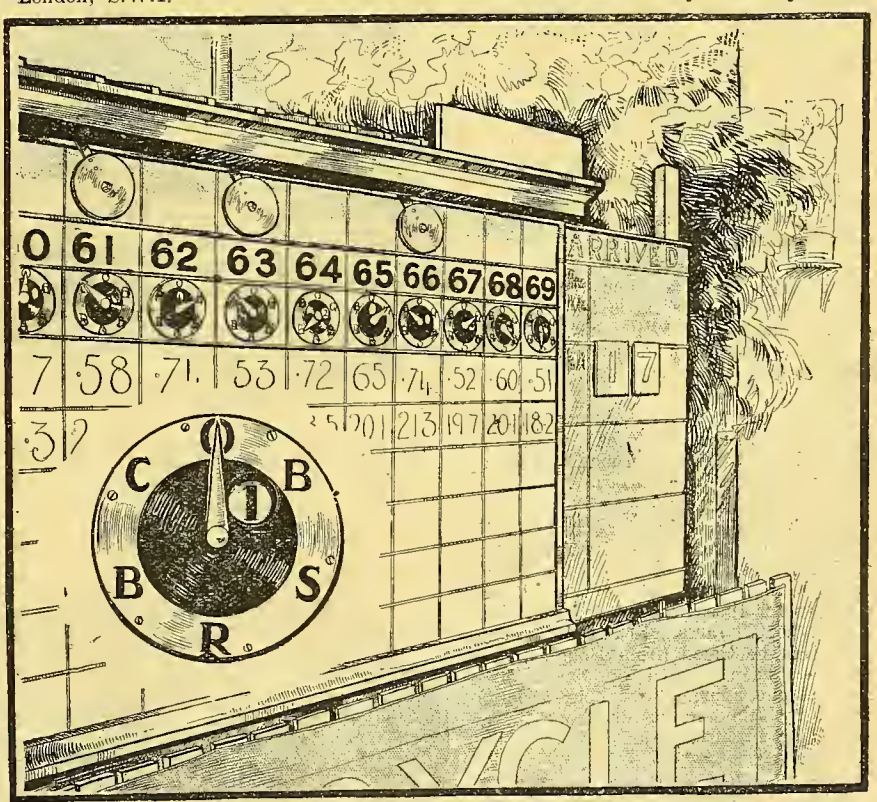
During the Schevenigen Automobile Show, races for cars and motor cycles were held on the promenade. The motor cycle event was won by a Dutch motor cyclist, M. Herkuleyns, who riding a Harley-Davidson made fastest time, being credited with a speed of 94 miles an hour over the flying kilometre.

### Profitable Reading.

In a recent issue of *Pitman's Journal*, while giving advice as to "Profitable Reading," Mr. Edward S. Hodgson remarks:—

"Shorthand-typists are generally voracious readers, as I found when business in London compelled me to journey daily from the outlying suburbs to the City. And—I am referring more particularly to the ladies now—their taste is extremely catholic, for it embraces the best-seller of the day and the now little-read classics, trade publications (I have seen more than one girl with *The Motor Cycle*) and the light three-halfpenny weeklies."

While thanking our fellow-scribe for his testimony, we may tell him that *The Motor Cycle* is glad to number among its readers thousands of ladies; in fact, a regular feature of this journal is devoted to the interests of lady motor cyclists.




To aid spectators in following the T.T. an ingenious new score board is being used. Competitors' numbers are placed above the lower row of (red) discs, and the top row (yellow) discs only appear as the riders reach Governor's Bridge. The red indicator disc is shown in detail in the inset; besides telling the lap number, the actual point the competitor has just passed is shown by the indicator, thus:—O. Start; B. Ballacraine; S. Sulby; R. Ramsey; B. Bungalow; C. Craig-ny-Baa. Below the competitors' speeds for each lap are painted.

# T.T. NOTES and NEWS

## Final Notes on the Senior Practising. Interesting Machines in To-day's Big Race.

THE Lightweight and Junior Tourist Trophy races have been won and lost, and all eyes of the motor cycle world are again turned towards the Isle of Man, where the Senior (500 c.c.) machines are competing for the coveted trophy.

* * * *

Each year sees fewer and fewer multi-cylinder machines in the races. The 1922 Senior event has attracted but one V twin, while five each two-stroke twins and flat twins are included in the entry of sixty-seven. Does this mean that capacity for capacity the single-cylinder engine is the more efficient? It would appear so. But should the V twin N.U.T. win, next year's entries may be in very different proportions.

* * * * *

Six members of the Bradford M.C. and L.C.C. are riding in the Senior T.T. Two teams have, therefore, been nominated for the club team award:—

FIRST TEAM.
C. P. Wood (Scott).
H. Langman (Scott).
J. H. Simpson (Scott).

SECOND TEAM.
F. W. Dixon (Indian).
R. T. Cawthorne (Norton).
J. H. Illingworth (Norton).

* * * *

Stray horses were on the course at Crosby one morning, but they did not cause anything worse than several anxious moments.

* * * *

G. Cowley, sen., is almost a second "Pa" Applebee, for he is 57 years of age, but has been handling his Sunbeam well and getting round the course in about the hour every morning.

* * * *

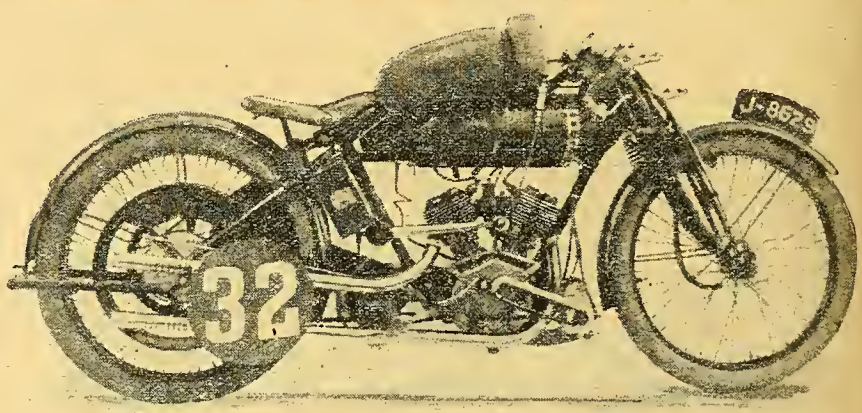
Scotts appear to have found an increase in speed, for in the first week's practising the one ridden by Langman made its officially timed circuit in 43m. 50s.

* * * *

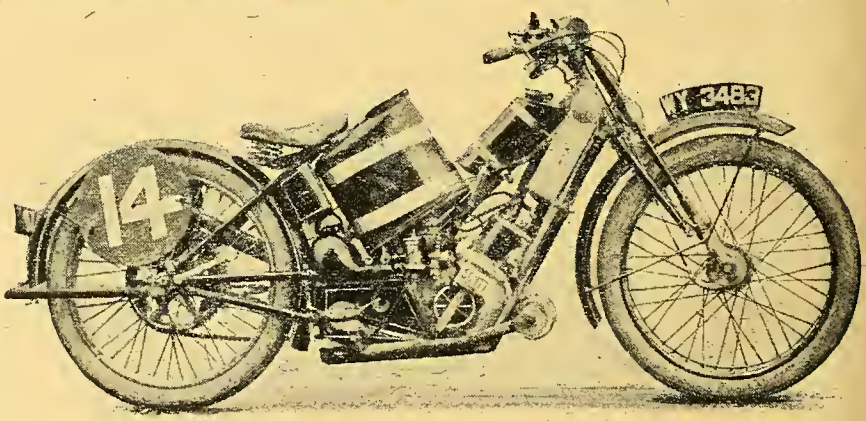
In the first 5 days 53 riders out of the 185 competitors and reserves had put in their qualifying laps, *i.e.*, five laps for those who have not previously competed, or three laps for those who started in either the 1920 or 1921 races. In either case one lap had to be timed (from Douglas) and must have been covered by Senior machines in one hour, in one hour and ten minutes by Juniors, and one hour thirty minutes by Lightweights.

* * * *

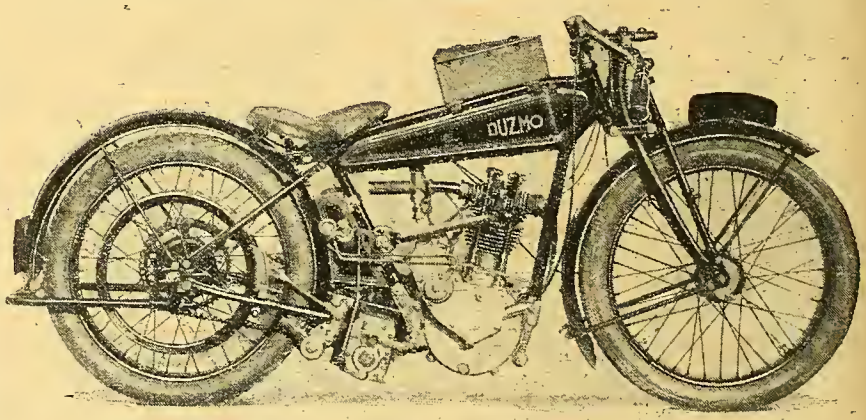
Under the charge of Graham Walker the Norton private owners' stable was a little hive of happy industry in the early days of the practising period. The Nortons appear to be unnumbered—there are fourteen actually, with three reserves. Walker has been putting in his practice laps on the o.h.v. model.




The only V twin in the Senior race—the N.U.T. Observe the cushion on the top tube.




Twice winners of the Senior Tourist Trophy, the Scotts in to-day's race are expected to be well in the running.




Racy lines are lent to the T.T. Duzmo by its short wheelbase and compact layout.

**T.T. Notes and News.—**

Few changes have been made to the 3½ h.p. Duzmo which will compete in the T.T. race. An inclined engine is the most noticable alteration, but a new frame providing a shorter wheelbase is now used. This design will, in future, become the standard sporting model.

A three-speed Sturmey-Archer gear box is used. The Brampton front forks have been modified, and the horizontal springs have been removed to provide more rigid steering. Best and Lloyd mechanical lubrication, an Amac carburetter, and E.I.C. magneto are employed.

* * * *

Much uneasiness was caused last week by the unsportsmanlike attitude of several riders who persistently rode their T.T. mounts in and about Douglas, revving their engines unnecessarily and deafening everyone with the bellowing of open exhausts. Disqualifications were threatened in consequence of riders taking T.T. machines on the course during the day. The police took action in one or two instances.

* * * *

Quality in cornering and acceleration when picking up on the level are well watched at Quarter Bridge, for it is a splendid test, especially for the riders of judgment.

According to the *Daily Mail* on Monday G. Estobart was to ride the 20¼ New Hudson two-stroke, but Mundey would race a 30½ h.p. model in the Senior. V. Hosman was reported as being unable to ride, and that his place would be taken by another rider on the 20¾ Raleigh. Haldervell was "down" to ride a Norton.

* * * *

A much-visited point of interest during practising was Quarter Bridge, which is only about a mile from Douglas. The corner there is almost a right-angle, and is situated at the foot of an appreciable gradient. It is a sharp main-road bend which may be taken at speeds up to 30 to 32 m.p.h. by a good rider.

* * * *

Wednesday morning last week was the first really fine, summer-like morning since the start of practising ten days ago, and it was signalised by the wholesale breaking of the record laps of 1921.

* * * *

L. Handley, riding a 248 c.c. O.K. Junior, covered a lap in 45m. 50s., 3m. 17s. less than B. Kershaw's time last year of 49m. 7s. on a New Imperial.

* * * *

In the Senior category, H. Langman (482 c.c. Scott) covered a lap in 39m. 55s., as against F. G. Edmond's fastest lap in last year's race of 40m. 8s., on a Triumph. Langman's speed equalled something over 57 m.p.h.

* * * *

During last week it became necessary to substitute cast-iron for aluminium pistons in the Norton engines, and the camp was busy re-balancing.

Of those riders observed at Quarter Bridge undoubtedly the best cornerists we have seen are G. Clapham, who was entered by the Ilkley M.C.C., and A. E. Taylor; they ride Scott and Rudge machines respectively, and in particular the former leaned over quite 48° from the vertical.

* * * *

Although the 1922 two-speed Scotts have not the same musical capabilities as the four-speeders used last year, C. P. Wood's machine has vocal powers which extend to the first bars of *a che la morte* when accelerating into the distance.

* * * *

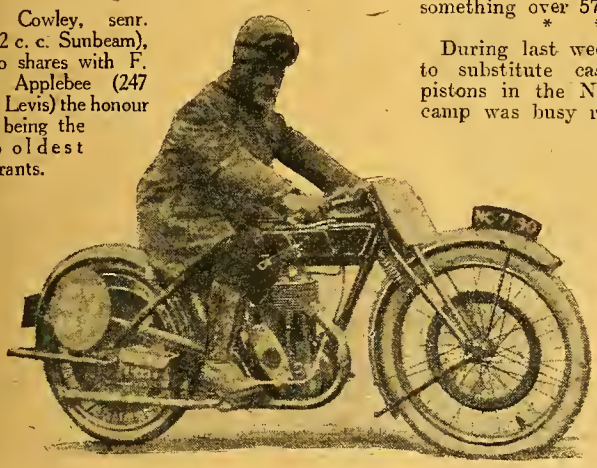
H. R. Davies appeared to be on a bad patch of ill-luck early last week, for he had trouble on both Tuesday and Wednesday.

* * * *

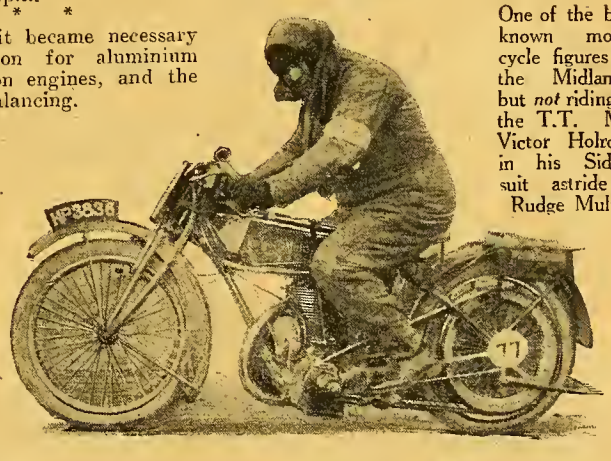
Arriving late at the end of the first practice week, G. Dance (Sunbeam) completed his initial circuit on Tuesday of last week in 41 mins. 5 secs.

* * * *

A standard Barr and Stroud engine with a Zephyr type piston is fitted in the Diamond machine ridden by J. Price. The engine was dismantled late last week after several practice laps and was in splendid condition; the working polish on the sleeve and cylinder bore being perfect.

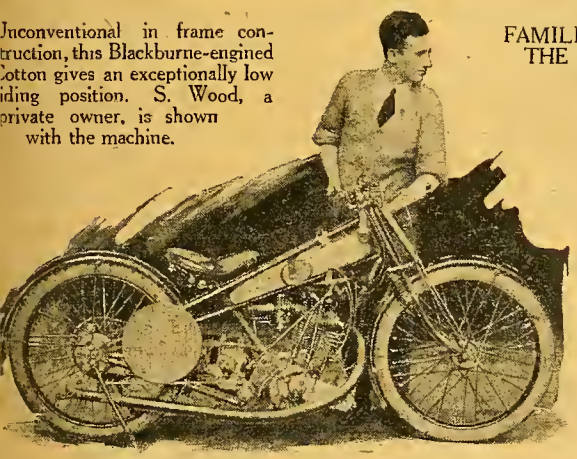


G. Cowley, senr. (492 c. c. Sunbeam), who shares with F. W. Applebee (247 c.c. Levis) the honour of being the two oldest entrants.

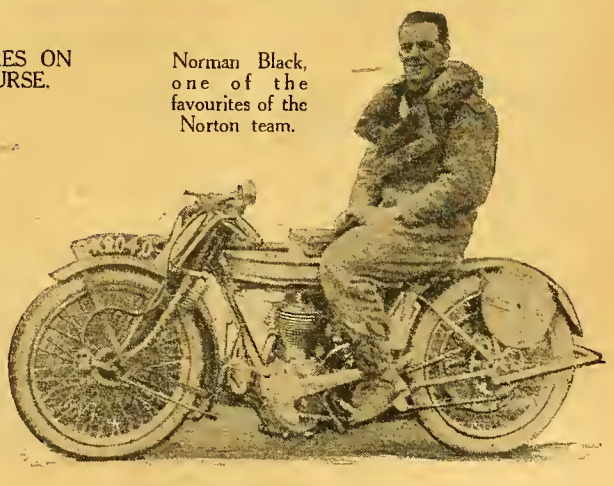


One of the best known motor cycle figures in the Midlands, but *not* riding in the T.T. Mr. Victor Holroyd in his Sidcot suit astride a Rudge Multi.

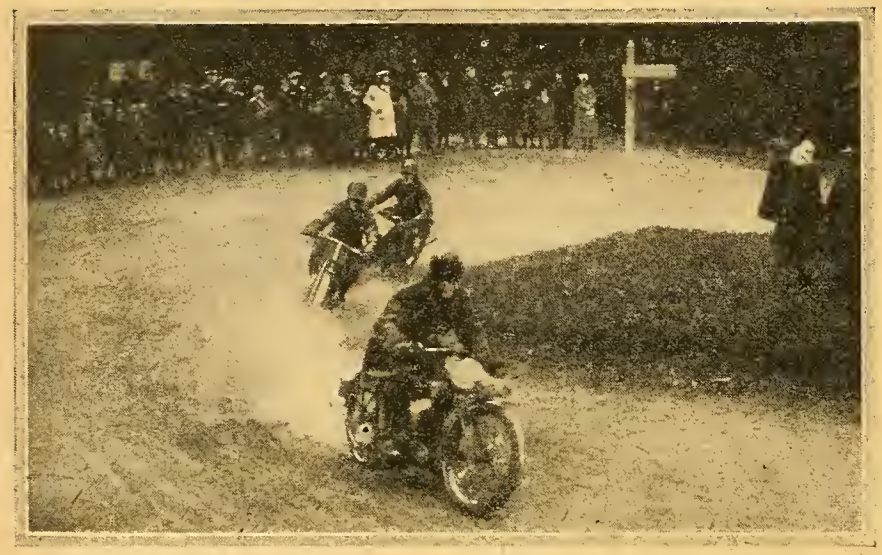
FAMILIAR FIGURES ON THE I.O.M. COURSE.



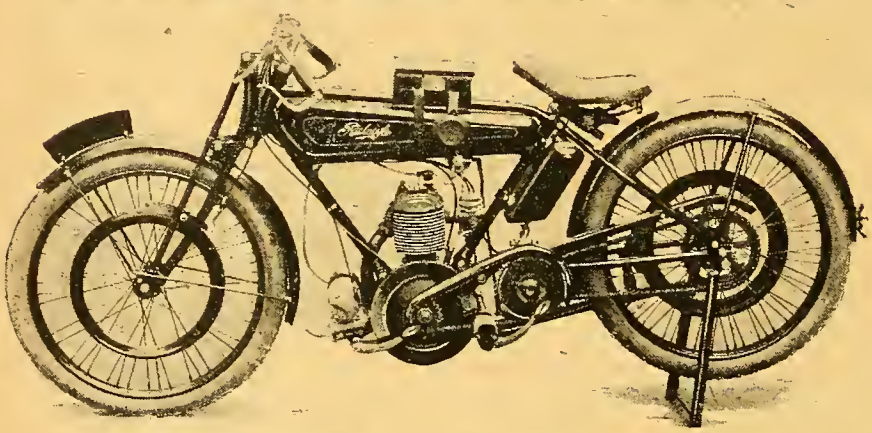
Unconventional in frame construction, this Blackburne-engined Cotton gives an exceptionally low riding position. S. Wood, a private owner, is shown with the machine.



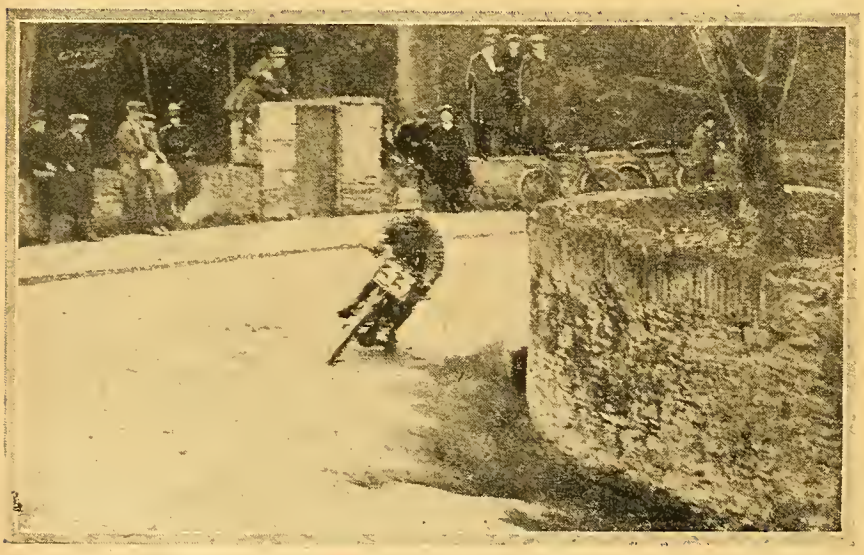
Norman Black, one of the favourites of the Norton team.



One of the most interesting vantage points on the whole of the course—the Ramsey hairpin.



There is very little change in the Raleigh which ran in Tuesday's race.



J. H. Simpson (486 c.c. Scott) scraping a footrest at Governor's Bridge.

O. M. Baldwin, A. E. Taylor, and J. A. Watson-Bourne are selected as the Rudge team.

* * * *

"June 1st is the day to show what you can do," said George Dance, the Sunbeam rider, when questioned on the wonderful lap times of last Wednesday morning.

* * * *

Carburation troubles beset the Douglas riders, and last week Atmos carburetters were being tried; A. H. Alexander, however, had a B. and B. on each cylinder; cross-bars fitted on the timing cover connect up each throttle and air slide by levers and wires, the single control wires thus operating both carburetters simultaneously.

* * * *

Two-strokes did not show to great advantage in either Lightweight or Junior practice laps. It seems that two-stroke engines have lagged behind in development when compared with four-strokes.

* * * *

Finding their steering somewhat affected by the whippiness of the Beardmore-Precision front forks, the riders damped the springs by wrappings of cord and insulation tape, with beneficial results.

* * *

A thicker oil considerably improved the excessive lubrication which affected the Sun-Vitesse machines. They increased in speed and emitted less smoke.

* * *

Owing to the change of plug position from the centre of the head to the side, Triumph compression ratio has been lowered to about 5 to 1.

* * *

A distinctive feature of the Triumph machines is the squealing of the front brakes (which are of the contracting cable type similar to those used for years on the same make of pedal cycles). The new brake has decided stopping powers.

* * *

Depending on its actual success in these races, there is every chance of the 350 c.c. o.h.v. A.J.S. becoming a marketable production.

* * *

Plug trouble was by no means uncommon throughout the practising. It is partly ascribable to excessively high compressions and partly, according to some experts, to the high pressures set up by pre-ignition arising from the overheated edges of very light valves.

* *

Misfiring appeared to be the bane of Pullin's existence; the raw morning air apparently did not suit the constitution of the Douglas machines, and the flaming blow-back through their carburetters was a sight to behold.

* * *

Brandish, the Triumph rider, corners particularly well; he uses both brakes on such a corner as Governor's Bridge, decelerating quickly, and after cornering safely and well, accelerating like a shot.

* * *

A number of riders are fitting a neat spark gap (embodied in a slightly enlarged plug wire terminal), introduced by the makers of Lodge plugs.

**T.T. Notes and News.—**

On the real hairpin bends the Scotts stick as tightly to the inside as a burr on a blanket.

* * *

When it seems desirable that the wheels should really turn round, Edmond (Triumph) is the man to make them do it.

* * *

Interconnected brakes on the A.J.S. machines were abandoned early in the practising.

* * *

One of the few men amongst the seniors to trail his foot on Governor's Bridge hairpin was R. M. Knowles (Norton), but his get-away was remarkably good in common with the other Nortons, which appear to steer, hold the road, and accelerate better than ever.

* * *

Controlling an Indian appears to be a work of art, judging by the number of things Alexander does all at once with both hands and feet after recovering from such a corner as Governor's Bridge; Dixon, however, sits like a part of his machine, handling it superbly and accelerating like an arrow from the bow. Dixon's record practice lap last week necessitated some thrilling riding.

* * *

Owing to difficulties found in holding the Douglas machines at speed on the bumpy course, the steering rake was modified by using different fork links; the steering was then much more controllable.

* * * *

Dr. Hopwood, the Levis rider, has already submitted an entry for next year's T.T., but has not decided what his machine will be; in the Island he has had a selection from his stable of cars and cycles, consisting of a Levis, Leboh (own make), Scott, and A.B.C.

* * * *

Neither Duzmo nor New Hudson machines have distinguished themselves in practice, but they appear to have reliability in their favour, and both look workmanlike. The latter machine, indeed, shorn of some weight (the sidecar lugs in the frame, for example) should make a fine solo mount, for the design is exceedingly clean.

* * * *

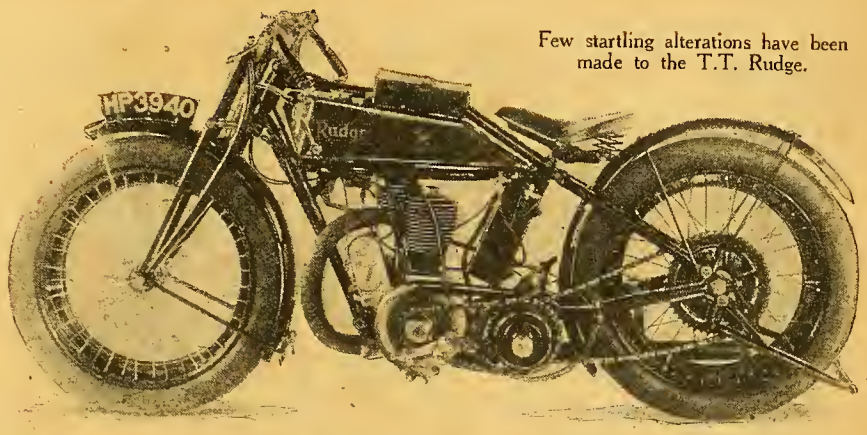
Twist-grip controls were fitted to many machines last week. H. R. Davies (A.J.S.) used them one morning in practice, but appeared to have reverted to levers again.

* * * *

It is confidently expected that to-day's race will be won at an average lap time of about 38 minutes

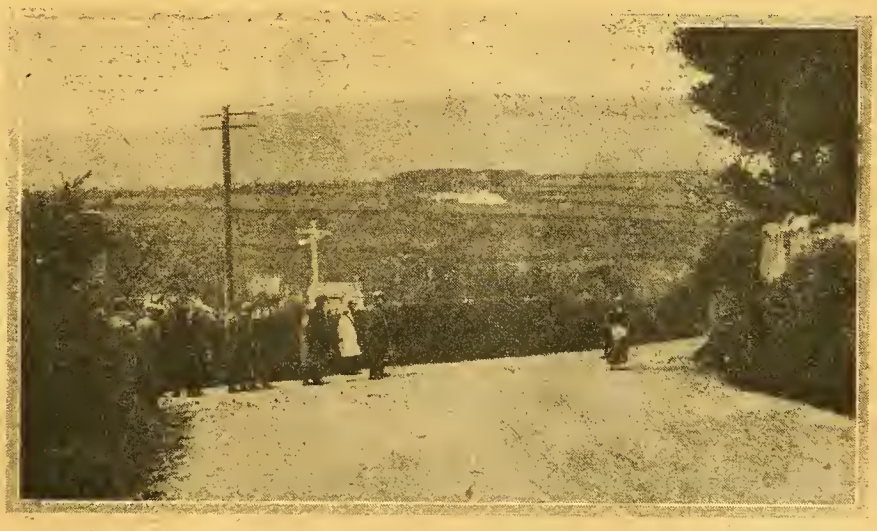
* * * *

An extra spark at the plug at very high revolutions 180° after the proper spark has been worrying the super-tuners in one camp. Magneto experts say that this is due to the high-tension winding itself generating a current of its own at great speeds—a low-tension current, of course, but of sufficient intensity to give a weak spark at the moment of flux reversal to the armature.

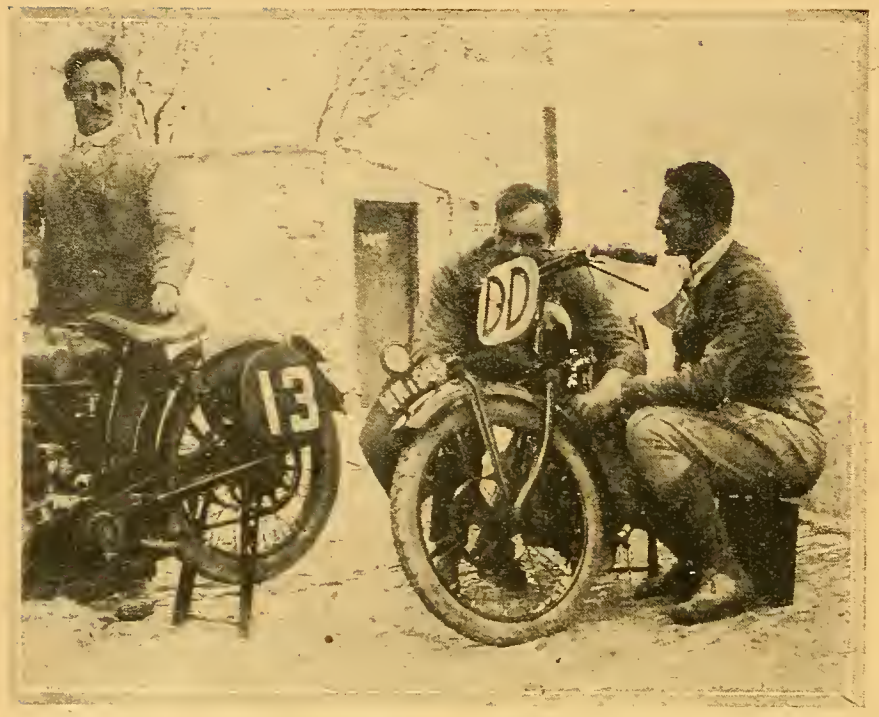



Few startling alterations have been made to the T.T. Rudge.

At Governor's Bridge. It is at such a corner as this where the driver of outstanding ability—the rare exception—excels over the average racing man. He loses fewer seconds and at the same time risks less.



An early morning scene at Cronk-ny-Mona. A Scott rider, C. W. Fairweather, on the slight gradient.




At the Beardmore-Precision stable. The distinction of piloting a No. "13" is shared with a Coulson rider in the Junior race.

Both the N.U.T. machines get along well, and they have several fast practice laps to their credit. Porter's 486 c.c. New Gerrard is another machine with the same type of engine (a V twin side-valve J.A.P.), which has shown excellent capabilities.

* * * *

Carburetter makers were represented in full force, all claiming "the last ounce." Amacs were represented by "the genial Mr. Clibbery" and Leslie Guy, one-time famous Scott rider, Cox Atmos by Mr. Cox, Mr. Cox, jun., and Oswald Hayes, the 1921 Colmore Cup winner, and B. and B. by S. C. Toye and Neville O. Soresby, familiar to older motor cyclists as a pre-war Rudge competition rider.

* * * *

After the bright green gratuitous Rudge handkerchiefs, K.L.G booklets of matches (Bryant and May ignition!) have been easily the most popular thing in everyday use in the Isle of Man. Then there are the Levis miniature screw-drivers, while anyone leaving a sidecar unattended near the Sefton Hotel was in danger of finding a J.A.P. pencil therein on his return.

* * * *

On Thursday morning last F. W. Dixon (Indian) set out to make a record practice lap, and by covering the circuit in 39m. 11s. he succeeded in beating Langman's record lap of the previous day on the Scott by 44s.

During this circuit Dixon's descent of Snaefell was terrific; from Keppel Gate to Craig-ny-Baa he came like a stone falling from a cliff, and scarcely slowed for the bend at the latter place.

* * * *

C. P. Wood has had a pair of leather breeches dyed Scott purple—his retreating figure offers as good a mark to the camera man as does a scurrying rabbit to the sporting farmer.

* * * *

One of the most cheerful-looking riders on the course is F. G. Edmond (Triumph). No matter how fast he goes he never looks "fashed," as they say up North.

* * * *

For a chance of victory in to-day's race, the A.J.S. riders, on their 350 c.c. mounts, obviously depend to some extent on saving fifths of seconds while cornering; to a man they are fearless in the extreme.

* * * *

Victor Horsman suffered a fall near Crosby last Thursday, the front tyre of his Norton suddenly deflating at speed.

* * * *

H. O. Wood (Tim) was out as a Scott reserve man; he says that nowadays he is past T.T. riding, but many of the entrants envy his time of 43m. 35s.

* * * *

To be reckoned with, even in the Senior race, is Le Vack on the New Imperial; his best lap was 42m. 6s.

* * * *

Some good lap times in the Lightweight class were made by: R. W. Loughton (248 Francis-Barnett), two laps, 48.50 and 46.40; F. C. North (248 O.K. Junior), 48.7; G. Denley (249 Velocette), two laps, 49.15 and 48.0.

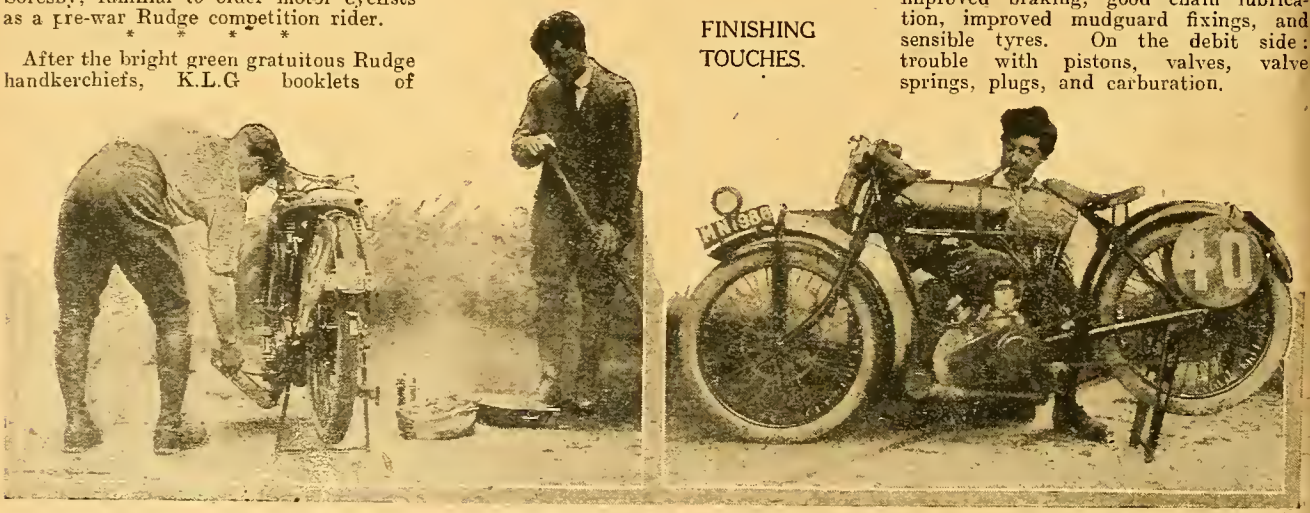
* * * *

In the Junior class the best practice time was made by H. R. Davies (349 A.J.S.), two laps, 41.45, 40.55.

* * * *

To sum up the lessons of the practising in a few words, we should say, on the credit side: Mechanical oil pumps, lower and easier steering frames, improved braking, good chain lubrication, improved mudguard fixings, and sensible tyres. On the debit side: trouble with pistons, valves, valve springs, plugs, and carburation.

## FINISHING TOUCHES.




Scenes at the Scott and Beardmore-Precision depots.

M. Sheard, on an A.J.S., wins the Junior Tourist Trophy at 54·75 m.p.h.; G. Grinton (A.J.S.), second; C. G. Pullin (Douglas), third. A Levis, ridden by G. S. Davison, gains the Lightweight Trophy, with D. Young (Rex-Acme), and S. J. Jones (Velocette), second and third respectively.

## TOTAL DISTANCE AND SENIOR LAP RECORDS BROKEN.

THE chief features of Tuesday's Junior T.T. Race were the fourth successive victory of the invincible A.J.S. and the first victory of a Manxman, T. M. Sheard, who was followed home by G. Grinton on a sister machine, C. G. Pullin (Douglas) being third.

The race occupied some ten minutes less than in 1921, Sheard winning at an average speed of 54.75 m.p.h. The first six places in the Lightweight Race fell to the machines of six different makers. S. S. Davison (Levis) finished over thirteen minutes ahead of the fastest four-stroke in the shape of a very dark horse in Dan Young, who rode the only Rex-Acme-Blackburne in the race. Another two-stroke rider, Jones (Velocette) ran third, little over a minute behind Young.

### Lightweights 25 mins. Faster than 1921.

The Lightweight winner covered the course in notably faster time than his 1921 predecessor, for a reduction of over twenty-five minutes raised the winning speed to 49.89 m.p.h.

As the stands filled up on Tuesday morning the sun was quite oppressively hot; Snaefell was sharply silhouetted against a glowing sky, and the roads were dusty. Crowds were hardly so large as usual either at the start or along the course, but the summer attire of the ladies added bright notes of colour to a gay panorama.

As the National Anthem announced the arrival of the Lieutenant-Governor, a silent phalanx of riders in yellow and green and red racing colours appeared wheeling their machines to the starting line from the official storage tent; Prentice, last year's Lightweight winner, moved up to the timekeeper's box, and as he received the word "Go" at 10 a.m. maroons signalled to the whole Island that another T.T. had begun. Numbers 1 to 32 (250 c.c. machines), with green number plates, were sent off first, the 350 c.c. class, 33 to 70, with blue numbers, following at half-minute intervals. Therefore No. 70 had to stand in the road thirty-five minutes wondering whether his engine would start obediently after standing twenty-four hours. Many of the men had applied paraffin injections as a precaution before storing their mounts on Monday, and the engines usually fired in a yard or two.

There were some alterations to the programme previously published in *The Motor Cycle*. L. Horton rode a New Imperial and Stobart replaced Mundey on a New Hudson. In the Junior entry Victor Horsman's arm was still too stiff for racing, and Albert Milner pluckily decided to ride the Raleigh, although he had not ridden one prior to the race; Ivor Thomas took the place of Strange (Sheffield-Henderson); Schofield (New Comet) did not start.

Careful acceleration was the order of the day. Cold oil in their crank cases troubled Jones (Velocette) and Simister (Diamond). Dr. Hopwood sucked a cigarette nonchalantly; Marchant and Edwards found their engines rather irresponsive; and Woods dropped a spare plug and actually came back for it!

Special ovations were awarded to J. Whalley for his plucky ride in 1921, to

T. M. Sheard (348 A.J.S.), the winner of Tuesday's Junior T.T. Race in record time.

**THE 1922 LIGHTWEIGHT RACE IN A NUTSHELL.**

Winner:
**G. S. Davison** (Levis).
Average speed, 49.89 m.p.h.

Second:
**D. Young** (Rex-Acme).

Third:
**S. J. Jones** (Velocette).

**THE 1922 JUNIOR RACE IN A NUTSHELL.**

Winner:
**T. M. Sheard** (A.J.S.).
Average speed, 54.75 m.p.h.

Second:
**G. Grinton** (A.J.S.).

Third:
**C. G. Pullin** (Douglas).

**T.T. Notes and News.—**

the veteran, "Pa" Applebee, who paused at the top of Bray Hill, to Sheard as a Manxman, to Howard Davies for his last year's performance, and to Harris as the popular tip for first in the 1922 Junior.

The rather "finicky" little progress clocks on the scoreboard already indicated changes in order, Handley's O.K. obviously beginning to race through the Lightweight field. Just as the last man left, the megaphone announced Searle's collision with Ballacraine Hotel, which had done him no harm. Thirteen minutes after the last man had gone a yellow plaque indicating No. 2 had passed Governor's Bridge suggested that Joynson (Invicta) had smashed the 1921 lap record even with the handicap of a standing start, but Davison (Levis), close on his heels, had actually cut the lap record by nearly five minutes; and when Handley arrived he was eleven seconds faster than the Levis.

Presently the first 350 c.c. machine, Davies, came in just three seconds outside the Senior record for a flying lap (56 m.p.h.). To everybody's dismay he paid a hasty visit to his depot without stopping his engine. Then Le Vack knocked four seconds off the Senior record, and Harris lapped one second faster than Davies.

## Excitement increases.

Excitement ran high, but as nearly all starters completed their first lap some time elapsed before the scoring board revealed how both races stood.

Marchant (Sheffield-Henderson) hit Sulby Bridge and damaged his oil tank; Dale (New Scale) crashed more heavily at the same point, requiring medical attention which lost him thirty-five minutes.

T. M. Sheard, the first native of the Isle of Man to win a T.T. His time was 3 hr. 26 m. 48 s., and his mount an A.J.S.

Inset, G. Grinton, who was second on a sister machine.

Kelly (A.J.S.) came off in Sulby Village, bending his forks so badly that he had to retire.

First lap times (250 c.c.).

| | | |
|---|---|---|
| Handley (O.K.) | ... | *44m. 24s. |
| Davison (Levis) | ... | 44m. 35s. |
| Kershaw (New Imperial) | ... | 45m. 37s. |
| Pike (Levis) | ... | 46m. 26s. |
| J. C. Whalley (Massey-Arran) | | 46m. 42s. |
| Loughton (Francis-Barnett) | ... | 46m. 52s. |

(350 c.c.)

| | | |
|---|---|---|
| Le Vack (New Imperial) | ... | 40m. 7s. |
| Harris (A.J.S.) | ... | 40m. 10s. |
| Davies (A.J.S.) | ... | 40m. 11s. |
| Woods (Cotton) | ... | 40m. 50s. |
| Longman (A.J.S.) | ... | 40m. 55s. |
| Sheard (A.J.S.) | ... | 40m. 59s. |

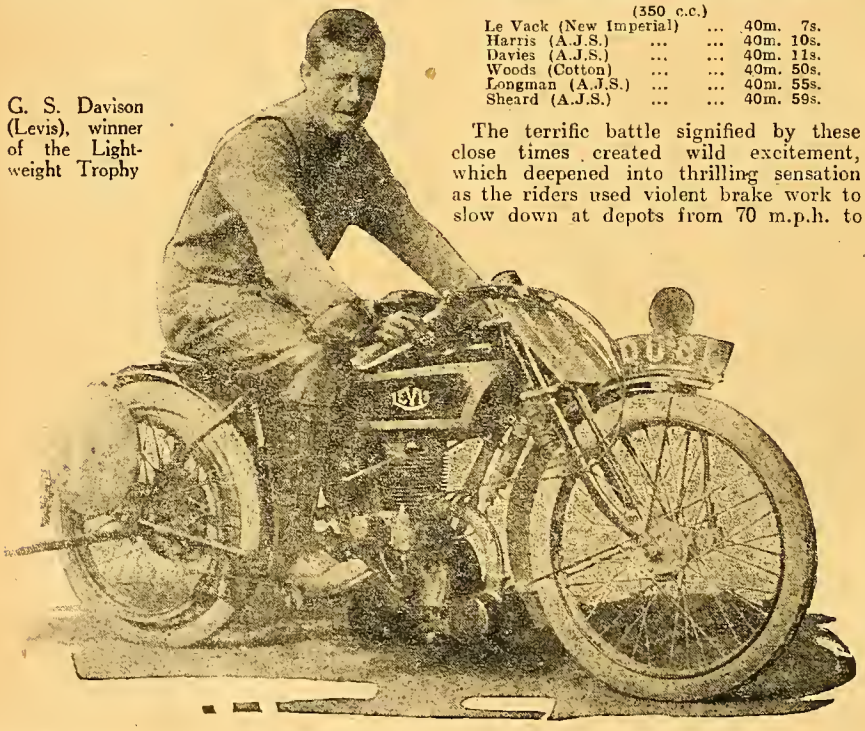
The terrific battle signified by these close times created wild excitement, which deepened into thrilling sensation as the riders used violent brake work to slow down at depots from 70 m.p.h. to pick up petrol. After two laps Woods left his engine running while he replenished his tank with petrol, and it caught fire, which spread to his depot. Woods staggered across the road with flames rising from his clothing, and men rushed to his assistance. Pyrene came to the rescue in the nick of time, and thirty seconds later he continued.

Most riders kept their engines running for reasons justified by their times. Price lost in trying to restart.

As twenty-seven seconds covered the leading trio of Juniors after two laps, the spectators along the course were very uncertain how matters stood.

A sensational New Imperial win in both events began to be mooted. But Davison's engine had a lovely purr, and four of the redoubtable A.J.S. team were hard on Le Vack's heels.

Those on the stands watched the scoring board eagerly.



G. S. Davison (Levis), winner of the Lightweight Trophy

Third lap times (250 c.c.).

| | | |
|---|---|---|
| Davison (Levis) | ... | 2h. 13m. 59s. |
| Kershaw (New Imperial) | | 2h. 17m. 46s. |
| Young (Rex-Acme) | ... | 2h. 22m. 10s. |
| Jones (Velocette) | ... | 2h. 22m. 17s. |
| Horton (New Imperial) | | 2h. 22m. 33s. |
| Prentice (New Imperial) | | 2h. 28m. 56s. |

(350 c.c.)

| | | |
|---|---|---|
| Le Vack (New Imperial) | | 2h. 1m. 15s. |
| Sheard (A.J.S.) | ... | 2h. 3m. 3s. |
| Longman (A.J.S.) | ... | 2h. 4m. 22s. |
| Grinton (A.J.S.) | ... | 2h. 10m. 11s. |
| Harris (A.J.S.) | ... | 2h. 10m. 27s. |
| Woods (Cotton) | ... | 2h. 11m. 6s. |

By the fourth lap even the crowd on the grandstand was somewhat befogged as to the state of the racing. Discs professing to show men's positions were not punctually operated, times were painted up rather slowly, and there were two

C. G. Pullin (346 Douglas, third in the fourth Junior lap.

H. Le Vack (346 New Imperial) leader in the Junior Race for the first three laps.

H. F. Harris (348 A.J.S.), second in laps one and two of the Junior Race.

H. R. Davies (348 A.J.S.). last year's Senior winner, second in the first and second Junior laps.

F. A. Longman (348 A.J.S.), third at half distance in the Junior event.

W. L. Handley (249 O.K. Junior), leader of the Lightweights at the end of the fitrst lap.

aces to confuse the onlookers. However hen Sheard (350 c.c. class) came in just head of Davison (250 c.c. class), who ad started earlier, and Le Vack's gear ox was reported seized at Windy 'orner, the situation grew fairly clear. Grinton (A.J.S)., a well-known Edinurgh rider, some thirty years old, was vidently a trifle slower than Sheard. Kershaw was out with engine trouble, o we knew the leaders at any rate. Meanwhile poor Woods, who was eartily cheered on each lap for his plnck n continuing after his fire, came into his epot in a very "ricketty" fashion; oil eakage from his charred tank had ruined he brake and he had to switch off and rake with his feet a long way up the oad. His cornering suffered accordngly, and he had a nasty fall at a airpin.

Wood's performance should surely ualify him special consideration when warding the Nisbit Trophy offered for riumph over adversity.

Thomas had lost his gear quadrant and ad to keep the gear engaged by his and.

There had been great slaughter of the vourites by this point. The Lightveight event had been regarded throughut the practice as fairly open, and everal of the leading ten were never eriously fancied. Of the surviving eaders Sheard and Pullin alone were expected" by their supporters. The asualty list inclnded Davies (A.J.S.), e Vack (New Imperial), Harris A.J.S.), Kelly (A.J.S.), Remington Edmund), Longman (A.J.S.), and Vhalley (Massey-Arran). Other retirements gradually came through by telehone, relieving the anxiety of watching riends.

Fourth lap times (250 c.c.).

| | | |
|---|---|---|
| G. S. Davison (Levis) | ... | 3h. 0m. 18s. |
| D. Yonng (Rex-Acme) | ... | 3h. 10m. 25s. |
| S. J. Jones (Velocette) | | 3h. 11m. 25s. |
| Padley (Sheffield-Henderson) | | 3h. 15m. 59s. |
| Prentice (New Imperial) | | 3h. 18m. 34s. |
| Hall (O.K.) | ... ... | 3m. 28m. 32s. |

(350 c.c.)

| | | |
|---|---|---|
| Sheard (A.J.S.) | ... | 2h. 43m. 34s. |
| G. Grinton (A.J.S.) | ... | 2h. 53m. 15s. |
| C. G. Pullin (Douglas) | | 2h. 58m. 9s. |
| Thomas (Sheffield-Henderson) | | 2h. 59m. 18s. |
| Woods (Cotton) | ... | 3h. 2m. 57s. |
| R. Lucas (Coulson) | ... | 3h. 6m. 1s. |

Now commenced the usual breathless vait as the fastest men in each race ackled the last thrilling lap and anxious pectators watched tiny signals indicating ach rider's passage through the five telehone stations recorded on the progress clocks. At the same time allowances had to be calculated from differences in starting times. In the Junior Sheard had started nine minutes ahead of Grinton and had commenced his fifth lap with a nett lead of nearly ten minutes. In the Lightweight Race Young had started 20 minutes behind Davison and now was ten minutes seven seconds behind him. If either leaders sustained slight trouble tight finishes were still possible.

The "clock" men intensified the excitement by leaving the index on Davison's disc pointing to "R" (Ramsey) much too long. Several pathetic spectacles beguiled the wait for real news; Booth came through with one hand-grip turned well up and the other well down.

At 1.45 a yellow placque signalled the arrival of Hill at Governor's Bridge on his first lap of nearly four hours, symbolising some immense Odyssey of troubles. Suddenly Davison's dial finger flew round to "B" (Bungalow); then Sheard was hoisted as past Craig-na-baa. Meanwhile, F. W. Applebee (Levis) received a salvo of cheers as he shot through on his fourth lap.

At last up went the yellow plaque No. 44. T. M. Sheard was at Governor's Bridge, and a Manxman had surely won outright at last. Handkerchiefs were waved, hats flew up into the air; there were cheers and yells and a storm of clapping. Then the band struck up "See the Conquering Hero Comes"—just too slowly, for Sheard crashed past as the opening chord sounded, and his friends rushed to overwhelm him. He looked pale and tired, with his legs barely able to support him. Small wonder, for even on the good tarmac past the stands the fast men were off their saddles more than they were on them.

As his last lap was only just over 43m., obviously no pursuer could wipe off the ten minutes' lead he had held after four laps. His lap times were as fast as they were consistent, viz., 40m. 59s., 40m. 47s., 41m. 47s., 40m. 47s., 40m. 31s.

Hardly had the hubbub subsided than a fresh round of cheering greeted Le Vack, walking in after his retirement. Immediately after, the winning Levis purred in, its engine running with much the same, smooth power as at the start. It was only some twenty minutes slower over the course than the winning 350 c.c. machine, and its time marks a huge advance on the lightweights of 1921. Judging by Davison's jaunty appearance, the Levis had given him a very comfortable ride; he seemed tolerably fresh and full of smiles.

When it was clear that none of the later starters could beat the timets now registered, boy sconts hung laurel wreaths over those columns on the board in which Sheard's and Davison's times were posted.

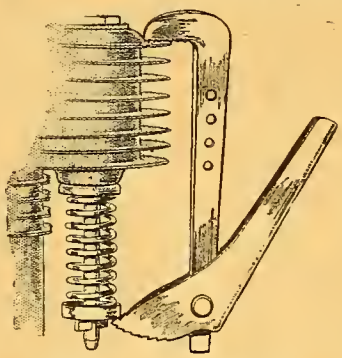
G. Grinton (A.J.S.), second in the Junior, a popular Scotch rider.

d.

# IDEAS Useful and Ingenious

## A Double-purpose Tool.

AN editorial blessing on Mr. A. Rouse, a Cambridgeshire reader, has been passed by a member of our staff who, in his irresponsible moments, uses a machine of his own constructing. Hitherto he has carried a pair of "Footprints" and a valve-extracting tool, now the latter is left at home, for, thanks to Mr. Rouse's idea, the former serves a dual purpose.



Ingenious adaptation of "Footprint" grips as a valve spring lifter.

Holes are drilled in the straight leg of the grips near the end, and a couple of teeth filed on the back of the movable jaw, which for valve removing operations is reversed and used as shown in the sketch. The only objection to this scheme is that all motor cyclists do not carry "Footprints," and fewer still admit it if they do; nevertheless it is an excellent tool in certain circumstances, but "to use it like a giant is tyrannous."

## Lighting the Speedometer.

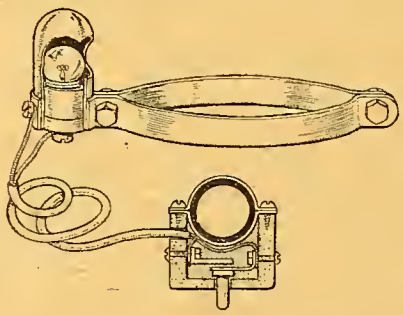
TO provide a guide to lubrication by watching the mileage counter was the origin of Mr. C. C. King's idea of constructing a speedometer lamp, and as his machine is equipped with acetylene lighting, a readily operated switch so that the lamp could be used intermittently had also to be devised. Thanks to this method of use the accumulator gives service of long periods on one charge.

The lamp itself is made from a piece of ⅜in. round brass rod, filed spherical at one end and drilled up the other to accommodate snugly a miniature screw bulb holder such as can be bought at any electrical shop. A transverse slit allows the light to pass on to the speedometer. The bulb holder is secured by the side contact screw, which enters through a hole drilled in the side of the lamp. Sheet

## A Selection of our Readers' Home-made Gadgets, with some Practical Hints on Work in the Garage.

tin is used to make the clip; the lamp is secured in this by one screw and nut, then the strip passes round the speedometer body and is clamped by a second nut and bolt.

For the location of the switch a position beneath the handle-bar was deemed best, and the construction was as follows: A round piece of wood was bored out to form a cylindrical shell, with a hole drilled through the blind end; in this hole a wooden plunger button is a loose fit. An L-shaped piece of springy brass strip is secured inside, touching the push button, and above it is a rigid brass elbow. These brass pieces form the contacts, and a wire is led to each, the whole being fastened to the bar with a tin clip. One wire goes to the battery, one direct to the

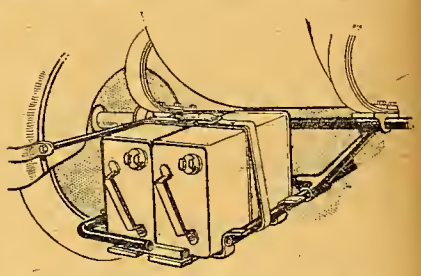


A useful idea for night riding.

lamp; the other contact screw on the lamp is wired to the other battery terminal. A 2.5 volt bulb is used and a pocket lamp accumulator of the same voltage is carried in one of the tool bags. Dry batteries could, of course, be used.

## Carrying Petrol Tins on a Millford Sidecar.

CERTAIN of the most popular models of Millford sidecar chassis are fitted with a luggage grid extension of the main tubes as an integral part of the construction, and on this it is quite easy to make a petrol tin carrier by very simple means. Mr. W. G. Harrison, of Coventry, explains his method thus:—"Two pieces of wood ¼in. thick, about 5in. wide, and a few inches longer than a petrol tin were obtained. These were secured together by two further pieces of wood fixed on top, one at each end, in such a manner as to permit a petrol tin just to enter between. Then two 1in. by ⅛in. steel strip brackets were bent so as to allow them to be pushed into place between the

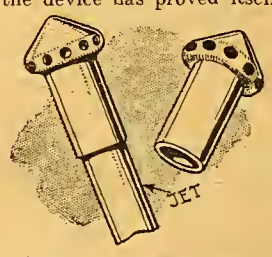


A tried petrol carrying device of particular interest to owners of Millford sidecars.

chassis tubes: for bending purposes the ends of the strips were heated in the fire. These brackets were placed in position with the wooden support on top. Two tins were placed side by side between the end pieces of wood, and the whole gear was secured together by leading a strap across the top of the tins, under the chassis tubes on each side, and the two ends finally secured on top as tightly as possible." This device, our reader assured us, has been in use for many hundreds of miles, and has never shown any signs of the tins shaking loose. It will be seen that as there are no fixtures to the chassis, the whole support can be readily removed when not in use.

## A Spraying Jet.

BEING of a mechanical turn, Mr. G. F. Rose, of Doncaster, constructed the little cap illustrated to fit over the single jet of his old-type B. and B. carburetter. Probably a petrol pipe union with the conical end "blanked" with a blob of solder would answer the purpose if a suitable fitting could not be turned out of brass. The radial holes are $\frac{1}{32}$in. diameter, and the efficacy of the device has proved itself to our correspondent's satisfaction, since he has been able to screw up his W.S.R. variable jet adapter half a turn with the diffuser in use without any diminution of power.




Converting a single jet into a spray.

# WHAT THE PRACTISING REVEALED.

## Speed Possibilities of Men and Machines in To-day's Senior T.T. Anybody's Race.

WHEN practising ended last Monday morning the Senior Tourist Trophy Race truly remained anybody's victory. Seldom indeed has the race been so open.

To-day it will be decided, but, until the sixth of *The Motor Cycle* telegrams is despatched broadcast to agents throughout the country, the motor cycle world will await the issue, wondering whether Dixon on his Indian, either Dance or Bennett on the Sunbeams, Edmonds or Brandish on the Triumphs, one of the redoubtable Scott trio, Wood, Langman, or Clapham, or a Norton rider, such as Black or Hassall has been able to prove superiority of the 500 c.c. mount against the super-efficient 350 c.c. A.J.S. of Howard Davies, which beat the Seniors hands down in last year's event.

Of course, there are other possibilities; the Massey-Arran, although of 350 c.c. only, will give any machine on the course a run for its money, especially the one ridden by J. Whalley, who will assuredly ride to win. Then there are the Sheffield-Hendersons, the N.U.T.'s, and the New Gerrard. If these machines can survive the cracking pace which will be set by the bigger men, they have more than a sporting chance, for the riders are good, if not old, hands at the racing game.

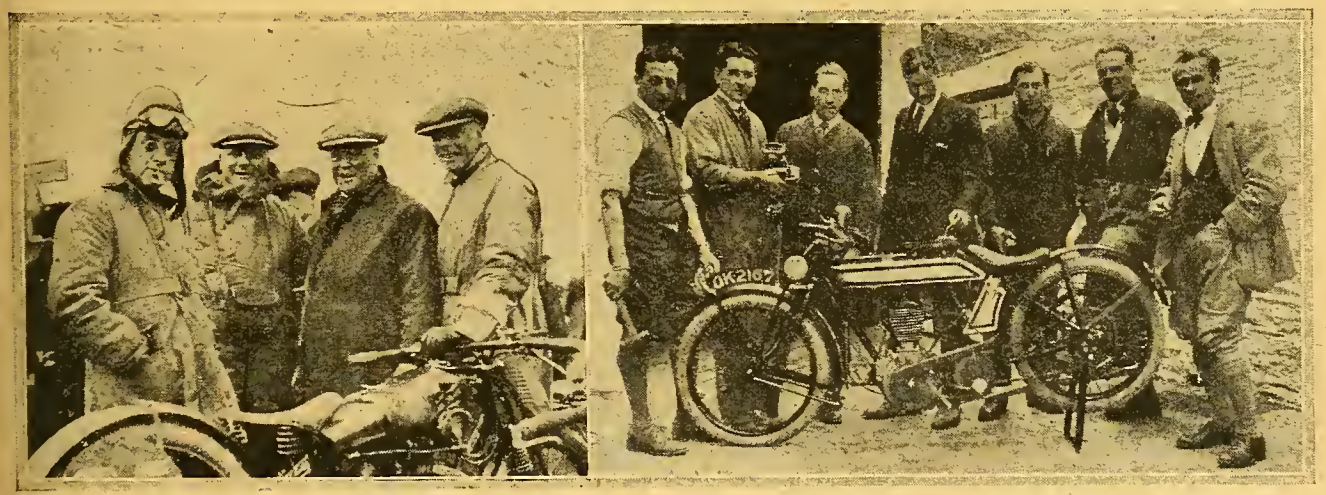
Is it the Manx air that makes the Triumph men so cheerful? A snapshot on the front at Douglas.

### Are Practice Speeds Deceptive?

There are many who say that the speeds of practice laps are valueless, because the riders neither run "all out" nor complete their laps without sundry stops either for adjustments, refreshment, or mystification. This view can scarcely be maintained when the actual times are considered. If one hears, for example, that a certain rider was seen to be going like the wind at various places, if various other competitors say they were passed "at 70" by the same man and then his lap time is announced as a phenomenally short one, there is no earthly reason why it should not be taken as a true index of what he can do.

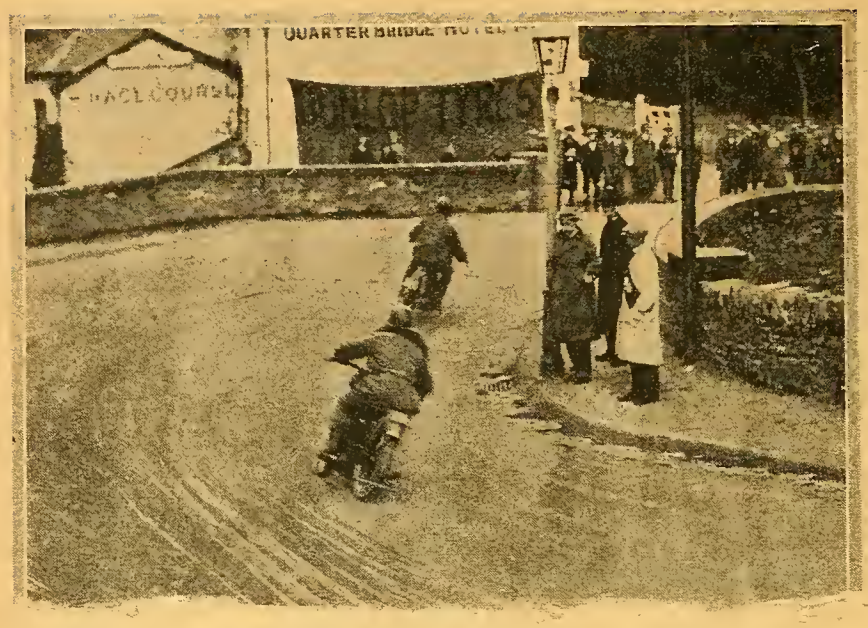
Various reasons may be advanced for the practice speeds which have already beaten the fastest lap of last year. There is a slight shortening of the course, not quite a quarter of a mile, indeed, but the alteration has eliminated one corner in Ramsey. Then Keppel Gate is twice as wide, and Windy, Signpost, and Governor's Bridge corners have all been eased. These improvements, perhaps, make the course one minute or a little more faster. Then there is an increased efficiency in machines—not a greatly improved engine efficiency, but a better regard to frame design, saddle comfort, steering, and controllability, while brakes on which a T.T. might be won or lost as easily as on an engine have been mightily improved.

All these things may be taken in relation to the high practice speeds which were attained last week to prove that the latter were no mere flash in the pan. It is safe to assume that the best laps in the race will be in the neighbourhood of thirty-seven minutes, and that the leading men will average about forty minutes per lap. Writing at the end of the practising period, it is almost



A cheerful quartette. Dr. Hopwood, one of the entrants in Tuesday's race; Mr. Victor Holroyd, of the Rudge-Whitworth Co.; and two members of the Shell organization.

Norton exponents at Castle Mona. Victor Horsman, who was feeling shy at the moment, is in the centre of the group; D. M. Brown, the Manx rider, holds the hammer; N. Black (smiling as usual), and R. Cawthorne (severe) on the right.



Senior machines out for a final practice lap. A Rudge rider leading a more cautious rider over Quarter Bridge.

impossible to do more than forecast a round dozen of men to watch as likely winners.

In a motor cycle race such as the T.T., while the "form" of both man and machine may be fairly accurately gauged, no one can gauge the workings of all those things we ascribe to "luck." A broken cotter, a fouled plug, a puncture, a leaky tap, may all happen to the favourite, and so an unforeseen circumstance may rob him of victory. Then there is the weather. Rain and mist on the mountain will slow some men more than others, and that has nothing to do with the machine, except perhaps in the case of one make. There are riders who will drive as cheerfully on full throttle into a clinging haze as they will burble along a sunny promenade with engine just firing—there are others, equally daring under fine conditions who would simply lose heart under parallel circumstances. No one can test these qualities beforehand with any thoroughness. During practice F. W. Dixon (Indian) and H. Langman (Scott) distinguished themselves by covering laps under 40 minutes. For some reason the Scott machines, although providing previous winners, have had a poor percentage of finishers; it is believed that the practically standard model running to-day will stand up as well as the next best machine. Given the same standard of reliability, these two men should fight a hard duel in the midst of Triumphs, Sunbeams Nortons, and A.J.S.'s, with Rudges close behind waiting for a crack-up of faster machines to slip into leadership. The Douglas riders are handicapped by steering and carburation, but are remarkably fast on the straights, while the dark horses remain to be watched.

Below in order are the fastest times recorded in each day during the second week of practice. They indicate to some extent what men are in the running, providing that propitious weather and absence of mechanical trouble favour the day.

MONDAY.

F. W. Dixon (Indian), 47m. 28s.
R. Bownass (N.U.T.), 47m. 32s.
J. W. Shaw (Norton), 47m. 32s.
J. Whalley (350 Massey-Arran), 47m. 45s.
N. Black (Norton), 49m. 21s.
A. W. Jones (Douglas), 49m. 40s.

TUESDAY.

F. W. Dixon (Indian), 41m. 7s. and 40m. 53s.
G. Dance (Sunbeam), 41m. 5s. and 46m. 10s.
W. W. Brandish (Triumph), 42m. 16s.
J. Whalley (350 Massey-Arran), 43m. 25s.
H. R. Davies (350 A.J.S.), 43m. 50s.
W. Hollowell (Norton), 45m. 20s. and 43m. 50s.
J. A. Porter (New Gerrard), 44m. 44s. and 44m. 43s.

WEDNESDAY.

H. Langman (Scott), 39m. 55s.
W. W. Brandish (Triumph), 41m. 6s.
W. Johnson (Sunbeam), 41m. 20s.
J. H. Illingworth (Norton), 41m. 20s.
W. Hollowell (Norton), 43m. 20s. and 42m.
S. A. Crabtree (Sunbeam), 42m. 5s.
J. H. Simpson (Scott), 42m. 31s. and 47m. 36s.
H. Le Vack (350 New Imperial), 41m. 20s.
G. Kelly (350 A.J.S.), 43m. 40s.
G. Dance (Sunbeam), 45m. 18s. and 43m. 17s.

THURSDAY.

F. W. Dixon (Indian), 39m. 11s., 39m. 30s.
G. Dance (Sunbeam), 42m. 20s.
A. Bennett (Sunbeam), 42m. 20s.
N. Black (Norton), 42m. 25s.
G. Kelly (350 A.J.S.), 42m. 55s. and 43m. 2Ss.
H. W. Hassall (Norton), 42m. 20s.
D. S. Alexander (Indian), 42m. 45s.
T. C. de la Hay (Sunbeam), 43m. 15s.

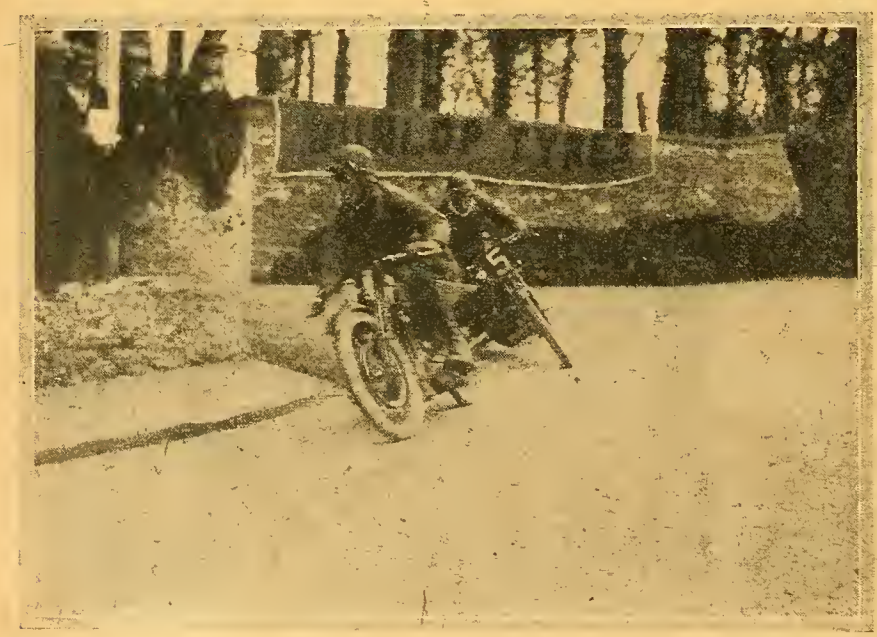
FRIDAY.

C. P. Wood (Scott), 48m 41s. and 40m. 39s.
G. Clapham (Scott), 41m.
H. Langman (Scott), 42m. 27s.
H. Le Vack (350 New Imperial), 43m. 56s.
H. W. Hassall (Norton), 43m. 34s.
G. M. Black (Norton), 45m. 20s. and 44m.
T. Simister (Norton), 47m. 8s. and 44m. 46s.

SATURDAY.

H. Langman (Scott), 40m. 30s.
G. Walker (Norton), 42m. 50s., 42m. 10s., and 40m. 48s.
G. Dance (Sunbeam), 41m. 5s.
A. Jackson (Sunbeam), 41m. 36s.
I. Thomas (Scott), 42m. 18s.
R. Bownass (N.U.T.), 42m. 38s.
H. Black (Norton), 42m. 42s.

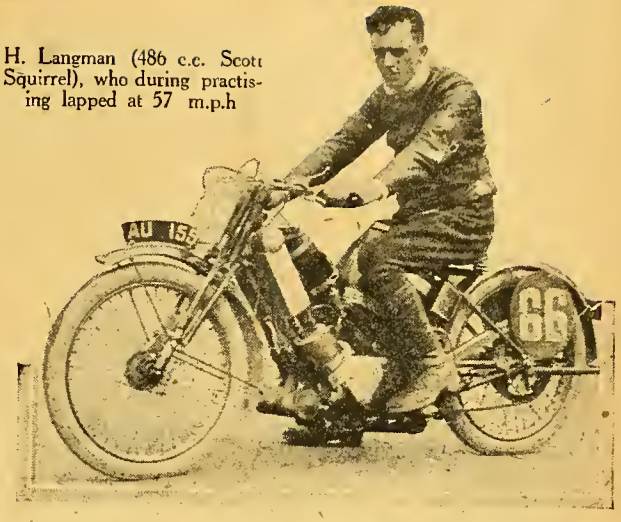
From the above figures it is to be seen that of those men who start out this morning Dixon in one week was amongst the first three fastest laps on three days, Dance two days, Langman two days, Brandish two days, and Shaw, Bownass, Johnson, Simpson, Kelly, Le Vack, Bennett, Wood, and Clapham each one day. The makes of machines making the three fastest laps each day were Scott (five times), Sunbeam (four times), Indian (three), Triumph (two), N.U.T., Norton, New Imperial, and A.J.S. (one).



The last deceleration and acceleration test on the circuit—Governor's Bridge. It is not a case of "slowing down to fifty" at this point—"five" is nearer the mark.

# LAST WORDS ON THE PRACTISING.

## Remarkable Turn-out of Riders on Monday Last. High Speeds Attained.




H. Langman (486 c.c. Scott Squirrel), who during practising lapped at 57 m.p.h

TAKEN generally, the practising period has passed off smoothly. No really serious casualties have occurred, although Thacker (Beardmore) lost his left forefinger, and Horsman (Raleigh and Norton) could not ride. Horsman was badly shaken at the end of last week.

A very tolerant attitude has been displayed by the police, and influential natives are satisfied that the T.T. riders have endeavoured to comply with all the regulations and precautions for safety. The control of practising by the Manx Club has been most efficient.

At the last moment G. A. Vandervell withdrew his machine, which leaves only one overhead-valve Norton, to be run experimentally by Cawthorne. Graham Walker will ride a standard Norton, replacing Vandervell; Adamson replaces Horsman.

As usual, the week-end proved a busy one for the competitors and the horde of mechanics on the Island. Practically every stable presented an animated scene as the final overhauls and finishing touches were being put to machines on the eve of this, the greatest race of all times. That competition is keener than ever old hands at the game are fully convinced. Generally speaking, the machines are in a more advanced state of completion than in former years. Of course, the Island is full of favourites, but whether the winner will be found among the 500 c.c. capacity machines is a moot point. The A.J.S. camp by no means despairs of a look in once again in the Senior event.

### The Eve of the Races.

As to the course, the riders seem to agree that an improvement has been made to the corners, and by amendments of the route in Ramsey, which embrace a private road, eliminating two corners, for which privilege £150 is said to have been paid, by which at least one minute has been saved.

The fastest Senior machines can attain 85 m.p.h. on two or, say, three short stretches, but Davies estimates that his A.J.S. exceeds 80 m.p.h. under best conditions.

Whereas the roads are complained of as being very rough in parts it would appear that the buffeting is largely due to increased speeds, and all predictions concerning possible winners are accompanied by a proviso, "if machines will stand up."

Practice times have beaten existing records, but it has always been found that on the actual race day the best practice speeds are further exceeded. That good sportsman, P. J. Evans, winner of the 1911 Junior Race, is this year armed with three gold cigarette cases for the trio who are credited with fastest laps in the three races. Due to flying stones, many competitors have adopted Easting handlebar screens, which should also prove useful on account of the dust which, this year, is far more troublesome. Although there are fewer people on the Island this year, due to the inconvenience of pre-Whit week, general interest was never more pronounced. All tickets for the grand stand were disposed of by the week-end, and more could have been sold had accommodation been arranged.

In spite of prognostications to the contrary, quite a number turned out for practice; although many merely toured the course, a few put in serious work. A. Bennett (Sunbeam) covered two laps in splendid style, his first being covered in 39m. 11s., and F. W. Dixon (Indian), who started late, got round in 39m. 59s.

During this lap excitement was caused by Wood (Scott) flashing by just as Dixon started, and not a few hoped to see an interesting duel. Dixon, however, came in alone, and Wood, who started from Ramsey, came no further than the mountain, leaving students of form still in the dark. Possibly the brilliance of the morning was responsible for such a large gathering so late in the day, for everyone had qualified, and most of the machines were ready for sealing. A. H. Alexander's twin carburetter Douglas is his 1920 Grand Prix machine. Sunbeams were out in force, and a few Triumphs came through from Ramsey going quietly. The speed of the Scotts has jumped up since last year. Nortons from the private owners' camp appeared to be having a fuel consumption test, Knowles starting with only half a gallon of petrol.

At the last moment it was decided to use New Imperial side-valve machines, the experimental overhead models not being sufficiently advanced for the strenuous test of the race.

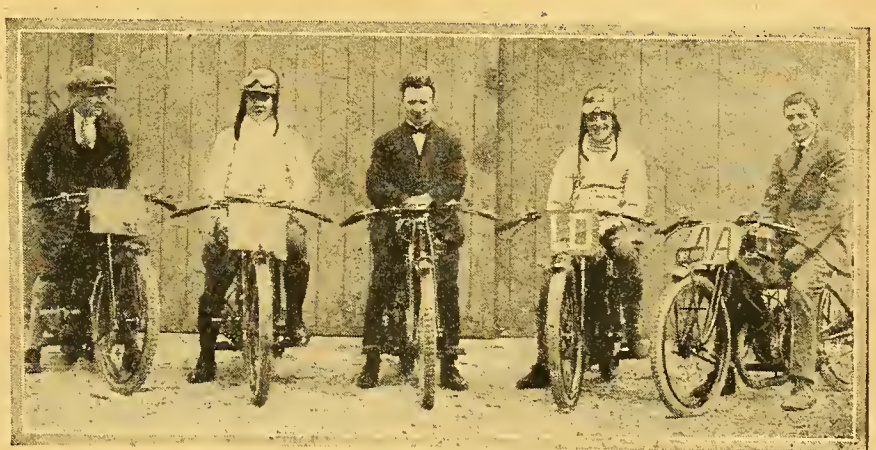
THE NEXT STAGE!

*MOTOR CYCLISTS interested in small or large cars should read*

The Autocar

Every Friday 4d.

*the forerunner of all motoring journals. Founded in 1895, it remains the largest and most successful automobile paper, and enjoys the greatest circulation. It is universally accepted as the representative British motoring journal.*



A quintette of Sun exponents. W. H. Lord (14), Gus Kuhn (3), and M. Bishop (10) were the three men entered for the Junior race, the other two riders being reserves.

# SOUTHEND CLUB'S HILL CLIMB.

SOMEHOW or other the word "Essex" on the programme of a hill-climb or speed event is synonymous with a great multiplicity of classes, and last Saturday's climb of the Essex County and Southend A.C. was no exception to the rule.

According to the voluminous seventy-page programme there were 1,078 entries, 236 being motor cyclists; but, boiled down to a basis of one man, one entry, there were roughly twenty-five riders in all.

Langdon Hill, with its maximum grade of 1 in 8, made quite a useful venue, but the organisation, especially towards the end, was not flawless.

Most of the excitement was concentrated in the acceleration test, in which competitors were required to come to a standstill between two tapes midway up the hill and then get going as quickly as possible. Shareholders in the various tyre companies looked on with particular pleasure. Two good men made mistakes: F. R. Cotgrove (Sheffield-Henderson) fell, and S. M. Greening (Francis-Barnett) overshot the second tape by six yards.

350 c.c. TOURING MACHINES.

1, L. F. Peaty (350 Hawker), 35⅗s.

UNLIMITED TOURING MACHINES.

1, L. F. Peaty (350 Hawker), 31⅘s.; 2, W. H. Fraser (499 Triumph), 33⅖s.

250 c.c. AND 350 c.c. SPORTS MODELS.

1, F. Cotgrove (348 Sheffield Henderson), 32⅗s.; 2, S. M. Greening (248 Francis-Barnett-Jap), 35s. (1st in 250 c.c. class).

500 c.c. AND UNLIMITED SPORTS MODELS.

1, K. S. Duncan (490 Sunbeam), 28⅗s.; 2, F. R. Cotgrove (348 Sheffield-Henderson), 31⅗s.

UNLIMITED SOLO MACHINES.

1, S. M. Greening (248 Francis-Barnett-Jap), 34⅕s.; 2, W. H. Norris (698 Raleigh), 34⅗s.

350 c.c. SOLO (ESSEX RESIDENTS).

1, S. M. Greening (248 Francis-Barnett-Jap).

UNLIMITED SOLO SPORTS MACHINES.

1, K. S. Duncan (490 Sunbeam), 29⅕s.; 2, H. E. Bolton (996 Indian) and S. M. Greening (248 Francis-Barnett) tied, 34s.

1,000 c.c. PASSENGER MACHINES.

1, L. P. Peaty (550 Hawker sc.) and S. M. Greening (348 Omega-Jap sc.) tied, 42s.; 2, J. G. Freeman (698 Raleigh sc.), 50s.

ACCELERATION TEST.

1, K. S. Duncan (490 Sunbeam), 39s.; 2, W. H. Fraser (499 Triumph), 42s.

## AWARDS IN S.W. TRIAL.

AFTER a tie with W. G. Churchill (Verus), **F. J. Ellis (Matchless sc.)** was awarded the **South-Western Trophy** in the Devonshire Open Trial described last week.

CLASS "A." SOLO UP TO 250 cc.

1ST CLASS AWARDS.

P. L. Mayo (Coventry-Eagle).

2ND CLASS AWARDS.

Mrs. Jansen (Ner-a-Car), D. Read (Ready), W. E. May (Excelsior).

CLASS "B." SOLO UP TO 350 cc.

*Silver Cup.*—W. G. Churchill (Verus).

*Gold Medal.*—S. Warne (Precision Barr and Stroud).

1ST CLASS AWARDS.

B. R. Robins (New Imperial), G. H. S. Earle (A.J.S.), H. F. Youings (Diamond-Jap), J. F. Anderson (Connaught), A. S. Gray (Beardmore-Precision), A. C. Westlake (Rex-Acme).

2ND CLASS AWARDS.

C. G. Clapshaw (A.J.S.), A. S. Milward (Wooler), J. Wooler (Wooler), H. H. Robinson (Wooler), T. G. Blundell (O.K. Junior), A. C. Smith (Sun Rotary).

CLASS "C." SOLO UP TO 500 cc.

*Silver Cup.*—G. L. Morrish (Sunbeam).

*Gold Medal.*—J. Pruen (Douglas).

1ST CLASS AWARDS.

F. J. Adam (Norton), E. W. Spencer (Douglas), A. H. S. Love (Nortoo), J. E. J. Whittager (Sunbeam), S. W. Easton (A.B.C.), G. Hancock (Sunbeam), W. Bray (Norton), W. F. Burnell (A.B.C.), S. G. Wheeler (Nortoo), L. Stagg (Sunbeam), E. H. Williams (Triumph), J. H. H. Veasey (Zenith-Bradshaw), K. Delve (Triumph), V. G. Tucker (Norton), C. L. Sprosen (Connaught), J. S. Rogers (James).

2ND CLASS AWARDS

H. H. Nicholson (Martinsyde), H. C. Jennens (James), P. V. Hare (Douglas), W. A. Le Brun (Rudge), E. C. Collins (Norton), E. V. Wood (Connaught), J. N. Illingworth (Norton), H. C. Bonchier (Zenith-Bradshaw).

CLASS "D." SOLO UP TO 750 cc.

*Silver Cup.*—L. Peters (Norton).

*Gold Medal.*—E. L. Herring (Triumph).

1ST CLASS AWARDS.

J. T. Bashall (Martinsyde), A. A. Symes (Martinsyde), H. Collins (B.S.A.), G. W. Anstey (Triumph), G. R. Claridge (Triumph), R. O. Bellasis (Scott).

2ND CLASS AWARDS.

Eli Clark, Jn. (Douglas), F. A. Harris (B.S.A.), W. C. Treloggen (Indian Scout), W. J. C. Pope (Triumph), E. H. Jones (Triumph), C. Jones Humber).

CLASS "E." SOLO UP TO 1,000 cc.

1ST CLASS AWARD.

J. Carslake, Jun. (Brough Superior).

CLASS "F." SIDECARS UP TO 600 cc.

*Silver Cup.*—E. A. Wright (Sunbeam).

2ND CLASS AWARDS.

C. Forward (Bradbury), E. Wood (Norton).

CLASS "G." SIDECARS UP TO 1,000 cc.

*S.W. Trophy and Silver Cup.*—F. J. Ellis (Matchless).

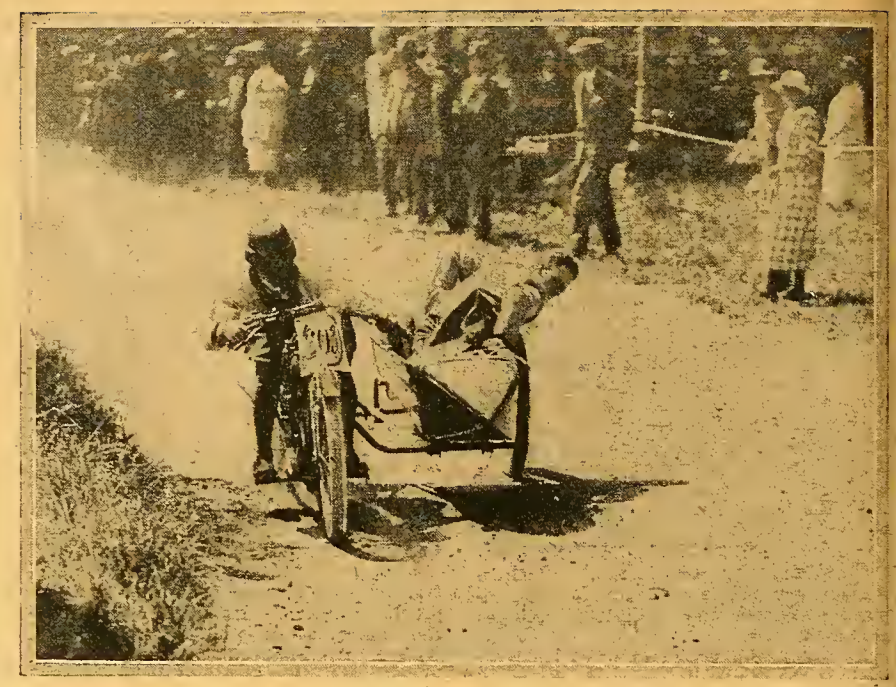
*Gold Medal.*—Mrs. Hardee (Matchless).

1ST CLASS AWARDS.

F. O'Brien (Matchless), G. D. Hardee (Matchless).

2ND CLASS AWARDS.

E. J. L. Strong (Harley-Davidson), S. Hall (Rudge), E. S. Powell (A.J.S.), J. Durant (Norton).



On a 348 c.c. Omega-Jap sidecar, S. M. Greening succeeded in equalling fastest sidecar time of the day.

## SOUTH MIDLAND CLUBS AT BROOKLANDS.

DESPITE the counter-attraction of the T.T., the South Midland Centre A.C.U. meeting at Brooklands received an excellent entry, and provided some exciting racing.

One- and two-lap scratch races were the order of the day, until the concluding events, an inter-club relay race and a three-lap winners' handicap. Results:

250 c.c ONE LAP SCRATCH RACE.—1, J. V. Prestwich (2½ New Imperial); 2, A. A. Swan (2½ New Imperial); 3, R. N. Stewart (2½ Trump-Jap). (Won at 61.15 m.p.h. by 300 yards.)

550 c.c. SIDECARS ONE LAP SCRATCH RACE.—1, D. F. C. Fitzgerald (3½ Nortoo sr.); 2, J. Hill (3½ Douglas sc.); 3, R. Newitt (3½ Douglas sc.) (Won easily at 53.52 m.p.h.)

350 c.c. ONE LAP SCRATCH RACE.—1, A. Fraser (2¾ Sheffield-Henderson); 2, J. V. Prestwich (2¾ Coventry Eagle-Jap); 3, F. V. Jones (2¾ Coulson). (Won at 64.54 m.p.h. by 20 yards.)

500 c.c. TWO LAP SCRATCH RACE.—1, R. T. Grogan (3½ Norton); 2, E. A. Marshall (3½ Matchless-M.A.G.); 3, A. Fraser (2¾ Sheffield Henderson). (Won at 69.19 m.p.h.)

500-750 c.c. TWO LAP SCRATCH RACE.—1, C. C. Labin (6 Martiosyde); 2, R. N. Stewart (5 Trump-Jap); 3, E. Finch (5 Zenith). (Won easily at 75.12 m.p.h.)

INTER-CLUB TEAM RACE.—1, St. Albans; 2, North-West London.

UNLIMITED SOLO TWO LAP SCRATCH RACE.—1, R. N. Stewart (10 Trump-Anzani); 2, E. C. E. Baragwanath (8 Matchless); 3, E. Finch (8 Zenith). (Won at 82.08 m.p.h.)

1,100 c.c. PASSENGER MACHINES.—1, R. Godfrey (8 G.N.); 2, O. de Lissa (8 M.A.G.); 3, H. Martin (10 Morgan-Anzani). (Won at 68.42 m.p.h.)

INTER-CLUB RELAY RACE.—1, Luton and South Beds.; 2, North London; 3, N.W. London; 4, Bucks County.

The last event of the afternoon provided an extremely exciting finish. It was open to the first and second men in the previous races, and was won by C. C. Labin (6 Martinsyde) at 79.54 m.p.h., only three yards separating him from Godfrey's G.N.

# GUIDE TO LONDON—EDINBURGH RUN.

## A Record Number of Competitors; 129 Motor Cycles, 110 Sidecars, 20 Three-wheelers, and 133 Cars.

THIS year's London-Edinburgh run has broken all records so far as entries are concerned, there being 392 in all, consisting of 129 motor bicycles, 110 sidecar outfits, 20 three-wheelers, and 133 cars. Last year's 381 was the previous best.

The run starts on Friday evening next from Hendon at 7 p.m.; a skeleton route and time-table is on page 701. Kirkstone Pass will probably be the chief point of interest; the leading competitors are due there about 11 o'clock on Saturday morning.

Special caution will be required in negotiating Newark Bridge, which is at present under reconstruction, and only half the width of the road is available.

### ENTRANTS.

*Including official numbers, cylinder capacity, and registration numbers of the machines.*

#### MOTOR BICYCLES.

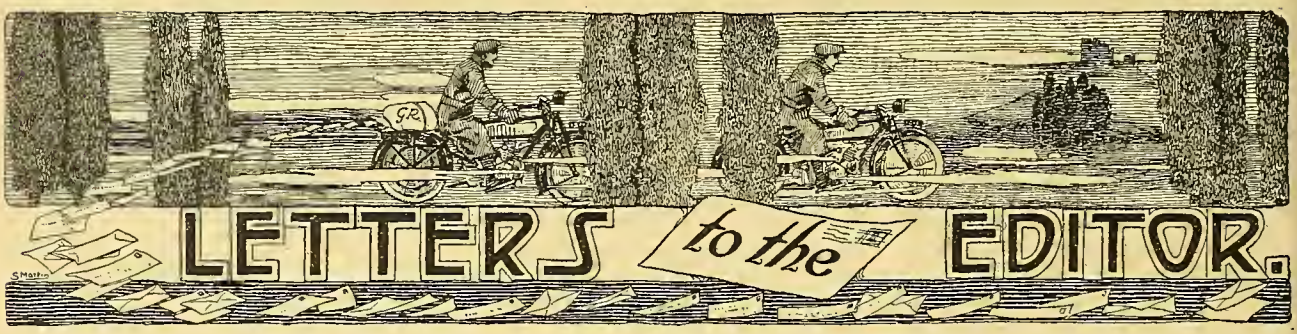
1. L. A. Baddeley (348 Douglas), FH 709.
2. G. E. Cuffe (269 Metro-Tyler), MD 5826.
3. C. Dickinson (498 Ariel), NM 1527.
4. C. Bourlet (498 Ariel), NK 3242.
5. H. Reyre (498 Ariel), NK 3241.
6. A. R. Richardson (550 Triumph), PB 1418.
7. G. W. Burgoyne (550 Triumph), XF 8386.
8. H. W. Harrington (596 Indian Scout), NO 5471.
9. S. J. Marks (499 Triumph), HM 2406.
10. G. W. Laugford (269 O.K. Junior), XH 53.
11. P. J. Young (292 O.K. Junior), XK 3512.
12. J. W. Troughton (550 X.L.), XK 4894.
13. G. Brough (976 Brough Superior), HP 2122.
14. H. Karslake (976 Brough Superior), AU 4359.
15. T. C. M. Bellairs (976 Brough Superior), BD 6287.
16. A. C. Rhodes (499 Triumph), NO 4406.
17. W. Sharpe (398 A.B.C.), XB 3375.
18. J. G. L. Boorer (678 N.U.T.), HM 1781.
19. C. J. Wheeler (481 Scott Squirrel), BL 9663.
20. J. G. Hann (976 New Imperial), BL 8551.
21. D. S. Baddeley (678 N.U.T.), J 8581.
22. H. W. Deacon (490 Norton), HP 2465.
23. H. B. Browning (349 A.J.S.), XH 9434.
24. W. Atkinson (550 Triumph), AJ 7627.
25. W. P. Brandon (499 Triumph), CR 6670.
26. T. S. Sharratt (349 A.J.S.), BH 8541.
27. H. R. Lane (211 Levis), OK 543.
28. H. Gibson (348 Raleigh), AU 5296.
29. J. A. Levland (555 Phelon and Moore), WY 2022.
30. J. Richardson (496 Lea-Francis), XK 5531.
31. J. Carslake (967 Brough Superior), EL 6503.
32. F. W. Stevenson (496 Brough), AN 6012.
33. R. W. Lane (692 Brough), AL 6290.
34. C. C. Lahin (678 Martinsyde), ——.
35. W. D. Pugh (498 Zenith-Bradshaw), PC 480.
36. F. V. Edwards (584 Harley-Davidson), ME 2256.
37. R. V. Saltmarsh (584 Harley-Davidson), MD 7319.
38. V. Belfield (499 Triumph), XK 7540.
39. R. P. Purnell (169 J.E.S.), FH 2246
40. A. C. Robbins (292 Edmund), XK 4667.
41. J. A. Newman (494 Douglas), AD 7009.
42. E. Clark (494 Douglas), HT 3712.
43. H. H. Nicholson (496 Martinsyde), PC 433.
44. A. A. Symes (678 Martinsyde), PC 916.
45. E. H. Gifford (496 Martinsyde), PC 435.
46. C. H. Mocatta (349 A.J.S.), XK 861.
47. J. McBirnie (998 Indian), MC 1161.
48. A. Stanger (538 Stanger), LW 3318.
49. J. Stanger (538 Stanger), XF 1777.
50. R. N. Thomas (350 Hagg Tandem), NK 627.
51. B. N. Taylor (350 Hagg Tandem), MD 7931.
52. W. Dawson (499 Sunbeam), J 8507.
53. T. L. Daniels (595 Douglas), XB 3404.
54. J. E. Beard (595 Douglas), XF 1832.
55. R. P. Reid (481 Scott Squirrel), BB 5625.
56. P. L. Mayo (269 Coventry-Eagle), HP 3015.
57. L. E. Chirney (350 Beardmore-Precision), NK 2413.
58. J. Haworth (348 Raleigh), BN 5739.
59. W. E. Smithie (490 Norton), TB 5448.
60. C. Guthrie (700 Raleigh), BN 5681.
61. A. G. Wall (398 A.B.C.) XK 6096.
62. G. Wray (499 Triumph), FY 4831.
63. A. H. S. Love (490 Norton), FX 4301.
64. P. Street (499 Sunbeam), HO 8830.
65. J. J. Sykes (599 Sunbeam), OK 45.
66. F. K. Parsons (211 Ner-a-Car), MD 5542.
67. N. A. C. Runnels-Moss (211 Ner-a-Car), MD 6808.
68. C. E. Bartlett (348 Omega Duplex), XK 6529.
69. A. F. Plummer (349 A.J.S.), NW 944.
70. A. F. F. Hall (349 A.J.S.), WY 1431.
71. O. F. Collier (499 Sunbeam), EW 2913.
72. R. Ellis (500 N.U.T.), X 1.
73. G. Packman (269 P. and P.), ——.
74. W. R. Preston (532 Scott), PC 1119.
75. C. Waldin (350 Beardmore-Precision), NX 1666.
76. H. Sutton (225 Royal Enfield), DP 3289.
77. G. S. Green (532 Scott), XB 2123.
78. P. H. Ingham (596 Indian Scout), EC 2630.
79. E. F. Taylor (345 Alecto), XK 8326.
80. R. S. Pilcher (345 Alecto), XK 8327.
81. F. C. Townshend (498 Zenith-Bradshaw), ——.
82. J. L. Hanman (349 Coulson), XK 5123.
83. H. J. Vidler (499 Triumph), MD 5856.
84. S. Warne (350 Precision B. and S.), ——.
85. G. H. Houlton (550 Triumph), AL 5434.
86. J. H. Fairweather (249 Federation), ——.
87. R. C. Bennett (249 Federation), OE 9479.
88. L. A. Y. Cashmore (345 Alecto), XK 9078.
89. R. L. Richardson (345 Alecto), XF 904.
90. D. Hall (220 Velocette), BB 5579.
91. H. C. Nias (499 Ariel), ME 1566.
92. L. N. Stannah (499 Rover), HP 3658.
93. C. W. Ward (499 Triumph), WA 5666.
94. H. J. Greathead (348 Ivy), OK 960.
95. F. Clay (293 Campion), W 5420.
96. A. W. Hadley (499 Rudge), XK 2283.
97. P. A. Hopkins (348 Ivy), XH 9234.
98. W. Henry Wells (398 A.B.C.), XK 5870.
99. D. White (347 G.R.I.), GB 435.
100. E. Eland (557 B.S.A.), SS 344.
101. J. A. Stedman (547 Powell), CA 4737.
102. H. W. Gleadinning (976 Zenith), ——.
103. A. S. Guthrie (350 Diamond-Barr-Stroud), XK 7658.
104. L. E. Clulee (292 Alldays' Allon), OB 7932.
105. R. C. Cooper (292 Alldays' Allon), OE 7747.
106. W. Johnson (292 Alldays' Allon), OK 2179.
107. M. O'Reilly (678 N.U.T.), PB 4122.
108. J. Vesper (349 Wooler), ME 1686.
109. J. F. Hull (349 Wooler), ME 1269.
110. J. W. Grose (398 A.B.C.), BE 6482).
111. F. S. Whitfield (499 Rudge-Multi), BR 625.
112. D. J. Stone (261 Orbit), ME 171.
113. A. M. O. McLachlan (349 A.J.S.), XK 1426.
114. S. C. Pearce (350 Coventry Eagle), HP 3539.
115. T. W. Buckle (748 F.N.), ——.
116. H. H. Robinson (349 Wooler), BH 7760.
117. A. Milward (349 Wooler), MC 3640.
118. A. S. Pinchbeck (398 A.B.C.), PB 3442.
119. R. S. Newnham (348 Raleigh), ——.
120. A. R. H. Stewart (348 Raleigh), ——.
121. R. Charlesworth (498 Zenith-Bradshaw), KE 8621.
122. E. M. Heller (293 Calthorpe), OH 944.
123. G. W. Segrott (499 Ariel), BY 8340.
124. O. S. Bridcutt (499 Dunelt), BY 8178.
125. D. Read (499 Ready) YA 2994.
126. M. Pearson (550 Triumph), BW 5376.
127. E. W. Cholderoft (349 A.J.S.), DA 4517.
128. B. F. C. Fellowes (345 De Dion Bouton), AU 5874.
129. A. H. Farmer (498 Zenith-Bradshaw), ——.

#### SIDECARS.

130. L. A. Bridgman (998 Indian Chief), SJ 80.
131. G. Townsend (555 P. and M.), WY 2169.
132. R. Lewis (555 P. and M.), WY 3217.
133. P. Cunningham (555 P. and M.), WY 1683.
134. J. E. Pantard (976 Chater-Lea), LE 146.
135. T. J. Ross (993 Matchless), XK 8436.
136. R. G. Boxer (993 Matchless), XK 720.
137. W. H. Guiver (993 Matchless), HO 6888.
138. Clifford Wilson (654 Quadrant), XF 2630.
139. G. A. Pidgeon (654 Quadrant), OK 970.
140. W. E. Clarke (654 Quadrant), XK 3831.
141. A. C. Ward (550 Triumph), XA 6949.
142. G. Dyer (998 Harley-Davidson), XH 9205.
143. E. J. L. Strong (998 Harley-Davidson), TA 3274.
144. J. G. Bryson (998 Harley-Davidson), ME 884.
145. W. H. Hardman (993 Matchless), NK 1266.
146. W. Bucknell (976 Matchless), BY 8319.
147. A. F. Pulling (976 Royal Enfield), BY 3304.
148. N. P. O. Bradley (599 Sunbeam), NP 655.
149. R. H. Attwood (633 Norton), EH 2761.
150. W. A. Fell-Smith (976 Brough Superior), HP 2929.
151. S. C. Tait (976 Brough Superior), BY 8110.
152. H. Clenoell (976 Brough Superior), BY 8120.
153. E. A. Wright (499 Sunbeam), FX 7892.
154. J. Mackenzie (499 Sunbeam), N H 193.
155. E. Cross (599 Sunbeam), ET 2297.
156. P. Pehrson (499 Dunelt), OE 341.
157. P. Platt (749 Bradbury), BU 2381.
158. J. P. Le Grand (550 Rex-Acme), HP 7333.
159. W. A. Jacobs (550 Rex-Acme), HP 3587.
160. F. White (998 Rex-Acme), HP 3828.
161. A. Greenwood (976 Brough Superior), CX 4925.
162. W. E. Brough (692 Brough), AU 4209.
163. P. W. White (998 Harley-Davidson), ——.
164. E. C. Lunnis (976 Matchless), ——.
165. L. A. Willmott (976 Matchless), MX 8234
166. B. S. Allen (976 Matchless), ——.
167. R. H. Bywaters (976 Zenith), PB 4548.
168. J. T. Bashall (678 Martinsyde), PB 1745.
169. W. H. Bashall (678 Martinsyde), PB 1746.
170. A. G. Cocks (598 Beardmore-Precision), OK ——.
171. C. W. Lewis (598 Beardmore-Precision), OK 105.
172. A. A. Attwood (598 Hawker), BY 8365.
173. J. Bradbury (550 Triumph), R 5692.
174. J. J. Lister (490 Norton), WR 8266.
175. R. B. Clark (498 Zenith-Bradshaw), XK 4126.
176. W. A. Sweet (998 Harley-Davidson), XF 539.
177. E. S. Powell (799 A.J.S.), DP 3995.
178. R. J. Andrews (557 B.S.A.), PA 3244.
179. L. Arnold (976 Matchless), XB 1427.
180. G. D. Hardee (993 Matchless), XK 5269.
181. F. J. Ellis (993 Matchless), XH 6022.
182. W. King (998 Harley-Davidson), BY 4644.
183. F. Broomfield (998 Harley-Davidson), BY 2531.
184. H. E. Crofts (998 Harley-Davidson), BY 5868.
185. E. Kehce (499 Rudge), BL 9612.
186. F. Smith (925 Clyno), DA 5901.
187. J. Honlt (993 Matchless), LW 2991.
188. J. Graham (993 Matchless), ——.
189. A. W. Graham (993 Matchless), PC 1128.
190. J. A. Masters (998 Harley-Davidson), XK 8631.
191. G. Baxter (998 Harley-Davidson), XH 9794.
192. E. O. Spence (998 Harley-Davidson), PC 1142.
193. A. H. Nelson (550 Triumph), BY 7391.
194. W. H. A. Turner (998 Indian), XK 3477.
195. J. W. Hazlewood (976 Hazlewood), HP 3598.
196. W. C. Hemy (799 A.J.S.), DA 5572.
197. J. Ball (799 A.J.S.), DA 5616.
198. H. L. Miserez (993 Matchless), XH 1570.
199. F. MacDonald (993 Matchless), XF 1133.
200. F. W. Neill (976 Matchless), XK 4409.
201. W. Higgs (799 A.J.S.), DP 4152.
202. A. S. Bagshaw (799 A.J.S.), CL 5033.
203. H. T. Chapman (550 Triumph), CL 5127.
204. W. J. Barker (1301 Henderson), ——.
205. S. F. Farley (1301 Henderson), XK 4471.
206. J. W. Cheyney (1301 Henderson), XA 7953.
207. R. V. Cranford (496 P.V.), ——.
208. P. S. Cranford (993 Matchless) XF 157.
209. T. E. Ranger (976 Matchless), ——.
210. L. V. Freeman (976 Sunbeam), MD 4643.
211. W. E. Grange (749 Bradbury), WY 3275.
212. J. S. Biss (998 Indian), XB 3435.
213. S. A. Cooke (550 Triumph), FL 2123.
214. H. Gold (346 Francis Barnett), GB 1007.
215. H. V. Bateman (1301 Henderson) ——.
216. F. J. Watson (796 Ariel), ME 1615.
217. S. S. Debenham (976 Campion), AU 5534.
218. I. P. Brettell (370 Connaught), OK 1017.
219. C. L. Sprosen (370 Connaught), ——.
220. H. W. Furness (595 Douglas), XK 2468.
221. G. Haines (633 Norton), NM 1883.
222. J. B. McGinnell (550 Triumph), EC 2275.
223. W. Chase (499 Dunelt), HP 2253.
224. T. J. Ryan (998 Rudge Twin), XK 4653.
225. G. Kuhn (595 Douglas), XK 2886.
226. L. Heller (595 Douglas), XK 94
227. F. H. Douglass (996 Bradbury), ——.
228. R. McK. Veale (985 B.S.A.), XK 9188.
229. E. C. Barton (976 Matchless), ——.
230. D. S. Parsons (976 Matchless), XK 5270.
231. G. Nott (993 Matchless), XK 532.
232. T. G. Bullus (855 Phelon and Moore), KU 296.
233. J. Wallis (688 Coventry Victor), ME 1524.
234. T. G. White (799 A.J.S.), GA 9489.
235. G. E. Minett (749 Bradbury), MX 3200.
236. F. E. Jones (976 Matchless), ME 1944.
237. F. W. Becker (688 McKechnie), HP 3529
238. E. F. Peaty (550 Hawker), ——.
239. A. Conville (592 Lea-Francis), EM 1169.

#### CYCLE CARS.

240. F. S. Spouse (980 T.B.), XF 2207.
241. S. M. Greening (980 T.B.), RE 826.
242. R. Duke-Williams (980 Morgan) SY 1210.
243. H. E. K. Sawtell (1096 Morgan), FX 5968.
244. W. M. Cowper (1096 Morgan), XK 8.
245. R. A. Biggs (1055.5 Coventry Premier), PB 4972.
246. D. W. Rhodes (578 Scott Sociable), SS 1035.
247. R. B. Whiffen (1096 Morgan), NP 632.
248. H. Beart (1096 Morgan), XH 3079.
249. A. C. Maskell (980 Morgan), ——.
250. J. Robinson (986 L.S.D.), CX 4786.
251. C. F. Swaine (986 L.S.D.), CX 1536.
252. T. G. McKenzie (986 L.S.D.), C 2426.
253. F. W. Dame (980 Morgan), HX 9951.
254. S. A. McCarthy (980 Morgan), XK 295.
255. J. W. Meredith (986 T.B.), RE 498.
256. C. F. Hollyoak (976 Federation), ——.
257. W. Joyce (980 Morgan), XC 2599.
258. S. Hall (1096 Morgan), NK 3599
259. W. Pattison (1096 Morgan Grand Prix), ——.




The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *SHAFT DRIVES' UNPOPULARITY.*

Sir,—It occurs to me there are two points of some importance not brought out by your correspondents.

(1.) The relative efficiency of fairly heavy gears, substantially mounted and tested under laboratory conditions, is not a sure guide for lighter gears mounted on such a structure as a motor cycle frame. Whilst such a frame can be made fairly rigid fore and aft, the road wheel cuts out many of the possibilities of mounting a gear shaft soundly. When, under load, yielding takes place, it will certainly set up binding and loss of efficiency more readily with a gear shaft than with chain. Chain gear is admittedly a much more free and easy mechanism in this respect. Moreover, the resultant force of the chain pull is direct fore and aft in line with the frame's rigidity, whereas a gear shaft has twists and cross forces in other directions.

(2.) The F.N. people hold such a position as regards excellent workmanship, that it might not be safe for an average manufacturer with moderate resources and equipment to follow their lead. C.E.H.

Tunbridge Wells.

### *TEMPERAMENTAL ENGINES.*

Sir,—Having read "Ixion's" remarks on engines going "fey," I would suggest that unless he means that the engines have a premonition of impending dissolution, the word applicable is not "fey," but probably "daft." "Fey" does imply peculiarity of action, but also includes the idea of approaching death. SCOTSMAN.

London, N.W.11.

Sir,—I have noted with interest, through your correspondence columns, readers' experiences with Rudge and other similar machines which occasionally put on the pace. It is my opinion that so long as manufacturers will fit that abomination, the hand oil pump, these variations will continue.

Most riders of machines so equipped invariably over-oil, which will not allow the engine to rev. as it should.

Occasionally the oil pump is forgotten for 8 or 10 miles, the oil drag ceases, and the machine automatically accelerates.

Anyone who has a speedometer can prove this for himself by giving a pumpful of oil when the needle points to 35 or 40, and it will immediately drop back about 5.

W. F. ARNATT.

### *TOO FEW FAST "SEVEN-FIFTIES."*

Sir,—I was interested in the description of the new o.h.v. Blackburne twins in *The Motor Cycle* of May 18th, but could not help thinking that the cubic capacity of the larger model (71 × 97 mm., 768 c.c.) was rather badly chosen. The engine is obviously a sports model, and as such will presumably be popular as a speed mount, but it will have little chance to excel, as it is just too big for 750 c.c. class, and will therefore have to compete with such engines as the 8-valve Anzani. Surely a few millimetres off the stroke, reducing the capacity by 20 c.c. (748 c.c.), would have little effect on the power output?

I remember Zenith Motors used to market a "6 h.p. sports model," with a J.A.P. engine of 76 mm. × 85 mm. (770 c.c.), which although a "hot" proposition, was of little use for speed work, being just too big for the 750's, and, in the 1,000 c.c. class, quite overshadowed by the 90-bores and other 8 h.p. buses.

The Martinsyde and the new 6 h.p. Douglas are really the only "hot stuff" 750's we have—and a few more are badly needed; it seems rather absurd that at the present moment every Class D record should be held by a 500 c.c. engine. J. MALCOLM McINTYRE.

### *THE T.T. AND A PRIVATE OWNER.*

Sir,—Can you say why manufacturers who, owing to labour troubles, cannot supply machines or spare parts, can spare time and money, and neglect customers, to enter the T.T.? W.F.A.

Bournemouth.

### MOTOR CYCLE POLICE TO CONTROL TRAFFIC.

Just at present the daily Press is strongly agitating for motor cyclist patrols to control unruly motor traffic, and, although the dangers of the road are being greatly exaggerated, the idea is sound. However, the Metropolitan Police already have Triumph sidecar outfits which are being used for this purpose, and a most favourable report on the efficiency of the scheme has recently been issued by the Commissioner. On the other hand, one shudders at the possibility of hordes of solo police motor cyclists on 70 m.p.h. machines being released on the tortuous roads of Great Britain.

## AN AMATEUR ASSOCIATION.

Sir,—I can never cease marvelling at the spirit which seems to animate a number of motor cyclists. They appear to imagine (1) that the Trade and the A.C.U. are combined in a gigantic conspiracy to browbeat and suppress the "amateur"; (2) that trade riders are a race of supermen mounted on super-machines mysteriously different from what you can buy; (3) that if the A.C.U. were abolished amateurs would win many more pots. I know that this last thus baldly stated, sounds idiotic, but it is undoubtedly the impression given by many letters. It is, I suppose, impossible to convince the writers of such letters that—except for the T.T. and in some cases for Brooklands—manufacturers do not build special machines for their competition riders. Success in competitions is far more often won by attention to *every* small detail than by secret and mysterious factory alterations, and the reason the average amateur is not successful is that he will not take the trouble that the trade rider takes to see that everything is exactly right. As a rule the advocates of such things as an Amateur Association—who nearly always hide their light under the bushel of anonymity—do not even begin to realise the difficulty of defining an amateur. I will, however, suggest a definition which should satisfy the most spartan-minded and—incidentally—exclude practically every keen and capable rider, so that the anonymous grousers should have little difficulty in carrying off a few of the pots which they find so elusive. "An amateur motor cyclist is one who has never received free advice or assistance in any form, whose machine has never been returned to the makers to be tuned or overhauled, who does all his own tuning, and who belongs to no motoring club or organisation." The last is necessary, because if he is a clubman he might have associated with some of those supermen—trade riders—and overheard them disclosing "secrets" of tune, which naturally the "genuine amateur" could not know.

J. M. PHILPOTT.

Sir,—I have followed with interest the correspondence in your columns under the above heading, which has mainly arisen in consequence of the very wise, and only possible, decision which the A.C.U. came to regarding the proposal to hold an Amateur Road Race on the day between the Junior and Senior T.T. races.

The majority of your correspondents seem to suggest that the A.C.U. refused permission under pressure from the manufacturers, and that this being the case it, the A.C.U., panders to the manufacturers, and therefore it is necessary, or desirable, that an Amateur Association should be formed.

As a member of the Competitions Committee, and as a member for many years of the General Committee of the A.C.U., I can most emphatically state that the manufacturers neither direct, control, nor influence the decisions of the Auto Cycle Union, which is a democratic body composed mainly of private riders, the very constitution of which does not permit of anyone connected with the manufacture of motor cycles being on its Competitions Committee.

As one very closely in touch with the motor cycle manufacturers, I can state very definitely that there have been times, many times, when the trade has been at variance with the Union as regards competitions, competition regulations, and even as regards the organisation of the T.T. itself, very often because the regulations were framed, so the trade thought, too much in the interest of the motor cyclists of the country, and not sufficiently in their own. It is only quite recently that the trade has been invited to place its views before the Union in connection with matters which might affect it, such as regulations covering the technical, as opposed to the sporting, side of trials, in order to avoid putting the trade to unnecessary expense, though such considerations would not be allowed to interfere with the decisions finally arrived at by the Union, if they were in any way against the interests of the motor cyclists of the country, or liable to interfere with the development of the motor cycle as a utility and sporting mount, which is one of the main objects of the Union. Your correspondents do not appear to realise the difficulties of running an amateur road race, or, what is more important still, of defining an amateur and ensuring that none but amateurs entered in such a race.

This is the biggest stumbling block of all, and I think I may safely say that the Competitions Committee of the Union, who discussed this question at very great length, and explored every avenue and every suggestion likely to overcome the difficulties, mainly came to its decision not to allow the race, because there were so many difficulties in the way, particularly at such short notice, and because, most of all, of the difficulty of ensuring that only amateurs, whom the Union is out to protect and whose interests it is furthering all the time, should compete.

The fact that the trade supports many of the trials organised by the Union and its affiliated clubs does not in the least signify that the trade has any control whatever, either directly or indirectly, over the Union. In fact, it can be most emphatically stated that this is not the case. The trials are open to all, whether trade or private riders.

The greatest difficulty which faces trials organisers is that of deciding who is an amateur and who is not.

Most of us remember the discussion there was some time ago on the subject of "Shamateurs," and the difficulties to-day are as great or greater than they were then.

The A.C.U. is a thoroughly democratic body, run mainly by amateurs and sporting motor cyclists, for amateurs, and I challenge anyone to disprove this statement.

J. VERNON BROOK,
Chairman, Midland Centre A.C.U.

LADIES IN RELIABILITY AND SPEED EVENTS. Elsewhere in this issue there appears an article on competition riding for lady motor cyclists, but already the sport is more popular with the fair sex than many realise. These attractive pictures are of (left) three ladies in an Exeter trial and (right) two in South Wales speed trials.

### PILLION RIDING INSURANCE RISKS.

Sir,—Now that pillion riding has been officially pronounced free from any additional risk, one is inclined to wonder what excuse insurance companies have for increasing premiums by half if pillion passengers are carried.

In view of the result of recent inquiries into the safety or otherwise of pillion riding, the increased charge would seem to be quite unjustifiable. "ARIEL."

Devon.

### 250 MILES IN A DAY WITH A TWO-STROKE.

Sir,—I read with interest your correspondent's, Mr. H. C. Sharp's, letter concerning the reliability of his Baby Triumph. Last year I purchased an Enfield two-stroke, and having heard that these "babies" were not much good for long-distance touring I decided to try for myself, and contradict this statement. Accordingly I undertook a journey from Chester (Cheshire) to Worthing (Sussex), and successfully accomplished this 250 mile journey in one day. Starting from Chester at 6 a.m. I arrived at Worthing at exactly 6.30 p.m., having made a non-stop run excepting one hour for lunch and only one road stop for a small puncture.

Chester. BABY ENFIELD.

### 4 H.P. AEROPLANES.

Sir,—I have read with interest the various correspondence on "4 h.p. Aeroplanes" that started as a consequence of "Ixion's" comment.

It is, of course, obvious from the point of view of both theory and practice that the 4 h.p. aeroplane is a long way off. I note that Mr. P. J. Robinson considers the h.p. limit is 16 h.p., and quotes the de Pischof machine as a good example. I think, however, that this figure could be considerably lowered if sufficient time and research were given to the subject. It is a matter of history that Mr. A. V. Roe, in 1909, flew with a triplane fitted with an 8-10 h.p. engine. I am open to correction on this last statement, but I know it was somewhere very near the 1,000 c.c. mark, and it was, if my memory still serves, a V-twin J.A.P. Would Messrs. Prestwich & Co. care to confirm?

In view of the extraordinary advance in aeronautics since the year 1909, I think that it is by no means an exaggeration to say that a 10 h.p. aeroplane of to-day would not only be practical but would also be very economical and satisfactory. All this, of course, assuming a single seater.

C. F. CAUNTER.

### CLIMBING JACOB'S LADDER.

Sir,—Your correspondent, Mr. Cyril Styning, writes you re the Jacob's Ladder road in Derbyshire. I was waiting to see who would "discover" this hill, as it has long been one of my favourite runs; although, I must admit, it is rather a strenuous occupation—not only up the hill, but down the other side to Kinder. I christened this latter side "crank case gully," as I always bash my silencer in on the projecting rocks. Mr. Styning possibly saw my wheel-marks.

I should say that this is the worst (or best) "discovered" Derbyshire hill as yet, but I know a good few places that "put the wind up" worse than the Ladder.

I should like to see a sidecar attempt.

For the benefit of those who are out for a bit of fun, the Jacob's Ladder is on the Edale-Hayfield road.

Does anyone know the gradient? P. H. DUDLEY.

### NEGLECTING THE SPORTING SIDE.

Sir,—The Amateur Road Race controversy and Mr. Rutherford's use of the oft-repeated contention that the T.T. races are held with the avowed object of "improving the breed" serve to emphasise the deplorable drift of motor sport into the realms of commercialism. Nowadays, competitions only too often are run more or less solely with the apparent object of providing advertisement matter for the makers. This would provide an incidental value to compensate for the deterioration of the purely sporting side, provided that machines strictly of the "same-as-you-can-buy" variety were used. Unfortunately, this is not done, and members of the public are faced with the option of basing their choice of a machine upon entirely false data, or of buying their experience as to which type suits their requirements best at very much their own expense. Roughly, the makers may be divided into two classes: (1) those who advertise their competition machines as being "perfectly standard," and (2) those who frankly make use of models which bear not the slightest resemblance to those offered to the public.

If genuine amateurs on machines bought in the ordinary way were given greater encouragement in competitions by the A.C.U., not only would the sport be placed upon a cleaner basis, but the buying public would have a reliable indication of the capabilities of the various motor cycles, and the makers, whose products really *were* superior, an invaluable advertisement.

In brief, one good performance by an amateur on a standard machine is worth, from the standpoint of advertising value, a cart-load of cups and trophies won by a professional mounted upon a machine "the-same-as-you-*cannot*-buy." INTERESTED.

Kent.

—/ —/ —/ —/

Sir,—I see from your report of the performances on Sheriffmuir Hill, in the recent Scottish trial, that a Mr. Watson-Bourne "pushed his big Brough-Superior up at speed." It was a large hill, and it seems to me that this was a most remarkable performance, for it is as much as I can do to push quite a small scooter up Dashwood. Perhaps he will tell me whether he prefers Oxo or Bovril when training, as I want to enter for a trial myself, but cannot decide which of these is the better preparation. I should be very grateful for his advice. BEGINNER.

Oxford.

P.S.—And does not his misfortune emphasise the need for some form of pedalling gear when a really severe trials course has to be negotiated, as in Scotland?

### SANS MAGNETO.

Sir,—Some time ago—I believe last year—a correspondent stated that his Levis had taken him to his destination quite nicely and that his magneto chain had been picked up a quarter of a mile away by a pedestrian, who saw it drop off.

To-day my Scott showed symptoms of pre-ignition—yes, they were mica plugs—so I stopped to change them. Having done so I could not restart.

After an exhaustive and exhausting investigation, I found I was minus the magneto chain, which any amount of hunting for a mile along the road failed to find. Nor was it in the bike.

Another correspondent (not in *The Motor Cycle*.—Ed.) says he knows a Scott which goes without oil and that he had owned one that was quite all right without water. Now if someone will cite an authentic case of running without petrol or like fuel we shall be quite certain that the Scott is the best bike. F. J. D.

Gloucester.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle.*

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle.*
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### TUNING UP FOR SPEED.

I have a 3½ h.p. Norton fitted with a Philipson Pulley. I wish to get it tuned up for very fast work. Will you kindly give me a few tips for doing so?—E.J.E.

There is nothing much you can do to the machine beyond seeing that everything is in perfect order, the valves ground in, rings in good condition, timing correct, and valve springs of adequate strength. Particular attention should, of course, be paid to such details as tappet adjustment, and experiments should be carried out as to the correct size of jet.

### LEAKY HEAD JOINTS.

I have experienced great trouble with the joint between the cylinder body and head of my engine; the packing repeatedly blows out. I have tried asbestos string and size, and various proprietary jointing mediums, all to no avail. I do not wish to go to the extreme of brazing or welding, unless this is the only way out of the difficulty.—D.F.

A proper copper and asbestos washer should be adequate. If the surfaces of the joint are clean and true there should be no difficulty in getting a gas-tight joint.

### METAL CLUTCH ADJUSTMENTS.

When taking down a 1918 B.S.A. gear box is it necessary to take the clutch worm off, and if so, after removing the worm nut, is the piece that holds the worm a cone? I have had all the nuts and wheels off the end plate, but I could not move this fitting. Has this gear box a cork clutch, and if so is an amateur able to repair it, or would you advise new plates, as I think mine are worn, as the machine will not start until given a push, even when the clutch is right in?—J.H.H.

Yes, before you can take off the clutch operating worm you must remove the small cone inside. The clutch consists of metal plates, and it is rather difficult to dismantle, and we would advise you to return the clutch complete to the makers for attention. Probably the plates are worn, or the springs may be weak; if the machine has had much use the trouble may be due to slight wear on the clutch shaft in the form of ridges on which the plates bind, and so do not close up properly

### TYRE SIZES AND SPEEDOMETERS.

I intend to fit oversize tyres to my machine; the present tyres are 650×65 mm. (1) Could I fit 28×3in. or 700×80 mm.? (2) Would this make any appreciable difference to the gear ratio or to a speedometer?—J.S.C.

(1) If the rims take 650×65 mm. tyres, the correct oversize is 700×80 mm. (2) A slight difference would be made to the speedometer reading.

### JET SIZES.

I ride a Scott with a Binks carburetter. What are the three best jets to use for sidecar work?—G.W.A.

The jets advised are 000, 2, and 7, or perhaps 8, for sidecar work. 000 should be the centre, No. 2 the right, and No. 7 or 8 left-hand. This, of course, is looking at the carburetter from the air intake. We should advise you, however, to experiment with various sizes, as no two engines are exactly alike.

### TWO-STROKE EFFICIENCY.

What is an extension pipe on a silencer for? My two-stroke has small holes in the end plates, but if an extension pipe is an advantage I want to fit one. Is variable ignition better than fixed ignition for a two-stroke?—E.E.

The use of an extension pipe is for further reducing the noise of the exhaust gases. Variable ignition is, on the whole, more satisfactory than fixed ignition.

### VALVE TIMING AND TAPPET CLEARANCE.

What is the correct valve timing and tappet clearances for a flat twin Wooler.—A.B.

The valve timing of the Wooler is quite a simple matter as the timing wheels are marked, and it is only necessary to get the marks "1," "1," and "0," "0" to correspond and the numbers truly in line. The valve clearance should be equal to the thickness of the blue cover of *The Motor Cycle*.

### MYSTERIOUS SPARKS.

I have a 1920 Harley Davidson (electric model), and on starting the engine, or when it is pulling over heavy roads, there are flashes just where the control lever fixes on to the distributor cap.—S.M.

The trouble is probably due to the fact that the fibre washer at the end of the rod, where it fixes on to the distributor cap, is cracked or missing, and this should therefore be replaced.

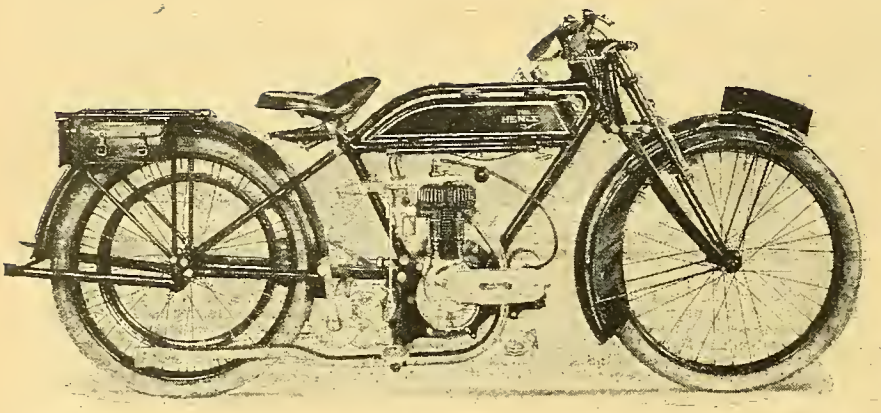
### CAUSE OF A SEIZURE.

Whilst riding a 1920 Triumph (chain-cum-belt) with passenger on pillion and doing fully 40 m.p.h., the engine stopped suddenly and the back wheel skidded 20 or 30 yards. I could find nothing wrong, and on restarting everything appeared to be in order. What was the cause?—H.H.W.

The trouble is due to pre-ignition owing to the use of a faulty or unsuitable plug. A piston seizure, even temporary, would leave its mark on the cylinder and piston.

## Important Dates.

**Thurs., June 1st—Senior Tourist Trophy Race.**
**Fri., June 2nd, and Sat., June 3rd—M.C.C. London-Edinburgh Run.**
**Mon., June 5th, to Sat., June 10th—Royal Scottish A.C. Light Car Trial.**
**Sat., June 10th—B.M.C.R.C. Open Meeting at Brooklands.**
**Sun., June 11th, to Mon., June 19th—Paris-Pyrenees Trial.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 Mile Sidecar Race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—M.C.C. Inter-club Team Trial for "The Motor Cycle" Cup.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Sat., Aug. 12th—Motor Cycle Races in Phœnix Park, Dublin.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**



In addition to the model last illustrated in "The Motor Cycle," the Henley is also obtainable with a Blackburne engine at £73 10s. solo, with three-speed gear and final belt drive.

### UNCERTAIN SPEEDOMETER READINGS.

The pointer of my speedometer has suddenly ceased to move evenly, and swings about all over the dial, the mean of the swing being approximately correct. I should be glad to know if this can be put right by some simple method, or whether it is a job for the makers.—E.H.L.

Undo the flexible tubing union underneath the instrument and squirt oil by means of a force feed oil can down the flexible tube, when we think you will find that the swinging of the needle will cease.

### VISIBLE SPARKS AND NOISY GEAR-CHANGING.

(1) Why (in damp weather more especially) can I plainly see a spark on the top of the carbon brushes of my magneto? The magneto in question is fitted to a 1917 Clyno. (2) I have difficulty also when starting off in engaging the low gear without a terrific grinding noise. Is the gear box lubrication at fault?—J.C.W.

(1) Probably this is a current leakage due to wet weather. New brush holders might cure the trouble. (2) The trouble is due to the clutch not being properly free before engaging the gear; it may be necessary to wash out the clutch with paraffin.

### REMOVING A TWIST GRIP CABLE.

I have a 1916 Harley-Davidson, and I cannot find a way to get a broken exhaust wire from the handle control (left grip). I have taken the cap from the handle, but there I am stuck, as there do not appear to be any other screws and nuts to come undone.

The procedure is as follows: Remove the large handlebar end screw and the grip comes straight off. Then remove the two small rollers and pins upon which it operates. Next, with a screwdiver push the handlebar plunger and control wire entirely out of the handlebar. Release the outer casing by removing the frame clip, and loosen the two sleeve screws which hold the control wires. Fit a new wire to the handlebar plunger, feed it through the outer casing, and re-assemble.

### ERRATIC ELECTRIC LIGHT.

A short time ago the accumulator of my Lucas lighting set did not keep its charge for more than three weeks, so I had to put it on a slow charge and add fresh acid. After this I did not use the machine for a couple of weeks, and then, on starting the engine and putting the switch into the "lamps" position, the head lamp rose to such a brilliancy that it fused. Also the electric horn sounded much louder than usual. The voltage appears to rise considerably above the ordinary six or seven volts. When the accumulator is used without the dynamo the light is not steady and flickers slightly, and the tone of the horn varies. Does the fault lie in the dynamo or the accumulator?—A.L.F.

The trouble is probably due to the following cause: bad or loose connections on the junction box or battery, so that the current from the dynamo, instead of going through this battery, is going direct to the lamps and burns them out. We should recommend you to look over all connections, tighten everything, put an ammeter in the circuit between the No. 5 wire and the terminal marked No. 5. Then start the engine and you will see whether the dynamo is charging or not.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned. Requests for experiences should be accompanied by a stamp.*

"J.H.R." (Walton).—Triumph Junior with W.S.R. variable jet.

"R.W.R." (Thanet).—Challenger, Jeff, etc., self-sealing tubes.

"A.R.S." (Manchester).—293 c.c. Connaught modifications to part design for speed; other timing limits; durability.

"H.E.R.M." (Winchester).—349 c.c. A.J.S; most suitable oil; easy starting; riding position; Showell pump; reliability.

## SPARKLETS.

### Six Nortons for Grand Prix.

Six Nortons in all have been entered for the Grand Prix, which will be run off near Strasbourg on July 12th.

### Duplicated Records.

When Emerson (494 Douglas) broke the 50 miles and hour records in Class C (500 c.c.), he also gained those in Class D (750 c.c.).

### Continental Extension of Tyre Makers.

Goodyear Tyres may now be purchased in Paris, the French company being known as La Société des Pneumatiques et Caoutchoucs Goodyear, 49, Rue de Ponthieu, Paris.

### Unbreakable Petrol Pipe Unions.

Specially soldered petrol pipe unions which are claimed to be unbreakable are made by W. G. Wilder, 16 and 17, Key Hill, Birmingham. A special type of hard solder is employed.

### How to Get to Epsom.

We are indebted to the A.A. for lucid maps showing how best to get to the Epsom Summer Meeting. This information will be gladly given to members who apply for it at Fanum House, Whitcomb Street, London, W.C.2.

### Tappet Clearances on Blackburne Engines.

For the purpose of accurately setting the valve clearance on Blackburne engines, Burney & Blackburne, Ltd., Atlas Works, Bookham, Surrey, supply a pair of gauges at the price of 1s. 2d., post free.

### Change of Address.

The manufacture of the Holroyd sports model motor cycle is now undertaken by J. S. Holroyd, Motor Engineer, East Street, Farnham, Surrey. Mr. Holroyd is also the manufacturer of an ingenious belt fastener and a transmission shock absorber.

### Bat Redivivus.

It would have been a pity had the manufacture of the Bat motor cycle been completely discontinued, as this machine has been almost continuously on the market since 1902. The stock and necessary plant of the old company have been acquired by Messrs. S. T. and F. H. Tessier, sons of H. T. Tessier, who conducted the manufacture successfully for many years; the business will be continued on the old lines. A complete range of J.A.P. spares will be carried, and repairs to J.A.P. engines will be undertaken, while a stock of Bat spares is being manufactured and will shortly be obtainable.

### Catalogues Received.

G.N. Motors, Ltd., East Hill, Wandsworth, London, S.W.18. An excellently illustrated and numbered spare parts list for G.N. cycle cars.

The Willowbrook Motor Co., Willowbrook Works, 282, Belgrave Gate, Leicester. A catalogue of Willowbrook sidecars of various types and prices, suitable for one or two persons. Sidecar fittings, such as hoods, screens, and side curtains are also listed.

THE FAMOUS

"JAMES"

Newcastle-on-Tyne,
March 21, 1922.

I might say although my "James" 4¼ H.P. is 1914 it still runs like a clock; have never had a stop on road through engine trouble. I have averaged about 100 miles each week-end this winter.

*Now write for full Catalogue illustrating this and other "James" models post free.*

**The JAMES CYCLE CO. Ltd.**

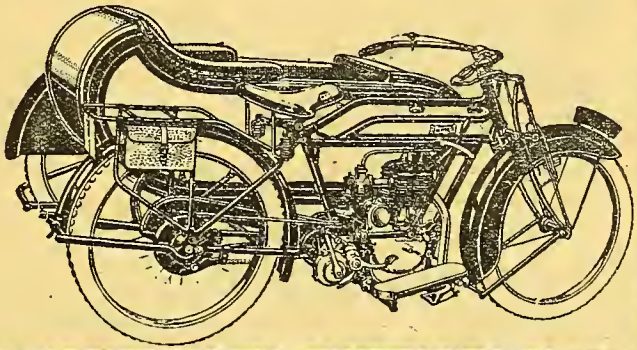
SHOWROOMS—
LONDON: 22, HOLBORN VIADUCT, E.C. 1
BIRMINGHAM: BROAD STREET CORNER.

**Model No. 6 4¼ h.p. Combination at - £135**

**IS THE ECONOMY TURN-OUT**

Powerful Big Single-cylinder Engine, 600 c.c., economical on oil and petrol. 3-speed countershaft gear and heel clutch, all-chain drive, etc.

**IMMEDIATE DELIVERY**



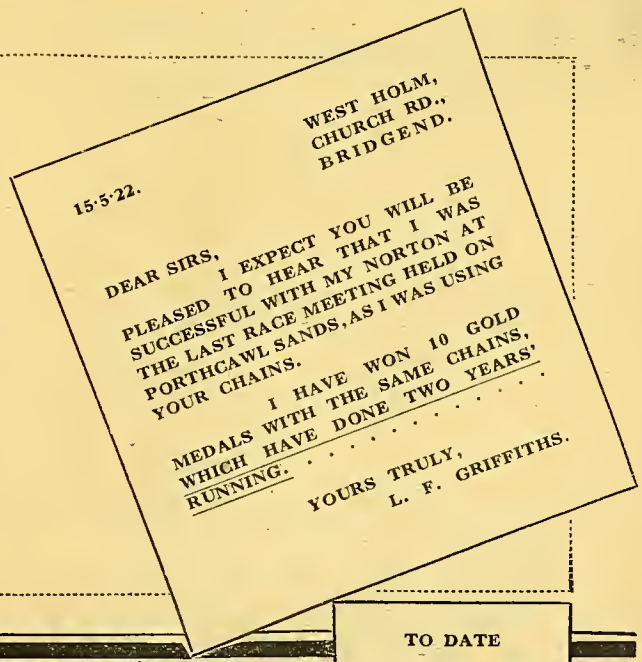
**10 GOLD MEDALS**

**WITH THE SAME CHAINS**

**"THE COVENTRY"**

**WATCH THE "RESULTS THAT TELL"**

"THE COVENTRY" CHAIN Co. LTD
COVENTRY——————ENGLAND
LONDON :: BIRMINGHAM :: MANCHESTER
NOTTINGHAM . NEWCASTLE . GLASGOW . BELFAST


WEST HOLM,
CHURCH RD.,
BRIDGEND.

15.5.22.

DEAR SIRS,

I EXPECT YOU WILL BE PLEASED TO HEAR THAT I WAS SUCCESSFUL WITH MY NORTON AT THE LAST RACE MEETING HELD ON PORTHCAWL SANDS, AS I WAS USING YOUR CHAINS.

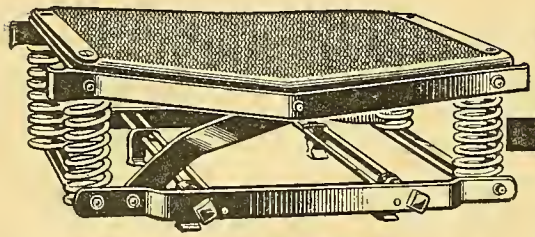
I HAVE WON 10 GOLD MEDALS WITH THE SAME CHAINS, WHICH HAVE DONE TWO YEARS' RUNNING.

YOURS TRULY,
L. F. GRIFFITHS.

UP TO LAST WEEK
3 FIRSTS
26 SECONDS
19 THIRDS

**"THE COVENTRY" CHAIN OF SUCCESS**

TO DATE
10 FIRSTS
28 SECONDS
21 THIRDS



# "Safety First"—then Comfort

The *safety* of Pillion Riding depends entirely upon the *Seat*. That "cushion on carrier" method is dangerous both to body and health. The safe way—the only way—is the Tan-Sad way.

Fit a Tan-Sad Pillion Seat to your Machine. The responsiveness of its springing to ev pothole, to every bump, frees the Pillion rider of the possibility of nerve-wrack, and obvi the Driver's risk of jolting his passenger off the Machine—even on the most potholed road

And isn't your passenger's *comfort* as important as your own? *Your* seat is sprung, is it?... Well, then, for safety's sake, for comfort's sake—fit a Tan-Sad.

**Price 30/-**

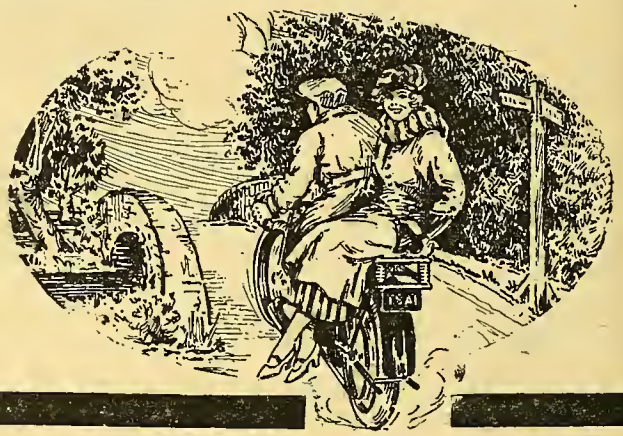
**Back Rest 7/- Foot Rest 5/- Handle 2/-**

Get particulars of the Tan-Sad Insurance Policy—it will protect you against all risks and provide a considerable saving, there being no extra premium for Pillion Riding.

*Get particulars straight away from your local agent or direct from*

**TAN-SAD, LTD.**
**FREEMAN ST.**
**BIRMINGHAM**

Makers of the famous Tan-Sad Chair and Pram (F. H. Headley's Inventions.)



# Grindlay

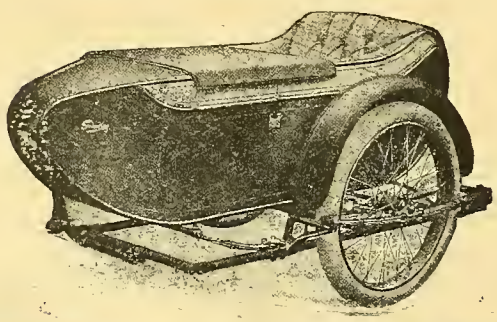
*"For the Rider who will have the best."*

**The sidecar SUPREME in appearance and comfort.**

Eight Models to choose from, for machines from 2¾ h.p. to 10 h.p.

**Prices to suit all purchasers, from £17 to £38.**

*A copy of our latest illustrated catalogue mailed free anywhere upon request.*



GRINDLAY (Coventry), Ltd., Melbourne Works, COVENTRY.

# MOSS BROS.

Hold the LARGEST STOCK OF SECONDHAND & NEW GENTS' CLOTHING IN LONDON:

**BLUE TRENCH COATS.**
WOOL GABARDINE.
**45/- & 52/6**
CHECK LINED. CHECK LINED & INTERLINED.

**OFFICERS' REGULATION TRENCH COATS**
CHECK LINED and OILSKIN INTERLINED **55/-** AND DETACHABLE FLEECE LINED.
THE CHEAPEST AND BEST COAT IN LONDON.

**HIGH-CLASS ALL WOOL SUITS**
**50/-, 60/-, 70/-, 80/- & 90/-**
IN THE LATEST DESIGNS IN BROWNS, BLUES & CHECKS.

| | |
|---|---|
| DINNER and DRESS SUITS | 55/- to 115/- |
| DINNER and DRESS JACKETS | 27/6 to 63/- |
| LOUNGE SUITS (Secondhand) | 30/- to 70/- |
| LOUNGE SUITS (New and Misfit) | 35/- to 90/- |
| BREECHES | 15/- to 45/- |
| SPORTS JACKETS | 15/- to 35/- |
| FLANNEL TROUSERS | 10/6 to 25/- |

ALL GOODS SENT ON SALE OR RETURN.
MONEY RETURNED IF DISSATISFIED.

Illustrated Price List and Self Measurement Form sent on application.
You make it your business to call. We make it *our* business to satisfy.

GENTS' CLOTHING BOUGHT, SOLD or TAKEN IN EXCHANGE

**MOSS BROS.** (Phone: PARK 4817)
**83-5, HIGH STREET, NOTTING HILL GATE, W.11**
**and 224, HIGH ROAD, KILBURN, N.W.6.**

# Radco

THE KING OF LIGHTWEIGHTS.

WRITE FOR BOOKLETS

## THE BEST VALUE FOR MONEY.

*We can give Prompt Delivery.*

THE WELLINGBORO' KETTERING, RUSHDEN AND DISTRICT RELIABILITY TRIAL.

**1st and 2nd in 250 c.c. Class with a**

**RADCO No. 2 and SPORTING MODEL**

THE REDDITCH SPEED TRIAL. **SILVER MEDAL.** One Entry.

No. 2 **34 Gns.**

London Agent:—
MAUDES' MOTOR MART
100, Gt. Portland Street, W.

London District Distributing Agent:—
T. BAXTER
36, Gt. Eastern St., E.C.

No. 1 **42 Gns.**

E. A. RADNALL & CO. - Dartmouth Street - BIRMINGHAM.

# YOU

WILL WANT TO SPEND YOUR WHITSUNTIDE in the OPEN AIR. cannot do it BETTER or CHEAPER.

**THEREFORE INVEST YOUR RAIL AND BUS FARE IN**

**THE $2\frac{1}{2}$ h.p. CALTHORPE LIGHTWEIGHT £36**

Read the *Daily Mail* of May 18th or *The Motor Cycle* of May 4th to learn its value, or ask your nearest agent who has one in stock or who knows all about it and place your order at once, so that you will not be disappointed.

Latest Successes **GOLD MEDAL,** etc.

Other models:—

| | |
|---|---|
| 3 h.p. 2-Stroke (2 Speed) .. .. .. .. .. .. | £60 |
| 3 h.p. Combination de Luxe (3 Speed) .. .. .. .. | £85 |

*Lists and name of nearest agent from*

**THE CALTHORPE MOTOR CYCLE CO.**

**LION WORKS, BAIN STREET - - - BIRMINGHAM.**

TELEGRAMS:
"MONTGOMERY SIDECARS COVENTRY."

TELEPHONE 470 COVENTRY

# MONTGOMERY SIDECARS

SOLE MANUFACTURERS:

## W. MONTGOMERY & CO.,

SIDECAR SPECIALISTS,

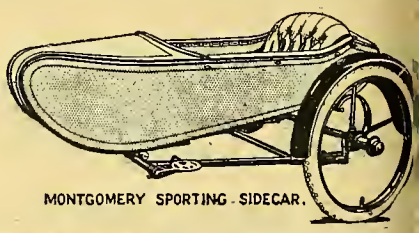
LEICESTER CAUSEWAY, COVENTRY.

SOLE PROPRIETOR:
W. MONTGOMERY.

**The Motor Cycle Manufacturer's idea of a Sidecar is a big, heavy affair whi slowly, but surely, wears the heart out of your engine and a big hole in your pocke**

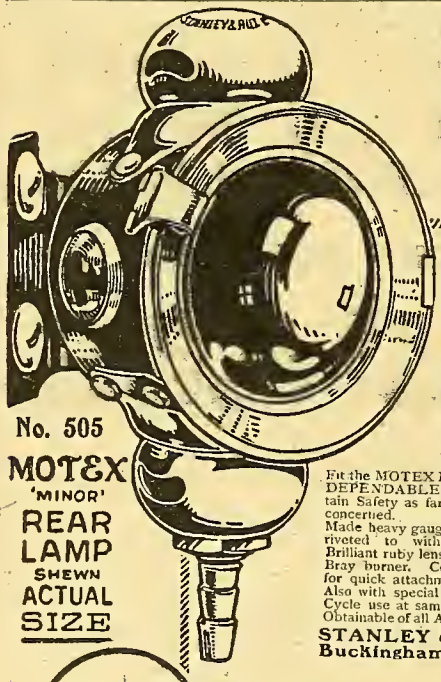
Montgomery Sidecars are the product of a firm who have specialised in Sidecars for over 20 years. Whatever make of Motor Cycle you choose, insist on a Montgomery Sidecar for distinguished appearance, easy steering, comfort of passenger, moderate cost and excellent road service.

*Art catalogue free on request.*



MONTGOMERY SPORTING SIDECAR.

**Price £23 10 0 complet**



# Safety First!

Don't carry "any old rear lamp," even though nights are shorter—such articles have a knack of going out at awkward moments!

No. 505
MOTEX
'MINOR'
REAR
LAMP
SHEWN
ACTUAL
SIZE

Fit the MOTEX Minor Rear Lamp—the DEPENDABLE model that spells Certain Safety as far as rear protection is concerned.
Made heavy gauge brass with all joints riveted to withstand hardest wear. Brilliant ruby lens, bull's eye lens at side. Bray burner. Complete with bracket for quick attachment to number plate. Also with special Rear Stay Clip for Cycle use at same price.
Obtainable of all Agents or direct.

STANLEY & HILL, LTD.
Buckingham St. B'ham.

PRICE 3/9

*Insist on* MOTEX Specialities.

B.H.8.

# A Special Line in Motor Cycling Suits.

We have no hesitation in claiming that our "Draperstyle" Motor Cycling Suits have no rival at the price. Satisfaction guaranteed or money refunded in full.

**C 50.**—Motor Cycling Suits, made from stout dark fawn material dustproof and rainproof, double-breasted Jacket, sleeves with storm straps at wrist. Slash pockets. The Leggings have special gussetted sides and straps to go under boot.

"All British" Factory Price. **23/6** Carriage Paid to your Door. The Suit Complete.

Stocked in sizes (Breast over Jacket): 34 36 38 40 42 44 ins.

**C 80.**—Motor Cycling Suit, comprising Man's full-cut double-breasted coat, double texture material storm collar, stormproof tab cuffs to tighten up when driving, thoroughly proof, rubber-proofed insulated edges. Seams sewn and taped. Detachable belt with slide buckles. Leggings of same double texture material spat front shaped—understrap for instep—tab tan shaped gussett outside, pateat clip fasteners at side. The gussett prevents either wind or rain from penetrating. Light in weight, thoroughly wind- and weather-proof, tailor-made, nothing on the market to equal it.

THE PROOFING IS GUARANTEED. Price **32/6.**

| Sizes. | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chest | 36 | 38 | 40 | 42 | 44 ins. | | |
| Length | 36 | 38 | 38 | 40 | 40 ins. | | |

Suit complete, **32/6.** If required with seatless trousers, **3/6** extra. (Jacket only, **21/6.** Leggings, **12/6.** Seatless Trousers, **16/3.**)

No. **C. 81.** Helmet, double texture, material guaranteed windproof and waterproof. Superior to leather helmets at three times the price, specially fitted with extensions at back to cover neck and come well down over the collar. Warm fleecy lining, adjustable strap under chin, special ear protectors to wear open or closed, peak at front, only **5/6** each.

**Illustrated Booklet Free.**

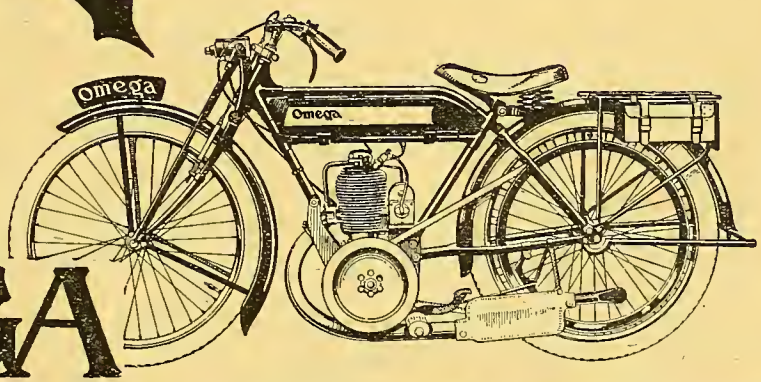
**ERNEST DRAPER & CO., LTD.,**
**54, "All British Works," NORTHAMPTON**

***Compare this 3 h.p. two-stroke at £39:10 with any other motor cycle on the market——***

Your decision will be the same as that of the many hundreds of Omega riders—but not until you have tried out and proved the wonderful efficiency and value of your Omega purchase will you fully appreciate the wisdom of your judgment.

*Get the New Catalogue NOW.*

Deferred Payments arranged.




# OMEGA

**J. J. GREEN, Ltd., Omega Works, COVENTRY,** And at 183a, Broad St., Birmingham. London Agents: BARTLETTS, 93, Gt. Portland St., W

# —MOTOR CYCLE CLOTHING OF DISTINCTION—

"TREWSO."

IMPERVIOUS TRADE MARK

## RITCHIE PATENT SPLIT OVERALLS

**In Two Styles—"TREWSO" and "TAB."** *Patent No.* 10677.

**Specially designed to meet the requirements of the business man, doctors, and all those wanting a quick on and off suit without soiling hands or clothes no matter how dirty the weather, and give absolute protection.**

"TREWSO" style are fastened with two long springs and tab at knee.

"TAB" style are fastened with four patent undamageable press studs.

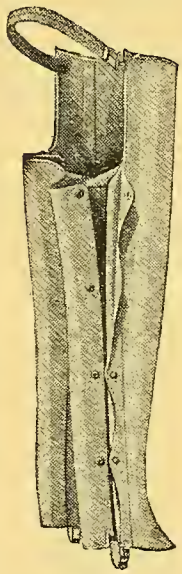
*Nothing "just as good." The world's best in workmanship.*

"IXION" in his "Occasional Comments" in "The Motor Cycle" says—"The best of its kind and I know of nothing to beat it."

**THE IMPERVIOUS WATERPROOF CLOTHING is guaranteed to keep you dry under all conditions of weather. All proofings guaranteed for two years against decomposition. The only clothing that stood the test in Copenhagen for the 200 miles Trials in a heavy downpour of rain.**

**Can be procured from all the principal Rubber Shops and large Retail Warehouses.**

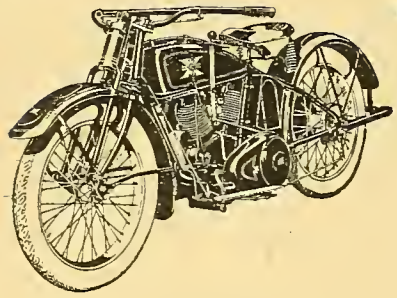
**Wholesale from all the principal Accessories Factors.**



"TAB."

*Sole Manufacturers:* **The IMPERVIOUS RUBBER Co., Ltd.,**

**38, FALFIELD STREET, GLASGOW.** Wholesale and Export Only. Telegrams: "Impervious, Glasgow."



The most advanced machine in the "big twin" class, *with electrical equipment*, is now obtainable at the startlingly low price of only

# £120

This is the price of the latest model

# AMERICAN "X"

This machine is ideal for either solo or sidecar work, having ample power and speed; the finish is now much improved, and the lubrication system has been re-designed, ensuring perfect lubrication in proportion to engine speed.

*Full details of this remarkable value-for-money twin will be sent on request to—*

**Melchior, Armstrong and Dessau (London), Ltd.,**
14E, Gt. Marlborough St.,
LONDON - - - W.1.

'Grams - "Melarm, London."
'Phone - - - Gerrard 2462.

---

# SPLIT LEGGINGS.

"I know of nothing to beat it, and it deserves to be better known."—*"Ixion" in "Motor Cycle" of 17th March in describing the "Split" Overalls.*

**The suit is put on and off in a few seconds, no pulling over dirty boots, nor soiling your hands.** They open right down outside of leg, and are fastened with two springs. There is absolute freedom and comfort, combined with neatness, and they are guaranteed to keep you dry under all conditions of weather. This is the only suit that kept out the terrible wet weather in the Reliability Trials at Copenhagen, when clothing was included in these trials.

*MADE IN TWO QUALITIES*

SUIT COMPLETE.

| | |
|---|---|
| **No. 1 Medium Weight** | **70/6** |
| **No. 2 Heavy ,,** | **75/-** |

LEGGINGS ONLY.

| | |
|---|---|
| **No. 1 Medium Weight** | **28/6** |
| **No. 2 Heavy ,,** | **30/-** |

**Postage 1/- extra.**

PAT. NO. 10577.

*When ordering give Chest, Waist, and Inside Leg Measurements.*

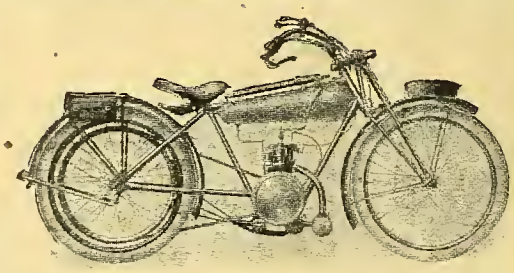
**HENRY A. MURTON, LTD.,**
**6 to 10, Grainger St., NEWCASTLE-ON-TYNE**

---

# VICTORIA

## *"The VALUE FOR MONEY" MOTOR CYCLE*

2½ h.p. 2-stroke lightweight model with Villiers engine (fixed gear) **38 gns.**



2-speed, countershaft gear.. .. **£45**

2-speed, countershaft gear with clutch and, kick-starter .. .. **£50**

*Particulars of this and other models obtainable from*

**VICTORIA MOTOR & CYCLE CO., LTD.,**
**Victoria Works, Dennistoun, GLASGOW.**
'Phone: 514 Bridgeton. 'Grams: "Bicycle, Glasgow."

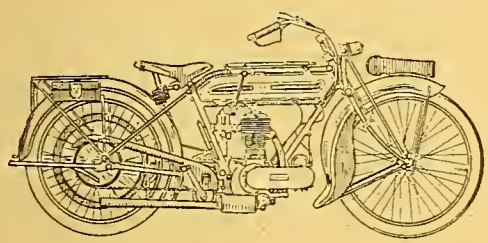
# *Buy on Deferred Terms from the great Store of*

# WHITELEYS

**The selection of Motor Cycles at Whiteleys is the best in London, and includes Triumph, B.S.A., Enfield, James, Martinsyde, New Imperial, O.K., Matchless, Blackburne, Lea-Francis, Douglas, Levis, Hazlewood, New Hudson, P. & M., Quadrant, Raleigh, Rudge, Sun, Zenith and Ner-a-Car—all side by side for critical examination.**

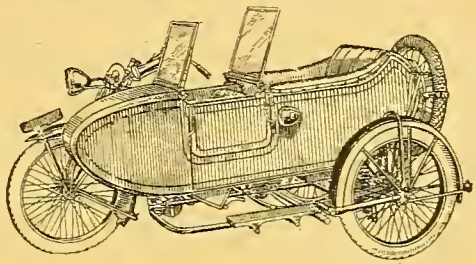
***Deferred Terms:*** 4% extra on the Cash Price is all that Whiteleys ask for the convenience of Deferred Payments. Whiteleys Motor Sales and, more important still, the Deferred Payment Plan (a system that Whiteleys originated) are entirely under the control of Whiteleys and free from outside influence of any kind.

*One-Fifth Deposit and Twelve equal monthly payments.*



## 1922 MODELS—SOLO

| | Cash. |
|---|---|
| **TRIUMPH,** 4 h.p., Model SD (as illustration) | £115 0 0 |
| **JAMES,** 3½ h.p., 3-speed, C/K.S. Deposit £21 16s. and 12 monthly payments of £7 5s. 8d. | £105 0 0 |
| **LEVIS,** 2¼ h.p., single-speed | £48 0 0 |
| **LEVIS,** 2¼ h.p., 2-speed, with clutch and K.S. | £60 0 0 |
| **DOUGLAS,** 2⅞ h.p., 2-speed, fully equipped | £68 0 0 |
| **DOUGLAS,** 2⅞ h.p., 3-speed, C/K.S., fully equipped | £82 0 0 |
| **NEW IMPERIAL,** 2⅞ h.p., 3-speed, C/K.S. | £69 0 0 |
| **NEW IMPERIAL,** 2⅞ h.p., all-chain, 3-speed, C/K.S. | £73 0 0 |
| **NEW IMPERIAL,** 2⅞ h.p., Model 5, Super Sports, 3-speed, C/K.S. | £80 0 0 |
| **O.K.-VILLIERS,** 2-stroke | £39 18 0 |
| **O.K.,** Mark XII, 2-speed, C/K.S. | £60 18 0 |
| **ENFIELD,** 2¼ h.p., 2-speed, 2-stroke | £55 0 0 |
| **ENFIELD,** 2½ h.p., 2-speed, C/K.S. | £57 0 0 |
| **OMEGA,** 3 h.p., Model 6 | £39 10 0 |
| **OMEGA,** 3 h.p., Model 6a, 2-speed | £45 10 0 |
| **ALLON,** 3 h.p., 2-speed, C/K.S. | £60 0 0 |
| **TRIUMPH,** 4 h.p., Model H | £105 0 0 |
| **B.S.A.,** 4½ h.p., Model K2 | £107 0 0 |
| **B.S.A.,** 4½ h.p., Model H2 | £110 0 0 |
| **JAMES,** 3½ h.p. twin, Model 7 | £105 0 0 |
| **JAMES,** 4½ h.p., Model 6 | £105 0 0 |
| **NEW HUDSON,** 2½ h.p., 2-speed, all-chain model | £63 0 0 |
| **MARTINSYDE,** 3½ h.p., sports model | £110 0 0 |
| **JAMES,** No. 8, 2¼ h.p., 2-speed | £55 0 0 |
| **JAMES,** No. 8a, 2¼ h.p., 2-speed, 2-stroke, C/K.S. | £60 0 0 |
| **SUN,** 2½ h.p., 2-speed, C/K.S. | £57 15 0 |
| **SUN,** 2½ h.p., J.A.P., 2-speed, with clutch and K.S. | £63 0 0 |
| **ZENITH-BRADSHAW,** 3½ h.p., variable gear | £113 0 0 |
| **LEA-FRANCIS,** 3½ h.p., 3-speed, C/K.S. | £110 0 0 |
| **O.K.,** Mark VI, 2-speed | £55 13 0 |
| **CALTHORPE,** 2½ h.p., single speed | £36 0 0 |
| **CALTHORPE,** 2½ h.p., 2-speed | £44 0 0 |
| **CALTHORPE,** 2½ h.p., 2-speed, with clutch | £45 0 0 |
| **CALTHORPE,** 2½ h.p., 2-speed, clutch and K.S. | £47 0 0 |
| **CONNAUGHT,** 2½ h.p., 2-speed, clutch and K.S. | £57 10 0 |

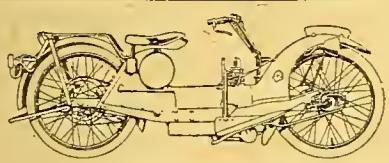


## 1922 COMBINATIONS

| | Cash. |
|---|---|
| **FAMILY MODEL COMBINATION** (or £35 16s. deposit and 12 monthly payments of £12 5s.) | £175 10 0 |
| **FAMILY MODEL COMBINATION.** Complete with dynamo lighting set, hood, two wind-screens, spare wheel and tyre, horn, leg-shield, and sidecar step. As illustrated (or £42 7s. 6d. deposit and 12 monthly payments of £14 16s. 8d.) | £211 17 6 |
| Model "J" **SPORTS SIDECAR COMBINATION** (or £32 deposit and 12 monthly payments of £11 4s.) | £160 0 0 |
| Model "H" **STANDARD COMBINATION** (or £34 deposit and 12 monthly payments of £11 18s.) | £170 0 0 |
| Model "H" **STANDARD COMBINATION.** Complete with dynamo lighting, hood, luggage carrier, spare wheel and tyre, sidecar step, leg guards, horn, and wind screen (or £41 1s. 6d. deposit and 12 monthly payments of £14 6s. 8d.) | £204 17 6 |
| **B.S.A.,** 4½ h.p., Model K2, with No. 3 Sidecar | £139 0 0 |
| **B.S.A.,** 4½ h.p., Model H.2, with No. 3 Sidecar | £142 0 0 |
| **JAMES,** 4½ h.p., Model 6, with coachbuilt Sidecar | £135 0 0 |
| **DOUGLAS,** 4 h.p., coachbuilt Sidecar | £138 0 0 |
| **JAMES,** 7 h.p., Model 10, coachbuilt de Luxe Sidecar | £160 0 0 |
| **ENFIELD,** 8 h.p., coachbuilt Sidecar | £140 0 0 |
| **BLACKBURNE,** 8 h.p., 3-speed, C/K.S., coachbuilt Sidecar | £152 5 0 |
| **HAZLEWOOD,** 5-6 h.p., 3-speed, C/K.S., coachbuilt S/c. | £118 0 0 |
| **B.S.A.,** 6 h.p., with No. 3 Sidecar | £164 0 0 |
| **MARTINSYDE,** 6 h.p., 3-speed, C/K.S., coachbuilt Sidecar | £160 0 0 |
| **OMEGA,** 3 h.p., 3-speed, C/K.S., coachbuilt Sidecar | £85 0 0 |

### 1921 SHOP-SOILED COMBINATIONS.

| | |
|---|---|
| **P. & M.,** 3½ h.p., coachbuilt Sidecar | £116 0 0 |
| **ROYAL RUBY,** 8 h.p., coachbuilt Sidecar, luggage carrier, Lucas lighting, wind-screen, spare wheel, sprtog frame | £175 0 0 |
| **READING STANDARD,** 3-speed, C/K.S., Plus One single or double Sidecar, electric lighting, etc. | £182 10 0 |



REDUCED PRICE—GENEROUS TERMS.

NER-A-CAR—a unique all-weather utility machine for lady's or gent's use—easy to handle, non-skidding, efficient and reliable ... ... ... ... ... ... ... **£65**

Or **£13 0 0** deposit and 12 monthly payments of **£4 11 0** (4% only extra for 12 months' credit accommodation).

## WM. WHITELEY LTD., QUEEN'S ROAD, LONDON, W.2.

## Bowns Light-weight Motor Cycles.

ENGLAND'S BEST,

FITTED WITH THE FAMOUS

Villiers, J.A.P., & Blackburne Engines

OTHER FITMENTS ALL OF THE BEST.

**Prices range from 38 Guineas to £75**

Latest Successes:—

COLMORE CUP TRIAL - - SILVER MEDAL
VICTORY CUP TRIAL - - GOLD MEDAL
MIDLAND CENTRE INTER CLUB TRIAL
Second best performance of the day, GOLD MEDAL
(the only one in its class).

AN INVITATION TO ENQUIRERS.

A Post-card addressed to our Head Offices giving your postal address, will ensure by return of post a fully illustrated catalogue, and the name and address of our nearest Agent to you.

Head Offices and Works:

**BOWNS, Limited,**

ÆOLUS WORKS, SUMMER LANE, BIRMINGHAM.

Telephonic Address: "Bownian, Birmingham."
'Phone No.: Central 3574.

# Sales Manager Wanted.

*A real chance for the right man.*

A WELL-KNOWN firm of Northern Motor Cycle Manufacturers, having big plans for the development of their already successful business, seeks a sales manager capable of carrying them out.

The machine is one of the best in the country with a fine record of successes. The manufacturers realise that they must pay the right man well, both in salary and a percentage on sales. Applications are invited from those possessing an intimate acquaintance with the trade, organising and constructive ability, and able to submit first class credentials.

*All communications (marked personal) will be treated in strictest confidence by*

THE MANAGING DIRECTOR,
St. James's Advertising and Publishing Co., Ltd.,
1, Wardour Street, London, W. 1.

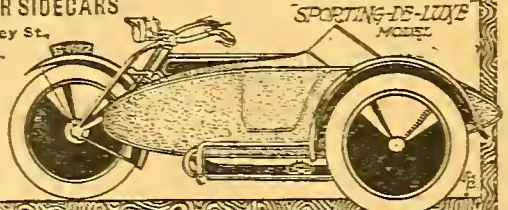
## BOWSER SIDECARS

Our 1922 models are designed for COMFORT & APPEARANCE, and those desirous of owning a smart Sporting Sidecar should order our "Sporting Model De-Luxe" as illustrated) at £28 - 0 - 0, windscreen and disc wheel extra. The "BOWSER" Original Two-seater Sidecar is £36 - 10 - 0.

*Send for Catalogue illustrating various models to—*

BOWSER SIDECARS
46, Burley St.,
LEEDS.

'Phone: 25479 Leeds.

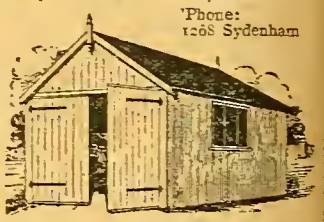



## A. TURRELL & SONS, PORTABLE BUILDING WORKS. FOREST HILL, S.E.23.

'Phone: 1208 Sydenham

| Length. | Width. | Height to Ridge | Height to Eaves | £ | s. | d. |
|---|---|---|---|---|---|---|
| ft. | ft. | ft. in. | ft. in. | | | |
| 7 | 5 | 7 0 | 5 0 | 7 | 5 | 0 |
| 8 | 6 | 7 6 | 5 3 | 9 | 0 | 0 |
| 9 | 7 | 8 0 | 5 6 | 11 | 7 | 0 |
| 10 | 8 | 8 4 | 5 9 | 12 | 19 | 0 |
| 12 | 8 | 8 4 | 6 0 | 17 | 5 | 0 |
| 14 | 8 | 8 7 | 6 3 | 21 | 0 | 0 |
| 16 | 9 | 8 9 | 6 4 | 26 | 0 | 0 |
| 18 | 9 | 8 9 | 6 4 | 31 | 0 | 0 |
| 20 | 10 | 9 0 | 6 6 | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ⅞in. tongued and grooved matchboards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed: 21oz. glass. Flooring: Strong joists, one inch boards. All bolts supplied for erecting house.

## USE "DRAGONFLY" MOTOR OILS AND GREASES

*Know your Speed & Mileage!*

Model 42 *(as illustrated)*—Black finish. Nickel-plated bezel. Indicates speeds to 60 miles per hour. Total mileage counter to 10,000 and repeats. Quickly reset trip-counter.

Price £6 5 0 (or without trip model 40) £5 15 0

Back wheel drive for Triumph, 5s. extra. Back wheel drive for Indian or Harley-Davidson, 10s. extra.

*Manufactured by*
NORTH & SONS, Ltd., WATFORD, & 14, Soho sq., London, W.1

NORTH'S BRITISH MADE Watford SPEEDOMETERS for Motor Cycles.

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

ADVERTISEMENTS in these columns First 12 words 3 –, and 3d. for every ad- ional word. Paragraphs of under 3 words e charged double rate. Each paragraph is arged separately. Name and address must counted. Series discounts, conditions, and ecial terms to regular trade advertisers will quoted on application.

Postal Orders and Cheques sent in payment for vertisements should be made payable & Co. LIFFE & SONS Ltd., and crossed easury Notes, being untraceable if lost in nsit, should not be sent as remittances.

All advertisements in this section should be ompanied with remittance, and be addressed the offices of "The Motor Cycle," Dorset ouse, Tudor Street, London, E.C.4. To sure insertion letters should be posted in ne to reach the offices of "The Motor Cycle," the first post on Friday morning previous to e day of issue. Advertisements that arrive o late for a particular issue or that are owded out will automatically be inserted in e following issue unless accompanied by tructions to the contrary.

All letters relating to advertisements should ote the number which is printed at the end of h advertisement, and the date of the issue which it appeared.

The proprietors are not responsible for clerical printers' errors, although every care is taken void mistakes.

## NUMBERED ADDRESSES.

or the convenience of advertisers, letters may be ressed to numbers at "The Motor Cycle" Office. en this is desired, the sum of 6d. to defray the cost of stration and to cover postage on replies must be added he advertisement charge, which must include the ds Box 000, c/o "The Motor Cycle." Only the number appear in the advertisement. All replies should be ressed No. 000, c/o "The Motor Cycle," Dorset House, or Street, London, E.C.4. *Readers who reply to Box No. rtisements are warned against sending remittance through ost except in registered envelopes; in all such cases the of the Deposit System is recommended, and the envelope ld be clearly marked "Deposit Department."*

the case of motor cycles offered for sale under a box ber, as it is unusual for these to be sold without first g inspected by the intending purchaser, advertisers will likate business by embodying in their advertisements e mention of the district in which the machine ed may be seen and tried.

## DEPOSIT SYSTEM.

sons who hesitate to send money to unknown persons deal in perfect safety by availing themselves of our osit System. If the money be deposited with "The or Cycle," both parties are advised of this receipt. he time allowed for a decision after receipt of the s is three days, and if a sale is effected we remit the unt to the seller, but, if not, we return the amount e depositor. Carriage is to be paid by the buyer, but e event of no sale each party pays carriage one way. seller takes the risk of damage in transit. For all sactions up to £10, a deposit fee of 1 - is charged; on sactions over £10 and under £50, the fee is 2/6; over and under £75, 5 -; over £75 and under £100, 7/6; on all transactions over £100, 1%. All deposit ers are dealt with at Dorset House, Tudor Street, on, E.C.4, and cheques and money orders should be e payable to Iliffe & Sons Limited.

he letter "D" at the end of an advertisement is an ation that the advertiser is willing to avail himself of Deposit System. Other advertisers may be equally ous, but have not advised us to that effect.

## SPECIAL NOTE.

Readers who reply to advertisements and receive no er to their enquiries are requested to regard the s as an indication that the goods advertised have dy been disposed of. Advertisers often receive so y enquiries that it is quite impossible to reply to one by post.

## MOTOR CYCLES FOR SALE.

### A.B.C.

21 A.B.C., dynamo lighting, speedometer, as new; £80.—Ratcliffe Bros., 200, Gt. Portland St., [3099

*It would help you*

in selecting a new machine to have before you in convenient form a list of all the most popular motor cycles and combinations.

## "1922 MODELS"

is a booklet we have just issued giving brief details of all these machines and showing the latest list price of each. It also explains in detail how the purchase of a motor cycle under our deferred payment system is carried out.

Let us send you this booklet and follow it up with fully illustrated catalogues of the selection from which you decide to make your final choice.

If you have a machine that you wish to exchange we shall be pleased to allow you a fair price for it in part payment for a new one.

Our stock list of

## SECONDHAND MACHINES

contains an excellent variety of makes and models.

Shall we post you a copy?

It is a rigid rule of our business to completely overhaul every second-hand motor cycle we offer, and we issue a full guarantee with each. You can, therefore, be quite certain of the reliability of any machine purchased from us.

Our deferred payment system applies to second-hand motors as well as new ones.

## The Eastern Garage Co.

(Official Repairers to R.A.C., A.C.U., A.A. and M.U.),

418, Romford Road, Forest Gate, E.7.

Telephone: 490 East Ham. Telegrams: "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C. 1921, brand new; what offers?—Randall, Andover. [3981

58 GNS.—1920-21 A.B.C., all accessories, perfect; taxed December.—40, Aylmer Rd., W.12. [3966

A.B.C., 1921, condition as new, very fast; bargain, £85.—57, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [3941

A.B.C., July, 1921, 2 speeds, clutch, lamps, tools, spares, 2,000 miles, new condition; £85.—12, Leaside Av., Muswell Hill, N.10. [3952

ROBERTSON'S Motors, Ltd.—1921 A.B.C., new in 1920, standard, with Henderson sidecar, accessories, £70.—157b, Gt. Portland St., W.1. [3872

A.B.C. Combination, 1921, Swan, dynamo, speedometer, new Dunlops, tax December, splendid, nearest £105; approbation.—4, Thurston Mews, Dorset Sq., N.W.1. [3964

19[21] A.B.C., dynamo model, electric lamps, horn, excellent condition, just overhauled, guaranteed perfect; owner hard up; £70, near offer.—Box 1533, c/o *The Motor Cycle*. [3534

A.B.C., perfect condition, just overhauled and tuned Sopwiths, dynamo lighting and horn, owner ordered abroad, ride reasonable distance; £67.—Messenger, 98 Co., Aldershot. [3541

*Spare Parts:*

A.B.C. Spares.—We are the largest stockists of these parts. Trade supplied.—Maudes' Motor Mart, 150, Great Portland St., W.1. [3930

### Abingdon.

ABINGDON King Dick 3½h.p., T.T. bars, N.S.U. gear, perfect; £60.—137, Kings Cross Rd., London. [3856

### A.E.L.

PERFECTLY New 1922 A.E.L.-Jap 2½h.p., 3-speed clutch, kick start; accept £65.—138, Vernon Rd., Sydenham, S.E. [3949

### A.J.S.

2¾h.p. A.J.S.; £35.—Goudge's, Fallowfield, Manchester. [3125

CROSS is Agent for A.J.S.'s in Rotherham.—New 7h.p. combs from stock. [3263

A.J.S. 7h.p., Model B1, in stock; £35.—Crow Bros., Guildford. 'Phone: 254. [3992

2¾h.p. (this season), A.J.S., just from works; £35, plus carriage.—Randall, Andover. [3884

A.J.S. 1920 7h.p. Combination, in stock.—Moore, College St., Long Eaton. 'Phone: 300. [3772

A.J.S. 1922 7h.p. sports and 7h.p. Combinations in stock.—Clifford Motories, Eastwood, Notts. [3506

DAN GUY, Weymouth.—1922 7h.p. A.J.S. Combination, £175, in stock. Dorset trade supplied. [3817

19[22] A.J.S. Combination, fast, overhauled, must sell; £50.—6, Cyril Mansions, Battersea Park. [3200

2¾h.p. 1921 late A.J.S., Lucas equipment; £75.—Godfrey's Garage, Cricklade Rd., Ilford. [3788

19[16] A.J.S. 7h.p. 2-speed, K.S., good condition, tax; nearest £45.—Benn, 32, Vernon St., Nelson. [3543

A.J.S. 8h.p. Combination, new, with spare wheel; £165.—Hadley, Gunnersbury. 'Phone: 1561 Chiswick. [3888

MOFFAT, Yeovil, Official A.J.S. Agents.—Get in touch with us for prompt deliveries. Exchanges. 'Phone: 50. [3703

LATE 1920 A.J.S. Combination, original specs., £125; since 1921, £135.—24, Baptist Rd., North Kensington. [3801

STANLEY'S.—8h.p. A.J.S., Model B1, delivery early June.—173-4, Railway Approach, Shepherd's Bush. [3787

19[21] A.J.S. Combination, very completely equipped, mileage under 5,000, tax paid; £150.—Gibbs, Fawcett St., York. [3857

A.J.S. 8h.p. Touring, delivered this month, unridden, full licence; £85.—3, Observatory Rd., East Sheen, S.W.14. [3850

BRAND New 1922 8h.p. A.J.S. Sports B1, in stock; £85.—Walters Motor Cycle Co., Saffron Walden. 'Phone: 45. [3851

2¾h.p. A.J.S., 2-speed, clutch, appearance and condition like new; £40; fully equipped.—28, Portland St., Leamington Spa. [3139

A.J.S. Combination, 1919, lamps, speedometer, all accessories, spare wheel; bargain, £87 10.—Lester, Radcliffe, Buckingham. [3887

A.J.S. Cambridgeshire Service Agents.—All models from stock; complete stock spares.—King and Harper, Bridge St., Cambridge. [3745

A.J.S. 1917 Combination, 8h.p., spare wheel, speedometer, hood, and screen; £85.—1, Kensington Rd., Staple Hill, Bristol. [3428

## MOTOR CYCLES FOR SALE.

### A.J.S.

IN Stock.—1922 7h.p. A.J.S. Combination; £183; including spare wheel, screen.—D. and S. Autocar Co., 33, The Parade, Golders Green. [2213

A.J.S. 1920 Combination, as new, screen, spare wheel, speedometer, etc.; £120.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [2229

6h.p. A.J.S. Combination, new 1921, small mileage, lamps, horn, spare wheel, perfect, tax paid.—Seed, 2, Garstang Rd., Fulwood, Preston. [1157

FOR A.J.S. 1922 models, 2¾h.p. solo, or 7h.p. combinations, get in touch with the N. London agents.—Jones Garage, The Broadway, Muswell Hill. [0785

A.J.S. 7h.p. Combination; £175.—Secure delivery for Whitsuntide by placing your order with P. J. Evans, John Bright St., Birmingham. [1536

7h.p. A.J.S. Combination, 1921, spare wheel, windscreen, lamps, horn, speedometer, perfect condition; £165.—D.R., 113, George St., Edinburgh. [1232

ROBERTSON'S Motors, Ltd.—1921 A.J.S. electric combination, luxuriously appointed, Bonniksen speedometer; £150.—157b, Gt. Portland St., W.1. [6073

1922 Semi-Sports 2¾h.p. A.J.S., total mileage 150, licence and spares cost £16; first cheque for £90 secures.—W. P. Edwards, 58, East St., Taunton. [1315

A.J.S. Combination, 1920, hood, pillion, low mileage, like new, perfect, fully equipped, tax paid; £120.—35, Mount Pleasant Rd., New Malden, Surrey. [1718

A.J.S. 1920 late Combination, spare wheel, hood, screen, Lucas lamps, lovely condition; £115.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [1970

SOUTHPORT.—1917 A.J.S. 6h.p. Combination, spare wheel, all accessories, hood, luggage grid, Tan-Sad, taxed; £80; exchanges.—Kent's, 417, Lord St., Southport. [1921

£50.—A.J.S. Combination 5-6h.p., all chain, 2 speeds, clutch, kick starter, Canoelet touring sidecar, fully equipped, splendid condition; exchanges.—63, Solon Rd., Brixton. [1882

1921 A.J.S. 2¾h.p., mileage 348, sports model, Bonniksen, horn, knee grips, tax paid; £85.—Homac's, 243, Lower Clapton Rd., Clapton, N.E. 'Phone: Dalston 2408. [2108

1922 A.J.S. Semi-sports, 600 miles, fully equipped; £87/10, or exchange 1922 A.B.C., Ricardo Triumph, or semi-sports Sunbeam; Kent Coast.—Box 1659, c/o *The Motor Cycle*. (P) [2252

1920 A.J.S. Combination, hood, screen, spare wheel, speedometer, lamps, Binks, etc., just overhauled; perfect, any trial; private owner; £120.—Pitman, 152, Barcombe Avenue, Streatham Hill. [1612

A.J.S. 1921 7h.p. Combination, Lucas electric lighting, electric horn, speedometer, hood, side curtains, spare wheel, small mileage, good condition, tax paid; £150.—Hudson, 20, Balby Rd., Doncaster. [1858

1920 A.J.S. Combination, perfect order, new condition, hood, side curtains, spare wheel, Tan-Sad, speedometer, Lucas horn, accumulator lighting; £115; no offers.—"Woodside," Cambridge Park, East Twickenham. [1847

1921 7-9h.p. A.J.S. Solo bought last November, lamps, horn, tools complete, licence and insurance paid, run about 200 miles, practically new, suitable for sidecar; £110.—Shirley, Chalgrove Rd., Sutton, Surrey. [1633

1920 (Aug.) A.J.S. Combination, guaranteed indistinguishable from new, just overhauled at makers costing £30, spare wheel, etc., Lucas, accessories; bargain, £135.—31, Claremont Rd., Alexandra Park, Manchester. [1120

1920¾ A.J.S. 6h.p. Combination, dynamo model, lavishly equipped, Cowey speedometer and horn, side screen, hood, Terry saddle, Tan-Sad, re-enamelled, recently overhauled by makers; any trial; insured, tax paid; £135.—Dumas, Longford, Cannock. [6633

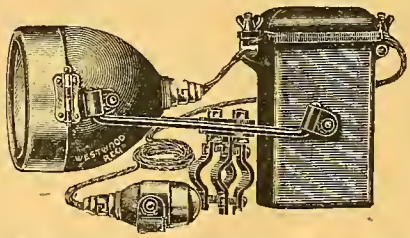
1921 A.J.S. Combination, dynamo lighting, electric horn, bnlb horn, sidecar, side screen, apron, legshields, low mileage, perfect condition and appearance, trial and inspection invited: £150, or nearest.—Garman, Gardener, Boxted, Colchester. [1464

LATE 1921 A.J.S. 7h.p. Combination, mileage 3,000, tyres good, spare wheel, electric lights, hood, speedometer, licensed December 31st, 1922, bargain, £160; also 1920, good condition, £125.—198, King St., Hammersmith. 'Phone: Hammersmith 2474. [1898

A.J.S. Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4925

A.J.S. 1920 6h.p. Combination, excellent condition, complete accessories, spare wheel, speedometer, Binks carburetter, hand and foot clutch, pillion seat, special platform, carefully driven, Easting screen, full tax paid, fully insured: £110; ready to drive away.—Apply, H. G. Gosselin, 333, Ewell Rd., Surbiton. 'Phone: Kingston 1779. [1516

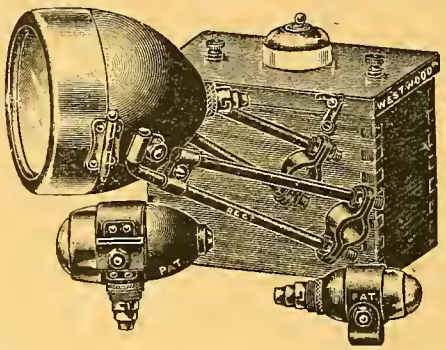
## "DAYBEAM" Electric Solo Set




The Headlamp supplied with this set is our 5in. Daybeam, a very powerful light-giver. The brackets are of exceptionally strong and handsome design. They carry the headlamp and also the (die cast) aluminium case. The accumulator is specially made for motor cycle lighting, and will brilliantly illuminate the head and the rear lamp for 20 hours if used intermittently. The tail lamp (our torpedo S.B.C.) is exceptionally strong and well made, and has a very attractive appearance. Each lamp is fitted with a switch, and one lamp may be used independently of the other. The outfit is despatched completely assembled, and 4 volt bulbs are fitted. The finish is ebony black and nickel plate.

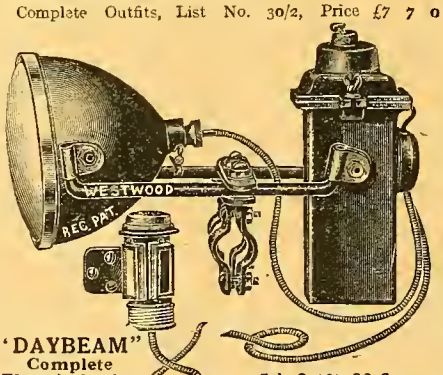
Complete Outfit, List No. 30/1, Price £5 5 0

## "DAYBEAM" Combination Set




The set comprises Daybeam 5in. Headlamp, Ideal Sidecar Lamp, and Torpedo S.B.C. Tail Lamp. Each lamp is fitted with an independent switch, and is finished in ebony black with nickel-plated relief. The Accumulator (capacity, 6 volt, 40 amp.) is specially made for motor cycle lighting and will give very satisfactory service in use.

Complete Outfits, List No. 30/2, Price £7 7 0




**"DAYBEAM" Complete Electric Set for Lightweights.**

Solo Outfit, £3 3s.
Combination Outfit, £3 15s

**—WRITE FOR LIST NO. 7—**

***Westwood Special Lines are stocked by all reputable agents.***

TRADE MARK
**WESTWOOD**
RIM & PATENTS LTD
LAWDEN RD BORDESLEY BIRMINGHAM.

## MOTOR CYCLES FOR SALE.

### A.J.S.

A.J.S. 6h.p. Combination, interchangeable wheel speed, recently overhauled, enamelled and pl £82/10; call for trial.—George, "Captain C Howard Rd., Stoke Newington, N.16. [

A.J.S. 1917 6h.p. Combination, perfect mecha condition, exceptionally well cared for, ap ance as new, all accessories, also Cameo windsc hood, hood cover, apron, spare wheel (all interch able), luggage grid, trip speedometer, Best-Lloyd matic lubrication, electric light, tax, insurance, trial; seen Richmond, Surrey; best offer secu Write, C.L.B., c/o Streets, 30, Cornhill, E.C.3. [

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, St., Ealing. [

### Alldays.

1919 Alldays' Allon, 2-speed, clutch, very sn £32/10.—67, Fernlea Rd., Balham. [

£20.—Allon 2¾h.p., single speed, re-enamelled plated, bargain.—61, Grand Parade, Harri [

KICKHAM, Stokes Croft, Bristol, Sole Dis Agent for Alloos; unequalled service, rep etc. [

ALLDAYS' Matchless 4h.p., 2-speed, clutch, B B. and B., fast, taxed; £25.—15, Elm Park, ton Hill. [

NEW Allday Allon, 2-speed, K.S., hand clutch, mediate delivery; £60; exchanges.—Percy Co., 314, Euston Rd. [

ALLDAYS' Allon, 2¾h.p., Albion 2-speed gears, engine, new engine, Binks unused carburetter, tyres; £33.—68, Gloucester Rd., Camden Town. [

ALLON 2¾h.p., 2-speed, 1921, new engine, done 300, used for demonstration, lamp, £35.—85, Revelstoke Rd., Wimbledon Park, S.W.1 [

ALLDAYS' Allon 2¾h.p., 2-speed, clutch, la horn, speedometer, etc., tax paid, splendid co tion; bargain, £30.—Totland, Station Rd., Orpin Kent. [

1921 Allon 2¾h.p., 2 speeds, C. and K.S., equipped, tax paid; £52/10.—Homac's, Lower Clapton Rd., Clapton, N.E. 'Phone: Dal 2408. [

ALLDAYS' 2-stroke, in first-class condition, t etc., as new, fully equipped, taxed, take 2 where; £27/10.—Ward, 51, Upper Richmond Putney. [

WAUCHOPE'S, 9, Shoe Lane, London.—Allon stroke new 1922 motor cycles, 2-speed model, £60; 3-speed gear model, £65; easy paym and exchange. [

1920 (late) Alldays'-Allon, 2-speed, clutch, f equipped, with Tan-Sad, perfect order, starter, any trial; £42/10.—Birkinger, 28, Fallowc Avenue, North Finchley, N.12. [

ALLDAYS' Matchless 4h.p., 3-speed gear box, h all chain, Bosch, fitted Douglas underslung car, good condition, reliable; bargain, £45; after 11, Kersley Mews, Battersea Park. [

### American X.

AMERICAN X, 1920, Montgomery sidecar, driven about 1,000 miles, all on; £105.— London Rd., Thornton Heath. [

ROBERTSON'S Motors, Ltd.—1921 American shop-soiled, £88; 1921 combination, accesso tax paid, £115.—157b, Gt. Portland St., W.1. [

7-9h.p. American X Combination, 2-seater side as new, hood, screen, accessories, tax paid, me nically perfect; £75, or offer.—92, King's Cross W.C. [

7-9h.p. American X Combination, hood, screen, tric lighting, E.H. Dunlops, chain-drive, f eqnipped; bargain, £50.—Boot Maker, 4, College Cheshunt. [

AMERICAN X, 1921 8h.p. Coachbuilt Combinat done only 2,500 miles, licensed, insured, Co speedometer and all accessories, spare tyre, chain plugs, good tool kit and Royal Easting screen; £ or offer; must sell.—W. Durell, London Rd., R ham, Kent. [

### Antoine.

ANTOINE 3½h.p., m.o.v., less magneto; £ Capt. Collins, Sunbury Common. [

### Ariel.

ARIELS at Gourlay's, Fallowfield, Manchester. [

ARIELS from Stock from the live agents, Bar and Son, Monton, Eccles. Tel.: 160 Eccles [

F.O.C.H. have 1920 3½h.p. Ariel Combinat fully equipped; bargain.—5, Heath St., Ha stead (near Tube). [

ARIEL, immediate delivery, Combinations £115. Cash or deferred.—Pion's Garage, High St., Fulham. [

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### B.S.A.

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond ., Ealing. [7539

H Promptest Firm for B.S.A. Spares.—Forfield tors, Forfield Place, Leamington Spa. [3161

B.S.A. Spares can be had by return, post free, n Jones Garage, B.S.A. Agents and Spares rvi Depot Broadway, Muswell Hill, N.10. [0805

H B.S.A. Specialists—On the Spot.—Our spares vice is unrivalled—write for catalogue!—County cl od Motor Co., Broad St., Birmingham. [4677

REYS', Ltd., 208, Great Portland St., London l.—Complete stock of all B.S.A. spare part. in stock. Write for free spare part list, stating ar manufacture. [0750

### Calcott.

-Calcott 2¾h.p., good condition, accessories, ns splendid.—143, Ravensbury Rd., Earlsfield, [2182

### Calthorpe

CHORPE 2-stroke, 2-speed, new tyre, speedo- ter; £18.—P. Willcocks, Datchet, Bucks. [1672

THORPE, 2¾h.p. J.A.P., late 1919, 2-speed, od condition; £30.—Spark, Hyde, Wareham. [1296

THORPE 3h.p. 1920 2-stroke, 2-speed, excellent odition; £40.—Rogers, 42, Church Rd., Hen- [1891

p. Calthorpe-Jap, 2-speed, 1919, lamps, horn, good condition.—Sydney, Hampton Rd., Wor- Park. [1329

Calthorpe 2-stroke 2½h.p.; immediate de- very; £36; exchange.—Percy and Co., 314, Rd., N.W. [9655

p. Calthorpe, 2-stroke, 2-speed, fully equipped, perfect condition, cost £60; accept £35.—Sim- Pimlico, Hemel Hempstead, Herts. [2218

THORPE-PRECISION 2½h.p., 2 speeds, free, ountershaft, lamps, horn, mirror, etc., running splendid bargain, £20.—91, Fairfield Rd., Bow. [1270

THORPE-J.A.P. 1916 2¾h.p., 2-speed, clutch, uipped, liceosed, excellent condition; £27, bar- after 7.—Gray, 52, Sumatra Rd., West Hamp- [1227

p. Calthorpe-Jap 1917-18, Enfield 2-speed, per- fect condition, spare chains and belt, horn, leg- , liceosed; £30.—"Ferndale," Albert Park Rd., rn. [1928

AGAIN.—3½h.p. Calthorpe, variable gear, nearly new tyres, lamps, liceosed, beautiful condition, il enamel, smart; £27/10.—89, East Hill, sworth. [2144

p. Calthorpe-Precision, new tyres, Mabon countershaft gear, Amac, Bosch, lamps, taxed, , all oo; £35, or nearest.—4, Furley Cottages, Sq., Peckham, S.E.15. [1770

### Carfield.

CFIELD 1920 2¾h.p., 2-stroke, 2-speed, lamps, etc., tip-top condition; £33.—Urquhart, 371, ield Rd., Earlsfield, S.W. [2368

### Cedos.

CKHAM, Stokes Croft, Bristol, Sole District Agent for Cedos; unequalled service, repairs. [3149

### Chater-Lea

21 Chater-Lea 8h.p., Lucas Magdyno, spare wheel, 2-seater sidecar, hood, screen, Tan-Sad; —29, Brixton Hill. [1598

ATER-LEA 4h.p. Combination, coach sidecar, 2- speed, clutch, tax paid, guaranteed; £39.—295, ow Rd., Paddington. [1354

ATER-LEA Combination 8h.p. J.A.P., 3-speed; 58 gns.; take lower power part; any trial.—57, ury St., Camberwell, London. [2241

ATER-LEA 4h.p. J.A.P. Combination, 3-speed, clutch, excellent condition, coach sidecar, tax, n; £70.—25, Gayhurst Rd., Dalston, E.8. [1647

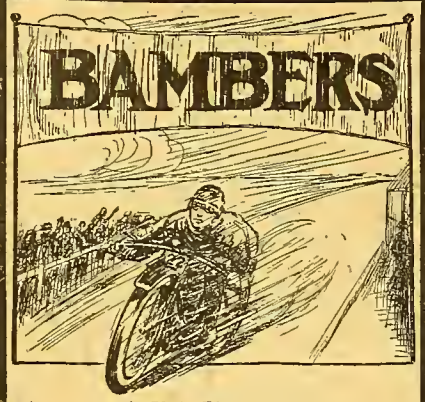
ATER-LEA 2-seater, 9h.p. J.A.P. engine, practically new, 3-speed and reverse, tax and aace paid; 70 gns.—"Milestones," Rydens Rd., oo-on-Thames. [2508

ATER-LEA 8h.p. Twin Sporting Solo or Sidecar, belt drive, single gear, adjustable pulley, fast ine, good condition; solo, £45; extra sidecar, £5. Banner St., London, E.C.1. [9434

ATER-LEA 1920 8h.p. Combination, 3-speed gear box, plate clutch, electric horn and lights, screen and apron, spring seat; £100; exchange 2-stroke and cash.—G. Plummer, 111, Wood St., hamstow. [1719

### Chater-Precision.

ATER-PRECISION Combination, 3-speed, clutch, Bosch magneto, coachbuilt sidecar, Orto screen, Sad, electric light, licensed, hardly used, con- as new; 65 gns. or offer.—Thatcher, 106, Fircroft Tooting. [1714


ALWAYS

FIRST

NO WAITING.

The FOLLOWING NEW MODELS ACTUALLY IN STOCK.

COMBINATIONS.

| | | | |
|---|---|---|---|
| 1922 7 | h.p. | **A.J.S.** Comb. | £175 |
| 1922 8 | h.p. | **ENFIELD** Comb. | £140 |
| 1922 8 | h.p. | **ENFIELD** Comb., dynamo | £158 |
| 1922 4 | h.p. | **DOUGLAS** Comb. | £135 |
| 1922 6 | h.p. | **DOUGLAS** Comb. | £165 |
| 1922 8 | h.p. | **MATCHLESS** Comb. | £170 |
| 1922 6 | h.p. | **B.S.A.** Comb. | £164 |
| 1922 4½ | h.p. | **B.S.A.** Comb. | £142 |
| 1922 3½ | h.p. | **ARIEL** Comb. | £125 |

SOLO.

| | | | |
|---|---|---|---|
| 1922 2¾ | h.p. | **DOUGLAS,** all on | £68 |
| 1922 2¾ | h.p. | **DOUGLAS,** 3-speed, K.S. | £82 |
| 1922 3½ | h.p. | **DOUGLAS,** Sports | £115 |
| 1922 2½ | h.p. | **ENFIELD,** 2-speed | £55 |
| 1922 3½ | h.p. | **NORTON,** 16H | £115 |
| 1922 3½ | h.p. | **ARIEL,** 3-speed, K.S. | £95 |
| 1922 4½ | h.p. | **B.S.A.,** All chain | £110 |
| 1922 4 | h.p. | **TRIUMPH,** Model H | £105 |
| 1922 4 | h.p. | **TRIUMPH,** All chain | £115 |
| 1922 3½ | h.p. | **ROVER,** All chain | £100 |
| 1922 3½ | h.p. | **ZENITH-BRADSHAW** | £119 |

ANY MAKE SUPPLIED.

HIGHEST PRICES ALLOWED FOR SECONDHAND MACHINES IN PART EXCHANGE.

A FEW OF OUR RELIABLE SECONDHAND MACHINES.

| | | | |
|---|---|---|---|
| 1922 2½ | h.p. | **ENFIELD,** shop-soiled | £50 |
| 1921 7 | h.p. | **A.J.S.** Comb., 2-seater | £150 |
| 1921 8 | h.p. | **ENFIELD** Comb., dynamo | £130 |
| 1921 5-6 | h.p. | **ROVER** Comb., All chain | £120 |
| 1921 4½ | h.p. | **B.S.A.** Comb., as new | £105 |
| 1921 7-9 | h.p. | **INDIAN** Comb., perfect | £110 |
| 1920 6 | h.p. | **ENFIELD** Comb., a gift | £105 |
| 1920 5-6 | h.p. | **RUDGE** Comb., as new | £80 |
| 1920 3½ | h.p. | **METRO-TYLER,** S-type | £50 |
| 1920 2¾ | h.p. | **EDMUND,** 2-speed | £45 |

SEVERAL MORE.

DEFERRED PAYMENTS

R. BAMBER & Co., Ltd.,

2, EASTBANK ST.,

'Phone 607. SOUTHPORT.


## MOTOR CYCLES FOR SALE.

### Clyno

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. Clyno, 1919, 2-speed; £37/10. [2404

£25.—5-6h.p. Clyno, 2 speeds, clutch, K.S., good running order.—King, Egrove, Oxford. [2070

CLYNO Combination, 1918, spare wheel, Lucas accessories, any trial; £69.—42, Southsea Av., Watford. [1657

1917 6h.p. Clyno Combination, 3-speed, K.S., detachables, spare wheel; £45.—Capt. Collins, Sudbury Common. [2297

6h.p. Twin Clyno and Cancelet Sidecar, re-enamelled and plated, 2-speed, electric light; £50, near offer.—21, Woodbury St., Tooting. [1703

CLYNO Combination, 1918, splendid order, lamps, Easting, spare wheel; £55, or near offer.—Duff, 50, Haydon Park Rd., Wimbledon. [1455

CLYNO 1918 Combination, discs, hood, screen, spare wheel, wants cylinder, piston, connecting rod; £40, offers.—Kemrod, Garage, Garratt Lane, Tooting. [1228

1918 Clyno Combination, 3-speed, 4 detachable wheels, hood, and apron, fully equipped; £47/10.—204, Ladbroke Grove, W.10. 'Phone: Park 5541. [1711

CLYNO 6h.p. Combination, guaranteed mechanical condition, 3-speed, all on, black and gold; reasonable offer; seen any time.—48, Orlando Rd., Clapham Common. [1658

CLYNO 6h.p. Combination, spare wheel, all wheels interchangeable, 3 speeds, clutch, kick starter; £48, complete.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [2438

CLYNO 5-6h.p. Combination, 1913, bulbous sidecar, lamps, speedometer, horn, licensed, excellent puller, £50; or exchange lightweight and cash.—Cross, 3a, Queen St., Oxford. [1156

CLYNO 1920 2-stroke, 2-speed, clutch, Cox Atmos, electric lighting, Klaxon, speedometer, tyres unpunctured, 2,500, tax paid, mechanically perfect; £37. —C., 117, Inverness Terrace, Bayswater. After 5.30. [1691

LATE 6h.p. Clyno Combination, 3-speed, clutch, kick start, coachbuilt sidecar, electric lighting, Bosch, hood, screen, spare, grid, Klaxon, superb condition, taxed, insured, gift; £68.—Oscroft, 212, Bow Rd., E.3. [2345

CLYNO 5-6h.p., 1916-17 models, rebuilt, replated, enamelled black, 3 speeds, kick start, foot clutch, interchangeable wheels, chain drive, aluminium cases; combinations, £68; solo, £57, as new; deferred terms or exchanges. One commercial 4 cwt. carrier, £75.—Hearn Bros., 94, Brixton Hill, S.W.2. [6224

*Spare Parts:*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7540

### Connaught.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. Connaught, 1921, 2-speed; £45. [2405

2½h.p., 2-stroke, 2-speed, just overhauled, perfect condition; £25.—34, Hereford Rd., Westbourne Grove. [2086

CONNAUGHT 1920 2½h.p., Sturmey-Archer 2-speed, clutch, kick start, good condition, spare tyre, tax paid; £40.—Phillips, 32, Leigham St., Plymouth. [1506

1922 Connaught, the super 2-stroke, for sidecar or solo; cash or easy terms; inquiries invited.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3259

CONNAUGHT 2¾h.p., 2-speed, clutch, K.S., lamps, horn, pillion seat, dress guard, tax for year, carefully driven for 1 year only, original front new back tyre, first-class running order; owner buying car; £45; Derby.—Box 1648, c/o *The Motor Cycle.* [1528

### Cotton.

COTTON 2¾h.p. 2-stroke, 2-speed gear, brand new, 1921 model; £49.—Hopkins, New St., Ledbury. [2469

### Coulson.

39 GNS.—1920 Coulson B, 2-speed, equipped, taxed, snip.—284, South Lambeth Rd., Stockwell. [2323

1920 Coulson-Blackburne, 2¾h.p., 2-speed, brand new, shop-soiled only; £65.—Jones, 28, Lichfield St., Wolverhampton. [1330

1920 Coulson B 2¾h.p., 2-speed, spring frame, good condition, equipped, taxed, accessories.—Morling, 9, Blatchington Rd., Seaford. [1637

COULSON 4h.p. 1920, 2-speed, E.I.C., Capac, electric light, horn, tools, condition and running order good; £40.—Seymour, St. Mary's, Chatham. [1644

1921 Coulson-Blackburne, 2¾h.p., 3-speed, kick start, spring frame, equipped, year's tax; 53 gns.—Peter Gordon, Limited, 110, Upper Richmond Rd., East Sheen. Exchanges. Photograph. [2381

## MOTOR CYCLES FOR SALE.

### Coventry Eagle.

COVENTRY EAGLE 1915 2½h.p., 2-stroke, 2-speed, overhauled by makers, electric lighting, perfect order; £28.—26, Webbs Rd., Battersea Rise, S.W. [1860

COVENTRY EAGLE, 1921, 2¾h.p. J.A.P., Sturmey, fully equipped, tax, spares, better than new, any trial; £43.—Linzell, 108, Carlingford Rd., West Green. [1518

1920 Coventry Eagle, 3½h.p., Abingdon King Dick, countershaft, fully equipped, splendid condition, under 3,000, tax paid; £60 or offer.—Harris, "Ardlui," Avonmore Avenue, Guildford. [1321

COVENTRY EAGLE, 1921, 2½h.p. Villiers engine, flywheel, magneto, Amac, Sturmey-Archer gearbox, 2-speed, clutch, kick start, 2 Miller lighting sets, horn, etc., new tyres, aluminium footboards, mileage 1,000, tax paid 1923, machine as new; £40, exchange.—284, St. James's Rd., Old Kent Rd., S.E.1. [2344

### Coventry Victor.

1922 6-7h.p. Coventry Victor Combination, demonstration machine, as new; £120.—London Agents, Storer and Tait, 20, Bourdon St., Bond St., W.1. [1076

### Daim.

DAIM, 2-stroke, 2-speed, 1918, tax paid, all on; £30.—Apply at shop, 67, Hammersmith Rd., W.14. [2008

### Dayton.

2h.p. Dayton 2-stroke Lightweight, weight 100 lbs., splendid running order, lamps, tax, etc.; £14.—82, Mill Hill Rd., Acton, W.3. [2080

### De Luxe.

DE LUXE 2¾h.p., 2-speed, late model, perfect; would pull sidecar; sacrifice, £27, near offer.—35, Bective Rd., Putney, S.W. [1570

THE Finest Value in the Motor World lies in the superlative De Luxe Barr and Stroud. We can save you £25 on the complete machine. See "Parts" advertisement.—Motorities, 191, Sweetman St., Wolverhampton. [2300

### Diamond.

DIAMOND Barr and Stroud Sports Model, in stock; 81 gns.—Moss, Wem. [2105

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Diamonds; unequalled service, repairs, etc. [3146

DIAMOND-J.A.P., 2¾h.p., 2-speed gear, 1921 model, excellent condition; £36, cash.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [2440

ROBERTSON'S Motors, Ltd., are the London and Home Counties Agents for the famous Diamond motor cycles, fitted with Barr and Stroud or J.A.P. engines.—157b, Great Portland St., W.1. [8443

### Douglas.

£17 Cash,

12 MONTHLY Payments of £4/11, will secure a brand new fully guaranteed 1922 model Douglas, 2¾h.p., 2-speed, including lamps, horn, etc., ready for the road.

ALL other models on similar terms. Write for proposal form and full particulars.

A. H. LAKEMAN, Ltd., Douglas Distributors, 26, Long Acre, London, W.C.2. [6342

DOUGLAS, all models, at Gourlay's, Fallowfield, Manchester. [1197

1917 Douglas 2¾h.p., 2-speed, as new; £37.—143, North End, Croydon. [1493

DOUGLAS 4h.p. Combination, good condition; £75.—Hopkins, New St., Ledbury. [2475

DOUGLAS 1918 2¾h.p., accessories, ride away; £40, or offer.—Stern, Lincoln, Oxford. [1186

£33.—3-speed 1915 2¾h.p. Douglas, clutch, K.S., tax paid.—King, Egrove, Oxford. [2069

1915 T.T. Douglas 2¾h.p.; £31.—Navarino, Salisbury Av., N.3. 'Phone: 1119 Finchley. [1787

2¾h.p. Douglas, 2-speed, 1918; £38.—Rhind and Co., Stone Place, Rusholme, Manchester. [2489

DOUGLAS 1922 3½h.p., all on, sports, new; £115.—Ginger, Douglas Agent, Banbury. [9591

1918 4h.p. Douglas, 3-speed, clutch, kick start; £47.—21, Linton Crescent, Hastings. [1692

1919 4h.p. Douglas Combination, as new; £65.—24, Balliol Rd., North Kensington. [1822

DOUGLAS 2¾h.p., 2-speed, 1915, disc, sporty; £35.—45, Bolton Terrace, Lewisham. [1680

1921 4h.p. Douglas Combination; £90.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [1804

DOUGLAS 2¾h.p., late model, fully equipped, excellent; £30.—17, Heaton Rd., Mitcham. [1862

DOUGLAS, 2¾h.p., 2-speed, 1915, all on; £32, appointment.—72, Lillington St., Victoria. [2309

DOUGLAS 2¾h.p., brand new, unregistered, must sell; 45 gns.—4, Devonshire Rd., Holloway. [1963

33⅓ MORE MILEAGE ■

A REAL RUBBER NON-SKID

MOTOR CYCLE COVER.

has been designed to withstand the kick of any motor cycle engine yet made and to last out any other make. These covers are a combination of everything that is best in tyre manufacture based upon expert knowledge obtained during the past 12 years we have been advertising motor cycle tyres of various makes in this journal.

THE ELITE SUPER NON-SKID

is a true non-skid, not merely a fancy pattern, as we have embodied all the true principles that go to make a non-skid—viz., Side Ribs, Cross Bars and Suction Cups.

THE ELITE SUPER NON-SKID GUARANTEES YOU AT LEAST 33⅓% MORE MILEAGE

than you have obtained from any other make, no matter what the price.

As certain sizes will shortly be withdrawn from all manufacturers' lists as non-standard, we have not laid down moulds in the Super Non-skid pattern; but for the convenience of our customers have made arrangements to supply these non-standard sizes in a Three-Ribbed Pattern which is exactly of the same construction and weight.

| ELITE SUPER NON-SKID COVERS. | | | ELITE THREE-RIBBED COVERS | | |
|---|---|---|---|---|---|
| Size. | Cover. | Tube. | Size. | Cover. | Tube. |
| 26×2¼ | 37/6 | 8/9 | 26×2 | 36/- | 6/3 |
| 26×2½ / ×2¼ | 49/6 | 8/3 | 26×2½ / 26×2¼ | 47/6 | 7/3 |
| 28×3 | 62/6 | 9/6 | for 2½ rims | 49/6 | 8/3 |
| 26×3 or 700×80 | 59/6 | 8/9 | | | |

SEND YOUR ORDER TO-DAY & FITONE READY FOR WHITSUN

ORDER THE ELITE RUBBER Co. LTD. Tyre Specialists WAY

The Name The Firm

LONDON'S LEADING TYRE HOUSE

266, Vauxhall Bridge Road, Victoria, S.W.1.

Telephones: Victoria 6553 and 6554.

Steele Publicity.


## MOTOR CYCLES FOR SALE.

### Douglas

KNIGHT and Wheatley, Official Douglas Agent Coulsdon and District; models in stock.—B

2½h.p., 2-speed, £68; 2¾h.p., 3-speed, clutch, £82; 4h.p. solo, £110; 4h.p. combination, 6h.p. combination, £165.—Below.

ALL Models are fully equipped; deferred payr arranged; your present machine taken in exchange.—Below.

CALL at our showrooms and let us fix you o Whitsun.—4, The Pavement, Coulsdon, S 'Phone: Purley 1277.

2¾h.p. Douglas, 2 speeds, perfect condition, little used; £40.—16, Gainsboro' Rd., Cre

DOUGLAS 2¾h.p., 1917, as new, not done miles; £38.—Durant, Lower Bourne, Farnh

DOUGLAS 2¾h.p., 2-speed, all brand new; 47 few only left.—Clark, 7, Exhibition Rd., S.

DOUGLAS Combination, licensed, fully equi excellent condition, cheap.—47, Silchester Rd

DOUGLAS 1920 2¾h.p., 2-speed, as new; £ Longman Bros., 17, Bond St., Ealing. 689.

DOUGLAS 2¾h.p., 1915, good mechanically, t £30.—Johnson, 192, Belsize Rd., West H stead.

DOUGLAS 2¾h.p., 2-speed, thoroughly overha excellent condition; £40.—Snelling, Co Kent.

DOUGLAS 4h.p. 1918 Combination, fully equi Binks, Easting; £60.—46, Vernon Gardens, Kings.

1921 Douglas 2¾h.p., 2-speed, taxed, insured tember; £47/10, or offer.—Dr. Millar, caster.

1914 2¾h.p. Douglas, 2 speeds, lamps, etc., did condition; £34.—225, Willesden N.W.2.

DOUGLAS 2¾h.p., 1916, splendid condition, tyres, all accessories; £45.—Crook, Salf Horley.

4h.p. Douglas 1916, 3-speed, clutch, K.S., re overhauled; £45.—50, Undine St., To S.W.17.

DOUGLAS 1915 2¾h.p., good tyres, excellent dition; £28.—2, Palmerston Rd., Southf S.W.18.

DOUGLAS 1917 Model 2¾h.p., 3-speed, first condition throughout; £45.—Hopkins, New Ledbury.

1914 Douglas 2¾h.p., in first-class condition, la horn, speedometer; £33.—Macmillan, K Langley.

DOUGLAS Combination 1920 4h.p., fully equi clutch, kick start, fine condition.—40, Th Rd., Erith.

BRAND new 2¾h.p. 2-speed Douglases; 47 exchanges entertained.—Clark, 7, Exhibi Rd., S.W.7.

1918 Douglas Combination, 4h.p., electric ligh speedometer, tax paid; £60.—107, Greyh Rd., Fulham.

4h.p. Douglas Combination, fully equipped, ex tional condition; £58/10.—71, Windermere South Ealing.

1916 2¾h.p. Douglas, equipped, tax paid, good dition; £40, or nearest.—R. Hobby, High Milford, Hants.

DOUGLAS Combination, splendid condition; after 7 p.m.—Wilkins, 41, Crusoe Rd., Mitch Tel.: City 628.

DOUGLAS.—1922 models for immediate deliv Cash, exchange, or deferred payments.— Kays Bond St., Ealing.

2¾h.p. Douglas 1915, Wooler 1921, sell, excha what offers?—Write, B., 14, Lambton West Wimbledon.

DOUGLAS 2¾h.p., 2-speed, 1921, fully equip licence paid; £58.—Ratcliffe Bros., 200, Portland St., W.1.

1920 2¾h.p. 3-speed Douglas and accessories, good condition; £55.—Bounds Garage, High Rd., Kilburn.

2¾h.p. Douglas, 2 speeds, perfect condition throu out, including tyres; £28 lowest.—106, Chu St., Chelsea, S.W.3.

1917 (late, not W.D.), overhauled, P. and lamps, very fast; £38/10.—34, Hereford Westbourne Grove.

DOUGLAS 2¾h.p., perfect, fast, 1913, trial, re for trip; £23, near; after 6.—37, Leam ton Rd. Villas, W.11.

DOUGLAS 2¾h.p., smart, good condition, tax p all on; £42, or nearest.—323, Earlsfield Wandsworth, S.W.18.

## ...TOR CYCLES FOR SALE.

### Hobart.

T-VILLIERS 1919 2¾h.p., speedometer, , etc.; £28.—74, Fairview Rd., Stamford . [1497

'win Hobart (countershaft), 2-speed and kick t, tax paid; £28.—26, Tulse Hill, Brixton. Brixton 1292. [2209

T, new, shop soiled, single speed, £39; 2- kick start, £59.—Shepherd, Enfield High- : Waltham X 31. [0875

T-J.A.P., spring frame, 2-speed, clutch and starter; cost £94 April 21st; mileage 2,500; 0 gns.—Ruffett, Toddington, Beds. [1857

Hobarts, all models. Catalogues with asure from the agent, Sam E. Clapham 27, Stockwell St., Greenwich, S.E.10. [4633

### Humber.

mber Twin 2¾h.p., fast.—71, Foster Hill Bedford. [1764

sh.—2¾h.p. Twin Humber, suit learner; ain.—89, East Hill, Wandsworth. [2145

Humber, 2-speed, excellent order, gears new; 3/10.—37, Lowther Rd., Brighton. [1333

Humber, discs, long exhaust, ride away; 9.—Fox, 301, Hornsey Rd., Holloway, N.19. [1357

ER-CENTAUR 1914 3½h.p., runs excellently, pped, taxed; £19.—Clark, 7, Exhibition Rd., [4610

ER Combination, good condition, go any- e, ride away, tax paid; £28.—19, Chaldon am. [1173

mber, good condition, running order; £17, offer.—Heaven, The Elms, Driffield, r, Glos. [1689

ER 3½h.p., 2-speed, clutch, in perfect condi- take sidecar anywhere; accept £17.—H. dley, Staffs. [1912

ER Combination 3½h.p., 2-speed, windscreen, ssories, spares; £35.—Churchman, 39, Ken- Rd., Clapton. [1477

ER 4¼h.p. Sports Model, £100; immediate ery.—Shepherd and Co., Enfield Highway. ltham Cross 31. [0877

ER Combination 1919 flat twin, perfect r; £75.—56, Lordship Lane, Tottenham. Tottenham 2067. [1666

ER, 3½h.p., 2-speed gear, free engine, splen- condition; £15 cash.—74, Brighton Rd., Sur- hone: Kingston 3025. [2441

ER, 3½h.p., 3-speed, clutch, starter, perfect, on; £46; with cosy re-decorated sidecar, Queen St., Southminster. [1336

ER 3½h.p. Combination, 2-speed, quickly achable sidecar, accessories; £30.—68, Derby k) Rd., Forest Gate, E.7. [1610

ER 4½h.p. Flat Twin Combination, new nine, slightly shop-soiled; £125.—P. J. ohn Bright St., Birmingham. [1541

ER Flat Twin Combination, every possible ssory, new condition, tax paid; £90.—Wil- Sack Rd., Upper Clapton, E.5. [1748

ER 1914 3½h.p., 3-speed, clutch, K.S., ad- able pulley, unused till 1921, coachbuilt £50.—Wean, 67, Telford Avenue, Streatham [1613

—2¾h.p. Twin Humber-Centaur, perfect, ne rebushed, Bosch; exchange for similar ars, cash.—Goodacre, 3, Brothertoft Rd., [1501

ER 3½h.p., 2-speed, free engine, handle start, h sidecar, tax paid, lamps, all on, any trial; Woodford Rd., Forest Gate. 'Phone: Mary- 3. [1951

ER Lightweight, 4-stroke, perfect order, es excellent, ride away; owner bought com- absolute gift; £20, or offer.—113, Kenil- venue, Wimbledon. [1596

(late) 3½h.p. Flat Twin 3-speed Humber cle, with passenger and carrier sidecars, tax year, perfect condition; 75 gns.—Can be seen ntment at Mugswell Farm, Coulsdon, Chip- rrey. [6340

### Indian.

CHOPE'S, 9, Shoe Lane, London, for new ians on easy terms. [2427

Indian, perfect condition, new, clutch; £40. ar, Newton, Thornbury, Glos. [2032

7-9h.p. Indian Combination, dynamo light- g; £70; no offers.—Catt, Jnr., Northampton. [1510

N 5-6h.p., sporting sidecar, 1916, perfect con- n; £50 lowest.—26, Lower Park Rd., Peckham. [1771

H. F.

# EDWARDS

& CO.

**101, GREAT PORTLAND STREET, W.1**

Tel. Mayfair 4027.

# WONDERFUL BARGAINS

SEVERAL BRAND NEW (Shop Soiled)

## 2¾ DOUGLAS 47 Gns.

TRADE SUPPLIED.

Several Brand New 1921 5 h.p.

## ZENITH - SPORTS

## 76 Gns. (listed £110)

Also MAKER'S USUAL GUARANTEE.

Several Brand New 5-6

## ZENITH COUNTERSHAFT

Models, Clutch, Kick-Start,

## 84 Gns.

Listed £118. Maker's Guarantee.

1918 4 h.p.

## TRIUMPH, W.D.

Overhauled and reconditioned as new,

## 57 Gns.

## NEW SIDECARS FOR ABOVE MACHINES FROM 17 Gns.

### SECONDHAND COMBINATIONS.

| | | Gns. |
|---|---|---|
| 1920 | 8 h.p. **ZENITH** and Gloria sc., speedo., wind screen, hood, elec. light, excellent order | 89 |
| 1921 | **O.K.** 2¾ comb., 2-speed, clutch, excellent condition. List price £97 10s., our price | 57 |
| 1921 | 8 h.p. **BLACKBURNE,** with K3 Canoelet sc. | 100 |
| 1921 | 6 h.p. **BRITISH EXCELSIOR,** wind screen, lamps, speedometer, licensed, Tan Sad. As new | 105 |
| 1921 | 7-9 h.p. **INDIAN,** Magdyno lighting, speedometer, Easting screen. Excellent condition | 97 |
| 1920 | **MARTINSYDE,** electric lights, screen | 90 |
| 1920 | American **EXCELSIOR.** 7 h.p., Electric Model, speedometer, screen, etc. | 75 |

### SECONDHAND SOLOS.

| | | |
|---|---|---|
| 1919 | **TRIUMPH,** Sports Model, Philipson Pulley, licensed, horn, knee grips, in good condition | 58 |
| 1920 | 3½ h.p. **ARIEL,** equipped legshields, etc. | 65 |
| 1921 | 3½ h.p. **SUNBEAM.** Equipped, licensed, speedo. | 98 |
| 1920 | **DIAMOND,** 2-stroke. Licensed | 29 |
| 1921 | 2¾ **NEW IMPERIAL,** 3-speed, licensed, equipped | 53 |
| | **O.K.,** 2½ h.p., single-speed, equipped | 26 |
| 1921 | 3½ h.p. **RUDGE-MULTI,** lamps, horn, speedometer. As new | 59 |
| 1922 | 4 h.p. **INDIAN SCOUT,** lamps, Tan Sad, licensed. As new | 93 |
| 1921 | 2¾ h.p. **KINGSBURY,** 2-speed, clutch | 35 |
| 1913 | 3½ **TRIUMPH,** elec. lights | 25 |
| 1916 | 7 h.p. **INDIAN,** clutch | 30 |

**Deferred Payments & Exchanges on any of the above.**

**WANTED—SOLOS and COMBINATIONS.**

Cash waiting.

## MOTOR CYCLES FOR SALE.

### Indian.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Indians; unequalled service, repairs, etc. [3144

1919 7-9h.p. Indian Powerplus Combination for sale, or exchange for 2-seater.—Ufton, Bourne End, Bucks. [9687

1915 7-9h.p. Indian, clutch model, splendid order; £28.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [1950

1914 Indian 7-9h.p., 2-speed, clutch, electric lamps, horn, dynamo lighting, self-starter; £45.—67, Little Heath, Charlton, S.E.7. [1815

1920 Indian Combination, 7-9h.p. Powerplus, tax paid, equipped, fine condition; 75 guineas.—13, Vambery Rd., Plumstead. [1574

INDIAN Combination, 7-9h.p., 3-speed, kick start, 1916, very fast, splendid condition, disc wheels; £50.—19, Valnay St., Tooting. [1871

INDIAN 1919 7-9h.p., 3-speed, tax paid, lamps, small car generator, Bluemels, splendid outfit; £78.—152, Bearton Rd., Hitchin. [1960

5h.p. Indian Combination, 3 speeds, clutch, kick start, Easting, perfect condition; £55.—19, Fairfield, South Kingston-on-Thames. [2369

£45!—7-9h.p. Indian Coachbuilt Combination, 2 speeds, clutch, electric lamps, good condition.—30, Canning Crescent, Wood Green. [1484

LATE 1919 Indian Combination 7-9h.p., 3 speeds, kick start, tax, as new, smart lot; £75, or near.—L. Firstbrook, Old Mill, Dareath. [2048

INDIAN 1915 7-9h.p. Combination, 3-speed, K.S., clutch, and spring frame, in good running order; £37.—A. and H., Ltd., 17, Crouch Hill, N.4. [1244

INDIAN 5h.p. 3-speed model, very nice condition, £37/10 solo; or with sidecar, £6 extra.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [2443

1915 7-9h.p. Indian Combination, fully equipped with hood and windscreen, trial; £55, or lightweight and cash.—43, Yalding Rd., Bermondsey. [1242

£48.—Indian Combination 1915-16 5-6h.p., 3 speeds, clutch, kick starter, sporting Canoelet, licence, etc., splendid condition.—63, Solon Rd., Brixton. [1884

INDIAN 7-9h.p., 3-speed Combination, electric lamps and horn, tax and insurance paid; any trial; £75.—H. S., 33, St. Stephen's Rd., Bow, E. [1575

1915 Indian 7-9h.p. Spring Frame Combination, 2-speed, clutch, K.S., new tyres, Millford sidecar, bargain, £50.—Yeates, Chislehurst Rd., Orpington. [2246

1916 5-6h.p. Indian Combination, kick start, 3-speed, turnout like new, any trial; £55.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [1949

£57/10.—1918 Powerplus Indian Combination, 3 speeds, hand, foot clutch, kick-starter, excellent engine, good order, trial.—89, East Hill, Wandsworth. [2149

1919 Indian Powerplus and Griadlay spring wheel sidecar, discs, electric light, really smart outfit; see Exchanges.—Bell, 106, Gaisford St., Kentish Town, N.W.5. [1221

1920 Powerplus Indian Combination, dynamo lighting, screen, licensed, speedometer, absolutely as new, hardly used, perfect; £90.—8, Barmouth Rd., Wandsworth. [2013

7-9h.p. Indian, late 1921, condition as new, dynamo lighting, electric horn, speedometer, etc., absolute bargain; £90 cash.—Juno Cycle and Motor Co., 248, Bishopsgate, E.C.2. [1317

1915 7-9h.p. Indian Combination, Millford, Amac carburetter, recently overhauled, new Dunlop, all on, tax paid; bargain, £55.—Boldero, Nunnery, C. Hedingham, Essex. [2039

1916 Indian Spring-frame Touring Combination, electric lighting, hood, windscreen, luggage carrier, excellent condition; £75, or nearest.—Apply, 15, Porchester Mews, Bayswater. [1486

£45.—7-9h.p. Indian Combination, 2 speeds, clutch, kick starter, new Millford coachbuilt touring sidecar, luggage grid, lamps, etc., excellent condition; exchange solo.—63, Solon Rd., Brixton. [1885

INDIAN Combination 7-9h.p. 1915-16, spring frame, 3-speed, K.S., tax paid, thoroughly overhauled, perfect condition, absolute bargain, quick sale; 65 gns.—"Eureka," Bath Rd., Coln Brook, Bucks. [1450

1920-21 Indian Powerplus, Swan sidecar, windscreen, mileage 5,000, insurance, tax paid, spare tyres, chains, perfect; £95; appointment.—Bomford, Kingsmuir, Sutton. 'Phone: 392. 1320

INDIAN Scout 4h.p. Model, GE-21, equipped with dynamo lighting, electric horn, speedometer; new machine, fully garanteed. Bargain! £110. Sidecar to suit, £20.—P. J. Evans, John Bright St., Birmingham. [1538

INDIAN 1920 7-9h.p. Big Valve Powerplus and de Luxe sidecar, dynamo lighting, windscreen, nearly new Goodyears, new chains, spares, excellent condition, tax paid; £95; owner bought car.—11, Winterstoke Gardens, Mill Hill, N.W.7. [1478

## MOTOR CYCLES FOR SALE.

### Indian.

INDIAN 1920 Powerplus, Henderson Elite sidecar, mileage 3,500, electrically equipped, speedometer, special windscreen, insured, perfect condition, practically unscratched, any trial; £125; appointment.—A. J. Elliott, 19, Shakespeare Rd., Hanwell, W.7. [1845

7-9h.p. 1919 Powerplus Indian, 3-speed, right-hand, kick start, handsome spring wheel, roomy coach-built sidecar, with dickey seat, and windscreen, lamps, horn, enamel and plating excellent, mechanically sound; £75.—Owen, 94B, High Rd., East Finchley. [2156

DYNAMO model Powerplus Indian Combination, luxuriously equipped, aluminium discs, Easting, Tan-Sad, taxed, faultless, new 1921; 98 gns.; exchanges.—Peter Gordon, Limited, 110, Upper Richmond Rd., East Sheen. 'Phone: Putney 2865. Photograph. [2383

INDIAN 7-9h.p. 1919 Powerplus Combination, spring frame, 3-speed, Cowey speedometer. Millford Indian de luxe (£42) sidecar, new 1920, brakes relined, new piston fitted, tools, spares, smart outfit, believed good sound condition; £67 or £54 solo; appointment only.—Edward Potts, Benthall House, Broseley, Shropshire. [1838

LANGFORD'S, Indian Specialists, can supply all 1922 models. In stock.—4h.p. Scout, £112; Millford Junior sidecar, £134; Swan sports, £137/10; De Luxe, £147; 7h.p. comoination, £175, with dynamo and speedometer. Chief, £199, with ditto; exchange your present machine for one of these magnificent models; we can allow you highest prices; write, call, or 'phone for full particulars.—Langford's, 37, Cricklewood Broadway, N.W.2. Hampstead 8616. [9717

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7544

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all Indian spare part always in stock. Write for free spare part list, stating year of manufacture. [0752

INDIAN.—The Dennis Accessories Stores, 89, Brixton Rd., London ('Phone: Brixton 3129), supply all parts from stock, new and second-hand. They also specialise in Indian repairs. [6788

INDIAN Spares.—New and second-hand for all models; all second-hand spares sent on approval; write, call, or 'phone; we can save you money.—Langford's, 37, Cricklewood Broadway, N.W.2. Hampstead 8616. [9718

### Invicta.

1920-21 Invicta Sporting Combination, Abingdon King Dick engine, 3-speed, Sturmey-Archer gear box, aluminium disc wheels, electric and acetylene lighting, an exceptionaly smart outfit, in first-class condition, bargain; £85.—Rhind & Co., Stone Place, Rusholme, Manchester. [2485

### Ivy.

1922 Ivy 3h.p., sports model, all chain, 3-speed, clutch, K.S., horn, new condition, done 300; £50.—Stutfield, Grove House, Hampton, Middlesex. [1851

1920 Ivy 2-stroke, 2 speeds, C. and K.S., fully equipped, tax paid; £35.—Homac's, 243, Lower Clapton Rd., Clapton, N.E. 'Phone: Dalston 2408. [2113

### James.

£70.—3½h.p. James 1920, perfect running, all on.—The Ridge, Haywards Heath, Sussex. [1479

JAMES 1920 3½h.p. Twin, brand new; £95, bargain.—Ginger, James Agent, Banbury. [9594

JAMES 6h.p. Twin Combination, new; £150.—Hedley, Gunnersbury. 'Phone: 1581 Chiswick. [1584

JAMES 2¾h.p., 2-stroke, 2-speed gear, new; £50.—Hedley, Gunnersbury. 'Phone: 1581 Chiswick. [1586

1921 James 2-stroke, 2-speed, all on, almost new; £45.—30, Credenhill St., Streatham, S.W.16. [1495

JAMES New 1922 Models in Stock; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [2449

JAMES 1915-16 3½h.p. Twin, 3-speed countershaft, K.S., clutch, lamps, etc.; £55.—25, Lyttelton Rd., Leyton. [2261

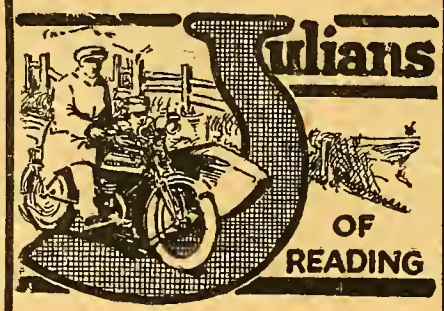
F.O.C.H. have a James 4½h.p. Combination, Lucas dynamo set; also 1920 4½h.p. solo.—5, Heath St., Hampstead (near Tube). [8990

JAMES 6h.p. 1919 Combination, smart, in good running condition; £90; seen after 5.30 p.m.—14, Thornehill Rd., Croydon. [1607

W. WHITBY and Son.—Immediate delivery of new James models; no waiting; list free on request.—7, The Vale, Acton, W.3. [3312

4¼h.p. James Combination, 3-speed complete with lamps, and tax paid December, 1922; £40.—Reynolds, 147, High St., East Ham. [1721

JAMES 1922 7h.p. Combination, spare wheel, dynamo, dickey, done 50 miles, cost £191; sell £158.—253, Munster Rd., Fulham. [1750


# YOUR WHITSUN MOUNT

**awaits you at**

## "The Biggest Dealers in the South."

| | | |
|---|---|---|
| 1922, | **A.J.S.,** 7 h.p. Combination, | **£175** |
| 1922. | **MATCHLESS MODEL,** "J" touring Combination - - - - | **£150** |
| 1922. | **ENFIELD,** 8 h.p. Combination - - - | **£140** |
| 1922. | **TRIUMPH,** Model "H" | **£105** |
| 1922. | **TRIUMPH,** Model "R" | **£120** |
| 1922. | **TRIUMPH,** Model SD - | **£115** |
| 1922. | **ARIEL,** 3½ h.p. - - | **£95** |
| 1922. | **LEVIS,** Popular - - | **£48** |
| 1922. | **LEVIS,** 2-speed, "S" - With kick start, £2 extra. | **£58** |
| 1922. | **NORTON,** 16 H - - | **£115** |
| 1922. | **RALEIGH,** 2¾ h.p., 2-speed - - - - | **£68** |
| 1922. | **ZENITH BRADSHAW,** complete as new - | **90 Gns.** |
| 1922. | **MATCHLESS,** Combination, mag. dyno., screen, spare wheel, as new | **165 Gns.** |
| 1921. | **NEW ZENITH,** 5 h.p., kick start, clutch - - | **£88** |
| 1922. | **MORGAN DE LUXE,** water-cooled Jap - - | **£186** |

# H. JULIAN, 84, Broad Street, Reading.

*'Phone:* 1024.


## MOTOR CYCLES FOR SALE.

### James.

1920 James 2-stroke, 2 speeds, fully equipp paid; £35.—Homac's, 243, Lower Clapto Clapton, N.E. 'Phone: Dalston 2408.

4h.p. James Combination, bulbous model lamps, etc., all-chain, in first-class con £75; Rhind & Co., Stone Place, Rusholme, M ter.

1920 5-6h.p. James Combination, recently bonised, in capital running order, tax full particulars and trial any time.—Geo. Printer, Dereham, Norfolk.

1914 James 3½h.p. Coachbuilt Combination mey 3-speed, condition perfect, full equi taxed for year; £38, or nearest.—Truran, 44, Rd., Marius Rd., Balham, S.W.

JAMES 4¼h.p. Combination, 3 speeds, gea clutch, kick starter, all enclosed chain driv run small mileage, well kept; £48.—74, Bright Surbiton. 'Phone: Kingston 3025.

*Spare Parts:*

JAMES Spares. Immediate delivery.—Kays, 8 St., Ealing.

WHITBY'S for James spares and service; for last 16 years.—7, The Vale, Phone: Chiswick 1513.

### Kerry.

KERRY 5-6h.p., excellent order, tax paid, equ £14.—17, Heaton Rd., Mitcham.

### Kingsbury.

1921 Kingsbury, nearly new, 2-speed all on, l £35.—204, Earl's Court Rd., S.W.

KINGSBURY 1921 2¾h.p., 2-speed, speed pillion seat, tax paid, all on, perfect con £35.—Leighton, 8, Princess Mews, Belsize Cr Hampstead.

### Lea-Francis

LEA-FRANCIS 3½h.p. 1920, under 4,000, perfect; £57.—132, Widmore Rd., Bromley,

LEA-FRANCIS, 1920, perfect condition guar 2-speed, hand and foot clutch, licensed, equipped; £65.—B., 11, Pleasant Place, N.1.

LEA-FRANCIS Combination, 1921, 3¾h.p., 2-speed, Stewart's, Tan-Sad, excellent con tax paid, too speedy for owner; reasonable off appointment.—Brown, 96, Camden Rd., N.W.1.

LEA-FRANCIS, M.A.G. twin, late 1920, onl 5 months, new condition, K.S., 2-speed, and foot clutch, all-chain enclosed drive, lamps, valves, etc., not used this year; £65.—15, Ha Rd., Leytonstone.

### Levis.

PREMIER Motor Co. for 1922 Levis.

POPULAR 2¼h.p. single gear Levis, £48; 8, 2¼h.p., 2-speed, clutch, £58; Model G c.c., 2-speed clutch £56; kick starter, £2 easy payments, 4 per cent. extra; carriage p any address; all models in stock for immediat very.—Premier Motor Co., Aston Rd., Birming

1921 Levis, 2-speed; £38.—59, Palfrey Place set Rd., Clapham Rd., S.W.8.

1920 Levis 2¼h.p., tax paid, perfect; £30 Tennyson Rd., Stratford, E.15.

£19.—2¼h.p. Levis, tax, good tyres, smart, h —Ewers, Newton Rd., Burton-on-Trent.

1921 Levis, new condition, all on; nearest Howe, 97, Manor Park Rd., N.W.10.

WAUCHOPE'S, 9, Shoe Lane, London, fo 1922 Levis motor cycles on easy terms.

2¼h.p. Levis Popular, 1921, excellent order th put, accessories; £30.—88, Park Rd., Du

WE are the Agents for London, S.W. Choos our stock.—Knight's, 126, Upper Tootin S.W.17.

2¼h.p. Levis Popular, excellent condition, e lighting; £27.—Peacock, Trinity Pars Buxton.

LEVIS 2¼h.p. 1916, electric light, disc wheel smart appearance; £29.—Blake, 63, Sc Rd., Tottenham, N.17.

2½h.p. Levis, engine No. 7078, splendid con single gear; £23, no offers.—La Hive, At Brewery, Northampton.

LEVIS Popular Model, complete with lamps, excellent tyres, tax paid; £24.—Apply at 67, Hammersmith Rd., W.14.

1920 Levis, perfect condition throughout, photo; £28; only used by lady.—Brooke House Farm, Salters Rd., King's Lynn.

FOR 1922 Levis, the most reliable and nea stroke upon the road, send or call at Garage, The Broadway, Muswell Hill, N.10.

LEVIS. All 1922 models. Send your orders catalogues with pleasure.—Sam E. Cl (Motors), 27, Stockwell St., Greenwich, S.E.10.

## MOTOR CYCLES FOR SALE.

### Levis.

E S 1920 Popular, new belt, all accessories, run-
og beautifully, exceptionally good engine; £32.
rson, Charlcombe Cottage, Lansdown, Bath.
[1828

E S New 1922 Models, 2¼h.p. Popular, £48;
¼h.p., 2 speeds and clutch, £58; Levis sports
£56; all models supplied on easy terms and
e, one-fifth down.—Wauchope's, 9, Shoe Lane,
[2421

*Parts:*

E S—All spares or complete 1922 model cycles
m stock, carriage paid.—Jones Garage, Broad-
uswell Hill, N 10. [0807

REYS, Ltd., 208, Great Portland St., London,
W.1.—Complete stock of all Levis spare parts
in stock. Write for free spare part list, stating
manufacture. [0753

### L.M.C.

1920 4¼h.p. Combination, 3 speeds, about
000 miles, perfect mechanical condition, licence
£68, offers, no dealers.—132, Merton Rd.,
worth, S.W. [1844

L.M.C. 1920, suspension frame, beautiful
indlay spring wheel sidecar, under 7,000 miles,
scratched, cost £193; near Lewes; £110.—Box
/o *The Motor Cycle*. [4839

### Martinsyde.

Martinsyde Combination; £160.—E. T. Morris
nod Co., Ltd., 139, Finchley Rd., London.
[1302

TINSYDE.—Immediate delivery of 1922
odels. Cash, exchange, or deferred payments.—
, Bond St., Ealing. [4835

TINSYDE Combination, 1920, original tyres,
illy equipped, tax paid; £87/10.—Surgery,
ortobello Rd., W.11. [1937

ERTSONS Motors, Ltd., are the London Mar
syde Service Agents; trial runs arranged;
stocked.—157b, Gt. Portland St., W.1. [6080

TINSYDE Combination 6h.p., new last July,
arely used, tax paid, all on; 100 gns., quick
orgery, 27, Sydney St., South Kensington.
[1856

a 1922 Martinsyde 3½h.p. Sports or 6h.p.
mbination get in touch with the North Lon-
ents, Jones Garage, The Broadway, Muswell
10. [0789

TINSYDE Solo and Combinations for imme-
iate delivery; best prices allowed on second-
achines in part payment.—Newnham Motor
3, Hammersmith Rd., W.6. 'Phone: Hammer-
30. [1730

### Massey-Arran.

HAM, Stokes Croft, Bristol, Sole District
gent for Massey-Arrans; unequalled service, re-
tc. [3147

SEY-ARRAN 2¾h.p. J.A.P., 2-speed, K.S.,
ightly shop-soiled; £58.—P. J. Evans, John
St., Birmingham. [1542

### Matchless

CHLESS, all models, from Gourlay's, Fallow-
ld, Manchester. [1201

S, Effingham Square, is Agent for Matchless
tors in Rotherham. [2254

1918 Matchless Combination, all on; £78.—
ath, 28A, High St., Hampstead. [1582

Matchless Combination, Model H, practically
ew; £125.—24, Balliol Rd., North Kensington.
[1824

Matchless 2-seater, Magdyno, speedometer, all
on, just arrived.—Robinson, 207, Rye Lane,
n. [1991

CHLESS Combination for Sale, 6h.p., perfect
nning order; £55.—Queen's Head Garage,
y, N.3. [1249

CHLESS Combination, 1920 Model, perfect
der; £110.—110, Fulham Palace Rd., Ham-
th, W.6. [1511

8h.p. Matchless-Mag. Combination, fully
equipped, tax paid; £90.—Lidderdale, New-
Rd., Stone. [1259

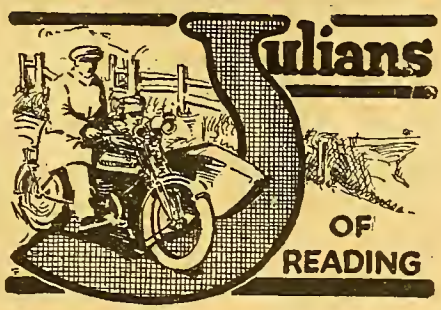
CHLESS.—All models from stock; highest ex
hange allowances.—Agents, R. B. Clark and Co.,
ibition Rd., S.W.7. [4619

CHLESS Combination 3½h.p., Mahon clutch,
ny trial; £25.—56, Lordship Lane, Tottenham.
: Tottenham 2067. [1665

JCHOPE'S, 9, Shoe Lane, London.—Matchless
ew 1922 models always in stock; easy terms
change. 'Phone: Holborn 5777. [2429

Matchless-M.A.G. Combination, excellent con-
dition, speedometer, Easting, fully equipped;
ranks, Town Hall, Stratford, E. [1800

Matchless, M.A.G., Lucas Magdyno light-
ing, speedometer, splendid condition; £140.—
1A, Bloomfield Rd., Plumstead. [9023


And the

T T

WHATEVER
THE WINNER
WE CAN SUPPLY

TRIUMPH
NORTON
A. J. S.
LEVIS
NEW IMPERIAL
RALEIGH
O. K.
Etc.

H. JULIAN,

84, Broad Street,

Phone 1024. READING.


## MOTOR CYCLES FOR SALE.

### Matchless.

OFFER Wanted for 1919 8h.p. Matchless, spare wheel, everything on, just overhauled, insurance policy.—Baker, 332, Hackney Rd., London. [1215

SHEFFIELD Agent for Matchless. All models in stock. Sporting models £130, standard models £170.—A. J. Stacey, 12, Ecclesall Rd., Sheffield. [0574

MATCHLESS Sporting T.T. Model, 3½h.p. o.h.v. J.A.P., variable belt drive, fast; bargain, £37/10. —Pioneer Motors, Ltd., 50, Grindlay St., Edinburgh. [1171

£150 is the price of a new Matchless Combination; see our showrooms, all models in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17. [0759

TASSELL, 1a, Bloomfield Rd., Plumstead, for Matchless Combinations; deferred payments; spares of all dates; trade supplied where agents not appointed. [2241

MATCHLESS-J.A.P. 5-6h.p. Combination, countershaft, 2-speed, kick starter, speedometer, lamps, exceptional mechanical condition; £27/10.—1, Priory Rd., Kew. [2364

MATCHLESS 1921 Model H Combination, lamps, horn, windscreen, etc.; £110.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

MATCHLESS 1922 Combinations for immediate delivery; prices from £150; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1732

MATCHLESS Combination, Victory model, good condition, accumulator, electric lighting, hood, screen, spare wheel; price £90.—Seeo at Oakley's, Ilford Hill, Ilford. [0871

1921 late Matchless Combination, M.A.G. engine, Magdyno lighting, spare wheel, hood, screen, condition unscratched; £140.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [1971

MATCHLESS Combinations.—Book your orders with Ross, 86, High Rd., Lee, S.E., or 'Phone Lee Green 744 for immediate delivery of 1922 models. Exchanges and gradual payments arranged. [3480

1922 Matchless-M.A.G. 8h.p. 2-seater Sidecar Combination, tax paid, equipped unusual extras, electric lighting, mileage 600, cheaper and better than new; £185.—Coote, Council Offices, Woking. [1505

1920 Matchless Combination, Lucas dynamo lighting, speedometer, hood, and screen, mileage 5,600, spare wheel, every accessory, insured; £135, or near offer.—Skudder, 83, Maple Rd. Surbiton. [1377

1921 Matchless Combination H, dynamo lighting, windscreen, hood, disc wheels, 1 spare wheel, speedometer, Tao-Sad and luggage grid, mileage 2,500; £140.—2, Reading Rd., Henley-on-Thames. [1453

MATCHLESS 1920 Combination, Magdyno, spare wheel, hood, screen, side curtains, step, speedometer, Binks, legshields, horn, tax and insurance paid; £140.—Newhatt, 35, Central Hill, Upper Norwood, S.E. [1316

1921 (July) Matchless Combination, 8h.p. M.A.G., Lucas, dynamo lighting, spare wheel, windscreen, etc., just thoroughly overhauled at makers; bargain, £160.—34, Bradshaw St., Moss Side, Manchester. [1121

MATCHLESS-J.A.P. 8h.p. Combination, late 1917, complete spare wheel, windscreen, lamps, horn, tools, tax, just been renovated as new; bargain, £78. —Young, Ironmonger, 1238, Coventry Rd., Yardley, Birmingham. [2247

1920 Matchless-M.A.G. Combination, Easting, Tao-Sad, clock, electric lighting, tax, insurance paid, perfect order, recently overhauled makers; £125 nearest.—Dr. Woodhouse, Windleston, Bray. Tel.: Maidenhead 455. [2219

1922 Matchless Touring Combination, with dynamo lighting set, windscreen, speedometer, horn, front hand brake, legshields, spare wheel and tyre, not done 1,000 miles; 180 gns., very good bargain.—H. Julian, 84, Broad St., Reading. [1193

DYNAMO-LIGHTING Matchless Combination, Model H, spare wheel, hood, screen, speedometer, mileage 5,000, faultless; 128 gns; exchanges.—Peter Gordon, Limited, 110, Upper Richmond Rd., East Sheen. Open Sundays. Photograph. [2384

MATCHLESS, 1921, 8h.p. M.A.G., special tandem sidecar for 2 adults, hood and screen, Lucas lighting and horn, mirror, rear drive speedometer, mileage 900, tax and insurance paid to next December; £145.—Oscroft, 212, Bow Rd., E. [1367

MATCHLESS 1920 Model H, J.A.P., hood, screen, speedometer, H.A.H. electric lighting, legshields, extra seat, spares, etc., tax paid, small mileage, good condition; £125; appointment.—34, Temple Sheen Rd., East Sheen. 'Phone: London Wall 3769. [1241

MATCHLESS 1922 Model H2 Combination, dynamo lighting, speedometer, screen and spare wheel, electric horn, front hand brake, magnificent condition throughout, special sports M.A.G. engine, mileage under 800, cost complete over £215, very great bargain; 165 gns.—Julian, 84, Broad St., Reading. 'Phone: 1024. [1395

## MOTOR CYCLES FOR SALE.

### Matchless.

7-9h.p. Matchless Combination, M.A.G. engine, all accessories, speedometer, spare wheel, hood, Easting screen, foot pump, etc., tax paid; price 100 gns., or near offer; seen any time.—Freeman, Kinsale, Langley Park Rd., Sutton, Surrey. 'Phone: Sutton 985. [1307

MATCHLESS Combination, model H, 1920, J.A.P., Magdyno lighting (Magdyno new), legshields, hood, windscreens, spare wheel, pillion seat, speedometer, mileage 4,779, just thoroughly overhauled and re-enamelled, tax paid; £135.—G. Haines, 89, Brady St., Whitechapel, E.1. [1126

NEW 8h.p. 1922 Matchless Combinations, 2-seater model, sprig frame, £187; 8h.p. standard model, £170; 8h.p. sports model, £160; easy payments one-fifth down, remainder in 12 equal monthly payments or more.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [2411

MATCHLESS, late 1919, Victory model, 8h.p. J.A.P. combination, hood, Orto screen, College guards, speedometer, acetylene, spare wheel, Tan-Sad, tax paid December, 1922, insured £140 to April, 1923, overhauled, any trial; price £105.—Graham, 13, Champion Grove, Denmark Hill, S.E.5. [2055

MATCHLESS, 8h.p. M.A.G., Victory model, Lucas dynamo lighting, Watford speedometer, Binks, electric and bulb horns, Easting, mirror, spare wheel, luggage and petrol carriers, tax paid to December and fully insured, in perfect order; £105.—Marshall and White, Cedars Rd., Clapham Common, S.W.4. [1286

MATCHLESS Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4931

MATCHLESS, Model H, M.A.G., Magdyno, double sidecar, hood, pillion, front band brake, watch, speedometer, Klaxon, spare wheel, 2 new Dunlop extra heavy covers, tubes, bulbs, valves, etc., 2 screens, tools, helmet, leggings, tax, insurance paid, complete, perfect, cost over £270; accept £165; exchange light car, cash adjustment; seen by appointment.—Gaydon, 41, Sefton Rd., Croydon. [1831

1922 Matchless. 'Phone: Greenwich 751. The Combination that scores every time. See results of Laud's End Trial. You can do the same if your Matchless is supplied by Sam E. Clapham. Send your orders along and secure satisfaction. Immediate delivery, all models, cash, exchange, or easy terms.—Matchless Service Depot, Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3052

*Spare Parts:*

MATCHLESS Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4828

MATCHLESS Spares for J.A.P. or M.A.G. by return, post free.—Jones Garage, Matchless Agent, Broadway, Muswell Hill, N.10. [0808

### McKenzie.

MCKENZIE-HOBART Ultra Lightweight motor cycles, 26 gs. ex works; immediate deliveries of these wonderful little machines.—Colonial Motors, 104a, Finchley Rd., Hampstead. 7822. [2400

### Metro.

1920 Model S Metro-Tyler, indistinguishable from new; cost £95; sell £38.—37, Arlington Rd., Surbiton. [2042

1920 Metro-Tyler, 2-speed, new tyres; bargain, 30 gns.; exchanges.—Kent's, 417, Lord St., Southport. [1918

METRO T.T., discs, just rebushed and overhauled by expert, lamps, mechanical horn, good tyres, licensed, good condition, mechanically perfect; not Saturday morning, Sunday; £26 cash.—Sharpe, Hawks Rd., Kingston. Two-up trial. [1544

### Minerva.

MINERVA 8h.p., perfect condition, 2-speed, low and sporty; £28.—Below.

COMPLETE 8h.p. Unit, side-by-side valves, Schebler carburetter, long exhaust pipes; £18.—53, London Rd., Wembley. [1134

MINERVA 3½h.p., magneto, any trial; £15.—56, Lordship Lane, Tottenham. 'Phone: Tottenham 2067. [1664

£16/10.—Minerva 3½h.p.; trial allowed; carry 2; take push cycle part.—57, Kenbury St., Camberwell, London. [2239

3½h.p. Minerva coachbuilt Combination, Sturmey-Archer countershaft gear, nice appearance and good running order, reasonable offer accepted.—Box 1682, c/o *The Motor Cycle*. [2392

### Mohawk.

MOHAWK Motor Cycle, 3½h.p., and delivery sidecar, for tradesmen's use, nearly new; £95.—282, Alexandra Rd., Hornsey. [8843

MOHAWK Cycles new, or second-hand, at lowest prices, for cash or easy payments.—Mohawk Cycle Co., Ltd., 276, Alexandra Rd., Hornsey, N.8. [1924

# ALEXANDER'S

*"The Store that aids Economists."*

# MID-SEASON SALE

**A GENERAL CLEARING OUT OF SURPLUS STOCK AT BELOW PRESENT MARKET VALUES.**

**NOTE THE SAVINGS TO BE EFFECTED.**

### COMBINATIONS.

1922 8 h.p. **MATCHLESS**, M.A.G. engine, Sports Combination, fully equipped with lamps, horn, spare wheel, Easting screen, specially tuned for competition work. Mileage about 1,500, tax paid. List price £177 8s. 6d. Two of these to clear at ..... **£145**

1922 8 h.p. **B.S.A.** Combination, 29×3½ tyres, only used 50 miles, owner bought car, as new, tax paid. List price £185, going at..... **£165**

1922 7 h.p. **INDIAN** Powerplus Combination, electrically equipped, tax paid, as new, only used about 100 miles. List price £175, now offered at **£150**

1919 8 h.p. **SUNBEAM** Combination, fully equipped, windscreen, perfect running order ..... **£120**

1918 6 h.p. **ENFIELD** Combination, newly overhauled, fully equipped.. **£85**

1919 3½ h.p. **P. & M.** Combination, 2-speed, just overhauled ..... **£70**

1921 4¼ h.p. **B.S.A.** Combination, 3-speed ..... **£90**

1914 4 h.p. **BRADBURY** 2-speed Combination ..... **£45**

### SOLO MACHINES.

1922 2¼ h.p. T.T. **NEW IMPERIAL**, Super J.A.P. 250 c.c. engine, very specially tuned, 3-speed, all-chain drive, tax paid. You can win on this mount. As new ..... **£70**

1920 3½ h.p. T.T. **TRIUMPH**, belt drive, speedometer, tax paid, as new, very little mileage ..... **£55**

1918 4 h.p. **TRIUMPH**, 3-speed, fully equipped, tax paid ..... **£65**

1922 2¾ h.p. **DOUGLAS**, 3-speed, clutch and kick-start, fully equipped, tax paid, only run 200 miles ..... **£70**

2½ h.p. **MOTO-REVE**, single gear, good running order ..... **£15**

1919 2¼ h.p. **NEW HUDSON**, 2-stroke, 2-speed, fully equipped, tax paid ..... **£40**

1922 4¼ h.p. **B.S.A.**, Model H2, all-chain, lamps, horn, used about 150 miles, as new, tax paid ..... **£98**

Late 1921 **LEVIS POPULAR**, 2¼ h.p. as new, tax paid ..... **£40**

1919 2¼ h.p. **ENFIELD**, 2-stroke, 2-speed, fully equipped, tax paid . **£35**

**The above machines are all ready to ride away.**

**THE VALUE IS UNDOUBTED.**

**WIRE US TO RESERVE OR YOU MAY BE TOO LATE**

# ALEXANDER'S

**113-115, LOTHIAN RD., EDINBURGH**

**272-274, GT. WESTERN RD., GLASGOW**

## MOTOR CYCLES FOR SALE.

### Motosacoche.

MOTOSACOCHE 2¼h.p., Bosch, Druids, B. and good condition; £16.—57, Linnell Rd., Carwell.

MOTOSACOCHE 2h.p., sound and good clim £16.—Roberts, 10, Aulay St., Ossory Rd., Kent Rd.

MOTOSACOCHE 2h.p. Engine, just overhaule makers, B.B. carburetter, very fast; £25.— King's Rd., Chelsea.

### New Hudson.

NEW HUDSON 2-stroke, 2-speed gear, first- condition; £32.—Hopkins, New St., Ledbur

NEW HUDSON 1920 De Luxe Lightweight, e lent condition, tax paid; £40.—Rogers, Church Rd., Hendon.

NEW HUDSON motor cycles.—London Depôt, Gray's Inn Rd., London, W.C.2. Immediate del all models. Spares stocked. Trade supplied.

3½h.p. New Hudson, 3-speed, clutch, very fast, able, thoroughly overhauled and re-enam all accessories; £38.—Langley Cottage, King's Hill, Chingford.

1922 Hudson de luxe, £63; also Popular m £50; 3 new lightweights, 1921 models, t new, to clear, £53.—Shepherd, Enfield Highway. Waltham Cross 31.

1922 New Hudson 10h.p light car, £230; 4 combinations, £125, solo, £100; 2¼h.p. 2- Popular, £50, De Luxe, £63; exchanges and de payments entertained; sole agents for Cambrid Wallis and Easton, 104, Mill Rd., Cambridge.

### New Imperial.

NEW IMPERIAL, No. 3 Model, in stock.—Wi Goldthorpe, Yorks.

1922 New Imperials in Stock.—Premier Motor Aston Rd., Birmingham.

NEW IMPERIAL, 2-speed, countershaft, spl condition; £36.—80a, High St., Bexley.

£24.—2¾h.p. New Imperial-Jap, 2-speed, good ning order.—King, Egrove Farm, Oxford.

NEW IMPERIAL, 2-speed, new April, 1921, equipped; £47.—Sharpe, 325, Essex Rd., I ton.

SHEFFIELD Agent for New Imperial Motor C all models in stock.—J. A. Stacey, Ecclesall Sheffield.

1916 2¾h.p. New Imperial, 2-speed, lamps, excellent order; £24.—18, Hestercombe Fulham.

2¾h.p. New Imperial-Jap, 2-speed, just overh bargain; £32/10.—19, Fairfield, South Kin on-Thames.

NEW IMPERIAL 8h.p. Combination, 1919, lent condition; reasonable offer.—104, Fen Rd., S.W.8.

NEW IMPERIAL 2¾h.p., 2-speed, condition fect; nearest £30 secures.—55, Robinson Tooting, S.W.17.

8h.p. New Imperial Solo, Burman 3-speed, re-enamelled, 1919; £60.—L. J. M., Pymmes House, Edmonton.

2¾h.p. New Imperial, 2 speeds, in good cond complete with lamps, tax paid; £22/10 Sidmouth St., Devizes.

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p Imperial-Japs, 1922, No. 3, £73; No. 2, easy terms and exchange.

32 GNS.—New Imperial, 2¾h.p., 2 speeds, B B., good tyres, reliable (after 8 o'clock) Swaffield Rd., Wandsworth.

1920 New Imperial, 8h.p., Sunbeam sidecar, ing, excellent condition; £80.—Luckiog Churchfield Rd. East, Acton.

1920 8h.p. New Imperial Combination, p mileage 3,500; £90.—Fitch, Chrysanth Nurseries, Merstham, Surrey.

1921 2¾h.p., 2-speed, New Imperial, lamps, tax paid, in perfect condition; 35 gns.; c seen at Julian's, Broad St., Reading.

1920 8h.p. New Imperial, fully equipped coachbuilt sidecar, perfect order; £90.— cliffe Bros., 200, Gt. Portland St., W.1.

1920 8h.p. New Imperial, fully equipped coachbuilt sidecar, perfect order; £100.— cliffe Bros., 200, Gt. Portland St., W.1.

1922 New Imperial-Jap 2¾h.p., 3-speed, c kick starter, 24in. wheels, 2 lamps, Smith's speedometer, bulb horn, Klaxon, mirror, liceo December, insured to April, 1923, mileage 60, s £80.—Coffin's Garage, Rake, Liss.

## MOTOR CYCLES FOR SALE.

### New Imperial.

New Imperial, 2 speeds, J.A.P., just overhauled, excellent condition, any trial; £35.—142, Maida Vale. 'Phone: Hampstead 1353. [2128

Imperial-Jap Albion 2-speed, tyres unpunctured, fully equipped, E.I.C. magneto, perfect part turnout; £27; photo.—128, London Rd., Lynn. [2516

IMPERIAL-J.A.P. 2¾h.p., 2-speed, 1922, mac, good appearance and running order, etc.; bargain, £27.—Satchell, 80, Gwynne Rd., ea, S.W. [1421

New Imperial 8h.p. Combination, 80 miles per gallon, mileage 1,500, guaranteed perfect, conas new, all accessories, taxed; 115 gns.—29, ill, E. Dulwich. [2362

New Imperial Combination, 8h.p., 3 speeds, all lamps, horn, Easting, tax paid; £85.—'s, 243, Lower Clapton Rd., Clapton, N.E. : Dalston 2408. [2115

). New Imperial, No. 2, 3-speed, as new, £52/10; also 2¾h.p. 1916 model, 2 speeds, and kick start, £35; insured for 12 months.—pe's, 9, Shoe Lane, London. [2431

*e Parts*

IMPERIAL Spare Parts.—London stockist's, ey, 173, Gt. Portland St. 'Phone: Langham Open till 7.30 p.m., 4 o'clock Saturdays. [0855

### New Ryder.

RYDER 2-stroke, 1917, Dunlops, Amac, perfect nning order, powerful; £23.—Sibley, 106, Marice, Romford. [1431

### New Scale.

SCALE Combination, 3½h.p. Beardmore-Precision, 1922 model, absolutely new; £65.—Rail-', South King St., Manchester. City 2417. [2197

### Norton.

MIER Motor Co. for 1922 Nortons.

9, 3½h.p., £80; 16H., 3-speed, £115; Big Four, -speed, £120; sidecars from £22; easy payments cent. extra; free delivery to any address.—r Motor Co., Aston Rd., Birmingham. [0865

TON 1922 3½h.p. Sports, new, in stock; £115.—Ginger, Norton Agent, Banbury. [9593

). B.R.S. Norton, winner of races; £52/10; seen at Wauchope's, 9, Shoe Lane, London. [2432

TON T.T. 1921, No. 9, lamps, licensed, speedy; 3.—Brown, Leabolme, Marehay, Derbyshire. [1135

Norton 3½h.p., 3-speed, absolutely as new, any trial or examination; £85.—Percy, Mount Preston. [1934

late Big Four Norton Combination, new sidecar last September, fully equipped, as new; any trial.—47, Evington Rd., Leicester. [2021

Norton, new July, Model 9, sporting, in perfect condition, tax paid; bargain, £65.—Motors, Ltd., 50, Grindlay St., Edinburgh. [1170

Stuff.—1921 3½h.p. Norton, Philipson pulley, and-controlled, 80 miles at Brooklands, winner gold medals; £70, or offers.—2, Queen St., ster. [1265

Norton 3½h.p., 3-speed countershaft, lamps, speedometer, tax paid, good tyres, any trial; ).—Goad, 122, Maida Vale. 'Phone: Hamp-1353. [2127

TON 1920 3½h.p., 3-speed, kick starter, mileage der 5,000, enamel, plating excellent, tax paid, essories; £73/10, no offers.—"Sycamores," Bar-, Worcester. [1147

ND new 1922 Norton 16H, just delivered, unegistered, Lucas Magdyno, oversize tyres, cost best offer, must realise.—Heath, 168, Welling-l. South, Hounslow. [2057

TON 3½h.p. Countershaft, polished crank case, ng copper exhaust, appearance brilliant, mechy perfect, equipped, photo; sacrifice, £58.—rth, 26, Brett St., Sheffield. [2190

) Norton 4h.p., T.T., single speed, equipped, speedometer, horn, etc., under 500 miles, guar-; £65.—Homac's, 243, Lower Clapton Rd., Clap-.E. 'Phone: Dalston 2408. [2116

TON'S New 1922 Models, big 4 and De Luxe sidecar, £153; also 3½h.p, 3-speed, all-chain £115; exchange and easy terms arranged.—ope's, 9, Shoe Lane, London. [2422

TON 1921 16H, speedometer, taxed, winner many speed trials, £85; 1920 Big 4, Magdyno, Norton sidecar, taxed, mechanically perfect, -Clark, 7, Exhibition Rd., S.W.7 [4611

TON Big Four 1920 and Millford Sidecar, low ileage, new tyres, electric lighting, Easting, d, Klaxon, spares, properly overhauled, ready ur; £95, or offer for quick sale; appointment. Ruskin Walk, Herne Hill. 'Phone: 652 Brix-[9686

# T.T.

**Every machine below is a *Trophy* worth getting.**

## BIKES

**for every use, pottering, competition or touring, they cannot be**

## BEATEN.

| Cash Price. | Make and Description. | First Payment. | Twelve Monthly Payments. |
|---|---|---|---|
| £80 | Norton No. 9 | £28 | £4 13 0 |
| £115 | Norton 16H | £40 | £6 13 0 |
| £120 | Norton Big 4 | £42 | £6 18 0 |
| £153 | Norton Big 4 and de Luxe Sidecar. | £53 | £8 17 0 |
| £130 | Indian Scout with electric equipment. | £45 | £7 11 0 |
| £160 | Indian Chief with electric equipment. | £55 | £9 6 0 |
| £199 | Indian Chief with electric equipment and sidecar. | £69 | £11 10 0 |
| £105 | Scott Squirrel | £37 | £6 0 0 |
| £110 | Scott Standard | £38 | £6 8 0 |
| £48 | Levis Popular | £17 | £2 15 0 |
| £60 | Levis 2-speed, clutch and kick-starter. | £21 | £3 9 0 |
| £66 | Levis Model G | £23 | £3 16 0 |
| £110 | Martinsyde 3½ twin sports. | £38 | £6 8 0 |
| £85 | Quadrant 4½ single, chain drive, solo. | £30 | £4 18 0 |
| £105 | Quadrant 4½ single, chain drive, combination. | £37 | £6 0 0 |
| £110 | B.S.A. 4½ chain drive | £38 | £6 8 0 |
| £65 | Velocette 2-speed | £23 | £3 15 0 |
| £72 10 | Velocette 3-speed | £25 | £4 4 0 |
| £130 | Raleigh 5 h.p. solo | £45 | £7 11 0 |
| £165 | Raleigh 5 h.p. combination | £57 | £9 11 0 |
| £65 | Raleigh 2¾ h.p. 2-speed | £23 | £3 19 6 |
| £141 15 | Sunbeam 4½ h.p. solo | £50 | £8 5 0 |
| £182 14 | Sunbeam 4½ h.p. No. 1 sidecar. | £65 | £10 12 0 |
| £126 | Sunbeam 3½ h.p. solo | £45 | £7 5 0 |
| £166 | Sunbeam 3½ h.p. No. 3 sidecar. | £50 | £9 11 0 |
| £136 10 | Sunbeam 3½ h.p. Light solo | £47 | £8 0 0 |
| £136 10 | Sunbeam T.T. Sporting solo. | £47 | £8 0 0 |
| £168 | Sunbeam 8 h.p. solo | £58 | £9 16 0 |
| £217 7 | Sunbeam 8 h.p. No. 2 sidecar. | £75 | £12 15 0 |

**Distance no object.**

**REAL SERVICE AFTER SALE.**

# VICTOR HORSMAN

**LIMITED,**

**7, Mount Pleasant, L'pool.**

## MOTOR CYCLES FOR SALE.

### Norton.

NORTON Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4929

BUY your new Norton from the rider agent. Carriage paid to any address in British Isles. Machines for competition tuned free of charge; good results guaranteed. I specialise in Norton motor cycles. Send for catalogue.—G. H. Tucker, Norton Specialist, Redcliffe Hill, Bristol. 'Phone: 4042. [6509

NORTON, late 1916, T.T., splendid throughout, fully equipped, £48; Norton, 1921, Model 16H, condition new, fully equipped, £80; Norton, 1922, B.R.S. certificate, 70 m.p.h., scarcely ridden, £70; Norton, 1922, brand new, 16H, fully equipped, 3in. tyres, £105; all tax paid.—Write or call, 32, High St., Reigate. [1650

*Spare Parts.*

NORTON Spares, per return from stock; postage paid on orders of £2 value; we carry huge stocks.—G. H. Tucker, Norton Rider Agent, Redcliffe Hill, Bristol. 'Phone: 4042. [6508

### N.S.U.

3h.p. Twin N.S.U., 2-speed, clutch, spring frame, all on, tax paid; £22.—Houchin, 189A, High St., Peckham, S.E.15. 1602

N.S.U. 3½h.p., 1914, Model de Luxe (85×88 mm.), spring frame, kick starter, 2 speeds, £30; also 6h.p. twin, 2-speed gear, £30.—Eagles and Co., 275, High St., Acton, London. [1797

### N.U.T.

1920 (October) 3½h.p. N.U.T., practically as new, Brooks cantilever, and lamps, licensed 1922; £75.—Boulton, Saffron Walden. [1990

N.U.T., 1916, 3½h.p. o.h.v. twin, discs, straight throughs, complete, perfect, £50; exchange I.O.M. Rudge.—Goddard, Brandon House, Cheltenham. [1801

1921 N.U.T. Model, 3 speeds, clutch, K.S., tyres good, 1915 J.A.P. 6h.p. twin fitted, perfect, coachbuilt sidecar, accessories; £57, bargain.—Link, Newchurch, Romney, Kent. [8736

### O.K.

O.K. Junior 2¾h.p., 1917; £23; excellent condition, running order.—44, Waveney Av., Peckham Rye, S.E. [1168

1920 O.K. Junior 2¾h.p., 2-stroke, 2-speed, kick start, hand clutch, like new; £35.—I, Priory Rd., Kew. [2366

O.K.-VILLIERS, splendid condition, tax paid; bargain, £30, or offer.—258, Goldhawk Rd., Shepherd's Bush. [1429

O.K. 1922 Lightweight, Villiers, magneto flywheel, lamps, horn, tax, as new; 29 gns.—H. Rock, Cradley, Staffs. [1911

1920 O.K. Junior, fully equipped, tyres and appearance as new; £27, or nearest.—Oswell, Broughton-Astley, Leicester. [1580

1921 O.K. Junior, 2½h.p., 2-speed, clutch, kick start, Lucas lamps, horn, guaranteed: £40.—40, Warley Rd., Blackpool. [2000

O.K.-UNION 1920, splendid condition, tax paid, mechanical horn, lamps, C.A.V. magneto, Amac carburetter; £28.—Connor, Haven, Redbourn, St. Albans. [2196

### Omega.

1919 Omega-Jap 2¾h.p., 2-speed, lamps, speedometer, good condition; £36/10.—217, Belsize Rd., Kilburn. [1934

1919 2¾h.p. Omega-Jap, 2-speed, fully equipped, licensed, tyres new; £30.—Cawtbra, Chester Place, Boothtown, Halifax. [1440

OMEGA 2¾h.p. 2-stroke, discs, registered, magneto requires repair; £15; seen by appointment only.—Write, Hudson, 44, Seaforth Av., New Malden, Surrey. [1693

### P. and M.

P. and M. 3½h.p., 2-speed, K.S., late; bargain, £42.—62b, Highgate Rd., Kentish Town. [1651

1919 P. and M. Combination, all on, perfect condition; £60.—42, Forest Rd., Kew. [1295

P. and M., 1917, all on, tax paid, recently overhauled; £50.—23a, Lower Rd., Eastbourne. [1659

P. and M. 1914 Combination, complete; £35; running order.—Bramble, 81, Canbury Av., Kingston. [1424

3½h.p. 1919 P. and M. Combination, nice condition; £75; tax paid.—Wauchope's, 9, Shoe Lane, London. [2433

P. and M., 1919, with 1920 sidecar, as new, all accessories; £75.—Legge, Manor, Willenhall, Staffs. [1360

## MOTOR CYCLES FOR SALE.

### P. and M.

P. and M. Combination, 1918, excellent condition; £40.—Miles, 11, Chichester Rd., West Kilburn, N.W.6. [2349

P. and M. Combination, 1919, taxed, overhauled; £52 10; or easy terms.—50, Haverstock Hill, N.W.3. [2548

P. and M. Combination, believed 1918, lamps, horn, licensed, good condition; trial.—Gouldstone, Larkfield, nr. Maidstone. [1462

PHELON and Moore, Ltd., 4, Berners St., W.1, offer the following overhauled machines, which carry our usual guarantee:—

1921 Combination, fully equipped, £100; 1922 4-speed demonstration model combination, fully equipped, £115. [1207

WAUCHOPE'S, 9, Shoe Lane, London, supply P. and M. Motor Cycles and Combinations on exchange and easy terms. [2434

P. and M., 1915, reconstructed 1920, tax paid, excellent condition, ride away, lamps, etc.; £37 10.—11, Brecknock Rd., N.7. [1509

P. and M. Combination, 1919, Sports sidecar, enamel and plating like new; £55.—Jenner, 11, Somerset Rd., Tottenham, N.17. [1794

BARGAIN.—3½h.p. P. and M., 2 speeds, kick start, 1918 or 1919, sloped top rail; first cheque 45 gns.—Geary, 115, Moor St., Burton-on-Trent. [2500

P. and M., 1912, Milford coachbuilt sidecar, electric lighting, good condition; £30, offers; appointment.—55, Drakefield Rd., Balham. [1839

3½h.p. 2-speed P. and M. Motor Cycle, Bosch, water-tight magneto, good tyres, needs little attention; first £20.—Box 1651, c/o *The Motor Cycle*. [1527

P. and M. 1919 Combination, splendid condition, tax paid, electric lighting, horn, etc.; £65.—Cope, 15, Upper Hagley Rd., Birmingham. [1928

P. and M. and Coachbuilt Sidecar, in perfect order, tyres all good, fully licensed for 1922; 39 gns.; viewed by appointment.—30, Golders Gardens, London, N.W.11. [6502

P. and M. Combination, late R.A.F., excellent condition, re-enamelled and plated, well equipped, fast, powerful, 70 m.p.g.; £47.—42, Southsea Av., Watford. [1656

LATE 1918 P. and M. Solo, reconditioned January, 1922, fast and reliable, lamps, licensed, any trial; £40; exchange Scott, 4h.p. Douglas.—104, Wokingham Rd., Reading. [1570

P. and M. 3½h.p., 1917, lately overhauled and enamelled, many new parts, spares, splendid condition; cash offers.—Can be seen and tried at 53, Rothes Rd., Dorking. [1653

1921 P. and M. solo, fully equipped, Cowey trip, Lucas lamps, Klaxon, Tan-Sad, mileage 5,800, just overhauled makers, splendid condition, tax paid; £75.—256, Leahurst Rd., Hither Green, S.E. [1604

P. and M., late 1920, with B4 Canoeler sidecar, fully equipped, makers' legshields, Tan-Sad, tax paid, small mileage, excellent condition; £75.—"Hollies," Gold Hill, Chalfont St. Peter, Bucks. [1752

RENOVATED P. and M. Motor Cycles, ex R.A.F., thoroughly overhauled, fitted with many new parts; solo £45, combination £55; exchanges.—S. E. Porter and Co., Whitchurch, Salop. Tel.: 74. [6270

P. and M. Combination, 1918, fitted new aluminium chain cases, new Dunlop heavies all wheels, complete all accessories, licensed 1922; £48.—Maynard, 161, Bowes Rd., Bowes Park, N.11. 'Phone: Palmer's Green [illegible]. [2026

P. and M. 3½h.p., 2-speed, clutch, kick start, aluminium discs, long copper exhaust, new tyres, Lucas Magdyno lighting, horn, licensed, enamel, plating, mechanical condition perfect; £60, or near offer.—Gothland, Bencombe Rd., Purley. 'Phone: Purley 245. [1509

VOLTAIRE Motor Works can supply a limited number of late type ex-R.A.F. P. and M., rebuilt, re-enamelled, lined and plated, fitted with new T. and B. magnetos, B. and B. carburetters, tyres and tubes, and guaranteed perfect; 40 gns.; delivery before Whitsun.—Voltaire Motor Works, 4, Voltaire Rd., Clapham Rd. Station, S.W.4. 'Phone: Latchmere 4548. [2527

*Spare Parts:*

P. and M. Spares Specialist. Every part in stock; cheap.—Inman, Durham Rd., Seaforth, Liverpool. [499?

P. and M.—All parts in stock for P. and M.'s; send stamp.—P. and M. Specialist, H. Beardwood, 147, Burlington St., Liverpool. [0839

### Paragon.

PARAGON 2-stroke, 3h.p., 2 speeds, spring frame, C.A.V. magneto, practically new, lamp, horn; £35; exchange 2¾h.p. Douglas.—1, Ardgowan Rd., Catford, S.E.6. [1503

### Peugeot.

£20.—Countershaft Twin Peugeot Combination, 3-speed, clutch, K.S., good running order.—King, Egrove Farm, Oxford. [2066


# WATERPROOF CLOTHING FOR ALL WEATHER CONDITIONS

Fig. 1.

**WATERPROOF MOTOR CYCLE SUIT (Fig. 1)**
With Plaited Leather Belt.

SPECIFICATION

MADE from hard wearing double texture material with an interlining of Rubber.
Double Breasted Jacket, with all-round plaited Leather Belt, large Patch Pockets, and converted collar to button right up to neck, to fasten with Throat Tab. Wind Cuffs in sleeves.
All seams of the Suit are rubber cemented and taped with extra material, making the garment absolutely waterproof.
Overall Trousers with spat-shaped leg; wind gussets to keep the wind from the leg and boots; fastened with patent clasp fasteners, enabling the trousers to be pulled off in a moment.

**SUIT COMPLETE 35/-**
Jacket only .... 25/-
NO EXTRA CHARGE FOR CARRIAGE

*POST YOUR ORDER EARLY*

*Satisfaction guaranteed or money refunded if garments are returned to us within 7 days.*

**Waterproof Trench Coat 25/-**
(Fig. 2.) Fawn material, rubber lined, wind cuffs, guaranteed waterproof.

SEAT-LESS Trousers Fawn double texture material rubber interlined wind gusset & clasp fasteners. All sizes. Guaranteed Waterproof.

**18/-** per pair.

Fig. 2

**WATERPROOF OVERALLS.**
Double texture material, clasp fasteners, perfectly waterproof.
per **12/6** pair.
THESE GARMENTS ARE NEWLY MADE FROM FRESHLY PROOFED MATERIAL BY EXPERIENCED WORKMEN AND NOT HALF PERISHED CLEARANCE LINES OR W.D. SURPLUS.
*If you cannot call, send money with breast measurement and height.*

*Send for pattern bunch of Cloths to-day.*
*Carriage paid on all Orders.*
Actual Manufacturers:
**Martin Waterproof Co.,**
208 Oldham Rd., New Cross, Manchester


## MOTOR CYCLES FOR SALE.

### Precision.

PRECISION 2¾h.p., 2-speed, equipped, overh[aul] tax paid; £17/10.—17, Heaton Rd. Mitch[am]

PRECISION Junior 2½h.p., 2-speed, new tyre[s] paid, perfect; £17.—13, Vernon Rd., East [Sheen]

### Premier.

£16.—4h.p. Twin Premier, good running order, [£]—King, Egrove Farm, Oxford.

PREMIER 3½h.p., clutch, £16; another, co[unter] shaft model, £25.—17, Heaton Rd., Mitch[am]

PREMIER 3½h.p., T.T., first-class sporty ma[chine] disc, etc.; £26.—Gibbons, 54, Holland Rd., [Kens]ington.

2½h.p. Premier, 2 speeds, clutch, starter, [in] smart appearance, tax paid; £16.—27, Sid[ney] St., Devizes.

PREMIER 1914 2½h.p., 3-speed, lamps, horn paid, perfect order; £22/10.—Hudson, Engi[neer] Office, G.W.R., Taunton. (D)

3½h.p. Premier Coach Combination, lamps, [horn] etc., 3-speed, clutch, trial given; best offer —Collins, Record Rd., Emsworth.

PREMIER 2½h.p., fully equipped, tax paid, [ready] to ride away, excellent condition, overha[uled] £20, or offer.—2, Mascotte Rd., Putney, S.W.15

PREMIER 3½h.p., 2-speed, K.S., variable B. [and] B., adjustable pulley, good tyres, recon[dition] low, tax paid; £30.—T. Read, Cross Hill, Hemsw[orth]

PREMIER 1914 3½h.p., free engine, gears, [new] low frame, recently overhauled, new Binks [carb]uretter; £24.—68, Gloucester Rd., Camden To[wn]

1914 Premier Combination 3½h.p., 3-speed, c[lutch] K.S., B. and B., Bosch, excellent cond[ition] stored during war; reasonable.—60, Smith [St.] Warwick.

3½h.p. Premier, in splendid order, long ex[tra] pillion, lamps, licensed, spares, no outla[y] quired, ready for touring; £35.—90, High Rd., W[illes]ford Green.

*Spare Parts:*

PREMIER Spares.—All parts in stock for [every] machine. Best and cheapest in the [trade] Repairs by Coventry's best mechanics.—Alf. Hol[mes] Hearsall Lane Corner, Coventry. 'Phone: 194[5]

PREMIER Spares and Repairs.—We claim to b[e the] most competent firm to supply spares and ex[pert] repairs to Premier motor cycles. We served i[n the] Premier works, and know this machine from A [to Z]. We hold the most varied stock of parts for it in [the] world. We are the only traders who can clai[m to] supply every part for a Premier machine. Our [prices] are rock bottom, and our service unsurpassable. [Write] us full requirements; you will receive our reply [by] return.—Forfield Motors, Forfield Place, Leamin[gton] Spa. [illegible]

### P.V.

P.V.—Astounding value is represented by our [new] range of popular models, incorporating [the] famous spring frame and Villiers or J.A.P. eng[ines] Prices from £45. Lists from agents or P.V. M[otor] Cycles, Ltd., Forest Hill, London. [illegible]

### Quadrant.

CLIFFORD WILSON Company, 16 years' experi[ence] with Quadrants. [illegible]

QUADRANT Combination, new 1922, actual[ly in] stock; £105; no waiting.—Moss, Wem. [illegible]

WAUCHOPE'S, 9, Shoe Lane, London.—4½ Quadrant Combination, 3 speeds, kick start, clutch, 1920; £77/10. [illegible]

1922 Quadrant 4½h.p. Combinations; £[illegible] Agents for Cambridge.—Wallis and Ea[rl], 104, Mill Rd., Cambridge. [illegible]

3½h.p. Quadrant, A.I.V., magneto, spring forks, [run]ning order; sacrifice, £9, carriage paid.—[Bur]well, 56, Lawrence Hill, Bristol.

FRANK WHITWORTH, Ltd., Distributors, [illegible] New St., Birmingham.—Quadrant £100 4½ Combination, delivery from stock. [illegible]

£25.—Quadrant 1915 4½h.p. 3-speed Solo, w[ell] overhauled.—Clifford Wilson Manufacturing [Co.,] 177, Westminster Bridge Rd., S.E.1. [illegible]

CLIFFORD WILSON Mfg. Company, Quad Works Representatives and Sole Wholesale [Dis]tributors for London, Southern and Eastern Coun[ties] official repairers and spare part stockists; defe[rred] payments; exchanges; all models in stock. Sp[ecial] insurance facilities applicable to Quadrants onl[y] 177, Westminster Bridge Rd., London, S.E.1, oppo[site] Waterloo Station Approach. Telephone: Hop 2[illegible]

### Radco.

£12.—2¾h.p. Radco, 2-stroke, new tyres, run[ning] order.—King, Egrove Farm, Oxford. [illegible]

NEW 1922 Radco 2-speed, clutch, kick star[ter] £47/5; easy payments 4% extra.—Premier M[otor] Co., Aston Rd., Birmingham.

## MOTOR CYCLES FOR SALE.

### Radco.

E 1921 Radco, 2 speeds, free engine, condition ... mileage under 1,000, mechanically perfect, ... trouble free; £35 or nearest; owner ... car.—Capt. Stevenson, The Elms, Fish, Sallis- [1934

### Raglan.

... Raglan Combination, carpet; sidecar in ... running order; £30.—Johnson, 106 Camberwell ... S.E.5 [1172

### Raleigh.

MITED Motor Co. for 1922 Raleighs.

EDIATE delivery of 2½h.p. 4-stroke lightweight, ...eed, £48; 3-speed, £52; also 5-6h.p. Gas twin, ... frame, detachable wheels, solo £150; sidecar ...ths, £153; easy payments, 4 per cent. extra; ...livery to any address.—The Premier Motor Co., ...84, Birmingham. [0886

EIGH 2¼h.p., all-chain drive; £46.—Wan... ...chapel, E. 9, Slade Lane, London. [2402

EIGH 2¾h.p., 3-speed, kick start, in stock; ...6.—Clark, 7, Exhibition Rd., S.W.7. [1030

EIGHS.—All models; delivery easy.—Barlow ...nd Son, Morden, Surbiton. Tel.: 180 Elmbridge. [2495

EIGH.—Immediate delivery of 1922 models, ...sh, exchange, or deferred payments.—Keys, 8, ...ne, Ealing. [4836

EIGH 1¾h.p. Models in stock for immediate ...elivery; cash or exchange.—Newnham Motor ...8, Hammersmith Rd., W.6. 'Phone: Hammer... 80. [1738

1923 5-8h.p. Raleigh, spring frame, detachable ...wheels, special Sporting Montgomery sidecar, ...easy payments 2½ extra; free delivery to any ...—Premier Motor Co., Aston Rd., Birming- [2492

EIGH 5-6h.p. Solo and Combination for immediate delivery; best market price allowed on ...and machines in part payment.—Newnham ... Co., 125, Hammersmith Rd., W.6. 'Phone: ...rsmith 80.

EIGH Spares in stock.—Newnham Motor Co., ...bove. [1739

### Reading-Standard.

DING-STANDARD 10h.p., 1920, de luxe sidecar, dynamo lighting, excellent condition, many ... £135.—Watts, 37, Okehampton Rd., Willes... S.W. [2140

### Rex.

—Rex, 5-6h.p., combination, good condition, ...rial; bargain.—62, Galloway Rd., W.12 [1262

... 5½h.p., clutch, overhauled, taxed, perfect; ...35.—112, Babbacombe Rd., Bromley, Kent. [2511

GNS.—Rex, 2¼h.p., magneto, dropped frame, ...drive away after 3 o'clock.—35, Swaffield Rd., ...worth. [2489

... new Rex-Acme 2¾h.p., 3-speed models; ...£48 10s; easy terms and exchange.—Wrenhaige's, ...e Lane, London. [2402

—5-6h.p. Rex, clutch, H.S., Bosch, drop frame, ...T. taps, tax paid, guaranteed, ride away.—T. ...gham Rd., New Cross. [2096

-BLACKBURNE, 1921, 8h.p. Combination, ...rfect, special sidecar, all accessories; £215.— ..., Exhibition Rd., S.W.7. [2479

2 Rex-Acme, 2¼h.p. Blackburne, all chain, 3-speed, kick starter, instant delivery; £73 10; ...ges.—Nevitt's, 417, Lord St., Southport. [2490

Rex Combination, excellent condition, 3-speed ...ear box, clutch and kick start, all-chain drive; ...e 50 gns., lowest.—Henry Bolt, 113, Bath Rd., ... [2545

... 6-8h.p. Combination, clutch, overhauled ...ngine last season, and all accessories, most ... it in splendid condition; £45.—T., 542, ...ford Rd., E.7. [1890

2 Rex-Acme, latest model G, immediate delivery, 'Phone: Greenwich 750. All-chain drive Blackburne engine, Sturmey-Archer gear with clutch, interchangeable and detachable wheels, ... brake, spring seat-pillar, etc., special ... chassis, with Autocross sidecar; a combination ...rivalling with refinements at £150, complete. ...and inspect same in my showrooms, catalogues ...pleasure.—The agents for all high-class products ... Sam E. Clapham Motors, 37, Stockwell St., ...ich, S.E.10. [3065

### Reynolds.

'NOLDS Runabout Motor Cycle, just delivered ...ew, cost £79; owner not nervous to ride; accept ...ir quick sale.—Apply, Mrs. Thomas, Long... ...w Cottage, Moor Street, Herts. [3798

### Rover.

1 New Rover 4h.p., 3-speed, chain drive; £80, ...r near offer.—Perry and Co., 314, Euston Rd. [3462


# Get your T. T. mount at

## "THE Birmingham House for Motorists."

HERE you can examine all the leading motor cycles—obtain expert opinion and assistance—and get your mount right away, ready for the road. All these machines are NOW in STOCK.

### SOLO Mounts:—

| | |
|---|---|
| TRIUMPH, 3½ h.p., type R.O.H.T. | £120 0 |
| A.J.S., 3½ h.p., De Luxe Sports | £95 0 |
| INDIAN-SCOUT, Model G.E. | £104 0 |
| TRIUMPH, 4 h.p., type H | £105 0 |
| JAMES, 3½ h.p., Twin | £105 0 |
| NEW IMPERIAL, 3½ h.p., Super Sports | £90 0 |
| HUMBER, 4½ h.p., Sports | £100 0 |
| N.U.T., 3½ h.p., Twin | £100 0 |
| TRIUMPH, 4 h.p., S.D. Model | £115 0 |
| ENFIELD, 3½ h.p., Sports | £55 0 |
| NORTON, 3½ h.p., Model 18H | £115 0 |
| A.J.S., 3½ h.p., De Luxe Stripped Sports | £85 0 |
| ROVER, 3½ h.p., single-speed | £68 0 |
| NEW IMPERIAL, 3½ h.p., Model 5 | £73 0 |
| MASSEY-ARRAN, 3½ h.p., Blackburne | £72 10 |
| ROVER, 4 h.p., 3-speed, Sports | £100 0 |
| ARIEL, 3½ h.p., 3-speed Sports | £87 10 |

### SIDECAR Outfits:—

| | |
|---|---|
| A.J.S., 7 h.p., De Luxe Inner wheels | £175 0 |
| DOUGLAS, 4 h.p., Combination, fully equipped | £125 0 |
| ENFIELD, 3 h.p., Combination | £143 0 |
| HUMBER, 4½ h.p., Twin Combination | £144 0 |
| INDIAN, 7-9 h.p., Combination, dynamo lighting, etc. | £175 0 |
| JAMES, 7 h.p., De Luxe Inner wheels | £160 0 |
| NORTON, 3½ h.p., and Racing Sidecar | £130 10 |
| TRIUMPH, type H, and Special Sidecar | £125 0 |
| ROVER, 8 h.p., Combination | £155 0 |

CASH. EXCHANGES. DEFERRED TERMS.

Call and get your mount NOW for "WHIT-SUN." Exp. rt tuition free. Registration, etc., arranged.

# P. J. EVANS

Winner of the JUNIOR T.T. 1921

81-91, John Bright St., BIRMINGHAM.

Telephone: Midland 2362.

Telegrams: "Lyrate, Birmingham."

Citroen-Wolf.


## MOTOR CYCLES FOR SALE.

### Rover.

ROVER, 1921 Combination, well equipped, taxed, £70.—Clark, 7, Exhibition Rd., S.W.7. [2491

3½ h.p. T.T. Rover, Malvern girder, tax paid, all to ... 42 gns.—34, Mallerstang Rd., Earlsdon. [2550

ROVER, 8h.p., 1921, Standard model, £150; combination in exchange.—Grimes, 11, Byron Place, Bond St., W.1. [2445

ROVER, 1921, Combination, 8-9h.p., balloon body, 3-speed, commershaft, £42.—136, Grangehill Rd., Eltham, S.E.9. [2572

3½ h.p. T.T. Rover, this good condition, accessories, tax paid; £50.—White Garage, 5, Richborough Rd., Cricklewood. [2564

5-6h.p. Rover, 1921, mileage 4,000, fully equipped, tax paid, all in perfect condition, £42.—Hampshires, High St., Stratford. [2553

ROVER, 1914, 3-speed, countershaft, in excellent condition; seen any time; £50.—Wills, London House, Hersham, Walton-on-Thames. [1362

19[illegible] Rover 8-9h.p. Road Racer, Phillipson pulley, ... lighting accessories and tax paid; £55.—Seen at Wrenhaige's, 3, Slade Lane, London. [2401

£55.—Rover Combination, 1919-19, 8-9h.p., countershaft, 3 speeds, chain drive, kick starter, fully equipped, splendid condition.—61, Seton Rd., Bromley. [2556

5-6h.p. Rover Combination, 1919-20, electric lamps, dashboard instruments, Cowey windscreen, new condition; £90.—72, Windermere Rd., South Ealing. [2521

3½ h.p. Rover, 3-speed, countershaft, handle bar control, chain drive, kick start, lamps, etc., tax paid; ... exceptionally smart machine; £55.—Elliot and Co., Stone Place, Brisbane. [2483

3½ h.p. Rover Combination, engine thoroughly overhauled, thermosiphon, fully equipped, speedometer, 3 months wear only; sole reason for selling, buying car; £70, or near offer.—Trumpeter Chains, Cambridge. [2532

3½ h.p. Rover 1918 Combination, 3-speed countershaft, B.S. clutch, extra heavy Dunlops, Lucas fully equipped, guaranteed perfect condition, thoroughly overhauled; 55 gns.—7, Wandle Rd., Wandsworth Common, S.W.17. [2081

ROVER Combination, 8-seater late 1918, 8½h.p., 3-speed gear box, kick start, overhauled thoroughly, upholstered, Dunlops, lamps complete, spare chain, plates and sprocket; £90 lot.—Trumble's Garage, Bayford Rd., East Finchley, N.2. [2084

*Spare Parts.*

ROVER Spares. Immediate delivery.—Keys, 8, Bond St., Ealing. [4837

### Royal Ruby.

ROYAL RUBY 2-stroke, good condition, accessories, lamp; £12.—9, Wood Vale, Forest Hill. [2563

19[illegible] 2¾h.p. Royal Ruby Combination, nearly new; £58.—84, Church St., Edgware Rd., W. [2555

ROYAL RUBYS.—Prompt delivery from Part's and Sun, Monroe, Enfield. Tel.: 180 Enfield. [2501

RUBY-VILLIERS 1920 2¾h.p., single-speed, electric light, chain, tax paid, perfect condition; £38.—Wells, Hirst, 58, Rylandt Rd., S.W.1. [2508

ROYAL RUBY, 1920, 8h.p., spring frame, R.I.W. valve attachments, accessories, licensed; £65.—Williams, Park Rd., Stanstead Abbotts, Herts. [2554

ROYAL RUBY, 8h.p., 1918, excellent condition, inspection by appointment; £50, or reasonable offer refused.—Jenkins, 10, Bassett Rd., W.10. [2044

19[illegible] Royal Ruby Combination, perfect order, fully equipped, Dunlop tyres; £55; 3-speed A.J.S. gear box, kick start.—204, Laburnum Grove, W.10. 'Phone: Park 3541. [2702

ROYAL RUBY, 8h.p., spring frame, new 1920 engine, new 1921 3-speed gear box, kick start, chain, speedometer, every accessory, machine perfect; £70, 10 m. or nearest.—P. Scofield, 11, Cleveland Rd., Hale, Cheshire. [2021

ROYAL RUBY 1919 8h.p. Combination, electric lights, 700 x 85 back tyre, Dewry improvement, 3 good spare tyres and tubes, spare hub body new pair cellulate, pliers and pumps; a perfect lot, £55.—45, Trevelyan Rd., Tooting, S.W. [2543

19[illegible] 8h.p. Royal Ruby—the spring frame combination par excellence—fitted with intensive and spare wheel, luggage and petrol carrier, Dashing Saxham screen, lamps, horn, etc., all in, at £[illegible]; immediate delivery from the stock of all high-class makes, as usual.—Sam E. Clapham Motors, 37, Stockwell St., Greenwich. 'Phone, 781. [2695

19[illegible] 8h.p. Royal-Ruby combination, modern-seater sidecar, luxurious cushions, dynamo lighting, Cowey speedometer, Dashing Saxham screen, handlebar watch, fitted with interchangeable and spare wheel, luggage and petrol carrier, jack and under shield, Lucas horn; only done £[illegible], with accessories.—Dealer, 194, Tufnell Park Rd., Holloway, N. [2545

## MOTOR CYCLES FOR SALE.

### R.S.

5-6h.p. R.S., Bosch magneto, B. and B. carburetter, drop frame, valanced mudguards, legshields, countershaft 2-speed and clutch, all chain, recently overhauled and enamelled, smart and powerful; £25; worth seeing.—Newman, 43, Arthur Rd., Mostyn Rd., Brixton. [1783

### Rudge.

RUDGE-MULTI, £28; another, incomplete, £15.—56, High St., Tooting. [1880

RUDGE, fast, clutch, tax paid, fine condition.—A., 135, Horton Hill, Epsom. [1328

RUDGE Combination, 3½h.p.; cheap, £28; disc wheels.—226, Wick Rd., E.9. [1616

1920 Rudge-Multi Combination; £80; tax paid.—10a, Sunnyhill Rd., Streatham. [1390

£27/10.—Rudge, clutch model, equipped, fast.—71, Forest Drive West, Leytonstone, E.11. [1176

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Rudge-Multi 1919 I.O.M.; £50; easy terms. [2414

£38.—Rudge-Multi, foot oiler, smart, fast, all on; exchange.—97, Hamilton Rd., West Norwood. [1979

RUDGE-MULTI (new) 3½h.p. T.T. models in stock.—Hill's Garage, Crooklog, Bexley Heath, S.E. [1152

49 GNS.—1919 Rudge-Multi I.O.M., equipped, solp.—284, South Lambeth Rd., Stockwell. [2324

RUDGE-MULTI 5-6h.p. Combination, Rudge coach-built sidecar; £30.—H. Rock, Cradley, Staffs. [1914

1920 3½h.p. Rudge-Multi, lamps, new belt, licensed; bargain, £49, near.—160, London Rd., Reading. [2223

3½h.p. Rudge-Multi and Rudge sidecar, unused, perfect; quick sale, £80.—Hill, Birchwood, Alfreton. [1225

£20.—Rudge 1920 3½h.p., perfect, approval, small deposit.—Mason, Three Tuns, Tancred St., Tannton. [1468

RUDGE-MULTI 3½h.p. 1922 Model in stock, immediate delivery; £77.—Smith's Garages, Grantham. [1488

3½h.p. Rudge-Multi, all on; £55, or offer; exchange combination.—Williams, 23, Lansdowne Rd., Dalston. [1149

RUDGE-MULTI 5-6h.p., excellent condition; 29 gns.; guaranteed; must sell.—79, Bedford Hill, Balham. [2329

1920 Rudge-Multi, lamps, etc., taxed year; £54.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [2230

1920 5h.p. Big Single Rudge, complete with sidecar; £75.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [2098

1922 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, Muswell Hill, N.10. [0791

1914 3½h.p. Rudge Combination, in good order; £48, or near offer.—Harris, 15, Rochester Mews, Camden Town. [1255

NEW Rudge, 3-speed, chain drive, 3½h.p.; immediate delivery; £94; exchange.—Percy and Co., 314, Euston Rd., N.W. [9654

RUDGE-MULTI Combination 3½h.p. 1919, any trial; £50.—56, Lordship Lane, Tottenham. 'Phone: Tottenham 2067. [1668

1921 I.O.M. Rudge-Multi, low mileage, tax paid, all accessories, lovely condition; £58.—151, Globe Rd., Bethnal Green. [1465

1921 Rudge-Multi 3½h.p., equipped, condition and appearance as new; £57.—Godfrey's Garage, Cranbrook Rd. Ilford 83. [2187

1922 Rudge, I.O.M. model, immediate delivery from stock.—Sam E Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [1816

RUDGE 1921 I.O.M., fully equipped with Lucas accessories, licence paid; £65.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [2097

RUDGE-MULTI 3½h.p. coachbuilt Combination, electric lighting, Tan-Sad, taxed, equipped; 38 gns.; photograph.—Below.

RUDGE 3½h.p., good order; 18 gns.—Peter Gordon, Limited, 110, Upper Richmond Rd., East Sheen. Open Sundays. Exchanges. [2388

£77 is the price of a new Rudge. Get it from the Agents; in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17. [0836

RUDGE-MULTI 3½h.p., 1919, recently overhauled and in good condition; £40, or nearest offer.—46, Osborne Rd., Palmer's Green, N. [1592

RUDGE-MULTI 3½h.p. C.B. Combination, excellent condition; £45; apply after 6 p.m.—17, Norfolk Mews, Norfolk Crescent, Edgware Rd. [1413

1916 Rudge-Multi, new tyres, belt, semi-sporting bars, Klaxon, speedometer, licensed; £30.—Tilling and Judd, Beacon Hill, Hindhead. [1128

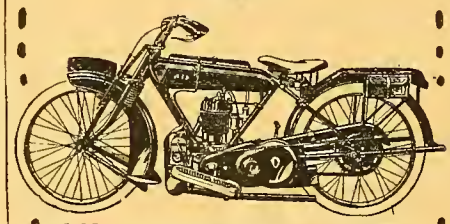
Sole London and District Agents for A.J.S., Excelsior & Dunelt Motorcycles

1922 T.T.
WATCH THE
A·J·S

Winner of the following TOURIST TROPHY RACES.

Junior
1914
1920
1921

Senior
1921



| | |
|---|---|
| A.J.S., 7 h.p. Combination ... ... | £175 0 |
| A.J.S., 7 h.p. Combination, 2-seater | £185 0 |
| A.J.S., 2¾ h.p. Combination ... | £110 0 |
| A.J.S., 2¾ h.p. Sports or Touring ... | £85 0 |

Get your A.J.S. from the Sole London Agents and largest suppliers. Cash or Easy Payment terms.

H. TAYLOR & Co., Ltd.
Showrooms—
Motorcycles and Cars,
52-53, Sussex Place, South Kensington.
Accessories, Spare Parts and Repairs,
21a, Store Street, Tottenham Court Road, W.C.1
Wholesale—
38, ALFRED PLACE, W.C.1.
Garage—Tottenham Court Road, W.1.
Phones: Accessories & Repairs, Museum 1240
Motorcycles and Cars, Kensington 7260
Telegrams: "Dynametro, Westcent, London."


## MOTOR CYCLES FOR SALE.

### Rudge.

1915 Rudge-Multi coachbuilt Combination, in excellent running order, bargain; £38.—Rhind and Co., Stone Place, Rusholme, Manchester. [248

WAUCHOPE'S, 9, Shoe Lane, London.—New 192 Rudge, 3½h.p., I.O.M.; £77; easy terms arranged.—Wauchope's, 9, Shoe Lane, London. [242

RUDGE-MULTI 3½h.p. 1921, pedal starter, speedometer, horn, new spare belt, tools, mileage 900 £60.—Turner, 15, Princes Gardens, Kensington. [135

RUDGE-MULTI Combination, sporting sidecar, fast splendid condition, lamps, windscreen; bargain £40.—Terrace Garage, Turnham Green Ter., Chiswick. [176

RUDGE-MULTI T.T. 3½h.p., clutch, lamps, pedal start, good condition, small mileage, also 2 side cars; what offers?—Lowe, Nursery, Hatton, Warwick [138

RUDGE 7-9h.p., complete with Mills-Fulford De Luxe sidecar, hood, screen, speedometer, lamp, licence paid; £90.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [209

1922 Rudge 7-9h.p., Easting screen and horn, tax and insurance paid for year, under 200 miles £145.—Tromans, Bellows Makers, Blackheath, Birmingham. [154

1921 3½h.p. Rudge-Multi, pedal start, electric light guaranteed perfect; £63; Cancelet Minor as above, £8.—Chandler, 56, Claverlng Rd., Wanstead Park, E.12. [143

1920 3½h.p. Rudge-Multi Combination; 50 gns (would separate); beautiful condition, complete accessories, mileage 3,457, licensed.—Fersfield, Wesbury Rd., New Malden. [169

£29.—Rudge 3½h.p., 1913, clutch model, re-enamelled and plated, engine overhauled by makers, lamps, tax paid, any trial, bargain.—6 Grand Parade, Harringay. [213

RUDGE-MULTI.—5-6h.p., shop soiled, £79; 7-9h. Combination, shop soiled, £105; 3½h.p., 192 I.O.M., £77; 3½h.p., £27/10.—Shepherd, Enfie Highway. Tel.: Waltham X 31. [087

£65.—3½h.p. Rudge combination, October, 191 licensed, insured, tools, new tyres throughou good mechanical condition, hood, windscreen, apron. Seen, Blake's, 218, Westbourne Grove. [18

RUDGE-MULTI, specially made for T.T. Race pr war, finished second, done 6,900 miles only, pra tically as new, probably fastest Rudge made; be reasonable offer.—Roger Bate, Dee Banks, Chester. [17

SPECIALLY Tuned Rudge-Multi, capable exceedin 60, Wex racing carburetter, special piston, lo exhaust pipe, enamel and nickel like new, all acce sories; £52/10.—45, Rosedew Rd., off Fulham Pala Rd., W.6. [164

*Spare Parts:*

THE Promptest Firm for Rudge Spares.—Forfie Motors, Forfield Place, Leamington Spa. [31

### Scott.

WAUCHOPE'S, 9, Shoe Lane, London.—3½h. Scott and Sidecar, 1914-15, 2 speeds; £45; ea terms. [24

F.O.C.H. have a 1920 Scott, brand new conditio also 1914 combination,—5, Heath St., Hampste (near Tube). [89

1915 Scott, splendid condition, very little use speedometer, lamps; £42.—Connolly, 33, Pa side, S.W.19. [12

3¾h.p. Scott, 2-speed, kick start, chain drive, sm mileage, almost as new; £55; guaranteed.— Warley Rd., Blackpool. [20

SCOTT, 1921, August, semi-T.T. hars, speedomet Cowey, Tan-Sad, licensed 1922, ready to ri Hall, 91, St. Peter's St., St. Albans. [12

SCOTT Sociable 1921, done only 1,400 miles, new condition, delivery at Bradford; price £1 —Somerville, 30, Ormidale Terrace, Edinburgh. [65

SCOTT, 1920, just overhauled, lamps, speedomet mileage 4,000, any trial; £75, or near offer away; £60, or best offer.—Yule, Kirkney, Hadl Wood. [11

SCOTT, 1915, with Phœnix sidecar, splendid con tion, chains new, lamps, tax paid, would sep ate; seen evenings; £45.—48, Frankfurt Rd., Her Hill, S.E. [17

1915 Scott Combination, new parts, perfect, brt photo; £45; exchange Triumph, Rover, B.S. solo, from 1915.—G., 25, Brook View, Ingrebour Park, Rainham, Essex. [12

£67/10.—Scott 1920 (September) 3¾h.p. Model, absolutely perfect, mileage under 2,000, a sacrifi lamps, horn, etc.; or exchange.—G. H. Tucker, R cliffe Hill, Bristol. 'Phone: 4042. [65

1920¾ Scott Combination, mileage 3,000, bra new condition, electric lighting, windscre taxed; 68 gns.; exchanges.—Peter Gordon, Limit 110, Upper Richmond Rd., East Sheen. Photogra [22

## OTOR CYCLES FOR SALE.

### Scott.

3¼h.p. Scott Combination, as new, mileage der 1,000, complete with Miller lamps, tool Cowey horn, licensed December, 1922; what Partridge, Flour Mills, Pershore. [1409

London Scott Service Depôt.—'Phone Croy- 1129 for demonstration runs; immediate de- rices from £105.—John R. Kinsey and Co., -352, Lower Addiscombe Rd., Croydon. [8352

*Parts:*

London Scott Service Depôt.—Scott Spares: tt Repairs.—John R. Kinsey and Co., Ltd., Lower Addiscombe Rd., Croydon. 'Phone [8353

REYS', Ltd., 208, Great Portland St., London, .1.—Complete stock of all Scott spare parts stock. Write for free spare part list, stating manufacture. [0751

### Singer.

CHOPE'S, 9, Shoe Lane, London.—2½h.p. ger, 1910; £20. [2416

R 2¼h.p., perfect order, fully equipped; £20. 8, Wandsworth Rd., S.W.8. [1802

).—Singer 2¾h.p., overhauled, all on.—11, remont Place, Rotherhithe, next Hippodrome. [1639

NS.—Singer 3½h.p., 3-speed, fine condition, 'ear's tax paid.—Delancey St. Garage, Camden .W.1. [1744

R Combination 4½h.p., 1917, 2-speed, coun- haft, Bosch, B.S.A., licensed, good condition; near offer.—Ranford, Garage, Malvern. [1235

NS.—Singer coachbuilt combination, 3 speeds, atch, enclosed magneto, B. and B., good tyres, er 8 o'clock).—53, Swaffield Rd., Wandsworth. [6670

R Combination, 4¼h.p., 2-speed countershaft, chain, equipped, tax paid; £45.—Homac's, wer Clapton Rd., Clapton, N.E. 'Phone: Dal- 08. [2118

*Parts:*

Promptest Firm for Singer Spares.—Forfield tors. Forfield Place, Leamington Spa. [3164

R Spares.—I have the genuine stock at the it price.—Alf. Holland, Hearsall Lane Corner, . 'Phone: 1945. [1877

### Slade.

Slade-Jap, 1921, perfect condition, all on, ew tyres; £48.—Mitchell, Didsbury College, ster. [2031

### Sparkbrook.

KBROOK 1916, Villiers engine, 2 speeds, can 40; £25.—Beckess, Butcher, Heston, Hounsl- [1381

Sparkbrook 2½h.p., 2-speed, electric lights, horn, little used, sound machine; £40.—Lyn- Tilehurst, Reading. [1254

KBROOK, 1920, Villiers engine, flywheel mag- to, 2 speeds, all accessories, little used; £38.— and Co., 275, High St., Acton, London. [1795

### Spur.

Olympia Model Spur-Villiers 2¾h.p., 2-stroke, bsolutely perfect condition; cost £75; acces- :23; accept £45, or near offer; reason for sale, yment.—9, Petherton Rd., Highbury. [1190

### Sun.

VILLIERS 2½h.p., lamps, horn, tax paid, splen- condition; £25.—15, Deal Rd., Tooting. [1833

Sun-Jap, as new, all accessories; want higher power; after 6.—East View, Stanhope Rd., te, N.6. [1414

2¼h.p. 4-stroke, with 2-speed gear, excellent ning order; £25.—Newoham Motor Co., 223, rsmith Rd., W.6. 'Phone: Hammersmith 80. [1739

VITESSE 1920 2¾h.p., 2-speed, 2-stroke, k start, clutch, horo; £34.—Elce, Ltd., 15-16, gate Avenue, Camomile St., E.C.3. 'phone: 5548. [0065

Sun, J.A.P., or Sun-Vitesse, get in touch with e sole North London agents. Models in stock, Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., Send for catalogues. Trade supplied.—Jones Broadway, Muswell Hill, N.10. [0790

### Sunbeam.

BEAMS, all models, from Gonrlay's, Fallowfield, anchester. [1199

. Sunbeam, detachable wheels, brand new; what offers?—Randall, Andover. [8983

S, Effingham Square, for Sunbeams.—New h.p. and 4¼h.p. models from stock. [2255

. Sunbeam 1921, ridden 6 weeks at evenings; £115.—Peet, 27, Alma Rd., Retford, Notts. [1339

NDUDNO.—Kelly Bros., 108, Mostyn St., gents. Sunbeams in stock. 'Phone: 277. [3311


INTEGRITY

LAYTON GARAGES

# Find out for yourself!

**Find out for yourself the vital advantages of Layton's service, and what its policy of "satisfaction above all things" may mean to you.**

**Find out for yourself how Layton's advice can help you to choose the best possible machine for your purpose and purse.**

**Find out for yourself how Layton's exceptional organization can give you the utmost value for your money.**

**Find out for yourself what bargains in guaranteed slightly-used machines Layton's can offer you.**

**Find out for yourself how Layton's terms for exchange and extended payments are adapted to meet your individual needs.**

*Always a unique stock of specially guaranteed used machines at real bargain prices. Let us know your requirements.*

**Find out for yourself the reason of the confidence and the friendliness that have always existed between Layton's and their customers—all over the country.**

***Earliest possible deliveries of 1922.***

*Ariel, B.S.A., Brough-Superior, Diamond, Douglas, Edmund, Enfield, Humber, Indian, Massey Arran, Matchless, Norton, Rover-Scott, Triumph and Velcette.*

# Layton Garages

**90, High St., OXFORD**
**And at Bicester.**

"Integrity," Oxford and Bicester.
581 and 784 Oxford.
35 Bicester

*J. W. Tollady,*
*General Manager.*


## MOTOR CYCLES FOR SALE.

### Sunbeam.

KICKHAM, Stokes Croft, Bristol. Sole District Agent for Sunbeams; unequalled service, repairs, etc. [3143

SUNBEAM 1921 3½h.p., touring model, brand new; £126, list £141.—Ginger, Sunbeam Agent, Banbury. [9589

SUNBEAM 3½h.p., black and gold, 3-speed, late model, good condition; £58.—Pike, 102a, Church St., Chelsea. [1426

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Sunbeam, 1917, 3 speeds; £65; extended payments taken. [2417

1921 Sunbeam 3½h.p. Sports Model, brand new, shop-soiled only; £115.—Jones, 28, Lichfield St., Wolverhampton. [1331

SUNBEAM 8h.p. Combination, dynamo lighting, spare wheel, tax paid; £105.—Tomlinson, 194, Church Rd., Hove, Sussex. [1836

SUNBEAM Combination, 8h.p., 1922, recently received from the makers, cost £250, guaranteed perfect; £198.—Moss, Wem. [2106

3½h.p. Sunbeam Combination, 1920, very fully equipped, engine perfect, as new; £120.—Butler, 11, Green St., Cambridge. [1707

SUNBEAM 3½h.p., 3 speeds, 1919 (late), Lucas lamps, horn, tools, licensed, equal to new; £80.—106, Church St., Chelsea, S.W.3. [1780

SUNBEAM Combination, brand new, late 1921, detachable wheels, leaf spring fork; £160; exchange.—Parker's Garage, Derby. [1588

SUNBEAM Combination, J.A.P. engine, large body with child's seat, Easting, as new; £95.—64, Forthbridge Rd., Clapham, S.W.11. [2076

BRAND New 3½h.p. Sports Sunbeam, equipped best Lucas accessories, cost £155; accept £110.—24, Balliol Rd., North Kensington. [1819

SUNBEAM 2¾h.p. all enclosed chains, countershaft, clutch, K.S., dependable, tax paid; £36.—Binfield, 20, Obelisk St., Camberley, Surrey. [1695

3½h.p. Sports Sunbeam, 1921, June, lamps, speedometer, horn, spare sprockets, special engine; £100.—D.R., 113, George St., Edinburgh. [1231

1922 3½h.p. T.T. Sporting Sunbeam, used for a few demonstration runs only; special price, £117/10.—Apply, 44, Bromsgrove Rd., Redditch. [1581

1921 Sunbeam 3½h.p. Touring, interchangeable wheels, lamps, etc., new condition; 90 gns.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. [2458

1920 3½h.p. Sunbeam Combination, tax paid Dec., completely equipped, condition as new; £120.—Cass's Motor Mart, 5, Warren St., W.1. Tel.: Museum 623. [1204

6h.p. Sunbeam Combination, large sidecar, Klaxon, screen, speedometer, every accessory electric and gas, oversize tyres; £75.—Lear, 6, Villiers Rd., Isleworth. [1675

SUNBEAM C.B. Combination, about 1919, hood, screen, lamps, horn, in perfect order, carefully used, any trial; £80.—23, Streatham Rd., Mitcham Lane end. [2045

3½h.p. Sunbeam, late 1920, Cowey legshields, new chain and back tyre, perfect condition, and carefully looked after; £95.—Fenton, 55, Stirling Rd., Bournemouth. [1379

SPECIAL Sporting 3½h.p. Twin Sunbeam, M.A.G., delivered June last, cost £175; sell £90, no offers; evenings.—120, Marlborough Flats, Walton St., Chelsea, S.W.3. [1931

1919 8h.p. Sunbeam Combination, little and carefully used, smart, sound, just thoroughly overhauled and enamelled makers; about £100.—12, Park St., Cambridge. [1964

SUNBEAM, early 1921, 8h.p., and sidecar, electric light, hood, screen, spare wheel, all tools, in thorough order; £150.—Watkins' Garage, Eccleston St. East, Victoria. [1595

LATE 1920 3½h.p. Sunbeam Combination, Special Canoelet sidecar, screen, speedometer, Cowey horn and lamps, tax paid; £95 only.—Lidderdale, Newcastle Rd., Stone. [1260

1921 3½h.p. Sunbeam Combination, delivered Sept. from maker's, very small mileage, condition as new; owner buying car; £135; Maida Vale.—Box 1578, c/o *The Motor Cycle*. [1206

LATE 1921 Sunbeam 3½h.p., semi-sporting, mileage 700, new condition, stored winter, Cowey horn, speedometer, lamps; £110; appointment.—1, Albany Gardens, Richmond. [1504

3½h.p. Sunbeam, 3-speed, clutch, kick start, chain drive, enamel and condition excellent, tax and insurance paid; best offer over £50.—23, Egremont Rd., Exmouth, Devon. [1282

6h.p. Sunbeam Combination, 1914, everything thoroughly overhauled, new Amac, gear box, carefully, little used, fully equipped, perfect; £130.—Benham, Church Lodge, Barnet. [1251

1921 3½h.p. Sunbeam, Montgomery sports sidecar, tax paid, Magdyno lighting, not soiled, 300 miles only, any trial; £150, or offers.—Garden Cottage, Weybridge Park, Weybridge. [1671

**All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue** B57
**Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Sunbeam.

3½h.p. Golden Sunbeam and Light Sidecar, January, 1920, complete lamps, speedometer, first-class appearance and mechanically, tyres good, low mileage. —Jackson, 20, Brook Lane, Chester. [1258

1917 Sunbeam Combination, 8h.p., Lucas dynamo, electric horn, Cowey, Binks, legshields, guaranteed faultless; £110.—Homac's, 243, Lower Clapton Rd., Clapton, N.E. 'Phone: Dalston 2408. [2117

1920 Sunbeam Combination, Montgomery sidecar, complete overhaul, 2 new tyre covers, C.A.V. electric light and accumulator, luggage carrier, tax paid 1922, splendid condition; £130.—Holmes, Woodland Chambers, Colwyn Bay. [2178

1920 Guaranteed 3½h.p. Sunbeam Combination, interchangeable wheels, lamps, mechanical horn, licensed year, perfect in every respect and in new condition; £115.—198, King St., Hammersmith. 'Phone: Hammersmith 2474. [1900

SUNBEAM 3½h.p. Combination 1919, about 1,000 miles, unscratched and guaranteed as new, has not been out of garage for 18 months, £20 worth of extras, including Easting and legshields, privately owned; £110.—Gillett, 3, Garden Mews, Bayswater. [1351

SUNBEAM 1918 Combination 3½h.p., new Easting Royal windscreen, legshields, electric lighting, very thoroughly overhauled, 1922 Sunbeam engine, re-enamelled, spares, insurance, 10,500 miles, excellent condition; £80.—Ison, 72, Chesterton Rd., Cambridge. [1765

### Taplin.

1920 Taplin-Dalm 3h.p., 2-speed gear box, lamps, discs, licensed; £35; or exchange sidecar, suit Triumph, and cash.—Torrome, 10, Cathcart Hill, N.19. [8994

### T.D.C.

1919 T.D.C., 2-stroke, good condition; good tyres, tax paid; best offer.—E. Soames, 34, Cyprus St., London, E.2. [1661

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE delivery of type 11, 4h.p., 3-speed, £105; type S.D., chain drive, £115; type R., 3½h.p., overhead valve, £120; type L.W., lightweight, £65; sidecars from £20 to £50; easy payments, 4 per cent. extra; free delivery to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0867

TRIUMPH, all models, from Gourlay's, Fallowfield, Manchester. [1198

BABY Triumph, as new, tax paid; £45.—3, Orsett St., Lambeth. [1187

£20.—Clutch model Triumph, taxed, equipped; bargain.—47, Leigh Rd., East Ham. [2074

1920 Triumph Combination, as new; £80.—24, Balliol Rd., North Kensington. [1825

TRIUMPH-RICARDO in stock; £120.—Premier Motor Co., Aston Rd., Birmingham. [0868

TRIUMPH, Ricardo model, just delivered; list price. —Forrester, Graham's Rd., Falkirk. [1212

TRIUMPH, 1918, in perfect order, fully equipped; £45.—155, Ladbroke Grove, W.10. [1709

£25.—Special sporting 1912 3½h.p. Triumph, clutch, fast.—King, Egrove Farm, Oxford. [2063

TRIUMPH 1922 Models in Stock; gradual payments. —Laffeaty, 308, King's Rd., Chelsea. [2172

20 COUNTERSHAFT Triumphs, 1918, from £40. —24, Balliol Rd., North Kensington. [1820

LIGHT Car and Motor Cycle Engineering Co., Ltd. —Come and see our stock of Triumphs.

1921 Triumph, in new condition, all accessories, and tax paid; £78.

1920 Triumph-Gloria Combination, Easting windscreen and many accessories; £85.

COUNTERSHAFT Triumph, 1922, renovated, indistinguishable from new; £70.

BRAND New 1918 Countershaft Triumphs, not renovated, just uncrated; £85.

MANY 1918 Triumphs (countershaft), in really good condition; £60.

LIGHT Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton. 'Phone: Brixton 1292. (½ minute from Brixton Skating Rink.) [2208

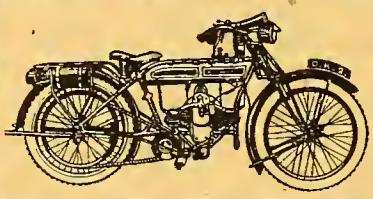
MODEL H 1922 Triumph, new, £105; also S.D. model, £115; cash or extended payments.—Below.

WE have several 1918, 1919 C.S. Triumphs, fitted new tyres, tubes, etc., and many fitted with 1922 S.A. gear boxes, splendid value, enamelled and plated, £65.—The Hackford Engineering Co., 33, Hackford Rd., Brixton, S.W.9. [2314

1914 Triumph, 3-speed, lamps, horn, tyres, new; £28.—Hampshire, Electric Works, Slough. [1144

CROSS, Effingham Square, is Agent for the Trusty Triumph for Rotherham.—All models from stock. [2256

**No matter what the spares or the accessories are that you require on your trip—if it's for a Douglas, we've got it—and if it's a motor cycle you require we offer you the two finest propositions obtainable.**



**Burlington Reconstructed 2¾ h.p. Douglas.** 2-speed gear, fully equipped with lamps, horn, tools and pump.

**Cash Price £50**

**Easy Payment Terms: £13 5s. down, and 12 monthly instalments of £3 6 3.**

**Burlington Reconstructed 4 h.p. Douglas,** with new Burlington sidecar, 3-speed gear, clutch and kick-starter. Fully equipped with lamps, horn, tools and pump.

**Cash Price: Solo 75 gns.**

**Easy Payment Terms: £20 18 6 down, 12 monthly instalments of £5 4 3**

**Cash Price: Combination 93 gns.**

**Easy Payment Terms: £25 16 6 down, 12 monthly instalments of £6 9 6.**

**TRADE SUPPLIED.**

**Burlington**
**MOTOR CYCLE CO. LTD**

**7, South Side,**
**Clapham Common, S.W.4.**
**'Phone: Brixton 2417.**
**Wires: Burlington Motors, Clapham.**
Just by Clapham Common Underground Station.

## MOTOR CYCLES FOR SA

### Triumph.

TRIUMPH 2-3h.p., going order; £17, Sutch, Herbert Rd., Plumstead Comm

RICARDO Model R Triumph, new, in frey's Garage, Cranbrook Rd. Ilford

1914 4h.p. Triumph, 3-speed hub, machin condition, £43.—2, Chudleigh Rd., Lad

TRIUMPH 4¼h.p., 3-speed gear, good condition; £55.—Hopkins, New St.,

TRIUMPHS.—Prompt delivery and serv and Son, Monton, Eccles. Tel.: 16

TRIUMPH, clutch model, 3½h.p., in sp dition; £26.—54, Brondesbury Villas

COUNTERSHAFT Triumph Combination Palfrey Place, Dorset Rd., Clapham

1918 3-speed Countershaft Triumph, i dition; £45.—64, Church St., Edgw

TRIUMPH, 1918, nearly new; £58; g Mosedale, 30, Canterbury Rd., Kilb

RICARDO-TRIUMPH actually in stock; mediately.—Meeten Motors, Dorkin 163.

TRIUMPH-RICARDO, new, in stock, in livery; £120.—Ginger, Triumph A bury.

£39/10, Bargain.—Countershaft Trium licensed, sound, reliable.—89, East E worth.

F.O.C.H. for Triumphs; latest models also 1921 solo,—5, Heath St., Hamp Tube).

TRIUMPH Combination, 1918, counter sonian, lamps, K.S.; £66.—43, G Ilford.

TRIUMPH 4h.p. Decompressor, Philipson anteed mechanically perfect, tax pa Below.

TRIUMPH-GLORIA, 1922, gear box; 11, Chichester Rd., West Kilburn, N.W

TRIUMPH, 4h.p., No. 52,131, excellent spares; £48.—49, Tonsley Hill, W S.W.18.

£38.—Triumph Combination, 3-speed, any lightweight part.—57, Kenbury St., London.

1913 3-speed Triumph, complete lamps, h but wants tuning up; £29.—Cr Rotherham.

TRIUMPH-GLORIA Combination, elect any trial; £70.—The Haven, 120, Rd., Croydon.

TRIUMPH, 1917, Model H, countersh gomery sidecar; bargain, £67.—365, Hammersmith.

1921 Triumph 4h.p., all-chain drive, as —28, Woodford Rd., Forest Gate. Maryland 2598.

1921 Triumph-Henderson, excellent hood, Cameo, accessories; £90.—Chilt Sudbury, Suffolk.

1914 Triumph, clutch, lamps, horn, etc condition, guaranteed; £32/10.—21 Rd., Hampstead.

CLUTCH Model 3½h.p. Triumph, kick st tax paid, new tyres; £25.—Rhind and Place, Rusholme.

1918 4h.p. Countershaft Triumph, fully licensed; £65; after 5 p.m.—100, Rd., West Croydon.

MOFFAT, Yeovil, Official Triumph Servic 1922 models from stock; exchanges; parts. 'Phone: 50.

TRIUMPHS, 1918, 20 to pick from, some new; £40 to £60.—204, Ladbroke Gr 'Phone: Park 5541.

TRIUMPH 1919, Gloria Combination, E paid, insured, new condition; £95.— ary Rd., Walthamstow.

TRIUMPH 4h.p. Combination, 1920, new been stored; £95. — Hedley, Gu 'Phone: 1581 Chiswick.

TRIUMPH 3½h.p. clutch model, fine machine, £22 cash.—74, Brighton Rd., 'Phone: Kingston 3025.

1918 4h.p. Countershaft Triumph, M sidecar; £62/10, or separate.—2, For Rd., Harlesden, N.W.10.

1922 4-valve Model R Triumph, 3½h.p. £120.—E. T. Morris and Co., Ltd., 1 ley Rd., London, N.W.3.

3½ T.T. Triumph, licensed, fully equippe running order; £20.—Enfield Engine 31, Silver St., Enfield, N.

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.
### Triumph.

UMPH combination, 1921, lamps, horn, etc., ax paid, splendid condition; £105.—33, Hack-d., Brixton, S.W.9. [2315

t Triumph, model H, all on, low mileage, excep-ional condition, any trial, tax paid; £75.—M. C., 581, *The Motor Cycle*. [2336

UMPH Combination, 1920, electrically equipped, ax paid, as new; £82/10.—Surgery, 216, Porto-d., North Kensington. [1938

3 Countershaft Triumph, perfect condition, fully equipped; £48.—Hillier, side bell, 9, Walling-v., North Kensington. [1972

–3h.p. Triumph, B. and B. magneto, tax paid, l on, good condition, ride away.—Bergin, Ros-Park Rd., New Barnet. [1685

UMPH, 3½h.p., clutch model, licensed 1922, well quipped, first rate condition; £30.—Bunting's Exchange, Wealdstone. [2496

—Triumph 1913 3½h.p., 3-speed hub gear, re-ntly overhauled, excellent condition.—Dominy o., Jewry St., Winchester. [2236

TCH Triumph and Wicker Sidecar, tax paid, ood condition; low price for quick sale.—Wood-Baring Rd., Beaconsfield. [2052

UMPH Junior 2-stroke, 2-speed countershaft, ootboards, practically new; £50.—Hart, 153, d Rd., East Dulwich, S.E. [1813

UMPH, 1920, never been used; sell £70, or exchange lightweight, cash adjustment.—Hum-Baker, High St., Bracknell. [2225

—Clutch Model Triumph, 1913, 3½h.p., Lucas mps and horn.—Smith's, 86, Chalk Farm Rd., te Chalk Farm Tube Station. [2195

UMPH, all-chain, only done 300 miles, speedo-ieter, Easting, lamps, horn, cost £175; offers.—son, 207, Rye Lane, Peckham. [1992

UMPHS.—Every model in stock, including over-ead valve; delivery immediate.—W. Brandish and The Triumph Garage, Coventry. [5985

0 Triumph Combination, countershaft, excellent condition, accessories; £75.—37, Canterbury Ball's Pond Rd., Dalston, N.1. [1416

9 Triumph-Gloria Combination, Easting screen, all lamps, tools, etc.; £75.—Hillier, side bell, llingford Av., North Kensington. [1973

UMPH Countershaft Combination, hood, wind-creen, etc., splendid condition; £75; trial any —Snow, Laurel St., Dalston, E.8. [2341

'E 1919 Triumph Combination, Easting, speedo-ieter, electric horn and lamps, every accessory; nip.—130, Lowfield Rd., Stockport. [1159

UMPHS, 7, 1918 countershaft models, with mps, etc., from £48; all perfect.—James, c/o nores, 482, Harrow Rd., Paddington. [2228

'YDON Agents Triumphs, all new models and arge range of second-hand in stock.—Moore's Motor Works, North End, Croydon. [0864

UMPH 1919 4h.p., mechanically sound, small ileage, enamel and plating unscratched, lamps, etc.; £65.—Perkins Bros., Wokingham. [2198

1 4h.p. Chain Drive Trusty Triumph, new last July, practically new condition; £100, or equit-ffer.—Box 1662, c/o *The Motor Cycle*. [2249

UMPH 1918-19 4h.p., countershaft, Bosch mag-eto, fully equipped, Tan-Sad, just overhauled; Glenthorpe, Sandfield Rd., St. Albans. [1214

UMPH Combination 3½h.p., 3-speed, clutch, tarter, splendid condition; £45.—56, Lordship Tottenham. 'Phone: Tottenham 2067. [1667

—Triumph 3½h.p., clutch, fully equipped, axed, excellent condition and appearance; bar-–143, Ravensbury Rd., Earlsfield, S.W. [2181

.—Triumph coachbuilt Combination, 3-speed, lutch, accessories, excellent condition, licensed. Amyand Park Rd., Twickenham. (D) [1611

:2 Triumphs, all models. Still the finest single. Catalogues with pleasure.—Sam E. Clapham rs), 27, Stockwell St., Greenwich, S.E.10. [4634

:0 4h.p. Triumph Combination, C.B. sidecar, lamps, Klaxon, all accessories, insurance, : £90.—74, St. Stephen's Rd., Hounslow. [1427

UMPH-GLORIA Combination 1913, 3-speed, ew tyres and belt, all on, excellent condition; -7, Alexandra Parade, Muswell Hill, N.10. [1388

. 1914 Triumph, Sturmey 3-speed and clutch, lenderson light sidecar, in good order, tax paid, , tools; £38/10.—20, Forrest St., Latchford. [2245

UMPH-RICARDO Model, 1922, absolutely as new, dynamo lighting, cost £145; accept £130.—nan Bros., 17, Bond St., Ealing. Tel.: 689. [2457

FFIELD Agent for Triumphs; all models in tock for immediate delivery.—J. A. Stacey, pb Service Depot, 12, Ecclesall Rd., Sheffield. [0812


# WATCH THIS COLUMN
EVERY WEEK FOR
# BANCROFTIAN CO.'S BARGAINS.

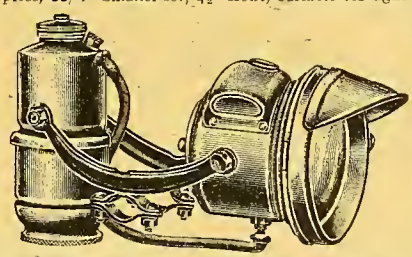
**Advertisers in "The Motor Cycle" from its first publication.**

**TYRES.**—Manufacturers' clearance stock, not W.D. Although clearance, they are new and perfect. Wood Milne extra heavy, 4-ply, 26×2½, combination, **35/-**. Pedley, 26×2¼, 3-ribbed, **25/-**. Hutchinson, 26×2¾, heavy T.T., **27/6**; Passenger, 26×2½ for 2¼, **39/6**; 700×80 to fit 650×65 small car, heavy, **49/6**; light car, 750×75 for 28×3 rim, **42/-**; heavy Passenger, 26×3, **37/6**; extra strong Passenger, 28×3, **53/6**; 24×2 T.T. heavy, **25/-**; extra heavy, 3-ribbed, 700×65, **35/-**; 650×65 steel studded car type, **65/-**; original, **£6 6s.** Firestone, 20×2, Auto wheel, **21/-**; original, **45/-**; tube, **6/6**. Palmer, 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½ cord, **42/-**. Oylers, 650×65, ribbed square tread, heavy, in original packing, **27/6**; original, **45/-**. Clincher de Luxe, very heavy, 26×2½, **37/6**; 26×2 Junior de Luxe, **22/6**; 26×1¾, **17/6**. Hutchinson wired edge cover, 26×2½ and 26×2¼, **30/-** each. Postage 1/6.

**TUBES.**—24×2¼, **4/6**; 24×2, **4/6**; 26×2¼, **5/6**; 26×2½, **5/9**; 26×2¾, **5/6**; 28×3, extra heavy, **7/6**; 700×80, **7/6**. Postage 9d.

**BELTS.**—Clincher clearance line, new, not W.D. ¾", 6' 6", **8/6**; ¾", 7' 6", **12/3**; 8' 6", **14/-**; 1", 7' 6", **16/-**; 8', **17/-**; 1¼", 7', **18/-**; 8', **20/6**; 8' 6", **21/6**; Bates short lengths, ¾", 5', **4/6**; 5' 6", **5/-**; ¾", 4' 6", **5/-**; 5', **5/-**; 5' 6", **5/6**; 1", 2' 6", **3/-**; 3', **4/-**; 3' 6", **4/6**; 4' 6", **6/3**; leather belts, ¾" at **2/6** per foot; belt fasteners, **9d.** and **1/-**. Postage 1/-.

**GREAT PURCHASE of Genuine "BOBJON" LAMPS.** Nickel-plated on brass or black and plated. Large size, 5½" front with powerful back lens, large generator sufficient for two lamps, suitable for a heavy-weight machine. **25/-** complete, as illustrated, original price, **55/-**. Smaller set, 4½" front, suitable for light-



weights, **16/3**. The greatest bargain ever offered. When cleared can never be repeated at near the price. Postage and packing, 1/6 extra. Special quotation for quantities.

**SPEEDOMETERS.**—Slightly shop soiled. Cowey with trip, **£4 15s.**; Stewart with trip (£6 6s. model), **£4 10s.**; Smith's with trip, **£4 10s.** Also Bouniksen in stock. All speedometer replacements in stock. Postage 1/6.

**TAN-SAD,** with back seat, **28/6**; original, **57/-**; only limited quantity. Carriage 3/6 extra.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined, **7/11**; lined, **10/6**; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, **3/6**; Gloves, leather, wool lined, **4/6**. Above lines worth more than double. Limited quantities only. Order at once. Postage 6d.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coat with belt, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality, extra heavy, double texture waterproof material, dark fawn, new and fresh, only been made recently, not half-perished W.D. Our price to clear, **£2 2s.** Postage 1/6 extra. Could not be bought elsewhere under £4 10s. The greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**HORNS.**—Reliable Electric, Motor Cycle, up to 4-volt only, complete with wire and switch; usual price, 29/6, our price, **15/6**. Postage 1/3 extra. Smith's Electric Horns, black and nickel, in 6, 8, or 12 volts, large size, suitable for heavy combinations; original price, £2 15s.; our price, **30/-**. Postage 1/6. The greatest bargain ever offered. All new and perfect.

We can supply anything for the motor cyclist at competitive prices.

## BANCROFTIAN CO.,
78, BISHOPSGATE, LONDON, E.C.2.

'Grams: "Chaikel, London." 'Phone: London Wall 989 7


## MOTOR CYCLES FOR SALE.
### Triumph.

£55.—Triumph 4h.p., countershaft, 1918, engine No. 54278, renovated, new Dunlop tyres.—Smith's, 86, Chalk Farm Rd.; opposite Chalk Farm Tube Station. [2194

1917, 4h.p., gear box, clutch, new Rennoc sidecar, perfect condition, Klaxon, lamps, windscreen, etc.; nearest £75.—Stimpson, May Place, Basingstoke. [1275

BRAND New 1922 4h.p. Triumph Model S.D., all chain, £115; Gloria pattern sidecar to fit, £35.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [1532

1920 Triumph Combination, under 2,000 mileage, as new, including £25 set of accessories; £110; after 6.—Rose, 40, Bracewell Rd., Wormwood Scrubbs. [1636

4h.p. Triumph Combination, C.S., new sidecar, lamps, horn, licensed, any trial; £68.—40, Linhope St., Upper Park Place, Baker St., N.W.1. Padd. 2854. [1852

£44.—Triumph, countershaft, 3-speed, hand clutch, kick start, tax for year, splendid condition throughout; bargain.—H., 1, Priory Rd., Kew Green. [1850

TRIUMPH 1919 Combination, fully equipped and in absolutely first-class condition throughout; £72/10.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. [2453

1914 Triumph 4h.p., 3-spced, fully equipped, excellent condition; £35; seeu Luton, London, by appointment.—Low, The Green, Caddington, Luton, Beds. [1705

TRIUMPH 1913 4h.p. Combination, lamps, horn, all accessories; £68.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0066

£17.—3½h.p. Triumph, Bosch, T.T. bars, fast and sporty, dropped frame, taxed.—W.J.C. Motor Exchange, 5, Addison Av., Holland Park, W.11. Park 2071. [2355

1920 Triumph and Sidecar, all on, Cameo, in excellent order, guaranteed; £95.—Homac's, 243, Lower Clapton Rd., Clapton, N.E. 'Phone: Dalston 2408. [2119

1918 late Triumph countershaft, first-class condition guaranteed, £55; with Mills-Fulford sidecar, £65.—Ward, 51, Upper Richmond Rd., Putney. [2377

1918-19 Triumph Combination, screen, speedometer, fully equipped, tax paid, splendid condition; £75, no offers.—La Hive, Abington Brewery, Northampton. [1145

4h.p. Triumph 1919, condition and appearance perfect, little used, all on, full tax paid; £70; seen by appointment.—Swayne, Hazelhurst, Uxbridge Rd., Slough. [1410

1912 4h.p. Triumph, T.T., clutch model, recently overhauled, Bosch, B. and B., very fast, smart, good order; 16 gns.—W. Green, 1, Southgate St., King's Lynn. [2078

TRIUMPH, 1921, all chain drive, 4h.p., 3 speeds, kick starter, all accessories, low mileage; £85 cash, quick sale.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [2436

TRIUMPHS.—Cambridgeshire Service Agents. All models from stock, including 3½h.p. Sports Ricardo; complete stock spares.—King and Harper, Bridge St., Cambridge. [9744

TRIUMPH 3½h.p., clutch, plate, and enamel perfect, overhauled, new wheels and bars, lamps, engine decarbonised, fast, reliable; £35.—Flack, 118, Dunedin Rd., Leyton. [1684

TRIUMPH 1914, hub gear, speedometer, watch, horn, etc., in thoroughly perfect condition throughout; £45.—Barker, 24a, Lidfield Rd., Stoke Newington, London, N. [1133

1918 4h.p. Triumph, recently thoroughly overhauled, perfect condition, barely ridden, owner going abroad; £60; lamps, horn.—Macnab, Wisborough Green, Sussex. [1268

1918 (late) 4h.p. countershaft Triumph, completely equipped, taxed year, splendid condition, enamel, plating as new; £60.—K. Baker, 11, Ridgmont Rd., St. Albans. [2357

TRIUMPH.—Immediate delivery of all 1922 Models. Sidecars to suit from £20.—Write for catalogue and particulars of easy payments, P. J. Evans, John Bright St., Birmingham. [1539

1913 Triumph 4h.p., 3-speed, clutch, just overhauled, good condition, with light sidecar, lamps, tax paid; £33.—Goad, 122, Maida Valve. 'Phone: Hampstead 1353. [2129

TRIUMPH 1922, 4h.p. Model H, Bonniksen, tax, mileage 100, absolutely as new; £105.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1740

RICARDO-TRIUMPH, foot oiling, 2-gallon petrol tank, £20 worth racing and other parts, will guarantee well over 70 m.p.h., perfect condition, cost £150, fast, and insurance paid; £110.—Moser, Trinity College, Cambridge. [1815

## MOTOR CYCLES FOR SALE.

### Triumph.

1919 4h.p. Triumph, just overhauled and repainted by makers, equipped and year's tax paid, new tyres; highest offer.—A.S.C., 166, Great Portland St., W.1. Tele.: Museum 6626. [1239

RICARDO-TRIUMPH, 1922, fitted Whitley super-sports sidecar, fully equipped, year's tax, run 500 miles only, won three medals hill-climbing last week; 136 gns; exchanges.—Below.

TRIUMPH, Model H, Lucas magdyno, disc wheels, large tank, spotless condition, smartest Triumph on road; 68 gns.; exchanges.—Peter Gordon, Limited, 110, Upper Richmond Rd., East Sheen. 'Phone: Putney 2865. [2386

1919 Triumph-Gloria Combination, delivered 1920, perfect order, appearance as new, oversize Dunlops, Easting's, tax paid, only wants seeing; £78.—1, Norwood Rd., Herne Hill, S.E.24. [2477

TRIUMPH combination, 1922, done 500 miles, fitted with lamps, horn, speedometer, windscreen, &c., tax paid, smart turnout; £115, exchanges.—33, Hackford Rd., Brixton, S.W.9. [2316

1918 (late) Triumph countershaft, in first-class condition throughout, fully equipped, taxed, guaranteed, £58; with Mills-Fulford sidecar, £68.—Ward, 51, Upper Richmond Rd., Putney. [2376

1914 Triumph 4h.p., Mills sidecar, hood, screen, Tan-Sad, child's seat, lamps, speedometer, overalls, tax paid year, 3-speed hub; £45.—Hawksley, 37, Reginald Rd., Northwood, Middlesex. [1507

1919 Triumph-Gloria Combination, all accessories, Easting, D.A. set, same owner since 1919, taxed, speedometer, engine overhauled; reasonable offer.—Ewbank, Holmwood, Limes Rd., Weybridge. [8856

1920 Triumph 4h.p., 3-speed countershaft, combination (or separate), complete with lamps, tools, etc., tyres good, tax paid, excellent condition, good running order; £95.—Bourner, Horsmonden, Kent. [1508

TRIUMPH, late 1921, all-chain drive, Gloria combination, Lucas dynamo lighting, Bonniksen, tax, absolutely as new; £145.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1734

TRIUMPH combination, 1919, new Binks, A.C.E. discs, fully equipped, licensed 1921, Rennoc sidecar with Blumell windscreen, spare belt, chain, valves, tools, &c.; £85, bargain.—B., 11, Pleasant Place, N.1. [2331

1920 Triumph Combination, Mills-Fulford Model H, hand and foot clutch, speedometer, tax paid, overhauled, as new, Lucas lighting set, mileage 3,780; bargain, £65 gns.—A. Thrower, 35, All Saints St., Kings Lynn. [2512

TRIUMPH 1920 4h.p., Henderson sidecar, Easting screen, unused lighting set, 30/- horn, original tyres and belt, very little used; £95; cost £175; £6/10 insurance, tax paid: after 7—9, Alcester Crescent, London, E.5. [1181

TRIUMPH 3½h.p. clutch model, overhauled April, re-enamelled makers' colours, new Amac, T.T. bars, belt, lamps, and horn, splendid engine, exceptionally fast, any trial; £30 or near.—68, Rattray Rd., Effra Rd., Brixton. [1843

1920 Countershaft Triumph, in absolutely showroom condition, original tyres, and complete with all accessories, tool kit, and knee grips, tax paid 1922; £70.—Maynard, 161, Bowes Rd., Bowes Park, N.11. 'Phone: Palmer's Green 19. [2023

TRIUMPH 1919, Montgomery sidecar, speedometer, horn, lamps (2 electric, 1 acetylene), almost new tyres, carefully driven, well looked after, fullest examination invited; £70 for quick sale.—Cross, Slingos Garage, Hythe Bridge St., Oxford. [1155

TRIUMPH, late 1920, engine 70882, privately ordered special sidecar, Easting, luggage grid, step, Tan-Sad, all accessories mileage 4,000, perfect condition throughout only wants seeing; £95; no offers.—D. Burns, 27, Hoxton St., London, N.1. [1849

£39.—1914 (date guaranteed) coachbuilt combination, 2 speeds, K.S., clutch, lamp, windscreen, &c., machine just had £9 overhaul, good running order, reliable, taxed.—W. J. C. Motor Exchange, 5, Addison Avenue, Holland Park, W.11. 'Phone: Park 2071. [2352

TRIUMPH-MONTGOMERY 1920 Combination, 3-speed, clutch, kick start, full equipment, including large Miller head lamp, patent Low generator, Smith speedometer, Clayrite horn, latest model sidecar with apron and mat, tax paid; 85 gns.—Redroofs, Oxshott. 'Phone: Regent 3160. [1529

TRIUMPH Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4928

TRIUMPH-GLORIA Combination, 1921 type, S.D.C., all chain, Lucas electric lighting, windscreen, Bonniksen speedometer, new pattern mudguards, very carefully used, condition guaranteed as new; £150, original cost over £220; specially picked machine.—Premier Motor Co., Aston Rd., Birmingham. [8459


# RIDEEZI

ANY MAKE OF

MOTOR CYCLE

SUPPLIED ON OUR

NEW SCHEME

OF

Eighteen Monthly Deferred Payments

which gives you the privilege of paying earlier and getting a discount.

*SEND for our Extended Payment Form. We also supply the famous Rideezi Sidecars on 12 Monthly Payments. Send for Sidecar Catalogue and Extended Payment Form*

RIDEEZI SALES LIMITED

5, Victoria Street, LONDON, S.W.1.


## MOTOR CYCLES FOR SALE

### Triumph.

TRIUMPHS.—New 1922 4h.p. Combinati chain drive, £155; chain-cum-belt com £145; 4h.p. S.D., all-chain, £115; Model cum-belt, £105; Junior, 2¼h.p., £65; also second-hand Triumphs from £40, and one 3½ o.h.v., done 500 miles, £115; second-hand taken in exchange, remainder on easy term allowed on old machine accepted as first down.—Wanchope's, 9, Shoe Lane, London. Holborn 5777.

*Spare Parts.*

TRIUMPH Spares.—Immediate delivery.—1 Bond St., Ealing.

COMPLETE stock Triumph and Sturme spares, no waiting.—Ward's, 51, Uppe mond Rd., Putney. 'Phone: Putney 2754.

TRIUMPH Spares.—Every part in stock, trade supplied.—W. L. Thompson, L Anlaby Rd., Hull. Tel.: Cen. 2820. Te "Petrol."

TRIUMPH Agents since 1905.—All Triump at new reduced prices from stock; princ mingham agents and service depot.—Premie Co., Aston Rd., Birmingham.

TRIUMPH Spare Parts for all model Sturmey-Archer gear parts from stock, p gear overhauls by specialist.—Jones Garage, Agents, Broadway, Muswell Hill, N.10.

SEND to the Rhosha Motor Garage, So Romford, for Triumph and Sturme spares. No disappointing delays; every stock. Repairs by skilled mechanics. official service agents. Telephone: Romford

TRIUMPH Parts, 1904-21, every part in st or second-hand. Why not second-hand of new till prices drop? Half the price, sat guaranteed. Hundreds of testimonials. repairs and renovations a speciality, under supervision of our proprietor, late with Triu Premier cycle companies. Cylinder regrin latest machinery.—Forfield Motors, Forfield Leamington Spa.

### Velocette.

PREMIER Motor Co., for 1922 Velocettes.

IMMEDIATE delivery of Model E.2 2-speed E.3 3-speed, £72/10; E.L.2 lady's open £68; all with clutch and kick starter; easy pa 4 per cent. extra; carriage paid to any ad Premier Motor Co., Aston Rd., Birmingham.

VELOCETTE 1921 2¼h.p., perfect, lamps tools, legshields; £55.—Muckalt, Sedbergh

VELOCETTE 2¼h.p., 2-speed, 1921, gua condition, not soiled, complete with Mille ing set and horn, all accessories, taxed for 192 trial; ride to purchaser.—Write, Howard, Bell Hay, Herefordshire.

VELOCETTE, 249 c.c., 3-speed, Sports, 1922, run 600 miles, unscratched, extraor fast and powerful, no fault, Ahcol mileage in and h.b. variable jet, licensed; cost £80/2, £70.—30, Chaffinch Rd., Beckenham.

### Verus.

VERUS-BLACKBURNE 2¾h.p. Sports, clutch, insured, fast; £50.—300, South L Rd., S.W.8.

### Villiers.

1920 Villiers 2-stroke, 2-speed, tax paid, eq bargain, £27/10.—67, Fernlea Rd., Bal

1920 Villiers, 2¾h.p., 2-stroke, 2-speed, perfe dition, like new; £26.—1, Priory Rd.,

### Werner.

WERNER 2¾h.p., good running order licensed; £10/10.—17, Heaton Rd., Mit

### Wilkin.

WILKIN-BLACKBURNE 4h.p. 1920 Combi 3-speed, h.b. clutch, chain drive, handso pearance, mechanically perfect, fully equippe £160; sacrifice £95.—Newitt, 52, South St., R Essex.

### Williamson.

WILLIAMSON 8-10h.p., water-cooled, 2-seat car, lovely condition; lower power wan Fitzroy Av., Ebbw Vale, Mon.

8h.p. Water-cooled Williamson, family mour ginal condition, Bosch, B. and B., 1917; ready cash.—"Atalanta," Hoole, Chester.

£58, Bargain.—Smart 8h.p. Williamson Coa Combination, water-cooled, hood, screen, clutch, starter, excellent condition, any trial, outfit.—89, East Hill, Wandsworth.

### Wolf.

WOLF, 2-speed, clutch, kick start; £30 or Write Squire, 39, Manor Park Rd., N.W

WOLF 2½h.p. 2-stroke, fully equipped, paid; £30.—Ratcliffe Bros., 200, Gt. P St., W.1.

## MOTOR CYCLES FOR SALE.

### Wolf.

)LF-J.A.P. 4h.p., 3-speed, clutch, kick start, good condition; £36.—43, Ewhurst Rd., Brock-E.4. [1683

)LF 2½h.p. 2-stroke, Sturmey-Archer 2-speed gear with clutch, Bosch magneto, B. and B. reiter, new Dunlop Magnum on back, new belt, od running order, tax paid December, 1922; -Rivett, 236, High Rd., Leytonstone. [1449

### Wooler.

.p. Wooler, 1920, very little used; £40.—D.R., 113, George St., Edinburgh. [1233

)OLER, 1920-1, little used, original tyres, lamps, &c.; £38.—73, Sutherland Rd., Edmonton, N. [2331

'1 Actual I.O.M. T.T. Wooler; £55; or exchange countershaft Triumph.—22, Brent St., Hendon. [1776

)OLER 2¾h.p., fully equipped, foothoards, tax paid, perfect, mileage 800; £50.—Dancer, Croxark, St. Neots, Hants. [1810

)OLER 2¾h.p., 1920, stored long period, 2-speed, clutch, fully equipped, smart mount; -Telford Garage, 47, Streatham Hill, London, [2192

### Yale.

.p. Yale Solo, handsome machine, Bosch, B. and ., clutch, equipped discs; 35 gns.—111, Swaby Sarlsfield. [1322

### Zenith.

.AN GRUZELIER and

'T. F. C. TOWNSHEND,

'H Zenith Riders of 10 years' standing, offer you heir services, the benefit of their united experi-and the following machines, for immediate de-:

. Countershaft, new, 84 gns.; 90 bore o.h.v. 921, small mileage, £65; 1922 Bradshaws, all ; all 1922 J.A.P. models.

.IEMBER, we are the specialists. Pay us a all at Ulster Chambers, 168, Regent St., W.1. [2212

'ITH-BRADSHAW, slightly soiled; price to lear, £100.—Below.

'ITH 5h.p., countershaft model, immediate deli-very; £118.—Motorists' Advisory Agency, Ltd., 'igmore St., W. [1621

C.H. for Zeniths; latest models in stock.—5, leath St., Hampstead (near Tube). [8987

—3½h.p. Zenith-Gradua combination, coachbuilt idecar, good order.—King, Egrove, Oxford. [2062

'ITH, new 1922 models on easy terms; list appli-ation; exchanges:—Wauchope's, 9, Shoe Lane, n. [2418

'ITH, 8-10h.p., 1919, sports model, fully insured and eqnipped; £75.—156, Norwood Rd., West od. [2318

—Zenith 8h.p. Sports, Stewart, Binks, Tan-Sad, pper exhaust, completely overhauled.—84, Ilex Villesden. [1678

Gns.—Zenith-Gradua 6h.p., equipped, taxed, per-fect, small mileage, new tyres; photograph; ex-es.—Below.

'ITH-GRADUA, 6h.p., 1920, perfect order, equipped, taxed, 3in. tyres, as new; 63 gns.; ages; photograph.—Peter Gordon, Limited, 110, Richmond Rd., East Sheen. Open Sundays. [2387

'1918 Zenith Sports Combination; cheap, quick ale.—Cole, 457, Rathgar Rd., Loughborough ion, S.W.9. [2279

'ITH Combination 4h.p., twin, countershaft, mps, speedometer, accessories; £55.—11, Streat-Rd., S.W.16. [1702

BERTSONS Motors, Ltd.—1922 shop-soiled Zenith-Bradshaw, Gradua gear; £100.—157b, Gt. nd St., W.1. [6082

'ITH 6h.p., J.A.P., modern engined, excellent mily combination, all on, tax paid; £45.—72, er Rd., Wealdstone [1690

20 (Sept.) Zenith 5h.p. Sports, tax paid, insur-ance, equipped, perfect condition; £63.—12, s Rd., Gunnersbury. [1577

nm.-bore Zenith, 80 m.p.h.; £55; exchanges.—W.J.C. Motor Exchange, 5, Addison Av., Hol-Park, W.11. Park 2071. [2354

. Zenith-Jap, Sports model, lamps, horn, tax aid for the year, good condition; what offers?—Marina, St. Leonard's-on-Sea. [1234

'ITH-GRADUA 8h.p. C.B. Combination, excel-ent condition, new tyres; 55 gns.; after 6.—a, 270, High Rd., Chiswick. [1364

. Zenith Sports Model, fully equipped, with Lucas accessories,-licence paid, perfect condition; -Ratcliffe Bros., 200, Gt. Portland St., W.1. [2096

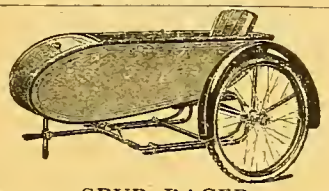

JAMES GROSE LTD.,

Established 1876.

'Phones: 7712 Central. 1297 North. City 3684.
OLD JEWRY, CHEAPSIDE, E.C.2,
and at 255-257, Holloway Road, N.;
8, New Bridge Street, E.C.

## SIDECARS

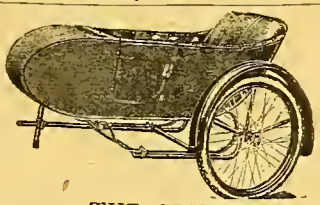
**We specialise in Sidecars, and can supply from Stock to fit almost any make of machine, and will fit free of charge.**



SPUR RACER.

Light sporting coachbuilt body, with small locker fitted, on light underslung chassis, complete with all fittings, and studded tyre—

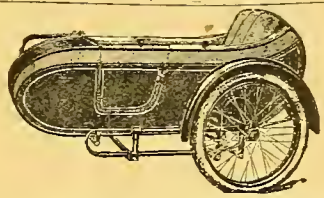
£13 - 13 - O.
Body only £4 – 15 – 0.



THE SPUR.

Light touring coachbuilt body, well upholstered, with locker under seat, light underslung chassis, complete with all fittings, and studded tyre—

£14 - 14 - O.
Body only £6 – 6 – 0.



SPUR LA GRANDE.

The smartest Sidecar on the road. Best coachbuilt body with large bulbous back giving a large locker, spring upholstering and special shape door, chassis heavy underslung, four-point connection, valanced mudguard, etc., and complete with Hutchinson tyre—

£23
Body only £10 - 10 – 0.

### SIDECAR SUNDRIES

**CHASSIS:**—Light underslung, complete with all fittings, **£6 6s.**; heavy underslung 4-point connections, valanced mudguard, and all fittings complete, **£9 9s.**; special for Indian complete, enamelled red, **£14 14s.** Arms:—Four-point connection, **6 6** and **12 6**; seat stay arms, complete, **18 6**; U bolts, **4d.** and **6d.**; body bolts with plate, **3d.**; right angle chassis bends, **5 6**; shackles, 2", **3 6**, 3", **3 9**, 4", **4/-**, 5", **4 6**, 6", **5/-** pair; cross bars, **2 6**. Springs:—2-leaf standard pattern, **18 6** pair, 3-leaf, **30/-** pair; rear springs for Douglas, **6 6**; any spring made to order. Mats:—**2 9, 6 6, 9 6.**

**A Special Show of Sidecars is always on view at our Holloway Road Branch, which closes at 1 o'clock Thursdays and 9 o'clock Saturdays.**


## MOTOR CYCLES FOR SALE.

### Zenith.

**19**17 Zenith 4h.p., all accessories, splendid condition, guaranteed; £37/10; or exchange lightweight.—217, Belsize Rd., Kilburn. [1935

£75.—1919 8h.p. Sports Zenith, Phœnix sidecar, excellent order, fully equipped, appearance as new.—Beaulieu, Avenue Rd., St. Albans. [1640

ZENITH 1922 8h.p. Combination, special sports engine, fully equipped; best offer over £125.—Griffith, 19, Purley Rise, Purley, Surrey. [1614

ZENITH-BRADSHAW, Gradua gear, 1922 model, shop-soiled; £95; exchange entertained.—Eagles and Co., 275, High St., Acton, London. [1796

ZENITH, 5h.p., new and guaranteed few only left, sports model; 76 gns.; countershaft model, 84 gns.—Clark, 7, Exhibition Rd., S.W.7. [8471

8h.p. Zenith Sports Combination, 1920½, lamps, horn, speedometer, tools, spares, re-enamelled by Zenith's.—102, Cherryhinton Rd., Cambridge. [1445

6h.p. Twin Zenith, Gradua gear, long exhaust pipes, lamps, and accessories, fast machine; £35.—Roberts, Kenmore, Trinity St., Llandudno. [1996

**19**20 6h.p. Sporting Zenith, Swan sidecar, all accessories, taxed, perfect condition; £100, or near offer.—45, Weymouth Mews, New Cavendish St., W.1. [1456

ZENITH Combination 8h.p. twin, Gradua, clutch, kick start, 1916, all on; £55; any trial.—56, Lordship Lane, Tottenham. 'Phone: Tottenham 2067. [1669

ZENITH Combination, 4h.p., Gradua gear, fully equipped, guaranteed; £55.—Homac's, 243, Lower Clapton Rd., Clapton, N.E. 'Phone: Dalston 2408. [2120

ZENITH 1915 Combination, 5-6h.p., lamps, horn, speedometer, etc.; £63.—Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0069

6h.p. Zenith, clutch model, nearly new, Middleton touring sidecar, electric horn, exceptionally good condition; bargain, £85.—Peaston, 1, Station Rd., Epsom. [1855

ZENITH-BRADSHAW 3-speed, chain drive model, in stock; cash or exchange.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [1731

4-5h.p. Twin Zenith, sporting model, lamps, speedometer, Lucas horn, licensed, splendid condition; £42/10.—37, Arlington Rd., Surbiton. 'Phone: Kingston 1274. [2040

ZENITH Combination 6h.p., kick, clutch, Bosch, Amac, new tyres and tubes, all spares, lamps; £55; any trial; seen at Morris's Garage, Freezywater, Waltham Cross. [1724

ZENITH-BRADSHAW, brand new, Gradua gear model, immediate delivery; usual price £113; my price this week, £95, or nearest offer.—334, Shirley Rd., Southampton. [1153

ZENITH 1916 6h.p. Countershaft Coachbuilt Combination, accumulator lighting, speedometer, Easting, tax, insurance December; £70.—Redlands, Tennyson Rd., Harpenden. [1148

BARGAIN.—1915 4h.p. Zenith Coachbuilt Combination, appearance and mechanically perfect; owner unemployed; accept £49; must sell.—28, Banchory Rd., Blackheath, S.E.3. 1140

**19**20 (late) Zenith, 8h.p. sports Gradua combination, fully equipped, taxed, guaranteed in new condition, fast and powerful; £80.—Ward, 51, Upper Richmond Rd., Putney. [2374

**19**20 Zenith-Gradua, 3½h.p. M.A.G. twin, 70 m.p.h., 2nd hour race Brooklands 1920, Canoelet sidecar, very flexible, splendid condition.—141, Brooke Rd., N.16 (by appointment). [1348

SOUTHPORT.—1922 Zenith-Bradshaw, guaranteed special sports model, brand new, done 350 miles, long plated exhaust, fully taxed; 94 gns.; exchanges.—Kent's, 417, Lord St., Southport. [1919

ZENITH 1919 8h.p., sporting Canoelet sidecar, Cameo windscreen, lamps, Cowey horn, fast 'bus, appearance like new; £70.—50, Haverstock Hill, N.W.3. 'Phone: Hampstead 6609. [2347

**19**22 Zenith-Bradshaw, licensed and completely fitted up, absolutely as new, beautiful running machine, mileage under 1,000, very great bargain; 90 gns.—Julian, 84, Broad St., Reading 'Phone: 1024. [1396

ZENITH Countershaft Combination, 1920, clutch, kick start, 8h.p., luxurious coachbuilt sidecar, Cameo windscreen, lighting set, horn, Tan-Sad, speedometer, etc., splendid condition throughout; best offer over £80.—Sidney, 769, Romford Rd., Manor Park, London, E. [2038

**19**21 Zenith Sports 5h.p., Fallolite head light, dissolved acetylene, Bonniksen speedometer, and Canoelet K4 sidecar, torpedo, apron, windscreen, luggage grid, condition perfect; any trial; £105 complete.—Allen, Greycot, Willow Tree Rd., Altrincham. Tel.: Altrincham 41 [2002

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4829

## MOTOR CYCLES FOR SALE.

### Ladies' Motor Cycles.

£30.—1921 lady's Excelsior 2-stroke, perfect condition, taxed.—King, Egrove Farm, Oxford. [2068

DOUGLAS 2¾h.p. Lady's, just overhauled, Amac, tax paid, fine running order; £50.—Robinson, "Chinhurst," Selby Av., St. Albans. [2270

2¾h.p. New 1922 New Comet, lady's machine, fitted with Comet sidecar; £80; easy terms arranged.—Wauchope's, 9, Shoe Lane, London. [2425

LADIES' Radco motor cycle, 2½h.p., run under 100 miles; no reasonable offer refused, tax paid up to January, 1923.—Box 1680, c/o *The Motor Cycle*. [2520

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy daintiest of all ladies' machines; £62, complete. Send for list. [0724

VELOCETTE 1922 Models, with clutch and kick starter, for immediate delivery; 2-speed, £68; 3-speed, £75; all black weatherproof finish, all-chain drive, open frame, giving very low position; the ideal ladies' mount; easy payments, 4% extra; illustrated catalogue free on request.—Premier Motor Co., Aston Rd. [3023

### Miscellaneous.

JONES Garage, The Broadway, Muswell Hill, N.10, and Woodside Parade, North Finchley.

NOTICE.—We are open all day every Saturday, and have all makes in stock. Write, call or 'phone Hornsey 2917 for big bargain list.

1919-21 Ariel 3½h.p. and sidecar, Mr. F. E. Jones's competition gold medal machine, specially tuned; £80.

ROVER 5-6h.p. Sports Solo, 3-speed, all-chain, shop soiled, otherwise new, 1921; £110.

RUDGE I.O.M., new; £70.

1919 4¼h.p. B.S.A., Model K, large Canoelet sidecar, fully equipped, licence paid; £80.

1920 Ariel 3½h.p., equipped, £72/10; also second-hand and new sidecars, from £7/10.

1919 4h.p. Douglas Combination, first-class condition, any trial given; £79/10.

1918 4h.p. Triumph, coachbuilt sidecar, fully equipped; £77/10.

1921 new 3½h.p. Ariel (slightly soiled), with new Montgomery sports sidecar, very posh; £100.

1920 2¾h.p. Allon, fully equipped, speedometer etc.; £47/10.

1915 Douglas 2¾h.p., equipped; £32/10.

1921 3½h.p. Ariel, demonstration model, equipped; £77/10.

8h.p. Enfield Combination, Lucas Magdyno electric lighting equipment, brand new 1921, unused outfit, complete; £140; our special bargain for this week.

ANY of the above can be had for one-quarter down, balance in 6 or 12 payments. All guaranteed 3 months. Send for particulars.—Jones Garage, Broadway, Muswell Hill, N.10. Motor 'bus from Highgate Finsbury Park. [2445

ALLBER Garage, Thornsett Rd., Earlsfield, London, S.W. (opposite station, L.S.W. Railway). 'Phone: Latchmere 4388. Terms, no extra with good deposit. Immediate delivery. No inquiries. Satisfaction guaranteed.

ALLBER.—Clyno 1920 2-stroke, 2 speeds, clutch, all accessories, tax paid, in new condition; £39.

ALLBER.—Sun-Villiers, 1916, 2¼h.p., all accessories, good order; £21.

ALLBER.—Ixion-Villiers 2½h.p., complete with lamps, in running order; £24.

ALLBER.—Levis 1916 2½h.p., 2-speed, all accessories, good order; £32.

ALLBER.—Invicta-Villiers, 1920, practically new; £29.

ALLBER.—Humber 1914 3½h.p., 2 speeds, handle start, all accessories, tax paid; £25.

ALLBER.—1922 Metro-Tyler, sports model, 2-speed, clutch, kick start, as new, tax paid; £45.

ALLBER.—1922 New Hudson Sports, 2-speed, aluminium piston, all accessories, tax paid, absolutely like new; bargain, £46.

ALLBER.—1918 Triumph 4h.p., countershaft, uncrated 1921, little used, in splendid condition; £58.

ALLBER.—Triumph 3½h.p., clutch model, all accessories, Philipson pulley, tax paid, good condition; £28.

ALLBER.—1915 A.J.S. Combination, 5-6h.p., countershaft, 3-speed, clutch, kick starter, enclosed chain, all accessories, tax paid, splendid condition; £56.

ALLBER.—1917 Humber 5-6h.p. water-cooled Combination, countershaft, 3 speeds, clutch, kick start, enclosed chain drive, oversize tyres, electric lighting, all accessories, tax paid; £55.

ALLBER.—New Hudson Combination 4h.p., 3 speeds, clutch, all accessories, tax paid, splendid order; £39. [2207


## Have you ever been disappointed?—

**Not when you order your Douglas or Williamson Spares from me. Any part for any model by return of post. Try my service.**

**You will appreciate this convenience** for 4 h.p. Models. A funnel, Oil Filler, and Crankcase Compression Reducer combined. Neat and out of the way of dirt. You can get the last drop out of a can without soiling your hands; fitted in a jiff. Price only **10/6.**

### A "DOUGLAS!" A "DOUGLAS!"

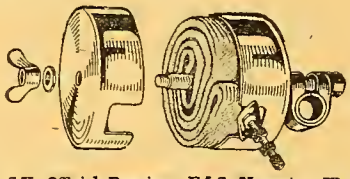
The luck-bringer for 1922. Douglas badge with a silk tartan muffler in Douglas tartan colours for the coat or blouse. Only LIGHTER PISTONS not only mean more speed and power, but less load on the con. rod and big ends. This new radiated piston is beautifully made and fitted with gudgeon and light twin rings. It will give you at least 1,000 more revs. per minute and 10 m.p.h. more speed. Price complete, **14/6** each.

### ZOOM! ZOOM!!

is now recognised as not only the fashionable but the most efficient exhaust system designed. It has a lovely Zoom and has a volume many times larger than the cylinder. Absolutely no back pressure, beautifully made, and finished in burnished copper or nickel plate. Price only **30/-** in burnished copper finish; or **33/6** nickel plated.
Honestly adds £10 to any Douglas.

**The Original** and still the best alloy valve cap for 4 h.p. and 2¾ h.p. Douglases. Prevents knocks. Keeps engine cool. Used by T.T. riders and Grand Prix winners. Price **4/-** each.

**The Tony Combined Footrest and Footboard is beautifully** made and finished. It gives a change of position and keeps your feet clean, smartens up your mount and makes it look an R.R. Great value. Only **30/-** per pair.
**WHY RISK damaging a new tube** when you can carry it safely and securely in an all-aluminium tube carrier? Cannot chafe and preserves the tube. Used by most competition riders including J. A. Newman, Esq. Price **10/6.**



**A.C.U. Official Repairer, E.I.C. Magnetos, West of England Service Depot.**

*W. G. Coram*

OFFICIAL DOUGLAS AGENT.
*10 years with Douglas Motors Ltd.*
**140, VICTORIA ST., BRISTOL.**
**The Man on the Spot—who sells the 55 m.p.h. 2¾ H.P. Douglas.**


## MOTOR CYCLES FOR SALE

### Miscellaneous.

WANDSWORTH Motor Exchange.—Great b Motor-cycles, combinations; prices rig changes. Easy terms.

WANDSWORTH.—Cheap machines is our Cheap machines, nothing dear, all cheap

WANDSWORTH.—Easy terms; the only give immediate delivery first deposit.

WANDSWORTH.—Triumph, almost new, speeds, countershaft, unscratched; 89 gn terms.

WANDSWORTH.—Scott, almost new comb water-cooled, everything fitted, unscratc gns. Easy terms.

WANDSWORTH.—Douglas, almost new, 2 speeds, lamp, unscratched; 58 gns. Eas

WANDSWORTH.—Indian 7h.p., 3 speeds, frame, newly enamelled, plated; 55 gns.

WANDSWORTH.—F.N., beautiful machine, 2 speeds, clutch, lamps, newly enamel plated; 55 gns.

WANDSWORTH.—F.N. combination, 5-6 speeds, clutch, lamps licensed; 49 gns terms.

WANDSWORTH.—1920 New Hudson 2 speeds, like new; 45 gns. Easy terms.

WANDSWORTH.—1920 A.B.C. combinatio 4 speeds, lamps, licensed; 79 gns. Easy

WANDSWORTH. — 1920 Indian Comb dynamo lighting, screen, speedometer, ver 89 gns. Terms.

WANDSWORTH.—1921 Scott Combination cooled, lamps, licensed, as new; 89 gns terms.

WANDSWORTH.—1921 Douglas 2¾h.p., 2 lamps, speedometer; offers; exchanges terms.

WANDSWORTH.—Indian coachbuilt comb 7h.p., 3 speeds, kick, lamps; 59 gns. terms.

WANDSWORTH.—Premier coachbuilt comb 4h.p., 3 speeds, countershaft, lamps; Easy terms.

WANDSWORTH.—Premier Coachbuilt C tion, 3½h.p., 3 speeds, lamps, licensed; Easy terms.

WANDSWORTH.—Rudge, T.T. type, 3½h. tyres, ride away; 26 gns. Easy terms

WANDSWORTH.—Rudge 3½h.p., clutch kick starter, drive away; 29 gns. Easy

WANDSWORTH.—F.N. 2¼h.p., 2-speed ge clutch, shaft drive; 23 gns. Terms.

WANDSWORTH.—Kerry-Ahingdon 3½h.p., belt drive, drive away; 23 gns. Easy t

WANDSWORTH. — De Dion 2¾h.p., r licensed, drive away, very cheap; 13 gns terms.

WANDSWORTH Exchanges, Wandsworth Exchange, Ebner St., Wandsworth Station). 'Phone: Latchmere 4686.

LEVIS Popular 1916, £23; 2¾h.p. Fafni licensed.—11, Stromness Place, Southend.

4h.p. o.h.i.v. J.A.P., Mabon clutch, fast, clim £28, offers.—Hall, 49, Thornton Av., S.W.

6h.p. Twin and Sidecar, good order; take near offer.—Vesty, 75, Shardeloes Rd., E

MOTOR Cycle, 4h.p., 85×98 engine, fitt Mabon gear; £35.—Styles, 135, Seven Rd., Holloway.

MOTOR Cycle 2½h.p., re-enamelled and new tyres, bargain; £20.—Slade, 44, Rd., Thornton Heath.

LIGHTWEIGHTS from £16 to £65, all i order; terms if desired over £30.—B Motor Exchange, Wealdstone.

VILLIERS 2¾h.p., 2-stroke, 2-speed, good co take 2 anywhere, lamps, horn, and ta £24.—31, Cromer Rd., Watford.

COMBINATION 4-6h.p., reliable make, not 1919, roomy sidecar, good condition, chea —Box 1637, c/o *The Motor Cycle*. (D)

£35.—3h.p. Twin, M.A.G., 1917, 2 speeds, kick start, all chain, fully equipped, exceedingly fast.—7, Cowdrey Rd., Wimbledon.

HALIFAX.—50 Second-hand Machines and hinations; cash, exchange, or deferred pa Get list.—Halifax Motor Exchange, Horto Halifax.

3½h.p. 1919 Rudge-Multi Combination, ju hauled, splendid condition, must sell, going abroad, tax paid; £55.—Harrison, 101, B Rd., St. John's Wood, N.W.

ROYAL RUBY, Villiers engine, excellent lamps, horn, licence, only £29; also Singer, £24; and 2¾h.p. Kerry, less carburette —Lane, Saxmundham, Suffolk.

## MOTOR CYCLES FOR SALE.

### Miscellaneous

). Combination, 1917, 3 speeds, clutch, K.S., naker's colours, just overhanled, also Tan-Sad, ondition, take three anywhere; owner buying car; ce, £45.—61, Platt St., Leigh. [1841

AND New Lightweight, frame fitted with Druid orks and sloping tank with drip feed; also 1922 Albion, 3-speed gear box, complete; £18 the Hall, 66, Coronation St., Blackpool. [1136

Y, 1921, Sunbeam Semi-sports, Cowey horn, Lucas lamps, Tan-Sad, handle-bar muffs, and lls, £110; also Darracq 15h.p. 4-cylinder car, in ng order, £30.—Rugeley Rd., Hednesford, Staffs. [1337

ACKPOOL Bargains.—1922 Rudges, 1922 Ariels, 922 O.K.s, 1922 New Imperials, 1922 Quadrants, Royal Rubys. Quick deliveries. Good price for machine; exchange.—Booths' Motories, 294, loo Rd., Blackpool.

ACKPOOL Bargains.—1919 New Imperial, 2 speeds, kick starter; £45/10.—Booth's Motories.

ACKPOOL Bargains.—P. and M. Combination, £47/10/6; 6h.p. Rex Combination, £27/10/6.—s' Motories, Blackpool.

ACKPOOL Bargains.—Clyno Combination, lamps, screen, spare wheel, £69/10/6; 8h.p. Premier ination, screen, hood, £49/10/6.—Bootbs' Mot- 294, Waterloo Rd.

ACKPOOL Bargains.—Good Trump, £18/10/6; N.S.U. lightweight, £13/10/6; 4h.p. Douglas ination, £59/10/6.—Bootbs' Motories.

ACKPOOL Bargains.—A.J.S. Combination, lamps, screen, £49/10/6; G.N. 1920 car, dynamo light- fully equipped, £140/10/6.—Booths' Motories.

ACKPOOL Bargains.—1920 Matchless Combina- tion, detachable wheels, £120/10/6; A.J.S. and r, £59/10/6.—Booths' Motories.

ACKPOOL Bargains.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, 0/6; 1920 Sun, 2 speeds, kick starter, 0/6.—Booths' Motories.

ACKPOOL Bargains.—1920 Wooler, £49/10/6; 3½h.p. Humber, £20/10/6; P. and M., 0/6; Indian Combination, disc wheels, 0/6; 6h.p. 3-speed Rudge, £35/10/6.—Booths' ies.

ACKPOOL Bargains.—2-speed O.K., £24/10/6; 1919 Douglas, £45/10/6; 1919 4h.p. Douglas ination, £79/10/6; 4h.p. Douglas, £55/10/6; Tamplin, £79/10/6; 1920 Morgan de Luxe, meter, water-cooled magneto engine, £155/10/6. l others cheap. Push cycles taken in exchange. cycles purchased for cash.—Bootbs' Motories, Waterloo Rd., Blackpool. [5060

Y one cheap for cash.—1922 B.S.A. 8h.p. twin combination, electric light; 1921 B.S.A. 6-7b.p. combination, electric light; 1920 Metro-Tyler p., 2-stroke; all in good condition, taxes paid; e owner.—Simpson, 14, Stanley Terrace, York Ripon. [1760

C.H for secondhand cycles, combinations and runabouts at bargain prices. Exchanges ar- d. Any new cycle, combination or car sup- cash or deferred payments.—Fair Offer Car , 5, Heath Street, Hampstead (near Tube). e: Hampstead 3752. Hours 9-7, including days. [1611

ON, 1918, Countershaft, 24 gns.; Connaught, 2-speed, 24 gns.; Trump-Jap, 4h.p., 3-speed, s.; Trinmph, 3½h.p., clutch, 29 gns.; Rudge, ., 18 gns. All equipped and taxed; photo- s free; exchanges.—Peter Gordon, Limited, Upper Richmond Rd., East Sheen. 'Phone: y 2865. Open Sundays. [2389

## MOTOR CYCLES FOR HIRE.

RE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigden, 130, n Rd. [0795

. Light Car and Douglas Motor Cycle and Side- car for hire; 8 gns. and £5 per week respec- ; fully insured.—Rodwell, 8, Red Lion Sq., Hol- W.C.1. Chancery 7272. [8776

BERTSONS Motors, Ltd., for many years have specialised in this class of work. If machine is eased, full amount of hire up to one week is d.—157b, Gt. Portland St., W.1. [6083

## MOTOR CYCLES WANTED.

VARDS and Co.,

L, Gt. Portland St., W., are cash buyers of solos, combinations, and Morgans. Highest given, distance no object. Call, write, or e: Mayfair 4027. [0870

OD Solo or Combination for cash.—Clayhall, Old ford Rd., Bow, E. [2517

We can give

**IMMEDIATE DELIVERY**

**of any of the following T.T. Models. ALL BRAND NEW mounts ready for your own T.T. at WHITSUN:**

**8 h.p. BROUGH-SUPERIOR**
The Super Twin ... ... **£150**

**6·5 h.p. BROUGH-SUPERIOR**
Light Sports Model ... ... **£125**

**3½ h.p. RICARDO-TRIUMPH**
O.H.V. Engine, 3 Speed ... **£120**

**16 H. 3½ h.p. - - - - NORTON**
The Leader of its Class ... **£115**

**3½ h.p. SCOTT-SQUIRREL £105**

**3½ h.p. SPORTS ARIEL** 3 Speed
A Mile a Minute machine at a pre-war price ... ... **£87-10**

**2¾ h.p. HENLEY-BLACKBURNE**
The "Value for Money" mount ... ... **£67-10**

**VELOCETTE TWO-STROKE**
2-Speed, K.S. ... ... ... **£65**

**and many other models.**

Easiest of Easy Terms for Extended Payments, direct with the Purchaser.

**EXPERT TUITION FREE**

Registration, Insurance, etc., arranged with minimum amount of trouble and expense.

**EXCHANGES A SPECIALITY,**
**Full market value allowed.**

**FRANK HALLAM**

**Dalton Street**
(2 doors from Bull Street)
**and 88, Bristol Street, BIRMINGHAM.**

'PHONES:
Dalton St., Cent. 7317. Bristol St., Mid. 1472.

## MOTOR CYCLES WANTED.

T.B.

WANT

500 COMBINATIONS and Solos, any make, guarantee top prices given.—T. and B. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5554

WE

ARE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 314, Euston Rd. [0815

BEST

PRICES

GIVEN

H. F. EDWARDS and Co., 50, Harrington Rd., South Kensington, will purchase for spot cash your motor cycle or combination. Call, write, or 'phone Ken. 3709. [0604

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391. [0352

A

MAUDES' Motor Mart are purchasers for spot cash of late models Sunbeam, Triumph, Douglas, Norton, and Morgans.—Maudes', 100, Great Portland St., London. [1128

SCOUT Indian wanted; must be cheap for cash.—89, East Hill, Wandsworth. [2143

£20 to £30 for the best Triumph offered.—Clark 15, Churchville Rd., Bedford. [1162

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machinees here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted machine can be included in auction sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling commission 7½%, not chargeable unless machine is sold. If no sale a nominal auction fee is charged—for motor cars 20/-, motor cycles under £50 value 5/-, ditto over £50 value 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Tel.: 208 Streatham. T.A.: Palmer's Garage, Tooting. [2393

COMBINATION wanted, about £40 cash.—Letters, 63, Arlingford Rd., Brixton, S.W.2. [1893

8h.p. Twin water-cooled; cheap; full particulars.—Buchanan's, 'Phone 109 Leatherhead. [1163

WANTED immediately, Lightweight, with gears, must be sound.—1, Othello St., Liverpool. [6868

WANTED, good Countershaft Sports, single; reasonable price, cash.—88, Lord St., Southport. [1924

WANTED, Douglas 4h.p., incomplete, damaged, any condition; cheap.—41, Gap Rd., Wimbledon. [1219

MOTOR Cycle wanted, must be running order; under £16.—11, Lindfield Rd., Pitshanger Lane, Ealing. [2275

TRIUMPH, similar, twin considered, privately; reasonable; letters.—Maglew, 29, Wilton Av., W.4. [1423

2¾h.p. Douglas; or good 2-stroke; cheap for immediate cash.—91, Burntwood Lane, Earlsfield S.W. [1869

## MOTOR CYCLES WANTED.

COMBINATION Wanted, 5-6h.p., known make, good order.—131, Pathfield Rd., Streatham Common, S.W. [2267

SOLO, not earlier 1919, speeds, good condition, private; West Herts.—Box 1664, c/o *The Motor Cycle*. [2248

WANTED, Combination, must be in good condition, cheap.—20, Hubert Rd., Wimbledon, S.W.19. [1271

WANTED, couotershaft Triumph, cheap.—Ricketts, 33, Davenport Avenue, Withington, Manchester. [1290

FIRST-CLASS Combination or light car, also good solo, immediately.—24, Balliol Rd., North Kensington. [1826

WANTED, 1921 combination, cash waiting; call or write.—Hillier, 9, Wallingford Av., North Kensington. [1975

COMBINATION Matchless, A.J.S., Sunbeam, 2-seater sidecar, 1920-21; spot cash.—14, Mount St., Aylesbury. [1226

ABOUT £30, modern solo, requiring attention not objected to; no Lightweights; letters.—105, Wellington Rd., E.6. [1556

WANTED, late combination, B.S.A., Sunbeam, Triumph, all on; no fancy prices.—Gooch, Tunnel Rd., Retford. [1435

GOOD Combinations or Solos for cash on sight.—198, King St., Hammersmith. 'Phone: Hammersmith 2474. [1897

WANTED, Motor Cycle, any condition, not earlier than 1913, cheap, cash waiting.—61, Grand Parade, Harringay. [9530

HUB-GEARED Triumph, 1914, wanted; exchange cash and 1913-14, clutch, decompressor Triumph.—57, Stopford Rd., E.13. [1238

MODERN Motor Cycles and Combinations bought for cash or sold on small commission; send details first.—South Eastern Garage, Herne Hill, S.E.24. [1096

WANTED, a few high-grade Combinations and Solos; must bear strictest investigation.—Storer and Tait, 20, Bourdon St., Bond St., W.1. [1074

WANTED, Combination, 3¾h.p., 3-speed, clutch, cheap, good condition.—Full particulars, Burnham, Cambridge House, Cheam Rd., Sutton, Surrey. [1278

WANTED, good modern combination or solo in exchange for 1921 Tamplin 2-seater, small mileage, perfect condition.—Hardie, 23-24, Woodstock St., W.1. [1191

WANTED, late combinations, solos, also Morgan runabouts, G.N.'s, and Rovers; cash or exchange. Elce, Ltd., 15-16, Bishopsgate Avenue, Camomile St., E.C.3. 'Phone: Avenue 5548. [0073

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s Douglases, Matchlesses, A.B.C.'s, Scotts, Brao hurys, Martlesydes, Zeniths. — Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station) 'Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted —Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [4559

F.O.C.H. always have cash waiting for sound machines of all types; highest prices and courteous treatment assured.—Fair Offer Car House, 6, Heath Street, Hampstead (near Tube). 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1610

WANTED.—Motor cycles and combinations for immediate cash, new or second-hand. Bring your machine to us for a cash offer; high prices paid on the spot. Write, 'phone, or call if possible.—Forge Garage, 74-76, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [3169

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, extended payments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Bleoheim St.), Bond St., W.1 'Phone: Mayfair 6559. [0772

ALWAYS Wanted, immediately, any number of second-hand machines and combinations; a competent representative will be sent to inspect and complete purchase after preliminary negotiations; cash and good prices paid.—Longman Bros., 17, Bond St., Ealing. Telephone: 689. [3046

SEND Your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station, Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address, Palmer's Garage, Tooting. [2396


H.A.H. Complete Electric Lighting Sets.

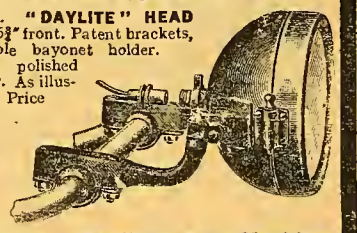
Manufacturers of
ACCESSORIES, PATENTS, SPECIALITIES.
POWERFUL LONG RANGE LAMPS.
November 15th, 1921.

1922 PRICE GUARANTEED.

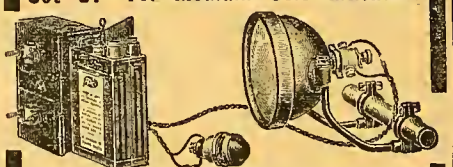
No alteration will be made in Current List Prices FOR ONE YEAR FROM THIS DATE.

H.A.H. MOTOR CYCLE HEAD LAMPS.

Fig. 895. "DAYLITE" HEAD LAMP, 6¾" front. Patent brackets, adjustable bayonet holder. Highly polished reflector. As illustrated. Price Nickel 60/- ea. Black 65/- ea.



Set C1—For Medium Solo Machines



Price as illustrated (with bulbs—less wire) £3 15 0

H.A.H. REARLAMPS.

Fig. 576 to take Bayonet Bulb. Supplied less Bulb and Wire. Price 4/9 each.

Fig. 347.

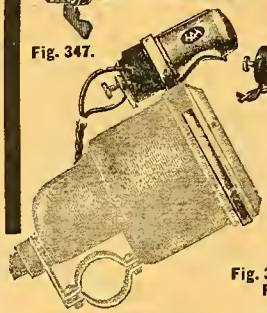


Fig. 574. Supplied with screw-in Bulb and Wire. Price 6/9 each.

Fig. 347. Speedolite. Price 7/6 each.

H.A.H. Insulating Tape.
Fig. 455.
½" small roll, 7½d. each.
Fig. 456.
¾" large roll, 1/- each.
Fig. 457.
¼" small roll, 6d. each.

Fig. 410. Cut-out. Price 2/- each.

Fig. 449. 2-way. Price 3/- each.

Fig. 428. 1-way Price 2/- each.

A. H. HUNT, LTD.,
H.A.H. WORKS,
Tunstall Road, CROYDON, Eng.
Telephone— Croydon 2225.
Telegrams— "Keyage, Croydon."


## MOTOR CYCLES WANTED.

BUNTING'S Buy, Sell, or Exchange any m motor cycle. State your requirements, undertake to do your business and give you sa tion. Distance immaterial.—Bunting's Moto change, Wealdstone.

## TRICARS FOR SALE.

£20.—Chater-Lea 5h.p., water-cooled, Bosch, perfect condition; coachbuilt; also easil verted to box carrier.—42, Crieff Rd., Wandsw

2-SEATER Tricar, interchangeable wheels, drive, 3 speeds and reverse, air-cooled eng first-class condition, licence paid, spare wheel, etc.; £140, or offers.—L. Newhigin, Alnwick.

## MOTOR SCOOTERS.

KINGSBURY Scooter, with seat, as new; Rogers, 42, Church Rd., Hendon.

KINGSBURY Scooters and Spare Parts.—B Works, Richmond Rd., Twickenham.

1921 Auto Scooter, perfect, £18; or exchang lightweight.—70, Titterton St., Sheffield.

SKOOTAMOTA, brand new, cost £55; accep or near offer.—Hopkins, New St., Ledbury.

SKOOTAMOTA, excellent condition, for sale offers?—Scott, 1, Belgrave Mews West, S.

BRAND New Autoped Scooter, dynamo li 1½h.p.; £15.—Percy and Co., 314, Euston N.W.

AUTOGLIDER 2¾h.p., coachbuilt seat, as ne £55, take £27; licensed.—59, Romilly Rd. Cardiff.

A.B.C. Skootamota, new, unsoiled, latest mode sacrifice.—Frank Whitworth. 139, New St mingham.

KINGSBURY 2-stroke Scooter, new conditio paid; £15.—Clubb, Russell Place, Cross Shrewsbury.

KINGSBURY Scooter, 1½h.p., C.A.V. m £11/10; nearly new, excellent order, comf saddle.—68, Gloucester Rd., Camden Town.

1921 Birmingham Guild Motor Cyclette, wheels, 1½h.p., overhead valves, all c paid, perfect condition, suit lady or gentleman photo.—Avery, 77a, Palmerston Rd., Earlsdon entry.

## MOTOR ATTACHMENTS.

AUTO-WHEEL, in good condition, Dunlop tyr £6, bargain.—Howley, Devizes.

£16.—1921 Young's Attachment on Gent.'s new condition.—King, Egrove, Oxford.

J.E.S. Motor Attachment, excellent condition "Aldwick," Sunnydene Rd., Purley, Surrey

1921 Young Engine Attachment and Cycle, licensed; £15/10.—Dunham, Chapel St.,

WALL Auto-Wheel, good order; what offers derson, Hawthorn Cottage, Moor, Cocker

1921 Young, fitted to James cycle, all on, t insurance paid; £20.—109, Kentish Tow N.W.

NEARLY New Lady's and Gent.'s Cycles, Young attachment; £18 each; bargain.—8 Rd., S.E.18.

WALL'S Auto-Wheel, including new Amac etter; £7/10; good order.—68, Gloucest Camden Town.

1921 Young Attachment and Cycle, perfect tion; £20.—D. and S. Autocar Co., 3 Parade, Golders Green.

CYCLOTRACTEURS, shop-soiled; price £ duced to clear, send for price, stamp Edwardes, 277, Camberwell Rd., S.E.

SIMPLEX Attachment fitted to gent's s built cycle, hardly used, new tyres, tip-t dition, licensed; bargain, 19 gns., or excha motor cycle, about 4h.p., running condition.— mont St., Chalk Farm.

HUMBER gent's cycle, 1¾h.p. Young m tachment, new, mileage under 50, guarantee, accessories, tax paid, light coachbu car, can be separated; £35.—Burnham, Ca House, Cheam Rd., Sutton, Surrey.

## HOODS, WIND SCREENS, ET

COLLINS and Son for hoods, screens, and hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreen plete with apron; 22/6, 30/-, and 35 on approval against cash; carriage 1/6 extra.

COLLINS and Son stock all known makes screens; we have a few second-hand S Eastings, fitted with new celluloid, from 45/-.

COLLINS and Son fit celluloid panels to ar screen in few hours, new aprons, side c etc.; open weekdays till 8.30, Sunday morni 1 o'clock.—Collins and Son, rear of 84, H Putney, S.W. (D)

THE MOTOR CYCLE
ESTABLISHED IN 1903
· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).
BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.
MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## The Tourist Trophy Races.

ANY critic who favoured a change from the Isle of Man for the Tourist Trophy Races must have wavered in his opinions after last week's events. No more thrilling and instructive races have ever taken place. They were a triumph of organisation for the Auto-Cycle Union, and the results were a triumph for British manufacturers and riders. The races were fought out with remarkable keenness, all previous records were broken both for individual laps and for the full duration of the course. The Senior event in particular provided remarkably keen competition, and the pace was so hot that the proportion of survivors—22 out of 67 starters—was inferior to the other events. In the Lightweight Race fourteen of the thirty-one starters reached home, and of the thirty-seven starters in the Junior Race, sixteen survived the ordeal. On the question of valve disposition, apart from the runaway victory of overhead valve engines in the Junior Race, and the ascendancy of the two-stroke engine in the small and large classes, no definite conclusions may be drawn by the public.

### Varied Types of Engines.

The Senior Race in particular provided a remarkable medley of engine types, for whereas a side-by-side valve engine led the field throughout, an overhead four-valved engine was second with two-strokes in the third and fourth positions. This result would confirm that progress in design is of a general all-round character, and not confined to any one type or design; capacity is the paramount factor, of course, and whether overhead, side-by-side valve or two-stroke engine be used, the best designs exhibit little advantage one over the other either in speed or hill-climbing. Single-cylinder machines, assisted by their preponderating numbers, commanded the greatest attention, and once again the seal of success is placed upon two- or three-speed gears and chain transmission.

Last year's report that the Isle of Man course was unsuited to 500 c.c. machines and tended to favour slower mounts were to some extent belied by the truly phenomenal speeds attained last Thursday. On the other hand, we have the evidence of this year's winner that no racing track in his experience introduces such a large personal factor as the Manx Snaefell mountain course.

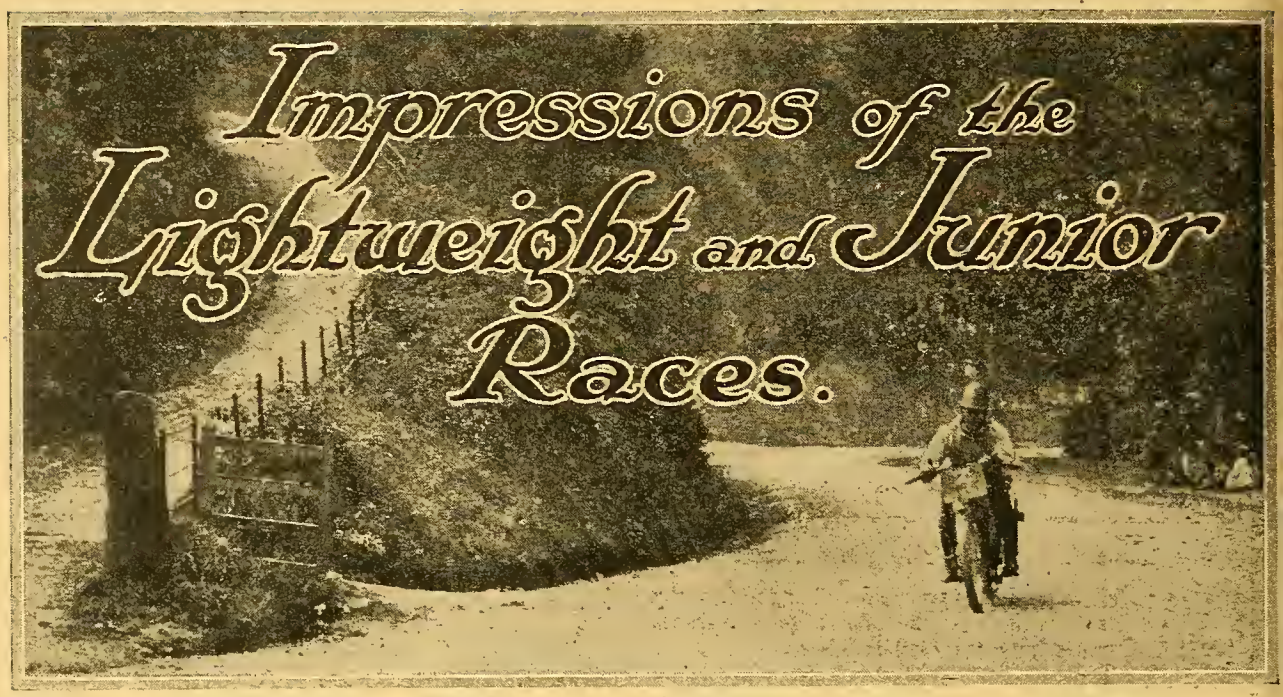
### Points to Criticise.

One suggestion which we would throw out now for immediate consideration by the A.C.U. is the banishment of a marquee for the storage of competing machines. Unless a permanent shelter under lock and key can be arranged, it would be preferable for the examination process to be simplified down and effected on the morning of the event. Competitors emphatically are not content to entrust their mounts to the bare protection of a tent, competition being what it is in modern times.

Reports from all quarters would indicate convincingly that never has interest in the Motor Cycle Tourist Trophy Races been so pronounced, and though fewer actual visitors were on the Island, this can at once be explained by the unsuitability of the date chosen. Clearly a pre-Whit-week for the T.T. is wrong, seriously interfering as it does with works' outputs at the busiest season of the year, and furthermore restricting the influx of visitors to the sporting little island.

One other matter calls for comment, *i.e.*, the undesirable bartering which precedes the races in connection with items of equipment. Last-minute changes in this direction were numerous, and, unless checked, the practice will tend to jeopardise the present high esteem with which motor cycle racing is regarded.

An index to the advertisements in this issue will be found on the page facing the back cover.



# Impressions of the Lightweight and Junior Races.

## The Return of the Two-stroke; the Invincible A.J.S.; and two ill-starred "Dark Horses."

AN *entrée* can never be as satisfying as a joint, but it is often more savoury. Pursuing the analogy, the Lightweight Race is the *hors d'œuvre* of our Manx meal, the Junior is the *entrée*, and the Senior is the roast beef. All three are to be anticipated with pleasure, and rolled on the palate; but the order of their importance is inexorably the same, viz.: 1, Senior; 2, Junior; 3, Lightweight.

Reverting for the moment to their order on the menu, one may enjoy a good dinner on two main systems. By the first method you select your favourite dishes, know exactly what is going to be dished up, and like it because it is better than ever it was. Or, alternatively, you may put yourself, bound and blindfold, in the hands of the *chef* and await delicious surprises. The Baby race was on these latter lines.

### Grandfather of all 2-strokes.

Said I to myself, said I, "These babies are all a little young. Some precocious engine will come out all by itself. Two-strokes melt their pistons in sustained speed. So the dominating stable will be four-stroke. Perhaps the J.A.P. Perhaps the Blackburne. Certainly *not* a two-stroke!" *What* fools we mortals be. The Levis is the great grandfather of all the two-strokes. Even the Scott is merely its great, overgrown hobbledehoy of a son.

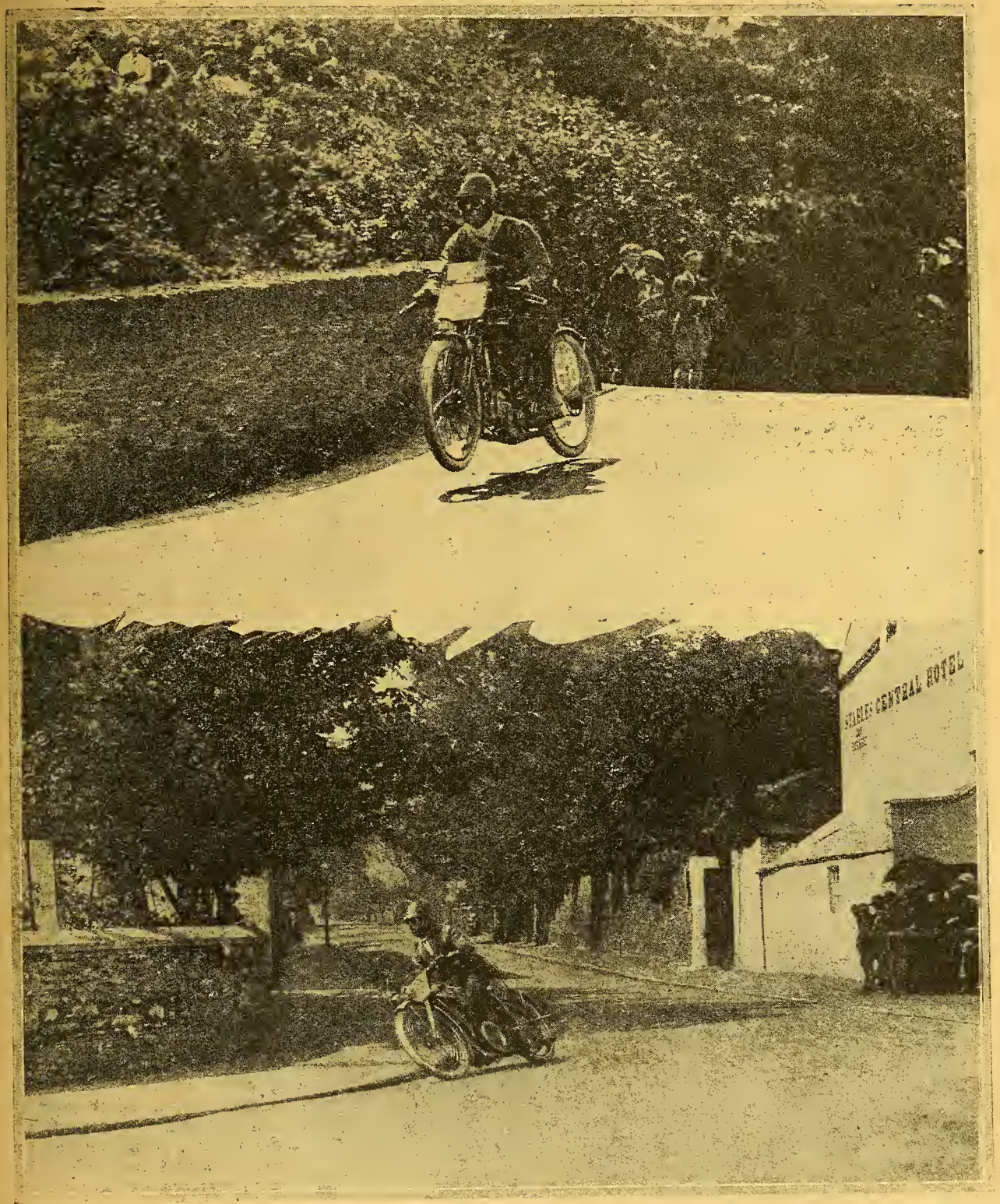
At the end of lap 1 Handley's O.K. was leading the fastest Levis by 11s., and Pike's Levis stood fourth, sandwiching a J.A.P. engine with that prince of riders, Kershaw, sitting over it. Did I sober my opinions? Not a bit. The O.K. will crack, I thought. It did—but only by the miracle of *a stainless steel inlet valve* (of all incredibilities) snapping across the stem. The two Levises will melt their pistons or burst their magnetos by revving the armatures too fast and too long. Kershaw will ride on pawkily and win. And I noted two more J.A.P. engines lying off fifth and sixth waiting for things to happen. Also I remarked that in the comparatively slow Baby Race machines count for more than men, as a mere tyro can lap at 44-46 minutes. So I lit a pipe and waited for the field to reappear in lap 2.

I. M. Sheard being escorted back after winning the Junior Tourist Trophy

### After lap two.

No Handley. Ah, a fluke, of course. Davison at the head. If a two-stroke can stand two laps, need five puzzle it? Kershaw's New Imperial—the alleged 9,000 r.p.m. type—24s. slower than its first lap, and the Levis only 5s. slower. If Kershaw holds a watching brief, there was too much "watch" and not enough "brief." Pike's Levis had vanished, it was true. But only a fire: and any machine may catch fire, of course. Whalley accelerating, as I expected. But a Velocette coming up, though slower than the Levis:

# WHERE COMPLETE CONTROL IS ESSENTIAL.




(Top.) Some idea of the extent of H. Chambers's (A.J.S.) leap at Ballig Bridge is indicated by his "floating" shadow.
(Bottom.) His machine leaning at a seemingly alarming angle, P. Newman (Ivy) cornering in Ramsey.

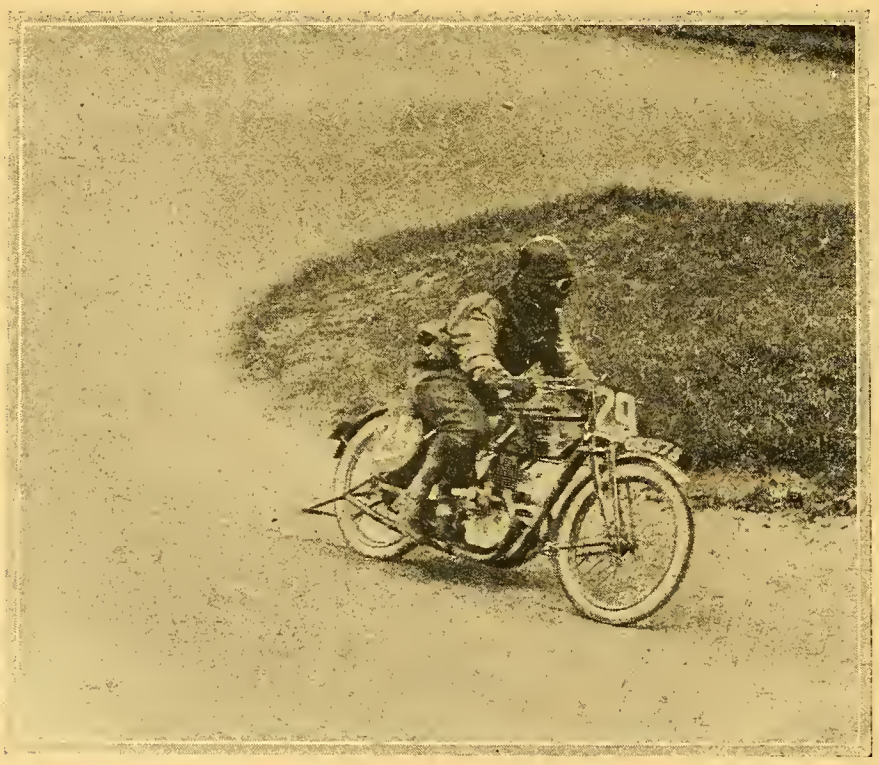
**Lightweight and Junior Impressions.** — and I chanced to know what a pushful kick the latest Velocettes have. I began to wonder whether a novelty in *hors d'œuvres* was being dished up.

Lap 3 saw the Levis with a nice, fat little lead of 2m. 33s., and its sweet little engine roaring away with as clear a *timbre* as ever. Eight minutes faster than the Velocette over 112 odd miles. I conceived a profound respect for the Levis. And whatever was Kershaw doing? The Levis was leaving him at the rate of rather over one minute per lap : and there are no flies on Kershaw as a rider : or on the New Imperial crowd as an organisation. Hereabouts is the crux, I thought. If Kershaw does not open his throttle here and now, and come through with a wet sail, the Levis has got him beat, and need only stand up to win.

Lightweight competitors undergoing the trying preliminaries to the start of their race. D. Prentice (New Imperial), last year's winner, has just moved into the starting position

I considered the lap speeds. Davison up to this point had averaged nearly 51 m.p.h. In 1921 Prentice's New Imperial had won at less than 45 m.p.h. An advance of 6 m.p.h. in twelve months! I took off my hat to Davison and the Levis, and focussed my glasses on the nasty, illegible little progress disc above Nos. 11 (Davison) and 15 (Kershaw) on the gaunt hoarding opposite me. The finger of the New Imperial disc abode stationary—he was not lying doggo, but down and out in a whole-hearted effort to overhaul a faster machine. But Davison's index crept steadily on. Lap 4 saw him leading by over 10 minutes. Lap 5 saw him win by over 13 minutes.

Then his marvellous little engine was dismantled by the jaundiced cynics of the A.C.U. management who naturally suspected it of being Temple's Brooklands Harley. Its bore was a mere 62 m.m. The stroke a beggarly 82.5 m.m. Two forty-eight c.c. No more. The piston head was innocent of carbon—scavenged by the turbulent blast of a potent exhaust and an eager intake. The cylinder head was clean enough to please a Dutch housewife. Just a trace of soot on the ports — no more. And the bearings all tight. *Some* two-stroke. How nice to see such an assorted crowd backing up —Rex, Velocette, Sheffield-Henderson, New Imperial, O.K. No haughty monopoly here. The *hors d'œuvre* had certainly given one much to retract, much to think about.



Well round the Ramsey hairpin. R. U. Judd (Velocette) is probably thinking how much faster he might be going on the Brooklands banking.

And so to the *entrée*.

The T.T. *entrée* is based on the other dining principle mentioned at the start of these notes. You greedily meditate, select your favourite dish, smack your lips, and wait rather impatiently while the waiter is setting the forks precisely parallel and flicking away imaginary crumbs from the cloth. *My* favourite *entrée* is made of minced kidney and mushrooms. When I was twenty-one I once

**Lightweight and Junior Impressions.—**

had a little money for about six weeks. I ordered kidney and mushrooms every day. I grew rather tired of it then. The A.J.S. is a very nice bike. I have one. I like nothing better. It won the Junior in 1914. And again in 1920. And once more in 1921. It displayed every intention of scoring again in 1922. It is developing an invincible habit. So I felt towards the Junior as I felt towards kidneys and mushrooms in the fifth week of the temporary opulence described above.

### Lap one of the Junior.

Howard Davies starts first of the 350 c.c. class and streaks round in 40m. 11s. from a standing start. Very nice, too. But somehow I have tasted kidney and mushrooms before. What's that? Le Vack, starting 9m. later, has lapped in 40m. 7s.? Weird yells from all around. No hostility to the A.J.S. Still less, anything depreciatory, to that pocket marvel, H.R.D. Just a moist glistening of the eye at the aroma of a new and very savoury *entrée*. Harris is round in 40m. 10s.? More kidney and mushrooms in fact. The Cotton in 40m. 50s. What *is* a Cotton, anyway? Then two more A.J.S.'s, and the whole six inside 52s. of each other. Praise be to Allah for a gorgeous race anyhow, with at least two chances of a surprise. We did not take the Cotton seriously enough, I admit. (Woods, in my opinion, would have won outright if he had not caught fire. His machine was a very lame duck indeed after that unlucky second lap flare-up at which moment it was over half a minute ahead of Sheard. Under the terrific handicap of a split oil tank, the loss of its main brake, the waste of a full minute, and the shock to Wood's nerves, it finished less than 14m. behind Sheard. (*Watch Woods in 1923!*).

### David against Goliath.

But Le Vack thus early stirred all our pulses. His engine was only designed eight weeks ago. It was what card players call a Singleton—No. 2 hasn't been made yet. He was up against the formidable A.J.S. battalion. He was David against Goliath. Belgium confronting Germany, Jimmy Wilde challenging Dempsey. And a clever, likeable fellow, too. The crowd rose at him just as they had done with Whalley in the previous year.

Here was no such camouflaged certainty as the Baby Race had given us. It was a pack of sleuth hounds straining to pull down a solitary thoroughbred. We waited breathlessly for the end of lap 2: and the worst of it was that with Davies starting at 10h. 16m. 30s. a.m., Le Vack at 10h. 25m. 30s. a.m., and Harris (A.J.S.) at 10.29 a.m., we had to puzzle our heads with dreadful calculations before the painters brushed the all-important times up and ended our suspense.

At last the vital lap 2 figures were complete. Stringing out a little—it took 1m. 40s. to cover the first six now. Still four A.J.S. machines among them. The lonely Le Vack had pulled out his 3s. lead to 10s. Woods round in 40m. 29s. (Ugh! And that horrible flare-up fifty yards along lap 3!) Another long wait whilst we watched the fingers creep round the B(Ballacraine), S(Sulby), R(Ramsey), B(Bungalow), and C(Creg-na-baa) of the dials. Noted meanwhile that Harris, the popular Island tip for the winner, had impertinently stolen a 17s. lead of Howard Davies. There came to mind, too, the rumour that Davies is too good a rider for a 350 c.c. engine over the Manx course. He can flog it harder than any 350 c.c. can reasonably stand. If Harris is even more ferocious—why, who can catch Le Vack? There appeared to be no answer.

What's the megaphone saying? "No. 33 (Davies) retired at Crosby with engine trouble!" Well, he will insist on winning the Senior now following last year's precedent. Look at Harris's dial—he's had a stop at the back of the Island somewhere. So lap 3 saw Le Vack leading by nearly two whole golden minutes. Good-bye, kidneys and mushrooms. But, bless me, here's Sheard catching up hand over fist: and Grinton, on yet another A.J.S.—is there no end to these fellows? And that plucky Cotton still in the first six after a blaze and losing so much time. Well, well!

### Consolation.

Lap 4. Sheer tragedy from the *menu* standpoint. The new dish—truffles in aspic, let us say—brandished under the nose: its appetising scent inhaled for a moment: then a grimy paw substitutes the old familiar kidneys and mushrooms. But certain consolations. If the plucky Le Vack is padding home afoot leaving his solid gear box by the roadside, here is a Manxman leading in the great Manx race. Salaams to him and to the Island which bred him, and greets us so warmly every year. And, after all, if the A.J.S. has cornered the Junior for four successive races, honour to whom honour is due.

Could any other team drop cracks like Davies and Harris and Longman and Kelly and still canter home first and second, beating the field by 10m. and 20m. respectively? The hollow character of the A.J.S. supremacy is the most convincing proof of quality which motor racing has yet afforded. At the particular combination of speed and stamina which road racing demands in a victorious team, they are transcendently invincible at present, as they have now been for eight years in the 350 c.c. class. They will not be displaced from their unique pre-eminence until a first-class metallurgist, a first-class engineer, and six first-class road racing jockeys take them on. And perhaps not then.

### Next Year?

The Sheffield-Hendersons, however, made a remarkably fine show for a first attempt, and, with J. Thomas third in the Junior, and L. Padley fourth in the Lightweight event, they are certainly amongst the makes which will be watched next year. No firm nowadays wins a T.T. on its first year of entry; generally it takes three years of hard trying, but the Sheffield production allied with the o.h.v. Blackburne may well reduce the waiting period to a little over twelve months.

B. H. DAVIS.

# The International Senior Tourist Trophy Race

The winner, A. Bennett (Sunbeam) crossing the line at the end of his history-making ride.

**A. Bennett wins the Senior T.T. on a Side Valve Sunbeam in the Record Time of 3h. 53m. 0·2s. = 58·33 m.p.h. Average Lap Time beats all previous fastest Lap Times. W. W. Brandish (o.h.v. Triumph) Second, 4h. 0m. 22·6s. = 56·52 m.p.h. H. Langman (Scott), Third, 4h. 2m 14·8s. = 56·09 m.p.h. Thursday's Wonderful Race.**

THE 1922 Senior T.T. was run in gorgeous weather and resulted in a superb victory for A. Bennett (Sunbeam), who led throughout, and won in 3h. 53m. 0.2s. at the astounding speed of 58.33 m.p.h., his second lap being just one second slower than 60 m.p.h., a feat which all riders who know the Manx course will appreciate.

The second man was W. W. Brandish (o.h.v. Triumph), who finished in 4h. 0m. 22.6s.; he had been running third and fourth during the earlier laps, and finished with his engine in perfect condition.

H. Langman and C. P. Wood, both on Scott Squirrels, were third and fourth respectively. Several famous riders were unlucky. George Dance retired with a buckled wheel in the first lap, and F. G. Edmond broke his handle-bar at Ballig on the second circuit, when he was lying fourth. The cruellest luck befel F. W. Dixon, who retired with tyre trouble at Ramsey on the final round, when he was riding second some three minutes behind the winner. Grahame Walker (Norton) was fifth. A complete list of finishers will be found on p. 773.

In spite of the high speeds, there was a notable absence of accidents. The winning machine was entirely British, down to the smallest item of its equipment.

Thursday dawned with a blistering sun, and even in the small hours there was no mist on the mountain. The Highway Board did its best with water-carts, covering most of the course, but dust threatened to bother the competitors, and the heat was evidently going to be oppressive for the spectators. Every boat arriving since Wednesday morning had been packed, and long before 9 a.m. crowds were streaming out to the various points of vantage along the course. The narrow hill leading up from the promenade at Douglas to the grandstands was full of every imaginable kind of vehicle, crowded to excess on the ascent, or returning empty for a fresh cargo; and the air was full of dust and exhaust fumes.

The phenomenal speeds recorded in practice had considerably intensified the excitement which is the usual prelude of a Senior Race—the tensest excitement of the whole motor cycling year; and on Thursday a special anxiety was discernible, since the 500 c.c. machines are now capable of speeds which sound absolutely perilous over such a course, so that the dread of serious accidents was present to many minds.

At 9.50 a.m. the National Anthem notified the arrival of the Governor, and

R. T. Cawthorne at Quarter Bridge; he rode one of the experimental overhead valve Nortons.

imultaneously the riders wheeled their iachines down the road, in ranks of iilitary precision. Right in front of the imekeeper's box was a small oblong, iarked in white on the tarmac, from hich each rider started in turn. Its rst occupant, by right of last year's ictory, was Howard Davies, a workman-ke figure in tight brown leather, dis-aining gauds. But the 66 men behind im resembled a flower garden in their arish racing colours—Indian red, Scott iolet, Norton grey, Douglas blue and ilver, Sunbeam black and gold, with he vivid grass-green helmets, jackets, ud breeches of the Rudge men standing ut above all.

Among the Tritons were five plucky innows—the three A.J.S. 350 c.c. iachines of Davies, Wade, and Keily, .e Vack's J.A.P.-engined New Imperial, nd Whalley's Massey-Arran. The only vins were five Scotts, five Douglases, one ew Gerrard, and one N.U.T.

Two minor changes were made in the rrangements at headquarters, both in-pired by Tuesday's experience: riders ere ordered to stop their engines during epôt stops to reduce the risk of another re, and an extra board was erected to xhibit the numbers of the ten leading ien as each lap was finished.

### The Start.

Davies evidently realised that contend-ig against 500 c.c. engines was a sterner isk for his A.J.S. than in 1921, for he ad streamlined his front number disc ith celluloid. He got a great cheer. So id de la Hay, No. 2, as the 1920 winner, id No. 3—Duggie Brown—as a native f the island. C. P. Wood's arrival on ie starting oblong stirred sympathy, as ie rule against preliminary warming-up f engines was deemed unfair to the ater-cooled two-strokes; but Wood ushed off, and his engine was firing from one-cold within ten yards.

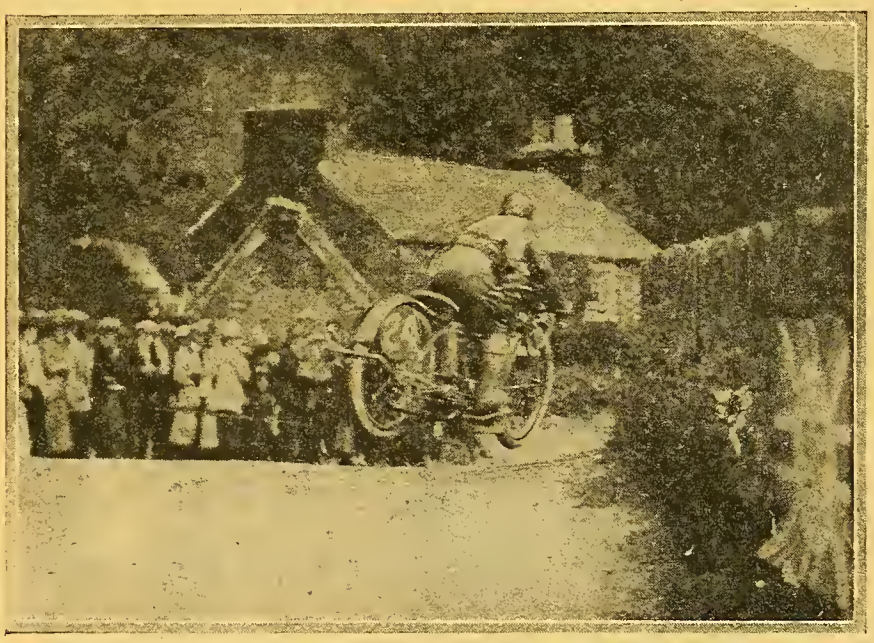
A. H. Alexander, who had elected to de his 1920 Grand Prix machine in lieu f the 1922 model, which he had tested i the recent Scottish Six Days, made the est get-away up to this point; but some riders obviously preferred to spare a cold engine at the outset. Greenwood's Sunbeam smoked as if his pump had been leaking overnight. F. W. Dixon, whose dashing practice work had earned him many backers, had a great send-off, and probably carried more money than any other entrant.

### Methods of Mounting.

Quite half the riders stepped on to the near footrest when their engines fired, and the old-fashioned leap clean into the saddle—once regarded as essential in speedy events—was used by few. Le Vack got an ovation in recognition of Tuesday's great ride, and so did Davison, as the lightweight winner.

Simpson, regarded in knowledgeable quarters as the Scott dark horse, tried to start with no gear engaged. By the time he got away twenty men were signalled through Ballacraine; only No. 13 was missing at that point. Davies still led at Sulby, where Clarence Wood had already caught Duggie Brown and Brandish. Meanwhile about half the field had got away. Vivian Olsson says he competes because the island is the only place where one can have a real blind; but he got away like a winner.

Searle's Sheffield-Henderson showed terrific acceleration. Bennett, probably co-favourite with Dixon, went off slowly, adjusting his goggles after mounting. The board showed that Hassall's Norton was already gobbling up men who had started ahead of him, and Clapham's progress dial was equally promising. One felt that the race had really started.



Few pictures give a better impression of the leap made at Ballig Bridge by fast machines than this wonderful photograph of F. W. Dixon with both wheels of his Indian well off the ground.

G. Clapham (486 c.c. Scott) opening out into the fast section below Craig-ny-baa.

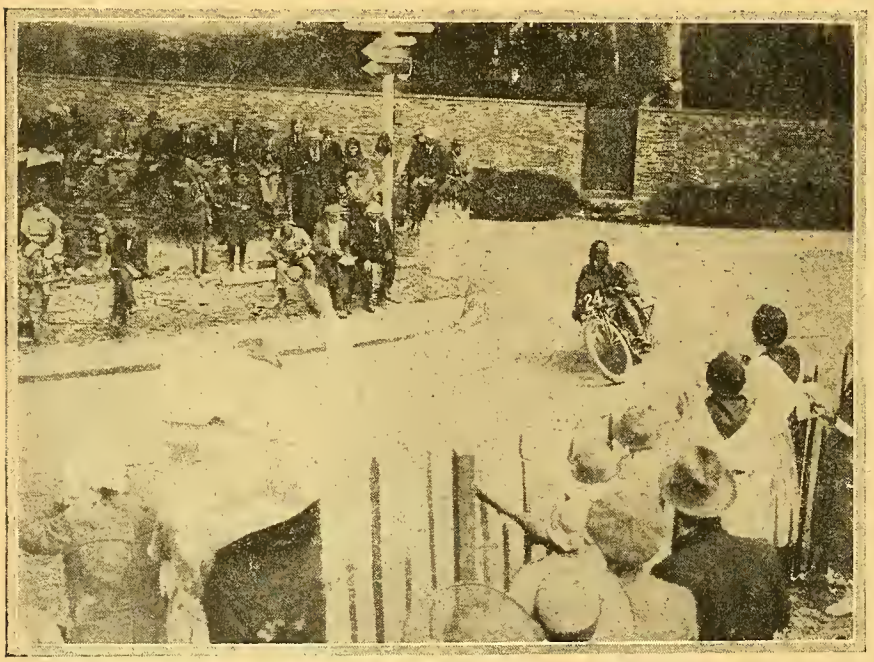
A buzz of comment arose when de la Hay was posted as first man at Ramsey, but Davies' number was substituted a minute afterwards. "Pa" Cowley got a special cheer as the oldest starter in the Senior: he has a beard and his years coincide with his racing number, *i.e.*, 57; his son was also riding.

Three of the most dangerous entrants were among the last half-dozen to leave—Dance (cheered before he took his stance in the oblong), F. G. Edmond (whose Triumph had been kept under lock and key), and Langman (riding one of the speediest Scotts). The last man left at 10h. 33m. 50s.; so if the rumoured 37-minute laps were to be produced, there would only be the briefest interval before the early starters completed their first circuit.

### The First Lap.

This interval brought news of a catastrophe. The discs showed that de la Hay had caught H. R. Davies on the mountain, and after the latter's index had been stationary for a long time it transpired that his petrol pipe had broken without the rider's knowledge, and near the Bungalow drained his tank.

Bownass (N.U.T.) was reported repairing after a tumble at Quarter Bridge.



Around the course Dixon, the Indian exponent, was a hot favourite, and he was popular with the children especially, who cheered him at Governor's Bridge and other points on the route.

Then Brandish's (Triumph) disc went u signifying arrival at Governor's Bridg necks were craned, and almost instant neously the distant hum of his engi struck the ear. Nearer and nearer came at 70 m.p.h. in giant *crescend* The crowd drew a breath of appreci tion, and perhaps 20s. later de la Hay Sunbeam, which had lost its minute's sta of Brandish, ripped past, followed i quick succession by many others.

### The Bend at Bray Hill.

Nearly everybody cut out momentaril on sighting the curve to Bray Hill, an having thus slowed down took the ben with their engines running. Brandis had done a standing start lap in 39m. 38s —good earnest of the nineteen separat beatings which the 1921 record was t sustain. Meanwhile the board showe that Dixon had caught seven men befor the Bungalow; that Edmond had caugh George Dance; that Bennett was cuttin out a truly frightful pace; and, finally that Dance had stopped. No. 44 (Ben nett) was signalled at Governor's Bridg immediately after No. 34, Cawthorn (o.h.v. Norton), who is himself no slug gard; and a sigh of astonishment went round when the Sunbeam's standing start lap was announced as 38m. 14s.

The crowd was much interested in the Scotts: the musical drone of their exhausts is pleasant to hear, and varies in pitch as the rear wheel spins over a bump. Everybody was curious to know how the later starters had done, especially the three cracks whose numbers were among the sixties. Alas! George Dance was reported as down and out near Craig-ny-baa with few spokes left in his back wheel. But Edmond came through very early, though with goggles down, suggesting trouble next time he entered another man's dust. Scarcely had he passed before Langman's Scott streaked through, gradually overhauling their starting difference. Porter (New Gerrard) visited his depot. Norris came through very late, as did Bownass, whose pluck in continuing after a bad toss was duly recognised. At last the position at the end of lap 1 was clear:

### Positions after the First Lap.

| | | H. | M. | S. |
|---|---|---|---|---|
| 1. | °A. Bennett (Sunbeam) ... | | 38 | 14 |
| 2. | °H. Langman (Scott-Squirrel) ... | | 38 | 15 |
| 3. | °W. W. Brandish (Triumph) ... | | 39 | 38 |
| 4. | °F. G. Edmond (Triumph) ... | | 40 | 7 |
| 5. | A. H. Alexander (Douglas) ... | | 40 | 12 |
| 6. | F. W. Dixon (Indian) ... ... | | 40 | 14 |
| 7. | G. Clapham (Scott-Squirrel) ... | | 40 | 26 |
| 8. | H. W. Hassall (Norton) ... ... | | 40 | 28 |
| 9. | W. Hollowell (Norton) / S. A. Crabtree (Sunbeam) ... | | 40 | 34 |
| 11. | R. T. Cawthorne (o.h.v. Norton) | | 40 | 37 |
| 12. | H. Le Vack (New Imperial-Jap) ... | | 40 | 47 |

°NOTE.—The first four men with a standing start all beat Edmond's 1921 record of 40m. 8s. for a flying lap. These placings included a surprise or two. Brandish had exceeded his practice form; Hollowell and Crabtree had done remarkably well; and no praise is too high for the fashion in which Le Vack's 350 c.c. J.A.P.-engined New Imperial outstripped over fifty bigger engines.

In the early stages with over sixty men still running, the small progress dials were not so useful as they became later on, when the keenest interests had narrowed down to comparatively few men, and many starters had dropped out or lost all chance of victory. But with a dozen

**International Senior T.T. Race.—**

leaders practically within two minutes of each other, the crowd spent the interval in studying the dials, and the attendants at the cages fidgetted over their preparations as the bulk of the men were due to stop for fuel and oil after two laps.

The ranks were beginning to thin, though lap 1 had retained a record percentage of survivors. During lap 2 Reg. Brown was put out near Sulby with engine trouble. G. Cowley, jun., withdrew after his machine had caught fire on the first round. Poor Bownass stopped at Sulby with a broken steering column, due no doubt to his crash on lap 1.

News came through that Simpson's disappearance was due to his petrol tank bursting at Ramsey in the opening circuit. The Duzmo never regained the starting point. Ivor Thomas had engine trouble at Bishop's Court on his second round, and a similar fate overtook Hatton's Douglas at Ramsey. A. W. Jones (Douglas) survived lap 1 to vanish on the next lap. (We heard later that his tyre came off in a crash following a frightful wobble after Governor's Bridge.) Stead's failure to return was reported as due to tyres, and Ollerhead's Douglas gave up at Union Mills in the second round.

### A 350 c.c. Machine Gaining Ground.

These misfortunes left less of the board to be studied. Le Vack was gaining more ground than anybody, despite his small engine. Consternation was rife when Edmond's dial seemed to indicate a stoppage, and a groan went up when the megaphone announced that a broken handle-bar had put him out of the race near Union Mills. He felt it giving way, and was therefore able to avoid a fall.

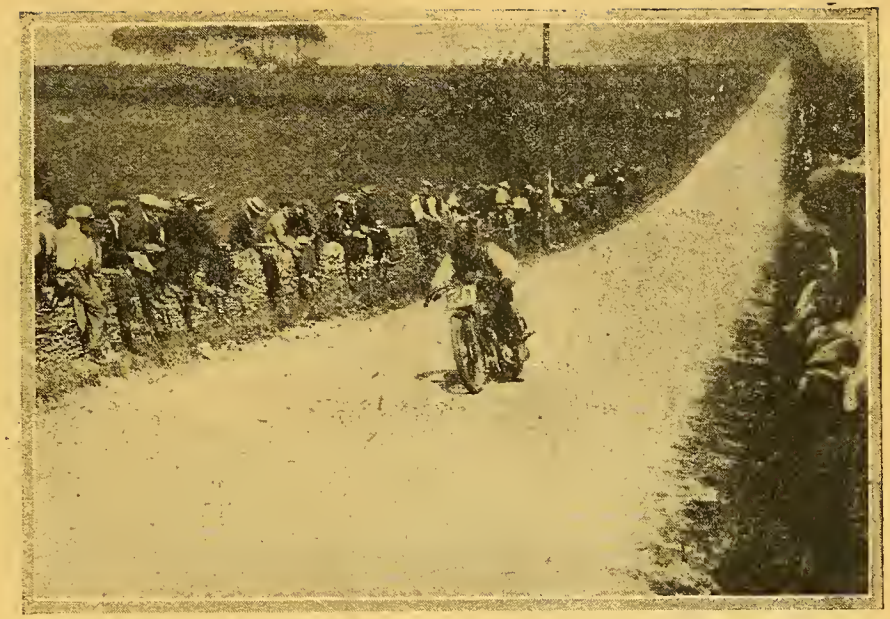
Wood's Scott appeared to be pressing Brandish, now the chief hope of the Triumph team; indeed, the Scott was clearly travelling at a furious pace. A. H. Alexander met some brief trouble, but Hollowell's Norton was accelerating.

Scarcely had these features been recognised before the yellow discs began to herald the second lap arrivals, and neat deceleration at the depots was the order of the day, very few men wobbling or overshooting their cages, whilst the brakes were quiet, firm, and smooth as contrasted with the squeaks and skids of previous years. In fact, observers opined that improved brakes shared the credit for the faster lap times.

### Advantage of Large Tanks.

On the second lap practically everybody stopped to replenish at the cages, but Wood (Scott) and Hassall (Norton) shot through, having fitted large tanks so as to accomplish six laps on a single depot stop, thus saving at least fifteen seconds on any rival who stopped every other lap.

Brandish, having started No. 4, was first man into the cages, but quick as he was, Wood hummed past ere he could get away: the Scott was travelling like forked lightning at this point, but Wood presently found it wise to restrict himself to threequarters throttle in the interests of his ignition. Ere he did so, he cut the Bennett's new lap record (38m. 14s.) by nine seconds, but, as it turned out, the Scott was not to hold the record for many minutes.



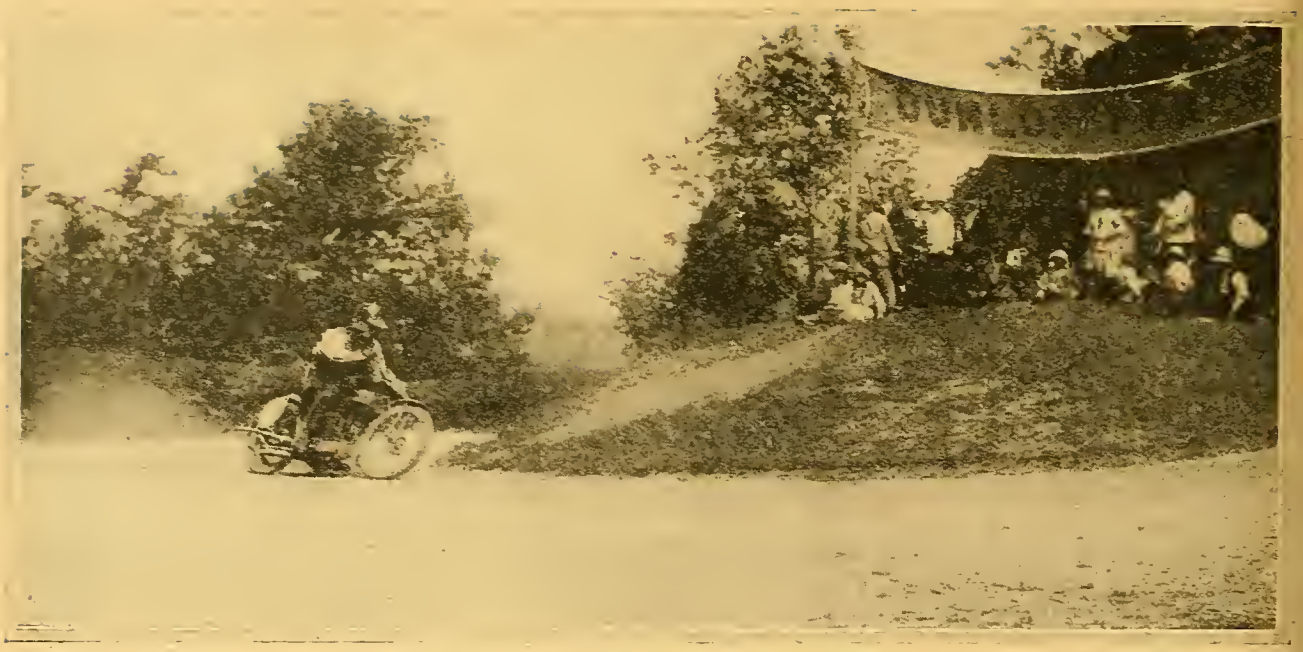
One of the fastest sections of the course—from Craig-ny-haa to Hillberry. H. R. Harveyson (499 c.c. Triumph) approaching the latter corner.

As we waited to see how the later men were faring, the megaphone reported that Jackson (Sunbeam) had gone over his handle-bars at Ballig Bridge, but was quite unhurt. The "crash" helmets have now many lives to their credit, and do not tear off the men's ears, as the croakers had prophesied.

A record lap was expected from F. W. Dixon: 39m. 18s. was certainly hot, but not hot enough to push him right in front. Then Whalley passed still on his first lap—trouble dogs this fine rider; and Mather's (Rudge) was in a similar predicament. All eyes were glued to Bennett's column on the big board, and his yellow disc swung down before his most sanguine friends expected it. He shot up to his cage, and was off again in a matter of seconds, while the crowd guessed at his lap time.

At last the man with the paint brush approached column No. 44 on the board —"37m. 46s." Phew! For is not

H. W. Hassall (490 c.c. Norton) overtaking G. Cowley Senr. (499 c.c. Sunbeam) on the Governor's Bridge hairpin.



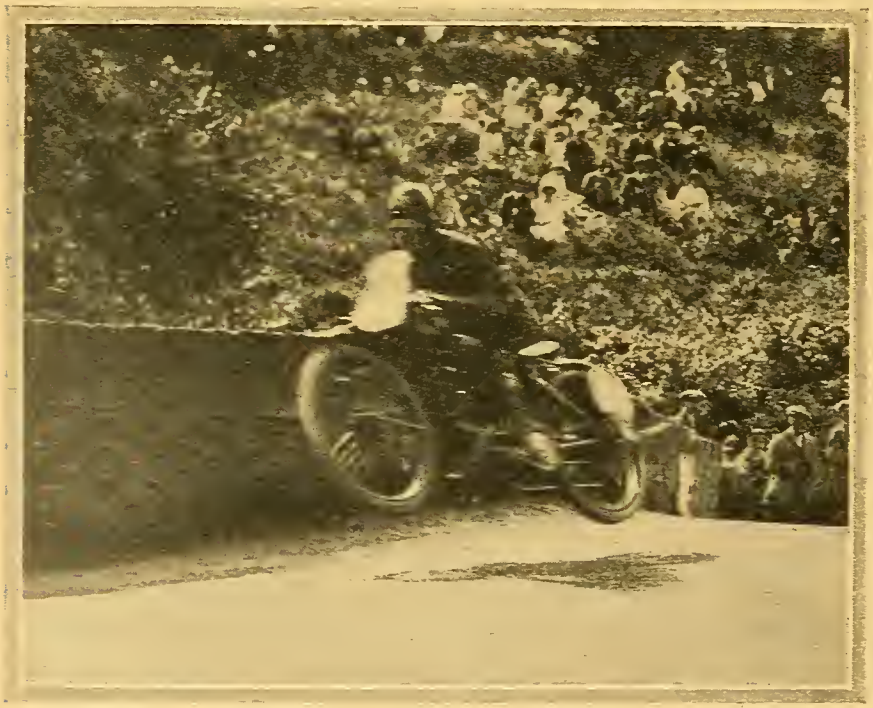
Beautiful cornering was a feature of last week's races. F. B. Halford (499 c.c. Triumph) making a neat attack on Ramsey hairpin.

37m. 45s. a level sixty miles an hour? Yet Bennett's Sunbeam engine is so quiet and smooth that few would suppose him to be fastest past the stands.

### Speculation.

Could any of the late starters among the sixties beat this? Slowly their pointers crept round the dials. Suddenly a cheer arose up the road—surely it *couldn't* be Langman so absurdly soon? "He's done a thirty-five-minute lap!" proclaimed some Scott enthusiast. But no! It was Howard Davies, sadly touring in after obtaining a supply of petrol.

Two of the formidable "sixties" in Dance and Edmond were now out of the race, but Langman fought hard for his end of the list, and when he ran into his depot, his lap time was 39m. 10s.



The riding of F. W. Dixon (498·8 c.c. *Indian*) is extraordinarily daring, and he "jumped" bridges like those at *Ballig* and *Ballaugh* in the manner shown.

### 2nd Lap Positions.

The leaders after two laps were then posted as follows:

| | | H. | M. | S. |
|---|---|---|---|---|
| 1. | A. Bennett (Sunbeam) | 1 | 16 | 0 |
| 2. | H. Langman (Scott-Squirrel) | 1 | 18 | 25 |
| 3. | C. P. Wood (Scott-Squirrel) | 1 | 19 | 8 |
| 4. | W. W. Brandish (Triumph) | 1 | 19 | 13 |
| 5. | F. W. Dixon (Indian) | 1 | 19 | 32 |
| 6. | W. Hollowell (Norton) | 1 | 20 | 52 |
| 7. | H. Le Vack (New Imperial-Jap) | 1 | 21 | 11 |
| 8. | G. Chapman (Scott-Squirrel) | 1 | 21 | 13 |
| 9. | H. W. Hassall (Norton) | 1 | 21 | 16 |
| 10. | R. T. Cawthorn (o.h.v. Norton) | 1 | 21 | 53 |
| 11. | S. A. Crabtree (Sunbeam) | 1 | 22 | 11 |
| 12. | T. C. de la Hay (Sunbeam) | 1 | 22 | 53 |

NOTE.—The outstanding feature of this time-sheet is the quality of Bennett and his Sunbeam: his opening laps in 38m. 14s. and 37m. 46s. had given him nearly 2½m. lead of the field in a most furious race. C. P. Wood actually jumped his Squirrel from thirteenth to third position in one frenzied circuit. Of the first lap leaders, Edmond had retired, A. H. Alexander had dropped back, de la Hay was working in towards the van, and the astounding 350 c.c. New Imperial had gone up five more places, actually outstripping all but six of the Senior machines.

Already victory seemed assured for Bennett, provided he and his mount could stick six laps of such a cracking pace under an almost tropical sun. The prophets began to quarrel—all the hares would stop by the wayside, and one of the tortoises would quietly annex a pawky victory. For our anxiety and excitement there was no vent but to use glasses and watch in conjunction with the progress dials: and when a Boy Scout was late in shifting a fast man's pointer round the dial, the hearts of that rider's supporters almost stopped beating with anxiety.

Meanwhile G. Cowley, jnn., toured in on his fire-blackened mount and retired at the grandstand. Norton enthusiasts grew anxious, for Hollowell, their fastest man, was not signalled from Snlby when one there. Langman's Scott signals

**International Senior T.T. Race.—**

wanted just enough waiting for to suggest he had sustained a brief stop somewhere—a touring trifle which is converted into disaster when your rivals are lapping at nearly 50 m.p.h. Hassall's counter always seemed to move a few seconds early during this third lap, suggesting that the mantle of Hollowell had fallen on the second Norton. Meanwhile, one felt a pang of pity for the general rush of the riders, many of whom were lapping at speeds which would have sounded dazzling enough in any previous T.T., but were almost overlooked in the keen combat between the super engines of the super men.

### Unrecognised Merit.

Amongst the middle markers excellent work was clearly being recorded by all men who covered two laps in under ninety minutes, i.e., at better than 50 m.p.h. There were some two dozen of them, whose names do not appear amongst the leaders—two Sheffield-Hendersons (Strange and Searle), eight Nortons (D. Brown, Tucker, G. Black, Minister, Carron, N. Black, Shaw, and Adamson), three Sunbeams (Greenwood, Waterhouse, and Olsson), two 350 c.c. A.J.S. (Wade and Kelly), two Rudges (Baldwin and Taylor), two Douglases (A. H. Alexander and Anstice), two Indians (D. Alexander and Davidson), and two Triumphs (Harveyson and Halford). These riders' speeds varied from 50-55 m.p.h. over the first two laps, and were good enough to have won or nearly won in 1920 or 1921. But in this year's crop of miracles such feats passed unrecognised by many of those present.

During the brief wait for the return of the leaders on their third lap, rumours began to fly about—that Bennett's tank hardly held enough oil for two laps at his present speed; that Johnson had crashed near Ballacraine and had possibly fractured his leg; that the occasional misfiring of Dixon's engine implied a broken valve spring; and that the Scott speedsters had to choose between sparing their engines a trifle or asking for ignition trouble.

Then the crowd sat up to watch some speed, as very few riders were due to visit their cages on the third lap. Of course, the men were not all out at the stands, as the Bray Hill curve comes soon after; but they were probably doing 70 m.p.h.

### First Replenishment Stops.

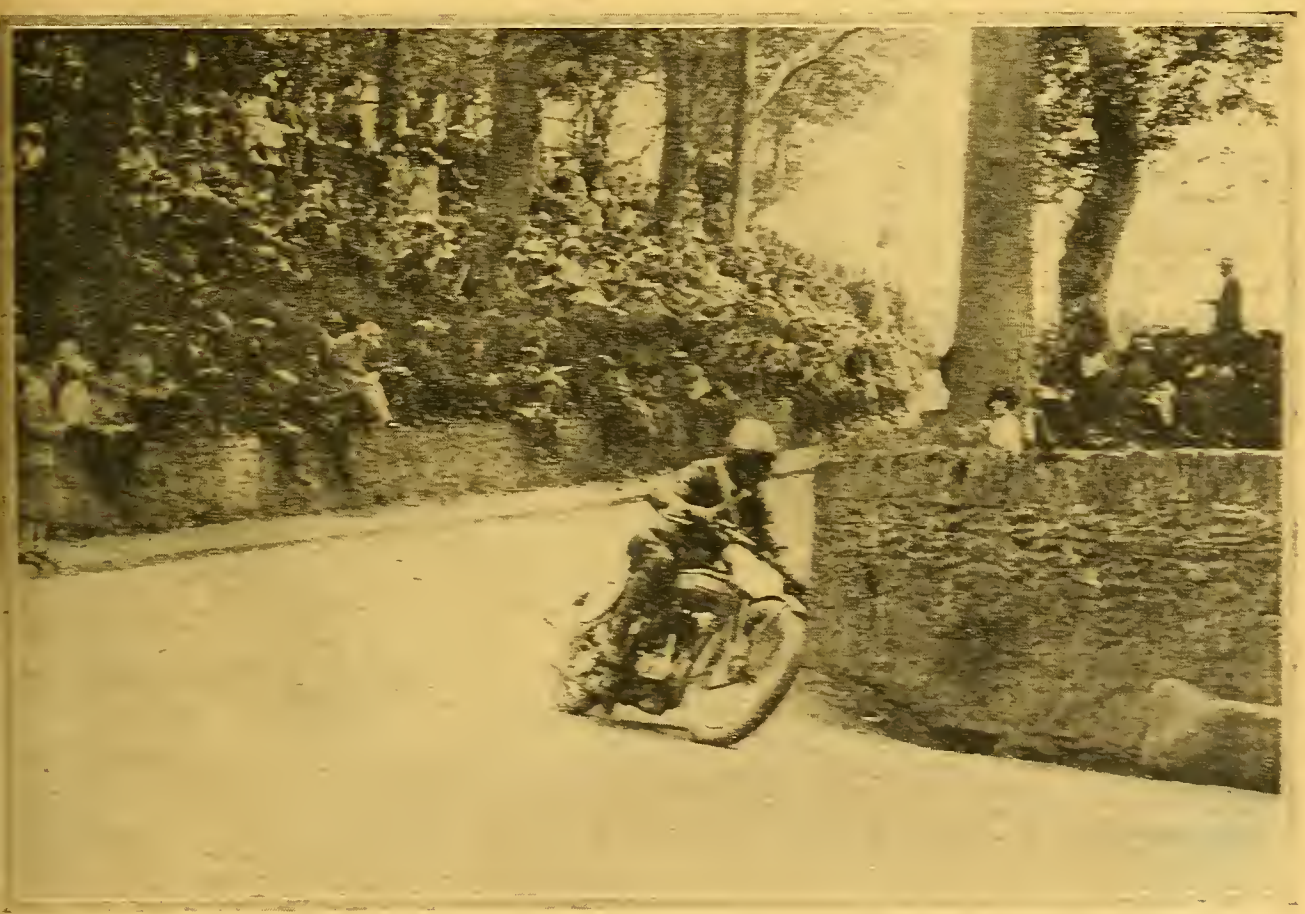
At noon precisely Wood made his first replenishment stop, having covered three laps on one tankful of spirit. His lap of 58m. 10s. was 11s. slower than his previous circuit. Burrill came in on his second lap, overshot his cage, and turned round in the road to ride back to it, fortunately nobody was passing through. Clapham gave a demonstration of a Squirrel at speed, having filled up on the previous round. Dixon came past early, having lapped in 58m. 5s., but there was a shade of irregularity in the roar of his engine fast though he was.

The board signals hinted that Hollowell was hopelessly stuck near Sulby, and his retirement was presently telephoned through—engine trouble: hard lines on the Norton. Brandish had dropped some way behind Wood.

Where was Bennett? Up went his disc punctually, and he shot through quietly in 58m. 20s., which included his stop at the cages at the beginning of the lap.

Munday (New Hudson) arrived late on his second circuit, having run out of petrol up the road. Le Vack roared through in his usual projectile fashion, his New Imperial's performances being indistinguishable by eye from the faster 500 c.c. machines. Douglas Alexander was just behind him, and seemed less speedy.

Late arrivals and withdrawals were giving the board a more sporty appear-



A natural grand stand is provided by the banking at Governor's Bridge. The rider is J. W. Shaw (490 c.c. Norton), one of Ireland's representatives in the races.

**International Senior T.T. Race.—**

ance now that half the distance had been covered, and it was easier to pick out those who threatened danger. Some of the slower men seemed to be tiring physically: at any rate, a number of them were plainly taking the simple bend at Bray Hill with reduced dash, cutting out sooner and longer.

### Half Way Positions.

| | | H. | M. | S. |
|---|---|---|---|---|
| 1. | A. Bennett (Sunbeam) ... ... | 1 | 54 | 20 |
| 2. | C. P. Wood (Scott-Squirrel) ... | 1 | 57 | 24 |
| 3. | F. W. Dixon (Indian) ... ... | 1 | 59 | 9 |
| 4. | W. W. Brandish (Triumph) ... | 1 | 59 | 20 |
| 5. | H. Langman (Scott-Squirrel) ... | 2 | 0 | 29 |
| 6. | H. W. Hassall (Norton) ... ... | 2 | 1 | 51 |
| 7. | G. Clapham (Scott-Squirrel) ... | 2 | 2 | 54 |
| 8. | H. Le Vack (New Imperial-Jap) | 2 | 3 | 18 |
| 9. | R. T. Cawthorne (o.h.v. Norton) | 2 | 5 | 38 |
| 10. | T. C. de la Hay (Sunbeam) ... | 2 | 5 | 44 |
| 11. | N. Black (Norton) ... } S. A. Crabtree (Sunbeam)... } ... | 2 | 5 | 55 |

NOTE.—Bennett had thus added another 39 sec. to his lead. Dixon had caught Brandish and Langman. Wood, now standing second, had picked up 4 sec. only on Bennett. Hassall had gone up from 9th to 6th place, and Norman Black replaced the missing Hollowell.

The usual wait for the late starters' times ensued, but at last Langman's came up, and the half-time positions could be calculated.

### Unable or Unwilling?

Thus the fourth lap was contested in a growing tension. If the riders knew their approximate positions, nobody except Wood seemed inclined to go hard after Bennett; the others seemed to have set themselves a certain pace, and to be unable or unwilling to exceed it.

As it happened, the first information obtainable from the progress dials proved that something was amiss with Wood. The pointers were not always reliable, but they indicated that Brandish had caught Wood and even reached Craig-ny-baa before the Scott got moving again, and was telephoned as past the Bungalow. "Nothing serious, but a short stop and a slow lap!" said everybody. Meanwhile Dixon's pointer spurted on regularly, marking a new sector every few minutes, and so did Bennett's. Langman, on the other hand, seemed to be getting his pointer round faster again.

### Retirements.

Occasional news dribbled in of the slower men and the missing ones. Harveyson had been delayed with a stuck valve at Crosby on lap 3, and finally retired. Davison's back tyre had deflated twice. Greenwood walked in after engine trouble at Ballacraine on his third circuit. Tucker pulled the valve clean out of his front tube at Creg Willey. Simister (Norton) met engine trouble at Sulby. Carton broke a piston near Ballacraine. Burrill burst a tyre down Bray Hill. During the fourth round Shaw (Norton) also dropped out, and Searle's Sheffield-Henderson, after a fine *début*, relinquished the struggle near Crosby, after averaging over 51 m.p.h. to that point.

Soon the big clock indicated that the early starters were due in on lap 4. Up went Brandish's yellow disc. He roared in with his stand down, overshot his cage, and was chocked by the stand when he tried to wheel back. He got away some five minutes before Wood appeared, and got a tremendous cheer. Wood was late in arriving, the fourth circuit having cost him no less than 46m. 38s.—an 8 min. excess which ultimately cost him two places; he went through without stopping and whatever had delayed him was clearly remedied by this point.

### Dixon's Difficulty.

Presently Dixon free-wheeled neatly into his depot, effected a lightning fill-up, and departed at speed, but still troubled by that haunting hiccup in the beat of his engine; it was only just noticeable, but sufficient to ruin his chance of riding down Bennett. The spectators waited feverishly for Bennett, whom many people thought incapable of staying the racket of six laps at his opening speed. But the next cheer was for F mond, who toured quietly in, steering with half a handle-bar.

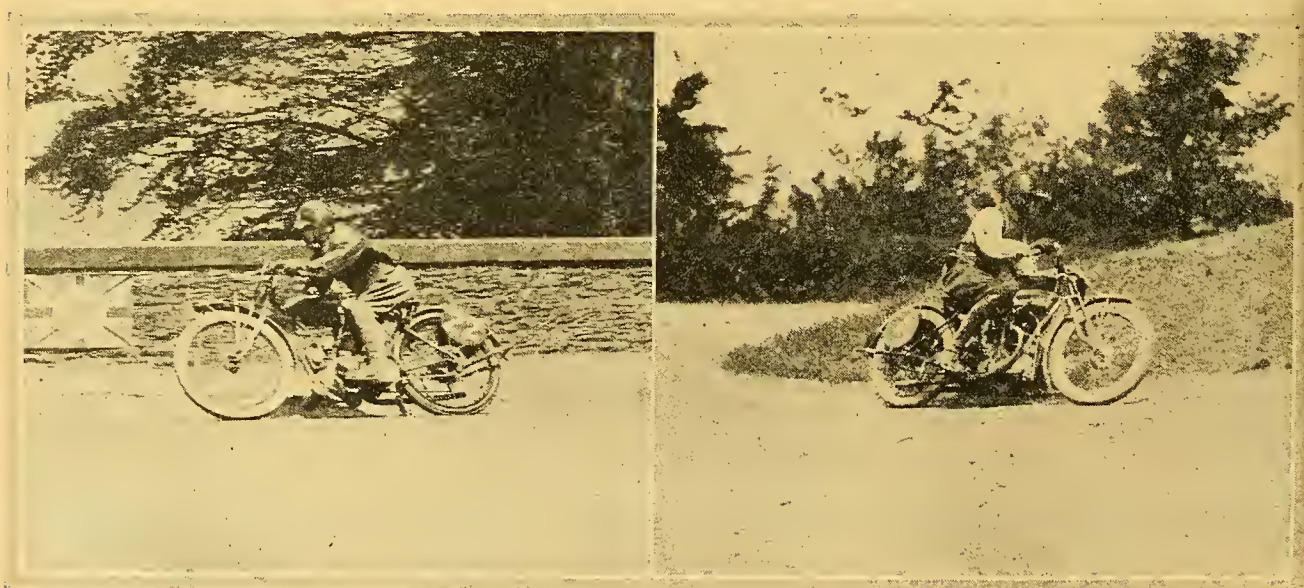
Then somebody with a watch remarked that the pointer on Bennett's dial h stood at "R" (Ramsey) for 15 mi Just when his friends were growing ne vous his pointer suddenly revived, spu round feverishly, gave place to the yell "Governor's Bridge" signal, and in came, having lapped in 42m. 50s. Th was slow time for the Canadian, and later transpired that shortage of oil ha worried him. He spent rather a lon time at his cage, and left amidst friend cheers. Mundey now came in on h third lap, looking rather weary. Most the faster men made depôt halts on th fourth round, which naturally compl cated calculations for the fifth lap. Whe Langman, the latest starter of the fa men, came into the pits, the position the end of four laps was made out a follows :—

### Fourth Lap Positions.

| | | H. | M. | |
|---|---|---|---|---|
| 1. | A. Bennett (Sunbeam) ... ... | 2 | 37 | 1 |
| 2. | F. W. Dixon (Indian) ... ... | 2 | 38 | |
| 3. | W. W. Brandish (Triumph) ... | 2 | 39 | 1 |
| 4. | H. Langman (Scott-Squirrel) ... | 2 | 40 | 2 |
| 5. | H. W. Hassall (Norton) ... ... | 2 | 43 | 2 |
| 6. | C. P. Wood (Scott-Squirrel) ... | 2 | 44 | |
| 7. | G. Clapham (Scott-Squirrel) ... | 2 | 44 | |
| 8. | H. Le Vack (New Imperial) ... | 2 | 46 | 1 |
| 9. | R. Cawthorne (o.h.v. Norton) ... | 2 | 47 | |
| 10. | N. Black (Norton) ... ... | 2 | 47 | |
| 11. | G. Walker (Norton) ... ... | 2 | 47 | 3 |
| 12. | T. C. de la Hay (Sunbeam) ... | 2 | 48 | |

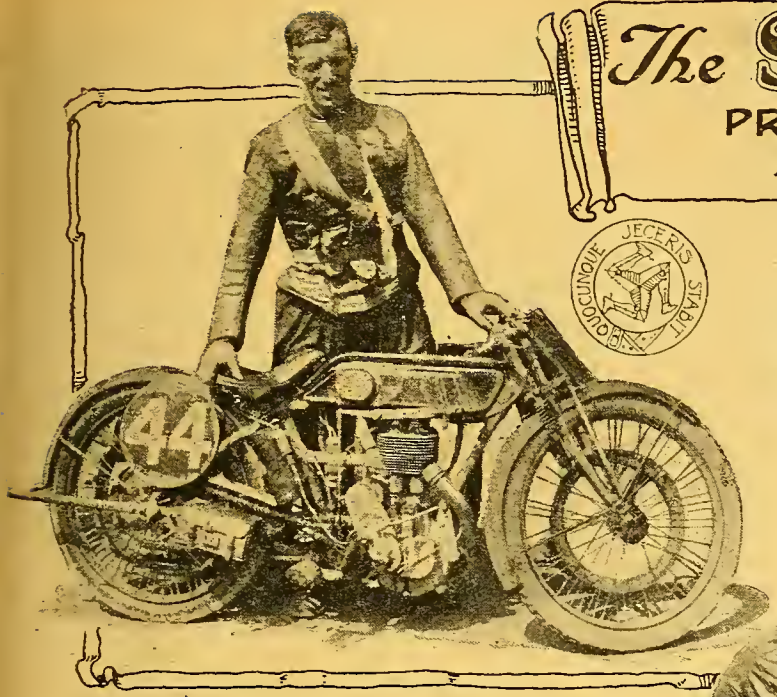
NOTE.—The sensation of these figures was tha Dixon had cut down Bennett's winning lead fro 3h. 4s. to a beggarly 53s. and Bennett's lon depot stop had reduced the Sunbeam vantage b perhaps another half minute.

A tight finish began to look possibl after all. Wood had lost four places, and Grahame Walker had replaced the missing Crabtree. Langman was probably warned at the Scott cage that his chances were now better than Wood's, and the atmosphere became full of electricity.

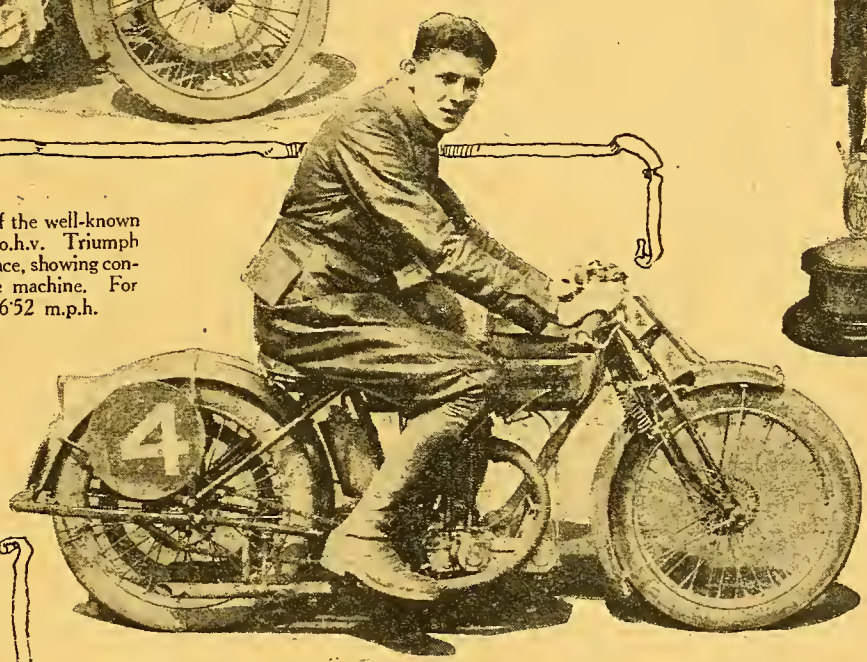


Comparisons in riding attitudes: On the left is D. S. Alexander "getting down to it" at Quarter Bridge, while W. Brandish, second place winner, takes the hairpin cautiously, sitting fairly upright

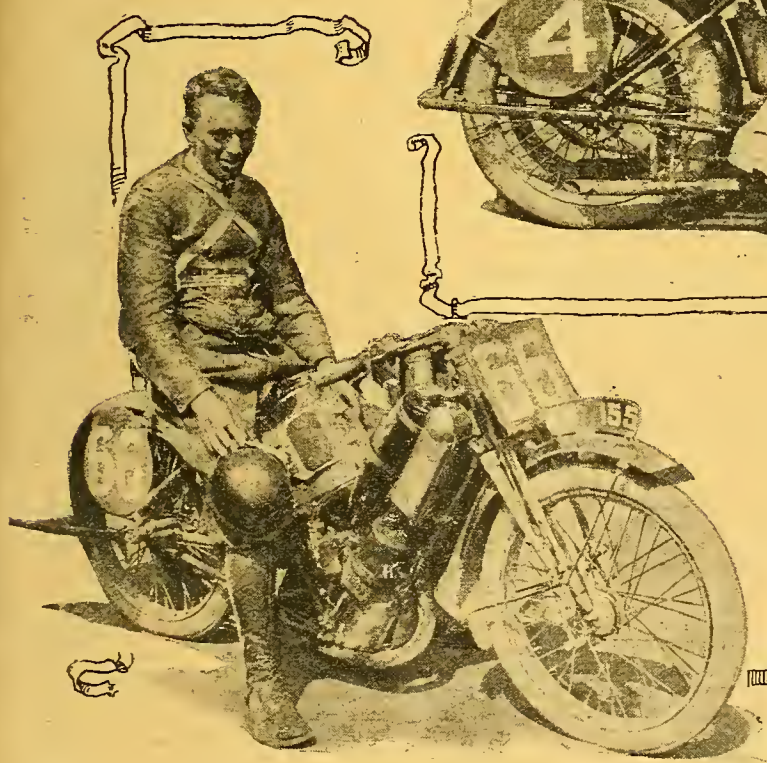
# The SENIOR T.T.
## PRIZE WINNERS in 1922




ALEX. BENNETT, Senior Tourist Trophy winner with the side-by-side valve engined Sunbeam (85 × 88 mm. = 499 c.c.) on which he averaged 58·33 m.p.h. for the 226 miles of the Isle of Man course. Bennett first came into prominence as the winner of the Grand Prix in France last year.




WALTER BRANDISH (Jun.), son of the well-known Coventry Agent. He rode his o.h.v. Triumph (85 × 88 mm. = 499 c.c.) into second place, showing consummate skill in the handling of the machine. For the total distance he averaged 56·52 m.p.h.




HARRY LANGMAN, to whom all credit is due for once again bringing the Scott into a position in "the first three." His mount was a Squirrel model (70 × 63·5 mm. = 482 c.c.) and in the first lap he had a fall which broke away the right footrest completely. Langman's average speed was 56·09 m.p.h.

**International Senior T.T. Race.—**

J. A. Porter (New Gerrard) turned up, having spent some two hours on his second lap, and appeared to leave the course just past the stands. Strange came in to replenish his Sheffield-Henderson, and reported that his average of 46⅕ m.p.h. would have been much higher but for a long stop with tappet trouble. The callous crowd by this time had begun to ignore the men who were merely doing fifty miles an hour, and attention was concentrated on the half-dozen columns which might record the history of a winner.

At last the early starters became due in on lap 5. Brandish was the first of them, and raced past at top speed, his engine running by faultlessly. The next comer was a false alarm, and proved to be Bourke (New Hudson), who walked off the course from the depôts, having encountered trouble in his second circuit.

Immediately after, C. P. Wood took his Squirrel past faster than ever, but too far behind Brandish to cherish any hopes of overtaking him in a non-stop final lap. Scarcely had he passed before F. W. Dixon was signalled in. As the Indian had started 9½ minutes after the Scott, and 10 minutes after the Triumph, an Indian victory was to be expected if misfortune befell Bennett. And Bennett had started 10 minutes behind Dixon, so another feverish delay occurred.

Meanwhile de la Hay came along, but not fast enough to be formidable. The men were looking extraordinarily swarthy, with the combined effects of sunburn and dust and dirt. Then Watson-Bourne arrived, and made a lengthy stop at his pit. Presently somebody remarked: "We should get Bennett's disc up in five minutes, if he is all right!" Hardly had he spoken when "44" was signalled, and the Sunbeam flashed past, travelling magnificently, and apparently faster than anybody had yet taken this stretch. Tired as he must have been, and in spite of an engine which was being rationed for lubricant, he had actually ridden the 5th lap, including a substantial pause at his depot, in 37m. 59sec. As his engine was running perfectly, whereas Dixon's was still missing a trifle, nothing but disaster seemed likely to change the order.

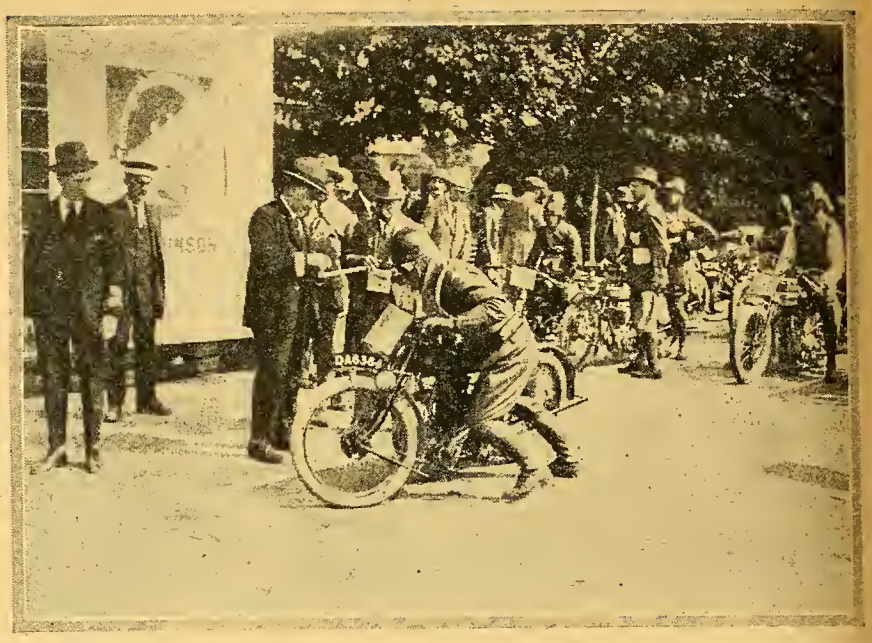
The times for five laps were:

**The Leaders at the End of the Fifth Lap.**

| | | H. | M. | S. |
|---|---|---|---|---|
| 1. | A. Bennett (Sunbeam) ... ... | 3 | 15 | 9 |
| 2. | F. W. Dixon (Indian) ... ... | 3 | 18 | 25 |
| 3. | W. W. Brandish (Triumph) ... | 3 | 20 | 18 |
| 4. | H. Langman (Scott) ... ... | 3 | 21 | 59 |
| 5. | C. P. Wood (Scott) ... ... | 3 | 25 | 25 |
| 6. | G. Walker (Norton) ... ... | 3 | 28 | 44 |
| 7. | R. T. Cawthorne (Norton) ... | 3 | 28 | 52 |
| 8. | T. C. de la Hay (Sunbeam) | 3 | 31 | 35 |
| 9. | H. Le Vack (New Imperial) | | | |
| 10. | A. H. Alexander (Douglas) ... | 3 | 31 | 55 |
| 11. | G. Clapham (Scott) ... ... | 3 | 33 | 5 |
| 12. | V. Olsson (Sunbeam) ... ... | 3 | 34 | 20 |

The first three men seemed firmly established in their places. Hassall's Norton was gone, Wood had lapped in 41m. 23s., Grahame Walker was going up hand over fist. Clapham had evidently met minor troubles, de la Hay was accelerating, and A. H. Alexander made a welcome appearance in the first dozen, much to the credit of his 1920 engine.

Everybody now began to figure out feverishly the times at which the leaders were due to finish if they retained their order. A confusing business at any time, and doubly so after five hours under a blazing sun. But the gods of chance simplified the task for all amateur mathematicians. Incredulously we saw Dixon's pointer become rigid on its dial. It had reached "Sulby." It was due to move to "Ramsey." But it did not. Bennett's pointer moved relentlessly round the clock, but malevolent fortune seemed to have pinned the Indian down. And so it was. A fine engine, still amply willing. A superb rider, as great as Bennett. And the Achilles' heel of motor cycling, a tyre, grudged him even the second place after half a day of danger and effort. The megaphone announced, "No. 24 has retired at Ramsey with tyre trouble!"



Last year's Senior winner, H. R. Davies, on a 349 c.c. A.J.S., starting away in the 1922 Senior Race on a similar mount.

**Bennett *v.* Brandish.**

Then Brandish clocked in amidst frantic cheers. He won the hearts of the crowd on his Rover last year, and the Triumph is popular everywhere. He had started twenty minutes ahead of Bennett. If Bennett came in within that period the Sunbeam was first: otherwise the Triumph. Slowly, inexorably, the minutes ticked away, but Bennett's pointer kept pace with them. Now he was at the Bungalow.

Who's this? Strange's Sheffield-Henderson, "revving" finely in its fifth lap. Bennett's at Craig-ny-baa. Suddenly, up went the yellow "44," and the incomparable Sunbeam roared home, winner of far and away the fastest T.T. on record, more than seven minutes ahead of Brandish, at an average speed of 58.33 m.p.h.

Langman's Scott had started No. 66—eleven minutes later than Bennett, so a brief wait was still necessary before the laurel wreath could be formally hung over the Sunbeam's number on the board.

Langman arrived too late for this, but both he and Wood were cheered to the echo. The former's slowing down was explained by his finish—he shot two or three hundred yards past the box, with low gear engaged, his brakes being weak. He had lost his right footrest at the half distance, and so had an uncomfortable ride.

All honour is due to the Sunbeam, which stood so terrible a racket undauntedly, and hardly less to the Triumph, which ran so good a second in the hands of a youngster just of age.

**Old Firms do Well.**

The table of finishers on page 773 speaks for itself, most of the old firms having covered themselves with glory. Of the twenty-two to finish, the Sunbeam secured first, sixth, eighth, seventeenth, nineteenth, and twentieth places. Triumphs were second and thirteenth. The three Scotts all finished high up—third, fourth, and ninth. Nortons claimed five places. Alexander, on an unofficial Douglas entry, was seventh. The Indians had to console themselves after Dixon's mishap with the eleventh place, but without them the race would have been shorn of its chief interest in the later stages.

Wade can be proud to have driven a 350 c.c. into twelfth position in so fierce a struggle; and the A.J.S. people can be proud of the machine which carried him. The Rudge has not quite come back to its old supremacy, but Baldwin's place is satisfactory. The Sheffield-Henderson, on its first appearance, has finished very creditably in all three T.T. races. Mundey's New Hudson was much faster than fortune permitted it to demonstrate. The winner's time was actually 16m. 22s. faster than in 1921—4m. 5½s. less per lap.

# THE SENIOR T.T. WINNER'S EXPERIENCES.

## Bennett apologises for allowing his oil supply to run low. One narrow escape.

ALEXANDER BENNETT, who won the Senior Tourist Trophy Race last Thursday at an average speed of 58.33 m.p.h., won the French Grand Prix, also on a Sunbeam, in 1921. At that time we mentioned that he was born at Vancouver, B.C., and is 25 years of age. Employed at the Sunbeam factory at Wolverhampton, he has been a favourite during all the practising period, partly by reason of his magnificent riding last year and his French success. Bennett is of a retiring disposition, and finished the ordeal in surprisingly fresh condition, though he is frail, weighing but 9st. 10lb. His was not exactly a no-trouble ride, though he was full of apologies to his manager for running out of oil, for that represented his only worry. Stopping twice at the replenishment depôts (at the end of the second and fourth laps), he learned that he was leading, but on the last occasion was told that F. W. Dixon, the Indian rider, was hot on his heels. Since Bennett had run out of oil at Ramsey on this lap and had actually suffered a momentary stop on the mountain climb due to the piston running dry, he was stirred to redoubled efforts. To this point he had run on three-quarters throttle, but now he really bent his back and let his machine go. His time for the fifth lap—37m. 59s.—which included a stop for petrol and oil, is sufficiently indicative of this assertion, and on the sixth lap Bennett estimates that he would have comfortably beaten his own record but for the fact that his tank again became depleted during the mountain climb, and he slowed appreciably, and had, in fact, to "nurse" his engine all the way to the finishing line. From all points of the course we had learned of Bennett's magnificent cornering, his speed round Hillberry Corner exciting praise from all and sundry except on the last lap, when he gave every onlooker a thorough fright by swinging out after rounding the bend at a good mile a minute, and scraping by "a thousandth of an inch," as one observer put it, the bank by the roadside.

### A Temporary Lapse.

Bennett explained this temporary lapse by the remark that he had to listen carefully to the engine, as he realised he was forcing it along without oil and risking a seizure. In so doing he for once misjudged the corner—but this was his only mistake. Compared to other tracks over which he has raced Bennett is emphatic that the Manx T.T. introduces a much stronger personal factor than any other.

### Trouble with Goggles.

He was troubled by squashed flies on his goggles due to the speed at which he travelled, until finally he had to discard them. Bennett was a popular winner, stentorian cheers and waving handkerchiefs greeted his arrival, and on entering the enclosure Mr. A. S. Bowers, managing director of John Marston, Ltd., made a personal present to Bennett of the machine he rode. On removing the cylinder one recognised that naturally the single-ring aluminium piston had not been improved by lack of oil; indeed, it was quite dry and tight on its pin. Both piston and conn. rod were drilled, little or no carbon was evident, and otherwise the machine was in astoundingly good fettle. The Sunbeam's *average* lap time of 38m. 84s. beats all previous *record* laps comfortably. It is of the standard Sunbeam T.T. type.

The equipment included M.L. magneto, K.L.G. plug, Amac carburetter (the first six used this carburetter), Miracle oil in the petrol, Dunlop tyres, Brooks saddle.

# W. W. BRANDISH AND HIS TRIUMPH.

## Young Midland giant expresses satisfaction with his dry sump lubrication system.

WALTER WILLIAM BRANDISH, jun., the second man home, after occupying third or fourth positions until the end of the fifth lap, is the 21-year-old son of a well-known motor cycle agent of Foleshill, near Coventry. Standing 6ft. 3in. and weighing 13½ stones he is a fine youth. Though naturally bespattered with oil and dust after 227 miles at nearly 57 m.p.h., we found him in remarkably fresh condition and showing no outward indication of exhaustion as a result of his strenuous ride. Standing by his Triumph machine as the official examiners removed the cylinder for measuring purposes, his young eyes glistened as he saw the magnificent state of the piston and rings which were covered with a fine film of oil. Neither piston nor connecting rod was drilled in any way. The piston was of the now well-known Ricardo aluminium slipper type with two rings at the top, and the first-rate internal condition was undoubtedly due in a large measure to the positive system of feeding oil to and from the crank case. Brandish was loud in praise of the oiling system, which relieved him from any anxieties in this direction, and, moreover, the Triumphs had no auxiliary pump as a stand-by, though many other makes adopted this precaution. Though Brandish never learned his position during the race, he naturally knew he was well up, for he enjoyed a no-trouble run, and only had two stops for replenishments, and was urged on by enthusiastic crowds at the different corners. Actually he might have improved his time but for one little incident. On the third lap at Signpost Corner he found his second gear inoperative, and thereafter he had to use first and third only, which handicapped him, particularly when climbing Snaefell.

Asked if he was "all out," Brandish assured us that his overhead-valve Triumph was capable of higher speed than he attained, but the state of the road surface would not permit him to let it go. Dust did not worry him unduly until after four laps, when, his goggles having become choked, he cast them aside. Brandish used home-made kneegrips, Shell spirit, Speedwell oil, B.T.H. magneto with K.L.G. plug, Coventry chains, and Brooks saddle. We examined the Dunlop Cord tyres which were fitted to the machine, and, though naturally the tread of the driving tyre bore slight traces of wear, the front cover might have been new. Brandish rode in last year's T.T. on a Rover, and was noticed by *The Motor Cycle* at the time as a consistent rider. He occupied thirteenth place on that occasion, and his lap time variations were extremely slight.

# SHEARD'S POPULAR SUCCESS.

## Nail found in rear tyre of Junior winner's machine.

NEVER was a T.T. won by a more modest and retiring rider than Thomas Mylchreest Sheard, who is self-effacing to the point of shyness. Immediately on the conclusion of the race he went home, leaving his wonderful A.J.S. for the crowd to admire.

A Douglas man by birth, his success was very popular; in conversation he confessed he did not know his position until his replenishment stop at the end of the fourth lap, when he was told that Le Vack was leading. He had no outstanding incidents, experienced no involuntary stops, but had to climb the mountain slowly on his second and fourth laps owing to oil shortage.

Excepting blistered hands, Sheard was quite unaffected by his fine ride. This was his sixth T.T. Last year, third in the Junior and ninth in the Senior, he is thirty-four years old.

During the examination a nail was found in the rear tyre, but the front cover was unmarked. He used Hutchinsons, with Impervio. His machine was geared 5, 6, and 9.5 to 1; his engine was as good at the finish as at the start. Steel pistons were used on all the A.J.S. machines.

The variation in Sheard's lap times was 2m. 43s., his fourth lap being the fastest and his last lap the slowest.

# THE RACE FROM DIFFERENT POINTS OF THE COURSE.

ONE cannot consider the Isle of Man course to be ideal, but it has many good points, of which not the least is the fact that, provided the visitor keeps outside it and rides a good mount, he may see the race from many different places and at all different points of the compass. I chose Ballacraine as a sort of centre; it has a telephone and is in touch with headquarters at the start, a narrow passage is left behind the barrier, through which a solo mount can be wheeled on to the Peel road, and some magnificent riding can be witnessed there.

Here the course turns to the right towards Glen Helen, an easy curve, it is true, but this makes it exciting, and the Senior men knew it to a fraction. Comparison with the performances in the Junior Race was most interesting, and after making a careful study of the machines at five different places, I have no doubt in my mind that generally the Senior mounts travelled as if made for the course. The Senior men as a whole cornered much better than those in the Junior event, and the machines held the road in a wonderful manner.

### Lap One from Ballacraine.

At 10.8 No. 1, H. R. Davies (548 A.J.S.), hove in sight, swooped majestically round the corner and disappeared. De la Hay, who had slowed down at the warning boards, actually accelerated before taking the bend, which he negotiated with all the skill of which he is master. Greenwood (492 Sunbeam) arrived with his stable companion, Brown, a length behind, but once on the Kirkmichael road Brown took the lead. Clapham (486 Scott-Squirrel) took the corner in dashing style, and the change of note as he altered his gear caused many a laugh among the crowd. Hollowell (490 Norton) was one of the many who knew just how far he dared lean over, and I could swear his exhaust pipe cleared the ground by no more than an inch. Anstice (499 Douglas) gave us the first thrill as he shaved the wall of the inn, but Ballacraine itself was devoid of incidents, so I hied me to Ballig.

### The Bridge of Leaps.

Ballig, with the accent on the "*ig*," is one of the favourite viewpoints of the T.T., being highly spectacular, but not dangerous, if taken properly. Poor Jackson (Sunbeam), last man on the entry list, was the victim of an error of judgment. Alas! he steered too central a course, came off head over heels, and for him the race was finished, as his machine suffered the damage which he himself had fortunately escaped, and this in his first lap.

An excellent view of the jumps was obtained from the wall of a ruined cottage. Wood (Scott-Squirrel) made a splendid leap, and one heard his forks crash as he regained Mother Earth, but never the sign of a swerve could be detected.

Even more sensational was Dixon (Indian), who took the bridge in his usual daring manner. Then came Bennett, whose wonderful riding was even then appreciated, as amateur timekeepers were already crediting him with a record lap. But enough of Ballig.

### Creg Willey's Hill.

So my own mount was put to the rough road to Ballavaish and left outside a gate; next followed a lovely walk down the hillside along a path leading to beautiful Glen Helen, out of which rises Creg Willey's hill—the terror of early T.T. events. Here Greenwood (Sunbeam) met engine trouble, and, knowing he was finished, ran down the hill, like the good sportsman he is, to help Tucker (Norton), who had had the valve pulled out of his front tube. Both worked like heroes, and Tucker was off again just as Wood's buzzing Scott sped by on its fourth lap.

### A Fast Stretch.

Cronk-y-hoddy, a fast stretch, but still on the upgrade, was not far away, so thither I went. Here men flashed by without incident, so back to Ballig, where all was proceeding merrily, and then to Ballacraine again. Competitors were now passing on their fifth lap, when suddenly a doctor was heard to remark, "Not serious, but a hospital case most certainly. We must have him X-rayed." But who was it? Evidently the doctor had been too busy to note, and people wanted to know badly, so on by foot to the Hawthorne Inn.

It appears that Johnson (Sunbeam) was in the act of passing No. 13, Norris (Beardmore), who clearly ought to have met misfortune with such a number, but no! No. 58 skidded and fell, and was somewhat damaged, but well able to sit up and take notice on our arrival, and eager to watch the racing. His helmet saved his life. Here Carton (Norton) was reported to have retired with a broken piston, and poor Tucker was again in trouble with his front tyre one mile east of Ballacraine. Back over the hills to Braddan, where the observer reported the retirements of Harveyson (Triumph) and Ollerhead (Colmore-Douglas), and the stopping in his second lap of Danskin (Rudge) for ten minutes to replace a valve.

E. M. P. B.

# IMPRESSIONS AT BALLAUGH.

A SLIGHT haze failed to temper the heat of the sun, but discomfort was forgotten by the spectators at Ballaugh, when the first man, H. R. Davies (A.J.S.) came through at about 10.20 a.m. with a substantial lead. Then followed Brandish and Wood, the Triumph and Scott exponents.

Ballaugh Bridge is in some ways more troublesome to the riders than Ballig Bridge. The approach to Ballaugh is on the twist, a jump is almost inevitable, and before a safe landing is made the steering must be corrected to enable the narrow village street to be negotiated. Generally, the exhibition of riding at this point was admirable, and 1922 machines obviously hold the road better than last year's mounts, for there was very little actual jumping, although most back wheels came off the road at the crown of the bridge. Clapham's Scott was the only machine that "aviated" quite clear of the ground, and he had quite a wobble on recovering.

Even so early in the race as the first twenty miles one or two engines appeared in distress. Cowley's (jun.) Norton knocked badly when picking up at Ballaugh, and so did Davison's Sunbeam.

At Sulby, too, the cornering was of such a high standard that thrills were denied to the large gathering which lined the banks beside the road.

It must have been the excitement of the race that caused Clapham again to go a little too fast, this time with more serious consequences, for he struck the wall and stopped, restarting again almost immediately; on his subsequent laps he rode much more cautiously. Riddell and Watson-Bourne showed how well the Rudges steer, for they took the approach to Sulby Bridge at a tremendous angle.

### Consternation.

R. Bownass's accident created some consternation amongst the crowd at Sulby. He was coming down the straight approaching the bridge at a high speed when the steering column of his N.U.T. broke away; with only the top links holding the forks to the machine he fell, yet came to rest undamaged.

Brandish also nearly came to grief at Sulby on his second lap—either he missed his gear change or got confused, but anyway, he only missed the bridge wall by fractions of an inch.

Good riding marked the bulk of the performances on Ramsey Hairpin. Since last year, indeed, there seemed to be not only a marked appearance of greater surety but also a visible increase in the speed at which the acute bend was rounded. Undoubtedly, the most informative incident occurred in the third lap, when Strange (Sheffield-Henderson), Knowles (Norton), and Riddell (Rudge) came round the hairpin in a cluster on the third lap; the former showed infinitely superior acceleration, leaving the others well behind. Langman's Scott showed such engine power that the rear wheel spun as he opened the throttle and he narrowly averted a skid.

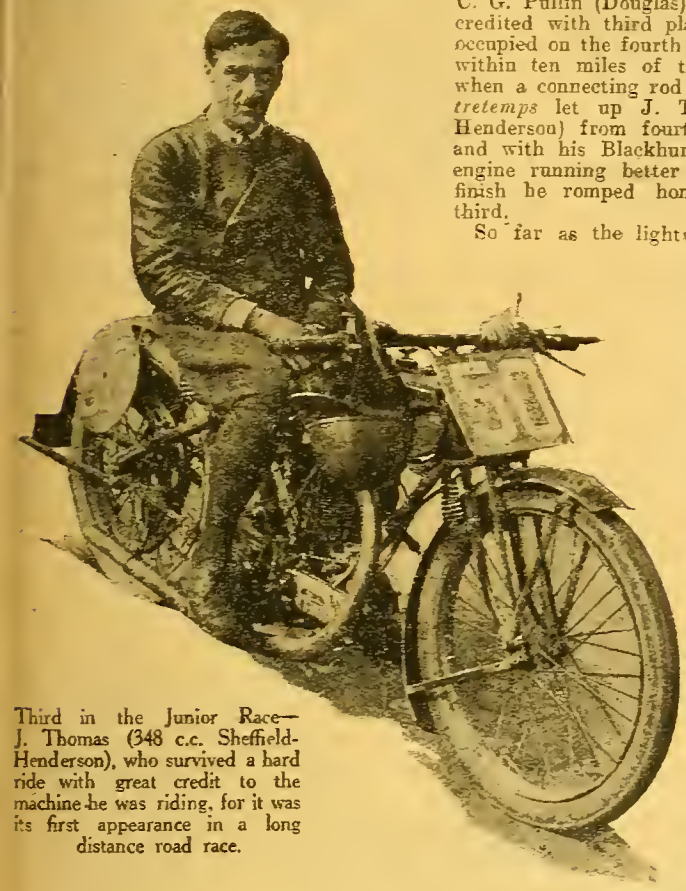
### Missing.

Porter (New Gerrard) stayed here some time, but after adjustments he was still in trouble with his engine, and although he restarted, he did not reappear on another lap. At Ballaugh, Sulby, and Ramsey, great excitement was created by the ding-dong duel between Brandish and Wood, but the Triumph rider ultimately came round alone, leaving the Scott man well behind.

# THE SHEFFIELD-HENDERSON ASSERTS ITSELF.

## Third in Junior and Fourth in Lightweight Races.

BY scoring third place in the Junior T.T. and fourth in the Lightweight Race the Sheffield-Henderson machines have crowned a long list of successes in competition. The rapid rise to fame of this machine is the more noteworthy when it is realised that it is a machine introduced as recently as 1921. Jack Thomas occupied third place in the Junior race, occupying 3h. 47m. 28.6s. In the telegraphic report of the Junior race which appeared in our last issue, C. G. Pullin (Douglas) was inadvertently credited with third place, a position he occupied on the fourth lap and indeed to within ten miles of the finishing point when a connecting rod broke. This *contretemps* let up J. Thomas (Sheffield-Henderson) from fourth place to third, and with his Blackburne overhead-valve engine running better than ever at the finish he romped home a comfortable third.



Third in the Junior Race—J. Thomas (348 c.c. Sheffield-Henderson), who survived a hard ride with great credit to the machine he was riding, for it was its first appearance in a long distance road race.

So far as the lightweights were concerned, L. Padley (Sheffield-Henderson) came home fourth. Again using a Blackburne engine, Padley rode magnificently, and might have been higher in the list but for unexpected events. He fell once and also had to change a plug twice, the first time due to fitting a long plug which the high-tension wire would not reach. Again, on the third lap he narrowly missed a fall on the Gooseneck which without thinking he charged all out and had to shoot up the bank before he could regain the road again. No manufacturer was more pleased with the showing of his men and machines than L. B. Henderson—a clever metallurgist who had tended his T.T. machines with almost loving care. Mr. Henderson has but one leg, and he was showered with congratulations on all hands.

L. Padley and his 248 c.c. Sheffield-Henderson, on which he performed very creditably, finishing fourth in the Lightweight T.T. Race.

The rakish lines of the Sheffield-Henderson were the object of much favourable comment at the last Olympia Show.

# T.T. INCIDENTAL NOTES.

Never has the weather been more perfect—not a drop of rain fell throughout the events.

* * *

Thursday's crowds for the Senior Race were noticeably larger than on Tuesday, and a general holiday was proclaimed in Douglas on that day.

* * *

The Rudge slogan was:

"When you see the Rudge go by
Cheer and wave your Hank—y!"

There were literally hundreds of green handkerchiefs distributed round the course by the firm.

* * *

The Sheffield-Hendersons were the surprise packet of the Junior and Lightweight races.

* * *

Condolences to C. G. Pullin (2¾ Douglas), who had to retire ten miles from home with engine trouble when actually in third position of the Junior race.

* * *

June 1st, 1922, will go down in history as the day of the hardest motor cycle race ever run. There was a more serious atmosphere over this event than the other two, perhaps naturally since it is the oldest event of all.

* * *

W. W. Brandish's first lap in 39m. 38s. on a Triumph opened spectators' eyes. He is the son of a well-known Coventry agent, and a leading member of the Coventry and Warwickshire Motor Club. Another meteoric opening lap was H. Le Vack's, on his "Junior" 350 c.c. New Imperial-Jap, in 40m. 47s. Of course, Bennett's Sunbeam record in the second lap of 37m. 46s. took the palm, and with a side-by-side valve engine too!

* * *

T. C. de la Hay had a no-trouble run, but misunderstood the message he picked up at the depôts, or he might have opened out more.

Second and third Senior men carried registration number plates H.P. 2933 and A.U. 15.

* * *

C. Waterhouse, possibly the youngest rider, punctured three times, but otherwise suffered no troubles. He finished twentieth.

* * *

Blackburne engines showed up conspicuously well in both the Lightweight and Junior Races. In the Lightweight Race they were second, fourth, seventh, and ninth, and in the Junior third, fourth, fifth, eighth, and ninth.

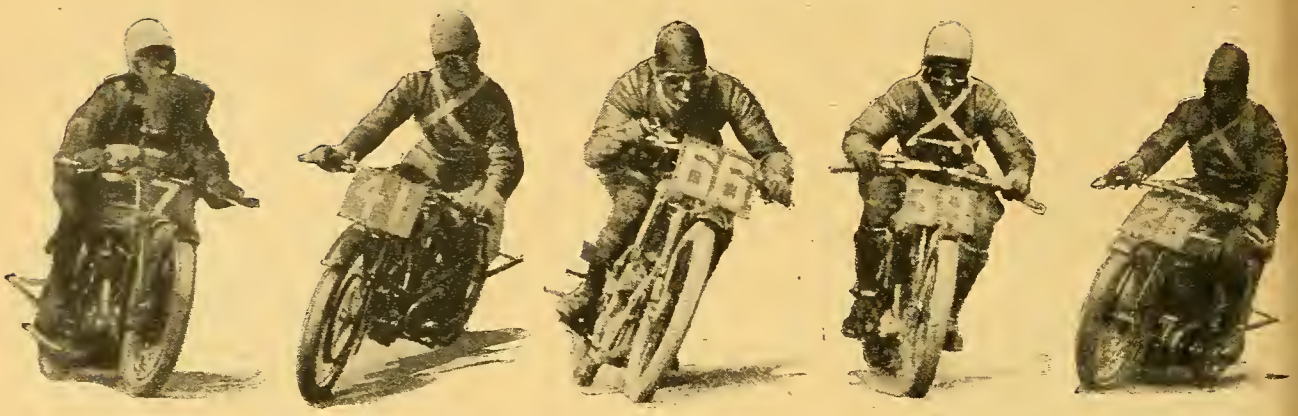
* * *

It is said that the Senior winner will net between £1,000 and £2,000. Good luck to him!

* * *

Every event produced a British success, but one would prefer to see a more international flavour about the T.T.

TYPICAL RIDING ATTITUDES IN THE SENIOR RACE



G. H. Tucker. V. Olsson. H. Langman. J. W. Shaw. A. Carton.

**T.T. Incidental Notes.—**

The engine of one solitary make which let its rider down badly on the mountain was attacked by him with a hammer.

* * *

Davison, who won the Lightweight Race on a Levis, used Price's Huile de Luxe. Miracle Oil, the new fireproof cylinder lubricant, was used by all the winners.

* * *

E.I.C. Magnetos, Ltd., who presented small pen-knives to contributors to their charity fund, were able to hand to Noble's Hospital the sum of £43 6s. 6d.

Last minute changes of equipment caused much annoyance and adverse criticism throughout the island.

* * *

Ivys were the only two-strokes in the Junior event and finished seventh, tenth, and twelfth.

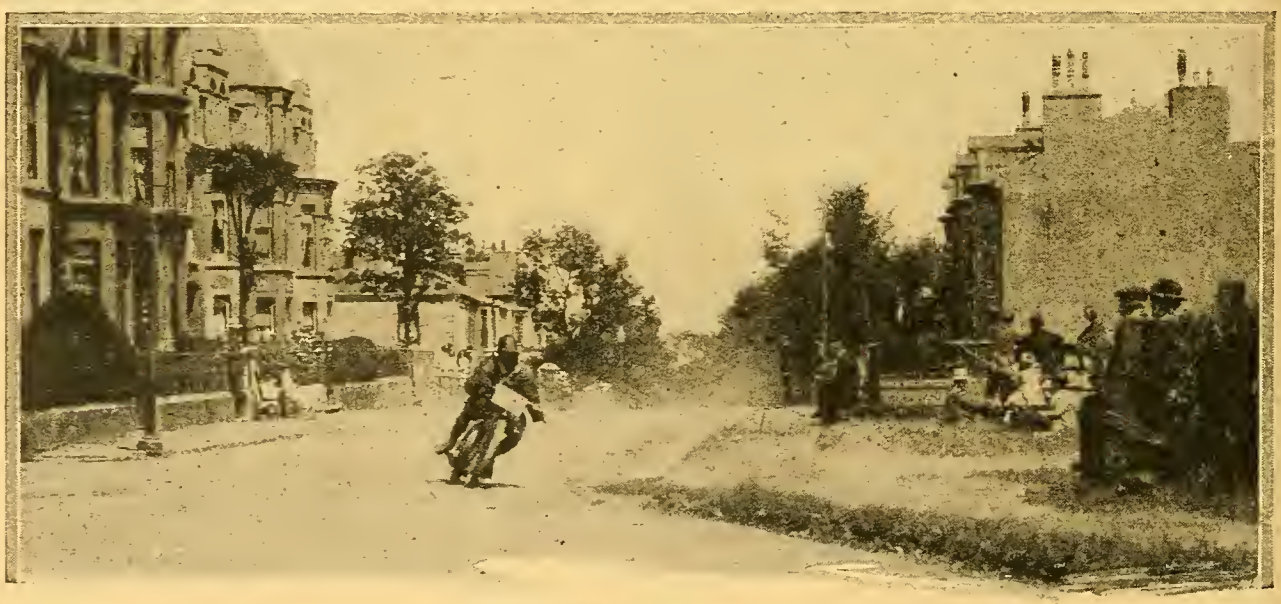
* * *

The New Hudson senior entry was in the nature of an experiment, since the firm have not attempted speed work for some time. Under these circumstances Mundey did well to finish on a modified standard machine, averaging 45.58 m.p.h.

Once again—for the third year in succession—the Junior Race became a duel between A.J.S. and Blackburne engines. While the former secured the two premier honours, Blackburne engines were fitted to the Sheffield-Henderson (third), Coulson (fourth), and Cotton (fifth).

* * *

The sight of the competing machines as they are massed for the start must warm the hearts of manufacturers of insulating tape. Surely in this year of grace there is some better method of securing fittings



Hurtling through the town of Ramsey. F. A. Longman (A.J.S.), who gained a place for one lap in the Junior race.

## THE TROPHIES PRESENTED.

ON Thursday night, after the Senior Race, an absolutely packed audience witnessed the presentation of the prizes by the Lieut.-Governor of the Island. Bennett, the Sunbeam rider, who made such a fine winning ride, was called for loudly.

Brandish also received loud and long cheers, and although both were called upon to speak, only the former was able to express his feelings; his speech, however, was quite inaudible to most.

Bennett's friends, of course, promptly seized him and chaired him round the spacious dancing-floor, despite a crush of some thousands of people.

Keen disappointment was felt at the non-arrival of the Scott contingent from Ramsey to receive their gold medals, and, in Langman's case, the third prize also—the explanation of this absence was made later, when it was learnt that the taxi which was bringing the party from Ramsey missed a turning, and in the subsequent crash some damage was done, especially to Langman and C. P. Wood, who had to be removed to hospital.

# OCCASIONAL COMMENTS.

By "IXION."

## I Recant.

VARIOUS diseases are incidental to youth. Measles is one of them. A few years later you get stage door fever. When I was at that age, a musical comedy called *San Toy* used to wheedle the money from youthful pockets. Its cast included a fat emperor, who quivered with joy like a jelly when the *première danseuse* pirouetted in front of him. Which things are a parable. The other day I went to a cinema. The Yankee comedy hinged round a Ford car, which dithered violently in huge 3ft. tremors whenever its engine was running. This also is a parable. For these two motions—the infinitesimal but eternal quiver, and the large abrupt jolt—are characteristic of the road vibration to which motor cycles are liable on modern roads. The original solution of this problem was the spring frame. Latterly, we had heard a lot about the merits of 3in. tyres. I wobbled in my convictions. Finally, sanity has returned. I still hold that 3in. tyres will confer a vast deal of comfort. But I further plead that when we get the perfect spring frame we shall prefer it to a mere big-tyre-and-good-fork solution.

## And Why——

MY change of heart on this burning topic is due to practical demonstrations of two more or less experimental spring frames. On one of them I have seen the inventor ride over the most appalling surfaces. Side by side with him travelled other men on other frames. They vibrated so rapidly that the eye could not follow their movements quickly enough to pick out the details of their personal appearance and attire; and, in addition to this quivering, reminiscent of the emperor in *San Toy*, they bounced enormously, like the Ford car on the invisible mechanical oscillator in the film comedy. But the spring frame demonstrator moved forward as steady as a statue on its pedestal. You could almost count the separate hairs of his moustache, examine the pattern of his tie, note the ornamentation of his cuff links. And he did not bounce. The point of his nose followed an even track precisely conforming to the hill contour. The contrast was extraordinary. Bentley and Draper, who handle the Ricardo piston in town, also have a new spring frame of which I hear the most glowing accounts. Wait and see.

## Spring Frames on the Track.

THE average club speed merchant would scoff at the notion of a spring frame having any record-breaking value on Brooklands. But the No. 8 hats are veering round to the conclusion that 90 miles in the hour on a 500 c.c. motor cycle and 100 mies in the hour on a small car, together with other keenly coveted records, depend almost as much upon springing as upon engine design. Come to think of it, when your saddle is jerked a foot off the concrete, it is engine power which lifts you: and you don't get that engine power back. You are wasting power in the vertical plane, which is urgently needed to knock those few seconds off the lap time of Pullin, or whoever set up the figure you are out to beat. Then, too, while your back wheel is off the ground it is wasting more power in beating the air, power which might as well be utilised in propelling you on towards the timekeeper. If these notions are sound, we may see the record-breakers scurrying about to get hold of super spring frame designs, and that in a not too remote future. I am sorry that my brain doesn't run to surds and such symbols as the square root of $x^n$, or I might make this bald suggestion absolutely convincing.

## Magneto Reliability.

READERS should not grow nervous when they read of magneto failures in the big trials or on the track. No deterioration of workmanship is implied, and the tourist magneto is as good as ever it was, or better. But in a good many competitions magnetos are run up to absurd speeds, and this overrunning sometimes lasts for quite lengthy periods. For example, if you are trying to climb Tornapress on a sidecarette in a trial, and your emergency ratio is about 25 to 1, whilst the hill demands full throttle for nearly half an hour, that poor magneto is going to be subjected to stresses—heat stresses, mechanical stresses, and electrical stresses—which could hardly be produced by any test possible to a Saturday-afternooner. (Rather proud of that last phrase. Just thought of it. Hits off a certain type of rider, doesn't it?)

## A Strong Man's Tears.

PERCY was lying awake every night. It was true that he had reached the final of the golf cup, for which purpose he was temporarily domiciled at Bunker-on-Sea. But had not papa recently unloaded the needful for a B.S. Norton? Cruel that the thoughtless and selfish engineers should cease work just when Percy's engine was being assembled prior to its final track tune. So Percy spent white nights, lying on his back staring at the ceiling, and picturing himself taking blind corners at 80 m.p.h. One morning came a letter from little sister. He glanced idly through its artless prattle—hey, what's this? "*Mummy told me to tell you that the postman says there is a motor bicycle at the railway station.*" Percy volplaned out of bed, upsetting his undrunk morning tea. He ripped on clothes somehow, hurtled down to the golf club, drew a heavy pencil line through the first half of the secretary's notice. "FINAL: Percy

**Occasional Comments.—**

Smithers (8) v. the Hon. Azure Gore (2)." added three neat letters to his name (scr.). howled for a taxi, goaded its elderly driver to T.T. speeds, caught the express, dived on to the home platform before the train had slowed to 20 m.p.h.. and burst into the parcels office like Ludendorf's *sturmtruppen*.

Propped against the wall, swathed in corrugated cardboard, was a dinky little motor scooter labelled with the name of the vicar's elderly wife.

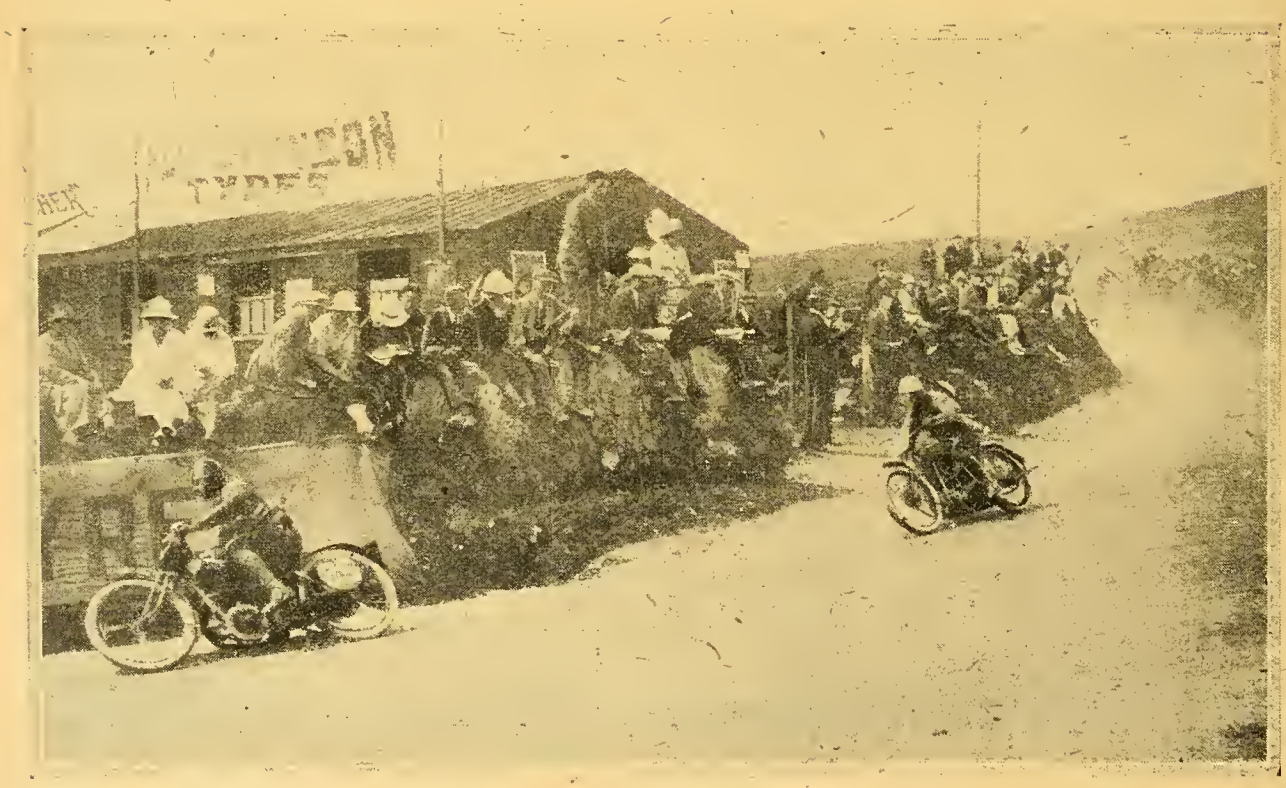
So Percy wept. D'you blame him?

## Scared Stiff.

WHEN I get wind up on the road, it is usually because I have done something silly, or some other idiot is driving as he shouldn't. But t'other afternoon you might have seen me proceeding along with my eyes popping from my head and my cap perilously poised on the extreme tips of my hairs. Yes, you are right first time—it *was* a speed wobble, one of the worst I ever suffered from. The speed was 18 m.p.h.—no more; and the vehicle—as you have doubtless guessed by this time—was a scooter, of all things. It had a nasty vertical sort of rake on its front fork and a Lilliputian front wheel about as big as a sparking plug washer, and after proving that I could manage her at her normal speed of 10 m.p.h., I rashly opened out to an adventurous 18. At this gait the unspeakable front wheel went into a wobble, quite as violent and irresistible as the wobble a rat gets into when a sturdy terrier has it by the nape of the neck. Why didn't I jump off? Well, for one thing to jump off isn't as easy as it looks when you are seated in an armchair on a wide platform and the handle-bar is level with your nose; for another, my right ankle is bandaged up as thick as an elephant's; but that is another story. How did the wobble end? As most wobbles do. My left ankle is now bandaged, too. So is my proboscis. And something else—I am not sure whether he called it a femur or a tibia.

## That Dud Bulb.

A NUMBER of electrical correspondents are still waging mighty battle in private letters to me about my tail lamp bulb which refused to light up, but continued to transmit current. The latest and most authoritative evidently hails from the Emerald Isle, since he talks of the "presence" of a vacuum. The purpose of a vacuum in a bulb is to prevent combustion of the white-hot filament, and so to prolong its life. He does not believe that the filament would survive many seconds if a tiny blowhole puncture existed in the glass. So—cheers for me—he votes heavily for my original suggestion, to wit, that the current was shorting through a crack in the cement of the bulb socket. He considers it common for the cement to be cracked whilst the owner is inserting the bulb into its holder, after which the cement rapidly goes to powder under the vibration. Moral: never remove a bulb without due cause, especially if it is head lamp size, with a big glass exerting marked leverage on the cement.



A fine speed impression at Craig-na-baa: T. M. Sheard (348 c.c. A.J.S.) winner of the Junior T.T. Race on the heels of L. Nicholson (248 c.c. Coulson).

# A Car Owner on Two Wheels

## Opinions on Motor Cycles and Some Experiences with the Ner-a-Car.

By OWEN JOHN, of "The Autocar."

NOT a motor cycle, not a scooter, not a car—but a "wheeler." This is how the firm responsible for the Ner-a-Car describes its new machine.

I write in fear and trembling of it in *The Motor Cycle*, for I have always had it instilled into me that this is a journal conducted, written and read entirely and solely by experts and that the least departure from strict accuracy is fraught with heavy and immediate penalty.

### Confessions of a Non-Motor Cyclist.

*The average woman thinks that she could manage a car while she regards the motor cycle as something too complicated. There are men—especially elderly men—who share the same opinions.*

*Why is this?*

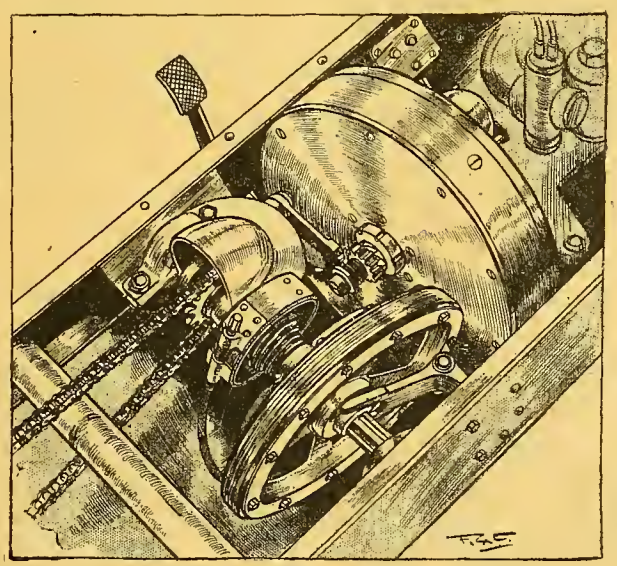
*The explanation appears to be in the fact that the mechanism of a car is unobtrusive and silent. Owen John's contribution seems to confirm this.*

But I will be brave and fear not. I am not a motor cyclist (cries of "Shame!"). I am too old at umpty-eight, too heavy at nearly fifteen stone, too valuable as a bread-winner, and quite happy as a car-owner and a self-appointed guide, philosopher and friend to several generations of four-wheel motorists. But I have succumbed to the charms and the speed and the safety of this new invention, and if I can only be assured that ordinary motor cycles are as easy, simple and safe to use, you may perchance find me in the Ardennes, in Ireland, in the Isle of Man, or wherever the next big motor cycle race may be, buzzing round the course clad all in leather and entirely cognisant of all the names of all the competitors and their mounts.

### Collective Experimenting

For a new era has opened to me—or, rather, it would have had not my family also appreciated the simplicity and hardiness of my new machine. I experiment vicariously, they do it almost all for me; only now and then do I take it out and amaze my friends and acquaintances with my apparent relapse into gay boyhood. It seems very simple, it seems very safe, I know it is very economical; when the sun gets warmer I am sure it is going to be very delightful indeed. For there seems so little in the Ner-a-Car that *can* go wrong, its accessibility is quite good, and its moving parts are nearly as few as those of a steam-engine, always my *beau idéal* of economy in machinery.

I have not had it long enough to be able to judge of its wearing qualities, a test for which only time and distance can tell, but it seems hardy and, considering that several people already have set their raw hands to it and promptly ridden off upon it, I think that it shows marvellously few signs of collision or of inexperience. Possibly the fact that one can ride on it as slowly as one can pedal a cycle may have something to do with the surprising confidence that beginners show upon it; a mount that goes off at twenty miles an hour with a roar often frightens away tyros by the mere thought that prodigies of skill are required to control the monster.



Variable friction-gear of the Ner-a-car, showing rack and pinion kick starter and countershaft brake.

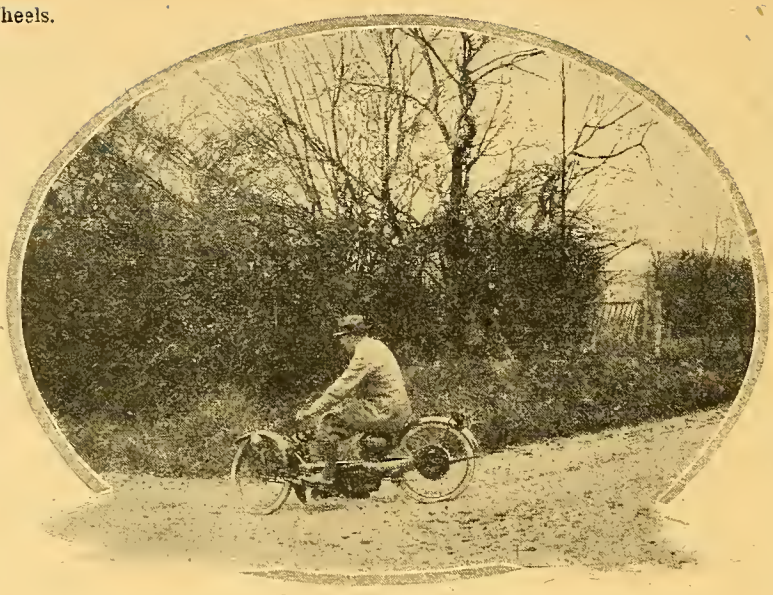
### For the Multitude.

A gentle and docile machine is a standing invitation for a new scale of humanity to take up motor cycles, for it cannot be denied that hitherto the movement, as we know it, has been more attractive to the young and hardy than to the man or woman who is more in search of comfort

**A Car Owner on Two Wheels.**

and convenience than mere speed.

Thousands of potential buyers exist amongst the latter class; they want a mount that can do its 30 m.p.h. up and down ordinary hills, that can steer like a fish, make its own light, and can carry an extra passenger when necessary on the flapper-bracket. The Ner-a-Car does all these things, and yet all the time, owing to its centre of gravity being so low, the rider does not seem to be doing anything bolder than just sitting on a cushion. Perhaps the fact that it possesses a chassis, a clutch, a two-stroke engine, five speeds, a footbrake, and that it steers like a car may lend it an extra sense of security. I do not know: all that I am aware of is that through it I have learned to appreciate the value and the economy of the two-wheeler, and in future shall be able and happy to count myself among the number of its devotees.

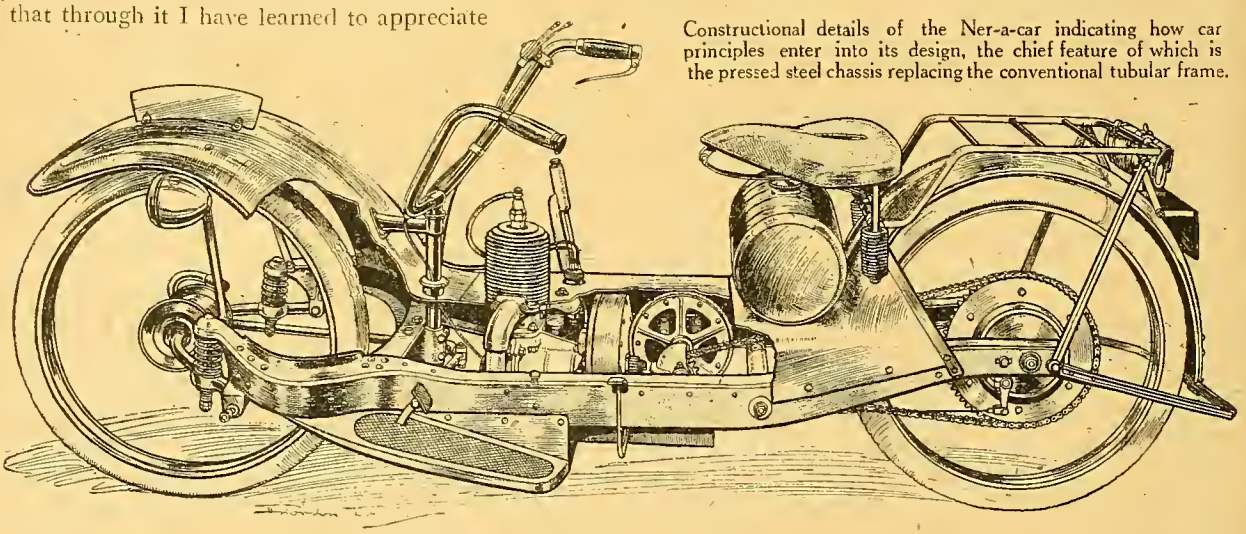


The extremely low riding position will be gathered from this illustration.

A curious thing was I found the pleasure derived from the handling of a motor cycle quite different from the pleasures of car driving; altogether apart from the motor cycle's handiness, its sporting appeal alone made it attractive.

A cheap, handy, well-made machine that, to parody the words of Mr. Jorrocks, can give "all the joys of the motor cycle with only twenty-five per cent. of its (imaginary) dangers" is something that an extraordinary number of people are looking for.

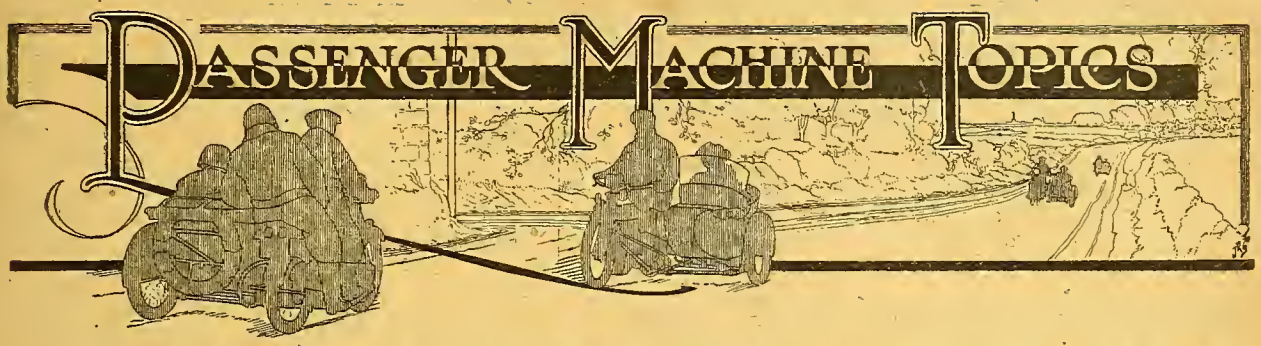
Constructional details of the Ner-a-car indicating how car principles enter into its design, the chief feature of which is the pressed steel chassis replacing the conventional tubular frame.



## OIL WHERE IT IS NOT NEEDED.

OIL, as the mere tyro knows, is essential for the good running of every piece of mechanism. Dirt has been described as "matter out of place." When oil is out of place, this lubricant and dirt are synonymous. The proper place for engine oil is in the crank case, the oil tank, and the various bearings. Engines can be, and are, made oiltight, but unfortunately there are makers who do not appreciate the quality of cleanliness in this direction. The motor cycle should be everybody's mount. Although the movement has progressed to an enormous extent it will never reach the popularity it deserves until the only necessity for overalls is concerned with the weather. Special or improvised attire to protect the rider against oil flung from the engine or gear is an indictment against the machine he rides.

We most earnestly assure manufacturers of motor bicycles that the point to which we have drawn attention is a most important one, and once a machine gains a name for cleanliness from oil it should, provided it is equally satisfactory in all other respects, gain a most enviable reputation. This is a point which the A.C.U. could consider. Why not serve out six days' competitors with white overalls.




## What Passengers Should Not Do. The 2,000-mile-a-Year Sidecar Owner and the Present Taxation.

By "FRIAR JOHN."

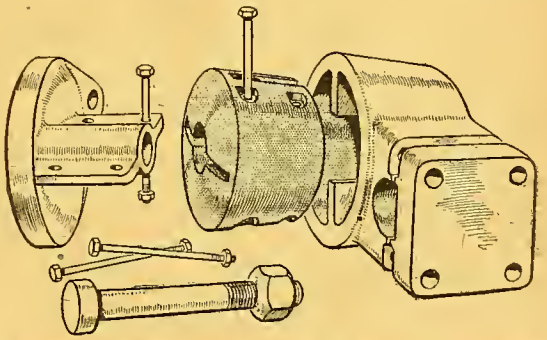
NO more pleasurable occupation exists than that of planning out a summer tour, especially when seated by the fireside with good maps on a cold, wet night, buoyed with the knowledge that the holidays are near and the machine ready for the road; yet not a few write to the Editor asking him to plan a tour for them. Such a query is intelligible when one wishes for the best and most direct route to a given place, or details of interest in a particular district, but for someone else to plan where I should travel, and possibly where I should eat and sleep for fourteen to twenty precious days, and what views to admire, surely takes the spice from the curry. I desire the passenger also to take an intelligent interest in the map and to maintain a celestial indifference to the idiosyncrasies of my machine and my driving, especially on steep hills; to join in my enthusiasm for exploring by-roads which I confess have often led to disaster and ignominious retracing of the track. In short, when on holiday I like to go whither the spirit takes either my passenger or myself. There are many who tour in a like manner, for I have met them on the road, wandering along to the north, to the south, or the east, or the west, on any route they fancy.



MUCH has been written and spoken about the desirability of flexible sidecar connections, and it is generally admitted that absolute rigidity is by no means ideal. A slight amount of flexibility in the rear attachment is almost essential and will save much frame distortion; already more than one patent has been filed on subjects relating to this important point.

The illustration shows the invention of Mr. W. H. M. Higham, A.M.I.A.E., of 56, Moorpool Avenue, Harborne, Birmingham, and it may best be described as a "cush" connection, since it is somewhat similar in principle to a well-known type of "cush" hub.

It will be seen that the lug bolted to the chain stay carries a conical boss having opposed vanes on its inner diameter and a spherical outer face. Into this boss fits a rubber block suitably slotted to take the vanes, and bolted lightly to similar vanes mounted on the outer or sidecar attachment member. These parts are held together by a central bolt, and form, to all intents,



The Higham flexible sidecar connection dismantled to show the construction.

a universal joint slightly flexible in all directions. How the vertical flexibility is obtained will be quickly grasped, but it is perhaps necessary to explain that a slight degree of lateral flexibility is allowed by the spherical faces of the inner and outer members working over each other against the pressure of the rubber block. Broken lugs become a thing of the past.

A device for those who dislike goggles, but desire protection for the eyes and face. The illustrations also show how the "Phace" screen is carried when not in use. Messrs. Coupé Windscreens, 74, Lennox Road, Portsmouth, are the makers.

OUR sister journal, *The Autocar*, has ever championed the cause of the owner of little cars, in spite of its reputation as a "big fellow's" paper, and I was glad to see that it did not intend to let the question of

**Passenger Machine Topics.—**

taxation remain undisturbed. neither does the A.A., which is shortly making representations to the Government. We suffered the present rates at the time they were imposed under protest, though some motor cyclists persuaded themselves they were necessary if any road improvement at all was to take place. A reduction in the taxation will naturally be particularly welcomed by owners of very small and old cars, and by the same calculation sidecar owners will appreciate a more equitable application of the tax. There are thousands who do no more than 2,000 miles a year. and this works out at nearly ½d. per mile for taxation, a much too big amount, considering the sidecar's light weight. The agitation for the more just taxation of petrol at the source must eventually have the desired effect, in spite of the supposed difficulties of collecting the revenue.

◈ ◈ ◈ ◈

IT is not every man who cares to purchase a new outfit each year, or even every two years. Apart from the question of cost, there are certain advantages in retaining the old bus for a lengthy period, although sooner or later one is confronted with the alternative of having the sidecar repainted by coach-painters or enamelling it oneself. Probably because Messrs. Robbialac's instructions led one to believe that the operation is a simple one. I undertook the job of painting the old shopping bus. the " ever-ready " and always reliable vehicle of convenience which is used at any time and at all times between trial runs on new outfits. Well! enamelling is simplicity itself. Not being a coach-painter by instinct, I simply cut out the Robbialac instructions by half. so to speak. rubbed down the body with a felt pad and pumice powder. then washed it. When dry I brushed on the enamel; when that was dry I gave it a wash with clean water. afterwards applying the varnish. Two evenings' work was quite sufficient for the job. and really it was not half the business I thought it was going to be.

◈ ◈ ◈ ◈

WHERE is the cheap four-wheeler " which was—and is—according to some prophets. to oust the sidecar? This question has grown into quite a hoary-headed old poser. and bids fair to remain a query and a topic for many moons. From time to time we publish details of most promising designs, we hear rumours of wonderful schemes of mass production, of the " perfect substitute for a sidecar." But the rumour soon fades away, and we hear no more of these promising designs. The meritorious little Carden and Tamplin are very much alive and kicking to show the way; but the sidecar still holds pride of place, and insists not only on retaining its just popularity, but on increasing its remarkable vogue.

◈ ◈ ◈ ◈

AMONGST the letters which have reached me this week, there is an offer to find me a house with garage space at the side—ideal, of course. in situation, elevation, and sanitation—an offer in response to my remarks on lack of garage space in many of the new houses at present being erected; another letter contains a request from an old sidecarist for further assurance anent the back wheel of three-wheelers before he abandons the sidecar. I gave him all the assurance I could. and by now he is probably satisfied that the rear wheel of the three-wheeler need not be more trouble than a pair of hind tyres on a four-wheeler; another correspondent deals with racing sidecars, and asks the following startling query: " Why not a sidecar T.T.? "

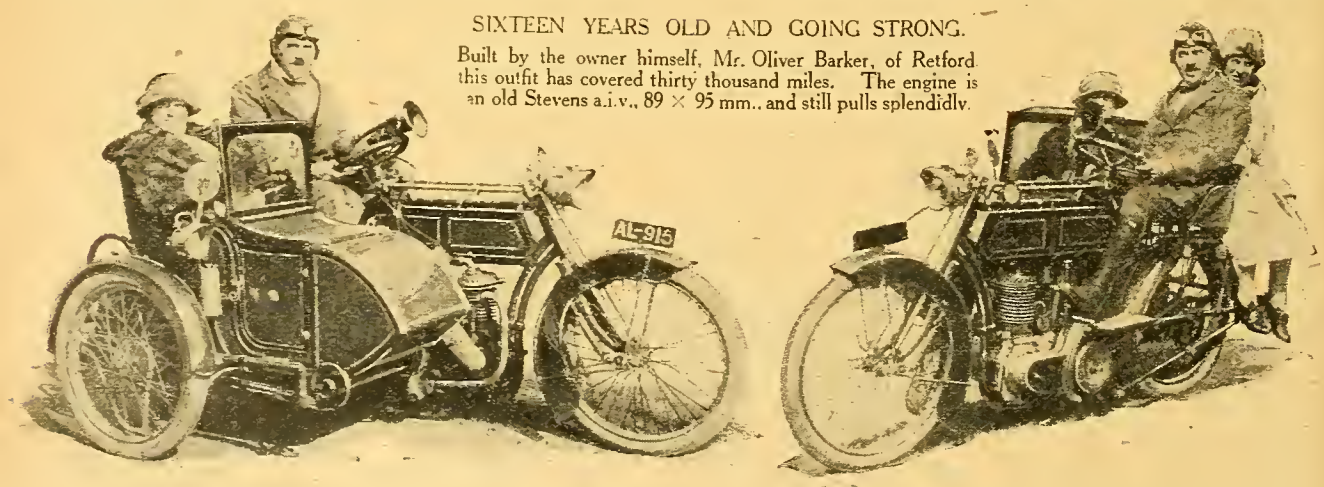
◈ ◈ ◈ ◈

I WONDER what the A.C.U. would think about a sidecar T.T.? And whilst we are on the subject it had better be put to Mr. Loughborough; he really should not escape this question. He has apparently got rid of the private petrol consumption test problem and the amateur race problem; now what about a sidecar T.T.? I wonder what O'Donovan would say, or Pullin Davies. Dance. De la Hay. and a host of others who have had sidecar experience at Brooklands and at hill climbs where phenomenal speeds are obtained and where bends are negligible—I wonder what they would think of hurtling around the T.T. course on a sidecar?

My correspondent did not give his reasons why a sidecar road race ought to be held. Maybe the same good reasons that apply to the holding of the three T.T. solo races would justify a sidecar event. Surely we have not reached finality in sidecar-chassis design?

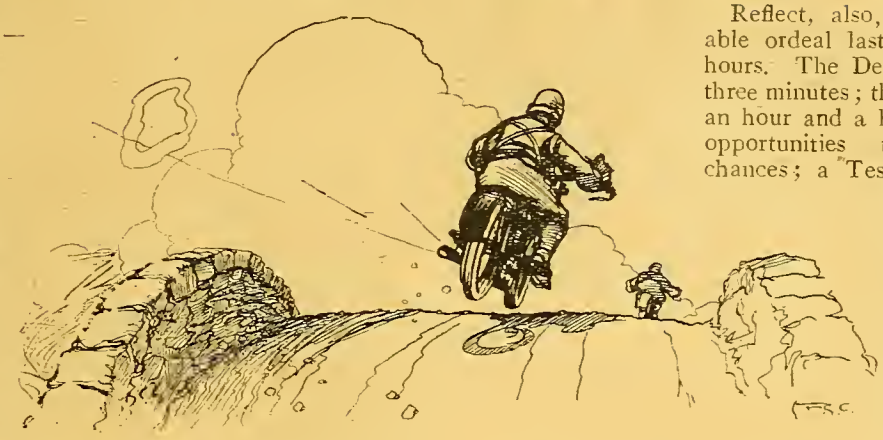
SIXTEEN YEARS OLD AND GOING STRONG.

Built by the owner himself, Mr. Oliver Barker, of Retford this outfit has covered thirty thousand miles. The engine is an old Stevens a.i.v., 89 × 95 mm., and still pulls splendidly.



# WINNING A T.T.

## First Place in the I.O.M. Races, the most hardly-earned Honour in the Sporting World.



OTHER sporting events — the Derby, the Cup Final, a Test Match, the Golf Championship — may attract larger crowds, provoke far more betting, and excite more attention all the world over, but I have always held that the Senior T.T. Race is infinitely the greatest fixture on the programme of international sport; and a very good case can be argued for this audacious assertion. Consider first the other newspaper boomed events.

In the Derby the horse counts for more than the jockey—a Flying Fox can win with almost anybody "up." In cricket and football and golf, the man is certainly everything, but in these events there is room for a bad blunder without the payment of any heavy penalty. Hobbs may give a catch in his first over, and be missed; Islip may miss an open goal, yet enjoy 89 minutes in which to work another opening; Duncan may drive into a bunker, and drop his second stone dead with a niblick; and in all these sports your opponent may balance your blunder by one of his own.

### Men, not Machines.

In a T.T. there are usually at least twenty machines good enough to win in record time. Which of them wins will be decided by the men who sit them. Moreover, the enemy makes no blunders. For in the T.T. a man does not have to beat another man—indeed, he seldom has more than a vague idea how the other men are running. He has first of all to master himself; and secondly, he has to master the inexorable laws of Nature, cold, impersonal, pitiless. Last year, for example, our very finest rider failed to finish. He was not beaten by the ultimate winner, H. R. Davies. He was not beaten by a finer machine, the A.J.S. He was beaten by himself and by physical laws. With the race in his pocket, he glanced up for the fraction of a second when a friend hailed him on a bend; in an instant his machine was plunging about on the rough at the roadside—then a stone fouled the front wheel, and he was out of the race. For such a tiny error there is no pardon in road-racing. The punishment is out of all proportion to the crime; it is as if a dropped catch at cricket always cost you 200 runs; as if every bunker at golf lost you 10 strokes; as if a ballooned shot at football meant your being pinned on your own goal line for the rest of the game.

Reflect, also, that this inexorable ordeal lasts for four mortal hours. The Derby lasts less than three minutes; the Cup Final takes an hour and a half, but is full of opportunities to recover lost chances; a Test Match occupies three days, full of long breathers, with victory incessantly tossed to and fro. But in the T.T. the riders are at full stretch for 240 minutes without so much as a single second's respite, and during every second of those 240 minutes their nerves are tense, their brains concentrated, their muscles tested to the uttermost. Moreover, the penalty which they court if failure comes is not limited to personal disappointment, or public humiliation, or financial loss. It includes a very real risk of physical injury. I know no event which provides so complete or thorough a testing of manhood in all its aspects.

### Six Essential Qualities.

Six factors, raised to the utmost limit, go to the composition of a first-class road racer. Eminent amongst them is the "reaction period." Pretend to throw something at the heads of two friends. One man's hand will fly up in self-defence a fraction of a second sooner than the other's. In the T.T. the speed with which the senses wireless the brain, and the speed with which the brain operates the muscles, are of prime importance. This factor counts at every corner. It counts in every emergency, as when the fellow just ahead does something he shouldn't. It counts particularly in overtaking along a rough, narrow road at 50, 60, 70 m.p.h.; and the winner overtakes somebody perhaps 200 times in the race. Then that indefinable sense of balance, so needful to excellence in every sport, is most of all demanded in driving a vehicle devoid of natural balance over so fierce a route as the T.T. course at T.T. speeds. Judgment of speed and distance—you, gentle reader, sometimes take easy corners at 30 or 40 m.p.h. With what indecision—throttle off and on again, brakes off and on again! That will not do in the T.T., where speed must be maintained up to the last inch, sliding round with just nothing to spare, and not a tenth of a second wasted in the roar with which she opens out once more. Daring—too timid a first lap has lost a man the race before now—yet not too daring, for every year a number of men start off too furiously, and are missing after a lap or so. Daring must be balanced by that cool restraint which never funks, and yet never shuns a legitimate or a possible risk.

As the slow hours wear on, and the body tires, and the familiar danger-points loom up like lightning, and

**Winning a T.T.—**

pass yet once again, the aching body and the weary brain must keep up all these virile qualities at their absolute zenith. So the perfection of physical fitness is essential.

In trade circles you may hear cynical remarks now and then about the financial aspects of victory, rumours of hard bargains driven by men with a name, and the like. You cannot run a world without a currency, and it pokes its ugly head into every sport. The Cup Final is won with the aid of somebody's boots, the golf championship with somebody's ball. Any good rider on the right side of thirty, with his career to carve, naturally makes the most of his abilities on a keen market; and with competition cut so fine as it is to-day, the firms bid high for the few real cracks to ride their bicycles. But once these inevitable preliminaries are settled, sport comes into its own: and the fact that the rider is paid, and paid as well as he deserves, does not alter the fact that his manhood is passed through a very fiery crucible in the actual race. Indeed, the fact that some of the riders are riding for cash as well as for glory, rather adds to the romance and the humanity of the race. For after all, cash is always convertible into something—perhaps something as domestic as a little home, and the consent of *her* papa, or a first-class education for that squaller in the bassinette. In racing, as in war, promotion is rapid, though purchased at grave risks; and once a man's foot is on the ladder, he may climb right away from what he used to be.

### Real Romance.

Nor do I personally forget or dislike the commercial interests at the back of the men. On paper a limited liability company is a soulless, unlovable thing; and the novels of the day try to make you visualise it as a little coterie of greedy, bald-headed old men. But if you have ever been put in charge of a concern which was none too prosperous, dropping money month by month and losing ground to better managed rivals, the struggle to pull things round is fascinating enough, and human to its core. Many a T.T. entry has been inspired by that kind of motive; whilst others who have, must try to hold. Ere now a big firm has grandiloquently decided, "We will win the T.T.!" The Board has allotted huge sums—perhaps £20,000—to the effort, and met only failure; while a petty little concern has done better on an expenditure of a few hundreds.

### The Designer's Part.

This brings us to a forgotten personage, who has more to do with our thrills in the Island than some people trouble to remember. I mean the designer. It ought to be plural, for there are many of them—tyres, ignition, carburetters, sparking plugs, valves, and the like, quite apart from the frame and the engine. To-day almost any competent engineer can produce a 500 c.c. engine which with the aid of a decent gear box, can lap as fast as human nature can circle the Manx lap. I feel a special respect for the metallurgists—those quiet, spectacled folk in the laboratories—who give us valves that won't snap or stretch, springs which flex and reflex without tiring, and pistons that won't grow. Every detail tells; and most of all, perhaps, the frame—watch the Scott frame on a corner like Hillberry.

The tuner? Sometimes he is the rider, too, sometimes not. But in the Senior event the tuning doesn't mean so much as it does at Brooklands. So fast are the 500 c.c. engines of to-day that one must tune for reliability rather than for speed.

So let nobody say that winning a T.T. is not team work. Eleven men lift the Football Cup; eleven men win the "ashes." But the teams which have been labouring for months past to ensure victory in the T.T. embody the massed brains and hands and tools of many a factory, and the little leathered figure which flashes past us with a roar and a dust-cloud is just the physical incarnation of those myriad thinkers and workers—the last man in the relay. As his is the sternest and the hardest task, so his is the main honour, when Fortune smiles.

ROAD RIDER.

At Sulby. D. Young, who finished second in the Lightweight T.T. Race on a 249 c.c. Rex Acme the only machine of this make entered.

# On the Cumbrian Hills with a Side Car

What better fun than an *al-fresco* lunch on the hill-side.

One of the finest mountain panoramas in the Lake district—Langdale Pikes.

## Touring in the Lake District. A Five Days' Itinerary for Medium-powered Passenger Machines.

IT was with great joy that "Passenger" and I accepted an invitation to join an old touring mate on a short visit to the Lake District during the latter part of last year's glorious summer.

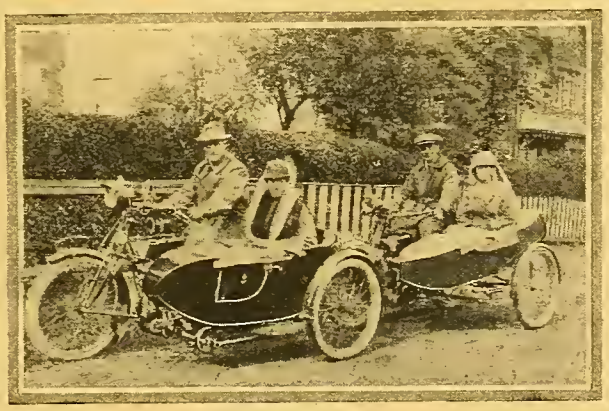
While "Passenger" got ready I busied myself with packing up the camera, a few ground-sheets, and also lowering the gear to obtain a 14-to-1 bottom—low enough for anything, I thought, "up there."

As we desired to make a call on friends at Stockport, two days were occupied in the journey from Birmingham to Blackpool, where my friend lives, leaving there the following morning—he and his passenger on a 4 h.p. Wolf-Jap outfit and we on our 3 h.p. Regal two-stroke ditto.

Our way was via Garstang, Lancaster and Kendal, the ascent leading out of the latter town necessitating a change down to second gear for the first time after leaving Blackpool. With mountain peaks now clearly in view the scenery improved considerably.

### Nearing Windermere.

When nearing Windermere a rather striking notice-board came into view at the top of a hill, telling us to "descend with great caution, or even dismount, as many fatal accidents have occurred," but we reached the Lakeside town without adding to the list of fatalities, and, bearing left, proceeded to Bowness and halted to admire the wonderful scenes all around. Then, slightly retracing, we took the picturesque road by the lake to Ambleside.



The two outfits on which the tour was accomplished, a 4 h.p. Wolf-Jap and a 3 h.p. Regal two-stroke.

Soon after starting for Langdale Pikes next morning the clutch on the Wolf commenced slipping, and on examination we found one of the six bolts broken. This was an "incident" not expected or desired, and being unable to obtain a new one, things had to be taken cautiously.

The eight-mile run up the Langdale Valley is one of wonderful grandeur, with a surprise picture at every turn, and it was difficult to decide what *not* to photograph.

Here we had our first *al-fresco* lunch, and as my friend's equipment included a spirit stove, the meal went down appetisingly, as only such a one should, after which we proceeded as far as we could possibly go—till the "road," in fact, dwindled away through a gate and we found ourselves in a field, out of which Langdale Pikes soared up to 2,401 ft. Yet the return journey to Ambleside was just as enjoyable. This Langdale Valley run should never be missed by tourists.

### Over Dunmail Raise.

Our next halt was in Grasmere, Wordsworth's snug little place, and then up the stiff climb of Dunmail Raise towards Thirlmere, with giant Helvellyn on our right. We got up, but not as well as we wished, for besides my friend's slipping clutch I experienced misfiring for the first time, and to make matters more difficult, rain commenced to fall and a strong wind blew.

**On the Cumbrian Hills with a Sidecar.—**

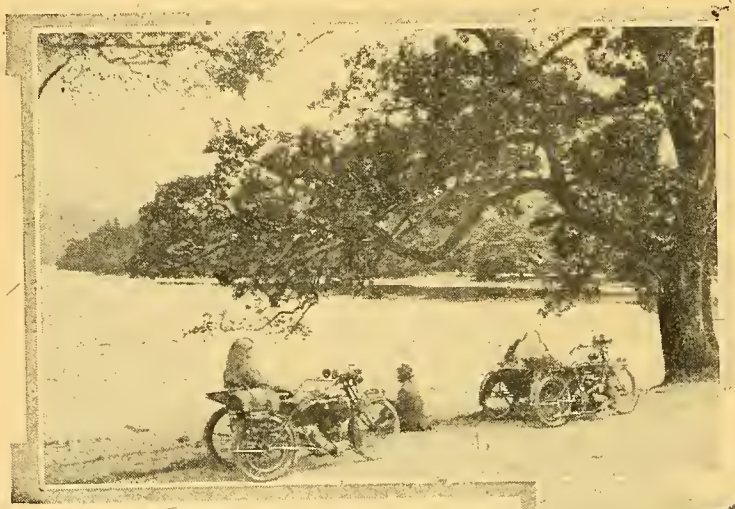
Next morning was spent by Derwentwater and in Borrowdale Valley, where in a quiet spot (except for a billion flies) attention was paid to my magneto, the platinum points of which were found to be very badly worn, and needed very careful handling indeed.

After a lunch we returned to Keswick *via* the west side of the lake—the worst and most dangerous stretch of road we encountered. Our running was certainly better as we proceeded *via* Troutbeck to Ullswater—indisputably the loveliest spot in England; with the glorious tints in the foliage, truly the scenes were bewitching on all sides—and we hadn't a care in the world! Through loitering we were late for tea at Pooley Bridge, at the foot of Ullswater, where we stayed the night.

Next morning was glorious, and the eight miles to Patterdale, by the water's edge practically the whole way, was a very slow run of enchanting delight. Midway we viewed Aira Force; many trippers were doing likewise, and after more photographing we moved on, until another halt by the side of the lake was called for lunch, etc.—this "etc." being a final "go" at my magneto and shortening the belt on the other machine. Then for the big climb!

### A Struggle over Kirkstone.

Starting off in the gayest of spirits, we had not proceeded far beyond Brothers Water when my misfiring became very pronounced, and the Wolf, owing to its heavy load and slipping clutch, struggled on only for a few yards more and then shut off steam. I carried on, but soon had to stop owing to the misfiring, which became more pronounced as the revs. increased. To ease matters our passengers decided to walk; but, not being able to assist one another, our progress was very slow. Having no kick-starter (I've never needed one), it was not easy getting my outfit in motion, and, when I did, the distance travelled was infinitesimal; but by perseverance we "got a move on," and eventually climbed to the "Traveller's Rest" (well-named), a distance of three miles, in two hours, thereby creating the world's "slow-" record! It is some consolation to add that during our progress we witnessed four failures on Kirkstone; they were an 8 h.p. sidecar, a $4\frac{1}{4}$ h.p. ditto, a $3\frac{1}{2}$ h.p. single with a pillion passenger, and a $2\frac{3}{4}$ h.p. light-weight, all engines konking out.



A rest by beautiful Ullswater.

### Mountain Echoes.

We had reward for our labours, however, in the shape of a musical treat from the merry miss at the inn, who sang a succession of selected harmonising notes towards the mountain, the resultant echoes being exquisite sustained chords as if from a choir. Needless to say, we demanded many encores ere we dropped down the four-mile descent to Windermere; and it *was* a drop, requiring exceptionally strong braking at some points, my back brake block being completely worn out in the run down.

After tea a visit was made to Orrest Head, and fortunately we saw one of those gorgeous sunsets of Lakeland, together with the fine panoramic view—this a special item no visitor should miss when at Windermere. There is still something else of further interest on this eminence, but what it is I must leave the tourist to discover.

### Heading South Again.

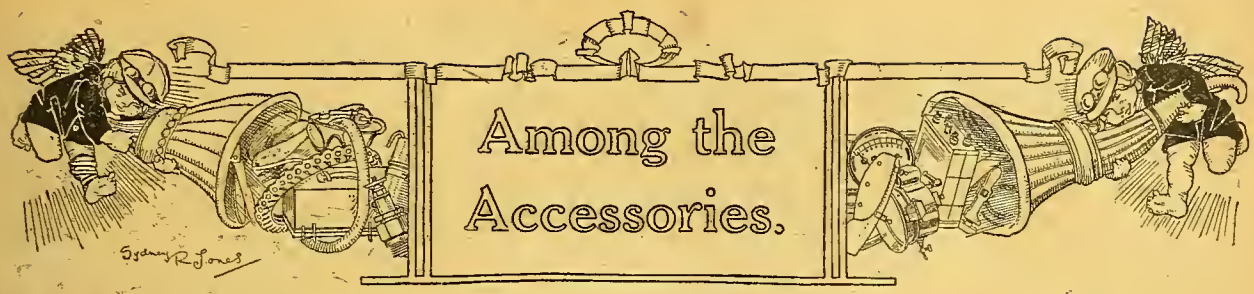
Reluctantly we turned southwards, *via* Lakeside and Grange, where a "lovely" sidecar tyre puncture was mended, followed by our last roadside lunch, after which the route was Lancaster, Garstang, and back to Blackpool.

With new platinum points fitted, together with two carbon brushes at the driving end, all went well on the run back to Birmingham *via* the Peak District of Derbyshire—a route to be recommended.

My total mileage was 620. I used 9 galls. of petrol, averaging 68 m.p.g.—a wee bit low in my opinion, and due to the low gear used; oil 3 pints. The Wolf-Jap used only $7\frac{1}{2}$ galls. of spirit, giving the excellent mileage of 82 per gallon.

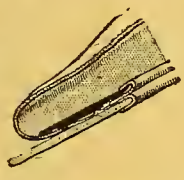
A. A. S.

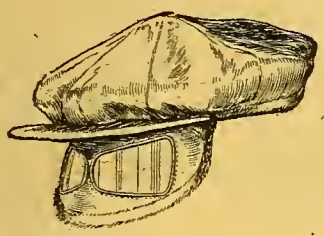
At the summit of Kirkstone Pass. "The Traveller's Rest," one of the highest inns in the country.



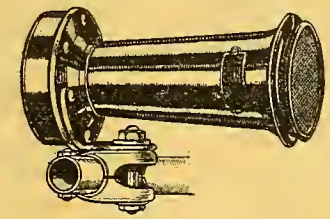

## Disappearing Eye Protectors.

When not in use the eye-protector of the Pidko cap folds flat in the peak. (Norrish & Pidcock, Ltd., 27, Chancery Lane, London, W.C.2.)





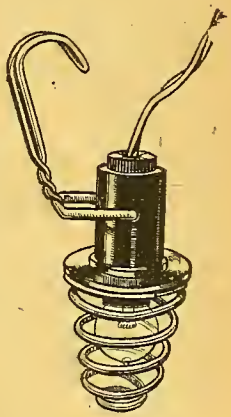
## New Electric Horn.



Of the "trembler" type with only two actual moving parts, the new Clayrite motor cycle electric horn is sold complete with flex and switch at 42/6. (Clayton-Wright, Ltd , Gt. Hampton Street, Birmingham.)

## Neat Inspection Lamp.

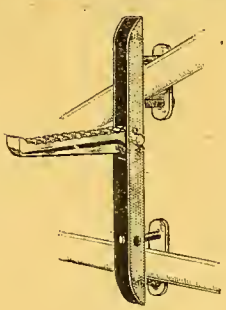
In the compact and well made Hunt Inspection Lamp the bulb is protected by a coil spring. (A. H. Hunt, Ltd., H.A.H. Works, Tunstall Road, East Croydon, Surrey).



## To Cure Hot Plug Troubles.

For two-stroke and other hot-running motor cycle engines, a new K.L.G. plug, the H.S.I., has been introduced. (The Robinhood Engineering Works, Ltd., Putney Vale, London, S.W. 15.)

## Rests for the Pillion Rider.

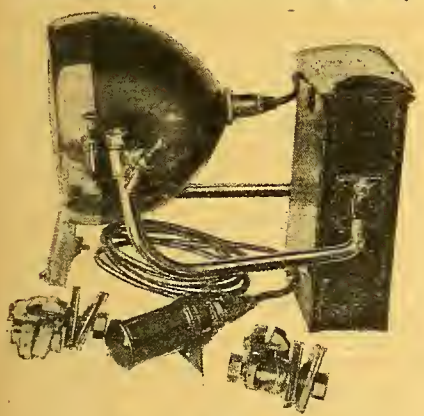


Foot rests for pillion riding have been introduced by Norrish & Pidcock, Ltd., 27, Chancery Lane, London, W.C.2. The step portion, which is adjustable. 12s. 6d. per pair.

## Combined Helmet and Goggles.

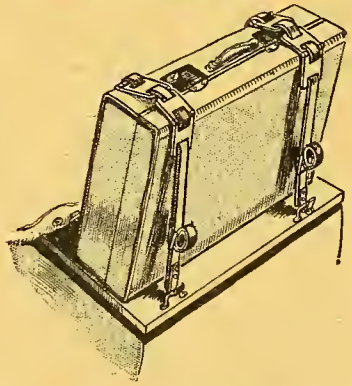
Goggles are incorporated in the peak of the Bednall Helmet, which otherwise follows R.A.F. lines. (H. Bednall, 55, Sutton Crescent, Walsall.)

## Self-contained Electric Lighting.



Carrying a four-volt accumulator of large capacity on the handlebar, the W.T. self-contained lamp, which includes tail-lamp and separate switches, is sold by the Service Co., Ltd., 289, High Holborn, London, W.C.2, at £4 17s. 6d.

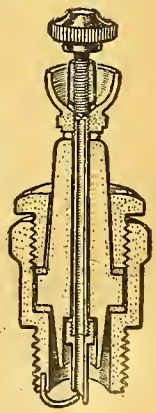
## Secure Luggage Straps.



Four angle pieces through which the straps are threaded, thus acting as pads, form the chief item of originality in the device of Capt. K. H. McCartney (The T.O.M. Co., Ltd., 6, Princes Street, Hanover Square, London, W.1) for securing luggage to a side-car locker lid.

## Sparking Plug and Compression Tap.

Motor cyclists, whose machines are not fitted with compression taps, will be interested in the Parson's combined tap and sparking plug, which has a hollow central electrode and a cup above the insulator; in the central electrode there is screwed a cone pattern valve. The plug is self-cleaning by simply opening the valve. (Quickways, Ltd., 30, City Road, London, E.C.1).



# CLUB NEWS.

### Eccles and District M.C.

The name and address of the acting hon. secretary of this club is now as follows:—Mr. S. Bethel (Jr.), 16, Clarendon Crescent, Eccles.

### Basingstoke M.C.C.

On May 28th an 86-mile reliability trial took place for the Porter Cup and medals over rather difficult country. The Cup was won by F. G. Hedges on a 4-valve Triumph.

### Neath and District M.C.

"Bumper" speed trials in Margam Park are being organised to take place on July 22nd, in conjunction with the Port Talbot *fête* and gala, when the whole of the proceeds are to be devoted to local charities.

### Suez M.C.C.

A club has recently been formed at Suez under the above title, and the first two runs have proved undoubtedly successful. Any communications may be addressed to the hon. sec., Mr. E. M. W. Alexander, at E.T.C. Staff Mess, Suez.

### Birmingham University M.C.C.

On Saturday, May 27th, the club held a gymkhana on the Athletic Grounds, the events including "riding the plank" (slow and fast), "potato race," and acceleration tests, finishing up with a hockey match played on motor cycles, which proved a great success.

### Knock M.C.C. (Belfast).

Neill's Hill was the starting point for a recent paper-chase, the trail being laid by N. P. Metcalfe and W. R. Boyd in a "Stelkite" car and H. McCleery on an Indian. The hounds followed on handicap 20 minutes later. The first to overhaul the car was C. Duffin (2¾ Douglas), followed by A. Bothwell (Norton), Trevor Cather, and S. Bolster (Rudge Multi's).

### Ashford (Kent) M.C., and L.C.C.

Over fifty entries were received for the hill-climb on May 24th at New Barn Hill, Hastingleigh. Although the club has only been in existence for a matter of two months, the membership numbers nearly 100. R. B. Eddleston (3½ Douglas) and Capt. Maund (3 A.B.C.) put up the fastest times, theirs being 53⅗sec. and 53sec. respectively. Miss Burnage (single-speed Levis) also did well. The hill is 1,040 yards long with a nasty hairpin bend in the middle, which renders fast cornering out of the question.

### Aberdeen and District M.C.

The club recently travelled to Potarch to witness a scooter competition on a hill about 150 yards in length, with an average gradient of 1 in 13½. In the ladies' class Mrs. Dawson took first place (32⅘sec.), whilst H. Kitson (28 3-10sec.) was first in the gentlemen's class.

### Stocksbridge and District M.C. and L.C.C.

Twenty competitors entered for the "Padley Cup Trial" on May 20th, the route for which included two circuits at 20 m.p.h. of typical Pennine country. Results:—

(1) Cup and Gold Medal.—W. P. Archer (4¼ B.S.A.); (2) G. Moorhouse (3⅝ Scott); (3) W. Sutton (3½ Rudge-Multi).

### Cheshire Centre A.C.U.

A rally of the clubs in this newly-formed centre is to be held at Knutsford Heath at 2.30 p.m. on June 25th, when the "Blake Cup" will be awarded to the club turning out the most members, multiplied by the number of miles travelled to the "rally"; other prizes will be awarded for individual events.

### Scarborough and District M.C.

About 40 machines were entered for a 37 miles handicap reliability trial, held on May 24th over the country surrounding Scarborough, which had to be completed at an average speed of 20 m.p.h. There were several ties, so that it will be necessary to re-run the event over a similar course to decide the winners.

### Salisbury and District M.C.C.

The first run organised by this new club took the form of an 80-mile reliability test, and was very successful. The route included an observed hill at Alvediston with an average gradient of 1—7. H. Edwards on a 3½ h.p. Sunbeam made a good ascent on top gear. Other good climbs were made by A. R. Hitchings (4 Norton sc.), W. H. Burt (4 Triumph sc.), E. J. Longman (3½ Douglas), and D. B. Ware (3⅝ Scott).

### Kingswood and District M.C. and L.C.C.

A speed hill-climb on May 20th, held at Warren Hill, Dursley, resulted in the following awards:—[350 c.c. class] (1st) C. H. King (2¾ Douglas); (2nd) E. G. Edwards (2¾ Douglas). [Solo unlimited class]: (1st) J. B. Williams (3½ Norton), the fastest time of the day; (2nd) P. E. Hale (3½ Norton); [Sidecar class]: P. E. Hale (3½ Norton sc.).

### Ferryhill and District M.C.

A course of 100 miles was covered in a reliability trial held on May 21st over a route that, without being particularly severe, required skilful driving to maintain a minimum speed of 20 m.p.h. Chas. Jones (4 Triumph) took first place with a loss of 11 marks, whilst E. W. Jones (6-7 B.S.A. sc.) came in a close second, losing 11½ marks. A 7-9 h.p. Harley-Davidson sidecar outfit, driveo by H. Wion, was third with a loss of 12 marks.

### Ipswich and District M.C.C.

A successful hill-climb was carried out by members at Cook's Hill, Mauningtree, recently, when over 100 entries were received for the 17 classes. A. G. Mann did well with his 3½ h.p. Sunbeam, whilst B. A. Katcher (o.h.v. Triumph) and F. K. Portway (Norton) also put in some very good work. A Barr and Stroud was entered and riddeo by A. Blowers, securing third place of the touring motor cycles (class C) with a time of 27sec.

### Bargoed and District M.C.

Results of the hill climb on May 11th, which was open to all clubs affiliated to the East South Wales Centre A.C.U., are now available:—

SOLO (up to 300 c.c.).—1, Luther Davies, Newport (2¼ Diamond-Jap), 54s.

SOLO (up to 350 c.c.).—1, H. Davies, Garnant (2¾ Diamond-Jap), 53⅕s.

SOLO (up to 600 c.c.).—1, L. C. Ramsay, Newport (2¾ Douglas), 53⅕s.; 2, Fred Davies, Tredegar (3½ Sunbeam), 56⅖s.

UNLIMITED SOLO.—1, L. C. Ramsay, Newport (2¾ Douglas), 51⅘s.; 2, Luther Davies, Newport (2¼ Diamond-Jap), 55⅖s.

### Glasgow M.C.C.

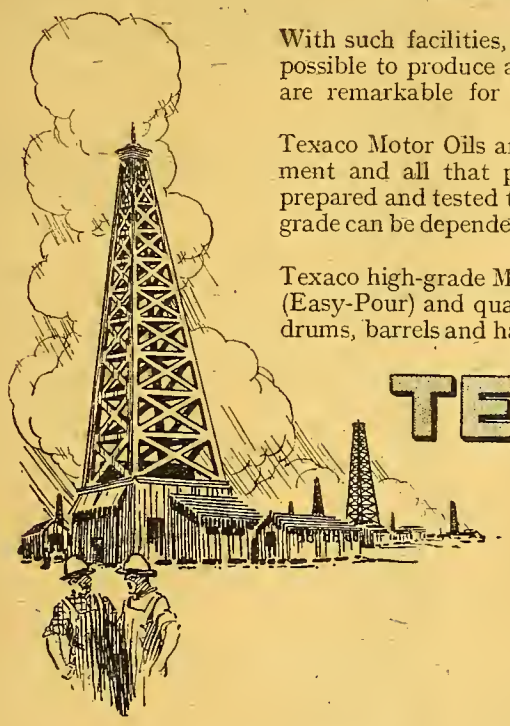
On May 13th the club held an open handicap hill climb on Bowhouse Hill, a recently discovered gradient near Bankerton. There were 19 classes, of which four were abandoned, and in all the entries numbered 108. Electric timing was employed over a half-mile stretch which was perfectly straight with fairly good surface. The best time was 30 seconds, made by two riders—James Beck and E. A. Small—both on 499 c.c. Sunbeams. These riders tied in classes 7 and 10, while Beck also scored in three of the sidecar classes. A. Best, riding a 250 c.c. New Imperial, won classes 1, 5, 6, 8, and 9, while John Deas (A.J.S.) was the winner in three classes. J. Kinney (A.B.C.) and W. M. Henderson (Matchless sc.) were also successful in obtaining firsts.

# OIL EFFICIENCY

**TEXACO PRODUCTS PRODUCED, REFINED AND DISTRIBUTED BY THE TEXACO ORGANISATION**

The equipment of the company responsible for this important development in automobile lubrication consists of :—

5 Refineries.
18 Terminals.
Chemical and Physical Laboratories at all Refineries and Terminals.
A large Fleet of Ocean-going and Coastal Vessels.
Over 4,000 miles of Pipe Line.
Over 5,000 Tank Cars.
Branches, Representatives and Storage facilities in nearly every country of the world.
Shipyard, where Texaco Tank Steamers, Cargo Vessels, Tugs, Barges, Motor Vessels, etc., are built.
2 Research Laboratories.
Barrel, Case and Can Factory.
Staff of over 27,000.



With such facilities, equipment and means of service, it is possible to produce and market a range of motor oils which are remarkable for their high-grade lubricating properties.

Texaco Motor Oils are the embodiment of scientific development and all that practical experience teaches. Specially prepared and tested to meet all automobile requirements, each grade can be depended upon for efficient and economical service.

Texaco high-grade Motor Oils are sold in gallon, half-gallon (Easy-Pour) and quart sealed cans ; 5 and 10 gallon sealed drums, barrels and half-barrels. *Ask your dealer for particulars.*

TEXACO

**The Texaco "Easy-Pour" Can**

The can that enables you to pour into the breather without using a funnel, without gulping or dripping, without waste or oily mess. *The Texaco "Easy-Pour" can costs you no more than the ordinary half-gallon square can.*

*SOLE MARKETERS U.K.:*

**THE TEXAS OIL CO., LTD.**

Imperial House, 15-19, Kingsway, London, W.C.2

Telephone:—GERRARD 6550. Telegrams: "TEXACOIL, LONDON."

# "With no loss of marks"

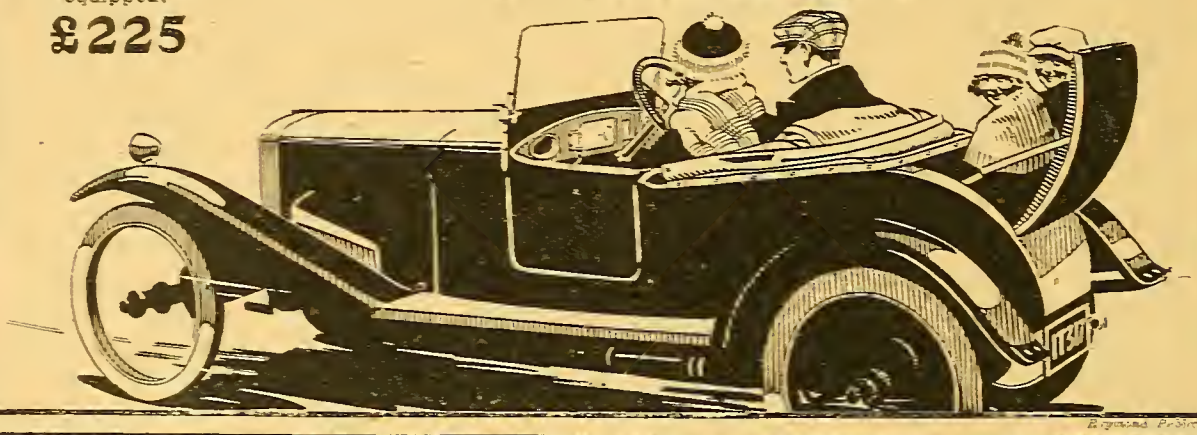
JUST as the G.N. in open competitions repeatedly gains the highest award, so, year after year, in the Great 365 Days' Trial, in which every private owner takes part, the G.N. comes through without the loss of a single mark.

Every claim is substantiated. Owners are unanimous in paying the highest tribute to the powerful and economical running of the car, its durability, reliability, and, moreover, the service that we give them *after* they buy their cars.

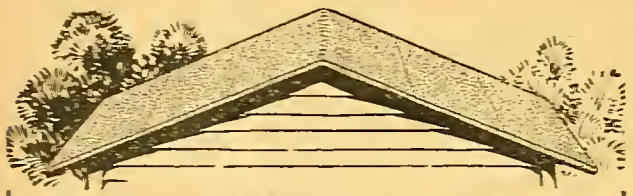
*Send for illustrated catalogue.*

**G.N. MOTORS, Ltd.**
222, GT. PORTLAND ST., LONDON, W.1.
TELEPHONE: 2271 MUSEUM.
WORKS AT EAST HILL, WANDSWORTH, S.W.

Price of Touring Model, luxuriously equipped.
**£225**



Reginald Pardon



# Your Garage Roof

Does it leak? Does the rusty corrugated iron condense and let drips fall on the coachwork?

Scrap it and cover it yourself with ACE Roofing, and stop all trouble. It's easy to lay—only nails and a hammer are required — it's cheap — only 7/3 per roll of 12 sq. yards—and its extra bitumen coating on both sides makes it wind, water, and weather proof for years.

Think it over and act! It will make a lot of difference at a trivial cost.

*From all Ironmongers.*
Sample and name of nearest agent free from
F. McNEILL & COMPANY, LTD.
4, South Place, Finsbury Sq., E.C.2

**ACE ROOFING**
always use ACE

F. M'N. & Co. No.

PETRO FLEX

Follow the lead of the racing "cracks" and have your petrol and oil piping of Petro-Flex, the advantages of copper, but none of the drawbacks. Very light, takes any bend, *really flexible.* Can't break; can't leak. Standard on speed machines; passed by Air Ministry.

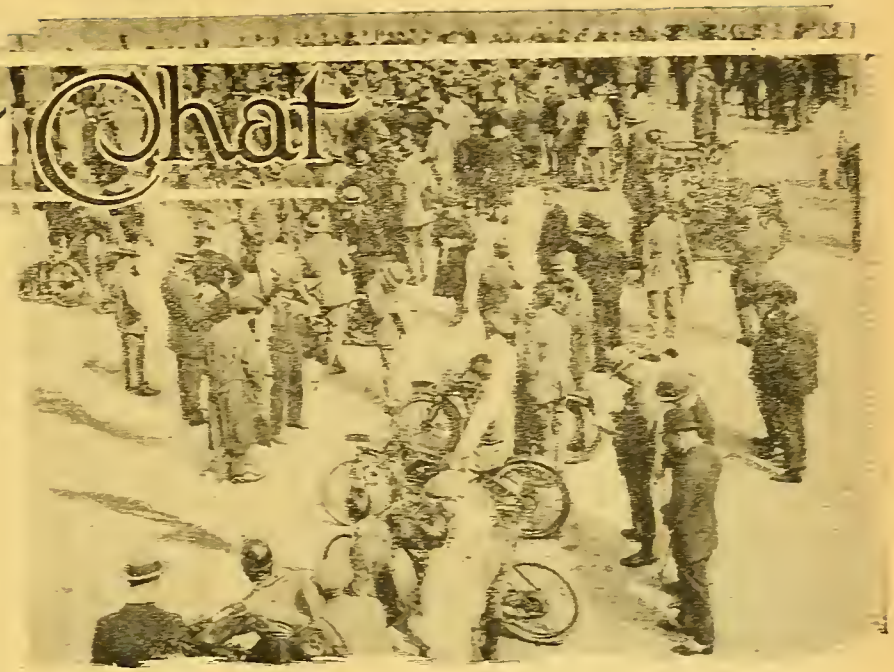
# PETRO -FLEX-

State type of carburettor and name of machine, or preferably send us present piping. Send cash with order. Tube and unions come by post within 48 hours.

Prices: up to 6" long, 3/6; to 9", 4/-; to 12", 5/6; to 15", 6/6; to 18", 7/6; to 24", 9/6, post free

**PETRO-FLEX TUBING CO., LTD.**
*Cassiobury Works*
**ST. ALBANS ROAD · WATFORD**

# Current Chat



## Times to Light Lamps.

| | | |
|---|---|---|
| June 8th | .. .. | 10.12 p.m. |
| „ 10th | .. .. | 10.13 „ |
| „ 12th | .. .. | 10.14 „ |
| „ 14th | .. .. | 10.16 „ |

Number plate- to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

## Special Features.

TOURIST TROPHY RACES.
TOURING IN CUMBRIA.
THE LONDON-EDINBURGH RUN.

**The Club Team Championship.**

Entries close on Saturday (the 10th inst.) for the M.C.C. Team Trials for *The Motor Cycle* Cup. The event will take place on the 24th.

**An Official Function.**

The Mayor and Corporation of Douglas entertained A.C.U. officials and the Press to dinner on Wednesday of last week at Collinson's Café, Douglas.

**The Scott Trial.**

Owing to the original day clashing with another important competition, the date of the Scott Trial has been changed to Sept. 16th. This event is regarded by all hardened soloists as the most difficult and sporting "day-out" organised in this country.

**Exiles.**

We understand that a Midland T.T. rider intends to reside in the Isle of Man permanently. It appears that his wife, who crossed with him during the pre-heat-wave storms, refuses to return until the Irish Sea is bridged.

**Winner of Royal Meet Competition.**

Our congratulations to Mr. F. V. Bradley, 25, Birchwood Road, West Byfleet, on winning the 584 c.c. Harley-Davidson motor cycle offered by Mr. Duncan Watson, on the occasion of the Royal Brooklands meeting on the 20th ult. The number of Mr. Bradley's entrance ticket given up at Brooklands was 5782.

**An Inter-'Varsity Hill Climb?**

It has been suggested that an inter-'Varsity hill climb might be held between such Universities as Sheffield, Manchester, Aberystwyth, London, Birmingham, etc., on July 15th this year, the hill to be somewhere in the Midlands. The "Packman Cup" has been promised as a challenge trophy, to be retained by the winning University for one year. The Birmingham M.C.C. is prepared to organise the event this year should the idea be welcomed in University and other circles.

**All Praise to them.**

There are more old crocks in London than in any other city—and they go.

**Thanks.**

Our thanks to the many readers who have written congratulating us on attaining our 1,001st number.

**In Another Transport Sphere.**

Sir Eric Geddes has been elected a member of the Board of the Dunlop Rubber Company, Ltd.

**Hoist with his own ——**

A small boy who filled the exhaust pipe of a hefty single with stones had the surprise of his life. He was bombarded with his own missiles when the rider started up.

**Increase in Swiss Motorists.**

At the present moment there are 27,511 motor vehicles in Switzerland, while in 1920 there were only 20,409. Probably when the number of cars in German Switzerland increases the motor tourist will receive a little greater consideration at the hands of the authorities.

**"The Motor Cycle" *v.* Time.**

Those of our readers who, on reading in the Isle of Man on Wednesday *The Motor Cycle* report of Tuesday's Junior race, little realise that the members of the staff responsible—both in the island and in London—held a kind of T.T. race of their own: *The Motor Cycle versus* time.

**Motor Vehicles Prohibited.**

The Duke of Portland and Earl Manvers have decided to open respectively Welbeck Park and Thoresby Park, in the Dukeries, to the general public forthwith, but the concession so far as vehicles are concerned, is limited to those which are horse-drawn. All motor vehicles, which incidentally convey the majority of visitors to the Dukeries, are barred.

**A Surprise Win.**

The win of a two-stroke in the lightweight race was a surprise to everyone.

**Speed.**

It takes longer for a telegram to come from the Isle of Man on T.T. days than it does for Bennett to cover the 226 miles of the course.

**A Popular Winner.**

T. M. Sheard is the first Manxman to win a T.T. race. Naturally he was a greater hero than any previous winner of the coveted trophy.

**"The Motor-Cycle" Lap Bulletins.**

As usual, thousands of the public interested in the T.T. races gathered before *The Motor Cycle* telegram boards which were displayed all over the country.

**Pocket Leviathans.**

The smallest engine entered for the London-Edinburgh run, described elsewhere in this issue, was the 169 c.c. J.E.S. which incidentally is just over two-thirds as large as Geoffrey Davison's wonderful Levis.

**Pioneers.**

Judging by the number of veterans who commenced their motor cycling career on a Werner front-driven machine, the output of this ancient mount must have been very high indeed. Perhaps they changed hands frequently.

**Motor Cycle Club Assists Police.**

The excellent condition of the roads on Dundham Downs has proved so great and irresistible a temptation to young and thoughtless "speed merchants," that the local police have been stung into a vigorous offensive, which has resulted in a number of prosecutions. The Bristol M.C. and L.C.C. has offered to support the police in suppressing this nuisance, and has threatened to remove from its books the name of any member convicted for this offence.

# LAP SCORES OF THE 1922 TOURIST TROPHY RACES.

Individual Lap times and Total times of all Survivors in the three races. Lap times of all the Starters.

## SENIOR T.T. RACE.

Distance, 226·5 Miles (6 laps of 37·75 miles). 67 starters; 22 survivors.

| Rider, Capacity and Machine. | Bore and Stroke. | Weight. Machine. | Weight. Rider. | First Lap. | Second Lap. | Third Lap. | Fourth Lap. | Fifth Lap. | Sixth Lap. | Total Time. | Average Speed. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | lb. | lb. | h. m. s. | h. m. s. | h. m. s. | h. m. s. | h. m. s. | m. s. | h. m. s. | m.p.h. |
| 1 A. BENNETT (492 Sunbeam) | 77×105.5 | 251 | 136 | 38 14 | *37 46 | 38 20 | 42 50 | 37 59 | 37 51 | 3 53 0.2 | 58.33 |
| 2 W. W. BRANDISH (499 Triumph) | 85×88 | 293 | 181 | 39 38 | 39 35 | 40 7 | 39 57 | 41 1 | 40 47 | 4 0 22.6 | 56.52 |
| 3 H. LANGMAN (486 Scott-Squirrel 2-cyl.) | 70×63.5 | 253 | 145 | 39 15 | 39 10 | 42 4 | 40 0 | 41 30 | 40 15.8 | 4 2 14.8 | 56.09 |
| 4 C. P. WOOD (486 Scott-Squirrel 2-cyl.) | 70×63.5 | 258 | 155 | 40 59 | 38 9 | 38 16 | 46 38 | 41 23 | 40 45 | 4 6 10 | 55.20 |
| 5 G. W. WALKER (490 Norton) | 79×100 | 285 | 172 | 42 46 | 41 48 | 42 8 | 40 49 | 41 13 | 40 24 | 4 9 8 | 54.55 |
| 6 T. C. DE LA HAY (492 Sunbeam) | 77×105.5 | 249 | 141 | 41 4 | 41 49 | 42 48 | 42 23 | 43 31 | 42 30 | 4 14 5 | 53.48 |
| 7 A. H. ALEXANDER (496 Douglas, 2-cyl.) | 68×68 | 297 | 169 | 40 12 | 44 10 | 42 45 | 41 8 | 43 40 | 43 1 | 4 15 56 | 53.30 |
| 8 V. OLSSON (492 Sunbeam) | 77×105.5 | 261 | 167 | 43 47 | 42 22 | 42 46 | 41 46 | 43 45 | 42 1 | 4 16 27 | 52.99 |
| 9 G. CLAPHAM (486 Scott-Squirrel, 2-cyl.) | 70×63.5 | 254 | 170 | 40 26 | 40 47 | 41 41 | 41 11 | 49 0 | 44 58.4 | 4 18 3.4 | 52.67 |
| 10 J. W. ADAMSON (490 Norton) | 79×100 | 295 | 204 | 44 20 | 43 1 | 43 31 | 42 30 | 43 51 | 42 0.6 | 4 19 13.6 | 52.41 |
| 11 D. H. DAVIDSON (498.8 Indian) | 79.3×100.8 | 285 | 134 | 43 27 | 42 39 | 44 3 | 43 51 | 45 57 | 48 40 | 4 28 37 | 50.60 |
| 12 O. WADE (348 A.J.S.) | 74×81 | 214 | 185 | 45 17 | 44 29 | 46 30 | 45 42 | 46 8 | 44 45 | 4 32 51 | 49.80 |
| 13 F. B. HALFORD (499 Triumph) | 85×88 | 283 | 146 | 43 54 | 43 5 | 43 21 | 45 57 | 54 9 | 43 2 | 4 33 28 | 49.70 |
| 14 O. M. BALDWIN (499 Rudge) | 85×88 | 294 | 144 | 43 55 | 44 29 | 46 31 | 45 30 | 46 55 | 45 47 | 4 33 37 | 49.67 |
| 15 R. M. KNOWLES (490 Norton) | 79×100 | 300 | 156 | 45 2 | 45 1 | 46 47 | 44 59 | 46 55 | 46 47 | 4 35 31 | 49.41 |
| 16 G. A. STRANGE (499 Sheffield-Henderson) | 85×88 | 255 | 146 | 42 26 | 44 31 | 45 51 | 53 46 | 45 42 | 44 59 | 4 37 15 | 49.01 |
| 17 G. S. DAVISON (492 Sunbeam) | 77×105.5 | 268 | 129 | 45 26 | 45 55 | 47 28 | 47 43 | 50 36 | 54 17 | 4 51 25 | 46.63 |
| 18 E. MUNDEY (496.5 New Hudson) | 79.5×100 | 297 | 140 | 45 42 | 1 0 58 | 46 34 | 46 38 | 52 7 | 46 11 | 4 58 10 | 45.58 |
| 19 G. COWLEY, Sr. (492 Sunbeam) | 77×105.5 | 259 | 132 | 49 26 | 49 0 | 51 1 | 49 26 | 52 27 | 51 59 | 5 3 19 | 44.80 |
| 20 C. WATERHOUSE (499 Sunbeam) | 85×88 | 248 | 124 | 43 36 | 43 10 | 43 52 | 1 29 0 | 48 9 | 45 11 | 5 12 58 | 43.40 |
| 21 G. M. BLACK (490 Norton) | 79×100 | 297 | 162 | 41 55 | 41 44 | 1 15 40 | 47 55 | 1 7 8 | 42 26 | 5 16 48 | 42.90 |
| 22 G. H. TUCKER (490 Norton) | 79×100 | 300 | 146 | 43 53 | 45 52 | 1 12 6 | 50 3 | 1 20 11 | 50 38 | 5 42 43 | 39.61 |
| F. COLLARD (495 Beardmore-Precision) | 81·1×96 | 299 | 151 | 49 30 | 1 57 16 | 50 54 | 47 48 | 51 18 | — | — | |
| J. A. WATSON-BOURNE (499 Rudge) | 85×88 | 297 | 196 | 1 6 55 | 43 56 | 45 34 | 43 33 | 1 41 40 | — | — | |
| H. RIDDELL (499 Rudge) | 85×88 | 268 | 150 | 47 38 | 47 24 | 45 50 | 1 36 45 | 48 35 | — | — | |
| W. L. DANSKIN (499 Rudge) | 85×88 | 261 | 159 | 44 28 | 1 0 32 | 57 46 | 1 10 31 | 47 18 | — | — | |
| D. S. ALEXANDER (498.8 Indian) | 79.3×100.8 | 291 | 142 | 42 16 | 41 48 | 43 30 | 43 54 | 45 32 | — | — | |
| H. LE VACK (349 New Imperial) | 70×90 | 261 | 162 | 40 47 | 40 24 | 42 7 | 42 57 | 45 20 | — | — | |
| R. T. CAWTHORNE (490 Norton) | 79×100 | 300 | 134 | 40 37 | 40 56 | 44 05 | 41 26 | 41 48 | — | — | |
| F. W. DIXON (498.8 Indian) | 79.3×100.8 | 299 | 144 | 40 14 | 39 18 | 39 37 | 38 54 | 40 22 | — | — | |
| J. H. MATHERS (499 Rudge) | 85×88 | 262 | 180 | 1 13 27 | 55 33 | 1 30 45 | 1 8 28 | — | — | | |
| E. R. JACOBS (495 Beardmore-Precision) | 81.1×96 | 306 | 149 | 46 23 | 1 51 57 | 53 55 | 52 15 | — | — | — | |
| A. E. TAYLOR (499 Rudge) | 81.1×96 | 290 | 157 | 44 33 | 44 57 | 46 56 | 1 21 13 | — | — | — | |
| R. B. EWENS (499 Rudge) | 85×88 | 261 | 153 | 48 27 | 47 22 | 1 3 14 | 47 15 | — | — | — | |
| J. WHALLEY (348 Massey-Arran) | 71×88 | 269 | 175 | 1 4 15 | 41 52 | 42 50 | 40 42 | — | — | — | |
| D. M. BROWN (490 Norton) | 79×100 | 289 | 139 | 43 11 | 43 22 | 43 38 | 42 41 | 54 56 | — | — | |
| N. BLACK (490 Norton) | 79×100 | 296 | 162 | 41 49 | 41 44 | 42 22 | 41 12 | — | — | — | |
| H. W. HASSALL (490 Norton) | 79×100 | 295 | 144 | 40 28 | 40 48 | 40 35 | 41 32 | — | — | — | |
| N. NORRIS (495 Beardmore-Precision) | 81.1×96 | 306 | 175 | 1 9 10 | 59 15 | 1 14 5 | — | — | — | — | |
| G. KELLY (348 A.J.S.) | 74×81 | 227 | 142 | 41 37 | 42 20 | 47 34 | — | — | — | — | |
| E. SEARLE (499 Sheffield Henderson) | 85×88 | 255 | 141 | 43 18 | 42 16 | 45 36 | — | — | — | — | |
| J. W. SHAW (490 Norton) | 79×100 | 291 | 139 | 42 5 | 45 17 | 42 48 | — | — | — | — | |
| S. A. CRABTREE (492 Sunbeam) | 77×105.5 | 266 | 128 | 40 34 | 41 37 | 43 44 | — | — | — | — | |
| J. A. PORTER (482 New Gerrard, 2-cyl.) | 64.5×76 | 278 | 133 | 49 38 | 1 59 33 | — | — | — | — | — | |
| H. BURRILL (499 Rudge) | 85×88 | 293 | 174 | 44 26 | 1 6 55 | — | — | — | — | — | |
| V. ANSTICE (496 Douglas, 2-cyl.) | 68×68 | 291 | 141 | 43 36 | 44 2 | — | — | — | — | — | |
| A. CARTON (490 Norton) | 79×100 | 295 | 175 | 43 53 | 43 43 | 45 48 | — | — | — | — | |
| G. GREENWOOD (492 Sunbeam) | 77×105.5 | 258 | 157 | 42 58 | 42 22 | — | — | — | — | — | |
| T. SIMISTER (490 Norton) | 79×100 | 289 | 140 | 41 55 | 42 54 | — | — | — | — | — | |
| H. R. HARVEYSON (499 Triumph) | 85×88 | 291 | 147 | 42 21 | 42 23 | — | — | — | — | — | |
| W. HOLLOWELL (490 Norton) | 79×100 | 301 | 145 | 40 34 | 40 18 | — | — | — | — | — | |
| G. E. COWLEY, Junr. (490 Norton) | 79×100 | 293 | 150 | 1 46 24 | — | — | — | — | — | — | |
| R. BOWNASS (498 N.U.T. 2-cyl.) | 64.5×76 | 284 | 142 | 1 2 4.6 | — | — | — | — | — | — | |
| F. T. HATTON (496 Douglas, 2-cyl.) | 68×68 | 281 | 150 | 46 20 | — | — | — | — | — | — | |
| B. BOURKE (496.5 New Hudson) | 79.5×100 | 297 | 169 | 44 3 | 2 8 38 | — | — | — | — | — | |
| W. R. BROWN (492 Sunbeam) | 77×105.5 | 249 | 167 | 42 42 | — | — | — | — | — | — | |
| I. THOMAS (486 Scott Squirrel) | 70×63.5 | 251 | 178 | 42 29 | — | — | — | — | — | — | |
| S. OLLERHEAD (499 Colmore-Douglas, 2-cyl.) | 68×68 | 286 | 138 | 42 26 | — | — | — | — | — | — | |
| A. W. JONES (496 Douglas, 2-cyl.) | 68×68 | 288 | 135 | 42 1 | — | — | — | — | — | — | |
| F. G. EDMOND (499 Triumph) | 85×88 | 278 | 150 | 40 7 | — | — | — | — | — | — | |

The following did not complete one lap T. H. Dickenson (491 Duzmo); C. Stead (498.8 Indian); H. R. Davies (348 A.J.S.); G. Dance (492 Sunbeam); W. Johnson (492 Sunbeam); J. H. Simpson (486 Scott); A. Jackson (492 Sunbeam).

# JUNIOR T.T. RACE. Distance, 188·75 Miles. 35 starters; 16 survivors.

| Rider, Capacity and Machine. | Bore and Stroke. | Weight. Machine. | Weight. Rider. | First Lap. | Second Lap. | Third Lap. | Fourth Lap. | Fifth Lap. | Total Time. | Average Speed. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | lb. | lb. | h. m. s. | h. m. s. | h. m. s. | h. m. s. | h. m. s. | h. m. s. | m.p.h. |
| 1 T. M. SHEARD (348 A.J.S.) | 74×81 | 229 | 151 | 40 59 | 40 47 | 41 17 | 40 31 | 43 14.2 | 3 26 48.2 | 54.75 |
| 2 G. GRINTON (348 A.J.S.) | 74×81 | 209 | 141 | 43 38 | 42 34 | 43 59 | 43 4 | 42 2.8 | 3 37 17.8 | 52.10 |
| 3 J. T. THOMAS (348 Sheffield-Henderson) | 71×88 | 241 | 150 | 44 55 | 44 32 | 45 16 | 44 35 | 48 10.6 | 3 47 28.6 | 49.79 |
| 4 R. LUCAS (348 Coulson) | 71×88 | 257 | 134 | 55 30 | 45 16 | 45 0 | 41 55 | 44 9.2 | 3 50 10 | 49.19 |
| 5 S. WOODS (348 Cotton) | 71×88 | 247 | 148 | 40 50 | 40 19 | 49 57 | 51 51 | 47 36.2 | 3 50 33.2 | 49.13 |
| 6 J. HASLAM (346 Douglas) | 57×68 | 245 | 140 | 49 10 | 47 42 | 49 17 | 48 23 | 50 50.4 | 4 5 22 | 46.16 |
| 7 P. A. NEWMAN (349 Ivy) | 75×79 | 232 | 147 | 49 20 | 48 40 | 49 34 | 48 52 | 49 20.2 | 4 5 46.2 | 46.08 |
| 8 G. W. SHEPHERD (348 Edmund) | 71×88 | 252 | 177 | 48 16 | 51 14 | 51 1 | 46 3 | 50 52 | 4 7 26 | 45.79 |
| 9 J. BANCE (348 O.E.C.-Blackburne) | 71×88 | 262 | 146 | 51 26 | 48 2 | 52 43 | 49 34 | 46 27.6 | 4 8 12.6 | 45.63 |
| 10 T. A. JONES (349 Ivy) | 75×79 | 227 | 140 | 49 48 | 49 3 | 50 53 | 49 42 | 51 12 | 4 16 38 | 45.19 |
| 11 H. F. BROCKBANK (348 Cotton) | 71×88 | 241 | 155 | 46 20 | 48 36 | 55 52 | 47 44 | 53 55.4 | 4 12 27.8 | 44.85 |
| 12 R. G. E. Flint (349 Ivy) | 75×79 | 227 | 157 | 50 29 | 48 20 | 56 18 | 48 53 | 49 38.8 | 4 13 38.8 | 44.64 |
| 13 A. W. MUIRHEAD (346 Dot) | 70×90 | 223 | 136 | 49 7 | 48 57 | 57 3 | 50 19 | 51 49.2 | 4 17 15.2 | 44.01 |
| 14 H. CHAMBERS (348 A.J.S.) | 74×81 | 188 | 116 | 46 4 | 46 16 | 47 4 | 1 27 5 | 55 36.6 | 4 42 5.6 | 40.14 |
| 15 F. G. MORGAN (348 Cotton) | 71×88 | 221 | 161 | 45 43 | 46 14 | 1 17 59 | 47 57 | 1 20 17 | 4 58 10 | 37.98 |
| 16 S. A. DALE (348 New Scale) | 71×88 | 240 | 134 | 1 56 55 | 48 37 | 46 21 | 50 12 | 54 48 | 5 16 53 | 35.72 |
| C. G. PULLIN (346 Douglas) | 57×68 | *273 | 158 | 42 36 | 43 51 | 47 16 | 44 26 | — | — | |
| A. BOOTH (348 Massey-Arran) | 71×88 | 253 | 147 | 47 18 | 46 29 | 51 17 | 55 3 | — | — | |
| H. LE VACK (346 New Imperial) | 70×90 | 260 | 164 | **40 7 | 40 11 | 40 57 | — | — | — | |
| F. A. LONGMAN (348 A.J.S.) | 74×81 | 234 | 152 | 40 55 | 41 3 | 42 24 | — | — | — | |
| H. F. HARRIS (348 A.J.S.) | 74×81 | 229 | 162 | 40 10 | 40 18 | 49 59 | — | — | — | |
| E. REMINGTON (348 Edmund) | 71×88 | 255 | 163 | 42 41 | 42 10 | 48 31 | — | — | — | |
| G. BROWNE (348 Edmund) | 71×88 | 254 | 148 | 46 22 | 47 54 | 45 51 | — | — | — | |
| F. J. PRICE (346 Diamond) | 70×90.5 | 223 | 158 | 51 21 | 47 14 | 50 3 | — | — | — | |
| H. R. DAVIES (348 A.J.S.) | 74×81 | 234 | 154 | 40 11 | 40 34 | — | — | — | — | |
| G. E. COWLEY (348 New Scale) | 71×88 | 232 | 152 | 41 24 | 41 38 | — | — | — | — | |
| J. A. PORTER (348 New Gerrard) | 71×88 | 253 | 137 | 42 54 | — | — | — | — | — | |
| R. GRAY (348 New Scale) | 71×88 | 246 | 159 | 47 0 | — | — | — | — | — | |
| JAS. WHALLEY (348 Massey-Arran) | 71×88 | 257 | 177 | 49 41 | — | — | — | — | — | |
| C. PARKINSON (346 Dot) | 70×90 | 221 | 146 | 49 59 | — | — | — | — | — | |
| A. E. TAYLOR (348 Coulson) | 71×88 | 253 | 147 | 1 11 11 | — | — | — | — | — | |
| A. MILNER (348 Raleigh) | 71×88 | 238 | 158 | 1 15 42 | — | — | — | — | — | |
| E. SEARLE (348 Sheffield-Henderson) | 71×88 | 237 | 141 | — | — | — | — | — | — | |
| G. KELLY (348 A.J.S.) | 74×81 | 233 | 144 | — | — | — | — | — | — | |
| †N. NORRIS (349 Ivy) | 75×79 | 231 | 182 | — | — | — | — | — | — | |

* Heaviest Junior. † Heaviest Junior Rider. ** Fastest Lap=56.46 m.p.h.

# LIGHTWEIGHT T.T. RACE. Distance, 188·75 Miles. 32 starters; 14 survivors.

| Rider, Capacity and Machine. | Bore and Stroke. | Weight. Machine. | Weight. Rider. | First Lap. | Second Lap. | Third Lap. | Fourth Lap. | Fifth Lap. | Total Time. | Average Speed. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | lb. | lb. | h. m. s. | h. m. s. | h. m. s. | h. m. s. | h. m. s. | h. m. s. | m.p.h. |
| 1 G. S. DAVISON (248 Levis) | 62·82.5 | 159 | 136 | 44 35 | 44 30 | 44 54 | 46 19 | 46 38.8 | 3 46 56.8 | 49.89 |
| 2 D. YOUNG (249 Rex-Acme) | 60×88 | 243 | 162 | 47 32 | 46 31 | 48 7 | 48 15 | 49 52.6 | 4 0 17.6 | 47.12 |
| 3 S. J. JONES (249 Velocette) | 63×80 | 218 | 158 | 46 57 | 46 59 | 48 21 | 49 8 | 50 6.6 | 4 1 31.6 | 46.90 |
| 4 L. PADLEY (249 Sheffield-Henderson) | 60×88 | 233 | 153 | 47 52 | 51 22 | 48 5 | 48 40 | 48 42 | 4 4 41 | 46.29 |
| 5 D. G. PRENTICE (249 New Imperial) | 64.5×76 | 217 | 133 | 49 17 | 49 0 | 50 39 | 49 38 | 52 35 | 4 11 9 | 45.10 |
| 6 F. C. NORTH (249 O.K.) | 60×88 | 237 | 128 | 48 25 | 47 34 | 48 59 | 1 0 33 | 50 44.2 | 4 16 15.2 | 44.28 |
| 7 N. HALL (249 O.K.) | 60×88 | 234 | 146 | 51 47 | 49 51 | 55 15 | 51 39 | 50 35.4 | 4 19 7.4 | 43.68 |
| 8 C. H. HOPWOOD (249 Levis) | 63×80 | 207 | 169 | 53 51 | 54 16 | 54 54 | 53 4 | 54 33.4 | 4 30 3.2 | 41.83 |
| 9 L. NICHOLSON (248 Coulson) | 64×77 | 257 | 151 | 52 47 | 53 36 | 1 7 19 | 48 15 | 50 20.6 | 4 31 17.6 | 41.57 |
| 10 R. W. LOUGHTON (249 Francis-Barnet) | 64.5×76 | 220 | 145 | 46 52 | 1 10 28 | 48 46 | 47 51 | 1 5 23 | 4 39 28 | 40.56 |
| 11 G. E. STOBART (249 New Hudson) | 63×80 | 193 | 173 | 57 13 | 1 0 45 | 57 37 | 56 7 | 1 8 59.8 | 5 0 41.8 | 37.66 |
| 12 G. KUHN (225 Sun-Vitesse) | 64×70 | 226 | 170 | 54 53 | 1 3 53 | 58 1 | 1 2 21 | 1 19 22 | 5 18 30 | 35.56 |
| 13 W. H. LORD (225 Sun-Vitesse) | 64×70 | 227 | 142 | 55 13 | 53 59 | 1 26 33 | 1 6 6 | 1 4 19 | 5 26 10 | 34.72 |
| 14 O. WADE (249 Diamond) | 64.5×76 | 225 | 188 | 54 18 | 54 15 | 55 30 | 1 42 59 | 1 0 57 | 5 27 59 | 34.53 |
| F. W. APPLEBEE (249 Levis) | 63×88 | 199 | 133 | 54 45 | 58 12 | 51 10 | 49 8 | — — | — | |
| T. SIMISTER (249 Diamond) | 64.5×76 | 217 | 143 | 54 28 | 53 36 | 52 27 | 53 20 | — | — | |
| B. KERSHAW (249 New Imperial) | 64.5×76 | 216 | 122 | 46 1 | 45 37 | 46 8 | — | — | — | |
| L. HORTON (249 New Imperial) | 64.5×76 | 214 | 157 | 47 19 | 47 12 | 48 2 | — | — | — | |
| R. N. JUDD (249 Velocette) | 63×80 | 215 | 133 | 48 7 | 48 10 | 49 17 | — | — | — | |
| G. DENLEY (249 Velocette) | 63×80 | 219 | 141 | 48 32 | 1 9 39 | 1 11 54 | — | — | — | |
| J. JOYNSON (249 Invicta) | 63×80 | 221 | 139 | 47 34 | 2 14 34 | 49 43 | — | — | — | |
| JNO. C. WHALLEY (249 Massey-Arran) | 60×88 | 237 | 147 | 46 42 | 45 59 | — | — | — | — | |
| G. E. TOTLEY (249 New Imperial) | 64.5×76 | 208 | 152 | — | 50 1 | 50 33 | — | — | — | |
| W. L. HANDLEY (249 O.K.) | 60×88 | 233 | 145 | *44 24 | — | — | — | — | — | |
| P. PIKE (247 Levis) | 67×70 | 193 | 142 | 46 26 | — | — | — | — | — | |
| H. PETTY (249 Diamond) | 64.5×76 | 224 | 156 | 51 31 | — | — | — | — | — | |
| D. B. CALDER (249 New Imperial) | 64.5×76 | 213 | 254 | 57 49 | — | — | — | — | — | |
| C. W. JOHNSTON (249 New Imperial) | 64.5×70 | 189 | 136 | 1 0 44 | — | — | — | — | — | |
| C. M. FAIRWEATHER (248 Coulson) | 64×77 | 254 | 134 | — | — | — | — | — | — | |
| M. BISHOP (225 Sun-Vitesse) | 64×70 | 222 | 156 | — | — | — | — | — | — | |
| W. D. MARCHANT (249 Sheffield-Henderson) | 60×88 | 223 | 149 | — | — | — | — | — | — | |
| C. EDWARDS (249 New Imperial) | 64.5×76 | 219 | 156 | — | — | — | — | — | — | |

* Fastest Lap = 51 m.p.h.

# The London-Edinburgh Run

At Hendon last Friday evening. This year the start took place in much less picturesque surroundings, and public interest was naturally less pronounced than when the competitors were dispatched from Ye Olde Gate House at Highgate.

## Out of 245 Starters in the M.C.C. Classic Whitsuntide Event, 219 Complete the Journey

IT hardly seems natural to start the London-Edinburgh run from Hendon, which is not—and does not want to be—London. Gone is the old glamour of starting from Highgate in that fine wide open space thronged with people beyond the Gate-House Inn. This year the fates and the Metropolitan police ruled otherwise, and the start, on Friday night last, took place in the open country outside the premises of the London Country Club, the hospitality of which, extended to members and officials, was highly appreciated. Unfortunately, the space wherein the competing vehicles were marshalled was somewhat restricted.

Two people started exceedingly late and did not sign the checkers' sheet: Stannah (499 Rover) left well over half an hour after his schedule time, owing to a garage refill of petrol and water, while Heller (293 Calthorpe) omitted to sign the sheet and started 20m. late.

### Lighting Equipment.

Acetylene lighting held its own. Dissolved acetylene cylinders were used in a number of cases, and, as on the Exeter and Land's End runs, Rhode's Triumph was illuminated by means of two Lucas King of the Road headlights placed side by side.

Boorer (678 N.U.T.) had wrapped his route card round a roller and covered it with celluloid. This roller was mounted on brackets and so placed that it could be rotated so as to show the route at every stage throughout the journey merely by turning it the required amount. Browning (349 A.J.S.) had rigged up an ingenious home-made arrangement, consisting of a case with a glass top through which a home-made route card, mounted on rollers, could be seen, and turned as required by wing nuts on the outside.

Fellowes competed as usual on the De Dion, the engine of which is slightly older than he is; its 1922 improvements consist of a new T.B. magneto and new piston rings.

We noticed a new o.h.v. flat twin Brough with a short wheelbase frame, saddle tank, and unit engine and gear box, which was being piloted by F. W. Stevenson. The new Hagg tandems were fitted with Barr and Stroud single sleeve-valve engines and ran very quietly. Hugh Gibson (Raleigh) was amongst those who had returned from the Isle of Man in time to take part in the event, and H. Glendinning turned out on one of the new 976 c.c. J.A.P. engined Zeniths, with three-speed gear and all-chain drive.

The inseparable friends, Jacobs and Le Grand, now united after the war, were riding identical Rex-Acme sidecar outfits, both fitted with Wattalite generators and both equipped with Belgrave tyres, a new make of cover hailing from Wembley. The two P. and M. sidecar outfits, ridden by Townsend and Lewis, embodied new types of sidecar bodies; the former's was of the semi-sporting type, with a scuttle which hinged sideways, and the latter's was built of three-ply cedarwood.

The first three-wheeler driver, Spouse (T.B.), started with a vase on the dashboard filled with white narcissi, but Biggs (Coventry-Premier three-wheeler) went further than this, leaving for Edinburgh with three up.

There were only eight non-starters among the solo riders. There was a fair crowd of spectators, not particularly well marshalled, for only one policeman was on duty, but, on the whole, the competitors had little difficulty in getting away, the later starters learning that the best way to get through the throng was to make a good deal of noise and to speed up, when a clear passage was quickly made. Among the 110 sidecars there were only six absentees, and only two three-wheelers did not line up for the start.

From Hendon to Barnet the roads were quite good and adequately marshalled.

**The London-Edinburgh Run.—**

### Rain for a Moment.

Heavy rain fell in the neighbourhood of Barnet.

After the stifling heat of the preceding day the evening's run was pleasant, and the well-tarred roads prevented dust from becoming a serious trouble, though the later competitors complained slightly on this score. By four o'clock in the morning the weather had become chilly, and passing through the Trent Valley it was bitterly cold.

G. Packman (P. and P.) was late at Grantham, having broken his petrol pipe, but he subsequently made up time. Near Grantham, also, C. C. Labin (678 Martinsyde) experienced a mysterious fire, but fortunately neither he nor his machine were seriously damaged, and he was able to continue. Muskham Bridge, north of Newark, is in the process of being widened, and to prevent competitors driving over the edge and into the Trent observers had been posted to give due warning.

### Doncaster and a Sleepy Checker.

Just short of Doncaster G. E. Cuffe (269 Metro-Tyler) broke a magneto chain, but by a stroke of luck he had a spare chain with him, and was under way again in a few minutes. R. N. Thomas (348 Hagg tandem) experienced continuous lamp trouble, and used a hand torch for a considerable distance. Fortunately, however, the period of darkness was short, and even the earliest numbers were able to extinguish their lamps at Doncaster. At this point the official checker was late, and the men were not required to sign on.

With a chill head wind but a bright morning the competitors made for the breakfast stop at Ilkley, and experienced poor road surfaces for the first time for a stretch before that town. At the Middleton Hotel, Ilkley, all the arrangements for the riders' comfort had been admirably carried out, and the sporting proprietor had himself superintended the lighting of the kitchen fires at 3 a.m. The men arrived in good order, and machines were parked in the hotel drive, where petrol and oil were obtainable. J. G. Haun (876 New Imperial) had the misfortune to run out of petrol within sight of the check, and since he walked into the control without his machine he was behind time. Had he pushed his machine in he would have saved his gold medal.

By 7.30 the first men were once again ready to continue their long run northwards, and good roads were the order of the day. Not a few took things easy, and near Skipton we passed an Ariel team resting by the roadside, while George Brough was sitting on a sunny wall discussing matters with a friend. Just beyond Settle a number of local enthusiasts had gathered at the summit of a long upward grade (Buckhaw Brow), but it was a top gear climb for most machines.

In Kirkby Lonsdale competitors were diverted from the main road and passed on to Kendal via Old Hutton, an excellent road, though rather dusty in places; thence onwards to Windermere and Ambleside, and so to the long steep ascent of Kirkstone Pass.

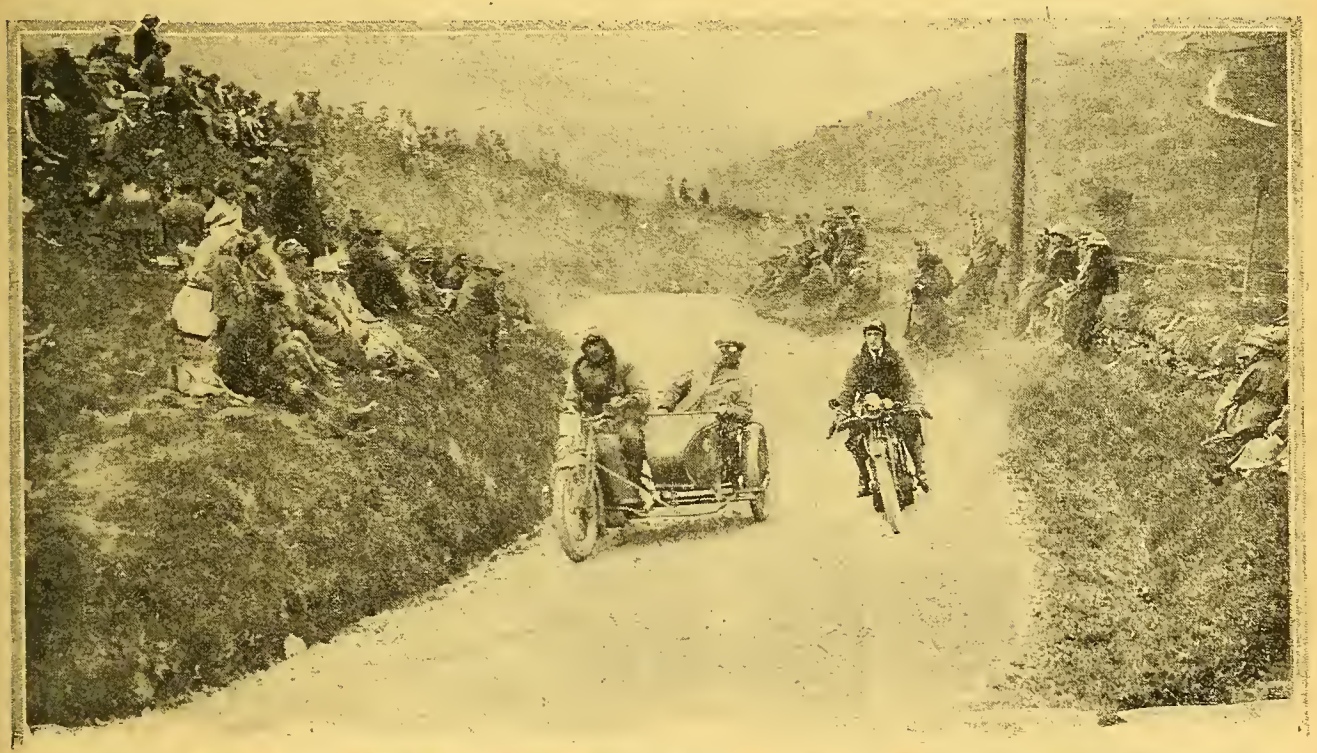
### Kirkstone.

Perhaps the steepest pitch of this climb occurs on leaving Ambleside village, but thereafter there is a long engine-heating pull of about a mile, then an easy stretch including a slight descent, and, finally, after two sharpish corners, a long grind of nearly 1 in 4, known as "the struggle," the summit being 1,476 feet above sea level. With so huge an entry it is impossible to mention each individual performance, especially as the hill is no more than a middle gear climb for many 350 c.c. machines, but some outstanding performances are worthy of note.

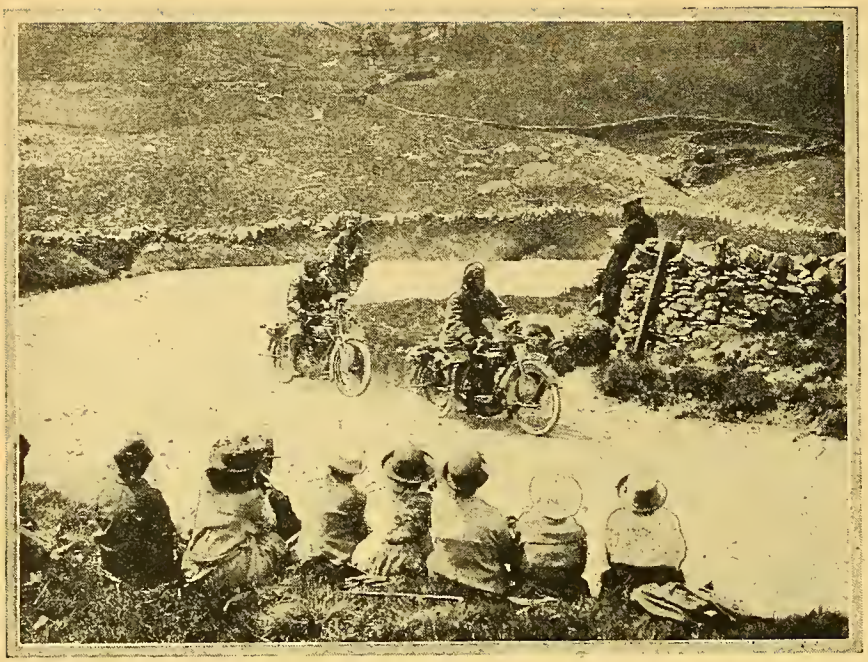
### Among the Early Arrivals.

Amongst the early arrivals, G. Brough (Brough Superior), C. Wheeler (Scott), H. Deacon (Norton), W. Brandon (o.h.v. Triumph), and R. Lane (Brough) made fine climbs of the upper stretch; G. Cuffe (Metro-Tyler) was slow, and was passed by A. C. Rhodes (o.h.v. Triumph). G. Lanford (O.K. Junior) found the long grade too much for his engine. Hugh Gibson (Raleigh) toured up with his hand on his hip, and C. Labin (Martinsyde), H. Lane (Levis), V. Belfield (o.h.v. Triumph), A. Symes, and E. Gifford, on Martinsydes, made splendid ascents.

Next came R. Purnell on his little J.E.S., the tiny engine purring up the steep grade and running well within its power. This was quite one of the most noticeable performances of the day. R. Reid (Scott), A. Wall (A.B.C.), O. Collier (Sunbeam), T. Harman (Coulson), and H. Nias (Ariel), came up fast, while G. Wray (Triumph), F. Townshend (Zenith-Bradshaw), S. Warne (Precision



On the worst portion of Kirkstone Pass, as will be gathered from the crowd. W. H. Hardman (993 c.c. Matchless sidecar) and a non-competitor.



Judging by their nonchalant riding attitude, the hairpin on Kirkstone gave this trio no trouble whatever. J. and A. Stanger (538 c.c. Stangers), followed by L. E. Chirney (348 c.c. Beardmore-Precision).

Barr and Stroud), H. Glendinning (Zenith), and T. Buckle (F.N.) were noticeably quiet. H. Sutton (211 Enfield) failed; F. Parsons (Ner-a-Car) stopped momentarily, and his team mate, N. Runnels-Moss, just got up by a piece of clever driving, a good performance for a machine which is not designed for "stunt" hill climbs.

C. Bartlett (Omega) ran beside his mount, and A. Stanger (Stanger) and E. Clark, Jun. (Douglas) made clean ascents, though their engines were misfiring. The next batch of fast climbs was made by E. Eland (B.S.A.), W. Wells (A.B.C), A. Guthrie (Diamond B. and S.), T. Grose (A.B.C.), and R. Charlesworth (Zenith-Bradshaw). L. Cashmore (Alecto), ran, as did D. Stone (Orbit), while F. Whitfield on an old pattern Rudge-Multi found his machine to be too highly geared, and stopped. B. Fellowes, on the veteran De Dion, made a clean climb with not too much in hand.

Not until the sidecars arrived was there any serious baulking, but L. Arnold (Matchless sc.) failed and baulked W. Sweet (Harley-Davidson sc.), who failed after scraping round Arnold's stationary outfit. On the whole, the many Matchless riders put up very fine performances, being quiet as well as fast.

Three of the four Henderson four-cylinder outfits went up very fast, but J. Cheyney, on a 10 h.p. model, failed badly and baulked an early three-wheeler. Perhaps the best performance in the sidecar class was that of H. Gold on a 348 c.c. Francis-Barnett, though C. Sprosen (370 Connaught sc.) made a fine, steady climb.

There appeared to be no reason for the passenger of W. Chase's Dunelt to perform acrobatics, as the outfit went up well. E. Bridgeman made a fine climb on his Indian Chief, as did all the P. and M. outfits, and Clifford Wilson (Quadrant sc.) and the Brough Superiors climbed well, S. Tait having a windscreen which he preferred to look round. Of the remainder the following were noticeable: P. Platt (Bradbury sc.), P. Peterson (Dunelt sc.), W. H. Bashall (Martinsyde sc.), W. King and J. A. Masters (Harley-Davidson sc.), Frank Smith (Clyno sc.), and L. Peaty (550 Hawker sc.).

### Failures.

The following failed or ran: J. Bradbury (Triumph sc.), R. Andrews (557 B.S.A. sc.), A. Graham (Matchless sc.), T. Ryan (Rudge sc.), A. Conville (Lea-Francis sc.), I. Brettell (370 Connaught), and F. Douglass (Bradbury), who appeared to be in trouble with his change-speed Quadrant.

Of the three-wheeled runabouts S. McCarthy, R. Duke-Williams, H. Beart, S. Hall, A. Maskell, and W. Pattison on Morgans all made first-class climbs, and D. Rhodes (Scott Sociable) made a wonderful ascent for so small an engine. F. Spouse (T.B.) and J. Meredith (T.B.) performed well, and C. Hollyoak piloted a newcomer named the Federation.

### Toward the Border.

After crossing Kirkstone there followed a picturesque drop into Patterdale requiring care, and thereafter delightful Lakeland scenery was enjoyed until the outskirts of Carlisle were reached. Here in the open space outside the County Hotel competing machines were marshalled in most orderly form, the foremost machines in the ranks being despatched after the luncheon interval, while the latest arrivals lined up at the tail end of the long procession. Lunch at 4 p.m. was a new experience for many of the cycle car drivers!

Here we learned that Pattison (Morgan) had been delayed by a broken water connection, Vidler (Triumph) had seized his engine near Otley, and Farmer (Zenith-Bradshaw) had collided with a competing sidecar and suffered injuries.

McGinnell had lost the petrol filler cap

Martinsydes of varying capacity on the hairpin. A. A. Symes, riding a 678 c.c. model, and E. H. Gifford on a mount of 496 c.c. capacity.

**The London-Edinburgh Run.—**

of his Triumph, and had stuffed his now sodden handkerchief into the orifice. A better plan would have been to transfer the oil cap and cover the oil tank, since lubricant does not plop out as petrol does. Cranford (P.V.) suffered a broken sidecar spindle and then transferred as passenger to his brother's Matchless.

On to Gretna Green, one observed that the enterprising A.A. had erected a yellow banner over the border bridge "The A.A. Welcomes the M.C.C." Regular running was the order over magnificently surfaced tarmac roads, undulating but slightly. Ontside Carlisle, Eli Clark, Jun., had to stop to clean the jet; one or two others suffered a similar experience, but mostly when groups were overtaken they were chatting or smoking cigarettes, trouble being rare.

Tea was arranged at Moffat, where the usual crowd had collected. Small boys found amusement in collecting the empty oil tins, and had a fine array with useful dregs for their bicycles and scooters. A magnificent climb over the mountains followed after Moffat.

**Emergency Dyeing Arrangements.**

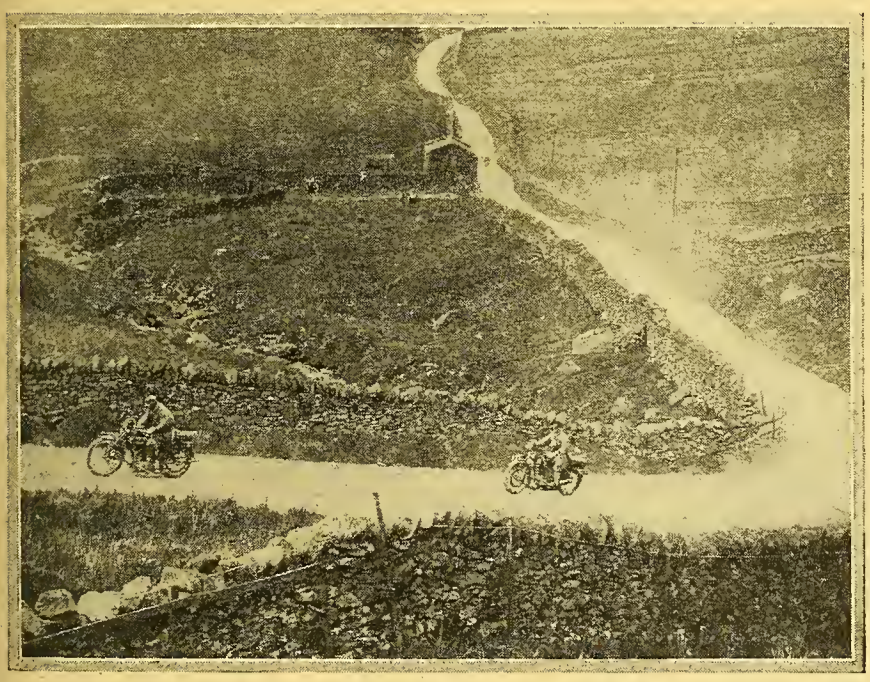
There was no risk of losing the way; apart from well placed arrows checked by G. Pettyt, W. H. Wells, the captain, made sure of things by carrying small sweet bags full of blue dye which, thrown heavily on the ground, produced a first rate line denoting the route.

Hereabouts we spoke to Frank Smith, who, driving a Clyno sidecar, had J. Cocker (formerly of Singers and Triumphs) in the sidecar as passenger. This connection may form the subject of an interesting announcement in the near future.

Near Crook Inn, White (Sunbeam) was passed by the roadside with his front chain case off. Through Liberton to Edinburgh crowds lined the route, a large number of owners of cars and motor cycles of all descriptions having motored out of the city for some miles to meet the dusty and tired riders.

As was the case in the 1920 London-Edinburgh run, when Kirkstone Pass was included, a big crowd gathered at the summit to watch and criticise the competitors. R. L. Richardson (345 c.c. Alecto) followed by P. A. Hopkins (348 c.c. Ivy).

Most complained of smarting eyes, some going so far as to carry eye lotion in order to bathe their eye at the controls. Notwithstanding, a magnificent and enjoyable run was the general verdict, and from a large percentage which succeeded, some were asking if the M.C.C. would willingly dole out so many gold medals, or whether they would make the event much stiffer next year—something to compare with the Eastertide London-Land's End Trial.



A slight idea of the long climb up Kirkstone is conveyed by this photograph taken at an elevation, showing G. Wray (499 c.c. Triumph) and J. J. Sykes (596 c.c. Sunbeam) making an effortless climb.

## SURVIVORS AND RETIREMENTS.

**PROVISIONAL SUMMARY OF AWARDS.**

| | Gold Medals. | Silver Medals. | Bronze Medals. |
|---|---|---|---|
| Solos .. .. .. | 99 | 12 | 2 |
| Sidecars .. .. | 78 | 12 | 1 |
| Cyclecars .. .. | 15 | — | — |

A.B.C.

A. G. Wall (398), W. Henry Wells (398), J. W Grose (398), A. S Pinchbeck (398).

*Retired:* W. Sharpe (398).

A.J.S.

H. B. Browning (349), C. H. Mocatta (349), A. F. Plummer (349), A. F. F. Hall (349), A. M. O. McLachlan (349), E. W. Choldcroft (349), W. C. Hemy (799 sc.), J. Ball (799 sc.), A. S. Bagshaw (799 sc.), T. G. White (799 sc.) E. S. Powell (799 sc.).

*Retired:* W. Higgs (799 sc.).

ALECTO.

E. F. Taylor (345), R. S. Pilcher (345), L. A. Y Cashmore (345), R. L. Richardson (345).

ALLDAYS-ALLON.

R. C. Cooper (292), W. Johnson (292).

ARIEL.

C. Dickinson (498), C. Bourlet (498), H. Reyre (498), G. W. Segrott (498), F. J. Watson (796 sc.).

*Retired:* H. C. Nias (498).

BEARDMORE-PRECISION.

L. E. Chirney (350), C. Waldin (350), S. Warne (B. and S.) (350), C. W. Lewis (598 sc.).

BRADBURY.

P. Platt (749 sc.), F. H. Douglass (996 sc.), W. E. Grange (749 sc.), G. E. Minett (749 sc.).

BROUGH.

F. W. Stevenson (499), R. W. Lane (692), W. E. Brough (692 sc.).

High-powered twins on Kirkstone. J. S. Biss (998 c.c. Indian sidecar) and S. S. Debenham (1100 c.c. Campion sidecar)

BROUGH-SUPERIOR.
G. Brough (976), H. Karslake (976), W. A. Fell-Smith (976 sc.), S. C. Tait (976 sc.), H. Clennell (976 sc.), A. Greenwood (976 sc.).

B.S.A.
E. Eland (557), R. J. Andrews (557 sc.), R. McK. Veale (985 sc.).

CALTHORPE.
*Retired:* E. M Heller (293).

CAMPION.
S. S. Debenham (1,100 sc.).
*Retired:* F. Clay (293).

CHATER-LEA.
*Retired:* J. E Pautard (976 sc.).

CLYNO.
F. Smith (925 sc.).

CONNAUGHT.
I. P. Brettell (370 sc.), C. L. Sprosen (370 sc.).

COULSON
J. D. Hanman (349).

COVENTRY EAGLE.
P. L. Mayo (249), S. C. Pearce (350 sc.).

COVENTRY VICTOR.
*Retired:* J. Wallis (688 sc.).

COVENTRY PREMIER (CYCLE CAR).
R. A. Biggs (1055.5).

DE DION BOUTON.
B F. C. Fellowes.

DIAMOND
B. F. C. Fellowes.

DOUGLAS.
L. S. Baddeley (348), J. A. Newman (494), E Clark, Junr. (494), T. L. Daniels (595), J. E. Beard (595).
*Retired:* H W. Furness (595 sc.), G. Kuhn (595 sc.), L Heller (595 sc.)

DUNELT.
O. S. Bridcutt (499), P. Pehrson (499 sc.), W. Chase (499 sc.),

DUZMO.
F. J. Wallis (496)

EDMUND
A. C. Robbins (292).

FEDERATION.
J. H. Fairweather (269), R. C. Bennett (269).

FEDERATION (CYCLE CAR).
C. F. Hollycak (976).

F.N
T. W. Buckle (748).

FRANCIS-BARNETT.
H. Gold (346)

G.R.I.
D. White (349).

HAGG TANDEM.
R. N. Thomas (350), B. N. Taylor (350).

HARLEY-DAVIDSON.
F. V. Edwards (584), R. V. Saltmarsh (584), E. J. L. Strong (993 sc.), J. G. Bryson (998 sc.), P. W. White (998 sc.), W. A Sweet (998 sc.), W King (998 sc.), F. Broomfield (998 sc.), H. E. Crofts (998 sc.), J. A. Masters (998 sc.), G. Baxter (998 sc.), E. O. Spence (998 sc.).

HAWKER.
A. A. Attwood (548 sc.), L. F. Peaty (548 sc.).

HAZLEWOOD.
J. W. Hazlewood (976 sc.).

HENDERSON.
W. J. Barker (1,301 sc.), S. F. Farley (1,301 sc.), H. V. Bateman (1,301 sc.).
*Retired:* J. W. Cheyney (1,301 sc.).

INDIAN.
H. W. Harrington (596), J. McBirnie (998), P. H. Ingham (596), L. A. Bridgman (998 sc.), J. S. Biss (998 sc.).

IVY.
H. J. Greathead (348), P. A. Hopkins (348).

J.E.S.
R. P. Purnell (169).

LEA-FRANCIS.
J. Richardson (496), A. Conville (592 sc.).

LEVIS.
H. R. Lane (211).

L.S.D (CYCLE CAR).
*Retired:* J. Robinson (986), T. G. MacKenzie (986)

MARTINSYDE.
C. C. Lahin (678), H H. Nicholson (496), A. A. Symes (678), E. H. Gifford (496), J. T. Bashall (678 sc.), W. H. Bashall (678 sc.).

MATCHLESS.
T. J. Ross (996 sc.), R. G. Boxer (996 sc.), W. F. Guive (996 sc.), W. H. Hardman (996 sc.), W. Bucknell (976 sc.), E. C. Lunniss (976 sc.), L A. Willmott (976 sc.), B. S. Allen (976 sc.), L. Arnold (976 sc.), G. D. Hardee (996 sc.), F. J. Ellis (996 sc.), J. Hoult (996 sc.), J. Graham (996 sc)., A. W. Graham (996 sc.), H. L. Miserez (996 sc.), F. MacDonald (996 sc.), F. W Neill (976 sc.), P. S. Crauford (996 sc.), T. E Ranger (976 sc.), E. C. Barton (976 sc), D. S. Parsons (976 sc.), G. Nott (996 sc.), F. E Jones (976 sc.).

McKECHNIE.
F. W. Becker (668 sc.).

METRO-TYLER.
G. E. Cuffe (269).

MORGAN (CYCLE CAR).
R. Duke Williams (986), H. E. K. Sawtell (1,096), W. M. Cowper (1,096), R. B. Whiffen 1,096), H. Beart (1,096), A. C. Maskell (986), F. W. Dame (980), S. A. McCarthy (980), S. Hall (1,096).
*Retired:* W. Pattison (1,096).

NER-A-CAR.
F. K. Parsons (211), N. A. C. Runnels-Moss (211).

NORTON.
H. W. Deacon (490), A. H. S. Love (490), R. H. Attwood (633 sc.), G. Haines (633 sc.).

N.U.T.
J. G. D. Boorer (678), D. S. Baddeley (678), R. S. Ellis (500), M. O'Reilly (678).

O.K. JUNIOR.
G. W. Langford (292), F. J. Youngs (292).

OMEGA-DUPLEX.
C. W. Bartlett (348).

ORBIT.
D. J. Stone (262).

P. AND M.
J. A. Leyland (555), G. Townsend (555 sc.), R. Lewis (555 sc.), P. Cunningham (555 sc.).
*Retired:* T. G. Bullus (555 sc.).

P. AND P.
G. Packman (250).

POWELL
J. A. Stedman (547).

P.V.
*Retired:* R. V. Crauford (496 sc.).

QUADRANT.
C. Wilson (654 sc.), G. A. Pidgeon (654 sc.).
*Retired:* W. W. E. Clarke (654 sc.).

RALEIGH.
H. Gibson (348), J. Haworth (348), R. S. Newnham (348), A. R. H. Stewart (348).

READY.
D. Read (358).

REX-ACME.
J. P. Le Grand (550 sc.), W. A. Jacobs (550 sc.), F. White (986 sc.).

ROVER
*Retired:* L. N. Stannah (499).

ROYAL ENFIELD.
H. Sutton (225), A. F. Pulling (976 sc.).

RUDGE.
A. W. Hadley (499), F. S. Whitfield (499), E. Kehoe (499 sc.), R. J. Ryan (998 sc.).

SCOTT SOCIABLE.
D. W. Rhodes (578).

SCOTT.
C. J. Wheeler (481), R. P. Reid (481), W. R. Preston (532), G. S. Green (532).

STANGER.
A. Stanger (538), J. Stanger (538).

SUNBEAM.
G. W. Dawson (489), J. J. Sykes (596), O. F. Collier (489), E. A. Wright (770 sc.), E. Cross (599 sc.), L. V. Freeman (976 sc.).
*Retired:* R. Street (489).

T.B. (CYCLE CAR).
F. S. Spouse (986), S. M. Greening (986), J. W. Meredith (986).

TRIUMPH.
A. R. Richardson (550), G. W. Burgoyne (550), S. J. Marks (499), A. C. Rhodes (499), W. Atkinson (550), W. P. Brandon (499), V. Belfield (499), G. Wray (499), G. H. Houlton (550), C. W. Ward (499), M. Pearson (550), J. Bradbury (550 sc.), H. T. Chapman (550 sc.); S. A. Cooke (550 sc.), J. B. McGinnell (550 sc.).
*Retired:* H. J. Vidler (499), A. C. Ward (550 sc.), A. H. Nelson (550 sc.).

VELOCETTE.
*Retired:* D. Hall (220).

WOOLER.
J. Wooler (349), J. F. Hull (349), H. Robinson (349), A. Milward (349).

ZENITH-BRADSHAW.
W. D. Pugh (498), F. C. Townshend (498), H. Glendinning (986), R. Charlesworth (498), R. H. Bywaters (986 sc.), R. B. Clark (498 sc.).
*Retired:* A. H. Farmer (498).

---

# IRISH RELIABILITY TRIALS.

THE Dunlop Cup reliability trial of the Dublin and District Club on the 27th ult. was won by T. E. Greene (496 Douglas), whose margin of error at the secret checks was less than any of the other riders who completed the course with full marks. The sidecar prize was won by J. Healy (598 James), and the team prize by Allen, Hill and Hurse. Gold medals were won by twenty-five of the finishers—an expensive result for the club treasury.

The Whitsuntide trial of the Dublin and District Club took the form of a novices' trial, most of the club experts being engaged in the open event of the Cork Club. Major Waters got together a very good entry, and over forty riders took part in the event. With good weather and easy conditions most of them completed the course.

# 50 Mile Race on the Sands

## Welsh Speed Championships. A Contest on the Beach at Pendine.

ON Whit-Monday Pendine Sands was once again the scene of successful motor cycle racing in connection with the Welsh speed championships of the Carmarthen and District Motor Cycle and Cycle Car Club. The racing commenced punctually at 10.30 a.m., and a very large crowd of spectators had assembled to witness this popular event. Several of the competitors had been staying at Pendine over the week-end, getting in fettle for the day, and some very close racing was the result.

### Machines Prove Staying Power.

A marked improvement in the staying powers of machines was noticed this year over preceding years, very few competitors falling out through mechanical breakdowns. In the 2½ miles sprint for unlimited machines, a nasty accident befell J. P. Board of Bridgend, who had a miraculous escape, his machine, a Norton, being very seriously damaged.

### Prominent Welsh Speedmen.

The entries included the cream of South Wales riders, among others being J. Thomas (Neath), mounted on his I.O.M. Sheffield Henderson, which made such a good performance in the Junior T.T., Dr. Lindsay on his Norton, Sgonina on his "Sgonina Special," and an A.J.S., the brothers Bush, and brothers Davies, Morris Isaacs, Wm. Edwards, etc.

Morris Isaacs (Carmarthen) did exceedingly well on his New Imperial, and was the winner by a comfortable margin of the 25 mile Welsh championship for machines up to 275 c.c.

### Long Distance Races.

The 25 miles championship for machines up to 350 c.c. was won by L. Davies (Newport) on a o.h.v. Cotton-Blackburn; although Sgonina would have been an easy winner had his machine (Sgonina Special) not been quite so new, he had to fall out in the last lap. The second man home was Jack Thomas (Neath) on his Sheffield Henderson, who ran practically neck and neck with L. Davies.

Great excitement prevailed, and the mounted police were kept busy at the start of the 50 mile Welsh championship for solo machines (unlimited c.c.), there being a considerable entry for this event.

The winner, F. Bush (Harley-Davidson), led from the start, maintaining this position throughout, finally winning by over a mile. Dr. Lindsay (Norton), after a tussle with H. Davies (Brough Superior), secured second position, the last mentioned rider coming in third. The results are as follow:

2½ MILE SPRINT FOR SOLOS UP TO 350 C.C.
1. C. Sgonina, Cardiff (A.J.S.).
2. J. Thomas, Neath (Sheffield-Henderson).
3. Luther Davies, Newport (Cotton Blackburn).

2½-MILE SPRINT, UNLIMITED C.C..
1. F. P. Bush, Neath (Harley-Davidson).
2. Dr. A. Lindsay, Neath (Norton).
3. C. Sgonina, Cardiff (S. Special).

25-MILE CHAMPIONSHIP UP TO 275 C.C
1. Morris Isaac, Carmarthen (New Imperial).

25-MILE CHAMPIONSHIP UP TO 350 C.C.
1. L. Davies, Newport (Cotton).
2. J. Thomas, Neath (Sheffield-Henderson).
3. T. G. Thomas, Carmarthen (Sheffield-Henderson).

50-MILE WELSH CHAMPIONSHIP, UNLIMITED C.C.
1. F. P. Bush, Neath (Harley-Davidson).
2. Dr. Lindsay, Neath (Norton).
3. H. Davies, Garnant (Brough Superior).

THE NEXT STAGE!

*MOTOR CYCLISTS interested in small or large cars should read*

The Autocar

Every Friday 4d.

*the forerunner of all motoring journals. Founded in 1895, it remains the largest and most successful automobile paper, and enjoys the greatest circulation. It is universally accepted as the representative British motoring journal.*

## T.T. ECHOES.

The Lucas Electrical Co. is to be congratulated on producing a twin two-spark magneto which withstood the searching test of the T.T. on the Scott machines. It is probably the first time that such an instrument has stood up successfully to such a gruelling, and this reflects pleasantly on the state of the British magneto industry.

* * *

It is rumoured that a well-known designer of an o.h.v. single lapped the course in 60 min. with a sidecar attached, afterwards remarking that he was *driving carefully*, as he did not wish to make the passenger (his father) nervous. With all due respect to the undoubted prowess of the driver, we are prepared to confess that had we been in the sidecar we might have felt the breeze.

# SIR EDWARD M. ILIFFE.

WE regard it as an honour to the technical Press in general and to *The Motor Cycle*, *The Autocar*, and sister journals in particular, that the list of His Majesty's Birthday Honours includes the name of Edward M. Iliffe, who is invested with a knighthood.

Sir Edward is joint proprietor with his brother—Mr. W. Coker Iliffe—of the firm of Iliffe and Sons, Ltd., owners and publishers of our sister journal, *The Autocar*, and the large group of technical and lay journals known to many as The Iliffe Press.

Naturally we are proud of the honour bestowed upon our director, especially since we know how deserved is the distinction.

During the war Sir Edward joined the Ministry of Munitions, of the machine tools department of which he subsequently became controller. After the Armistice he was appointed liquidator of machine tool and small tool contracts. Early in 1918 he received a C.B.E., and the following year he became an officer of the Legion of Honour.

In the Birthday Honours List.—Sir Edward M. Iliffe.

Sir Edward Iliffe is a Justice of the Peace for Warwickshire; President of the Coventry Chamber of Commerce and a member of the Association of British Chambers of Commerce; and President of the British Association of Trade and Technical Journals.

### A Pioneer Motorist.

An enthusiastic motorist since the earliest days—when he drove an Enfield Quad in the historic Thousand Miles Trial of 1895—Sir Edward is also a skilled tennis player, and frequently plays for Warwickshire County.

In extending our congratulations, we feel that we are writing on behalf of a large number of our readers, many of whom have at some time or another come in contact with the personality chiefly responsible for our success.

# ENJOYABLE LONDON RALLY.

LAST year somewhat inclement weather spoilt the North London M.C.C. Rally at Hendon; this year it was almost too hot. Nevertheless, the attendance at the aerodrome on Whit-Monday was quite good, although, considered in relation to the number of motor cyclists in London and the Home Counties, it was very disappointing.

### A Longer Run Wanted.

Perhaps Hendon is too near the Metropolis for the average motor cyclist who is a great traveller and ignores distance, especially when favoured by a long week-end like Whitsuntide.

This theory is confirmed by the fact that the Wakefield and District M.C. and L.C.C. easily won the Challenge Shield presented by Mr. A. J. F. Beaurain for the club travelling furthest to the meet, the mileage figure, of course, being multiplied by the number of members present. Wakefield gained 2,958 points, and the Connaught M.C.C., with a score of 2,478, was second, gaining the Triumph Challenge Cup (presented by the Triumph Cycle Co.).

Gymkhana events occupied the afternoon and evening, but neither the tent-pegging nor the apple bobbing, nor even the bun-eating competition was half so amusing as the remark of one of those present as he toured into the grounds on an ancient, certainly pre-war, twin in an advanced stage of decrepitude. "I wonder," quoth he, to his friend, "if I can have a blind here. *I'm doing seventy-five just now!*"

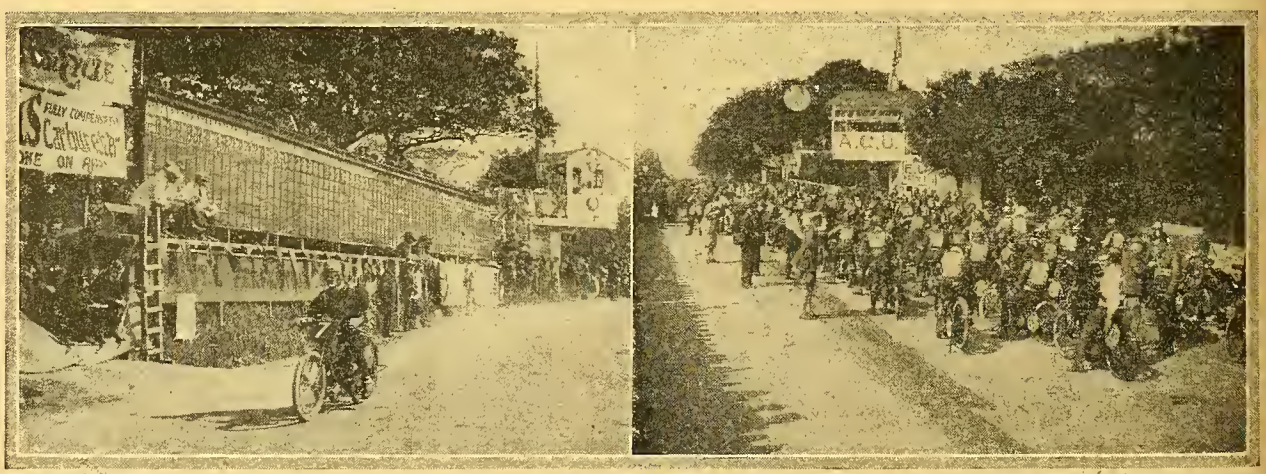
What struck the North Country visitors most was the number of old crocks present; but our representative was even more impressed by the popularity of Rudge-Multis and Connaughts. They were as numerous as insects on the unmown grass.

### A Surprised Prize Winner.

The usual competition for the most ingenious "gadget" provided an unusual *dénouement*; it was won by J. Dennis for a nail and copper wire repair to his gear box effected as a first aid measure to his Royal Ruby on his way to the rally—a case of turning misfortune to good account if ever there was!

An exhibition of "new models and unconventional makes" was better supported on the programme than in the grounds; and the ice-cream stall, generally, attracted greater crowds.

Two hire aeroplanes, there by special arrangement, were seldom allowed to remain long out of the air, and generally speaking there was always something happening until the approach of dusk broke the meeting up.



THE LIGHTWEIGHT AND JUNIOR T.T. RACES.

H. Petty (249 c.c. Diamond) accelerating at the start. Competitors awaiting their turn for the word to go.

# The O.K.-Junior in-

## The T.T.

broke all Lightweight lap records, putting up the fastest time in practice, and in the race itself making

***the fastest lap***

(Time 44 mins. 24 secs., over 51 m.p.h.)

ever recorded, and that from a standing start.

—took ***2 prizes out of 7 with only 3 entries.***

***2 O.K.'s finishing 6th & 7th.***

## The National Swedish May Races—

***2,300 Kilometres***

***FIRST***

HUMPHRIES & DAWES LTD., HALL GREEN, BIRMINGHAM.

# THE SENSATION OF THE 1922 T.T.

## A NEW LUBRICATION METHOD DISCOVERED

**FIRST IN THE LIGHTWEIGHT**
**FIRST IN THE JUNIOR**
**FASTEST LAP IN THE LIGHTWEIGHT**
**FIRST IN THE SENIOR**
**FASTEST LAP IN THE JUNIOR**
**FASTEST LAP IN THE SENIOR**

The winners of the above had the upper end of piston and cylinder walls lubricated by means of a new oil which was added to the petrol and supplied through the carburetter. The engines, when stripped for examination, were found to be in perfect condition and perfectly lubricated. The oil was

**MIRACLE OIL**

and the majority of the T.T. competitors, after severe test in practice, decided to use it in the races, being satisfied after examination of their engines that **MIRACLE OIL was indispensable.**

**MIRACLE OIL** is of even more importance to the ordinary user of internal combustion engines, as the perfect lubrication of the upper end of piston, cylinder walls, valves, valve stems and guides, means not only a faster and better engine, but an economy in upkeep which saves the pocket many pounds per year.

**½-oz. of Miracle Oil to 1 gallon of Petrol is all you require to complete your lubrication and make it perfect.**

**MIRACLE OIL WILL SHORTLY BE STOCKED BY EVERY FIRST CLASS AGENT, BUT PENDING CIRCULATION OF SUPPLIES TO ALL DISTRICTS, INQUIRIES SHOULD BE ADDRESSED TO:—**

# CONCORD CO. LTD.

## 18 BERNERS STREET, LONDON.




*In answering this advertisement it is desirable to mention "The Motor Cycle."*

The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

### *WHERE TO TOUR.*

Sir,—Having myself often been in doubt as to where to take my summer holiday, I presume that some of your other readers may have been so too. May I be allowed to suggest to these people that they should visit North Wales? There are numerous attractions about the place for the motor cyclist on tour; seaside towns with plenty of amusements and good accommodation, inland rides amidst gorgeous mountain scenery, and excellent roads with plenty of hill climbing, are but a few. SUMMER CYCLIST.

Epsom.

### *AN AMATEUR ASSOCIATION.*

Sir,—Although I think the A.C.U. has made rather a mistake in stopping the amateur race altogether, I do think there is something to be said for the objection that such a race held in between the Junior and Senior T.T. would, to quite a considerable extent, deteriorate their value. If this race became an annual one (held in between the Junior and Senior T.T.), I am sure the public would soon begin to take more interest in it than the trade event, in which case the most important motor cycling event of the year would lose its significance. Also, makers are not going to spend all the money and trouble necessary for competing in the T.T. if it is not spent to some good purpose.

Why not, therefore, have an Amateur Race, but hold it as far apart from the usual T.T. as possible, when the two events would not clash. D. GOODMAN.

Sir,—Messrs. J. M. Philpott's and J. V. Brook's letters have interested—and amused—me not a little; they have not, I am afraid, instructed me much.

Mr. Philpott, whom I know as a thorough good sportsman, misses the point of the matter altogether. He speaks entirely in terms of reliability trials, where, as he says, the amateur stands in just as favourable a position as the trade man. In speed events—road, track, or I.O.M.—he, I am sure, will agree the average amateur, however much he "pays attention to every small detail," is setting himself a hopeless task in attempting to compete against riders of special factory machines.

The second letter is mainly a very stereotyped crede of the A.C.U., as it is supposed to be, but Mr. Brook makes one interesting confession. The biggest stumbling block in the way of the proposed Amateur Race was the difficulty of defining an amateur. Now, in the first place, I understood that the Manx M.C.C. had prepared some very excellent rulings on this matter. Were they considered, or ignored? Secondly, if the A.C.U. cannot define an amateur, surely it is time that we had some organisation which could.

In conclusion, Mr. Philpott mentions "anonymous grousers." I am afraid I must retain my anonymity, for reasons quite unconnected with any desire to "carry off pots," but the Editor can vouch for the fact that I have no axe to grind. R.I.C. UMPH.

W.C.2.

### *TEMPERAMENTAL ENGINES.*

Sir,—My machine would carry on at 15 to 20 m.p.h. with very little gas, and suddenly, without warning, would tear away "all out." Thinking the carburetter to be at fault, I fitted a different type, but the mysterious madness was not cured. On dismantling the engine, however, I found that the exhaust rocker had worked loose on its bearing, and was running partly on the *inlet* cam, thus producing a "decompressor" effect. The fitting of new rockers and cams cured the mania, and the machine now gives such service as one would expect from a Rudge Multi. Usual disclaimer. THREE PLY.

Birmingham.

Sir,—I am very sorry to see that no one has come forward with any possible explanation. I do not think the rarified atmosphere referred to by "Multi" can be held responsible. I can assure any experts who may be interested that this is a real problem, to which there must be one definite solution. Surely it is not going to get the better of us? I fear my case must be the worst, or else the others would demand a further explanation. I may say I have further experimented since my letter in your issue of May 4th, and have definitely ruled out the cause put forward by most people to whom I have mentioned the trouble, *i.e.*, the magneto. This may be taken for granted. I suggest that "Ixion" peruses carefully all the instances, and comes to a conclusion—the right one—without delay! Thereby his reputation will be further enhanced. I can assure him I do not go on any lofty tablelands, nor does my compression vary—as far as I know. R. S. A. BOOTE.

### *STEREOTYPING THE RELIABILITY TRIAL.*

Sir,—In your last issue Major Vernon Brook replied in very friendly spirit to some criticism I had ventured to make upon his resolution that a representative of the Competition Committee should in future inspect the courses got out by the centres for the purposes of open competitions. One can always feel sure that his suggestions are ever prompted by a very keen desire to forward whatsoever shall be in the best interests of motor cycling, and I, therefore, trust that he may deem worthy of consideration the following comments upon the reasons he gives for his proposal:

(1) Major Brook puts as his first reason that the union is responsible for the proper conduct of such events. Personally, I consider the various centres as the component parts of the Union, and as such some confidence should be placed

in their experience and their discretion. After all, the inspector representative from the Competitions Committee would generally be a prominent centre official—though he might come with his instructions.

(2) Trials results on courses of such a nature that the secret check has to be resorted to in order to find a winner are much more of "a farce" than those issued from "the lively course." I am told by a prominent trials rider that in a recent open event performances of equal merit were made on the course and declared time checks by a very large number. The secret check was consulted, and whilst one receives the premier award, another through a four or five minutes' error of judgment receives a "bronze." I can imagine nothing more galling than this to the manufacturer.

(3) It is not my experience that the genuine amateur does not enter the so-called "freak trial." This centre last season ran an event over the same course as that upon which there has been so much controversy of late, and secured nearly a hundred amateur local entries, and no grumblers. The reason open trials fail to attract the amateur is, first of all, because there are very few of the genuine type who can get away from business for the day (open events cannot be run on Sunday), and secondly on account of the high entrance fees necessitated by the gold medal tradition.

(4) Respecting the value to the trade, I dealt with this matter in my previous letter. It seems to me quite unnecessary that any warning should be issued regarding the nature of the tests. To give opportunity of fitting any special equipment would detract considerably from the value of the trial. The courses are as a rule got out by enthusiastic amateurs on standard machines.

(5) Accidents on reliability trials are very rare, and I cannot recollect one which has been due to the nature of the course.

(6) Your correspondent finally states that the union should have control of the sport. I agree, but the pivot of the question is, "Who is the Union?"—a matter which comes under the first heading.

Major Brook refers to the forthcoming Yorkshire Centre open trial, which is quite in order, as all have been advised what to expect. A few weeks ago we read that it was to be all "rough, heart-breaking stuff," but now we are earnestly assured that there are to be no freak surfaces and no freak hills. In my first letter I ventured to suggest that the proposal in question would go to stereotype the open trial. Is it possible that one of the most sporting and enterprising of centres has in any way been influenced by the present controversy, and that amongst the wonders of the Yorkshire dales we are not to have something really distinctive for this very reason?

K. S. TOPPING.
Hon. Sec., East Mid. Centre A.C.U.

### *A 365 DAYS' TRIAL?*

Sir,—To many motor cyclists the average reliability trial—when reported in the Press—is somewhat unconvincing.

This, one supposes, is probably due to the fact that nothing can persuade the man-in-the-street that the machines, entered by the makers and ridden by their experts, are not in many ways un-standard, being specially equipped and made suitable for the particular class of trial undertaken.

One does not entirely blame the manufacturer—he is out to win—and such precautions as are undoubtedly taken with the machines entered (for example, the recent Scottish Six Days' Trial) may be justifiable.

Now the makers are perfectly aware that these suspicions still lurk in the mind of motor cyclists, and for this very reason would, I think, welcome the chance of dispelling them.

Allow me, therefore, as an amateur, to suggest the following scheme for what it is worth, the details to be worked out by a more skilled mind than mine.

At the beginning of the competition season let such firms as Sunbeam, Triumph, A.J.S., and the remainder of the senior (and more opnlent) manufacturers invite the A.C.U. to select, say, four of their standard productions from any agent anywhere in the British Isles.

These machines would be retained by the A.C.U. throughout the year, being handed out to the firms in question in time to be ridden to the start of the trial, at the end of which the machines would be "returned to store."

Any subsequent replacements and adjustments would, of course, be noted by the A.C.U. at the time; these being completed, the machines would once more remain under lock and key till the next trial.

At the end of the year the combined report of the manufacturers' successes and that of the A.C.U.'s observations would be highly interesting, informative, and truly convincing.

One is aware that the scheme would cost money and considerable trouble, but in the end it would be well worth it, especially to the man about to buy a machine, and, after all, he is the one that matters.

There is already, one knows, a stock machine trial, but this, I think, hardly goes far enough.

Perhaps manufacturers would be sufficiently interested to send their views on the above to the Editor?

I am in no way interested or connected with the motor trade.

NELBIK.
London, W.2.

### *ON THE LOWER REACHES OF THE THAMES.*

Sir,—Can you, or any of your readers, tell of a suitable place for picnicing, accessible to motor cyclists, on the north bank of the Thames between, say, Barking and Southend? Plenty such spots seem to show during a trip on the water, but none seem to be visible or accessible from the main road.

A day's rest on one of the banks of the lower reaches of the Thames with its endless and interesting traffic would make a pleasant change from the purely country picnic.

Leytonstone. DOOGOROHT.

### *ABOUT HEAT.*

Sir,—In the correspondence "About Heat," if Mr. Brewster is desirous of accuracy, he should consider his statement "a refractive index cannot be measured if the body will not transmit the wave-length."

Apparently "Brewster's Law" has escaped Mr. Brewster's notice. He will find it in Watson's "Physics," page 577. It is thus that the refractive index of opaque solids, *e.g.* ebonite, is found.

L. H. WAKEFORD.

Sir,—I should like to amplify Mr. W. E. Marsh's remarks on the subject of the radiation of heat, as they seem to me to convey a very misleading idea of the true state of affairs.

First, as to the greenhouse. Mr. Marsh seems to imply that the sun's *light* produces the *heat* in the greenhouse.

THE ISLE OF MAN CAM!

From this unusual contour plan of the T.T. course—the idea of Messrs. A. J. Stevens, Ltd.—one can obtain a remarkably graphic illustration of the chief gradients of the famous Manx circuit over which last week's races were run.

The fact is that glass is opaque to the radiation emitted by bodies at a comparatively low temperature, but is as transparent to the radiation produced by bodies at a high temperature as it is to light itself. Hence the sun's heat radiation enters the greenhouse readily, but the heat radiation of the objects inside cannot pass out.

Next, as to the cooling. Air is the best heat insulator known. The heat is conducted from the cylinder to a minutely thin layer of air in immediate contact with it, and the rest is done by convection, the heated air being continually carried away and taking the heat with it.

A. K. GORDON.

### GEAR RATIOS FOR THE TOURIST.

Sir,—We have read with interest "Jay Cai See's" letter in your issue of the 25th ult., and while we fully appreciate his kind remarks regarding the construction and finish of our standard sidecar outfit, we must confess ourselves considerably surprised that he does not find our gear ratios to his liking, these actually being top 5¼ to 1, 2nd 11 to 1, and low 17½ to 1, *i.e.*, practically the same ratios as used on all the best-known makes. Should he be using the machine solo, our close ratio box, giving 5¼, 7.87 and 14, would, of course, be more suitable.

We note that your correspondent states that his Martinsyde can only attain a little over a quarter of its maximum speed on second gear. Since our standard product can always attain well over 20 m.p.h. on second, we feel that there must be some other cause, such as carburation, for his trouble. We shall be glad if "Jay Cai See" will communicate with us direct.

MARTINSYDE, LTD.
GEO. TILGHMAN RICHARDS.
General Manager.

### TAXATION.

Sir,—Replying to Mr. G. J. Hickling re "Motor Cycle Taxation," I should suggest that not only push-bikes pay 5s. tax, but that childrens' toy motor-cars, tricycles, scooters, and the like, should pay 2s. 6d., also that roller skates should be taxed at, say, 6½d. per annum. Perhaps the A.C.U. could take this up instead of trying to suppress private trials.

3½ TRIUMPH.

Westcliff.

### CAMPING ON THE SOUTH COAST.

Sir,—Can any of your numerous readers assist me to find places on the coast between Portsmouth and Folkestone where the pitching of tents for week-end camping is not objected to?

KE 8411

Westerham.

### R.A.C. SALUTES.

Sir,—I should like to hear the opinion of your readers as to whether they are saluted by patrols of the R.A.C. I have been a member of the A.C.U. for three years, and I think I have only been saluted six times (twice yesterday); yet I do not remember a single occasion on which an A.A. patron has not saluted, although I have only been a member for the same period. They (the A.A.) lay it down as a rule that there is something wrong if a patrol does not salute, and I wondered if the same rule applied to R.A.C., or is it they hold an A.C.U. member below the dignity of a salute?

It is not that I desire in any way to be saluted—as a matter of fact it is rather difficult to return it on a nasty bend, but I just enquire as a matter of interest.

London, W.14. KEN BUSH.

WINNER OF THE LIGHTWEIGHT T.T.

G. S. Davison (247 c.c. Levis), at the Ramsey hairpin, which tests driving skill, the general design of the machine, and the acceleration of the engine.

### 7 TO 1 COMPRESSION RATIOS.

Sir,—It is with much interest that I read the remarks of "Ixion" in your issue of the 25th ult., anent the G.R.I. engine.

Being responsible for the design of this engine, I would ask the indulgence of a little space in your valued journal, in order to provide some justification for the seemingly drastic departure from what has hitherto been considered possible, or shall we say, advisable in the matter of compression ratios.

As "Ixion" remarks, much was done during the war with the use and maintaining of high compression ratios at high altitudes, as in addition to the increased power obtained up to a point, this higher compression has a direct effect on fuel consumption which was, and of course still is, an all-important factor.

The limitation of this high compression ratio was brought by the presence of some "hot spot" in the combustion chamber, which set up "pre-ignition."

It is the absence of any "hot spot" in the G.R.I. engine combustion head which has made it possible to use a compression ratio of 6.5 to 1 in a standard production.

With regard to "Ixion's" reference to a ratio of over 7 to 1 being used, this is, of course, for a special purpose, and one wherein all the factors remain more or less constant, such as, with an accurately machined combustion chamber, a given piston speed and even distribution of temperatures for a given power output. Although detonation undoubtedly takes place, it can, under these circumstances, be regarded as a useful agent, rather than otherwise.

GEORGE R. INSHAW, A.M.I.A.E.

### PRICES OF ALUMINIUM PISTONS.

Sir,—I was much interested by "D.C.O.'s" letter *re* "Specialloid" aluminium pistons. I am glad to hear that they are so nearly perfect, as I thought about trying them until I received the "Specialloid' pamphlet with the price of the piston, when I rapidly changed my mind. I wonder why "D.C.O." did not mention the price? Because, after all, the price can be an advantage or otherwise—can it not?

A.H. 42.

Tynemouth.

[The price of "Specialloid" pistons varies acording to size. For an A.B.C. car the charge is £6, including gudgeon pins.—ED.]

### "IXION'S" REMINISCENCES.

Sir,—On behalf of a small party of non-expert enthusiasts, will you allow me to thank "Ixion" for many an uproarious evening this last winter, through one of our number chancing on his "Motor Cycle Reminiscences."

We made it a habit to take it in turn to read aloud a chapter on one night per week, and when we had finished we were so pleased that we started all over again!

We would now like to know, if we are not troubling you too much, if you are publishing, or have published, any more reminiscences, because, as MacAndrew says (that isn't his real name!), "I'd rather miss a 'gold' than another book like that."

Again thanking him for the wonderfully pleasant evenings we have spent with him.

J. DEXTER WATTS.

For and on behalf of "The Hounds."

[A second volume of "Reminiscences" will appear in due course.—ED.]

### DYNAMOS FROM OLD MAGNETOS.

Sir,—In reply to Mr. G. R. Thomson's letter, I beg to contradict his statement, that "8 volt bulbs of less than 5 amp. can be obtained at *any* garage or electrical shop," which I suppose come under his rather ambiguous name of "electrical engineers." Even if they were easily obtainable, their use in conjunction with the particular dynamo under consideration would not be advisable, since in the event of the head light bulb burning out or breaking the whole of the available current *would* flow through the other bulbs, unless the road speed were very low.

To convince Mr. Thomson of this fact would be rather difficult, since he seems to find even simple elementary calculations in Ohm's law rather complicated; but if he will carefully read my first article on this subject, and will also look up some standard book dealing with alternator characteristic curves, and the effect of armature reaction and reactance on permearat, or separately excited field systems, he will, no doubt, be able to understand why a small amperage bulb of the same voltage as the head light would burn out at, say, a road speed of 20 m.p.h., if the latter bulb was cut out of circuit in any way.

Mr. Thomson's series-parallel circuit is quite sound, provided two 6 volt 5 amp. bulbs be used in the series part of the circuit. These bulbs, in the event of the head light burning out, are quite capable of withstanding the surplus current without any serious danger of burning out.

I have proved the truth of my statements from experiments carried out with one of these dynamos, and if Mr. Thomson will construct one and do likewise, I think he also will be convinced.

W.R.

### RAIN AND RHODESIAN ROADS.

Sir,—I should like to know what part of Rhodesia "Overseas Triumph" lives in, and if he will tell me if he knows of a ten mile run where he can keep over 35 m.p.h. (also the road).

As he states, rain improves sandy roads, but he does not mention what it does to the country waggon track over red soil.

S412M

Rhodesia.

### ELIMINATE THE PRIMARY CHAIN!

Sir,—In a very interesting article on "Modern Practice in Engine Design," there is the statement that "although the Scott engine has been little changed in the last decade, it is still advanced in many details." This view I am sure will be fully endorsed by enthusiastic Scott riders—and what Scott rider is not enthusiastic over this fascinating mount?

The pity is that such an advanced engine, fitted into a remarkable frame, studied in every detail, with unexcelled mudguarding, has its reliability impaired by a ten-year-old transmission from the engine to a very satisfactory and fool-proof countershaft two-speed gear. It is surprising how the double chain system has survived on this engine, notwithstanding its obvious drawbacks, such as the impossibility of keeping both chains in proper tension at the same time, and notwithstanding the smooth torque of the engine, the short life of the chains themselves.

The Indian Scout, with its unit engine and gear box is a notable advanced example of what the future transmission between engine and gear box will be. Why are British machines, which are so much to the fore in engine design, general finish, and scrupulous attention to appearances and details, so conservative in retaining that bit of chain between the engine and gear box?

M. L. L.

Aldeburgh.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle*.

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

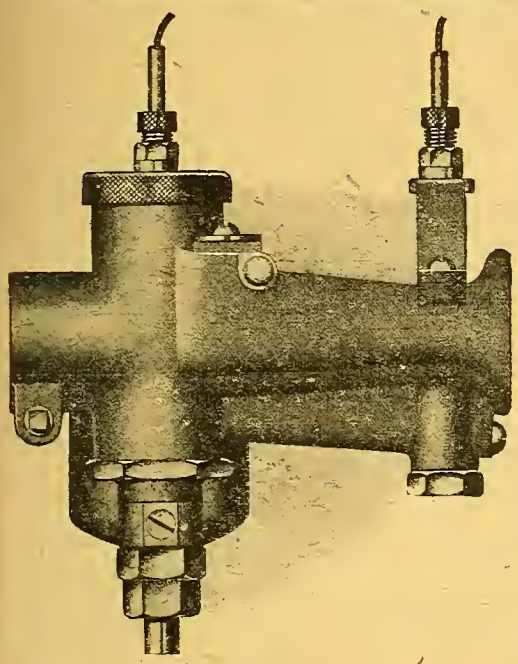
**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle*.
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# BINKS CARBURETTORS NEW 1922 DESIGNS.



## A New SPORTS MODEL CARBURETTOR giving the ENORMOUS speeds and power of the famous "Mousetrap" combined with flexibility and slow running.

This Carburettor is ideal for Hill Climbs and fast touring where acceleration and speed count for everything.

**PRICE ON APPROVAL with spare Jets and Key For Singles or Twins. £6:6:0**

The slow running is obtained by a pilot jet under the throttle, and the correct suction on the main jet is maintained by the variable venturi tube which passes gas without loss at high speeds—in fact it even helps to cram the gas into the cylinder.

It is not an extravagant Carburettor, as non-spilling jets are fitted.

Beautifully made—accessible—swivelling float chamber—a delightful thing to own.

Order it to be supplied to you fitted to your Sports model.

## QUALITIES OF THE BINKS 3-JET DAMPING CARBURETTOR.

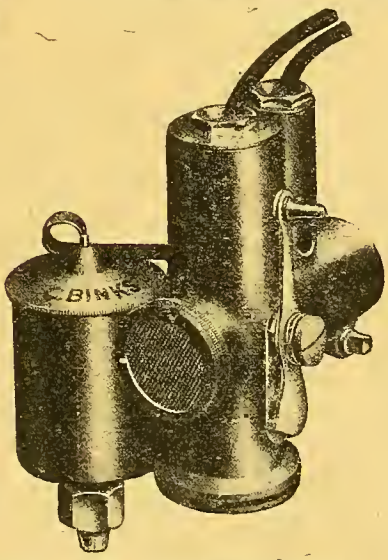
Marvellous slow running, flexibility, lively acceleration and power, and a truly automatic mixture are the recognised attributes of this world famous instrument, but the **astounding fact is that in addition, the mileage per gallon is definitely increased from 30 to 75 per cent.**

EXAMPLES.

| | | | |
|---|---|---|---|
| 4 H.P. SOLO MOUNTS | do | 120/150 | m.p.g. |
| „ SIDECAR | „ | „ 65/90 | „ |
| 6 & 8 H.P. | „ | „ 50/65 | „ |
| including Big Harleys and Indians. | | | |
| DOUGLAS MODELS 2½ | do | 115/150 | „ |
| „ 4 H.P. with Sidecar | | 55/65 | „ |
| SCOTT SOLO .. | .. | 65/70 | „ |
| „ SIDECAR .. | .. | about 50 | „ |
| Lightweight Two-Strokes ... | | 120/140 | „ |

If you do not get this mileage, you can do so.

Mr. CHAS. L. BINKS.




**THE FAMOUS 3-JET DAMPING BINKS CARBURETTOR. For Town and Country.**

Price - **£3 15 0 + 2/-** postage.

## AN OPEN LETTER TO MOTOR CYCLISTS.

*Ladies and Gentlemen,*

*We are presenting to you by this advertisement two of our very latest productions, and we are sure they must be of interest to riders of all machines.*

*The new Sports model is a revelation in acceleration and power—in fact it is the record winning Mousetrap Carburettor with a pilot jet to give it slow running and flexibility. I can personally recommend you to fit it to your "Sports Sunbeam" or "Norton," and you will get two to five more miles per hour, and more violent acceleration. It is an ideal sporting Carburettor to have, and fulfils a long-felt want where extreme economy is not the first consideration.*

*The three-jet model is the Carburettor for touring, and gives you a control over your machine which is delightful in town and country alike. It really saves you money. The low petrol consumption is no mystery. The simple fact of controlling the jets by dampers and getting a perfect mixture at all speeds ensures this economy by preventing waste.*

*To enable you to try the Carburettor and to prove its merits the Carburettors are all sold on approval. By this we mean that if you find that the Carburettor does not do as we state you return the Carburettor to us and we refund you your money less 7/6. This offer in the past has been greatly appreciated by the public.*

*We invite you to call at the works personally either for a talk on Carburation, or to have your machine fitted, and we ask you to apply for our literature and book on Carburation free of charge.*

*Yours sincerely,*

*Harold Binks.*

## Outstanding Features of the Binks 3-Jet.

1. **The control is by one lever—smooth and gradual in action.**
2. **The jets are easily got at, permitting you to adjust the Carburettor to perfection to the requirements of your individual machine.**
3. **The mixture is automatic and flexible because the 3 jets in their sequence of operation provide a perfect mixture.**
4. **Economy is obtained by having 3 jets controlled by dampers. At slow speeds one jet works whilst the two big ones are sealed, and it is only when power is wanted that the big jet is allowed to work.**
5. **Starting is easy from cold. You simply close the shutter at the side—then open. Very useful on two-strokes.**
6. **An Extra Air Valve is fitted to enable you to coast down hill—using your engine as a brake and cooling it at the same time.**

Mr. HAROLD BINKS.

**C. BINKS (1920) Ltd., Eccles, Manchester.**

# THE MOTOR CYCLE Insurance Policy

*Issued by the Autocar Fire and Accident Insurance Company, Ltd.*
*(Incorporating "The Autocar" Insurance Dept.* Established 1904).

**COVERING MOTOR CYCLES or CYCLES and SIDECARS—**
**Used by Owners for private or professional purposes or personal business journeys.**

**1. THIRD PARTY.**
Legal liability up to an unlimited amount, including law costs. Also indemnifying Insured whilst driving any private motor cycle not belonging to him. Defence of any police summons for driving to the danger of the public when an accident as insured is concerned, free of legal costs

**2. DAMAGE TO CYCLE**
by accidental external means. Reasonable repairs may be put in hand at once.

**3. FIRE**
including tyres and accessories.

**4. THEFT**
including tyres and accessories when machine is stolen. Damage by attempted theft included.

**5. TRANSIT**
by road, rail, or inland waterway, also short sea journeys to continent, etc.

**6. BONUS.**
10% reduction off renewal premium if no claim.

**EXTRAS.**

To extend Policy to cover use by and to indemnify—
one additional rider, 33⅓% extra. Any licensed rider, 50% extra.
Cycle used solo to carry passenger on pillion seat or luggage carrier—**50% extra.**

**ACCIDENTS TO OWNER.**
**Benefits:** Death £250.
Loss of two limbs, or sight of both eyes, £250.
Loss of one limb or sight of one eye, £125.
Total disablement, limited to 26 weeks each accident, £3 per week.
Premium 30/-

**Half Benefits—Half Premium**

**PASSENGER IN SIDECAR.**
**Benefits as for Owner:**
Covering any passenger not suffering from physical infirmity, and not less than 17, or more than 55 years of age. Premium 30/-

**REDUCTIONS.**

**To be taken off premiums (A) only.**
15% if Insured bears first 50/- of each accident.
20% if Insured bears first £5 of each accident.
33% if Insured bears first £10 of each accident.

**SCHEDULE OF PREMIUMS.**

| Not exceeding | A — Full Policy. All Sections 1 to 6. | B — Third Party, Fire, and Theft. 1, 3, 4, and 6 only. |
|---|---|---|
| 2¾ h.p. | £4 10 0 | £2 8 0 |
| 4 h.p. | £6 10 0 | £2 14 0 |
| 5 h.p. | £7 0 0 | £3 0 0 |
| 10 h.p. | £9 0 0 | £3 12 0 |

If value exceeds **£100**, add **15/-** under Table A or **10/-** under Table B for each additional **£50** or part thereof.

## PROPOSAL FORM. Particulars of Motor Cycles

| Make of Cycle. State whether Sidecar attached and Seating capacity. | Makers' H.P. and Frame No. | Year of Make. | Date of Purchase | Price Paid by Owner. | New or Second hand. | Present Value, including Accessories | | Registered Letter and Number. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Cycle. | Sidecar. | |
| | | | | | | | | |

1. Owner's name (in full) .....
2. Address .....
.....
3. Occupation (if any) ..... Age .....
4. Have you any physical defect or infirmity, defective vision or hearing? .....
5. Will Cycle to be insured be **solely** used for Private Pleasure Purposes? .....
If not, please give full particulars .....
6. Will passengers be carried otherwise than in sidecar? .....
7. Will Cycle be **solely** driven by owner
If not, please give particulars .....
8. Have you been or are you now insured in respect of a Motor Vehicle? .....
Please state (a) Name of Company insured with .....
.....
(b) Whether any Company or Underwriter has ever declined, cancelled, or refused to renew your insurance, or required you to carry first amount of any loss, or increased your premium because of claims experience? .....
9. What accidents during the past two years have occurred in connection with any Cycle owned by you?
19.....Number.....Amount paid £.....
19.....Number.....Amount paid £.....

*I hereby declare that all the particulars stated above are true and correct, and I hereby agree that the proposal and declaration shall be the basis of the contract between me and The Autocar Fire and Accident Insurance Co., Ltd.*

*Date*..... *Owner's Signature* .....

*Immediate protection can be obtained by forwarding this form, filled in, and remittance for first premium to*

**The Autocar Fire and Accident Insurance Company, Limited**
*Telegrams—"Autoinsure, Cent, London."* **77, Cheapside, London, E.C.2.** *Telephone—City 9831-2*
Branch Offices at Birmingham: Phœnix Chambers, Colmore Row. Cardiff: 15, High Street.
Leeds: 28, Bond Street.

# Have you taken advantage of the new price-reduction?

THE

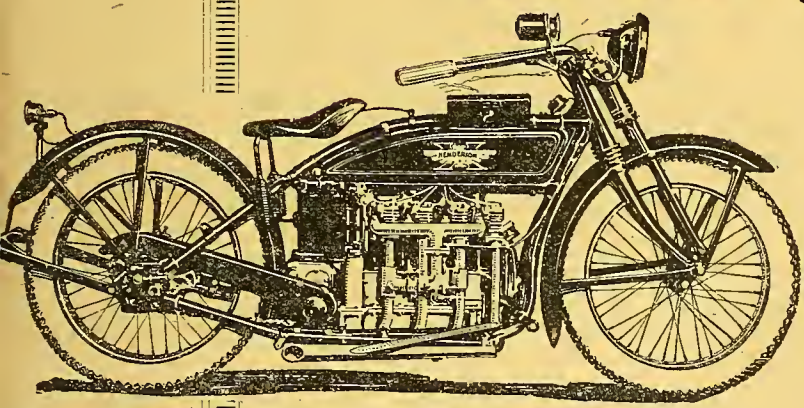
# HENDERSON

## DE LUXE

## FOUR-CYLINDER MOTORCYCLE

NOW COSTS ONLY

## £165 — *including full electrical equipment*



*e Henderson, alone ong motorcycles, can fitted with a reverse sidecar use, at an extra cost of*

**£7 10 0**

This is precisely the same 1922 model that we have been advertising for the past few months, and is not altered in any detail of specification, the drop in price being a purely natural outcome of improved trade conditions.

Note the massive front fork design and the way in which the front wheel is trailed, so that shocks are met easily and naturally; note the accesssible position of the chain (the only one) on the off-side; note the free saddle suspension and low riding position.

The Henderson gives far more in proportion than is represented by its price as compared with singles or twins. The four-cylinder is in a class of its own, as was proved in car practice a decade or more ago. The luxury of having 11.5 h.p. at your disposal, and in such a velvety, sweet-running form, can only be realised by experience.

*Further details post free from*

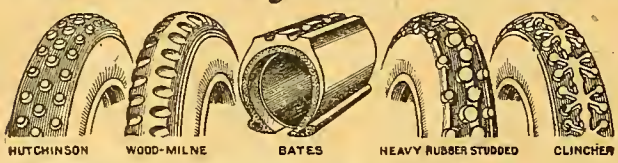
**MELCHIOR, ARMSTRONG & DESSAU (LONDON), LTD.,**

**14E, GT. MARLBOROUGH STREET, : : : LONDON, W.1. : : :**

'Grams - - "Melarm, London."
'Phone - - - - Gerrard 2462.

# BENETFINKS

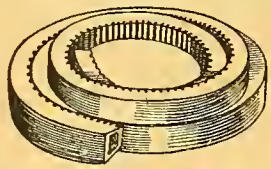
## Great Tyre Offers




*SATISFACTION ASSURED: We stand by All we Sell.*

| Size. | Description. | Our Price. |
|---|---|---|
| 24×2 | PALMER 3-Ribbed | 15/6 |
| 26×2 | PALMER 3-Ribbed | 16/6 |
| | BURNETT Suction Cup | 17/9 |
| 26×2¼ | BURNET Suction Cup | 17/9 |
| | WOOD-MILNE Combination | 25/6 |
| 26×2⅜ | CLINCHER DE LUXE Extra Heavy | 25/- |
| | AVON Tricar | 26/9 |
| | PALMER Cord, Rubber Studded | 34/3 |
| 26×2½ to fit 2¼ | Extra Heavy, Rubber Studded (New) | 25/- |
| | PALMER Cord, Rubber Studded | 37/9 |
| 26×2½ to fit 2½ | WOOD-MILNE 3-ply | 13/9 |
| | CLIPPER Reflex, Extra Heavy, 3-Rib | 27/6 |
| | BATES Special Heavy, 3-Rib | 32/6 |
| 650×65 | WOOD-MILNE Special | 14/- |
| | WOOD-MILNE Light Car, Extra Strong | 30/- |
| | SPENCER MOULTON 3-Ribbed, Very Heavy | 30/- |
| 28×2½ | CLINCHER DE LUXE Extra Heavy | 18/9 |
| | CLINCHER Dreadnought | 21/6 |
| 28×3 | AMERICAN Rubber Non-Skids, Very Heavy | 43/- |
| | GOODRICH AND FIRESTONE Rubber Non-Skids | 44/- |
| | GOODYEAR Diamond All-weather, Rubber Non-skids | 45/- |
| 700×80 | SUPER CHAIN Rubber, Non-Skids, Extra Heavy, New | 42/6 |
| | HENLEY Combination, Light Car | 57/6 |
| | PALMER Cord, Heavy | 50/- |
| | PALMER Cord, Ribbed | 45/- |

*PLEASE NOTE:—All Covers sent Carriage Paid.*



BENETFINKS BEST

## BELTING

We have contracted for a season's supply, and although our prices are 33⅓% lower than leading Manufacturers, we give the same guarantee. Every belt fresh and flexible, made by one of the largest makers in the Country, of finest Canvas and Rubber, with a good deep drive:—

| Size | OUR PRICE | Other Makers |
|---|---|---|
| 7′×⅝″ | 6/- | 10/- |
| 7′ 6″×⅝″ | 6/9 | 10/3 |
| 7′×¾″ | 7/9 | 11/- |
| 7′ 6″×¾″ | 8/6 | 11/9 |
| 8′×¾″ | 9/3 | 12/6 |
| 7′ 6″×⅞″ | 10/6 | 13/9 |
| 8′×⅞″ | 11/3 | 14/9 |
| 8′ 6″×⅞″ | 11/9 | 15/9 |
| 6′ 6″×1″ | 11/6 | 16/- |
| 7′ 6″×1″ | 13/3 | 18/6 |
| 8′ 6″×1″ | 15/- | 21/- |

## EXTRA HEAVY NEW INNER TUBES

Made of finest quality **Extra Heavy** Red Rubber, GUARANTEED to give trouble-free service for 3000 miles. Specially manufactured for us by one of the biggest tyre makers in the Country. Fitted with standard valves and bolt valve plate, complete in box. Give one a trial. You will be surprised at their strength and good value.

| Size | OUR PRICE | Other Makers |
|---|---|---|
| 24×2 | 4/9 | 7/6 |
| 26×2 | 4/9 | 8/- |
| 26×2¼ | 5/- | 8/3 |
| 26×2⅜ | 5/3 | 9/- |
| 26×2½×2¼ | 5/6 | 9/6 |
| 26×2½ | 5/6 | 9/6 |
| 26×3 | 6/- | 10/6 |
| 26×3×2½ | 6/- | 10/- |
| 28×2½ | 5/9 | 10/6 |
| 28×3 | 6/- | 11/- |
| 650×65 | 5/6 | 10/- |
| 700×80 | 6/- | 10/6 |

Post 9d.

## CELLULOID FACE SHIELDS.

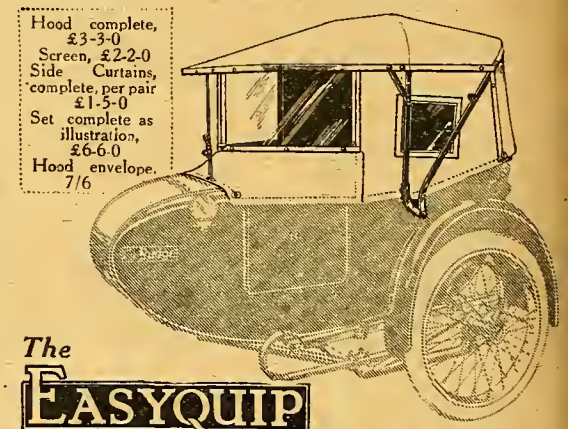
The most popular protection on the market. Very light and compact. Bound Chenille. Price - - 1/3 Post Free.

## SPECIAL OFFER OF MOTOR-CYCLE GOGGLES

The famous Touriste Pattern, wide vision with detachable Glasses. 1/9 Post 4d.

**BENETFINKS** *"THE CITY'S OWN STORE."*
**CHEAPSIDE, LONDON, E.C. 2.**

## *Never mind the weather*




*The*

## EASYQUIP

**"COSY" HOOD and V WINDSCREEN**

withstands wind or rain, showers or storms, with equal efficiency. The smart V fronted windscreen, of non-inflammable transparent material, ***opens and closes with the door*** to admit of easy ingress and egress, while the whole can be neatly folded away when not in use.

*When ordering please state name of sidecar, if known, length from dash to back of body at widest place.*

Descriptive Illustrated Folder on request.

**COVENTRY EQUIPMENTS LTD.,**
Empire Works, Clarendon Street, Coventry.

This is a reliable piece of Engineering at a price which makes motor cycling really economical.
EASY FIRST COST and easy in maintenance.

## You Owe yourself the gratification

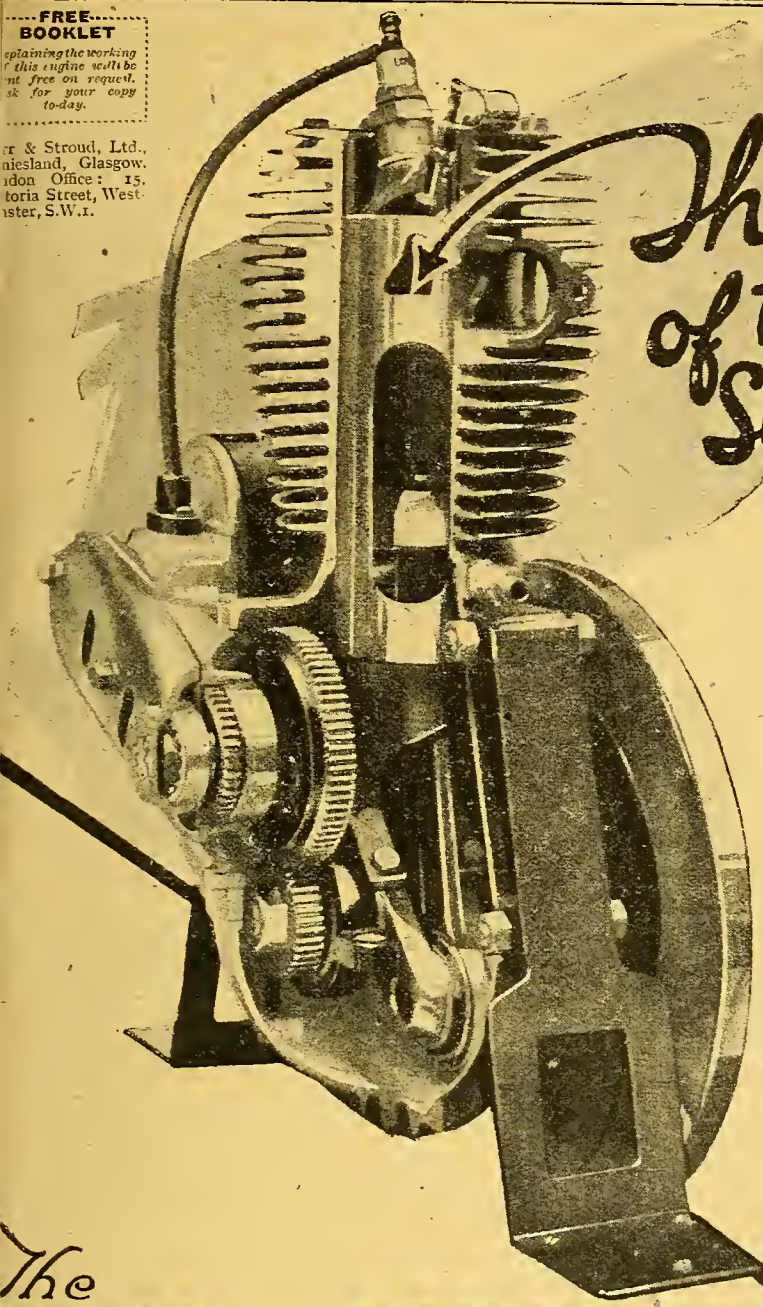
**of owning a machine that gives you everything—except TROUBLE.**

The **"FEDERATION"** is a sound investment. It is perfectly designed and engineered to secure **SPEED, POWER, and TRUSTY RUNNING.** Send to C.W.S. Motor Cycle Works, Tyseley, Birmingham, for specification of this reliable and powerful "Federation."

"FEDERATION" JAP

FREE BOOKLET
explaining the working of this engine will be sent free on request. Ask for your copy to-day.

r & Stroud, Ltd., nieśland, Glasgow.
ıdon Office: 15, toria Street, West ıster, S.W.1.

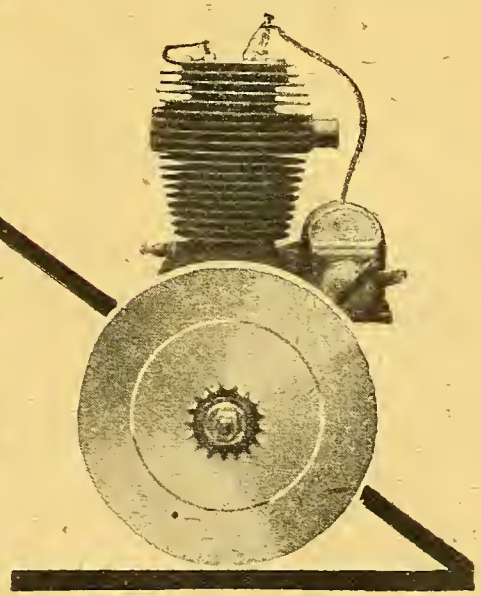


# The simplicity of the single Sleeve Valve

IN the Barr & Stroud Engine a simply operated sleeve replaces all valves, springs and tappets necessary in a poppet valve engine. This sleeve is raised and lowered and at the same time rotated inside the cylinder by a pin at the foot which operates in a ball and socket coupling set in the half-time wheel. There are ports in the sleeve corresponding with ports in the combustion head.

There are no valves to leak or require renewing. The engine is mechanically silent when new and will retain its silence.

Speed 60 m.p.h. Fuel 140 m.p.g.
Oil 2,500 m.p.g.



The
# BARR & STROUD
# SLEEVE VALVE
# 4-STROKE ENGINE

"It's the Engine that Counts"

Fitted by the makers of the following machines:—Banshee, Beardmore Precision, Coventry Mascot De Luxe, Diamond, Edmund, Hagg, New Gerrard, P.V. and Royal Scot.

Messrs. Warnes, Ltd., 46, Churchfield Rd., Acton, London, W.3., specialise in fitting the B. & S. engine to existing machines.

# LOOK FOR THE CLUB TRADE MARK

ON THE ACCESSORIES YOU BUY.

IT IS A GUARANTEE OF

**QUALITY, VALUE, RELIABILITY.**

SOLE MANUFACTURERS:

**SILICO ENAMEL CO.——STRATFORD, LONDON.**

CLUB SPECIALITIES ARE PRODUCED BY PRACTICAL MOTOR CYCLISTS.

## ENAMELS.

**CLUB BLACK ENAMEL.**
Special Hard Drying .. Jars 11½d. & 1/6

**CLUB COLOURED ENAMEL.**
Dries in 24 hours. Does not crack or chip.
Motor Cycle size Tins 1/9
Made in: Large Tins 3/-
Royal Mail Red. Black.
Elswick Green. White.
Emerald Green. Cream.
French Grey. Brown.
Light Blue. Lavender.
Dark Blue. Primrose.

**CLUB TRANSPARENT ENAMEL FINISH.**
Makes Worn and Dull Enamel Look Like New.
Motor Cycle or Sidecar size Tins .. 1/6
Large Tins .. .. .. .. .. 3/-

**CLUB ALUMINIUM ENAMEL.**
Petrol Resisting .. .. .. Jars 1/6

**ANTARNISH INVISIBLE LACQUER.**
Prevents Rust and Tarnish .. Jars 1/-

**ANTARNISH BLACK LACQUER.**
Gunmetal Finish .. .. .. Jars 1/-

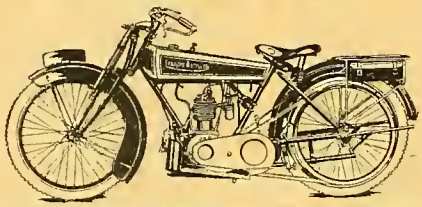
**CLUB ENGINE BLACK.**
For Radiators, Exhaust Pipes, etc. Tins 1/- & 1/8

**CLUB JOINTING GOLD SIZE.**
Makes Oil, Air and Water-tight Joints. Tins 1/-

IF LOCALLY UNOBTAINABLE ANY ARTICLE LISTED WILL BE SENT CARRIAGE FREE EXCEPT CARBIDE, ON RECEIPT OF P.O. AND NAME OF LOCAL AGENT.

# Francis-Barnett

**2¾ h.p. STANDARD MODEL £73**



THERE is a long specialised manufacturing experience behind Francis-Barnett Motor Cycles which is a sure guarantee to you of quality in workmanship and reliability in service. You buy no unknown, untried newcomer when you buy a Francis-Barnett. You buy a proved first-class machine perfect in detail and construction that combines efficiency and comfort with lasting service.

***The Specification is bristling with original features.***

2¾ h.p. J.A.P. engine with Sturmey-Archer Two Speed Gear and Kick Starter, Quick-action Chain adjustment. Quick-action Rear Brake adjustment. Saddle Tank (large capacity with clean contour). Detachable Aluminium Chain Case. Footboards combined with Toe Shields and Undershield in one unit. Effective Mudguards with large valances, etc.

***No machine can pass you if you ride a FRANCIS-BARNETT***

*Write for Specification and Catalogue to-day—*
FRANCIS & BARNETT LTD., LOWER FORD ST., COVENTRY.

350 c.c. SPORTING MODEL £85 2¾ h.p. STANDARD MODEL £73

# THE "BONNIKSEN" SPEEDOMETER

is rapidly achieving a popularity with all classes of motorists who desire accurate and reliable readings. It has been extensively

## TRIED

with great success in Trials and Competitions, users being delighted with the results obtained, and subjected to every test the instrument is

## NEVER FOUND WANTING

**PRICES:**

MOTOR CYCLE TYPE

| Trip | Non-Trip |
|---|---|
| £5 5 0 | £4 15 0 |

(Rear Drive for American Machines 10/- extra)

CAR or CYCLECAR TYPE

| Trip | Non-Trip |
|---|---|
| £7 0 0 | £6 10 0 |

SEND for ILLUSTRATED BOOKLET to the Manufacturers.

## ROTHERHAM & SONS, Ltd.

Telephones: 752 and 753. COVENTRY. Telegrams: Rotherhams, Coventry.

# OFFICERS' ARMY TRENCH COATS

## THE GENUINE "WESTO" TYPE

**47/6** Post Free in Great Britain and the Irish Free State.

With All-Wool Detachable Fleece Lining
**62/6** each.

**Reduced from 75/- and 70/-, at which prices over 35,000 have been sold in the last 8 months.**

## Quite 75% below present-day prices.

These goods can never be duplicated at the price.

**WE have foreshadowed for some time in our advertisements that the stock of Government Material for Officers' Army Trench Coats was becoming rapidly exhausted. That time has nearly arrived, and in order to rapidly clear our remaining stocks we have reduced our price to the above amazing figure. We confidently anticipate that this Sale will clear our stocks; thereafter *coats of this quality* will not be obtainable under FIVE GUINEAS each.**

Brand New, Tripleproof Gabardine, check lining, **oilskin *inter*-lining**, and with detachable **All-wool** fleece lining. **Four Coats in One.**

These Coats are impervious to weather. Worn with the fleece lining, they combine the warmth and comfort of an ulster with the rain-resisting qualities of a stout mackintosh. With this lining detached they are a light, elegant raincoat. Thousands of officers and ex-officers testify to their worth. They will last for years—even war conditions could not wear them out.

*This is the only coat made THROUGHOUT with surplus Government materials, which we control.*

### POINTS FOR TRENCH COAT BUYERS.

1. A Genuine Officer's Army Trench Coat made with Government Surplus materials will last for years. An inferior one will "crock up" in a few months.
2. See that the fleece lining is ALL WOOL.
3. See that the fleece lining extends down the sleeves to the wrist.
4. See that the interlining is oilskin or oil cotton and not a rubber solutioned fabric which is perishable.
5. See that you deal with a "MONEYBACK" Firm, so that if the coat does not meet with these requirements you can demand a refund.

### OUR GUARANTEE.

**We guarantee this coat to be as described above and that the description is in no way exaggerated. If the customer is not satisfied with his purchase we guarantee to return his money in full without question provided the coat is returned unworn and undamaged within seven days of purchase.**

**MONEYBACK PRINCIPLE.** **All our business is conducted on the "Moneyback" principle. Inasmuch as a Mail Order Customer has no opportunity of inspecting his goods before purchasing, this is the only fair and satisfactory way of conducting a Mail Order Business. An announcement such as ours forms a legal contract between the Seller and the Purchaser, and, therefore, fully protects the latter.**

Chest sizes, 34, 36, 38, 40, 42, 44 ins. When ordering state height and chest measurement over waistcoat. Outsizes (i.e., over 44 ins.), 10/- extra.

## SEND YOUR ORDER TO-DAY—IT WILL BE EXECUTED TO-MORROW.

**Art Catalogue illustrating this and other Bargains in wearing apparel FREE ON REQUEST.**

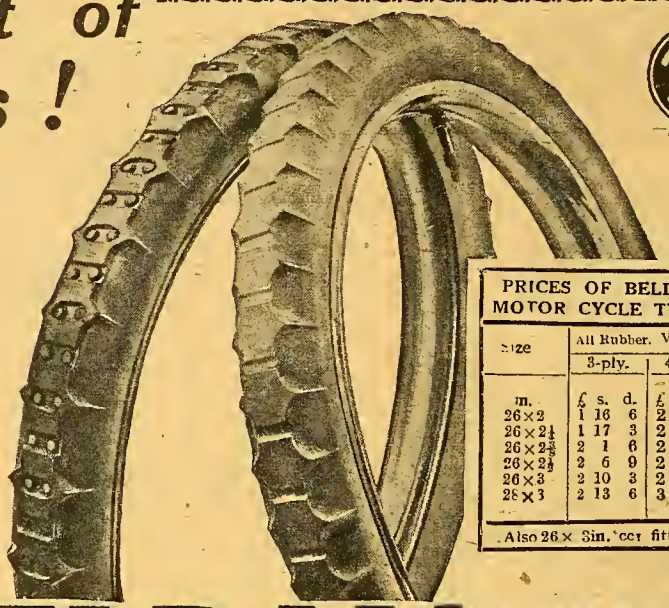
*Cheques, Money Orders and Postal Orders should be crossed Barclays Bank, Limited. Treasury Notes should be registered.*

# GEORGE WESTON & CO.

***Clothing Contractors, "Moneyback" Merchants,***

Offices (Dept. M.C.): 1, Bath Road,
Warehouse & Stores: Inverness Rd., } HOUNSLOW, MIDDLESEX.

# Nothing short of Marvellous!



Referring to the writer's win in the Formula Hill Climb in the "Travers Trophy Trial";

*Newcastle-on-Tyne.*

*"The road grip that this tyre obtained was nothing short of marvellous, considering the roads varied from grass sheep tracks to loose stones, and at Combe Bridge to that of slimy clay."—T. W. T.*

Try a set next time you need tyres, and you will find that "once used, always used" applies to Beldam Motor Cycle Tyres.

*Write for Latest Price List.*
The Beldam Tyre Co. (1920) Ltd.,
Brentford, Middlesex.
*Telephone: Ealing 125.*

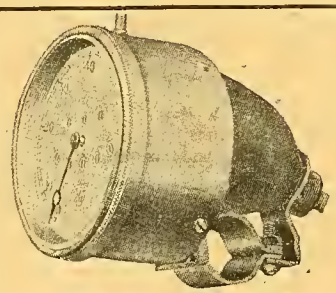
| PRICES OF BELDAM MOTOR CYCLE TYRES | | | | | |
|---|---|---|---|---|---|
| Size | All Rubber. V Design | | | | |
| | 3-ply. | | | 4-ply. | |
| m. | £ | s. | d. | £ | s. d. |
| 26×2 | 1 | 16 | 6 | 2 | 3 0 |
| 26×2¼ | 1 | 17 | 3 | 2 | 5 6 |
| 26×2⅜ | 2 | 1 | 6 | 2 | 7 6 |
| 26×2½ | 2 | 6 | 9 | 2 | 14 0 |
| 26×3 | 2 | 10 | 3 | 2 | 16 9 |
| 28×3 | 2 | 13 | 6 | 3 | 0 9 |

Also 26×3in. cover fitting.

# BELDAM

All British
Motor-Cycle Tyres

**BELDAM RETREADS**
are good for several thousands of extra miles.
*Write for Price List.*



The Smith Motor Cycle Speedometer.
Price £5 5 0 each.

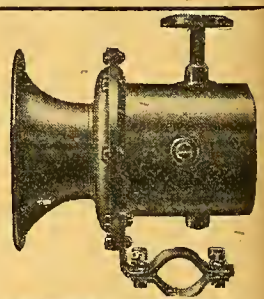
Birmingham: 122, Alma Street.
Manchester: 12, Jackson's Row.

# SMITH'S
## MOTOR CYCLE ACCESSORIES
of a better kind.

Smith's Motor Cycle Accessories embrace every want of the motor cycling public, and include Speedometers, Revolution Indicators, Mechanical and Bulb Horns, Lighting Sets, Tank Gauges, Watches, etc., etc.

Write for further particulars to

**SMITH'S (M.A.) LIMITED,**
Motor Cycle Dept.
**Cricklewood Works, London, N.W.2.**
*Phone: Willesden 2335.* *Telegrams: Speedofac, London.*
London Showrooms: 179–185, Great Portland Street, W.1.



The Smith Motor Cycle Horn.
Price £1 10 0 each.

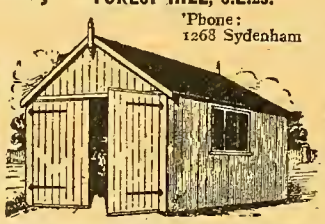
Glasgow: 23-25, Renfrew St.
Belfast: 39, Donegal Street.

## A. TURRELL & SONS, PORTABLE BUILDING WORKS. FOREST HILL, S.E.23.

'Phone: 1268 Sydenham

| Lth. ft. | Wth. ft. | Height to Ridge ft. | Height to Eaves ft. in. | £ | s. | d. |
|---|---|---|---|---|---|---|
| 7× | 5 .. | 7 0 .. | 5 0 | 7 | 5 | 0 |
| 8× | 6 .. | 7 6 .. | 5 3 | 9 | 0 | 0 |
| 9× | 7 .. | 8 0 .. | 5 6 | 11 | 7 | 0 |
| 10× | 8 .. | 8 4 .. | 5 9 | 12 | 19 | 0 |
| 12× | 8 .. | 8 4 .. | 6 0 | 17 | 5 | 0 |
| 14× | 8 .. | 8 7 .. | 6 3 | 21 | 0 | 0 |
| 16× | 9 .. | 8 9 .. | 6 4 | 26 | 0 | 0 |
| 18× | 9 .. | 8 9 .. | 6 4 | 31 | 0 | 0 |
| 20× | 10 .. | 9 0 .. | 6 6 | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ¾in. tongued and grooved matchboards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed: 21oz. glass. Flooring: Strong joists, one inch boards. All bolts supplied for erecting house.

Rust Proof Dope

## KEEP HIM OFF!

This little beggar works whilst you're asleep or busy—takes pounds and pride off your "outfit." Stop his activity with "Corrosine" *the* Rust-Preventer and "Derusta" *the* Rust-Remover.

*In 1/6 and 2/6 sizes, at Halford's shops and all other enterprising dealers, or direct from*

**HOWSE'S** —*The* Rust-Preventer Firm,— Union Works, SMETHWICK.
Postage 4d. and 6d. each size extra.

# The Martinsyde

"The Martinsydes were splendid."
*Daily Mail.*

"A beauty Bus."
*Athletic News.*

"Very fine indeed."
*The Motor Cycle.*

By permission of "Motor Cycling."

IN daily service and open competition the MARTINSYDE has proved that for reliability, economical running, speed, and appearance it cannot be surpassed. Amongst our recent successes are:

**DUBLIN M.C.C. OPEN TRIAL.**
One Martinsyde entered. One Gold Medal.

**LONDON—LAND'S END TRIAL.**
Three Gold Medals.

**SCOTTISH SIX DAYS TRIAL.**
Four Special Gold Medals and Sidecar Team Prize (Tie).

**WINNERS' HANDICAP. Brooklands, May 27th.**
First. Average speed, 79·5 m.p.h.

**500 MILES RACE (MILLER CUP).**
Team Prize.

**KOP HILL CLIMB, Princes Risborough.**
First in 750 c.c. Class.

**MARTINSYDE, Ltd.,** Maybury Hill, WOKING.

THE
**TWIN TO TWIN.**

Send for illustrated Catalogue and details of our Easy Payment System.

London Agents:
**ROBERTSON'S MOTORS, LTD.,**
157, Great Portland St., W.1.

*The Symbol of Success*

## MOTOR CYCLES FOR SALE.

### A.J.S

**1921** 7h.p. A.J.S. Combination, Lucas dynamo lighting, hood and screen, spare wheel, condition as new, tax paid, any trial; £135.—Box 1788, c/o *The Motor Cycle.* [2967

**1922** 7h.p. A.J.S. Combination, Magdyne, spare wheel, in stock for immediate delivery.—Ward and Co., 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [2956

**1919** A.J.S. 6h.p. Combination, excellent condition, tax paid, full Lucas electrical equipment, speedometer, side screen, spare wheel; £140.—Houchin, 189a, High St., Peckham, S.E.15. [3466

A.J.S. 1916 Combination, 4h.p. twin engine, 3-speed countershaft gear, Millford-built car, good going condition, tax and insurance paid year; nearest to £75; private.—15, Belle Vue Terrace, York. [2722

A.J.S. 6h.p. Combination 1914, fully equipped, interchangeable wheels, trip speedometer, etc., mileage 9,000, overhauled and mechanically perfect, taxed and insured; £80.—Hope Villa, Church St., Edmonton. [3191

A.J.S. 1920 Combination, just overhauled and repainted, detachable wheels, speedometer, dissolved acetylene lighting, windscreen, many spares, taxed, condition and appearance excellent; £128.—38, Cowley Rd., Oxford. [2723

**1921-22** A.J.S. Combination, de luxe, smartest on road, only 2,000 miles, dyname, electric horn, watch, side balance, hood, screen, spare wheel, and many extras; £155; absolutely new.—James, c/o Bradmores, 482, Harrew Rd., Paddington. [3237

A.J.S. Again Demonstrate their superiority by winning the Junior T.T. race for the fourth time in succession. Secure early delivery of the famous 2¾h.p. model by placing your order with P. J. Evans, John Bright St., Birmingham. [3313

A.J.S. Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4925

**1922** 2¾h.p. A.J.S., semi-sports model, only ridden very small mileage by expert, in beautiful order, tax paid till end of year, bulb horn, small lamp and generator, tyres unmarked; a bargain at £75, as these popular machines are practically unobtainable this year.—B. H. Davies, Lodswerth, Petworth, Sussex. [9085

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7538

### Allday.

**1919** Allon 2¾h.p., 2-stroke, 2-speed, overhauled, nice condition.—Coles, Cardington, Church Stretton. [2738

NEW Allday Allon, 2-speed, K.S., hand clutch, immediate delivery; £60; exchanges.—Percy and Co., 314, Euston Rd. [2460

WAUCHOPE'S, 9, Shoe Lane, London.—Allen 2-stroke new 1922 motor cycles, 2-speed gear model, £60; 3-speed gear model, £65; easy paymeots and exchange. [3410

### American X.

AMERICAN X 7-9h.p. Combination, fully equipped; £50; snip.—Hillier, Side Bell, 9, Wallingford Ave., North Kensington. [3120

ROBERTSON'S Motors, Ltd.—1921 American X., shop-soiled, £88; 1921 combination, accessories, tax paid, £115.—157b, Gt. Portland St., W.1. [6074

### Ariel.

ARIELS from Stock from the live agents, Barlow and Son, Menton, Eccles. Tel.: 160 Eccles. [3691

ARIEL 1920 3½h.p. Combination, complete, in very good order; £80.—The Layton Garages, 30, Holywell St., Oxford. [2789

LATE 1920 6-7h.p. Ariel Combination, every accessory, mileage only 400, taxed; £85.—24, Balliol Rd., North Kensington. [3033

5-6h.p. Ariel Combination, 3-speed, clutch, K.S., Tan-Sad, hood, screen; £75; sole part exchange.—Ratcliff, Butcher, Wadhurst. [3196

£85.—Ariel 1921 3½h.p., 3-speed, countershaft, hand and foot clutch, coachbuilt sidecar, Tan-Sad, equipped.—Dean, 67, Telford Avenue, Streatham. [2943

ARIEL 1921 Combination, with dynamo lighting, perfect condition; £115.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3272

ARIEL 6-7h.p. chain drive Combination; £140; immediate delivery here or from works, distance immaterial.—Bunting's Motor Exchange, Wealdstone, Middlesex. [2906

ARIEL Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4927


# NOTE THIS!

OWING TO LOWER COST OF MATERIAL AND LABOUR WE ARE NOW ABLE TO ANNOUNCE A FURTHER

## REDUCTION

OF APPROXIMATELY

## 15%

IN THE PRICE OF

# PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

# PULLEY

AND GEAR COMBINED

for

## 2 and 4 STROKE ENGINES

**No gear box friction.**
**No grinding noises.**
**No wheels or pinions to chew up.**

**The lightest, speediest, and simplest gear on the market for direct belt-driven 2 and 4 stroke engines.**

**We are now in a position to supply the Philipson-Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.**

IMMEDIATE DELIVERY.

*Send for Illustrated Booklet.*

*What is your make?* *Write us.*

## NEW REDUCED PRICE

# £6-6-0

CARRIAGE PAID

## PHILIPSON & Co., LTD.

**Astley Bridge, BOLTON, Lancs.**

(Established over 50 years.)

'Phone, 147 Eagley. 'Grams, 'Safety, Bolton.'


## MOTOR CYCLES FOR SALE.

### Ariel.

F.O.C.H. have 1920 3½h.p. Ariel Combination, full equipped, bargain.—5, Heath St., Hampstead (Near Tube.) [2894

ARIEL new 1922 3½h.p. Sports model Combination 3 speeds, clutch, and kick start; £115.—Warchope's, 9, Shoe Lane, London; easy payments an exchange. [3411

ARIEL Twin 5-6h.p., 3-speed, excellent condition and appearance, insured and tax paid, Glori sidecar, trial, full equipment; £75.—545, Green Lane Harringay. [2611

6-7h.p. Ariel Combination 1921, August, chain drive No. 1 sidecar, windscreen, accessories, under 1,50 miles, perfect condition; £120.—Bonning, 182, Whitladies Rd., Bristol. [3181

ARIEL Combination, 6h.p., 1920, very fine order full equipment; £82/10.—Vivian Hardie an Lane, Ltd., 23-24, Woodstock St. (off Blenheim St. Bond St., W. Mayfair 6559. [2599

**1921** (July) 6-7h.p. Ariel de Luxe Combination, al chain drive, hand and foot clutch, dynam lighting, electric horn, windscreen, all accessorie any trial or test; best offer.—Mortons, 25, Dukes Av N.10. Hornsey 2215. [2528

ARIELS, the most reliable machines on the road all models from stock; spare parts sent an where; trade supplied.—F. Speakmao, Ariel Exper Ariel Garage, 7, Rochdale Rd., Harpurhey, Manchester. Tel.: 325 Cheetham Hill. [5131

*Spare Parts:*

ARIEL Spares for all models, post free, Ari Agents, and Spares Service Depot.—Jones Garag Broadway, Muswell Hill, N.10 [0800

### Armis.

2¾h.p. October, 1920, Armis-Jap, 2-speed, K.S 24 speedometer, horn, mileage 4,100; £40.—Tuso Haslar Barracks, Gosport. [3200

ARMIS 3½h.p., Precision engine 1921, 2-speed, K.S Dunlop tyres, unpunctured, Hopley folding sid car, apron, all lamps, mileage 1,300, illness causin sale; £75.—Seen Burton's Cycle Works, Gillingham. [3055

### Bat.

8h.p. Bat-Jap Combination, 2-speed, perfect; £3 —17, Heaton Rd., Mitcham. [3090

BAT-J.A.P. 5-6h.p., good condition, fast, sporty £45.—Walter, Stoke-under-Ham, Somerset. [2920

NEW Shop-soiled Bat, 6h.p., 3-speed, spring frame £90, or near offer.—Percy and Co., 314, Euston Rd. [3490

**1921** 6h.p. Bat-Jap Combination, mileage 4,000 lamps, speedometer, horn, very good condition any trial; £95; owner going abroad.—Redwell, Great Milton, Oxon. [3230

**1921** 8h.p. Bat-Jap Combination, electric lighting Cowey speedometer, detachable and spar wheels, Easting's, tax paid; £125; would consider lighter machine part.—7, Norwood Rd., Herne Hill S.E.24. [2470

### Beardmore.

BEARDMORE-PRECISION.—1922 models for immediate delivery. Cash, exchange, or deferre payments.—Kays, 8, Bond St., Ealing. [4830

BEARDMORE-PRECISION Combination, spring frame, 3½h.p., 2-stroke, 3 inch tyres, variable jet, Lucas headlamp and horn, new August, 1921 done 1,600 miles; £80.—Puddy, 24, Lancaster Rd Stroud Green, London. [2930

### Blackburne.

BLACKBURNE Combination, single cylinder, speeds, countershaft, good condition; 55 guineas Thompson, 12, Trinity Rd., Balham (above shop). [2940

*Spare Parts:*

ALL engine spares from stock.—Maudes' Motor Mart 100, Great Portland St., W.1. [3250

### Bradbury.

BRADBURY 3½h.p., good condition, ride away; £18 or offer.—Write, P. T., 87, Eversleigh Rd., S.W. [2975

BRADBURY, 2-speed, enamelled black and gold guaranteed; 19 gns.—Royal Garage, Castle Gate Blackpool, S.S. [2670

F.O.C.H. have a 3½h.p. Bradbury Combination 3-speed countershaft, kick starter; bargain.—5 Heath St., Hampstead. (Near Tube.) [2891

£35.—Bradbury 4h.p., coachbuilt sidecar, 2 speeds clutch, K.S., all accessories, very good condition and cheap.—7, Cowdry Rd., Wimbledon, S.W. [3311

£14.—3½h.p. Bradbury, tax, good tyres, Sensprayo Bosch, ride away, first wire; another, £18. See Humber, F.N., Levis, Calthorpe, etc.—Ewers, Newton Rd., Burton-on-Trent. [3304

4h.p. Bradbury, new 1922, all-chain, 3 speeds, kick starter, and clutch, £92; also new 1922 2¾h.p. speed gear, etc., £60; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. [3412

## MOTOR CYCLES FOR SALE.

### Enfield.

1918 GNS.—1921 Royal Enfield Combination 8h.p., Vickers engine, Dunlop Magnum tyres, Stewart speedometer, Lucas lamps, legshields, windscreen, tax paid; exchanges.—Smith's, 86 Chalk Farm Rd., opposite Chalk Farm Tube Station. [2193

3h.p. Royal Enfield Combination, new 1922, £140; dynamo lighting model, £158; 2¼h.p. sports model, 2-stroke, £55; with kick starter, £57; easy payments, one-fifth down, exchanges arranged.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 777. [3418

ENFIELD Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St. Southport. 'Phone: 607. [4924

BARGAIN.—6h.p. Enfield Combination, electric and gas lighting, speedometer, screen, Tan-Sad, horn, etc., also spares, tax paid till 1923, thoroughly overhauled at considerable expense, appearance as new; compelled to sacrifice; £80.—Apply, between 7-8 p.m., 94, Camden St., Camden Town, N.W.1. [3135

*Spare Parts.*

ENFIELD Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7542

ENFIELD Spares and Repairs a speciality.—Pulling's Garage, London Rd., Croydon. 'Phone, 1619. [6952

### Excelsior.

1918 British Excelsior Combination, 8h.p. J.A.P., electric light, in very good condition, especially engine; offers.—Colin Cooper, Markham, Duckmenton, Chesterfield. [2587

£98.—1920 Excelsior, J.A.P. 8h.p., Magdyno, 3 speeds, clutch, K.S., 2-seater sidecar, hood, screens, electric horn, fully equipped, excellent condition and appearance; real bargain.—143, Ravensbury Rd., Earlsfield, S.W.18. [3311

1921 2¾h.p. Excelsior-Blackburne, 2-speed Sturmey-Archer, clutch, kick start, Bonniksen, speedometer, perfect condition, 2,000 miles only, driven by lady, splendid lady's machine, fast, quiet, reliable; £55.—Shaw, Sunnyside, Pinner Rd., Northwood, Middlesex. [3505

### Fafnir.

3h.p. Fafnir, 2-speed, Bosch, perfect running order; £17.—52, Birmingham Rd., Stratford-on-Avon. [2937

### F.N.

F.N. 4-cyl. 6h.p., Bosch, dropped frame; £20.—Captain Collins, Sunbury Common. [3381

F.N. 2½h.p., 2 speeds, clutch, new tyre, etc., must sell; £14.—C., 6, Thorley St., near Bishops Stortford, Herts. [3054

£25.—F.N. 5h.p., 4-cylinder, excellent condition, taxed; or exchange lightweight.—Lee, 239, Balham High Rd. [3246

1922 F.N. 2½h.p., brand new, 2-speed, kick start, clutch, shaft drive; 40 gns.—15, Caird St., Queen's Park, W.10. [2933

1919 GNS.—5-6h.p. F.N. 4-cylinder, 2 speeds, clutch, fast, Bosch, Amac, good tyres, tax; ride away; first wire.—181, Newton Rd., Burton-on-Trent. [3306

LANGFORD'S, 37, Cricklewood Broadway, London, N.W.2.—1922 8h.p. 4-cylinder F.N., with new o.h.i.v. engine, 3-speed gear, and no-trouble shaft drive, £135; 2½h.p., £55. Highest price for your present machine in exchange. [3369

F.N.'s, 9h.p., new type, overhead valves, £135; with sidecar, £174; 3h.p. new type overhead valves, with kick starter, hand-controlled clutch, and 2-speed gear, £72; a 2½h.p., 2-speed, hand-controlled clutch and kick start, side valves, £55; easy terms and exchange.—Wauchope's, 9, Shoe Lane London. 'Phone: Holborn 5777. [3419

*Spare Parts:*

F.N. Spares.—We can supply for all models from 1904. Please send frame number or old parts 37, Cricklewood Broadway, London, N.W.2. [3370

### Gamage.

1921 Gamage 2½h.p., 2-stroke, Villiers engine, Burman 2-speed, complete tools, lamps, and licence, excellent condition; £35.—Box 1775, c/o *The Motor Cycle*. [2800

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; from £120.—Stacey, 12, Ecclesall Rd. [0577

7-9h.p. Harley Combination, good condition, about 1916; £60.—Dickson and Co., Hollinwood, Manchester. [2730

HARLEY Combination, double-seater sidecar, windscreen; sacrifice. 60 gns.; exchanges.—67, Fernlea Rd., Balham. [3460

HARLEY-DAVIDSON 4½h.p. Solo, late model, new condition; £80.—Cook, Foresters Arms, 27, Lordship Lane, East Dulwich. [2683

1918 Harley Combination, 7-9h.p., double-seater, excellent condition, all on; £75; after 6 p.m.—18, Eastbourne Rd., Tooting, S.W.17. [3066

A Query!

# TO BUY OR NOT TO BUY

a visit here will solve the question.

If you cannot come, get our latest List.

## SPECIAL BARGAINS

| | |
|---|---|
| STANDARD, 11.6 brand new 2-seater..... | £485 0 |
| FORD, 4-seater, detachable and spare wheels, wants overhaul ..... | £49 10 |
| REX, 5-6, M.O.V. twin, 2-speeds, F.E., handle starting, sidecar ..... | £29 10 |
| TAMPLIN, 1920, 8 h.p. 2-seater ... ... | £89 10 |

## SECOND-HAND BARGAINS

*SOLOS.*

| | |
|---|---|
| ARIEL, 3½, 2-speed..... | £29 10 |
| ARIEL, 1920, 3½, 3-speed countershaft .. | £69 10 |
| B.S.A., 3½, single speed ..... ..... | £25 0 |
| BRADBURY, 3½, single gear ..... | £28 0 |
| DOUGLAS, 2¾, 2-speed, tax paid ..... | £40 0 |
| DOUGLAS, 1920, 2¾, 3-speed..... | £59 10 |
| DOUGLAS, 1921, 2¾, 3-speed, tax paid.... | £65 0 |
| HUMBER, 1914, 3½, 3-speed..... | £18 0 |
| LEVIS, 1922, 2-speed, tax paid..... | £51 0 |
| RUDGE MULTI, 1920, 3½ I.O.M. ..... | £59 10 |
| RUDGE, 3½, requires slight attention.... | £19 10 |
| SCOTT, 1920, 3¾ h.p., 2-speed..... | £79 10 |
| TRIUMPH, 3½, 2-speed F.E., tax paid .. | £32 10 |
| TRIUMPH, 1914, 4 h.p. 3-speed hub..... | £37 10 |
| WOOLER, 2¾, 1920, accessories, tax paid.. | £47 10 |
| PREMIER, 3½, 2-speed F.E. ..... | £35 0 |

## PASSENGER MACHINES

| | |
|---|---|
| ACME-JAP, 1920, 8 h.p. comb., Tax paid | £105 0 |
| A.J.S., 1915, 6 h.p. comb., spare wheel, etc. | £87 10 |
| ARIEL, 3½, 1920, 3-speed comb..... | £79 10 |
| COVENTRY VICTOR, 5-8, 1921, flat twin. | £105 0 |
| ENFIELD, 6 h.p. comb., Tax paid. ..... | £65 0 |
| ENFIELD, 1915-19, 6 h.p. combination.. | £79 10 |
| HARLEY, 1918, 7-9, 1920 Grindlay s.c. .. | £105 0 |
| HARLEY, 1919, electric comb. ..... | £115 0 |
| INDIAN, 7/9, 3-speed, electric comb..... | £75 0 |
| MATCHLESS, 8 h.p. coach combination.. | £57 10 |
| N.S.U., 8 h.p., 2-speed comb., Tax paid.... | £49 10 |
| REX M.O.V., 6 h.p., 2-speed comb. ..... | £39 10 |
| REX BLACKBURN, 1920, spare wheel, etc. | £110 0 |
| REX J.A.P., 8 h.p., 2-speed comb. ..... | £52 10 |
| ROVER, 5-6, 1920, unused 1920. New Rover sidecar. Electric Lighting.... | £120 0 |
| RUDGE, 1920, 5-6, and sidecar. Tax paid. | £75 0 |
| RUDGE, 7 h.p., 1920 comb..... | £89 10 |
| SCOTT, 1920, 2-speed comb., special..... | £105 0 |
| TRIUMPH, 3½, 2-speed, F.E., 1920 engine | £42 10 |
| SUNBEAM, 8 h.p. M.A.G., 3-speed comb... | £105 0 |

## NEW 1922 LIGHT CARS

B.S.A., CALTHORPE, COVENTRY PREMIER, LAGONDA, L.S.D. AND RHODE.

## NEW 1922 MOTOR CYCLES

B.S.A., BRADBURY, DOUGLAS, ENFIELD, EDMUND, LEVIS, MARTINSYDE, NEW IMPERIAL, NORTON, QUADRANT, RALEIGH, REX, ROYAL RUBY, SCOTT, SUNBEAM and TRIUMPH.

## Halifax Motor Exchange,

25, Horton Street, Halifax.

'Phone: 1400. 'Grams: "Perfection."


## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

HARLEY Combination, 1919, bulbous sidecar, Enfield, Tan-Sad, splendid condition; 75 gns.—Terrace Garage, Turnham Green Terrace, Chiswick. [3475

HARLEY Combination, electric model, excellent condition, very beautiful, tax paid; £95, bargain.—Terrace Garage, Turnham Green Terrace, Chiswick. [3476

LATE 1918 Harley Combination, discs, repainted, beautiful mechanical condition; 72 gns.; evenings, week-ends.—17, Redfern Rd., Harlesden, N.W.10. [3077

1920 7-9h.p. Harley-Davidson 2-seater Sidecar, lamps, horn, speedometer, windscreen, hood, as new, guaranteed; £110.—40, Warley Rd., Blackpool. [3204

1918 Harley 7-9h.p. Combination, Bosch magneto, exceptionally fast, perfect mechanical condition; owner buying car; any trial; £75.—57, Harrow View, Harrow. [2686

HARLEY-DAVIDSON 7-9h.p. 1919, de luxe sidecar, Bosch magneto, dynamo lighting, tax, insurance paid; £105.—Tricker, Private Rd., Long Ditton, Surrey. [1459

£58.—Harley-Davidson Combination 1915 7-9h.p., 3 speeds, clutch, kick starter, large sidecar, lamps, licence, accessories, etc., splendid condition.—63, Solon Rd., Brixton. [3068

HARLEY 7-9h.p. de Luxe Combination 1919, electric lights, Klaxon, speedometer, screen, perfect; £100; exchange Morgan.—Ansell, 184, New North Rd., Islington, N.1. [2950

1922 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices. Catalogue with pleasure.—Sam. E. Clapham (Motors), 27 Stockwell St., Greenwich, S.E.10. [5986

HARLEY Combination, 1918, Canoelet MM4 sidecar, in excellent condition throughout, lamps, horn, any trial; £80; or exchange for Indian or Triumph and cash.—Langford's, 37, Cricklewood Broadway, N.W.2. [3366

1919 Electric Model 7-9h.p. Harley, mechanically splendid, just re-enamelled, roomy sidecar, screen, speedometer, retreaded tyres, outfit looks as if just left makers' works; £120; appointment.—Stanley, 21, Parkview Rd., Croydon. [3082

1920 4h.p. Flat Twin Harley Combination, 3-speed, clutch, kick start, Swan sporting sidecar, speedometer, lighting set, horn, etc., most beautiful engine, in practically new condition throughout; £88.—Will, 769, Romford Rd., Manor Park, London, E. [3376

*Spare Parts:*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7543

### Hawker.

1921 Hawker 2¾h.p., 2-speed, splendid condition, tax paid; £30.—164, Revelstoke Rd., Wimbledon Park, S.W. [3155

### Hazlewood.

NEW Shop-soiled 1921 Hazlewood Combination, 6h.p.; £110, or near offer; exchange.—Percy and Co., 314, Euston Rd., N.W. [9657

### H.B.

H.B., 1922 Models, 2¾h.p. Blackburne engine, 2-speed Burman gear box, chain belt, C. and K.S., £72; with 3-speed gear box, £75; 4h.p., 3-speed, £82; 4¼h.p., 3-speed model, clutch and kick start, £100; cash, deferred terms, or exchange.—Below.

H.B., 1922 Models for earliest deliveries.—Write London Motors, 61, Holborn Viaduct, E.C., sole distributing agents for the following counties:—Kent, Surrey, Sussex, Hants, Berks, Oxford, Bucks, Northants, Beds, Hunts, Cambridge, Norfolk, Suffolk, Essex, Herts, Middlesex (including London). [2612

### Henderson.

HENDERSON 1920 4-cyl. Combination, lamps, horn, Easting, Tan-Sad, good condition throughout, tax paid; £105; private owner.—Box 1730, c/o *The Motor Cycle*. [2648

REDUCTION in Price of the new 1922 Model De Luxe Henderson, dynamo lighting set, electric horn; now £165; easy payments only 4% extra; free delivery to any address.—Premier Motor Co., Aston Rd., Birmingham. [2448

ROBERTSONS Motors, Ltd., who have handled these famous Henderson machines since 1911, can give trial runs with the latest model at any time by appointment. 1922 De Luxe model in stock at the new reduced price of £165.—157b, Great Portland St., W.1. [1092

ROBERTSONS Motors, Ltd., the original Henderson importers, offer the following: 1921 Standard, in perfect order, tax paid, £110; 1920 electric combination, Tan-Sad, just completely overhauled, £135; 1920 Standard Capjon and Mudd, £80; sidecar, Cowey trip, and all accessories, £135; 1920 Standard combination, all accessories, tax paid, £120; 1915 Standard, with luxurious sidecar, speedometer and accessories, £70.—167b, Gt. Portland St., W.1. [6078

## MOTOR CYCLES FOR SALE.

### Henderson.

*Spare Parts:*

ROBERTSONS Motors, Ltd., the Henderson Experts, have the most representative stock in the country.—157h, Gt. Portland St., W.1. [6079

### Hobart.

2¾h.p. Hobart, 3-speed, clutch, excellent order; £20.—17, Heaton Rd., Mitcham. [3096

HOBART, new, shop soiled, single speed, £39; 2-speed, kick start, £59.—Shepherd, Enfield Highway. Tel.: Waltham X 31. [0875

1922 Hobarts, all models. Catalogues with pleasure from the agent, Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [4635

1920 Hobart-Villiers, 2-speed, all accessories, tax paid, magnificent condition; £32/10.—36, Ulleswater Rd., Southgate, N.14. 29 'Bus route. [3005

### Humber

HUMBER-CENTAUR 1914 3½h.p., runs excellently, equipped, taxed; £19.—Clark, 7, Exhibition Rd., S.W.7. [4610

HUMBERETTE 1913 A.C., 3 speeds and reverse, excellent condition; £65.—Wessex Motors, Ltd., Salisbury. [2921

£18.—3½h.p. Humber, sporting model, fast, tax, new back forks for gear box.—181, Newton Rd., Burton-on-Trent. [3303

HUMBER Combination 1914 3½h.p., new 3-speed gear, lamps, speedometer, tax paid; cash offer.—14, Stuart Rd., Acton. [3012

3½h.p. Humber, Bosch, B. and B., low frame, spring forks, footboards, excellent condition; £16.—Read, Aston, Nantwich. [2721

HUMBER 4½h.p. Sports Model, £100; immediate delivery.—Shepherd and Co., Enfield Highway. Tel.: Waltham Cross 31. [0877

HUMBER 4½h.p. Flat Twin Combination, new machine, slightly shop-soiled; £125.—P. J. Evans, John Bright St., Birmingham. [3318

£16.—2¾h.p. Twin Humber, also Singer Combination, many others; exchanges arranged; call or write for particulars.—89, East Hill, Wandsworth. [3093

HUMBER 3½h.p., 2-speed, clutch, in excellent condition and runs well, lamps and accessories, and tax paid for year; £17/10.—74, Brighton Rd., Surbiton. [2890

4h.p. Humber, 3-speed, kick start, long exhaust, Bosch, B. and B., suitable for sidecar, perfect, any examination; offers.—Box 1804, c/o *The Motor Cycle*. [3347

MOTOR Cycle 6h.p., water-cooled 1917 Humber, overhauled, new tyres, Millford sidecar, reliable machine; price £80.—Gimson, Woodlands, Loughborough. [2650

3½h.p. Humber, 2-speed, Bosch, B. and B., new tyres, tubes, and belt, just overhauled, lamps, good running order, horn; £25.—Box 1786, c/o *The Motor Cycle*. [2920

HUMBER 3½h.p. 3-speed Combination, modern, C.B. sidecar, windscreen, hood, lamps, horn, clutch, kick-starter, just overhauled, sound; £50.—10, Grove Avenue, Hanwell, W.7. [2694

£17.—Humber Lightweight, excellent condition, ride away; owner bought combination; tyres perfect; great bargain; first cash secures; seen after 7 p.m. —113, Kenilworth Avenue, Wimbledon. [2953

HUMBER 3½h.p. 2-speed Combination, coachbuilt, excellent running order and condition, strong tyres complete; £35, or solo, £29/10; fitted semi-T.T. handle-bars; sidecar, £5/10.—Young, Lenbury, Eastwood, Essex. [3113

3½h.p. Humber, 3-speed, S.A., enamel perfect, engine overhanled, new parts, etc., lamps, horn, trial, no tax, £25, no offers; Philipson pulley, fit 1915-16-17 Triumph, perfect, £4.—Ford, Sotwell, nr Wallingford, Berks. [3079

### Indian.

WAUCHOPE'S, 9, Shoe Lane, London, for new Indians on easy terms. [3420

INDIAN SCOUT, 1921, perfect condition, ride 50 miles; £82/10.—51, Broad St., Longhborough. [3235

INDIAN 7-9h.p., clutch, electric, insurance, tax paid, perfect, any trial; £45.—Painter, Marcham, Abingdon. [2986

1919 7-9h.p. Indian Powerplus Combination for sale, or exchange for 2-seater.—Ufton, Bourne End, Bucks. [9687

7-9h.p. Indian, 2-speed, hand and foot clutch, fully equipped, perfect; £40.—10, Knatchbull Rd., Camberwell. [3228

INDIAN 1919 7-9h.p. Powerplus, 3-speed, clutch, kick starter; £75.—A. E. Hughes, Crankhall Lane, Wednesbury. [3063

INDIAN and Sidecar, 7-9h.p., 1914; sell or exchange Douglas or Triumph preferred.—Padfield, Bowlish, Shepton Mallet. [3083


# SUCCESSES OF OUR SECOND-HAND MACHINES IN COMPETITION

Our second-hand stock machines, without special tuning, have recently won the following successes :—

April 19th. Wallington M.C.C. President's Cup Trial (Non-stop). **3½ h.p. NORTON**, Silver Medal, second best performance, 100 per cent. marks.

May 10th. Surbiton M.C.C. Trial (Non-stop). **3½ h.p. SUNBEAM**, Silver Medal (Premier Award).

May 13th. Woolwich M.C.C.'s Team Trials (100 miles). **3½ h.p. SUNBEAM**, Silver Medal (Non-stop performance).

May 20th. North London M.C.C.'s Annual Hill-climb at Kop. **3½ h.p. TRIUMPH and Sidecar**, first in 600 c.c. solo, first in 600 c.c. sidecar, second in 1,000 c.c. solo, second best time of day. (Winning 2 silver and 1 bronze medal.)
**3½ h.p. NORTON**, second in 600 c.c. solo (Bronze medal).

May 27th–28th. Reigate and Redhill M.C.C. All-night Trial. **3½ h.p. TRIUMPH and Sidecar**, Special Gold Medal for best performance of day.

Thus our second-hand stock machines have won 1 Gold, 5 Silver, and 2 Bronze medals in the last few weeks. We pride ourselves that ALL our second-hands are capable of similar results, and we sell ALL machines under a three months guarantee. Exchanges undertaken.

**SELECTION FROM PRESENT GUARANTEED STOCK.**

| | Gns. |
|---|---|
| Alldays Allon, 2-stroke, countershaft | 24 |
| Ariel, 1921, 6 h.p. combination | 89 |
| B.S.A., 4½ 3-speed, chain-cum-belt | 45 |
| B.S.A., 4½, 3-speed, all-chain | 48 |
| Connaught, 2½ h.p., 2-speed | 24 |
| Coulson-B, 2¾ h.p., 3-speed, 1921 | 53 |
| Douglas, 2¾ h.p., 2-speed | 24 |
| Enfield, 1918, 6 h.p. combination | 69 |
| Harley, 1921, brand new 4 h.p. twin, unsoiled | 89 |
| Indian, 7-9 h.p., 3-speed | 45 |
| Indian, 7-9 h.p. comb., 1920, dyn. lighting | 98 |
| Lea-Francis combination, 3½ h.p. twin J.A.P. | 48 |
| Norton, 3½ h.p., 16 H Model, as new | 79 |
| P. & M., 3½ h.p., 2-speed, renovated | 35 |
| Triumph, 1914, 4 h.p., 3-speed | 34 |
| Triumph, Model H, Magdyno, as new | 89 |
| Triumph, 1921, all-chain, 3-speed | 88 |
| Westwood-Jap, 1921, 8 h.p. comb., dyn. light. | 89 |

**Peter Gordon, Limited,**
**110, Upper Richmond Rd., EAST SHEEN, S.W.14.**

Tel.: PUTNEY 2865. **Open 8 p.m. & Sundays.**

*Nos. 33, 37, 73 Buses pass door.*

Nearest Station, MORTLAKE, L.S.W.R.


## MOTOR CYCLES FOR SALE.

### Indian.

INDIAN 3½h.p. Twin, 3-speed, lamps, all accessories, as new; £40.—Apply, 213, Bowes Rd., New Southgate, N.11. [2716

INDIAN 7-9h.p., spring frame, running order; bargain, £30.—Achurch, 29, Herbert Rd., Woolwich, S.E.18. [2549

NEARLY New Indian Scout, dynamo lighting, speedometer, etc., perfect; best offer.—Collum, 1, Thames Side, Windsor. [2808

INDIAN 1919 Powerplus Combination, been used solo, 2 sprockets, T.T. bars, perfect, fast; £76.—247, High Rd., Lee, S.E. [2748

INDIAN Scout, 1922, immediate delivery of this famous machine; £112.—The Layton Garages, 30, Holywell St., Oxford. [2782

INDIAN Mills-Fulford Combination, 3-speed, hand and foot clutch, tax paid, equipped.—13, Vambery Rd., Plumstead, S.E.18. [3292

INDIAN 7-9h.p. Combination, 1915-16, 3 speeds, spring frame, electric lighting; £65.—Eagles and Co., 275, High St., Acton, London. [2772

1914 7h.p. Indian and Special Millford 2-seater Sidecar, good condition, re-enamelled, electrically equipped; £75.—Seymour, Ivy Hill, Hitchin. [3134

1920 Indian Powerplus Combination, all on splendid condition, any trial, licence paid; 95 gns.; 8 till 5.—H.B., 74, East Hill, Wandsworth. [2630

7-9h.p. Indian, late 1921, T.T. bars, electrical equipment, mudshields, only run 1,500 miles, owner buying car; £90.—Tod, R.A. Mess, Aldershot. [3389

SCOUT Indian, 1921, unpunctured, lamps, licensed, as new, ideal outfit, absolutely perfect, exceptionally fast; bargain, £85.—89, East Hill, Wandsworth. [3092

7-9h.p. Indian Combination, 1914, 2 speeds, clutch, Eastiog, speedometer, new tyres, tubes; no reasonable offer refused; exchange solo.—34, Poolstock, Wigan. [3186

7-9h.p. Indian Powerplus Combination, dynamo, speedometer, new tyres, beautiful sidecar, thorough good order; bargain; exchanges considered.—8, Springcopse Rd., Reigate. [2681

£35.—1915 Indian, 5-6h.p., sports model, clutch, Disc wheels, speedometer, T.T. reversible bars, in excellent condition; or exchange lightweight.—Yea, Turk's Head, Taunton. [3243

1918 Indian 7-9h.p., spring frame, kick starter, 3-speed gear, complete in every way, guaranteed excellent condition throughout; accept first reasonable offer.—Bridges, Ltd., Cirencester. [2607

7-9h.p. Powerplus Indian Outfit, 1920 tandem sidecar, take 2 adults, dynamo lighting set, horn, speedometer, screens, hood, perfect order; £125.—K. Green, 44, Cornwall Ave., Wood Green. [2846

1920 7-9h.p. Indian Combination, very little used mileage 2,300, dynamo lighting, electric horn Mills-Fulford sidecar, screen, in excellent condition; nearest to £100 accepted.—Redfern, Honiton. [2682

INDIAN-SCOUT 4h.p., Model G.E.21, equipped with dynamo lighting, electric horn, speedometer, new machine, fully guaranteed; £110; sidecar to suit, £20.—P. J. Evans, John Bright St., Birmingham. [3318

£98.—Late 1920 7-9h.p. Powerplus Indian combination, dynamo lighting, 3 electric lamps, electric horn, speedometer, ammeter, pump, tools, legshields tax paid, luxurious machine, any trial; exchanges.—Smith's, 86, Chalk Farm Rd., N.W.3. [2603

INDIAN 1921 7-9h.p. Combination, electric and gas lighting, electric horn, speedometer, luggage carrier, De Luxe sidecar, Easting and sidecar cover, pair and tyres as new, small mileage; 100 gns.—Sparke's, 7-13, Upper Gloucester Place, N.W.1. Paddington 2900. [2775

FOR Latest 1922 Indians, try Scouts, from £112 standards from £140; and Chiefs £160. Try Horswill's, Indian Specialists. Overhauls a speciality over 10 years' experience with Indians. Large stock of spares always kept in stock.—Horswill, 42, Bridge St., Chester. 'Phone: 943. [2594

LANGFORD'S, Indian Specialists, can supply all 1922 models. In stock.—4h.p. Scout. £112 Millford Junior sidecar, £134; Swan sports, £137/10 De Luxe, £147; 7h.p. combination, £175, with dynamo and speedometer; Chief, £199, with ditto; exchange your present machine for one of these magnificent models; we can allow you highest prices; write, call, or 'phone for full particulars.—Laugford's, 37 Cricklewood Broadway, N.W.2. Hampstead 8616. [3375

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7545

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all Indian spare parts always in stock. Write for free spare part list, stating year of manufacture [0755

INDIAN.—The Dennis Accessories Stores 89, Brixton Rd., London ('Phone: Brixton 3129), supply all parts from stock, new and second-hand. They also specialise in Indian repairs. [6781

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH-RICARDO in stock; £120.—Premier Motor Co., Aston Rd., Birmingham. [0868

TRIUMPH 1922 Models in Stock; gradual payments.—Lafferty, 309, King's Rd., Chelsea. [2172

T.O.C.H. for Triumphs, latest models in stock.—5, Heath St., Hampstead. (Near Tube.) [2894

1918 Trimph, countershaft, 3-speed, K.S., perfect order; £50.—9, Church Rd., Harlesden. [2934

MODEL H 1922 Triumph, new, £105; also S.D. model, £115; cash or extended payments.—Below.

WE have several 1918, 1919 C.S. Triumphs, fitted new tyres, tubes, etc., and many fitted with 1922 S.A. gear boxes, splendid value, enamelled and plated, £85.—The Hackford Engineering Co., 53, Hackford Rd., Brixton, S.W.9. [3445

1919-20 Triumph, standard, speedometer, yearly tax, perfect; 75 gns.—160, King St., Gt. Yarmouth. [3160

TRIUMPHS.—Prompt delivery and service.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3692

1921 Baby Triumph, nearly new; bargain, £40.—Jefferies, 37, Fraser St., Bedminster, Bristol. [2572

1917 3½h.p. Triumph, little repairs; £8; stamp, particulars.—Box 1747, c/o *The Motor Cycle*. [2712

1920 Triumph Junior, all on, spares, licensed, any trial; £43.—Wray, 169, Tufnell Park Rd., N.7. [2977

TRIUMPH-GLORIA Combination, electric lamp, perfect condition; £70.—120, Sutherland Rd., Croydon. [3263

TRIUMPH 1918, in perfect order, fully equipped, £45; new sidecar, £10.—155, Ladbroke Grove, W.10. [3175

TRIUMPH, 1914, clutch, lamps, horn, etc., guaranteed condition; £30.—217, Belsize Rd., Hampstead. [3213

1920 Triumph, perfect, fully equipped, taxed; £75.—526, Princes' Rd., Penkhull, Stoke-on-Trent. [3145

1916 4h.p. Triumph and accessories, in good condition; £55.—Bounds' Garage, 223, High Rd., Kilburn. [3287

TRIUMPH Clutch Model, lamps, generator, watch; £22.—Terrace Garage, Turnham Green Terrace, Chiswick. [3478

FOR Sale, 1922 Ricardo-Triumph, or exchange for 1922 Norton to take sidecar.—Redfearn, 53, Cogan St., Hull. [2536

1920 Triumph-Gloria Combination, windscreen, lamps, not ridden 5,000 miles; £95.—Alway, Monmouth. [2530

4h.p. Triumph, 1921, Lucas Magdyno, speedometer, licence, insurance, complete; £110.—Basford, Tiffegrance, Market Drayton. [2534

RICARDO-TRIUMPH, actually in stock, £120; also model SD, chain drive, £115.—Hitchings and Son, Evesham. [2627

OXFORD.—4h.p. Countershaft Triumph, sound condition, fully equipped; £52.—King, Egrove Farm, Oxford. [2840

3½h.p. Triumph, Olivos spring frame, fast, perfect running order; £30.—Barrett, 85, High St., Wandsworth. [2859

TRIUMPH 1918 sporting Combination, good condition, accessories; £65, near offer.—17a, Dean Rd., Cricklewood. [2958

1918 Countershaft Triumph, fully equipped; £48.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [3118

1918 Triumph 4h.p., countershaft, fully equipped, perfect; £48.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [2962

MOFFAT, Yeovil, Official Triumph Service Agents.—1922 models from stock; exchanges; all spare parts. 'Phone: 50. [5725

TRIUMPH Combination, 2-speed, clutch, good condition, £45; Philipson gear, £3.—Ashford, Highlands Farm, Leatherhead. [2651

1914 Triumph, 3-speed, good running order, lamps, speedometer; £35, or near offer.—66, Hermon Hill, Snaresbrook, E.11. [2990

TRIUMPH Combination, 1920, electrically equipped, tax paid, as new; £82 10.—Surgery, 216, Portobello Rd., North Kensington. [1938

TRIUMPH combination, 1921, lamps, horn, etc., tax paid, splendid condition; £105.—33, Hackford Rd., Brixton, S.W.9. [3444

TRIUMPH Countershaft from £45; renovated and guaranteed, £55.—J. Rhind and Co., Stone Place, Rusholme, Manchester. [3278

TRIUMPH Combination, 1920, tax paid, splendid condition, privately owned; £85 or near offer.—Corner Garage, Amesbury, Wilts. [2811

1922 Renovated Triumph, countershaft, as brand new, unregistered; first 59 gns. secures.—Clifton Garage, Abingdon St., Blackpool. [2567


# T.T.

Every machine below is a *Trophy* worth getting.

## BIKES

for every use, pottering, competition or touring, they cannot be

## BEATEN.

| Cash Price. | Make and Description. | First Payment. | Twelve Monthly Payments. |
|---|---|---|---|
| £80 | Norton No. S | £28 | £4 13 0 |
| £115 | Norton 16H | £40 | £6 13 0 |
| £120 | Norton Big 4 | £42 | £6 18 0 |
| £153 | Norton Big 4 and de Luxe Sidecar. | £53 | £8 17 0 |
| £130 | Indian Scout with electric equipment. | £45 | £7 11 0 |
| £160 | Indian Chief with electric equipment. | £55 | £9 6 0 |
| £199 | Indian Chief with electric equipment and sidecar. | £69 | £11 10 0 |
| £105 | Scott Squirrel | £37 | £6 0 0 |
| £110 | Scott Standard | £33 | £6 8 0 |
| £43 | Levis Popular | £17 | £2 15 0 |
| £60 | Levis 2-speed, clutch and kick-starter. | £21 | £3 9 0 |
| £86 | Levis Model G | £23 | £3 16 0 |
| £110 | Martinsyde 3½ twin sports. | £38 | £6 8 0 |
| £85 | Quadrant 4½ single, chain drive, solo. | £30 | £4 18 0 |
| £105 | Quadrant 4½ single, chain drive, combination. | £37 | £6 0 0 |
| £110 | B.S.A. 4½ chain drive | £38 | £6 8 0 |
| £65 | Velocette 2-speed | £23 | £3 15 0 |
| £72 10 | Velocette 3-speed | £25 | £4 4 0 |
| £130 | Raleigh 5 h.p. solo | £45 | £7 11 0 |
| £165 | Raleigh 5 h.p. combination | £57 | £9 11 0 |
| £68 | Raleigh 2¾ h.p. 2-speed | £23 | £3 19 6 |
| £141 15 | Sunbeam 4½ h.p. solo | £50 | £8 5 0 |
| £182 14 | Sunbeam 4½ h.p. No. 1 sidecar. | £65 | £10 12 0 |
| £126 | Sunbeam 3½ h.p. solo | £45 | £7 5 0 |
| £165 | Sunbeam 3½ h.p. No. 3 sidecar. | £60 | £9 11 0 |
| £136 10 | Sunbeam 3½ h.p. Light solo | £47 | £8 0 0 |
| £136 10 | Sunbeam T.T. Sporting solo. | £47 | £8 0 0 |
| £168 | Sunbeam 8 h.p. solo | £58 | £9 16 0 |
| £217 7 | Sunbeam 8 h.p. No. 2 sidecar. | £75 | £12 15 0 |

Distance no object.

REAL SERVICE AFTER SALE.

**VICTOR HORSMAN**
**LIMITED,**
**7, Mount Pleasant, L'pool.**


## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH, late 1913, attractive condition, Eastings screen, good accessories; £85.—Bunting's Motor Exchange, Wealdstone, Middlesex. [2907

LATE 1913 Triumph Combination, coachbuilt, equipped, excellent order, ride away; £36.—Warwick, Hinckley Rd., Leicester. [2996

£28.—Clutch Model Triumph, 1913, 3½h.p., Lucas lamps and horn.—Smith's, 86, Chalk Farm Rd., opposite Chalk Farm Tube Station. [2195

£50.—Triumph, 1913, clutch, modernised, appearance and mechanically as new, fast, reliable, taxed.—52, Wilmington Rd., Leicester. (D) [2541

1918 Countershaft Triumph, lamps, horn, licensed, beautiful condition, smart, complete; £55, exchanges.—89, East Hill, Wandsworth. [3083

1913 Triumph Combination, excellent order, equipped; £85; will separate.—1a, Marie House, Brockley View, Forest Hill. [3193

TRIUMPH, clutch, lamps, new tyre, Bosch, pillion, footrests, insured, taxed, no dealers.—59, Leppoc Rd., Clapham Park, S.W.4. (evenings). [3017

TRIUMPH countershaft with Cancelet sidecar, windscreen, fully equipped, excellent condition; £55.—51, Upper Richmond Rd., Putney. [2955

CROYDON Agents Triumphs, all new models and large range of second-hand in stock.—Moore's Presto Motor Works, North End, Croydon. [0884

TRIUMPH 1922 Model H, with coachbuilt sidecar, indistinguishable from new; £112 10.—The Layton Garages, 50, Holywell St., Oxford. [2799

TRIUMPH 1922, S.D. model, and sidecar, little mileage, condition as new; £127/10.—The Layton Garages, 50, Holywell St., Oxford. [2789

4h.p. Triumph, 1918, 3-speed countershaft, £55; ditto fully equipped, £60; guaranteed.—Joseph Rhind and Co., Stone Place, Rusholme, Manchester. [3279

4h.p. 1914 Triumph, Sturmey 3-speed and clutch, Henderson light sidecar, in good order, tax paid, lamps, tools; £58 10.—20, Forrest St., Latchford. [2245

SHEFFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stacey, Triumph Service Depot, 12, Ecclesall Rd., Sheffield [0812

£55.—Triumph 4h.p., countershaft, 1918, engine No. 54278, renovated, new Dunlop tyres.—Smith's, 86, Chalk Farm Rd., opposite Chalk Farm Tube Station. [2194

BRAND New 1922 4h.p. Triumph Model S.D., all chain, £115; Gloria pattern sidecar to fit, £55.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [1552

TRIUMPH 1918 4h.p. Combination, lamps, horn, complete; £68.—Elce, Ltd., 13, 15 and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0065

TRIUMPH 1922, Model H, fully equipped and tax paid, very little mileage; £95 cash; approval anywhere.—The Layton Garages, 50, Holywell St., Oxford. [2791

TRIUMPH.—Delivery from stock of all 1922 models. Enquiries invited. Cash or deferred.—The Layton Garages, 50, Holywell St., Oxford. [2784

TRIUMPH 1922 Combination, fully equipped, tax paid, indistinguishable from new, cost £140; accept £120.—The Layton Garages, 50, Holywell St., Oxford. [2785

TRIUMPH 1921, all-chain drive, lamps, horn and Bonniksen, exceptional condition, little mileage; £100.—The Layton Garages, 50, Holywell St., Oxford. [2786

TRIUMPH Model H 1922, Bonniksen, tax, horn, run 50 miles, unscratched; £105.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [3275

1914 Triumph, 3-speed Sturmey-Archer, perfect condition, tax paid, speedometer, lamps, all tools; cash wanted; £45.—Newman, 92, Corporation St., Nuneaton. [2802

TRIUMPH 4h.p. Countershaft, just returned from makers after thorough overhaul, accessories; must dispose; what offers?—Budge, 42, Hammersmith Bridge Rd., W.6. [2803

NEW (May) Triumph, Ricardo 3½h.p., o.h.v., with all accessories, licence, insurance paid; best offer; no fault; Knutsford, Ches. district.—Box 1798, c/o *The Motor Cycle*. [3049

TRIUMPH Combination, Model H, mileage 1,100, lamps, Bonniksen, horn, new June, 1921, untaxed September to April; £110.—Rathbone, 211, Barton Rd., Stratford. [3122

TRIUMPHS.—Cambridgeshire Service Agents. All models from stock, including 3½h.p. Sports Ricardo; complete stock spares.—King and Harper, Bridge St., Cambridge. [9744

BARGAIN of the week.—Hottest Triumph on the road, fully equipped, registered 1922; 59 gns. for quick sale; only wants seeing; after 5 p.m.—4, Elm Gardens, Hammersmith. [3203

## MOTOR CYCLES FOR SALE.

### Triumph

TRIUMPH 1921 4h.p., all-chain drive, fully equipped, low mileage; £85, or exchange for lower power and cash.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [2888

TRIUMPH 3½h.p., single-speed, clutch, fully equipped, lamps, dissolved acetylene tank, Klaxon, licensed, fast 'bus, excellent shape; £35.—66, Union Grove, Clapham. [3453

1920 Triumph Combination 4h.p., countershaft, equipped every possible accessory, condition as new, guaranteed; £80.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [2961

TRIUMPH.—Immediate delivery of all 1922 models. Sidecars to suit from £20. Write for catalogue and particulars of easy payments.—P. J. Evans, John Bright St., Birmingham. [3316

TRIUMPH Gloria, 1920, hood, windscreen, etc., lamps, speedometer, original tyres, finest combination on the road, tax paid; £100.—145, Widmore Rd., Bromley, Kent. [2939

NEW 1922 Triumph chain drive combination shortly due from Triumph works; advertiser cannot use, and would be glad to dispose of same.—Box 1783, c/o *The Motor Cycle*. [2882

1921 Triumph 4h.p., countershaft, fully equipped, literally new; £80, or with brand new Coupette sidecar, the sidecar with rigid disappearing hood (come and see one), £110.—Below.

1918 Triumph 4h.p., countershaft, fine condition throughout, fully equipped, tax paid; £58/10. —Below.

1913 Triumph, 3 speeds, clutch, lamps, tools, etc., excellent; £32/10.—Goad, Norman Lodge, 122, Maida Vale, W.9. 'Phone: Hampstead 1353. [3334

1919 Triumph-Gloria Combination, delivered 1920, perfect order, appearance as new, oversize Dunlops, Easting's, tax paid, only wants seeing; £78.—1, Norwood Rd., Herne Hill, S.E.24. [2477

57 GNS.; exchange.—Triumph 4h.p., believed 1917, 3 speeds, clutch, K.S., new Mills-Fulford sidecar, equipped; any examination.—Seabridge, Hansler Rd., East Dulwich, Sydenham 2452. [3076

TRIUMPH combination, 1922, done 500 miles, fitted with lamps, horn, speedometer, windscreen, &c., tax paid, smart turnout; £115, exchanges. —33, Hackford Rd., Brixton, S.W.9. [3446

1919 Triumph Gloria Combination, Easting screen, legshields, luggage grid, all lamps, tools, tax paid, splendid condition; £78.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [3115

TRIUMPH 4h.p. countershaft, new lamps, mechanical horn, and long exhaust pipe, tools complete, driving suit, condition excellent, licensed, many spare parts; £53.—153, Strathyre Av., Norbury, S.W. [3504

1920 Triumph 4h.p. 3-speed Countershaft Combination (or separate), complete with lamps, tools, etc., tyres good, tax paid, excellent condition, good running order; £95.—Bourner, Horsmonden, Kent. [2865

TRIUMPHS, 1918; all £45; 40 to pick from, in sound condition, any trial, new Dunlop tyres, fully equipped; we really have 40 for you to pick from.—204, Ladbroke Grove, W.10. 'Phone: Park 5541. [3176

TRIUMPH 4h.p. Combination, engine No. 63461, new Lucas Magdyno, Cowey horn, speedometer, Gloria sidecar, Easting, excellent condition, tax paid, tools, spares; £130.—Welsford Holgan, Mawney's Rd., Romford. [2660

WE Have a large number of 1918 countershaft Triumphs in excellent condition; prices from £45 to £65. One only brand new 1918 Triumph, just uncrated, £85.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [3323

1912 (3½h.p.) Triumph, 3-speed, foot clutch, splendid condition, roomy sidecar, screen, head light, good tyres, ready for immediate use, fully insured, tax paid December; £45.—Trotter, 116, Manor Rd., Wallington, Surrey. [2754

1921 Triumph 4¼h.p., tools, spares, inner tubes, 3 electric lamps and acetylene, perfect condition, with lightweight Sandham sidecar, new February, 1922; £90, or offer; solo, £70; owner returning India. —Captain Morgan, Rostrevor, Seaford, Sussex. [2709

FOR Quick Sale, perfect condition guaranteed, 4 h.p. Triumph combination, November, 1920, grey Millford sidecar, all on, powerful and speedy 'bus, carefully used, fully licensed and insured; £95 cash; any trial by appointment.—Write, Green, 22, Templars Av., Golders Green, N.W.11. [3968

TRIUMPHS.—New 1922 4h.p. Combination, all-chain drive, £155; chain-cum-belt combination, £145; 4h.p. S.D., all-chain, £115; Model H, chain-cum-belt, £105; Junior 2¼h.p., £65; also several second-hand Triumphs from £40; and one 3½h.p., 1922, o.h.v., done 500 miles, £115; second-hand machines taken in exchange; remainder on easy terms, value allowed on old machine accepted as first payment down.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [3437


# WATERPROOF CLOTHING FOR ALL WEATHER CONDITIONS

Fig. 1.

**WATERPROOF MOTOR CYCLE SUIT (Fig. 1)**
With Plaited Leather Belt.

**SPECIFICATION**

**MADE from hard wearing double texture material with an interlining of Rubber.**
**Double Breasted Jacket, with all-round plaited Leather Belt, large Patch Pockets, and converted collar to button right up to neck, to fasten with Throat Tab. Wind Cuffs in sleeves. All seams of the Suit are rubber cemented and taped with extra material, making the garment absolutely waterproof.**
**Overall Trousers with spat-shaped leg; wind gussets to keep the wind from the leg and boots; fastened with patent clasp fasteners, enabling the trousers to be pulled off in a moment.**

**SUIT COMPLETE 35/-**

**Jacket only . . . . 25/-**
**NO EXTRA CHARGE FOR CARRIAGE**

**OUR ILLUSTRATED LIST AND PATTERN BUNCH OF CLOTHS, TOGETHER WITH SELF-MEASUREMENT FORM, WILL BE SENT POST FREE AND WITHOUT ANY OBLIGATION UPON RECEIPT OF YOUR NAME AND ADDRESS.**

**Waterproof Trench Coat 25/-**

Fig. 2.

**(Fig. 2.) Fawn material, rubber lined, wind cuffs, guaranteed waterproof.**

**SEAT-LESS Trousers Fawn double texture material rubber interlined wind gusset & clasp fasteners. All sizes. Guaranteed Waterproof.**

**18/-** per pair

**WATERPROOF OVERALLS.**
**Double texture material, clasp fasteners, perfectly waterproof.**

**12/6** pair

**THESE GARMENTS ARE NEWLY MADE FROM FRESHLY PROOFED MATERIAL BY EXPERIENCED WORKMEN AND NOT HALF-PERISHED CLEARANCE LINES OR W.D. SURPLU**

*If you cannot call, send money with breast measurement and height.*

*POST YOUR ORDER EARLY*

*Satisfaction guaranteed or money refunded if garments are returned to us within 7 days.*

**CARRIAGE PAID ON ALL ORDERS**

**Actual Manufacturers:**
**Martin Waterproof Co.,**
**208 Oldham Rd., New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2 Eastbank St., Southport. 'Phone: 607. [4928

TRIUMPH-GLORIA Combination, 1921 type S.D.C., all chain, Lucas electric lighting, wind screen, Bonnisse speedo, etc., new pattern mud guards, very carefully used, condition guaranteed as new, £150, original cost over £220; specially picked machine.—Premier Motor Co., Aston Rd., Birmingham. [8458

*Spare Parts.*

TRIUMPH Spares.—Immediate delivery.—Kays, 8 Road St., Ealing [7548

TRIUMPH Service Agents.—Every part in stock, trade supplied.—Clarke's, Motor Cycle Specialists, St. Albans. [2918

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney 'Phone: Putney 2754. [1248

TRIUMPH Spares.—Every part in stock, 1910-22, trade supplied.—W. L. Thompson, Ltd., 83 Anlaby Rd., Hull. Tel.: Cen. 2820. Telegrams "Petrol." [2668

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham [10798

TRIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; gear overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10 [0808

SEND to the Rhosha Motor Garage, South St., Romford, for Triumph and Sturmey-Archer spares. No disappointing delays; every part in stock. Repairs by skilled mechanics. We are official service agents. Telephone: Romford 584. [7766

TRIUMPH Parts, 1904-21 every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Velocette.

PREMIER Motor Co., for 1922 Velocettes.

IMMEDIATE delivery of Model E.2 2-speed, £65; E.3 3-speed, £72/10; E.L.2 lady's open frame, £68; all with clutch and kick starter; easy payments, 4 per cent. extra; carriage paid to any address.—Premier Motor Co., Aston Rd., Birmingham. [3020

2½h.p. Velocette, 2-speed, all-chain, tax; given away, 24 gns.—Royal Garage, Castle Gate, Blackpool, S.S. [2876

VELOCETTE 1921, Lucas horn, Dunlops, 2-speed, chain drive, good condition; £45.—Glazebrook, Castle Rd., Kenilworth. [3396

£27/10.—Velocette, 2-speed, chain-drive, automatic lubrication aluminium footboards, T.T. handlebars, brand new tyre on rear wheel, accessories.—Delancey St. Garage, Camden Town, N.W.1. [3110

### Verus.

1920 Verus 2¼h.p., single-speed, good as new, electric light outfit, good accessories, suit overalls (5ft. 6in.), insurance, tax paid; lot cost over £75; 40 gns., no offers; appointment only.—Schofield, 25, Santos Rd., Wandsworth, S.W.18. [1020

### Villiers.

NEW spring frame P.V.-Villiers 2¾h.p., kick-starter, H.B. clutch, Burman 2 speeds; £55.—Write 81, Greyswood St., Streatham, S.W. [3284

1917 Villiers 2-stroke 2¾h.p. 2-speed Countershaft Model, recently overhauled, horn, lamps, nice appearance, fast, low riding position; £28.—Cable, 89, Grundy St., Poplar, E.14. [3203

### Vindec.

VINDEC 5-6h.p., running order, Bosch, Amac, single lever; must sell, £17.—Milnes, 1, Church St., Caldecote, Carlisle. [3060

### Wanderer.

£25.—Wanderer 3½h.p., 3 speeds, countershaft, clutch, kick starter, Burman box, good order, taxed.—211, Garratt Lane, Wandsworth. [3127

### Wilkinson.

WILKINSON T.M.C. Combination, 4-cylinder, W.C., leaf-spring frame, very comfortable, shaft drive, 3-speed, gear box, hand and foot control to clutch and carburetter (new), perfect mechanical condition, fully equipped; £95; (see Exchange).—13, Queensdale Rd., Holland Park, London, W.11. [3044

### Williamson

8h.p. Water-cooled Williamson Combination, hood, screen, new tyres, lamps, perfect; £58.—89, East Hill, Wandsworth. [3090

## MOTOR CYCLES FOR SALE.

### Williamson.

WILLIAMSON 8h.p. 2-seater Sidecar Combination, W.C., speedometer, lamps, 1 new and 2 almost new tyres, splendid turnout.—G. Lamb, Norman Terrace, 285, High St. South, East Ham. [2976

### Wolf.

WOLF 1914, 2¾h.p. J.A.P., new condition; £12, bargain; taxed.—Guinchard, 179, York Rd., Ilington. [3136

GENUINE Bargain.—Wolf-Villiers 2-speed, appearance like new, guaranteed sound condition; £38, West.—Williams, 82, Bingley Rd., Saltaire, Bradford. [3015

### Wooler.

3½h.p. Wooler, 1920, very little used; £40.—D.R., 113, George St., Edinburgh. [1233

1920 Wooler, Binks, and B.B. carburetters, Watford, all lamps tax paid, perfect; £45.—18, Winterbrook Rd., Herne Hill, S.E.24. [3062

WOOLER 2¾h.p., 1920, stored long period, 2-speed, clutch, fully equipped, smart mount; £40.—Elford Garage, 47, Streatham Hill, London, S.W.2. [2902

### X.L.

WHITE, Holmes and Co., Ltd., are able to offer one perfectly new X.L. motor cycle, originally listed at £110, for £95. This machine is worthy of examination, and all interested motor cyclists are cordially invited to inspect it at Princes Garage, Downlace, Hammersmith, W.6. [3058

### Zenith.

FOUR Firsts and Second, fastest time of the day.

ALLAN GRUZELIER, on 3½h.p. Bradshaw, at Wallington M.C.C. Hill-climb.

IF you want the best machines, come to Allan Gruzelier and Capt. F. C. Townshend, the Zenith experts. We can give you immediate delivery of all Bradshaw models, and enable you to do the same in competitions.

MODELS from £113, Gradua gear; £119, touring, chain drive; £127, sports.

ULSTER Chambers, 168, Regent St.; and 4, The Pavement, Coulsdon. [3359

P.O.C.H. for Zeniths, latest models in stock.—5, Heath St., Hampstead. (Near Tube.) [2892

h.p. Zenith, in good condition, replated and painted; £40.—79, Fitzneal St., Shepherd's Bush. [2877

ZENITH, 4h.p., 1917, guaranteed good condition; £37/10.—217, Belsize Rd., Hampstead. [3214

ZENITH 1920 8h.p. Sports, excellent order; £70.—The Layton Garages, 30, Holywell St., Oxford. [2792

ZENITH 8h.p. 1920, Swan sidecar, delivered 1921; must sell, offers.—B., 1, Park Lane, Waltham Cross. [2629

ZENITH 4h.p., 1920 engine, Binks, lamps, belt, tyres good; £48/10.—Nevols, Longdon, Wellington, Salop. [3209

h.p. Zenith-Jap, C.B. combination, K.S., lamps, tax; 27 gns.—Royal Garage, Castle Gate, Blackpool, S.S. [2675

ZENITH new 1922 models on easy terms; list on application; exchanges.—Wauchope's, 9, Shoe Lane, London. [3438

ROBERTSONS Motors, Ltd.—1922 shop-soiled Zenith-Bradshaw, Gradua gear; £100.—157b, Gt. Portland St., W.1. [6082

1923.—3½h.p. Zenith Combination, Gradua gears, coachbuilt sidecar, sound condition.—King, Grove Farm, Oxford. [2841

1921 Zenith Combination, clutch model, lamps, spares, tax paid, condition as new; best cash offers.—5, Jackson St., Baldock. [2881

1920 Zenith Combination (Swan), clutch, kick starter, fully equipped, splendid condition; bargain.—Gillingham, Prospect, Chard. [3084

SPORTS Zenith 8h.p. 1920, well equipped, in first-class condition; £65; exchange Norton, Sunbeam, Loweth, 6, Mount Pleasant Rd., Ealing. [2866

ZENITH, 5h.p., new and guaranteed few only left, sports model, 76 gns.; countershaft model, 81 gns.—Clark, 7, Exhibition Rd., S.W.7. [8471

ZENITH Combination, 8h.p. twin J.A.P., Gradua gear, speedometer, lamps, spares, splendid condition; trial; £70.—F. Carter, Hale St., Staines. [2636

ZENITH 5-6h.p. J.A.P. 1921 Sports model, new condition, all accessories, tax paid; £62.—Eagles and Co., 275, High St., Acton, London. [2773

ZENITH 1921 8h.p. Countershaft Combination, fully equipped, perfect order; best offer over 100.—Sergt. Byrne, Malplaquet Barracks, Aldershot. [2641

1922 Zenith-Bradshaw, £95, list £119; all chain, 3 speeds, kick, new, never ridden, perfect, unregistered, guaranteed.—Slater, 174, Revidge, Blackburn. [3358


# RIDEEZI

ANY MAKE OF

# MOTOR CYCLE

SUPPLIED ON OUR

# NEW SCHEME

OF

## Eighteen Monthly Deferred Payments

which gives you the privilege of paying earlier and getting a discount.

*SEND for our Extended Payment Form. We also supply the famous Rideezi Sidecars on 12 Monthly Payments. Send for Sidecar Catalogue and Extended Payment Form*

# RIDEEZI SALES LIMITED

5, Victoria Street, LONDON, S.W.1.


## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH-BRADSHAW new 1922 model, Gradua gear, slightly soiled; £95; exchange entertained.—Eagles and Co., 275, High St., Acton, London. [2775

ZENITH, 1920, 8h.p., countershaft, smart semi-sports sidecar, lamps, tools, luggage grid, tax paid, fine condition, fast; any trial; £100.—5, Prince Arthur Rd., Hampstead. [2646

ZENITH 1920 Sports Combination, fully equipped, Easting screen, in excellent condition, tax paid; £80; seen by appointment after 6 or week-ends.—Cross, 19, Kensington Court, W.8. [3174

ZENITH, late 1922, 8h.p. clutch combination, electric throughout, very completely equipped, guaranteed perfect; any trial after 6 p.m.; must sell; £130.—252, St. Ann's Rd., Tottenham. [3075

ZENITH Combination 8h.p. 1920, countershaft, Milford sidecar, original tyres, spare cover and tube, indistinguishable from new, tax paid; 85 gns.—145, Widmore Rd., Bromley, Kent. [2940

ZENITH 1915 Combination 5-6h.p., countershaft, complete with lamps, horn, speedometer, spares; £63.—Elce, Ltd., 13, 15 and 16 Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0067

GENUINE Bargain.—1919 8h.p. Zenith-Jap, with Dunhill sidecar, hood, screen, lamps, horn, etc., tax paid till 1923; make sure and secure now; £82/10.—Wilkins Simpson, Opposite Olympia, London. [3406

ZENITH 8h.p. Sports, 1914, Senspray, Bosch, F.R.S., Lucas horn, Dunlop belt, Dunlop and Wood-Milne tyres, all in exceptional condition; no reasonable offer refused.—Wadey, Five Oaks, Billingshurst. [3052

1922 Zenith-Bradshaw, chain drive, actual show model, special sports engine, large overhead exhaust, speed 65 easy (guarantee), winner 5 awards, condition and appearance perfect, just overhauled; £90.—C. C. Labin, 53, Piccadilly. 'Phone: Regent 32. [2634

5-6h.p. Sports Zenith, complete less unit, aluminium discs, T.T. bars, knee grips, tool bags and gear all new, enamel good, only requires seeing, owner broke; sell £35, or exchange 2¾h.p. Enfield or similar.—Spooner, Asylum Lodge, Warley Rd., Brentwood, Essex. [2980

1920 Zenith 8h.p. Combination, Henderson sidecar, underslung with locker, screen, mat, spare belt, Cowey horn, tools, J.A.P. engine No. 71170, hardly been used, and in exceptionally good condition, licence paid to end 1922; price £135; private owner.—Reply, Dorking Motor Co., 56 Dorking. [2762

ZENITH, 1920, 6h.p., countershaft, clutch, kick starter, in very fine condition, Dunhill triangulated sidecar with superh limousette body, dove coloured upholstery, electric lighting throughout, hood, screen, Lucas horn, spare tube and belting, tools, pump, etc., tax paid to 1923; 85 gns.—Delancey St. Garage, Camden Town, N.W.1. [3109

JULY (1919) 8h.p. clutch model Zenith and Swan sidecar, fully equipped, thoroughly renovated and in perfect condition throughout, spare unused extra heavy Dunlop, unused Dunlop on sidecar, spare belt, 2 spare tubes, Palmer cords, makers' kit with many extras. The machine has not been used since December, 1921, as owner is unable to ride, which is sole reason for sale; £75, or close offer for immediate disposal.—Seen The Manor House, Dogsthorpe, Peterborough. [2632

*Spare Parts.*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4829

### Ladies' Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines: £62, complete. Send for list. [0724

1922 Lady's Model Ivy 2-stroke, hardly ridden, in lovely order, equal to new in appearance and mechanically, mechanical horn, no lamps, licensed and insured till end of year, a very cheap machine at £45.—B. H. Davies, Lodsworth, Petworth, Sussex. [9086

VELOCETTE 1922 Models, with clutch and kick starter, for immediate delivery; 2-speed, £68; 3-speed, £75; all black weatherproof finish, all-chain drive, open frame, giving very low position; the ideal ladies' mount; easy payments, 4% extra; illustrated catalogue free on request.—Premier Motor Co., Aston Rd. [3023

### Miscellaneous.

1920 Villiers, 2-speed, nicely equipped; 27 gns.—67, Fernlea Rd., Balham. [3461

2¾h.p. Villiers, recently overhauled, new tyres, good condition; bargain, £25.—Mayne, The Hut, Hivings Hill, Chesham. [2720

BUNTING'S undertake to execute your requirements (whatever they are) with motor cycles; but they are closed Sundays.—Bunting's, Wealdstone, Middlesex. [2909

HALIFAX.—50 Second-hand Machines and Combinations; cash, exchange, or deferred payments. Get list.—Halifax Motor Exchange, Horton St., Halifax. [1401

## MOTOR CYCLES FOR SALE.
### Miscellaneous.

JONES Garage, The Broadway, Muswell Hill, N.10, and Woodside Parade, North Finchley.

NOTICE.—We are open all day every Saturday, and have all makes in stock. Write, call, or 'phone Hornsey 2917 for big bargain list.

ROVER 5-6h.p. Sports Solo, 3-speed, all-chain, shop-soiled, otherwise new, 1921; £110.

RUDGE I.O.M., new; £70.

1919 4½h.p. B.S.A., Model K, large Canoelet sidecar, fully equipped, licence paid; £80.

1920 Ariel 3½h.p., equipped, £72/10; also second-hand and new sidecars, from £7/10.

1919 4h.p. Douglas Combination, first-class condition, any trial given; £79/10.

1918 4h.p. Triumph, coachbuilt sidecar, fully equipped; £77/10.

1920 2¾h.p. Allon, fully equipped, speedometer, etc.; £47/10.

1915 Douglas 2¾h.p., equipped; £32/10.

1921 3½h.p. Ariel, demonstration model, equipped; £77/10.

8h.p. Enfield Combination, Lucas Magdyno electric lighting equipment, brand new 1921, unused outfit, complete; £140; our special bargain for this week.

1919 3½p.h. Ariel Solo, a beautiful machine, in perfect condition; £62/10.

1920 2¾h.p. Douglas, 3-speed, equipped, very smart; £45.

2½h.p. Connaught, 2-speed, fully equipped, leg-shields, taxed for 1922, perfect; £45.

3h.p. Precision, excellent condition, tax paid, starts easily and climbs anything; £15.

ANY of the above can be had on our easy payment system. It is the easiest of all; simply fill in a simple form, pay your deposit, wait two or three days, and in 99 cases out of a 100 the machine is yours. You are missing the best if you have not seen our terms, etc., and list of bargains.

ALL Guaranteed 3 Months.—Jones Garage, Broadway, Muswell Hill, N.10. Motor 'bus from Highgate or Finsbury Park. [3001

6h.p. Rex Combination, £45; 1922 lightweight, £25; sidecar, £3/10-; B.B. carburetter, 10/-; 2-seater Wolseley car, £40.—W. W. Evers, Wath. [3481

P. and M., engine 9873 S, 10 months' wear, perfect throughout. £55; also 1912 T.T. Triumph, last, mechanically perfect. £22/10.—Benfield, 67, Canterbury Rd., Margate. [2617

INDIAN 1915-16 7-9h.p. Combination, overhauling costing £35, new Binks; sell or exchange Triumph, Scott, similar; also 2¾h.p. Douglas, 3-speed, £45.—Bridge, Loderland, Askerswell, Dorchester. [3020

4h.p. Overhead-valved Competition All-chain Solo, 1914, 3 speeds, clutch, long exhaust, aluminium footboards, taxed 1922, guaranteed; exchange Triumph or Douglas; £27, offers.—255, South Lambeth Rd. S.W.8. [3051

BLACKPOOL Bargains.—1922 Rudges, 1922 Ariels 1922 O.K.s, 1922 New Imperials, 1922 Quadrants 1922 Royal Ruhys. Quick deliveries. Good price for your machine; exchange.—Booths' Motories, 294, Waterloo Rd., Blackpool.

BLACKPOOL Bargains.—1919 New Imperial, 2 speeds, kick starter; £45/10.—Booth's Motories.

BLACKPOOL Bargains.—P. and M. Combination, £47/10/6; 6h.p. Rex Combination, £27/10/6.—Booths' Motories, Blackpool.

BLACKPOOL Bargains.—Clyno Combination, lamps, screen, spare wheel, £69/10/6; 8h.p. Premier Combination, screen, hood, £49/10/6.—Booths' Motories, 294, Waterloo Rd.

BLACKPOOL Bargains.—Good Trump, £18/10/6. N.S.U. lightweight, £13/10/6; 4h.p. Douglas Combination, £59/10/6.—Booths' Motories.

BLACKPOOL Bargains.—A.J.S. Combination, lamps, screen, £49/10/6; G.N. 1920 car, dynamo lighting, fully equipped, £140/10/6.—Booths' Motories.

BLACKPOOL Bargains.—1920 Matchless Combination, detachable wheels, £120/10/6; A.J.S. and sidecar, £59/10/6.—Booths' Motories.

BLACKPOOL Bargains.—1917 Allon, 3-speed gear, clutch, kick starter, lamps, speedometer, £42/10/6; 1920 Sun, 2 speeds, kick starter, £39/10/6.—Booths' Motories.

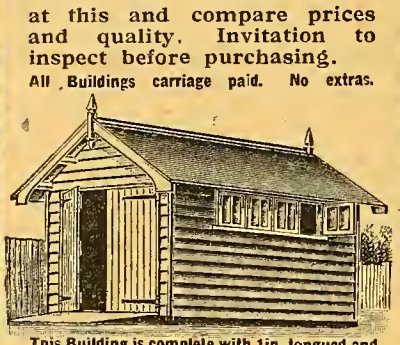
BLACKPOOL Bargains.—1920 Wooler, £49/10/6; 3½h.p. Humber, £20/10/6; P. and M., £35/10/6; Indian Combination, disc wheels, £45/10/6; 6h.p. 3-speed Rudge, £35/10/6.—Booths' Motories.

BLACKPOOL Bargains.—2-speed O.K., £24/10/6; 1919 Douglas, £45/10/6; 1919 4h.p. Douglas Combination, £79/10/6; 4h.p. Douglas, £55/10/6; 1920 Tamplin, £79/10/6; 1920 Morgan de Luxe, speedometer, water-cooled magneto engine, £155/10/6. Several others cheap. Push cycles taken in exchange. Motor cycles purchased for cash.—Booths' Motories, 294, Waterloo Rd., Blackpool. [5060

# STOP

**at this and compare prices and quality. Invitation to inspect before purchasing.**

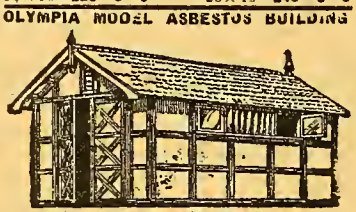
**All Buildings carriage paid. No extras.**



**This Building is complete with 1in. tongued and grooved floor, ¾in. match-boards or weather-boards, 3in. framing, strong boarded roof, best pluvex felt. Building treated with weather-proof composition. Prices, complete and carriage paid to any station in England and Wales.**

| | | | | | |
|---|---|---|---|---|---|
| 8× 6 | £8 0 0 | | 16×10 | £27 0 0 | |
| 10× 8 | £13 0 0 | | 18×10 | £33 0 0 | |
| 12× 8 | £17 10 0 | | 20×10 | £37 10 0 | |
| 14×10 | £23 0 0 | | 20×12 | £40 0 0 | |

**OLYMPIA MODEL ASBESTOS BUILDING**



*Specification in Our Catalogue.*

| | | | | | |
|---|---|---|---|---|---|
| 12× 8 | £23 10 0 | | 18×10 | £42 10 0 | |
| 14×10 | £32 15 0 | | 20×12 | £46 15 0 | |
| 16×10 | £37 15 0 | | | — | |

Delivered with iron roof complete. Fire-proof and sound-proof.

**Our unsolicited testimonials should create confidence.**

Shun Park Lawn Tennis Club,
May 22nd, 1922.

Dear Sir,
I am instructed by my Committee to say they are very pleased with the Pavilion you erected for them.
Yours faithfully,
JOHN O. GRIFFITS.

23, London Road,
Leicester.

Gentlemen,
I find the Building you sent me very satisfactory, and consider it very good value for the money.
Yours faithfully,
J. CROSBY.

28 Dover Road,
Moseley,
Birmingham.

Dear Sir,
Garden Shed received in good condition; thanks for promptitude.
P. HASTINGS.

**Illustrated Catalogue Free.**

**SOUTH-WESTERN APPLIANCE Co.,**
**High Street, Fulham, London, S.W.**
Telephone: PUTNEY 2771.

## MOTOR CYCLES FOR SALE.
### Miscellaneous.

WANDSWORTH Motor Exchange.—Fine selection motor cycles, combinations; prices right. Exchanges. Easy terms.

WANDSWORTH.—Cheap machines is our motto. Cheap machines. Nothing dear, all cheap.

WANDSWORTH.—Easy terms. The only firm to give immediate delivery, first deposit.

WANDSWORTH.—1921 Clyno (brand new) 2¼h.p., 2 speeds; sacrifice 48 gns. Easy terms.

WANDSWORTH.—1921 Douglas (almost new) 2¾h.p. twin, 3 speeds, lamps; 58 gns. Terms.

WANDSWORTH.—1921 New Hudson (almost new) 2¼h.p., 2 speeds, lamps; 49 gns. Terms.

WANDSWORTH.—1920 New Hudson 2¼h.p., 2 speeds, lamps, licensed, beauty; 45 gns. Terms.

WANDSWORTH.—1921 Triumph (almost new) 4h.p., 3 speeds, lamps; 89 gns. Easy terms.

WANDSWORTH.—1920 Scott (almost new) Coachbuilt Combination, twin, watercooled, lamps; 85 gns. Terms.

WANDSWORTH.—1920 Indian Combination, dynamo lighting, 3 speeds, fully equipped; 95 gns. Terms.

WANDSWORTH.—1920 Henderson 10h.p., 4-cyl., 3 speeds, dynamo lighting; 89 gns. Easy terms.

WANDSWORTH.—1920 A.B.C. Combination, twin, 4 speeds, spring frame, lamps; 79 gns. Terms.

WANDSWORTH.—1919 Triumph-Gloria Combination, 4h.p., 3 speeds, lamps; 79 gns. Terms.

WANDSWORTH.—1919 Triumph Combination, 4h.p., 3 speeds, lamps; only 69 gns. Easy terms.

WANDSWORTH.—Swift Coachbuilt Combination, 4h.p., 3-speed gearbox, kick, lamps; 55 gns. Easy terms.

WANDSWORTH.—Indian 7h.p. Twin, 3 speeds, spring frame, newly enamelled, plated; 55 gns.

WANDSWORTH.—Premier Coachbuilt Combination, 4h.p., 3 speeds, countershaft, kick, lamps; 49gns. Terms.

WANDSWORTH.—Premier Coachbuilt Combination, 3½h.p., 3 speeds, lamps, licensed; 39 gns. Easy terms.

WANDSWORTH.—Grandex-Precision Combination, 3½h.p., 2 speeds, lamps, licensed; 35 gns. Easy terms.

WANDSWORTH.—Indian Coachbuilt Combination, 7h.p., 3 speeds, kick, spring frame, disc wheels; 59 gns. Terms.

WANDSWORTH.—Rudge T.T., 3½h.p., good tyres, runs well; bargain, 26 gns. Easy terms.

WANDSWORTH.—Tourist 3½h.p., 2-speed gearbox, low built, drive away; 26 gns.

WANDSWORTH.—F.N. 2¼h.p., 2 speeds, clutch, shaft drive, wants attention; 16 gns. Terms.

WANDSWORTH Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686. [2852

F.O.C.H. for secondhand cycles, combinations and runabouts at bargain prices. Exchanges arranged. Any new cycle, combination or car supplied, cash or deferred payments.—Fair Offer Car House, 5, Heath Street, Hampstead (near Tube). Phone: Hampstead 3752. Hours 9-7, including Saturdays [1611

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period. Write terms. Fowler Brigden, 130 Euston Rd. [0795

G.N. Light Car and Douglas Motor Cycle and Sidecar for hire; 8 gns. and £5 per week respectively; fully insured.—Rodwell, 8, Red Lion Sq., Holborn, W.C.1. Chancery 7272. [3770

ROBERTSONS Motors, Ltd., for many years have specialised in this class of work. If machine is purchased, full amount of hire up to one week is allowed.—157b, Gt. Portland St., W.1. [6083

## MOTOR CYCLES WANTED.

H

F

EDWARDS and Co.,

101, Gt. Portland St., W., are cash buyers of solos, combinations, and Morgans. Highest prices given, distance no object. Call, write, or 'phone: Mayfair 4027. [0870

1922 New 2¾h.p. A.J.S.—Bayley, Market Place, Uttoxeter, Staffs. [2630

WANTED, Douglas 2¾h.p., modern; £30.—Box 1748, c/o *The Motor Cycle*. [2710



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES WANTED.

B

ANT

)0 COMBINATIONS and Solos, any make, guarantee top prices given.—T. and B. Motor Ltd., 372, Euston Rd. Museum 6581. [5554

E

RE

CTUAL Buyers.

LEASE Offer Us your motor cycle or combination. We pay cash on sight.—Write, call, or 'phone eum 1337.—Percy and Co., 314, Euston Rd. [0815

EST

RICES

IVEN

. F. EDWARDS and Co., 50, Harrington Rd., South Kensington, will purchase for spot cash motor cycle or combination. Call, write, or ne Ken. 3709. [0604

E

LWAYS Buy

LOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London inus. We collect free and send best cash offer. T. Dunn, Ltd., 326, Euston Rd., London. Museum 1. [0332

AUDES' Motor Mart are purchasers for spot cash of late models Sunbeam, Triumph, Douglas, Nor and Morgans.—Maudes', 100, Great Portland St., don. [1128

ANTED, P. and M. old pre-war model; about £20.—King, New Rd., Oxford [2843

20 Cash Offered for Best Motor Cycle.—23, Tunnard St., Boston, Lincolnshire. [3162

ANTED, 1920 B.S.A., Model H solo, perfect condition.—20, Goldsmiths Row, E.2. [3061

ALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

ALMER'S Garage, Tooting, will make you a cash offer at sight.

ALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at mer's Garage.

ALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

ALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every rsday at 2.

ALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

ALMER'S Garage, Tooting, will collect machines from any London railway station. The auction is held every Thursday, commencing 2 p.m.

ALMER'S Garage, Tooting.—If cash offer not aeccepted, machine can be included in auction held every Thursday.

ALMER'S Garage, Tooting.—You fix the price and we do the rest.

ALMER'S Garage, Tooting.—Terms: Selling commission 7½% not chargeable unless machine is . If no sale, a nominal auction fee is charged: motor cars, 20/-; motor cycles under £50 value, ; ditto over £50 value, 10/-. When we effect a , these charges are cancelled and commission rged.

ALMER'S Garage, Tooting.—Catalogue free. Tel.: 206 Streatham. T.A.: Palmer's Garage, Tooting. [3041

ANTED immediately, Lightweight, with gears, must be sound.—1, Othello St., Livarpool. [6868

ATE Triumph, or similar, good condition; no fancy prices.—Borrow, Cowplain, Cosham, Hants. (P) [2547

921 Norton Big Four Combination for cash; private purchaser.—84, New Rd., Uttoxeter, Staffs. [2623

OUGLAS or good lightweight, not earlier 1919, reasonable; cash waiting.—36, Ulleswater Rd., 4. [3006

RIUMPH or Sunbeam Combination, modern, equipped, reasonable.—Write 43, Dover Rd., 2. [2830

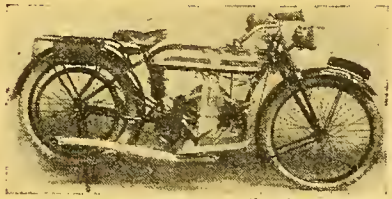
ODERN Solos and Combinations for cash, or in exchange.—R. B. lark and Co., 7, Exhibition Rd., W.7. [3492

ANTED, for cash, 1919-20 Sunbeam, A.J.S., Triumph.—Jefferies. 39, Essex St., Bedminster, stol. [2573


# 55 M.P.H. GUARANTEED

## *Special Offer of new*

## 1922 2¾ H.P. Douglas.



Fitted with "Zoom! Zoom!!" exhaust system, alloy air-cooled valve caps, special pistons, combined footrest and aluminium footboards, special valve springs, low saddle position, tuned and guaranteed to do 55 m.p.h. Delivered anywhere. Price **£69 10s.** inclusive. This is only 30/- above list price and is an opportunity you should not miss if you are purchasing a motor cycle. Not shop-soiled or second-hand, but new ex Douglas works, with full guarantee. Fully equipped as makers' specification.

**A NEW TWIN RING PISTON.**

Scientifically designed to prevent distortion. Four strengthening webbs and radiating fins, gudgeon pins supported correctly. Much lighter than standard pistons, yet double the strength. Piston with rings and gudgeon pin, **14/6.**

**ZOOM! ZOOM!!**

Are you Zooming it This lovely exhaust pipe gives a lovely Zoom note and provides an expansion chamber many times the cylinder capacity; it silences without back pressure. The most efficient system yet devised; over 2,000 sets already fitted. Beautifully finished in polished copper plate, **30/-.** Nickel plated, **33/6.**

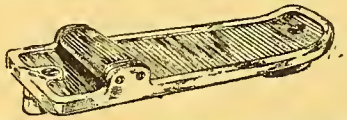
**TOOLBAGS,** metal armoured, two straps and buckles, finest quality for 4 h.p. Douglas. Usual price 20/-. My price **10/-.** Smaller size for 2¾ h.p., two straps and metal covered real leather. List price 11/-. My price **7/6.**

**A SADDLE OF REAL MERIT.**

Pan Seat covered in real leather, adjustable springs, gives a low riding position on 2¾ h.p. and does not foul the 4 h.p. Sidecar Stay. A real comfy seat. List 35/-. My price **25/-.**

**LEATHER TOOL ROLL.**

A real heavy affair that will stand rough usage. Fitted with leather pocket, two side flaps, leather centre tool holder and leather strap. **5/-** each.



**THE TONY COMBINED ALUMINIUM FOOTBOARD AND FOOTRESTS** (patented). **30/-** per pair.

## DOUGLAS SPARES.

**I guarantee to send any part by first post: being on the spot, if it is not in my huge stock I obtain the same day. Try my return post service.**

*W. G. Coram*

OFFICIAL DOUGLAS AGENT.
*10 years with Douglas Motors Ltd.*

**140, VICTORIA ST., BRISTOL.**
*Telephone:* 3792.


## MOTOR CYCLES WANTED.

WANTED, Motor Cycle or Combination, cheap; cash waiting.—18, Cambridge Rd., Barnes, S.W.13. [3167

HARLEY-DAVIDSON 2-seater Wanted, 1921 or 1922.—Write, Wood, Belle St., West Stanley, Durham. [3156

WANTED immediately, good combination and countershaft Triumph.—24, Balliol Rd., North Kensington. [3035

WANTED, 2¾h.p. New Imperial, Omega, similar lightweight; reasonable price.—King, Egrove, Kennington, Oxford. [2842

I.O.M. Rudge-Multi, 3½h.p. Rover, 2¾h.p. New Imperial, or similar; reasonable.—Watts, 261, Balham High Rd., S.W. [3148

SOLO Wanted; cash for cheapest machine offered; £35 limit.—Write, Fould, 55, Queen's Gate Mews, Gloucester Rd., S.W.7. [2849

WANTED, modern 8h.p. Zenith, countershaft, engine, frame number.—"Sandleford," Bramber Rd., N. Finchley, N.12. [2929

ENFIELD or Matchless Combination, 1919-20, perfect condition, private owner.—Full particulars, 309, Lillie Rd., Fulham. [2705

P. and M., Triumph, Enfield, similar combination, 1918-20; trial Sunday morning here.—65, Clifton Av., Wembley, Middlesex. [3216

ENFIELD (large sidecar), similar, under £80; exchange Matchless combination and £30.—Box 1791, c/o *The Motor Cycle.* [2959

WANTED, 3½h.p., or over, Combination, not earlier 1918; about £50.—R. Porter, 4, Scott's Villas, Thorkill Rd., Ditton. [2565

WANTED, N.U.T.; exchange Renault limousine, guaranteed; cash adjustment; no dealers.—Box 1746, c/o *The Motor Cycle.* [2711

2¾h.p. or 3h.p. Solo, good running order, must be cheap, for spot cash, Douglas preferred.—Particulars, 14, Mill Rd., Salisbury. [2745

WANTED, Lightweight, must be cheap; give 3-speed ladies' Rover cycle, as new, and cash.—13, Whitehill Rd., Gravesend. (P) [3177

WANTED, Henderson Combination, must be good as new and fully equipped; cheap.—17, Wilcox Rd., South Lambeth, London, S.W.8. [2589

LET me sell your machine—only 5% commission and a quick sale.—Write, F. L. C., 42, Northampton Buildings, E.C.1. 'Phone: Finchley 1778. [1363

SEVERAL good combinations and motor cycles wanted, cash waiting, distance immaterial to our drivers.—Bunting's Motor Exchange, Wealdstone. [2908

MODERN Motor Cycles and Combinations bought for cash or sold on small commission; send details first.—South Easteru Garage, Herne Hill, S.E.24. [1096

EXCHANGE Humber w.c. Combination, dynamo lighting and cash, for equally good 2-seater combination.—Thomas, 235, Victoria Rd., Wood Green. [3298

PETER GORDON, Ltd., require modern motor cycles for cash or exchange; good prices paid. Open Sundays.—110, Upper Richmond Rd., East Sheen. [3264

WANTED, Late Combinations, Solos; also Morgan Runabouts, G.N.'s, and Rovers; cash or exchange.—Elce, Ltd., 13, 15 and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0076

LATE Solo or Combination; exchange exquisite platinum, diamonds, and pearl necklace, also platinum spray diamond brooch; cost £100; no dealers; London district.—Box 1517, c/o *The Motor Cycle.* [9083

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

BUNTING'S Buy, Sell, or Exchange any make of motor cycle. State your requirements. We undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor Exchange, Wealdstone. [0328

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Brachnrys, Martinsydes, Zeniths. — Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted. —Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [4559

F.O.C.H. always have cash waiting for sound machines of all types; highest prices and courteous treatment assured.—Fair Offer Car House, 5, Heath Street, Hampstead (near Tube). 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1810

## MOTOR CYCLES WANTED.

WANTED.—Motor cycles and combinations for immediate cash, new or second-hand. Bring your machine to us for a cash offer; high prices paid on the spot. Write, 'phone, or call if possible.—Forge Garage, 74-76, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [3169

WANTED, good modern Motor Cycles, solo or combination, in part exchange for 8h.p. Rover or other light car. Best prices allowed, exteoded payments arranged.—Vivian Hardie & Lane, Ltd., 23/24, Woodstock St. (off Blenheim St.). Bond St., W.1. 'Phone: Mayfair 6559 [0772

SEND your Motor Cycle to Palmer's Garage and Motor Auction Rooms, High St., Tooting. Cash offer telegraphed immediately on receipt. Nearest station Wimbledon. We will collect from any London station. Machine can be included in auction sale if desired.—Sole address: Palmer's Garage, Tooting. [3038

## MOTOR SCOOTERS.

MOTOR Scooter, new; £12.—Parkinson, 714, Oldham Rd., N.H., Manchester. [2656

KINGSBURY Scooters and Spare Parts.—Beaufort Works, Richmond Rd., Twickenham. [2231

A.B.C. Skootamota, new, unsoiled, latest model; £23, sacrifice.—Frank Whitworth, 139, New St., Birmingbam. [4658

A.B.C. Skootamota, perfect running order, owner too elderly; £19.—Gelston, 10, Winchester St., Basingstoke. [2714

## MOTOR ATTACHMENTS.

WALL Auto-Wheel, good condition; £7/10.—156, Windmill Rd., Gillingham, Kent. [3081

AUTO-WHEEL, perfect working order; price £7.—Baker, Cycle Stores, Ealing Green. [2876

WALL Auto-wheel, very good, can be seen running; £10.—Coles, Cardington, Church Stretton. [2739

YOUNG Motor and Cycle, complete, new and unused; £20.—Stirling, 115, Allison Rd., N.4 [2658

AUTO-WHEEL, with cycle, fast, licensed, spares; £12; trailer, £4.—105, Belmont Rd., Maidenhead. [2761

WALTHAM Cycle, engine attached, excellent running order; £17.—Hume, Hagg, Cornhill-on-Tweed. [3227

WALL Auto-Wheel, splendid condition, taxed December; £11.—Hunter, 24, Ridyard St., Pemberton, Wigan. [2671

WALL Auto-wheel, tip-top condition, take almost any hill 10½st. rider; £13; licence paid.—44, Durban Rd., Watford. [2988

1921 Young Attachment and Cycle, perfect condition; £20.—D. and S. Autocar Co., 33, The Parade, Golders Green. [2214

YOUNG'S 1921, complete with strong cycle Dunlop Magnum tyres, scarcely used, almost new; take £17.—33, West End Lane, Kilburn, N.W. [3469

J.E.S. Cycle, complete, good running order, new belt, etc.; £18, offers. Also a 1921 Young cycle attachment, complete, ready for cycle, £10.—118, Cricklade Rd., Swindon. [3339

## HOODS, WINDSCREENS, ETC.

COLLINS and Son for hoods, screens, and aprons; hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreens, complete with apron; 22/6, 30/-, and 35/-; sent on approval against cash: carriage 1/6 extra.—Below.

COLLINS and Son stock all known makes of windscreens; we have a few second-hand Standard Eastings, fitted with new celluloid, from 45/-.—Below.

COLLINS and Son fit celluloid panels to any windscreen in few hours, new aprons, side curtains, etc.; open weekdays till 8.30, Sunday mornings till 1 o'clock.—Collins and Son, rear of 84, High St., Putney, S.W. (D) [6025

V-SHAPED Windscreens, with apron, from £2/15.—Bright and Hayles, 78, Church St., Camberwell. [3100

HERCULES Hoods and Aprons; write for list.—Hercules Hood Co., 698, Seven Sisters Rd., Tottenham. [0853

HIGH-GRADE Hoods, polished boops, brass fittings, 30/-; hoops, twill, etc.—Henry Jones, 778, High Rd., Tottenham, London. [3502

RENNOC Co.—We are actual manufacturers of hoods, screens, and aprons. Send for list.—Rennoc Motors Ltd., 155a, Marlborough Rd., Upper Holloway, N.19 [2321

BASTONE'S for windscreens, Sandum V type, £2/15; Easting Standard, £3/18; Easting Baby, £3; Montgomery Bo-Peep, £3/10.—228, Pentonville Rd., King's Cross, London, N.1. [3496

ROBINI Manfc. Co.—The Bower adjustable windscreen, registered, with coverall apron, 30/-, carriage paid; beware of imitations; celluloid panels fitted, Eastings, 16/6; coverall aprons made to order, 10/-. 'Phone: Brixton 1585.—Robini Manfc. Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. [3352

## The Tyre Station

## MOTOR CYCLE TYRES.

*All perfectly new—we guarantee every tyre ourselves, and if you are not perfectly satisfied with our tyres we will refund your money.*

| | | |
|---|---|---|
| 26×2 | Englebert Touring | 18/6 |
| 26×2 | Englebert Passenger | 20/6 |
| 26×2¼ | Hutchinson Tourist Trophy | 22/6 |
| 26×2¼ | Hutchinson Passenger | 25/- |
| 26×2¼ | Wood-Milne Combination, Steel Studded | 26/- |
| 26×2¼ | Firestone Rubber Non-skid | 28/6 |
| 26×2¼ | Dunlop Heavy Rubber Studded | 27/6 |
| 26×2⅜ | Clincher Extra Heavy de Luxe | 26/6 |
| 26×2⅜ | Avon Tricar Rubber Studded | 27/6 |
| 26×2⅜ | Palmer Cord Heavy | 32/6 |
| 26×2⅜ | Dunlop Heavy Rubber Studded | 32/6 |
| 26×2⅜ | Dunlop Extra Heavy Rubber Std. | 35/- |
| 26×2½ | Bates Special Heavy Ribbed | 29/- |
| 26×2½×2¼ | Extra Heavy Rubber Studded | 27/- |
| 650×65 | Lutetia Ribbed | 20/- |
| 650×65 | Wood-Milne Extra Strong | 30/- |
| 650×65 | Bergougnan voiturette | 40/- |
| 650×65 | Michelin square voiturette | 42/6 |
| 650×75 | Hutchinson Light Car | 33/6 |
| 700×80 | to fit 650×65 The Euston Special Super Chain Extra Heavy Rubber Stud | 42/6 |
| 700×80 | Excelsior voiturette | 47/6 |
| 28×2½ | Clincher Dreadnought | 30/- |

**SPECIAL OFFER OF 28 × 3 AMERICAN TYRES for American Rims.**

All perfect stock in original wrappers.

| | |
|---|---|
| Republic Rubber Non-skid | 43/- |
| Portage Rubber Non-skid | 43/- |
| Federal Rubber Non-skid | 43/- |
| Goodrich Safety Tread | 44/- |
| USCO (United States) RNS. | 44/- |
| Firestone Rubber Non-skid | 44/- |
| Goodyear All Weather Tread | 45/- |

*Any of the above tyres will be despatched by next passenger train immediately after receipt of order, accompanied by remittance and 1/6 for carriage.*

**MOTOR CYCLE TUBES.**—All sizes in 24" and 26" at **5/6** each. Butt ended **1/6** extra. 28"×3" and 28"×2½" at **6/6**; 650×65 at **6/6**; 700×80 at **6/6**; Butt ended **1/6** extra.

Euston Special Inner Tubes, extra superfine quality.—26×2¼ at **7/6**; 26×2⅜ at **7/9**; 26×2½×2¼ at **8/-**; 26×2¼ at **8/3**.

Firestone, Dominion and Puncture Proof tubes.—26×2¼, 26×2⅜, 26×2½, 650×65 at **6/9**.

*All Tubes post free.*

**MOTOR CYCLE BELTS.**—Clipper, regular stock, in original boxes. 8'×¾" at **10/-**; 8'6"×¾" at **10/6**; 8'6"×⅞" at **12/6**.

Sensational offer in ⅞" belting, any length ordered, at **9d.** per foot.

Clearance stock of 6'6"×⅞" at **7/11** each; 10'3"×⅞" at **12/6**.

**PEGAMOID WATERPROOF MOTOR CYCLING SUITS** for "all weather" motor cyclists, **15/-** per suit.

**MOTOR CYCLING HELMETS.**—We can offer you a splendid assortment at low prices—send for our illustrated leaflet.

**MOTOR CAR TYRES.**—We are the cheapest in the trade—send for our price list.

**OUR REPUTATION ENSURES THAT YOU WILL HAVE THE UTMOST SATISFACTION.**

## HOODS, WINDSCREENS, ETC.

SANDUM V Windscreens, £2/15; in stock.—Houchi 189a, High St., Peckham, S.E.15. [340

AUTO-WHEEL and Raleigh Tandem, perfect ru ning order; £18; apply after 6.—Meadva Montagu Gardens, Wallington. [340

## BODIES.

RENNOC Sidecar Bodies, actual manufacturers, models, also several clearance, cheap to clear.

RENNOC Co. specialise in repairs, repointing, a upholstering.—Rennoc Motors, Ltd., 155a, Ma borough Rd., Upper Holloway, N.19. [23

COLLINS and Son for coachbuilt bodies, all mod in stock, from lightweights to 2-seater.—Below

COLLINS and Son are actual manufacturers, a give twelve months' guarantee with every bo made by them.—Below.

COLLINS and Son repair, repaint and upholster moderate charges, first-class work guarantee estimates free; send for catalogue.—Collins and S rear of 84, High St., Putney, S.W. [40

LOVELY Sidecar Body, hood and cover, screen, 1921 Sunbeam, as new; £5.—Eton, 260, High R Balham. [32

COACHBUILT Bodies for old type chassis, many others from £5.—Willowbrook Motor Leicester. [03

BASTONES for Sidecar Bodies, all latest models stock from £4.—228, Pentonville Rd., Kin Cross, London, N.1. [51

CAMBER Sidecar Bodies from £4/17/6; bodies painted and upholstered from £3.—Bright Hayles, 78, Church St., Camberwell. [31

AUCTION Pending, selling privately, 6 new origi bodies, comfortable and well finished; your o and choice if early.—Russell, 270, Goswell Rd., E. [3

100 SIDECAR Bodies, De Luxe and Stand models, canoe shape, quite new, coachbu low price to clear in 1 or several lots.—C.A.C., High Rd., Kilburn, N.W. [1

FIFTY bodies, second-hand, upholstered best p moid, touring shape, from £2 each; a f new, at £7, exceptional bargain; also a few cha to clear.—Sandums, 336, Gray's Inn Rd., W.C. [0

£3/15; great bargains in bodies, beautifully finish from £3/15; sports bodies for P. and M.'s, 2-seaters, adaptable for 2 adults, or 1 adult child, from £9; all bodies finished to order. Write particulars.—Robini Manfc. Co., 1 and 3, Tulse Effra Rd., Brixton, S.W.2. 'Phone: Brixton 158 [3

SIDECAR Body Designs for the trade only. W ing, colored pencil, or line drawings of orig designs, also working drawings, full-sized or to scal Cooper's Vehicle Journal, Designing Dept., establi designers to the coach trade for over 80 years. C sult us when designing new ideas.—Dorset Ho Tudor St., London, E.C.4. [0

£4/17/6.—250 Douglas type, bulbous backed, locker under seat, brand new, bodies upholste in rexine; £4/17/6 each; owing to contract, we h bought right, to sell right; they simply require finishing coat to complete; photo sent on request stamp. 'Phone: 1958 Brixton.—19, Wilcox South Lambeth, London, S.W.8. [2

COBB Speedman Sidecar Bodies for all powers types of machine at from £2/12/6. The ligh attachment on the market. Don't overload y machine. If you want a lively outfit, fit a C Speedman racer weighing 20 lbs., with door compl from £3; second-hands, alterations, etc., at low pri —Vernon Cobb, 18, Midland Rd., Carlton, Nott ham. Works: Burton Joyce. [2

LIGHT Car and Motor Cycle Engineering Co., Lt We have a few brand new lightweight coachb bodies at £5. Medium weight with bulbous b £7/7. Heavyweight model, specially suitable Triumphs, £10/10. Semi-sports model, large lo in rear, £10. Second-hand Millford, renovated as £6; box carrier, 30/-; renovated sidecar compl £8/10; Touring lightweight sidecar, complete, £5.- Tulse Hill, Brixton. 'Phone: Brixton 1292. minute from Brixton Skating Rink.) [3

## SIDECAR ATTACHMENTS.

S

FOR

SANDHAM, the smartest sidecar specialists.

SANDUM Sidecars.—Our pre-war prices were the of the show; £14 to £50. Write for new catalo

SANDUM (V-shaped) Wind Screen a hood, scr and apron; £2/15 and £3/18. Write for list

SANDUM (V-shaped) Wind Screen.—Our South Lon agent writes: "An instantaneous success; out; send further supply." Agents, get in touch with

SANDHAM Engineering Co., Ltd., 336, Gray's Rd., W.C.1. 'Phone: Museum 3427. [0

## SIDECAR ATTACHMENTS.

MIDDLETON'S Patent Spring Wheel Sidecars are guaranteed 3 years.

MIDDLETON'S Patent Unbreakable Chassis for high-powered machines; Zenith, Harleys, Indians, ew Imperials, Sunbeam, Blackburnes, etc.

NDIANS with kick starter on left present no diffi- culty with Middleton's special model.

MIDDLETON'S specialise in frame repairs of all kinds. Twisted motor cycle frames and forks romptly corrected.

ECOND-HANDS of various makes for sale. Your old sidecar taken in part exchange.

MIDDLETON'S Spring Wheel Sidecars are not only safer and more comfortable, but are faster on d roads than rigids. They give to the bumps, not sh into them.

NEACHER'S Model withdrawn owing to lack of feathers for special hat, the birds of Finsbury ark having moulted through heat wave.

WHOROUGHLY Hygienic Upholstery, antiseptic, antitoxinated, Thermogene stuffing both ends, cur- ulum dash fitted with barometer, thermometer, ane- ometer, 5-day chronometer, vibration minimised .0, suring blood corpuscles relativity to other corpuscles maining statistically as they were before they did, to speak; Triple Triple tyre for abnormal mileage oal with long holidays; price, with vacuum dust and crabe excluder, £257/9/2¾; Alpine shaped hat to itch, one feather at side, "not jaunty," 10/11¾.

MIDDLETON'S, London's oldest established sidecar makers, wholesale, retail, and export, 27, Stroud een Rd., Finsbury Park (near Tube). 'Phone, Horn- 1584. [0522

BASTONES for Sidecars, no better or cheaper honse. All latest models in stock.

BASTONES.—Lightweight sidecars complete, to fit any machine; £12/18/6

BASTONES. Sports model sidecar, complete, £17/10; several other models in stock, including idem, all at low prices.

BASTONES.—Distributing agents for the famous Montgomery sidecars, all the latest 1922 models stock.

BASTONES for Sidecar Chassis, underslung £7/19/6. tandem chassis £14/10, auxiliary arms 14/-.— 3, Pentonville Rd., King's Cross, London, N.1 hone: 2481 North. Grams: Bastones, London. [6049

BOUGLAS Sidecar, in good condition; £9/10.—217, Belsize Rd., Hampstead. [3212

BOACHBUILT Sidecar, nearly new; what offer?— 193, Earlsfield Rd., S.W.18. [2728

BORPEDO Sidecar, fit Douglas, Cameo; £10.—40, Forest Hill Rd., East Dulwich. [3107

BRITUBE Sidecars are most unique. Scientifically designed, made of finest materials.

BRITUBE Chassis, constructed of steel lugs, straight steel tubes, with welded joints.

BRITUBE Sidecars are light. Supplied with either sporting or touring coachbuilt bodies.

BRITUBE Sidecars. One price, £15/10. Write for booklet.—Davis Bros., Church St., Rickmans- th. 'Phone: 5. [1534

BAMBER Utility Tandems; £27.—Bright and Hayles, 78, Church St., Camberwell. [3102

BAMBER Semi-sports Model; £17/10.—Bright and Hayles, 78, Church St., Camberwell. [3103

BEARLY New James No. 2 Sidecar, Easting wind- screen; £15.—79, Droitwich Rd., Worcester. [3240

BDIAN Sidecar, complete; £6. Several coachbuilt sidecars; cheap.—17, Heaton Rd., Mitcham. [3098

BALIFAX.—Second-hand Sidecars from £7/10.— Halifax Motor Exchange, Horton St., Halifax. [1406

BIGHTWEIGHT Chassis, nearly new, 26in. wheel and tyre, complete; £5/10.—26, Enfield Rd., on. [2655

BOUGLAS Sidecar, complete, indistinguishable from new; £15/10, near offer.—33, Land St., rdon. [2836

B22 Canoelt Semi-sporting, blue, off Triumph, 28× 2½ Dunlop, apron, done 50 miles; £21.—Forth, klington. [3335

BOOTHS Blackpool Bargains.—Limited number, new coach bodies, full size, with locker, £5/17/6; ally £9/10.

BOOTHS Blackpool Bargains.-New £9/10 coach bodies for £5/17/6; illustration free.—Booths ories, Blackpool.

BOOTHS Blackpool Bargains.—Quantity new under- slung chassis, 4-point attachment, £9/19/6; tration free.—Bootha Motories, Blackpool.

BOOTHS Blackpool Bargains.—Several shop-soiled sidecars, cheap; Hercules coach sidecar, £9/10/6; Canoelet, £8/10/6 ditto Farlow, £8/10/6; cane 7. 22/6.—Booths Motories, 294, Waterloo Rd., kpool. [5061

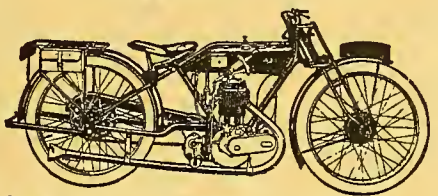
# T.T. WINNERS

The famous 2¾ h.p.

# A·J·S

## Again WINS the JUNIOR T.T.

obtaining **FIRST** and **SECOND** places, covering the 188½ miles at an average speed of 54¾ m.p.h.



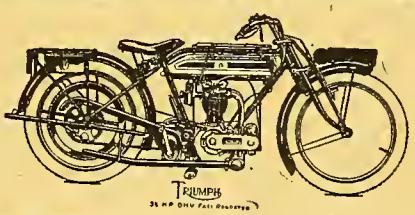
**A.J.S.**, 2¾ h.p., Model B 3-speed Touring, with Kick Start.. .. .. **£85**
**MODEL B1**, Semi-Sports .. .. **£85**
**MODEL B2**, Stripped Sports .. **£85**
**7 h.p. COMBINATION**, Inter Wheels **£175**

SOLE BIRMINGHAM AGENT—P. J. EVANS.

# The Trusty "TRIUMPH"

## 2nd in the SENIOR T.T.

completing the course in 4 hrs. 22 secs.




**TRIUMPH**, 3½ h.p., Type R, O.H.V. engine .. .. .. .. **£120**
**TRIUMPH**, 4 h.p., Type H., T.T. bars **£105**
" 4 h.p., " S.D., " " **£115**
" 2¼ h.p. 2-speed .. .. **£65**
" 4 h.p. with Special Sidecar **£125**

Call and see these famous proved machines at "THE Birmingham House for Motor ists." Expert Tuition, exchanges and deferred terms arranged.

# P.J.EVANS

Winner of the 1911 JUNIOR T.T.

## 81-91, JOHN BRIGHT ST., BIRMINGHAM

'Phone: Mid. 2910. 'Grams: Lytcar, B'ham."

*Clinton-Wall*

## SIDECAR ATTACHMENTS.

WHITLEY Sidecars, Coventry.—Three models, £25, £29/10, £32/10. Nothing on one wheel to equal. Lists free. [0856

SPORTING Rennoc sidecar, 1922, apron, screen, off Indian Scout; bargain, £16.—77, Cranbrook Rd., Ilford, Essex. [2737

STANFORD Sidecars, with tyre and apron, are priced from £15/12/6 to £27/7/6; a dozen models meeting all requirements.

STANFORD Sporting Windscreens in Celluloid, most convenient in use, 37/6; Universal windscreen, 60/-; spring-slung child's seat, small 32/6, large 37/6; all fit bodies of any width.—Stanford Sidecar Co., Sampson Rd. North, Birmingham. [2653

COACHBUILT Sidecar, off Triumph, good condi- tion, 4-point attachment, complete; £5.—107, Pulborough Rd., Southfields, S.W. [2816

MONTGOMERY Sidecars from £17/10; sporting model in stock; trade supplied.—R. G. Houchin, 189a, High St., Peckham, S.E.15. [3463

EXTENDED Payments accepted for sidecars; models for all makes.—Send for catalogue, etc., Rideezi Sales, Ltd., 5, Victoria St., S.W.1. [0829

B.S.A. No. 4 Sporting Sidecar, Easting, good con- dition; £22; or exchange for B.S.A. No. 3 tour- ing.—Drew, Instow, The Gardens, West Harrow. [3386

R.E.N.N.O. Sidecars, bodies, hoods, screens, largest stock in London, actual manufacturers through- out. Send for our catalogue, 32 pages, 80 illustrations.

PHŒNIX Sidecars.—All spare parts in stock by the Rennoc Sidecar Co.

RENNOC Sidecar Co. specialise in sidecars for Indian motors, with left-hand kick starters, and can deliver.

RENNOC Co. have 50 second-hand and clearance sidecars, bodies, hoods, etc., all to clear at knock- out prices. Note; Write for special clearance list.

RENNOC Co. have the finest selection of complete sidecars in the trade.

RENNOC Co. undertake repairs to any make of side- car; repainting and reupholstering a speciality.

RENNOC Co. have in stock sidecars to fit all makes, English and American.

RENNOC Co. again ask you to send for their catalogue, the most comprehensive issued by any manufacturers.

RENNOC Motors, Ltd., 155a, Marlborough Rd., Upper Holloway, N.19 'Phone: Hornsey 1589. [2319

SPORTS Model Sidecar, 4 attachments, 26×2½ tyre; £21; many others from 16 guineas. Write for list.—Willowbrook Motor Co., Leicester. [0335

WATSONIAN Canoelet Sidecar, first-class condi- tion, suitable for Douglas or two-stroke; £10 or near offer.—K. Keer, Wickham Market. [3000

SIDECAR Bargain.—A.B.C. Hughes, beaten alu- minium body, locker, smart appearance, done only 100 miles; £30.—Tullis, Engineers, Clydebank. [2170

P.M. Sidecars, complete with £12 bodies, tube and tyre, £11/10; 2 second-hand, new paint, upholstery, £9/10.—55, St. James' Rd., Bermondsey. [3454

COLLINS and Son for Sidecars, new bulbous back models complete with renovated underslung chas- sis, with fittings for any machine, from £12/10.— Below.

COLLINS and Son.—2-Seater bulbous back coachbuilt models, with renovated underslung chassis, from £15.—Below.

COLLINS and Son.—New Montgomery Chassis, fitted with our 1922 bulbous De Luxe coachbuilt body, supplied with fittings for any machine, £18/10.— Below.

COLLINS and Son.—New Mills-Fulford Chassis, with bulbous back coachbuilt body, supplied with fit- tings for any machine, £17/10.—Below.

COLLINS and Son specialise in frame and chassis repairs; all work guaranteed; send for catalogue. Open weekdays till 8.30, Sunday mornings till 1 o'clock.—Below

COLLINS and Son will take your present sidecar in part payment of any model; a few second-hand sidecars in stock.—Collins and Son, rear of 84, High St., Putney S.W [4085

TAYLORS' (30 years' experience).—Sidecars, brand new, underslung, bulbous back, coach, £10/10; bodies, £3/10.—637, Seven Sisters Rd., Tot- tenham. [2923

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expense. Attached to motor will go through passage 28in. Tandem and single bodies fitted.—Hopley

FOLDING Sidecar.—When ordering your motor specify a Hopley folder Suits motors up to 10h.p Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birming- ham [0152

## SIDECAR ATTACHMENTS.

WATSONIAN Sidecar, coupe, 4-point, off Harley, ideal for touring, late model, new condition; bargain, 15 gns.—Seen at Middleton's; or write, 81, Empshott Rd., Southsea. [2574

NEARING the End. Only few left. 18 gn. sidecar chassis for £6/10; bankrupt stock; any size wheel, and large luggage grid included.—Liquidator, Durant, Bourne, Farnham. [2806

SIDECARS.—The Burbury, over 85 stock, sporting, touring, tradesman's, lightweights; few soiled from £10, complete with tyre.—Only address for sidecars, Cadby's, 392, Farm St., Birmingham. [2640

LARGE Millford Sidecar, bulbous back, 4 points of connection, screen, dashboard, electric head lamp, dash lamp, complete with all fittings, almost as new; £15.—Smith's, 86, Chalk Farm Rd., N.W.3. [2604

"MUDGUARD'S Fallen Off!"—Has it? Well, you should fit one of our new Car type on to the body; that's the place for it; 17/6 complete, any colour.—Jones Garage, The Broadway, Muswell Hill. [3003

PINNACLE Sidecars for comfort, durability, and elegance; a model for every purpose; prices from 18 to 48 gns.—Particulars from W. G. Fearn and Co., Albion Works, King's Cross; North 3541; or through your local agent. [3290

LANCASTER Sidecars.—Superb coachbuilt sidecars complete from 14 gns.; bodies only from 4 gns. A good selection in stock. Call and inspect.—The Lancaster Motor Co., 158, Norwood Rd., West Norwood, S.E.27. 'Phone: Streatham 2541. [3328

PARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co Ltd., 236 High Holborn, W.C.1 [038

DOUGLAS Chassis, shop-soiled bodies, special offer, £11/10; P. and M. outfits, new bulbous back bodies, fittings, etc., £14; sports outfit for P. and M.'s, £14; outfit for Triumphs, B.S.A.'s, etc., new bodies, £15; lightweights, complete, brand new, from £11/10; 2-seaters complete, from £14; bodies only, £9; extended payments. Write for particulars.—Robini Manfc. Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone: Brixton 1585. [3356

OLD Man Hep. has 1,000 Douglas underslung chassis, renovated and complete, to suit all makes of machines, for £5; or fitted with a brand new Douglas type bulbous backed body, for £10/10 (these bodies are upholstered with good quality Rexine, but require a last coat of paint); this has been left for travelling on rail; send for photo, enclosing stamp We cannot be beaten for our prices. 'Phone: 1958 Brixton. (See Body column.)—19, Wilcox Rd., South Lambeth, London, S.W.8. [2591

## RUNABOUTS AND CYCLE CARS.

BEDELIA.—The new 1922 model 8-10h.p., air-cooled or water-cooled to choice; immediate deliveries.

BEDELIA.—Air-cooled model, £185; water-cooled model, £195, side-by-side armchair seats, 3 speeds and reverse, 5 detachable wheels, hood, screen, lamps, tools, jack and pump included; trial free.

BEDELIA.—Cash or easy terms; your old car or motor cycle taken part payment.

BEDELIA.—Catalogue free from L. N. Palmer, Sole Concessionaire for the British Empire.—Palmer's Garage, Tooting [3036

1914 Morgan, 8h.p. J.A.P., A.C., licensed, equipped; £57.—35, Marlow Rd., Anerley, S.E.20. [3086

G.N., touring model, immediate delivery; £225.—Ratcliffe Bros., 200, Great Portland St., W. [4396

G.P. Morgan, new 1922, in stock; £180.—Rey, 173, Gt. Portland St. 'Phone: Langham 1257. [3472

MORGAN 1919 Sporting, 10h.p. Precision, 4 speeds, perfect; £110.—Haslett, Garlands, Caterham. [3192

G.N. 1920 Model, complete with spare wheel and dynamo lighting, mileage 4,000; £125.—Elce, Ltd. —Below.

MORGAN 1921 De Luxe Model, Lucas dynamo lighting, 10h.p. W.C. M.A.G. engine; £157/10. —Elce, Ltd., 13, 15 and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0074

CARDEN, late 1921, scarcely used, electric light; quick sale, £65.—Clark, 7, Exhibition Rd., S.W.7. [3491

MORGAN Runabout, Grand Prix, dynamo lighting, brand new; £193/10; exchange.—Parker's Garage, Derby. [1587

1921 Seal Sociable, 8h.p. J.A.P., lamps, horn, spare wheel, small mileage; £160, nearest.—3, Abbey Rd., Liverpool. [3230

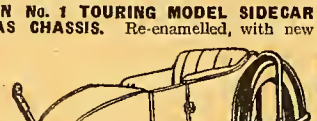
1920-21 Bleriot Whippet, spare wheel, good running order, bargain; £60; any trial.—H. Wright, Arlesey, Beds. [2974

LIGHT Cars, 3- and 4-wheelers, including several 1920 models, from £50 to £150; cash, terms, or exchange with motor cycles; distance immaterial.—Bunting's Motors, Wealdstone, Middlesex. [2905

**The open road is calling you. Enjoy every hour you can in trouble-free motor cycling. For this you want the right sidecar, spares and accessories—we have them. Here are a few of many. If it's for a Douglas, we have it. Write for list of machines and Easy Payment Terms.**

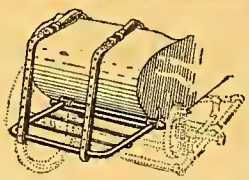
**WHY RIDE SOLO?**

**BURLINGTON and DOUGLAS CHASSIS.** **No. 1 TOURING MODEL SIDECAR** Re-enamelled, with new springs, new mudguards, wheel and tyre. Complete with apron.



Price **£15 10**

**Carry your luggage without discomforting your passenger**

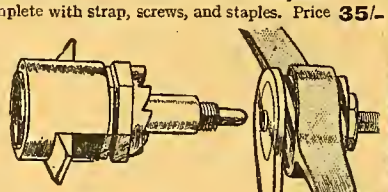


**LUGGAGE GRIDS FOR SIDECARS.**

**Body Fitting.**

Made of strong steel tubing. Attached to the body by two nickel plated brackets in which the grid swings up or down as required.

Complete with strap, screws, and staples. Price **35/-**



**To 4 h.p. Douglas Owners**

**No more broken drawbolts.**

A new form of operating mechanism for the 4 h.p. Douglas Motor Cycle, by which the Drawbolt is entirely eliminated.

*Write for full particulars.*

**FOOTBOARDS** for 2¾ h.p. and 4 h.p. Douglases covered with lino; brass beading; with clips **12/6** per pair. Postage 1/6.

**Spares for Douglases.** We carry a larger stock of spares for Douglases than any other agent in this country. **Write for what you want and get it by return**

*TRADE SUPPLIED.*

**Burlington Motor Cycle Co., Ltd.,**
**7, South Side, Clapham Common, S.W.4.**
**'Phone: Brixton 2417.**
**Wires: Burlington Motors, Clapham.**
Just by Clapham Common Underground Station.

## RUNABOUTS AND CYCLE CARS.

1917 G.P. Morgan, disc, lamps, etc., complete £120; motor cycle part.—The Haven, 120 Sutherland Rd., Croydon. [3282

MORGAN.—New 1922 Models in stock.—Agents, Birkenhead Motor Works, Old Bidston Rd., Birkenhead. 'Phone: 2047. [2389

HALIFAX.—1920 2-seater Tamplin, £89/10; Range 8h.p. 2-seater light car, £75.—Halifax Motor Exchange, Horton St., Halifax. [1404

SWIFT, 2-cylinder engine, just overhauled, gear box and radiator for same; £40; sell separately if required.—H. Slade, Chinpion Sodbury. [2528

1921 Carden, two-seater, dynamo lighting, hood screen, perfect mechanical condition, any trial £75.—Courtfield, Ross Rd., Wallington. [3011

G.N. new 1922 Touring model, dynamo lighting £225; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [3440

1921 Morgan de Luxe, W.C., J.A.P., speedometer, discs, lovely condition; £135.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [3116

MORGAN 1916 G.P., J.A.P., excellent condition, hood, screen, speedometer, lamps, discs; £110.—Write 15, Rookfield Avenue, Muswell Hill, N.10. [2769

1920 Tamplin 2-seater, stored since 1920, splendid condition, taxed; £75; take good motor cycle and cash.—7, Portland Place, Leamington. [3179

G.N., 1921, de luxe, dynamo, spare wheel, as new, 4,000; £130, nearest; exchange combination.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [3236

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co., 392, High Holborn, W.C.1. [0673

1921 Coventry Premier 3-wheeler, dynamo lighting, spare wheel, dickey; £160; exchanges.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [3117

PRACTICALLY brand new 1921 Coventry-Premier, dynamo lighting, spare wheel; £150; part exchange combination.—24, Balliol Rd., North Kensington. [3034A

BAYLISS-THOMAS, 1922 10h.p. model, 4-cyl. water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0736

BLERIOT Whippet, 1920, handle starter, thoroughly overhauled, unused twelve months, licensed; no reasonable offer refused.—98, Foster Hill Rd., Bedford. [2550

£50.—Sizaire-Naudin 9h.p. 2-seater, with dickey, dual ignition, condition and tyres perfect; take motor cycle part.—Pryor, Off License, Newchapel, Lingfield, Surrey. [3050

£38.—A.C. Sociable, excellent condition, tax paid, nearly new tyres, pump, jack, tools, hood and screen; any trial; exchanges.—Smith's, 86, Chalk Farm Rd., N.W.3. [2602

LATE 1921 Bleriot-Whippet, interchangeable wheels, 1 spare, dynamo lighting, taxed, spares, any trial; £90; exchange combination.—24 Balliol Rd., North Kensington. [3034

CHATER-LEA 2-seater, 9h.p. J.A.P. engine, practically new, 3-speed and reverse, tax and insurance paid; 70 gns.—"Milestones," Rydens Rd., Walton-on-Thames. [2508

CARDEN 2-seater, 1921, fully equipped, hood and screen, lamps, tax paid; £77/10; ready to drive away; motor cycle as part payment.—Wauchope's, 9, Shoe Lane, London. [3441

1922 Morgan Popular, £150; Grand Prix, £180; 8h.p. Rover, £220 in stock for immediate delivery; easy payments only 4% extra.—The Premier Motor Co., Aston Rd., Birmingham. [0773

GRAND Prix Morgan, 1920, November, guaranteed new condition, fast and powerful, water-cooled M.A.G.; £135; equipped.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. [3239

BLERIOT-WHIPPET, 1920, electric lights, horn, spot light, side curtains, spare wheel, luggage grid; £84. Exchange solo, Indian preferred.—Smith, 38, Sydenham Hill, S.E.26. [2952

G.N. Sporting Light Car, engine and gears overhauled, electric lighting, etc.; sell £76; exchange A.B.C., Sunbeam, Scott Squirrel, solo.—J. Wigley, Walgrave, Northamptonshire. [3122

COVENTRY-PREMIER 4-wheeler 1922 model, only recently from works, standard except no dickey seat; £200; usual price, £230.—Frank Whitworth, Ltd., 139, New St., Birmingham [6055

TAMPLIN 1921 2-seater, perfect condition; first reasonable offer accepted, or exchange combination.—Vivian Hardie and Lane, Ltd., 23-24, Woodstock St. (off Blenheim St.), Bond St., W. Mayfair 6559. [2597

## RUNABOUTS AND CYCLE CARS.

.C. Sociables by the A.C. Co., dependable runabouts, take 2 persons anywhere, good condition d appearance, fully equipped; from £40 to £55; al.—29, Allsop St., Upper Baker St., London, N.W. [8740

AMPLIN, 1921, 8h.p. J.A.P., Binks, Sturmey-Archer 3-speed, 2-seater, hood, screen, lamps, axon, aluminium discs, spares, luggage carrier, excellent condition, run about 600 miles; £80.—79, stleton Mansions, Barnes. [5484

OR Sale. Morgan Grand Prix, late model, just overhanled and repainted primrose and black, R.S. 6in. head lamps, discs, completely equipped; y trial; offers; would exchange for combination or o machine.—112, Gorton Rd., Coventry. [3289

XCEPTIONAL Bargain.—Brand New 1922 Coventry-Premier, water-cooled, dynamo lighting, re wheel and tyre, fully guaranteed, full compreasive insurance, no dickey; accept £197/10.—lkins Simpson, Opposite Olympia, London. [3408

.V. Monocars, with dickey seat, J.A.P. engine, 2-speed gear, lighting set, Klaxon, windscreen, rty appearance, painted red, black mudguards, reble, fast; exchanges considered; price £45 (1919) to 0 (1921).—A.V. Specialist, Garage, 105, Castlenau, rnes. [3483

920 Tamplin 2-seater, in excellent running order, extra large dashboard with special sight feed d oil pump, lamps, horn, all-weather hood, spare tin carrier, large tool box, fully equipped, tax id; £75.—Dunns, 326, Euston Rd., N.W.1. 'Phone: iseum 5391. [2189

ORGAN 1921½ Aero Special Model, 10h.p., w.c., M.A.G. engine, Lucas dynamo lighting, axon and electric horns, special body with 2 plex screens, hood and special cover, aluminium shboard, with speedometer, clock, switchboard, sh light, oversize steering wheel, petrol carrier, cs, tools, taxed, dark blue, with white lines, lly pretty, do 60, guaranteed perfect throughout, t £285; accept £180.—Stockwell, 6, Northdown e, Margate. (See Exchange column.) [3308

*Spare Parts:*

ORGAN.—All spares from stock.—Mandes' Motor Mart, 100, Great Portland St., W.1. [3256

ORGAN Spare Parts Depot.—Spares for all models from stock.—Elce, Ltd., 13, 15 and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0075

## TAXI-COMBINATIONS AND CABS.

OUNTY," 8h.p. B.S.A. Sidecar Taxis, as licensed throughout the country.—Write for full particulars, County Cycle and Motor Co., "Originators," 0, Broad St., Birmingham. [5353

## CARS FOR SALE.

917 Deemster 2-seater, electric lighting, 5 detachable wheels, perfect; 115 gns.—Below.

4h.p. Humber Covered Van, 4-cyl., 3 speeds, perfect; £35.—Below.

915 Marshall-Arter 12h.p. 4-seater, dynamo, 5 Sankeys, leather upholstery, beautiful condition ronghout; £150.—Below.

915 Singer 2-seater, dynamo lighting, 5 Sankeys; any trial; exchanges; 115 gns.—20, The Archy, Walmer Rd., North Kensington. [3398

55.—Bedford-Buick 2-seater, dickey, good tyres, fine running order.—King, Egrove Farm, Oxford. [2844

h.p. Rover 2-seater, 1911, good condition; £48, offers.—15, Blomfield St., Bury St. Edmunds. [2684

OUR-SEATER Touring Car, 1913, for Sale, or exchange Combination; £65.—15, Deal Rd., oting. [3210

100.—Perry 1914 8h.p., very good condition, overhauled £40 1920.—Bennett, 47, Magdalen Rd., andsworth. [6911

OVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd. 208, Gt. Portland St., ndon, W.1 [0350

EST Norwood! 60 cars, absolute bargains, list free, exchanges.—Douglas S. Cox, Lansdowne, st Norwood. [1932

AST and Comfortable 2-seater R.M.C., 1914, unused during war; £75.—11, Ashmere Grove, Acre ne, Brixton, S.W. [3473

7h.p. R.M.C. 4-seater, 1917, lighting and starting set, nice condition; £115.—Scrase, 381, ttersea Park Rd., S.W. [3474

914 Humber, two-seater, splendid car; £100; or exchange combination, cash adjustment.—56, abourne Rd. Bournemouth. [3008

OVER Cars.—The famous 8h.p. model in stock £220; for immediate delivery.—Eagles and Co 5 High St., Acton, London [0761

OVENTRY PREMIER, 1922, 4-wheel model; £230, immediate delivery; cash or deferred payments.—atcliffe Bros., 200, Gt. Portland St., W. [0730

AND 10h.p., 4-cylinder, water-cooled, dynamo lighting and starter, double dickey; £300.—atcliffe Bros., 200, Great Portland St., W. [4395

MALL 4-seater 15h.p., R.M.C. starting and lighting set, nice condition, very low running costs; 15.—Scrase, 381, Battersea Park Rd., S.W. [2598

# The machine to buy

¶¶ Before you settle on your next season's mount, get in touch with us. We specialise in the two machines named here. Let us tell why we concentrate on them,

**NORTON** and ON THOSE TWO ONLY.

¶ We think our reasons for so doing may interest you—even more, they may convince you that either the Velocette or the Norton is the machine YOU should buy. Which of the two you will choose depends entirely on your requirements. But we do maintain that they both represent the best of their respective types—and that you can't do better.

¶¶ A very special feature of our service deals with Sports and Competition Machines. We tune up new machines for Competition work free of charge. Or, we will overhaul your existing mount, giving you better speed and better results in every way, on reasonable terms. Our many years of competition experience is at your disposal.

**VELOCETTE**

*We have all 1922 Models for immediate delivery anywhere. Cash or Deferred Terms*

## O'Donovan Motors (D.R.O'Donovan H. H. Beach)

76a, Great Portland Street, London, W.1. : : : : :
"Odonomote, Wesdo, London."
Museum 5890. : : : : : : :

H.G.T.

## CARS FOR SALE.

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £5 secures smart 12-14h.p. Panhard landaulet.

PALMER'S Garage, Tooting.—£10 down and 6 monthly payments £3 secures 14-18h.p. Darracq light lorry.

PALMER'S Garage, Tooting.—£10 down and 12 monthly payments £3 secures excellent Napier long chassis.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £6 secures 2-ton Karrier lorry chassis, new tyres.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £5 secures S.C.A.T. 10-seater wagonette.

PALMER'S Garage, Tooting.—£30 down and 12 monthly payments £4 secures 14-16h.p. Darracq torpedo touring car.

PALMER'S Garage, Tooting.—£125 down and 12 monthly payments £10 secures modern 15.9h.p. Swift touring car, dynamo lighting.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7 secures 20h.p. Studebaker landaulet, dynamo lighting, self-starting.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7 secures 12-14h.p. Fiat light van.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8/10 secures Piccard-Pictet ¾ landaulet, dynamo lighting.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £6 secures modern 15-20h.p. Fiat landaulet.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £6 secures splendid 16h.p. Adams ¾ landaulet.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £5 secures very smart 14-16 h.p. Darracq landaulet.

PALMER'S Garage, Tooting.—£25 down and 6 monthly payments £5 secures excellent Renault taxicab.

PALMER'S Garage, Tooting.—£10 down and 6 monthly payments £3 secures 12h.p. Talbot 4-seater.

PALMER'S Garage, Tooting.—£65 cash secures modern 12h.p. Gregoire 2-seater, 4 cyls., gate change.

PALMER'S Garage, Tooting.—£150 cash secures modern 15.9h.p. Napier 30-cwt. van.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £10 secures 30h.p. Berliet touring car, 6 cyls.

PALMER'S Garage, 157, High St., Tooting, will accept your old car or motor cycle as part payment for any car in stock. For cash price, deduct 10% from above totals. [3042

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash, deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

DE MARCAY 10h.p., electric lighting, 5 detachable wheels, tyres almost new, a fast, quiet, comfortable car; £120.—Telford Garage, 47, Streatham Hill, London, S.W.2. [2901

HALIFAX.—1922 B.S.A., Calthorpe, Coventry Premier, Lagonda, and Rhode. Latest models Cash or exchange.—Halifax Motor Exchange, Hortop St., Halifax. [1405

CLYDE 10h.p. 2-3-seater, hood, screen, 4 lamps, spare rim and tyre, overhauled, guaranteed perfect condition, handy, reliable little car; £115.—Wait and Co., Ltd., Leicester. [2644

BUCKINGHAM 10h.p. 2-seater Car, with dickey seat, dynamo lighting, aluminium body; 199 gns.—Latest model from stock at Tyrrell and Clissold's Garage, Iffley Rd., Oxford. [2643

CLYDE 10-12h.p., £8 tax, 2-3-seater. White and Poppe engine, new hood, screen, Stepney wheel, thoroughly overhauled, guaranteed, handy little car; £85.—Wait and Co., Leicester. [2645

15-20h.p. Flanders Covered Van, 4-cylinder, 3-speed, reverse, inside gate change, engine overhauled, body repainted; £60; consider motor cycle part.—Snodgrass, Lightwater, Bagshot. [3189

G.N., 1922, Touring, £225; All-Weather, £250; fully equipped; inspection and trial invited. Deferred payments arranged. From Agents and Showrooms, 222, Gt. Portland St. Museum 2271. [1629

10h.p. New 1922 B.S.A. Light Car, just delivered ex works, fully equipped, dynamo lighting, electric starting, etc.; £340; exchanges or easy terms of payment entertained.—Wanchope's, 9, Shoe Lane, Fleet St., London. 'Phone: Holborn 5777. [3443

G.N. 8h.p. Standard Touring, detachable wheels, dynamo lighting, hood, screen, horn, jack, pump, tools, tax paid to December, ex works August, 1921, first used January, 1922, ready to drive away; £155.—Telford Garage, 47, Streatham Hill, London, S.W.2. [2900

## EXTENDED PAYMENTS.

TRY Wanchope's, 9, Shoe Lane, London, E.C.4, for easy terms 'Phone, Holborn 5777 [7218

HALIFAX.—Second-hand Models at special rates.—Halifax Motor Exchange, Horton St., Halifax. [1402

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1 [0672

ANY make of cycle or any combination completely equipped; licensed, insured on 12, 15, 18 months' extended payments system.—Write for particulars, Rideezi Sales, Ltd 5 Victoria St., S.W.1 [0830

HERBERT ROBINSON, Ltd., Green St., Cambridge, will supply any make of motor cycle or light car on easy terms at the lowest possible price obtainable anywhere. Catalogues and full particulars by post. [1626

## ENGINES.

DOUGLAS 1920 2¾h.p., unused, new C.A.V., Amac; £17/10.—4, Auckland Rd., Doncaster. [2562

VILLIERS Engine Spares from Stock.—Maudes' Motor Mart, 100, Great Portland St., W.1. [3257

2¾h.p. J.A.P., re-bushed, new piston, rings and con. rod; £4/10.—Corner Garage, Amesbury, Wilts. [2812

INDIAN 7-9h.p. Engine and Carburetter, good condition; £14.—Houchin, 189a, High St., Peckham, S.E.15. [3465

P. and M., 1918, fine condition; £8, near offer.—Coulson, 22, Lupus St., Victoria (2 knocks, after 6). [2924

WHATEVER type of engine you require, we can supply.—Forfield Motors, Forfield Place, Leamington Spa. [8453

GAS Engine, equal to new, magneto ignition, 10h.p.; can be seen running by appointment.—J. Thorp and Sons, Valley Mill, New Mill, Huddersfield. [2606

4½h.p. Levis Flat Twin 2-stroke, carburetter, and magneto, new condition, perfect; £10.—Cole, 457, Rathgar Rd., Loughborough Junction, S.W.9. [2280

BARR and Stroud Engines, the bar none engine, 140 miles per gallon, 60 miles per hour. See Parts advertisement.—Motorities, 191, Sweetman St., Wolverhampton. [2299

VILLIERS Engine, 2-stroke, flywheel, magneto, complete with brackets and Senspray carburetter, pulley, nearly new, ready for fitting, perfect; price £14.—Hall, Preston Rd., Chorley. [3507

ENGINES. — Coventry-Premier pattern, 1916, 3½h.p., with silencer, new; we have a few of these splendid engines to clear at £10/10 each, carriage paid; all spares in stock.—Planet Engineering Co., 15, Francis St., Ashted, Birmingham. [9545

HEPPELTHWAITE'S.—5-6h.p. Clyno and Bosch magneto, £10; twin Precision, £9; 2¾h.p. Fafnir, £3; 2h.p. F.N., £2; 5-6h.p. Peugeot and magneto, £6; and tons of 5h.p. J.A.P. spares; stamp, please 'Phone: 1958 Brixton.—19, Wilcox Rd., South Lambeth, London, S.W.8. [2593

LOOK.—New 1½h.p. air-cooled Whippet scooter, engine suitable cycle attachment, scooter, mowing machine, dynamo, pump, etc. Note, 4-stroke and brand new, with carburetter and magneto; £8/10; worth double; offered subject unsold.—Wortham Blake and Co., Waltham Cross. [1530

## IGNITION, LIGHTING, ETC.

MAGDYNAMO Engineering Co., Ltd., for magnetos, spares, and repairs.

BOSCH Enclosed Waterproof Type D.A.L. Magnetos. Government surplus, ready to fit on Indian, Harley, J.A.P., or any big single or twin, gives powerful spark at all engine speeds, makes your engine a real live engine, give you easy starting, smooth and rapid acceleration, high speed, and low fuel and oil consumption with increased power; price only £5 each, postage 1/6 extra; a 12 months' written guarantee sent out with each magneto. We give you satisfaction or refund cash.

PLEASE Note, the above type magnetos were originally manufactured for 200h.p. aircraft engines; therefore we have every confidence in claiming them to be the magneto you require for your big machine. Fit one to-day, and see life with a live machine.

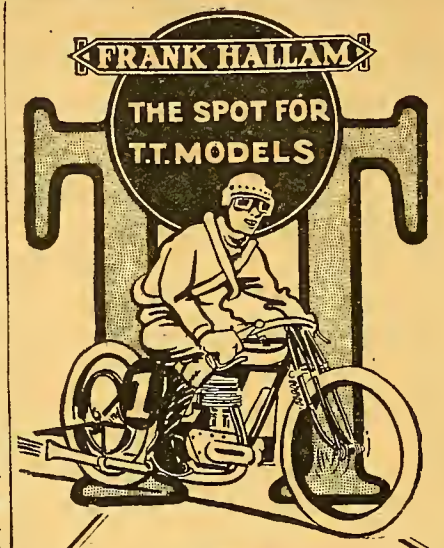
HARLEY-DAVIDSON Owner writes: "Magneto to hand; many thanks for prompt despatch [illegible] factory in every way; will recommend to my friends."

ZENITH Owner writes: "Since fitting magneto have completed a run of 250 miles; highly satisfied; will certainly recommend these magnetos."

REMEMBER your magneto is sent on 14 days' approval against cash per return on receipt of your order; there is no obligation to keep it until you have used it for 14 days on your machine and are satisfied; let us send you one now.

MAGDYNAMO Engineering Co., Ltd., 28, Bateman's Row, E.C.2. 'Phone: London Wall 4570. (One minute from Brown Bros.) [8522

ACCUMULATORS. — Quality right; price right; write for list; trade supplied.—Adams Bros. (Longton), Ltd., Accumulator Manufacturers, Longton, Staffs. [1284




We can give

## IMMEDIATE DELIVERY

**of any of the following T.T. Models. ALL BRAND NEW MOUNTS ready for the road.**

**8 h.p. BROUGH-SUPERIOR**
The Super Twin ... ... **£150**

**6·5 h.p. BROUGH-SUPERIOR**
Light Sports Model ... ... **£125**

**3½ h.p. RICARDO-TRIUMPH**
O.H.V. Engine, 3 Speed ... **£120**

**16 H. 3½ h.p. - - - - - NORTON**
The Leader of its Class ... **£115**

**3½ h.p. SPORTS ARIEL** 3 Speed
A Mile a Minute machine at a pre-war price ... ... **£87-10**

**2¾ h.p. RALEIGH Sports Model**
2-speed, Kick Starter ... **£68**
3-speed, ,, ,, .. **£73**

## Special "T.T." Model "LEVIS"

**2-speed, Kick Starter £68**

Winner of the Lightweight Trophy.

**VELOCETTE TWO-STROKE**
2-Speed, K.S. ... ... ... **£65**

**and many other models.**

**Easiest of Easy Terms for Extended Payments direct with the Purchaser.**

**EXPERT TUITION FREE**

**Registration, Insurance, etc., arranged with minimum amount of trouble and expense.**

**EXCHANGES A SPECIALITY,**

**Full market value allowed.**

## FRANK HALLAM

**Dalton Street**
(2 doors from Bull Street)
**and 88, Bristol Street, BIRMINGHAM.**

'PHONES:
Dalton St., Cent. 7317. Bristol St., Mid. 1472.

## IGNITION, LIGHTING, ETC.

H.B. I. Co

H.B. for new and second-hand magnetos; all spare stocked.

H.B. Specialise in Thomson-Bennett complete fo fixing to Triumph.

P.M., J.A.P., Douglas, 2-stroke engines, etc.; £3.

C.A.V. New, twin and single, clock and anti; £3.

DIXIE, Single and twin, all degrees; £2/5.

H.B. Guarantee all magnetos one year.

H.B. will take your old machine in part payme

H.B. Despatches all goods per returo, carriage pak on approval against cash, or through *The Moto Cycle* deposit system.

H.B. Ignition Co., 78, New Park Rd., Brixto Hill, London. 'Phone: Brixton 610. [069

BROWN, Gardiner and Co.

C.A.V. 2-cylinder, clockwise, aeroplane starting mag netos, platinum points, guaranteed unused, a working parts interchangeable with C.A.V. type KU

THESE Magnetos can be converted for use on an 1- or 2-cylinder engine of less than 5h.p.; 25, each, carriage paid.

SPECIAL Prices for quantities.

CASTINGS and brass armature ends; 10/6 per se

LONG Cams necessary for single cylinders; 3/- eac

SAMPLES sent on approval against cash.

BROWN, Gardiner and Co., 8, Bevis Marks, E.C. [082

COUNTY of London Engineering Works, Ltd.

MAGNETO Factors and Repairers.

ALL Magneto Spares Stocked.

BOSCH Single, Type D.A.L., variable ignition; £3/

M-L Single, enclosed, waterproof, variable ignition £3/15.

THOMSON-BENNETT, single or twin, enclose waterproof, variable ignition, all degrees; £2/1 each.

THOMSON-BENNETT, large type, single or twi enclosed, waterproof, variable ignition, all d grees; £3/10.

C.A.V., single or twin, enclosed waterproof, variabl ignition; £2/15.

RUTHARDT, single, enclosed, waterproof, variabl ignition; £2/5 each.

BERLING, single, enclosed, waterproof, variabl ignition; £2/5.

SPLITDORF, single, enclosed, waterproof, variabl ignition; £2/5.

DIXIE, single or twin, enclosed, waterproof, var able ignition; £2.

ANY of the above single-cylinder magnetos can b supplied with the special long driving spindl suitable for Rudge.

THESE Magnetos are fitted with leads and bas plates, ready to be immediately fitted; sprocket can be supplied if required. Please state make engine when ordering.

GUARANTEE.—We guarantee all our magnetos fo 12 months, and will willingly replace or repai any that should prove defective within that period.

ALL Repairs Guaranteed. Send your magneto t us for quotation. It will pay you. We 'ca despatch all repairs within 3 days, and, if require 24 hours, and guaranteed for 12 months.

SPECIAL Terms to Trade. Write for list.

COUNTY of London Engineering Works, Ltd., 2 Stockwell Rd., London, S.W. (1 min. from Stoc well Underground Station). T.A.: Ignitionac, Cla road, London. Tel.: Brixton 2841. [27

C.A.V., Ruthart, spare parts specialists.—Writ Wigan Magneto Works, Acton St., Wigan. [262

SPARKING Plugs, used, standard makes, teste 4/- doz.—Urquhart, 371, Earlsfield Rd., Londo S.W. [877

BOSCH and M-L singles, 30/-; C.A.V., 37/6; var able ignition guaranteed.—84, Green side Rd Croydon. [324

K.L.G. W.D. Plugs, 4 for 2/6, postage 9d., valu unprecedented; money returned if dissatisfied. Thompson, 59, Queen St., Wolverhampton. [818

DYNAMOS, Lucas 6v. 6 amps., with cut-out, char ing and lighting, £6 each; junction boxes, 3/6. Jenner (Dept. M.C.), 165, Church St., Mitcham. [26

## IGNITION, LIGHTING, ETC.

ALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3.

A.V. Magnetos, 1- or 2-cylinder, clock or anti, variable ignition, with short-circuiting terminal platinum points; price 50/- each; all working ts are standard, and interchangeable with C.A.V. es KU1 and 2.

HOMSON-BENNETT, types A.M.1 and 2, variable igoition, clock or anti, fitted with short-circuiting minal and platinum points; price 52/6 each.

HOMSON-BENNETT, and M-L's of Coventry, 1-cylinder, types A.D.S. or P.L.R., especially suite for stationary engines, price 35/- each; fitted h variable ignition, 10/- extra.

HOMSON-BENNETT 4-cylinder, variable ignition, clock or anti, fitted with short-circuiting terminal; ce £4/10.

OSCH, D.A.L., waterproof, variable ignition, 1-cylinder, clock or anti, with short-circuiting terial; price £3 each.

UARANTEE.—All magnetos are guaranteed to give satisfaction, and are despatched in perfect king order; any machine not in accordance with guarantee will be replaced or money refunded, returned to us as sent, and within 30 days of ipt.

ERMS.—Net cash with order; samples sent on approval against cash; all goods carriage paid.

EFORE ordering elsewhere, write for samples, and compare our quality and finish with other sups.

ALE Engineering Syndicate, 8-11, Brown's Buildings, St. Mary Axe, E.C.3 'Phone: Avenue 4564 [0698

HE Largest Organisation in Europe for ignition and automobile electrical equipment.

HE Runbaken Repair Service has eight fully staffed and equipped Service Depots throughout the ntry, each ready and competent to carry out the st difficult repair to any make or type of magneto, amo, starter, accumulator, or battery.

OMPLETED Work is fully guaranteed and of the highest finish. Send your machine for a free mination and quotation.

HE Runbaken Magneto Co., Ltd. Head office and works: Cheetwood Lane, Derby St., Manchester y 8266) (3 lines). Manchester: 288, Deansgate. ntral 7342). London: 142, Gt. Portland St., (Museum 3905). Leeds: 94, Albion St. (27219) erpool: 16, Colquitt St. (Royal 605). Birmingm: 192, Corporation St. (2059 Central). Bristol: Colston St. (3728). Glasgow: S. W. Murray, 34, h St. (Douglas 1784). Paris: 7, Rue Brunel agram 50-11). [0841

ELIANCE Magneto Repairing Co. (the largest London repair depot) for repairs and new magos.—See below.

ELIANCE Guarantee to Return your magneto withia 3 days, if necessary 24 hours, with a 12 ths' written guarantee.

ELIANCE Test Every Magneto after repair under all running conditions, and, as we contract for ny of the largest concerns, you need have no hesion in placing your repairs and orders with us.

ELIANCE Manufacture and Stock Spare Parts for all magnetos. Special line, genuine platinum ews for every make, 12/- per pair.

ELIANCE will be pleased to give advice, free of charge, upon any question concerning ignition ubles, as we place our long-standing experience at r disposal, and old and new customers may be cer- of getting the usual promptness and courtesy we e always endeavoured to give.—Reliance Magneto pairing Co., 283, St. John St., London, E.C.1.

ELIANCE Magneto Repairing Co., 283, St. John St., London, E.C.1, for new and second-hand gnetos.

HOMSON-BENNETT Magnetos, brand new, enclosed waterproof type, singles, suit any engine, e £3; twins, 45, 48, 50, 55, 60, 180 degrees, Douglas, Clyno, etc., price £3. See our guarantee ow.

A.V. Magnetos, waterproof, new and unused, singles and 180 degrees twins, suitable for iglas, O.K., Calthorpe, A.J.S., Enfield, Levis, New perial, Scott, Velocette, or any lightweight. These gnetos are of the finest workmanship throughout. ce £3. See our guarantee below.

EFORE Sending Elsewhere, send a P.C. for our small interesting booklet showing a full range of gnetos to suit every engine, with full particulars prices.—See below.

UARANTEE.—Every magneto, no matter what the price or make, is guaranteed by us. Not ely a guarantee that same is in good order at time sale, but a plainly written statement that we rantee each machine against all defects for a period 12 months. This, we maintain, justifies us in rging a few shillings more than certain of our petitors.

ELIANCE Cordially Invite Customers to their works to see any of the above on test. Magneto giving full particulars, sent upon application. It pay you to deal with a firm of repute.—Reliance gneto Repairing Co. (1914), 283, St. John St., Lon-, E.C.1. Telephone: Clerkenwell 4290. Telems: Remagco, Isling, London. [3882

# WATCH THIS COLUMN
## EVERY WEEK FOR
# BANCROFTIAN CO.'S BARGAINS.

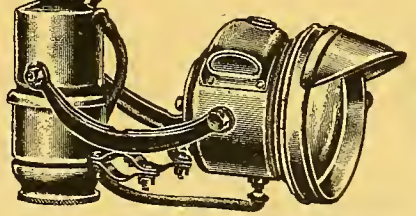
**Advertisers in "The Motor Cycle" from its first publication.**

**TYRES.**—Manufacturers' clearance stock, not W.D. Although clearance, they are new and perfect. Wood Milne extra heavy, 4-ply, 26×2¼, combination, **35/-**. Pedley, 26×2¼, 3-ribbed, **25/-**. Hutchinson, 26×2⅜, heavy T.T., **27/6**; Passenger, 26×2½ for 2¼, **39/6**; 700×80 to fit 650×65 small car, heavy, **49/6**; light car, 750×75 for 28×3 rim, **42/-**; heavy Passenger, 26×3, **37/6**; extra strong Passenger, 28×3, **53/6**; 24×2 T.T. heavy, **25/-**; extra heavy, 3-ribbed, 700×65, **35/-**; 650×65 steel studded car type, **65/-**; original, **£6 6s.** Firestone, 20×2, Auto wheel, **21/-**; original, **45/-**; tube, **6/6**. Palmer, 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½ cord, **42/-**. Oylers, 650×65, ribbed square tread, heavy, in original packing, **27/6**; original, **45/-**. Clincher de Luxe, very heavy, 26×2½, **37/6**; 26×2 Junior de Luxe, **22/6**; 26×1¾, **17/6**. Hutchinson wired edge cover, 26×2½ and 26×2¼, **30/-** each. Postage 1/6.

**TUBES.**—24×2¼, **4/6**; 24×2, **4/6**; 26×2¼, **5/6**; 26×2½, **5/9**; 26×2⅜, **5/6**; 28×3, extra heavy, **7/6**; 700×80, **7/6**. Postage 9d.

**BELTS.**—Clincher clearance line, new, not W.D. ⅜", 6' 6", **8/6**; ⅜", 7' 6", **12/3**; 8' 6", **14/-**; 1", 7' 6", **16/-**; 8', **17/-**; 1¼", 7', **18/-**; 8', **20/6**; 8' 6", **21/6**; Bates short lengths, ⅜", 5', **4/6**; 5' 6", **5/-**; ½", 4' 6", **5/-**; 5', **5/-**; 5' 6", **5/6**; 1", 2' 6", **3/-**; 3', **4/-**; 3' 6", **4/6**; 4' 6", **6/3**; leather belts, ¾" at **2/6** per foot; belt fasteners, **9d.** and **1/-**. Postage 1/-.

**GREAT PURCHASE of Genuine "BOBJON" LAMPS.** Nickel-plated on brass or black and plated. Large size, 5½" front with powerful back lens, large generator sufficient for two lamps, suitable for a heavy-weight machine. **25/-** complete, as illustrated, original price, **55/-**. Smaller set, 4½" front, suitable for light-



weights, **16/6**. The greatest bargain ever offered. When cleared can never be repeated at near the price. Postage and packing, 1/6 extra. Special quotation for quantities.

**SPEEDOMETERS.**—Slightly shop soiled. Cowey with trip, **£4 15s.**; Stewart with trip (£6 6s. model), **£4 10s.**; Smith's with trip, **£4 10s.** Also Bonniksen in stock. All speedometer replacements in stock. Postage 1/6.

**TAN-SAD,** with back seat, **28/6**; original, **57/-**; only limited quantity. Carriage 3/6 extra.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined, **7/11**; lined, **10/6**; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, **3/6**; Gloves, leather, wool lined, **4/6**. Above lines worth more than double. Limited quantities only. Order at once. Postage 6d.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coat with belt, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality, extra heavy, double texture waterproof material, dark fawn, new and fresh, only been made recently, not half-perished W.D. Our price to clear, **£2 2s.** Postage 1/6 extra. Could not be bought elsewhere under £4 10s. The greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**HORNS.**—Reliable Electric, Motor Cycle, up to 4-volt only, complete with wire and switch; usual price, 29/6, our price, **15/6**. Postage 1/3 extra. Smith's Electric Horns, black and nickel, in 6, 8, or 12 volts, large size, suitable for heavy combinations; original price, £2 15s.; our price, **30/-**. Postage 1/6. The greatest bargain ever offered. All new and perfect.

We can supply anything for the motor cyclist at competitive prices.

## BANCROFTIAN CO.,
**78, BISHOPSGATE, LONDON, E.C.2.**

'Grams: "Chaikel, London." 'Phone: London Wall 9897

## IGNITION, LIGHTING, ETC.

ANY Motor Cycle Magneto repaired, no matter what condition, provided complete, for 30/-; 24 hour service.—Kays, Electrical Dept., 8, Bond St., Ealing, W. [4538

CHELTENHAM.—Repairs to magnetos, self-starters, lighting plants, etc.; London experts employed.—Norwood Magneto Works, 95, Bath Rd., Cheltenham. 'Phone: 1256. [0758

DASH Switchboards, 4-way, with ammeter, 20/-; with ammeter and voltmeter, 35/- each nett.—Leslie Dixon and Co. (Dept. H.1), 9, Colonial Av., Minories, E.1 [0760

CONTINENTAL Ignition Repair Co.—We repair Continental magnetos only. By specialising on Bosch, U.H., Eisemann, Mea, Splitworf, Dixie, and Berling magnetos, we can naturally give you better service.

PRICE: Rewinding 18/-, condensers 10/-, platinum screws (Bosch standard) 6/-, remagnetising 2/6, slip rings, 6/6, H.T. terminals 4/6. Our price for overhauling a motor cycle magneto ranges between 20/- and 35/-, and never exceeds the latter figure. Guaranteed for 12 months, and redespatched to you in 2 days.

CONTINENTAL Ignition Repair Co., 13, Hardwick Rd., Chiswick, London. [2504

C.A.V. Magnetos.—Extraordinary bargains. Brand new 180° twin or single cylinder, 38/6, carriage free. Every magneto thoroughly tested before despatch; approval against cash. Kindly state rotation required.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [3365

SURPLUS Magnetos, with written guarantee one year; M-L single, 35/-; B.L.I.C. ditto, 42/-; Bosch ditto, 45/-; C.A.V. single or twin, 50/-; Thomson-Bennett ditto, 60/-. We specialise in repairs and spares for all makes. Lists, 2d. stamp. Deal with experts and avoid certain disappointment. —Whitdale Magneto Service, Cherry Orchard, Croydon. 'Phone: Croydon 1625. [2718

THE Magneto Repairing and Winding Co. (established 1912), contractors to H.M. Government, and officially appointed by the R.A.C. Magneto repairs of every description; all repairs at lowest possible prices, and strictly guaranteed. We can mostly return them within 24 hours. We have several new and second-hand single and 2-cyl. magnetos in stock, all guaranteed.—The Magneto Repairing and Winding Co., 78, Hampstead Rd., Euston, London, N.W.1. 'Phone: Museum 1158. T.A.: Kumagaelec, Eusroad, London. [2445

EUSTON Ignition Co.'s 24-hour repair service. Guaranteed repairs to all types of magnetos; Splitdorf and Dixie specialists; official Indian electrical service station; Thomson-Bennett repairs and spares. All repairs are tested on an approval A.I.D. test bench before despatch, and therefore carry our guarantee for 12 months. We hold the largest stock of guaranteed magnetos in London, twins all degrees; spare parts for all makes in stock; charged accumulators, all voltages, always ready in stock; plugs, cables, ½-watt and vacuum bulbs, all voltages. We give you real live service always.—Euston Ignition Co., 329, Euston Rd., London, N.W.1. 'Phone: Museum 5034 T.A.: Magdyno, Eusroad, London [0263

THE Central Ignition Works, London.—Surplus magnetos, not converted from ex-W.D. starter magnetos. Magnetos for all motor cycles. Bosch twins types: Z.A.2, £3/10; Z.U.2, £4/10, enclosed, waterproof, variable ignition. Bosch singles, £3/10. M.L. singles only, enclosed waterproof, variable ignition, £3/10. E.I.C. single and twin, enclosed waterproof, variable ignition, £3/5. Thomson-Bennett single and twin, enclosed waterproof, variable ignition, £3. Ruthart, singles only, enclosed waterproof, variable ignition, £2/10. C.A.V. single and twin, enclosed waterproof, variable ignition, £3. C.A.V. and Ruthart magnetos, fitted with genuine Rudge driving spindles: C.A.V., £3/7/6; Ruthart, £3/2/6. These magnetos were formerly made exclusively for Rudge motor cycles, so that you can in no way doubt their entire efficiency. Bosch sparking plugs, suitable for all English cars and motor cycles, long and short reach, 1/6 each. Carriage on each plug, 2d. on orders up to 6; over 6, carriage free. Repairs accepted for all magnetos. Spares stocked, all types. All goods despatched by the Central are forwarded on approval against cash. If dissatisfied, your cash refunded within 24 hours. Guarantee.—We guarantee all our magnetos for a period of twelve months, and will willingly replace or repair any magneto that should prove defective within that period. Carriage on all magnetos, 1/6.—The Central Ignition Works, 14, Loughborough Rd., Brixton, London, S.W. Tel.: Brixton 210. [2919

## TYRES.

A SPECIAL Offer of clearance covers: 26×2 Hutchinson, Brooklands rubber stud, 15/-; 26×2¼ Hutchinson, Brooklands rubber stud, 17/6; 26×2½ to fit 2¼, extra heavy rubber non-skid, 27/6; 26×2½ Hutchinson, passenger rubber non-skid, 30/-; 26×3 Hutchinson T.T. stud, 27/-; 26×2¾ Diamond rubber non-skid, 30/-; 650×65 Hutchinson 3-rib, 27/6; Dunlop plain, 25/-; 750×75 to fit 700×65 Hutchinson rib, 27/6; 700×80 Firestone plain, 45/-. These covers are guaranteed by us; postage is included in above prices.—Maudes' Motor Mart, 100, Gt. Portland St., W.1. Museum 7676. [3252

## TYRES.

EMANUEL'S For Tyre Bargains.—From Manufacturers', Bankrupt, and Surplus Stocks.—Below.

**24**×2.—Hutchinson rubber studded, 22/3.

**24**×2¼.—Clincher de Luxe heavy rubber studded, 22/3.

**24**×2¼ Bates, special heavy 3-ribbed; £29/9.

**26**×2¼ Hutchinson, Brooklands R.S.; 19/6.

**26**×2¼×2¼ Bates, special heavy rubber non-skid; 43/7.

**28**×3 Bates, special 3-ribbed heavy; 50/8.

**29**×3½ (to fit 28×3 American rims), heavy rubber non-skid; 62/5

**26**×2.—Continental standard and ribbed, 16/6 Wood-Milne Key-grip, 18/6; Hutchinson Brooklands rubber studded, 26/9; Palmer cord heavy 34/6.

**26**×2¼.—Moseley heavy ribbed, 20/6, Bates special heavy beaded, 28/3; Macintosh chain heavy, 32/3; Palmer cord 3-ribbed heavy, 34/9; Dunlop Magnum heavy, 36/-

**26**×2⅜.—Dunlop retreaded grooved, 20/6; Palmer cord 3-ribbed extra heavy, 35/3; Dunlop Magnum heavy, 35/9; Clincher de Luxe extra heavy, 24/3

**26**×2½.—Hutchinson rubber studded T.T., 27/-; Hutchinson rubber studded or ribbed, 33/-; Bates special 3-ribbed extra heavy, 56/-.

**26**×2½.—Wood-Milne 3-ply, 13/6; Wood-Milne 4-ply extra heavy, 16/6; Rom. Combination 38/9; Dunlop rubber non-skid, 41/-; Hutchinson rubber non-skid or ribbed, 29/9; Emanuel's extra heavy rubber non-skid, 45/-; Englebert passenger rubber, 32/-.

**28**×2½.—Hutchinson ribbed, 25/-; Spencer Moulton rubber non-skid, 30/-.

**28**×3 (to fit 2½ rims).—Dunlop heavy rubber non skid, 45/-.

**28**×3.—Macintosh chain tread heavy, 27/6; Dunlop sidecar, 37/6; Dunlop heavy rubber studded, 44/-; Fisk extra heavy rubber studded, 46/-; John Bull extra heavy rubber studded, 68/-.

**28**×3.—In original wrappers for (American rims), postage, rubber non-skid, Republic, 43/-; United States and Firestone rubber non-skid, 44/-; Goodyear all-weather, 45/-; new tubes, 7/-.

**650**×65.—Hutchinson three-ribbed, 32/6; Wood-Milne 4-ply extra strong, 25/-; Emanuel's rubber non-skid extra heavy, 26/6; Burnett grooved, 30/-; Dunlop steel studded, 45/-.

**700**×80 (to fit 650×65 rims).—Bates special heavy 3-ribbed, 52/6; John Bull extra heavy rubber non-skid, 55/-; Clincher grooved, 47/6.

EXTRA Heavy Rubber Studded Non-skid, 42/6.

NEW Tubes, all sizes, 7/-; clearance, 5/6 each.

H. EMANUEL and Co.—Stores, 37a, Balls Pond Rd., Dalston, N.1. Office, 27, Belgrade Rd Stoke Newington, N.16 Tele.: Dal. 3161 [0836

MOTOR Cycle Tyres on Easy Terms, standard makes: list post free.—J. G. Graves, Ltd., Sheffield. [0589

BRAND new Clincher rubber-studded tyres, 26×2½, 26×2¼, 33/6 each.—1, Ebner St., Wandsworth. [2854

MOTORISTS.—Try our 3,000 mile retreads, repairs, etc., carriage paid.—Buxton Vulcanising Co., Buxton, Derbyshire. [9293

**28**×3 Pedley Clearance Covers, 39/6, list 70 24×2¼ covers and tubes, 16/3 to 22/-, carriage paid.—Davies, Union St., Wednesbury [4452

BULL'S have your size in bargain covers and tubes. If you do not see what you require below, write or call on us, or phone Gerrard 1347

**26**×2¼ standard cord rubber, non-skid, 37/6; Beldam 3-ply, 29/6; 4-ply, 32/6; Avon Druid, 17/6; heavy 3-ribbed, 21/6; tubes, 5/3.

**26**×3 Goodyear cord 5-ribbed, 42/6; Beldam all-rubber 4-ply, 37/6; 3-ply, 32/6; tubes, 7/-.

**26**×2½×¼ Wood-Milne Keygrip, 4-ply, 37/6; Beldam rubber non-skid, 4-ply, 39/6; 3-ply, 32/6; Clincher de Luxe, 30/-; tubes, 5/6.

**26**×2½ Avon Stonehenge, 27/6; Tricar, 32/6; Goodyear cord, 5-ribbed, 40/-; Clincher rubber non-skid sidecar, 27/6; tubes, 5/9

**26**×2⅜ Beldam all-rubber 4-ply, 37/6; 3-ply, 30/-; Wood-Milne Keygrip, 4-ply, 35/-; Clincher de Luxe, 27/6; tubes, 5/3.

TUBES and all other sizes and makes on application. Accessories stocked.

BULL'S Rubber Co., Ltd., 3, Upper St. Martin's Lane, London, W.C.2. (next door to Aldridge's). Phone: Gerrard 1347. [0869

SCOTTISH readers will find it advantageous to purchase their tyres from McArthur, Hill and Co., new address: 436, Argyle St., Glasgow. Lists post free. [6514

# MAUDE RUBBER CO.

**58, PRAED STREET, W. 2**

4484 Padd.

**WE GUARANTEE YOUR SATISFACTION**

**and our Special Mail Order Dept. dispatch all goods immediately on 7 days' approval against cash.**

HOURS.—9-7. Sat. 9-6.

| | | |
|---|---|---|
| 24×2¼ | **Avon Ribbed.** Heavy | 18/3 |
| | **Clincher de Luxe.** Ex.Hvy. | 21/- |
| | **Palmer.** 3 Ribbed | 21/- |
| 26×2 | **Englebert** Passenger. Heavy | 17/6 |
| | **Avon Ribbed.** Heavy | 17/6 |
| 26×2¼ | **Wood-Milne** Comb. Ex. Hvy. | 22/- |
| | **Dunlop** Rubber-studded. Heavy | 27/6 |
| | **Firestone** Safety. Ex. Heavy | 28/6 |
| | **Hutchinson T.T.** Heavy | 23/- |
| | **Avon.** 3 Ribbed Heavy | 22/6 |
| | **Michelin** Comb. | 25/- |
| | **Wood-Milne** Heavy | 19/- |
| 26×2⅜ | **Dunlop** Rubber-stud. Ex. Hvy | 30/6 |
| | **Clincher de Luxe.** Ex. Hvy. | 26/6 |
| | **Hutchinson** Rubberstud. Hvy. | 26/6 |
| | **Dunlop R/S.** Heavy | 30/- |
| 26×2½×2½ | **Palmer Cord.** Heavy | 32/3 |
| | **Clincher de Luxe.** Heavy | 28/6 |
| | **Kempshall** Anti-skid. Heavy | 27/6 |
| | **Maude R/S.** Extra Heavy | 28/6 |
| | **Dunlop** Heavy. Rubber Stud. | 46/- |
| | **Dunlop.** Extra Hvy. Rubber Stud | 53/- |
| 26×2½ | **Wood-Milne** Key-grip. Heavy | 16/6 |
| | **Bates Ribbed.** Ex. Heavy | 30/- |
| | **Avon.** Heavy. Rubber Stud. | 18/6 |
| | **Hutchinson** Rubber Stud. Hvy. | 26/6 |
| | **Englebert** Passenger. Ex. Hvy. | 22/6 |
| 26×3 | **Englebert** Passenger. Heavy | 30/- |
| | **Avon.** Ex. Hvy. Rubber Stud | 40/- |

## Large Purchase of American and English Covers.

## 28 × 3

All brand new in makers' wrappings and guaranteed perfect.

Stocks cannot last long as demand already unprecedented, when such goods will never again be obtainable at these low prices.

| | |
|---|---|
| **FIRESTONE, RUBBER NON-SKID** | 44/- |
| **GOODYEAR, DIAMOND** | 45/- |
| **GOODRICH, SAFETY** | 44/- |
| **PORTAGE, SUPER EX. HEAVY** | 43/- |
| **FEDERAL, EX. HEAVY** | 42/- |
| **USCO, SUPER EX. HEAVY** | 44/- |
| **FISK, RUBBER NON-SKID** | 42/6 |
| **AVON, 3-RIB, EX. HEAVY** | 42/- |
| **DUNLOP R/S, EX. HEAVY** | 50/- |
| **AVON COMB., EX. HEAVY** | 50/- |

| | | |
|---|---|---|
| 650×65 | **Wood-Milne.** Grov. Ribbed Extra Heavy | 30/- |
| | **Englebert.** Sq.Tread. Ex. Hvy. | 22/6 |
| | **Avon.** 3 Ribbed Heavy | 32/- |
| | „ Extra Heavy | 36/- |
| | **Dunlop** S. studded, Light Car | 35/- |
| | **Dunlop.** Grooved. Light Car | 37/6 |
| 700×80 | **Michelin** St. Stud. Ex. Hvy. | 45/- |
| | **Firestone** Grooved. Lt. Car | 45/- |
| | **Rodace** Sq. tread. Ex. Hy. Lt. Car | 42/6 |
| | **Maude** Super-Ex. Heavy | 48/- |
| | **Avon** 3-rib Lt. Car | 45/- |
| | **Avon** Sunstone | 60/- |

**Tubes.** Brand new **Dunlops, Palmers,** and **Avon** 26"×2", 2¼", 2⅜" and 2½" 5/6 each. 26×3, 28×3, 650 & 700 6/6 „

**RUBBER HIP BOOTS (WADERS)**

Actual value 45/-

Thousands sold at 12/6.

SALE PRICE **8/6** Postage 1/3

**All Goods sent on approval 7 days against Cash.**

## TYRES.

MISS DOOLEY.—New 28×3 heavy Moseley cover not blemished in any way, price 35/-, carriage extra; also new 28×3 Wood-Milne at 30/- each, carriage extra.

MISS DOOLEY.—Tubes: New 26×3 Dunlop, but ended or endless, 5/- each.—Please apply to Mi E. Dooley, 33, Killyon Rd., Clapham, S.W.8. [334

ECONOMIC Tyre Co.—We have the following bargain lines in clearance and blemished cover All goods sent on 7 days' approval against remittance carriage paid.

ECONOMIC.—24×2¼ (also oversize for 2in. rim Clincher heavy Junior de Luxe, 20/-.

ECONOMIC.—26×2¼ Dunlop heavy (warranted 37/3; Firestone extra heavy, 28/6; Bates speci heavy, 27/6; special heavy tubes, 6/-.

ECONOMIC.—26×2⅜ Palmer cord, heavy, 40/ Clincher extra heavy de luxe, 26/6; Hutchins T.T., 29/-; special heavy tubes, 6/6.

ECONOMIC.—26×2½×2¼ Dunlop extra heavy (wa ranted), 55/3; Clincher heavy de Luxe, 30/ R.O.M. Rubberstud, 25/-.

ECONOMIC.—26×2½ O.S. Bates special heavy, 30/ special heavy tubes, 7/-.

ECONOMIC.—28×3 Fisk extra heavy rubberste 42/6; Clincher extra heavy de Luxe, 47/ Clincher Dreadnought passenger, 50/-.

ECONOMIC.—650×65 Goodrich safety tread, blei ished (warranted), 39/6; especial heavy tabe 7/-.

ECONOMIC.—700×80 Beldam V rubber non-sk extra heavy (warranted), 50/-; Goodrich Safe (warranted), 46/-; Avon extra heavy Rubberstu 42/6.

ECONOMIC.—Fully warranted Dunlop Rubberstu 24×2, 22/6; 24×2¼, 24/9; 26×2, 24/6; 26×2 25/9.

ECONOMIC Tyre Co., 314, New Cross Rd., S.E. (near Town Hall). 'Phone: New Cross 139 Repairs and Retreading. [99

TYRE Repair Specialists.—H.F. process throughou including retreading burst covers. Every kind repair to tyres and tubes in 24 hours, retreads in days.—The Motor Tyre Co., 66, High St., West Bro wich. [20

LONG-DISTANCE Retreads, three-ribbed patter returned like new. 26in. tyres, 20/-; 28in. tyre 25/-; burst tyres made perfect, chafed beads moulded, tube vulcanising, butt ends fitted; best wo in the country.—Melton Rubber Works, Melton Mo bray. [03

CENTRAL Garage for fair dealing. All covers a vertised under are guaranteed in stock and wi be despatched within one hour on receipt of orde and, what is more, we will send with all cleara lines a portable vulcaniser free of charge; no moto cyclist should be without one.

**26**×2.—Dunlop heavy, 36/6; Palmer cord heav (oversize), 32/6.

**26**×2¼.—Firestone, 30/-; Macintosh, 27/6; Hat E.H., 30/-; Clincher E.H. (oversize), 28/ Clincher Junior, 19/-; Palmer cord E.H., 32/6; Avo Stonehenge, 21/6; Goodyear E.H., 26/6; Wood-Mil E.H. Combination, 22/6.

**26**×2⅜.—Dunlop heavy, 30/-; E.H., 37/9; Avo tricar, 27/6; Hutchinson, 30/-; Clincher Luxe (for 2¼), 28/-.

**26**×2½.—Palmer cord E.H., 32/6; Avon H., 27/ Clincher E.H., 29/6; Hutchinson T.T., 26/6.

**26**×2½×2¼.—Palmer Cord H., 32/6; Clincher Luxe, 28/-; Hutchinson T.T., 30/-; Avon E.H 28/-; heavy, 25/-.

**26**×3×2½.—Wood-Milne heavy, 25/-; Dunlop E.H 50/-.

**28**×2½.—Clincher Dreadnought E.H., 40/-.

**28**×3.—Clipper 3-ribbed E.H., 35/6; Clincher E.H., ribbed, 42/6; Dunlop sidecar, 30/ Macintosh chain tread, 25/-; Goodyear Diamond, 45/ Firestone, 44/-; Goodrich, 44/-; Portage, 43/-.

**650**×65.—Goodrich (guaranteed) safety trea 38/6; Palmer cord, 44/-; Rom Square Trea E.H., 37/6; Hutchinson H., 32/-; E.H., 37/6.

**700**×80.—Bates, 45/-; Collier E.H., 72/6; Fir stone, 43/-; Dunlop E.H., ribbed, 57/6; Avo super heavy, 44/-; Englebert passenger, 32/-; Woo Milne E.H., 37/6.

TUBES.—Small size, 5/6; 28×3, 6/3; 650×65, an 700×80, 7/3

CENTRAL Garage always open; any covers sent o 7 days' approval against cash, plus 1/6 carriag —302, Loudon Rd., Thornton Heath. [339

GOOD Second-hand Covers, all sizes, 12/6 each New Beldam covers, 26×2⅜ for 2¼, 26×3 fo 2½, 25/- each; 28×3, 35/- each; 650×65, 40/- each 700×80, 45/- each; new Avon steel studded cover W.D., 700×65, 35/- each; steel tow ropes, complet 10/- each.—Homerton Rubber Works, Brooksby Walk, Homerton, E.9. [033

## TYRES.

TS.—Do you realise that you are offered motor cycle tyres at less than cost? Is it worth riding ubtful tyre? You will want these when it is too Dunlop heavy, 26×2⅜, 26/6; 26×2½ for 65 or old-size rims, 28/6; ditto Clincher, extra 25/-; inner tubes, 2¼in. 4/-, 2⅜in. 4/6, 2½in., end, 5/6; carriage paid.—Deacon, 58, Blagdon New Malden. [3482

AND Offer of tyres, sent on 7 days' approval against cash, plus 1/6 postage. 26×2¼ Avon, Firestone, 30/-; Goodyear, 26/6; Clincher, Wood-Milne Combination, 21/6; 26×2⅜ her E.H., 27-; Dunlop heavy, 30/-; E.H., 37/6; 27/6; 26×2½×2¼ Clincher E.H., 28/-; Avon 28/-; Palmer cord, 32/6; 28×3 Avon ribbed 40/-; Dunlop, 28/-; Macintosh, 24/-; 650×65 rich 38/6; Palmer cord, 44/-; Rom square tread, ; 700×80 Avon E.H., 44/-; Wood-Milne E.H., ; Englebert, 32/-. Tubes, small sizes, 6/-; rs, 7/3.

L these covers are guaranteed by us.—Alwin Tyre Co., 37, Red Lion St., High Holborn. [3392

## TANKS.

ANKS re-enamelled from 15/6.—Bright and Hayles, 78, Church St., Camberwell, London. [3106

ANKS, Radiators, Repaired or Replaced.—Hughes, 373, New John St. West, Birmingham. [8996

ANKS for B.S.A., new, 38/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [9779

ANKS for Triumph, new, 38/6; 1910, 1921.—Coventry Tankers, Ltd., Hearsall Works, Coventry. [9780

ANKS for Humber, 1921 pattern, to fit 1912; 38/6.—Coventry Tankers, Ltd., Hearsall Works, entry. [9778

SPECIALISE in Repairs, Rebuilds, etc., to any pattern; first-class enamelling; reasonable charges , 27, St. Luke's Rd., Birmingham. [8188

and M.—R.A.F. tanks, brand new, 1922 colours, 55/-.—Kenneth Kemp, 4, Berkeley Mews, Conght Sq., Marble Arch, W. Padd. 1177. [2873

ANKS of every description replaced, repaired, and re-enamelled. Quick service, moderate charges.—bert Robinson, Ltd., Green St., Cambridge [1627

OVENTRY Tankers, Ltd., makers to the principal manufacturers, petrol tanks for any style supd extra capacity.—Hearsall Works, Coventry. [9781

ANKS Made or Repaired, re-enamelled, lined, transferred; handle-bars, etc., plated. Established 30 rs.—Attwood's, 86, Rnsebery Av., London, E.C.1 [7073

ANKS Renovated, makers' colours, 15/6; trade supplied.—Robini Manfc. Co., 1 and 3, Tulse l, Effra Rd., Brixton, S.W.2. 'Phone: Brixton 5. [3354

ANKS re-enamelled to pattern; high-class work only.—D. Jenkins and Sons, 6, Richard St., Atson St., Deansgate, Manchester. Established 25 rs. [2245

ANKS of any make repaired or re-enamelled in 6 days, partition leakage, rebuilds, fastenings, dents, every repair undertaken, makers' colours, designs, transfers guaranteed; private or trade.—Park Tank rks, 1A, Paradise Rd., Highbury, N.5. [3146

ANKS of every description replaced, repaired, and re-enamelled at our own works; all kinds of nga stocked; quick service and reasonable charges strated list free.—A. Green, Water St., Chapel St ford, Manchester Tel.: 2191 Central. [0256

VERY'S Stock Tanks for Douglas, Hazlewood, B.S.A., Triumph, Omega, enamelled makers' urs, plated fittings, 40/-, complete; other design or pe to order. 12 months' guarantee with every tank.—don Street Tank Works, Coventry 'Phone 1774 '0770

ANKS.—All kinds made to order, 32/6 each, including 2 plated fillers, 2 taps. Delivery 14 s, carriage paid. Satisfaction guaranteed or money rned. Enamelling, one colour, 10/6; two colours, 6.—Order forms from H. Peel, The Liverpool Tank spital, 5, Smithdown Lane, Paddington, Liverpool [6521

## BELTS.

ELTS.—Clipper, new, 8ft.×¾, 11/6 8ft. 6in.×¾, 12/3; 8ft. 6in.×⅞, 14/-.

OHN BULL or Bates Standard (new), in any length —¾in., 1/11; ⅞in., 2/3; 1in., 2/8; 1⅛in., 3/2, foot.—H. Emanuel and Co., 37a, Balls Pond Rd., [0854

ASTONES.—Brand new clearance Clincher belts, ¾in., 6ft. 6in. lengths, 7/- each, plus 1/- postage ee below.

ASTONES for New Belts.—Dunlop, round top, ⅝in., 1/10; ⅞in., 2/2; 1in., 2/8; 1⅛in., 3/2 per t. John Bull, ¾in., 1/11; ⅞in., 2/3; 1in., 2/8; in., 3/2 per foot. Pedley, ¾in., 1/9; ⅞in., 2/-; , 2/6; 1⅛in., 3/- per foot. Buffalo hide and ome, ⅞in., 1/9; 1in., 2/-; 1⅛in., 2/3 per foot; s 1/- postage.—228, Pentonville Rd, King's Cross, ndon, N.1. [8450

AVIES, Union St., Wednesbury.—Belts, 6ft. 6in.× 1in., 10/3; 7ft. 6in.×⅞in., 11/9; Dunlop clear-e; carriage paid; approval; other sizes in stock [6272

# Messrs. W. E. LINE,

**89, GT. PORTLAND ST., LONDON, W.1.**

Beg to announce that they have purchased from Messrs. Coppen, Allan & Co. a number of

**SHOP-SOILED genuine**

# READING STANDARD

## 8-10 h.p. MOTOR-CYCLES

and are offering these direct to the public at the remarkably low figure of

# 100 Gns.

**ANY TRIAL RUN GIVEN WITH PLEASURE.**

The machines are of the 1921-22 type, complete with **Dynamo Lighting, Electric Horn, ETC., ETC.**

# SPARE PARTS.

**Do not forget that the READING STANDARD SPARE PART SERVICE is SECOND TO NONE.**

Many Sidecars in stock suitable for the above from **£25.**

*Cheques should be made payable to W. E. LINE.*

## 89, Gt. Portland St., LONDON, W.1.

LANGHAM 1601.

## BELTS.

HERBERT ROBINSON, Ltd., Green St., Cambridge.—All brand new and guaranteed Dunlop, round top: ¾in., 1/10 ft.; ⅞in., 2/2 ft.; 1in., 2/8 ft.; 1⅛in., 3/2 ft.; John Bull, ¾in., 1/11 ft.; ⅞in., 2/3 ft.; 1in., 2/8 ft.; 1⅛in., 3/2 ft.; any length cut. Clearance belts, 6ft. 6in.×¾in., 10/-. [1628

CENTRAL Garage offer.—Brand new Dunlop belting in standard sizes sent on approval against cash plus 1/- postage. ¾in., 1/7 foot; ⅞in., 1/10 foot 1in., 2/2 foot; 1⅛in., 3/2 foot; Dunlop fasteners, all sizes, 1/3; punches, 2/9, all sizes. We have a few 6ft. 6in.×⅞in. Pedley at 10/-.—Central Garage, 302, London Rd., Thornton Heath. [3394

BALATA and Chrome V Belts.—A customer writes: "The other belt which I had from you has given excellent service, and I think you may safely say you have the ideal belt for variable gears, as this belt gives at least twice the service of a rubber belt." ¾in., 1/4; ⅞in., 1/6; 1in., 1/9; 1⅛in., 2/- per foot; fasteners, 9d. each, postage 1/-.—Sole Manufacturers: W. Pollin and Son, Hollington, St. Leonard's-on-Sea. [8710

## PATENT AGENTS.

J. E. S. LOCKWOOD, 3, New Street, Birmingham. 'Phone: 5816 C. Patents guide free. [7976

PATENTS Advice, handbook free.—King, Registered Patent Agent, 146a, Queen Victoria St., E.C. 35 years' references. [0129

## PATENTS.

VAN CEERT and Co., 540, Chaussée de Waterloo, Brussels, Belgium.—Get your foreign patents directly through a Continental firm. Our prices are at least 50% lower. [2652

ADVERTISER having patented simple device which instantly locates air leaks in induction systems, invites manufacturers' inquiries.—5, Lansdowne Sqnare, Weymouth. [2732

WE Buy, Sell, and Finance Inventions and Patents, and advise on their marketing.—Send postcard for full particulars to Dept. C., Inventors' Sales Agency, 22-24, Spencer Av., Coventry. [1432

## CLUB ANNOUNCEMENTS.

*Space can always be obtained under this heading for announcements required by Clubs. Rate 3d. per word, minimum 3/-.*

## AGENCIES.

REQUIRED, energetic men with some capital, to take up the sole agency for our motor cycles in the West End of London and other large towns.—Mohawk Cycle Co., Ltd., 281, Alexandra Rd., Hornsey, N.8. [8841

THE Mohawk Cycle Co., Ltd., require sole agents for their celebrated motor cycles in districts where they are not already represented.—Write for lists and terms to Mohawk Cycle Co., Ltd., 275, Alexandra Rd., Hornsey, N.8. [1923

## INSURANCE.

£3 Covers All Risks for 2¾h.p., others at competitive rates.—Ernest Bass, 40, Chancery Lane W.C.2. 'Phone: Museum 2234. [0005

ROYS, LTD., Insurance Brokers.—Agents for all companies and Lloyd's.—Competitive rates for motor insurance.—170, Gt. Portland St., London [0055

ECONOMY With Security.—Comprehensive policies from £3; Morgans, £6; prompt settlements.—A. R. Broadhurst, 65A, Holborn Viaduct, E.C.1. [1599

"THE Motor Cycle" Insurance Policy is the policy authorised by "The Motor Cycle," and covers motor cycles or cycles and sidecars used for private purposes. Complete comprehensive cover. Maximum benefits, minimum rates. Full particulars and prospectuses on application.—The Autocar Fire and Accident Insurance Co., Ltd., 77, Cheapside, London, E.C.2. [0007

## TUITION.

HOUSE and Estate Agency, Auctioneering, etc.—Train by post for this paying profession. Start a business of your own. Prospectus free.—Agricultural Correspondence College (Dept. T), Ripon. [0383

TUITION Free to purchasers of new or second-hand machines; deferred payments; large selection leading makes; open till 8, Thursday 1 p.m. —Motoria, 15, Regent's Parade, Tally-Ho, Finchley. [8794

## SITUATIONS VACANT.

LOCAL Representative wanted, with or without experience.—Tynesider Pillion Seat Works, Union St., North Shields. [1211

## SITUATIONS WANTED.

COMPETITION Rider, 8 years with Douglas, track experience, requires situation.—Mr. H. Thorpe, 4, Worcester Rd., Kingswood, Bristol. [2685

## FINANCIAL.—PARTNERSHIPS.

PARTNERSHIP Offered in sound motor dealing business, etc., capital required for extension, could live on premises.—Write, Box 1799, c/o *The Motor Cycle*. [3133

## FINANCIAL.—PARTNERSHIPS.

CAPABLE Mechanic seeks partnership, preferably established business, giving immediate returns for hard worker; £150 invested if necessary.—Box 1796, c/o *The Motor Cycle.* [3023

AN Unusual Opportunity occurs for a gentleman to finance a sole concession for a high-class lightweight 2¾h.p. 2-stroke motor cycle, selling at an exceptional attractive figure, with a substantial interest in the production company; capital required £2,000.—Apply, Box J2389, A. J. Wilson and Co., Ltd., 154, Clerkenwell Rd., E.C.1. [1109

## BUSINESSES AND PROPERTY FOR SALE, TO BE LET, OR WANTED.

FREEHOLD Motor Garage for sale; £750; vacant; executors selling.—Milton Bridger, Crawley. [2698

FINEST Business Position, London, main road, W., motors and cycles, now ample room for adding cars, area 156ft.×20ft., over 3,000 ft., front shop (6ft. 6in. sideway, built over and glass-roofed 40ft. deep), 2-floor brick-built factory with covered workshop, all concreted, of an area of 1,000ft.; lease over 44 years at ground rent of £7/10; price for premises £1,500; stock, fittings, etc., at valuation.—Write particulars, 54, Whitehall Park Rd., Chiswick. [2483

## HOTELS AND APARTMENTS.

DOUGLAS.—Stafford House, Queen's Promenade, private hotel, near garage.—Write tariff, Tattersall. [1414

DOUGLAS.—The Crawford, private hotel, central promenade, 80 bedrooms.—L. Wordsworth, Proprietress. [3413

DOUGLAS: Ravenscliffe Central Promenade; personal supervision; terms 10/6 per day.—Resident Manageress. [5987

## GARAGES.

BLACKPOOL.—Garage at Claremont Garage, General St., North Shore. Proprietor's personal supervision. [7530

## STOLEN.

£20 Reward.—Stolen from Tavistock Drive, Nottingham, on night of 26-27th May, 4h.p. Norton solo bicycle, Tan-Sad pillion seat, leather knee-grips, two battery boxes, one on each side of rear stays, electric tail lamp, Miller acetylene head lamp, less generator, broken glass in celluloid licence holder, on left, handle-bar slightly cracked near clutch control, large brass compression tap, small dab of green paint and small dent behind the front number-plate. The above reward will be paid to any person or persons giving such information as will lead to the conviction of the thief or thieves.—Apply Powell and Son, Burton Buildings, Parliament St., Nottingham. [2770

## GENERAL TRADE.

CYCLE and M.C. Frames made to the trade.—Luke and Co., 80, Ashted Row, Birmingham. [4266

AUCTION Sales.—Palmer's Garage, Tooting, the oldest solely motor auction rooms in London. Terms 7½%, not chargeable if machine unsold. Motor cycles and cars bought and sold for cash. Nearest goods stations: Falcon Lane, L. and N.W.R.; Wimbledon, L. and S.W.R. and G.W.R.—Sole address: Palmer's Garage, Tooting, London. [3039

## WANTED.

WANTED, A.B.C. Sidecar.—Watkins, 32, Manor St., Cathays, Cardiff. [2559

LIGHT Sidecar, any condition if cheap.—H. Ruth, Castle St., Eye, Suffolk. [2618

QUAD Wanted, any make; state particulars.—Adams, 43, St. Anne St., Liverpool. [2615

MOTOR Scooter; state price, make, and condition.—Box 1749, c/o *The Motor Cycle.* [2715

WANTED, cylinder and piston, 1916 4½h.p. B.S.A.—Box 1734, c/o *The Motor Cycle.* [2616

WANTED, P. and M. chassis with wheel, R.A.F. model.—Garlick, Chemist, Chesham. [3217

SPORTING Norton Sidecar, or similar, for Norton.—Belt, 26, Brent, Dartford, Kent. [2575

WANTED, front cylinder 5-6h.p. twin Rex, a.i.v. —A. R. E., 10-12, High St., Wem, Salop. [2758

SPEEDOMETERS.—Stewart and Watford; state lowest cash price.—97, Latchmere Rd., Battersea. [2642

MILLFORD Sidecar, 7 to 8, cheap for cash, condition of enamel immaterial.—H. G., 56, London Rd., E.5. [2765

WANTED, 6h.p. J.A.P. back cylinder, piston, Enfield forks.—Bridge House Garage, Crayford, Kent. [2561

DOUGLAS clutch and kick-starter for 2¾h.p. gear box.—P. Wareham, Bradford Rd., Trowbridge, Wilts. [2750

WANTED, motor cycle syren, ball bearings, approval.—Canham, Langley Vicarage, Newport, Essex. [2740

WANTED, A.V. Steering Wheel, complete with fittings; cheap.—Allerton, 39, Sunnyside, Diss, Norfolk. [2821


GET the best out of your engine by fitting—

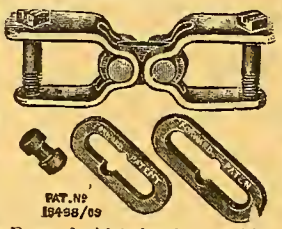
FORWARD

—the British made plugs that ensure perfect ignition.

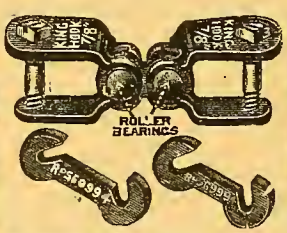
Type "M" illustrated is a detachable mica plug which is giving the greatest satisfaction on thousands of motor cycles. Ideal for two strokes, as it will not overheat or oil up quickly; carefully made with finest quality ruby mica and extra heavy pure nickel firing points. Every plug tested and guaranteed gas-tight—easily taken apart for cleaning—two parts only and no loose packing. Send for list showing the full range.

TYPE M 5/-

FORWARD FASTENERS never fail.




Forward with unbreakable steel locks .. 1/9
Forward Leather Links .. .. .. 1/6




KING HOOK—the strongest hook fastener in the world.

Detachable .. .. .. .. 1/3
Adjustable .. .. .. .. 1/6
King Hook Leather Links 1/-

FORWARD PLUG CO., 35, SUMMER ROW, BIRMINGHAM.



DISAPPOINTED

The T.T. Rider using the Juckes Patent

4 SPEED GEARS

is unable to obtain Government leave at the last moment owing to pressing duties, but for full particulars of these famous productions send to the

Efficient Motor & Engineering Co., Bilston Road, WOLVERHAMPTON.


## WANTED.

WANTED immediately, Morgan, water-cooled; be sound and reasonable.—1, Othell Liverpool.

WANTED, Triumph, B.S.A., Douglas spares, 21, engines, etc.—23, Jupiter Terrace, Hall, S.E.9.

N.S.U. Gears, Triumph, etc., any condition, also Philipsons, Grados.—Box 1803, c/o *Motor Cycle.*

WANTED, a Hopley folding sidecar, light, body, cheap for cash.—76, Stormont Rd., La S.W.11.

LIGHTWEIGHT Sidecar, cheap, to fit Beare Precision spring frame.—Cuunder, 10, ton Place, Brighton.

WANTED, cylinder and piston for 6h.p. long base-plate type, cheap.—Great E Cycle Co., Lowestoft.

SECOND-HAND 5-6h.p. Twin Engine, known perfect condition; lowest price.—Bull, 6, Sh Grove, Lenton, Nottingham. (D)

STURMEY-ARCHER 2- or 3-speed gear box engine 3½h.p. to 8h.p., single or twin, and spring forks; cheap for cash.—19, Wilcox Rd., Lambeth, London, S.W.8. 'Phone: 1958 Brixt

WANTED, Coachbuilt Sidecar, suitable for 5 motor; exchange Derwent sporting sidecar massive marble timepiece, in perfect order.—Br Clothiers, Catherine St., Grimsby.

WANTED, to purchase outright, for cash, rupt stocks, W.D. spares, miscellaneous s motor cycles, any make; send full particul McNeille and Platt, 57, Great George St., Live Phone: 1092 Royal

HALIFAX.—1922 B.S.A., Douglas, Edmund, field, Levis, Martinsyde, New Imperial, N Quadrant, Raleigh, Rex, Royal Ruby, Scott, Sun Triumph, and Henderson Motor Cycles. Exch quoted.—Halifax Motor Exchange, Horton St., Ha

ENGINES, gears, frames, wheels, sidecar ch etc., incomplete or out of order not objecte in exchange for new or second-hand motor cycle sories, lamps, horns, tyres, tubes, speedometers, cash adjustment either way.—Snodgrass, Lightw Bagshot.

## EXCHANGE.

MOTOR Van for Car or Runabout; sell £95. Brighton Rd., Surbiton.

LATE A.V. Light Car for motor cycle and side 67, Fernlea Rd., Balham.

DE DION Chassis, twin, for combination or s 51, Brighton Rd., Surbiton.

1916 Sun-Vitesse and cash for single-geared liers.—43, Bushey Grove Rd., Watford.

EXCHANGE Nearly New Binks 3-jet for Kod Withers, 60, Orchard St., Weston-super-Mar

EXCHANGE your present machine for a new or motor cycle at Kays, 8, Bond St., Ealin

INDIAN, 5-6h.p. (see Sales column), sports m for lightweight.—Yea, Turk's Head, Taunto

EXCHANGE Motosacoche, racing, B. and B., Dr Brooks, licensed; offers.—Bostock, Byron Ilkeston.

EXCHANGE Wilkinson T.M.C. Combination Sale column) for 2-seater light car, cash justment.

5-6h.p. F.N. 4-cylinder, 2 speeds, clutch; exch lightweight, cash either way.—181, Newton Burton-on-Trent.

DOUGLAS 1918 4h.p. Combination for mo light car and cash, or sell cash.—Cave, corator, Windsor.

8h.p. 2-seater 3-wheeled Runabout, for good sol combination, or sell.—Medley, 24, Coptfold Brentwood, Essex.

1919 Harley Combination, bulbous sidecar; change lower power, late model.—49, Dag Av., Wembley Hill.

8-10h.p. Reading-Standard Combination, all on condition, for smaller mount and cash.—23, ratt Av., Wood Green.

EXCHANGE Ford Landaulet, detachable wh splendid condition, for combination, or sell.—E 260, High Rd., Balham.

EXCHANGE First-class Combination with cash good modern light car.—Newnham, 223, Ham mith Rd., London, W.6.

1919 5-6h.p. Rover Combination, well equip any trial; exchange for higher power.—Min Milton, Weston-Super-Mare.

8h.p. Zenith Sports Combination, in fine condit level, for 4h.p. countershaft solo.—Falmouth V Kentish Rd., Belvedere, Kent.

JARDINE Gear Box, £4/10; Clyno frame cer tank, £2/10; exchange Clyno sidecar.—Vassie, Dundas St., Tradeston, Glasgow.

CHATER-PRECISION Combination, 3-speed, new, for Douglas, lightweight, and cash, or £65.—106, Fircroft Rd., Tooting.

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## The Sport and the Masses.

IF, as was claimed in these pages recently, the motor cycle Tourist Trophy race is the premier sporting event of the year, why is the general public so apathetic?

The Derby and the Grand National are common topics of conversation throughout the country for days before they are held, yet fully 90% of those who gravely discuss these fixtures have no particular interest in horse-racing, nor is betting the real attraction in the majority of cases.

The Boat race fascinates thousands who cannot row, and thousands more who have never seen Oxford or Cambridge. The chief billiards, boxing, and golf championships are breathlessly followed by like numbers who are ignorant of the most elementary rules of these sports. Yet the man-in-the-street does not know what the letters "T.T." stand for, and thinks most likely that "A.C.U." is some kind of trade union. It is a great pity.

*The Motor Cycle* film has done, and will do, a great deal to break down this barrier of ignorance, but until everybody of licenceable age is a motor cyclist it rests with the daily Press to stimulate the interest of the non-motoring masses and help the T.T. races to attain the importance in the sporting world which they have long ago reached in their own sphere.

## The Conservative Car Owner.

THERE is more than would at first sight appear in the article in last week's issue by a car-owner dealing in an unsophisticated manner with his impressions of a two-wheeled vehicle. His unconcealed surprise that anything not soundly bedded on four wheels can provide even the slightest road pleasure is amusing.

The author, a distinguished contributor to *The Autocar*, confesses to a profound ignorance of motor cycle matters, and, in a way, he typifies a class which has no great incentive to be other than ignorant of the controllability and reliability of the modern motor cycle.

In his case the conversion was effected by an unconventional lightweight of low power, designed to attract the timid, but we venture to suggest that he would have experienced even greater surprise and pleasure had he gone a step farther and tried, say, any first-class semi-sporting solo mount of to-day. In performance, controllability, and reliability he would have found little to choose between the motor cycle and a car costing ten times as much. The pity is that the average car-owner simply refuses to believe this.

## Heat Wave Comfort.

IF, as we are told, the summer of 1922 is going to be a repetition of last year's, the motor cyclist will more than ever have cause to be pleased with his choice of a recreation.

Not many pastimes share with motor cycling its attractiveness on a broiling hot day, not only as a means of reaching the shadiest country nooks or the ever-refreshing sea, but in itself as a way of keeping cool. When the temperature is high there is nothing to compare with a swift rush through the air on a motor cycle.

True, with the heat comes the dust, but off the beaten track the nuisance is seldom very noticeable, and a good pair of goggles provides a ready and efficient antidote. Incidentally we fear that the average motor cyclist is inclined to minimise the importance of this latter item of his equipment—very false economy indeed.

On the whole the motor cyclist will be the last to grumble at the continuance of a heat wave or drought of the severity likely to be experienced in these islands.

An index to the advertisements in this issue will be found on the page facing the back cover.

# OCCASIONAL COMMENTS

BY IXION

## Bad Debts.

WE all notice that motor cycles have fallen in price since 1919. One economy adopted by most firms is the No Credit stunt. I have just learnt it to my cost. The other day my stand wilted like a wax candle in August, and simultaneously I required a peculiar washer, unobtainable except at the factory. Having been a customer since 1906, and knowing many of the factory staff intimately—not to speak of my eminent position in motor journalism (ahem !)—I presumed on all these things to order a new washer without enclosing the dibs (didn't know the cost) and to ask for a new stand to be forwarded instanter, instead of waiting till they had microscoped the wilted article and satisfied themselves that it was super-heat-treated by a tight mechanic, or something of that kind. Not a bit of it. For seven long days I watched the post, and finally there arrived the coldest of formal notes promising to dispatch a new washer on receipt of 3d., and guardedly indicating that a new stand might or might not be forthcoming after their laboratory experts had done their what-d'ye-call-it on the old stand. I feel so small. I have meekly forwarded 3d. For the nonce my machine rests with one footrest on an inverted flower-pot in the garage. And I had thought I was a small somebody. So you can guess what you'll get, dear ordinary reader.

## The Rudge's Mad Moment.

OF late our columns have contained assorted communications anent the curious manner in which certain Rudge engines behave, travelling at one moment like perfect little ladies and at another like infuriated buffaloes. Various amateur physicians diagnosed the symptoms as being due to mountain air, temporary relief of high-compression ratios by fragments of carbon, and the like. At last a prophet has arisen in Israel. I haven't a Rudge at hand at the moment, so I cannot verify his theory, but it strikes me as far more plausible than its rivals. From time to time, so runs his rede, Rudge's have modified their inlet valve springs and domes in sundry petty respects. If you happen to put a new spring of a certain type on a dome of a certain type, the spring may find some difficulty in bedding down dead true around the valve. In that case its normal working attitude may be a thought cock-eyed. The valve stem will bind in its guide a little; possibly the valve may not even seat perfectly. Super-rudging will be impossible under such conditions. Anon, perhaps when the tail of the spring chances to work round the dome, the spring may temporarily become axially concentric with the valve. Extra h.p. will then be available, disappearing again if the spring once more emulates the leaning tower of Pisa. Sufferers please verify and report.

## "Private" or "Pirate" Owner.

SOME of the trade representatives in the Isle of Man brought away unpleasant impressions of the baser type of "private" owner. Individual entrants are not required to sign contracts in return for goods supplied, but are treated as gentlemen, *i.e.*, the traders take it for granted that such applicants *bona fide* require the supplies in connection with the race. What are they to think of so-called amateur riders who calmly tap all the rival firms for motor cycle equipment free of charge, plus a contingent bonus for finishing, for mileage, and even for starting, and who are then seen to be shipping back to England after the race sufficient stuff to start a small garage—a dozen outer covers of assorted makes, two or three crates full of tins of lubricating oil, a bucketful of sparking plugs, a furlong of chain, three or four carburetters, etc., etc. ? Thorny as the amateur question certainly is, I believe the time has come for the A.C.U. to display some energy in the matter. The trade requires protection from such barefaced piracy. Even more emphatically, the best type of amateur will be driven out of the racing game if it becomes a pastime for persons who ask for presents to be made them and then sell those presents. The whole business comes perilously near obtaining money on false pretences. If the trade does not care to prosecute, the A.C.U. might surely suspend or disqualify for this offence?

## A Remarkable *Début.*

MOTORING history surely affords no parallel to the audacious behaviour of the Sheffield-Henderson machines. Their first season ostensibly caught them between the devil and the deep sea. Machines with a special *cachet* for speed could certainly not abstain from the T.T. On the other hand, how could a newcomer hope to accomplish anything? Moreover, as the machine is built in three sizes, the obvious alternative was to enter in all three events or in none. The bold course was taken. The aspiring infant was started in the Lightweight and the Junior and the Senior. What is far more to the point, it ran well forward in all three races at the very first time of asking. I believe the explanation is that the designer is an exceptionally skilled metallurgist. Rumour whispers that by 1923 he may develop an engine of his own. When, and if he does, we shall look forward to something remarkably special.

**Occasional Comments.—**

## Another "Series Wiring" Puzzle.

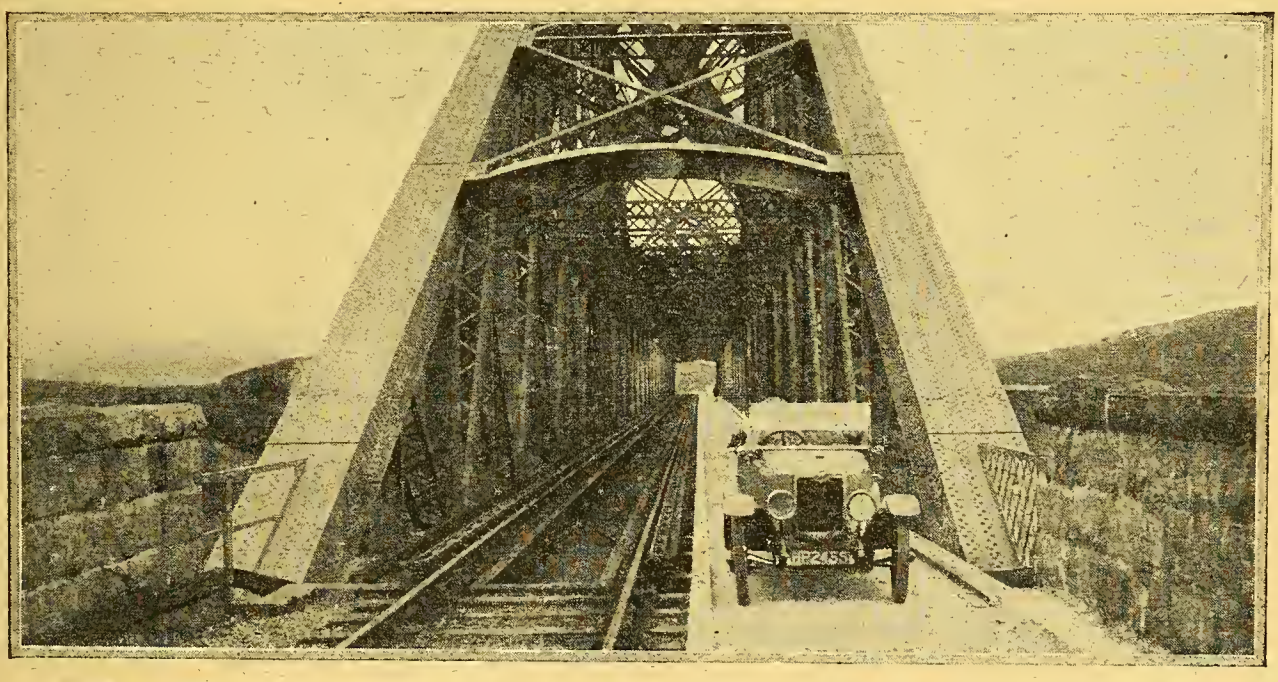
I HAD taken a solemn oath to print no more electrical puzzles, for the last one embroiled me with a horde of hot-headed experts till I felt like the pancake when the Westminster boys have done with it. But now comes a solemn appeal from a person of exalted station in the trade. He has a sidecar, with its tail and side lamps wired in series. The two bulbs are alleged to be identical, but they aren't. At least he thinks not. For they will not both burn brightly simultaneously. If he swops them round, the one which aforetime was brilliant now becomes pallid, and *vice versa*. Moreover, one or both of them burn out with annoying frequency. And when he purchases an alleged duplicate, the old story goes on. Solutions may be sent to our Correspondence columns. When these electrical high-brows really get on the bummel across me, I feel as Little Tich would feel if he had to referee a championship fight between Dempsey and Jack Johnson. I refuse to act as intermediary in any more set—what *is* the plural of "set to"—of this character.

## Close Ratio Gear boxes.

THE gear box people will say we are insatiable, but a reader puts forward a suggestion which is at least worth considering. He rides a modern sports machine equipped with a close-ratio gear box. He doesn't state his actual ratios, but I rather fancy that his bottom gear is 8 to 1. A ratio of 8 to 1 is quite low enough for any modern solo bus of 350 c.c. or over on main roads; it would laugh at Sutton, and Porlock ought not to alarm it. But he occasionally desires to accompany a freak trial, and dislikes making an ass of himself in public. The competitors in such trials often use bottom ratios of 16 to 1. On the other hand, his existing bottom gear (of say 8 to 1) is practically useless in ordinary fast road work. He starts with a push on second gear. Second gear will climb anything where the surface allows him to let his engine rev. So he asks for a "sports" gear box, with "close" top and second ratios for road burning, and a "climb anything" bottom gear. We cannot expect gear box makers to upset their organisation for the sake of a very limited market. A four-speed gear box seems the simplest solution of his trouble, and a four-speed box weighs very little more than a three. But I agree with him that a genuine "close ratio" box is not very suitable for all-round work.

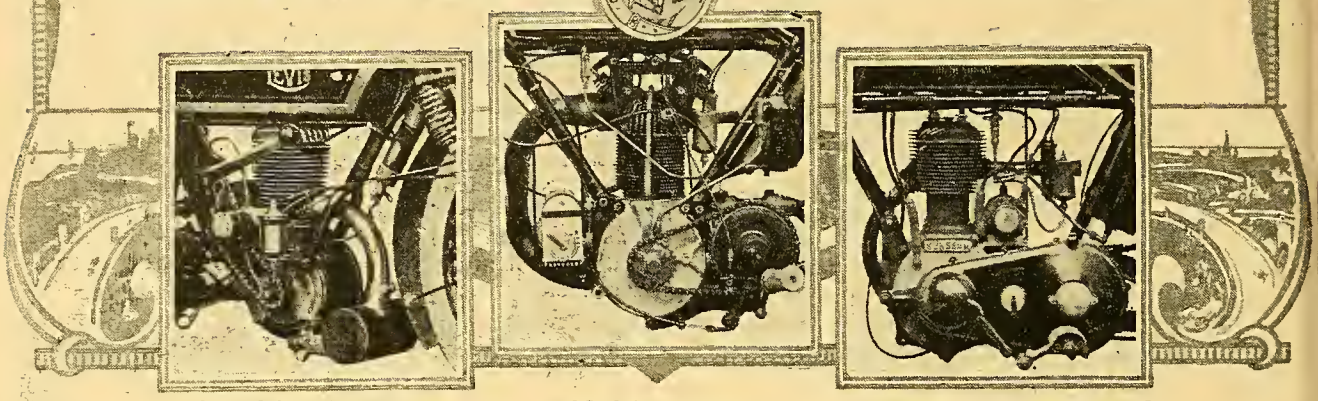
## Sideslip and Big Tyres.

I HAVE written so often and so deliriously in praise of big tyres—say 3in. on a 500 c.c. machine—that honesty compels me to ventilate the one doubt troubling my mind about them. I should love to hear a discussion between half a dozen cute men with varied experience as to whether the 3in. tyre skids more than the 2⅜in. Naturally it would do so if blown "puddingy," because it would roll. So when dangerous grease is about, one blows the big tyre harder than usual. Blown hard, it is very resilient, it sets the machine jumping, and a jumping machine side-slips. There are so many other factors concerned with a skid—centre of gravity, design of tyre tread, steering rake, local geology, nerve of rider concerned, and the like—that I haven't the pluck to dogmatise. But my present impression is that the small tyre is steadier on bad grease, if only fractionally so.



ANOTHER SCOTTISH SIX DAYS' TRIAL. Last week the R.S.A.C. held a six days' reliability trial in Scotland for light cars. Although none of the 'best" Highland hills—Applecross, for example—are any longer snow-bound, the club chose an easier route than usually figures in the motor-cycle event. Nevertheless some interesting data were obtained, particulars of which, and a full report of the event, are contained in this week's issue of "The Autocar." A competing Riley crossing the bridge at Connel Ferry.

# TECHNICAL ASPECTS



Levis 248 c.c. (two-stroke). A.J.S. 348 c.c. (o.h.v.). Sunbeam 492 c.c. (side-valve).

## Contemporary Motor Cycle Design Reviewed and Criticised in the Light of the T.T. Races, the Most Searching Test of the Year.

EVERY year T.T. machines show definite evidence of advancement. The last two years, in particular, have shown an enormous improvement, not only in engine performance, but also in general motor cycle construction.

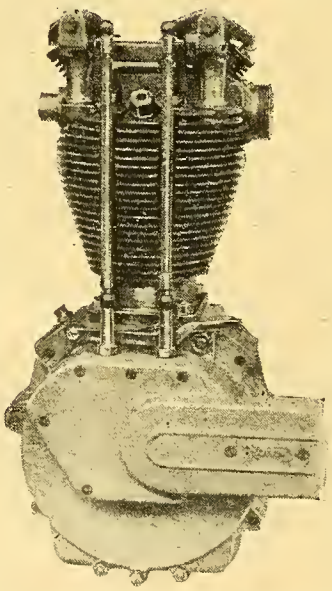
It is, however, not only to the winning machines that we have to look for the future of our touring mounts, but also to the general run of competing machines, for many manufacturers utilise the Isle of Man course as a testing ground for next year's special features.

### Cooling.

On the two-strokes the use of aluminium for cylinder head construction was very noticeable. Levis machines retained their shrunk-on head and barrel cover, the Velocettes employed very thick and deeply ribbed bolted-on aluminium head. A bolted-on head of similar material was used on the Ivys, while the Sun Vitesse went the whole hog by employing a complete aluminium cylinder with cast iron liner. The Levis win in the lightweight event was a triumph not only for the two-stroke but also for the composite cylinder, especially as a Velocette ran into third place. In the senior event also Scotts finished 3rd, 4th, and 9th.

As yet the four-strokes have not come into line in this respect, largely because of the difficulty of fitting valve seats of a suitable material and still finding room for valves of sufficient diameter.

The extent to which aluminium was employed in piston manufacture was only obvious to those who had the opportunity of seeing the engines stripped for examination, but it may be stated that by far the greater number of engines were so fitted. To quote but a few examples, alloy pistons were used in such well-known machines as Sunbeam, Triumph, Norton, Indian, Rudge, Velocette, New Hudson and J.A.P. and Blackburne engines, the Rudge piston being peculiar in that the bearing surfaces were divided into diagonal lozenges. In some cases these pistons were of slipper construction with the walls cut away right up to the piston rings except on the thrust surfaces, in others full skirted pistons were employed, notably in the case of the J.A.P. ridden by Le Vack, but in almost every case the importance of aluminium pistons for internal cooling as well as—or even more than—for weight reduction, was more fully appreciated. This point is most important, for so long as ultra light, thin-walled alloy pistons are employed, so long shall we suffer from "slap," burning, and distortion troubles, while the introduction of slightly heavier types will lead to the general employment of aluminium pistons for touring purposes.



An o.h.v. Norton engine used experimentally in the Senior T.T.

### Alloy, Steel and Iron Pistons.

Brandish's Triumph piston finished in perfect condition. Bennett's Sunbeam, however, was dry from want of oil on two occasions. Sheard employed a light steel piston, and Davison's Levis was fitted with a very light cast iron piston, which finished well but had obviously been very hot in the head.

There was some improvement in the arrangement of cooling ribs, but it does not seem to have been fully realised that it is of little practical use to have ultra deep ribs if the pitch is too fine or that it is preferable that the ribs should be arranged so as to lie parallel to the cooling draught.

The new o.h.v. J.A.P. is a fine

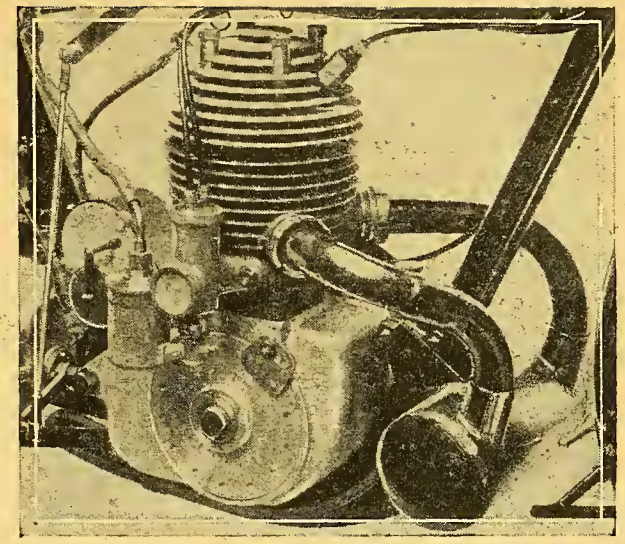
**Technical Aspects.—**

example of air-cooling as it should be. We were not surprised, therefore, to find that Le Vack had decided to use the same engine as he had ridden in the Junior race for the Senior event. In fact, he did little more than change the valves and springs.

### The Triumph Mechanical Lubrication.

Perhaps the most striking feature of all was the almost universal adoption of some form of mechanical oil feed. Triumph, Indian, New Imperial, Beardmore-Precision, Sunbeam, and Velocette have all developed satisfactory systems of their own; the first-mentioned firm employed a double pump of the oscillating plunger type in conjunction with a dry sump system, a scheme which has the advantage of assisting internal cooling since the temperature of the circulating oil is cooled to some degree in its passage to and from the tank. Undoubtedly the wonderful condition of Brandish's machine at the end of the race was largely due to the lubrication system, which ensured a constant film of clean oil on every working surface. In most other cases a mechanical pump only was used to feed the requisite amount of lubricant to the engine. Even this is a big step in the right direction, and it is to be hoped that manufacturers will remember that some such device is even more badly needed by the average tourist than by the T.T. rider, whose knowledge and experience enable him to oil his engine regularly. In the Isle of Man it was usual but by no means universal practice to find an auxiliary hand pump fitted for emergencies, but it should be possible to omit this precaution from touring machines of the near future. Showell or Best oil pumps appear to be the favourite proprietary articles, but the Lamplugh pump was used in at least one instance; amongst the machines fitting one or other of these pumps were, Coulson, Sunbeam, Diamond, Massey-Arran, Rudge, Sheffield-Henderson, H.B., O.E.C.-Blackburne, Cotton and New Gerrard.

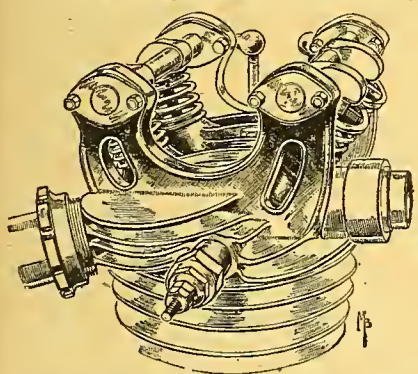
In addition to this list, another firm of high repute intended to employ an ingenious lubrication system of their own design, but had insufficient time to try it out previous to the races. Once the mechanical oil pump becomes an accepted part of standard machines we may look forward to a steady improvement not only in lubrication systems but in motor cycle performances.



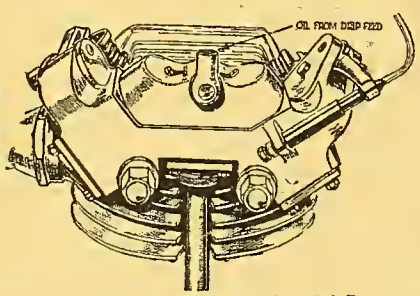
The 249 c.c. Velocette engine. In the Lightweight race the Velocette reached third place at 46·90 m.p.h.

### Valve Position.

While on such first-class racing engines as the Sunbeam, Indian and, in the main, Norton and J.A.P., the side-by-side valve position was retained, there was a big increase in the number of o.h.v. engines in all races. The Triumph organisation has definitely accepted the practice for fast work; Nortons show a tendency to follow suit. New Imperials have a decided leaning in that direction, and the makers of J.A.P. engines are flirting with the idea, as instanced by Le Vack's most interesting engine, which employed two short bevel-driven camshafts, one for each valve, thus eliminating push rods. With this exception all overhead valve gear was operated by push rods, and it is a sorry commentary on the system as applied to motor cycles to find that some riders carried as many as four spare rods. The A.J.S. had overhead valves for the third year, Douglas sporting models have been so equipped for some time past, side valves have never been used on the Duzmo, and a host of machines were fitted with o.h.v. Blackburne



Arrangement of the overhead valves on the T.T. Triumph. The design varies but slightly from the standard model.




Valve gear of the new o.h.v. J.A.P. engine which performed so well in the Junior race.

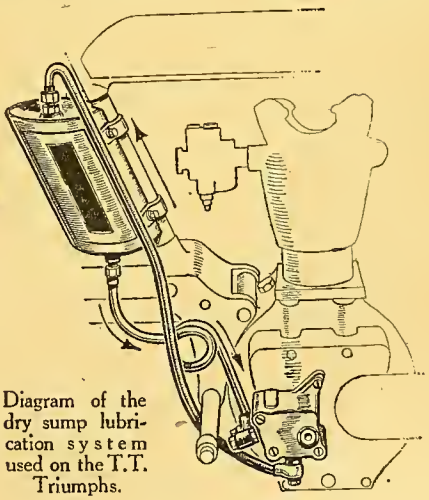


Diagram of the dry sump lubrication system used on the T.T. Triumphs.

**Technical Aspects.—**

engines. Even those retaining the side valve system are in many cases aware that, given equally good design and workmanship, the overhead valve engine scores for speed, acceleration, and economy, but not all of them are prepared to risk their reputations on standard touring overhead engines without further road experience. Triumphs retained their four-valve engine, but on the remaining makes two valves only are employed.

Valve trouble, though common enough in practice, was not unduly prevalent in the races, and o.h.v. engines sinned in this respect no more than other types.

One is not apt to associate valves with two-stroke engines, yet the Sun-Vitesse employed a simple form of rotary valve in the crank case by which means the mixture charge could be correctly timed while an additional and scavenging charge of air is drawn in through a piston-controlled port and forms a buffer between the burnt charge and the mixture proper. In this connection one is constrained to wonder whether the two-stroke of the future will not incorporate some such simple form of valve gear by means of which output per capacity may be increased and fuel consumption reduced. With the exceptions already mentioned, single-cylinder two-strokes appeared outwardly to have altered but little, though results prove that internal improvements resulting in an increase of speed have been effected.

### Transmission.

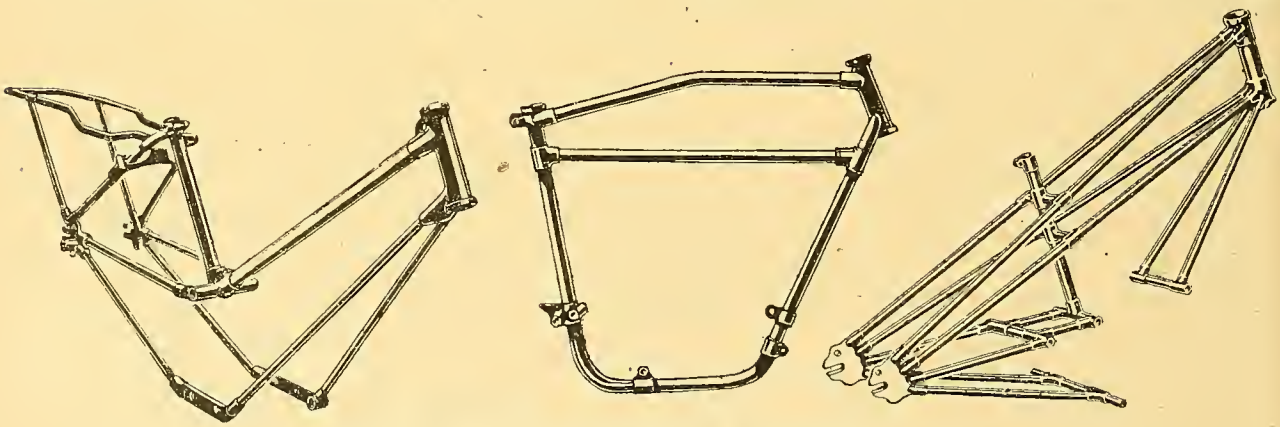
Undoubtedly a feature of the 1922 T.T. was the amount of care expended on the lubrication of the primary chain. An oil-bath chain case, as is exemplified by the Triumph and Sunbeam, appears to be easily the best solution of the question, but there are some who prefer instant accessibility to the risk of trouble in an enclosed part. Thus we find the majority employ exposed chains and either a breather pipe from the crank case directed on to the chain or a small auxiliary oil tank for the sole purpose of chain lubrication. Amongst those using auxiliary oilers were to be found O.K.-Junior, Levis, Scott, Sheffield-Henderson, and New Hudson, the ingenious saddle-operated oil pump of the Sheffield-Henderson being particularly noticeable.

Close ratio three-speed countershaft gear boxes were almost universal, though the Scott retained its selective clutch two-speed, which enables lightning changes to be effected. Racing gear boxes usually provide extreme ratio variations of slightly less than 2-1, and one might quote 4.25, 5.5, and 7.75 to 1 as being roughly typical of the normal range. Apart from firms manufacturing their own gear boxes the field is divided between a number of proprietary gears all of which are familiar to our readers, though the foot-controlled Moss gear which made its *début* in the 1921 Junior race should appeal to a large class of rider. Outwardly gear boxes have changed but little, and even internally the improvements hinge chiefly on better production methods.

### Brakes.

Of vital importance to both touring and T.T. riders, brakes showed a very considerable amount of improvement. It is essential that brakes should be not only powerful but also smooth and perfectly reliable. Belt rim brakes, or more properly "dummy belt rim" brakes, were still used on many machines. If properly designed these brakes are excellent, and besides being cheap to manufacture and replace they carry out their allotted functions admirably. The internal V type has become the most popular, as it does not interfere with wheel removal. One of the best examples of the correct application of internal V brakes was to be found on both wheels of the Sunbeams and the rear wheel of the Triumphs. Contracting band brakes were fitted to the Beardmore-Precisions and to the Triumph front wheel and Indian rear wheel, but the most noticeable feature as regards brakes lay in the enormous increase in numbers of internal expanding brakes. The Webb internal expanding front brake was a very popular fitting, and rear brakes by the same makers were to be found on some machines—undoubtedly it was time that up-to-date brake specialists should make their appearance in the motor cycle world.

Quite a large number of motor cycle manufacturers have designed their own expanding brakes either for the rear wheel only or less commonly, as in the case of the A.J.S., for both wheels. Amongst those who fitted at least one expanding brake are Norton, Indian, Velocette (2), A.J.S. (2), New Imperial (2), Coulson



DUPLEX AND LOOP FRAMES ON T.T. MACHINES.

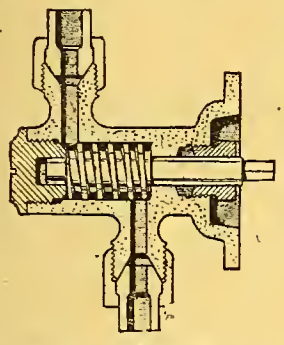
Scott. New Imperial. Cotton.

**Technical Aspects.—**

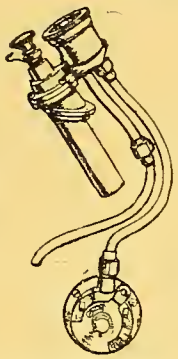
(2), New Hudson (2), Diamond, Sun-Vitesse, Levis, Francis-Barnett, Invicta, New Gerrard, Cotton, Scott, N.U.T.

Other types of brake which have proved to be most effective and do not interfere with wheel removal are the Rudge shoe type operating on large diameter flat drums, and the Douglas external V type. The importance of good front wheel brakes should not be under-estimated; there was a time when badly designed "horse-shoe" types brought front brakes into disrepute; but a check on the front wheel, provided it is not too violent, is most useful under any circumstances, and the makers who entirely dispensed with front wheel brakes in the T.T. were few and far between.

A new era as far as motor cycle racing is concerned was inaugurated by the A.J.S., who, for practice,



Section of the Showell pump showing the simplicity of construction.



The Best mechanical oil-pump with the new hand-pump and sight feed.

coupled both front and rear brakes to a single operating pedal. This system was discontinued only on account of a fault which is not inherent to the system but only to the application thereof, Dixon's Indian being fitted with three interconnected brakes.

**Frames and Fittings.**

An overwhelming majority of frames were of the curved top tube type, and though the straight top tube is mechanically the sounder job, there are certain advantages in the curved tube, while the disadvantages can be overcome by a matter of an ounce or two of extra weight. One is apt to consider that the curved frame tube is liable to weakness, but Mr. Henderson is no mean engineer or metallurgist, and is not likely to encourage faulty frames; yet the Sheffield-Henderson exhibited some fantastic curves in the lower tank rail. New Imperial and Indian machines represented the loop frame, a construction which has many good points, since it provides rigidity and relieves the engine from stresses which it is seldom designed to absorb. All-steel construction is making steady progress, and Rudge and Beardmore-Precision should be mentioned in this respect, though O.K.-Junior, Raleigh, Douglas and others have many steel lugs in their construction.

With the exceptions already mentioned, and with the addition of the Cotton which appeared to hold the road admirably, there were no frames of unorthodox design. The Scott, of course, is unusual in this respect, but its admirably scientific construction has been with us so long that one is apt to overlook its merits except in the Isle of Man, where the excellent weight distribution renders the machine ideal for the course, and consequently for touring purposes.

Even some of the best-known concerns have something to learn as regards the effects of frame design on steering; one large and important entry found it necessary to change their frames a few days before the race, while another would have done better if they had followed the example.

The two-lever carburetter retains its position as a standard fitting, though single-lever Cox carburetters were fitted to quite a number of machines. Amac carburetters secured most of the winning places in Junior, Senior, and Lightweight events, though Davison's Levis had a new Senspray. A. H. Alexander's Douglas had a separate two-lever Amac carburetter on each cylinder.

Large tyres have not gained much ground for racing purposes, though a few 26in. × 3in. and 700 × 80 mm. tyres were to be found.

**Ignition.**

The high-tension magneto was universal, Scotts using a two-spark instrument; and some sort of nail-catcher was usual. The Isle of Man is not the place to study improvements in mudguard design.

Plug trouble was comparatively rare in spite of the trying conditions, K.L.G. plugs securing the lion's share of awards. The difficulties of the plug manufacturer can be more fully realised when it is stated that a well-known make of engine started practice with a 7-1 compression ratio.

The Easting windscreen, which first made its appearance in the 1921 event, was fitted by quite a number of riders, and should be of service in affording protection from dust and flying stones.

Something of a novelty also appeared in the form of Miracle oil, a high flash-point oil, a small quantity of which is mixed with the petrol in order to lubricate the valves, and the upper portion of the cylinder. It is early yet to make a definite pronouncement on the effects of this mixture, but certain it is that many team managers and riders were convinced that it had decided advantages, and most of the leaders used it.

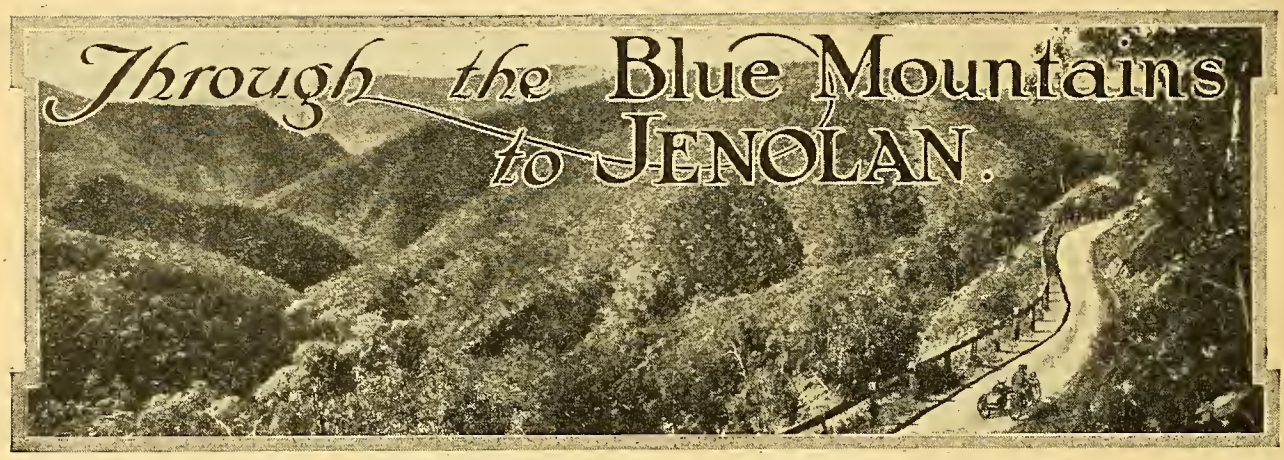
As regards the actual winners, the Lightweight race was won by a two-stroke, with an o.h.v. single second, and another two-stroke third. The Junior event for the third year in succession developed into a duel between A.J.S. and Blackburne engines, J. Thomas's Sheffield-Henderson with the latter engine lying third to two of the former make, while the first six places went to o.h.v. engines. Finally, the Senior honours were divided between all types, side-by-side valves first, o.h.v. second and two-stroke third.

It is perhaps interesting to examine the different type of engine to finish in each of the three events. The lists below are instructive:

| | Lightweight. | Junior. | Senior. |
|---|---|---|---|
| Started ... ... | 33 | 36 | 67 |
| Finished ... ... | 14 | 16 | 22 |
| Overhead valves... | 5 | 11 | 5 |
| Side by side ... | 3 | 2 | 13 |
| Two-stroke ... | 6 | 3 | 3 |
| I. over E. ... ... | | | 1 |

In studying the weights of machines published in our last issue, it is necessary to remember that fuel and oil alone may total some 25lb., while spares and tools may easily account for another 5lb.

# Through the Blue Mountains to Jenolan.



A fine panorama showing how extraordinarily well wooded are the Blue Mountains of Australia.

## A Tour to Australia's Counterpart of the Cheddar Caves.

*There is nothing of "the bush" in this account of a holiday trip in New South Wales. The writer refers to tourists' cars, garages and hotels, not to mention turbine-generated electric light.*

OFTEN had I longed to tackle a fairly long and interesting run on my old but trusty 3½ h.p. Singer, but time had not permitted. At last, however, I had four days to myself, and careful arrangements were made for a trip to the Jenolan Caves—a round journey of 251 miles.

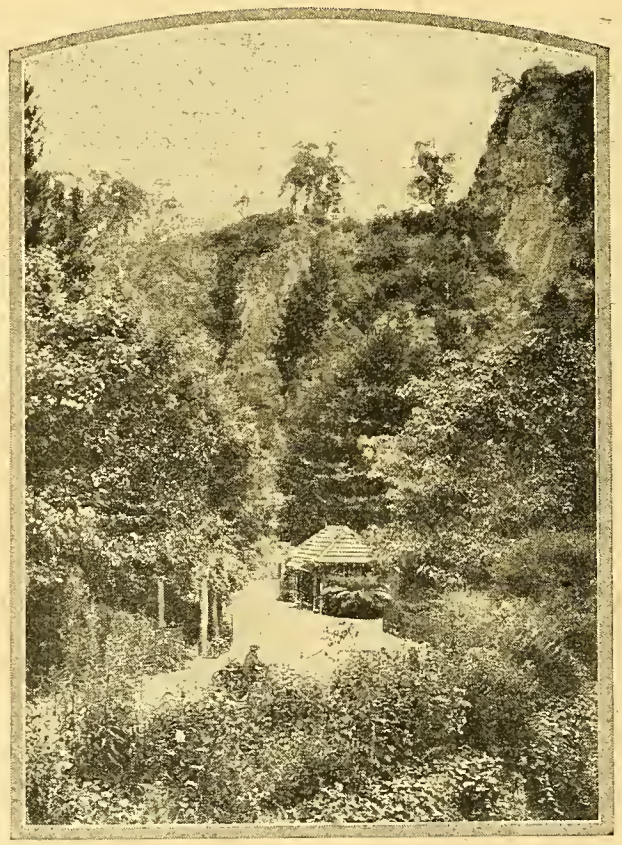
I enlisted the sympathy of another rider, who owned a 2¾ h.p. Douglas, and we planned to leave home on a Saturday morning at six o'clock. The spares we carried consisted of one inner tube, a repair outfit, spare belt, and two plugs.

Near Sydney the roads were very greasy, but as we cleared the suburbs we came upon roads which had evidently not experienced rain for several months, judging by the dust we raised.

Very bad roads were encountered near Parramatta. There were some bad hills, and a surface resembling ploughed ground, which, combined with the head wind, made it extremely hard for the machines.

### Into the Mountains.

We were now beginning the ascent of the Blue Mountains. Lapstone Hill, near the commencement, is one of the worst climbs in the State, and caused me to drop to the bottom ratio of my N.S.U gear; the 2-speed Douglas followed suit. The surface was very loose, and it entailed some careful riding to avoid spills. Notwithstanding, after running nearly red-hot, we managed to reach the top, where the wind soon cooled our engines.



Looking towards the Grand Arch from the Caves House.

Here the road followed the railway track, and, observing a train, we accelerated quickly and raced alongside. We had an advantage in that we could climb faster, and consequently soon lost sight of the hard-worked locomotive and its burden.

After covering fifty miles we arrived at Springwood, a delightful tourist resort on the Mountains, and stopped to refresh the inner man. It had taken us four hours to cover the fifty miles, but delay had been caused by the bad roads, and the last twenty miles had been one long continuous climb.

### Over 3,000ft. above Sea Level.

Once more in the saddle, we opened up, and although we encountered a number of loose patches on the road, we made fairly good time into Katoomba. We were by this time 3,336ft. above sea level, and had climbed to that height in the last twenty-seven miles. So far I had only been in low gear

**Through the Blue Mountains to Jenolan.—**

for about two miles, but the Douglas rider had not been so fortunate.

Although beautiful, Katoomba could not detain us beyond the time spent in filling up at a garage pump, for dinner was awaiting us at the hotel at Mount Victoria only eleven miles away.

### Four Miles of Downhill Road.

Then we set out for Jenolan over the most tortuous and steepest road I have ever seen. The surface was excellent, and, trusting to our brakes to act satisfactorily, we descended at a fast rate. Having dropped 1,500ft. in four miles, we came to an excellent four-mile stretch of level road and then hills again.

A mile or so to the rear we could see six cars loaded with tourists for the Caves, and the dust they were raising was great. We decided to keep ahead if we could, so we opened out.

The next fifteen miles were undulating, and then came a short, sharp rise. We were now on the summit of the famous "Five Mile Hill." At the side of the road is a notice board informing drivers of vehicles of certain hours when no vehicle is allowed to descend, as all traffic would then be ascending the "hill," and there is not sufficient room for two vehicles to pass.

This "hill" drops 2,000ft. in five miles, and ends with an exhilarating rush through a natural tunnel in Mount Jenolan. At the bottom we came to what appeared to be a big tunnel, but what was really a huge hole right through the mountain, through which the road passed. This Grand Arch, as it is called, is 450ft. long, 70ft. high, and 180ft. wide.

We were thankful to reach Jenolan, and so after garaging our steeds we entered the magnificent Caves House.

The dinner bell soon rang, and so to the dining-room *via* an electric lift. We were dumfounded with the magnificent meal placed before us, and could hardly believe that we were 115 miles from Sydney, with the nearest house fifteen miles distant. The whole of the surroundings of the Caves House, the house itself, and the interior of the world-famous limestone caves, are lit by electricity produced by water turbine.

We stayed there Sunday and Monday inspecting the Caves, and at six-thirty on Tuesday we departed, and, through a mountain mist, commenced our 2½-mile climb up the Oberon Hill out of the Jenolan Valley.

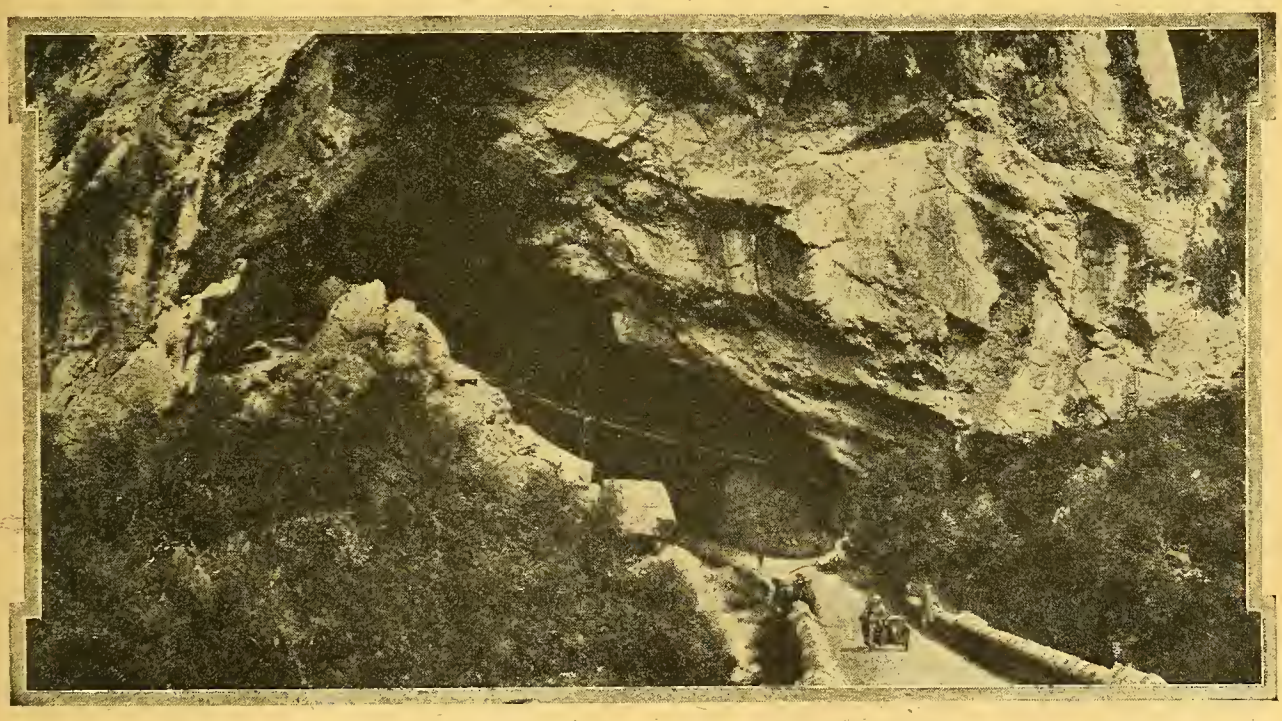
We then passed over good and fairly easy roads until about twenty-five miles from the Caves, where we struck a continuous descent of five miles. Another two miles and we had reached Tarana.

The next eight miles were covered in 25 minutes. Very indifferent roads constituted the nineteen miles into Rydal, where, as it was but six miles to Mount Victoria, we decided to continue and have our lunch there at the hotel.

We had now 74 miles to cover before we reached home, but as the greater part was down-grade, we did not mind. We arrived home at 6.45 p.m., after having covered 74 miles since half-past 1, and altogether 130 miles since 6.30 a.m

Such was the end of a glorious ride of 251 miles which is unsurpassed in beautiful scenery and yet which is very seldom tackled by motor cyclists.

SINGER.



THE GRAND ARCH, 450ft. long and 70ft. high, was, during the course of ages, cut through the solid limestone mountain by the running waters of the creek.

# A PRESSMAN'S MANX WEEK.

## Things Seen, Heard and Considered during "The Motor Cycle" Man's Busiest Days of the Year.

By "ROAD RIDER."

NORMALLY I wear a starched double collar—rather high. On the morning when I leave the office for the T.T. I don a soft collar, rather low—for obvious reasons. Normally, as my wife tells me, I gobble my food. In America there is a certain Professor Fletcher, who holds that we should all live to be 100 years old if we chewed every mouthful of food thirty times. On 363 days of the year I ignore his doctrine, but on the Monday before the T.T. and again on the Friday after the race I am the most punctilious of Fletcherites—for obvious reasons. Shakespeare says :

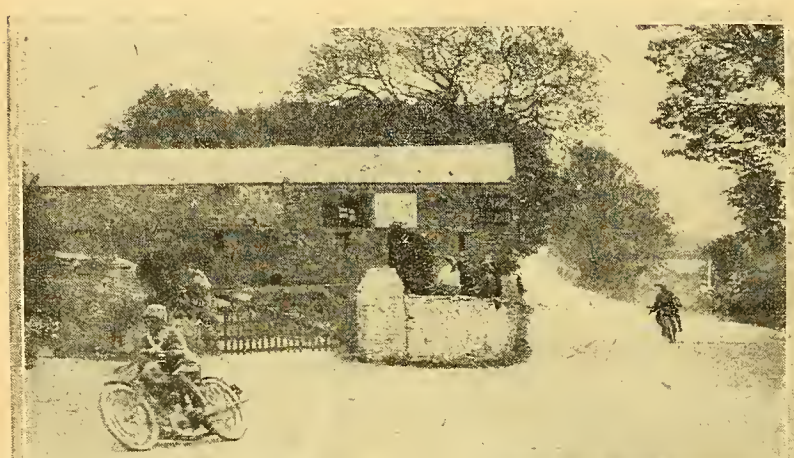
> "There is a soul of goodness in things evil,
> Would one observingly distil it out."

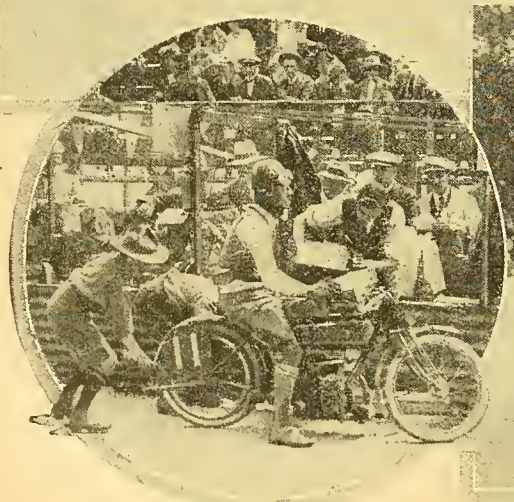
For many years, having a queasy stomach, I have wondered what the "soul of goodness" in sea-sickness might be. This year I solved the problem. Our roads are vilely pot-holed. We grumble and grouse about them. The sea also is full of pot-holes. Road pot-holes are shallow and stationary. Sea pot-holes are deep and in a state of constant motion. The purpose of sea-sickness, therefore, is to make discontented motor cyclists more satisfied with the comparatively innocuous undulations of the roads.

Thus prepared in body and mind for the voyage, I started for the T.T. on an o.h.v. machine. At the tenth milestone, where the road rises sharply, my engine missed three consecutive revolutions. It chipped in again for ten more, and then stopped. I gingerly extricated a red-hot K.L.G., which appeared O.K. Rule of thumb methods, I admit, but they indicate my simple trust in the reliability of my engine : and I had certainly been over-oiling. I went round to the other side, and noticed that my exhaust valve was opening but not shutting. In other words, the engine could force it down, but a mere spring could not return it. Irreparable, too.

### Assorted Transport.

I went sadly into a near-by building, which proved to be a poorhouse, and 'phoned for a taxi. Presently there arrived a Ford—of the most decrepit, as our French friends would put it. So by the slow but reliable train to Liverpool. Then the s.s. *Mona's Isle*. And finally a horse tram to my Douglas hotel. Truly a quaint assortment of vehicles for one journey.





(Top) At Ballacraine corner. F. C. North (249 c.c. O.K. Junior), who was sixth among the lightweights, followed by A. Booth (348 c.c. Massey-Arran). (Left) G. S. Davison (248 c.c. Levis), winner of the Lightweight Race, receiving attention from the boy scouts and the petrol replenisher. (Right) S. Woods (348 c.c. Cotton), on the Ramsey hair-pin. He finished fifth among the Junior entrants after riding magnificently in the face of a handicap that probably lost him the race.

**A Pressman's Manx Week—**

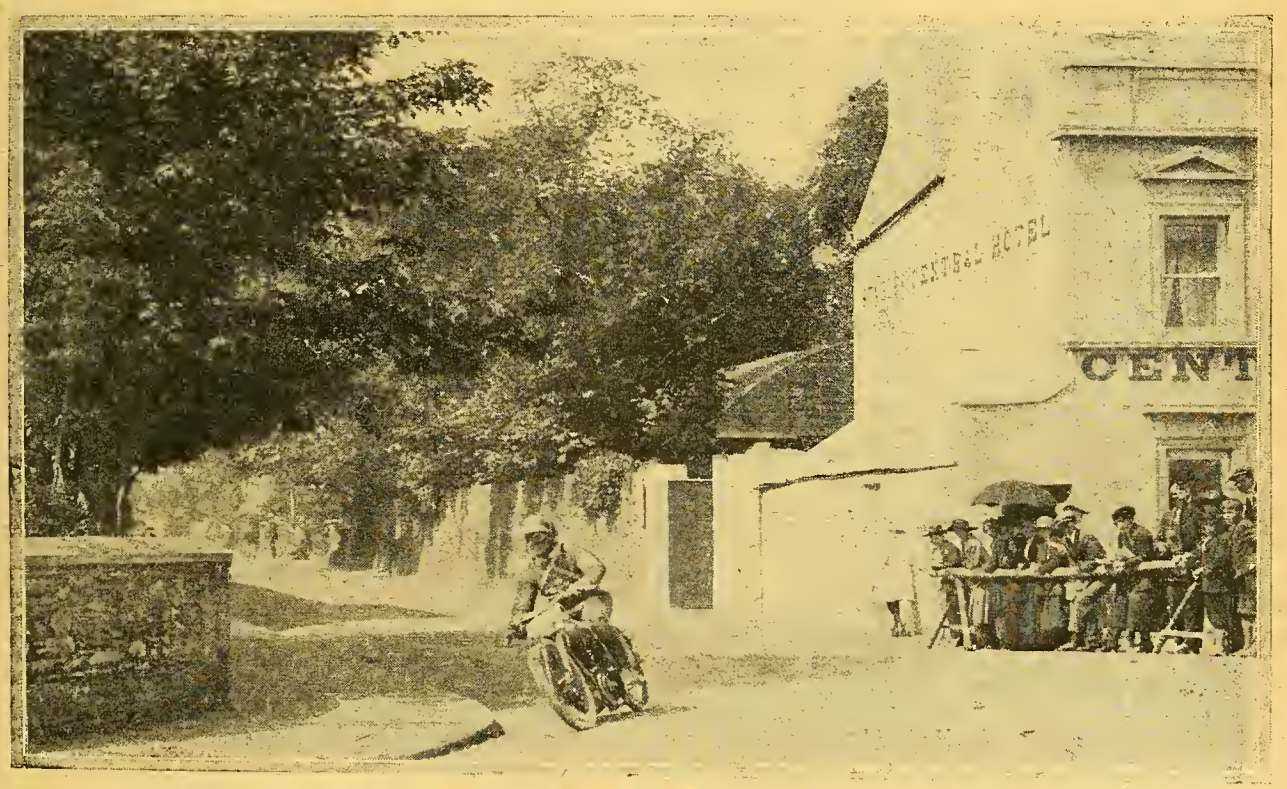
The outward voyage safely astern of me—ugh, how I loathe all those nautical terms and their associations—I enjoy the Island. One meets everybody who is anybody in the motor cycle world. They all yarn to one. Thuswise. You meet Smithkins, who sells sparking plugs. He tells you confidentially that his 1922 plug will positively stand up in the Conx engine (a notorious plug devourer). Then you meet Mr. Conx, and congratulate him that his team have at last solved their plug troubles. To your amazement he foams, erupts, explodes. It is true his men are lapping in forty-one minutes, but they *could* lap in thirty-five minutes if the plugs didn't melt as soon as they opened their throttles.

The next person you run into is Brownjohn, another plug merchant. Partly to rag him, partly on the off chance of his helping Mr. Conx, you whisper in his ear that the Conx boys are in sad trouble with plugs. Brownjohn laughs consumedly, and slaps you on the shoulder in his hearty fashion. "Don't you believe it, old chap!" Then, after a furtive glance right and left, he whispers confidentially. A fortnight ago he gave the Conx team plugs which would freeze in the flame of a welding blowpipe. The Conx trouble isn't plugs at all. It's the Jones and Jones valve. They have to use it because the Jones brothers are on the Conx board of directors. But, as he needn't tell me, the Jones valve is as brittle as a carrot and as heatproof as tallow. Then you espy Fitzwilliam, a carburetter expert, sulking in a corner of the Sefton bar. You discuss the Conx chances on the great day. He is roused to a cold, angry animation. "It's their carburetter, old man! They *will* use it, because their managing director owns the patent. It simply chucks great blobs of wet juice into the cylinder, and sluices out all the lubricant. I could put 'em right to-morrow. It's heart-breaking, simply heart-breaking. Such fine lads, too. And so keen. Robbed of victory by their bosses' financial affinities." Finally you call at the Conx camp. The riders don't display any very exuberant *joie de vivre*. You try to comfort them with reliable stories of the secret adversities of their chief rivals. At last their best man says, "Well, there's only one thing the matter with our buses—*they're too darned slow!*"

Truth, says an Indian proverb, lives at the bottom of a well. I doubt if anybody's bucket has a long enough rope to reach to the bottom of the T.T. well.

**More and More Power.**

Perhaps my main observation in Manxland was the quite extraordinary power developed by the modern hot-stuff engine. I myself own an engine with a Mary Ann punch capable of just about 70 m.p.h. When it is running slowly in neutral, shortly after receiving a charge of oil, a haze of blue vapour lazily exudes from the open exhaust pipe. But when its Manx cousin ticks over under similar conditions, a fat clot of stinking asphyxiation is violently projected in a solid lump to a point 20ft. in the rear of the machine. Which shows how engines are getting on. Especially the baby two-strokes. A few years ago the valveless type



At the right-angle bend entering Ramsey. G. W. Shepherd (348 c.c. Edmund), who finished eighth in the Junior race.

**A Pressman's Manx Week.—**

of 250 c.c. engine was extremely woolly, a rickety, anæmic relation of the poppet valve type. This year it beat them, and its performance was superb. Naturally, these wee racing engines are not in all cases comfy to sit over. But their detuned touring editions are becoming extraordinarily capable. As a spectacle and in sporting interest the Lightweight event is nowhere by comparison with the Junior and the Senior, but I fancy it will exert an even larger influence on the future of the sport and the industry. I foresee the day when perfected 250 c.c. engines will fulfil all ordinary touring needs, and the Manx week is accelerating that consummation.

### The Three Races Compared.

The most careless observer must note profound differences between the three T.T.'s. The Baby event is still an "*engine*" race. Almost any rider—even an ordinarily capable scrap-loving amateur—can get round the course fast enough to win, *if* his engine is good enough. The Junior is a "*man and engine*" race, for only a first-class rider can conquer the tempts and threats of that awful lap with the requisite blend of devil and restraint, whilst only a magnificent 350 c.c. engine can do its 80 m.p.h., accelerate like a projectile, and display the durability of a doormat. The Senior is a "man" race. Oh, I know well enough that 37½ miles of twists and hills, taken at nearly 60 m.p.h., rack both engine and frame to the very limits of endurance. But, nevertheless, the real emphasis is on the *man* in this event. At least half of the entry cherished no fond dreams of finishing within 30 min. of the winner. "I am far too scared!" they said. All they wanted was a comfortable blind at their own pace; if they could crowd in six laps before the course was opened, so much the better. If not, they had for once savoured the unique sensation of going as fast as they had a mind to, with no police or traffic to worry about. Perhaps six men nourished genuine and secret hopes of victory. So if I intended to market a machine, and a T.T. victory was a definite part of my sales policy, I would not waste brains on designing the machine or money on producing it until I had found the *man* to ride it. Bennett, Dixon, Wood, H. R. Davies. One or two others. Or some precocious unknown youngster, possessing equal calibre, but not yet known to fame. Sixty-seven men started in the Senior Race. I suspect we might mount fifty of them on an imaginary machine 25% better than the winning Sunbeam in every racing factor, and yet watch it being thoroughly well beaten.

Nevertheless, an amazing lack of common sense is noticeable in details. Why start men with vital parts sure to be lost if a solitary unlocked nut comes adrift? Why spend thousands on competing when your junior tester could prove to you that nothing but humiliation can result? Why compete without taking any of the obvious and rational precautions against tyre trouble? Why start without verifying your oil consumption? Why make depot stops after the second and fourth lap, when a single stop after three laps would suffice? The extra stoppage entails a loss of at least half a minute nett, allowing for weakening of acceleration and climb by dint of the extra weight carried, and some year soon the race will be won and lost by less than 30 sec.

Or, again, it was fairly common knowledge last January that a maximum speed of 85 to 90 m.p.h. would be needed to win the Senior Race. Lots of firms entered without utilising Brooklands to discover what speeds their engines could produce, or even how their valves and pistons and plugs stood up at even 70 m.p.h. A marvellously casual habit of taking chances was discernible in many camps.

### Next Year?

There are many weird suggestions afoot for the 1923 T.T., some good, some bad, some indifferent. Three, at least, deserve attention. With plenty of time available the problems of a real Amateur race might not prove quite insuperable. If such an event can be organised, the reformers who wish to give large and small firms an equal chance by limiting entries in the Open race to three machines of each make will find their path eased. Then there are those who consider that in 1922 too much depended on the man and too little on the engine. Their prescription is a 500 mile T.T. with a change of driver every third lap. We shall see.

The return journey? Oh, yes. I crossed in company with one of those incredible persons who owns a small yacht *for pleasure!!!* At breakfast, in Douglas, he kept pointing out the "magnificent surf" in the Bay (as if I couldn't see the infernal surf through the coffee room window, and as if I hadn't listened to its roar all night). I stood things pretty well till we were half an hour out from Douglas. Then he crashed a great fist on my back. "I say, old man, come and watch these gorgeous billows tumbling on the port bow!"

* * * * * *

"Those billows" were not all that tumbled.

## HARDENING AND SOFTENING.

THE other day I saw an amateur motor cyclist trying to reduce the size of a nut, which was tapped with the correct thread for the job in hand, but projected too far. He was working away with a file and sweating profusely, but making no impression on the nut, which had been case-hardened. Needless to say, the nut was easily softened by heating it red-hot and allowing it to cool off; the alternative was to grind off the surplus metal without first softening the nut; filing, of course, was perfectly hopeless. If re-hardening is necessary for any reason, the part may be hardened by raising it to a red heat and cooling it instantaneously by plunging it in either water or oil, providing the hardened skin is not entirely removed. Iron parts may be case-hardened by heating them red, covering with a case-hardening compound (purchasable at any ironmonger's), re-heating, and cooling off rapidly in water. Discretion must, of course, be observed in annealing and hardening special steels designed for peculiar duties. ROAD RIDER.

# THE BONUS BUGBEAR—SUBSIDY SCANDALS.

## An Interesting Sidelight on one Hidden Aspect of the T.T. Races.

ALL our readers are familiar with the two chief aspects of the T.T.—namely, its sporting eminence as perhaps the most thrilling athletic contest of the year, and its technical importance as a grim test of design, material, and workmanship. It has a third side, which is generally kept in the background so far as the general public are concerned. The entire motor cycle trade is intimately affected by the T.T. The shares of the companies which manufacture the successful machines are instantly quoted at higher figures on the Stock Exchange. The sales of those companies' machines increase. Excellent advertisements accrue to every item of the equipment of the winning machine—tyres, oil, petrol, magneto, sparking plugs, chains and belts, carburetters, etc., etc. An advertisement is always worth paying for, and the representatives of the firms which manufacture motor cycle requisites strain every nerve to induce as many entrants as possible to use their commodities. Where such keen competition exists, a system of subsidies naturally follows. This year, for example, at the beginning of the practising, the tyre companies were offering a cash award of £250 to any rider who won his race on their tyres. Every entrant was promised so much in cash for every mile he covered in the race on tyres of this make or that. The different tyre firms began to bid against each other, and by the start of the race the riders of the winning machines stood to receive £1,000 from the makers of certain tyres, whilst every starter could get 2s. 6d. per mile. Some tyre companies abstained from this crazy auction, but the representatives of other firms toured the various "camps" in the island daily. On Monday the Blizzard team practised on Speedster tyres before breakfast, but by lunch time they had all been tempted by a higher bid to substitute Standing tyres. On Tuesday another bid produced a further change to a third make of cover. Simultaneously a similar process was occurring with half-a-dozen other proprietary articles. Acrimonious scenes occasionally occurred at hotels and depots. Not until the machines are actually placed in the custody of the A.C.U. does this unseemly scandal of bid and counterbid finally terminate.

### Pointers.

The folowing comments on the practice seem to the point:—

1. The best riders loathe it. These notes are inspired by a previous winner.
2. Many makers of motor cycle equipment will not stoop to these methods. Their specialities are consequently absent from the race, but may be equal in quality to those used by the winner.
3. The cost of these subsidies is ultimately abstracted from the pockets of the general public.
4. Similar practices killed cycle racing as a sport twenty years ago, in spite of strict laws on the amateur question, laws which are not applied to motor cycling.

There is only one possible argument in favour of this un-English, unsporting, and unpleasant practice. It assures a substantial reward for the winner, who might receive little compensation for his skill, toil, and risk if he were left at the mercy of the firm who engaged him, particularly if he chanced to be an unknown man. The public would wish every T.T. winner who is not a man of large private means to pocket upwards of £1,000, as he does to-day, but they would prefer him to receive this sum by better channels.

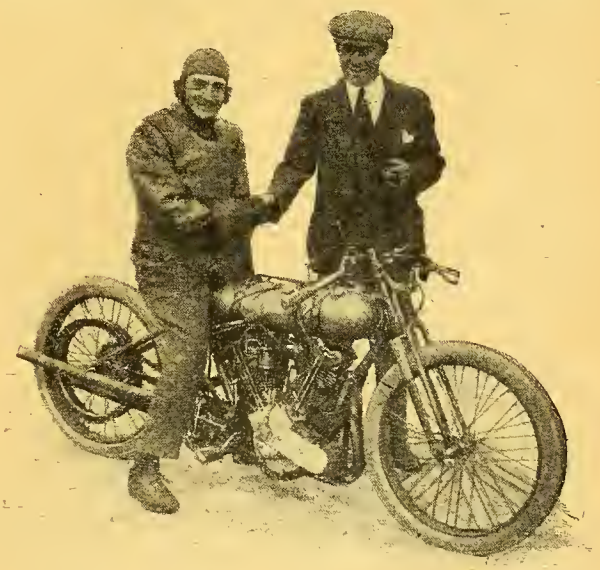
### Can a Remedy be Found?

Remedies are not easily found. One proposal has been that the Auto-Cycle Union shall compel every competitor to specify at the date of his entry complete details of his equipment. This plausible scheme overlooks a real problem. Now and then every accessory maker may be hampered by a batch of inferior stuff coming through his works—a rule which might force a good rider to use an inferior magneto could not be accepted.

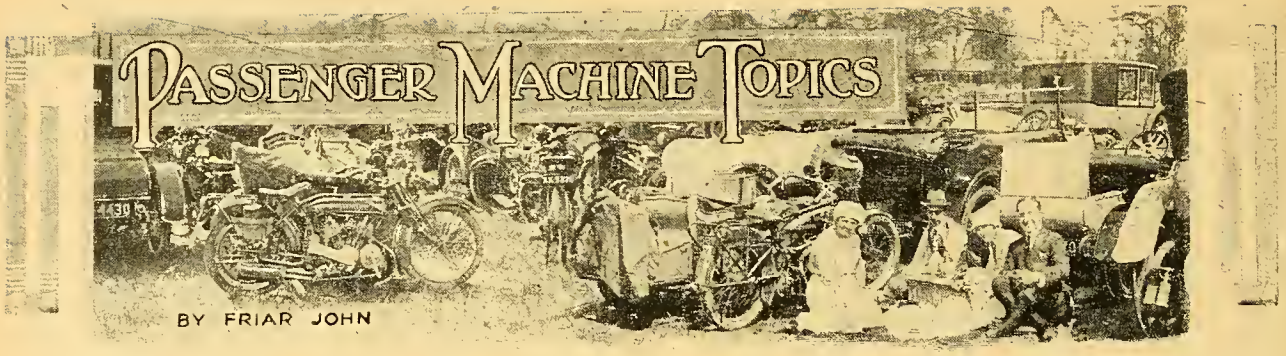
A second proposal is that the manufacturers of the machines should decide what equipment is to be used; should receive any subsidies paid by accessory firms; and should remunerate their riders adequately.

If the trade and the A.C.U. can put their heads together and eliminate these unpleasant customs before 1923, they will do the race a great service. This year the chaffering has been far worse than in any previous event. Many of the riders and some of the offending firms are sick of it.

B. H. D.



For many years Col. R. N. Stewart has been a regular competitor at Brooklands, and, if his easy win in the recent South Midland Centre meeting is any criterion, his new mount, an eight-valve Anzani-engined Trump, should cause his name to occur with some frequency among the prize-winners of the future. Mr. H. H. Hagens, the designer of the power unit congratulating the successful rider.

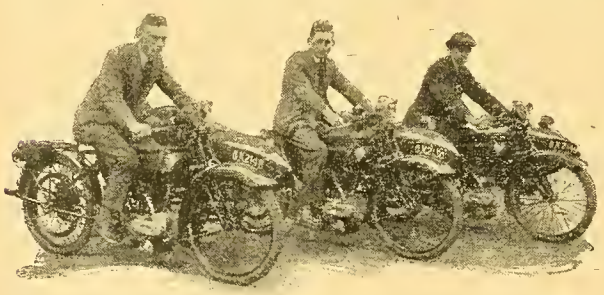



Besides offering the excitement of racing, Brooklands provides an admirable venue for a picnic. A typical paddock scene on a hot afternoon.

## The "Road Sense" of the Novice: Sidecars to Carry Six Passengers: A Note on Sensations, Speed and Otherwise.

I WONDER whether after all that "road sense" which the experienced motor cyclist prides himself on possessing does come from prolonged experience, or whether it is second nature, so to speak, to some people? Last week, for instance, I taught a man who had a leg amputated to ride a sidecar. After two lessons of about 15 minutes each, he tackled my 6h.p. outfit alone. The next day he took possession of a 4h.p. Douglas sidecar and persuaded a confiding youth to accompany him in the sidecar, and managed a 20-mile journey without incident. This man had never even ridden a bicycle or driven a car, yet he never once swerved or lifted the sidecar wheel. He took to sidecar driving like a duck to water. Yet another individual may ride for years and always remain a duffer.

WHERE is there most room for experiment in sidecar design? New ideas continue to blossom forth at Olympia each year, even though the height of perfection had apparently been reached at the previous show, but no outstanding features or revolution in design has startled us lately unless it be the amateur post-impressionists and cubists who mistake their sidecar bodies for canvases. Take the question of springing: there are vastly *more* well-sprung sidecars on the market to-day, but the *majority* are not much better sprung than were the best in 1914. I think this can be said of cars also, and would point to the fact that springing can advance to a certain point and no further unless the size and weight of the vehicle is increased. Yet one may contend that Alfred Scott has evolved a triangulated vehicle which surpasses all sidecars in comfort so far as the springing is concerned. Personally I think it is in the direction of suspension that the average sidecar needs the most improvement.



Speedy but economical transport was required by Messrs. Winter, Ltd., Confectioners, Birmingham, for their travellers; vehicles which could be started easily hundreds of times a day without fatigue and which could carry samples were essential. All these requirements are fulfilled by the 350 c.c. four-stroke, and the three all-chain-drive outfits selected are shown.

WHEN the B.S.A. screen, which gives protection to the rider, first made its appearance, quaint were the comments it inspired. But, in spite of the almost irrepressible desire one has to paint two golly-wog eyes on the sinister-looking shield, there are attractive features about the fitment. One has only to ride about 50 miles against a wet and easterly wind to appreciate its worth. A criticism that I refute emphatically was one passed by an observer who, on seeing a similar contrivance, said: "Ah! another effort showing how far short is the sidecar of what a cheap passenger vehicle should be." This statement infers that the sidecar has never been the ideal cheap passenger vehicle, and that these shields simply emphasise its shortcomings. Perhaps the shield does draw attention to the obvious want of protection for the rider, but the sidecar still remains the "ideal cheap passenger vehicle" in spite of its so-called shortcomings. There must be, a mysterious and subtle attraction about the sidecar that one cannot well analyse or the query below would never have been addressed to me.

AS a hardened sidecarist I can quite understand Mr. H. W. A. Mason's desire to use a sidecar in preference to a car. But "six up"! Read the following extract. Mr. Mason will not mind my making public his requirements, I'm sure.

"Gold Coast Govt. Rly.,
"Accra, British West Africa.

" . . . . At the end of 18 months, I come to England for a six months' leave, during which period I generally use a motor cycle combination for self and family.

"What I really want is a good motor cycle combination capable of doing the work of a car, but I want one with sufficient room to accommodate myself as driver, my wife and four children as passengers, ages respectively 14, 13, 10, 5, for week-ends and during any holidays the kiddies may have during my next leave. . . .

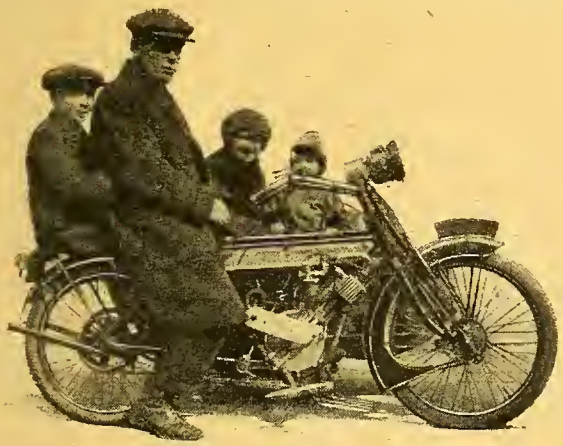
**Passenger Machine Topics.—**

". . . . In the event of you not thinking the proposition advisable, I am afraid I shall have to turn to a car, although I very much prefer the sporting side of motor cycling."

It would be instructive to hear what readers say on the subject.

SEVERAL outstanding performances with sidecars have been made recently, but comparatively little comment has been passed upon them. Sibley's performance in the Scottish trials was one. He piloted a 499 c.c. Rudge sidecar (the smallest sidecar in the trial) up and down the dales and across the mountain passes, yet finished up with a gold—a fine ride, and a tribute to the engine and Sibley's judgment. Another ride worth more than passing thought was I. P. Riddoch's ride at Brooklands on a 998 c.c. Zenith and sidecar. He averaged 79·83 m.p.h. for 8½ miles, thus setting up a record for the distance. Riddoch is a member of the Oxford University Motor Club, the only amateur to hold a Brooklands record. Eighty miles an hour!

ONE of these days I hope to try one of these phenomenal sidecar outfits, but not at 80 m.p.h. The sensation of slipping along even at 60 m.p.h. must be supreme. Yet a colleague who recently attained the staggering speed of 140 m.p.h. at Brooklands on one of the fastest cars in the world said he had no particular sensation to record. I suppose after all one gets more sensation on the road, especially at week-ends on routes abounding with intersecting roads. There one meets all kinds of different and indifferent drivers, not to mention the *inconsiderate* lorry man without a mirror, and is there anything more aggravating than being imprisoned in the dusty rear of one of these juggernauts for mile after mile? That is where the soloist scores: he can shoot past the brutes in the width of a razor's edge—almost.



Given a soundly designed and well-made outfit, depreciation, if care is taken of the machine, need only be negligible. This 1909 P. and M. is still in regular use, and a moment's calculation of its probable cost and present-day value will show that depreciation cannot be more than a few pounds yearly.

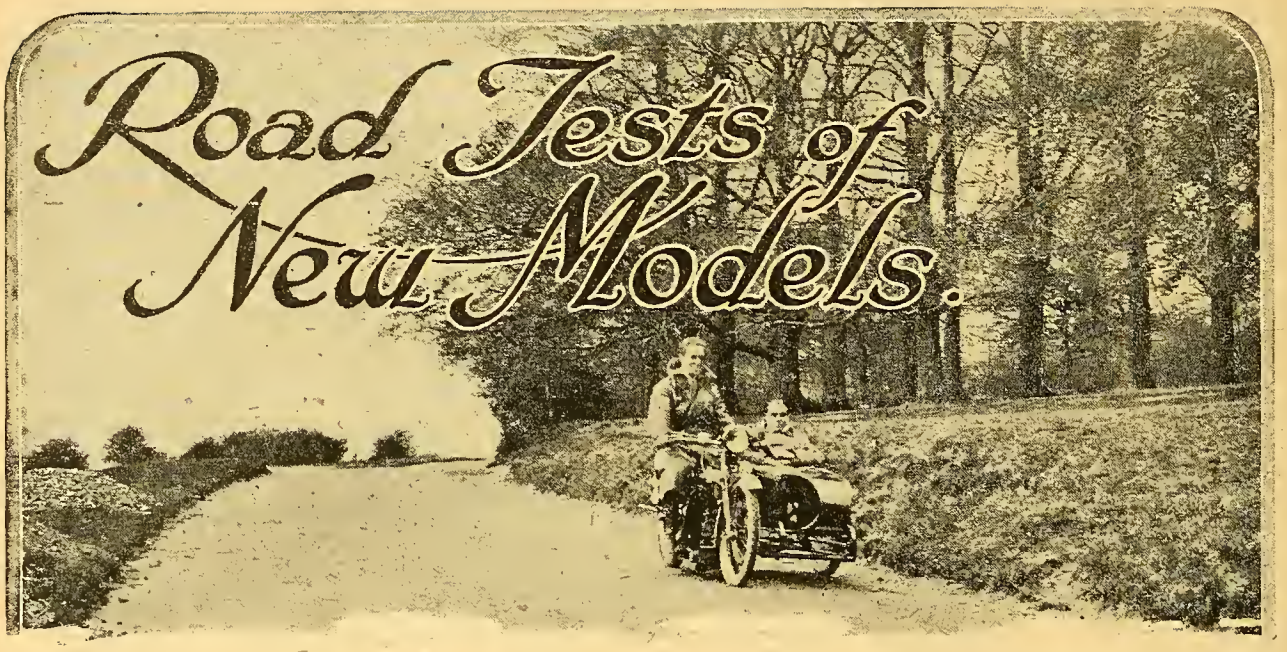
In the cool of the plantation. This Enfield passenger must have picnicked before, for she realises the advantage of taking the loaf and knife in preference to sandwiches cut at home.

REVERTING a moment to the topic of sidecar speeds, I should imagine the 1922 P. & M. has astonished many who have always, and quite rightly, considered this make an ultra-reliable but comparatively slow machine. Although my test was not over long Welsh hills with a heavily loaded sidecar—a ride more than once undertaken on a 1912 pattern—the model I rode was fast enough to whizz the indicator round to 45 m.p.h.

THE signposting of many cross roads round about the west and south-west of London is truly remarkable. It is so good generally, and yet there are road junctions quite bare of any directions. Of course, at all the important points there are posts, constables, or scouts, but maybe a mile or so farther on one will be in a quandary. In many cases either direction boards are missing altogether or else they are placed in an obscure position. I recently saw three sidecarists hunting for a signpost in Surbiton to direct them to a particular destination. Ridiculous to the inhabitants, perhaps, but not so simple to strangers. Of course, there is seldom any real difficulty; my grouse is in having to stop and inquire the way so frequently.

THIS little tip for renovating faded upholstery has proved useful. Get a bottle of Indian ink and a small bottle of waterproof drawing ink near to the colour of the leather or pegamoid, as the case may be, mix a little of the black with the coloured ink, otherwise it will be too vivid, then apply with a cloth, rubbing evenly all over the faded portions; when this is thoroughly dry, finish off with polishing wax.

# Road Tests of New Models.



The Chain-driven Zenith-Bradshaw Sidecar Outfit.

*SPECIFICATION.*

| | | |
|---|---|---|
| *ENGINE: "Oil-cooled" flat-twin, 68 × 68 m.m. = 498 c.c.* | *GEAR BOX: Sturmey-Archer three-speed, clutch and kick starter.* | *CARBURETTER: Amac* |
| *TRANSMISSION: ½in. chains.* | *TYRES: 26 × 2½in.* | *FORKS: Druid.* |
| | | *PRICE: £111.* |

WHEN first introduced the oil-cooled Zenith-Bradshaw excited somewhat of a stir in motor cycle circles. Mr. Bradshaw is nothing if not original, and the adoption of his engine by Zenith Motors, Ltd., proved that his efforts had been appreciated by manufacturers who had long been wedded to engines of standard design. Full descriptions of this oil-cooled flat twin have already appeared in *The Motor Cycle*, and this article therefore deals with the behaviour of the machine on the road, pulling a Millford sidecar chassis fitted with a comfortable semi-sports body—an entirely new rôle for this model.

### On Two Surrey Test Hills.

The first part of our test consisted of a journey comprising two of the principal Surrey test hills, one a well-known main road hill of ordinary severity, of which the worst gradient is about 1 in 9, and the other a stiff hill culminating in a gradient of 1 in 5, approached by a sharp corner. On this occasion a passenger was carried.

From the very outset it was clear that the machine under our charge was designed by a practical rider. Everything was to hand; small details such as the position of the control levers and pedals had been carefully studied so that one instinctively did the right thing even though the machine was quite strange. Its excellent steering was also particularly noticeable, and so was its flexibility, for there was a good deal of winding road work to be accomplished before the Portsmouth road was reached at Esher. Thereafter an excellent turn of speed was kept up until the fork leading to Newlands Corner.

Passing through West Clandon and carefully crossing the Leatherhead-Guildford road, the outfit was speeded up to take the first "step" up Newlands Corner. This occurs suddenly round a bend, and is out of sight until actually tackled. The engine made a splendid climb on second speed until the gear lever dropped out of engagement, which necessitated a few yards on first, when almost immediately afterwards second was again engaged and the climb was finished on top in magnificent style.

After taking photographs the long down grade towards the Silent Pool was taken under easy steam, and next the hairpin bend on to the road approaching Coombe Bottom was negotiated with certainty, as was the 1 in 5 portion following.

### Good Pulling Powers.

The return journey to the Zenith Works was made by exactly the same route, and just before the entrance to the Silent Pool the outfit was let go. Here the engine properly "took hold," and, notwithstanding the hard work it was doing, there was not a trace of knocking on acceleration; in fact, the impossibility of making the engine konk was noticeable throughout the test. At the Zenith works the passenger was

**Road Tests of New Models.—**

dropped and the remainder of the trial was made with an empty sidecar. Appallingly rough roads were traversed, but throughout the whole period a commendably high speed was kept up, entailed by the necessity of accomplishing a certain amount of work in a certain time—a task more fitted for a solo mount.

Reviewing the test, we can safely say that an earlier remark by our passenger that the engine would not tire was absolutely true. The unit also proved to be well balanced, its slow running was good, and its acceleration all that could be desired. Flexibility is one of the features of the engine, but the carburetter, though almost automatic, was not so entirely.

So easy was the steering that mile after mile the machine could be ridden with one hand, and on certain occasions with the hands off; there was very little tendency for the outfit to leave the straight path unless the camber of the road was severe. Dummy belt rim brakes are fitted to both wheels; either proved sufficient to stop the machine in a very short distance.

There were a few instances of oil leak, one rather tiresome one at the oil indicator which spattered the rider's offside boot.

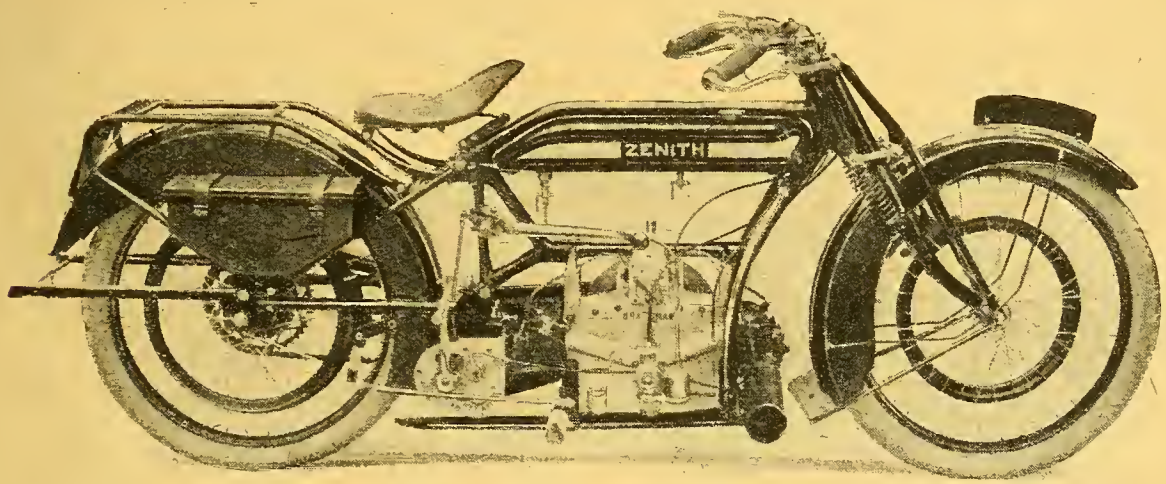
It was obvious, considering the distance the machine was driven and the nature of the route, that it is capable of climbing any hill with two up, and that bottom speed is very rarely likely to be required.

Later we had occasion to try the same machine solo. Gear ratios, etc., were unaltered, and the test as a test would have been a joke were our journey not a strenuous trip to Devonshire for a sporting trial which included Beggar's Roost and Hunter Inn hills in its route.

The Zenith-Bradshaw, however, was more than equal to the occasion, and we "got there"—the colloquialism aptly denotes a series of rushes to points of interest on the course—with great regularity and considerable rapidity.

As it turned out the machine was actually *undergeared* for both the stiff acclivities mentioned; had there been no critics present we should have attempted a spectacular ascent of Beggar's Roost with its dreaded 1 in 3.3—or 1 in 2 over the hump—on second gear. As far as we can judge there was quite a sporting chance of success.

The journey supplied us with but one subject for criticism, and that has already been referred to. Before we reached home the whole engine and rider's right foot were liberally coated with oil slung out by the indicator. Some means of usefully trapping this surplus lubricant should not be difficult to devise.



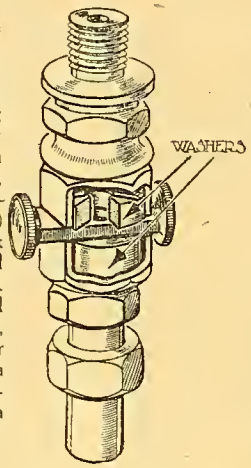

In its chain-driven form the Zenith-Bradshaw retains much of the simplicity and well-balanced appearance of the earlier belt model.

## THE CARE OF CHAINS.

THE novice who is new to chain drive should beware of two common blunders. The first is to take it for granted that his front chain will seldom need adjustment, because it is encased and lubricated. The best new chain, running under these high-speed conditions, will generally sag enough to foul the case within 1,000 miles, at which distance its tension should be verified and adjusted. (Should the rear chain be enclosed, the 1,000th mile will be soon enough for an examination; if it is naked, 500 miles will probably find it slack.) The second blunder consists in lubricating a naked chain by pouring oil on it or rubbing it with grease. It is possible that this makeshift system is better than running the chain bone dry; but whatever lubrication may be effected is more than balanced by the dust and dirt which are birdlimed by the lubricant, and slowly worked into the joints of the chain. Dust and dirt act as a powerful abrasive, and accelerate chain wear. The only sensible way of treating a naked chain is to remove it at regular intervals—every thousand miles is not too often—wash it thoroughly in paraffin (two separate baths are desirable), and, when perfectly clean, give it a third bath in some melted lubricant such as Russian tallow, which will fill the joints and seal them for a long distance against the entry of abrasive dust, without forming a magnet for the collection of more dirt.

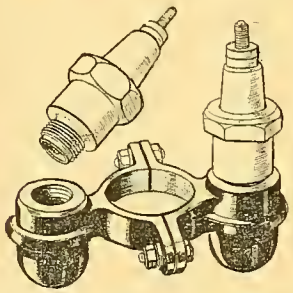
# AMONG THE ACCESSORIES

## Non-Leaking Petrol Tap.



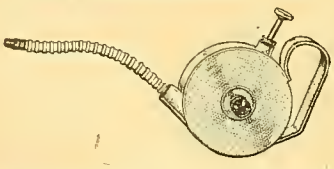

Quite a new system is embodied in the construction of the Concentric Patent Petrol Tap, the only moving part of which is a flat strip of metal with a hole in the centre, which slides (by external pressure) through two cork washers compressed by means of nuts. The tap is guaranteed to be free from leaks, and is sold at 5s., or 6s. 6d. including a filter. (W. R. Volrath, 28, Victoria Street, London S.W.1.)

## Carrier and Bath for Plugs.



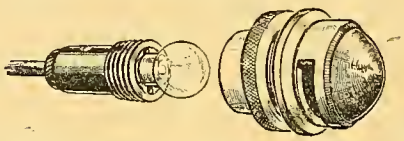
Designed to carry two spare sparking plugs, and at the same time to clean them by means of petrol contained in the cup portions, this useful holder is sold at 4s. 6d. by the Gulson Engineering Co., Ltd. Gulson Road Works. Coventry

## Oiling Inaccessible Parts.



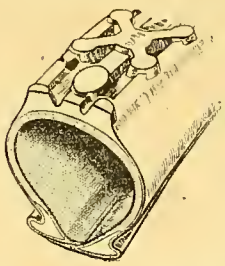
The flexible spout on the Mac Stan oiler is very useful for reaching inaccessible places. 3s. 9d. (P. Thomas, Old Hall Road Wolverhampton.)

## Rear or Inspection Lamp.



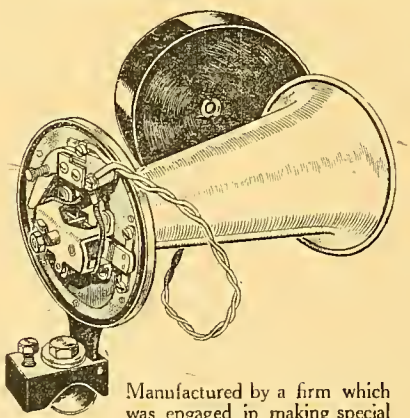
By unscrewing the insulated portion of this tail light, the lamp can be withdrawn and used for inspection purposes. (A. H. Hunt, Ltd., H.A.H. Works, Tunstall Road, East Croydon, Surrey.)

## New Tyre for Big Sidecars.



Quite a new production of the North British Rubber Co. is a 28 × 3in. (flat base rim) tyre for heavy sidecar outfits. The tread consists of the usual Clincher cross pattern, and the cover is built up on four layers of canvas. (The North British Rubber Co., Ltd., 204, Tottenham Court Road, London, W.1.)

## Well-made Electric Horn.

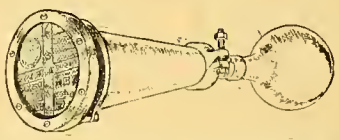


Manufactured by a firm which was engaged in making special telephones for the Navy during the war, the Graham electric horn is an excellently designed warning signal. Its mechanism is of the buzzer type, and will work off a 4 or 6-volt accumulator £1 16s. 0d. (Alfred Graham & Co., St. Andrew's Works, Crofton Park London, S.E.4.)

## Moderately Priced Windscreen.

With coverall apron and all-metal frame, adjustable to any angle, the Robini Windscreen is marketed at 30s. (The Robini Manufacturing Co., 1 and 3, Tulse Hill, Effra Road, Brixton, London, S.W.2.)

## Novel Licence Holder.



Attachment of the licence-holder to the fore part of the horn is the (protected) idea of Mr. W. Winkle, 47 Etruscan St., Etruria, Stoke-on-Trent.

## Miniature Map Measurer.

Familiar to ex-reconnaisance officers and others, the map measurer is an extremely useful addition to the pocket kit of the motor cyclist. The neat example illustrated has been introduced by J. B. Brooks, the well-known saddle manufacturers, at 3s. 6d. (complete in leather case).

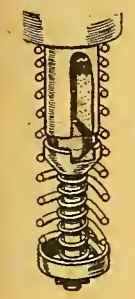
# IMPROVING AN EX-W.D. MACHINE.

## Describing Alterations to an Old 4 h.p. Douglas carried out by a Reader.

BEING "ex W.D." myself, perhaps it is only natural that my financial resources could only go the extent of procuring another war victim—a 4 h.p. Douglas. The obvious task, after a casual glance round, was a complete overhaul, and this gave an opportunity to attempt a few alterations (such as amateurs love); these were mostly successful, and are detailed below.

### Eliminating Air Leaks.

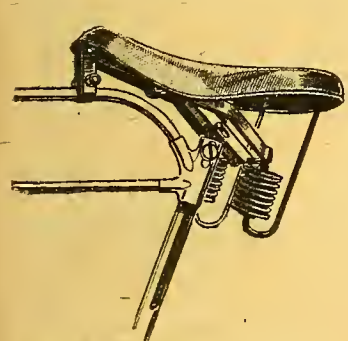
The question of reducing air leaks in the slightly worn valve guides was first considered, and the outer ends of both inlet valve guides were countersunk and a felt washer well soaked in graphite was placed on the valve stem, up to the countersink. This was kept in position by a steel washer and spring, the washer being "dished" so as to squeeze the felt washer, in conjunction with the countersunk guide, on to the valve stem. The spring, which was a fairly light one, rested against the inside of the valve spring collar. Care must be taken not to use a very large steel washer, as the valve spring must clear it in working. This arrangement was found to be very effective for easy starting, and it avoids the unnecessary pressure which is present when the valve spring itself is used to keep the felt washer in position.



Air leak preventer on valve guide.

### Far Greater Comfort.

Memories ("tender" at times) of some "joy" rides on some of the approaches to London, brought the saddle under review, and it was resolved to use a spring pillar fixing. A short length of light tubing (a free fit in the saddle pillar tube), was dropped inside the frame tube, to act as a distance piece or stop for the compression spring. This spring was about 8in. long, being carefully selected to suit the weight of the rider. The tubing of the seat pillar itself may be more substantial, preferably steam pipe, and should be a nice sliding fit in the frame tube. It was drilled near the top end to receive the pin which keeps the two pivoting arms in position; these arms are held in place at the front by the original bolt which held the pillar clip (this was done away with), and a small piece of tubing was placed between them to keep them against the framework of saddle. The clip on the top tube is U-shape, and was fixed by using the bolt in the nose of saddle. It will be seen that the pivot arms have slots where they are connected with the sliding tube; this was necessary to allow for the radial movement from the clip on the top tube. As it was desirable to limit the downward movement of the saddle a hole was tapped in the frame lug, and a corresponding slot cut in the sliding tube to accommodate a steel stud; the position of the slot was regulated so that the rear saddle springs were just coming into action before the end of the slot was reached. Although this was rather a crude arrangement, it improved the comfort of the saddle 100 per cent.

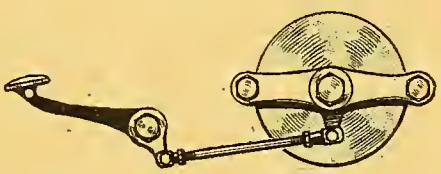


Spring seat pillar which greatly enhanced the comfort of the driver.

### Oiling System Modifications.

The tank being a 1915 pattern, was designed for a lubricator on the outside; however, a 1918 type lubricator was obtained, and the original ⅝in. diameter hole in the tank was slotted forward in line with top tube to make room for the two oil pipes on the new lubricator; a tin sleeve of the required shape was then soldered in. While on the lubrication question, it was found that a new glass was required for the gauge in the sump, but remembering the unfortunate case of a friend, on a similar mount, who had his glass smashed by a flint from a passing vehicle, a copper plate disc was inserted instead. No doubt the oil gauge is convenient (when clean), but I prefer to unscrew the sump cap to examine the oil rather than to risk being drained of oil a few miles from anywhere.

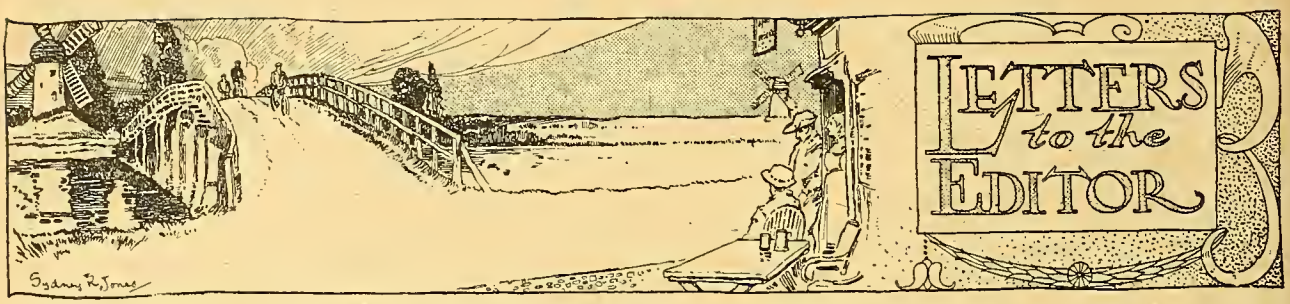
On a trial run solo, the clutch pedal on the front cross tube was found to require rather an effort to reach, so an attempt was made to fix up a pedal similar to the 1920 type, which pivots from the back cross tube. The clutch release arm was removed, and by taking advantage of the double thread was replaced with the arm below; the sketch of the new pedal control is sufficiently clear to explain without further word. SAXON.



Alteration to clutch control, bringing pedal to a more convenient position for operation.

## DOGGED BY ILL LUCK.

SOME machines of undoubted merit invariably fail to justify themselves in public trials. An ingeniously designed French machine, the Viratelle, which has a water-cooled engine, had such an appalling run of bad luck in the International Six Days trials last year, and its rider was so plucky and persevering that the English riders subscribed to give him a consolation prize. In the recent *Tour de France* trial of 2,300 miles a similar machine ran through the whole trip without trouble until within 62 miles of the finish, when it broke its front fork. Hard luck indeed!




The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address**

### *PILLION RIDING INSURANCE RISKS.*

Sir,—I was pleased to see "Ariel's" letter on the above subject. I think it is about time something was done in the matter of insurance charges on pillion riding. It is one of the safest of sports. I have been a pillion rider over twelve years, and I consider that, if anything, insurance charges should be less. My experience is that greater care is exercised when a machine is used for pillion riding.

There are firms which advertise, "No extra insurance for pillion riding." This offer should be properly examined before entering into the scheme. Only the non-tariff companies can make this offer, and none of the better known and therefore reliable companies makes such an offer.

F. M. DAVIDSON.

### *SPRINGING ON A SIDECAR SUBSTITUTE.*

Sir,—As an owner of a Scott Sociable, I was much interested in "Ixion's" remarks concerning this machine, which I can bear out very fully. "Ixion" does not mention the excellence of the springing, which I consider far ahead of any of the light cars I have possessed, though, in my opinion, it would be improved by the employment of friction shock absorbers.

As an example of the easy riding of the Sociable, I recently made a trip of approximately 200 miles, and packed in the back of the car was an Aladdin paraffin oil lamp, complete with mantle, the latter having been in use for about six months. These mantles are, of course, exceedingly fragile when once burnt off, and will crumble to bits if severely jolted in the hand, yet it survived the journey perfectly safely, and is still in use! B.

East Lothian.

### *CONGRATULATIONS TO "THE" SENIOR T.T. RIDER*

Sir,—I should like to express my admiration of the performance put up by Mr. G. Cowley, Sen., in T.T. on Thursday.

When one considers this gentleman's age, it has to be admitted that his riding was nothing short of magnificent.

Is a "disclaimer" necessary? "21."

Cardiff.

### *AMERICAN SUPERIORITY!*

Sir,—Further to the "Scott incidents," by "F. J. D." in your "1,001st," "I could a tale unfold."

Last year an English tourist was hiring a car in New York for touring. Having chosen one, a trial run was started; the car travelled but four miles down town when it came to rest. On opening the bonnet the driver found that the manufacturers had forgotten to put in the engine. Though mechanically ignorant the tourist was doubtful. The manager, however, explained to the incredulous tourist that the car had run four miles on its reputation.

L. R. A. HARVEY.

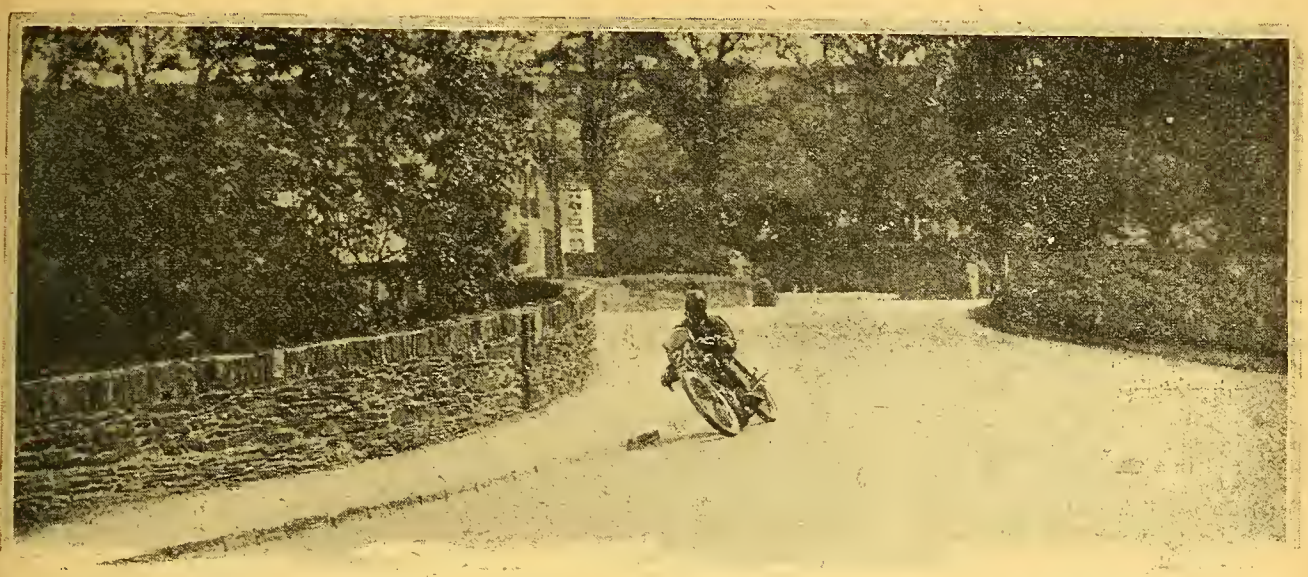
### *THE EVOLUTION OF THE MOTOR CYCLE.*

Sir,—The article in the 1,001st number, entitled "The Evolution of the Motor Cycle," was most interesting and enlightening; it prompts the reflection that England was surely a land of heroes twenty years ago.

Various examples of the machines mentioned in the above article are exhibited at South Kensington Science Museum; they include a front-drive Werner, and a De Dion tricycle with its engine sectioned. The modern 'bus is represented by a 1916 Rudge-Multi—in a glass case.

R. A. ASHBY.

C. G. Pullin (346 c.c. Douglas) passing another competitor who fell at Sulby Bridge. The Douglas, the only flat twin in the Junior T.T. race, made a splendid performance, being third until 10 miles from the finish.



Steering within inches of the kerb, leaning at seemingly impossible angles, and utilising the least camber of the road as a banking, are all to be thought of in lightning flashes by the successful T.T. rider, who must never loose even a fifth of a second by momentary inattention. F. W. Dixon, the rider of Indian machines, has all the qualities of a super road-racer in his make-up.

## *WHAT IT COSTS.*

Sir,—The enclosed schedule of my running expenses with a 1912 free engine Triumph may be of interest. I may say I do all my own repairs except rebushing of the connecting rod, which has been required more often than should be the case, as the bush has on two or three occasions turned in the housing and worked loose that way, instead of legitimately on the crank pin.

I used benzole when I could get it till early in 1921, when the price of petrol was so much reduced. The engine ran rather hot on it; a half and half mixture with Shell gave the best results. The mileage on benzole in 1914 was sometimes as good as 150 m.p.g., but now I can only do about 90 on Shell. I cannot account for the big difference, as I have recently fitted a new cylinder and throttle piston, without any improvement. A new piston might be an advantage, but it would hardly make so much difference in the consumption.

B. T. VINES.

| Item. | 1912. | 1913. | 1914. | 1915. | 1919. | 1920. | 1921. |
|---|---|---|---|---|---|---|---|
| Mileage .. | 4,600 | 4,046 | 3,266 | 2,913 | 2,493 | 2,421 | 2,210 |
| | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| Fuel and Oil. | 3 6 3 | 2 2 6 | 2 2 6 | 1 12 1 | 3 12 7 | 5 8 7 | 2 19 9 |
| Gals. Fuel | 38 | 35½ | 23¾ | 26 | 22 | 22¾ | 21 |
| Miles per gal. .. | 105 | 114 | 137½ | 112½ | 113½ | 105 | 105 |
| | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| Tyres .. | 1 2 6 | 3 7 8 | 3 1 10 | 1 8 7 | 0 2 2½ | 4 15 6 | 2 16 6 |
| Belts .. | 1 0 0 | 0 10 1 | 0 15 1 | — | — | 0 17 6 | — |
| Engine .. | 0 1 0 | 0 7 6 | 0 3 10 | 0 17 1½ | 0 8 3 | 5 4 4 | 0 1 8 |
| Lamp Sundries | 0 2 10 | — | 0 4 2 | 0 2 2 | — | 0 2 0 | 0 1 1½ |
| Sundries | 0 10 3 | 0 1 4½ | 0 13 2 | 0 14 8½ | — | 0 11 8 | 0 5 7½ |
| Spares .. | 0 7 6 | — | — | — | — | — | — |
| Permanent Fittings | 3 0 0 | — | 3 4 11 | 1 12 0 | — | — | — |
| Police Traps.. | — | — | — | 1 10 0 | — | — | — |
| Licences | 1 10 0 | 1 5 0 | 1 5 0 | 1 5. 0 | 1 5 0 | 1 5 0 | 1 15 0 |
| Total cost | £11 0 4 | £7 14 1½ | £11 10 6 | £9 5 3 | £5 8 0½ | £18 13 9 | £7 19 8 |
| Total cost per mile | .661d. | .457d. | .641d. | .76d. | .520d. | 1.85d. | .87d. |

## *PILING IT ON!*

Sir,—In June, 1920, as a novice I bought a single speed motor cycle; in December, 1920, I converted it to 2-speed (c. and k.s.), and in July, 1921, I had the impudence to attach a Canoelet Minor sidecar. The experiment has been fully justified, and in spite of mishandling through my inexperience over 5,600 miles (sometimes with 3 up), it has not yet let me down, neither has the engine been touched by a repairer.

On the 28th ult. with sidecar and passenger it was capable of doing Brighton to Redhill (29½ miles) in 1hr. 20min. through the dense Sunday evening traffic, and this in spite of baulking by char-a-bancs, entailing a loss of at least 8min.

I have no connection with the makers of this excellent machine (2¾ h.p. O.K.-Union 2-stroke), and my only object is to give voice to my thorough satisfaction.

London, E.16. "CITY CLERK."

## *SOLDERING BOWDEN NIPPLES.*

Sir,—In reference to "Road Rider's" recent hints on soldering, these will prove useful to many. There is, however, one defect in the use of solder for Bowden wires. The heating necessarily anneals the wire just at the point where the friction is greatest; this causes it to break again near the nipple. Has not every motor cyclist experienced this? The solderless nipple is therefore the ideal stop.

A. E. BOTTOMLEY.

Sir,—After reading "Road Rider's" article, I thought a few supplementary hints from an old hand might be useful.

For heating the iron a gas flame is preferable, as then the end can be watched. The correct heat is reached when the tinning on the point begins to discolour; and if, instead of rubbing the iron on a brick, it is dipped for an instant in the flux, better results will be obtained.

To solder a nipple, I find that the best method is as follows:—

Thread the wire through the nipple and bend the end so that when the nipple slides up to the bend it is in its right place.

Apply some flux to the wire at the *small* end of the nipple, then, while holding the wire with a pair of pliers about an inch from the nipple and with the nipple down, apply some solder with the iron. Hold the iron there for a time until the solder runs through the cut end of the wire about one-eighth of an inch from the nipple, and turn down the strands radially. Another touch of the iron will put a blob of solder on the turned down ends. This seems complicated, but is far better than gripping the nipple in a vice.

Cambridge. G. R. H.

### TUNING A 4 H.P. TRIUMPH.

Sir,—With reference to the letter from "A.M.I.Mech.E.," is he quite sure that he can get his engine to tick over at only 120 r.p.m.? One exhaust note per second!! 240 r.p.m. perhaps, but 120! I have met few engines that will tick over slower than mine, and I can hardly get below 300 r.p.m.

London, E.C.2. MACCABÆUS.

### TUNING A TWO-STROKE.

Sir,—Now that a Levis machine has again won the Lightweight T.T., there must be quite a number of enthusiastic riders of these machines who would like to tune up their machines in order to get a few more m.p.h. from them. To these I pen the following hints, taking it for granted that the engine is spotlessly clean outside as well as inside, and that the bearings are in perfect order :—

(1) Do not lighten the reciprocating parts or alter the size of the ports.

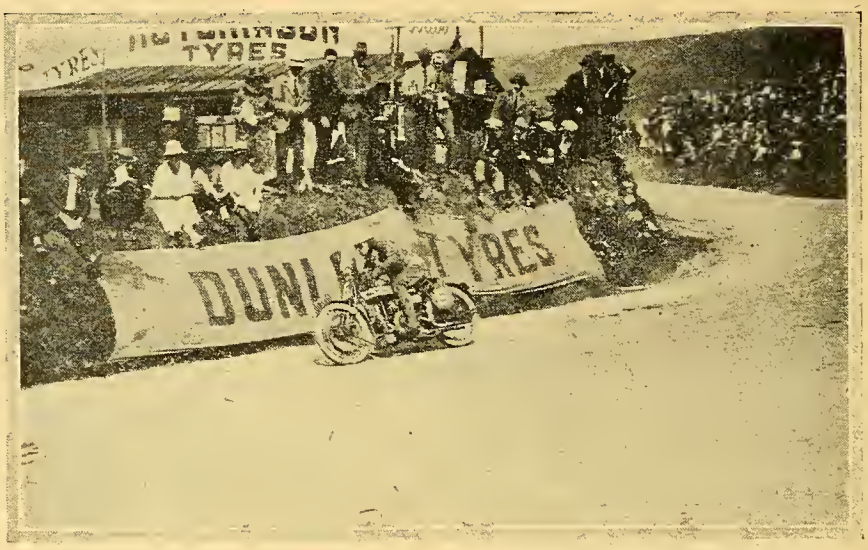
(2) Thoroughly clean the inside of the exhaust pipe where it is bolted on to the cylinder.

(3) Fit a good plug with thick electrodes and a one inch "reach" so that it projects slightly inside the cylinder walls.

(4) For those machines that have variable E.I.C. magnetos a minute screw will be found in the end plate of the magneto just underneath the contact breaker. This screw determines the range of control of the spark lever. Take it out and the speed of the engine will be increased by several m.p.h., as the range of control has been increased by about 50 per cent. Do not make the mistake of over-advancing the ignition.

(5) Fit a variable jet, as without one the best cannot be expected to be obtained from the engine.

(6) Do not alter the silencing arrangements of the machine or fit a straight through exhaust pipe, as the same is very much noisier and actually *decreases speed by several m.p.h.*




Safely round the corner at Craig-ny-baa; A. H. Alexander (499 c.c. Douglas) entering the speedy stretch to Hillberry, one of the fastest portions of the course, where Senior T.T. mounts develop their highest speeds.

(7) An extra air valve is a slight advantage if used correctly.

(8) For T.T. models it pays to alter the position of the float chamber from behind the carburetter (Senspray) to the front of it, as a rich mixture is obtained when climbing hills and weak when descending them.

Oxford. SOLDER.

### LIGHTWEIGHT TWO-STROKES FOR LONG DISTANCE TOURING.

Sir,—Referring to a correspondent's remark about his Royal Enfield lightweight doing 250 miles in one day, I should like to give you the following particulars :—My machine is a standard pattern 1920 Enfield lightweight, and I rode in the London-Edinburgh Trial.

I left Bagshot at 5 p.m. for Hendon (35 miles) on Friday evening, and left Hendon 7.38 same evening, arriving at Edinburgh, on schedule time, Saturday evening (408 miles), and on Sunday morning left Edinburgh (11 a.m.), arriving Northallerton (Yorks) 8 p.m. same evening (168 miles); left Northallerton 9 a.m. Monday, and arrived Bagshot 12.30 p.m. (approx. 256 miles). Can any correspondent beat this on a standard pattern 190 Enfield lightweight. Further, throughout the whole of the journey I did not use a tool—nothing but an oilcan. I am purely an amateur rider. H. SUTTON.

Sir,—I read with interest the letters from Mr. H. C. Sharp and "Baby Enfield," as I am, or was during the winter, the owner of a two-stroke Hawker.

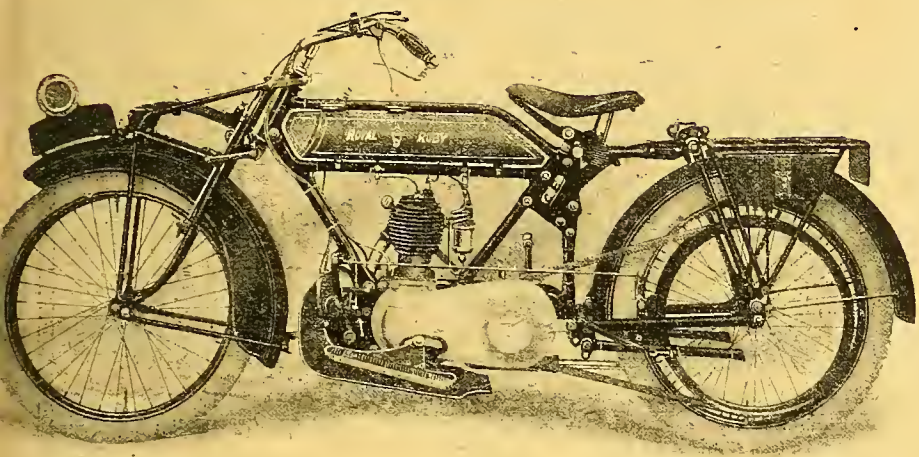
During the winter I have regularly on Sunday, with my wife on the pillion, done journeys to York and back, Carlisle and back, Scarborough and back, from this city (Newcastle). Last Sunday we both went to York in 3¼ hours without touching the ground or stopping in any way, and we returned the same afternoon in the same time. The total distance is 160 miles.

A. E. STORY.

Adjusting goggles or enjoying a final cigarette—that is how the riders assembled on the eventful morning, ready to prove their mounts and themselves in the big event of the year—the Senior T.T.

# RUBY

## f Perfection."



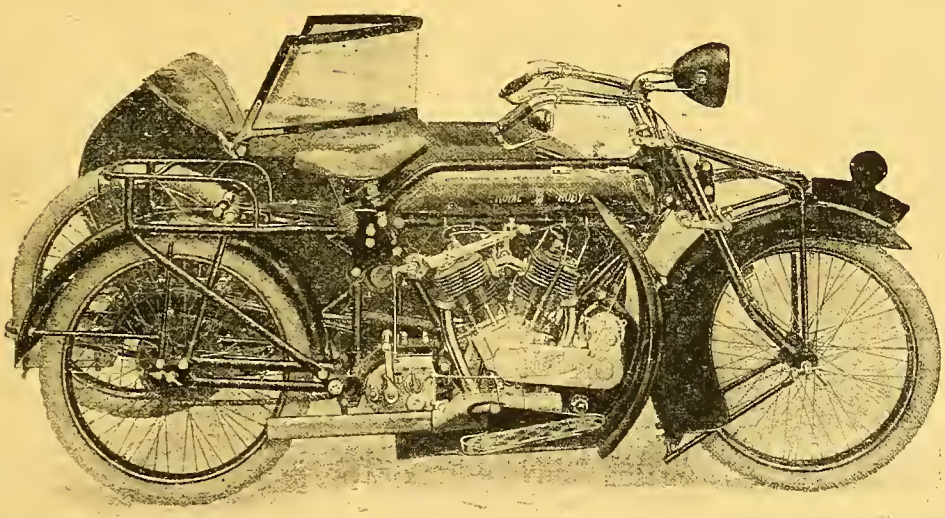
The most up-to-date Motor Cycle on the market, manufactured throughout in our own Works. The only efficient system of springing. Powerful and supremely comfortable. Eminently suitable for business and professional use. Royal Ruby 375 c.c. Engine, 3-speed Gear, clutch and kick-starter. Patent adjustable spring frame and fork.

**£90 ALL ON**

. Twin Combina-
Patent adjustable
g frame and side-
heel. "Luxury in
lsis." All wheels
changeable. Large
coachbuilt body,
ed with weather-
"Atholeather."
e wheel and carrier,
ge and petrol
ers, windscreen and
n, sidecar step,
horn and lighting
set complete.

tandem 2-seater
decar £12 extra.

**85 ALL ON**



*the Ruby Catalogue, free on application. Splendidly illustrated.*

**orks: Altrincham. Agents Everywhere.**

*wich, S.E.10. The Pneumo Motor Works, 169, Lower Clapton Road, N.E. Referee Cycle Co., Ltd., S. Kensington. Wauchope's, 9, Shoe Lane, Fleet St., E.C. Wm. Whiteley, Ltd., Queen's Rd., Bayswater, W.*

# "Motor Car Practice at Motorcycle Cost."

**IMMEDIATE DELIVERY OF THE WONDERFUL SHAFT DRIVE 8 h.p. 4-CYLINDER MACHINE,** the Engine of which is illustrated. A super-engine of moderate size.

*Full of vim, but docile and tractable withal.*

# F.N.

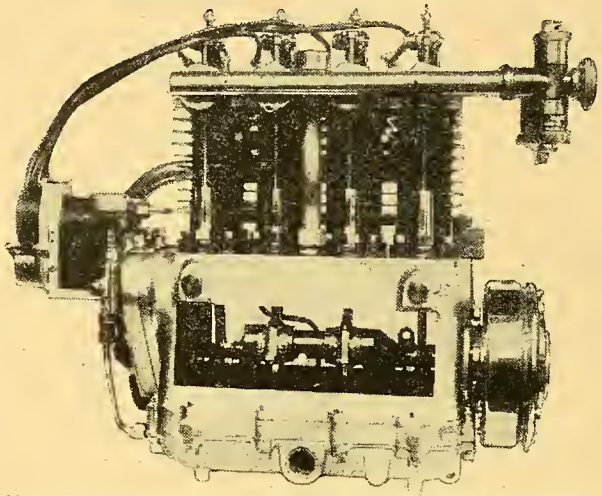
*Easy Terms Arranged.*

2½ h.p. Standard Touring Model A, 2-speed, kick-starter, hand-controlled clutch .. .. **£55**

3 h.p. New Model de Luxe with overhead-valved engine .. .. **£72**

8 h.p. 4-cylinder de luxe (see illustration of engine). New Model, with overhead inlet valve.. **£135**

Sidecar Combination with Hood and Screen **£174**



The new overhead-valved F.N. engine of the 8h.p. de luxe "F.N." A section of the crankcase is cut away to show the liberal dimensions of the crankshaft and big ends. Roller bearings to valve rockers. Ball bearings to crankshaft.

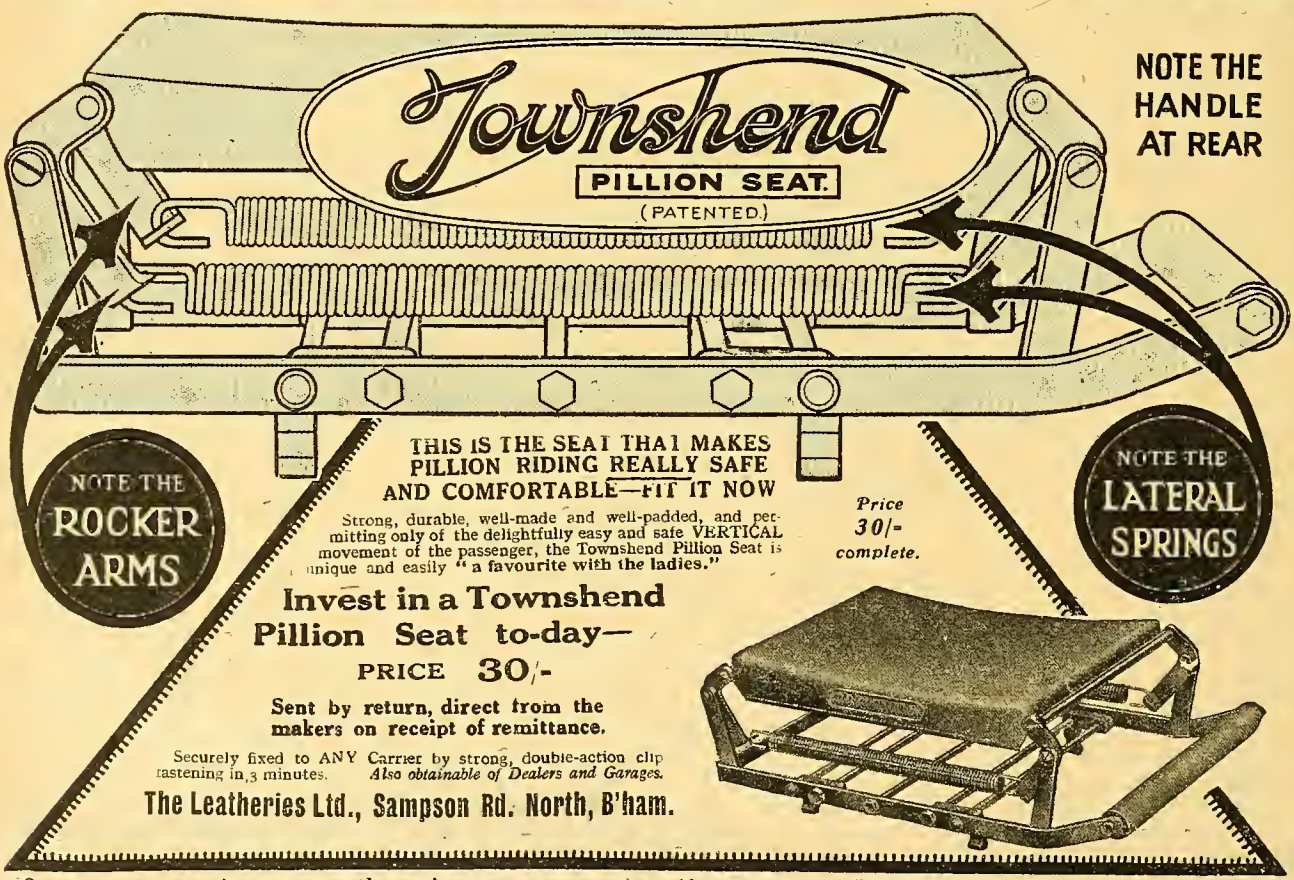
# F.N.

*Send for Handsome Booklet and name of nearest AGENT.*

**F.N. (England), Ltd.**
**Efenmo Works,**
**Kimberley Road,**
**Willesden Lane,**
**LONDON, N.W.6.**

Telephone: Willesden 2395.
Telegrams:
"Efenmo, Brond, London."

## "A CAR ON TWO WHEELS."




**THIS IS THE SEAT THAT MAKES PILLION RIDING REALLY SAFE AND COMFORTABLE—FIT IT NOW**

Strong, durable, well-made and well-padded, and permitting only of the delightfully easy and safe VERTICAL movement of the passenger, the Townshend Pillion Seat is unique and easily "a favourite with the ladies."

*Price 30/- complete.*

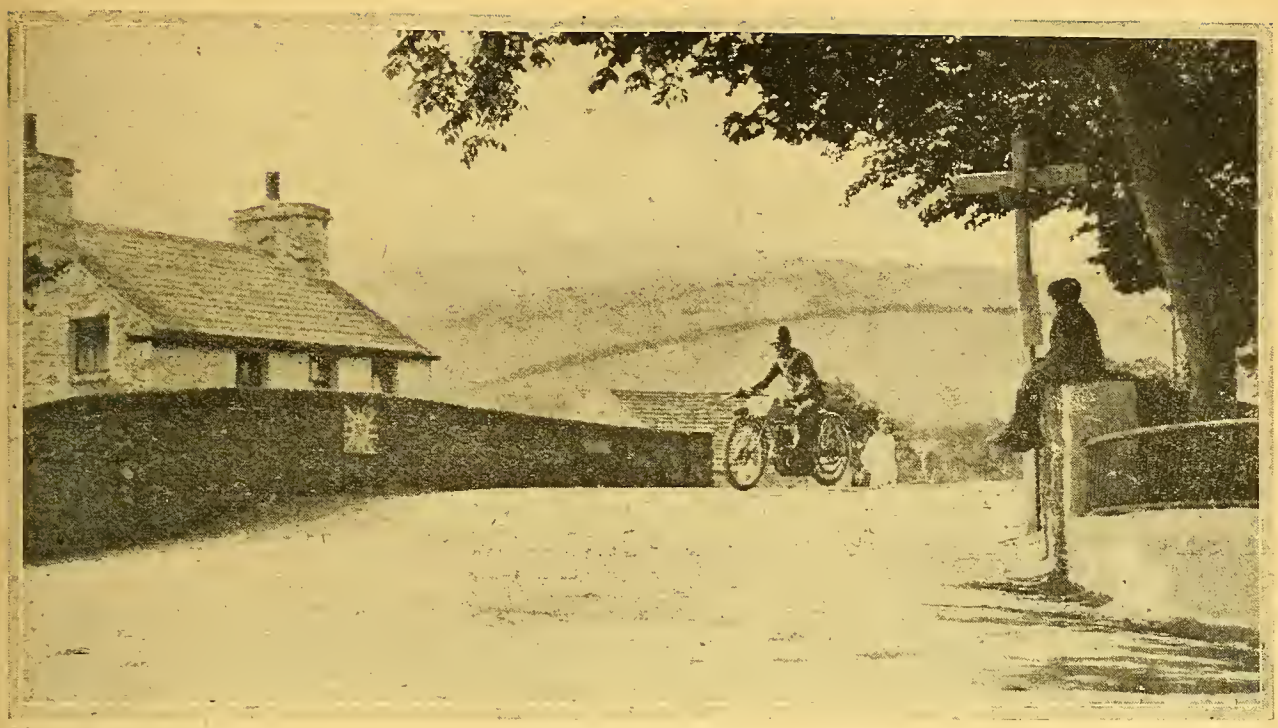
**Invest in a Townshend Pillion Seat to-day—**

**PRICE 30/-**

**Sent by return, direct from the makers on receipt of remittance.**

Securely fixed to ANY Carrier by strong, double-action clip fastening in 3 minutes. *Also obtainable of Dealers and Garages.*

**The Leatheries Ltd., Sampson Rd. North, B'ham.**



Ballaugh Bridge, one of the lesser-known danger spots on the Tourist Trophy Course. The fastest machines jump at this point, yet, immediately, they have to be steered into a narrow and curving village street. J. Joynson, in the Junior Race, is shown with both wheels of his Invicta clear of the road.

### *WITHOUT INVOLUNTARY STOPS.*

Sir,—I noticed recently that a machine was said to have run for a whole week without an involuntary engine stop. It occurred to me that this cannot be any great feat nowadays. I am but a clerk with few tools (mostly of the "Woolworth" type), yet I manage to keep an old machine running all the year round. I see from my wife's records that our last involuntary engine stop was in October, 1920 (6,000 miles nearly). Barring actual breakages, there seems no reason why a machine should stop if it is looked over occasionally. Surely some of your readers could supplement this, real experts I mean, and not mere M. U. UDDLERS.

London, S.W.

### *PISTON CLEARANCE.*

Sir,—With reference to the comments by "Ixion" on the G.R.I. engine, I was amused by his remarks on the piston clearance.

Being partly concerned in the design of the piston, I would like to point out to "Ixion" that:

1. The piston was designed to have a clearance of .004in.
2. The pistons were not finished to size by a "lathe hand," but, as is the usual practice, they were ground accurately to size, a tolerance of plus or minus .0005in. being the maximum allowed. "AMUSED."

Gloucester.

### *GOOD SAMARITANS.*

Sir,—May I through your columns thank the unknown driver and passenger of a Brough sidecar outfit, who, when the front wheel spindle of my own outfit broke at 6.15 a.m. three miles north of Ferrybridge in the London-Edinburgh run, drove to Ferrybridge in quest of a spare? Failing in this, they returned to me and took my wife to Pontefract, where they went to much trouble in finding first the owner and next the manager of the only likely motor cycle depot, but unfortunately no spindle could be obtained.

In the meantime I had discovered a small garage at Fairburn, owned by Mr. John Thomas. On my wife's return, this gentleman rode off to Castleford on a similar quest, again without success. He then sent his assistant per Douglas sixteen miles to Leeds. His wife meanwhile gave us a most welcome breakfast and a souvenir in the form of a giant cauliflower. (I wish I could have it embalmed.) The spindle obtained, it was soon fitted, and Mr. Thomas made us the almost foolishly small charge of 7s. 6d. inclusive. Needless to say, the long delay robbed us of any chance of even a "bronze." A. H. NELSON.

[We do not usually make a practice of publishing in full instances of sportsmanship on the road—generally there are too many—but we feel justified in making an exception of this double proof that "the fraternity of the road" is no mere empty phrase.—ED.]


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle.*

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle.*
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# Current Chat

## Special Features.

TECHNICAL ASPECT OF THE T.T. RACES.

THROUGH THE MOUNTAINS OF ARGYLL.

PASSENGER MACHINE TOPICS.

### Times to Light Lamps.

[illegible] p.m.

[illegible]

[illegible] 9.6

[illegible] 9.8

Times have to be observed thirty minutes earlier in Irish Counties legislation and Lighting Order 1911.

### Lighting up a Speed Event.

The novel idea [illegible] is to be tried in the streets of Southport next [illegible] a spectacle, an effort will be made to [illegible] a midnight scene. The event starts at 7 p.m.

### Events for Big Midland Club.

Events for the Midland Centre meeting [illegible] to be held on the 24th inst. [illegible] in charge. Mr. A. F. Spencer, [illegible] Street, Coventry, is the hon. secretary.

### Australian Road Record Broken.

The reliable "Melbourne Australia" [illegible] record the best journey [illegible] Darwin, having a Douglas [illegible] with the 950 miles each way has been [illegible] the Darling Downs, parts of which are very mountainous.

### The Tamil Motor Cycle.

A letter in a recent South African [illegible] in agreeing a native who was fully [illegible] in the police raided a motor [illegible] under the street and set it in [illegible]. The engine did not surrender until the rider had had a shot between the cylinder [illegible].

### Overland.

The Lady [illegible] is to visit Devizes on [illegible] Motor Cycle Club's [illegible] "Motor Cycle Enthusiast" [illegible] Lady Douglas takes in the [illegible].

The Lady [illegible] time many [illegible] in the case of England.

### Mechanical Traffic Signals in Paris.

Silent [illegible] are to be installed in the streets of Paris. They will [illegible] the direction to be followed by the [illegible], and the direction is to be avoided. There will be no policemen in your [illegible] but in their place there will be [illegible] green lights will convey information to the motorist as to what [illegible] the traffic is approaching there [illegible] will be lights arranged for a single policeman. Red lights will signify "stop," white means "go ahead," and the green "caution."

### A Swiss Road Race.

Motor-cycle competitions are becoming increasingly popular in Switzerland, and a [illegible] is to be held in the [illegible] this year. This is submitted to take place in the first week in July. We understand that several enthusiasts are [illegible] the latest sports models of British manufacture, among them the [illegible] Douglas.

### An Official South African T.T.

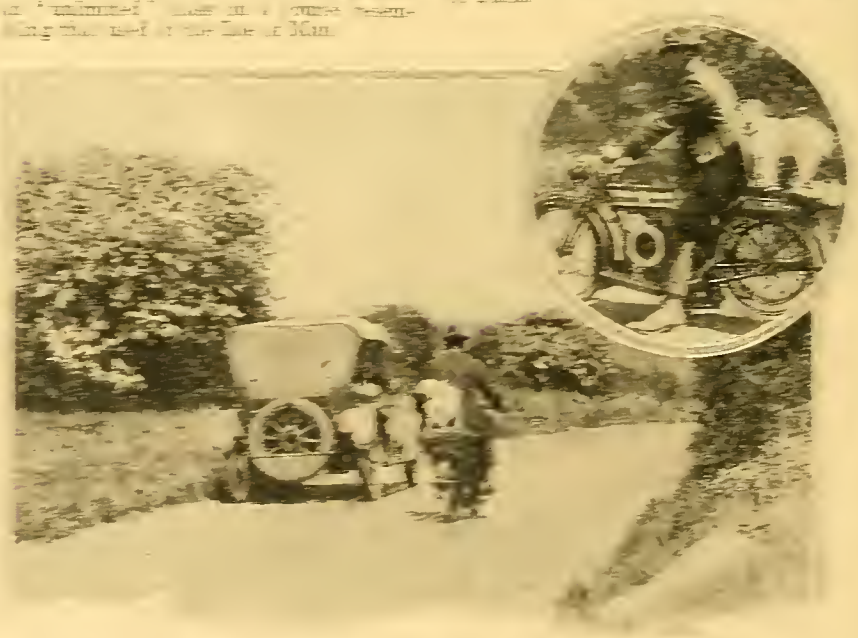
The Mayor of the Town of South Africa was [illegible] in Cape Town before the war began, and [illegible] motor-cycle [illegible] in South Africa in the same way [illegible] the A.C.U. does in England. It is [illegible] a South African T.T. Race, which will include [illegible] in it in 1911. [illegible] Class B in [illegible] Class C in [illegible] and Class D in [illegible]. The conditions will be as nearly as possible [illegible] Class B in the Manx T.T. Races. The [illegible] somewhat much [illegible] in the way it is native has been [illegible], as it would not be safe to have a "mixed" race in a [illegible] having the best of the Isle of Man.

### Penny Steep!

According to a daily paper's report, [illegible] by several of our readers, the gradient of Birchanger Pass is 1 in 3 for about three miles.

### 774 Miles in 24 Hours.

By averaging a distance of 774 miles, Lord [illegible] Mercedes won the Isotta 24-hour road race. Second place was scored by Nazzaro driving an Isotta, who covered 765 miles. Lautenschlager, [illegible] third in this class with 751 miles, and Lambert, Excelsior-Zedel, was fourth with 731.1 miles. In the 3½ litre the winner was Pierre [illegible] two-seater, who covered 731.1 miles. A good performance was made by Clem Mauselin in the 2½ litre class in covering 647 miles. The race, promoted by the Italian Touring Motor Club, took place over a short course in the eastern suburbs of Paris.



Dog mates and dog managers make a unusual crew. The little wire-haired under dog on the carrier of the Douglas does not ride under compulsion, but positively revels in the quiet evening run in the sun with as much enthusiasm as his master.

### All-purpose Machines for the Multitude.

At a recent luncheon given to the Press by the producers of the Ner-a-car, Earl Fortescue stated that the Ner-a-car was intended to be a general service motor cycle: an extended programme had been developed.

### Double Twelve-hour Record Attempt.

Last Thursday D. R. Marchant commenced a twenty-four-hour record ride on a Norton under the new "double twelve-hour rules," whereby twelve hours are completed on two consecutive days. The attempt was abandoned owing to rain.

### Club Propaganda.

In the Isle of Man during the T.T. period the residential headquarters of each competing team are invariably distinguished by a banner; not to be behind in publicity the local Jawa agent, Mr. W. A. Dyer, the "Jawa man" of the Tredinnick Centre, A.J.C., and the Bradford M.C.C. was similarly distinguished by a suitable banner to attract the North-countrymen as a rendezvous.

### Prize Winners Wanted.

The addresses of the following competitors, who left the London Exhibition during the North London Rally on Whit Monday without having their prizes, are wanted by the organisers: Mr. L. W. Day, "Claremont," Ballards Lane, Finchley, N.3; Mr. Bugg and Mr. Giddings. Ivy and Dot in hen-pegging competition. Mr. Barnes, Dot in pea-eating competition, and Mr. Bardley, Dot in the balloon blowing competition for cars and cycles.

### A Sporting Timing.

In two of competitions recently staged one apt concerning the speed in which certain motor vehicles were able to pass through Welwyn, the Chief Constable of Bedfordshire (Colonel Law) issued a notice to the Press in the effort that he intended to make an example of the few who drove at a dangerous speed through that village. In response to this spontaneous attitude, such a marked improvement has been noticed since this warning was issued that very few prosecutions were necessary. Infringements have also been recorded at reckless driving through Markyate, a few miles from Dunstable on the Holyhead Road, where the Chief Constable gives motor cyclists he intends to take similar action.

### A Motor Cycle Wanted.

It is not often that a reader of *The Motor Cycle* asks for a machine to be given to him, but a case brought to our notice is a really deserving one. A clerk in the Mission to Seamen's Institute lately returned from Ireland and only just recovered from a three weeks' bout of typhoid, having a large area to cover in the execution of his duties, his only means of locomotion being a motor cycle, and as the training ship "Conway" urgently needs a motor cycle to help him in his work. On Sunday he starts the day with a service at the Seamen's Hospital at 8.45 a.m. We sincerely hope that some charitably disposed reader may care to present him with some old machine which would help him in his good work.

### In a Good Cause.

During T.T. week in the Isle of Man Mr. Alexander W. Lisle, of Wavertree, raised by collection a sum of £28 15s. on behalf of the National Institute for the Blind. Mr. Lisle was a timed rider, received congratulations from practically all the prominent riders and traders who were in the Island.

### The Date of the I.O.

If the whole year were "fair" it is unlikely that any dates for T.T. races will be fixed so early in the year. In the spring and early summer the flow of orders is at high tide and the heavy work of race rules and the heavy time of it, makes either to plan and personal is a real inconvenience. By September nominations is easing off and such a comparatively late date would probably be acceptable to the Manx people who desire the T.T. to extend their season, but to any practicable extent in mind and is so expressed.


THE NEXT STAGE!

MOTOR CYCLISTS interested in small or large cars should get

The Autocar

Every Friday 4d.

the forerunner of all motoring journals. Founded in 1895, it contains the largest and most reliable motorable paper and enjoys the greatest circulation. It is undoubtedly unequalled as the representative British motoring journal.


### An American Motor Cycle Show.

A date early in February, 1923, has been arranged for the National Motor Cycle Show to be held in New York City.

### Good Reason for Retiring.

After going through the rules of the London-Edinburgh run so far as Darlington without trouble, E. J. Mac Gill, who motored on a solitary with a combination, with the result that the lay the latter.

### British Team for the International Trophy.

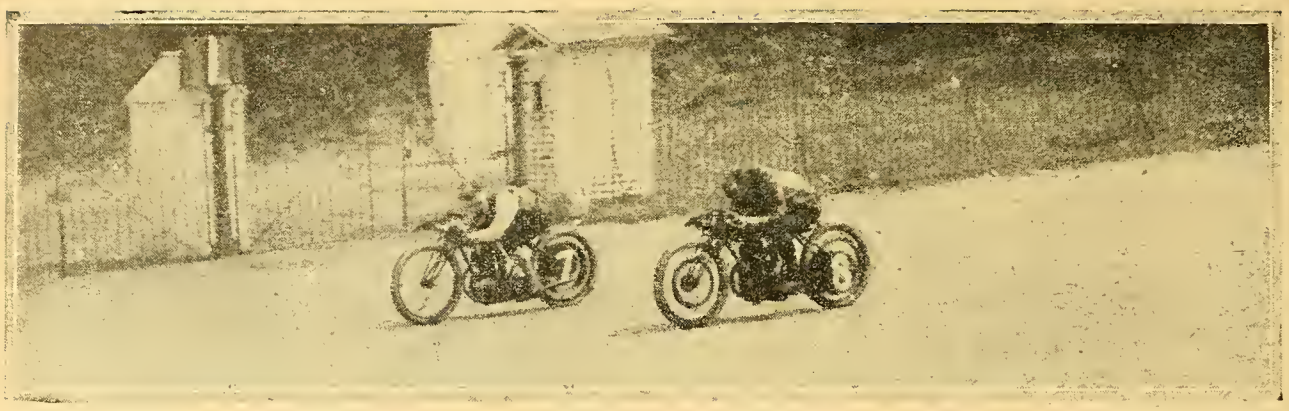
In view of their success in the Isle of Man, the A.J.C. has formed the three winners of the three Junior Trophy races—A. Bennett (AJS), Sandham, Senior T. (Velocette), and A.J.S. Junior and a Reserve (AJS Lightweight)—to have the honour of representing England in the International Six Days Trial which starts from Geneva on August 3rd.

### To Compete for the Club Championship.

As every event in last year's list has been selected for the team trial organised by the Motor Cycling Club for the Efficiency Challenge Trophy presented by *The Motor Cycle*. It seems having sent in their names.

The following are the clubs entered: The Motor Cycling Club, Sheffield and Hallamshire Section, Worcester and District, Poole Scouts, Leeds Tramway, Birmingham University, Northern Wolverton and Hampstead, Luton and South Beds, Coventry and Warwickshire, Leeds, Ilkley and District, North-West London, Ilkley Wanderers and District, Bradford, Lower and District, Nottingham and District, City and Guilds, Leicester and District, Oxford, North London, Ealing and District, Essex, Cambridge.

S. L. Baker on right, of Douglas, has seen it a new role. Never did one of his twins serve him so shabby as this stubborn animal, and never has he contrived in the rashest efforts of moral steering to evacuate. Had this race been held under jockey rules we are afraid he would have been disqualified for biting. A scene at the recent Douglas sports.



A tussle between a pair of Sunbeams. P. G. Kennedy and W. L. Kenning in the 5-Lap Solo class.

# A WIN FOR THE DUKE OF YORK.

## The B.M.C.R.C. Third Members' Meeting at Brooklands.

NUMEROUS short distance handicap races, fine weather, and a fair attendance were features of last Saturday's third members' meeting of the British Motor Cycle Racing Club.

Had it not been for the aftermath of the T.T. races more publicity might have been accorded to this meeting, and a larger attendance might have resulted, but as it was the park was not uncomfortably crowded. A party of paralysed ex-soldiers from the Alexandra Hospital, who had been invited to the track, formed a proportion of the spectators.

Event 1, a two lap race for motor bicycles up to 350 c.c., saw nineteen competitors on the starting line, and among these Le Vack was noticed mounted on the identical machine he rode in the Isle of Man, and J. V. Prestwich, who rode a J.A.P.-engined Coventry Eagle, with side-by-side valves. F. A. Longman rode the A.J.S. entered by Harry Martin.

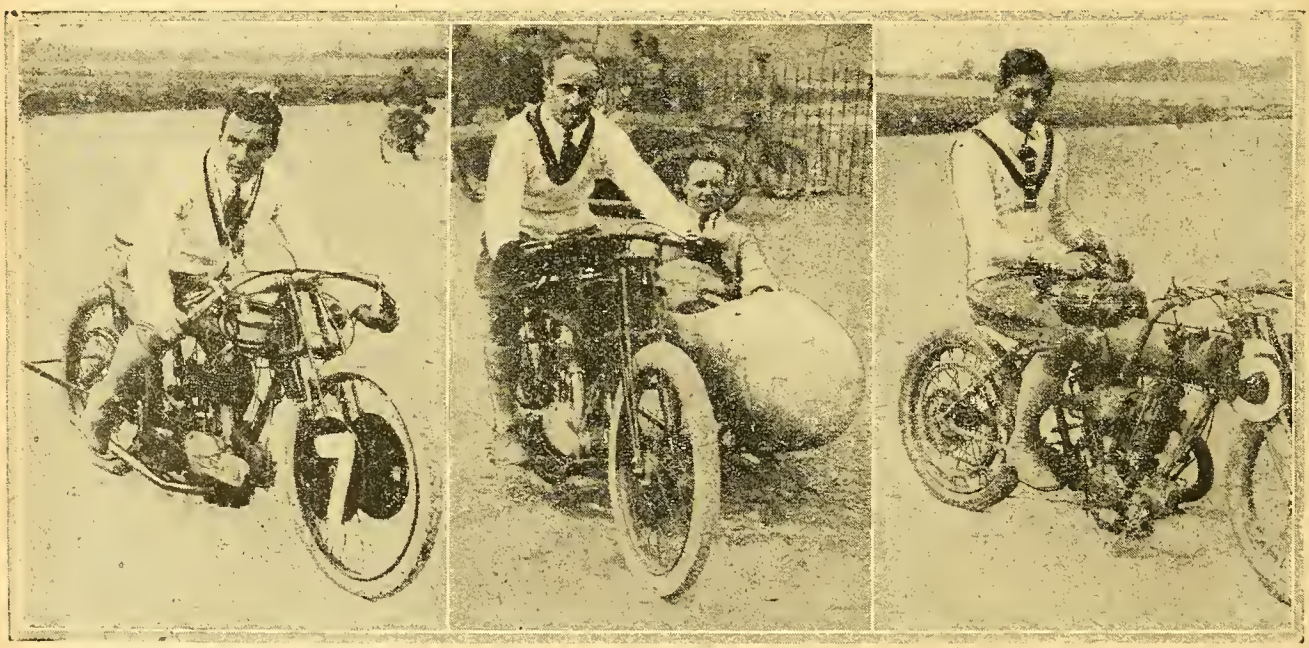
### The Second Lap.

At the end of the first lap Jones (Coulson) was leading, Watson (Douglas) and Fairweather (Coulson) were striving for second place, while the remainder of the leaders passed in the following order :—Reyersbach (Trump), Hall (Trump), Greening (Francis-Barnett), Baxter (Holroyd), Dequin (Ivy), Holroyd (Holroyd), and Williams (Sheffield-Henderson). Weatherell (Weatherell) retired with a sheared fly-wheel key, and Dequin failed to finish owing to a choked jet.

The result was an easy win for the first-lap leader.

F. V. Jones (346 Coulson).
S. M. Greening (249 Francis-Barnett).
G. H. Williams (348 Sheffield-Henderson).
Winner's speed, 59.29 m.p.h.

The second event was a similar race for

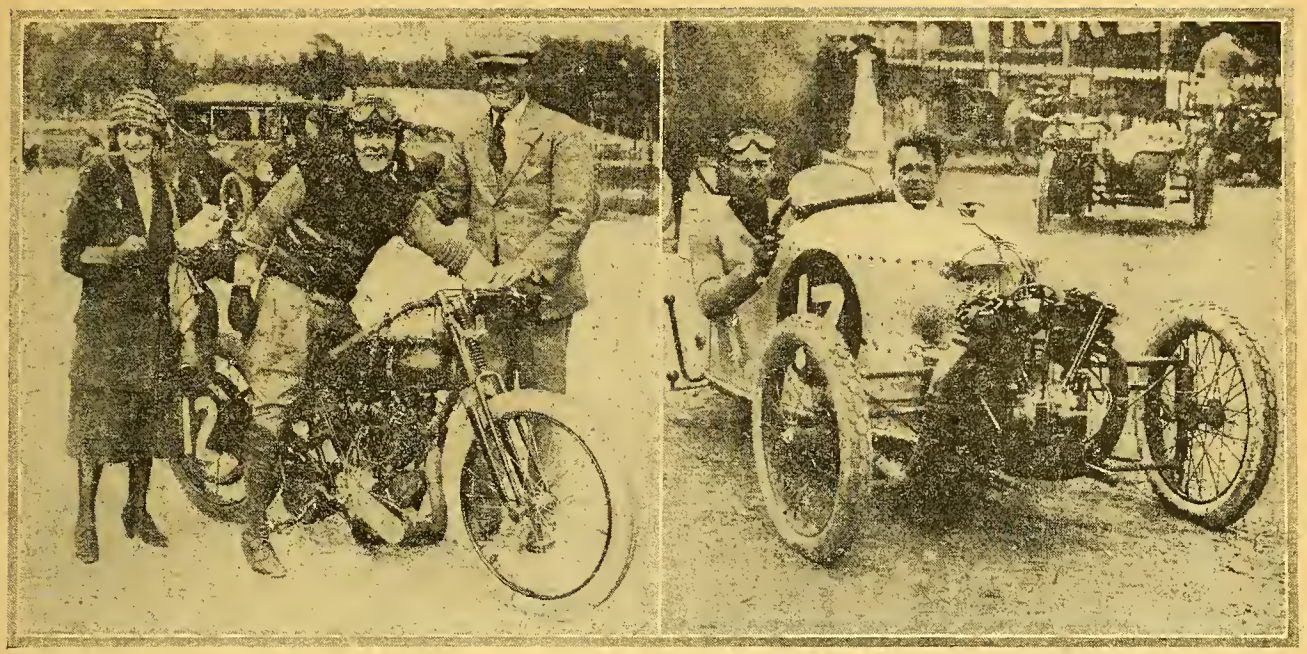


WINNERS AT BROOKLANDS LAST SATURDAY.

Lt. R. T. Grogan, R.N. (490 c.c. Norton)—solo handicap for machines between 350 c.c. and 500 c.c.; speed 67·52 m.p.h.

S. M. Greening (346 c.c. Francis-Barnett sidecar)—two-lap handicap for sidecars and cycle cars; speed 54·05 m.p.h.

O. M. Baldwin (994 c.c. Matchless)—two-lap solo handicap for machines between 500 c.c. and 1,000 c.c.; speed 85·07 m.p.h.



The Duke of York's rider, S. F. Wood, who won the 5-Lap Solo Handicap on a 994 c.c. Trump-Anzani. His speed was 86·12 m.p.h.

H. Martin (1,074 c.c. Morgan-Anzani), winner of the 5-Lap Passenger Handicap for Sidecars and Cycle Cars of any class. His speed was 70·58 m.p.h.

machines with engines between 350 and 500 c.c. In this, Lieut. R. T. Grogan, R.N., took part. This officer is certainly one of the Navy's most skilful motor cyclists, as he won one event and was placed in two others. He took part in last year's Arbuthnot Trophy Trial, while other naval men who assisted at this competition, Lieut. Evans Graves, R.N., winner of the first Trophy Trial in 1919, and another Arbuthnot Trophy competitor, Lieut. H. C. Hovenden, R.N., helped to push him off. Yet another naval competitor was Lieut. A. G. Smith, R.N., whose picture we recently reproduced in *The Motor Cycle*. He lost his leg in an accident at sea, but notwithstanding rode a plucky race in Event 7. So the Senior Service was well represented.

F. V. Jones (348 c.c. Coulson), winner of the 2-lap solo handicap at 59·29 m.p.h.

### 500 c.c. Race Falls to a Naval Man.

In the second event Emerson was mounted on a racing Douglas, with gate change and a Flexi carburetter, while two machines not often seen on the track were Cunningham's P. & M. and Mallett's Zenith-Bradshaw.

Halford (Triumph) rode next to Emerson, and before the start the former asked the latter, jokingly, to wait for him; his machine was the original o.h.v. Triumph.

Marshall (Matchless) made a bad start, but a quick recovery. Mallett, whose Zenith-Bradshaw was fitted with a gauze shield to protect the front cylinder tappets from dust (he used no front mudguard) succeeded in leading at the end of the first lap, but unfortunately he was no stayer. Others in the first rank were Grogan (Norton), Sheraton (Norton), Williams (Sunbeam), and Marshall (Matchless). Ill-luck befell Sheraton and Kehoe (Rudge), whose engines seized; Mallett retired with a faulty plug. Grogan had an easy win.

Lt. R. T. Grogan, R.N. (490 Norton).
E. A. Marshall (496 Matchless).
A. G. Williams (496 Sunbeam).
Winner's speed, 67.52 m.p.h.

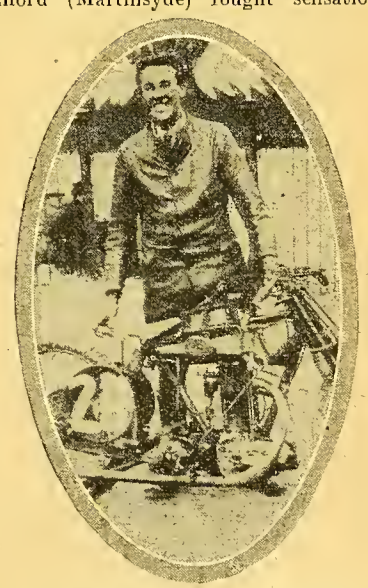
Also a two-lap handicap, the third race was for motor bicycles with engines between 500 and 1,000 c.c.

### Overhead Valve Twins.

Several interesting mounts took part. Stewart's Trump was fitted with one of the new 8-valve Anzani engines, and was provided with additional back frame stays to stop whip, while Baldwin's Matchless had one of the latest M.A.G. racing engines and a Zenith carburetter. Temple (Harley) seemed to be too highly geared to get off the mark really smartly, but even if he had it would have availed him little, as the handicapping was as bad in this race as in any other during the afternoon, since not a single close finish can be recorded.

### Results of Poor Handicapping.

Hall (Trump) took the lead in the first lap, while Baldwin (Matchless) and Gifford (Martinsyde) fought sensation-



C. M. Fairweather (249 c.c. Coulson) who won the 5-lap handicap at 61·7 m.p.h.

### A Win for the Duke of York.

ally all the way for second place. Longman (Ariel) rode next, followed by Bainbridge (Martinsyde) and Allchin (Harley). As usual, the winner came in streets ahead of the rest of the field.

O. M. Baldwin (994 Matchless).
T. R. Allchin (989 Harley).
J. Hall (744 Trump).
Winner's speed, 85.07 m.p.h.

Next followed a series of five-lap handicap races, Event 4 being for lightweights and juniors. There was an excellent entry, but as the limit man had 4 min. 20 sec. start of the scratch man, he and others near him had finished their first lap before the scratch man had started. Consequently the public became thoroughly confused and doubted the results.

C. M. Fairweather (346 Coulson).
F. A. Longman (349 A.J.S.).
A. Watson (350 Douglas).
Winner's speed, 61.17 m.p.h.

Some excitement was provided for a change in the next race, as Emerson (Douglas) worked up from scratch to winner amongst the 500 c.c. machines. Grogan (Norton), whose handicap had been reduced to 1m. 50s. from 2m. 20s. acquitted himself well. Whitaker (Sunbeam) had his plug blow out, and Kennedy (Sunbeam) had a broken piston ring. Gradually working to first place Emerson won easily, but missed breaking the ten miles record.

J. L. Emerson (499 Douglas).
C. Volk (499 Douglas).
Lt. R. T. Grogan (490 Norton).
Winner's speed, 81.39 m.p.h.

### A Royal Win—By Proxy.

The last five-lap handicap was that for motor bicycles with engines between 500 and 1,000 c.c. Its chief feature was the fine riding of the driver and the excellent performance of the Anzani-engined Trump entered by His Royal Highness the Duke of York and driven by his chauffeur S. E. Wood. True, Wood had a start of 2m. 10s. on scratch, but his machine was a dark horse, and he not only led in every lap but won with ease. Allchin (Harley) put up an excellent fight for second place, which he attained in the fourth lap, but the handicap allowed to Temple (scratch) did not permit of his getting better than third place.

H.R.H. The Duke of York (994 Trump), (driver, S. E. Wood).
T. R. Allchin (989 Harley).
C. F. Temple (989 Harley).
Winner's speed, 86.12 m.p.h.

Next on the programme was a two-lap passenger handicap for sidecars and cycle cars of any class, but it provided no special excitement. Its winner, Greening, had 2m. 26s. start over the scratch man, Ware (Morgan-Jap), who, though travelling well, only managed to finish seventh. Harry Martin driving an Anzani-engined Morgan rode fourth in the first lap, and managed to finish second, while Greening came in an easy winner.

S. M. Greening (346 Francis-Barnett sc.).
H. Martin (1,074 Morgan-Anzani).
R. Dequin (349 Ivy sc.).
Winner's speed, 54.05 m.p.h.

### Private Owners' Handicap.

A private owners' three-lap handicap followed, open to a private owner member driving any class of machine, his own private property.

Jones (Coulson) kept the lead for two laps, and then dropped to fourth place. In the second lap Williams (Sheffield-Henderson), Whitaker (Sunbeam), Sheraton (Norton), Capper (Morgan), and Grogan (Norton) rode in a bunch after the leader, but Whitaker disengaged himself from the group and rode in an easy winner.

J. E. Whitaker (496 Sunbeam).
G. H. Williams (348 Sheffield-Henderson).
Lt. R. T. Grogan, R.N. (490 Norton).
Winner's speed, 66.02 m.p.h.

A five-lap passenger handicap was the last race. E. B. Ware (Morgan), scratch, retired with a broken propeller-shaft in the first lap, in which Dequin (Ivy sc.) was the leader. Dicker (Rudge sc.) led in the second lap, and in the third dropped to fourth place; afterwards Martin (Morgan) took the lead, which he maintained to the end, and won easily. Meanwhile Le Vack (Zenith-Jap sc.) forged ahead and had a splendid tussle for second place with the veteran rider de Lissa.

H. Martin (1,074 Morgan-Anzani).
H. Le Vack (988 Zenith-Jap sc.).
O. de Lissa (994 Motosacoche sc.).
Winner's speed, 70.58 m.p.h.

## 200 Miles Sidecar Races.

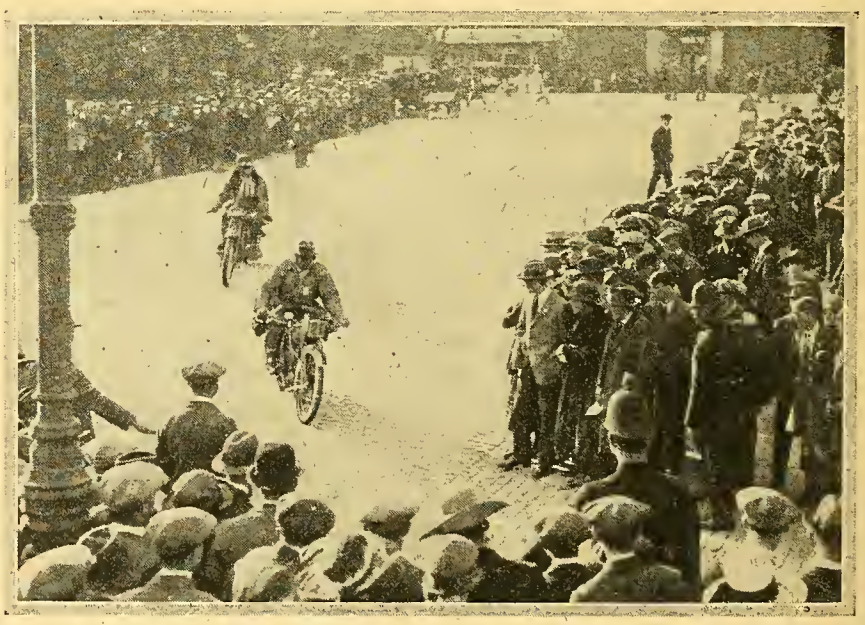
SOME forty entries have been received for the 200-mile sidecar races promoted by the Ealing and District M.C.C., to be held on Saturday at Brooklands.

There are three classes, viz., 350 c.c., 600 c.c., and 1,000 c.c., and the machines in each category will be started at 12 o'clock (noon), 1 p.m. and 2 p.m. respectively. By starting the machines in this way it is anticipated that all three winners should finish at about 4.30 p.m. Entries have been made by such well-known riders as Le Vack, Temple, Dixon, Don, Stewart, Davidson, Pullen, O'Donovan, Horsman, Emerson, and Prestwich, so that some high speeds may be expected.

# THE HARE THAT JUMPED.

ALTHOUGH he found that the greater portion of the London-Edinburgh run, through which he drove a Brough Superior sidecar, was "monotony itself," W. A. Fell Smith has described for us this extraordinary incident that befell him between Leadburn and Penicuik. "On approaching a cross-roads where several people were standing," he writes, "my passenger pointed to a very large hare which was crossing the field to our left. We reached the corner of the field simultaneously with the hare, which ran into the road, apparently jumped to avoid the sidecar wheel, and struck my passenger full in the face with sufficient force to knock him senseless for two or three minutes!

"Fortunately no serious damage was done beyond a broken pair of Triplex goggles and a black eye, and after a 'wee drap' of whisky had been administered by a kindly onlooker we were soon able to proceed. The only thing that really worried my passenger was that the hare wasn't killed for him to take home as a souvenir! Can anyone equal this for a remarkable accident, I wonder?"



Great enthusiasm was shown by the public on the arrival of the London-Edinburgh competitors at the Scottish capital. Far bigger crowds gathered than were seen at the start at Hendon.

# THE CLUB-TEAM CHAMPIONSHIP.

## M.C.C. Team Trial for "The Motor Cycle" Cup.

"THE MOTOR CYCLE" CHALLENGE CUP. Presented in 1909 by the proprietors of "The Motor Cycle" after the original "Motor Cycle" Cup had been won outright in 1908.

WHICH club will produce the champion team this year? Since the popular M.C.C. team trial for *The Motor Cycle* Cup was inaugurated in 1904 there has been very keen rivalry between the more enterprising clubs for the honour of holding the trophy, which can be won outright by three successes.

This year 27 clubs are competing in the event, which takes place on Saturday, the 24th.

In 1908 the Coventry Club won the first Cup outright, and a second trophy was presented by this journal in 1909. Since this date the M.C.C. has been twice successful, as have members of the Coventry and Warwickshire M.C. and the Sheffield and Hallamshire M.C.C. One of the clubs, therefore, has only to win this year to secure the trophy for all time.

In the days when the M.C.C. team trial was first instituted both *The Motor Cycle* and the industry were very young. At that early stage every encouragement was needed for the pastime to obtain new supporters.

The Motor Cycling Club was not only the leading club in 1904, but a hoary veteran even at that period (it was founded in 1901); it was only natural, therefore, that *The Motor Cycle* should present the challenge trophy to this group of enthusiasts.

The original conditions of the trial stipulated that teams should consist of four solo and two passenger machine riders, who should endeavour to make non-stop runs over a course of 100 miles.

### The Lonely Sidecar.

Only one sidecar competed in the first event, most of the passenger machines being tricars or motor bicycles towing trailers. Naturally, of the competing clubs the Coventry team produced the most skilful riders, men whose names are famous even to present-day readers of this journal. Frank Hulbert, who joined the Triumph Co. in that year and only retired in 1921; S. Wright, who then drove an Excelsior with trailer, who now with his companion, B. Yates, is still connected with Humber & Co.; R. W. Ayton, a clever inventor and the originator of aluminium cylinders with steel liners; A. W. Wall, inventor of the Auto-Wheel, who drove a Roc and trailer; and W. H. Wells, of Indian fame, who then rode a 2¾ h.p. Vindec.

It will be seen from the number of clubs supporting the event how small the movement was in those days, but the advent of the magneto just about that time gave a great fillip to the industry, and when *The Motor Cycle* presented another trophy in 1909, 17 club teams lined up for the start.

Not only did 1908 mark the general adoption of magnetos, but it saw also the increased popularity of the sidecar and the waning of the tricar; in 1909 each team produced one sidecar machine.

A record entry was received in 1913, when 41 teams entered, consisting of 246 competitors, 82 passengers and 100 reserve men.

### Welcome Innovations.

Revived after the war, in 1919, the M.C.C. team trial made important progress. The composition of the teams was altered to three solo and three passenger machines, and a really sporting course was found in the Chilterns, starting from Tring and including many surprises. This innovation of awarding the trophy more by merit in overcoming difficulties than by speed judgment, into which the element of luck so largely enters, was greatly appreciated. The circuit, consisting of many single-figure gradient hills with rough surfaces, was 32½ miles in length and was covered three times. Again the Coventry club added to its long list of victories, the Ilkley L.C. and M.C.C. being second and the M.C.C. third. So soon after the war, machines were difficult to get, and only 15 teams entered.

In 1920, exactly the same course was utilised; 28 teams competed, and there was considerable improvement in the organisation and arrowing. The trial has always been run on rigid non-stop lines, and all fuel has to be carried on board and replenishments made while riding. In 1920 the winners were the Leicester and District M.C.C.

### Direction of Course Reversed.

Last year 26 teams rode over the same course, but, as suggested by *The Motor Cycle*, in the reverse direction, rendering the trial equally severe, but being a welcome change. As was to be expected in 1921, the day was exceedingly hot, and tyre troubles were prevalent. There were numerous casualties apart from punctures, and the Sheffield and Hallamshire M.C.C. was the only team to finish complete—their second win in Team Trial history.

Up to date the winners year by year have been as follows:—

| Date. | No. of Teams Competing. | Champion Club. |
|---|---|---|
| 1904 .. | 5 | Coventry M.C. |
| 1905 .. | — | M.C.C. (Walk-over) |
| 1906 .. | 5 | Motor Cycling Club. |
| 1907 .. | 5 | Coventry M.C. |
| *1908 .. | 9 | Coventry M.C. |
| 1909 .. | 17 | Motor Cycling Club. |
| 1910 .. | 18 | Coventry and Warwickshire M.C. |
| 1911 .. | 20 | Derby and District M.C.C. |
| 1912 .. | 25 | Nottingham and District M.C.C. |
| 1913 .. | 41 | Sheffield and Hallamshire M.C.C. |
| 1914 .. | 31 | Motor Cycling Club. |
| 1919 .. | 15 | Coventry and Warwickshire M.C. |
| 1920 .. | 28 | Leicester and District M.C.C. |
| 1921 .. | 26 | Sheffield and Hallamshire M.C.C. |

* In 1908 the Coventry M.C. won the first cup outright, and the proprietors of *The Motor Cycle* presented a second trophy in which the Coventry and Warwickshire M.C.C., the M.C.C. and the Sheffield and Hallamshire Club each hold two shares.

# FOURTEEN HILLS IN A ONE DAY TRIAL.

## The Coventry and Warwickshire Motor Club's One Day Trial in the Cotswolds.

OPEN to all members of clubs affiliated to the Midland Centre A.C.U., the Coventry Club's one day trial was well organised, well marked, and well laid-out, and was altogether worthy of better support than was received. Of the thirty-two motor cycle and sidecar entries and three three-wheelers, three failed to start and three more failed to complete the very sporting course, while of the finishers quite a number spoiled their clean scores by mistakes at one or other of the numerous tests.

Quite soon after the start C. R. Little (688 Coventry Victor sc.) retired, having damaged an experimental aluminium piston. Saintbury Hill was the scene of the first test, a stop and re-start affair, which, in spite of a specially prepared surface of loose stones and small boughs, failed to penalise anyone. The best performances were put up by E. A. Barnett (346 Francis-Barnett), A. D. Mayo (346 Coventry Eagle), H. Stretton-Ward (499 Triumph), W. Brandish (600 Humber), H. Uzzell (964 New Imperial sc.), A. Watson (599 Sunbeam sc.), and S. Wright (600 Humber sc.).

### Few Failures in Midland Test Hills.

Thereafter the usual Midland trial route was followed, up Sudeley Hill and *via* Roel Gate, but missing Cheltenham, the competitors were taken from Andoversford past the Air Balloon Inn to the foot of Birdlip.

Neither Sudeley nor Birdlip hill is a serious proposition to the modern machine when the roads are dry, and the next point of real interest was the rough and narrow lane, known as Stancombe Hill, which lies within a few miles of Stroud.

Here came the first batch of hill failures, for, besides being steep, the surface of the lower part of the hill is a little tricky, even in dry weather. T. Brown, who, though entered in the solo class, had elected to fit a sidecar to his 539 c.c. Rex-Acme, came to a momentary stop with wheel slip. His passenger, in an endeavour to save the situation, leant out hurriedly, shedding his watch and other odds and ends, which were hurled after him by the official observer.

Other momentary stops were debited to C. Dyer (600 Humber), R. Roberts (549 Triumph sc.), and T. Gibbins (976 Rex-Acme sc.). With these exceptions, the majority of machines played with the gradient, though at the top of the hill the Rev. J. M. Philpott's 249 c.c. Velocette was misfiring rather badly. He retired at the lunch stop in Stroud, and it was subsequently discovered that the trouble was due to the magneto points closing up.

### Test for Flexibility.

Within a mile of the lunch check came a flexibility test on Rodborough Lane, in which the following appeared to be the best performances in their respective classes. *Slow Section* :—E. A. Barnett (346 Francis-Barnett), G. R. Butcher (499 Sunbeam), A. W. Thrush (499 Sunbeam), A. Watson (599 Sunbeam sc.), H. Uzzell (964 New Imperial sc.), and S. Wright (600 Humber sc.). *Fast Section* :—A. W. Thrush (499 Sunbeam), C. Dyer (600 Humber), D. Brandish (600 Humber), T. Hazelwood (950 Hazelwood sc.), H. Uzzell (964 New Imperial sc.), and A. Watson (599 Sunbeam sc.).

Coventry and Warwickshire Midland Centre Trial. A. Watson (599 c.c. Sunbeam sidecar) at the start of the brake test on Saintbury Hill.

### Hills in the Stroud District.

In the next twenty miles were included no less than eight hills, of which Knapp was the most severe test. It is impossible for a spectator to see all the points of interest on this long climb, but the following observations were made at the hairpin near the top :—Here the small solo machines shone, in particular E. A. Barnett and D. A. Atkin (346 Francis-Barnetts), F. Whitworth (245 Calthorpe), T. Moxon (346 Monopole), E. Broughall and A. Mayo (346 Coventry Eagles), A. Thrush (499 Sunbeam), R. Grindlay and W. Brandish (600 Humbers). D. Brandish, on a similar machine, had his gear jump out and ran back. Good sidecar performances were made by T. Brown (539 Rex-Acme sc.), F. Sibley (499 Rudge sc), H. Uzzell (964 New Imperial sc.), while G. Goodall (999 Morgan) went up without a falter.

The failures were : G. Butcher (499 Sunbeam), fell. T. Nickson (494 Douglas), foot down. C. Dyer (600 Humber) fell. T. Smith (245 Calthorpe), T. Hazlewood (950 Hazlewood sc.), and R. Roberts (549 Triumph sc.). On Gambles Lane not a single failure was noted, the dry surface making the notorious hill too easy except for the loose and rutty surface near the top. Saintbury was the scene of the last test, a brake test, which was of considerable interest. Competitors had to cover a distance of 73 yards in not less than 15 seconds and pull up between two tapes placed nine feet apart. A local but heavy rainstorm made the task no easier, though trees protected the road at the most important point.

### Severe Brake Test.

The best performances appeared to be those of D. Brandish (600 Humber), F. Whitworth (245 Calthorpe), R. Grindlay (500 Humber), T. Nickson (494 Douglas), H. Stretton-Ward (499 Triumph), A. D. Mayo (346 Coventry Eagle), D. Atkin (346 Francis-Barnett), R. W. Duke (499 Triumph), H. Uzzell (964 New Imperial sc.), S. Wright (600 Humber sc.), A. Watson (599 Sunbeam sc.), and G. H. Goodall (993 Morgan). The last-mentioned performance was exceptionally fine and was assisted materially by large diameter front wheel brakes.

The homeward route via Shatford and Warwick was without incident. The route was marked with blue stain only, and this method was most successful.

# A SCIENTIFIC LAYMAN CRITICISES.

## Some Points of Interest Raised by the T.T. Races.

IT is probable that the particular points which interest different spectators of the T.T. preparations and races are in no two cases exactly similar. The following points are those which particularly appealed to a man with practical, yet scientific, ideas who is more concerned with the efficiency and performance of the machines than with the riders of them.

An outstanding thing was the large number of reports of breakages of parts of the machines. These may be divided into two sections, which are: those dealing with engine breakages and those dealing with the fracturing of frame members and other components. Now to the careful observer it was interesting in the extreme to notice the ingenious devices which were incorporated in the machines to ensure quick replacements in the case of fracture, but on no occasion did one actually hear of the prevention of breakages by any other method than that of excessive section and weight of various components.

### Special Steels and Heat Treatment.

It is obvious that in the majority of cases no special steels or alloys were employed in the manufacture of those parts which gave most trouble, otherwise breakage would not have occurred. If correctly treated alloy steels were used instead of plain carbon steels, or wrought iron, it is almost certain that the great majority of breakage troubles would vanish. The great trouble experienced with valves constitutes an excellent example of wrong material or wrong treatment. If valves are made of stainless or, preferably, tungsten steel carefully and correctly heat-treated, they will not break, because their tensile strength at high temperatures—even when red hot—is ample to withstand all the strains they can possibly be subjected to. Therefore the sooner manufacturers consult first-class metallurgical chemists as to the composition and correct treatment of their valves, the sooner the troubles will vanish and incidentally valves of smaller section, and much lighter, could be employed owing to the terrific strength at high temperatures possessed by these special steels, the lack of this being the cause of all the trouble with other steels.

Similar remarks to the above apply to such unnecessary fractures as those of mudguard stays, bolts, frames, etc., and if steels like high and low carbon nickel-chrome, chrome vanadium, and others are employed, then these troubles will almost certainly vanish.

### Vegetable or Mineral Oils?

A third point of interest, which was frequently commented upon, was the very prevalent smell of castor oil noticed in nearly all the exhaust gases. This is rather surprising, because what the exact advantages of this oil are it is difficult to say, but its disadvantages are well known. Undoubtedly, the smell of burnt castor oil is rather more pleasant than otherwise, and its great popularity is partly due to this fact and partly due to the fact that it has been used by so many record breakers in the past. It is, however, certain that other oils could have been used with equal or superior results than those obtained with oils containing castor oil. The only distinct advantage of this oil is that it is practically insoluble in petrol, and for this reason it is used for certain rotary and radial aero engines in which the oil is liable to come into contact with the liquid petrol. For other aero engines it is seldom used.

The chief disadvantage of castor oil is that owing to its being of vegetable origin it contains several components which, when heated sufficiently highly, are decomposed and split up into what are known as fatty acids. These fatty acids are extremely detrimental to all parts of an engine because they attack and corrode all parts with which they come in contact, resulting in worn pistons, cylinders, bearings, etc. Proof of this fact is found if one examines the tin or metal bung in which castor-oil has been kept. The etching of the parts is very apparent, and any brass becomes coated with a blue matter which is a combination of copper and these fatty acids. If this occurs at normal temperatures it is obvious that it is infinitely more liable to occur at extreme temperatures which readily break up the constituents of castor oil. Furthermore, many people imagine that this oil is one of the "thickest" obtainable. This is partly true at low temperatures, but at high temperatures it is wrong, and if the viscosities of this oil be compared with those of thick mineral oils it will be found that they are in favour of the mineral oils, which do not break up into objectionable acids when heated.

Of course it will perhaps be stated that although the smell of castor oil is noticeable, actually the percentage of this ingredient is small; but even so its advantages are doubtful and its disadvantages are obvious; so why use it at all when better oils are available?

KEMIST.

---

# GUARDING T.T. MACHINES.

THE following extract from a letter received from Mr. T. W. Loughborough, Secretary of the Auto Cycle, is intended to clear up any misconception which may exist regarding the storage of T.T. machines by the Union during the period between "weighing in" and handing over to the riders on the morning of the race:—

> Under the heading "Points to Criticise," you rather infer that the machines entered for the T.T. are left for some time in a marquee unguarded, and you suggest that some better arrangement to prevent possible interference with them should be adopted next year. As a fact, during the whole time that the machines are in the storage marquee they are guarded—not only by two particularly stalwart police sergeants in plain clothes, but also by a leading official of the Union. No entrant, no competitor, or any member of the general public whomsoever is allowed access on any pretext to enter the marquee. At night the police guard is retained, and a principal official of the Union remains constantly in the tent.
>
> This, I think, should satisfy any of your readers who may be inclined to doubt whether the A.C.U. adequately protects the competing motor cycles while they await their ordeal.

# CLUB NEWS.

### Lee, Lewisham and District M.C. and L.C.C.

A reliability trial is being held on June 25th for the Ranger Cup, full particulars of which can be obtained from the honorary secretary, Mr. H. W. Allen, 23, Boones St., Lee, S.E.

### Middlesbrough and District M.C.

Speed trials, organised by this club, and open to all clubs affiliated to the Yorkshire Centre A.C.U., commence at twelve noon on Saltburn Sands on Saturday, July 1st, when motor cycles, sidecars, and light cars may be entered. Last year, it is claimed that these trials were witnessed by as many as 50,000 spectators.

### Cumberland County M.C.C.

The Whit-Monday trial was run over a course of 130 miles of Lakeland bye-roads. Kirkstone Pass and Red Bank were observed in the morning, but no failures occurred. Wrynose Pass, the stumbling block in last year's open trial, proved too much for all except W. Tiffen (Velocette) and J. Fendley (Rhode light car).

### North West London M.C.

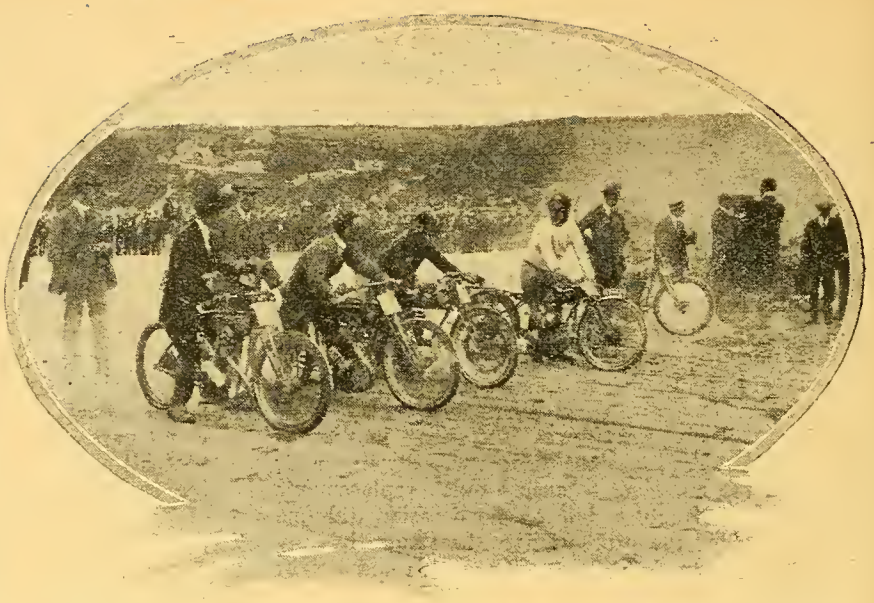
Last Saturday's hill-climb on an entirely fresh hill in Herts showed some close finishes. Entries were limited to 500 c.c. Judged on time the results were as follows: Solo: 1, D. F. C. Fitzgerald (490 Norton); 2, J. A. Peacock (398 A.B.C.). Sidecar: 1, H. James (490 Norton); 2, D. F. C. Fitzgerald (490 Norton). Handicap: 1, H. J. Pooley (498 P. and M.); 2, A. Cartwright (492 Sunbeam).

### Sale and District M.C.C.

Two all-night runs are being organised, one to take place on Saturday, July 8th, to Windermere and the Lakes, and the other on Saturday, August 5th to Snowdon. All motor cyclists and neighbouring clubs are invited to co-operate. Names and addresses of those intending to participate should be sent to the honorary secretary, Mr. E. C. Bramley, Landfield House, Hesketh Road, Ashton-on-Mersey.

### Cork and District M.C.C.

First-class awards in the open trial held on Whit-Monday were as follows: First Class: J. Gibbings (349 A.J.S.), W. Waterman (595 Douglas sc.), tied for the cup; J. A. Wilson (398 A.B.C.), J. A. Carville (557 B.S.A.), J. P. Frost (499 Blackburne sc.), T. O.'Sullivan (349 A.J.S.), R. Daly (550 Triumph), A. Holmes (976 Enfield sc.), and J. F. Slein (249 Velocette).



Competitors warming up their engines preparatory to the start of the 50 mile race on Pendine sands on Whit-Monday. This event was described last week in "The Motor Cycle."

### Epsom and District M.C.C.

The opening meeting of this new club was held at Ewell on Wednesday, June 7th, and was very successful. Applications for memberships, etc., should be addressed to Mr. G. E. Himing, at The Laurels, Park Hill Road, Ewell.

### Worcester and District M.C.C.

The last day for receiving entries for the speed trials, to be held on Thursday, June 22nd, is Saturday, June 17th. The Flying Half-mile will take place on the Gloucester Drive, by kind permission of Earl Beauchamp, K.C.

### South West London M.C.C.

An invitation run is being held on June 18th, starting from the White Horse, Brixton, at three o'clock, and proceeding to Crawley, full particulars of which may be obtained from the honorary secretary, Mr. H. S. Carter, 37, Half Moon Lane, Herne Hill, S.E.

Geo. Kelly and Douglas Alexander at the Scottish Auto Cycle Union hill climb at Dalgrain Brae, Sorn on Saturday last. Awaiting the word to go but more interested in the photographer than the timekeeper at the moment.

### Newcastle and District M.C.

In the Travers open reliability trial held recently, the club report omitted the fact that J. A. Newman (499 Douglas) was awarded a silver medal. Next week-end will be held the seventeenth annual all-night reliability trial from Newcastle to Edinburgh *via* Berwick, returning through Otterburn, starting from the club headquarters at 8 p.m. on Saturday.

### Surrey M.C. and L.C.C.

The eighth annual Exeter reliability trial for the Swain and Jones and Feeny Challenge Cups will take place on Saturday, June 24th. The event is open to all types of machines up to 1,500 c.c. capacity, and entries should be sent in by June 20th. The start will be made from Guildford at midnight on June 23-24.

### Blaina and District M.C.C.

On Tuesday of last week, a reliability trial was carried out over a 150-mile course, when twenty-one competitors lined up at the start from Blaina, and only eleven checked in at the finish. Gold medals were awarded as follows: H. Dickinson (Scott), C. Bowen (Triumph), A. Colcombe (Indian), J. Marsh (Sunbeam), A. Miklin (Triumph), A. Ford (Triumph), H. Westwood (James sc.), and A. Williams (G.N.). A silver medal was won by F. Hawkins (Raleigh).

### Scottish A.C.U.

On Saturday, June 10th, an open scratch hill-climb was carried out by the S.A.C.U. on Dalgaim Brae. The entries numbered 114, and some excellent times were accomplished over a course half a mile in length. Electrical timing was used, and the fastest time was 30 1-16th secs. registered by G. M. Black (490 Norton), who obtained first place in no less than five classes, besides doing fastest time of the day from flying and standing starts. He was closely followed by E. A. Small (492 Sunbeam). Hundreds of spectators witnessed the event, which was carried out under very favourable weather conditions.

### Northern Centre A.C.U.

Under the auspices of the centre, speed trials were held on Saturday last at Eskweals, Cumberland, organised by the Barrow and District M.C. The course was half a mile in length, and the weather conditions were excellent. Results:

Not exceeding 350 c.c. (solo).—1, Shepherd 348 Edmund), 33.96s.; 2, Sayers (249 Velocette), 39.45s.

Not exceeding 550 c.c. (solo).—1, H. Jackson (499 Sunbeam), 30.85s. (fastest time of the day); 2, A. Baxter (490 Norton), 33.45s.

Not exceeding 750 c.c.—1, H. Jackson (499 Sunbeam), 31.25s.; 2, A. Baxter (490 Norton), 32.5s.

Unlimited c.c. (solo).—1, H. Jackson (499 Sunbeam), 32.20s.; 2, W. Barron (998 Indian), 32.24s.

Unlimited cc. (sidecars and three-wheeled cycle cars).—1, H. Jackson (499 Sunbeam), 35.9s.; 2, W. Barron (998 Indian), 37.22s.

"BP"

MOTOR SPIRIT

The "Best Possible" direction

British Petroleum Co. Ltd.
22, FENCHURCH ST, LONDON E.C.3

# DUNELT

500 cc. 2-STROKE

## LONDON— EDINBURGH Trial

Again the distinctive "DUNELT" has added to its list of unbroken successes, running consistently through the London-Edinburgh Trial and once again demonstrating its unfailing efficiency.

## 3 Entered 3 Finished

Decide to own a "DUNELT"—the proved successful outfit with its powerful engine, interchangeable wheels, special spring fork and roomy sidecar, it makes an ideal touring outfit and is unquestionably the finest value offered.

**We can give IMMEDIATE DELIVERY.**

Write us NOW for List and let us arrange for a demonstration.

**DUNFORD & ELLIOTT**
(Sheffield) Ltd.,
**Bath Street, Birmingham.**

London Agents: H. TAYLOR & CO., Ltd
Sussex Place, South Kensington.

COMBINATION with Spare Wheel **108 gns.**
SOLO MACHINE - **82 gns.**

*Clin'on-Wall*

# WOOLER

WOOLER Motor Cycles have shewn consistently good results in Reliability Trials, the A.C.U. One Day Trial, the S.W. Centre Sporting Reliability Trial and the London-Edinburgh. In each instance all entrants finished without experiencing any trouble whatever throughout the trials, which proves conclusively that the choice of a WOOLER is a safe choice.

**CONSISTENT RELIABILITY**
**LONDON — EDINBURGH TRIAL**

**4 WOOLERS ENTER**
**4 WOOLERS FINISH**
**Making trouble-free runs**

**OFFICIAL RESULTS AWAITED**

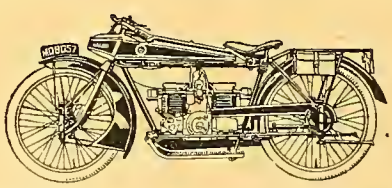
**Prices ranging from**

**£65**

**Write for particulars.**

THE DEDERICH-WOOLER ENGINEERING Co

**ALPERTON.**
**LONDON.**



TRAINING FOR THE 1932 T.T.! Illustrating the controllability of the modern sidecar. Master Harry Younie, aged 14 years, weight 4st. 10lbs., climbing the 1 in 3 portion of Manifold Hill, a Derbyshire test piece with an average gradient of 1 in 5, on a sports Martinsyde outfit.

## Birmingham M.C.C.

Copies of the artistically-produced official handbook are now available, while the supply lasts, to anyone who applies to Mr. W. A. Egginton, 76, Earlsbury Gardens, Birchfield, Birmingham.

## Brighton and Hove M.C.C.

The South-Eastern Centre A.C.U. hill-climb, which is being organised by this club will be held near Brighton on Saturday, June 24th. Full particulars of the event may be obtained from the hon. sec., Mr. Cecil Volk, 24, York Villas, Brighton.

## Kidderminster M.C.C.

At Angel Bank, near Cleobury Mortimer, on the 17th inst., a hill climb of about half a mile will be held, open to all clubs in the Midland Centre A.C.U. The secretary of the meeting is Mr. A. J. Wilkes, Pelham Lodge, Kidderminster, from whom full particulars may be received.

## West Kent M.C.

On Saturday, July 1st, the combined Kent clubs are holding a race meeting at Brooklands for their members. The races vary in length from one to three laps, and will include both scratch and handicap events for "sports" and "touring" machines. Entries for these events should be sent by Tuesday next to Mr. E. Jessop, c/o Love and Co., Park Road, Bromley, Kent, who will furnish full particulars.

## North Eastern Centre A.C.U.

The team from South Shields, which won the team trials organised by this Centre, included T. Braid (Indian Scout), G. Heath (8 Matchless sc.) and S. Dunn (3½ N.U.T.). Second place was taken by the Newcastle and District Club team, composed of W. Richardson (3½ N.U.T.), T. Toovey (3½ Norton sc.) and R. P. Reid (Scott Squirrel). The course was from Newcastle to Allendale and back.

## Surrey M.C. and L.C.C.

A hill climb was held on Saturday, June 3rd, when the fastest time of the day was made by C. B. I'Anson (Zenith-Bradshaw). C. J. Feeny (Francis Barnett) took first place in the 350 c.c. class, and the winner of the larger solo class was C. R. Jenkins (4 Triumph), followed by C. B. I'Anson (Zenith-Bradshaw). Class VII., reserved for "1914 machines," was won by S. Manners-Smith (1912 Triumph).

## Warrington M.C.

A stiff course covering 92½ miles of difficult country was chosen for the reliability run for the Blake cup, recently held from the Angel Hotel at Koutsford. The North Cheshire Club officiated. First man home was W. Bolton (Westwood) with a total loss of six marks, followed by F. Doward (3½ N.U.T.), also with a loss of six marks (missed first place by being two minutes behind time at a secret check). H. Lee (3½ Sunbeam), who put up a very good performance, came in third with a loss of only nine marks.

## Musselburgh and District M.C.C.

Although but recently formed, this club has a membership of sixty-one, and held a successful hill climb not long ago, when 40 machines took part. The fastest time was made by J. Murray (Harley-Davidson) at 18⅕ secs. D. Lowe made a close second at 19⅖ on a Sunbeam. H. J. McIntosh (8 Excelsior sc.) won the passenger class in 32⅘ secs, and T. K. Hubbard (2¼ New Imperial) also did very well.

## Scarborough and District M.C.

The Scarborough Rally organised by the Scarborough and District M.C. will be held on the 24th inst, to which an invitation to all motorists has been issued. Clubs are asked to be in their allocated positions on the Marine drive by 3 o'clock. On the 25th a freak hill climb has been arranged, to take place at Johnson's Beck, near Fyling Hall Station, to start at 3 p.m. A silver cup, silver medal, and bronze medal will be awarded in each of the following classes: (1) solo machine, (2) sidecars (including three-wheelers), (3) four-wheeled cars.

## Mid Bucks M.C.C.

A reliability run for the Putnam Cup was held on Saturday, June 3rd, when, out of 39 entries, 38 competitors started and 34 finished. The course included such hills as Kingston, Kop, and Ashton Clinton. R. T. Roberts (Zenith-Jap) was first, losing only two points, and he was closely followed by C. H. Wright (A.B.C.), who lost three points. In addition to the cup, Roberts carries off a gold medal for his performance, and Wright a silver one. A bronze medal was awarded to H. J. Coales (Triumph), who came in third with a loss of six points, a very creditable performance on a 1912 model.

## Evesham M.C.C.

Some fast times were put up at the recent climb on Hipton Hill, a hill one-third of a mile long and with a 1 in 4 gradient on the rough crest. The fastest speed averaged 58.8 m.p.h., last year's record of 24s. being beaten by 3⅖s. Winners:—

350 c.c. Private Solo.—H. Bleckley (2¾ Sheffield Henderson), 25⅘s.

350 c.c. General Solo.—H. Bleckley (2¾ Sheffield Henderson), 24s.

500 c.c. Private Solo.—E. A. Locke (3½ Sunbeam), 21⅕s.

500 c.c. General Solo.—F. Morrall (I.O.M. model 3½ B.S.A.), 21s.

750 c.c. Private Solo.—E. A. Locke (3½ Sunbeam), 21⅗s.

750 c.c. General Solo.—R. E. Eveson (3½ Norton), 20⅗s.

500 c.c. General Sidecar.—L. Paynter (3½ Norton), 25⅘s.

1,000 c.c. General Sidecar.—R. E. Eveson (3½ Norton), 25s.

Best on Formula.—L. Paynter (3½ Norton), 19.76.

## Brixton M.C. and L.C.C.

This club, although quite recently formed, has an interesting programme for the next two months. On June 18th a run to Tunbridge Wells, with tea at Sevenoaks, has been arranged.

## Newcastle and Northern M.C.

What promises to be a very successful and interesting event is being organised in the form of a club gymkhana to be held on Saturday, which is open to all clubs affiliated to the North Eastern Centre A.C.U. Particulars may be obtained from Mr. E. S. Nash at 6, Moore Avenue, Dunston-on-Tyne.

## Ilkley M.C. and L.C.C.

Although there was not a large entry, the hill-climb held on Sunday, June 4th, produced some good riding. L. A. Runton (2¼ Velocette) was the winner of the Dixon trophy and gold medal, whilst C. Heap (3½ Sunbeam) was awarded the silver medal. The bronze medal was won by J. H. Holmes (3¾ Scott).

## Gravesend and District M.C.C.

The club has made an interesting innovation in deciding to adopt *The Motor Cycle* policy of insurance for all accidents, etc., to its members. Arrangements have been made with the Autocar Accident and Insurance Co. for the adoption of the policy advocated by *The Motor Cycle*, and the scheme will result in the club members getting more than favourable terms for their insurances. The club is affiliated to the A.C.U., and a scheme is on hand by which a unique trophy will be given in place of medals to members who win competition prizes. The trophy is to consist of a silver oxydised mascot of S. Christopher, the Patron of Travellers.

## Westmorland M.C.C.

The annual speed trials were held at Lowther Park by kind permission of the Earl of Lonsdale, when some good times were put up over a half-mile course. Results: 275 c.c. Solo Class: 1, Ayer (Velocette), 40.82s.; 2, Turner (Velocette), 41.20s. 350 c.c. Class, Solo: 1, Baxter (Sheffield-Henderson), 31.90s.; 2, J. C. Dearden (Massey-Arran), 35.30s.; 3, Mrs. Roberts (Sheffield-Henderson), 35.58s. 500 c.c. Solo Class: 1, H. Jackson (Sunbeam), 31.10s.; 2, A. Hawkins (Norton), 32.58s.. Unlimited Solo Class: 1, H. Jackson (Sunbeam), 31s.; 2, A. Hawkins (Norton), 32.50s. Novices' Unlimited Solo Class: 1, J. C. Dearden (Massey-Arran), 34.20s.; 2, J. Dunning (o.h.v. Triumph), 35s.. 500 c.c. Sidecar Class: 1, H. Jackson (Sunbeam sc.), 39.11s.; 2, J. Baxter (Norton sc.), 39.11s. Unlimited Sidecar Class: 1, H. Jackson (Sunbeam sc.), 35.32s.; 2, S. Barron (Indian sc.), 36.05s.

## Falkirk and District M.C.

A hill-climb was held recently with the following results: Class 1: Members (expert barred), 350 c.c. formula, W. Fleming (2¾ Wolf). Class 2: Members (expert barred), 350 c.c., time, J. S. Hunter (2¾ Douglas). Class 3: Open, 350 c.c., formula, J. G. Porter (2¼ New Gerrard). Class 4: Open, 350 c.c., time, H. E. Fairley (2¾ Hawker). Class 5: Members (expert barred) 600 c.c., formula, R. Mather (3½ Norton). Class 6: Members (expert barred), 600 c.c., time, J. W. Morton (3½ Douglas). Class 7: Open, 600 c.c., formula, H. E. Fairley (2¾ Hawker). Class 8: Open, 600 c.c., time, D. Cairns (3½ Douglas). Class 9: Members (expert barred), unlimited, formula, R. Mather (3½ Norton). Class 10: Members (expert barred), unlimited, time, J. W. Morton (3½ Douglas). Class 11: Open, unlimited, formula, H. E. Fairley (2¾ Hawker). Class 12: Open, unlimited, time, J. Alexander (3½ Sunbeam).

## Rochester, Chatham and District M.C.C.

An inter-club hill-climb over a course of nearly half a mile was held recently at the Cut, Stonebridge, near Maidstone, in which the West Kent, Canterbury, and Rochester clubs took part. Fastest time of the day was put up by Capt. Maund (A.B.C.) whose time was 25⅘s. Results:

250 c.c. CLASS.—1, S. T. Smith (2¼ New Imperial), 44s.; 2, H. Ash (2¼ Enfield), 46s.

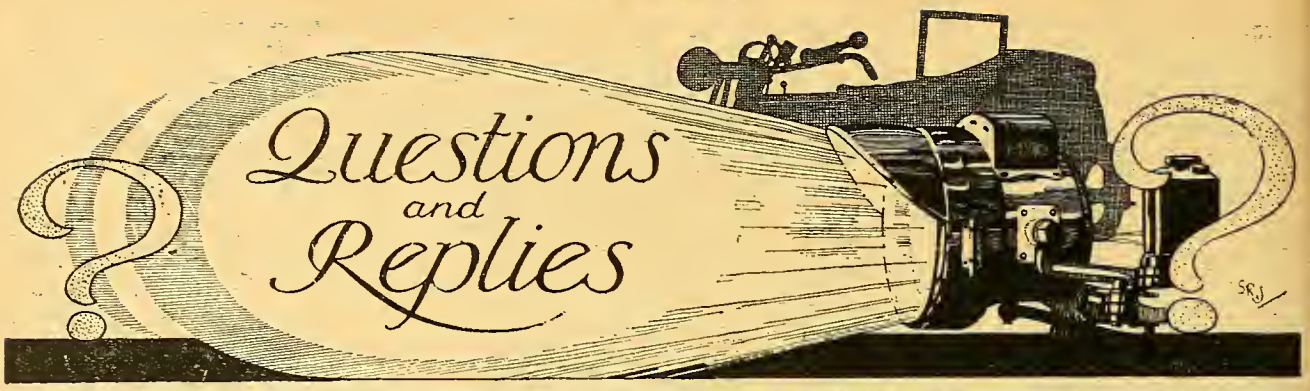
350 c.c. CLASS (experts barred).—1, A. Fraser (2¾ Sheffield-Henderson), 29s.; 2, Mid. Bolus (2¾ Sheffield-Henderson), 31s. Experts: 1, A. Fraser (2¾ Sheffield-Henderson), 28⅘s.; 2, F. S. Short (2¾ Rex-Acme), 31⅖s.

600 c.c. CLASS (experts barred).—1, W. H. Sheriton (3½ Norton), 26⅘s.; 2, A. Fraser (2¾ Sheffield-Henderson), 27⅗s. Experts: 1, Capt. Maund (3 A.B.C.), 26s.; 2, W. H. Sheriton (3½ Norton), 26⅘s.

1,000 c.c. CLASS (experts barred).—1, W. H. Sheriton (3½ Norton), 26s.; 2, C. Volk (3½ Douglas), 28⅖s. Experts: 1, Capt. Maund, (3 A.B.C.), 25⅖s., 2, W. H. Sheriton (3½ Norton), 26s.

600 c.c. CLASS (Sidecars).—1, A. Clark (4 Triumph sc.), 27⅗s.; 2 C. Volk (3½ Douglas sc.), 28⅘s.

1,000 c.c. CLASS (Sidecars).—1, A. Clarke (4 Triumph sc.), 36⅘s.; 2, C. Volk (3½ Douglas sc.), 38⅘s.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### BENT REAR FORKS.

The previous owner of my second-hand Triumph, in putting it up on its stand, let the machine down so heavily that the forks running from the engine to the hub of the back wheel are bent. If I have these straightened, will the machine be safe to ride, or would you recommend having those forks entirely replaced?—I.V.L.

In all probability it would be better to have new tubes brazed into the rear forks of the machine, although if they are not badly bent they could be quite easily straightened if warmed by a brazing lamp.

### TIMING A PRE-WAR MACHINE.

(1.) Will you kindly inform me of the best valve timing for my 1912 Singer? The variation of the ignition lever is too great, so that if timed as usual, i.e., piston t.d.c. spark two-thirds retard, the spark obviously occurs too soon with lever fully advanced. (2.) What is the greatest distance the piston should be down the cylinder on compression stroke with the lever fully advanced? (3.) When turning the engine shaft in the proper direction, the contact breaker gives a considerable jump forward on reaching a certain point. Should the points break before this point is reached or afterwards?—S.D.T.

(1.) Time your valves as follows:—Rotate the engine until the piston reaches the top-dead centre, and in this position insert the cam wheels so that the exhaust valve is just about to close and the inlet just commencing to open. (2.) Connect the magneto drive when the piston is $\frac{3}{32}$in. from the top of compression stroke, and the contact breaker points are just separating, having the ignition control fully advanced. (3.) When fully advanced, separation of the contact breaker points should be coincident with the tendency of the armature to jump forward.

### TO REMOVE GEAR BOX BALL RACES.

I am overhauling my Sturmey-Archer countershaft gear box and am desirous of renewing some of the ball races. I am, however, unable to get the old races out. How is this done?—C.H.

The proper method is to warm up the aluminium casing and then strike this smartly on the corner of a bench, when, owing to the high expansion of the aluminium, the bearings usually become quite loose. If this is not successful the only alternative is to drill two holes at the back of the bearing and punch it out, afterwards filling up the holes with screws, rivets, or solder.

## Important Dates.

**Sun., June 11th, to Mon., June 19th—Paris-Pyrenees Trial.**
**Sat., June 17th—Yorkshire Centre A.C.U. Open "Colonial Trial."**
**Sat., June 17th—Ealing and Dist. M.C.C. 200 Mile Sidecar Race, Brooklands.**
**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—M.C.C. Inter-club Team Trial for "The Motor Cycle" Cup.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Sat., Aug. 12th—Motor Cycle Races in Phœnix Park, Dublin.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 16th—The Scott Trial.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**

### THE RIGHT TO CARRY A CREST.

Please inform me if it is legal to have a monogram on a sidecar. I have been informed that there is a tax of £10 per year for a monogram on any vehicle.—A.D.

You may have a monogram, or device, on a vehicle, provided it is not a crest or coat of arms. The right to use a crest or coat of arms costs one guinea per annum, or two guineas per annum if carried on a vehicle.

### A CARBURETTER HINT.

Since having a new cylinder fitted to my engine I find that it starts at first kick with the air full open and a quarter throttle, after which it answers well to the throttle up to about three-quarters of the way, when it "chokes" and pulls up. An extra air is fitted to the induction pipe, but does not improve matters at all. The carburetter is in good order, and has a jet marked 32.—W.G.

Probably you will find you have to close the air when you open the throttle fully. This is not unusual with some carburetters.

### CHANGES TO A TWO-STROKE TWIN.

I have recently purchased a second-hand Scott, which I find hard to start from the cold. (1) Would putting an extra plug to each cylinder improve it? (2) How would this affect petrol consumption and general efficiency? (3) What percentage of oil to petrol is generally used in the petroil system? (4) Should the ordinary oiling system be used at the same time?—P.O.

(1) The fitting of an extra plug would not affect matters so far as starting is concerned. (2) A plug in the cylinder head might improve general efficiency to a slight extent. (3) The proportion is half a pint of oil to one gallon of petrol. (4) If this is used the ordinary system of lubrication need only be employed occasionally to oil the crankshaft bearings.

### HUB GEAR TROUBLE.

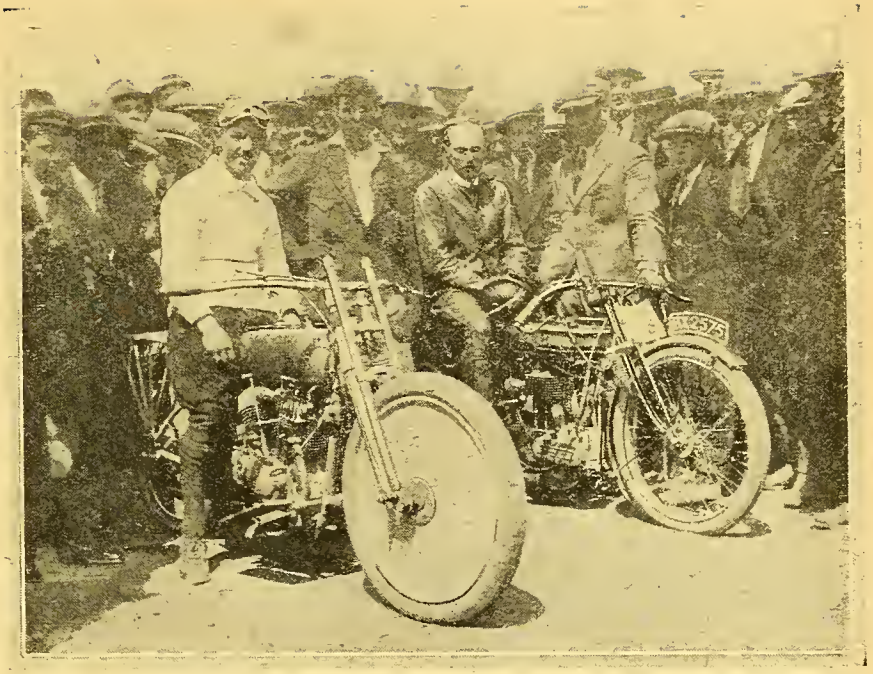
I have a difficulty with the Armstrong three-speed hub gear of my old Premier motor cycle. The low gear does not act—nothing appears to be broken, the top and middle work all right, but when the lever is moved into the low no change takes place. The rod does not jam in the hollow spindle—L.H.

You do not mention the type of Armstrong gear. The push rod should project from the end of the axle $\frac{5}{16}$ in., so as to be sure of engaging all gears properly. If the gear is mark VI or VII, the trouble may be due to the sliding sleeve being worn, with the result that it will not push the small pinion in far enough to engage with the right clutch. If the gear is mark II, III or V, the difficulty may be caused by too weak an axle spring.

### MISFIRING AFTER STARTING.

Each time I start my ex-W.D. single cylinder machine from cold it will not fire regularly, and does not take any air for about half a mile. After that distance it takes full air and works splendidly; but should the engine get cold again the trouble reappears for the first half-mile. The carburetter is quite clean, petrol pipe clear, and everything as clean as possible. My magneto has been in use for four years without a hitch, and, to all appearances, is in order. Can this have anything to do with it?—A.L.K.

The trouble with your engine is most probably due to the fact that the inlet valve is worn in its guide, thus rendering starting difficult; also notice if there is clearance between the tappets and valves when the engine is cold. Since the engine runs perfectly when warm, it seems unlikely that there is any defect in the magneto.



At the conclusion of the 50 mile Welsh Speed Championship Race on Pendine Sands, F. Bush (998 c.c. Harley-Davidson) and Dr. Lindsay (490 c.c. Norton), respectively first and second men home, surrounded by an interested crowd of spectators.

### SPARK INTENSIFIER ON THE TANK.

As I am desirous of fixing a spark intensifier on to the tank of my two-stroke I propose fixing a long h.t. wire from the magneto to one end of the spark intensifier and a second wire from the other end to the plug. Owing to the great speed at which the current flows from the magneto I assume the extra distance that the current will have to travel before it reaches the plug will in no way affect the timing.—P.L.P.

Your method of fixing the spark intensifier is quite in order, and the length of high tension wire will make no difference. Of course it would not be advisable to fit an open spark gap on the tank anywhere in the vicinity of the petrol filler, as by so doing you would run a grave risk of igniting the fuel should there be any overflow after filling. A gap which is enclosed or protected by gauze would be quite safe.

Considered to be the most dangerous corner on the T.T. course. Half-way down a long descent, the bend at Craig-ny-baa can be negotiated "all out" by a skilled rider. W. Brandish (499 c.c. Triumph) hugging the inside edge.

### CONDENSER NOT FUNCTIONING.

I have had a second-hand magneto recently fitted to my lightweight four-stroke. It functioned perfectly for about forty miles, when the engine commenced to misfire badly, finally stopping altogether. Examination of the contact breaker revealed that the platinum points were fused, and pitted with deep holes. After filing the points flat the engine fired perfectly for a further forty miles. I have since experienced this trouble four times, at intervals of forty miles, and at the expense of two sets of new platinum screws. What is the cause of this periodical fusing of platinum tips, and the remedy?—H.O.J.

We should say that the condenser connections are at fault. A small spark may take place between the platinum points, but if excessive sparking occurs the condenser or its connections are usually the cause of the trouble.

While everyone inclines to the belief that riding in the T.T. is a "young man's game," such veterans as G. E. Cowley, here shown on his Sunbeam in the Senior Race, and F. W. Applebee, who rode a Levis in the Lightweight event, prove that they are not too old for racing even when nearing 60 years.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o "The Editor," "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

"J.C." (Ayrshire).—Suitable jets for Cedos 2-stroke.

"R.G.P." (Cork).—Degory carburetter fitted to Sun-Vitesse 2-stroke.

"V.O.G." (Ipswich). — Automatic valved 4-cylinder F.N.

"E.P.S." (London).—Indian chief with sidecar.

"G.A.E." (Leeds).—Powerplus Indian.

"E.K." (Surrey).—Auto-wheels.

J.V.C.S. (Oundle).—ABC.

J.B.J. (Fence Houses). — Weatherell Automatic Lubricator on 550 c.c. Triumph.

E.J.T. (Wadhurst). — Seal Sociable: durability, road holding qualities, and climbing.

A.H. (Leicester).—4 h.p. Corona. solo.

Puzzled (Kimberley, S.A.).—Consumption of 350 c.c. Douglas with standard Amac and other carburetters; also any improvement tips.

## RECOMMENDED ROUTE.

ILFRACOMBE TO MELTON MOWBRAY.—W.H.T.

Ilfracombe, Braunton, Barnstaple, Swimbridge, South Molton, Stuckeridge Bridge, The Exeter Inn, Bampton, Shillingford, Venn Cross Station, Wiveliscombe, Milverton, Norton Fitzwarren, Taunton, Bathpool, Durston, Lyng, Othery, Piper's Inn, Street, Glastonbury, Wells, Priddy, Cheddar, Westbury, Wells, Ston Easton, Farrington Gurney, Hallatrow, High Littleton, Farmborough, Marksbury, Corston, Bath, Swainswick, Nailsworth, Stroud, Painswick, Shurdington, Cheltenham, Presthury, Winchcomb, Broadway, Willersey, Weston-sub-Edge, Mickleton, Stratford-on-Avon, Warwick, Melton Mowbray. Approximately 262½ miles.

### Found on the Road.

Found at Hendon Aerodrome, after North London Rally on Whit-Monday, a lady's umbrella and a gauntlet glove. Apply to Mr. A. W. Day, "Claremont," Ballards Lane, Finchley, N.3, organiser of the rally.

Mr. E. A. Freakley, 101, Blackheath Hill, Greenwich, S.E.10, reports a case of luggage found between Redbourne and Markyate, on the London-Holyhead road, on Saturday, June 3rd.

### Some Recent Improvements.

Some considerable improvement has been effected in the appearance of the 5 h.p. single cylinder and 8 h.p. 4 cylinder F.N. by the adoption of a blue taper panel in the tank and on the toolbox. Forks similar in design to those on the 8 h.p., with ball bearing links, are now fitted to the 5 h.p. model.

### Additions to the Editor's Bookshelf.

"Wireless at Home." (Percival Marshall & Co. Price 6d.)

"The Great North Road."—London to York. By Charles G. Harper. (Cecil Palmer, 7s. 6d.)

"The Great North Road."—York to Edinburgh. By Charles G. Harper. (Cecil Palmer, 7s. 6d.)

### To Avoid Possible Misunderstanding.

In our London-Edinburgh report a certain rider was mentioned as being in trouble with his "change speed quadrant." Unfortunately, the word "quadrant" was printed with a capital Q, which might have led some readers to associate the failure with the machine of that name. As a matter of fact both the Quadrant machines in the run qualified for gold medals.

### Price Correction.

The price of the 595 c.c. Douglas sidecar outfit is now £135.

### Oilcans for the Admiralty.

An Admiralty order for 1,728 of their seamless serrated oilcans has been received by Joseph Kaye and Sons, Ltd., Lock Works, Leeds.

### Change of Address.

Staffed by experienced engineers and carrying a large stock of bearings, the new London office of the Hoffmann Manufacturing Co., Ltd., is now at 2, Bedford Square, London, W.C.1.

### Lubricants Now Cheaper.

From the beginning of this month all motor lubricants sold by Prices' Co., Ltd., Battersea, London, S.W.11, have been reduced in price, a new list having been published giving full particulars.

### More Price Reductions.

Considerable reductions have been made in the prices of specialities sold by Saxessories, George Street Works, Coventry. Their pillion seat is now 25s., and their air spring pillion 17s. 6d.

### Carburation on the T.T. Machines.

It speaks well for the manufacturers of the Amac Carburetter that in the Senior Race all the finishing machines were fitted with Amacs, except three. In the Junior Race 15 out of the 16 finishers were Amac equipped, and in the Lightweight Race these carburetters were used by all the competitors except four—a record of which the firm have good reason to be proud.

### Puncture Sealing Compounds.

Among the successful puncture sealing compounds may be mentioned Jackson's Impervo. This preparation was injected into the tubes of the machines finishing first, second and third in the Junior T.T. Race, and we are given to understand that a nail was pulled from one of Sheard's tyres at the conclusion of the race. The address of the makers of Jackson's Impervo is 48, Dover Street, London, W.1.

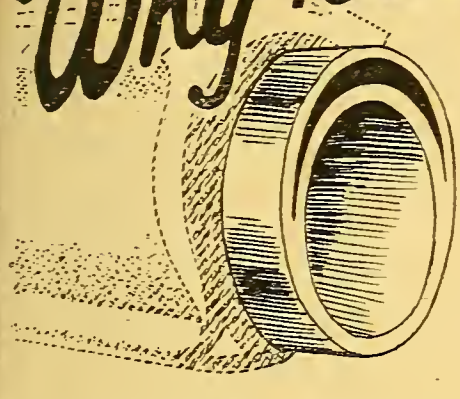
### Oil in the I.O.M.

One of the greatest contributing causes to the efficiency which has been demonstrated by the results of the T.T. Races is the high pitch of excellence reached in the accessories. It is worthy of note, for example, that Wakefield Castrol was the lubricant used by the winners of both the Junior and Senior Races this year. This makes the third time in succession that Castrol has been used by the winner of the Junior Race and the seventh time in the Senior.

### Hutchinson Successes in the T.T. Races.

An excellent series of successes in the T.T. Races must be credited to Hutchinson tyres. Seven out of the first twelve lightweight machines, including the first, second, and third, eight out of the first twelve Junior machines, including the first, second, and fourth, seven out of the first twelve Senior machines, and 90 per cent. of the gold medals won in all races were gained by riders using Hutchinson's.

# Why tolerate Punctures?



*The Remedy is Simple and Prices are Reasonable.*

The perfect **Puncture-Sealing** Tube discovered at last. **Challenger Patent Puncture-Sealing Tubes** are practically indistinguishable from the ordinary old-fashioned tube. They are absolutely pneumatic throughout and contain no messy or sticky substances, nor is there any solid filling, nor anything which will collect in a lump in the tyre while the car is standing. The only difference from an ordinary tube is that the tread portion is very slightly thicker and is built of three layers so adjusted as to be self-sealing: the centre layer being composed of the patent hole-proof composition, which instantly closes up when the nail or article causing the puncture is withdrawn.

PRICE LIST.

| | | |
|---|---|---|
| 24 × 2 | £0 | 14 3 |
| 24 × 2¼ | 0 | 15 0 |
| 26 × 2¼ | 0 | 15 3 |
| 26 × 2⅜ | 0 | 16 9 |
| 26 × 2½ | 0 | 18 0 |
| 26 × 3 | 0 | 18 6 |
| 28 × 3 | 1 | 0 3 |
| 650 × 65 | 1 | 0 9 |
| 700 × 80 | 1 | 5 0 |
| 30 × 3 | 1 | 8 0 |
| 30 × 3½ | 1 | 18 0 |
| 710 × 90 | 1 | 12 3 |
| 815 × 105 | 2 | 8 0 |

## GODFREY'S LTD.

Are able to make the interesting announcement that they have been appointed the sole London and District Distributors for the well known

## CHALLENGER PUNCTURE SEALING TUBES.

The sales of these tubes have increased to an unprecedented extent justified by the practicable nature of the Patent and testified by an ever growing list of thoroughly satisfied riders.

Arrangements are now complete for increasing supplies and immediate delivery can be given of all sizes.

TRADE ENQUIRIES INVITED.

Stocked by Messrs. H. Taylor & Co., Ltd., 212, Store Street, W.C.1; Messrs. The Service Company, 289-293, High Holborn, W.C.; A. W. Gamage, Ltd., Holborn, E.C.4, and all leading Agents.

WRITE FOR FULL PRICE LIST AND SAMPLE SECTION to

**GODFREY'S LIMITED,**
**208, Great Portland Street,**
**LONDON, W.1**

# GAMAGES Great Offer of "HUTCHINSON" TYRES

Having purchased the huge quantity of 3,000 "Hutchinson" Motorcycle Tyres, we are offering them at

**BARGAIN PRICES**

to clear quickly.
These Tyres are not "W.D." or old stock, but all are

**PERFECTLY NEW AND FRESH GOODS.**

The action of the manufacturers in altering the pattern of their tread has enabled us to purchase their stock at a low rate.
As usual, we are passing on the advantage to our customers, thus creating a unique opportunity—one that is too good to miss.

**PLACE YOUR ORDER NOW TO SECURE.**

The demand is sure to be heavy. All orders dealt with in strict rotation.
REMEMBER! These Tyres although offered as "Clearance" are *guaranteed* by us to be fresh and perfect!

| SIZE. | GRADE. | OUR PRICE. | USUAL PRICE. |
|---|---|---|---|
| 26 × 2¼ | Rubber Studded "Brooklands" | 18/9 | 27/6 |
| 26 × 2¼ | Tourist Trophy, Heavy Cover | 21/6 | 37/3 |
| 26 × 2¼ | Passenger, Extra Heavy Cover | 23/6 | 47/- |
| 26 × 2⅜ to fit 2¼ | Tourist Trophy, Heavy Cover | 22/9 | 41/6 |
| | Passenger, Studded or Ribbed Tread. Extra Heavy Cover | 24/9 | 49/- |
| 26 × 2½ to fit 2½ | Passenger, Extra Heavy Rubber Studded | 25/- | 57/6 |
| 28 × 2½ | Passenger, Extra Heavy Rubber Studded | 21/- | 57/- |
| | *Carriage Paid.* | | |

**A. W. GAMAGE, Ltd.,**
**HOLBORN, LONDON, E.C.1.**

We can give you immediate delivery of any make of Motor Cycle, Cash Exchange or Easy Payments.

Place your order with the firm who are riders as well as Agents and know your wants.

*Full range of Triumph and Sturmey Archer spares in stock.*

**W. Brandish & Sons**

Triumph Garage, Foleshill Road,

**COVENTRY.** 'Phone 1050

# *Instructions for* amateurs to enamel *a Motor Cycle*

*A COPY of the above leaflet will gladly be sent to those writing to Jenson & Nicholson, Ltd., Publicity Dept., Robbialac Works, London, E.15. Robbialac Whitby Black and special motor cycle colours available, such as Indian, Harley-Davidson, Matchless, etc. Colour card free.*

—**ROBBIALAC TRANSPARENT.**—After enamelling with Robbialac, a final coat of Robbialac Transparent will give an absolutely superfine finish.

—**ROBBIALAC BRUSHES.**—To get the best results with Robbialac Enamel and Robbialac Transparent Finish, it is essential to use the Special Robbialac Brushes.

ROBBIALAC

**Is sold by all Cycle Agents**

# SELFRIDGES *for* MOTOR CYCLES

| | | | |
|---|---|---|---|
| 6 h.p. Twin **B.S.A.** Combination | £164 | 0 | 0 |
| 4½ h.p. **B.S.A.,** all-chain ,, | £135 | 0 | 0 |
| 4 h.p. **DOUGLAS** ,, | £135 | 0 | 0 |
| 3½ h.p. **RUDGE,** all-chain ,, | £114 | 0 | 0 |
| 2¾ h.p. **ALLOAYS ALLON** ,, | £90 | 0 | 0 |
| 8 h.p. **MATCHLESS,** with double-seated sidecar, completely equipped | £207 | 12 | 6 |
| 8 h.p. **MORGAN** Runabout | £157 | 10 | 0 |
| 2¾ h.p. **XTRA CAR,** 2 speeds, etc. | £99 | 15 | 0 |
| 4½ h.p. **BEARDMORE-PRECISION,** spring frame | £105 | 0 | 0 |
| 2¾ h.p. **DOUGLAS,** 3-speed, clutch, etc. | £82 | 0 | 0 |
| 2¾ h.p. **DOUGLAS,** 2-speed | £68 | 0 | 0 |
| 2¾ h.p. **CONNAUGHT,** 2-speed, clutch | £57 | 10 | 0 |
| 2¼ h.p. **BABY TRIUMPH,** 2 speeds | £65 | 0 | 0 |
| 2¾ h.p. **METRO-TYLER,** 2 speeds | £55 | 0 | 0 |
| 3½ h.p. **NORTON,** 3 speeds, clutch etc. | £115 | 0 | 0 |
| 2½ h.p. **CALTHORPE,** single-speed | £36 | 0 | 0 |
| 1¾ h.p. **McKENZIE** Lightweight | £27 | 6 | 0 |

**WHERE MAKERS' PRICES ARE AT WORKS CARRIAGE IS EXTRA.**

**LARGE ASSORTMENT OF MOTOR ACCESSORIES, MASCOTS, ETC.**

**Full detailed Catalogue of above or any machines obtainable forwarded upon application. All machines can be purchased on our well-known deferred terms. Let us have your inquiries or, better still, give us a call.**

MOTOR CYCLE DEPT.,

**SELFRIDGE & CO. LTD., Oxford St., W.1**

'Phone: GERRARD 1.

The best service agents for

# DOUGLAS MOTOR CYCLES

Immediate delivery

**£68** (or £4 a month)

Old machines in exchange.

# DOUGLAS SPARE PARTS

Send to us.

We carry large stock—and dispatch next post.

# FRANK WHITWORTH LTD.

139, NEW STREET

**BIRMINGHAM**

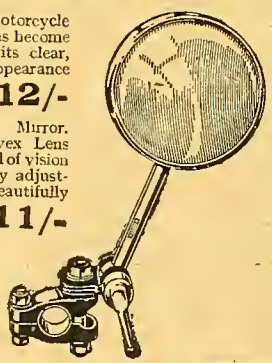
The Douglas Agents.

'Phone Mid. 2221.

# DESMO

## —the Motorcyclist's Pass Word.

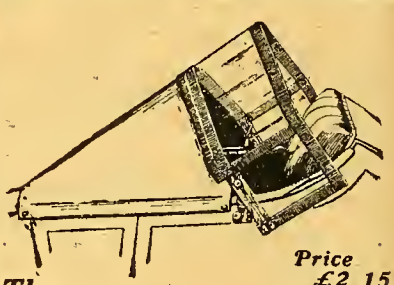
No. 1, Lightweight Motorcycle Horn. A model that has become popular by reason of its clear, arresting note, neat appearance and excellent workmanship. **12/-**



No. 21, Observation Mirror. Fitted with 3½in. Convex Lens Mirror, giving a wide field of vision without distortion, fully adjustable as illustrated. Beautifully made and finished. **11/-**

*All Desmo Accessories are guaranteed against defective materials or workmanship. Failures through same remedied free of charge.*

**"DESMO HOUSE," 264/265, Broad St., Birmingham.**



*Price* **£2 15 0** / **£3 18 0**

# *The V-shaped SANDUM Windscreen*

*ITS scientific design, its common-sense 'V' shape, are not the only features that distinguish the Sandum Windscreen above all others. It excels, too, in its most attractive appearance, adding the happiest finishing touch to any outfit. It is unapproachable also in the range and simplicity of its adjustments, in its fine workmanship and material.*

*Yet it is sold at a price that makes it the best value of any accessory on the market.*

¶ *Write for full details of both models.*

***The Sandham Engineering Co., Ltd., 336, Gray's Inn Road, London, W.C. 1.***

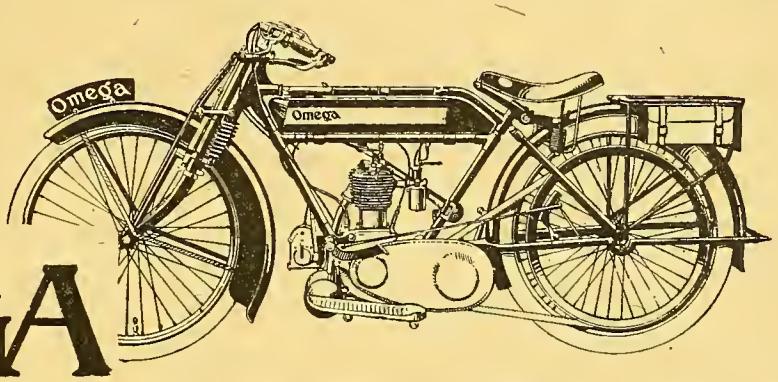
H.G.T.

# *If you want a reliable four stroke touring mount at a low price——————this is it.*

Model 3 is of "Omega" quality throughout—a term synonymous with all that is best in motor-cycle design, finish and value. The specification comprises J.A.P. 70 × 76 m.m. Engine, Sturmey-Archer two-speed gear with hand-controlled clutch and kick-starter, Omega special frame with web-strengthened, one-piece head lug, Dunlop tyres, aluminium footboards. A sturdy, highly-efficient, handsomely finished mount—at a price which makes it, according to "The Motor Cycle," "amazingly cheap." Write now for details of Model 3 and other Omega Motor Cycles.

Model 3—2½h.p. Omega J.A.P. with Sturmey-Archer 2-speed clutch and kick-starter **£66**

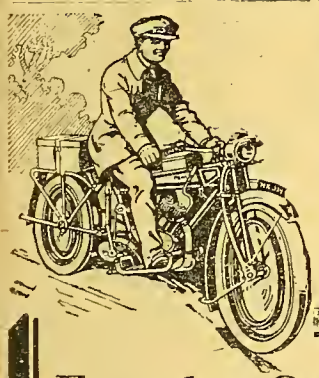
Or with plain 2-speed gear **£60**




# OMEGA

**W. J. GREEN, LTD., Omega Works, COVENTRY.**

**Birmingham Dept.: 183a, Broad Street.**
**London: Bartletts, 93, Gt. Portland St., W.**



*To Agents.—Where not taken, write NOW for Agency. It will pay you to do so.*

## For the Owner-Rider

PRIVATE owners wish to make necessary running adjustments themselves and thus keep down Garage bills.

This point has been carefully watched in the design of the 4 h.p. Powell—everything is made easily accessible.

Note the detachable head which makes decarbonising and valve grinding easy—then look over the other many-points of advantage.

**Send To-day** Simply drop a postcard at once asking for the full facts and a copy of Booklet M.C.45.

# POWELL

*Riding—A real Pleasure on a Powell.*

Powell Bros., Ltd., Wrexham.

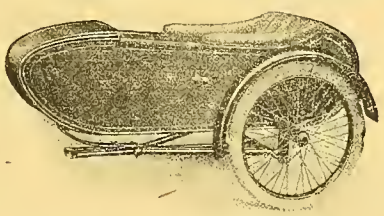
**ONLY THE BEST IS GOOD ENOUGH!!**

# CANOELET SIDECARS

appeal to all discriminating Motor Cyclists by reason of their ELEGANCE, COMFORT AND PROVED RELIABILITY. These qualities are displayed only in a sidecar of scientific design, constructed by experienced hands.

*THAT IS WHY CANOELET SIDECARS HAVE A WORLD-WIDE REPUTATION.*

**Price £24**



**Price £24**

MODEL R. TOURING.
BODIES ANY COLOUR. FITTINGS FOR ANY MACHINE.

*Write to-day for Illustrated Catalogue*

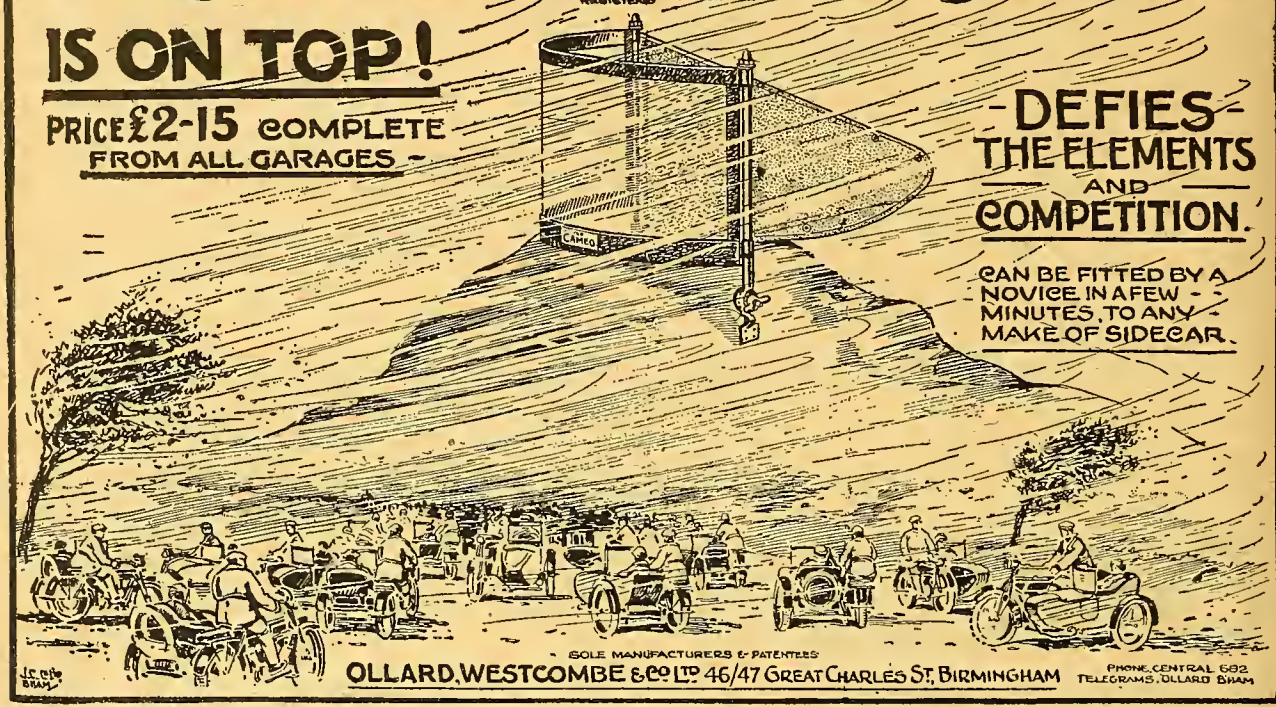
# MEAD & DEAKIN

TYSELEY, BIRMINGHAM, ENGLAND.

# The CAMEO WIND SCREEN.

## IS ON TOP!

PRICE £2-15 COMPLETE FROM ALL GARAGES




DEFIES THE ELEMENTS AND COMPETITION.

CAN BE FITTED BY A NOVICE IN A FEW MINUTES, TO ANY MAKE OF SIDECAR.

SOLE MANUFACTURERS & PATENTEES

OLLARD, WESTCOMBE & Co LTD 46/47 GREAT CHARLES ST, BIRMINGHAM

PHONE, CENTRAL 692 TELEGRAMS, OLLARD BHAM

## A Special Line in Motor Cycling Suits.

We have no hesitation in claiming that our "Draperstyle" Motor Cycling Suits have no rival at the price. Satisfaction guaranteed or money refunded in full.

**C 50.**—Motor Cycling Suits, made from stout dark fawn material dustproof and rainproof, double-breasted Jacket, sleeves with storm straps at wrist. Slash pockets. The Leggings have special gussetted sides and straps to go under boot.

"All British" Factory Price. **23/6** Carriage Paid to your Door. The Suit Complete.

Stocked in sizes (Breast over Jacket): 34 36 38 40 42 44 ins.

**C 80.**—Motor Cycling Suit, comprising Man's full-cut double-breasted coat, double texture material storm collar, stormproof tab cuffs to tighten up when driving, thoroughly proof, rubber-proofed insulated edges. Seams sewn and taped. Detachable belt with slide buckles. Leggings of same double texture material spat front shaped—understrap for instep—tab tan shaped gussett outside, patent clip fasteners at side. The gussett prevents either wind or rain from penetrating. Light in weight, thoroughly wind- and weather-proof, tailor-made, nothing on the market to equal it.

THE PROOFING IS GUARANTEED. Price 32/6.

| Sizes. | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chest .. .. .. | 36 | 38 | 40 | 42 | 44 ins. | | |
| Length .. .. .. | 36 | 38 | 38 | 40 | 40 ins. | | |

Suit complete, **32/6.** If required with seatless trousers, **3/6** extra. (Jacket only, **21/6.** Leggings, **12/6.** Seatless Trousers, **16/3.**)

No. **C 81.** Helmet, double texture, material guaranteed windproof and waterproof. Superior to leather helmets at three times the price, specially fitted with extensions at back to cover neck and come well down over the collar. Warm fleecy lining, adjustable strap under chin, special ear protectors to wear open or closed, peak at front, only **5/6** each.

**Illustrated Booklet Free.**

**ERNEST DRAPER & CO., LTD.,**
**54, "All British Works," NORTHAMPTON**

*Know your Speed & Mileage!*

**Model 42** (*as illustrated*—Black finish. Nickel-plated bezel. Indicates speeds to 60 miles per hour. Total mileage counter to 10,000 and repeats. Quickly reset trip-counter.

**Price £6 5 0** (or without trip model 40) **£5 15 0**

Back wheel drive for Triumph, **5s.** extra. Back wheel drive for Indian or Harley-Davidson, **10s.** extra.

*Manufactured by* **NORTH & SONS, Ltd., WATFORD,** & 14, Soho sq., London, W.1

NORTH'S BRITISH MADE Watford SPEEDOMETERS for Motor Cycles

## RENT-FREE ADVERTISING

Advertisers and advertising agents who are investigating economical publicity methods should carefully consider the merits of

# WINDOW TRANSFERS

Always clean and attractive, they are appreciated by retailers. Once in position they cost nothing, yet continually produce business.

**Write for New Booklet and Specimen**

THE BRITISH TRANSFER PRINTING CO., LTD., Quinton Works, COVENTRY.

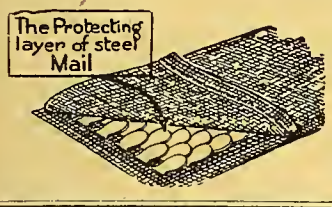
London: Dorset House, Tudor St., E.C.4. Manchester: 199, Deansgate.

# Tube Protector

## No More Punctures!

**OWING TO DIFFICULTIES WITH THE WORKS, DELIVERY OF TUBE PROTECTORS WILL BE DELAYED UNTIL FURTHER NOTICE.**

PARTICULARS ON APPLICATION.



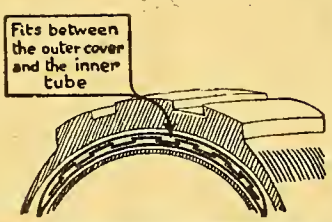

**Liberal terms to factors and retailers.**

PROTECTORS for MOTOR CYCLES, 17/11 each.

Sole Agents:

**A. Stuart Morris & Co.,**

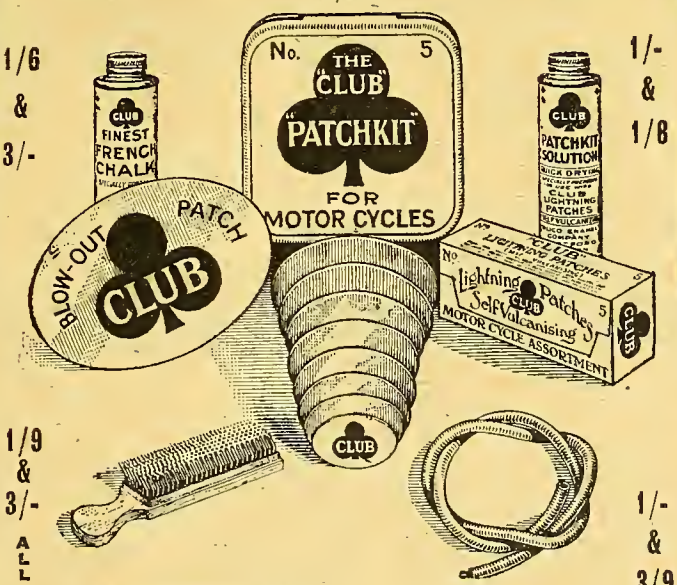
**Head Office: 101, Leadenhall St., E.C.3**




**SILICO ENAMEL CO., STRATFORD, LONDON.**

**3/-**

1/6 & 3/-




1/- & 1/6

1/9 & 3/- ALL COLOURS

**CLUB COLOURED ENAMEL.**

| Dries in 24 hours. Does not crack or chip. | Made in: Motor Cycle size Tins | 1/9 |
|---|---|---|
| | Large Tins | 3/- |
| | Royal Mail Red. Black. | |
| | Elswick Green. White. | |
| | Emerald Green. Cream. | |
| | French Grey. Brown. | |
| | Light Blue. Lavender. | |
| | Dark Blue. Primrose. | |

**CLUB TRANSPARENT ENAMEL FINISH. 1/6**

**Post free if unobtainable**

1/- & 3/9

# To suit Your convenience—

# Try Allen-Bennett

## DEFERRED PAYMENTS OVER EIGHTEEN MONTHS

YOU deal direct with us and we will supply **ANY MAKE** of machine, either new or second-hand.

Second-hand Machines Guaranteed for Three Months from date of purchase.

| | | | | | |
|---|---|---|---|---|---|
| TRIUMPH, [illegible] 2-speed, all chain and L.S. rally equipped, and a splendid machine for sidecar | £71 | 1 | BIRCH, [illegible] Sunbeam, 4-speed, spare throttle handle, guaranteed as big a machine as ever manufactured for sidecar | £85 | 1 |
| TRIUMPH, [illegible] h.p., 4-speed, all chain, just over from maker's hands, speedometer, excellent condition | £111 | 10 | SUNBEAM, 1914 super sports 3½ h.p., "W" set, has only done run under 3 miles | £131 | 1 |
| MATCHLESS, 1914 super sports combination, rally equipped, 2 spare wheels, Lucas lamps and Magdyno dynamo lighting, an exceptional speedy tuned super sports L.S. machine, best value in the sidecar combination world, wonder a motorist could be found to part with | £145 | 1 | ROYAL RUBY, 1914 4-speed, all chain model, rally equipped, handle starting | £58 | 1 |
| ZENITH, 1914 8-valve sports J.A.P. engine, sand-shoe s.c., rally equipped, small mileage | £125 | 1 | P. & M., 1914 3½ h.p., 3-speed, chain and L.S., rally equipped, handle starting | £55 | 1 |
| ZENITH, 1914 3½ h.p. sports, very speedy machine | £65 | 1 | READING STANDARD, 1914 3½ h.p. combination, 3-speed, kick start, spare wheel, lamps, horn, etc., splendid condition, exceptionally powerful combination | £70 | 1 |
| BROUGH SUPERIOR, 1914 Watts 2 cylinder, 4 valves, fast, speedometer, lamps, horn, etc., only 2,000 miles guaranteed, just over from maker's hands | £125 | 1 | NEW HUDSON, 1921 3½ h.p., 2-speed, all chain and horn, very little used | £47 | 10 |
| | | | DOUGLAS 2, 1921-22 2½ h.p. combination, fully equipped, speedometer, lamps, horn, etc., splendid condition | £65, £75 | |
| | | | DOUGLAS 2, 1921-22 2½ h.p., 2-speed, rally equipped, splendid condition | £45, £50 | |
| | | | JAMES, 1921-22 2½ h.p., 2-speed, all-chain drive combination | £65 | 0 |
| | | | JAMES, 1921-22 3½ h.p., 3-speed rally equipped, 4 lamps and horn, excellent condition | £55 | 0 |
| | | | ROVER, 1921-22 3½ h.p., 3-speed, chain drive, sidecar, rally equipped | £45 | 0 |
| | | | BROUGH SUPERIOR, 1921 super sports 7 h.p. side-valve combination, dynamo lighting, Wee screenette, exceptionally fast | £165 | 0 |
| | | | INDIAN, 1920 combination, dynamo lighting, speedometer, etc., as new in every respect | £110 | 0 |
| | | | D.F., 1921 2½ h.p., all lamps and horn, as new | £55 | 10 |
| | | | ALLON, 1921 2½ h.p., 2-speed, chain and L.S., rally equipped, all lamps and horn, run under 500 miles, as new | £62 | 10 |
| | | | TRIUMPH BABY, 1921 2½ h.p., 2-speed, kick start, | £55 | 0 |
| | | | RUDGE L.C.W., 1921, 3½ h.p., 3-speed, all lamps and horn, very fast, perfect condition | £47 | 10 |
| | | | ENFIELD, 1921 4½ h.p., combination, fully equipped, speedometer, lamps and horn, as new and indistinguishable from new | £125 | 0 |

Make a note of our address and whenever in need of advice, assistance, spares, accessories, write, 'phone or call, and you will get immediate and continuous satisfaction.

Over 200 machines actually in stock.

## ALLEN-BENNETT MOTOR CO., LTD.

9, 10, 11, ROYAL PARADE, WEST CROYDON.

'Phone—Croydon 1450, 1451. 'Grams—"Track," Croydon.

Open Saturdays until 7.30 p.m.

## WEATHERELL MOTOR CYCLES.

Watch our next week's announcement: meantime send for our illustrated booklet giving particulars of the 2½ h.p. O.H.V. sports 70 m.p.h. machine, also our touring model.

*Designers, Patentees, and Manufacturers:—*

R. WEATHERELL & CO., LTD. REGINALD WEATHERELL, *Managing Director*,
TERRACE WORKS, HIGH ROAD, KILBURN, LONDON, N.W.6.

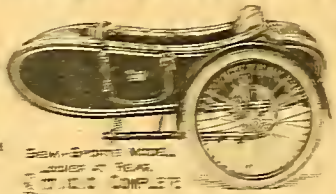
*Write me for a copy.*

IRVINE SMITH,
Buttershaw, Bradford.

Made and dressing-gowns by a practical [illegible] Smart in appearance, [illegible] wear. Send for Book.

## CAMBER SIDECARS

Fittings supplied for any make machine



SEMI-SPORTS MODEL, LEADER OF YEAR. £[illegible] COMPLETE

Prices complete.

| | |
|---|---|
| Tandem Models ... ... | £27 1 0 |
| Light Weight ... ... | £21 10 0 |
| Streamline ... ... | £23 10 0 |
| Mode No. 4 ... ... | £25 11 0 |

BRIGHT & HAYLES, 21, CHANDOS STREET, CAMBERWELL, LONDON.

'Phone: [illegible]

## DONOGHUE WOULD HAVE WON THE OAKS IF HE HAD RIDDEN ONE OF THESE.

IN STOCK—

| | |
|---|---|
| 2½ Triumph 2 ... ... | £120 |
| 3½ Matchless Model J Touring ... | £150 |
| 7 A.J.S. Combination ... ... | £175 |
| 3½ Scott Squirrel ... ... | £105 |
| 2½ O.K. ... ... ... | 35 Gns. |
| 2½ Lewis Popular ... ... | £42 |
| 2½ Raleigh 2-speed ... ... | £61 |
| 1¾ McKenzie ... ... ... | 26 Gns. |
| 1–10 Morgan de Luxe, W.C., J.A.P. | £186 |
| 1922 3½ Zenith Gradua (under 1000 miles, ridden only by ourselves) | 95 Gns. |

E. JULIAN, 34 Broad Street, READING.

'Phone 2122.

## MOTOR CYCLES FOR SALE.

### Ariel.

### Rex.

### Scott.

### Sunbeam.

### Blackburne.

### Bradbury.

### Brough Superior.

# DON'T ENVY THE OTHER FELLOW!

Whatever make he rides, whether Douglas or B.S.A. type we can supply YOU as well equipped HIM.

CASH EXCHANGES
DEFERRED PAYMENTS

| DEPOSIT. | | INSTAL-MENTS. | CASH PRICE. |
|---|---|---|---|
| £20 | DIAMOND, 1921. | | £55 |
| £25 | B.S.A., 1921. | | £70 |
| £30 | A.J.S. | | £80 |
| £20 | JAMES. | | £60 |
| £15 | BRADBURY. | | £35 |
| £40 | B.S.A. | | £155 |
| £30 | HARLEY-DAVIDSON. | | £120 |
| £40 | SUNBEAM, 1921. | | £100 |
| £25 | V.S.C., 1921. | | £95 |
| £50 | HARLEY-DAVIDSON. | | £160 |
| £35 | ZENITH. | | £125 |
| £40 | B.S.A., 1921. | | £120 |
| £25 | HARLEY-DAVIDSON. | | £75 |

ANY MAKE OF NEW MACHINE SUPPLIED.

# PARKER'S

BOLTON: Bradshawgate. Tel. 1345.

MANCHESTER: 245, Deansgate. Tel. Cen. 364.

## MOTOR CYCLES FOR SALE.

### Brough Superior.

### B.S.A.

### Douglas.

### Harley-Davidson.

### New Hudson.

### Rudge-Whitworth.

### Sunbeam.

### Triumph.

### Zenith.

### Miscellaneous.

In letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue. Motor Cycles advertised by private owners are, when desired, marked *

## MOTOR CYCLES FOR SALE.

### B.S.A.

1922 B.S.A., all chain, with Swan sporting sidecar, equipped, licensed to Dec. 1922, mileage 1,000; bargain, £105.—Tyrrell and Clissold, Oxford. [3606

1921 4¼h.p. B.S.A. Combination, perfect, fully equipped, licensed, windscreen; nearest £90; exchange fast solo.—Bustin, Chilton, Thame. [3883

4¼h.p. B.S.A. Combination, new 1921, speedometer, Easting, taxed, unscratched, mileage 2,600, all accessories; £90.—17, St. Charles Sq., W.10. [4074

B.S.A. 1916 4¼h.p., 3-speed, clutch, K.S., electric light, accessories, good tyres, tax paid, perfect condition; £38.—Jassamine Cottage, Sundridge, Kent. [4417

B.S.A. 4¼h.p. Combination, 1919, luggage grid, Easting screen, lamps, horn, mirror, licensed; excellent condition; £80.—"Shirley," Wick, Devizes. [3886

CASS'S Motor Mart, Ltd.—B.S.A. and sidecar chassis, 1912-13 3½h.p., 2-speed, lamps, tax paid Dec.; £27/10.—5, Warren St., W.1. Museum 623. [4279

1920 B.S.A. 4¼h.p. Combination, electric lighting, fully equipped, splendid condition; £90, or offer.—White, 36, Avondale Rd., Sparkhill, Birmingham. [4719

B.S.A. 1921 Combination, 4¼h.p., all-chain drive, lamps, horn, screen, tax, insurance paid, scarcely used; £110.—166, Lausdowne Rd., Seven Kings, Essex. [4129

B.S.A. Combination, 1921, Grindlay spring wheel sidecar, fully equipped, tax paid, Easting, equal new; £97/10.—Cope, 15, Upper Hagley Rd., Edgbaston, Birmingham. [4049

4¼h.p. B.S.A., with No. 2 sidecar. An ideal combination. New outfit but offered as slightly shop soiled; £130.—Harrods Motor Sales Rooms, 118, Brompton Rd., London. [3858

DON'T Delay.—Look! B.S.A., 1922, brand new, but slightly shop-soiled, 4¼h.p., Model H.2; accept for quick sale £97/10; usual price £110.—Wilkins, Simpson, opposite Olympia, London. [3781

B.S.A. 1919 Combination, 4¼h.p., 3-speed, chain drive, hood, lamps, horn, accessories complete, electric lighting, tax paid; trial; perfect condition; 79 gns.—149, Lansdowne Rd., Seven Kings, Essex. [3732

B.S.A. 6-7h.p. 1921 Combination, Lucas Magdyno lighting, special windscreen, spare wheel, speedometer, electric horn, indistinguishable from new; accept £135.—J. Hillier, 216, Portobello Rd., North Kensington. [3973

1919 4¼h.p. B.S.A., 3-speed, kick starter, Millford sidecar, C.A.V. electric lighting, screen, Klaxon, trip speedometer, luggage grid, excellent condition, small mileage, tax paid; £78/10.—391, King St., Hammersmith. [3911

B.S.A. 4¼h.p., all-chain drive, 3 speeds, 46 gns.; perfect; also another, similar, chain-cum-belt, 44 gns.; sidecar to suit, £7; photos, exchanges; open Sundays.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [4260

B.S.A. 6-7h.p. Combination, electrically equipped, No. 1 sidecar, Easting Royal windscreen, sidecar mat, step, horn, and tools, purchased Xmas, 1921; cost £210, what offers? New condition. Buying car.—Bugden, Edward's Rd., Amesbury, Wilts. [3573

1921 B.S.A. Combination, De Luxe, 7h.p., Lucas dynamo lighting, spare wheel, windscreen, electric horn, speedometer, etc., magnificent turnout, cost £250, absolutely perfect; bargain, £145.—31, Claremont Rd., Alexandra Park, Manchester. [4622

B.S.A. Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Hambers, 2, Eastbank St., Southport. 'Phone: 607. [4926

B.S.A. and Sidecar, genuine late 1921, appearance as new, perfect running order, 4¼h.p., all-chain drive, aluminium chain covers, 3-speed, latest locker back sidecar, Easting screen, Lucas horn, present list price represents over £150; accept £100; A. H. Hunt, electric light fitted, remove or include.—Box 1,883, c/o *The Motor Cycle*. [4338

B.S.A. 4¼h.p. New 1922 Model H2 Combination, chain drive, 3 speeds, No. 3 B.S.A. sidecar, slightly soiled, £127; without sidecar, £100; 6h.p. B.S.A. twin Model E combination and 4¼h.p. K2 Model, in stock for immediate delivery; also one second-hand B.S.A. 4¼h.p. Model K 3-speed combination, £55.—Eagles and Co., 275, High St., Acton, London. [4524

*Spare Parts:*

B.S.A. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7535

B.S.A. Spares can be had by return, post free from Jones Garage, B.S.A. Agents and Spares Service Depot Broadway, Muswell Hill, N.10. [0805

THE B.S.A. Specialists—On the Spot—Our spares service is unrivalled—give us a trial.—County Cycle and Motor Co., Broad St., Birmingham [4677

Sole London and District Agents for A.J.S., Excelsior & Dunelt Motorcycles

## Are you willing to be advised?

**If so, then just send us the following brief particulars of your motorcycling requirements and we will give you our expert advice—FREE.**

1. **Type of engine preferred :** Single, Twin, Two-stroke, Four-stroke, etc.

2. **Solo or Sidecar combination.** Is machine required for solo riding only, for dual purposes, or as a combination only?

3. **Maximum price you are prepared to pay,** also what is amount you would prefer not to exceed?

4. **Speed.** Is great speed required, or will a go-anywhere mount capable of putting up a good average speed answer your purpose?

5. **Method of payment.** Do you wish to pay cash or would an Extended Payment arrangement suit you better?

6. **Exchange.** Have you at present a motorcycle which you would require us to take in part payment for a new one? If so, please give full particulars.

We feel there are great numbers of potential purchasers ready to buy, but undecided as to what make would suit them best and where, in their best interests, they should get it. As Agents for ALL first-class machines we can give unbiassed advice, and owing to our large contracts we can offer one of the best selections in the country.

**Send for Bargain List of shop-soiled and carefully used machines—it will pay you.**

**H. TAYLOR & Co., Ltd.**

Showrooms—
Motorcycles and Cars,
52-53, Sussex Place, South Kensington.
Accessories, Spare Parts and Repairs,
21a, Store Street, Tottenham Court Road, W.C.1
Wholesale—
38, ALFRED PLACE, W.C.1.
Garage—Tottenham Court Road, W.1.
Phones: Accessories & Repairs, Museum 1240
Motorcycles and Cars, Kensington 7260
Telegrams: "Dynametro, Westcent, London."

## MOTOR CYCLES FOR SALE.

### B.S.A.

*Spare Parts:*

GODFREYS, Ltd., 208, Great Portland St., London W.1.—Complete stock of all B.S.A. spare part always in stock. Write for free spare part list, stating year of manufacture. [0750

### Calthorpe.

2¼h.p. Calthorpe, 2 speeds; excellent bargain, £22.—Fairhurst, Behind 68, Standishgate, Wigan. [4232

1917 Calthorpe, 2¾h.p. J.A.P., Enfield 2-speed, accessories, tax paid; £27.—391, King St., Hammersmith. [3910

1918 Calthorpe-Jap 4h.p. Twin Combination, good condition, all on, hood and screen; £52.—Roseworthy, Harrow Rd., Wembley. [3983

2¾h.p. Calthorpe-Jap, 1920 model, lamps, horn, tools, etc., fully insured; excellent condition; £42.—227, Gladstone St., Peterborough. [4116

4¼h.p. Calthorpe-Precision, C.B. Combination, cylinder re-ground, Sturmey countershaft, 1922, B.B. windscreen, etc.; £48 or offer.—Houchin, 189a, High St., Peckham. [3870

1916 Calthorpe-Jap, 2-speed, clutch, new cylinder, piston, December, 1919, B. and L. automatic pump, Saxad, just rebushed, spare chain, lamps, etc.; £35, no offers.—Buckner, Laurels, Barking Rd., East Ham. [3690

### Chater-Lea.

CHATER-LEA 3½h.p., 2-speed, overhauled, lamps, tax paid.—Hussey, 162a, Estcourt Rd., Fulham. [3959

£15, near offer.—3½h.p. Chater-Lea, mechanical valves, C.A.V., B. and B., tax, running order.—181, Newton Rd., Burton-on-Trent. [4307

1922 Chater-Lea 2½h.p. Popular Lightweight 2-stroke, Villiers engine, only ridden 100 miles; £45.—30, Ravenswood Rd., Balham, S.W.12. [4103

CHATER-LEA Combination, 8h.p. J.A.P., 3-speed, countershaft, splendid condition; 58 gns.; take lower power part.—57, Kenbury St., Camberwell, London. [3544

CHATER-LEA Combination, tax paid, splendid condition; bargain, £55 gns., or nearest offer.—Brooke, 255, Wellington Buildings, Ebury Bridge Rd., S.W. [3908

### Chater-Lea-Jap.

7h.p. Chater-Lea-Jap Combination, 3-speed, etc.; £55, or near offer.—Oakville, Bouverie Rd., Chelmsford. [3522

### Chater-Lea-Precision.

CHATER-LEA-PRECISION 1915 8-10h.p. Coach-built Combination, Bosch magneto, 3-speed countershaft, chain drive, electric rear light and horn, 2 acetylene head lights, luggage carrier, spare wheel, recently overhauled, splendid order, large sidecar with screen and apron; £80.—Walch, Milston, Durrington, Wilts. [3703

### Clyno.

£24.—2¾h.p. Clyno, 2-stroke, 2-speed, clutch, just overhauled.—King, Egrove Farm, Oxford. [4389

CLYNO 5-6h.p. Combination, as new, 3-speed; bargain, £55.—Locke, Draper, Penge. [3968

1916-17 Clyno Combination, lamps; £35, exchange.—2, Fortune Gate Rd., Harlesden, N.W.10. [4062

5-6h.p. Clyno Combination, splendid condition, all on; 40 gns.—18, Clairville Gardens, Hanwell. Evenings. [4360

CLYNO (late 1920) 2½h.p., 2-speed, disc wheels, leg guards, fully equipped; £35.—Bower, High St., Cinderford. [3583

CLYNO 1920 2-stroke, 2-speed, clutch, tax paid; £34.—Cope, 15, Upper Hagley Rd., Edgbaston, Birmingham. [4050

6h.p. Clyno Combination, twin-cylinder engine, 3 speeds and kick starter; £45.—Wauchope's, 9, Shoe Lane, London. [4591

REAL Clyno Combinations, with Clyno sidecars, 3-speed, clutch, kick start; £60-£70 each.—Box 1797, c/o *The Motor Cycle*. [3024

CLYNO 6h.p., late model, absolutely as new, enamelled black and gold, 3-speed, kick starter; £42.—64, Framfield Rd., Hanwell, W.7. [4407

CLYNO 6h.p., 2-speed, kick start, fast, powerful, good sidecar machine; £35; take lightweight part.—57, Kenbury St., Camberwell, London. [3543

5-6h.p. Clyno, 2-speed, K.S., spring wheel sidecar, all on, tax and insurance paid; trial after 7; £45.—Andrews, 25, Park Hill, Carshalton. [4166

1920 Clyno 2½h.p., 2 speeds, clutch, all on, in excellent condition; best offer over £30.—Coote, 92, Canterbury Rd., West Kilburn, N.W.6. [3667

2½h.p. Clyno Lightweight, 1920, 2-speed and clutch, just overhauled, tax paid 1922; £37/10. Easy payments if desired.—Harrods Motor Sales Rooms, 118, Brompton Rd., London. [3856

£52/10.—1917 5-6h.p. 3-speed Clyno combination, year's licence, new tyres, spare wheel and cover, chains, valves, all tools, lamps, etc.—Sykes, Winslade, Montem Rd., New Malden. [4239

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue of Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Douglas.

h.p. 1921 2-speed Douglas, all on, £60 solo; also 3½h.p. 1914 Douglas combination, 2 speeds, ; and 2¾h.p. 1915, 2 speeds, £27/10.—Wan-e's, 9, Shoe Lane, Fleet St., London. [4581

OR Douglas 1922 2¾h.p. and 4h.p. combinations, get in touch with us; we are North London agents give you the best of service; all spares in stock; no rubbish.—Jones Garage, The Broadway, Muswell [0786

OUGLAS 4h.p. Combination, 1917, almost new engine and gear box, fully equipped, lamps, horn, paid, windscreen, new Dunlop tyres, insurance, ranteed; £63.—Naylor and Kirk, 406, Garratt Lane, lsfield, S.W. [4084

)18 Douglases, absolutely like new, fitted with brand new tyres, tubes, carriers, stands, mud-rds, handle-bars, brakes, footrests, tanks, etc., plete minus engine and gear box; only £15/15, n gear box £19.—Dawson Bros., 34, Ampthill Rd., ford. [3924

38.—Douglas 4h.p. motor cycles, completely re-novated as new, stove enamelled and finished in cers' colours, new magneto, tyres and tubes, and y equipped, guaranteed 3 months.—Effra Motor rks, Ltd., 59-63, High St., Clapham, S.W.4. one: 1115. [4275

47/10.—Douglas 2¾h.p. motor cycles, completely renovated as new, stove enamelled and finished makers' colours, new magneto, tyres and tubes, fully equipped, guaranteed 3 months.—Effra tor Works, Ltd., 59-63, High St., Clapham; one: Brixton 1115. [4274

OUGLAS Specialists.—Wanted, your present motor cycle in part exchange for any new model o stock. No waiting; Distance no object. Best es allowed for second-hand machines. Deferred ments, see column advertisement.—Bambers, 2, thank St., Southport. 'Phone: 607. [4930

OUGLAS 1921 Combination, electric lighting, speedometer, Easting, Tan-Sad, complete kit of ls, 3 new outer covers, 5 inner tubes, new chain, gs and other spare parts, also overhaul, tax paid end of 1922 and insurance, engine perfect, the un-stering and paint of sidecar as new; accept 89 .; first deposit secures; seen after 7 p.m.—161, renslea Rd., Balham Station. [3921

BARGAIN.—Douglas, specially tuned, fast and splendid hill-climber, December, 1916 (A1 engine r), 2¾h.p., 2-speed, not used till 1920, carefully den since in summer only, just overhauled and in fect order, long copper exhaust pipe, aluminium bined footboards and rest, lamps, horn, tools, and res, adjustable jet, 100 m.p.g.: £44, including nce.—Owner, 5, Eaton Terrace, N.W.8. [4656

*Spare Parts:*

OUGLAS Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7541

OBERTSON'S Motors, Ltd., can supply all usual Douglas spares requirements.—157b, Gt. Portland , W.1. [6077

OUGLAS Spares.—Large stocks of genuine Douglas spares. Dealers supplied at trade rates.—Rivett, 5, High Rd., Leytonstone. [2679

OUGLAS Spares.—We hold a complete stock for all models; post free. Douglas Agents and spare t stockists.—Jones Garage Broadway, Muswell Hill, 10. [0806

RANK WHITWORTH, Ltd., 139, New St., Birmingham.—Complete stock, genuine guaranteed uglas spare parts; prompt attention, immediate patch lowest cash prices. [4657

### Economic.

CONOMIC.—We can give you immediate delivery of this wonderful low-priced machine; variable r model, £34; or on easy payments. Please send for catalogue.—South Eastern Garage, Herne ll, S.E.24 [5056

CONOMIC.—Sole Agents for Croydon, Thornton Heath and Norbury district. Immediate delivery 6-speed model; £34, or easy payments; cheapest red machine on the market.—Petty's Garage, 3, rbury Parade, Norbury, S.W. [4073

### Edmund.

N Stock.—1922 2¾h.p. Edmund, Blackburne engine, spring frame, Model No. 4B; £90, cash or de-red.—D. and S. Autocar Co., 33, The Parade, Golders een. [4640

DMUND-J.A.P., spring frame, 2-speed, perfect order, £40; immediate deliveries of all 1922 odels, from £70 upwards.—Marston, 31, Bridge St., ester. [4576

DMUND-J.A.P. 1921 2¾h.p., spring frame machine, Burman 2-speed gear, new machine, fully guar-teed; £58.—P. J. Evans, John Bright St., Bir-ngham. [3771

£10 GNS.—Practically indistinguishable from new, 1920, 2¾h.p., Edmund-Jap, spring frame, 2 eed, clutch, chain-drive, tax paid; any trial; ex-anges.—Smith's, 86, Chalk Farm Rd., N.W.3. [4282

DMUND, Olympia Show model, practically new, 2¾h.p. J.A.P., Enfield, 2-speed, clutch, chain-ive, spring frame, Amac, Dunlops, lamps, licence, cessories, unscratched; £55; exchanges.—63, Solon d., Brixton. [4147

# Harrods MOTOR CYCLES

## ON EASY TERMS

All the following machines are available from stock and may be obtained on Harrods Convenient System of Easy Payments. Details and latest lists free.

### NEW SOLO MACHINES

| | |
|---|---|
| 2¾ h.p. ALLDAYS ALLON, Model de Luxe | £60 0 |
| 4¼ h.p. B.S.A., 3-speed, belt drive | £107 0 |
| 4¼ h.p. B.S.A., 3-speed, chain drive | £110 0 |
| 2¼ h.p. ENFIELD, 2-speed | £55 0 |
| 2¾ h.p. FRANCIS BARNETT, J.A.P. engine | £73 0 |
| 2¼ h.p. LEVIS, Popular model | £48 0 |
| 2¾ h.p. NEW IMPERIAL, 3-speed, belt drive | £69 0 |
| 2¾ h.p. NEW IMPERIAL, 3-speed, chain drive | £73 0 |
| 1¾ h.p. McKENZIE Lightweight | £27 6 |
| 2¾ h.p. O.K., single speed | £39 18 |
| 2½ h.p. O.K., 2-speed, clutch, etc. | £60 18 |
| 2¼ h.p. RADCO, 2-speed | £42 0 |
| 2½ h.p. RADCO, 2-speed and kick-starter | £47 5 |
| 2½ h.p. RADCO, single speed | £35 14 |
| 3¼ h.p. RUDGE, Multi gear | £77 0 |
| 3½ RUDGE, 3-speed, chain drive | £94 0 |
| 2¼ h.p. SPARK, single speed | £39 18 |
| 2½ h.p. SPARKBROOK, single speed | £54 12 |
| 2¼ h.p. TRIUMPH Lightweight, 2-speed | £65 0 |
| 4 h.p. TRIUMPH, 3-speed, belt drive | £105 0 |
| 4 h.p. TRIUMPH, 3-speed, chain drive | £115 0 |

### NEW COMBINATIONS

| | |
|---|---|
| 2¾ h.p. ALLDAYS ALLON, de Luxe | £85 0 |
| 4¼ h.p. B.S.A., belt drive, No. 3 sidecar | £139 0 |
| 4¼ h.p. B.S.A., chain drive, No. 3 sidecar | £142 0 |
| 8 h.p. ENFIELD, 2-speed | £140 0 |
| 8 h.p. ENFIELD, dynamo lighting | £158 0 |
| 8 h.p. MATCHLESS, 3-speed, spring frame | £170 0 |
| 8 h.p. MATCHLESS, Family 2-seater sidecar | £175 10 |
| 6 h.p. HAZLEWOOD, 3-speed | £118 0 |
| 8 h.p. NEW IMPERIAL, 3-speed | £145 0 |
| 4 h.p. TRIUMPH, 3-speed, belt drive | £145 0 |
| 4 h.p. TRIUMPH, 3-speed, chain drive | £155 0 |

### SLIGHTLY SHOP-SOILED.

| | |
|---|---|
| 4¼ h.p. B.S.A., belt drive, No. 2 sidecar | £130 0 |

***All machines sent Carriage Paid from London to nearest Railway Station.***

**HARRODS MOTOR SALES DEPT**
**116–118 Brompton Road London SW1**
*(Opposite the Main Building)*

### Enfield.

19 22 Enfields in stock.—Premier Motor Co., Birmingham. [4601

ROYAL ENFIELD Combination, 1914; £60.—152, High Rd., East Finchley. [4291

ENFIELD 2¾h.p., single-speed, excellent order; £16.—17, Heaton Rd., Mitcham. [4173

BRAND New Enfield Combination; £114.—24, Balliol Rd., N. Kensington. [4139

NEW Enfield Combinations in stock.—Bounds, Garage, 223, High Rd., Kilburn. [4350

19 22 Enfield all-chain drive Lightweights in stock; £55.—Gray's Garage, Watford. [4209

LATE 8h.p. Enfield Combination, all accessories; £80.—17, St. Charles Sq., W.10. [4076

ENFIELD, 1922, latest models, lightweight and combination, in stock.—Moss, Wem. [4630

19 15 5h.p. Enfield Twin, 2-speed, clutch; 25 gns.—Edwards, 101, Gt. Portland St., W.1. [4447

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0577

19 20 2¼h.p. Enfield 2-stroke, 2 speeds, excellent condition; £34.—Ben Scott, Dunstable. [4059

19 21 2¼h.p. Enfield, tax paid, fully equipped; £42; as new.—204, Ladbroke Grove, W.10. [4066

8h.p. Enfield Combination; £55 or nearest.—Robinson, 4, Grantham Terrace, Stockwell, S.W.9. [3811

ENFIELD 2¼h.p. 1920, tax paid, fully equipped; £36.—J. Hillier, 216, Portobello Rd., North Kensington. [3975

ROYAL ENFIELD 2¼h.p., 2 speeds, kick starter; £57.—Shepherd, Enfield Highway. Tel.: Waltham Cross 31 [0879

ENFIELD 3h.p., 2-speed, kick start, lamps, horn, etc., tax paid; £45.—Frith, Wheston, Tideswell, Buxton. [4386

ENFIELD 2-stroke, 1921, small mileage, tax paid, all on, perfect; trial; £45.—Park Garage, Hampton Wick. [3510

LOOK.—Brand new 1922 Enfield 2¼h.p., 2-speed, kick starter, solicd; £53/10.—391, King St., Hammersmith. [3913a

THE Latest 2-stroke Enfield, £35, or near offer; call any time after 6 p.m.—45, Doddington Grove, Battersea. [4672

2¼h.p. 1920 Enfield, 2-speed, lamps, horn, enamel 24 and plating like new; £34.—10, Hamlet Rd., Chelmsford. [4480

6h.p. Enfield C.B. Combination, lamps; nearest £60, bargain.—Service Motors, St. Chad's Rd., Headingley, Leeds. [4256

2¼h.p. 1922 2-stroke Enfield, K.S., new; £50, or 24 nearest cash offer.—Dunn, 14, Bridge St., Northampton. [3958

19 GNS.—Enfield 3h.p. sporting twin, 2-speed, clutch, year's licence.—20, Treen Av., Hoggers Corner, Barnes. [4003

ENFIELD 2¾h.p. Twin, Binks, etc.; accept £25; ride to show prospective customer.—Goodman, Plumpton, Sussex. [3571

ENFIELD Twin, 2-speed, splendid condition and appearance, equipped, any trial; £24.—269, Camberwell New Rd. [3914

DAN GUY, Weymouth.—Enfield 1921 8h.p., Magdyno, double-seated sidecar, hood and screen, guaranteed perfect; £125. [0818

ENFIELD 8h.p. 1921 Combination, dynamo lighting, hood and screen, almost new; £112.—151, Globe Rd., Bethnal Green. [3919

19 18 Enfield 8h.p. Combination, lamps speedometer, licence; £85.—L. Ogden, 28, Whitehead St., Walkden, Nr. Manchester. [4697

19 22 Enfield 8h.p. Combination, Lucas Magdyno lighting, mileage 1,500; £130.—King, 4, Willow Walk, Short St., Cambridge. [4490

19 19 Enfield Combination, dynamo lighting, Easting, windscreen, Tan-Sad, new condition; £75.—64, Church St., Edgware Rd. [3849

19 15 Enfield Combination, just overhauled and coach-painted, hood, Cameo, speedometer; £58.—Warner, 5, Clyde Rd., Croydon. [4087

ENFIELD 1921 2¼h.p., equipped; £39, or exchange B.S.A. 1919 combination, cash adjustment.—40, Fullerton Rd., Wandsworth. [3706

CROYDON and District.—Sole official appointed agent for Royal Enfields.—A. F. Pulling, 175a, London Rd., Croydon. 'Phone, 1619. [6951

ENFIELD 1918 6h.p. Combination, specially good condition; 69 gns.; photo.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [4264

6h.p. 1915 Enfield Combination, 2 speeds, £65; also 2¼h.p. 1921 Royal Enfield, 2-speed 2-stroke, £47/10.—Wauchope's, 9, Shoe Lane, London. [4594

19 16 Enfield Combination, Easting, speedometer, lamps, tools, spares, excellent condition, tax paid; £84.—Jones, 76, Kenyon St., Fulham Palace Rd. [3623

## MOTOR CYCLES FOR SALE.

### Enfield.

3h.p. Twin Enfield, M.A.G., 1917, fully equipped, guaranteed, lovely condition, 50 m.p.h.; trial; £35; exchange.—7, Cowdrey Rd., Wimbledon. [4722

1919 3h.p. Enfield, 2-speed, coachbuilt sidecar, new tyres, enamel and plating good, little used, perfect; 60 gns.—Barton, 26, Union St., Deal. [3646

1921 8h.p. Enfield Combination, speedometer, many extras, Easting screen, mileage negligible, tax paid; £125.—31, Thursby Rd., Northampton. [4508

£35.—3h.p. Enfield, twin M.A.G., 1917, 2 speeds, clutch, kick start, all chain, fully equipped, perfect, exceedingly fast.—7, Cowdrey Rd., Wimbledon. [4723

ENFIELD.—Complete range of 1922 models, for immediate delivery; cash, exchanges; easy payments.—P. J. Evans, John Bright St., Birmingham. [3768

ENFIELD, 1922, brand new 2¼h.p., 2-speed, kick starter, in stock; £57; easy payments arranged; exchanges.—Wilkins, Simpson, opposite Olympia, London. [3782

ENFIELD Combination, 6h.p., March, 1920, fully equipped, perfect, stored since December; nearest £100.—Applications first to Royal Jones Garage, Oxford. [4097

IN Stock.—1922 8h.p. Enfield combination. £140; also 2¼h.p. 2-stroke model, £55; cash or deferred.—D. and S. Autocar Co., 33, The Parade, Golders Green. [4637

ENFIELD 2¼h.p., 2-speed, 2-stroke, tax paid, speedometer, lamp, horn, tools, spares, perfect condition; £42.—Holmes, 131a, Church Rd., Barnes, S.W.13. [3619

ENFIELD 1921 8h.p. Combination, complete with Lucas dynamo lighting; £123.—Elce, Ltd., 13, 15 and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0071

3h.p. Enfield Twin, M.A.G. engine, 2-speed, fully equipped, speedometer, etc., a genuine snip, tax paid, any trial; £29.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [4081

SPORTS Enfield 2¼h.p., just delivered carefully run in, Lucas lamp set, horn, J.B. knee grips, tax year; highest secures.—Park Garage, Kingston Bridge, Hampton Wick. [3928

FOR Sale, 8h.p. Royal Enfield Combination; 1922, with lamps, horn, windscreen, tools, tax, insurance, etc.; what offers?—Burdon, 17, Taokerville St., West Hartlepool. [3634

1919 (July) 3h.p. Enfield, not ridden 200 miles since overhauled by makers 1921, excellent condition; £45; after 7 p.m.—174, Muswell Hill Rd., Muswell Hill, N.10. [3644

ENFIELD 1922 Brand New 8h.p. Combination, Magdyno lighting; £158; in stock; easy payments arranged; exchanges.—Wilkins, Simpson, opposite Olympia, London. [3784

ENFIELD Combination, late 1917, Magdyno, speedometer, pillion, licence, tax, spares, trial, condition perfect; £87.—Wallace, 39, Old Deer Park Gardens, Richmond, Surrey. [4401

ENFIELD, 1922, brand new 8h.p. model, with double-seater sidecar; £145; in stock; easy payments arranged; exchanges.—Wilkins, Simpson, opposite Olympia, London. [3785

ENFIELD, 1922, brand new, 2-stroke, 2¼h.p., new sports model, just arrived; secure now; £55; easy payments arranged; exchanges.—Wilkins, Simpson, opposite Olympia, London. [3783

1917 Royal Enfield, 6h.p. J.A.P., 2-seater sidecar, hood, 2 windscreens, speedometer, horn, electric lighting, good condition, tyres unpunctured; any trial; £85.—37, The Grove, Palmers Green. [4154

1922 Enfield Combination, Lucas dynamo lighting, in stock for immediate delivery; exchanges or deferred 4% extra; £158.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [4434

ENFIELD Combination, late model, as new, speedometer, complete lighting, new tyres, full accessories, Tan-Sad, Easting, hood, D.A. cylinder and fittings; £115.—15, Audrey Rd., Ilford, Essex. [3850

ENFIELD, 1922, brand new 8h.p. model, with double-seater sidecar, Magdyno lighting; £163; in stock; just arrived. Easy payments arranged; exchanges.—Wilkins, Simpson, opposite Olympia, London. [3786

ROYAL ENFIELD Combination 6h.p., 1917, J.A.P. engine, enamel, plating perfect, hood, screen, Jones trip speed, lamps, low mileage, any trial and expert examination; tax paid; offers wanted.—French, Oxted. [2179

98 GNS.—1921 Royal Enfield Combination 8h.p., Vickers engine, Dunlop Magnum tyres, Stewart speedometer, Lucas lamps, legshields, windscreen, tax paid; exchanges.—Smith's, 86 Chalk Farm Rd., opposite Chalk Farm Tube Station. [2193

ENFIELD Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St. Southport. 'Phone: 607. [4924


# FOR MOTORING and EVERY-DAY WEAR.

**WE have purchased 500,000 yards of Cloth in three shades, and two qualities from manufacturers who require ready-money, and we are now offering this to the public in garments at 50% LESS THAN TO-DAY'S COST PRICE.**

**CHILDREN'S CAPES and HOODS in various shades of BLUE.**

All sizes, 21in., 24in., 27in., 30in., 33in. and 36in.

**ALL ONE PRICE 4/11** plus 9d. extra for postage.

Worth 12/6.

**LADIES' HEAVY FAWN RUBBER SURFACE COATS AND HEAVY NAVY RUBBER-LINED COATS**

**(Just the thing for Motor use).**

Sizes, 42in., 44in., 46in., 48in., 50in. length.

**ALL ONE PRICE 15/-**

Postage 1/- extra.

Worth 35/-

**GENTS' HEAVY FAWN RUBBER SURFACE COATS AND HEAVY FAWN or NAVY RUBBER LINED COATS.**

Sizes, 34in., 36in., 38in., 40in., 42in. and 44in. Chest.

**ALL ONE PRICE 15/-**

Postage 1/- extra. Worth 42/-

**THIS offer cannot be repeated when the cloth is sold. We secured this cloth during the trade slump, and if bought to-day we could not offer the garments at even double the price.**

*If clients are not satisfied on receipt of garment, the money will be refunded in full upon return of the clothing.*

All orders, together with remittance to be addressed to:—

**THE LANCASHIRE AND CHESHIRE RUBBER CO.**

**MACINCOAT HOUSE,**

**34, North John St., LIVERPOOL.**


## MOTOR CYCLES FOR SALE.

### Enfield.

2¾h.p. Enfield, 2-speed, clutch, Bosch, new Amac all new chains, taxed December, any trial; £23 —Osborne House, North Malvern, Worcestershire. [390

1919 Enfield 8h.p. J.A.P., double seater, all el minium sidecar, bulbous back, Goodyears u punctured, Bosch, Stewart speedometer, spares, r cently overhauled and fitted with three new chain etc.; will take four up; any test run of 50 miles; ca be seen in London or Southend-on-Sea; £95; offers co sidered, except dealers; seen by appointment.—Pe rott, 98, Southchurch Avenue, Southend-on-Sea. Lon don 'phone: Central 3176. [384

*Spare Parts.*

ENFIELD Spares.—Immediate delivery.—Kays, Bond St., Ealing. [754

ENFIELD Spares and Repairs a speciality.—Pulling's Garage, London Rd., Croydon. 'Phon 1619. [699

### Excelsior.

1921 Excelsior 8h.p. Combination, licence, D. cylinder, lamps, horn, screen, low mileag £98.—Blake, Park Crescent Mews (East), Great Por land St., W.1. [430

1921 (September) 8h.p. Excelsior Combination, a chain, 700×80 tyres, equipped, licensed, le shields, screen and dash, low mileage; £110; good so taken part.—Watkins, Rayner Place, Swansea. [366

BRITISH Excelsior de Luxe Combination. 8h J.A.P., 3 speeds, Lucas Magdyno, detachat wheels, spare wheel, 28in. tyres, hood, screen, 2-seat sidecar (one seat removable), many other accessori photo, run 5,000 miles only, year's tax; 110 gn exchanges.—Peter Gordon, Ltd., 110, Upper Richmon Rd., East Sheen. [42

### Fafnir.

2¾h.p. Fafnir (incomplete) Engine, sound; £5. Platts, 602, King's Rd., Fulham, S.W.6. [38

3h.p. Fafnir for Sale, or exchange Auto-Wheel a cycle; tax paid.—138, Wycliffe Rd., Batters [39

### F.N.

F.N. 4-cyl., good condition; £28, or near offer. Brooks, Austey, Leicester. [40

F.N. 4-cylinder, 2-speed, hand and foot clutch, twi grip control, Claudel, new tyres, discs; £26. 38, Cumberland St., Luton. [39

F.N. 1920 7h.p. 4-cyl. Combination, hood, scree complete, nearly new condition; £85.—Motoris Advisory Agency, Ltd., 89, Wigmore St., W. [37

1919 GNS.—5-6h.p. F.N. 4-cylinder, 2 speeds, clute sporting Bosch, good tyres, dropped fram tax, ride away.—181, Newton Rd., Burton-on-Tren [43

F.N. 2½h.p., 2-speed, handle-bar clutch, overhaul new rings, good condition; £20.—Allison, 23 High St., Camden Town. Ring bell side furnitu shop. [42

£14 only.—F.N. 5h.p., 4 cylinders, Bosch magne Amac, tax paid, fast, excellent condition, ri away; first wire secures bargain.—18, Whorstead R Ipswich. [42

1921 F.N. 2½h.p., 2 speeds, C. and K.S., sha driven, fully equipped, absolutely as new; changes or terms.—Homac's, 243, Lower Clapton R N.E. 'Phone: Dalston 2408. [44

LANGFORD'S, 37, Cricklewood Broadway, Lond N.W.2.—1922 8h.p. 4-cylinder F.N., with n o.h.i.v. engine, 3-speed gear, and no-trouble shaft dri £135; 2¼h.p., £55. Highest price for your prese machine in exchange. [33

*Spare Parts:*

F.N. Spares.—We can supply for all models fr 1904. Please send frame number or old pa 37, Cricklewood Broadway, London, N.W.2. [33

### Gamage.

GAMAGE Lightweight 4-stroke, 3-speed, hub, clut Bosch, B. and B. little wear, requires tunin £15, offers.—Troahyfryd, Llwyngwril, Merionethshi [43

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; (re £120.—Stacey 12 Ecclesall Rd. [05

£60.—Solo 7-9h.p. Harley, T.T. bars, good conditi —Knall Corner, Brighton Rd., Purley. [35

HARLEY Combination, double-seater, excellent c dition; 60 gns.—67, Fernlea Rd., Balham. [46

1919 7-9h.p. Harley, incomplete; £42, exchange 2, Fortune Gate Rd., Harlesden, N.W.10. [40

HARLEY 7-9h.p. Combination, late 1919, new c dition, not W.D., equipped; £85.—Clark, 7, P hihilton Rd., S.W.7. [45

LATE 1920 Harley 7-9h.p. Combination, almost new; £115.—28, Woodford Rd., Forest Ga 'Phone: Maryland 2598. [40

1920-21 4h.p. Harley, 3 speeds, clutch and k starter, small mileage, equal to new; £85, exchange.—198, King St. 'Phone: Hammersmith 24 [41

## MOTOR CYCLES FOR SALE.

### New Imperial.

0 New Imperial Combination, 8h.p. J.A.P., 3 speeds, C. and K.S., all lamps, horn, Easting, an exceptional bargain, tax paid; £85; ex-es or deferred.—Homac's, 243, Lower Clapton N.E. 'Phone: Dalston 2408. [4440

'EPTIONALLY Smart 8h.p. 1920 Imperial-Jap. est made Grimley sidecar, leaf sprung, wide mud- aluminium nose and scuttle, Triplex screen, luggage carrier, dashboard in sidecar fitted, switchboard, electric cigarette lighters, clock, dynamo lighting, T.T. bars, Bonniksen speed- mechanical horn, aluminium discs all round, eds, K.S., hand and foot clutch, large flexible st pipe, perfect condition, as new; nothing to eady for any tour; smartest outfit on the road: £140; accept 100 gns.; impossible to repeat argain.—W.J.C. Motor Exchange, Addison Av., d Park, W.11. Park 2071. [4687

*re Parts*

V IMPERIAL Spare Parts.—London stockist's, ter, 175, Gt. Portland St. 'Phone: Langham Open till 7.30 p.m., 4 o'clock Saturdays. 0855

### New Ryder.

RYDER-J.A.P., 2-speed, practically new, ucas equipment, splendid little machine; £52.— 391, c/o *The Motor Cycle*. [4519

### Norton.

MIER Motor Co. for 1922 Nortons.

9, 3½h.p., £80, 16H., 3-speed, £115; Big Four, 5-speed, £120; sidecars from £22; easy payments, cent. extra, free delivery to any address.— r Motor Co., Aston Rd., Birmingham. [0865

IAN'S, of Reading, have Norton 16H in stock. [4505

C.H. have 1922 Norton 16H, new condition, ardly used, licensed.—5, Heath St., Hampstead abet. [3806

TON, late 1920, B.R.S. 1922 tank, bars, per- ect, 60 m.p.h. easy; lowest £50.—43, Hales- Rd., Lewisham. [4035

TON, 1920, 3-speed, Lucas lamp, speedometer; 78; 1920, T.T. bars, £48; both tax paid.—H. Cradley, Staffs. [3750

—1921 3½h.p. 16H Norton, equipped, very fast. -W.J.C. Motor Exchange, Addison Av., Holland W.11. Park 2071. [4692

ERS.—1916 Norton 3½h.p., 3-speed, fully quipped; any trial.—Goad, 122, Maida Vale, : Hampstead 1353. [4007

TON, latest No. 9 model in stock, £80; also 921 model, Philipson, lamps, etc., £55.—Mar- 31, Bridge St., Chester. [4575

p. Racing Norton, close ratio gears, B.R.S., winner of 50 firsts, will do 82 m.p.h., nearly £90.—Williams, Pilton, Somerset. [4302

TON 1920 (late) 3½h.p., 3-speed, K.S., in prac- ically new condition throughout, fully equipped, pares, guaranteed ready for any tour; best offer. Varren, Hindon, Wilts. [3887

TON 1921 16H, speedometer, taxed, winner any speed trials, £85; 1920 Big 4, Magdyno, Norton sidecar, taxed, mechanically perfect, -Clark, 7, Exhibition Rd., S.W.7 [4611

t 16H Norton, Cancelet Combination, Standard and latest mousetrap Binks carburetters, Bon- 3 sprockets, tyres good, insured, taxed year, competition awards, fine condition; accept £98. oe, Headstone Drive, Wealdstone. [3816

TON Specialists.—Wanted, your present motor ycle in part exchange for any new model tock. No waiting. Distance no object. Best allowed for second-hand machines. Deferred nts, see column advertisement.—Bambers, 2, nk St., Southport. 'Phone: 607. [4929

your new Norton from the rider agent. Car- ge paid to any address in British Isles. es for competition tuned free of charge; good guaranteed. I specialise in Norton motor Send for catalogue.—G. H. Tucker, Norton st Redcliffe Hill, Bristol. 'Phone: 4042. [6509

### N.S.U.

. Motor Cycle enamelled, ride away; £16.— tanding, 156, Acre Rd., Kingston-on-Thames. [3684

U. 3h.p. Twin,, 2-speed, spring frame, all on; 18.—Houchin, 189a, High St., Peckham, S.E.15. [4680

U. Motor Cycle, light twin, 2-speed gear, lamps, rn, etc; bargain, £19/15; exchange typewriter niture; stamp, please.—277, Camberwell Rd., [3950

U. 1914 4h.p. Twin, spring frame, 2-speed, me- hanical lubrication, little used, lamps, etc., condition; £25.—Lowe, 4, Carlton Terrace, Hill, N.W.2. [4664

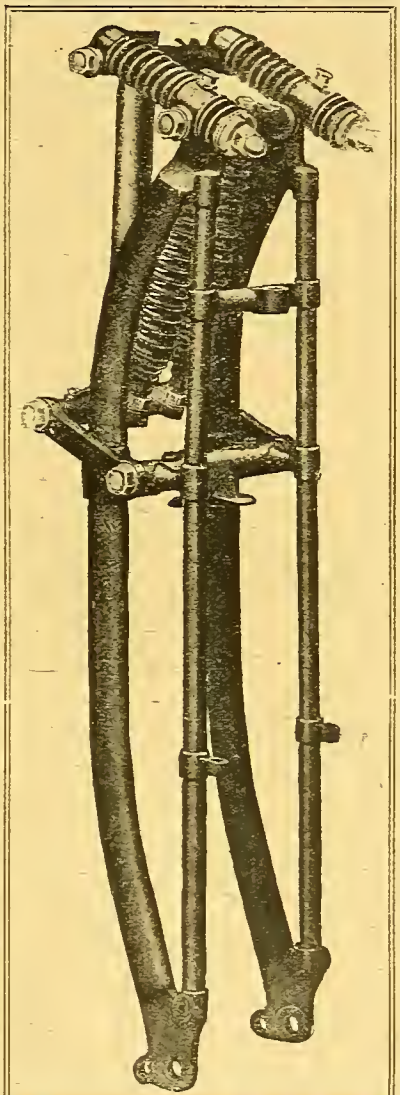
### N.U.T.

0 (October) 3½h.p. Standard N.U.T., excellent condition throughout, Brook cantilever, lamps; Boulton, Saltron Walden. [3680


The

# BRAMPTON

## BI-FLEX SPRING FORK.



## A Telling Testimonial.

*The following is a copy of unsolicited letter received from a user of the Brampton Bi-Flex Spring Fork, resident in Oxford, dated May 27th, 1922.*

Dear Sirs.

The Spring Forks I ordered from you arrived safely and in good order on Tuesday. Yesterday and to-day I have been testing them on some of the roughest roads round here and they are a fairly good test. Naturally my expectations were high, but I am glad to say they were exceeded by the efficiency of your Fork. The comfort of the machine has been trebled and it steers itself almost without assistance.

Yours sincerely.

**Illustrated and descriptive booklet free on request.**

**BRAMPTON BROS. Ltd.**
**Oliver Street, BIRMINGHAM.**


## MOTOR CYCLES FOR SALE.

### N.U.T.

N.U.T. 1920, 3½h.p. Twin, Sturmey 3-speed, Lucas Magdyno lighting set, speedometer, special engine, very fast; £92.—Davis, 18, Church St., Rickmansworth, Herts. [3621

### O.K.

19 18 2½h.p. O.K., equipped; 20 gns.—Edwards, 101, Gt. Portland St., W.1. [4446

19 21 O.K. Junior, 2½h.p., 2-speed, clutch, all on; £42.—305, High St. North, East Ham. [3688

O.K.-M.A.G. 2½h.p., 2-speed, economical, enamel good; £25.—44, Curzon St., Nottingham. [4203

O.K. Junior, new 1921, Mark IX. Model; £33.— Eagles and Co., 275, High St., Acton, London. [4522

19 21 O.K. Junior, 2¾h.p., perfect condition, very little used, fully equipped, licensed; £30.— Foster, Bazaar, Chertsey. [3863

O.K., 25 gns.; 1920, 2¾h.p., P. and H. lamps, horn, tax paid until 1922, any trial; bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [4285

19 21 2¾h.p. O.K. Junior, 2-speed, clutch, kick start, Lucas lamps, horn, licensed; £40; guaranteed.—24, Warford St., Newtown, Manchester. [3992

2¾h.p. O.K.-Blackburne, 2-speed, P. and M. band brake, lamps, like new, fast; any trial; perfect condition; £38.—Horace, 61, School Rd., Woking. [3577

O.K. Junior Ideal Lightweight, everything perfect, overhead inlet, Albion 2-speed, good as new, fully equipped; bargain, £26.—Box 1890, c/o *The Motor Cycle*. [4518

19 21 2¾h.p. O.K., both Dunlops and all accessories, perfect running order, footboards; bargain, £28, or near offer.—G., 424, London Rd., Thornton Heath. [3572

### Omega.

19 16 2¾h.p. Omega-Jap, 2-speed, equipped; 26 gns. —Edwards, 101, Gt. Portland St., W.1. [4445

19 19 Omega-Jap 2¾h.p., 2-speed, speedometer, lamps, horn; £35; or exchange higher power.— 217, Belsize Rd., Hampstead. [4178

19 20 Omega-Jap 2¾h.p., 2-speed, clutch, kick start, lamps, accessories, splendid condition throughout; £40.—12, Portland Av., Stamford Hill. [3718

### Orbit.

ORBIT, 1922, 2-speed and clutch, kick-start, nearly new, black and gold finish, very smart; £44; cost £54.—11, Ellerby St., Fulham, S.W.6. [3864

### P. and M.

P. and M., 1918; £45, or best offer; after 4.—43a, Tennyson Rd., Kilburn. [3602

P. and M., 1918, renovated 1920, taxed, ride away; £36.—43, Ripplevale Grove, Barnsbury. [3668

3½h.p. 1919 P. and M. Solo, fully equipped; £55.— Wanchope's, 9, Shoe Lane, London. [4592

P. and M. 3½h.p., good order; £21, or offer, quick sale.—Davey, 6, High St., Lewisham, S.E.13. [2725

P. and M. 1917, all on, tax paid, recently overhauled; £50.—23a, Lower Rd., Eastbourne. [4130

P. and M. Machine, solo, 1917, in good condition; £32.—Cooper, 63, Avenue Rd., Camberwell, S.E.5. [3830

P. and M. 1919, sidecar, excellent condition; £55.— Write, Brooker, 55, Lady Margaret Rd., Kentish Town. [4115

P. and M., 1919, perfect order, fully equipped, fast, good appearance; £45.—50, Haverstock Hill, N.W.3. [4665

£35.—P. and M., 1918, fully equipped, excellent condition, bargain.—143, Ravensbury Rd., Earlsfield, S.W. [4494

19 18 P. and M., lamps, pump, horn, Tan-Sad, ride 30 miles to see purchaser; £35.—Davis, 53, Lennard Rd., Penge. [3694

£38.—1918 3½h.p. P. and M., completely rebuilt, very smart, new engine; bargain.—1, Molesey Rd., Hersham, Surrey. (D) [4695

WANCHOPE'S, 9, Shoe Lane, London, supply P. and M. motor cycles and combinations on exchange and easy terms. [4586

19 19 P. and M. renovated, guaranteed; 33 gns.; photograph.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [4268

19 18 P. and M., Montgomery sidecar, lamps, tax; £48, exchange; ride 60 miles to purchaser.— 2, Fortune Gate Rd., Harlesden, N.W.10. [4060

19 22 4-speed Combination, shop-soiled only, £120; 1918 renovated P. and M., guaranteed, £45.— Inman, Durham Rd., Seaforth, Liverpool. [4485

19 21 P. and M. Combination, demonstration model, mileage 300, Lucas equipment; 110 gns.; tax paid.—Romano, 49, High St., Wimbledon. [3616

P. and M. Combination, late 1919, electric lighting, splendid condition, tax paid, insured; £65.—Cope, 15, Upper Hagley Rd., Edgbaston, Birmingham. [4051

P. and M. Combination, late 1920, electric speedometer, Easting, excellent condition throughout, many spares, must sell; offers.—113, Browning Rd., Manor Park. [3842

## MOTOR CYCLES FOR SALE.

### P. and M.

P. and M., 1919, reconditioned model, new sidecar, all Hutchinson tyres, new sidecar and lamps, horn, etc.; bargain, £52/10; or exchange good furniture; stamp, please.—277, Camberwell Rd., S.E. [3949

1918 P. and M. Combination, fitted aluminium chain cases, new Dunlops, fully equipped, tax paid for year, perfect order; £45.—Maynard, 161, Bowes Rd., Bowes Park, N.11. 'Phone: Palmers Green 19. [3891

BARGAIN, P. and M. combination, brand new condition, new tyres, aluminium chain cases, long exhaust, new bulbous back sidecar, wind screen, accessories, only wants seeing, guaranteed; £75.—142, Alexandra Rd., Hampstead, N.W.8. [3984

P. and M., ex R.A.F., late type Solos, re-built, re-enamelled, lined and plated, fitted with new T. and B. magnetos, B. and B. carburetters, tyres, and tubes. 40 gns.; P. and M. sidecar chassis, complete, £5/10; P. and M. Sporting Cancelet sidecar, £8/10.—Voltaire Motor Works, 4, Voltaire Rd., Clapham, London, S.W.4. [4615

*Spare Parts:*

P. and M.—For P. and M. spares see Kenneth Remp, under Parts and Accessories. [2872

SPARE Parts, early deliveries.—Maudes' Motor Mart, 100, Gt. Portland St., W.I. [4375

P. and M. Spares' Specialist. Every part stocked. Stamp brings list.—Inman, Durham Rd., Seaforth, Liverpool. [4484

P. and M.—All parts in stock for P. and M.'s; send stamp.—P. and M. Specialist, H. Beardwood, 147, Burlington St., Liverpool. [0839

### Precision.

PRECISION Junior, 2-speed, tax paid, excellent order; £18.—17, Heaton Rd., Mitcham. [4172

2¾h.p. Precision, Bosch, B. and B., drip feed, clutch, etc.; sacrifice £15.—Fisher, Springwell Rd., Heston, Hounslow. [4099

4¼h.p. Precision Combination, 3-speed, K.S., countersnaft, all on, won in raffle; £35; write.—20, Wade Rd., E.16. [4648

### Premier.

PREMIER 2¾h.p., very good condition and running order; first with cash £18.—Hole, 129, Park Lane, Carshalton. [3519

PREMIER 2½h.p., fully equipped, tax paid, ready to ride away, excellent condition, overhauled; £20, or offer.—2, Mascotte Rd., Putney, S.W.15. [3978

PREMIER 2¾h.p., 3-speed, Bosch, B. and B., lamps, speedometer, Dunlop and Palmer, drop foot-rests, good running order, licence; what offers?—17, Pyrmont Rd., Ilford. [3643

1914 Premier 3½h.p., 3-speed, kick starter, coach-built sidecar, Easting, re-enamelled, overhauled, perfect; £50, or nearest, genuine proposition.—Thornitt's Garage, Banbury. [4096

3½h.p. Premier C.B. Combination, 3-speed hub gear, first-class condition, all accessories, tax paid, wind screen, any trial; £35.—Blackshear, Meadow Walk, Walton-on-Hill, Surrey. [3997

PREMIER 4h.p., 2-speed, K.S., Bosch, lamps, horn, re-enamelled overhauled, sound, reliable machine; go anywhere; first £25 secures; exchange piano.—8, Hartington Rd., Chiswick. Tel.: 1779. [3681

*Spare Parts:*

PREMIER Spares and Repairs.—We claim to be the most competent firm to supply spares and execute repairs to Premier motor cycles. We served in the Premier works, and know this machine from A to Z. We hold the most varied stock of parts for it in the world. We are the only traders who can claim to supply every part for a Premier machine. Our prices are rock bottom, and our service unsurpassable. Write us full requirements; you will receive our reply per return.—Forfield Motors, Forfield Place, Leamington Spa. [3167

### P.V.

P.V.—Astounding value is represented by our new range of popular models, incorporating our famous spring frame and Villiers or J.A.P. engines. Prices from £45. Lists from agents or P.V. Motor Cycles, Ltd., Forest Hill, London. [9555

### Quadrant.

CLIFFORD WILSON Company, 16 years' experience with Quadrants. [9925

WAUCHOPE'S, 9, Shoe Lane, London.—4½h.p. Quadrant combination, 3 speeds, kick start and clutch, 1920; £77/10. [4587

1922 Quadrant 4½h.p. Combinations; £100. Agents for Cambridge.—Wallis and Eastoo, 104, Mill Rd., Cambridge. [0825

FRANK WHITWORTH, Ltd., Distributors, 139, New St., Birmingham.—Quadrant £100 4½h.p. Combination, delivery from stock. [0767

£25.—Quadrant 1915 4½h.p. 3-speed Solo, works overhauled.—Clifford Wilson Manufacturing Co., 177, Westminster Bridge Rd., S.E.1. [2463


# WATERPROOF CLOTHING FOR ALL WEATHER CONDITIONS

Fig. 1.

**WATERPROOF MOTOR CYCLE SUIT (Fig. 1)**
With Plaited Leather Belt.

**SPECIFICATION**

**MADE from hard wearing double texture material with an interlining of Rubber.**
**Double Breasted Jacket, with all-round plaited Leather Belt, large Patch Pockets, and converted collar to button right up to neck, to fasten with Throat Tab. Wind Cuffs in sleeves. All seams of the Suit are rubber cemented and taped with extra material, making the garment absolutely waterproof.**
**Overall Trousers with spat-shaped leg; wind gussets to keep the wind from the leg and boots; fastened with patent clasp fasteners, enabling the trousers to be pulled off in a moment.**

**SUIT COMPLETE 35/-**
**Jacket only . . . . 25/-**
**NO EXTRA CHARGE FOR CARRIAGE**

**OUR ILLUSTRATED LIST AND PATTERN BUNCH OF CLOTHS, TOGETHER WITH SELF-MEASUREMENT FORM, WILL BE SENT POST FREE AND WITHOUT ANY OBLIGATION UPON RECEIPT OF YOUR NAME AND ADDRESS.**

**Waterproof Trench Coat 25/-**

Fig. 2.

**(Fig. 2.) Fawn material, rubber lined, wind cuffs, guaranteed waterproof.**

**SEAT-LESS Trousers Fawn double texture material rubber interlined wind gusset & clasp fasteners. All sizes. Guaranteed Waterproof.**

**18/-** per pair

**WATERPROOF OVERALLS.**
**Double texture material, clasp fasteners, perfectly waterproof.**
per **12/6** pair

**THESE GARMENTS ARE NEWLY MADE FROM FRESHLY PROOFED MATERIAL BY EXPERIENCED WORKMEN AND NOT HALF-PERISHED CLEARANCE LINES OR W.D. SURPLU-**

*If you cannot call, send money wit breast measurement and height.*

*POST YOUR ORDER EARLY*

*Satisfaction guaranteed or money refunded if garments are returne to us within 7 days.*

**CARRIAGE PAID ON ALL ORDERS**

Actual Manufacturers:
**Martin Waterproof Co.,**
**208 Oldham Rd., New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### Quadrant.

1920 Quadrant 4½h.p. Combination, 3-speed, clutch, kick start, all chain, Cancelet sidecar, Easting, all on, fine condition; £65.—29, Hartley Rd., Leytonstone. [4678

QUADRANT (May, 1921) 5h.p. all-chain Combination, Watford, Easting, Tan-Sad, Millers, 2 brand new extra heavy Dunlops, excellent order; £85.—22, Cambridge Rd., Teddington. [4067

QUADRANT 4½h.p. 1920 Combination, taxed, equipped, overhauled, mechanically perfect, all chain, Sturmey 3-speed, clutch, Amac, Cancelet, Cameo, hood; £88.—Seen Taylor's Garage, 239, Wood St., Walthamstow. [3692

CLIFFORD WILSON Mfg. Company, Quadrant Works Representatives and Sole Wholesale Distributors for London, Southern and Eastern Counties; official repairers and spare part stockists; deferred payments; exchanges; all models in stock. Special insurance facilities applicable to Quadrants only.—177, Westminster Bridge Rd., London, S.E.1, opposite Waterloo Station Approach. Telephone: Hop 210. [9926

### Radco.

RADCO 1915, Albion 2-speed, engine sound, magneto overhauled by maker, equipped, tax paid; £23, lowest.—Cook, 4, Canston Rd., Highgate. [4069

NEW 1922 Radco, 2½h.p., 2-speed clutch, kick starter, £47/5; easy payments 4% extra; free delivery.—Premier Motor Co. Aston Rd., Birmingham. [4606

### Raleigh.

PREMIER Motor Co. for 1922 Raleighs.

IMMEDIATE delivery of 2¾h.p. 4-stroke lightweight, 2-speed, £68; 3-speed, £73; also 5-6h.p. flat twin, spring frame, detachable wheels, solo, £130; sidecar combination, £165; easy payments, 4 per cent. extra; free delivery to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0866

JULIAN'S, of Reading, have 2¾h.p. Raleigh in stock; £68. [4501

RALEIGH 2¾h.p., 2-speed, kick start, in stock; £68.—Clark, 7, Exhibition Rd., S.W.7. [1280

RALEIGHS.—All models; delivery now.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3693

RALEIGH 3h.p., 3-speed, kick starter; immediate delivery from stock.—Gray's Garage, Watford. [4207

RALEIGH.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing [4836

RALEIGHS.—1922 2¾h.p. and combinations always in stock delivery anywhere.—Clifford Motories, Eastwood, Notts. [3383

RALEIGH.—Immediate delivery of 1922 models; exchanges or deferred payments arranged.—Edwards, 50, Harrington Rd., South Kensington. [4547

NEW 1922 3h.p. 3-speed Sports Raleigh, £78; or with Hughes aluminium sidecar, £99; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [4607

RALEIGH, latest 1922 2¾h.p., 2-speed model, £68; 3-speed model, £73; 6h.p., spring frame model, £130 complete.—All in stock at Marston, 31, Bridge St., Chester. [4567

### Reading-Standard.

READING-STANDARD. — 1921 8-10h.p., Dyno lighting, electric horn, in splendid condition; £80.—W. E. Line, 89, Gt. Portland St., W.1. [4314

READING-STANDARD.—See our displayed advert. for shop-soiled unused 1921-22 machines at £105.—W. E. Line, 89, Gt. Portland St., W.1. [4315

### Ready.

READY.—1922, 2¾h.p. J.A.P. engine, Burman gear box, shop-soiled, unused; £55.—W. E. Line, 89, Gt. Portland St., W.1. [4316

### Rex.

REX 3½h.p., Philipson pulley, all on, any trial; £25.—B. Mitchell, Chapel Terrace, Pool, Leeds. [3591

£16/10.—Rex 3½h.p., splendid condition; take push cycle part.—57, Kenbury St., Camberwell, London. [3545

1922 New Rex-Acme 2¾h.p., 3-speed model; £66/10; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. [4588

£32.—Sporting 5-6h.p. Rex, condition perfect, capable of 60 m.p.h., all accessories.—Batchelor, Trulls Hatch, Rotherfield, Sussex. [4321

REX 2¾h.p., mechanical valves, magneto, low dropped frame, good tyres, runs beautifully; 16 gns., or near offer.—53, Swaffield Rd., Wandsworth. [4359

1922 Rex-Acme, all models. Note performance in lightweight T.T. race. A marvellous production.—The agent is Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3498

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue**
**Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Rex.

.p. 1913 Rex Combination, 2 speeds, in excellent condition, any trial, coachbuilt, speedometer, xon; £45, or near offer; after 6 p.m.—H. R. Crew, Bramcote Rd., Bermondsey, S.E.16. [4399

IVEN Away, £65.—1919 4b.p. Model 77 Rex combination, dickey seat, countershaft, mechani-lubrication, detachable interchangeable wheels, tax, 0 insurance paid; buying bigger outfit.—91, Lons-Av., Wembley. [3657

### Rover.

OVER 1919 Combination, well equipped, taxed; £70.—Clark, 7, Exhibition Rd., S.W.7. [4614

OVER, 1922, latest model in stock, £220; also Coventry Premier, £230.—Moss, Wem. [4634

18.—1913 3½h.p. Rover, clutch model, splendid running order.—King, Egrove, Oxford. [4395

OVER 3½h.p., 3-speed, Bosch, good tyres, lamps, tax paid; £30.—P. Willcocks, Datchet, Bucks. [3980

OVER 3½b.p., overhauled, in good order; £10; exchange.—264, St. James's Rd., Old Kent Rd., .1. [3822

½b.p. T.T. Rover, good condition, accessories, tax 2 paid.—Write, Garrett, 3, Richborough Rd., cklewood. [4220

37/10.—1914-15 Rover 3½h.p., 3 speeds, clutch, starter, licensed, lamps, original condition, perfect. East Hill, Wandsworth. [4331

53.—Rover combination, 3½b.p., 1915-16, 3 speeds, clutch, kickstarter, fully equipped, splendid er.—63, Solon Rd., Brixton. [4149

OVER 1914 Combination, Easting, Tan-Sad, 3-speed, clutch, excellent condition; bargain, £38. 30, Beulah Hill, Norwood, S.E. [3893

)21 Rover 3½h.p., road racer, Philipson pulley, including accessories and tax paid; £65.—Seen Wauchope's, 9, Shoe Lane, London. [4589

)21 Rover 8h.p., spare wheel, dynamo lighting, speedometer, small mileage; £160.—Hillier, e Bell, 9, Wallingford Av., North Kensington. [4466

7OOD Green.—Rover 3½h.p., £50; with sidecar, £70; or exchange Douglas Combination. Photo, ticulars on request.—Smith, 134, Hewitt Av., Noel k. [3961

)18 6h.p. Rover Combination, Lucas accessories, Easting screen, splendid condition; accept £90; arrange terms.—Bunting's Motor Exchange, ldstone. [4712

)19-20 Rover 5-6h.p. Combination, electric lighting, dashboard instruments, windscreen, side-ens; £85. Wanted, late Douglas.—71, Winder-e Rd., South Ealing. [4655

)19 3½h.p. Rover Combination, 3-speed countershaft, lamps, horn, Easting, luggage grid, ndid condition throughout, licensed; £62.—37, ington Rd., Surbiton. 'Phone: Kingston 1274 [4419

OVER 3½h.p., T.T., special tuned engine, light countershaft, K.S., clutch, long exhaust, heavy nlops, laps Brooklands in touring trim at 55 .b., guaranteed perfect, really hot stuff; £45; must .—1, Park Hill Rd., Ewell. [3647

)21 Rover 5-6h.p. J.A.P. Combination; equipment includes dynamo lighting, Easting al, Cowey speedometer, luggage grid, horn, watch, ror, etc.; splendid climber, powerful and flexible; e 4,000 miles. Cost £212; new value to-day, 95; bargain at £130, or near offer.—Box No. 1, c/o *The Motor Cycle*. [4643

*Spare Parts:*

OVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4832

### Royal Ruby.

OYAL RUBYS.—Prompt delivery from Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3694

.O.C.H. have 8h.p. Royal Ruby Combination, fully licensed; bargain.—5, Heath St., Hampstead (nr. be). [3805

OYAL RUBY, 1916, 2-speed, lamps, horn, tyres good; £33, offers.—Mansbridge, Cliddesden, singstoke. [4201

h.p. Royal Ruby, J.A.P., 1919 combination, speedometer, etc.; £80.—Edwards, 22, Parkbolme Rd., lston, E.8. [3565

OYAL RUBY, 1919, 2¾b.p. Villiers, good condition; £20.—24, Winsham Grove, Clapham Com-n, S.W.11. [4107

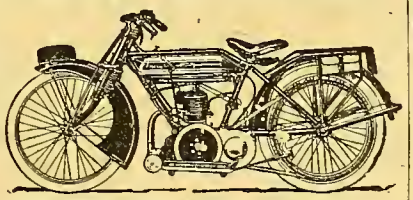
OYAL RUBY, 2-stroke Villiers, excellent condition, all accessories; £18.—Hamilton, Cambria ., Ellesmere. [4196

OYAL RUBY 1921 3b.p., spring frame; £60, or offer; seen by appointment.—Todd, 225, Shooter's ll Rd., Blackheath. [3640

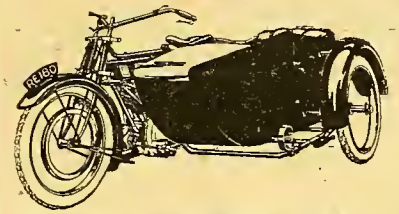
3 GNS.—Royal Ruby 1919 2-stroke, 2-speed, well equipped, licensed, perfect.—20, Treen Av., ggers Corner, Barnes. [4002

5 GNS.—Royal Ruby-Jap 2¾b.p., late model, 2 speed, licensed, Klaxon, fast, reliable.—20, Treen ., Hoggers Corner, Barnes. [4001

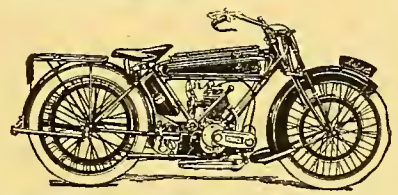

# A FEW EXAMPLES FROM OUR STOCK



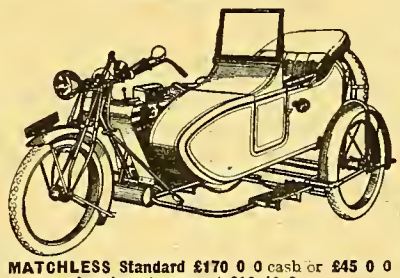
**CONNAUGHT** £39 18 0 cash, or £10 7 6 down and 12 monthly instalments of £2 11 11.



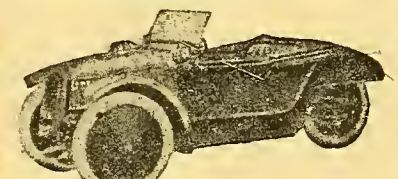
**ENFIELD** 8 h.p. Comb. £140 0 0 cash, or £36 8 0 down and 12 instalments of £9 2 0.



**RALEIGH** 2¾ h.p. £68 0 0 cash or £17 13 7 down and 12 instalments of £4 8 5.



**MATCHLESS** Standard £170 0 0 cash or £45 0 0 down and 12 instalments of £10 19 8.



**MORGAN** from £150 0 0 cash or £39 0 0 down and 12 instalments of £9 15 0.

EVERY WELL KNOWN MAKE OF MOTOR CYCLE IN STOCK.
TRADE SUPPLIED.
DISCOUNTS ALLOWED IF ACCOUNT PAID IN 2, 4, OR 6 MONTHS.

**LAMB'S Ltd**

EUSTON ROAD, LONDON, N.W. (Opposite Gt. Portland St. Stn.) 'Phone: Museum 4978.
WALTHAMSTOW, LONDON, E., 151, High St 'Phone Walthamstow 169 (2 lines).
WOOD GREEN, LONDON, N., 50, High Road. 'Phone: Hornsey 1956.


## MOTOR CYCLES FOR SALE.

### Royal Ruby

**19**21 Royal Ruby 2¾b.p., 2-speed, kick starter, not been used since December, insured; £48.—Fox, 12, Conduit St., Lichfield. [4044

**19**20 3b.p. Royal Ruby, spring frame, 3-speed, kick starter, horn, lamp and tools; £38.—Kiog, 4, Willow Walk, Short St., Cambridge. [4488

£62/10.—Royal Ruby 1918 8h.p. J.A.P. Combination, 3 speeds, clutch, kick starter, will ride 50 miles to purchaser.—211, Garratt Lane, Wan.sworth. [4176

ROYAL RUBY Combination, lamps, horn, windscreen, Tan-Sad, speedometer, absolutely as new; bargain, £100.—3, Eldon Villas, Brownlow Rd., Finchley. [4408

**19**22 8b.p. Royal Ruby—the spring frame combination par excellence—fitted with interchangeable and spare wheel, luggage and petrol carrier, Easting Sandum screen, lamps, horn, etc., all on, at £185; immediate delivery from the agent for all high-class makes, as usual.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich. 'Phone, 751. [5893

### Rudge

**19**21 Rudge, only done 1,000 miles; £55.—Fox, 12, Conduit St., Lichfield. [4046

RUDGE-MULTI 5-6h.p., 1914, in perfect condition; £35.—5, Derby Villas, S.E.23. [4222

RUDGE-MULTI, late 1921, as new, accessories.—126, Junction Rd., Highgate. [3533

RUDGE-MULTIS, incomplete surplus machines; £15 each.—998, Garratt Lane, Tooting, S.W.17 [4168

3½h.p. Rudge-Multi Solo, trial; £35, or near offer.—Harris, 15, Rochester Mews, Camden Town. [3516

3½h.p. Rudge-Multi, 1915-16, excellent, £38; coach sidecar, £8/10.—21a, Brent St., Hendon, N.W.4. [3970

**19**21 3½b.p. Rudge-Multi, equipped, absolutely as new; 59 gns.—Edwards, 101, Gt. Portland St., W.1. [4459

RUDGE-MULTI 3½b.p. Touring; immediate delivery from stock; new models.—Gray's Garage, Watford. [4208

RUDGE Combination, superb condition; nearest £35.—Wright, Inglewood House, Porlington Rd., Leyton. (P) [3610

RUDGE-MULTI, 1920, electric lamps, horn, licensed, perfect condition; £47.—132, High Rd., E. Finchley. [4287

RUDGE-MULTI and Sidecar, fully equipped, Easting, perfect, 1919 (late); £60.—132, High Rd., East Finchley. [4290

RUDGE-MULTI, clutch, new tyres and belt, re-enamelled, accessories; £26.—Seen at 85, Camden Mews, N.W.1. [3824

3½b.p. Rudge-Multi and Sidecar, tax, trial, £40; 4b.p. Star, S.S.V. magneto, £20.—108, Halifax Rd., Todmorden. [3592

**19**22 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, Muswell Hill, N.10. [0791

RUDGE 3-speed All-chain Drive Model interchangeable wheels, 3½b.p.; £94, in stock.—Marston, 31, Bridge St., Chester. [4571

**19**21 Rudge-Multi 3½b.p., equipped, condition and appearance as new; £57.—Godfrey's Garage, Cranbrook Rd. Ilford 83. [3759

LATE 1920 I.O.M. Rudge-Multi, pedal starter, taxed, absolutely like new; 55 gns.—284, South Lambeth Rd., Stockwell. [3874

**19**22 3½b.p. T.T. Rudge brand new, in stock; £77; easy payments arranged.—Wilkins, Simpson, opposite Olympia, London. [3789

NEARLY New 3½h.p. I.O.M. Rudge-Multi, taxed, equipped; £60, snip.—Kensington Park Hotel, 139, Ladbroke Grove, W.10. [4068

£77 is the price of a new Rudge. Get it from the Agents; in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17. [0836

RUDGE-MULTI 1919 3½h.p. Combination, electric light, good condition; £70, or best offer; Beckenham.—Box 1821, c/o *The Motor Cycle*. [3551

£28.—Rudge-Multi, band clutch, foot oiler, W.D. model, good order.—W.J.C. Motor Exchange, Addison Av., Holland Park, W.11. Park 2071. [4689

RUDGE Solo, 3½b.p., free engine, fully equipped, tax paid, tyres good, only wants seeing; £20.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [4082

RUDGE Combination, 3-speed Sturmey, Rudge sidecar, splendid order, fully equipped, ready anywhere; genuine, £36.—Box 1889, c/o *The Motor Cycle*. [4517

7-9b.p. Rudge-Multi Standard Combination, 1920, fine condition; 80 gns; photograph, exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [4269

RUDGE 3½b.p., 1920, I.O.M. model, perfect order throughout, tyres very good, lamp set, horn, etc.; sacrifice, £40; quick sale.—Cold Harbour Farm, Emsworth. [3511

## MOTOR CYCLES FOR SALE.

### Rudge.

1916 6h.p. Rudge-Multi Combination, good running order, just overhauled, spare tube, cover, belt, all on; £50.—Smithbone, 60, High St., Hampton Wick, Middlesex. [3620

RUDGE-MULTI, 1919, Tourist Trophy model, new tyres, all accessories, tax paid, in topping condition; £45.—50a, Church Rd., North Wimbledon, S.W. 'Phone: Wim. 2270. [4180

LATE 1920 3½h.p. I.O.M. Rudge Combination, brand new sidecar, taxed, insured, equipped, speedometer, fine order; must sell, £67/10, or near. —139, Ladbroke Grove, W.10. [4319

RUDGE-MULTI Combination, 5-6h.p., lamps, horn, hood, etc.; £45.—Gordon R. Croxford, The Motor Cycle House, 461, Upper Richmood Rd., East Sheen, S.W.14. 'Phone: Richmond 322. [4579

RUDGE-MULTI.—5-6h.p., shop soiled, £79; 7-9h.p. Combination, sbop soiled, £105; 3½h.p., 1922, I.O.M., £77; 3½h.p., £27/10.—Shepherd, Enfield Highway. Tel.: Waltham X 31. [0874

RUDGE-MULTI 5-6h.p. 1920, T.T. bars, perfect condition; £55; exchange I.O.M. Rudge, Zenith, Triumph.—Knight aod Wheatley, 4, The Pavement, Coulsdoa, Surrey. 'Phone: Purley 1277. [4325

RUDGE-MULTI 1916 3½h.p., new Dunlops and belt, engine and cycle parts completely overhauled, semi-T.T. bars, knee-grips, splendid order; £40, or offers.—Davidson, 50, Grafton Rd., Acton. [4725

*Spare Parts:*

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamiogton Spa. [3163

### Scott.

JULIAN'S, of Reading, have Scott Squirrel in stock. [4503

1922 Scott Sociables and Motor Cycles.—Scott Service Depot, 99, Gt. George St., Liverpool. [4477

3¾h.p. Scott, 2-speed, kick start, conditon as new, guaranteed; £55.—40, Warley Rd., Blackpool. [3991

F.O.C.H have a 1920 Scott, brand new condition; also 1914 combination.—5, Heath St., Hampstead (nr. Tube). [3800

SCOTT SQUIRREL, 1921, fully equipped, taxed, new condition throughout: £72.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [3486

SCOTT, 1921, August, semi-T.T. bars, speedometer, mileage 4,000, any trial; £75, or near offer.—Hall, 91, St. Peter's St., St. Albans. [1299

1922 Scott Squirrel, as new, Lucas, perfect, £90; Sporting Canoelet sidecar to match, £12.—Le Brunn, 7, Victoria Rd., Milton Regis, Kent. [4382

SCOTT, 1920, just overhauled, lamps, speedometer, Cowey, Tan-Sad, licensed 1922, ready to ride away; £60, or best offer.—Yule, Kirkney, Hadley Wood. [1178

1920 Scott Combination, electric lighting and all accessories, tax paid, sidecar repainted; genuine bargain, £70.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [4527

LATE 1920 3¾h.p. Sports Scott, fully equipped, excellent condition throughout, tax paid; £70; exchange 4h.p. countershaft Triumph.—Elliff, 11, New Walk Terrace, York. [3569

1919 Scott, with 60 gn. R34 Rennoc sidecar, fully equipped, discs, windscreen, absolutely perfect all round; a real bargain, 75 gns.—Edwards, 50, Harrington Rd., South Kensington. [4548

SCOTT, latest Squirrel model, £105; new touring model, slightly shop-soiled, £90: 1922 Squirrel model, slightly used, licence paid, £90 complete.—Marston, 31, Bridge St., Chester. [4568

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey aod Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8352

SCOTT (July, 1921), perfect mechanically, overhauled Godfrey's, Cowey, Dunlop Magnum 26×3 back, spriog-up stand, Cowey, Lucas horn; £75; seen Stevenage.—10, Crag Path, Aldeburgh, Suffolk. [3743

*Spare Parts:*

SOUTH London Scott Service Depôt.—Scott Spares: Scott Repairs.—John R. Kinsey aod Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone 1129. [8353

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all Scott spare parts always in stock Write for free spare part list, stating year of manufacture. [0751

### Seal.

SEAL Patent 2-seater (1920-21), 8h.p., perfect condition, lamps, tools, spare wheel, etc.; nearest £110.—21, Cecil St., Chester. [1631

### Singer.

25 GNS.—Singer 3½h.p., 3-speed, fine condition, year's tax paid.—Delancey St. Garage, Camden Town, N.W.1. [4228


# OPEN LETTER TO RIDEEZI SALES, LIMITED.

DEAR SIRS,

Without placing me under any obligation whatsoever, kindly quote me for 1922 Model together with Lamp Horn Licence Holder, and the various other Accessories which I have placed on the back of this letter. I shall require to be fully insured for 12 months and also require you to pay the tax, therefore, kindly show me exactly the amount of deposit which you would require on this transaction, and the monthly payments which I should have to pay for 18 months. It must be distinctly understood that when I pay the first deposit that I am not called upon to pay one penny more other than the usual monthly instalment.

Yours faithfully,

P.S.—I understand that your new Scheme allows the hirer to pay off the instalments in a shorter period than 18 months and to obtain a rebate, so that the machine shall not have cost him one penny more than if he had originally agreed to complete the payment in the time taken.

**RIDEEZI SALES, Ltd.**
**5 Victoria Street, S.W.1**


## MOTOR CYCLES FOR SALE.

### Singer.

SINGER 2½h.p., clutch model, 2 speeds, kick start, excellent running order; £30.—48, Connaught Rd., Harlesden, N.W.10. [3957

3½h.p. Singer, clutcb, taxed, 45 m.p.h. guaranteed, overhaul Easter cost £10 (receipt showo); £25.—Holmes, Priory, Pontefract. [3539

£32/10, Bargain.—4h.p. Singer Countershaft, 2-speed, clutch, lamps, licensed, coachbuilt combinatioo, perfect.—89, East Hill, Wandsworth. [4332

SINGER Combination 4½h.p., 1917, 2-speed, countershaft, Bosch, B.S.A., licensed, good condition; £40, or near offer.—Ranford, Garage, Malvern. [1235

NO Reasonable offer refused: 1914 3½h.p. Singer combination, 3 speeds, clutch, enclosed valves, also 2½h.p. lightweight, 2-speed, both machines run splendidly.—53, Swaffield Rd., Wandsworth. [4357

*Spare Parts*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

### Sun.

19 GNS.—Sun-Villiers, late model, ride away.—15, Deal Rd., Tooting. [3868

SUN-VITESSE 2-stroke, nearly new condition; £30; bargain.—Parkin, 49, Elgin Rd., Croydon. [3622

£26.—3½h.p. Sun-Precision, 3-speed, clutch (Sturmey), discs, good running order.—King, Egrove, Oxford. [4396

SUN-VITESSE 1920 2¾h.p., 2-speed, 2-stroke, kick starter, clutch, horn; £36.—Elce. Ltd., 13, 15 and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0065

FOR Sun, J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., 60 gns. Send for catalogues. Trade supplied.—Jones Garage. Broadway, Muswell Hill, N.10. [0780

### Sunbeam.

SUNBEAMS.—All models.—Try Clifford Motories, Eastwood, Notts. [3585

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs, etc. [3558

SUNBEAM 8h.p., M.A.G. engine, very good condition; £135.—2, Palmerston Rd., Southfields, S.W.18. [3712

LATE Sunbeam Combination, C.B., 3½h.p.; £65.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [3934

BRAND New Semi-T.T. 3½h.p. Sunbeam, Lucas equipment, used once; £110.—24, Balliol Rd., N. Kensington. [4136

1921 Sports Sunbeam, 3½h.p., fully equipped, licence, insurance; £100.—French, 43, Old Park Rd., Palmers Green, N. [3719

SUNBEAM, 1922, sporting model, only run 800 miles, guaranteed as new, Lucas equipped, licensed; £125.—Moss, Wem. [4631

1921 Touring 3½h.p. Sunbeam, fully equipped, tax paid, condition perfect, guaranteed; £95.—Dosser, Slingsby, Maltoo, Yorks. [4055

1919 Sunbeam 3½h.p. Combination, hood, lamps, horn, speedometer, Dunlops, any trial; £85.—B., 7, Gibson Square, London, N.1. [3361

8h.p. Sunbeam Combination, 1916, spare wheel, fine condition and appearance; £100; no offers.—Hayes, 105, Central Park Rd., East Ham, E. [3553

1921 8h.p. Sunbeam Combination, lamps, horn, tools, spare wheel, licence paid, splendid order; first cheque £160.—Crawley, Chatteris, Cambs. [3528

SUNBEAM 4½h.p., 1922, special high-speed engine, new, cost £142; will sell cheaply to quick buyer, or exchange.—Outram, Rectory Rd., Southport. [3575

1920 Sunbeam Combination, new sidecar, Sandum-Easting screen, licensed year, lot equal to new; £120, or exchange.—198, King St., Hammersmith. [4110

1916 Sunbeam 3½h.p. Combination, machioe just overhauled by makers, engine perfect, 3 speeds, clutch, K.S., all tools; £85.—Wadlow, Orpington, Kent. [4371

SUNBEAM Sports, 1921, electric lighting, fully equipped, in splendid condition, very fast, tax paid; £100.—Cope, 15, Upper Hagley Rd., Edgbaston, Birmingham. [4048

SUNBEAM Combination, 1918, Easting windscreen, Tan-Sad, very fast, perfect condition; accept reasonable offer; must be sold.—14, Bennett Park, Blackheath, S.E. [3722

CASS'S Motor Mart, Ltd.—Sunbeam combination, late 1920, 3½h.p., spare wheel and tyre, complete equipment, tax paid Dec.; £115.—5, Warren St., W.1. Museum 623. [4278

1922 3½h.p. Sunbeam, 3-speed, all-chain drive, lamps, tax paid December, machine only ridden 40 miles, as new; £110.—D. and S. Autocar Co., 33, The Parade, Golders Green. [4642

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Sunbeam

1919 (late) 8h.p. Sunbeam Combination, dynamo lighting, electric horn, all accessories, spare wheel unused, tax and insurance paid, perfect condition; £160.—31, Thursby Rd., Northampton. [4507

1919 (September) 3½h.p. Sunbeam Combination, Easting, Tan-Sad, luggage carrier, Klaxon, Lucas head lamp, 2 new Dunlop tyres, mileage 4,500; £100.—Homedale, Saxton St., Gillingham, Kent. [4132

1919 Sunbeam 3½h.p. and Sidecar, new cylinder and piston, lamps, Easting windscreen, tax paid, overhauled, very carefully looked after; £85.—Williams, 60, Wrotham Rd., Camden Town, London. [3594

SUNBEAM 3½h.p. C.B. Combination, late model, all-chain, and 3-speed, lamps, Klaxon screen, hood, enamel and plating in splendid condition, any trial; £78.—"Westonby," 71, Greyswood St., Streatham. [4474

SUNBEAM 1914 2¾h.p., 2-speed, kick start, hand clutch, latest taper tank, copper exhaust, mechanical condition and enamel excellent, equipped; £38, offer.—7, Birkbeck Mansions, Birkbeck Rd., Ormsey, N.8. [4106

1917 Sunbeam Combination, 3 speeds, C. and K.S., Lucas dynamo lighting, Lucas electric horn, screen, Binks, leg shields, tyres excellent; £110; exchanges or deferred.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [4441

1921 3½h.p. (499c.c.) Sunbeam, new April, makers' sidecar, screen, apron, tank, front chain case, all works-enamelled, nearly new 3in. Dunlop Magnum and tyres on detachable, interchangeable wheels, leading fork, speedometer, Cowey horn, all lamps, luxurious outfit, perfect order; driven only by original owner, who loves her; medical reasons for disposal; genuine opportunity for wise buyer; £135.—Write, C. F. Bowman, A.C.U. Consul, 6, Clarence Crescent, Windsor. [3755

### Swift.

SWIFT 3½h.p., 3-speed, clutch, overhauled, enamelled, tax paid; £35, or near.—16, Daleham Mews, Hampstead. [3530

### Taplin.

1920 Taplin-Dalm 3h.p., 2-speed, equipped, licensed; £28; bargain; after 7.30 p.m.—Torrome, 10, Heart Hill, N.19. [3807

### Triumph.

TREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE delivery of type H, 4h.p., 3-speed, £105; type S.D., chain drive, £115; type R., 4h.p., overhead valve, £120; type L.W., lightweight, £; sidecars from £20 to £50; easy payments, 4 per t. extra; free delivery to any address.—The Premier tor Co., Aston Rd., Birmingham. [086

JULIAN'S, of Reading, bave Model R Triumph in stock. [4500

COUNTERSHAFT Triumph, perfect; £44.—104, Malvern Rd., N.W.6. [3705

TRIUMPHS. solo or combinations.—Try Clifford Motories, Eastwood, Notts. [3382

NEW 4h.p. Triumph in stock.—Bounds, Garage, 223, High Rd., Kilburn, N.W. [4352

TRIUMPH-RICARDO, new, actually in stock; also Types H and SD.—Moss, Wem. [4632

1918 Triumph, good condition, any trial; £48.—77, Haverstock Hill, Hampstead. [4660

L.O.C.H. for Triumphs; latest models in stock.—5, Heath St., Hampstead (nr. Tube). [3801

TRIUMPH-RICARDO in stock; £120.—Premier Motor Co., Aston Rd., Birmingham. [0868

NEW Triumph, Ricardo model; what offers?—A. Bursnall, Mareham le Fen, Boston. [3582

1918 Countershaft Triumph, fully equipped; £48. —24, Balliol Rd., N. Kensington. [4135

1h.p. Triumph, 2-speed, T.T. bars, good order; £18.—P. Willcocks, Datchet, Bucks. [4277

ABY Triumph, 2 speeds, in good order; £30.— Sheppard, 108, The Crescent, Slough. [3876

1920 Triumph, as new; bargain, £68.—Rhind and Co., Stone Place, Rusholme, Manchester. [3728

GENUINE 1918 Triumph, very fine condition, perfect; £50.—49, Dagmar Av., Wembley Hill. [4027

MODEL H 1922 Triumph, new, £105; also S.D model, £115; cash or extended payments.—Below

WE have several 1918, 1919 C.S. Triumphs, fitted new tyres, tubes, etc., and many fitted with 2 S.A. gear boxes, splendid value, enamelled and ced, £65.—The Hackford Engineering Co., 33, ckford Rd., Brixton, S.W.9. [3862

TRIUMPHS.—Prompt delivery and service.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3692

TRIUMPH-RICARDO, Model R, new, in stock.— Godfrey's Garage, Cranbrook Rd., Ilford 83. [3758

1918 Triumph, 3-speed, countershaft, good condition; 40 gns.—64, Church St., Edgware Rd. [3848


LIMITED QUANTITY OF

**Best Quality HORSEHIDE DRIVING GLOVES**

*(As illustrated.)*

Value **6/6** for **2/8**

***Don't Delay—Order To-Day***

Made from Best Quality Hide, one stud fastener. Soft and pliable. In Willow Tan and Grey.

| Pairs | | Per pair |
|---|---|---|
| 1 | at | 3/2 |
| 3 | ,, | 2/11 |
| 6 | ,, | 2/10 |
| 12 | ,, | 2/9 |

*Post paid.*

Trade supplied.

Single pair at counter **2/8**

**500 pairs Best Quality Split Hide GAUNTLET GLOVES.** **4/11** A PAIR *Post 6d.*

In natural Colour, short Black waterproof gauntlet. Strong and Durable. Worth 9/6 a pair.

**144 only TAN CHROME Leather Helmets** **5/6**

With peak, adjustable chin strap and ear rolls. Fleece lined.

Worth 10/6. *Post 6d.*

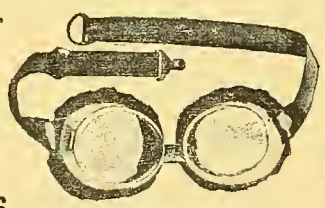
**250 prs. Best Quality HORSEHIDE Gauntlet Gloves.** **5/11** A PAIR *Post 6d.*

In Willow Tan with short Black waterproof gauntlet. Soft and pliable Worth 10/6 a pair.

**25 ONLY. LADIES' MOTOR SUITS** **57/6** *Post paid.*

Best quality Cotton Cashmere. Double Texture Macintosh Jacket. 36 ins. long, D.B. Belted, Seated Trousers to match. All sizes. To-day's value 84/- a suit.

Genuine **'Triplex'** Safety-glass **Goggles** *(As illustrated)* collapsible pattern. White or Tinted Lenses. *Post paid* **9/6**



Worth 15/- a Pair.

The Service Company ltd. LONDON

**289-293, HIGH HOLBORN LONDON.**

*Telephone: Holborn 6430.* *Telegrams: Admittedly, London.*


## MOTOR CYCLES FOR SALE.

### Triumph

1913 3½h.p. Triumph, single-speed, electric lights; 22 gns.—Edwards, 101, Gt. Portland St., W.1. [4448

TRIUMPH Combination, countershaft, licensed 1923, fully equipped; 68 gns.—Petty's Garage, Norbury, S.W. [4091

1918 Triumph, in perfect order, 4h.p., 3-speed, fully equipped; £45.—155, Ladbroke Grove, W.10. [4068

1918 Triumph Combiuation for Douglas and cash.— 59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [3936

TRIUMPH Combination, 1918, guaranteed condition, trial; £57.—77, Haverstock Hill, Hampstead. [4661

3½h.p. Triumph, clutch, Philipson pulley, trial; £27.—Fairhurst, Behind 68, Standishgate, Wigan. [4233

TRIUMPH and Milford sidecar, 1920; £90; all on, taxed, beautiful condition.—Standard Garage, Oxford. [3796

TRIUMPH 4h.p., countershaft, just been overhauled and renovated; £55.—Hole, 129, Park Lane, Carshalton. [3520

3½h.p. Triumph, Bosch magneto, long exhaust, perfect running order; £24.—116, Woking Rd., Guildford. [4164

TRIUMPH T.T., variable gear, fully equipped. licensed, very fast; £25.—Petty's Garage, Norbury, S.W. [4089

TRIUMPH-RICARDO Model, £120, in stock; also other models from £65.—Marston, 31, Bridge St., Chester. [4572

TRIUMPH 3½h.p., Bosch, magneto, N.S.U. gear, excellent condition; £23.—44, West Side, Wandsworth Common. [3836

TRIUMPH 4h.p. Combination, countershaft model, good condition; £58; call any time.—Snow, Laurel St., Dalston, E.8. [4654

1920 Triumph Combiuation, equipped every possible accessory, condition equal new throughout; £82.—Below.

1920 Triumph-Gloria Combination, discs, electric lighting, magnificent outfit; £92.—Below.

1919 Triumph Combination, completely renovated by Triumph at cost of £30; bargain, £78.—Below.

1918 Triumph Combination, fully equipped, excellent condition; £67/10. Below.

ABOVE guaranteed absolutely perfect, call and have trial.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [4673

JUNIOR Triumph, 1921, perfect order, small mileage, lamps, tax paid; £52/10.—Minihane, King's Parade, Isleworth. [3829

TRIUMPH countershaft, fully equipped, tax paid, good condition; £39/10.—51, Upper Richmond Rd., East Putney. [4683

1918-19 Countershaft Triumph, lamps, horn, licensed, beautiful condition; £58.—100, Handcroft Rd., Croydon. [4412

1918 Triumph and Milford sidecar Combination, fully equipped; £52.—37, Chesterton Rd., North Kensington, W.10. [4064

MOFFAT, Yeovil, Official Triumph Service Agents.— 1922 models from stock; exchanges; all spare parts. 'Phone: 50. [5725

TRIUMPH, 1920, D.A. lighting, A1 condition; £60, or offer.—Bromley Engineers, Ltd., Plaistow Lane, Bromley, Kent. [3898

IN Stock.—1922 4h.p. Triumph Model H; £105; cash or deferred.—D. and S. Autocar Co., 33, The Parade, Golders Green. [4639

TRIUMPH-GLORIA Combination, electric lamps, Klaxon, etc., fine condition; £70, offer.—120, Sutherland Rd., Croydon. [4471

1919 4h.p. Triumph and Canoelet sporting sidecar, all on; £72/10 (solo £65).—Smith, 555, Fulham Rd., London, S.W.6. [4667

£45.—Triumph 4h.p., couotershaft, like new, money wauted, will ride 50 miles to purchaser.—211, Garratt Lane, Wandsworth. [4175

IN Stock.—Triumph-Ricardo; highest exchange allowance or deferred payment.—Edwards, 50, Harrington Rd., South Kensington. [4551

TRIUMPH 3½h.p., Grado gear, good tyres, lamps, horn, good running order, licensed; £25.—Woodward, Watledge, Nailsworth. [4070

TRIUMPH Combination 1921, electrically equipped, tax paid, as new; £82/10.—J. Hillier, 216, Portobello Rd., North Kensington. [3977

1918 Triumph, Gloria sidecar outfits in first-class condition; £75 each.—Rhind and Co., Stone Place, Rusholme, Manchester. [3727

TRIUMPH Combination, 3-speed, kick start, fast, powerful; £38; take lightweight part.—57, Kenbury St., Camberwell, London. [3548

## MOTOR CYCLES FOR SALE.
### Triumph.

£26.—Triumph 3½h.p., clutch, Philipson pulley, fully equipped, taxed, excellent condition.—143, Ravensbury Rd., Earlsfield, S.W. [4495

TRIUMPH 1914 4h.p., 3-speed, clutch, new and spare tyres and belts, tools, etc., little used; £50.—Tyson, Buckley, Chester. [3600

1919 Triumph Model H, new sidecar, cost £24; lamps, horn, tax paid, mileage about 3,000, excellent condition; £80.—Below.

1917 Triumph Model H, Montgomery sidecar, lamps, horn, etc., splendid condition; £70.—391, King St., Hammersmith. [3912

4h.p. 1914 Triumph and Sidecar, 3 speeds, £50; and 1914 solo Triumph, 3 speeds, £45.—Wauchope's, 9, Shoe Lane, London. [4597

TRIUMPH 3½h.p., clutch model, very smart machine; £22.—50a, Church Rd., North Wimbledon, S.W. 'Phone: Wim. 2270. [4183

£45.—4h.p. Triumph, countershaft, good condition, smart.—W.J.C. Motor Exchange, Addison Av., Holland Park, W.11. Park 2071. [4693

1921 Triumph Combination, perfect condition, tax paid, mileage about 1,000; £110, or near offer. —24, Upsdell Av., Palmers Green, N. [4120

1919 Triumph-Gloria Combination, Easting screen, luggage grid, tax paid; £78.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [4465

CROYDON Agents Triumphs, all new models and large range of second-hand in stock.—Moore's Presto Motor Works, North End, Croydon. [0864

1917 Triumphs, in perfect order, 4h.p., 3-speed, fully equipped; £40; ten to pick from.—204, Ladbroke Grove, W.10. 'Phone: Park 5541. [4065

1918 Countershaft Triumph, splendid condition, mechanically and otherwise; £44.—37, Arlington Rd., Surbiton. 'Phone: Kingston 1274. [4418

TRIUMPH 3½h.p. coachbuilt Combination, fitted 1921 Sturmey 3-speed, good condition, all accessories; £35.—91, Headcorn Rd., Thornton Heath. [3844

SHEFFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stacey, Triumph Service Depot, 12, Ecclesall Rd., Sheffield [0812

25 GNS.—Clutch Model Triumph, 1913, 3½h.p., Lucas lamps and horn; exchanges.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [4531

4h.p. Countershaft Triumphs, handle-bar control, clutch and kick start, guaranteed; £45.—Joseph Rhind and Co., Stone Place, Rusholme, Manchester. [3724

1919 Triumph Combination, in excellent condition, under 2,000 mileage, new tyre, tax paid; £78, bargain.—Hibberd, "Oaklands," Farnham Rd., Slough. [3676

TRIUMPH 1918 4h.p. Combination, lamps, horn, complete; £68.—Elce, Ltd., 13, 15 and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0066

TRIUMPH 3½h.p., 1913, clutch, kick start, excellent condition; £32, or exchange lightweight.—Avery, Little York Cottage, Back Pantiles, Tunbridge Wells. [3612

SOUTHPORT.—1920 renovated countershaft Triumph Combination, 1921, R34 sidecar, windscreen, all on; 72 gns. Exchanges.—Kents, 417, Lord St., Southport. [4365

LATE 1920 Triumph-Henderson Combination, perfect condition, fully equipped, any trial; £100, or exchange good solo.—Box 1863, c/o *The Motor Cycle.* [3653

1920 Countershaft Triumph, Canoelet sidecar, accumulator lighting, speedometer, perfect mechanical condition; £80.—Box 1873, c/o *The Motor Cycle.* [3717

1921 Baby Triumph, fully equipped, licensed for year, absolutely as new; 40 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [4549

1918 Countershaft Trinmphs, 3-speed countershaft models, in first-class condition, guaranteed; £55.—Joseph Rhind and Co., Stone Place, Rusholme, Manchester. [3725

TRIUMPH Combination, coachbuilt sidecars; £55, £60, and £65 each; absolnte bargains.—Joseph Rhind and Co., Stone Place, Wilmslow Rd., Rusholme, Manchester. [3726

REPLATED, enamelled, 1918 Triumph Combination, new tyres, full equipment, speedometer, spares, tax paid; £80; smart turnout.—37, Harvard Rd., Gunnersbnry, W.4. [3839

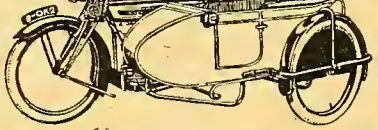
TRIUMPH-GLORIA Combination, October, 1919, fully equipped, spares, tax paid, insured April 1923, splendid condition; £80.—Firth, 72, Umfreville Rd., Harringay. [3964

1916 Triumph 4h.p. and Sidecar, lamps, horn, licence, tools, good appearance, first-class running order; £55.—King, 4, Willow Walk, Short St., Cambridge. [4487

£30.—Triumph, 3-speed, perfect running, gears renewed throughout, original enamel, new belt, etc., all accessories, taxed 1923; sidecar £5.—145, Leander Rd., Brixton Hill. [3828

We have pleasure in again giving you a few brief particulars of these machines. They are becoming more and more popular becanse they are eqnal to new in reliability, appearance and performance—they give absolnte satisfaction.
We shall be pleased to forward you full details on application. Drop us a line.

**Burlington Reconditioned 2¾ h.p. Douglas, 2 speed gear, fully equipped, fully guaranteed for three months.**
**Prices: Cash - - - £50.**
**Deferred Payment Terms: Deposit £13 5, and Twelve Monthly Instalments of £3 6 3.**
*The ideal mount for the Solo rider and the most convenient for traffic riding and long distance work.*



**Burlington Reconditioned 4 h.p. Douglas, 3 speed gear, kick-starter and clutch, complete with new Burlington No. 2 Touring Model Sidecar. Fully equipped and fully guaranteed for three months.**

**SOLO.**
**Prices: Cash - - - 75 Guineas.**
**Deferred Payment Terms: Deposit £20 18 6, and Twelve Monthly Instalments of £5 4 3.**

**COMBINATION.**
**Prices: Cash - - - 93 Guineas.**
**Deferred Payment Terms: Deposit £25 16 6, and Twelve Monthly Instalments of £6 9 6.**
**The "Economy Combination."**
*A real value for money proposition and well worth the consideration of the man who has to study his pocket.*
**Remember:—**
(1) **In performance they equal new machines.**
(2) **In appearance they are indistinguishable from new.**
(3) **They are covered by a guarantee similar to that which a maker gives with a new machine.**

*TRADE SUPPLIED.*

**Spares for Douglases.**
*It is impossible to advertise a list of our prices as same would fill the book.*
*However, we have in stock every part for Douglases. Our prices are right—our service is right. Drop us a line and let us quote you for your requirements.*

**Burlington Motor Cycle Co., Ltd.,**
**7, South Side, Clapham Common, S.W.4.**
**'Phone: Brixton 2417.**
**Wires: Burlington Motors, Clapham.**
Just by Clapham Common Underground Station.

## MOTOR CYCLES FOR SALE.
### Triumph.

59 GNS.—4h.p. Triumph, fully equipped, registered, indistinguishable from new, guaranteed a sound machine; bargain; after 5 p.m.—4, Elm Gardens, Hammersmith. [4191

1920 Triumph and Sidecar, Lucas lamps, horn, Cameo screen, in perfect order; £95; exchanges or deferred.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [4442

LATE Triumph Combination, excellent condition throughout, windscreen, speedometer, watch, lamps, tools, licensed, insured, photo, any trial.—Alec Howard, Broad St., Chesham. [3670

4¼h.p. Countershaft Triumph Combination, new condition, not ridden 3,000, very fast, Sturmey-Archer 3-speed, lamps, horn, tools; £70, or near.—645, Harrow Rd., Willesden. [3686

57 GNS., Exchange.—1917 Countershaft Triumph, 4h.p., nearly new Mills-Fulford sidecar, equipped, any examination.—Seabridge, Hansler Rd., E. Dulwich. Sydenham 2452. [4031

TRIUMPH.—Immediate delivery of all 1922 models. Sidecars to suit from £20. Write for catalogue and full particnlars of easy payments.—P. J. Evans, John Bright St., Birmingham. [3770

48 GNS.—Triumph 4h.p., countershaft, 1918, engine No. 54278, renovated, nearly new Dunlop tyres; exchanges.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [4530

TRIUMPH Combination or Separate, 1919-1922 renovation, showroom appearance, all on, speedometer, tax paid, ride to custmer; £78.—Seen, 106, North End Rd., West Kensington. [4157

COUNTERSHAFT Triumph, thoroughly overhauled, in perfect condition, all accessories, tax paid, been well looked after; £48.—Richardson, Rosslyn Mews, Rosslyn Hill, Hampstead, near Tube. [4086

RICARDO-TRIUMPH, delivered June 5th, registered, unridden; owner selling becanse nnable dispose 1921 Scott; £118; seen Ipswich at Triumph agents.—10, Crag Path, Aldeburgh, Suffolk. [3742

1921 Triumph 4h.p., countershaft, literally new, fully equipped, guaranteed unridden 1922; £80, or with 1922 Coupette sidecar, the sidecar with rigid disappearing hood, perfect combination, £110.—Below.

1918 Triumph 4h.p., countershaft, not renovated, machine nearly new throughout, lamps, horn, tax paid; £62/10, fine lot.—Below.

1913 Triumph, 3½h.p., 3 speeds, clutch, lamps, tax paid, nice condition; £28/10, bargain.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [4004

TRIUMPH-GLORIA Combination, 1922, 4h.p., all-chain drive, electric lighting, Bluemel screen, cost £175, tax paid, fully insured, not run 100 miles; accept £150.—Kershaw, 103, Foxholes Rd., Rochdale. [4041

£39.—4h.p. Triumph combination, 1914 (late), 2 speeds, K.S., clutch, windscreen, lamp, taxed, £9 just spent on engine overhaul.—W.J.C. Motor Exchange, Addison Av., Holland Park, W.11. Park 2071. [4690

BRAND new 1915 shop-soiled Sturmey hub 3-speed 4h.p. Triumph, 1922 improvements, unscratched and unridden, magnificent machine; £55; any trial or examination; £10 worth accessories.—190, Divinity Rd., Oxford. [4559

TRIUMPH Countershaft 3-speed 4h.p. Combination, 1918, fully licensed, spares, horn, lamp set, pump, etc., recently overhauled, smart, guaranteed; 65 gns.; must sell.—32, Fontarabia Rd., Lavender Hill, Clapham Junction, S.W.11. [3699

1921 Triumph 4¼h.p., tools, spares, inner tubes, 3 electric lamps and acetylene, perfect condition, with lightweight Sandham sidecar, new February, 1922; £90, or offer; solo, £70; owner returning India. —Captain Morgan, Rostrevor, Seaford, Sussex. [2709

4h.p. Triumph Combination 1921, Gloria sidecar, Easting screen, Tan-Sad pillion seat, speedometer, electric lamps and set of accumulators, horn, etc., tax paid 1922; £120 Easy payments if desired.—Harrods' Motor Sales Rooms, 118, Brompton Rd., London. [3857

TRIUMPH 3½h.p., 2-speed, fully equipped, cylinder, piston, valves, bushes all renewed last December, machine little used since, tyres, belt, good as new, excellent going order, fully licensed, must sell; £25.—Stevens, 24, Woodwarde Rd., East Dulwich. [4345

£60.—Triumph 4h.p. countershaft motor cycles, completely renovated as new, stove enamelled and finished in makers' colours, Bosch magneto, new tyres and tubes, guaranteed 3 months.—Effra Motor Works, Ltd., 59-63, High St., Clapham, S.W.4. 'Phone: Brixton 1115. [4273

4h.p. Countershaft Triumph (late model), 3-speed, clutch, K.S., completely equipped lamps, mechanical horn, pnmp, toolbags, etc., tax paid year, enamel, plating almost as new, in excellent running order, reliable and fast; £58.—K. Baker, 11, Ridgmont Rd., St. Albans. [4613

TRIUMPH Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting Distance no object. Best prices allowed for second-hand machines. Deferred-payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4928

## MOTOR CYCLES FOR SALE.

### Triumph.

22 Ricardo-Triumph, mileage 300, 110 gns.; 1921 Triumph, 4h.p., chain drive, 85 gns.; 1914 mph, 4h.p., 3 speeds, 34 gns.; all taxed for year, pped, guaranteed; photographs on request; second-l sidecars to suit above at all prices; exchanges; Sundays.—Peter Gordon, Ltd., 110, Upper Rich-l Rd., East Sheen. [4270

GHT Car and Motor Cycle Engineering Co., Ltd. —We have several 1918 countershaft Triumphs, anical condition guaranteed, £60; 1918 combina-touring sidecar, £73; 1918 combination, semi-s, £75; countershaft Triumph, 1922, renovated ew, £70.—26, Tulse Hill, Brixton. 'Phone: Brix-1292. (½ minute from Brixton Skating Rink.) [4525

RIUMPHS, Triumphs.—6 genuine 1918 new W.D. unused Triumphs, Irish surplus, £85; also large y of used machines from £55 to £65; we supply ew parts for Triumphs, also all Sturmey parts, by rn post; also large stock of cheap sidecars.—S. is, Motor Engineer and Government Surplus es, 19a, Carburton St., off Gt. Portland St., W.1. ne: Museum 1824 and 2075. See Miscellaneous mn. [4618

*ore Parts.*

RIUMPH Spares.—Immediate delivery.—Kays, 8, Broad St. Ealing [7545

RIUMPH Service Agents.—Every part in stock; trade supplied.—Clarke's, Motor Cycle Specialists, Albans. [2916

MPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Rich-l Rd., Putney. 'Phone: Putney 2754. [1247

RIUMPH Spares.—Every part in stock, 1910 22; trade supplied.—W. L. Thompson, Ltd., 83, by Rd., Hull. Tel.: Cen. 2820. Telegrams: trol." [8655

RIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Bir-gham agents and service depot.—Premier Motor Aston Rd., Birmingham. [0798

RIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free: overhauls by specialist.—Jones Garage, Triumph nts, Broadway Muswell Hill, N.10 [0809

ND to the Rhosha Motor Garage, South St., Romford, for Triumph and Sturmey-Archer es. No disappointing delays; every part in k. Repairs by skilled mechanics. We are al service agents. Telephone: Romford 584. [7768

RIUMPH Parts, 1904-21 every part in stock, new or second-hand. Why not second-hand in place ew till prices drop? Halt the price, satisfaction anteed. Hundreds of testimonials. Triumph irs and renovations a speciality, under personal rvision of our proprietor, late with Triumph and nier cycle companies. Cylinder regrinding on t machinery.—Forfield Motors, Forfield Place, nington Spa. [7361

### Velocette.

REMIER Motor Co., for 1922 Velocettes.

MEDIATE delivery of Model E.2 2-speed, £65; E.3 3-speed, £72/10; E.L.2 lady's open frame, ; all with clutch and kick starter; easy payments, extra; carriage paid to any address.—Premier or Co., Aston Rd., Birmingham. [4609

21 Brand New Velocette, in crate; £53.—Fox, 12, Conduit St., Lichfield. [4045

21 Velocette, splendid, wonderful, economical, equipped, licensed; £55.—Hollicot, Mere Green, mingham. [3645

EW 1922 Model E.3 Velocette, fitted with 247 c.c. Sports engine, specially picked machine; £75 only.—Premier Motor Co., Aston Rd., Birming-[4609

ELOCETTE 2¼h.p., 2-stroke, 2-speed, counter-shaft, all-chain drive, lamps, horn, taxed, Dun-, perfect condition, trial; £28.—154, Hackney E.2. [3918

ELOCETTE, 1921, brand new, 2¼h.p., 2-speed model, Lucas lamps and horn, aluminium leg-lds; £60.—J. Hebden and Sons, 71, Scotland Nelson, Lancs. Tel.: 91. [4510

ELOCETTE, 249 c.c., 3-speed, sports, March, 1922, run 600 miles, unscratched, extraordinarily fast powerful, no fault, Abcol mileage indicator and variable jet, licensed; cost £80/2, accept £64.—Chaffinch Rd., Beckenham. [4658

### Verus.

ERUS, 1920, 2¾h.p. Blackburne, Lucas lamps, tax paid; £48.—H. Rock, Cradley, Staffs. [3751

ERUS 1922 2¾h.p., box carburetter, excellent condition throughout; £50.—R. W. Tanner, New se, Kingston Bagpuze, Abingdon, Berks. [3756

20 Verus-Blackburne 2¾h.p., 3-speed, clutch, kick starter, equipped, taxed; 49 gns., or ex-nge.—284, South Lambeth Rd., Stockwell. [3875

20 Verus 2¼h.p., single-speed, good as new, done under 1,000 miles, electric light outfit, good ssories, insurance, tax paid; £40; no offers; ointment only.—25, Santos Rd., Wandsworth, .18. [1020


# WATCH THIS COLUMN
EVERY WEEK FOR
# BANCROFTIAN CO.'S BARGAINS.

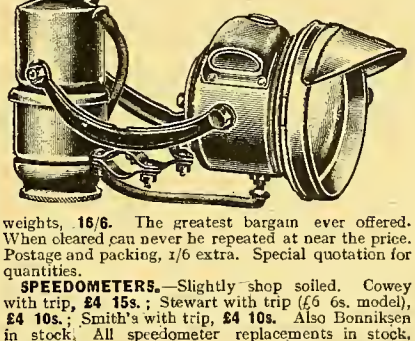
**Advertisers in "The Motor Cycle" from its first publication.**

**TYRES.**—Manufacturers' clearance stock, not W.D. Although clearance, they are new and perfect. Wood Milne extra heavy, 4-ply, 26×2¼, combination, **35/-**. Pedley, 26×2¼, 3-ribbed, **25/-**. Hutchinson, 26×2⅜, heavy T.T., **27/6**; Passenger, 26×2½ for 2¼, **39/6**; 700×80 to fit 650×65 small car, heavy, **49/6**; light car, 750×75 for 28×3 rim, **42/-**; heavy Passenger, 26×3, **37/6**; extra strong Passenger, 28×3, **53/6**; 24×2 T.T. heavy, **25/-**; extra heavy, 3-ribbed, 700×65, **35/-**; 650×65 steel studded car type, **65/-**; original, **£6 6s.** Firestone, 20×2, Auto wheel, **21/-**; original, **45/-**; tube, **6/8.** Palmer, 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½ cord, **42/-.** Oylers, 650×65, ribbed square tread, heavy, in original packing, **27/6**; original, **45/-.** Clincher de Luxe, very heavy, 26×2⅜, **37/6**; 26×2 Junior de Luxe, **22/6**; 26×1¾, **17/6.** Hutchinson wired edge cover, 26×2½ and 26×2¼, **30/-** each. Postage 1/6.

**TUBES.**—24×2¼, **4/6**; 24×2, **4/6**; 26×2¼, **5/6**; 26×2½, **5/9**; 26×2⅜, **5/6**; 28×3, extra heavy, **7/6**; 700×80, **7/6.** Postage 9d.

**BELTS.**—Clincher clearance line, new, not W.D. ¾", 6' 6", **6/6**; ⅞", 7' 6", **12/3**; 8' 6", **14/-**; 1", 7' 6", **18/-**; 8', **17/-**; 1¼", 7', **18/-**; 8', **20/6**; 8' 6" **21/6**; Bates short lengths, ¾", 5', **4/6**; 5' 6", **5/-**; ⅞", 4' 6", **5/-**; 5', **5/-**; 5' 6", **5/6**; 1", 2' 6", **3/-**; 3', **4/-**; 3' 6", **4/6**; 4' 6", **6/3**; leather belts, ¾" at **2/6** per foot; belt fasteners, **9d.** and **1/-.** Postage 1/-.

**GREAT PURCHASE of Genuine "BOBJON" LAMPS.** Nickel-plated on brass or black and plated. Large size, 5½" front with powerful back lens, large generator sufficient for two lamps, suitable for a heavy-weight machine. **25/-** complete, as illustrated, original price, **55/-.** Smaller set, 4½" front, suitable for light-



weights, **16/6.** The greatest bargain ever offered. When cleared can never be repeated at near the price. Postage and packing, 1/6 extra. Special quotation for quantities.

**SPEEDOMETERS.**—Slightly shop soiled. Cowey with trip, **£4 15s.**; Stewart with trip (£6 6s. model), **£4 10s.**; Smith's with trip, **£4 10s.** Also Bonniksen in stock. All speedometer replacements in stock. Postage 1/6.

**TAN-SAD,** with back-seat, **28/6**; original, **57/-**; only limited quantity. Carriage 3/6 extra.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined, **7/11**; lined, **10/6**; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, **3/6**; Gloves, leather, wool lined, **4/6.** Above lines worth more than double. Limited quantities only. Order at once. Postage 6d.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coat with belt, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality, extra heavy, double texture waterproof material, dark fawn, new and fresh, only been made recently, not half-perished W.D. Our price to clear, **£2 2s.** Postage 1/6 extra. Could not be bought elsewhere under £4 10s. The greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**HORNS.**—Reliable Electric, Motor Cycle, up to 4-volt only, complete with wire and switch; usual price, 29/6, our price, **15/6.** Postage 1/3 extra. Smith's Electric Horns, black and nickel, in 6, 8, or 12 volts, large size, suitable for heavy combinations; original price, £2 15s.; our price, **30/-.** Postage 1/6. The greatest bargain ever offered. All new and perfect.

We can supply anything for the motor cyclist at competitive prices.

**BANCROFTIAN CO.,**
78, BISHOPSGATE, LONDON, E.C.2.
'Grams: "Chaikel, London." 'Phone: London Wall 9897


## MOTOR CYCLES FOR SALE.

### Victoria.

1920 4h.p. Victoria-Jap Combination, 3-speed, clutch, K.S., equipped and licensed, as new; 55 gns.—Edwards, 101, Gt. Portland St., W.1. [4455

### Vindec.

1921 Vindec-Villiers 2-stroke, 2-speed, fully equipped, tax paid; a bargain, £26.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [4085

VINDEC 5-6h.p. Coachbuilt Combination, 2-speed, Bosch, tax paid, complete overhaul, perfect condition; £35; after 6 p.m.—Reynolds, 22, Swanage Rd., Wandsworth, S.W.18. [4286

### Werner.

WERNER, complete less battery, Amac; £4.—Box 1841, c/o *The Motor Cycle.* [3597

### Wilkin.

1921 Wilkin 4h.p., Blackburne, 3-speed, Lucas dynamo lighting, electric horn, automatic oiler, really perfect, licensed for year; 73 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [4550

### Williamson.

8h.p. Williamson Combination, perfect condition; £70; or exchange.—5, Lidy St., Brighton. [4231

£52/10.—Williamson Combination 8h.p., water-cooled, lamps, new tyres, hood screen, perfect.—89, East Hill, Wandsworth. [4334

WILLIAMSON Combination, with 8h.p. Douglas engine, magnificent machine, fully equipped, very comfortable, any trial.—20, Maxwell Rd., Bournemouth. [0883

### Wooler.

WOOLER 1920 Flat Twin, hardly used, perfect; £35.—21, Fordel Rd., Catford. [4100

WOOLER, 1921, not used last 9 months, owner in Ireland, lamps, horn, speedometer, watch, as new; £55.—Carpenter, 45, Pember Rd., Willesden. [4095

### Yale.

7-9h.p. Yale, 1918, splendid condition, new tyres, all on, tax fully paid, too powerful for owner; £60; lighter machine will be considered as part payment.—Attfield, 54, Lewisham Rd., S.E.13. [3965

### Zenith.

ZENITH 3½h.p., running order, all on; £24.—21, Norman Rd., Thornton Heath. [4216

ZENITH-BRADSHAW Lightweight, slightly soiled; price to clear, 90 gns.—Below.

ZENITH 5h.p., countershaft model, slightly soiled; price to clear, £110.—Motorists' Advisory Agency, Ltd., 89, Wigmore St., W. [3764

F.O.C.H. for Zeniths; latest models in stock.—5, Heath St., Hampstead (nr. Tube). [3799

ZENITH 6h.p. Combination; quick sale, £35.—Pickett, 58, Alexander Rd., Holloway. [3994

ZENITH 6h.p. Sports, fast, special oiling to front cylinder; £40.—14, Phœnix St., Euston. [3846

ZENITH-BRADSHAW, quite new, Gradua gear; 95 gns.—Marston, 31, Bridge St., Chester. [4577

ZENITH-BRADSHAW, 2 months old, Gradua gear, lamps, etc.; 90 gns.—Box 1,902, c/o *The Motor Cycle.* [4649

ZENITH Combination 8h.p. Sports Model, perfect order; £60.—Hawke, Millswood, South Brent, Devon. [4042

ZENITH 8h.p., countershaft, almost as new; £47/10. —28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [4020

HONEST Bargain.—6h.p. Zenith-Gradua, T.T., overhauled, good condition; first £35.—15, Sidney Rd., London, N.22. [4088

ROBERTSONS Motors, Ltd.—1922 shop-soiled Zenith-Bradshaw, Gradua gear; £100.—157b, Gt. Portland St., W.1. [6082

8h.p. Zenith 1920 Countershaft Combination, in splendid condition; £115.—18, Dorlcote Rd., Wandsworth Common. [3957

ZENITH, 5-6h.p. J.A.P., 1921, sports model, new condition, all accessories, tax paid; £62.—Eagles and Co., 275, High St., Acton, London. [4521

ZENITH-BRADSHAW, new 1922 model, Gradua gear, slightly soiled; £95; exchange entertained.—Eagles and Co., 275, High St., Acton, London. [4523

ZENITH Combination, J.A.P., Gradua gear, perfectly reliable, any trial; £30; exchange 2-stroke. —Seed, 22, Mount Pleasant Rd., Crouch Hill, N.4. [3999

ZENITH Sports, bought new last March, ridden 500 miles, tax paid, all tools, very fast; £80; no offers.—101, Upper Tollington Park, Stroud Green. [3841

1921 5h.p. Zenith, countershaft, clutch, K.S., brand new, makers' guarantee; our price 88 gns; listed £118.—Edwards, 101, Gt. Portland St., W.1. [4451

8h.p. Zenith, countershaft, clutch, K.S., believed 1916-17, perfect condition; £55, or nearest; owner giving up riding.—G. Smith, 39, Wood Av., Folkestone. [4426

## MOTOR CYCLES FOR SALE.

### Zenith

ZENITH August (1920) Combination, 8h.p., all on, beautiful condition, 4,000 miles; what offers?—McDongall, 57, Pagoda Av., Richmond. Tel.: North 476. [3650

5h.p. Sports Zenith, late 1919, 4,000 miles, good condition, speedometer, horn, etc., practically new 3in. Dunlop; 50 gns., bargain.—100, Newmarket Rd., Norwich. [4206

1922 Zenith-Bradshaw, lamps, horn, licensed, mileage under 800, magnificent condition; very great bargain, 88 gns.—Julian's, 84, Broad St., Reading. 'Phone: 1024. [4498

ZENITH 1921 o.h.v. 8h.p., as new, 1,000 miles only, full equipment, lamps, Bonniksen, aluminium sidecar, 5-70 m.p.h.; cost £200, accept £100.—Mitchell, Lindens, Farnham. [4250

1919 Zenith 6h.p. Countershaft Combination, Swan sidecar, discs, all accessories, excellent condition, any trial; 80 gns.—65, High St., Hounslow. 'Phone: Hounslow 366. [4349

ZENITH 1919, 3h.p. A.B.C. engine, o.h.v., Claudel-Hobson, Thomson-Bennett magneto, ... equipped, tax paid 1923; £30; exchange.—284, St. James's Rd., Old Kent Rd., S.E. [3821

ZENITH 1919 8h.p. Sporting Canoelet Sidecar, cameo windscreen, lamps, Cowey horn, fast 'bus, appearance like new; £70.—50, Haverstock Hill, N.W.3. 'Phone: Hampstead 6609. [4666

ZENITH Combination, 4h.p. J.A.P., Gradua gear, Lucas lamps, horn, etc., guaranteed; £55; exchanges or deferred.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [4443

1919 Zenith 5h.p. Countershaft Combination, twin, splendid condition, clutch, kick start, speedometer, electric outfit, tax paid; £70.—12, Eton Stables, Eton Av., N.W.3. 'Phone: Hampstead 2970. [4198

ZENITH 1915 Combination 5-6h.p., countershaft, complete with lamps, horn, speedometer, spares; £63.—Elce, Ltd., 13, 15 and 16 Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0067

1920 5-6h.p. Zenith Motor Cycle, Milford sidecar, fully equipped, pillion, lamps, horn, licence paid to end year, only done about 1,000 miles, trial; private owner; £100.—Jackson's Garage, Horsham. [3529

GENUINE Bargain.—1919 8h.p. Zenith-Jap, with Dunhill sidecar, hood, screen, lamps, horn, etc., tax paid till 1923. Make sure and secure now; £82/10.—Wilkins, Simpson, opposite Olympia, London. [3790

ZENITH 6-8h.p. Combination, renovated, new complete Gradua and pluggers, new belt, tyres good, tradesman's box and 2-seater cane sidecar; trial; £50 cash.—Titshall, 28, Loughborough St., Kennington Lane, S.E. [4238

SOUTHPORT.—Two special competition 1922 Zenith-Bradshaw all-chain models, few weeks old, one actual winner Scarishrick Cup, other speed model; bargains, 90 gns. and 94 gns. Exchanges.—Kents, 417, Lord St., Southport. [4362

1920 8h.p. Zenith Combination, countershaft clutch, kick start, Milford sidecar, speedometer, F.R.S. electric lighting, disc wheels, and accessories, perfect condition; 89 gns.—Smith, 9, Johnson St., Notting Hill Gate, London, W.11. Park 3447. [4668

8h.p. Zenith 1919-20 Countershaft, 1921 Henderson Elite sidecar, windscreen, lamps, horn, all tyres good, nice outfit, engineer owner and carefully driven; £100, no offers; sidecar cost £50 last year; would exchange for 2¾h.p. 1922 A.J.S., or 1921-22 3½h.p. Sunbeam solo.—Zenith., 40, Heber Rd., Cricklewood, N.W.2. [4056

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4829

### Ladies' Motor Cycles.

LADY'S Velocette, 2¾h.p., 1919, 2 speeds, little used, grand condition; £30 for quick sale.—Bunting's Exchange, Wealdstone. [4711

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

LADY'S 2¾h.p. Douglas, 2-speed, hand clutch, excellent mechanical condition and appearance, lamps, horn, tool bags; £35.—Miss Thorne, School House, Davidson Rd., South Norwood. [3877

1922 Lady's Model Ivy 2-stroke, hardly ridden, in lovely order, equal to new in appearance and mechanically, mechanical horn, no lamps, licensed and insured till end of year, a very cheap machine at £45.—B. H. Davies, Lodsworth, Petworth, Sussex. [9086

VELOCETTE 1922 Models, with clutch and kick starter, for immediate delivery; 2-speed, £68; 3-speed, £75; all black weatherproof finish, all-chain drive, open frame, giving very low position; the ideal ladies' mount; easy payments, 4% extra; illustrated catalogue free on request.—Premier Motor Co., Aston Rd., Birmingham. [4610

# Messrs. W. E. LINE,

## 89, GT. PORTLAND ST., LONDON, W.1.

Beg to announce that they have purchased from Messrs. Coppen, Allan & Co. a number of

**SHOP-SOILED genuine**

# READING STANDARD

## 8-10 h.p. MOTOR-CYCLES

and are offering these direct to the public at the remarkably low figure of

# 100 GNS.

**A FIGURE THAT WILL NEVER BE REPEATED.**

The machines are of the 1921-1922 type, complete with **Dynamo Lighting, Electric Horn,** etc., etc.

**SPARE PARTS.**

Do not forget that the READING STANDARD SPARE PART SERVICE is SECOND TO NONE.

**10 ONLY, SHOP-SOILED**

**PLUS ONE SIDECARS,**

**with Hoods and Screens,**

**£37 10 0 each.**

**Retail Price £60 12s. 6d.**

**6 ONLY, SHOP-SOILED**

**M.C. CANTILEVER SIDECARS**

**£24**

**Retail Price £39 18s. 0d.**

We have also a number of

**PLUS ONE SIDECAR CHASSIS,**

Complete with Wheel and in Best Enamel at

**£6 10s. each.**

These will carry the heaviest body with TWO persons, or are very suitable for Box Carriers.

**MUST BE CLEARED.**

**See small advts. for our Bargains in Misc. Motor Cycles.**

*Cheques should be made payable to W. E. LINE.*

## 89, Gt. Portland St., LONDON, W.1.

LANGHAM 1601.

## MOTOR CYCLES FOR SALE.

### Miscellaneous

JONES Garage, The Broadway, Muswell Hill, N.10, and Woodside Parade, North Finchley.

HERE You Are!—We are open all day every Saturday, and have all makes in stock. Write, call, or 'phone Hornsey 2917 for big bargain list.

RUDGE I.O.M., new; £70.

1919 4¼h.p. B.S.A., Model K, large Canoelet sidecar, fully equipped, licence paid; £79/10.

1920 Ariel 3½h.p., equipped, £72/10; also second-hand and new sidecars, from £7/10.

1919 4h.p. Douglas Combination, first-class condition, any trial given; £79/10.

1918 4h.p. Triumph, coachbuilt sidecar, fully equipped; £75.

1915 Douglas 2¾h.p., equipped; £25.

1922 Matchless Combination, 7-9h.p. M.A.G. engine, indistinguishable from new, spare wheel, etc.; £160.

VERY Special.—1919 3½h.p. Ariel, in perfect condition, with brand new Ariel sidecar (1922); this week's bargain, £79/10.

8h.p. Enfield Combination, Lucas Magdyno electric lighting equipment, brand new 1921, unused outfit, complete; £140.

1919 3½h.p. Ariel Solo, a beautiful machine, in perfect condition; £62/10.

1920 2¾h.p. Douglas, 3-speed, equipped, very smart, K.S. and clutch; £50.

2½h.p. Connaught, 2-speed, fully equipped, leg-shields, taxed for 1922, perfect; £45.

3h.p. Precision, excellent condition, tax paid, starts easily and climbs anything; £15.

ANY of the above can be had on our easy payment system. It is the easiest of all; simply fill in a simple form, pay your deposit, wait two or three days, and in 99 cases out of a 100 the machine is yours. You are missing the best if you have not seen our terms, etc., and list of bargains.

ALL Guaranteed 3 Months.—Jones Garage, Broadway, Muswell Hill, N.10. Motor 'bus from Highgate or Finsbury Park. [4620

2½h.p. J.A.P., good running order, speedometer, accessories; £20, or near.—41, Grove Rd., South Woodford. [3536

J.A.P. 6h.p. Combination, B.S.A. gears, all-chain drive, Bosch; genuine bargain, £55, offer.—48, Clifton Rd., Kingston Hill, S.W. [3524

HALIFAX.—Fifty second-hand machines and combinations; cash, exchange, or deferred payments. Get list.—Halifax Motor Exchange, Horton St., Halifax. [3776

BARGAIN.—3½h.p. Motor Cycle, running order, free engine, adjustable pulley, Bosch, B. and B.; first 10 gns. secures.—Brock, 31, Aberdeen Walk, Scarborough. [4057

ALLBER Garage, Thornsett Rd., Earlsfield, London, S.W. (opposite station, L.S.W. Railway). 'Phone: Latchmere 4388).—Terms, no extra with good deposit. Immediate delivery; no inquiries; satisfaction guaranteed.

ALLBER.—Clyno, 1920, 2-stroke, 2 speeds, clutch, all accessories, tax paid, in new condition; £39

ALLBER.—Ixion-Villiers, 2½h.p. complete with lamps, in running order; £24.

ALLBER.—Levis, 1916, 2½h.p., 2-speed, all accessories, good order; £32.

ALLBER.—Invicta-Villiers, 1920, practically new 29.

ALLBER.—Humber, 1914, 3½h.p., 2 speeds, handle start, all accessories, tax paid; £25.

ALLBER.—1922 Metro-Tyler, sports model, 2-speed clutch, kick start, as new, tax paid; £45.

ALLBER.—1922 New Hudson, sports, 2-speed aluminium piston, all accessories, tax paid, absolutely like new; bargain, £46.

ALLBER.—1918 Triumph, 4h.p., countershaft, overated, 1921, little used, in splendid condition £58.

ALLBER.—Triumph, 3½h.p., clutch model, all accessories, Philipson pulley, tax paid, good condition; £28.

ALLBER.—Douglas, 3½h.p., 2 speeds, new tyre all accessories, tax paid, in good condition; £35

ALLBER.—1920 Blackburne, 4h.p. model, complete with all accessories, tax paid, in splendid condition; £65.

ALLBER.—1918 P. and M., 3½h.p., 2 speeds, kick start, fitted all accessories, tax paid, in good order; £38.

ALLBER.—New Hudson combination, 4h.p., 3 speeds clutch, all accessories, tax paid, splendid order £39. [4616

## MOTOR CYCLES FOR SALE.

### Miscellaneous

WANDSWORTH Motor Exchange (Great Bargains), —Motor cycles, combinations; plenty to choose o.—Below.

WANDSWORTH.—Cheap motor cycles is our motto. Cheap motor cycles; nothing dear; all cheap.

WANDSWORTH.—Easy terms; easy terms. The only firm to give immediate delivery first de- t.

WANDSWORTH.—De Dion 2¾h.p. magneto dropped frame, licensed, drive away; 16 gns.; terms.

WANDSWORTH.—F.N. 2¼h.p., 2-speed gear box, clutch, wants attention; 16 gns.; terms.

WANDSWORTH.—Triumph 3½h.p., clutch model, lamps; nice condition; bargain, 26 gns.; easy os.

WANDSWORTH.—Tourist Sporting type 3½h.p., 2-speed, countershaft, very low; 26 gns.; terms.

WANDSWORTH.—Rudge 3½h.p., good tyres, kick starter, licensed, drive away; 29 gns.; terms.

WANDSWORTH.—Roc 5-6h.p., twin, 2 speeds, disc wheels, kick; 33 gns.; easy terms.

WANDSWORTH.—Abingdon King Dick 3½h.p., 2 speeds, kick, lamps; 38 gns.; easy terms.

WANDSWORTH.—Premier Fine Coachbuilt Combination 3½h.p., 3 speeds, countershaft, lamps; gns.; terms.

WANDSWORTH.—James (late) Coachbuilt Combination 4¼h.p., 3 speeds, countershaft, kick, dometer, lamps; 65 gns.; terms.

WANDSWORTH.—Rover Splendid Coachbuilt Combination 3½h.p., 3 speeds, lamps; 49 gns.; easy ns.

WANDSWORTH.—Indian Coachbuilt Combination 7h.p., 3 speeds, spring frame, disc wheels; 59 ...

WANDSWORTH.—Indian, beautiful machine, 7h.p., 3 speeds, spring frame, newly enamelled; 55 gns.

WANDSWORTH.—1919½ Scott, almost new, Coachbuilt Combination, water-cooled, lamps; 79 gns.; terms.

WANDSWORTH.—Swift Coachbuilt Combination 3½h.p., 3 speeds, countershaft, lamps; offers; terms.

WANDSWORTH.—Singer Coachbuilt Combination 4h.p., 3 speeds, clutch; cheap, 39 gns.; easy ns.

WANDSWORTH.—Levis genuine 1916 2¼h.p., nice little machine; very cheap, 29 gns.; terms.

WANDSWORTH.—T.D.C. 2¼h.p., good tyres, fine machine, only wants seeing; 22 gns.; terms.

WANDSWORTH.—F.N. 2¼h.p., 2 speeds, clutch, shaft drive, wants attention; 16 gns.; terms.

WANDSWORTH.—Gregoire 3½h.p., good tyres, dropped frame, runs well; only 22 gns.; terms.

WANDSWORTH.—Minerva 3½h.p., magneto, low built, wants overhauling; gift, 8 gns.—Below.

WANDSWORTH Exchanges.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town ion). 'Phone: Latchmere 4686. [4367

LACKPOOL Bargains.—1922 Rudges, 1922 Ariels, 1922 O.K.'s, 1922 New Imperials, 1922 Quad-s, 1922 Royal Rubys. Quick deliveries. Good e for your machine; exchange.—Booths' Motories, erloo Rd., Blackpool.

LACKPOOL Bargains.—New 1921 4h.p. Brad-bury, all chain, £78/10, with sidecar £95/10. oths' Motories.

LACKPOOL Bargains.—3½h.p. Triumph, £18/10/6; ditto, 2-speed, £22/10/6; countershaft model, /10/6.—Booths' Motories.

LACKPOOL Bargains.—3½h.p. Humber, £20/10/6; 1920 Wooler, £39/10/6; 6h.p. 3-speed Rudge, /10/6; 3½h.p. Premier, £24/10/6.—Booths' ories.

LACKPOOL Bargains.—3½h.p. Singer, speed gear, clutch, £27/10/6; Phelon and Moore, £19/10/6; .p. Triumph, 3-speed, £22/10/6.—Booths' Motories.

LACKPOOL Bargains.—1¼h.p. J.E.S., £10/10/6; N.S.U. lightweight, £13/10/6; 2-speed O.K., /10/6; 6h.p. 2-speed Rex, with Montgomery side- £26/10/6.—Booths' Motories.

LACKPOOL Bargains.—2¾h.p. Douglas, £25/10/6; 4h.p. Douglas, new sidecar, £69/10/6; A.J.S. bination, £49/10/6; 8h.p. Premier combination, /10/6; 6h.p. Enfield combination, £39/10/6.— ths' Motories.

LACKPOOL Bargains.—120 G.N., dynamo lighting, spare wheel, £110/10/6; 1920 Tamplin, /10/6; Morgan de Luxe, £147/10/6; two 1920 chless combinations, £115/10/6 and £120/10/6; 0 Rudge combination, dynamo lighting, £79/10/6; 0 Rudge, £55/10/6; Indian Combination, /10/6; 1920 Sun, £35/10/6; another, £39/10/6; lays' Allon, £36/10/6; another, £42/10/6; 1922 ., mileage 600 £34/10/6; several others cheap; n cycles taken in exchange.—Booths' Motories, 294, terloo Rd., Blackpool. [4538


IT

"V.E.S."

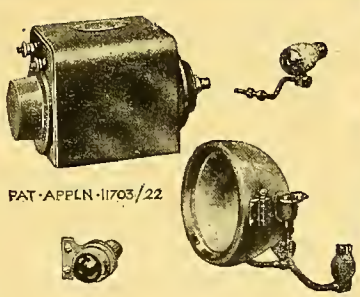
Dynamo & Accumulator

LIGHTING SET ON CAR LINES

FOR MOTOR CYCLES

Complete with Tail & 6" Head Lamp.

£10-17-6.




BRITISH MANUFACTURE

N.B. ILLUSTRATED BOOKLET ON APPLICATION.

ACETYLENE TO ELECTRIC

£8-5-0

AS £10-17-6 SET, BUT WITH ADAPTERS INSTEAD OF LAMPS.

FLEXIBLE DRIVE 30/-

PAT. APPLN. 516/22

TERMS 30 Days approval against cash

VALE

ENGINEERING SYND.

8 to 11, BROWNS BUILDINGS,

ST MARY AXE, E.C.3.

TELEPHONE:

AVENUE 4564.


## MOTOR CYCLES FOR SALE.

### Miscellaneous

LIGHTWEIGHT Bargains.—Clyno, 1921, hardly soiled, £45; James 2-stroke, good, £25; lo-victa, 1920, 2-stroke, splendid mount, £35; Douglas, 1916, good condition, £33; all equipped and ready for use; easy payment if required; come by Bakerloo and see us.—Bunting's Exchange, Wealdstone. [4713

F.O.C.H for secondhand cycles, combinations and runabouts at bargain prices. Exchanges ar-anged. Any new cycle, combination or car sup-lied, cash or deferred payments.—Fair Offer Car louse, 5, Heath Street, Hampstead (near Tube). 'hone: Hampstead 3752 Hours 9-7, including undays [1611

TRIUMPH Combination, £38; Minerva combina-tion, £32; Chater-Lea combination, 8h.p., 50 gns.; Levis, £28; Rex, 3½h.p., £12/15; Minerva, 3½h.p., £16/10; Lincoln-Elk, 4¼h.p., countershaft, £25; scooter, 1920, £16; Clyno, 6h.p., £35; ex-changes; call any time.—57, Kenbury St., Camber-well, London. [4125

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period Write terms. Fowler Brigden, 130, Euston Rd. [0795

FOR Hire, July 1st, Rex-Jap 6h.p. combination, moderate charge. For sale, 3½h.p. engine, un-used, magneto, carburetter; £8.—Write particulars, 20, Westwood Rd., Tilehurst, Reading. [4000

G.N. Light Car and Douglas Motor Cycle and Side-car for hire; 8 gns. and £5 per week respec-tively; fully insured.—Rodwell, 8, Red Lion Sq., Hol-born, W.C.1. Chancery 7272. [8776

ROBERTSONS Motors, Ltd., for many years have specialised in this class of work. If machine is purchased, full amount of hire up to one week is allowed.—157h, Gt. Portland St., W.1. [6083

## MOTOR CYCLES WANTED.

H

F

EDWARDS and Co.,

101 Gt. Portland St., W., are cash buyers of solos, combinations, and Morgans. Highest prices given, distance no object. Call, write, or 'phone: Mayfair 4027. [0870

T.B.

WANT

500 COMBINATIONS and Solos, any make, guar-antee top prices given.—T. and B. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5564

WE

ARE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination. We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 314, Euston Rd. [0815

BEST

PRICES

GIVEN

H. F. EDWARDS and Co., 50, Harrington Rd., South Kensington, will purchase for spot cash your motor cycle or combination. Call, write, or 'phone Ken. 3709. [0604

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 6391. [0332

A

MAUDES' Motor Mart are purchasers for spot cash of late models Sunbeam, Triumph, Douglas, Nor-ton, and Morgans.—Maudes', 100, Great Portland St., London. [1128

LATE Model Solo or Combination for cash.—Clayhall Tavern, Old Ford Rd., Bow, E. [3894

ENFIELD 2-stroke, K.S., equipped.—A. J. Slatter, 3, Cliff Terrace, St. John's, S.E.8. [3629

£50-60 cash for best late Combination offered.—2, Hawkswood Place, Kirkstall, Leeds. [4255

WANTED, late model B.S.A. solo, must be good condition; tax.—Howley, Devizes. [3884

COMBINATION Wanted, about £80; after 7 p.m., or letter.—27A, Anerley Park, Anerley. [3945

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue A39

Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES WANTED.

2¾h.p. Douglas, 2-speed; £25 or near, cash.—Write, 35, Shepherd's Bush Rd., Hammersmith. [3969

WANTED, good Combination; call or write.—143, Ravensbury Rd., Earlsfield Rd., S.W.18. [4497

WANTED, Triumph Solo, 1916-19; cheap; particulars.—Powell, 215, Belgrave Gate, Leicester. [3693

SUNBEAM Solo wanted, not earlier 1918; about £50.—Wheeler, Chantry House Stables, Sevenoaks. [3709

HOT Stuff modern Solo wanted; spot cash; appointment.—E. J. H., "Brockenton," Belmont, Surrey. [3766

NORTON, Triumph, or similar; cash waiting; call or write.—Green, Wine Merchant, Reigate. [4381

WANTED, Indian Motor Cycles, age and condition immaterial.—17, Heaton Rd., Mitcham. [4174

NORTON, No. 9, 1920 earliest.—Biddulph, 16, North Av., Model Village, Rainworth, Mansfield, Notts. [4043

WANTED, Matchless 1921-22 combination, new condition, cash.—Hill, 31, Westbourne Rd., Sunderland. [3576

WANTED, solo, late model, must be cheap, cash waiting; no dealers.—Box 1823, c/o *The Motor Cycle*. [3554

MODERN Solos and Combinations for cash, or in exchange.—R. B. lark and Co., 7, Exhibition Rd., S.W.7. [3492

SOLO, no lightweights, Triumph preferred, any date. —Letters only, 3, Hermit Place, Belsize Rd., Kilburn. [3581

WANTED, Indian clutch model, also I.O.M. Rudge, cheap for cash.—Bramwell, Market Sq., Stony Stratford. [4257

ROVER required, 8h.p.; must be cheap and in good condition.—Morgan, 138, Gower St., W.C.1. Museum 3418. [3652

1914 3½h.p. Twin Motosacoche, De Lissa frame, fork, and parts; cheap.—P. Tyler, 23, Barrack St., Colchester. [3697

WANTED 2¾h.p. Douglas, 1916-19; cheap; full particulars.—Moorcroft, Ormside, Appleby, Westmorland. (D) [3737

JAMES 4¼h.p., Solo or Combination, about 1917 or 1918.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [4083

LONDON.—Wanted, privately, for cash, cheap, any solo, with gears; state year, etc.—Box 1822, c/o *The Motor Cycle*. [3550

WANTED, motor cycle, and condition, not earlier than 1913; cheap, cash waiting.—61, Grand Parade, Harringay. [4161

WANTED, good combination, late; cheap for immediate cash.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [4430

WANTED, 4h.p. or more twin combination, not pre-1920; give about £80.—Full particulars, Turner, 85, Lyall Mews West, Lyall St., S.W. [3942

LET me sell your machine—only 5% commission and a quick sale.—Write, F. L. C., 42, Northampton Buildings, E.C.1. 'Phone: Finchley 1778. [1363

WANTED.—Good Solo or Combination, 1920-21 model; cash on sight; distance no object.—Hillier, 9, Wallingford St., North Kensington. [4469

MODERN Motor Cycles and Combinations bought for cash or sold on small commission; send details first.—South Eastern Garage, Herne Hill, S.E.24. [1096

PRIVATE, wanted, high power sporting combination, not earlier than 1919; Harley, Zenith, Brough Superior, Indian preferred; after 5 p.m.—4, Elm Gardens, Hammersmith. [4193

WANTED, 1921 Matchless or Enfield, fitted with makers' 2-seater sidecar, fully equipped, must be reasonable.—Engine number and full particulars to Slemon, Lodge Hill House, Rochester, Kent. [3939

WANTED, Late Combinations, Solos; also Morgan Runabouts, G.N.'s, and Rovers; cash or exchange.—Elce, Ltd., 13, 15 and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0076

CASH on sight for new and second-hand motor cycles and combinations, any make or condition.—Call, write, or 'phone, Short and Glass, Ltd., 485-493, Upper Richmond Rd., East Sheen, S.W. 'Phone: Richmond 2362 and 2363. [0372

WANTED for Cash, Motor Cycles or Combinations, any make, late or old models.—Write, call, or 'phone North Wimbledon Cycle Stores, 50a, Church Rd., North Wimbledon, S.W. 'Phone: Wimbledon 2270. [4184

SPECIAL Cash Buyers, Triumphs, Enfields, B.S.A.'s, Douglases, Matchlesses, A.B.C.'s, Scotts, Braburys, Martinsydes, Zeniths.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). 'Phone: Latchmere 4686.

4-CYL. F.N.'s, Hendersons, T.A.C.'s, T.M.C.'s, wanted. —Wandsworth Motor Exchange, Ebner St., Wandsworth.

RED Indians, Harley-Davidsons, wanted.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [4559

# Motor Cycle STOLEN.

## 3½ h.p. 1922 TRIUMPH No. 79938

## Frame No. 318358

## Registered No. H.P. 3460

**Triumph colour, Lucas Magdyno Lighting Set, Double Handle-bar Grips.**

**Stolen from John Carpenter Street, Tudor Street, London, E.C.**

# A Reward of £10:0:0

**will be paid by**

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED, 77, Cheapside, London, E.C.2, to the first person giving such information as will lead to the recovery of the machine and the apprehension of the thief or thieves.**

## MOTOR CYCLES WANTED.

BUNTING'S Buy, Sell, or Exchange any make motor cycle. State your requirements. undertake to do your business and give you satisfaction. Distance immaterial.—Bunting's Motor change, Wealdstone. [0

F.O.C.H always have cash waiting for sc machines of all types; highest prices and c teous treatment assured.—Fair Offer Car House Heath Street, Hampstead (near Tube). 'Pho Hampstead 3752 Hours 9-7 including Saturday [1

WANTED, good modern Motor Cycles, solo combination, in part exchange for 8h.p. R or other light car. Best prices allowed, extended ments arranged.—Vivian Hardie & Lane, Ltd., 23 Woodstock St. (off Blenheim St.), Bond St., 'Phone: Mayfair 6559 [0

ANY Number of Second-hand Machines and C binations purchased for cash. A representa will be sent to any part of the country to ins and complete the transaction after preliminary n tiations. Write, 'phone, or call.—Longman B 17, Bond St., Ealing. Tel.: 689. [4

## MOTOR SCOOTERS.

KINGSBURY Scooters and Spare Parts.—Beau Works, Richmond Rd., Twickenham. [2

KINGSBURY 2h.p. Scooter, unused, complete a quantity of spares; £15.—28, Boston Rd., well. [3

AUTO-WHEEL Scooter, 1920, powerful; £16; push cycle part.—57, Kenbury St., Camberw London. [4

A.B.C. Skootamota, new, unoiled, latest model; sacrifice.—Frank Whitworth 139, New St., mingham. [4

1921 Autoglider De Luxe, coachbuilt body, s clutch, electric lights, equipment, as new; or exchange motor cycle.—Geo. Liddall, Stan Rowsley, Derbyshire. [3

## MOTOR ATTACHMENTS.

1¼h.p. 1921 Auto-Wheel Attachment, fitted B.S.A. cycle with 2-speed gear; £17/1 Wauchope's, 9, Shoe Lane, London. [4

AUTO-WHEEL 1921, Briggs and Stratton, 2h perfect condition, only run 260 miles; £18; £36.—83, Overstrand Mansions, S.W.11. [3

NEW Cyclotracteur, to fit cycle; maker's price, £ would exchange for good typewriter; sta please.—Edwardes, 277, Camberwell Rd., S.E. [3

AUTO-WHEEL, excellent condition, £11; la B.S.A. Special bicycle for same, £8/8; seen appointment.—G. 122, Beaufort St., Chelsea. T 2721 Kensington. [3

## HOODS, WINDSCREENS, ETC.

COLLINS and Son for hoods, screens, and apr hoods from 35/-.—Below.

COLLINS and Son.—Adjustable windscreens, c plete with apron; 22/6, 30/-, and 35/-; on approval against cash; carriage 1/6 extra.—Bel

COLLINS and Son stock all known makes of w screens; we have a few second-hand Stand Eastings, fitted with new celluloid, from 45/-.—Bel

COLLINS and Son fit celluloid panels to any w screen in few hours, new aprons, side curta etc.; open weekdays till 8.30, Sunday mornings 1 o'clock.—Collins and Son, rear of 84, High Putney, S.W. (D) [6

HERCULES Hoods and Aprons; write for lis Hercules Hood Co., 698, Seven Sisters Rd., tenham [0

EASTING Windscreen (Royal), new, never u list £5; accept £3; postage 3/-.—H. Rock, C ley, Staffs. [3

HIGH-GRADE Hoods, polished hoops, brass fitti 30/-; hoops, twill, etc.—Henry Jones, 778, H Rd., Tottenham, London. [3

ONE Royal Easting Screen, complete, only bought, used once; price £4.—Richard Braeval, Seend, Wilts. (D) [3

RENNOC Co.—We are actual manufacturers hoods, screens, and aprons. Send for lis Rennoc Motors Ltd., 155a, Marlborough Rd., U Holloway N 19 [2

ROBINI Mfg. Co.—The Bower adjustable w screen, registered, with coverall apron, 30/-, riage paid. Beware of imitations. Celluloid pa fitted, Eastings 16/6; Coverall aprons made to or 10/-.—Robini Mfg. Co., 1 and 3, Tulse Hill, Brix S.W.2. 'Phone: Brixton 1585. [4

## BODIES.

COLLINS and Son for coachbuilt bodies, all mo in stock, from lightweights to 2-seater.—Belo

COLLINS and Son are actual manufacturers, give twelve months' guarantee with every b made by them.—Below

COLLINS and Son repair, repaint and upholster moderate charges, first-class work guarant estimates free; send for catalogue.—Collins and S rear of 84, High St., Putney, S.W. [4

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).
BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.
MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d per annum.

## Saturday's Club Championship Event.

TWENTY-SEVEN clubs will meet in friendly rivalry next Saturday to contest the club championship of 1922. Representative teams have been nominated by all the leading motor cycle clubs, and a course in Hertfordshire abounding in hills has been again selected, with Tring as the rallying point.

Contests such as the Team Trial for *The Motor Cycle* Challenge Cup do an untold amount of good for the pastime, for the majority of the entrants are keen amateur owners of the machines they ride, and enter upon the trial with the utmost enthusiasm for the benefit of the clubs which they represent.

We have no doubt that, with the efficient organisation for which the Motor Cycling Club has become famous, an entirely successful and enjoyable event will result. Although few will be concerned by the announcement, it may be of interest to record that the Auto Cycle Union at first unaccountably withheld a permit for this event, though, without having disturbed the M.C.C. arrangements in any way, the original decision was rescinded and a permit issued as late as last Thursday.

What good and useful purpose has been served by attempted interference with an annual event of recognised importance the A.C.U. best know, particularly as the M.C.C. Team Trial has for years past attracted a representative entry (it is always the largest and most representative inter-club gathering of the year) and the date of this year's event was announced months ago. The A.C.U. is running a risk of getting into disfavour by the arbitrary actions of some of its busybodies whose actions tend to nullify the undoubted good work carried out by the governing organisation.

## Cylinder Capacities.

NOW that the A.C.U. is recommending the classification of motor cycles on the basis of 1 h.p. per 100 c.c., it will behove riders, and even certain manufacturers, to obtain some definite knowledge of the cylinder capacity of the machines in which they are interested.

Not long ago we had occasion to point out how misleading were existing horse-power rating engines, varying by as much as 130 c.c. in the case of units of the same nominal horse-power. It was these discrepancies and the attention which they received that resulted in the new ratings being considered and recommended by a specially appointed committee.

Examination of the programme of most of the prominent open reliability and speed trials shows that there is quite an appreciable lack of knowledge of cylinder capacities amongst the entrants of machines, and this failing is not confined solely to private owners, who might be forgiven a lack of knowledge of the exact internal dimensions of their engines.

In one important event recently a number of machines of one make embodying a well-known proprietary engine were credited with three different capacities, while another maker using the same engine stated its capacity at a figure slightly higher than any of the other figures quoted by the other entrants.

Another proprietary engine is frequently entered in trials, by makers and riders who use it, with statements of capacity which vary by as much as 20 c.c.

Of course, these things do not matter greatly as they do not bring the machines concerned into another class, but for the good name of the engineering section of the motor cycle industry trade entrants in trials should at least specify their cylinder capacities with accuracy.

An index to the advertisements in this issue will be found on the page facing the back cover.

# OCCASIONAL COMMENTS

BY "IXION"

## Those Were Stirring Times.

I HAVE been swopping yarns this week with an eminent member of the trade, whose memory goes back about as far as my own. We got to the point where, after tremulous solo adventures, we dared to invite the one and only fair to accompany us. He hired a push-bike trailer for a run from town to the sea. The coast was reached well enow, as the poets put it. But the return journey was arduous. The automatic inlet valve took a dislike to its cotter, and spat it out into the road. At that date there were no such things as garages, and it is doubtful whether a spare cotter existed in the British Isles; moreover, even the blacksmiths had downed tools for the day. So he borrowed a hairpin from his passenger. It lasted two miles. He borrowed another. And so on. The demure Victorian maiden who started out with him was transformed into rather a saucy, stagey flapper before the trip ended. Later on the accumulator gave out. Also the spare accumulator. Such trifles did not worry us in 1903. He woke up an electrician, bought some dry cells, caused his passenger to nurse them on her lap, and connected them up from her lap to the coil under the bicycle tank with some six yards of bell-wire. In fact, he felt rather more comfortable on this improvised ignition; for the trailer connection was a thought dickey, and so long as the engine went on firing he knew the trailer—and its contents—were still there.

## Forget About Your Oil.

I HAVE recently fitted a Best and Lloyd mechanical oil pump, and have finished for ever with the adjustment of drips, the watching of miles on my speedometer, the anxious ear cocked at the sound of the engine. I just see that there is plenty of oil in the tank, and then—well, I just ride. When the toy was new I found a certain fascination in watching a fat little splodge of Summer *Huile de luxe* eject itself every few seconds from the downturned pipe, and slide across the tiny tilted basin to the hole leading to my engine. But now I know that the splodge never fails to appear when due, I forget all about such mundane matters as lubrication, and let my thoughts wander to the scenery or the bobbies or the latest *her*. The engine appears to prefer this regular ration to the boa-constrictor régime of alternate gorges and fasts dictated by a hand pump; and my oil bill looks like being appreciably smaller, for since I know what I am doing, I no longer over-lubricate. Of course, the critical mind of the professional journalist is never *quite* satisfied. These "stick on" pumps must necessarily be mounted in somewhat exposed positions, and I suppose that some day I shall neatly wipe the pump clean off the engine when I am cutting a kerbed corner too fine. So in theory I should prefer a pump designed as part of the engine, and tucked out of harm's way. Secondly—though here I meekly bow my ignorant head to the Best and Lloyd trained metallurgist—I wonder why the pump designer is so fond of nickel plating. I had already quite enough to keep clean, and it reflects the sun into my eyes. I suppose he will retort that motor cyclists in general prefer something bright. So do magpies. You can't knock sense into a magpie's head. I know.

## Round *v.* Square Tanks.

I USE both adjectives in a Pickwickian sense, no motor cycle tank being truly round or square. This is merely a mild enquiry as to whether other riders find that the rain is far more apt to run round to the underside of a more or less circular tank than with a tank of roughly rectangular contours.

## "Mixed" Meetings at Brooklands.

NO, I don't mean what you mean; I am querying the wisdom of mixing motor cycle races with car races. Colonel Lindsay Lloyd holds that if you have a nice pair of prismatic lenses, and take a stance on the club-house or the member's hill, you can follow a motor cycle race quite as nicely as you could from the fork. Some lucky people are blessed with the perfect vision immortalised by Sam Weller as "double extry million horse-power magnifying." Others have the kind of glass that is marked "12x," whatever that may mean. I have just ordinary eyes, and my glass is only marked "8x." I *won't* go to the fork, or anywhere else on the edge of the track, when interesting cars and interesting people can only be viewed close up in the paddock. So on these occasions I know no more about the vicissitudes of a motor cycle race than I know what Queen Elizabeth would have done with Lloyd George if he had risen to eminence in her reign. And I like to know what's what in these events. So I prefer my motor races like my drinks—one sort at a sitting, please. Not but what the Royal meeting was very good fun. *Did* you see Chitty-Bang-Bang misfire into that pusher's eye?

*Ixion's "MOTOR CYCLE REMINISCENCES" are available in book form, price 2s. 9d. post free, from "The Motor Cycle" Offices, Dorset House, Tudor Street, E.C.4.*

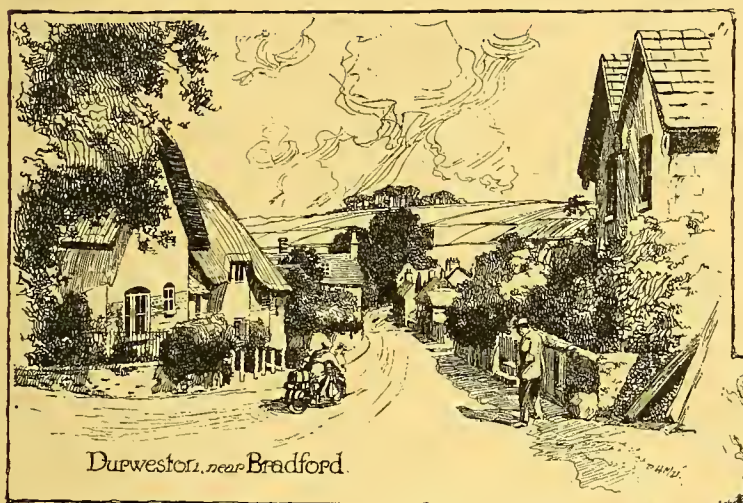
**Occasional Comments.—**

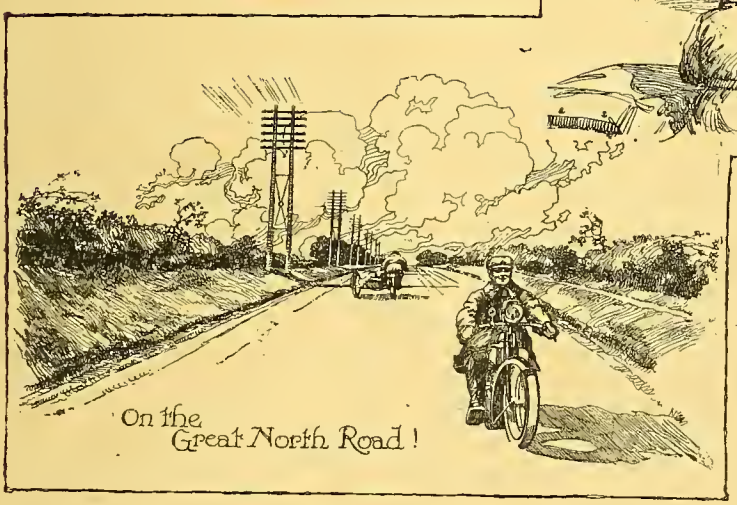
## More Trouble.

ON May 18th I described how a medical reader bought a 3½ h.p. Ponk-Ponk, which was quite satisfactory, barring its rear brakes. The makers got into difficulties, and Road Destroyers, Ltd., took over. Our reader sent them his back wheel at Christmas, and they kept it—to his infinite chagrin—until this month. At last it returned, and he had some great spins. One day he was descending a rough 1 in 7 lane, which abutted at right angles into a *very* main road. The brakes failed. He crossed the main road at "60" or so, much assisted by a temporary vacuum in the traffic. Is he thirsting for the blood of Road Destroyers, Ltd.? No. He is kicking himself because he did not think of stopping the runaway jigger by caressing the outside flywheel with his boot-sole. Which reminds me of Tommy taking the Hun's frightfulness as a matter of course, but complaining bitterly of plum and apple jam. At present the 3½ h.p. Ponk-Ponk is in the hands of a capable local mechanic, who is eliminating from the brakework the tiny keys, feathers and threads beloved of Road Destroyers, Ltd., and substituting *large* squared portions, with visloks, castellated nuts, split pins, spring washers, seccotine and other holdmefasts.

## Asking for It.

SOME weeks ago I rashly announced that this year I was going to enjoy a non-stop season on the road, and explained how the trick was to be done. One never gets in a mess without discovering that old daddy Adam went through it æons ago in the Garden of Eden. At any rate, a lot of small sagacities which seem to date back to him crop up in your mind immediately afterwards. F'rinstance—"Don't halloa till you're out of the wood!" "The best laid schemes of mice and men," etc., etc. Am I having a non-stop season? Of course not. I'm not having common troubles. But I get regular packets of weird misfortunes which never happened to anybody else, or to me previously. For example, I was riding along a beautiful street when a horrible jangle occurred in my transmission, and an enormous piece of copper wire—as thick as telegraph wire—was trying to lash my rear hub and chain to the frame. A day or two later the rear stand of my machine wilted as a protest against the weight of the jigger. When things were going too well with the Roman emperors of old, they used to dump the crown jewels in a quicksand, or take other radical measures to prevent the gods from feeling jealous of them. I am considering some step of the kind—perhaps I might fill up my dynamo bearings with carborundum—there's a chance that Jupiter doesn't know how late lighting-up time is under the Daylight Saving Bill.

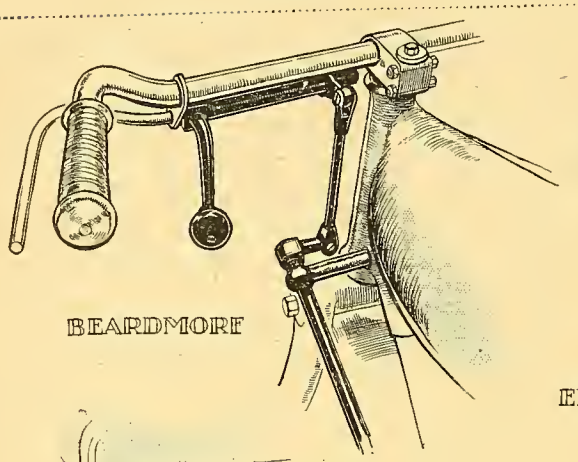




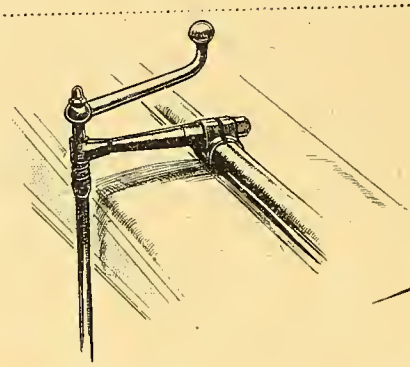

ENGLAND'S HIGHWAYS.

The motor cyclist who carries a camera on his jaunts certainly adds to his pleasures by obtaining records of his journeyings, but possibly the artist's pleasures are even greater, for the slightest of sketches carry more meaning—to the artist—than the best of photographs.

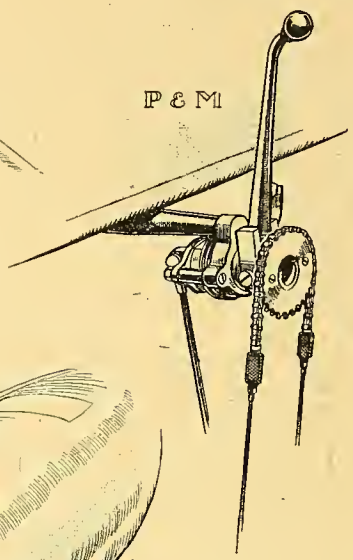
# GEAR CONTROLS ON MODERN MACHINES.



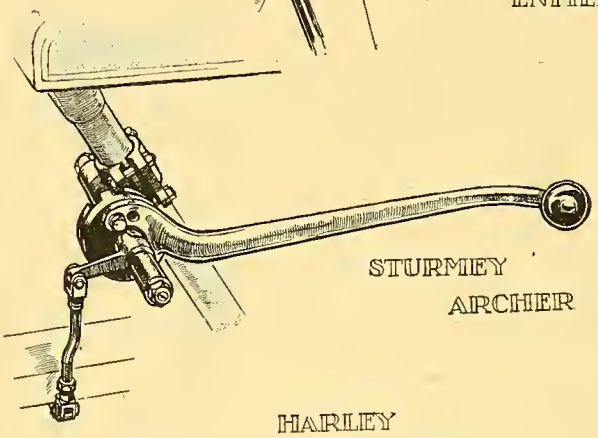
BEARDMORE



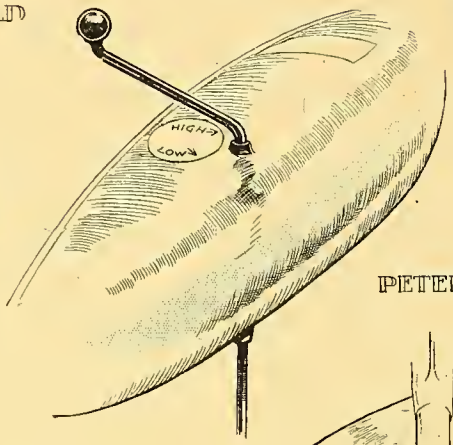
ENFIELD



P & M

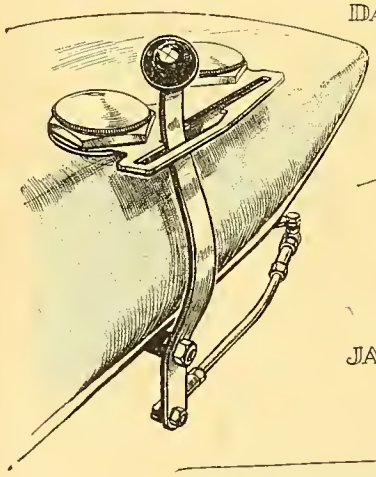


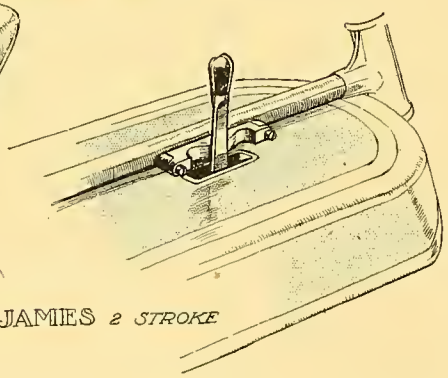
STURMEY ARCHIER



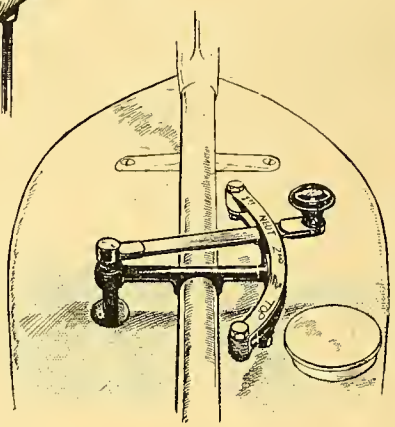

PETERS

HARLEY DAVIDSON

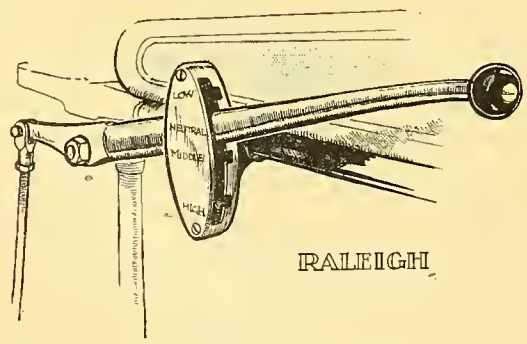




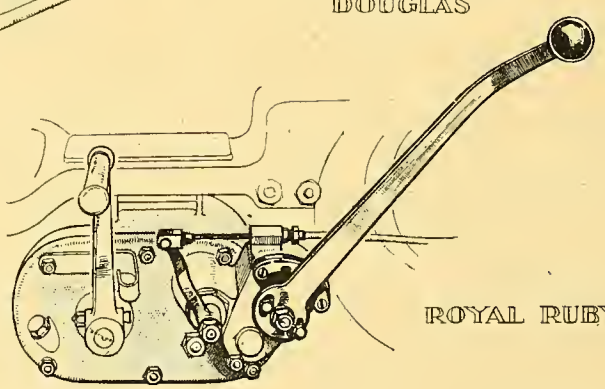
JAMES 2 STROKE



DOUGLAS

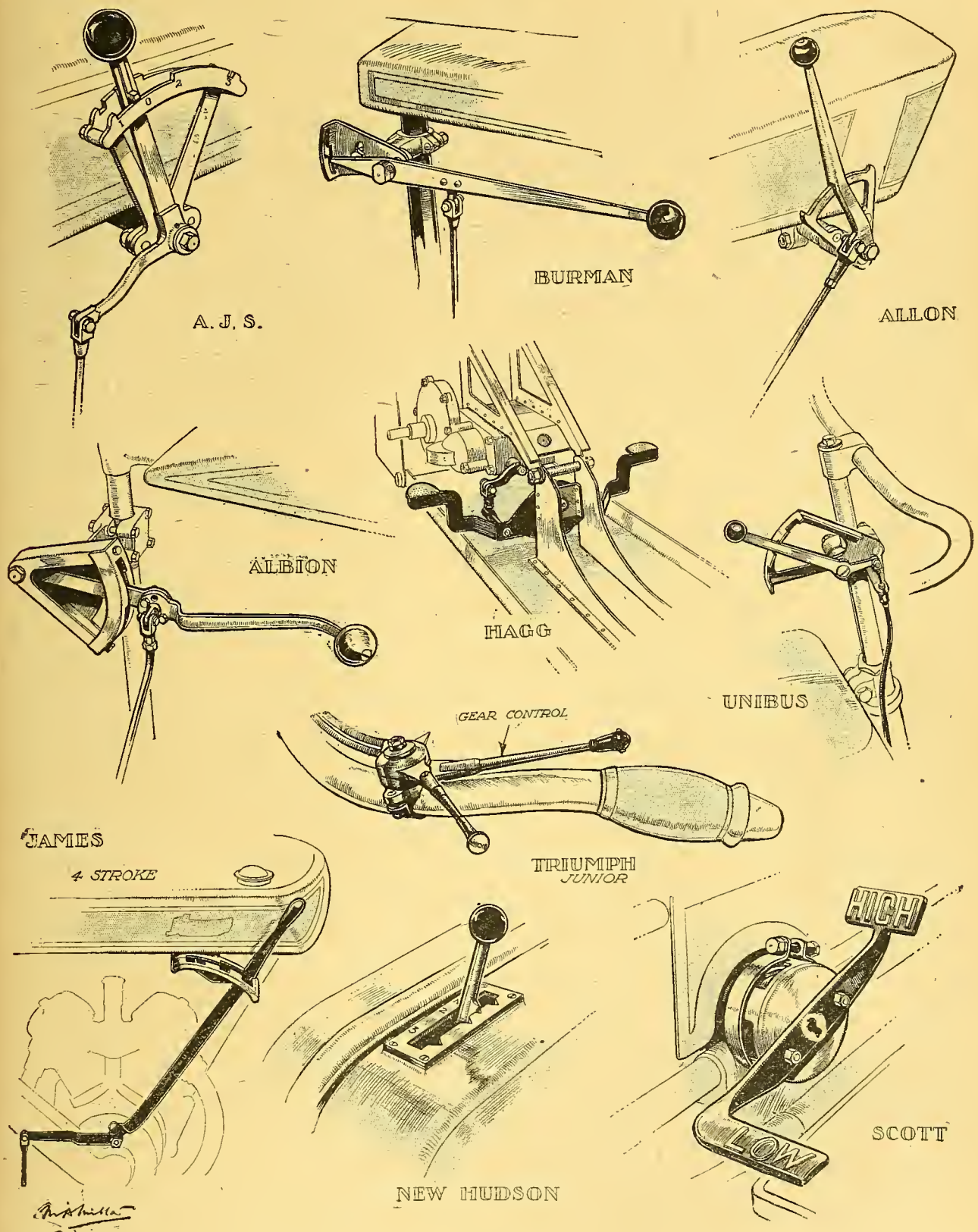


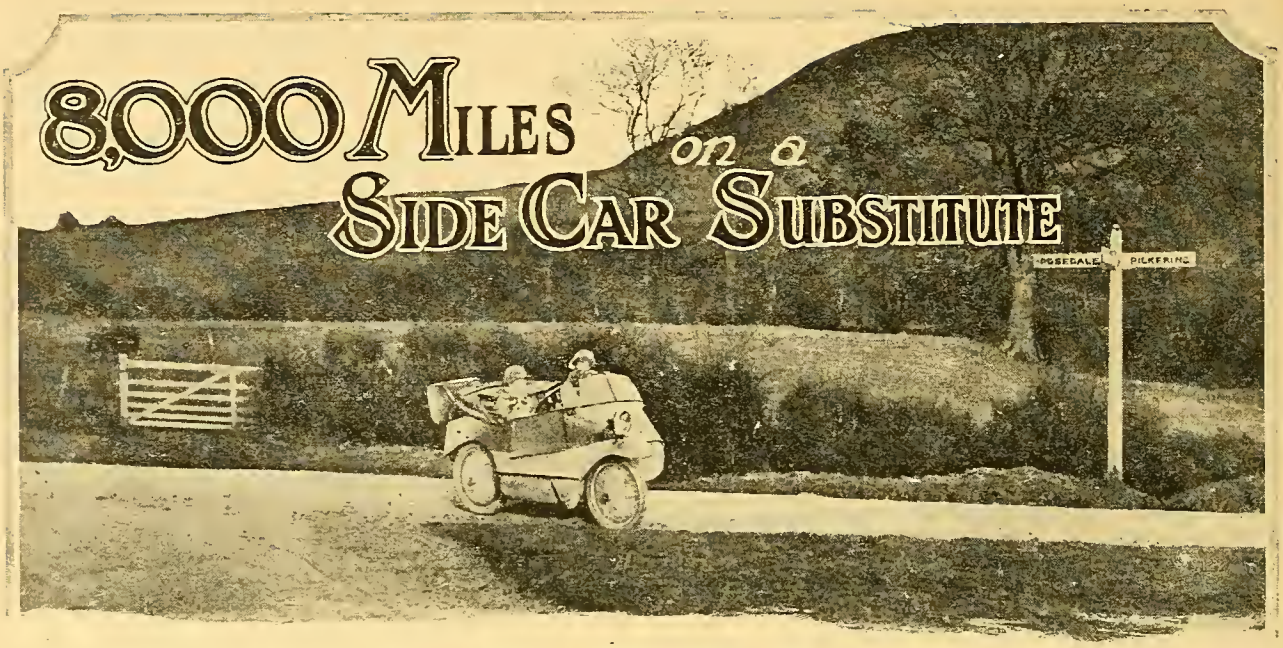

RALEIGH



ROYAL RUBY

# A SELECTION OF CHARACTERISTIC METHODS IN USE TO-DAY.





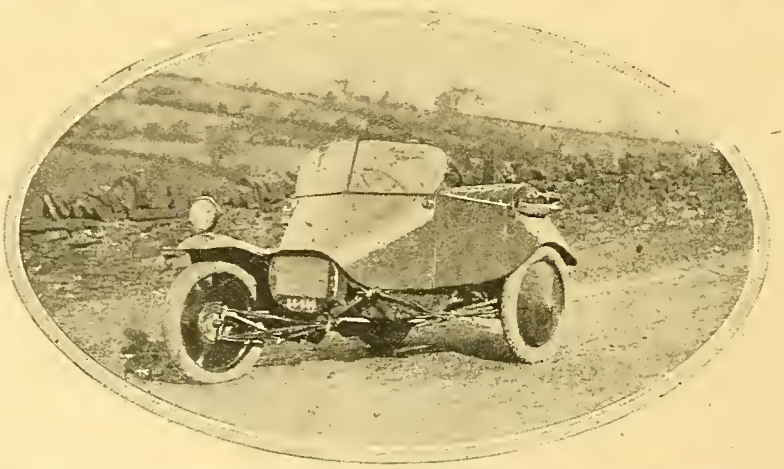

## Practical Notes on the Scott Sociable.

By H. MORTIMER BATTEN.

THE ignorant jeer, the foolish grin, the conventional are coldly superior, but the truly intelligent are always interested. That is the summing up of one's fellowmen from behind the wheel of a Scott Sociable.

Jeers become less prevalent, however, as the sight of the little machine becomes more familiar, but that idiotic grin of the fellow who thinks you are trying to be funny just because you drive a machine out of the ordinary comes in time to irritate.

The sidecar unquestionably has advantages over the light car, but its disadvantages are enormous. If one can rule out these disadvantages while retaining its unique and favourable points—that is, if one can obtain car comfort and shelter in a machine which has the mobility and economy of the sidecar, one has obviously realised something very much worth while. This was Mr. Scott's aim in evolving the three-wheeled Sociable, and certainly he has succeeded. The Scott Sociable is as sporting as a well-powered sidecar outfit to drive; owing to its wonderfully lively engine, smooth torque, and light weight, its acceleration and nippiness are astounding. As to comfort and weatherproofness, more anon.



The Scott Sociable—distinctive in design and possessing certain advantages over both car and sidecar. The engine, 76·2 × 63·5 = 578 c.c., is a water-cooled twin.

### Handsome is as Handsome Does.

The appearances of this machine offend the man driving it least of all, and so he becomes rather tired of those who wave aside favourable points as overwhelmed by the so-called ugliness of the Sociable. I have had a good many of these gentry as passengers from time to time, and invariably they prove the easiest converts. At the end of the ride you are more than likely to hear the man who only an hour or so previously was condemning the Scott Sociable on the grounds of its appearances, arguing in perspiring wrath with anyone who dares to call the machine ugly.

Personally I have ceased to regard the Scott Sociable as ugly, but even if it were I hold that its ugliness would be entirely permissible on the grounds of its distinctly practical design—I selected it because I saw it was the work of a genuine engineer.

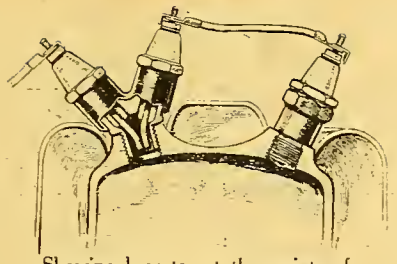
### Tyre Wear.

After 6,000 miles driving, 3,000 of which was under most strenuous trials conditions, I found it necessary to renew the driving wheel tyre. It was not worn out, but it was too smooth to obtain a good grip. The other three tyres (including spare wheel) are still perfectly sound, after close upon 9,000 miles, though quite smooth.

**8,000 Miles on a Sidecar Substitute.—**

My machine was one of the first to leave the factory, and during the first two months of my ownership it developed one or two weaknesses. These were amended as they occurred, and during the last 6,000 miles the machine has been in daily use over moorland roads and under generally trying conditions, practically without attention of any kind. It has not even been decarbonised.

It will be seen from the foregoing that rather remarkable results have been obtained as regards tyre economy, and the makers themselves do not claim such good results. On the whole, my Scott Sociable, providing car comfort for two and even three passengers, has actually cost less to run than various 3½ h.p. sidecar outfits I have owned.



Showing how to set the points of the two-pole plug so that the gap will not be immediately widened by burning.

### Petrol Consumption.

Petrol consumption on the Scott Sociable seems to vary more than on most machines, which is doubtless due to its lightness. Normally one runs the engine as one runs a car engine—that is, at a much wider throttle opening than one runs a motor cycle engine. Road surface and wind affect petrol consumption enormously. On a smooth surface with a following wind, I have regularly obtained 90 m.p.g. and put up a good average speed. Under normal conditions of main road travel, petrol consumption hovers on and about the 80 m.p.g. mark. With a strong headwind and heavy roads in a mountainous district I have had my fuel consumption up as high as 30 m.p.g. Oil consumption is negligible. The Scott Sociable uses exactly a quarter of the oil of a baby two-stroke I have had in my possession at the same time.

### Eliminating Weakness.

There is hardly a moorland track in Yorkshire or Cumberland that Mr. Scott and his satellites have not travelled during their road tests of this machine. This process naturally revealed various weaknesses in Mr. Scott's original design, and one by one minor points were altered and strengthened, till the Scott Sociable reached the stage whereby it was considered safe to place it in the hands of the public.

A stud of factory machines under test is, however, an entirely different proposition from a number of machines in the hands of the public, and it must be admitted that the first machines turned out gave a certain amount of trouble. The public will find weaknesses that the factory tester never finds. The tester at once perceives any minor defect, and sets it right. With the ordinary owner, however, it is a case of minor defect upon minor defect, till the aggregate results in the development of some serious weakness and the machine breaks down. Thus, there is only one tester to decide whether a new machine is or is not a worthy road proposition, and that tester is the public for whom the machine is made.

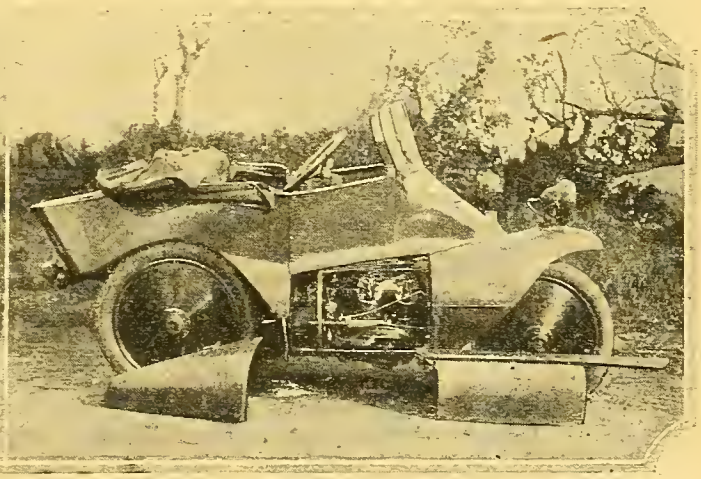
The outstanding weaknesses in the first Scott Sociables that were turned out were in the transmission, but, having carefully followed the various revisions in the design that have been made, and this backed by my own experience, I feel confident that transmission weaknesses have now been overcome.

My own experiences were as follows: My first mishap, which occurred during the initial 1,000 miles, took the form of a stripped key, which conveys the load direct from the clutch to the driving pinion. This meant removing the engine from the frame and taking the whole unit adrift, which I did myself, fitting a new key, which is still doing service. In the new design this key is an integral part of the driven member, so that the likelihood of breakdown of the kind I experienced no longer exists.

While on this repair I found that my universal joint was wearing badly, and I sent it back to the makers. They supplied me with a much stronger pattern of a kind they had just started to fit, and have fitted ever since. This shows no signs of wear as yet.

My second breakdown was caused by the small bevel

The wheels are easily detached, the simple stand being much more quickly operated than a jack.



The removal of the cover gives access to the engine and gear box, an operation of a few seconds only.

**8,000 Miles on a Sidecar Substitute.—**

in the final drive choosing to shed its teeth. A new one was fitted, and has proved satisfactory, but the makers are now employing a new type of spiral bevel, which is not only infinitely stronger than the old one, but is also quite silent. The old straight bevel was very noisy.

It will be seen, then, that the three outstanding weaknesses in the transmission of the very early machines have been set right, and, so far as one can judge, the transmission of the present-day Scott Sociable is as infallible as that of the best car.

### Frame Repairing Possibilities.

The frame tubes now used in the Scott Sociable are very much stronger than those originally fitted. The old-type tube was apt to fracture at the ends, but in the present type the ends are reinforced and practically unbreakable. One tube in my front bracket used to fracture regularly every three weeks. The breakage did not matter much, it was simply that the tube cracked and went on doing its work in that condition. I then fitted one of the new type tubes, which has had 4,000 miles and is still as sound as a bell.

As an example of the convenience of the nut-and-bolt method of frame construction, as distinct from brazed junction lugs, I had the misfortune last summer to collide with a taxicab and completely crumple up the front wheel bracket. At first it looked an awful tangle, but having taken the bracket to pieces I found that only three tubes were damaged. At the time I foolishly had no spare tubes by me, but I took the damaged portion of the frame to bits in twenty-two minutes, and wired to the works for new tubes. These came on the following day, and the damaged bracket was reassembled equal to new in thirty-three minutes working time. Any sort of frame breakage can be mended in this way at an absurdly low cost, and naturally one keeps a spare tube of each type, three in all, in case of breakage.

### The Advantages of the Machine.

The advantages of the Scott Sociable are very highly appreciated by those whose motoring in the past has been confined to the sidecar type of vehicle. Round its economy its chief advantages are centred. The point is that it offers far more for one's money than any other machine on the road. The windscreen and hood keep out the weather, and one can travel in decent clothing and keep perfectly dry during the most villainous winter gales. A spacious dash tray is at hand for buns, sandwiches, or one's tobacco pouch, while the seats are deeply and comfortably upholstered. One needs to bear in mind that all three wheels are sprung, and the entire chassis insulated from road shock. Eggs can be carried unpacked in the dash tray, so excellent is the springing, and naturally the tool boxes do not shake their contents badly. Luggage travels in the spacious dickey without fear of damage to leather suitcases and their contents. When the dickey seat is not in use there is enough room in the rear for two large suitcases, a spare cover, petrol and oil tins, spare frame members, jack, and various other oddments. Thus one can tour comfortably with all the luggage required and with all necessary accessories. The spare wheel fits under the seat, and as for minor accommodation, one is much better off than with most cars.

### Extra Passengers in Comfort.

The dickey seat is ample for a passenger up to ten stones in weight, but I do not think it was intended for a much heavier passenger, though apparently some Scott Sociable owners do not share this opinion. I have several times carried a dead weight of 2 cwt. on the back of the car, as I have been dependent upon it all winter for transportation of various kinds.

Two normal adults, a small child, and a medium-sized dog may be accommodated in the front seat.

Another point which the erstwhile motor cyclist highly appreciates is the fact that all wheels are accessible and immediately interchangeable. It is only three minutes' work to remove the spare wheel from under the seat, and to change over when a puncture occurs. Moreover, it is a clean job. Again, one enjoys the benefit of decent wheel bearings which are not exposed to mud and water, and which have no unspeakable adjustable cones. Over and above these advantages the machine fully realises "Ixion's" ideas as regards being hoseable. Two minutes' work with a bucket of water and a wet sponge after the most sloppy ride restore its original lustre.

### Speed and Safety.

As regards maximum speed, the machine will accelerate to over 40 m.p.h. on any good high road. The efficiency for the engine size is marvellous, for it must be borne in mind that the capacity is approximately the same as that of the ordinary 4 h.p. single. If one is content to keep the speedometer on at about 30 m.p.h., the petrol consumption is normally good, but if the machine is driven continuously at 37 to 40 m.p.h. speedometer reading, the petrol consumption at once drops to the tune of about 20 m.p.g. lower than before.

With regard to safety on corners it is practically impossible under any conditions to lift the side wheel. I have tried it driving solo, but, the weight of the driver being inside the wheel track, there is no tendency for the side wheel to lift. In turning to the right it would be possible to raise the driving wheel from the ground, but it would take an insane and wicked wrench to do it, and I cannot imagine any normal driver accomplishing the feat. The springing of the Sociable is, of course, excellent. Should a spring break it can be renewed in a few minutes, and one or two spares are always carried. Most of my driving has been over abnormally rough roads, and so far I have experienced but one broken spring. Coil springs are used throughout; they are light, and take up little room.

The Scott Sociable is a machine which needs very little attention. It is not a mount for the man who loves to tinker, as one can find nothing to do to it. The present two-pole plug system requires a little attention, as the plug points are apt to burn wide, whereupon they spark inside, resulting in terrific popping back through the carburetter.

# Attention to the Magneto.

## Simple Hints on the Care of the Ignition Apparatus.

So efficient and foolproof has the modern magneto become that even when the bus is down for a thorough overhaul the magneto is usually left severely alone, with the one exception, perhaps, of trimming the contacts.

At the same time, it is advisable to "get wise" to the most common troubles which might occur sooner or later and leave the rider stranded, when a knowledge of where to look for the trouble would enable a repair to be easily effected.

Owing to the fact that the magneto is revolving continuously at a high speed, mechanical defects are more frequent than electrical ones, most of them emanating from the contact breaker.

### Care of Contacts.

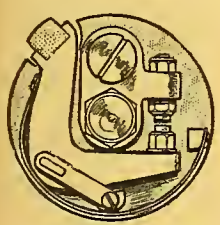
The contact breaker is located at the opposite end of the magneto to the driving spindle, and can be examined and adjusted by removing the metal or ebonite inspection cover, which is held in position by a flat spring.

The contacts should be examined for signs of overheating and pitting, and if necessary the contact surfaces filed clean with the aid of a special magneto file. This must be done carefully, as it is absolutely essential that the faces of the contacts are parallel. After the contacts have been cleaned and trued up they should be adjusted for maximum opening with the special feeler gauge supplied with the magneto.

### Causes of Misfiring.

Dirty or burnt contacts will cause the engine to miss intermittently, while contacts not opening to their full extent will have much the same effect.

Another cause of intermittent missing, especially in wet weather, is the fibre bush in the centre of the bell crank swelling with the moisture and producing a dragging effect on the contacts, sometimes causing them to stick up altogether.



The contact points should be parallel, unpitted and perfectly free from oil and dirt.

To cure this trouble the bush should be eased out very carefully with a small reamer, just sufficiently to enable the bell crank to work freely but without any side play. It will be noticed that the bell crank contact is held in position by means of a spring, and when this is lifted with the finger and moved to one side the bell crank may be removed intact.

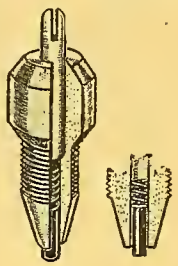
Should the retaining spring become weak in time it will allow the bell crank to lift and "chatter" at high speeds; this can be remedied by bending the spring down very slightly.

The contact breaker does not improve by being run in oil—in fact, neither oil nor grease should be allowed to get on the contact breaker or to collect on the inside of the cam-cage under any circumstances.

### Roadside Cures.

Let us now deal with a few of the troubles which may occur on the road, together with their remedies.

Should the magneto cut out examine carefully the whole of the high-tension leads and the spark plugs for signs of a short circuit; in the majority of cases the fault will be found here. If the magneto is of the type fitted with a cut-out terminal on the inspection cover, a "short" in this circuit will cause the whole trouble.



Showing how the carbon brush is held in position.

A noticeable weakness in sparking may be due to weak magnets, which, however, is unlikely if the magneto is less than eighteen months old. It will probably be traced to the contacts not opening to their correct distance, and an adjustment will usually put matters right. Old or worn high-tension leads will cause a weak spark at the plug points through electrical leakage.

Sticking contact breakers have already been dealt with, but it may be mentioned that, should a C.A.V. magneto give trouble, due to the fibre roller in the contact breaker mechanism becoming worn, this should be replaced at the first opportunity.

It is a good plan to carry a spare carbon brush obtained from the makers of the magneto. No attempt should be made to utilise a brush which has broken off short, as it is an impossibility to obtain the correct amount of pressure by stretching the spring.

If the magneto gets hot and the contact breaker and camcage show signs of burning, the trouble can almost certainly be put down to a "burnt-out" condenser. The magneto should be returned to the makers—it will work out cheaper in the end!

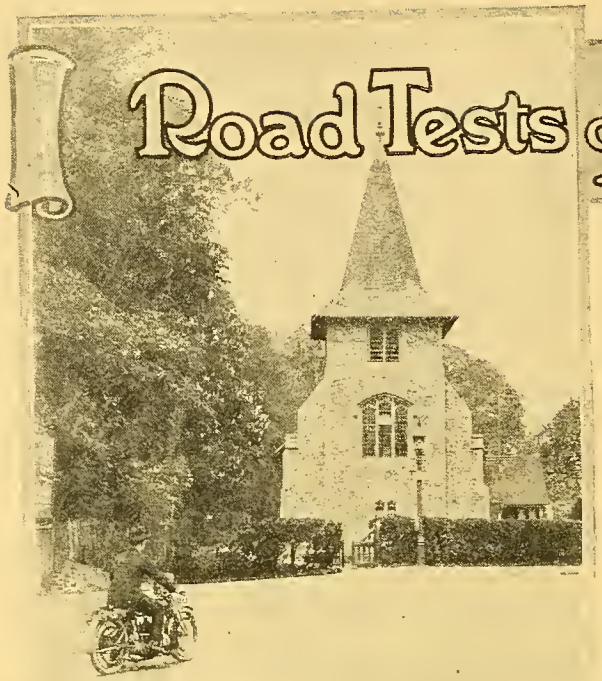
### General Remarks.

It is always a good plan, before commencing any magneto adjustments, to look over the petrol system and carburetter jets and strainer. In cold weather glance at the exhaust valve to see whether it is stuck up with oil.

With regard to the slip-ring on the armature, if this is dirty it should be wiped clean with a rag soaked in petrol, but any signs of burning should be left until the magneto is sent to the makers for overhaul.

In conclusion, the writer would like to add that, unless the magneto really does give trouble, it should be left to take care of itself.

SPARK.



# Road Tests of New Models

## The 496 c.c. V-Twin Martinsyde.

*SPECIFICATION.*

| | |
|---|---|
| *ENGINE: 70 × 80 mm. (496 c.c.) V-twin.* | *TRANSMISSION: ⅝in. chains.* |
| *VALVES: Exhaust over inlet.* | *LUBRICATION: Drip-feed.* |
| *GEAR BOX: A.J.S. Type three-speed, clutch, and kick-starter.* | *CARBURETTER: Amac.* |
| | *WEIGHT: 290 lbs.* |
| | *PRICE: £110.* |

AFTER nearly 400 fleeting miles on the 496 c.c. V-twin solo Martinsyde we are quite unable to explain the real reason of its undoubted fascination.

It may be an excellent clutch, it may be absence of vibration or transmission shock, it may be its lively and efficient engine, or again it may be only the impressive purr which answers an outward movement of the throttle lever. Perhaps—and more likely, it is all these qualities, and one or two more combined, which made a hardened devotee of the sporting single wonder if he had not been just a trifle prejudiced in his views.

### One of a Select Few.

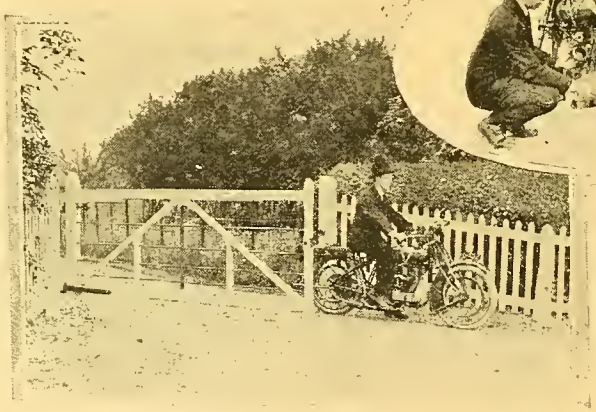
There are not half-a-dozen medium-weight V-twins on the market to-day, and one is inclined, after sampling the Martinsyde, to wonder why. A twin of any sort has certain unquestioned advantages over the single, advantages which particularly apply when the engine is of the high efficiency, hefty type. No 60 m.p.h. chain-driven "one-lunger" is pleasant to drive at lower speeds unless a very well designed transmission shock absorber forms part of its equipment.

The flat twin is usually immune from this defect, but usually, too, the difficulty of housing such a unit in a motor cycle frame makes the machine, as a whole, somewhat ungainly. With the V-twin, however, the standard "diamond" frame forms as perfect a union as bacon with eggs.

### Does Appearance Count?

Nowadays there is little to choose between the leading motor cycles and appearance therefore becomes quite an important factor. The designer of the Martinsyde has made the most of his opportunity. It is a very pretty machine indeed.

At the same time a sporting and symmetrical appearance on a solo mount does not go very far unless the riding position is right. In the machine under discussion, it is—for 90 per cent. of the people likely to buy it. From the minority there are possible two criticisms: (1) the gear control rod is inclined to get in the way of the long-legged rider; and (2) the handle-bars—perchance this is the lone voice of a faddist—are too wide and the grips too far behind the steering head for full controllability at maximum speeds.



Flexibility was a feature of the Martinsyde that was much appreciated when throttled down in free engine. (Inset) Adjusting the clutch, an operation quickly effected.

For the rest, one is comfortable at all ordinary speeds, and the control levers, including the rear brake pedal, are fully accessible without undue leg or arm movement. This somehow brings us to the brake itself, which is a pity, for we had fully intended to write a great many nice things (fully deserved) about the machine,

**Road Tests of New Models.—**

and this is another, albeit almost the last, point that we must criticise. As a brake, this member is quite efficient, indeed, as efficient as the most nervous (or hair-raising) driver could desire, but it requires more pressure by the foot to bring it into action than should be necessary, and, on our particular mount anyhow, slight eccentricities in the belt rim were felt at the pedal, very probably necessitating the weighty push complained of. Like the entirely admirable front one, of the dummy belt rim type, the rear brake, however, does its work, although, until one gets used to it, it may not seem so efficient as some.

### Freedom from Noise and Vibration.

For the rest the machine is a thoroughly delightful little solo mount. Mechanically it is very silent; indeed, the only noise of note at all is the subdued crackle, already referred to, which responds to the admission of more gas, on hills or on the level. Up to 50 m.p.h. or so there is no vibration of any sort, but thereafter to the maximum of something creditably in the neighbourhood of the elusive mile-a-minute gait there is, or was on our particular mount, a distinct trace of handle-bar tremor which, as the grips were devoid of rubbers, was inclined to give one that unpleasant sensation popularly termed "pins and needles." This, we should imagine, was very probably peculiar to the actual machine which we rode.

Very liberal openings of the drip-feed for 400 miles failed to find any sources of oil leakage—a pleasing trait which not all motor cycles of 1922 possess.

The overhead exhaust gear, exclusive to this make, is only really unusual in its absence of noise and its sturdy, simple design, the latter a quality which the power-unit, as a whole, equally possesses.

Petrol consumption figures, too, were eminently satisfactory; hard driving gave an average of 75-80 m.p.g.

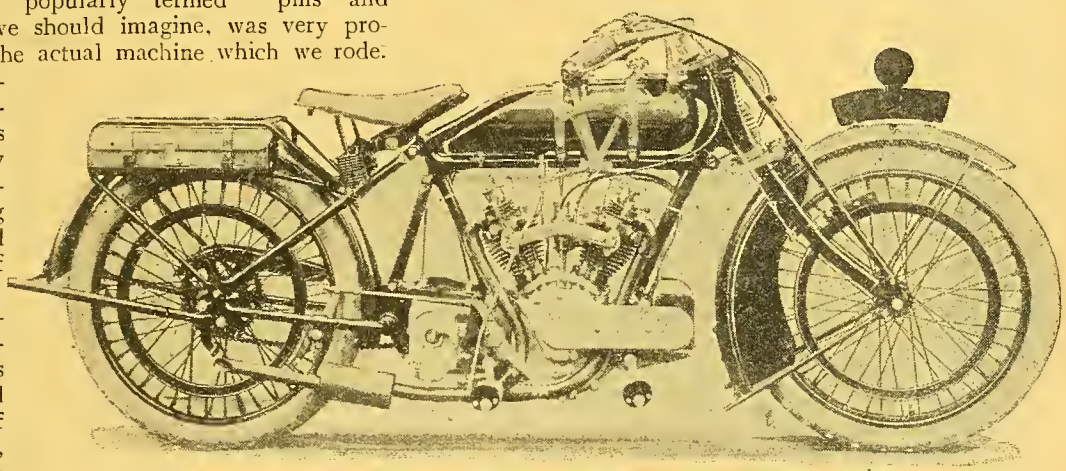
### Top Gear Hill-climbing.

It would be quite futile to say much about hill-climbing; the Martinsyde is as good a top-gear climber as any single or twin of equivalent capacity which we have sampled, and a fairly low bottom allows ample reserve for the freakiest of 1 in 3 grades; as, incidentally, recent trials have well demonstrated.

Two pairs of foot-rests are fitted. The majority of riders will find the front pair entirely superfluous except as a permanent prop-stand.

The gear box is of A.J.S. design, the most marked feature of which is the progressively smooth clutch. One soon learns that there is no need to get down to bottom to effect a start; and on the road it is seldom necessary to change down to pick up speed after traffic delays.

Summarising, we would say that the 496 c.c. Martinsyde is a very sensibly designed solo mount, combining several attractive qualities seldom found together, yet fast, silent, and reliable—we experienced no involuntary stop during our test, nor did we fear one.



A twin of pleasing appearance, particularly suitable for fast solo work, the 496 c.c. Martinsyde.

## ALTERNATIVE TAXATION SCHEMES.

THE Departmental Committee on the Taxation and Regulation of Road Vehicles is shortly to commence its enquiry, which will be confined in the first instance to an investigation of alternative methods of taxation, the question of the incidence of the tax being dealt with at a later stage. The Committee, therefore, invites suggestions, which, it should be noted, must be submitted through motoring or other organisations, and not by individuals.

Any recommended alternative to the present horse-power tax must be capable of producing a gross annual sum of approximately £10,250,000, exclusive of receipts in respect of licences for horse-drawn vehicles, fees for drivers' licences, and penalties for offences. All schemes put forward must be restricted to definite methods of taxation only, and they should show the method, or methods, in detail, so that the Committee may be in a position to judge of the probable receipts, both gross and nett, therefrom. Figures capable of substantiation must be submitted in support of any estimate of revenue.

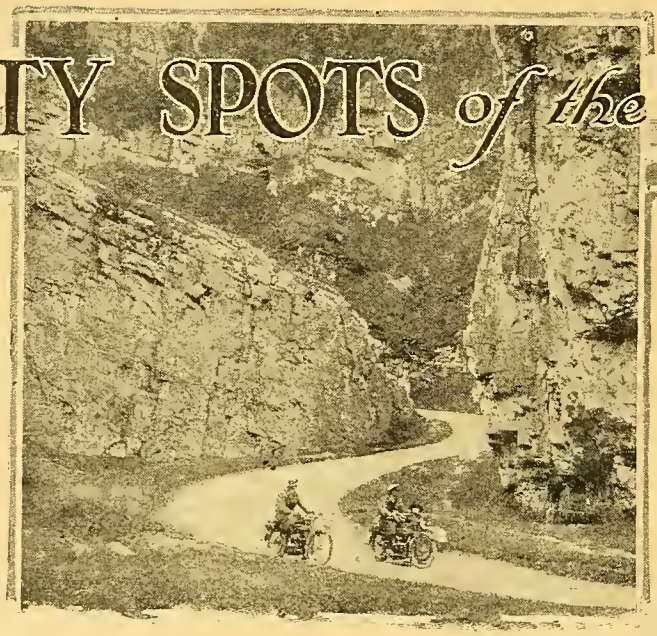
Any memorandum submitted should state the advantages which it is considered the scheme would have over the existing system, and it is pointed out that mere statements of opinion, unsupported by any concrete proposals, cannot be considered.

Suggestions — which, by the way, must be confined to mechanically-propelled vehicles—should be submitted on or before September 1st, 1922.—*The Autocar.*

# BEAUTY SPOTS of the WEST

## A Circular Tour Embracing Bristol, Cheddar, Wells, Glastonbury, and Bath.

MANY of the English counties are well noted for their beauty spots, and each has its own claim which cannot be disputed. Each tourist may have his own happy hunting ground and will tell you that this or that district is second to none for its beauty spots.



Cheddar Gorge, Somerset.

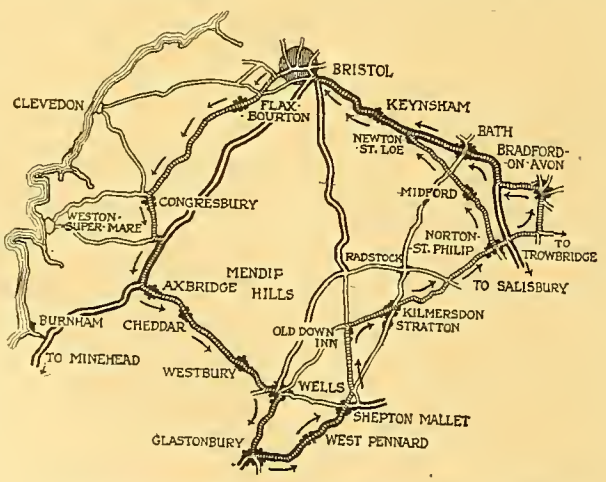
However, I think the south-western counties can well hold their own in the list. Here the motorist can enjoy hill or dale, the moors with its ever-open road, or the rough sea and rocky coast dear to the heart of the man shut up in an inland town or city all the year round. Again, he can find in abundance those beautiful old links with the past which recall the names of many men and places which have gone to make history.

There are several good centres, and in taking Bristol as one it is only a selection of many. This city itself is rich in sights, many of the lovely old churches and buildings being well worth a visit, while the famous gorge of the Avon, crossed by the well-known Clifton Suspension Bridge, has few equals in grandeur. Many day runs can be arranged from this centre. The coast can be followed to include Clevedon, Weston-super-Mare, Burnham, Minehead, etc., or tours may be taken, visiting the many old-world towns and villages of Somerset, Gloucestershire, Wilts, or Devon.

### A Run to Glastonbury.

Perhaps it will be interesting to select one such day's run out of the many possible ones, and I will take the tourist out of Bristol by the Weston-super-Mare road and continue through the pretty village of Flax Bourton to Congresbury. Here we leave the Weston road and branch to the left to the little old-fashioned town of Axbridge. We have now covered about 24 miles, and from this point we can look forward to seeing many items of interest. Leaving Axbridge, a 3 mile run brings us to the famous Cheddar Gorge, with its wonderful natural caves, through which parties are conducted at all times during the summer months, and a run up the gorge for a couple of miles will be well repaid. Cheddar also boasts some fine strawberry gardens, and here the visitor can indulge in fresh strawberries and cream to his heart's content.

Continuing our journey through Westbury, we next arrive at Wells. Here a day could easily be spent, and the lover of architecture will find much of interest in this beautiful old city. Standing at the foot of the Mendip Hills, it is truly a link with the past, possessing a fine cathedral, an ancient Bishops' Palace, surrounded by a moat, and many other features too numerous to mention. Wells occupies a prominent place in the history of England, and the inhabitants are proud of repeating many of the stirring times through which the city has passed. The interior of the cathedral is very beautiful, and contains a clock which marks the hour by two knights riding out on horseback and fighting a duel. The "Vicars Close" and the "Eye Tower" are also well worth a visit, both being near the very remarkable Cathedral.




The route taken is indicated by arrows, the darkened portions showing where the main roads were followed.

If we are going to continue our tour we must not linger too long, but strike the road leading to Glastonbury. Here a visit must be made to the ruins of the stately Abbey, with its fine Norman doorways and Abbotts' kitchen, and the "Old George" hotel in the centre of the little town would tell you many thrilling stories, could it but speak.

This will be the limit of our outward journey, and

**Beauty Spots of the West.—**

from this point we work back home *via* West Pennard to Shepton Mallet. This town, like many others in Somerset, contains a remarkable old market cross. Leaving Shepton Mallet, we strike the Bristol road for about 6 miles, until we reach the "Old Down" Inn, where we turn sharp to the right on to the Trowbridge road. This leads us to Stratton, with its fine Abbey, known as Downside Abbey, through the pretty village of Kilmersdon and on to Norton St. Philip. Here a halt should be made and a visit paid to the quaint old "George" inn. This is said to be the oldest licensed house in England, but how far this is true I am unable to say. It is a timber building, and boasts of having received the patronage of many English Kings and Queens. The landlord conducts visitors over the house, and in one of the rooms the bullet marks can still be seen where the Duke of Monmouth was fired at while looking out of an upstairs window.

**The End of the Journey.**

From Norton several ways can be taken back to Bristol. We can go *via* Bradford-on-Avon and through Bath, or we can take the road through Midford to Newton St. Loe, where we strike the main Bristol to Bath road, through Keynsham, home.

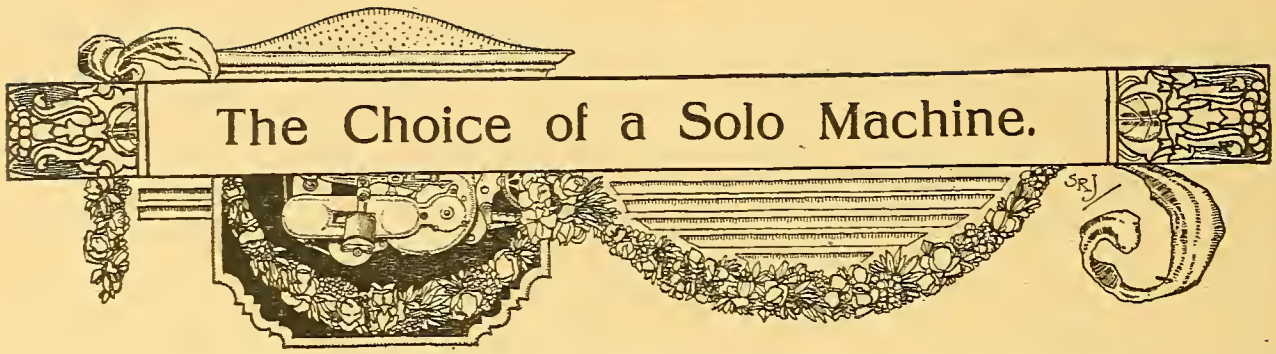
This trip, touching, as it does, a number of interesting places, is only one of many, and the views to be obtained, especially from some of the villages on the Mendips, are beautiful. Should any motor cyclists make up their minds to visit the western counties this summer, I can assure them that they will find that the scenery here compares very favourably with anything which they may consider the finest spot in England.

A fine group of old world buildings, rich in historical associations and beautiful in their picturesque setting. The Square, Wells.

## KEEP TO THE LEFT.

CONSIDERABLE discussion has been, and still is, taking place on the rule of the pavement for pedestrians, but dating from July 1st many London districts have decided on the establishment of local rules, abolishing the old "keep to the right" idea in favour of the safer and perhaps more popular one of keeping to the left. Amongst the districts conforming to this alteration are Barking, Brentford, Camberwell, Chiswick, Deptford, Hampton Wick, Holborn, Lewisham, and Poplar, but at present the new rule will not be universal by any means; the City of London has decided against it. On behalf of the change, it is urged that a large percentage of street accidents is caused by pedestrians stepping off the pavement with their backs to oncoming traffic. Recognising that uniformity of practice must be secured, the Home Office is at present in consultation with the Ministry of Transport.

# The Choice of a Solo Machine.



## Some Hints, primarily to Novices, on the Selection of a Mount.

BEFORE a comparative novice can choose his mount, he needs two distinct kinds of information. The first is technical—will a light, medium, or heavy machine suit his needs best? The second is commercial—which firms provide the best goods in that line. The former question can be answered in a few paragraphs. The second can be answered by the enquirer himself, if he will devote an evening to the job.

A lightweight machine weighs under 200 lb., is rated at from 2 to 3 h.p., and varies almost as widely in cost as any other type, according to the luxury or austerity of its specification. One of the few drawbacks to motor cycles is the physical effort of handling a dismounted machine; therefore a lightweight is a necessity for weakly people, and is desirable for any owner whose work entails short runs interspersed with innumerable stops. The present writer, an athlete and an old hand, always gives a lightweight the preference for short-distance, multi-stop riding.

### Two Warnings.

There are, however, two warnings to be added to the above. The first is that a lightweight is seldom as comfortable as a medium or heavyweight for long-distance work. If an occasional tour or lengthy cross-country journey figures in the programme, most riders would vote for not less than 3½ h.p. A light machine usually dithers more than a heavy one, and a small engine buzzes rather tiresomely when it is driven fast. The second feature is that, if you have 3½ h.p. at your disposal, you can afford to let the engine sink below par, and still have enough power to get along with; but if you have only 2 h.p. at the best, a very small derangement will cause a severe hill to become alarming. It is desirable that the owner of a lightweight should possess mechanical instincts, and look forward to taking an intelligent interest in his machine. Its mechanism is really absurdly simple, and a very few months will put him *au fait* with its possibilities, whether in the way of curing derangements or of tuning it up to run better than when it was first delivered. It is fair to add that particular care should be exercised in choosing a lightweight. Engines, gear boxes, and other components can be purchased very cheaply. Next to no capital enables any tiny garage to assemble one or two machines under some high sounding name. First-class lightweights exist, but they are accompanied by crowds of duds. Wherefore the buyer should study the advice in the second section of these notes.

The medium-powered roadster of 3½-4 h.p. is easily the most popular machine on the road, as it is powerful enough to pull a sidecar over any roads at a modest pace; it will do its solo work when it is in very poor order, as it disposes of a large reserve of power. It is not too heavy for the ordinary man to manage in runs which include numerous stops. It rides very comfortably over a long journey. It is also the most highly developed 'bus in the world, having undergone intensive cultivation from the cleverest motor cycle industry in the world for some fourteen years. Numerous first-class examples are obtainable, and depreciation on resale is comparatively low. On first acquaintance it feels rather heavy, for nearly every type weighs well over 2 cwt. But when the knack of keeping a balance in wheeling the machine is learnt, the rider ceases to be conscious that his mount is heavy. It will go absolutely anywhere without a sign of faltering, and in expense it is a sensible compromise between the two extremes. One or two of the very best 2¾-3 h.p. machines are beginning to trespass on its preserves, being a shade lighter and quite as reliable.

### Value of the Big Trials.

If the above analysis has decided any bewildered novice as to the type of machine which is likely to suit him best, the next question is that of "Which make?" There are two unmistakable tests which enable a sheer novice to read off the public form of the rival makes. The first is to procure the reports of the Scottish and English Six Days Trials for the past year or two, and to note which makes have earned plenty of gold medals, noting especially whether all—or nearly all—the entries of that make finished. The second is to consult the advertisements of second-hand machines in *The Motor Cycle*, jot down the prices asked for 1921 models of the machines which he is considering, and note which commands the highest percentage of its original cost.

There are a few items of specification which deserve brief comment. If a machine is to be used regularly after dark, electric lighting is almost a *sine qua non*. It is nowadays quite reliable, much cleaner and less troublesome than gas, but far more expensive. Some form of dynamo is desirable, as is proved by the fact that all modern cars have dynamos. The use of accumulators is not advised except where the owner has access to a really good charging plant.

The belt drive is obsolescent where medium and heavy machines are concerned, chiefly, it may be

**The Choice of a Solo Machine.—**

added, because it is hardly equal to pulling a sidecar in wet weather. On lightweight machines or purely solo machines, however, the so-called "combined" drive (chain from engine to gear box, belt from gear box to wheel) is quite sound. Direct belt drive should be eschewed except on sports models. The all-chain drive is now constructed so admirably that it is practically as smooth as any belt, and gives much less trouble.

### The Question of Comfort.

Now that roads are almost uniformly bad, the question of comfort deserves special study, but it has baffled too many of our lightweight designers. On touring machines comfort is wooed in three principal methods. Some makers adopt a fully-sprung frame. Others are content to fit 3in. tyres, which can be run at low pressures and smooth out a rough road quite incredibly. Others again fit very large and expensive saddles. The large tyres are to be warmly recommended from every point of view. They are extremely economical in wear, and very seldom puncture, besides conferring a large immunity from road shocks. A spring frame in conjunction with small tyres only attains two out of these three *desiderata*. A super-saddle can be added to large tyres or to a spring frame.

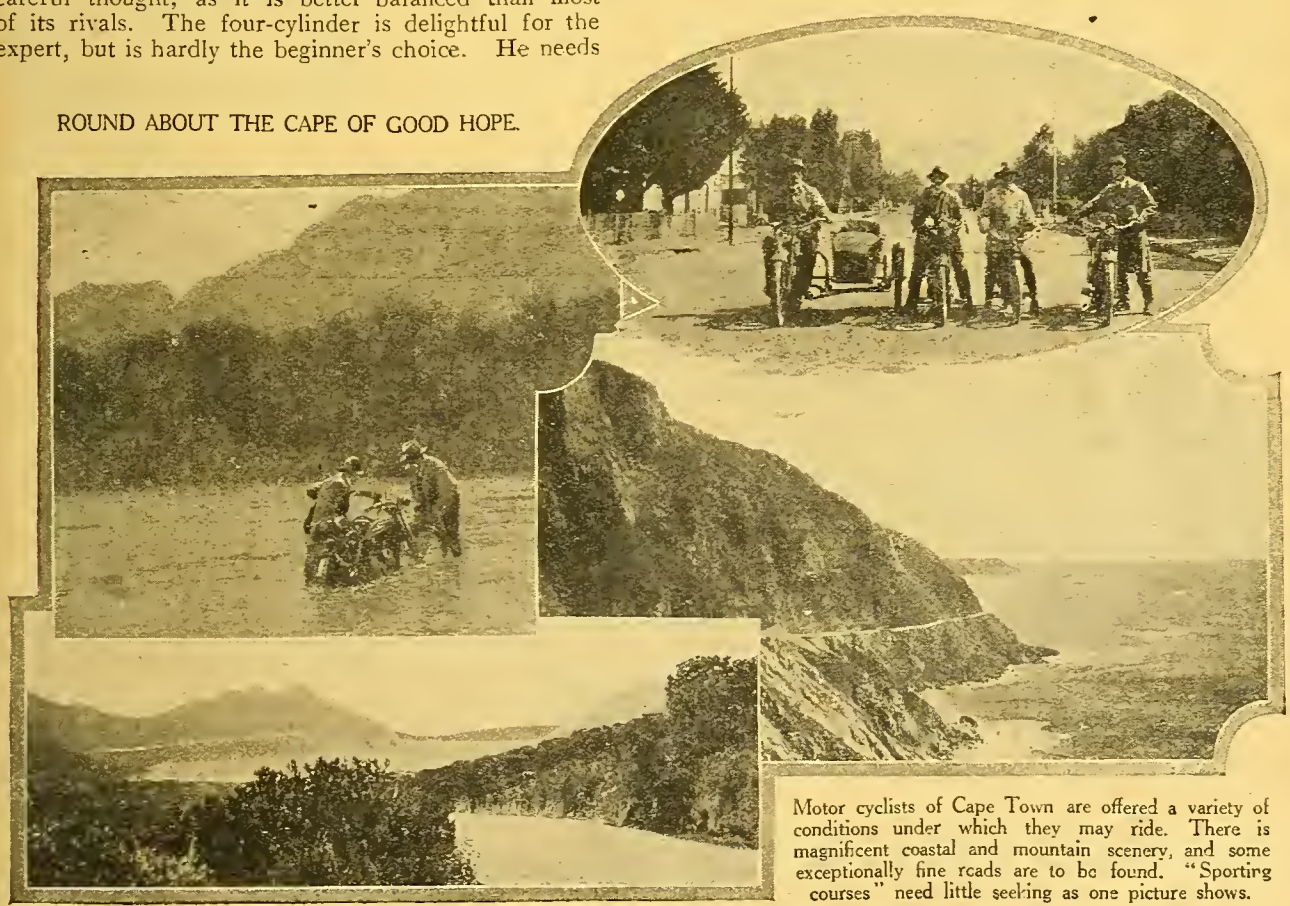
Multi-cylinder engines are not specially desirable for novices, and a single-cylinder is probably the best for the beginner if an engine is being selected with a view to ten years' work. The flat twin deserves careful thought, as it is better balanced than most of its rivals. The four-cylinder is delightful for the expert, but is hardly the beginner's choice. He needs something as simple and free from complication as he can possibly buy.

As most of the local agents are a little anxious about finding customers for all the machines for which they have contracted, the present is in one respect an excellent time to buy. The agent will take unlimited trouble to secure a sale, and there will be no difficulty about getting punctual delivery.

### How and Where to Buy.

When the list of possibles has been whittled down to two or three probables, an actual road trial may be obtained on application to the local agent. I wish to enter two pleas for the local agent, who is often a misused individual. In the first place, especially in these hard times, it is cruel to put the local man to a lot of trouble and expense, and then to purchase elsewhere. He should not be bothered unless there is a real intention of buying from him, provided the trial is satisfactory. It is, of course, up to him to prove that his machines are better than those of a rival local agency. Further, it is foolish for a beginner to buy from some distant source. Sooner or later he will either be puzzled by some elementary ignorance of his own, or encounter some petty trouble with his new purchase. If he has placed his order locally, the local agent will see him through, possibly without charge. If he has bought his machine 100 miles away, he will be a forlorn little figure, crying in the wilderness, with nobody to befriend him except by a "postal put-off." B.H.D.

ROUND ABOUT THE CAPE OF GOOD HOPE.

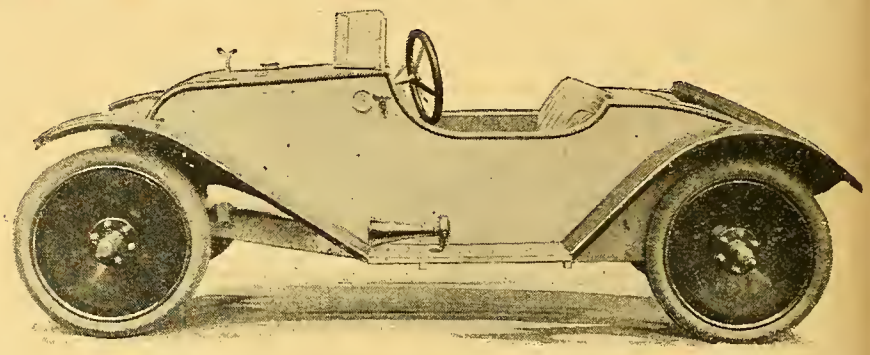


Motor cyclists of Cape Town are offered a variety of conditions under which they may ride. There is magnificent coastal and mountain scenery, and some exceptionally fine roads are to be found. "Sporting courses" need little seeking as one picture shows.

# A FOUR-WHEELER ON MOTOR CYCLE LINES.

## Air-cooled Twin Engine, Proprietary Gear Box and Chain Drive on the Bow-V Cycle Car.

CONSTRUCTED on motor cycle lines, though giving the comfort and protection of a small car, the Bow-V car is intended to take the place of the ultra-expensive sidecar outfit. No actual chassis is to be found in its construction since the bodywork serves as a frame, but at the rear there is a tubular framework on which is mounted the 1,090 c.c. Precision V twin (85×96 mm.) engine, fan-cooled, and provided with a Degory carburetter. In the centre of this tubular framework are two longitudinal members which carry engine and gear box, the latter being adjustable for the purpose of taking up any slack in the engine chain. From the engine power is transmitted through a chain to the clutch on the Jardine four-speed gear box, while the final drive is from the gear box by chain to the back axle, which latter runs in four ball bearings, two at each extremity and two in the centre. For adjustment of the second chain provision is made for sliding the axle bearing housings along the frame.



A neat little cycle car embodying motor cycle practice in its construction, the Bow-V.

### Hand Starting from Driver's Seat.

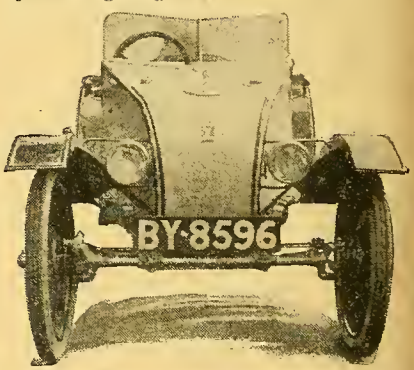
Situated at the right-hand side of the chassis is a lever on which an exhaust lifter is mounted. This is connected by means of a rod to the "kick-starter" mechanism in the gear box. Cable and bobbin steering is provided, and this is well caried out, there being shock absorbing springs at the ends of the cables where they are connected to the steering arms.

So far as the control is concerned, change speed and side brake levers are centrally situated in the body, which latter, together with the wings, is constructed of three-ply wood. Brake, clutch, and accelerator are disposed car fashion, while the design of the clutch and brake pedals is worthy of mention. A roller is interposed between the pedal and the lever to which the actuating rod is attached, and the position of this roller can be so varied that the leverage may be adjusted to suit requirements. Two brakes of the external contracting pattern are fitted.

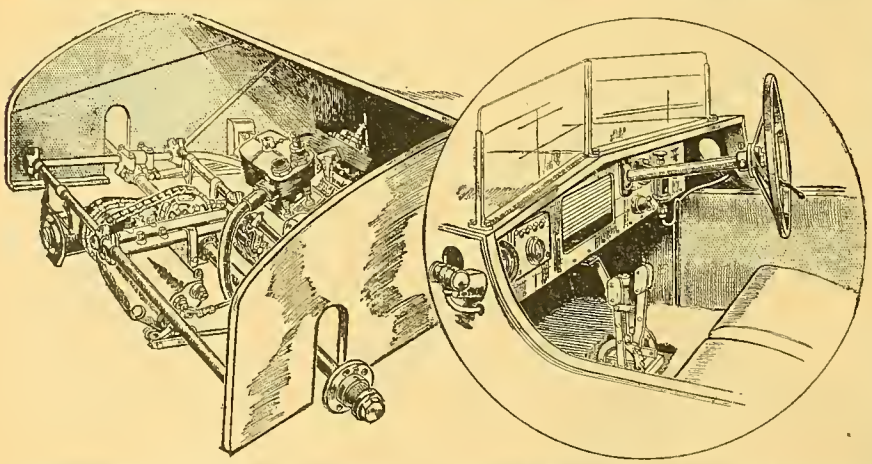
Mounted on the instrument board are the lighting switches, speedometer, and usual fittings, and there is a locker with a "roll-top" cover for maps and other oddments. Illumination of the instruments is provided for by windows in the scuttle adjacent to the side lamps.

### Passengers Insulated from Power-Unit.

Cantilever springs are employed for the suspension, these being anchored with rubber buffers, so as further to lessen the road shocks. It will be seen, however, that the power and transmission unit is carried as unsprung weight. The little vehicle is fitted with five Lynton 650×65 mm. interchangeable disc wheels. The wheelbase is 7ft., the track 3ft. 5in., and the overall width 4ft. 3in. It is manufactured by the Plycar Co., Stoney Lane, Church Road, Upper Norwood, London, S.E.19, and is designed by Mr. C. F. Beauvais, who has studied this type of vehicle for a number of years. Its price complete is £180. £200 with dynamo lighting set.




No attempt has been made slavishly to imitate car practice by fitting a dummy radiator.



Arrangement of power unit and transmission, showing location of the Jardine four speed gear box.



Change speed and brake levers are centrally situated, and a well-equipped instrument board fitted.

## THIS YEAR'S INTERNATIONAL SIX DAYS TRIAL.

Now that the T.T. is over, a trial comes into prominence which is well worthy of the consideration of British manufacturers. This is the International Six Days Trial, organised by the Swiss Motor Cycle Union. Each country belonging to the Federation of Motor Cycle Clubs is invited to send a team to compete for the handsome trophy presented by the British Motor Cycle Manufacturers' Union. The trophy was won by the Swiss club last year, consequently this year's trial will again be held in their delightful country.

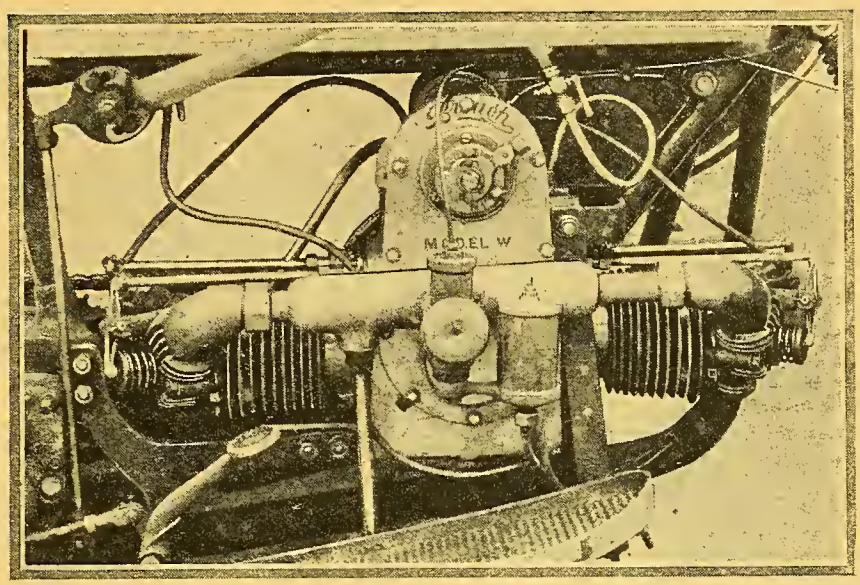
The organisation for this year's trial is now complete, and route cards and road maps are being despatched to all likely entrants, while the final programme will be issued during the present month. A distinct improvement lies in the fact that there will be one day's rest at Lugano, on August 6th, when competitors will be able to watch an interesting hill climb on Monte-Bré. A special scheme has been devised on the coupon system by which competitors and officials will be relieved of all anxiety as to meals and lodgings, and special terms are being arranged.

# A REVISED SPORTING FLAT TWIN.

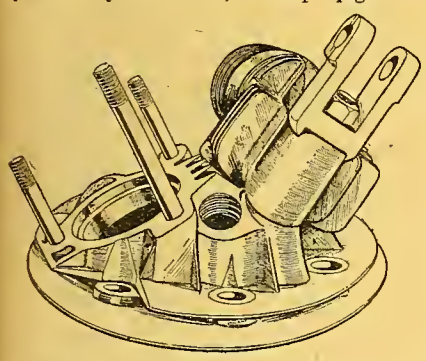
## Detail Modifications to the 497 c.c. Sports Brough Engine and Gear box Unit Assembly.

FOR many years past the productions of W. E. Brough, Ltd., of Basford, Nottingham, have been confined almost entirely to flat twin engines, the 692 c.c. sidecar machine and 497 c.c. overhead valve solo machine being already well known. It is not, therefore, surprising to find that the latest sports model retains the same general outlines in that it has opposed cylinders with overhead valve gear. Bore and stroke remain the same (70 x 64.5), but very considerable modifications have been made in the cylinder head and various other vital points.

A special head is bolted down to each cylinder by six studs, a deep spigot is employed having ground surfaces to ensure close contact. The inclined valves seat directly in the head, but the valve ports are detachable and held on by three studs in each case; one of these studs is both longer and larger in diameter than the other two and serves to hold the forked rocker bracket in position. The sparking plug lies between the rocker brackets and is inclined at a considerable angle. Cooling ribs are embodied with these parts wherever extra surface has been found to be desirable. Tubular push rods are employed, and these are operated from the camshaft through roller-ended tappets, an adjustment being supplied at the lower end of the rods. There are four cams on the solid camshaft, which is mounted on roller bearings. Supported in combined plain and roller bearings, the crankshaft has plain big ends and is connected to the light aluminium pistons by H section connecting rods, the compression ratio being approximately 5 to 1. On the end of the magneto driving spindle a Best mechanical pump is fitted, and the ribbed engine base is extended backwards to carry a three-speed Sturmey-Archer gear box, so that a unit is formed by the main power and transmission plants.




The experimental 497 c.c. Sports Brough engine is at present fitted in a standard frame; the salient features are very clearly visible.



One valve port has been removed to show more clearly the construction of the new Brough cylinder head.

Roller ended tappets are operated direct by the cams.

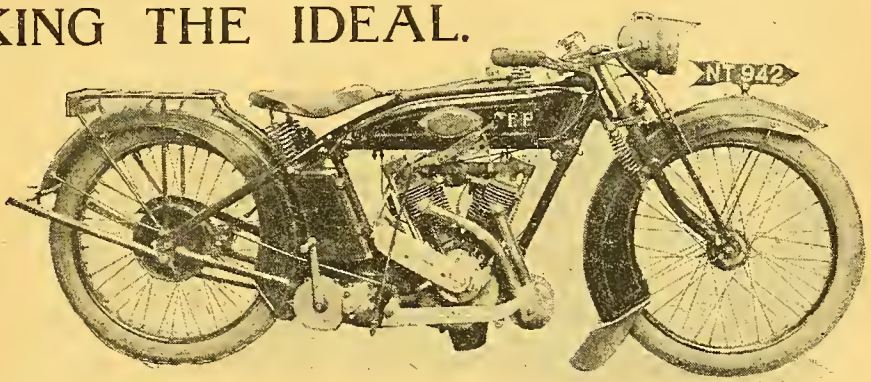
# SEEKING THE IDEAL.

## An Owner-built Big Twin Solo Machine.

FROM time to time our mail bag contains descriptions of home-built machines which illustrate the ideals of the constructor. Often these are ingenious and sometimes they are practical, but it is seldom that we come across a machine so thoroughly well turned out in every detail as that which has been constructed by T. F. Parkes, of The Croft, Madeley, Salop, for his own use.

A 993 c.c. M.A.G. engine and Burman three-speed gear box form the main essentials round which the machine has been designed.

Strictly speaking, the frame is conventional, but the slightly sloping top tube combined with a long easy downward curve produces very pleasant lines and provides a low saddle position. The saddle, by the way, is a Lycett hinged from the top tube at the nose and supported at the back by very large coil springs mounted on a combined mudguard support and fork bridge. Both the M-L magneto and the carburetter are controlled by twist grips, and a speed indicator on the top tube is driven from the rear wheel, the necessary gears lying inside the driven sprocket.




Built to a rider's ideal. A 993 c.c. M.A.G. engined machine assembled by one of our readers.

# THE CLUB TEAM CHAMPIONSHIP.

## Next Saturday's M.C.C. Inter-club Team Trial for "The Motor Cycle" Challenge Cup. List of Teams with Order of Starting.

AS on previous occasions in recent years the Rose and Crown Hotel, Tring, is the headquarters of the M.C.C. for the Inter-Club Team Trial for *The Motor Cycle* Challenge Cup. Punctually at 1 p.m. the first team will be started at a point near Tring on the 33 mile circuit which each team will have to cover three times in succession.

Those who wish to witness the event had better proceed to Kop Hill, taking care not to impede the course with their machines.

**Team No. 1.—Sheffield and Hallamshire M.C. and L.C.C.**

| H. | M. | S. | | | |
|---|---|---|---|---|---|
| 1 | 0 | 0 | ... | 11 | C. E. Turner (6 Martinsyde). |
| 1 | 0 | 30 | ... | 12 | S. Sawer (4 Norton sc.). |
| 1 | 1 | 0 | ... | 13 | E. Searle (2¾ Sheffield-Henderson). |
| 1 | 1 | 30 | ... | 14 | J. A. Stacey (8 Matchless sc.). |
| 1 | 2 | 0 | ... | 15 | E. Wheatley (4 Triumph). |
| 1 | 2 | 30 | ... | 16 | F. James (10 Morgan three-wheeled cycle car). |

*Reserves:* C. Ward (4 Triumph) solo, J. M. Younie (6 Martinsyde sc.).

**Team No. 2.—Coventry and Warwickshire M.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 3 | 0 | ... | 21 | W. Brandish (4½ Humber). |
| 1 | 3 | 30 | ... | 22 | S. Wright (4½ Humber sc.). |
| 1 | 4 | 0 | ... | 23 | L. Crisp (4½ Humber). |
| 1 | 4 | 30 | ... | 24 | H. Finch (4½ Triumph sc.). |
| 1 | 5 | 0 | ... | 25 | R. Grindlay (4½ Humber). |
| 1 | 5 | 30 | ... | 26 | F. G. Edmond (4 Triumph sc.). |

*Reserves:* E. A. Barnett (2¾ Francis-Barnett), D. Atkin (2¾ Francis-Barnett), A. P. McGowran (4 Triumph sc.), F. T. Sibley (3½ Rudge sc.).

**Team No. 3.—Motor Cycling Club.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 6 | 0 | ... | 31 | R. B. Clark (3½ Zenith). |
| 1 | 6 | 30 | ... | 32 | G. W. Nott (7 Matchless sc.). |
| 1 | 7 | 0 | ... | 33 | P. W. Moffat (3½ Douglas). |
| 1 | 7 | 30 | ... | 34 | F. J. Watson (7 Ariel sc.). |
| 1 | 8 | 0 | ... | 35 | W. R. Preston (3¾ Scott). |
| 1 | 8 | 30 | ... | 36 | E. A. Bridgman (7 Indian sc.). |

*Reserves:* L. A. Baddeley (2¾ Douglas), P. Cunningham (4½ P. and M. sc.).

**Team No. 4.—Leicester and District Motor Club.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 9 | 0 | ... | 41 | J. Simpson (3½ Scott-Squirrel). |
| 1 | 9 | 30 | ... | 42 | W. Chapman (7 A.J.S. sc.). |
| 1 | 10 | 0 | ... | 43 | A. Bowerman (2¼ Velocette). |
| 1 | 10 | 30 | ... | 44 | F. Hatton (6 Douglas sc.). |
| 1 | 11 | 0 | ... | 45 | J. Dearden Smithie (2¼ Enfield). |
| 1 | 11 | 30 | ... | 46 | M. S. Collis (10 Morgan three-wheeled cycle car). |

*Reserves:* K. Topping (8 Zenith sc.), J. Willcox (3½ Douglas).

**Team No. 5.—Nottingham and District M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 12 | 0 | ... | 51 | H. Karslake (8 Brough Superior). |
| 1 | 12 | 30 | ... | 52 | I. Cohen (7 Campion sc.). |
| 1 | 13 | 0 | ... | 53 | F. W. Stevenson (5 Brough). |
| 1 | 13 | 30 | ... | 54 | J. R. Sylvester (5-6 Raleigh sc.). |
| 1 | 14 | 0 | ... | 55 | G. Brough (5 Brough). |
| 1 | 14 | 30 | ... | 56 | S. S. Debenham (7 Campion sc.). |

*Reserves:* C. F. W. Nott (5-6 Raleigh). R. A. G. Barnes (3½ Norton sc.).

**Team No. 6.—Worcester and District M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 15 | 0 | ... | 61 | J. A. Newman (3½ Douglas). |
| 1 | 15 | 30 | ... | 62 | B. Bladder (8 New Imperial sc.). |
| 1 | 16 | 0 | ... | 63 | B. Kershaw (2¾ New Imperial). |
| 1 | 16 | 30 | ... | 64 | E. W. Choldcroft (7 A.J.S. sc.). |
| 1 | 17 | 0 | ... | 65 | J. A. Chadwick (——). |
| 1 | 17 | 30 | ... | 66 | E. Williams (7 A.J.S. sc.). |

*Reserves:* E. Main (3½ Zenith-Bradshaw), F. Townley (3½ Norton sc.).

**Team No. 7.—Birmingham University M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 18 | 0 | ... | 71 | G. Butcher (3½ Sunbeam). |
| 1 | 18 | 30 | ... | 72 | F. Halham (—— sc.). |
| 1 | 19 | 0 | ... | 73 | J. H. Park (2¾ A.J.S.). |
| 1 | 19 | 30 | ... | 74 | J. Hector (7 A.J.S. sc.). |
| 1 | 20 | 0 | ... | 75 | G. Packman (2¼ P. and P.). |
| 1 | 20 | 30 | ... | 76 | H. H. Watling (—— sc.). |

*Reserves:* J. H. Crowe (4 Norton), G. H. Jolly (4 Norton sc.).

**Team No. 8.—Bucks County Motor Club.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 21 | 0 | ... | 81 | C. F. Michell (7 A.J.S.). |
| 1 | 21 | 30 | ... | 82 | D. Youers (7 A.J.S.). |
| 1 | 22 | 0 | ... | 83 | R. Pugh (4 Triumph). |
| 1 | 22 | 30 | ... | 84 | C. B. Smith (7 Indian sc.). |
| 1 | 23 | 0 | ... | 85 | R. Newitt (3½ Douglas). |
| 1 | 23 | 30 | ... | 86 | G. Slade (3½ Norton sc.). |

*Reserves:* A. Bass (5-6 Raleigh), T. Harris (3½ Norton), J. Gibson (4 Triumph), and E. Burnett (4 Triumph).

**Team No. 9.—North West London Motor Club.**

| H. | M. | S. | | | |
|---|---|---|---|---|---|
| 1 | 24 | 0 | ... | 91 | O. B. Smyth (3½ Sunbeam). |
| 1 | 24 | 30 | ... | 92 | J. A. Peacock (8 Matchless sc.). |
| 1 | 25 | 0 | ... | 93 | F. V. Edwards (4 Harley-Davidson). |
| 1 | 25 | 30 | ... | 94 | L. W. Goddard (8 Matchless sc.). |
| 1 | 26 | 0 | ... | 95 | E. W. T. Howard (3½ Sunbeam). |
| 1 | 26 | 30 | ... | 96 | A. C. Rowe (10 Morgan three-wheeled cycle car). |

*Reserves:* J. L. Johnson (4 Triumph), H. V. Davidson.

**Team No. 10.—Norfolk M.C. and L.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 27 | 0 | ... | 101 | E. H. Gowling (3½ Sunbeam). |
| 1 | 27 | 30 | ... | 102 | H. D. Wheeler (8 New Imperial sc.). |
| 1 | 28 | 0 | ... | 103 | D. Gowing (3½ Norton). |
| 1 | 28 | 30 | ... | 104 | A. S. Bagshaw (7 A.J.S. sc.). |
| 1 | 29 | 0 | ... | 105 | R. A. Daniel (3½ Norton). |
| 1 | 29 | 30 | ... | 106 | F. Ebbage (4 Triumph sc.). |

*Reserves:* T. B. Hensman (3½ Norton), P. Sherwood (3½ Triumph).

**Team No. 11.—Woolwich, Plumstead and District Motor Club.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 30 | 0 | ... | 111 | B. J. Sims (3½ Triumph). |
| 1 | 30 | 30 | ... | 112 | F. MacDonald (8 Matchless sc.). |
| 1 | 31 | 0 | ... | 113 | E. Atkins (3½ Ariel). |
| 1 | 31 | 30 | ... | 114 | T. J. Ross (8 Matchless sc.). |
| 1 | 32 | 0 | ... | 115 | C. Clease (3½ Triumph). |
| 1 | 32 | 30 | ... | 116 | F. J. Ellis (8 Matchless sc.). |

*Reserves:* J. A. Hoult. G. W. Hardee, J. Peterson, F. Motley, and C. Steytler.

**Team No. 12.—Luton and South Beds. A.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 33 | 0 | ... | 121 | C. Dickinson (3½ Ariel). |
| 1 | 33 | 30 | ... | 122 | C. G. H. Dunham (4 Norton sc.). |
| 1 | 34 | 0 | ... | 123 | F. H. Burley (3½ Sunbeam). |
| 1 | 34 | 30 | ... | 124 | L. Kell (4-5 New Hudson sc.). |
| 1 | 35 | 0 | ... | 125 | C. Bourlet (3½ Ariel). |
| 1 | 35 | 30 | ... | 126 | E. J. O. Sansome (8 Enfield sc.). |

*Reserves:* S. Grigg, J. Simpson.

**Team No. 13.—Herts M.C. and L.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 36 | 0 | ... | 131 | G. G. Smith (3½ Sunbeam). |
| 1 | 36 | 30 | ... | 132 | W. H. Harman (8 Matchless sc.). |
| 1 | 37 | 0 | ... | 133 | P. H. Jones (3½ Sunbeam). |
| 1 | 37 | 30 | ... | 134 | S. Hall (10 Morgan three-wheeled cycle car). |
| 1 | 38 | 0 | ... | 135 | C. F. Plowman (3½ Sunbeam). |
| 1 | 38 | 30 | ... | 136 | A. H. Wright (8 Matchless sc.). |

*Reserves:* T. D. Chapman, P. H. Jones, L. E. Chirney.

**Team No. 14.—Ipswich and District M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 39 | 0 | ... | 141 | E. C. Rose (3½ N.U.T.). |
| 1 | 39 | 30 | ... | 142 | H. O. Goldsmith (5-6 Brough sc.). |
| 1 | 40 | 0 | ... | 143 | V. Ollson (3½ Sunbeam). |
| 1 | 40 | 30 | ... | 144 | E. C. Lunniss (8 Sunbeam sc.). |
| 1 | 41 | 0 | ... | 145 | L. C. Solomon (3½ Sunbeam). |
| 1 | 41 | 30 | ... | 146 | J. W. Pretty (8-10 Morgan three-wheeled cycle car). |

*Reserves:* D. Potter (4½ Beardmore-Precision sc.), C. O. Rose (Barr and Stroud), G. Turner (2¾ A.J.S.).

**Team No. 15.—Ilkley M.C. and L.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 42 | 0 | ... | 151 | C. P. Wood (3¾ Scott). |
| 1 | 42 | 30 | ... | 152 | H. Langman (3¾ Scott sc.). |
| 1 | 43 | 0 | ... | 153 | J. H. Holmes (3¾ Scott). |
| 1 | 43 | 30 | ... | 154 | W. F. Scott (3¾ Scott sc.). |
| 1 | 44 | 0 | ... | 155 | W. Moore (3¾ Scott). |
| 1 | 44 | 30 | ... | 156 | J. S. Duxbury (3¾ Scott sc.). |

*Reserve:* H. Pearson (3¾ Scott).

**Team No. 16.—Wallington and District M.C. and L.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 45 | 0 | ... | 161 | F. C. Townsend (3½ Zenith-Bradshaw). |
| 1 | 45 | 30 | ... | 162 | E. Vallis (8 Matchless sc.). |
| 1 | 46 | 0 | ... | 163 | C. M. Bowen (3 A.B.C.). |
| 1 | 46 | 30 | ... | 164 | E. C. Gordon (8 Excelsior sc.). |
| 1 | 47 | 0 | ... | 165 | G. Gilbertson (5 Rover). |
| 1 | 47 | 30 | ... | 166 | G. Baxter (7-9 Harley-Davidson sc.). |

*Reserves:* A. B. Lavy (3½ Sunbeam), J. C. Sanford (5 Rover sc.).

**Team No. 17.—Bradford M.C. and L.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 48 | 0 | ... | 171 | A. R. Naylor (3½ Sunbeam). |
| 1 | 48 | 30 | ... | 172 | W. R. Haggas (3½ Triumph sc.). |
| 1 | 49 | 0 | ... | 173 | H. S. Moorhouse (3½ Triumph-Ricardo). |
| 1 | 49 | 30 | ... | 174 | C. M. Townsend (4½ P. and M. sc.). |
| 1 | 50 | 0 | ... | 175 | W. Marriott (2¾ Coventry-Eagle). |
| 1 | 50 | 30 | ... | 176 | S. M. Haigh (4½ P. and M. sc.). |

*Reserve:* J. C. Neilson (7-9 Harley-Davidson sc.).

**Team No. 18.—City and Guilds M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 51 | 0 | ... | 181 | J. H. Wells (3 A.B.C.). |
| 1 | 51 | 30 | ... | 182 | A. B. Bourne (8 Brough Superior sc.). |
| 1 | 52 | 0 | ... | 183 | D. Carden (8 Zenith). |
| 1 | 52 | 30 | ... | 184 | B. Lyons (8 Matchless sc.). |
| 1 | 53 | 0 | ... | 185 | D. A. Griffith (3½ Norton). |
| 1 | 53 | 30 | ... | 186 | A. G. Mausell (8 Matchless sc.). |

*Reserves:* J. H. Brass (4 Triumph), R. A. Bull (8 Matchless sc.), D. S. D. Fraser (7-9 Harley-Davidson sc.).

**Team No. 19.—Surbiton Motor Club.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 54 | 0 | ... | 191 | R. Charlesworth (3½ Zenith-Bradshaw). |
| 1 | 54 | 30 | ... | 192 | K. Don (8 Zenith sc.). |
| 1 | 55 | 0 | ... | 193 | R. Green (3½ Norton). |
| 1 | 55 | 30 | ... | 194 | D. H. Davidson (7-9 Indian sc.). |
| 1 | 56 | 0 | ... | 195 | R. C. Staunton (4 Triumph). |
| 1 | 56 | 30 | ... | 196 | H. R. Harveyson (4 o.h.v. Triumph sc.). |

*Reserves:* E. J. Pittock (3¾ Scott sc.), W. J. Kelly (3½ Norton).

**Team No. 20.—Public Schools M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 57 | 0 | ... | 201 | H. B. Browning (2¾ A.J.S.). |
| 1 | 57 | 30 | ... | 202 | H. W. Glendinning (8 Zenith sc.). |
| 1 | 58 | 0 | ... | 203 | C. H. Mocatta (2¾ A.J.S.). |
| 1 | 58 | 30 | ... | 204 | K. P. Tweedie (8 Harley-Davidson sc.). |
| 1 | 59 | 0 | ... | 205 | C. C. Lahin (6 Martinsyde). |
| 1 | 59 | 30 | ... | 206 | H. R. Wright (7 Indian sc.). |

*Reserves:*

**Team No. 21.—Lewes and District M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 2 | 0 | 0 | ... | 211 | W. H. Law (2¾ Verus). |
| 2 | 0 | 30 | ... | 212 | S. Dunford (7-9 Harley-Davidson sc.). |
| 2 | 1 | 0 | ... | 213 | E. Chandler (3½ Norton). |
| 2 | 1 | 30 | ... | 214 | S. H. Colbourne (7-9 Harley-Davidson sc.). |
| 2 | 2 | 0 | ... | 215 | J. H. Duart (3½ Sunbeam). |
| 2 | 2 | 30 | ... | 216 | G. E. Stacey (3½ Norton sc.). |

*Reserves:*

**Team No. 22.—Oxford Motor Club.**

| | | | | | |
|---|---|---|---|---|---|
| 2 | 3 | 0 | ... | 221 | E. Colegrove (4 Triumph). |
| 2 | 3 | 30 | ... | 222 | N. V. Young (4½ Sunbeam sc.). |
| 2 | 4 | 0 | ... | 223 | M. Pearson (4 Triumph). |
| 2 | 4 | 30 | ... | 224 | L. Avery (7-9 Harley-Davidson sc.). |
| 2 | 6 | 0 | ... | 225 | J. A. C. Kempster (4 Triumph). |
| 2 | 5 | 30 | ... | 226 | J. G. Avery (7-9 Harley-Davidson sc.). |

*Reserves:* L. A. Welch (2½ O.K.-Junior), S. S. Hancox (3½ Zenith-Bradshaw sc.).

**Team No. 23.—North London M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 2 | 6 | 0 | ... | 231 | B. Staley (4 Triumph). |
| 2 | 6 | 30 | ... | 232 | R. W. Greaves (8 Brough Superior sc.). |
| 2 | 7 | 0 | ... | 233 | L. P. Walter (4 Triumph). |
| 2 | 7 | 30 | ... | 234 | L. V. Freeman (8 Sunbeam sc.). |
| 2 | 8 | 0 | ... | 235 | R. L. Richardson (3½ Alecto). |
| 2 | 8 | 30 | ... | 236 | H. V. Bateman (10 Henderson sc.). |

*Reserves:* R. R. T. Bowen (4 Triumph), W. E. Line (10 New Hudson cycle car).

**Team No. 24.—Ealing and District M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 2 | 9 | 0 | ... | 241 | C. F. Temple (4 Harley-Davidson). |
| 2 | 9 | 30 | ... | 242 | F. H. Douglasa (6 Bradbury sc.). |
| 2 | 10 | 0 | ... | 243 | W. G. Boyer (3½ Norton). |
| 2 | 10 | 30 | ... | 244 | J. A. Masters (7-9 Harley-Davidson sc.). |
| 2 | 11 | 0 | ... | 245 | S. E. Longman (3½ Zenith-Bradshaw). |
| 2 | 11 | 30 | ... | 246 | R. G. Mundy (10 Morgan three-wheeled cycle car). |

*Reserves:*

**Team No. 25.—Essex Motor Club.**

| | | | | | |
|---|---|---|---|---|---|
| 2 | 12 | 0 | ... | 251 | S. M. Greening (2¾ Francis-Barnett). |
| 2 | 12 | 30 | ... | 252 | H. McCardle (7-9 Harley-Davidson sc.). |
| 2 | 13 | 0 | ... | 253 | T. Davies (3½ Sunbeam). |
| 2 | 13 | 30 | ... | 254 | S. Biss (7-9 Indian sc.). |
| 2 | 14 | 0 | ... | 255 | H. W. Harrington (4 Indian). |
| 2 | 14 | 30 | ... | 256 | D. S. Parsons (8 Matchless sc.). |

*Reserves:* S. J. Marks (3½ Triumph), D. Stuart (8 Acme sc.).

**Team No. 26.—Camberley Club.**

| | | | | | |
|---|---|---|---|---|---|
| 2 | 15 | 0 | ... | 261 | P. Street (3½ Sunbeam). |
| 2 | 15 | 30 | ... | 262 | P. W. White (8 Sunbeam sc.). |
| 2 | 16 | 0 | ... | 263 | A. H. S. Love (3½ Norton). |
| 2 | 16 | 30 | ... | 264 | E. O. Spence (7-9 Harley-Davidson sc.). |
| 2 | 17 | 0 | ... | 265 | G. Green (3¾ Scott). |
| 2 | 17 | 30 | ... | 266 | E. J. Over (7-9 Harley-Davidson sc.). |

*Reserves:* R. Elsegood, W. Sutton.

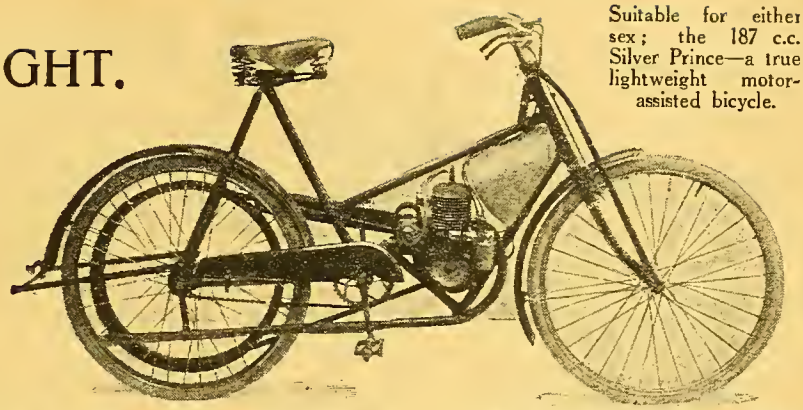
**Team No. 27.—Basingstoke M.C.C.**

| | | | | | |
|---|---|---|---|---|---|
| 2 | 18 | 0 | ... | 271 | T. Mansbridge (2¾ Metro-Tyler). |
| 2 | 18 | 30 | ... | 272 | G. Bickerton (3½ Norton sc.). |
| 2 | 19 | 0 | ... | 273 | W. Osmond (3½ Triumph). |
| 2 | 19 | 30 | ... | 274 | G. Gammon (3½ Norton sc.). |
| 2 | 20 | 0 | ... | 275 | B. Fleming (4 Harley-Davidson). |
| 2 | 20 | 30 | ... | 276 | M. Scales (3½ Sunbeam sc.). |

*Reserves:* C. Hedges (3½ Triumph), R. Stevens (8 Enfield sc.).

# A GENUINE LIGHTWEIGHT.

## Tiny Two-Stroke Engine in a Special Open Frame Pedal Cycle.



Suitable for either sex; the 187 c.c. Silver Prince—a true lightweight motor-assisted bicycle.

WEIGHING less than 70lb., and selling complete at 25 guineas, the Silver Prince featherweight is likely to attract a large number of cyclists who wish to extend their normal radius of action.

The little engine which is fitted is of the three port type, having a bore and stroke of 63 × 60 mm. respectively (187 c.c.), and plain bearings throughout. The crankshaft is carried in single long bearing with an outside flywheel well clear of the pedalling gear; direct belt drive with a ratio of 7 to 1 is employed, and the tank has a capacity of just over a gallon of petrol and oil mixture.

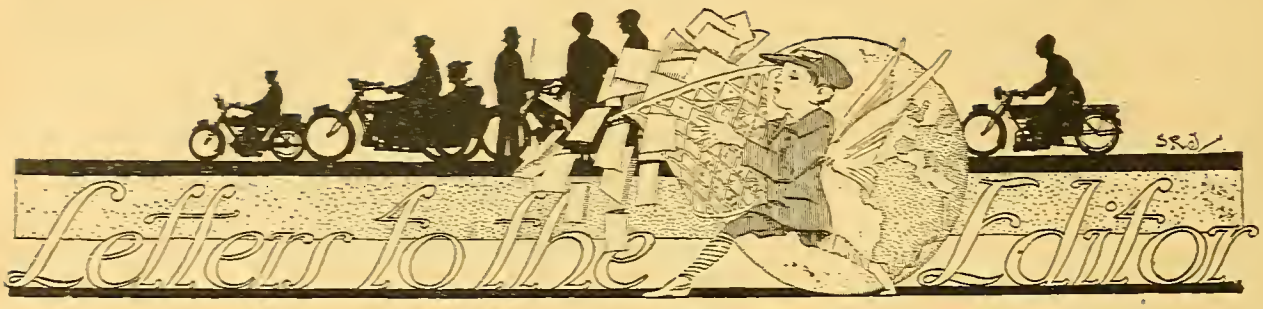
In its latest form this miniature motor cycle has a lower frame, the saddle of which is the same height from the ground as that of an ordinary lady's cycle. With the exception of a strengthened head lug and somewhat heavier gauge tubing, all parts are standard cycle sizes, the front forks are stiffened by auxiliary girders, chain and belt guards are fitted, and an expansion chamber of considerable dimensions will be part of the standard specification. The tyres are 26 × 1½, and brakes consist of an Eadie back pedalling brake in the rear wheel, and an ordinary cycle brake in front. We took the opportunity of a short trial run on an experimental machine, and found it extremely flexible and easy to bandle. In addition to this the engine is wonderfully well balanced, and appears to have ample power for all normal hills.

# RESULTS OF THE CAR T.T. RACES.

## "The Autocar" Series of Telegrams denoting Progress and Results.

A LARGE percentage of our readers will be interested in the Tourist Trophy Car Races to be held in the Isle of Man to-day, Thursday. The same course as was used for the Motor Cycle Races has been adopted for the car races organised by the Royal Automobile Club, and the two events will be run concurrently, starting at 9.30 a.m. In the case of the International T.T. Race for cars of 3,000 c.c., eight circuits = 302 miles, will be covered, and in the case of the 1,500 c.c. Trophy, six circuits = 226½ miles—the same distance as the Senior Tourist Tropky Race for motor cycles. Our parent journal *The Autocar* has arranged to issue a series of telegrams (as was the case with *The Motor Cycle* in connection with the Motor Cycle Races) throughout the country denoting the progress and results of the two events. In 1914 the winner of the Car T.T., which occupied two days, averaged 56.44 m.p.h. for 600 miles. This year's Senior T.T. winner, A. Bennett (Sunbeam) averaged 58.33 m.p.h. There seems very little doubt but that Bennett's wonderful performance will be eclipsed in to-day's race. Appended is a list of the points at which *The Autocar* series of telegrams will be displayed.

**Bala (N. Wales).**—Jones Bros., Henblas Garage.
**Belfast.**—J. B. Ferguson, 60-76, Chichester Street.
**Birmingham.**—John Bryant and Sons, 125, New Street; P. J. Evans, 81-91, John Bright Street; George Heath, Ltd., John Bright Street; Iliffe and Sons Ltd., Guildhall Buildings, Navigation Street.
**Blackburn.**—Thompson Bros. (Blackburn), Ltd., 15, Preston New Road.
**Blackpool.**—Brown and Mallalieu, Metropole Garage, General Street; G. and J. Jackson, Station Road, S.S.
**Bolton.**—Parker's, Bradshawgate.
**Bournemouth.** — Grosvenor Garage (Bournemouth), Ltd., Poole Hill.
**Bradford.**—Eric S. Myere, 52, Manningham Lane; The Thornton Engineering Co., Ltd., Belle Vue Works, Manningham Lane.
**Bristol.**—Bristol Motor Co., Ltd., Motor Car Dept., 138, Victoria Street; Pirelli, Ltd., 26, Victoria Street; J. S. Willway and Sons, Ltd., St. Augustine's Bridge.
**Burnley.**—W. H. Harrison, The Motor House.
**Cambridge.**—Herbert Robinson, Ltd., 2, Regent Street.
**Cardiff.**—R. E. Jones, Ltd., 84, Queen Street.
**Carlisle.**—J. Dias and Co., 63, Lowther Street.
**Castle-Douglas.**—A. C. Penman, Ltd.
**Chester.**—Grosvenor Motor Co., Ltd., 41, Eastgate Street.
**Coventry.**—Iliffe and Sons Ltd., *The Motor Cycle* Offices, 19, Hertford Street; H. C. Berry, Ltd., Gosford Street.
**Darlington.**—Chas. G. S. Buist, Ltd., Grange Road.
**Dover.**—Martin Walter, Ltd., Market Square.
**Dublin.**—Thomas and Rogers, 42-6, South King Street.
**Dumfries.**—A. C. Penman, Queensberry Motor Works, St. David's Street.
**Dunfermline.**—D. R. Engineering Co., Hospital Hill.
**Edinburgh.**—Alexander and Co., 115, Lothian Road; Rossleigh, Ltd., 32, Shandwick Place.
**Exeter.**—Motor Mac's (Exeter), Ltd., 167-9, Sidwell Street; Stanfield and White, Ltd., 8, Sidwell Street.
**Folkestone.**—Martin Walter, Ltd., 62 and 64, Sandgate Road.
**Glasgow.**—Claud Hamilton, Ltd., Smith Street, Hillhead; Pirelli, Ltd., 89-95, Pitt Street.
**High Wycombe.**—Davenport Vernon and Co., Ltd., 14 and 15, High Street.
**Hull.**—Darmody and Lamplugh, Ltd., 362, Anlaby Road.
**Huntingdon.**—G. Maddox and Sons, Hartford Road.
**Leicester.**—Midland Counties Motor Garage Co., Ltd., Granby Street.
**Leeds.**—Appleyard's, 119, Albion Street; Rowland Winn, County Garage.
**Lincoln.**—R. M. Wright and Co., Ltd., Newland.
**Liverpool.**—J. Blake and Co., Ltd., Bold Street; Central Motor Co., 18, Newington, Bold Street; W. Watson and Co., Renshaw Street.
**London.**—Armstrong Siddeley Motors, Ltd., 10, Old Bond Street, W.1; Austin Motor Co., Ltd., 479, Oxford Street, W.; Automotive Clearing House, 175-9, Oxford Street, W.1; Barker and Co. (Coachbuilders), Ltd., 66, South Audley Street, W.1; Bentley Motors, Ltd., 3, Hanover Court, Hanover Street, W.1; Malcolm Campbell (London), Ltd., 27, Albemarle Street, W.1; Car Mart, Ltd., 297-9, Euston Road, W.1; Car Mart, Ltd., 173, Piccadilly, W.; The Eastern Garage Co., 418, Romford Road, Forest Gate, E.7; A. W. Gamage, Ltd., Holborn, E.C.1; Harrods, Ltd., Motor Showrooms, 118, Brompton Road, S.W.1; Humber, Ltd., Humber House, 94, New Bond Street, W.1; Iliffe and Sons Ltd., Dorset House, Tudor Street, E.C.4; C. H. Parkes and Co., 27, High Street, Notting Hill Gate, W.11; Pirelli, Ltd., 144, Queen Victoria Street, E.C.4; Rootes, Ltd., 8 and 9, Long Acre, W.C.2; S. Smith and Sons (M.A.), Ltd., 179-85, Great Portland Street, W.1; Sunbeam Motor Car Co., Ltd., 12, Princes Street, Hanover Square, W.1; The Royal Automobile Club, Pall Mall, S.W.1; The Trader Publishing Co., Ltd., 139-40, Fleet Street, E.C.4.
**Luton.**—Dickinson and Adams, Ltd., Frederic Street.
**Maidstone.**—Rootes, Ltd., Len Engineering Works, Mill Street.
**Malvern.**—W. and H. Woodyatt, Ltd., Garage.
**Manchester.**—Alexander and Garner, 265, Deansgate; Finnigans, Ltd., 123, Deansgate; Iliffe and Sons Ltd., 199, Deansgate; Midland Hotel; Pirelli, Ltd., 5, Cambridge Street; The Sunbeam Motor Car Co., Ltd., 106, Deansgate; Leo Swain and Co., 237, Deansgate.
**Newcastle-on-Tyne.**—Travers, Ltd., 77, Pilgrim Street.
**Newport (Mon.).**—Wellsteeds County Garage, Ltd., 74 and 75, Commercial Street.
**Northampton.**—Pytchley Autocar Co., Ltd., 3, Sheep Street.
**Norwich.**—Mann, Egerton and Co., Ltd., 5, Prince of Wales Road.
**Nottingham.**—R. Cripps and Co., Ltd., Lower Parliament Street.
**Plymouth.**—H. Andrew and Co., Ltd., The Garage, Athenæum Place; R. Humm and Co., Motor Engineers.
**Portsmouth.**—Linington Bros., Ltd., 54, Commercial Road.
**Reading.**—Wm. Vincent, 101, Broad Street.
**Ross (Herefordshire).**—Ross Engineering Co., Ltd.
**Rugby.**—Sam Robbins, Ltd., Bilton Road.
**Sheffield.**—Frank B. Roper, 166, London Road.
**Shrewsbury.**—Samuel Withers, Welsh Bridge.
**Southampton.**—Motor Mac's (Southampton), Ltd., 25-7, London Road; Pirelli, Ltd., 22, Bridge Street.
**Southport.**—Bamber and Co., 33, Liverpool Road, Birkdale; Kent's, 417, Lord Stretet.
**Stafford.**—Attwood's Garage, Lichfield Road.
**Stalybridge.**—The Waterloo Garage Co. (Stalybridge), Ltd., Waterloo Road.
**Trevor (near Ruabon).**—J. A. Richards.
**Weybridge.**—Brooklands Motor Course.
**Wigan.**—H. H. Timberlake, King Street.
**Wolverhampton.**—The Sunbeam Motor Car Co., Ltd., Moorfield Works; The Victoria Hotel: Cyril Williams, Chapel Ash Depot.
**Wrexham.**—North Wales Motor Exchange, Chester Street.




The Editor does not hold himself responsible for the opinions of his correspondents.

Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.

### THE 1,001ST NUMBER.

Sir,—Congratulations on your excellent 1,001st number.
Darlington. W. B.

Sir,—Good luck to the next 1,000 "Blue 'Uns."
Enfield Lock. A. O. B.

Sir,—We wish to tender you our best wishes on the occasion of the 1,000th consecutive number of your most excellent journal. HOLROYD AND COLLIER.

Sir,—In sending best wishes on the occasion of attaining your 1,001st number, I should like to thank you for the manner in which you have helped to guide the fortunes of the motor cycle industry. MANUFACTURER.
Birmingham.

Sir,—Many happy returns of the day. My family and I have only one fault to find with *The Motor Cycle*—it ought to be a daily. From Thursday to Thursday is a long, long time. OLIVER TWIST.
S.W.16.

Sir,—Although perhaps a little late, I must congratulate you on your 1,001st number of *The Motor Cycle*. I was very much interested in seeing the early patterns of motor cycles, with all their troubles, etc., on the road, and especially the 2½ h.p. Minerva. I should like to say that I owned one for a long time and can well remember the dry battery becoming exhausted when least expected. There was no magneto ignition in those days. Still, I had lots of fun on it, and altogether have pleasant recollections of the same.

Strange to say, my next mount was a 3½ h.p. Minerva, but this was fitted with a low tension magneto. On the two Minerva machines I covered nearly 9,000 miles.

I quite agree with the remarks of J. Dente Watts respecting "Ixion's Reminiscences," and am eagerly looking forward to more of the same sort being published. I think I had good value when I purchased this book. *The Motor Cycle* is another example of good honest value. Best wishes for your blue cover. T. 2955.
Bude.

### THE FATHER OF THE TWO-STROKE.

Sir,—In your issue of the 8th inst., we note with surprise in Mr. B. H. Davies' article, the Levis is referred to as the "Grandfather of all Two-Strokes, and even the Scott is its great overgrown hobbledehoy of a son." Surely some mistake has been made here, as the Scott was on the road many years before the public ever heard of the Levis.

If our memory serves us rightly, it was in 1904 when the Scott engine was patented and the complete machine was marketed in 1909, but in a previous year the machine appeared in competitions and hill climbs, both in the Midlands and in the North Country, and because of successes the two-stroke was handicapped by the A.C.U. 1.32 capacity formula.

We think we are right in saying that Mr. Scott has an engine fitted to a boat similar in principle to the one on the machine, which was made in 1901, and is still giving excellent service.

THE SCOTT MOTOR CYCLE CO., LTD.,
H. O. WOOD, Technical Adviser.

### HOW STEEP IS IT?

Sir,—Can one of your readers tell me the name and gradient of a hill which lies on the outskirts of St. George's, on the way to Wellington, Salop?

It is, I should imagine, about 1 : 5. I am rather proud of my performance of coming up this hill on a 494 c.c. twin sc., with a bottom gear of approximately 8 to 1, and 22 stone aboard. OE. 2990.
Birmingham.

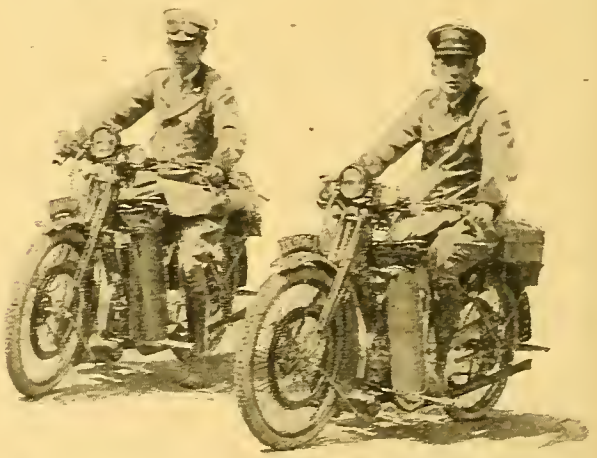
### SPRING FRAMES AND RACING.

Sir,—I noticed "Ixion's" comment on spring frames and racing with interest, and from personal experience thoroughly agree with him. I possess a Triumph-engined machine (engine considerably hotted up), with the latest "Warner" spring frame. My mount steers perfectly up to 60 m.p.h. (my limit), and holds the road far better than a rigid frame, potholes and ripples having absolutely no effect on steering.

I think it is only a matter of time before our real speed merchants adopt a spring frame. C. M.
Coventry.

### FUEL CONSUMPTION.

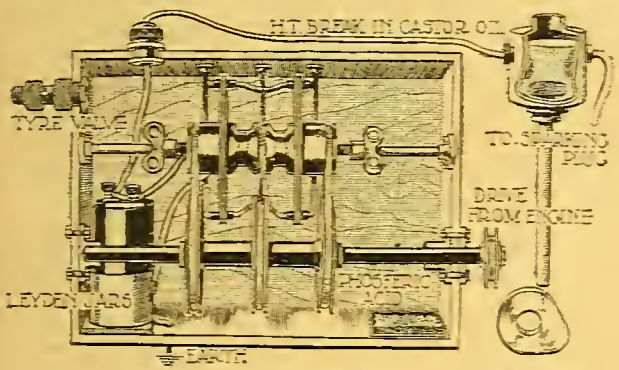
Sir,—Perhaps this may be of interest to some of your readers:—I recently covered a 100 mile run, through Stratford-on-Avon, Stow-on-the-Wold, Broadway, etc., over hilly country, on three-quarters of a gallon of benzol, that is, over 130 m.p.g. My machine is a 3½ h.p. Ariel, over three years old, with 10,000 miles to its credit, fitted with Binks' carburetter and F.E.W. valve attachments. "Spots" were used in the fuel. I have also obtained over 95 m.p.g. with heavy sidecar and passenger. O.B. 8387.
Birmingham.



Many of the R.A.C. scouts have for a long time past been equipped with motor cycles. The two shown are part of a consignment of Joys recently delivered to the R.A.C. for patrol work, all of them being finished in R.A.C. blue.

### INFLUENCE MACHINES FOR I.C. ENGINES.

Sir,—I was interested to know of Mr. Freeman Lee's knowledge of the superiority of such machines over the induction coil. As an experimenter I have made and used several static machines for illuminating vacuum tubes of my own construction, and I think the current from the coil is by far the inferior. A tube lit from an influence machine is beautifully filled with soft light, but with a coil it is rather of a forced nature. Enclosed is a sketch of the lay-out, for use with an internal combustion engine. The static machine is enclosed in a strong wooden box kept at a pressure of three or four atmospheres by means of the cycle valve, the air being pumped in now and then by means of a cycle pump. A tray of phosphoric acid dries the air

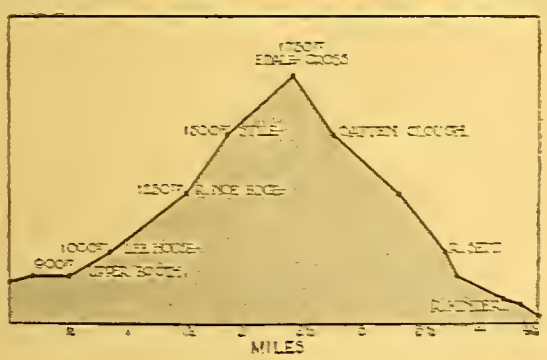



Layout of static machine suggested by our correspondent.

inside the box, and ensures the working of the machine in all weathers. The high tension break is composed of an insulated box of small size made preferably of ebonite; inside are two brass contacts placed opposite one another, and a piece of round brass placed on the top of an insulated rod actuated by a cam completes the circuit at the sparking stroke. The break should be filled with castor oil, so that no discharge takes place until the cam rod rises and touches the contacts. The machine may be of the Wimshurst type, and the plates about four or five inches in diameter. I have made a machine with the plates four inches in diameter, and it gives a continuous spark threequarters of an inch. The sparking plug points may be used a little wider than usual owing to the Leyden jars being charged to such a high potential. A. LUTMAN.

### JACOB'S LADDER.

Sir,—Referring to Mr. Dudley's letter on page 738 of your issue of June 1st, I have pleasure in enclosing herewith a contour sketch of the above hill showing the average




Contour of Jacob's Ladder between Edale and Hayfield, Derbyshire.

gradients on different sections. The figures are taken from the 1in. Ordnance map. There is one part where the rise is 250ft. in ½ mile. This is an average figure, the actual gradient is constantly varying.

I "discovered" the hill about the year 1906, but unfortunately my first machine—a 1902 Centaur 30×30,—was not quite up to this class of work.

I don't think the hill is practicable for sidecars; part of the path runs between walls which are rather near together. CYRIL STYRING.

Sir,—With reference to Mr. P. H. Dudley's remarks about his discovery of a freak hill named "Jacob's Ladder."

I have an idea that the hill he mentions was included in the English Six Days in 1914.

I am sure that if Mr. Dudley will obtain a copy of *The Motor Cycle* for July 23rd, 1914, he will find illustrations of competitors negotiating the hill he mentions. H.D. 1628. Mirfield.

[In the A.C.U. Six Days Trial of 1914 the competitors descended and ascended a hill known as Jacob's Ladder, which, however, is not the hill referred to by our correspondents.—Ed.]

### NOT TWO-STROKES.

Sir,—In reference to the letter from "F. J. D." (Gloucester) about Scotts running without oil or petrol, in 1915 I saw Scotts run without same. *They were chasing "Jerry."* W. E. F. Southsea.

### R.A.C. SALUTES.

Sir,—With regard to "Ken Bush's" letter, may I say that my own experience entirely corroborates his? There is a scout at Banbury and I have only been saluted by him once, although I have passed him on numerous occasions. Another A.C.U. cyclist here tells me he has had exactly the same experience not only here but near London. P.C. 549. Brackley.

Sir,—It is interesting to read the remarks of Ken Bush in reference to the omission of the patrols of the R.A.C. to salute. I find the real grievance is where to find the patrols, so few and far between in comparison to the A.A. One can journey many miles along the main roads without meeting an R.A.C. man. In fact, it would be interesting to know how many patrols are employed within a radius of fifty miles from London. The A.C.U. ask for suggestions to popularise the Union, and I would suggest that a list showing where its patrols are to be found should be issued to each of its members. A. MARTIN CYDER. W. Ealing.

### ELIMINATE THE PRIMARY CHAIN.

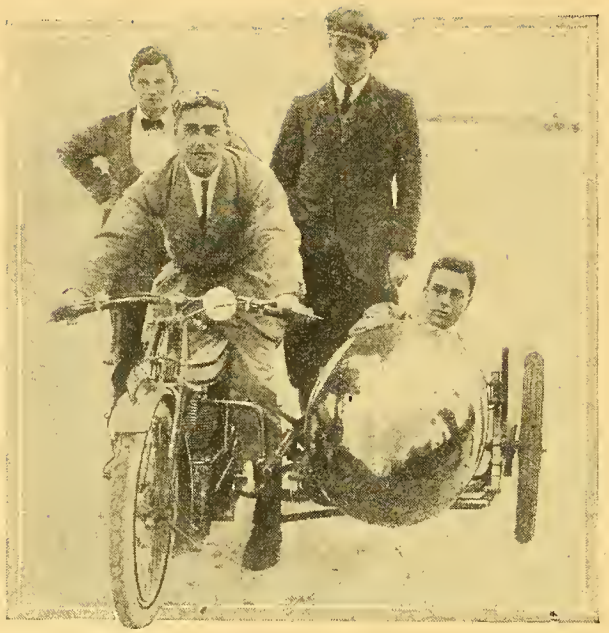
Sir,—I should very much like to add my small quota of congratulation and criticism to that of "M. L. L."

My first introduction to motor cycling was when as a small boy at school, proud and joyful, I brought home my first mount, a 2½ h.p. Ariel, which had cost me just fifty shillings! The world has progressed since then. I have ridden many makes, good, bad, but mostly indifferent, and, although I hope I shall not call down on my head the curses of some ultra enthusiast of other makes, I must say that until two years ago, when I bought my first Scott, a 1920 sports model, I never realised how close a motor cycle could get to perfection without realising perfection.

I have now made six journeys from here (Bangor) on it to Norfolk, 270 miles, and on only one occasion have I had an involuntary stop, through a broken chain, due to my own negligence in back wheel adjustment: my petrol consumption on these trips works out at about 90 m.p.g. solo, and about 75-80 m.p.g. sidecar, while on a petrol consumption trial last year my Scott walked in first, passing all the "bhoys" with a consumption of 150 m.p.g.!

But after the sweet—the bitter; the perfection of the engine and comfort of frame only seem to accentuate the imperfection of the transmission. The Scott Sociable has, I believe, a three-speed integral with the crank case—why not the Scott motor cycle? Why is this nest of chains, which are the cause of endless barked knuckles and lost souls, still retained? Perhaps the Scott Company will tell us.

THOS. E. W. BROWNE,
Capt. Univ. Coll. of Wales M.C.C.



THE NAVY AT BROOKLANDS.

A group of naval motor cyclists at a recent Brooklands meeting. On the saddle is Lt. A. G. Smith, R.N., who, despite the fact that he has only one leg, put up a good race on his Norton and sidecar. Behind him, standing on the right, is Lt. E. S. K. Evans Greaves, R.N., winner of the Arbuthnot Trophy in 1919 and A.C.U. consul for the Royal Navy, while on the left is Lt. R. C. Hovenden, R.N., who took part in last year's Arbuthnot Trophy. The passenger is also a naval officer. A feature of the meeting was the success of Lt. R. G. T. Grogan, a naval rider who won one race and came in third in two.

### *NO AGE LIMIT.*

Sir,—My attention has been drawn to a letter which appeared in a recent issue from a reader wishing to know if 58 years of age was too old for motor cycling.

I am a regular and consistent rider; on Saturday afternoon last I took with me a lady passenger, and our united ages are a few months short of 160 years. Is this a record?

W. A. DYER.

### *MOTOR CYCLE TAXATION.*

Sir,—G. J. Hickling suggests that "push-bikes" should be taxed 5s. Let me just suggest to him and others, through the medium of your valuable paper, that as things are going on it doesn't seem as though the Government will alter the present system of taxation yet awhile, and we are taxed enough as it is, so I say don't suggest anything else should be taxed. Probably 75 per cent. of motor cyclists use pedal cycles at one time or another, and I'm sure they don't want an extra 5s. tax just "thrown in for luck."

Hitchin. N. K. 1660.

### *DOT AND CARRY ONE STROKES.*

Sir,—While traversing the main Oxford-London road I observed a single-speed two-stroke approaching me at about 15-20 m.p.h. The machine was running quite regularly, but cutting out for two revolutions at the end of every seven or eight, as far as I could judge. The rider did not appear to be disturbed, and behaved as though his bike always ran in this extraordinary fashion. Have any of your readers experienced this erratic running with two-strokes?

I should be much interested to know the cause. The most remarkable fact was that the engine did not splutter or misfire once. I could hear the engine for about a quarter of a mile. "CELERITAS."

Oxford.

### *OVERSIZE TYRES.*

Sir,—It may interest some of your readers to know that the 26in. × 2½in. Dunlop Magnum cover fits a 24in. × 2in. wheel. I have been running one of these covers on the back wheel of my Omega-Villiers for the last five hundred miles, mostly with a passenger, and have found it a great success except for a slight roll on corners. D. V. AKEROYD.

35, Falkner Square, Liverpool.

### *A VERY FULL WEEK.*

Sir,—As one who was in the Isle of Man for a week, and left by the 4 o'clock boat Thursday, travelling all night to reach London in time to start for the London-Edinburgh, and having successfully completed the run, returned by the night train from Edinburgh, arriving in London again on Sunday morning, I should be very interested to hear if any other rider in the Edinburgh run did the same amount of travelling in such a short time. F. J. YOUNGS.

### *GEAR RATIOS FOR THE TOURIST.*

Sir,—I consider it high time the subject of gear ratios on sidecar machines received further ventilation, and can heartily sympathise with "Jay Cai See."

For the tourist who desires to keep up a fair average speed up hill and down dale it is essential that the second gear should be considerably closer to the top than is the usual practice at the moment, and in this respect the high-class sidecar compares very unfavourably with the average European car.

For the last 12 months I have been riding one of the most famous 8 h.p. sidecars—undoubtedly an excellent machine—but the top gear is so low that really steep hills can be surmounted without a change, and at 35 m.p.h. vibration becomes very unpleasant owing to the excessive engine speed, also the maximum is limited to just over 40 m.p.h. When second gear is resorted to the speed drops to a wretched 15-18 m.p.h. unless the engine is unmercifully raced.

From memory I believe my top gear is just under 5 to 1, and the second is about 8½ to 1, i.e., less than 70 per cent. drop, and I am astounded to see in the letter from Messrs. Martinsyde, Ltd., that on their machines the top and second gears are respectively 5¼ and 11 to 1, i.e., over a 100 per cent. drop!

Personally, I do not think we shall reach the ideal until the four-speed box becomes standard practice, and I hope by the time the next Olympia Show comes round we shall see some of the leading makes fitted with such a box giving ratios of, say, 4½, 6½, 9½ or 10, and 14 or 16 to 1, which should suit the ordinary 8 h.p. outfit admirably, and would also add considerably to its average speed and increase the pleasure of driving immensely. F. SMURTHWAITE.


## Books & Maps for Motor Cyclists.

Issued in conjunction with *The Motor Cycle.*

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

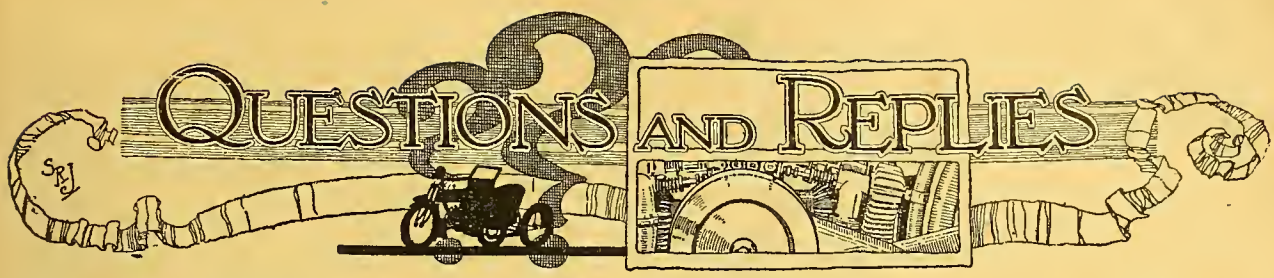
**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "IXION," of *The Motor Cycle.*
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### TO FIX TRANSFERS.

Having purchased a set of transfers for my tank, I should be obliged if you could let me know the best way to put them on.—G.D.

Take a very small quantity of copal varnish, gold size, or any quick-drying varnish, coat the face of the transfer as thinly as possible (a short hog-hair brush is recommended for this), and let it remain for a few minutes, when it should be just tacky. Cut away all paper from around the transfer, then place it face downwards on the tank, pressing well down, either with a pad or roller, taking great care that the transfer does not move. Damp back of paper with a moist rag or leather, slightly at first, and again press down, gradually increasing moisture until well soaked. The paper may then be lifted off. Wash over the face of the transfer lightly to remove any gum which may be left on the surface, otherwise the transfer is liable to crack, especially if it be a coloured one. When quite dry give a thin coating of varnish, which will improve the appearance of the transfer and also prevent it being damaged.

### REMOVING VALVE GUIDES.

I am dismantling my B.S.A. engine; please tell me: (1) What is the thread of the set screw in timing pinion (left or right). (2) Also the best way of removing the old valve guides.—A.S.

(1) The B.S.A. small timing pinion is secured with a right-hand thread conical headed screw which expands the shaft on to which the pinion is pressed. (2) Drop a set pin through the valve guide with a head which will not pass through the hole, then punch the head of the pin and the guide will drop out.

### VALVE TIMING.

Please give me the timing of valves for a 1914 4 h.p. J.A.P. engine. (2) Distance between magneto points when fully opened?—S.G.O.

(1) Set the exhaust valve to close just after the completion of the exhaust stroke. It will then commence to open when the piston is about one-seventh of the length of the stroke from the bottom of the firing stroke. The inlet should commence to open as the exhaust closes, and remain open for a little more than one complete stroke of the piston, or while the flywheels turn through about 200°. (2) The distance the magneto points should be opened is 4 mm.

## Important Dates.

**Fri., June 23rd, and Sat., June 24th—Irish Twenty-Four Hour Open Trial.**
**Sat., June 24th—M.C.C. Inter-club Team Trial for "The Motor Cycle" Cup.**
**Sat., June 24th—Midland Centre A.C.U. Open Reliability Trial.**
**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Wed., July 12th—French Grand Prix.**
**Sat., July 15th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Sat., Aug. 12th—Motor Cycle Races in Phœnix Park, Dublin.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 16th—The Scott Trial.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**
**Sat., Oct. 21st—B.M.C.R.C. Championship Meeting at Brooklands.**

### FITTING A TWO-SPEED.

My machine is a 269 c.c. O.K. Junior, with direct drive, and, in view of this fact, I am having a 2-speed gear and clutch fitted. Will you tell me whether: (1) The magneto should have a control fitted? (2) The present 26×2in. tyres should be changed for 26×2½in. (3) Whether the last-named size of tyre will go on a rim designed for 26×2in. only?—T.H.P.

(1) This is optional, but it is a great advantage to have variable ignition. (2) Yes, they would be advisable. (3) The 26×2in. rim is the one for which 26×2¼in. tyres are made, but they will fit the B.S. D2 rim, which is slightly wider than the older rims of the first-mentioned size.

### MAGNETO QUESTIONS.

Having taken a Thomson-Bennett magneto (twin) to pieces, (1) Will you tell me the positions of the brushes and their functions. (2) How can I tell which way the magneto should run? There are no marks. (3) Is there any method of telling whether a magneto requires re-magnetising or not?—E.N.M.

(1) There are two carbon brushes conducting the high tension current from the collector ring and a carbon brush behind the contact breaker, earthing the back plate of the latter to the body of the machine. (2) The drive on the machine from which the magneto was taken should tell you this, but if it is not available examination of the contact breaker will provide the necessary information; the rocker arm of the breaker has a trailing action, i.e.: the fibre heel follows on rocker pivot in relation to the direction of rotation. (3) The surest indication is whether or not the magneto gives a good spark.

### CARRYING AN ACCUMULATOR.

What is the best position to carry an accumulator on an A.B.C. motor cycle? I do a considerable amount of riding over rough roads. Do you think it would save the accumulator from road shock if I fitted a sprung platform in the bottom of the accumulator box, or would fixing to the handlebars be of any advantage?—J.H.B.

The position in which the accumulator would receive the least vibration is somewhere approximately half-way between the handlebars and saddle. A sprung platform at the bottom of the accumulator box would probably cause more trouble than a rigid fixing. Our own experience is that delicate articles suffer least the more securely they are fixed to the main frame of the machine.

### MISSING AT LOW SPEED.

The front cylinder of my 350 c.c. flat twin continually "misses" at slow speeds and when the engine is running idle throttled down. It never misses at high speeds. The engine nearly always starts on the back cylinder unless a very rich mixture is given, then it will tick over on both cylinders. There are no air leaks and the plug is all right. The points of the magneto contact breaker

do not separate quite as far for the front cylinder as for the back one; this appears to be due to the position of the contact breaker cams. The spark appears to be the same; changing over the plugs makes no difference. Can you suggest the cause of the trouble?—F.W.E.

The trouble may be due to one of three things: the tappets have not been carefully adjusted for the cylinder, which misfires, the absence of a warming device to the carburetter causes condensation on the inlet pipe, or an inlet valve guide may be worn and thus cause an air leak. The last suggestion is the most probable.

### STARTING DIFFICULTIES.

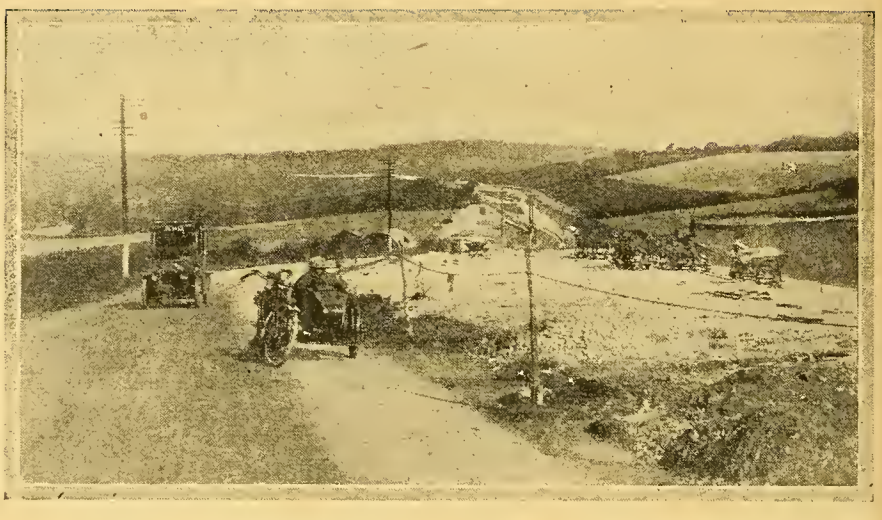
Q. I am a rider (novice) of a 770 c.c. twin, and am having difficulty in starting up the engine, due to the power needed to work the kick-starter, which sometimes can hardly be depressed, even after running a few miles. Is this caused by too much or too thick oil being used?—H.J.B.

It is difficult to say what is the cause of the trouble without actually seeing the machine. Cold weather may cause the engine to gum up, and paraffin injections may be necessary, but at this time of the year no such trouble should be experienced. You cannot go far wrong if you use the oil recommended by the makers.

### LOSS OF POWER.

Q. A 250 c.c. two-stroke which has just been fitted with new main bearings throughout has since lost much of its former power. Ignition appears to be correct, the carburetter, a Senspray, with 30 jet, also seems all right, and the compression is very good. (1) What do you think is the cause of this loss of power? (2) What is the correct timing for this machine? (3) What is the cause of constant four-stroking?—V.F.G.

(1) The loss of power may be due to the bearings being somewhat tight and the power may return after further use. (2) The engine should be timed as follows:—(If variable spark:) place the piston exactly on top of the compression stroke and connect up the magneto with the points just broken and the ignition lever fully retarded. (Fixed spark:) If for a hilly country, set the piston $\frac{3}{16}$ in. before the top of the stroke; if for a flat country $\frac{5}{16}$ in. from the top of the stroke. When in these positions the points should be in the act of breaking. (3) The symptoms mentioned here seem to indicate that a smaller jet would be desirable.



The extensive widening and straightening of many main roads during the last few years marks the beginning of a complete evolution in our road system—it is to be hoped. On the London-Folkestone road showing the alterations in progress between Swanley and Maidstone.

### SIDECAR ON SOLO LIGHTWEIGHT.

Q. (1.) Would it be detrimental to a 350 c.c. three-speed Douglas to attach a light sidecar occasionally, passenger weight never exceeding 9 stones. (2.) Suggested make of sidecar and recommended weight of same. (3.) What gradient might I expect the outfit to negotiate without passenger dismounting? (4.) Maximum speed advisable with passenger, on ordinary give-and-take roads. (5.) Best gear ratios?—F.A.R.

(1.) It would do no great harm to use a light sidecar, although it is not a machine made or recommended for sidecar work. (2.) Almost all the principle sidecar manufacturers produce a lightweight model which would be suitable; you should choose one weighing not more than 70 lb. (3.) This question is almost impossible to answer, as much depends upon the method of driving and the weight of the outfit with passenger. It should negotiate ordinary main road hills, however, up to about 1 in 10. (4.) You should be content with an average speed of about 18 to 20 m.p.h. (5.) $5\frac{3}{4}$ or 6 to 1 top gear ratio.

### REBORING CYLINDERS.

Q. (1.) Which of the two is the better for speed, pulling power, and general efficiency—a piston with one ring at the top and one at the very bottom (scraper ring), or a piston with two rings at the top and one scraper ring at the bottom? (2.) Does regrinding a cylinder weaken it or shorten its life to any considerable extent and how much is taken out of the cylinder bore in the operation?—"Arno."

(1.) In all probability you would not find any observable difference in the running of two engines of similar design if the piston ring arrangements were varied, as you suggest. (2.) Unless the cylinder is a very light casting, it will not weaken it appreciably if it is reground; the amount to be taken out of the cylinder bore depends entirely upon the degree of

THREE-WHEELER *v.* SIDECAR. E. B. Ware (1,074 c.c. Morgan) leading C. F. Temple (998 c.c. Harley Davidson) and H. Le Vack (976 c.c. Zenith), at a recent meeting at Brooklands.

ovality which has to be corrected; if the cylinder is as much as 10-1,000ths out of round, it would be advisable to submit it to a thoroughly reliable firm of cylinder grinders, and to take their opinion as to whether the cylinder would be safe in use afterwards.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

R.Q. (Bootle).—350 c.c. New Scale and sidecar.

S.F. (Sutton).—654 c.c. Quadrant solo, m.p.g., comfort, etc.

J.A.H. (Harrogate).—Weatherell automatic engine lubricator on 976 c.c. twin J.A.P. engine. Oil consumption and distribution to cylinders.

L.L.P. (Birmingham). — Barr and Stroud engine. 654 c.c. Quadrant and sidecar.

E.K. (Sanderstead). — Auto-Wheel. Petrol consumption, vibration, overheating.

H.W.R. (Earls Colne).—Hopley or Paragon folding sidecars.

H.B. (Norwich).—976 c.c. Enfield (Vickers engine) and sidecar.

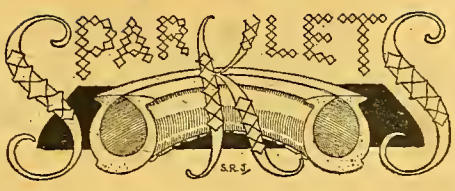
W.E.P. (Dewsbury).—348 c.c. A.J.S. Suitable sidecar, gears, etc.

## RECOMMENDED ROUTES.

BURTON-ON-TRENT TO GREENOCK.—O.A.H. Burton-on-Trent, Derby, Matlock Bath, Matlock Bridge, Rowsley, Chesterfield, Worksop, Doncaster, Ferrybridge, Wetherby, Harrogate, Ripley, Ripon, Catterick, Scotch Corner, Greta Bridge, Barnard Castle, Bowes, Brough, Appleby, Penrith, Carlisle, Rigg, Clarencefield, (edge of) Mouswald, Dumfries, Thornhill, Ayr, Troon, Ardrossan, Fairlie, Largs, Wemyss Bay, Greenock. Approximately 273½ miles.

A TOUR FROM SOUTHAMPTON.—P.M. Southampton, Millbrook, Redbridge, Totton, Ower, Wigley, West Wellow, Newton, Whaddon, Alderbury, Salisbury, Fugglestone, (edge of) Stapleford, Deptford, Codford St. Mary, Heytesbury, Warminster, Beckington, Woolverton, Limpley Stoke, Claverton, Bath, Corston, Marksbury, Farmborough, High Littleton, Farrington Gurney, Stone Easton, Wells, Priddy, Cheddar, Westbury, Wells, Glastonbury, Street, Piper's Inn, Greinton, Othery, Durston, Taunton, Wellington, Waterloo Cross, Cullompton, Exeter, Pocombe Bridge, Tedburn St. Mary, Crockernwell, Whiddon Down, Sticklepath, Okehampton, Downton, Tavistock, Grenofen, Horrabridge, Roborough, Plymouth, Plympton, Ivybridge, South Brent, Shinner's Bridge, Totnes, Paignton, Torquay, (edge of) Kingskerswell, Newton Abbot, Kingsteignton, Kennford, Exeter, Honiton Clyst, Fenny Bridges, Honiton, Yarcombe, Chard, Crewkerne, West Coker, Yeovil, Sherborne, Henstridge Ash, East Stour, Shaftesbury, Fovant, Wilton, Salisbury, Southampton. Approximately 383 miles.

(5–11)




### Revised Prices for Tyres.

Improved trade conditions have enabled the Goodyear Tyre and Rubber Company to reduce the prices of their motor cycle tyres. The revised prices are effective as from June 1st, 1922.

### Prices of Aluminium Pistons.

In the issue of June 8th, under this heading, it was inadvertently stated that the price of Specialloid pistons for an A.B.C. car was £6 per pair. This should have read as £10 10s. per pair, complete with gudgeon pins.

### Enfield Trophy Reliability Trial.

The sixth annual reliability trial for the Enfield Trophy will be held on Wednesday, June 21st, together with gold, silver, and bronze medals. Entrants have to maintain an average speed of 20 m.p.h. from Leeds to Aysgarth and back. The organiser is Mr. A. I. Greenwood, 39 and 41, Guildford Street, Leeds.

### Chains in the T.T.

A remarkably large percentage of the competing chain-driven T.T. machines were equipped with Renold chains. In the Senior Race the winner, third, fourth, to twenty-second and 96 per cent. of chain-driven motor cycles were fitted with Renolds, whilst every chain-driven machine in the Junior Race was fitted with these chains.

### A Stretched Cover.

In the issue of June 1st, it was stated in the report of the Junior T.T. that Hill (No. 70) arrived at Governors Bridge after four hours. Hill Bros., of Wolverhampton, manufacturers of the H.B. motor cycle, point out that the rear tyre came off after passing through Kirkmichael, and, owing to it having stretched, it was found to be impossible to refit the cover. This explanation should remedy any suggestion that the failure was due to engine or frame trouble.

### Uses of Dissolved Acetylene.

At a luncheon recently given by Allen-Liversidge, Ltd., at the Hotel Cecil, a film demonstrating the use of dissolved acetylene in various industries was shown. Several interesting facts were demonstrated, among which it may be mentioned that dissolved acetylene only occupies one-hundredth of its original bulk, and that the acetone with which the kapoc-filled cylinders are packed absorbs twenty-five times the amount of acetylene gas to every fifteen lb. per square inch pressure. A sidecar fitted with dissolved acetylene lighting was shown on the screen; while the fog-piercing qualities of acetylene illumination were also demonstrated, and an illustration shown of an acetylene stove boiling a kettle out of doors, the acetylene flame being unaffected in a high wind.

### Stolen Machines.

Matchless H., frame H 3868, engine 3868, sidecar 2814 (Ref. 101).

### Found on the Road.

A spanner and a pair of pliers on the Guildford Road last Saturday, found by Mr. W. H. Wherson, "Glenhurst," Linden Gardens, Leatherhead.

On the Great North Road, 10 miles from Catterick Bridge, Mr. A. B. Jelly, of 42, Danes Hill Road, Leicester, found a kit of motor cycle tools.

### C.A.V. Magnetos in the T.T.

During practice laps and the race, Norton motor cycles fitted with C.A.V magnetos covered an aggregate of over 20,000 miles without any sign of trouble, while the machines which started in the race got straight off the mark in the morning, from cold, without the slightest hesitation.

### In the Dublin Trial.

A gold medal has been secured by a Coulson machine in the Dunlop Cup Trial held recently in Dublin, when the machine was entered by Cumming and Dillon's Auto-Service Agency. It will be remembered that the Coulson also gained fourth place in the Isle of Man Junior Race, being ridden by R. Lucas.

### A Belgian Resort.

A booklet describing all that is of interest in Spa, that charming town in Belgium which has given its name to so many watering places in various parts of Europe, has been sent to us by M. Paul Dommartin, Rue David, Spa, Belgium. This point of the Ardennes is of particular beauty and has delightful surroundings. The roads are wide, straight and smooth, while in the neighbourhood is the famous Francorchamps-Malmédy-Stavelot course of the Belgian Grand Prix.

### Value of Crash Helmets.

It will be remembered that whilst C. Parkinson (D.O.T.) was riding in the Junior T.T. this year, he had the misfortune to break his handle-bars when travelling at speed. The front wheel broke away and the rider turned a somersault, landing on his head. He was wearing a crash helmet supplied by Herbert Robinson, Ltd., of Cambridge, and is of the opinion that it is to this helmet he owes his life.

### Catalogues Received.

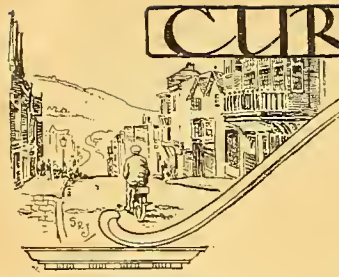
W. G. Fearn and Co., Albion Works, Albion Street, King's Cross, London, N.1. illustrated catalogue of various types of Pinnacle sidecars.

The Dederich-Wooler Engineering Co., Alperton, London. A folder referring to the 1922 Dederich-Wooler, listing a three-speed chain-driven model at £78 10s., a touring model at £66 10s., and a semi-T.T. model with belt drive and variable pulley gear at £65.

The Fellowes Magneto Co., Ltd., Cumberland Avenue, Park Royal, Willesden, London, N.W.10. A well illustrated booklet concerning the Baby Fellows magneto for lightweights, giving a description of the working of the magneto, and concluding with a list of spare parts and illustrations.

c 3

# CURRENT CHAT



## Special Features

8,000 MILES ON A SIDECAR SUBSTITUTE.
BEAUTY SPOTS OF THE WEST.
METHODS OF GEAR CONTROL.

## Time to Light Lamps

| | | |
|---|---|---|
| June | 22nd | 10.19 p.m. |
| ,, | 24th | 10.19 p.m. |
| ,, | 26th | 10.19 p.m. |
| ,, | 28th | 10.19 p.m. |

### Official Results.

On page 860 will be found the official results of the recent London-Edinburgh Trial.

### A Cinema Star.

Mr. Henry Edwards, the cinema star, was an interested spectator at the recent T.T. Races.

### Club Team Championship.

A list of the riders in the teams competing in the M.C.C. team trial for *The Motor Cycle* Cup appears on page 842.

### Car T.T.

All eyes are again turned towards the Isle of Man, where the Car T.T. races are being contested to-day. Motor cyclists who wish to learn the progress of the race should refer to page 843, which contains a list of places where *The Autocar* telegrams are being displayed.

### Attracting Motoring Visitors.

In Scarborough the local motor club is co-operating with the Townsmen's Association in running first a rally of the "Richmond type" on the 24th, and on the following day a freak hill-climb at Johnson's Beck, apparently open to all. This idea of a motor club augmenting the season's attractions at a seaside resort is worthy of further development.

### To Avoid Nottingham's Traffic.

Nottingham City Council have approved of a scheme for the construction of a new road from Parliament Street to London Road for the diversion of traffic going east and west and having no occasion to pass through the central streets of the town. It is the biggest street improvement undertaken in hand in Nottingham for many years, and will cost £316,940.

### T.T. Sweepstake.

The following are the numbers of the winning tickets in the A.C.U. T.T. Sweepstake:

LIGHTWEIGHT: 22966, Davison; 22904, Young; 8032, Jones.

JUNIOR: 10214, Sheard; 8316, Grinton; 1487, J. Thomas.

SENIOR: 1823, Bennett; 7354, Brandish; 5099, Langman.

Finishers were drawn as follows:

LIGHTWEIGHT: 9710, Padley; 1117, Prentice; 9875, North.

JUNIOR: 1225, Lucas; 963, Woods.

SENIOR: 20, Olsson; 7391, Horsman; 7458, de la Hay; 3087, Clapham; 8490, Wood; 7894, Illingworth; 9476, A. H. Alexander.

A sum of over £200 was presented to the I.O.M. hospitals.

### The Magneto.

The ignition aparatus of the modern motor cycle requires so little attention that generally it is neglected altogether. An article on this subject appears on page 833.

### A Silent Warning.

Motor cyclists whose machines are innocent of adequate silencing arrangements would be well advised to avoid St. Albans at present. We are informed that the local police are displaying a certain activity in this direction and offenders if caught are not likely to escape unpunished for their sins.

### London-Edinburgh Souvenir Badges.

Many members of the Motor Cycling Club, who won gold medals for the first time this year in the London-Edinburgh run, would doubtless like to obtain one of the badges which are issued for fixing to machines. Members desiring souvenirs of this historical event should apply for particulars to Mr. W. H. Wells, Captain of the M.C.C., 366, Euston Road, London, N.W.1.

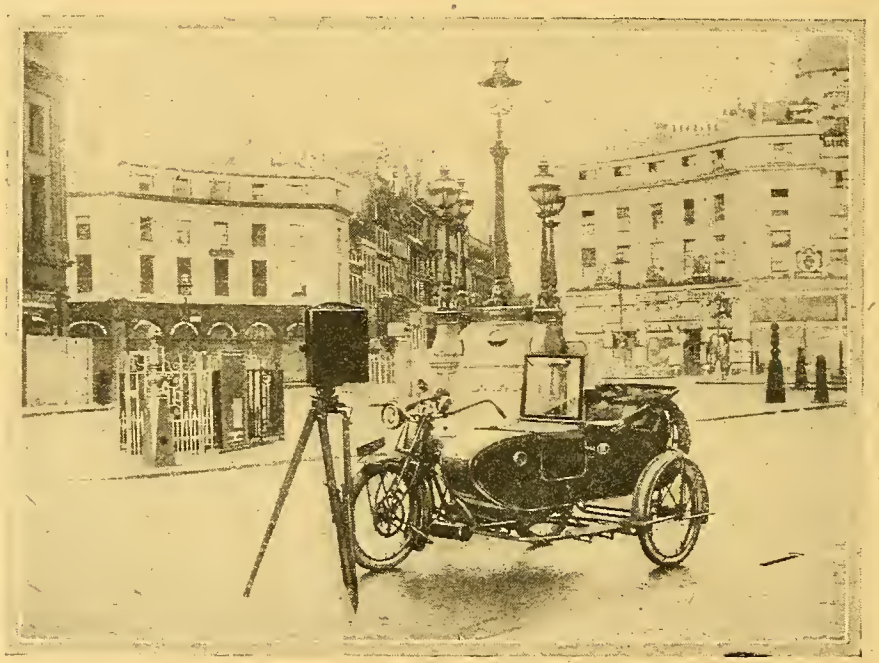
Number plates to be illuminated thirty minutes earlier, *vide* Road Vehicles Registration and Licensing Order (1921).

### 1922 Olympia.

The dates of the Cycle and Motor Cycle Show have been fixed for November 25th to December 2nd, both dates inclusive. The Show will therefore open on Saturday instead of on Monday, as has hitherto been the case. It has also been decided to make an alteration in the hours during which the exhibition will be open to the public, which will be from 10 a.m. to 9 p.m.

### French Appreciation.

Our contemporary *Mécano* in reviewing our 1001st number writes, "We have just received this number of our special (*sic*) English confrère, *The Motor Cycle*. This time it is more interesting than usual, and shows on its cover the 1001st number—that is to say, it is 1,000 weeks since our contemporary first appeared. One thousand weeks represents something like 20 years since this English journal first saw the light. Who would then believe that motor cycling would reach the present state of its development!"



Motor cyclists who are strangers to London and wish to see all the buildings and streets without danger and obstruction from traffic can do so in brilliant sunlight if they rise sufficiently early. The illustration shows the outfit owned by a cinema photographer, who has just filmed an early morning cinema "stunt" staged in a locality usually teeming with vehicles of every type.

A SUMMER NUMBER
OF
THE MOTOR CYCLE
WILL BE PUBLISHED ON
*Thursday, July 6th.*
Special articles and illustrations of an appropriate nature are in course of preparation for this enlarged issue.
**To prevent disappointment definite orders should be placed with Newsagents.**

### The Longest Day.

To-day the sun rises at 4.45 a.m. and sets at 9.18 summer time.

### The U.M.F. Grand Prix.

British competitors proceeding to the Grand Prix race at Strasbourg on July 12th will have their interests looked after on their journey by Mr. A. Mellano, who has already approached the A.C.U. for customs papers and other details.

### The Sidecar and the Stage.

The sidecar has at last appeared on the musical hall stage as a subject for burlesque. The Anartos are emulating Harry Tate's famous motoring sketch with a sidecar outfit of doubtful origin and efficiency.

### A Midland 24-Hours Trial.

The M.C. and A.C., always a live club, are organising a 24-hour trial from Birmingham to Holyhead and back, to take place on July 7th and 8th. Particulars will shortly be available from Mr. T. Blumfield, 52, Edgbaston Road, Birmingham.

### Recovered from Accident.

Both C. P. Wood and H. Langman, the Scott riders, who were involved in a taxi accident in the Isle of Man after the Senior T.T. have now recovered; Langman rode (against advice) in Saturday's Yorkshire Centre Open Trial, and was first in his class.

### A R.N.A.S. Reunion.

A Reunion Dinner for No. 8 Squadron, R.N.A.S. (Zanzibar) will be held to-morrow, June 23rd. All members of the R.N.A.S. who served in East Africa will be welcome. Communications to Mr. S. Thompson, 383, Wharncliffe Gardens, St. John's Wood, N.W.8.

### Handicapping Innovation for Brooklands.

At Brooklands, on July 15th, the chief feature of the B.M.C.R.C. race meeting will be a 100-miles race for which Mr. A. Mellano, of Hutchinson tyre fame, has presented as first prize a cup valne fifty pounds, or its full value in cash. He has suggested a novelty in handicapping, based on the 100 miles records. Each competitor will be credited with so many laps on the scoring board at the beginning of the race. No credit will be allowed to class E men (1,000 c.c.), and all riders will start together. The handicaps will therefore be by distance and not by time allowance, and interesting results are anticipated.

### Next Big International Event.

The French Grand Prix, which will be held at Strasbourg on Wednesday, July 12th, is the next big international event.

### Two Hours 1000 c.c. Record Broken.

Riding a 994 c.c. Trump-Anzani, Colonel R. N. Stewart succeeded in breaking the two hours' record at a speed of 78.85 m.p.h. at Brooklands. The weather was cold and threatened to rain with a strong north wind blowing. He intended to attempt the 2, 3, 4, and 5 hours' records, but owing to a unfortunate breakdown was unable to continue.

### The Belgian Grand Prix.

Already quite a good number of British machines have been entered for the Belgian Grand Prix to be held on July 23 next. Mr. Paul E. Kelecom, of the F.N. Company, of Liege, who attended the Tourist Trophy Races in the Isle of Man, sportingly approached one or two manufacturers with the object of inducing them to compete in the event, and his efforts met with success. The entry fees are 750 francs per machine, up to July 8 next.

### Silencer Prosecutions.

Four motor cyclists were fined £2 each at Bristol recently for, in the opinion of the Bench, creating undue noise and smoke by riding their machines without silencers. The constable, in evidence, said that one machine made a noise like "a rifle being fired down a drain-pipe."

Much discussion took place as to the standard by which noise could be judged; one defendant asked for a police guarantee of compliance with the law when the necessary additions had been made to the machine, but this was refused.

### Imports and Exports.

Importation of motor cycles showed an increase last month of over £8,591, the number of machines received being 194, valued at £10,508; accessories accounted for £6,663, a total of £17,171. Exports have not brightened up as we hoped they would. Certainly last month's figures are more than maintained, but compared with May, 1920, the value is down by half.

EXPORTS.

| | 1920 | 1921 | 1922 |
|---|---|---|---|
| Value of machines | £120,350 | £66,898 | £55,880 |
| Value of Accessories | £47,732 | £21,095 | £25,936 |
| Total | £168,082 | £87,993 | £81,816 |
| No. of machines | 1,599 | 864 | 855 |

### The Grand Prix.

Two of the T.T. winners, G. S. Davison (Levis), in the lightweight class, and A. Bennett (Sunbeam), in the senior class, have entered for the French Grand Prix. The second Sunbeam will be ridden by De La Hay, while one of the three Triumphs entered is to be ridden by F. G. Edmond, and one of the Nortons by W. Hollowell. Forty-two entries in all have been received, in which four nations are represented: England by Triumph, Sunbeam, Norton, Massey-Arran, New Imperial, Levis, and Velocette; France by Armor, Thomann, Moto Solo, Isoard, Liaudois, Yvels, Chauvière, Terrot, Alcyon, Peugeot, Griffon, and Koehler Escoffier; Switzerland by the Motosacoche; and Italy by three Garelli's, a very interesting type of two-stroke.

### Trial for Naval Officers.

Notice is given by the Royal Naval and Royal Marine Sports Control Board that entries for the Arbuthnot Trophy trial will close at noon on Friday, July 7th. The trial is open to any officer or midshipman in H.M. Navy, Naval Reserve, and Naval Volunteer Reserve, on the active list on the date on which entries close. Entrants must compete on solo motor bicycles which may be of any make or power, and must report at the trial headquarters at the Burford Bridge Hotel not later than noon on July 7th, with their motor cycles filled with petrol and oil, to be ready to start at 2 p.m. sharp. Such is the gist of a notice appearing in *The Times* under the heading "Naval and Military," which clearly shows that the Arbuthnot Trophy trial has the official recognition of the Admiralty. We sincerely hope, therefore, that commanding officers will grant the necessary leave to intending naval competitors who take part in this unique event.

### 500 Miles Motor Cycle Race.

The second five hundred miles motor cycle race to be promoted by the British Motor Cycle Racing Club at Brooklands Track, Weybridge, on Saturday, September 23rd, is already arousing much interest. There will be a race over five hundred miles for solo motor cycles in each of the five recognised classes, A, B, C, D, and E, all the contests being run together as one event of unique interest. Intending competitors are reminded that the number of entries is strictly limited to fifteen in each class, and that priority will be given to those who make application for entry first. Application should, therefore, be made at once to Mr. T. W. Loughborough, Hon. Secretary, British Motor Cycle Racing Club, 83, Pall Mall, London, S.W.1, a remittance of £6 6s. for each entry being forwarded.

The race is confined to members of the B.M.C.R.C., and others making application for entry should at the same time apply for membership of the Club.

SMALL CAR PROGRESSION

*"THE AUTOCAR"—published from the offices of "THE MOTOR CYCLE" and conducted on the same enterprising lines—is the complete automobile journal embracing small, medium, and large cars. Every motor cyclist contemplating the purchase of a light car should read*

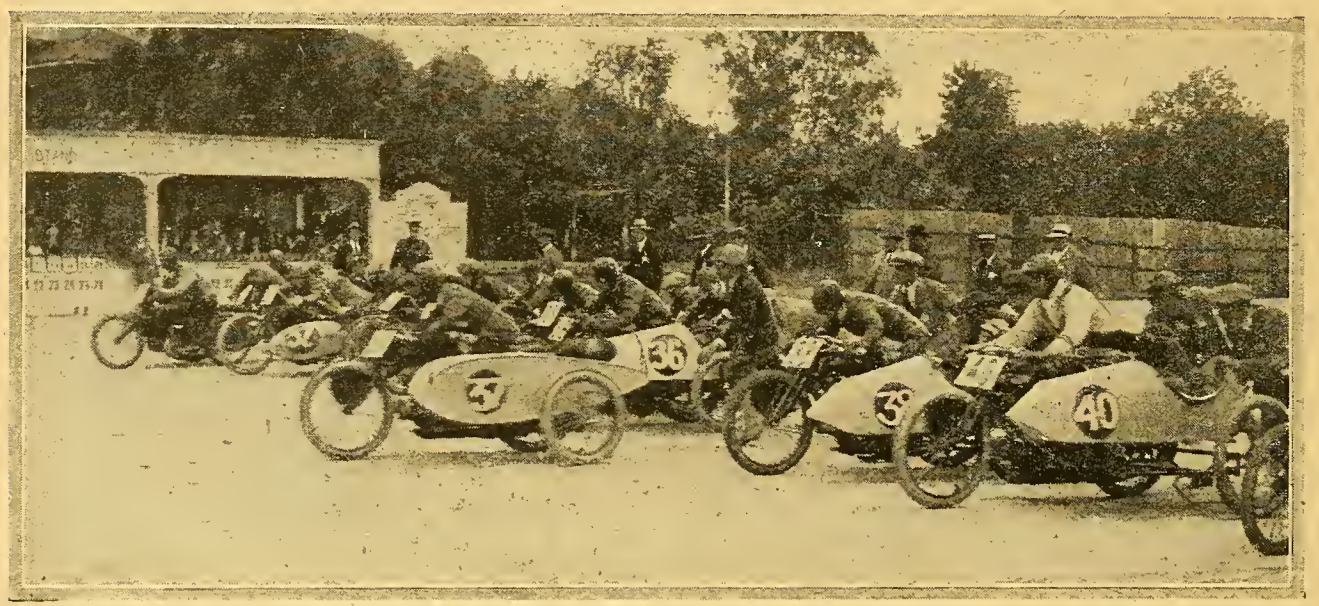
The Autocar

Every Friday **4d.**

*Founded in 1895, "THE AUTOCAR" is the largest and most successful automobile paper and enjoys the greatest circulation. It is universally accepted as the representative British motoring journal.*

# SIDECARS AT SPEED.

## Two Hundred Mile Sidecar Races at Brooklands; Many Records Broken at Ealing Club's Event.



Off! The big twins of the 1,000 c.c. class crossing the starting line.

FULL of incidents, though somewhat tedious to watch and difficult to follow, the two hundred miles sidecar races held by the Ealing and District Motor Cycle Club resulted in the beating of several records, though these were not ready for publication at the conclusion of the meeting. Particulars of these, however, will be found on the next page.

Cool, but not unpleasant, weather favoured the event, and suited the spectators admirably, though there was too much wind to please some of the competitors.

Pullin's 346 c.c. Douglas brought him records and a splendid victory by nearly half an hour in the 350 race; Bridgman's (499 Indian sc.) in the 600 c.c. race by over three-quarters of an hour was a brilliant success, but Le Vack's 998 Zenith-Jap sc.) brave fight against Davidson (998 Indian sc.) provided the most excitement of the whole meeting.

### Three Separate Events.

There were really three separate events in all, the 350 c.c. race (sidecars painted blue), the 600 c.c. race (sidecars painted red), and the 1,000 c.c. race (sidecars painted yellow). To give a coherent account of the proceedings each race must be treated by itself.

Beginning about 10 minutes after schedule time—noon—the race for the 350 c.c. cup attracted 15 starters. Several of the machines possessed interesting fitments, and all of every class had to be equipped with special skids so as to support the outfit in the event of the sidecar wheel coming off. Fortunately they were never needed, but the idea was a good one, all the same. The skid on Young's O.K. was equipped with a ball-bearing roller skate wheel. Most of the 350 c.c. competitors got off the mark smartly, but two of the Weatherells started late. That driven by Weatherell himself was delayed by the breakage of a brake pedal, but, notwithstanding, he is reported to have broken record. Tudor Thompson (346 Douglas sc.) rode instead of Holroyd. Thompson led easily for three laps, but a choked petrol pipe delayed him; then Pullin, who was similarly mounted, assumed the lead and kept it throughout the race, doing better and better as he proceeded. All the Weatherells suffered lubrication trouble, since their simple and ingenious constant-level float-feed system, though satisfactory for ordinary use, was not up to racing requirements. Early in the event the leaders were posted at the end of every ten laps, but later in the afternoon this posting of progress lagged behind somewhat.

### THE 200 MILE SIDECAR RACES IN BRIEF

#### THE WINNERS.

**For the "350" Cup.**

1. C. G. Pullin (346 Douglas sc.)—51.76 m.p.h.
2. L. F. Peaty (348 Hawker sc.)—46.32 m.p.h.
3. V. Baxter (549 Holroyd-Jap sc.)—43.73 m.p.h

**For the "600" Cup.**

1. E. A. Bridgman (499 Indian sc.)—53.92 m.p.h.
2. V. E. Horsman (596 Norton sc.)—44.42 m.p.h.
3. F. E. Jones (498 Ariel sc.)—38.02 m.p.h.

**For the "1,000" Cup..**

1. D. H. Davidson (998 Indian sc.)—65.44 m.p.h.
2. H. Le Vack (998 Zenith-Jap sc.)—64.88 m.p.h.
3. T. R. Allchin (989 Harley-D. sc.)—60.64 m.p.h.

### After Ten Laps.

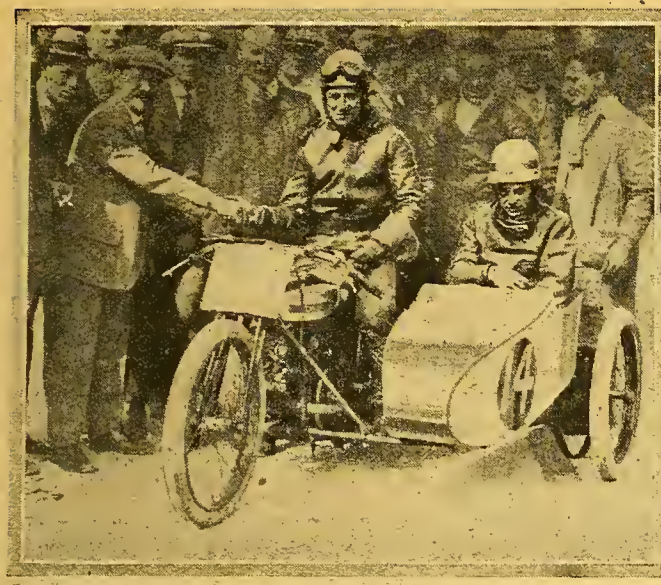
When ten laps had been completed the leaders were: Pullin (Douglas sc.), Youngs (O.K. sc.), and Peaty (Hawker sc.). By the time (1-10 p.m.) that the 600 c.c. machines were started [illegible] had accomplished 20 laps, Youngs 19, and Peaty 18, and at 20 laps also the three leaders' positions had not altered.

There were naturally plenty of incidents. Dequin (Ivy sc.) broke the bottom of the saddle tube of his frame just above the bottom bracket on his 14th lap. Weatherell retired with a seized piston on his 8th lap. In his 49th lap Prestwich (Jap engined Coventry Eagle sc.) was delayed by a broken chain, and King Smith (Morris sc.), after 30 laps, experienced a broken gudgeon pin.

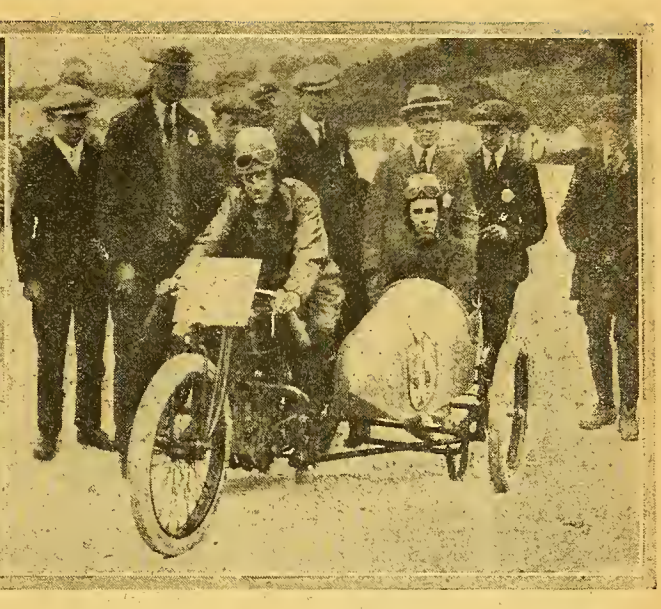
### Half-way.

At practically half distance Pullin was not only leading, but bettering his position, and was four laps ahead of Peaty, while Baxter (Holroyd-J.A.P.) held third place. Thereafter their positions never altered.

When the leaders in the 40th lap were posted, Pullin had covered 58



C. G. Pullin (346 c.c. Douglas), winner of the "Three-Fifty Cup" at a speed of 51·76 m.p.h.



D. H. Davidson, who won the "Thousand Cup" on his 998 c.c. Indian at 65·44 m.p.h.

laps. By the time Pullin had completed 70 laps, Peaty had done 63, and Baxter 61, the leader of the 600 c.c. race had finished 57, and the leader of the 1,000 c.c. race 43.

Just after 4 p.m. Pullin crossed the finishing line.

| | | |
|---|---|---|
| C. G. Pullin (350 Douglas sc.) | 3h. 53m. | 10⅕s. |
| L. F. Peaty (346 Hawker sc.) | 4h. 20m. | 29⅘s. |
| V. Baxter (349 Holroyd-Jap sc.) | 4h. 35m. | 22s. |
| J. V. Prestwich (349 Coventry-Eagle sc.) | 4h. 56m. | 58s. |
| S. T. Glanfield (348 Morris sc.) | 5h. 23m. | 49s. |
| H. Jeluke (348 Weatherell sc.) | 5h. 39m. | 46s. |
| A. King Smith (348 Morris sc.) | 6h. 15m. | 9s. |
| Tudor Thompson (350 Douglas sc.) | 37 laps. | |
| P. C. C. Passmore (348 Weatherell sc.) | 26 | ,, |
| H. H. Robinson (349 Wooler sc.) | 21 | ,, |
| R. Deguin (348 Ivy sc.) | 14 | ,, |
| R. Weatherell (348 Weatherell sc.) | 12 | ,, |
| S. M. Greening (349 Francis-Barnett sc.) | 9 | ,, |

* Outside time limit.

At the end of the race Pullin referred to his ride as "a comfortable half-throttle job." He was troubled by the slower riders who "rode well on the 50ft. line," and said it was curious how the speed varied according to slight changes in the wind direction, though the throttle was set in one position and never altered. In one lap his passenger sat up in the sidecar and it made a difference of 3 m.p.h. Peaty, who made an absolute non-stop run, had an auxiliary tank behind the sidecar and a hand pump for the pressure feed, complete with gauge. Prestwich, who finished fourth, had a flat sidecar tyre in his 50th lap, repaired it, and continued.

### The 600 c.c. Sidecars.

When the time came for the 600 c.c. sidecar outfits to line up for the start, Col. R. N. Stewart stationed himself on the track with a yellow flag so as to keep the juniors clear of their larger *confrères*.

In this class there were only seven starters, but some first-class riders were among them. Bridgman was mounted on a single-cylinder T.T. Indian, and of course his red sidecar matched the natural colour of his mount. Harwood's Hazlewood J.A.P. had two carburetters, while the Norton riders were all first-class men. Maintaining the same delay as on the occasion of the "350" men, the larger machines left at 1.10 p.m., all getting away well except Bridgman, and at the end of lap one O'Donovan was leading, followed by Horsman, Emerson, and Tucker,

### RECORDS MADE DURING THE RACES.

**350cc. Class B/S.**

50 miles.—C. G. Pullin (346 Douglas sc.), 55m. 45.36s. = 53.81 m.p.h.

100 Miles.—C. G. Pullin (346 Douglas sc.), 1h. 54m. 56.52s. = 52.20 m.p.h.

200 Miles.—C. G. Pullin (346 Douglas sc.), 3h. 51m. 51.39s. = 51.76 m.p.h.

1 Hour.—C. G. Pullin (346 Douglas sc.), 53 miles 1,378 yards = 53.78 m.p.h.

2 Hours.—C. G. Pullin (346 Douglas sc.), 104 miles 665 yards = 52.19 m.p.h.

3 Hours.—C. G. Pullin (346 Douglas sc.), 156 miles 1,239 yards = 52.23 m.p.h.

4 Hours.—C. G. Pullin (346 Douglas sc.), 201 miles 189 yards = 50.28 m.p.h.

5 Hours.—C. G. Pullin (346 Douglas sc.), 201 miles 189 yards = 40.22 m.p.h.

**600cc. Class F.**

100 Miles.—V. E. Horsman (596 Norton sc.), 1h. 44m. 5.20s. = 57.64 m.p.h.

200 Miles.—G. H. Tucker (588 Norton sc.), 3h. 40m. 9.86s. = 54.50 m.p.h.

2 Hours.—G. H. Tucker (588 Norton sc.), 114 miles 511 yards = 57.14 m.p.h.

3 Hours.—G. H. Tucker (588 Norton sc.), 166 miles 1,683 yards = 55.65 m.p.h.

**1,000c.c Class G.**

200 Miles.—H. Le Vack (998 Zenith-Jap sc.), 3h. 5m. 4.70s. = 64.84 m.p.h.

2 Hours.—H. Le Vack (998 Zenith-Jap sc.), 134 miles 465 yards = 67.13 m.p.h.

3 Hours.—H. Le Vack (998 Zenith-Jap sc.), 193 miles 1,060 yards = 64.53 m.p.h.

*The following distances and times were made by D. H. Davidson, but may not be passed as records as the tyre on the sidecar was smaller than allowed under F.I.C.M. Rules:—*

200 Miles.—D. H. Davidson (998 Indian sc.), 3h. 3m. 21.78s. = 65 miles 44 yards m.p.h.

3 Hours.—D. H. Davidson (998 Indian sc.), 196 miles 259 yards = 65 miles 38 yards m.p.h.

but in the early stages the race resolved itself in a duel for first place between Horsman (Norton sc.) and Emerson (Douglas sc.), but at the 10th lap the leaders were Horsman (Norton sc.), Emerson (Douglas sc.), and Tucker (Norton sc.).

Then misfortune overtook Emerson, as, somewhere about his 15th lap, a stripped gear pinion caused his retirement. Harwood had also experienced bad luck and withdrew with a burnt-out plug and a slipping clutch. O'Donovan also retired, but by the 20th lap Horsman was leading and Tucker second, while Bridgman's consistent running had brought him up to third place. By the time thirty laps had been accomplished the order remained unchanged. At forty laps Tucker took the lead, with Horsman second and Bridgman third. A broken inlet valve then caused Horsman delay, and only four men were left in the running. Tucker was easily ahead, but as he changed a wheel with assistance away from his depot he was disqualified, but later raised a protest. Result:—

| | | |
|---|---|---|
| E. A. Bridgman (499 Indian sc.) | 3h. 43m. | 47⅗s. |
| V. Horsman (596 Norton sc.) | 4h. 31m. | 41⅖s. |
| F. E. Jones (498 Ariel sc.) | 5h. 17m. | 20⅖s. |
| J. Emerson (499 Douglas sc.) | 16 laps. | |
| D. R. O'Donovan (588 Norton sc.) | 15 | ,, |
| J. E. G. Harwood (498 Hazlewood-Jap sc.) | 3 | ,, |

### The 1,000 c.c. Machines.

By far the most exciting race was that started at 2.10 p.m. between the 1,000 c.c. sidecar outfits. Eleven starters lined up before the timekeeper. Packman's Packman-Jap used a double induction pipe (in one casting) leading to two carburetters, and perhaps the greatest novelty was Dixon's Harley-Davidson, the sidecar wheel of which was driven by chain off a sprocket attached to a shaft running underneath the sidecar chassis and driven direct off the countershaft. Le Vack was using a Schebler carburetter on his Zenith-Jap sidecar.

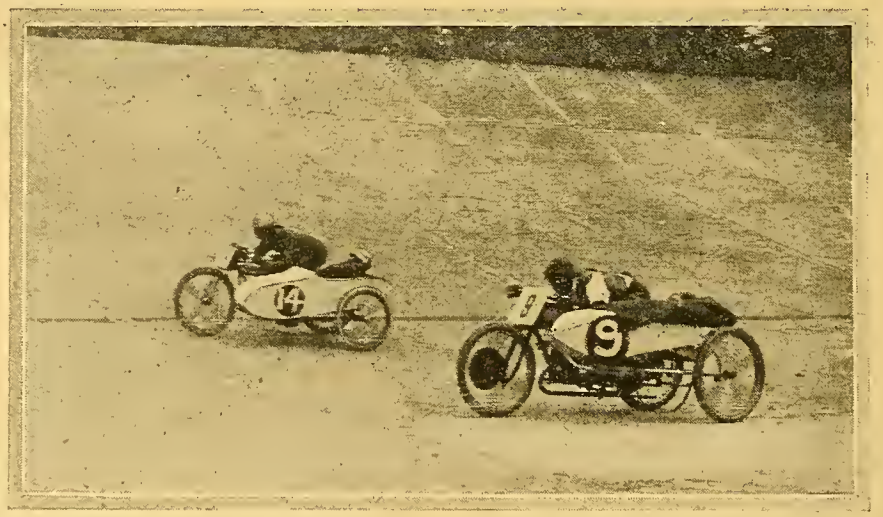
An excellent start was made, but Kaye

A. G. Fenn (739 c.c. Martinsyde) (31), Kaye Don (998 c.c Zenith J.A.P.) (38), T. R. Allchin (989 c.c. Harley-Davidson) (34), followed by C. G. Pullin (346 c.c. Douglas) (14). These two photographs were taken within two or three seconds of each other, and show how the riders' positions changed.

Don rolled in at the end of his first lap with his rear tyre deflated. Fenn (Martinsyde sc.) stopped early in the race. At the end of the tenth lap, Le Vack, travelling at high speed, was leading easily, Davidson (Indian sc.) was second and Allchin (Harley-D. sc.) third, but at thirty laps, though the first and second positions were unaltered, Dixon (Harley-D. sc.) occupied third place. Meanwhile, Longman (Zenith-Jap sc.) was held up by plug trouble, and a piece of the plug entered the cylinder. By the time forty laps had been covered, the order of the leaders remained the same. Temple (Harley-D. sc.) stopped and replaced his petrol pipe, and at forty-four laps Le Vack paid a call at his depot and hurriedly changed a rear wheel, and Allchin (Harley-D. sc.) was delayed by clutch trouble.

When about fifty-five laps had been covered the excitement became intense. Le Vack's tyre trouble and the fact that he had been delayed far away round the track gave Davidson a three-lap lead. Le Vack got going again, and travelling well (he had clearly the faster machine), struggled hard to regain the lead, but tyre trouble again pulled him up in his 67th lap. Once on the track again, he renewed his desperate efforts, and once more began to overhaul his rival, but the time was too short; passing him at the 71st lap, Le Vack was still a lap behind, and finished second, 1 min. 38 sec. behind the winner, who carried off a second Indian victory (if Tucker's protest is not allowed). Result:—

| | | |
|---|---|---|
| D. H. Davidson (998 Indian sc.) | 3h. 4m. | 20s. |
| H. Le Vack (998 Zenith-Jap sc.) | 3h. 5m. | 58s. |
| T. R. Allchin (989 Harley-D. sc.) | 3h. 18m. | 55s. |
| R. Charlesworth (998 Zenith-Jap sc.) | 3h. 37m. | 6s. |
| C. F. Temple (989 Harley-D. sc.) | 3h. 44m. | 15s. |
| Kaye Don (998 Zenith-Jap sc.) | 4h. 7m. | 31⅕s |
| A. G. Fenn (739 Martinsyde sc.) | 52 laps. | |
| G. Packman (998 Packman-Jap sc.) | 41 | ,, |
| S. E. Longman (998 Zenith-Jap sc.) | 30 | ,, |
| F. A. Longman (994 Ariel sc.) | 26 | ,, |
| F. W. Dixon (989 Harley sc.) | 23 | ,, |



A duel between C. G. Pullin (346 c.c. Douglas) and H. H. Robinson on a 349 c.c. Wooler. The former won.

## HOW THE CRASH HELMET ORIGINATED.

EARLY in 1914 Dr. Eric Gardner, Medical Officer for Brooklands track, noticed in his case book that about every fortnight he had a hospital case of a motor cyclist who had fallen on the track and received injury to the head. If the rider was travelling at 60 miles an hour or over he was usually practically unhurt, but if going at only 45 m.p.h. serious bodily damage usually resulted.

After some thought Dr. Gardner came to the conclusion that at the higher speeds a man who crashed was projected forward and struck the ground with a glancing blow, and not directly, as happened at the slower speeds. Having witnessed a man part company with his machine through fork breakage while passing under the bridge leading to the track, Dr. Gardner thought of the helmet idea, and got Mr. Moss, of Bethnal Green, to construct a canvas and shellac helmet devoid of all projections, stiff enough to stand a heavy blow, and smooth enough to glance off any object against which it came in contact. When the design was first submitted to the A.C.U. it was universally condemned, and when the A.C.U. became converted violent opposition was encountered from the riders.

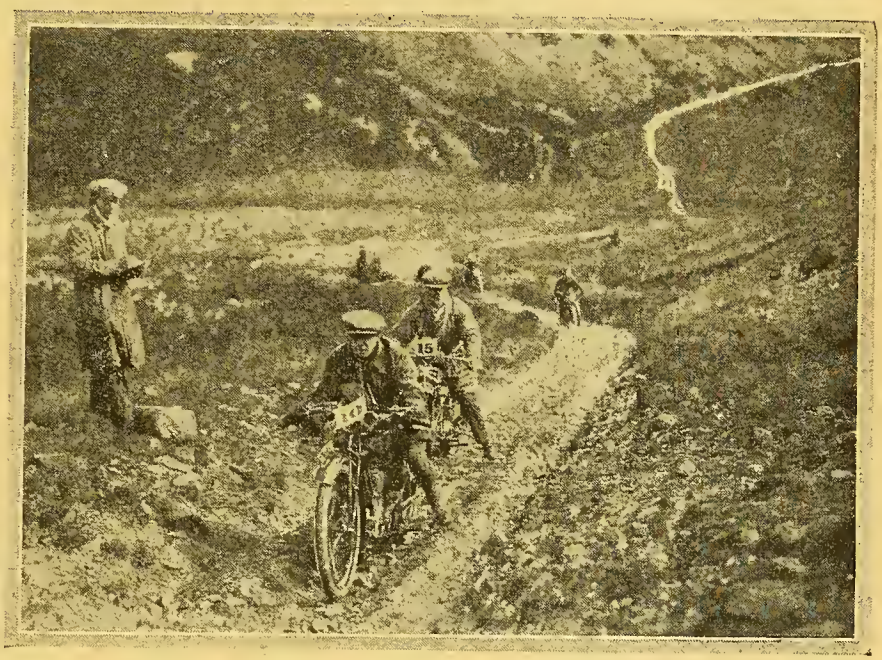
Nevertheless, Col. Lloyd took 94 of these helmets with him to the Isle of Man. One rider who hit a gate struck it a glancing blow and, thanks to the helmet, was uninjured. Later, Dr. Gardner received a letter from one of the principal medical officers in the Isle of Man asking why, when after the T.T. races their hospitals had always "several interesting concussion cases," there was now none. All credit must therefore be given to Dr. Eric Gardner for an innovation which has not only rendered motor cycle racing a comparatively safe sport, but has saved countless riders from serious injury.

# "ROUGH HEART-BREAKING STUFF."

## Yorkshire Centre (A.C.U.) Colonial Trial. Two Grueliing Circuits of a 70 Miles Course.

ACCORDING to "Ye Booke of Ye Great Colonial Trialle on ye Seventeenth Day of ye month of June in ye yeare of Grace 1922 A.D.," otherwise the programme of last Saturday's open one-day event in Yorkshire, the competition was termed a Colonial Trial.

The term so used was explained by the following note: "Portions of the course will be over rough, though perfectly rideable, ground, and the conditions, so far as possible, will be such as a motor cyclist would expect to meet in some of the colonies"—looking back on the trial we are inclined to agree that no one would expect much worse.

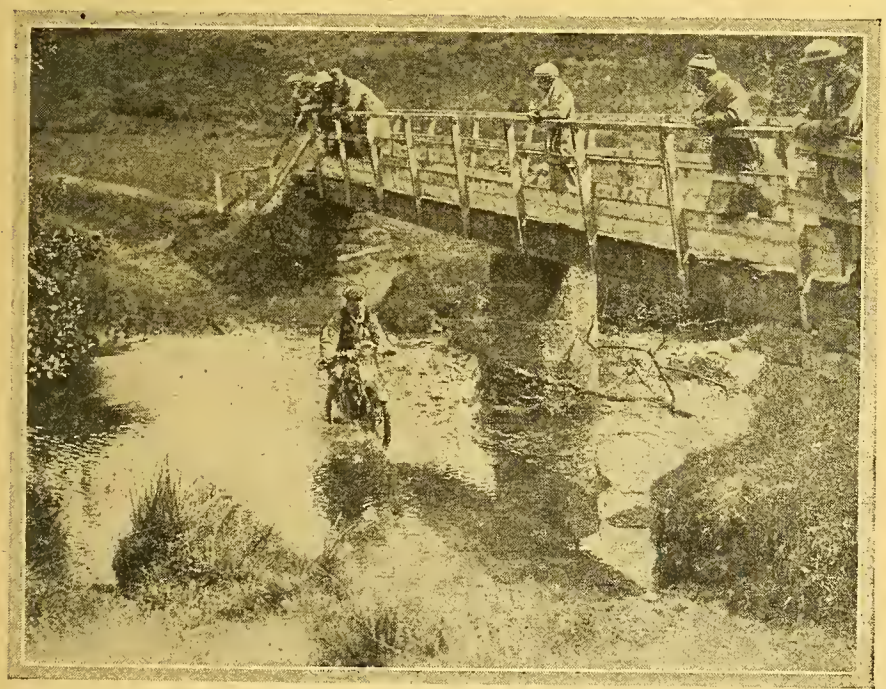


It was this type of surface which made the trial so difficult. C. Dodson (349 c.c. Royal Ruby) and A. Bowie (349 c.c. Wooler) on the disused track to the lead mines near Greenhow.

### Two Circuits over Same Course.

Harrogate was the starting, lunch, and finishing point of the trial, and the course embraced some of the lesser-known roads in Wharfedale and Nidderdale. No freak gradients were included; surface, or lack of it, described some time ago by one of the route-finders as rough, heart-breaking stuff, being relied upon for elimination purposes on a system of marking based on observation of riding ability and machine performance; the observer at each of the twenty-five selected points awarding marks from 0 to 5 on the spot.

From Harrogate the route led circuitously over lanes and grass tracks, with some decent going to Pately Bridge, where a sharp turn, almost a hairpin, in the cobbled main street led to a lane up Brownstay Ridge, a northern flank of the Nidd Valley. Up and down again to the river's level involved about three miles of farm tracks, minor watersplashes, and grassy hairpins, as a foretaste of what was to follow.

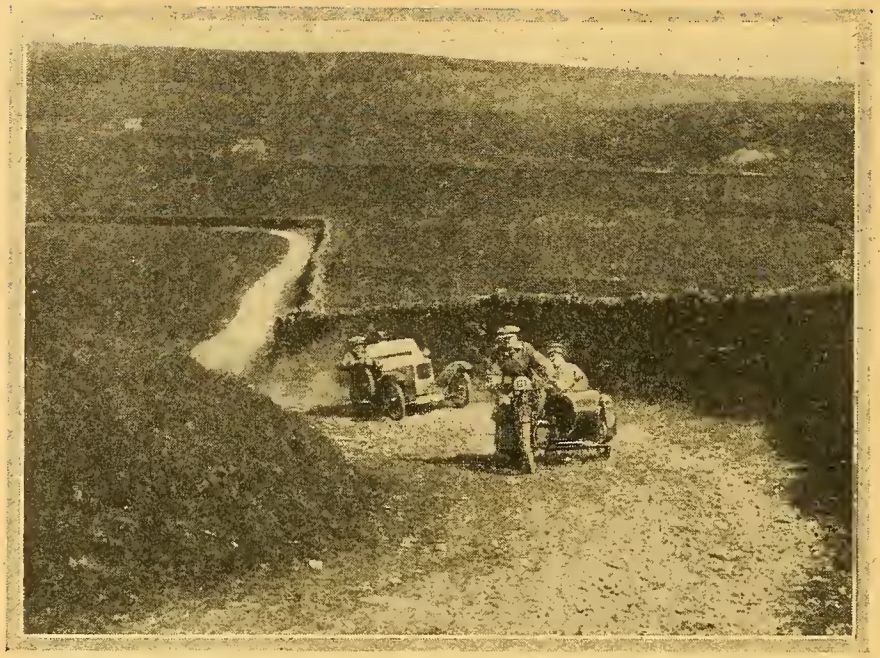


In the River Washburn, at Mogington Bridge, on the West Yorkshire Moors. The rider is S. Lawrence (499 c.c. Sunbeam). This was only one of the many watersplashes in the Yorkshire Centre Trial.

Re-entering Pateley Bridge the famous Greenhow Hill was attacked, but only the lower section was climbed before the route switched to the right along the edge of a valley carved in the moors by a mountain stream. Having climbed some 500 ft., crossing the stream meanwhile, the competitors, rounding a bluff, came to a grassy and rutted descent into a veritable valley of desolation—no vegetation, rocks and stones innumerable, and the ruins of a lead mine, crumbling with fifty years of decay. Here was the most terrible bit of track in the trial. The route recrossed the stream by a thickly boulder-strewn ford, from which the forgotten track wound upwards in gentle curves over fearsome lumps of rock. Few would have thought a clean passage was possible to a solo rider, yet Bert Kershaw (250 New Imperial), P. L. Mayo (348 Coventry Eagle), J. Whalley (348 Massey Arran), and J. A. Watson-Bourne (976 Brough Superior) all made astoundingly clean performances at this point; if any distinction can be made Kershaw and Watson-Bourne were the best, the former all concentration on the business in hand, the latter cheerful as ever, with time for a side glance and a greeting to an acquaintance by the wayside.

### Speed on Freak Surfaces.

Only slightly less outstanding were J. A. Newman (496 Douglas), W. Backhouse (499 Triumph), C. W. Ward (499 Triumph), J. T. Bashall (688 Martinsyde), and J. H. Holmes, W. Clough,



G. C. Booth (598 c c. Beardmore-Precision sidecar) followed by W. Ridley ( 1098 c.c. New Hudson) on the ascent to the Hardcastle control.

and C. B. Haigh (532 Scotts). J. S. Duxbury (532 Scott) was exceptionally fast, but after a valiant effort to keep his feet off the ground at last had to touch. Very little baulking occurred, but on one occasion seven competitors came in a string, led by Mrs. Janson, now mounted on a 211 c.c. Levis. This lady stopped, and had great difficulty in moving her mount from the course; thus several were baulked.

Out of 66 starters, 47 rode solo mounts, for although two tracks gave stability, the possibility of surviving the course on a passenger machine seemed somewhat remote. On the above described section the sidecars naturally had some fearful buffeting, but with one exception appeared to be surviving well. The three-wheelers (there were five) did not appear to be quite so happy—two were giving signals of engine distress.

### Down the Valley Again.

Thereafter the competitors might have expected some respite—but no! Down the valley again by a hill used in former Scott trials, then up again, parallel to it, by a tolerably smooth but steep ascent to the moorland plateau once more, then a glorious "blind" *viâ* Greenhow village (1,400 ft. altitude), down to Skyreholme, near Appletreewick in Wharfedale. Then up the disused grass track over Pock Stones Moor, all on old Scott trials route again, through a deep watersplash at Hey Slack, another at Bramley Head, and another shallow one at Mogington Bridge.

Of these three, that at Mogington was reported to be worst, but Kershaw (249 New Imperial), J. Whalley (348 Massey Arran), H. Gibson (349 Raleigh), H. S. Moorhouse (499 Triumph), E. L. Boston (486 Scott), S. Laurence (499 Sunbeam), W. Brandish (700 Humber), and J. M. Younie (688 Martinsyde), treated it with indifference.

Quite outstanding amongst the solo men, however, were P. L. Mayo (248 Coventry Eagle), H. Langman (486 Scott), and Watson Bourne (976 Brough Superior). The other Brough Superiors were not nearly so dexterously handled. A. K. Fitton, on this make, floundered and then broke a chain, while A. Greenwood, his team mate, charged into the water at speed, only to scramble out at the other side. T. A. R. Arthurs (550 Triumph) experienced bad luck, for his exhaust pipe fell away from the cylinder.

Generally speaking, the sidecars were better than the soloists, and some good driving was exhibited. This remark cannot be passed on the methods of some of the three-wheeler drivers. W. A. Carr (1098 Morgan), and W. Ridley (1098 New Hudson) negotiated the crossing skilfully, but the others were far too dashing.

After this point no severe obstacle was encountered until Harrogate was reached again, but the surfaces, the countless humps, bumps, and corners, all contributed to the difficulties of maintaining a satisfactory average speed.

### The Same Dose Repeated.

Somewhat refreshed by the excellent provision made for everyone's comfort during the luncheon hour in Harrogate, the survivors, numbering about forty-five, embarked again on their second circuit. Footrests were dangling or pointing to one-fifty o'clock, lamps were battered, mudguard stays broken, and silencers loose, but the hardy crowd went on.

The afternoon's run was a repetition of the morning's trip, except for a timed hill climb, but some of those not previously familiar with the type of road traversed had learnt a lesson or two. Others were so tired of holding the dithering and plunging handlebars that they fell off where they had previously excelled.

Although on the first circuit the ford at Mogington Bridge was deemed worst, on the second round the Bramley Head splash was considered to be the real test of seamanship; and most of the soloists had difficulty therein—one even laying down altogether. Amongst the sidecars, the two P. and M.'s driven by G. M. Townsend and R. Lewis, distinguished themselves—the high engine and magneto position favouring them. E. C. Gifford's Martinsyde sidecar was also good, and H. S. Perry's 770 c.c. B.S.A. twin was undoubtedly the healthiest sounding sidecar machine in the trial.

As in the morning's circuit, the weather remained fine throughout, and except near the water-splashes, roughness of surface was the only real obstacle to time-keeping; at the splashes, of course, considerable wheel spin was experienced.

Naturally there were many incidents and difficulties. G. E. Jackson and G. C. Booth (598 Beardmore-Precision sidecars) had both dropped out with tyre troubles; W. E. Grange (750 Bradbury sc.) had damaged his gearbox by slamming in low as a brake; R. Horsley (633 Norton) had a gear box ball race go; Hugh Gibson (348 Raleigh) was gamely riding with one hand on the petrol tap owing to a punctured float; B. L. Bird (537 B.S.A. sc.) kept going, and well at that, despite a broken inlet spring, and C. B. Haigh (532 Scott) was sticking on to a broken saddle.

Everything concluded satisfactorily. The results were announced the same evening, and beyond a few minor grumblings as to the arrowing, which for the most part were raised on small grounds, the trial was most enjoyable, although more than an ordinarily strenuous day's riding had been done, again to quote the programme, between "eight of ye morne to setting of sun."

Results:—

(Maximum marks, by observation, 250; by final examination, 10; total, 260.)

Premier Awards of equal value were given in each class, with second and third prizes as mentioned.

CLASS A.—SOLO UP TO 250 c.c.

| | Marks. |
|---|---|
| 1. B. Kershaw (248 New Imperial) ... | 244 |
| 2. P. L. Mayo (248 Coventry-Eagle) ... | 208 |

CLASS B.—SOLO UP TO 350 c.c.

| | |
|---|---|
| 1. J. Whalley (348 Massey-Arran) ... | 244 |
| 2. H. Gibson (348 Raleigh) ... ... | 226 |
| 3. C. F. Nott (348 Raleigh) ... ... | 220 |

CLASS C.—SOLO UP TO 500 c.c.

| | |
|---|---|
| 1. H. Langman (486 Scott) ... ... | 253 |
| 2. H. S. Moorhouse (499 Triumph) ... | 247 |
| 3. W. Westwood (499 Triumph) ... ... | 245 |

CLASS D.—SOLO UP TO 750 c.c.

| | |
|---|---|
| 1. C. B. Haigh (532 Scott) ... ... | 253 |
| 2. W. Moore (532 Scott) ... ... ... | 250 |
| 3. G. S. Boston (532 Scott) ... ... | 249 |

(NOTE.—J. T. Bashall (688 Martinsyde) also secured 249 marks, but was slower in timed hill climb.)

CLASS E.—SOLO, UNLIMITED.

| | |
|---|---|
| 1. J. A. Watson-Bourne (976 Brough-Superior) ... ... ... | 235 |

CLASS G.—SIDECARS UP TO 500 c.c.

| | |
|---|---|
| 1. P. Pehrson (499 Dunelt sc.) ... ... | 195 |

CLASS H.—SIDECARS UP TO 750 c.c.

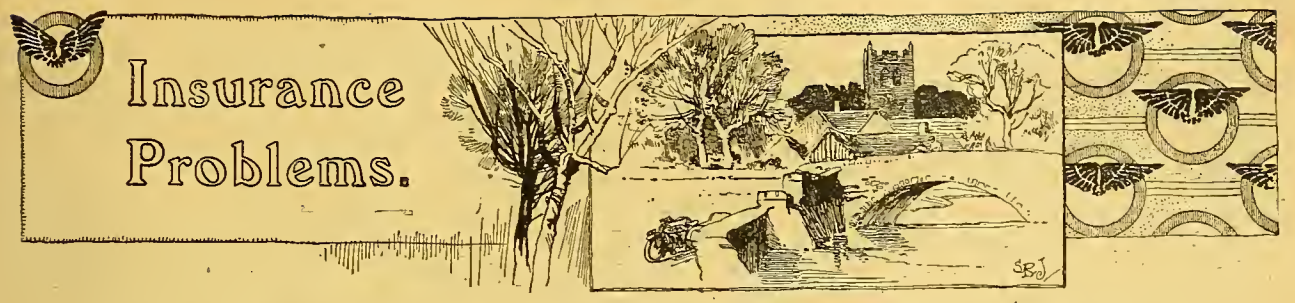
| | |
|---|---|
| 1. B. L. Bird (557 B.S.A. sc.) ... ... | 250 |
| 2. G. M. Towsend (555 P. and M. sc.) ... | 248 |
| 3. E. C. Gifford (688 Martinsyde sc.) ... | 231 |

CLASS I.—SIDECARS, UNLIMITED.

| | |
|---|---|
| 1. A. R. Stacey (989 Harley-Davidson sc.) | 255 |

CLASS J.—THREE-WHEELERS.

| | |
|---|---|
| 1. W. Ridley (1098 New Hudson) ... ... | 191 |




## A New Feature in which Insurance Questions are Answered and Discussed.

NONE but the rich can afford to run an uninsured motor cycle; none but the heedless and careless ever do so. The benefits and contentment of mind obtained by covering a machine by insurance are undeniable. That the necessity of insurance is recognised by the average motor cyclist is shown by the number of letters and queries we receive on the subject. Some of these questions are knotty ones requiring expert advice, and in this new feature it is proposed to deal impartially with the various problems our readers are so frequently presenting to us.

No good purpose can be served by recalling the calamitous passing of big insurance bodies recently, or of dwelling on the parlous state of several existing organisations except that they throw into strong relief the reputable organisations who are seeking patronage of motor cyclists to-day. These companies stand on solid foundations and reflect the greatest credit on British Insurance, which stands to-day in the premier position amongst insurance organisation of the world.

When motoring insurance was in its infancy, our sister journal *The Autocar* perceived a great need for motorists and founded The Autocar Insurance Department, the main object being that the motor vehicle insurer should have amongst other things unquestioned security, due and prompt recognition of the motorist's point of view, and equitable premium basis, prompt claim settlements, and all those things which the insurer is entitled to expect. From that company grew the Autocar Fire and Accident Insurance Co., from which office is issued *The Motor Cycle* Insurance policy.

As previously stated, we propose to assist readers wherever possible on any insurance matters, and problems needing elucidation will be dealt with promptly and impartially, and if of general interest discussed in these columns. Enquiries will be welcomed and should be marked "Insurance" on the left-hand corner of the envelope and addressed to *The Motor Cycle*, Dorset House, Tudor Street, London, E.C.4.

**Deducting for Depreciation.** Assessment of the value of a stolen motor cycle is a point of greatest interest. Mr. J. A. Coulder, Nottingham, wants to know if a machine be stolen three months after purchase (the original cost being £155), whether the full insured value is claimable from the insurance company, or may depreciation be deducted.

The fundamental principle governing all insurance transactions is, that the policy of insurance is a policy of indemnity and not of profit.

A motor cycle, purchased new to-day, and lost or destroyed after three months' usage, cannot possibly be of the value at the time of loss which it was at the time of insurance. It is the usual practice to settle total losses arising from any cause covered under the terms of an insurance policy on the basis of market value at the time of loss.

A reputable office would look upon a loss occurring after three months of insurance, in the case of a brand new machine, on the basis of very little and probably no depreciation having taken place at all. Should it be the case that the particular machine lost had been reduced in price for the new model, by the makers, then this is a consideration which must govern the settlement.

* * * *

**Who has the Last Word?** Like many others Mr. C. W. Clarke, Hampstead, wonders what constitutes "Reasonable precaution against theft," and he wishes to know, too, who has the last word in this matter. Pertinent questions not briefly answered.

"Reasonable precaution" is very difficult to define in actual set terms, but in practice, it presents very little difficulty indeed. Reasonable precaution, as the term is used in connection with insurance matters, is whether an insured person has looked after his property in such a manner as he would undoubtedly do were that property not insured.

Cases have happened, within our own experience, where machines have been left outside offices in public thoroughfares in London from 10.30 a.m. until 2.30 p.m. and no care at all exercised, either in padlocking or otherwise, to see that the machine was not criminally removed.

In no case has The Autocar Insurance Co. repudiated liability, however extreme the conditions attaching to a claim of this nature may have been, but in one or two cases the insured has had to bear some small portion of the loss where it was considered that there was grave negligence.

It must be remembered that the majority of insurance companies in transacting motor insurance have their big reputations to maintain, and it would obviously be inimical to their interests were they to adopt an attitude which could not be strictly maintained in a Court of Arbitration or other court.

As to "Who has the last word in this matter" the answer is undoubtedly the insured.

* * * *

**A Boundary Hit and Broken Spokes.** The following interesting query to hand as we go to press raises a point on which readers may speculate during the week. An answer will be given next Thursday.

A party of motor cyclists recently stopped to see a cricket match in a village, writes "Sportsman." One of the batsmen sent a hard, fast drive, which hit one of the machines and smashed several spokes. The question arose amongst us as to whether the insurance company should make good the damage. It was no fault of the batsman or of the motor cyclist, as the machine had been placed in what appeared to be a perfectly secure position. The machine does not appear to be covered, unless by the clause in the policy which says "accidental damage whilst on the road under ordinary riding conditions." It was an unlucky accident, and it certainly does raise a nice point, namely, who has to pay?

# Club News

In addition to the usual items at the motor cyclists' gymkhana at Exeter, acceleration and speed tests took place. R. Clark all out on his 633 c.c. Norton sidecar.

## Week-End Club Events.

*June 24th.—Scarborough and District M.C.—Open Yorkshire Rally, Scarborough Sea Front.*
*June 24th.—Bulwell M.C.—Run to Hathern and Loughboro'.*
*June 24th.—North Wales M.C.C.—Speed Hill Climb.*
*June 24th.—West Kent M.C.—S.E. Centre Hill Climb at Brighton.*
*June 24th.—Oxford M.C.—Motor Cycling Club Inter Team Trial.*
*June 24th.—Coventry and Warwickshire M.C.—Midland Centre A.C.U. Open Trial.*
*June 24th.—North West London Motor Club.—M.C.C. Team Trials.*
*June 24th.—Kelso and District M.C.C.—Reliability Trial.*
*June 24th.—York and District M.C.—Yorks Centre Gymkhana at Scarborough.*
*June 24th.—Eastbourne and District M.C.C.—Brighton and Hove M.C.C. Hill Climb.*
*June 24th.—Coventry Triangle M.C.—Run to Temple Balsall.*
*June 24th.—Yorkshire Centre.—Rally at Scarborough.*
*June 24th.—Darlington and District M.C.—Picnic at Dryderdale.*
*June 25th.—Rochester, Chatham and District M.C. and L.C.C.—Run to Leysdown.*
*June 25th.—Leeds Motor Union.—Reliability Trial.*
*June 25th.—Darlington and District M.C.—Reliability Trial for President's Cup.*
*June 25th.—Coventry Triangle M.C.—Run to Bentley Woods.*
*June 25th.—Eastbourne and District M.C.C.—Team Trial.*
*June 25th.—York and District M.C.—Mr. C. S. Russell's Run at 11 a.m., St Sampson's Sq.*
*June 25th.—Scarborough and District M.C.—Freak Hill Climb.*
*June 25th.—Southampton M.C.C.—Run to Bognor.*
*June 25th.—East London M.C.C.—Club Run.*
*June 25th.—Halifax and District M.C. and L.C.C.—Hincheliffe Reliability Trial.*
*June 25th.—Barrow and District M.C.—Open Trial.*
*June 25th.—Colne and District M.C.—Run to Rathmell.*
*June 25th.—Sheffield M.C.C.—Run to Lathkill Dale.*
*June 25th.—Wolverhampton M.C.C.—Social Run.*
*June 25th.—Exeter M.C. and J.C.C.—Club Run.*
*June 25th.—Newcastle and Northern M.C.—Picnic to Middleton.*
*June 28th.—Leeds Motor Union.—Impromptu Run.*
*June 28th.—York and District M.C.—Paper Chase.*
*June 29th.—Mid Bucks M.C.C.—Captain's Cup.*

### Barrow and District M.C.

Following are the formula results in each class of a hill-climb held at Buckman Brow by the Club: A.—1, B. Parkinson (Diamond); 2, B. Turner (Velocette). B.—1, B. Parkinson (Diamond); 2, J. C. Dearden (Massey-Arran); C.—1, B. Parkinson (Diamond); 2, B. Hill (Scott). D.—1, B. Parkinson (Diamond); 2, J. C. Dearden (Massey-Arran). E.—1, B. Parkinson (Diamond); 2, H. Jackson (Sunbeam). F.—1, J. C. Dearden (Norton). G.—1, J. C. Dearden (Norton); 2, D. Chanaing (Sunbeam). I.—1, H. Jackson (Sunbeam); 2, G. Roberts (Norton). K.—1, H. Jackson (Sunbeam).

### Sheffield and Hallamshire M.C. & L.C.C

A twenty-four hours' reliability trial was held at Whitsun, from Sheffield to Barmouth and back, starting on Sunday evening at 8 p.m. Awards as follows: Gold medals, H. Beeden (499 Sunbeam), C. E. Turner (688 Martinsyde), J. Carter (1,098 T.B.), J. Younie (688 Martinsyde), G. W. Wilkin (9.5 Deemster), A. Flint (348 Ivy), C. Hollister (348 Ivy), J. Wildblood (688 Martinsyde sc.), R. May (10.5 A.B.C.), C. W. Ward (499 Triumph). Silver medals: R. Stacey (993 Matchless sc.), B. Jepson (598 Harley-Davidson), R. Denby (9.5 Deemster). On the homeward run, failure to climb Bwlch-y-Groes Hill resulted in the loss of a gold medal.

### Nottingham and District M.C. and L.C.C.

The team representing this club in the M.C.C. Team Trial is composed of resident members of the Nottingham Club, and all the machines being used have been manufactured in Nottingham.

### T.T. SPEEDS IN ITALY.

Averaging slightly more than 59 m.p.h. over a distance of 134 miles, A. Marcoli recently won the Circuito Internationale, Padova, Italy, on his 499 c.c. o.h.v. Triumph. Incidentally he beat the 1,000 c.c. record for the same course held since 1921 by a British big twin.

### Austin L.C. and M.C.C.

It is proposed to hold a Charity Gymkhana on Saturday, July 1st, at the Austin Playing Fields, Rednal, in aid of the Birmingham hospitals and other charities if sufficient support is given to the movement. Motorists entering for this event may be sure of enjoying a good programme, and some valuable prizes are being offered.

### Essex Motor Club.

Speed trials have been arranged in conjunction with the Essex County and Southend Automobile Club to be held on Wednesday, July 5th, at Westcliff-on-Sea. Particulars of the events are now available together with entry forms, and may be obtained either from Mr. E. J. Bass, 40, Chancery Lane, W.C., or Mr. Maitland Keddie, Hintlesham, The Leas, Westcliff. Entries close on June 22nd.

### North London M.C.C.

The following are the results of the Slow Hill Climb held on Thursday last at Handpost Hill, Northaw:—Solo Class: (1) H. Williams (499 Rudge-Multi), silver medal. (2) L. P. Walter (550 Triumph), bronze medal. Sidecar class: (1) J. Hawkins (796 Ariel sc.), silver medal. There were twelve and five entrants respectively in the solo and sidecar classes. An inter-club hill climb in conjunction with the N.W.L.M.C.C. is being arranged to take place on Saturday, July 22nd.

### Bury St. Edmunds and District M.C.C.

Inter-club speed trials were held jointly by this club, Ipswich and District, and Cambridge Town and County clubs near Six Mile Bottom, over a course half a mile in length, when 150 entries were received. Results:

350 c.c. (Solo).—1, McKechnie (349 A.J.S.); 2, Spencer (349 A.J.S.).

500 c.c. (Solo).—1, Bassett (398 A.B.C.); 2, D. Robinson (492 Sunbeam), and Ludlow (490 Norton).

750 c.c. (Solo).—1, Fenn (499 Triumph); 2, D. Robioson (492 Sunbeam).

1,000 c.c. (Solo).—1, Bassett (398 A.B.C.); 2, Ludlow (490 Norton).

600 c.c. (Sidecars).—1, Fenn (499 Triumph; 2, N. Robinson (492 Sunbeam).

1,000 c.c. (Sidecars).—1, Hinde (986 Trump-Jap); 2, Fenn (499 Triumph).

These results were obtained from standing starts with engines off. The winners in the flying starts were as follows:

350 c.c. (Solo).—McKechnie (349 A.J.S.).
500 c.c. (Solo).—Basset (398 A.B.C.);
750 c.c. (Solo).—Bassett (398 A.B.C.).
1,000 c.c. (Solo).—Bassett (398 A.B.C.).
600 c.c. (Sidecars).—Fenn (499 Triumph).
1,000 c.c. (Sidecars).—Hinde (986 Trump-Jap).

Bassett's speed for the standing start was 59.8 m.p.h., and for the flying start 84.9 m.p.h. Hinde in the flying sidecar race reached 65.4 m.p.h. These three results gained special prizes.

## West Kent M.C.

The Wilson Cup Trial has been postponed until Saturday next, June 24th. Intending competitors should communicate with Mr. A. E. Jessop, 91, Park End, Bromley, Kent.

## Epsom and District M.C.C.

A general meeting of members is being held to-night, at 7.45 p.m., at the Spread Eagle Hotel, Epsom, when matters for discussion will include the aims and objects of forming the club, rules, subscription, and the programme for this year.

## South Eastern Centre A.C.U.

An open reliability trial is being held on July 8th, starting from Caterham and including various parts of Kent and Surrey. Further details of the run may be obtained from Mr. Alan Gruzelier, 605, Ulster Chambers, 168, Regent Street, London, W.

## Aberdeen and District M.C.

A hill-climb was held last Saturday on Cairn o' Mount (South Side), when R. Dempster (499 Triumph) took first place. H. S. Dawson (499 Sunbeam) came second, and G. K. Ferres (349 Massey-Arran) third. The sidecar class was cancelled, as only two machines were entered.

## Loughborough College M.C.C.

In a speed judging competition over a 33-mile course the principal results were: (1) F. A. Beardmore (998 Indian), 2½m. error; (2) S. C. Wells (499 Sunbeam), 5½m.; (3) Miss D. A. Travers (496 N.U.T. sc.), 6½m.; (4) S. Hillyer (498 P. and M.), 6¾m.; (5) D. L. David (998 Indian sc.) and H. J. Baker (599 Sunbeam), 7m.

## Essex County and Southend A.C.

The "knock-out" hill-climb took place last Saturday afternoon, when a large number of competitors mustered at the club's headquarters to proceed to Bottiedown Hill. The winner of the event was K. S. Duncan (499 Sunbeam), who was awarded the silver cup, doing the slowest time of the day in 89s.

## Annfield Plain and District M.C.

The results of the Whit Monday reliability trial, when the Skilbeck challenge cup and prizes were competed for, are as follows: (1) Cup and gold medal, T. Brown (700 Humber sc.); (2) gold medal, G. Humphrey (498 Ariel); (3) silver medal, J. Almond (550 Triumph); (4) bronze medal, F. Hunter (550 Triumph); (5) E. Wilkinson (633 Norton); (6) J. Crawford (688 Coventry Victor).

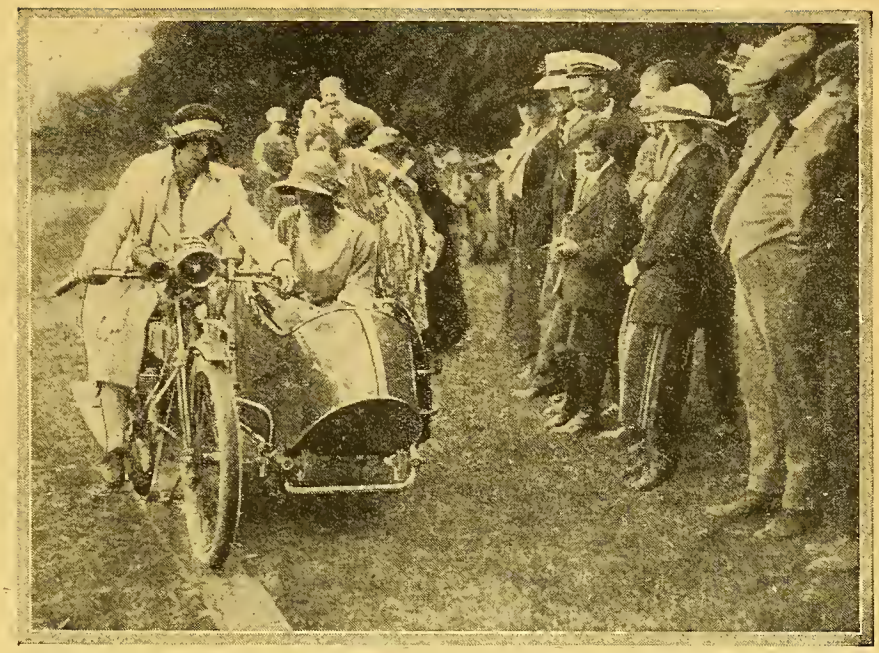
## Surbiton M.C.

Starting at 1.30 p.m., the Ealing M.C.C. and the above club are holding a joint hill-climb at Kop Hill, Princes Risboro', on July 1st. Motor cycle classes will be run on time only, and each machine will be allowed two runs up the hill, the fastest time to count. If sufficient support is given to what promises to be a sporting affair, it is hoped to make this an annual event.

## Yeovil M.C.C.

The results in the Yeovil-Land's End trial held recently are as follows:

Moffat Cup (open to teams of three), presented by Mr. P. W. Moffat, of Yeovil: won by Yeovil team—D. Southcombe (490 Norton), max. marks; B. R. Robbins (293 New Imperial), lost 10 marks; F. W. Cole (10h.p. Wolseley), lost 6 marks. Motor cycle and sidecar: 1, S. Hall (998 Rudge).



THE GREASY PLANK FOR MOTOR CYCLISTS. An item on the programme of the Exeter M.C.C.'s gymkhana was riding along a well-greased plank, a more difficult feat than one would imagine on a sidecar. A lady member making a good performance.

## S.E. Durham M.C.

A reliability trial held not long ago attracted a good attendance of members. Silver shield and gold medal: E. Welsh. Gold medal: P. Bell. Silver medals: H. Greenwell, J. Trimdon, W. Langrin. Bronze medals: J. Graves, J. Trimdon, B. Raine, and M. Bates.

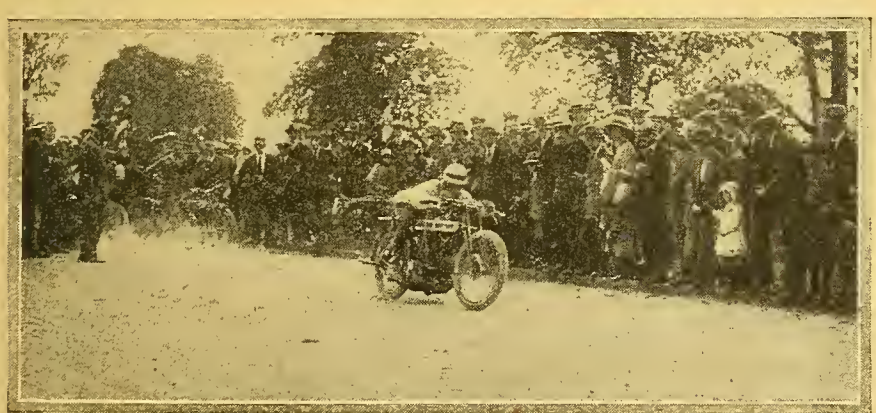
## East South Wales Centre A.C.U.

An open hill climb is being held on Saturday, July 1st, on Catsash Hill, near Newport, starting at 12 noon, when various challenge cups and other prizes will be competed for. Particulars can be had from Mr. A. B. Adams, "The Croft," Clevendon Road, Newport, Mon.

## Plymouth and District M.C. and L.C.C.

Excellent weather prevailed for the hill-climb arranged at Huccaby on June 14th. The course is rather "freakish," and in the three-eighths of a mile ascent three hairpins call for skilful negotiation. A number of spectators assembled to witness the event.

Ian Spooner (499 Sunbeam) made the fastest time, 68⅖s., in the class for solos under 600 c.c.; while his time in the solo unlimited section was 74s. A. Browne (293 New Imperial) finished in 83s. for the solo class under 350 c.c.; and 86⅖s. was recorded by J. Illingworth (490 Norton).



At the Avonmouth Speed Trials organised by the Bristol M.C. and L.C.C. A. T. Koehler winning the unlimited class on a 494 c.c. Douglas.

## South Birmingham M.C.C.

In an inter-club trial held recently by South Birmingham clubs the winner was H. Greaves on a Beardmore Precision fitted with a Barr & Stroud engine, who gained the Palmer Cup and a silver cup for the best performance of the day.

## Exeter M.C. and J.C.C.

A good attendance marked the first of an annual series of gymkhanas held by the club at Woodbury Common on June 11th. Slow Race: solo machines, O. Ford; sidecars, L. Jones. Acceleration Race (open): 1, O. Ford; 2, L. Peters. Needle-threading for Sidecar Passengers: 1, Mrs. Medlin; 2, Miss Clark. Egg and Spoon Race: sidecar, Fry Allen; solo, J. Bliss.

## Blackpool and Fylde M.C.

Fine weather favoured the 100-mile non-stop reliability trial for the Chadwick Trophy, held on June 18th, when fifteen machines started and only four succeeded in finishing. The course, which was fairly rough, had to be covered three times: 1, W. Lyons (532 Scott); 2, G. W. Nabb (494 Douglas), and J. Riley (499 Sunbeam); and 4, C. V. Jennings (532 Scott).

## North Western Centre A.C.U.

The Premiership Reliability Trial, over a course approximately 150 miles in length, which is being held on June 25th for the "200 Deansgate" Cup, will be open to all members of clubs in the North-Western Centre. Particulars and entry forms may be obtained from Mr. J. H. Place, "Girsee," Manchester Road, Burnley, to whom all communications should be addressed.

## Isle of Wight M.C. and L.C.C.

In the Speed Trials held recently, under excellent weather conditions, fatest time of the day was made by E. G. H. Morris (490 Norton), at 63.1 m.p.h. 275 c.c., 2-stroke, solo class: 1, S. Russell (225 Royal Enfield), 48 m.p.h.; 2, C. G. Fox (225 Royal Enfield), 44.4 m.p.h. 350 c.c. solo class: C. F. Stagg (349 A.J.S.), 58.8 m.p.h.; 2, N. G. Chinchen (349 A.J.S.), 53.5 m.p.h. 500 c.c. solo class: E. G. H. Morris (490 Norton), 63.1 m.p.h.; 2, C. F. Stagg (349 A.J.S.), 58.8 m.p.h. 750 c.c. solo class: 1, E. G. H. Morris (490 Norton), 63.1 m.p.h.; 2, C. F. Stagg (349 A.J.S.), 57.7 m.p.h. Unlimited solo class: 1, E. G. H. Morris (490 Norton), 63.1 m.p.h.; 2, C. F. Stagg (349 A.J.S.); 60 m.p.h. 600 c.c. sidecar class: J. H. D. Allen (557 B.S.A. sc.), 40 m.p.h. Unlimited sidecar class: 1, E. G. Loe (988 Royal Enfield), 51.7 m.p.h.; 2, H. W. Linington (988 Royal Enfield), and G. R. Scotney (735 Royal Enfield), 48 m.p.h. Light car class: Dr. E. S. Craig (Morgan), 45 m.p.h.

# LONDON-EDINBURGH RESULTS.

## 77°/₀ of Motor Bicycle Starters awarded Gold Medals; Sidecars 70°/₀; Cycle Cars 60°/₀, and Cars 76°/₀.

AS usual, this popular event, the fifteenth annual club run of the Motor Cycling Club from London to Edinburgh, resulted in a host of gold medals being awarded. Analysed with the characteristic thoroughness of Mr. F. T. Bidlake, the M.C.C. timekeeper and trials secretary, the summarised entries and awards stand as shown in the schedule:

| | Solos. | Sidecars. | Cycle cars. | Cars. | Totals. |
|---|---|---|---|---|---|
| Entries | 129 | 110 | 20 | 133 | 392 |
| Starters | 121 | 104 | 18 | 123 | 366 |
| Retirements | 8 | 13 | 3 | 14 | 38 |
| Finishers | 113 | 91 | 15 | 109 | 328 |
| Gold Medals | 94 | 73 | 11 | 94 | 272 |
| Silver Medals | 17 | 13 | 2 | 13 | 45 |
| Bronze Medals | 1 | 2 | — | 1 | 4 |
| Disqualified | 1 | 3 | 2 | 1 | 7 |

A.B.C.
A. G. Wall (398). *Gold medal.*
W. Henry Wells (398). *Gold medal.*
J. W. Grose (398). *Gold medal.*
A. S. Pinchbeck (398). *Gold medal.*
W. Sharpe (398). *Retired.*

A.J.S.
H. B. Browning (349). *Gold medal.*
C. H. Mocatta (349). *Gold medal.*
A. F. Plummer (349). *Gold medal.*
A. F. F. Hall (349). *Gold medal.*
A. M. O. McLachlan (349). *Gold medal.*
E. W. Choldcroft (349). *Gold medal.*
W. C. Hemy (799 sc.). *Gold medal.*
J. Ball (799 sc.). *Gold medal.*
T. G. White (799 sc.). *Gold medal.*
A. S. Bagshaw (799 sc.). *Bronze medal.*
E. S. Powell (799 sc.). *Retired.*
W. Higgs (799 sc.). *Retired.*

ALECTO.
E. F. Taylor (345). *Gold medal.*
R. S. Pilcher (345). *Gold medal.*
R. L. Richardson (345). *Gold medal.*
L. A. Y. Cashmore (345). *Silver medal.*

ALLDAYS-ALLON.
R. C. Cooper (292). *Gold medal.*
W. Johnson (292). *Gold medal.*

ARIEL.
C. Dickinson (498). *Gold medal.*
C. Bourlet (498). *Gold medal.*
H. Reyre (498). *Gold medal.*
G. W. Segrott (498). *Gold medal.*
F. J. Watson (796 sc.). *Gold medal.*
H. C. Nias (498) *Retired.*

BEARDMORE-PRECISION.
L. E. Chirney (350). *Gold medal.*
C. Waldin (350). *Gold medal.*
S. Warne (B. & S.) (350). *Gold medal.*
C. W. Lewis (598 sc.). *Gold medal.*

BRADBURY.
P. Platt (749 sc.). *Gold medal.*
W. E. Grange (749 sc.). *Gold medal.*
G. E. Minett (749 sc.). *Gold medal.*
F. H. Douglass (996 sc.). *Silver medal.*

BROUGH.
F. W. Stevenson (496). *Gold medal.*
R. W. Lane (692). *Gold medal.*
W. E. Brough (692 sc.). *Gold medal.*

BROUGH SUPERIOR.
G. Brough (976). *Gold medal.*
H. Karslake (976). *Gold medal.*
W. A. Fell-Smith (976 sc.). *Gold medal.*
S. C. Tait (976 sc.). *Gold medal.*
H. Clennell (976 sc.). *Gold medal.*
A. Greenwood (976 sc.). *Gold medal.*

B.S.A.
E. Eland (557). *Gold medal.*
R. McK. Veale (935 sc.). *Gold medal.*
R. J. Andrews (557 sc.). *Silver medal.*

CALTHORPE.
E. M. Heller (293). *Retired.*

CAMPION.
S. S. Debenham (1,100). *Gold medal.*
F. Clay (293). *Retired.*

CHATER-LEA.
J. E. Pautard (976 sc.). *Retired.*

CLYNO.
F. Smith (925 sc.). *Gold medal.*

CONNAUGHT.
C. L. Sprosen (370 sc.). *Gold medal.*
I. E. Brettell (370 sc.). *Silver medal.*

COVENTRY EAGLE.
P. L. Mayo (249). *Gold medal.*
S. C. Pearce (350 sc.). *Gold medal.*

COVENTRY PREMIER (CYCLE CAR).
R. A. Biggs (1,055.5). *Silver medal.*

DE DION BOUTON.
B. F. C. Fellowes (327). *Gold medal.*

DIAMOND.
A. S. Guthrie (350). *Gold medal.*

DOUGLAS.
J. L. Hanman (494). *Gold medal.*
L. A. Baddeley (348) *Gold medal.*
J. A. Newman (494). *Gold medal.*
T. L. Daniels (595). *Gold medal.*
J. E. Beard (595). *Gold medal.*
E. Clark, Jun. (494). *Bronze medal.*
H. W. Furness (595 sc.). *Retired.*
G. Kuhn (595 sc.). *Retired.*
L. Heller (595 sc.). *Retired.*

DUNELT.
O. S. Bridcutt (499). *Gold medal.*
P. Pehrson (499 sc.). *Silver medal.*
W. Chase (499 sc.). *Silver medal.*

DUZMO.
F. J. Wallis (496). *Retired.*

EDMUND.
A. C. Robbins (292). *Silver medal.*

FEDERATION.
J. H. Fairweather (269). *Gold medal.*
R. C. Bennett (269). *Gold medal.*

FEDERATION (CYCLE CAR).
C. F. Hollyoak (976). *Disqualified.*

F.N.
T. W. Buckle (748). *Gold medal.*

FRANCIS-BARNETT.
H. Gold (346). *Disqualified for noisy exhaust.*

G.R.I.
D. White (349). *Gold medal.*

HAGG TANDEM.
R. N. Thomas (350). *Gold medal.*
B. N. Taylor (350). *Gold medal.*

HARLEY-DAVIDSON.
F. V. Edwards (584). *Gold medal.*
R. V. Saltmarsh (584). *Gold medal.*
E. J. L. Strong (998 sc.). *Gold medal.*
J. B. Bryson (998 sc.). *Gold medal.*
P. W. White (998 sc.). *Gold medal.*
W. A. Street (998 sc.). *Gold medal.*
W. King (998 sc.). *Gold medal.*
F. Broomfield (998 sc.). *Gold medal.*
H. E. Crofts (998 sc.). *Gold medal.*
J. A. Masters (998 sc.). *Gold medal.*
G. Baxter (998 sc.). *Gold medal.*
E. O. Spence (998 sc.). *Gold medal.*

HAWKER.
A. A. Attwood (548 sc.). *Disqualified; advertised award before Committee meeting.*
E. F. Peaty (548 sc.). *Disqualified; advertised award before Committee meeting.*

HAZLEWOOD.
J. W. Hazlewood (976 sc.). *Gold medal.*

HENDERSON.
W. J. Barker (1,301 sc.). *Gold medal.*
S. F. Farley (1,301 sc.). *Gold medal.*
H. V. Bateman (1,301 sc.). *Silver medal.*
J. W. Cheyney (1.301 sc.). *Retired.*

INDIAN.
H. W. Harrington (Scout) (596). *Gold medal.*
J. McBirnie (998). *Gold medal.*
P. H. Ingham (Scout) (596). *Gold medal.*
L. A. Bridgman (Chief) (998 sc.). *Gold medal.*
J. S. Bliss (998 sc.). *Silver medal.*

IVY.
H. J. Greathead (348). *Gold medal.*
P. A. Hopkins (348). *Gold medal.*

J.E.S.
R. P. Purnell (169). *Gold medal.*

LEA-FRANCIS.
J. Richardson (496). *Silver medal.*
A. Conville (592 sc.). *Silver medal.*

LEVIS.
H. R. Lane (211). *Gold medal.*

L.S.D. (CYCLE CAR).
J. Robinson (986). *Retired.*
T. G MacKenzie (986). *Retired.*

MARTINSYDE.
C. C. Labin (678). *Gold medal.*
H. H. Nicholson (496). *Gold medal.*
A. A. Symes (678). *Gold medal.*
E. H. Gifford (496). *Gold medal.*
J. T. Bashall (678 sc.). *Gold medal.*
W. H. Bashall (678 sc.). *Gold medal.*

MATCHLESS.
T. J. Ross (996 sc.). *Gold medal.*
R. G. Boxer (996 sc.). *Gold medal.*
W. F. Guiver (996 sc.). *Gold medal.*
W. H. Hardman (996 sc.). *Gold medal.*
W. Bucknell (976 sc.). *Gold medal.*
E. C. Lunniss (976 sc.). *Gold medal*
B. S. Allen (976 sc.). *Gold medal.*
G. D. Hardee (996 sc.). *Gold medal.*
F. J. Ellis (996 sc.). *Gold medal.*
J. Hoult (996 sc.). *Gold medal.*
J. Graham (996 sc.). *Gold medal.*
H. L. Miserez (996 sc.). *Gold medal.*
F. MacDonald (996 sc.). *Gold medal.*
F. W. Neill (976 sc.). *Gold medal.*
P. S. Crauford (996 sc.). *Gold medal.*
T. E. Ranger (976 sc.). *Gold medal.*
E. C. Barton (976 sc.). *Gold medal.*
D. S. Parsons (976 sc.). *Gold medal.*
G. Nott (996 sc.). *Gold medal.*
F. E. Jones (976 sc.). *Gold medal.*
L. A. Willmott (976 sc.). *Silver medal.*
L. Arnold (976 sc.). *Silver medal.*
A. W. Graham (996 sc.). *Bronze medal.*

McKECHNIE.
F. W. Becker (668 sc.). *Gold medal.*

METRO-TYLER.
G. E. Cuffe (269). *Silver medal.*

MORGAN (CYCLE CAR).
R. Duke Williams (986). *Gold medal.*
H. E. K. Sawtell (1,096). *Gold medal.*
W. M. Cowner (1,096). *Gold medal.*
R. B. Whiffen (1,096). *Gold medal.*
F. W. Dame (980). *Gold medal.*
S. A. McCarthy (980). *Gold medal.*
S. Hall (1,096). *Gold medal.*
A. C. Maskell (986). *Silver medal.*
W. Pattison (1,096). *Retired.*
H. Beart (1,096). *Disqualified.*

NER-A-CAR.
F. K. Parsons (211). *Silver medal.*
N. A. C. Runnels-Moss (211). *Silver medal.*

NORTON.
H. W. Deacon (490). *Gold medal.*
A. H. S. Love (490). *Gold medal.*
R. H. Attwood (633 sc.). *Gold medal.*
G. Haines (633 sc.). *Gold medal.*

N.U.T.
J. G. D. Boorer (678). *Gold medal.*
D. S. Baddeley (678). *Gold medal.*
R. S. Ellis (500). *Gold medal.*
M. O'Reilly (678). *Gold medal.*

O.K. JUNIOR.
F. J. Youngs (292). *Gold medal.*
G. W. Langford (292). *Silver medal.*

OMEGA-DUPLEX.
C. W. Bartlett (348). *Silver medal.*

ORBIT.
D. J. Stone (262). *Silver medal.*

P. AND M.
J. A. Leyland (555). *Gold medal.*
G. Townsend (555 sc.). *Gold medal.*
R. Lewis (555 sc.). *Gold medal.*
P. Cunningham (555sc.). *Gold medal.*
T. G. Bullus (555 sc.). *Retired.*

P. AND P.
C. Packman (250). *Disqualified.*

POWELL.
J. A. Stedman (547). *Gold medal.*

P.V.
R. V. Crauford (496 sc.). *Retired.*

QUADRANT.
C. Wilson (654 sc.). *Gold medal.*
G. A. Pidgeon (654 sc.). *Gold medal.*
W. W. E. Clarke (654 sc.). *Retired.*

RALEIGH.
H. Gibson (348). *Gold medal.*
J. Haworth (348). *Gold medal.*
R. S. Newnham (348). *Gold medal.*
A. R. H. Stewart (348). *Gold medal.*

READY.
D. Read (350). *Gold medal.*

REX-ACME.
J. P. LeGrand (550 sc.). *Gold medal.*
W. A. Jacobs (550 sc.). *Gold medal.*
F. White (986 sc.). *Gold medal.*

ROVER.
L. N. Stannah (499). *Retired.*

ROYAL ENFIELD.
A. F. Pulling (976 sc.). *Gold medal.*
H. Sutton (225). *Silver medal.*

RUDGE.
A. W. Hadley (499). *Gold medal.*
F. S. Whitfield (499). *Silver medal.*
E. Kehce (499 sc.). *Silver medal.*
R. J. Ryan (998 sc.). *Silver medal.*

SCOTT SOCIABLE (CYCLE CAR).
D. W. Rhodes (578). *Gold medal.*

SCOTT.
C. J. Wheeler (481). *Gold medal.*
R. P. Reid (481). *Gold medal.*
W. R. Preston (532). *Gold medal.*
G. S. Green (532). *Gold medal.*

STANGER.
A. Stanger (538). *Gold medal.*
J. Stanger (538). *Silver medal.*

SUNBEAM.
G. W. Dawson (489). *Gold medal.*
J. J. Sykes (596). *Gold medal.*
O. F. Collier (489). *Gold medal.*
E. A. Wright (770 sc.). *Gold medal.*
E. Cross (599 sc.). *Gold medal.*
L. V. Freeman (976 sc.). *Gold medal.*
R. Street (489). *Retired.*

T.B. (CYCLE CAR).
F. S. Spouse (980). *Gold medal.*
S. M. Greening (980). *Gold medal.*
J. W. Meredith (986). *Gold medal.*

TRIUMPH.
G. W. Burgoyne (550). *Gold medal.*
S. J. Marks (499). *Gold medal.*
A. C. Rhodes (499). *Gold medal.*
W. Atkinson (550). *Gold medal.*
W. P. Brandon (499). *Gold medal.*
V. Belfield (499). *Gold medal.*
G. H. Houfton (550). *Gold medal.*
C. W. Ward (499). *Gold medal.*
M. Pearson (550). *Gold medal.*
H. T. Chapman (550 sc.). *Gold medal.*
S. A. Cooke (550 sc.). *Gold medal.*
J. B. Mc Ginnell (550 sc.). *Gold medal.*
A. R. Richardson (550). *Silver medal.*
G. Wray (499). *Silver medal.*
J. Bradbury (550 sc.). *Silver medal.*
H. J. Vidler (499). *Silver medal.*
A. C. Ward (550 sc.). *Retired.*
A. H. Nelson (550 sc.). *Retired.*

WOOLER.
J. F. Hull (349). *Gold medal.*
H. Robinson (349). *Gold medal.*
A. Milward (349). *Gold medal.*
J. Wooler (349). *Silver medal.*

ZENITH-BRADSHAW.
F. C. Townshend (498). *Gold medal.*
H. Glendinning (986). *Gold medal.*
R. Charlesworth (498). *Gold medal.*
R. H. Bywaters (986 sc.). *Gold medal.*
R. B. Clark (498 sc.). *Gold medal.*
W. D. Pugh (498). *Silver medal.*
A. H. Parmer (498). *Retired.*

# ings the Bell!

## A "SOLO" FOR A SONG.

JNDOUBTEDLY the Allen-Bennett Lightweight is the finest value to-day. It has been manufactured for us by a well-known firm of high repute in the tor cycle trade and represents the perfection of trouble- solo mounts. No expense has been spared to make this orthy product of the Allen-Bennett Motor Coy., and to end we have incorporated in its manufacture every nement conducive to the most comfortable solo riding. s certainly the cheapest machine on the road to-day and clever design makes it suitable for either lady or gentleman r.

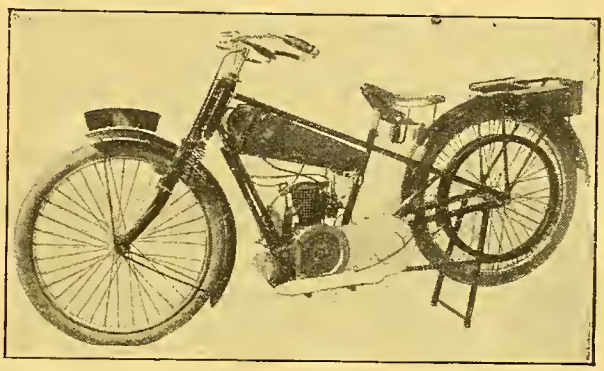
Here, again, our EXTENDED PAYMENT SYSTEM is ilable for your use.

A payment of £10 down and twelve monthly payments of 13s. 9d. may be arranged or, if you prefer, a payment of down and eighteen monthly payments of £1 16s. 8d. these unique arrangements the liability incurred by you lmost negligible in comparison with the pleasure and real ity the Allen-Bennett Lightweight affords you.

Why not visit us at Croydon and examine this or any other del you may prefer. Our services and advice are at your posal and you will find an atmosphere of friendliness and *araderie* at once apparent. Motorcycling makes many v friendships. Why not join in with us?

SPECIFICATION.

2¾ h.p., 2-stroke, "Best & Lloyd" Drip Feed Lubrication, Chain-cum-Belt Transmission, Burman 2-speed Gear Box, Special design Frame, extra strong, Patent Pan Saddle, Strong Mudguards, Comfortable Footboards, Finished Black, Gold, usual bright parts heavily nickel-plated, complete with equipment to standard specification. Price £40.



*Proposal Form for the Purchase of Motor Cycle.*

THE ALLEN-BENNETT MOTOR CO., LTD., 9, 10 and 11, Royal Parade, Croydon.

Telephone: Croydon 2450. Telegraphic Address: Track, Croydon.

Date.....192

NTLEMEN,

I have selected from your Stocks:—

..... h.p. ..... Motor cycle, your price being ... ... ... ... ... ... ... ... ... ... £ : :

..... Sidecar ... ... ... ... ... ... ... ... ... ... ... ... £ : :

Accessories ... ... ... ... ... ... ... ... ... ... ... ... £ : :

Total ... ... ... ... ... £ : :

Please supply me with the above selection on your Deferred Payment System.

r which I agree to pay before delivery ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... £ : :

d agree to pay you the balance of ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... £ : :

yable in ..... monthly instalments of £ : :

(*State number of months, 12 or 18.*)

Total ... ... ... ... ... £ : :

me (in full) ..... Age .....

e you a Householder? ..... Private Address .....

w long here? ..... Years ..... Months (*If less than twelve months kindly state previous address.*) .....

nkers and Branch Address .....

ature of Employment .....

Signature of Purchaser .....

(*If not a householder, please submit a Guarantor who is a householder.*)

GUARANTOR.

ull Name .....

ivate Address .....

nkers and Branch Address .....

Signature of Guarantor .....

**ny make of machine supplied.** **Over 100 machines actually in stock.** **Open Saturday till 7.30 p.m.** **Trade supplied.**

**Catalogue post free on application.**

# BENNETT

*In answering this advertisement it is desirable to mention "The Motor Cycle."*

# THERE IS ONLY ONE WAY TO JUDGE

*results in the T.T. Races and it shows that the*

# "COULSON"

*more than holds its own among the Leading Makes.*

| Make. | Started. | Finished. |
|---|---|---|
| New Imperial .. | 8 | 1 |
| A.J.S. .. .. .. | 8 | 4 |
| Sheffield Henderson.. | 4 | 2 |
| Diamond .. .. | 4 | 1 |
| Levis .. .. .. | 4 | 2 |
| **COULSON** .. .. | **3** | **2** |
| New Scale .. .. | 3 | 1 |
| Velocette .. .. | 3 | 1 |
| Douglas .. .. | 2 | 1 |
| Raleigh .. .. | 1 | 0 |

THE T.T. Races are first and foremost tests of DURABILITY. Only motor cycles which are reliable in all emergencies, which are consistently efficient and equal to constant strain can possibly FINISH in these trials. Hence to finish is an achievement and the only correct way to judge the merits of the makes of machines competing is to find out the proportion of STARTERS who FINISHED.

A large percentage of "finishers" says more for the *standard* of efficiency of a make of machine than a spectacular win—however brilliant—discounted by a big percentage of starters on the same make who *failed to finish.*

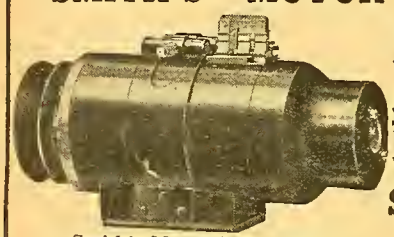
Judged in this way, which are the machines reaching the highest average of efficiency? The Table opposite, compiled from The Junior and Light-weight results, is enlightening, and demonstrates the splendid efficiency of The Coulson.

*If you want a thoroughly reliable mount send for specification and other particulars to*

**LONDON MOTORS,** 61, HOLBORN VIADUCT, LONDON, E.C. 2.

*('Phone: City 4230).*

# SMITH'S MOTOR CYCLE LIGHTING SET.

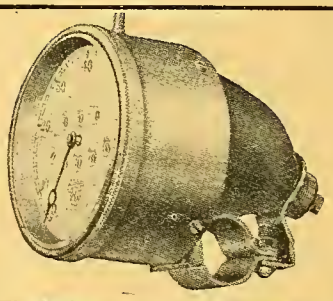


Smith's Motor Cycle Dynamo with Automatic Cutout is absolutely foolproof and reliable.

THE new Smith Motor Cycle Lighting Set is complete in every detail. The Dynamo has an Automatic Cutout reudering it absolutely foolproof, while the whole wiring is absolutely simple.
Complete Sets from £17 5s. 9d.
Smith's Motor Cycle Speedometer is specially built for motor cycle work, the pointer remaining rock steady no matter how bumpy the road. Trip and total mileage recorder. £5 5s. 0d.

Write for further particulars to

**SMITH'S (M.A.) LIMITED,**
Motor Cycle Dept.,
**Cricklewood Works, London, N.W.2.**
*'Phone: Willesden 2335. Telegrams: Speedofac, London*
**London Showrooms: 179-185, Great Portland Street, W.1.**



The Smith Motor Cycle Speedometer. Price £5 5 0 each.

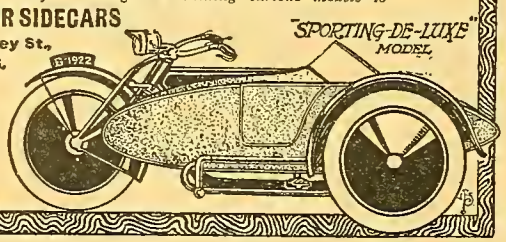
Birmingham: 122, Alma Street.
Manchester: 12, Jackson's Row.
Glasgow: 23-25, Renfrew St.
Belfast: 39, Donegal Street.

## BOWSER SIDECARS

Our 1922 models are designed for COMFORT & APPEARANCE, and those desirous of owning a smart Sporting Sidecar should order our "Sporting Model De-Luxe" as illustrated) at £28 - 0 - 0, windscreen and disc wheel extra. The "BOWSER" Original Two-seater Sidecar is £36 - 10 - 0.
*Send for Catalogue illustrating various models to—*

**BOWSER SIDECARS**
46, Burley St.,
LEEDS.

'Phone: 25479 Leeds.



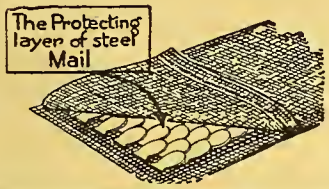

SIGN OF
BELDAM·TYRES
SUPREMACY

# Tube Protector

## No More Punctures!

**OWING TO DIFFICULTIES WITH THE WORKS, DELIVERY OF TUBE PROTECTORS WILL BE DELAYED UNTIL FURTHER NOTICE.**

PARTICULARS ON APPLICATION.



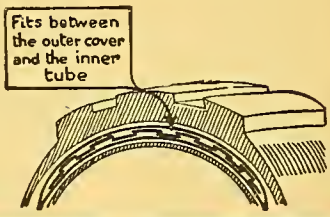

**Liberal terms to factors and retailers.**

PROTECTORS for MOTOR CYCLES, 17/11 each.

Sole Agents:

**A. Stuart Morris & Co.,**

**Head Office: 101, Leadenhall St., E.C.3**



## LOOK FOR THE CLUB TRADE MARK

ON THE ACCESSORIES YOU BUY.

IT IS A GUARANTEE OF

**QUALITY, VALUE, RELIABILITY.**

SOLE MANUFACTURERS:

**SILICO ENAMEL CO.——STRATFORD, LONDON.**

CLUB SPECIALITIES ARE PRODUCED BY PRACTICAL MOTOR CYCLISTS.

**ENAMELS.**

**CLUB BLACK ENAMEL.**
Special Hard Drying .. Jars 11½d. & 1/6

**CLUB COLOURED ENAMEL.**
Dries in 24 hours. Does not crack or chip.

| Motor Cycle size Tins | 1/9 |
|---|---|
| Made in: Large Tins | 3/- |
| Royal Mail Red. Black. | |
| Elswick Green. White. | |
| Emerald Green. Cream. | |
| French Grey. Brown. | |
| Light Blue. Lavender. | |
| Dark Blue. Primrose. | |

**CLUB TRANSPARENT ENAMEL FINISH.**
Makes Worn and Dull Enamel Look Like New.
Motor Cycle or Sidecar size Tins .. 1/6
Large Tins .. .. .. .. .. 3/-

**CLUB ALUMINIUM ENAMEL.**
Petrol Resisting .. .. .. Jars 1/6

**ANTARNISH INVISIBLE LACQUER.**
Prevents Rust and Tarnish .. Jars 1/-

**ANTARNISH BLACK LACQUER.**
Gunmetal Finish .. .. .. Jars 1/-

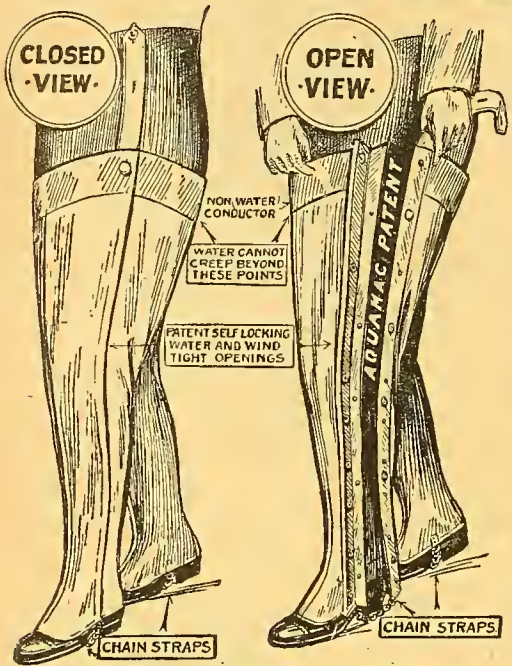
**CLUB ENGINE BLACK.**
For Radiators, Exhaust Pipes, etc. Tins 1/- & 1/8

**CLUB JOINTING GOLD SIZE.**
Makes Oil, Air and Water-tight Joints. Tins 1/-

IF LOCALLY UNOBTAINABLE ANY ARTICLE LISTED WILL BE SENT CARRIAGE FREE EXCEPT CARBIDE, ON RECEIPT OF P.O. AND NAME OF LOCAL AGENT.

# "AQUAMAC"

## is the foremost Motor Cycling Suit.




**AQUAMAC OVERALLS.** Cunningly constructed self-locking non-water conducting openings. Just a few pulls at the sides and the leggings fall to the ground. Price **17/6** per pair.

It is a *real* WATERPROOF. No "imitation," e about the "AQUAMAC." Guaranteed to bs absolutely impervious to rain. Fly side openings are fitted with patent Non (Water) Conductor and PNEUMATIC edges throughout the suit. No water can percolate through the seams.

It is smart as well as serviceable. We cater for the discerning man by our **"Made to measure" offer. No extra charge** if you decide to make use of this facility.

It is *comfortable*. No need to struggle out of dirty overalls—JUST A FEW PULLS AT THE SIDE SEAMS AND THE TROUSERS COLLAPSE TO THE GROUND.

"AQUAMAC" is *the* riding habit for dress and storm occasions.

**Price per Suit £2 15s. 0d.**

**Price for Overalls 17s. 6d.**

**When ordering give chest measurement, inside leg from fork to floor and state height.**

**SEND NO MONEY.**

**JUST WRITE FOR FREE CATALOGUE AND PATTERNS to the Patentees and Actual Manufacturers.**

**The Express Manfg. Co. (M/C.), Ltd.**
**Manufacturing Waterproof Motor Clothing Experts,**
**AQUAMAC WORKS,**
**431-7 Rochdale Road, MANCHESTER.**

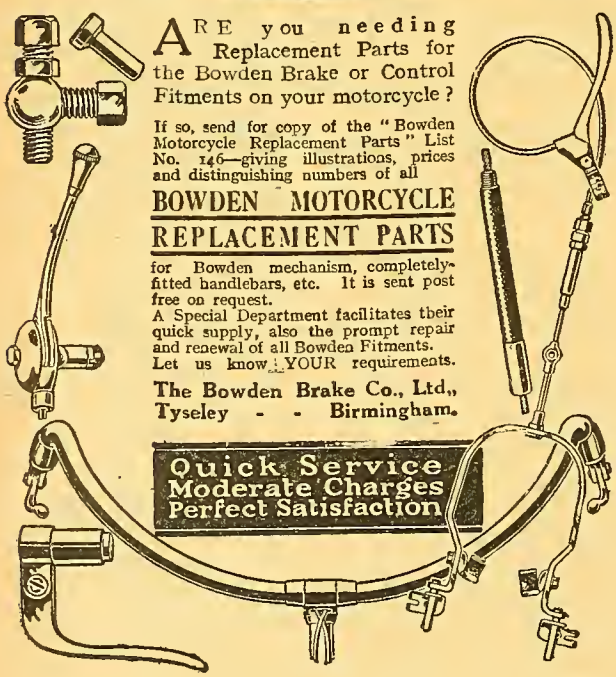
*"Aquamacs" can be inspected without obligation to purchase at our London Showrooms.*

**The SERVICE COMPANY (LONDON), Ltd.,**
**289-293 HIGH HOLBORN, LONDON——W.C.1.**

NON-WATER CONDUCTOR
WATER CANNOT CREEP BEYOND THESE POINTS
PATENT
PATENT SELF LOCKING WATER AND WIND TIGHT OPENING
NOTE CHAIN STRAP
FLEECE LINING
PATENT SELF LOCKING WATER AND WIND TIGHT OPENING.

Price **COAT** only, fully Fleece Lined **37/6**

# Bowden Service



ARE you needing Replacement Parts for the Bowden Brake or Control Fitments on your motorcycle?

If so, send for copy of the "Bowden Motorcycle Replacement Parts" List No. 146—giving illustrations, prices and distinguishing numbers of all

**BOWDEN MOTORCYCLE REPLACEMENT PARTS**

for Bowden mechanism, completely-fitted handlebars, etc. It is sent post free on request.

A Special Department facilitates their quick supply, also the prompt repair and renewal of all Bowden Fitments.

Let us know YOUR requirements.

**The Bowden Brake Co., Ltd., Tyseley - - Birmingham.**

**Quick Service**
**Moderate Charges**
**Perfect Satisfaction**

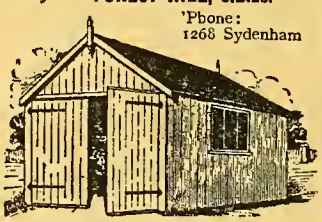
R.H.S.

## A. TURRELL & SONS, PORTABLE BUILDING WORKS. FOREST HILL, S.E.23.

'Phone: 1268 Sydenham

| Lth. ft. | Wth. ft. | Height to Ridge ft. in. | Height to Eaves ft. in. | £ | s. | d. |
|---|---|---|---|---|---|---|
| 7× | 5 .. | 7 0 .. | 5 0 | 7 | 5 | 0 |
| 8× | 6 .. | 7 6 .. | 5 3 | 9 | 0 | 0 |
| 9× | 7 .. | 8 0 .. | 5 6 | 11 | 7 | 0 |
| 10× | 8 .. | 8 4 .. | 5 9 | 12 | 19 | 0 |
| 12× | 8 .. | 8 4 .. | 6 0 | 17 | 5 | 0 |
| 14× | 8 .. | 8 7 .. | 6 3 | 21 | 0 | 0 |
| 16× | 9 .. | 8 9 .. | 6 4 | 26 | 0 | 0 |
| 18× | 9 .. | 8 9 .. | 6 4 | 31 | 0 | 0 |
| 20× | 10 .. | 9 0 .. | 6 6 | 36 | 0 | 0 |

*Prices Carriage Paid England and Wales.*



Made in sections, with double doors, with ⅞in. tongued and grooved match-boards on strong framing. Roof matchboarded, and covered with good quality felt, making same thoroughly weatherproof. Doors hung on strong garnets, and fitted with lock and key and tower bolts. Windows glazed: 21oz. glass. Flooring: Strong joists, one inch boards. All bolts supplied for erecting house.

**Rust Proof Dope**

**KEEP HIM OFF!**

This little beggar works whilst you're asleep or busy—takes pounds and pride off your "outfit." Stop his activity with "Corrosine" *the* Rust-Preventer and "Derusta" *the* Rust-Remover.

*In 1/6 and 2/6 sizes, at Halford's shops and all other enterprising dealers, or direct from*

**HOWSE'S** —*The* **Rust-Preventer Firm,— Union Works, SMETHWICK.**

Postage 4d. and 6d. each size extra.

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

**ADVERTISEMENTS** in these columns —First 12 words 3/–, and 3d. for every additional word. Paragraphs of under 8 words are charged double rate. Each paragraph is charged separately. Name and address must be counted. Series discounts, conditions, and special terms to regular trade advertisers will be quoted on application.

Postal Orders and Cheques sent in payment for advertisements should be made payable to ILIFFE & SONS Ltd., and crossed & Co. Treasury Notes, being untraceable if lost in transit, should not be sent as remittances.

All advertisements in this section should be accompanied with remittance, and be addressed to the offices of "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. To ensure insertion letters should be posted in time to reach the offices of "The Motor Cycle," by the first post on Friday morning previous to the day of issue. Advertisements that arrive too late for a particular issue or that are crowded out will automatically be inserted in the following issue unless accompanied by instructions to the contrary.

All letters relating to advertisements should quote the number which is printed at the end of each advertisement, and the date of the issue in which it appeared.

The proprietors are not responsible for clerical or printers' errors, although every care is taken to avoid mistakes.

## NUMBERED ADDRESSES.

For the convenience of advertisers, letters may be addressed to numbers at "The Motor Cycle" Office. When this is desired, the sum of 6d. to defray the cost of registration and to cover postage on replies must be added to the advertisement charge, which must include the words Box one, c/o "The Motor Cycle." Only the number will appear in the advertisement. All replies should be addressed No. 000, c/o "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. *Readers who reply to Box No. advertisements are warned against sending remittance through the post except in registered envelopes; in all such cases the use of the Deposit System is recommended, and the envelope should be clearly marked "Deposit Department."*

In the case of motor cycles offered for sale under a box number, as it is unusual for these to be sold without first being inspected by the intending purchaser, advertisers will facilitate business by embodying in their advertisements some mention of the district in which the machine offered may be seen and tried.

## ☞ DEPOSIT SYSTEM.

Persons who hesitate to send money to unknown persons may deal in perfect safety by availing themselves of our Deposit System. If the money be deposited with "The Motor Cycle," both parties are advised of this receipt.

The time allowed for a decision after receipt of the goods is three days, and if a sale is effected we remit the amount to the seller, but, if not, we return the amount to the depositor. Carriage is to be paid by the buyer, but in the event of no sale each party pays carriage one way. The seller takes the risk of damage in transit. For all transactions up to £10, a deposit fee of 1/- is charged; on transactions over £10 and under £50, the fee is 2/6; over £50 and under £75, 5/-; over £75 and under £100, 7/6 and on all transactions over £100, ½%. All deposit matters are dealt with at Dorset House, Tudor Street London, E.C.4, and cheques and money orders should be made payable to Iliffe & Sons Limited.

The letter "D" at the end of an advertisement is an indication that the advertiser is willing to avail himself of the Deposit System. Other advertisers may be equally desirous, but have not advised us to that effect.

## SPECIAL NOTE.

**Readers who reply to advertisements and receive no answer to their enquiries are requested to regard the silence as an indication that the goods advertised have already been disposed of. Advertisers often receive so many enquiries that it is quite impossible to reply to each one by post.**

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C., 1920, Lucas lighting, horn, 7,000 miles, good condition, tyres new; £75, or offer.—Morris, Mundesley, Norfolk. [5340


The Sign of Good Service.

The following list represents only a small selection from Godfrey's large and representative stock of all the best makes.

*Full detailed lists sent on request.*

A.J.S., 7 h.p. Comb.
ARIEL, 3½ h.p.
ALLON, 2¾ h.p.
B.S.A., 4½ h.p., K2
B.S.A., 4½ h.p., H2
B.S.A., 6 h.p., "E"
B.S.A., 8 h.p., "F"
COVENTRY-EAGLE
DOUGLAS, 2¾ h.p.
ENFIELD, 2¼ h.p.
ENFIELD, 8 h.p. Comb.
ENFIELD FAMILY S/C
HAWKER, 2¾ h.p.
HAWKER, 4½ h.p.
INDIAN SCOUT
INDIAN STANDARD
INDIAN CHIEF
LEVIS POPULAR
LEVIS, Mod. "S"
LEVIS, Mod. "G2"
MATCHLESS "J"
MATCHLESS H2
NEW IMPERIAL No. 3
NEW IMPERIAL No. 5
" " Comb., 8 h.p.
RALEIGH, 2¾ h.p.
RUDGE MULTI
RUDGE, 3½ h.p., 3 sp.
SCOTT, 3¾ h.p.
SQUIRREL, 3½ h.p.
TRIUMPH, "H"
TRIUMPH, "S.D."
TRIUMPH, "L.W."
ZENITH BRADSHAW
ZENITH SPORTS

SIDECARS.

MILLFORD
B.S.A.
TRIUMPH
INDIAN, Etc,

ANOTHER SMALL CONSIGNMENT OF 1921 INDIANS.

1921 7 h.p. Powerplus Indian, with Spring Frame and full electrical equipment. Solo, £110. Combination, £140.

SECOND-HAND MACHINES.

Godfrey's thoroughly overhaul and guarantee every secondhand machine

Many attractive bargains now available.

GRADUAL PAYMENTS.

ANY MACHINE can be purchased on our Deferred Payment System.

TERMS: 4% extra, payable ¼ down and balance in 12 months.

EXCHANGES.

Godfrey's are prepared to offer exceptional prices for good modern secondhand machines.

Send full details of your present machine and a quotation will be sent per return.

GODFREY'S, LTD.

208, Gt. Portland St., London, W.1

'Phone: Langham 1300 (2 lines).

Repair Depot, 14, Miller Street, Camden Town, N.W

'Phone Museum 2434.

Service House for all B.S.A. Spares.


## MOTOR CYCLES FOR SALE.

### A.B.C.

53 GNS.—1920-21 A.B.C., fully equipped, taxed December, perfect.—40, Aynhoe Rd., W.14. [5369

A.B.C. 3h.p., 4-speed, late, as new, all on, fast, any trial; nearest £70.—Fuller, 1, College Hill, E.C.2. [4790

A.B.C. 1920 Model, front forks and T.T. handlebars with controls.—Lowe, 13a, Eccles Old Rd., Manchester. [4831

1921 A.B.C., as new, very fast; 60 gns., or exchange old Matchless and cash.—57, Claude Rd., Plaistow. [5679

1921 A.B.C. 3h.p., 4-speed, electric lighting, accessories, excellent condition and fast; £65.—1, Dingwall Rd., E. Croydon. [5313

ROBERTSON'S Motors, Ltd.—1920 A.B.C. (new in 1921) standard, with Henderson sidecar, accessories; £70.—157b, Gt. Portland St., W.1. [6072

£85.—A.B.C. Combination, sports Swan, 1921, Klaxon, accumulator, lighting, tyres excellent, taxed, like new.—11, Warwick St., Oxford. 'Phone: 833. [4814

A.B.C., French model, delivered 1922, fitted Sopwith new pattern sidecar, screen, lamps, tools, spares, perfect, cost £160; offers; Isle Wight; reasons selling.—Box 1933, c/o *The Motor Cycle* [4803

*Spare Parts:*

SPARE Parts.—We are the largest stockists of these parts; trade supplied.—Maudes', 100, Great Portland St., W.1. [5568

### Abingdon.

ABINGDON 6-7h.p. 1914, folding sidecar, lamps, speedometer, Easting; £60, offers.—27, St. Germains Rd., Forest Hill. [6009

### Ace.

A.C.E., 1921, 4-cylinder, Middleton C.B. sidecar, spring wheel, screen, locker, speedometer, horn, lamps, tools, hardly used excellent condition any trial; £130.—21, Wontner Rd., Balham. [3674

### Acme

ACME 4h.p. Blackburne, 3-speed, clutch; £32; reliable.—1, Boro, Isleworth. [4833

1920 8h.p. Acme-Jap Combination, fully equipped, spare wheel, Lucas lamps, speedometer, etc.; bargain, £98.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5866

### A.J.S.

A.J.S. New 1922 Sporting Model B1, actually in stock; £85.—Moss, Wem. [5805

A.J.S. 2¾h.p., 2-speed, all on, good condition; £28.—Box 2021, c/o *The Motor Cycle.* [5110

6h.p. 1914 A.J.S. Combination; £67/10; easy terms.—Wauchope's, 9, Shoe Lane, London. [5976

A.J.S. 1922, latest 2¾h.p. model; £85.—Wilkins Simpson, Opposite Olympia, London. [5074

A.J.S., 3-speed, K.S., excellent condition, 5-6h.p., tax paid.—Davis, 22, Tooting Bec Rd. [5024

A.J.S. (new) 2¾h.p., B1 model; immediate delivery; £85.—Harrison and Bunkall, Chichester. [4752

1918 A.J.S. Combination, bought car; cheap, 85 gns.—Byrom, 18, Fleet St., Lancaster. [5290

A.J.S. 2¾h.p., brand new, actually in stock.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. [4562

£18/10.—2½h.p. A.J.S., splendid running order, good climber.—King, Egrove Farm, Oxford. [5541

DAN GUY, Weymouth.—1922 7h.p. A.J.S. Combination, £175; in stock. Dorset trade supplied. [0817

A.J.S. 1922 2¾h.p Sports and 7h.p. Combinations in stock.—Clifford Motories, Eastwood, Notts. [6506

1914 A.J.S. Combination, excellent condition; £70.—244, Old Christchurch Rd., Bournemouth. [4828

1920 6h.p. A.J.S. Combination, full accessories, tax paid; £123.—Ross, 86, High Rd., Lee, S.E. [5663

1921 7h.p. A.J.S. Combination, as new; £150, complete.—665, Didsbury Rd., Heaton Mersey, Manchester. [5119

MOST Luxurious Late 1920 A.J.S. Combination, every equipment; £112.—24, Balliol Rd., North Kensington. [5465

1917 2¾h.p. A.J.S., 3-speed, kick starter; what offers, bargain.—Took, 120, High Rd., South Tottenham. [5296

A.J.S. Combination, 4h.p., December, 1915, recently overhauled, re-enamelled makers, spare wheel, Cameo, speedometer, lamps, horn, tools, spares, 1920 Senspray, fully licensed, excellent condition, expert examination; nearest £75.—Heatherlea, Albany Rd., Fleet, Hants. [4761

## MOTOR CYCLES FOR SALE.

### A.J.S.

CROSS, Effingham Sq., is agent for A.J.S.'s in Rotherham. New 7h.p. outfit from stock. [5781

£49.—2¾h.p. A.J.S., 3-speed, clutch, K.S., electric, new tyres.—50, St. James' Rd., Leicester. [4731

MOFFAT, Yeovil, Official A.J.S. Agents.—Get in touch with us for prompt deliveries. Exchanges. Phone: 50. [5723

A.J.S. 7h.p. Combination; £175.—Immediate delivery can be obtained from P. J. Evans, John Bright St., Birmingham. [5135

A.J.S. Combination, equal to new, magnificent turn-out; cost £250; sell £140, or lightweight and cash.—Guise, Hunstanton. [5554

A.J.S. 1920 6h.p. Combination, spare wheel, tax paid; £95 for immediate sale.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [5889

1922 A.J.S., all models. Again the sensation of Tourist Trophy races. Catalogues with pleasure. —Sam E. Clapham (Motors), Greenwich. [3499

A.J.S. 1920 Combination, fully equipped and taxed, speedometer, spare wheel, etc.; £112.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [5716

FOR A.J.S. 1922 models, 2¾h.p. solo, or 7h.p. combinations, get in touch with the N. London agents. —Jones Garage, The Broadway, Muswell Hill. [0785

ROBERTSON'S Motors, Ltd.—1921 A.J.S. electric combination, luxuriously appointed, Bonniksen speedometer; £150.—157b, Gt. Portland St., W.1. [6073

A.J.S. 1920 Combination, dynamo lighting, best or Lloyd mechanical, hood, curtains, spare wheel; £128.—Day, 87, Uxbridge Rd., Shepherd's Bush. [5184

A.J.S. 6h.p. Combination, 3-speed, interchangeable wheels, recently overhauled, enamelled and plated; £80; call for trial.—Snow, Laurel St., Dalston, E.8. [6013

A.J.S. 1922 Combination, £175, in stock. Orders booked for the famous 2¾h.p. A.J.S. Motor and motor cycle accessories of all kinds.—J. E. Beale, Ltd., Bournemouth. [4885

A.J.S. 1921 Combination, spare wheel, windscreen, side screen, lamps, horn, speedometer, tax fully paid, perfect condition; £150.—Roberts, 68, North St., Chichester. [4993

A.J.S., 1921, December, finest on road, luxuriously equipped, dynamo, hood, screen, many refinements; £150.—James, c/o Bradmores, 482, Harrow Rd., Paddington. [5718

1921 A.J.S. Combination, dynamo lighting, electric horn, Best-Lloyd feed, sidescreen, cover, spare wheel, legshields, any trial; £165.—45, Waterlow Rd., Highgate. [5151

A.J.S. 1919 (late) Combination, spare wheel, speedometer, Lucas lamps, screen, tax paid, lovely condition; £90.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [5655

1922 Brand New A.J.S. 7h.p. Combination, £183, including spare wheel, windscreen, etc.; easy payments; free delivery to any address.—Premier Motor Co., Aston Rd., Birmingham. [4599

A.J.S. 6h.p. 1914 3-speed Combination, chain drive, 700×80 tyres, Cameo windscreen, speedometer, tax paid; £48, or near offer.—Eagles and Co., 275, High St., Acton, London. [5774

A.J.S.—Distributing Agents for Cambridgeshire, Huntingdonshire, and Bedfordshire. All models from stock; complete stock of spares.—King and Harper, Bridge St., Cambridge. [5816

SOUTHPORT.—A.J.S. 6h.p. 1917 Combination, spare wheel, lavishly equipped, including hood, windscreen, luggage carrier; snip, £79; exchanges.—Kents, 417, Lord St., Southport. [5280

1921 A.J.S. 7h.p. Combination; £150; Lucas lamps, horn, speedometer, windscreen, dickey seat, spare wheel, spares, tax paid, fully insured.—10, Orchard Rd., St. Margaret's, Twickenham. [4887

1921 A.J.S. 2¾h.p., Sports, B.1 Bonniksen speedometer, Lucas horn, knee grips, etc., mileage 348, like new, tax paid; £85; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone Dalston 2408. [5846

1921 7h.p. A.J.S., sidecar, D.A. lighting, spare wheel, Tan-Sad, W.R.S., aluminium plates, many spares, insurance; £152; appearance, mechanical condition, and running really exceptional.—6, High St., Sydenham. ('Phone: Syd. 375.) [5175

A.J.S. 6h.p. Combination, fully equipped, pillion, spares, tools, enamelled, plated, overhauled makers, like new; £140; exchange, cash adjustment, 2¾h.p. A.J.S. or Douglas, 1921.—Harrison, Boston Hotel, Boston St., Hulme, Manchester. [5449

A.J.S. Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4925

1914 2¾h.p. Special Competition I.O.M. Racing A.J.S., winner of over 100, first lap leader in 1914 Junior T.T., condition as new, mechanically perfect, 60-70 average speed, Binks and Amac racing carburetters, £20 spares; cost £200; accept £85, or highest offer.—Crabtree, Bridgefoot, Warrington. [5694


PREMIER MOTOR COMPANY

Can To-day offer you

IMMEDIATE DELIVERY

at the new

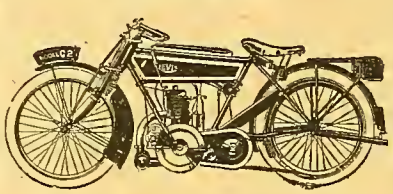
REDUCED PRICE

of the Model G. 247 c.c.

LEVIS

TWO STROKE

with sloping top tube, improved pattern tank, 247 c.c. super-efficient engine. Of more imposing appearance, faster, and comfortable on the worst roads, it is a great advance on all previous LEVIS models.



G1, single gear, belt drive ... £51
G2, 2-speed, clutch ... ... £61
G2, K.S. (kick starter) ... ... £63

Principal Birmingham Agents for

HENDERSON, LEVIS, RALEIGH, TRIUMPH, VELOCETTE.

Contracting Agents for A.J.S., ENFIELD JAMES, NEW IMPERIAL, NORTON, &c.

Telephone :— Central 7367 (2 lines).

Telegrams :— "Primus, Birmingham."

ASTON ROAD, BIRMINGHAM


## MOTOR CYCLES FOR SALE.

### A.J.S.

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7538

### Alecto.

1921 3½h.p. Alecto, fully equipped, tax paid; £40. 114, Brixton Hill. [6035

### Alldays.

ALLDAYS' Allon, 2-speed, as new; £45.—7, Melbourne Grove, East Dulwich. [5217

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Allons; unequalled service, repairs, etc. [3559

VERY Late 2¾h.p. Allon, 2 speeds, clutch, kick starter, fully equipped, taxed, as new; £32; trial. —7, Cowdrey Rd., Wimbledon. [5736

1920 Alldays' Allon 2¾h.p., 2-speed, clutch, kick start, in new condition, lamps, horn, etc.; £55. —Luck, 17a, Camden Rd., Tunbridge Wells. [5221

ALLON 1920 2¾h.p., 2-speed, clutch and kick starter; £39.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5616

1921 Alldays Combination, 2-speed, clutch, Kick start, mileage 700, tax paid, accessories, new condition; £80, or near offer.—79, High St., West Norwood. [5032

WAUCHOPE'S, 9, Shoe Lane, London.—Allon 2-stroke, new 1922 motor cycles, 2-speed gear model, £60; 3-speed gear model, £65; easy payments and exchange. [5973

1921 Alldays Allon 2¾h.p. 2-stroke, 2 speeds, clutch and kick starter, all lamps, horn, leg guards, tax paid; £52/10; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [5847

ALLDAYS' Allon 2¾h.p., new April, 1921, De Luxe model, 2-speed, clutch, kick start, fully equipped, P. and H. lamps, Lucas horn, legshields, tax paid, spare belt, excellent mechanical condition, any trial; £42.—Molliex, The Gate, Carrog, near Corwen, Merioneth. [5422

### American X.

AMERICAN X, 1919, 7h.p. Combination, dynamo lighting, perfect condition; £90.—28, Calbourne Rd., Balham. [5179

ROBERTSON'S Motors, Ltd.—1921 American X, shop-soiled, £88; 1921 combination, accessories, tax paid, £115.—157b, Gt. Portland St., W.1. [6074

1921 American X, new, ran 400 miles, examination or any trial with all accessories; £90, or exchange late model.—Henderson, 11, Cromford Rd., East Putney. [4826

1921 American X Combination, dynamo lighting, aluminium sidecar, luxuriously equipped; 110 gns.; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. (Photograph.) [5872

AMERICAN X 8-10h.p. 1921 Combination, only run 3,000 miles, luxurious sidecar, leather upholstery, windscreen, Camelina lamps, Cowey speedometer, full range spares and tools, licensed December, ride 50 miles to purchaser; £125.—Durell, Rainham, Kent. [5207

### Ariel.

ARIEL 3½h.p., splendid order; £18.—28, Woodford Rd., Forest Gate. [5375

3½h.p. Ariel Sport Model; any trial; £27.—Fairhurst, 2 behind 68, Standishgate, Wigan. [5446

3½h.p. Ariel 3-speed Combination; £48.—Hart, 27, 2 Walpole Rd., New Cross, S.E. [5057

ARIELS from Stock from the live agents, Barlow and Son, Mouton, Eccles. Tel.: 160 Eccles. [3691

ARIEL 3½h.p. 1922 (April), Sports model, done 150, tax paid, horn; £75.—279, Hither Green Lane. [4982

F.O.C.H. have 1920 3½h.p. Ariel Combination, fully equipped; bargain.—5, Heath St., Hampstead (nr. Tube). [3798

1911 Ariel Motor Cycle, 2¾h.p., single-speed, good running order; £16.—Parker, Johnson St., Lower Hopton, Mirfield. [4822

ARIEL 3½h.p. Combination, 3-speed, clutch, K.S., electric lighting, Tan-Sad; £45; trial after 6.—25, Bawdale Rd., E. Dulwich. [5216

1920 Ariel 6-7h.p. Combination, overhauled, coach painted, perfect; bargain, £95.—Greenfield, 255, South Park Rd., Wimbledon. [4990

ARIEL 3½h.p. 1920 Combination, in first-class condition and well cared for; 60 gns.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. [4561

SOUTHPORT.—Superb 1920-21 Ariel Countershaft Combination, excellent condition, all on; £78; exchanges.—Kents, 417, Lord St., Southport. [5279

ARIEL.—All models cash or gradual payments. Spares supplied from stock.—West Central Agency, Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0704

ARIEL 3½h.p. Sports Model, new, in stock, £87/10; best value for money, 60 m.p.h., guaranteed.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. [4563

## MOTOR CYCLES FOR SALE.

### Douglas.

DOUGLAS, 1916, 2-speed, overhauled; 29 gns.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [5874

DOUGLAS.—R. B. Clark and Co.—Brand new 2¾h.p. 2-speed, 47 gns.; few only left.—7, Exhibition Rd., S.W.7. [5489

2¾h.p. Douglas, all on, good running order; must sell, £26, or nearest.—Pumping Station, Hadley Rd., Enfield. [4777

2¾h.p. Douglas, all on, ride away, splendid appearance; bargain, £37/10.—16, Portland Rd., London, W.11. [5722

DOUGLAS 2¾h.p., nearly new, all on, only wants seeing; genuine bargain, £46.—1, Alexandra Rd., Kingston Hill. [5208

DOUGLAS Combination 1919 4h.p., special sidecar, hood, screen, lamps, etc.; £67/10.—38, Burlington Rd., Bayswater. [5395

1916 2¾h.p. Douglas, fully equipped, licensed, reliable mount; £32/10.—76, Herongate Rd., Wanstead Park. [4923

DOUGLAS.—1922 models for immediate delivery. Cash, exchange, or deferred payments.— Kays, 8, Bond St., Ealing. [4834

1916-17-18 2¾h.p. Douglases, 2-speed, reconditioned throughout; £35; guaranteed.—Daw, 114, Brixton Hill. [6033

1920 Douglas 2¾h.p., 3 speeds, fully equipped, new condition; £55.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [6056

DOUGLAS 4h.p. Combination, all accessories, but little wear, perfect; 52 gns.—73, Windermere Rd., South Ealing. [5209

£70.—Douglas combination, late model, lamps, horn, licence, perfect running order.—211, Garratt Lane, Wandsworth. [5835

DOUGLAS Combination 1920 4h.p., aluminium disc, fully equipped; £85.—J. Hillier, 216, Portobello Rd., North Kensington. [3976

DOUGLAS 2¾h.p., 1918 model, perfect condition, tax paid; £30.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [5893

DOUGLAS.—1922 Models ready for instant despatch, all complete with lamps, horn, licence-holder, pump, tools, etc.

£82.—2¾h.p. 3-speed, clutch, Douglas, all on.

£110.—4h.p. 3-speed solo Douglas, all on.

£115.—3½h.p. Sports Douglas, all on.

£135.—4h.p. Combination Douglas, all on.

EXCHANGES and special payment terms arranged; correspondence invited; catalogues and full particulars by return post free.

HERBERT ROBINSON, Ltd., Green St., Cambridge. [6112

2¾h.p. Douglas, tax paid, horn, etc., perfect running order; £15 cash; ride away.—Collins, 9, Riversley Rd., Nuneaton. [5084

DOUGLAS 1915 2¾h.p. 2-speed, good tyres, equipped, year's tax; £30.—Lawson, 8, Athenlay Rd., Nunhead, S.E.15. [5654

DOUGLAS 2¾h.p., a.i.v., 2-speed, £31 overhaul, mechanically perfect, any trial; offers.—9, Dundonald Rd., Ramsgate, Kent. [3632

4h.p. Douglas Combination, coachbuilt, late model, splendid condition; £55.—4a, St. John's Wood Rd., Maida Vale, London, N.W. [4511

£45.—Douglas 2¾h.p. motor cycle, never ridden, can be seen by appointment.—F. W., 20, Romola Rd., Herne Hill, S.E. [6119

DOUGLAS 1922 Solos and Combinations in stock —Agents, Birkenhead Motor Works, Old Bidston Rd., Birkenhead. 'Phone: 2047. [2388

1920 (June) Douglas Combination, well shod, splendid condition, 3 new tyres; £70.—244, Old Christchurch Rd., Bournemouth. [4826

1921 2¾h.p. Douglas, 2-speed, all on model, tax paid; £55.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5866

DOUGLAS 2¾h.p., 3-speed, 1920, dynamo, and acetylene, lavishly equipped; best over £52/10.—Geoffrey, 1, Goding St., Vauxhall. [3764

1920 Douglas Combination, equipped every possible accessory, new condition; £75.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [6055

4h.p. Douglas Combination, late 1918, good as new, all on, discs; £78; wanted, late 2¾h.p. Douglas.—Wethered, 24, Gwendolen Av., Putney. [5477

DOUGLAS, late 1921, 2¾h.p., complete accessories, Tan-Sad, oversize Dunlops, year's licence; 48 gns. —Fersfield, Westbury Rd., New Malden. [5314

4h.p. Douglas Combination, 1918, excellent order, small mileage, hood, screen, and spares, tax paid; £55.—"Homestead," Albert Rd., Ashtead. [4965


MANUFACTURERS' STOCK

MAKINKOT BRAND

*TO BE CLEARED.*

Fawn double texture, interlined rubber,

MOTOR SUITS

THESE suits are made of Fawn double texture cloth, interlined rubber.

The seams are cemented, sewn and taped, making these absolutely waterproof.

Will stand any amount of hard wear.

The jackets are made double-breasted, with belts and wind cuffs.

The Motor Leggings are made fastening with clips and straps, and have wind gussets in leg.

These suits actually cost over 30/- to manufacture without any profit, but we have several thousands to clear.

Every suit is guaranteed absolutely waterproof, and should these not meet entirely with your approval, we guarantee to return your money in full, if returned within seven days.

SPECIAL PRICE,

29/11 Carriage 1/- extra.

We have also several thousands heavy Twill Suits to offer. These are made of the heavy Twill used for making Motor Hoods, and are one of the finest suits made for motor cycling, interlined rubber. They are made with sewn and cemented seams, and taped, also the seams of these suits are striped, making these garments absolutely waterproof and we are prepared to give a guarantee that these are absolutely impossible for water to penetrate through. The Motor Leggings are made in the same way with wind gussets, fastening with clips and straps. The Suits are in sizes 34, 36, 38, 40, 42 and 44 chest, lengths inside leg are 27, 29, 31. Please state when ordering by post, measurements of chest, length inside.

50/- Carriage 1/- extra.

Orders to be addressed—

*The* LANCASHIRE and CHESHIRE RUBBER Co.

MAKINKOT HOUSE,

30, Thomas Street,

LIVERPOOL.

'Phone 4891 Bank, Liverpool.


## MOTOR CYCLES FOR SALE.

### Douglas.

4h.p. Douglas Combination, 1920, accessories, Cowey speedometer, spares, little used, perfect condition, trial; offers.—S.P., 45, Cecil Rd., Enfield. [4729

1919 4h.p. Douglas Combination, all on, electric side and rear light, screen, good condition, perfect engine; £70.—48, Burchell Rd., Peckham. [4875

1920 Douglas Combination, engine No. 11304, Easting, oversize tyres, full equipment, splendid condition; £85.—37, Church Gate, Leicester. [5104

DOUGLAS 4h.p., 1917, 3 speeds, clutch, kick starter, reconditioned throughout, all accessories; £55.—Eagles and Co., 275, High St., Acton, London. [5777

DOUGLAS 1922, brand new, 2-speed, all on, lamps, horn, licence holder, etc.; £68; cash or easy payments.—Wilkins Simpson, Opposite Olympia, London. [5067

DOUGLAS 2¾h.p., 3-speed, without clutch, absolutely as new; £59.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5619

30 GNS.—Douglas, 1915, long copper exhaust pipe, footboards, tyres as new, accessories, tax paid to 1923.—Delancey St. Garage, Camden Town, N.W.1. [5646

DOUGLAS 4h.p. Combination, 1918, general and mechanical condition, equivalent new, fully equipped, tax paid, trial; £70.—17, Station Rd., Ilford. [5087

1920-21 Douglas Combination, blue sidecar, Easting, everything as new, fully equipped, taxed for year; bargain, £85.—7, Riverdale Terrace, Richmond. [6010

2¾h.p. Douglas, 2-speed, in good condition, tyres nearly new, lamps, horn, and tax paid; £17.—Anthony, 1, Townshend Cottages, St. John's Wood, N.W.8. [5741

DOUGLAS 4h.p., 3-speed, kick start, horn, licensed, top-hole condition; best offer to £60; or consider lightweight in part.—Deeming, Hadley Highstone, Barnet. [4766

2¾h.p. Douglas, improved W.D., 2-speed, all on; best value on the market; £68 complete; delivery from stock.—The Spalding Motor Co., Ltd., Spalding. [4770

49 GNS.!—4h.p. Douglas Coach Combination, 3-speed, K.S., etc., fully equipped and guaranteed; given away.—Clifton Garage, Abingdon St., Blackpool. [4985

MOFFAT, Yeovil.—What we don't know about Douglas M.C.'s—nuf sed. New 1922 models, spares and repairs; exchanges. Agents since 1908. 'Phone: 50. [5724

£45.—Irish M.T. surplus, brand new enamel soiled 2¾h.p. Douglas motor cycle, never ridden; every part new except saddle.—43, Brailsford Rd., Tulse Hill, Brixton. [6118

DOUGLAS Combination, 4h.p., 1920; 76 gns.; well equipped, Easting, etc.; licensed year; new condition, mileage 2,000; after 7.—60, Parkfield Rd., South Harrow. [5186

1921 4h.p. Douglas Combination, lamps, horn, etc., purchased Sept., unscratched, mileage under 500, tax paid; 90 gns.—9, Hatherley Gardens, Crouch End. Hornsey 356. [5639

DOUGLAS 1922 Models: 2¾h.p. £68, 4h.p. solo £110, 4h.p. combination £135; prices include all accessories; delivery from stock.—Rivett, 236, High Rd., Leytonstone. [2680

1919 Sporting Douglas 2¾h.p., 2 speeds, nickel plated exhaust, disc wheels, lamps, Klaxon, new tyres, tax paid, perfect condition; £46.—66, Marsham St., Westminster. [5060

1918 4h.p. Douglas Combination, lamp sets and horn, recently overhauled, not W.D., good condition; £68.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [6094

DOUGLAS 1917 2¾h.p., engine and gear box been overhauled, old worn parts replaced, like new, in perfect condition; bargain, £35.—179, Brixton Rd., London, S.W.9. [6075

3½h.p. Sports Douglas, latest, mileage 300, Bonnikersen, knee grips, speedy mount; sell £110; exchange Sunbeam, Triumph, cash adjustment.—Taylor, Habrough, Grimsby. [5427

2¾h.p. Douglas, 1915, fully equipped, footboards and copper exhaust, excellent running order and appearance, licensed 1922; £33.—97, Northumberland Rd., O.T., Manchester. [5450

ELI CLARK can give you good service both in new machines and spares; try me. I may be useful to you. The pioneer agent for Douglas motors.—196, Cheltenham Rd., Bristol. [0016

2¾h.p. Douglas, 1915, 3-speed, Miller lighting set, Klaxon, speedometer, tools, etc., long exhaust, taxed, guaranteed perfect; accept £35.—Stockwell, 6, Northdown Av., Margate. [4889

1919 4h.p. Douglas, solo, 3-speed, clutch, K.S., licensed, equipped, powerful, nearly new condition, engine No. 6549; any trial; 59 gns.; lightweight part.—95, North Rd., Brighton. [5523

## MOTOR CYCLES FOR SALE.

### Douglas.

**19**20 Douglas 2¾h.p., 3-speed, new tyres, lamps, footboards, fully equipped, as new; nearest £55.—Station Hotel, Bramley Rd., Latimer Rd. Station, Metropolitan. 'Phone: Park 3875. [5520

**19**19 Douglas 2¾h.p., 2-speed, fully equipped, licensed, in excellent mechanical order and condition; 40 gns.; exchange or deferred.—Edwards, 50, Harrington Rd., South Kensington. [4545

**2¾**h.p. 1921 2-speed Douglas, all on, £60 solo; also **2¾** 3½h.p. 1914 Douglas combination, 2 speeds, £35; and 2¾h.p. 1915, 2 speeds, £27/10.—Wauchope's, 9, Shoe Lane, Fleet St., London. [5972

**49** GNS.—Douglas 4h.p., sidecar, Nov., 1915, Binks, engine 2583, lamps, 2 generators, perfect throughout, good tyres, exceptional engine, taxed; any trial; 7 o'clock.—90A, Belvedere Rd., Crystal Palace. [4905

DOUGLAS 2¾h.p., 2-speed, late 1914, new Amac carburetter, 2in. copper exhaust, enamel, plating, and appearance as new, tax paid for year, very fast; trial; £30.--44, Stoneleigh St., N. Kensington, W.11. [4918

**19**19 4h.p. Douglas Combination, nice order, £70; also 1920 2¾h.p. Douglas, K.S. and clutch, tax paid, full accessories, £56; also 1917 4h.p. Douglas, £44, tax paid.—Ross, 86, High Rd., Lee, S.E. [5664

4h.p. Douglas, 1917, 1921 engine, fully equipped, whole machine in perfect condition throughout, tax and insurance paid; £50, or exchange for extra good lightweight.—F. West, Grocer, St. Cuthbert's St., Bedford. [4859

FOR Douglas 1922 2¾h.p. and 4h.p. combinations, get in touch with us; we are North London agents and give you the best of service; all spares in stock; no W.D. rubbish.—Jones Garage, The Broadway, Muswell Hill. [0786

DOUGLAS 4h.p. 1916 coachbuilt Combination, 3 speeds, kick start, goods tyres, powerful, fast, perfect throughout, guaranteed, lamps, tools, trial; bargain, £58.—Owner, 45, Charles St., Exmouth St., Stepney. [5318

RACING 2¾h.p. Douglas, 2-speed, specially tuned engine, will do 60 m.p.h., was third at Brooklands on June 10th, total mileage since new 450, absolutely the fastest standard Douglas on the road; £50.—Watson, 203a, Buxton Hill, S.W.2., at rear of 205. [5441

KICKHAM, Stokes Croft, Bristol, the Douglas Agent with real experience and knowledge of a Douglas. Successes during 1920 on this mount: 38 firsts, 17 seconds, and 8 thirds, also 6 special trophies. Let me deal with your order. Unequalled service, repairs, etc. [3557

DOUGLAS Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4930

DOUGLAS.—£68. New 2¾h.p. 2-speed models delivered from stock; all machines complete with best lamps, horn, licence-holder, pump, and tools; exchanges and special payment terms arranged; correspondence invited; catalogues and full particulars by return post free.—Herbert Robinson, Ltd., Green St., Cambridge. [6111

DOUGLAS New 2¾h.p., 1922, 2-speed models, fully equipped, £63; 2¾h.p., 3-speed, clutch, and kick start model, all on, £82; 4h.p., all on, £110; 4h.p. combination, all on, £135; 3½h.p. sports model, £115; 6h.p. combination, all on, £165; your old machine taken in exchange and treated as payment down, the remainder in twelve equal monthly payments or more.—Wauchope's, 9, Shoe Lane, London. [5942

*Spare Parts.*

DOUGLAS Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7541

ROBERTSON'S Motors, Ltd., can supply all nsual Douglas spares requirements.—157b, Gt. Portland St., W.1. [6077

DOUGLAS Spares.—Large stocks of genuine Douglas spares. Dealers supplied at trade rates.—Rivett, 236, High Rd., Leytonstone. [2679

DOUGLAS Spares.—We hold a complete stock for all models; post free. Douglas Agents and spare part stockists.—Jones Garage, Broadway, Muswell Hill, N.10. [0806

FRANK WHITWORTH, Ltd., 139, New St., Birmingham.—Complete stock, genuine guaranteed Douglas spare parts; prompt attention, immediate dispatch lowest cash prices. [4657

### Dunelt.

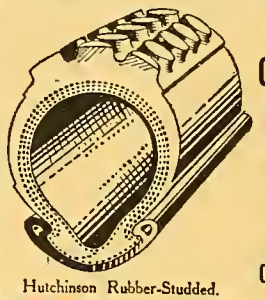
**19**21½ Dunelt, Maglita, Bonniksen, 28×3, small mileage, £20 accessories; 82 gns.; exchanges considered.—57, High St., Banbury. [5257

### Economic.

£34.—Economic, 6-speed, clutch, vibrationless twin motor cycles, heavy tyres, Druid forks, for ladies or gentlemen.—North London agents: Jones' Garage, Muswell Hill, N.10. [5916

## WILLIAM NICHOLS & CO.

**GLOUCESTER MANSIONS, CAMBRIDGE CIRCUS**
Tel.: Ger. 6472. **LONDON, W.C.2**



Hutchinson Rubber-Studded.

**MOTOR CYCLISTS!**

**Bargains: Clearance Line.**

**NEW MOTOR CYCLE TYRES.**

| Size. | Make. | Our Price. |
|---|---|---|
| 26×2 | Hutchinson, Brookland, rubber-studded | 16/6 |
| 26×2¼ | Hutchinson, Brookland, rubber-studded | 19/6 |
| 26×2¼ | Hutchinson, Tourist-Trophy, rubber-studded | 23/6 |
| 26×2¼ | Hutchinson, Tourist-Trophy, three-ribbed | 29/6 |
| 26×2¼ | Hutchinson Passenger, rubber-studded | 33/6 |
| 26×2⅜ | Hutchinson, Tourist-Trophy, rubber-studded | 24/9 |
| 26×2⅜ | Hutchinson, Passenger, rubber-studded | 30/6 |
| 26×2½ | Hutchinson, Brookland, rubber-studded | 22/6 |
| 26×2½ | Hutchinson, Tourist-Trophy, rubber-studded | 30/9 |
| 26×2½ | Hutchinson, Passenger, rubber-studded | 34/- |
| 650×65 | Hutchinson, Light Car, three-ribbed | 32/- |
| 700×75 | to fit 650×65 rim, Hutchinson, Light Car, T-ribbed | 36/6 |
| 750×75 | to fit 750×75 rim, Hutchinson, Light Car, T-ribbed | 39/- |

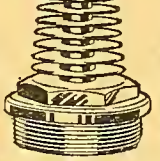
**SPECIAL.**

26×2¼ } **BELGRAVE,** rubber-
26×2½ } **studded, cable-cord** **30/- each**

**Limited Quantity Only.**

*Carriage Paid.—Three days' approval against remittance.—All goods guaranteed.*

**Motor Cyclists ! ! !**



**Replace** your exhaust valve caps with our aluminium air-cooled plug.
As used in the T.T.
Keeps your valve and engine cool.
Increases your power.
Reduces petrol consumption.
Stops pinking.
Supplied to fit any engine.
Made of pure aluminium.
Machined all over.
Aero-engine quality.

Price **5/-** Post free. Any engine
When ordering—state make of engine and H.P.

**Leather Driving Gloves**

Soft and pliable gusseted at wrist, with tab & press-button fastener.

—

Made of best selected skins. Will stand the tests of heat, steam, water and washing.

—

Price **3/9** Ideal for Motorists, Cyclists, etc.

## MOTOR CYCLES FOR SALE.

### Economic.

ECONOMIC.—We can give you immediate delivery of this wonderful low-priced machine; variable gear model, £34; or on easy payments. Please send P.C. for catalogue.—South Eastern Garage, Herne Hill, S.E.24. [5056

### Edmund.

EDMUND Motor Cycle, damaged in accident; what offers?—Crawford, c/o Waters, Hatfield. [4771

NEW 1921 Edmund-Jap, 2-speed, spring frame; £62, or near offer.—Percy and Co., 314, Euston Rd. [5823

### Enfield.

**19**22 Enfields in stock.--Premier Motor Co., Birmingham. [4601

£16.—2¾h.p. Enfield, single speed, all on, perfect.—17, Heaton Rd., Mitcham. [5336

**19**20 6h.p. Enfield Combination; bargain, £80; tax paid.—Ross, 86, High Rd., Lee. [5666

SHEFFIELD Agent for Royal Enfields; all models in stock.—J. A. Stacey, 12, Ecclesall Rd. [0573

ENFIELD 2¼h.p. Sports, six in stock; £55.—Cleare & Co., 125, High St., Woolwich. [6060

ENFIELD 3h.p., recently overhauled; £35.—Baldwin, Bakehouse Farm, Bledlow, Bucks. [5219

**2¼**h.p. Royal Enfield, almost new; £35; exchange higher power.—1, Upper Rd., Wallington. [5286

**19**14 6h.p. Enfield Combination, fully equipped, good condition.—Marbrook and Kirby, Sandwich. [5428

ENFIELD Combination, 6h.p., 1916, splendid condition; £65.—Stanley and Sons, Marden, Kent. [4909

£45.—1919 combination Enfield, 3h.p.; solo, £39; trial, appointment.—87, King Henry's Rd., N.W.3. [5475

ENFIELD 2¾h.p. Twin, 1914, 2-speed; £20.—Houchin, 189A, High St., Peckham, S.E.15. [6040

6h.p. Enfield Combination, lamps, horn, tax paid, in good condition; £55.—76, Brighton Rd., Surbiton. [5895

£35, near offer.—3½h.p. Enfield, 2-speed, overhauled, lamps, tax paid, pillion, perfect.—11, Queen's Rd., S.E.15. [5594

3h.p. Enfield, late model, twin magneto engine, fast; no reasonable offer refused.—88, Eleanor Rd., Dalston. [5315

ENFIELD 2¼h.p. 1920, tax paid, fully equipped; £36.—J. Hillier, 216, Portobello Rd., North Kensington. [3975

**19**22 Enfield Combination, Lucas equipment, mileage 800; £120.—24, Balliol Rd., North Kensington. [5464

ENFIELD Lightweight, 1921, new condition, tax paid; £45.—5, Matthews St., Latchmere Estate, S.W.11. [5040

ROYAL ENFIELD 2¼h.p., 2 speeds, kick starter; £57.—Shepnerd, Enfield Highway Tel.: Waltham Cross 31 [0879

ENFIELD Lightweight, with kick starter, in stock; £57; best value extant.—Bunting's Exchange, Wealdstone. [5584

**19**20 Enfield 2¼h.p., 2-speed, all accessories, tax paid, hardly ridden; £35.—26, Leighton Grove, London, N.W. [5479

ENFIELD 1921 Lightweight, 2-speed, K.S., all on, little used, perfect order; £40.—97, Rosebery Rd., Muswell Hill [5197

ENFIELD Lightweight, 1921, soiled only, fully equipped, tax paid; £42/10.—Owen, 94B, High Rd., East Finchley. [5764

ENFIELD 6h.p. Combination, 1916, mechanically perfect, accessories, any trial; £60.—119, Dalmeny Avenue, Norbury. [5183

DAN GUY, Weymouth.—Enfield 1921 8h.p., Magdyno, double-seated sidecar, hood and screen, guaranteed perfect; £125. [0818

FAST 1917 3h.p. Enfield, Senspray, new chains, Bonniksen, Klaxon, spares; £45, or offer.—109, East Dulwich Grove, S.E.22. [5016

**19**21 Enfield Combination, dynamo, Easting Royal screen, tax paid, perfect condition.—H. Sedgwick, 4, Shipka Rd., Balham. [5178

ENFIELD, August, 1921, Lucas Magdyno, horn, Cowey speedometer, double sidecar, taxed; £110.—19, The Park, Golders Green. [5307

£36.—1921 Enfield, 2-stroke, 2 speeds, K.S., fully equipped, taxed, as new; bargain.—Allery, 30, Thornsett Rd., Earlsfield, S.W.18. [5814

**19**20 Enfield-Jap Combination, Magdyno, hood, screen, fully equipped, new condition; best offer accepted.—20, Goldsmith's Row, E.2. [5390

ENFIELD 3h.p. twin, 2-speed, 1914, full equipment, back tyre faulty, machine otherwise O.K.; £30.—Box 2041, c/o *The Motor Cycle.* [5979

CROYDON and District.—Sole official appointed agent for Royal Enfields.—A. F. Pulling, 175a, London Rd., Croydon. 'Phone, 1619. [6951



**All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Enfield.

ROYAL ENFIELD, 1916, tax paid, all on, perfect condition, guaranteed £80, or near offer.—Stafford, Fulbrook Mews, Tufnell Park, N. [5478

ENFIELD Combination, in fine condition, enamel like new, £57; a sidecar, in new condition, suit Triumph, £12.—55, Holland St., Brixton. [5590

ENFIELD, £28, or nearest; 2¾h.p., twin, 2-speed, tax paid, good tyres and running order.—Herbert, 2, Belmont Terrace, St. Ives, Cornwall. [5052

6h.p. 1915 Enfield Combination, 2 speeds, £65; also 2¼h.p. 1921 Royal Enfield, 2-speed 2-stroke, £47/10.—Wauchope's, 9, Shoe Lane, London. [5959

1921 8h.p. Enfield Combination, speedometer, many extras, Easting screen, mileage negligible, tax paid; £125.—31, Thursby Rd., Northampton. [4508

£35.—1921 2¼h.p. Enfield, 2-speed, taxed, fully equipped; bargain.—W.J.C. Motor Exchange, Addison Av., Holland Park, W.11. Park 2071. [5920

ENFIELD 6h.p. Combination, late model, as new; 69 gns.; photograph; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [5875

ENFIELD.—Complete range of 1922 models for immediate delivery. Cash! Exchanges! Easy payments.—P. J. Evans, John Bright St., Birmingham. [5131

ENFIELD 6h.p. Late 1920 Combination, in first-class condition, all accessories, tax paid; £92/10.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [5891

2¾h.p. Enfield, 2-speed, all chain, tyres perfect, re-enamelled, tool bags, horn, stored, no tax, trial, Bosch, latest Amac; £17.—Ford, Sotwell, nr. Wallingford, Berks. [5365

1921 Late Enfield Combination, Vickers engine, complete outfit, mileage only 2,500, tax paid; best over £110; child's seat.—Box 2026, c/o *The Motor Cycle*. [5698

ENFIELD Combination 6h.p., J.A.P., recently overhauled by makers, perfect; £85; exchanges; easy payments.—Geo. Smith, 268-270, Lavender Hill, Clapham Junction. [5125

ENFIELD 1922, brand new, 2-stroke 2¼h.p. new sports model, just arrived; secure now; £55; easy payments arranged; exchanges.—Wilkins Simpson, Opposite Olympia. [5065

ENFIELD 1922, brand new 8h.p. Combination, Magdyno lighting; £158; in stock; easy payments arranged; exchanges.—Wilkins Simpson, Opposite Olympia, London. [5068

ENFIELD Combination 8h.p., excellent condition, hood, screen, speedometer; £85, or near offer.—Kirkwood, Builder, 83a, Maria St., Kingsland Rd., E.2. 'Phone: Dalston 3151. [4863

EXCEPTIONAL Bargain.—Enfield 1922, 2-stroke, 2-speed, kick starter, tax paid, better than new, only done 30 miles; accept £52.—Wilkins Simpson, Opposite Olympia, London. [5073

ENFIELD Combination, tandem sidecar, late 1921, fully equipped, mileage 500, absolutely as new, tax and insurance paid; £125; evenings.—Gatward, 19, Mehctabel Rd., Hackney, E.9. [5007

1922 Enfield Combination, Lucas dynamo lighting, in stock for immediate delivery; exchanges or deferred 4% extra; £158.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [5850

1921 2¼h.p. Enfield, 2-speed, as new, £42; 1916 6h.p. Royal Enfield Combination, accessories, tax paid, £58; new models in stock, for cash or exchange.—Daw, Enfield Agent, 114, Brixton Hill. [6031

ENFIELD Combination 6h.p. J.A.P., electric light, speedometer, clock, Cameo windscreen, side wings, luggage grid, railed pillion seat, little used, and as new; £115.—19, Wilton Rd., Highams Park, Chingford. [4963

1921 Enfield Combination 8h.p., appearance and condition as brand new, all lamps, speedometer, Tan-Sad, spring handle-bars, windscreen; £120, no offers.—Catt, Jnr., "Thanet," Abington Park, Northampton. [4747

ENFIELD 1917-1918 Combination, 6h.p., fully equipped, including Jones' speedometer, sound mechanical condition, excellent appearance, luggage grid, tax quarter paid; £85.—27, South End Rd., Hampstead. [5258

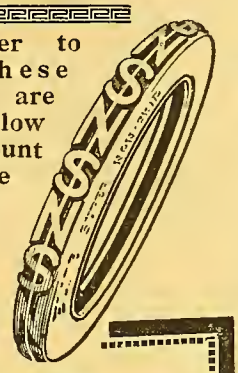
ENFIELD Combination, 6h.p., 2-seater sidecar, Cameo screen; this combination been completely overhauled, new tyres, re-enamelled and plated, machine equal new, licensed; £75.—5, St. Peter's Rd., Hammersmith, W.6. [5830

8h.p. Royal Enfield Combination, new 1922, £140; dynamo lighting model, £158; 2¼h.p. sports model, 2-stroke, £55; with kick starter, £57; easy payments, one-fifth down; exchanges arranged.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5943

ENFIELD Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St. Southport. 'Phone: 607. [4924


# Special Offer.

¶ ¶ In order to introduce these Covers, we are prepared to allow a special discount of 25% off the first 1,000 covers sold. This offer cannot be repeated.




THE

## EXTRA HEAVY MOTOR CYCLE COVER

has been designed to withstand the kick of any motor cycle engine yet made and to last out any other make. These covers are a combination of everything that is best in tyre manufacture based upon expert knowledge obtained during the past 12 years we have been advertising motor cycle tyres of various makes in this journal.

**THE ELITE SUPER NON-SKID** is a true non-skid—not merely a fancy pattern. It embodies all the true principles that go to make a non-skid—Side Ribs, Cross Bars & Suction Cups.

**THE ELITE SUPER NON-SKID GUARANTEES YOU AT LEAST 33⅓ per cent. more mileage** than you have obtained from any other make, no matter what the price.

**ELITE SUPER NON-SKID COVERS.**

| Size. | Special Price. | | List Price. | |
|---|---|---|---|---|
| | Cover. | Tube. | Cover. | Tube. |
| 26×2¼.... | 29/6 | 6/9 | 40/- | 7/6 |
| 26×2½×2¼ | 42/- | 6/9 | 56/- | 9/- |
| 28×3..... | 51/- | 7/11 | 68/- | 10/6 |
| 700×80... | 54/6 | 7/6 | 69/6 | 9/9 |

As certain sizes will shortly be withdrawn from all manufacturers' lists as non-standard, we have not laid down moulds in the Super Non-skid pattern; but for the convenience of our customers have made arrangements to supply these non-standard sizes in a Three-ribbed Pattern which is exactly of the same construction and weight.

**ELITE THREE-RIBBED COVERS.**

| Size. | Special Price. | | List Price. | |
|---|---|---|---|---|
| | Cover. | Tube. | Cover. | Tube. |
| 26×2..... | 29/- | 5/3 | 38/6 | 7/- |
| 26×2¼.... | 37/6 | 6/- | 50/- | 8/- |
| 26×2½.... | 42/- | 6/9 | 56/- | 9/- |
| 26×3..... | 49/6 | 7/6 | 66/- | 9/9 |

**ELITE COVERS ECLIPS ALL OTHERS**

'Phone: Victoria 6553. ELITE RUBBER Co. LTD Tyre Specialists 'Grams: "Tyrelidav, London."

*LONDON'S LEADING TYRE HOUSE.*
**266, VAUXHALL BRIDGE RD., S.W.1.**
to where all post orders should be addressed.

**And at 44, Surbiton Road, Kingston-on-Thames.**
Telephone—Kingston 3355.

Steele Publicity.


## MOTOR CYCLES FOR SALE.

### Enfield

1912 2¼h.p. Royal Enfield, tax paid, all-chain drive, 2-speed and clutch, fitted with F.R.S. lamps and horn, original tyres, machine has done about 400 miles only, plating and enamel in very fine condition, complete with all tools and spares; £38, bargain.—Allen, Station House, Aldeburgh, Suffolk. [5761

*Spare Parts.*

ENFIELD Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7542

ENFIELD Spares and Repairs a speciality.—Pulling's Garage, London Rd., Croydon. 'Phone, 1619. [6952

### Excelsior.

BRAND new 1922 2½h.p. Excelsior, 2 speeds, kick starter, shop soiled, only £45.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [6088

EXCELSIOR 1921 De Luxe Combination, 8h.p. J.A.P., Magdyno lighting, 4 interchangeable wheels, Binks, speedometer, legshields, etc., perfect condition; £115.—Hughes, 95, Fernhead Rd., Kilburn, W.9. [5012

BRITISH Excelsior de Luxe Combination, 8h.p. J.A.P., 3 speeds, Lucas Magdyno, detachable wheels, spare wheel, 28in. tyres, hood, screen, 2-seater sidecar (one seat removable), many other accessories, photo, run 5,000 miles only, year's tax; 110 gns.; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [4265

### F.N.

4-CYL. F.N., single-speed, overhauled, reliable; best offer.—M., 30, Millais Rd., Leyton. [4880

F.N. 5-6h.p., mechanical valves, 2-speed, clutch, good order, few spares; offers?—215, Gladstone St., Peterborough. [5289

1922 F.N. 2½h.p., brand new, 2-speed, kick start, clutch, shaft drive; 40 gns.—21, Mostyn Gardens, Kensal Rise, N.W.10. [5425

F.N., 1914, 4-cylinder, 2-speed, clutch, perfect condition, sporting appearance; £28, or exchange.—130, Beulah Hill, Norwood, S.E. [5640

1914 F.N. Combination 7h.p., accumulator lighting, mechanically perfect, in good condition; £70; after 7 or week-end.—Stanton, 32, Boston Park Rd., Brentford. [4796

F.N. 1914 7h.p. Combination, 3 speeds, clutch, speedometer, examination invited, too fast for owner; for quick sale, £65.—G. Cheny, 161, Dalling Rd., Hammersmith. [4786

1921 F.N. 2½h.p., 2 speeds, C. and K.S., shaft-driven, fully equipped; £37/10; absolutely as new; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [5851

F.N. (England), Ltd., have several second-hand machines for sale, used only for competition or demonstration purposes.—For prices and particulars apply, F.N. Works, Kimberley Rd., Willesden Lane, London, N.W.6. [4965

LANGFORD'S, 37, Cricklewood Broadway, London, N.W.2.—1922 8h.p. 4-cylinder F.N., with new o.h.i.v. engine, 3-speed gear, and no-trouble shaft drive, £136; 2½h.p., £55. Highest price for your present machine in exchange. [3369

F.N.'s, 9h.p., new type, overhead valves, £135, with sidecar, £174; 5h.p. new type, overhead valves, with kick-starter, hand-controlled clutch and 2-speed gear, £72; a 2½h.p. 2-speed, hand-controlled clutch and kick start, side valves, £55; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5954

*Spare Parts:*

F.N. Spares.—We can supply for all models from 1904. Please send frame number or old parts 37, Cricklewood Broadway, London, N.W.2. [3370

F.N. Spares.—We can supply for all models from 1904; prompt attention to all enquiries.—Langford's, 37, Cricklewood Broadway, London, N.W.2. [5887

### Francis-Barnett.

2¾h.p. Francis-Barnett standard model in stock; £73.—Read Bros., Tunbridge Wells. Tel.: Rebro. 'Phone: 1139. [4481

FRANCIS-BARNETT 2¾h.p., J.A.P., Sturmey gear box, kick starter and clutch, well equipped.—Bunting's Exchange, Wealdstone. [5586

FRANCIS-BARNETT 2¾h.p. 1920 model, 2-speed and clutch, lamps, speedometer, perfect condition; £45.—Garaged at 78, Church St., Camberwell Green. [5530

### Gamage.

1921 Gamage, 2½h.p. Villiers, flywheel magneto, Burman 2-speed, good condition; £33.—Seen London, or Court Lodge, Horton Kirby, Kent. [5230

### Grandex.

GRANDEX-J.A.P. 2½h.p., 2-speed, very good order; £28.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5620

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; from £120.—Stacey, 12, Ecclesall Rd. [0577

## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

HARLEY-DAVIDSON 7-9h.p., 1917-18, splendid condition; best offers.—Central Garage, Crawley. [5268

1915 Harley-Davidson Combination, 7-9h.p., 3-speed, lamps, Easting; £65.—97, Chesnut Rd., Plumstead. [5433

1919 Harley 7-9h.p., overhauled, plated, re-enamelled, discs; £85.—6, Exeter Rd., Cedars Av., Walthamstow. [5273

1915 Harley Combination, 7-9h.p., 3 speeds, clutch, K.S.; after 7 p.m.; offers.—68, Ashmore Rd., Paddington, W.9. [5309

1919 Harley 2-seater Combination, extremely small mileage, fully equipped, tax paid; £115.—Daw, 114, Brixton Hill. [6034

HARLEY 7-9h.p. Combination, late 1919, new condition, not W.D., equipped; £85.—Clark, 7, Exhibition Rd., S.W.7. [4533

HARLEY-HENDERSON Combination, very smart, as new; £105, lower power part.—The Haven, 120, Sutherland Rd., Croydon. [5715

DOUBLE-SEATER Harley Combination, excellent condition, tyres, etc., mechanically perfect; first 53 gns. secures.—67, Fernlea Rd., Balham. [5996

7-9h.p. Harley-Davidson Combination, just overhauled, first-class condition; seen after 5 p.m.; 65 gns.—Phillis, 21, Cole St., Borough, S.E. [4758

HARLEY 7-9h.p. Combination, 1918, Bosch magneto, perfect mechanical condition, owner bought car; £75; any trial.—57, Harrow View, Harrow. [5506

1920 7-9h.p. Harley-Davidson, 2-seater sidecar, lamps, horn, speedometer, hood, windscreen, guaranteed perfect; £110.—40, Warley Rd., Blackpool. [5378

1916 7-9h.p. Harley Combination, just overhauled, all accessories, smart appearance; £85; exchange considered.—Ross, 5, Hall Rd., East Ham, E.6. [5002

HARLEY 7-9h.p., 1917, large coachbuilt sidecar, hood, screen, electric lamps, horn, etc., perfect mechanical condition; £77/10.—Owen, 94B, High Rd., East Finchley. [5762

1920-21 Harley 4h.p., low mileage; expert examination; fully equipped, lamps, horn, discs, speedometer; £85; exchange 7-9h.p. Harley.—Jenkins, 20, Duffryn Rd., Waunllwyd, Mon. [5440

1922 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices: catalogue with pleasure.—Sam. E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5986

1918 Sports Harley 7-9h.p., magneto model, 3-speed, Swan sporting sidecar, Easting, electric lights, taxed, splendid condition and very smart; £78.—164, Revelstoke Rd., Wimbledon Park, S.W.18. [5360

7-9h.p. 1915 Harley Combination, 1920, 2-seater sidecar, 3-speed, clutch, K.S., Easting's, £25 overhaul, smart turnout; any trial; £85; exchanges considered.—16, Burton St., Gorton, Manchester. [5495

HARLEY-DAVIDSON 7-9h.p. Late Combination, luxuriously equipped, electric lighting, speedometer, Tan-Sad, windscreen, perfect running order, little used; £75, no offers.—1, Priory Row, Kew. [5651

1921 7-9h.p. Harley Combination, electric model, luxurious outfit, speedometer, discs, mudshields, hood, screen, tyres new, excellent condition, unscratched; £150; must sell.—21, Wontner Rd., Balham. [3675

GENUINE Bargain.—1919 Electric Model Harley-Davidson Combination, fully equipped, discs, Tan-Sad, Easting, all in very fine condition; £110, or exchange for good Sunbeam.—49, Dagmar Avenue, Wembley Hill. [6006

LATE 1920 Harley, beautiful tune and condition, 72 m.p.h., 75 m.p.g., will maintain 50 without effort infinitely, very comfortable and mechanically silent, any examination after 6; £90.—Phillips, 195a, Albany St., N.W. [5312

HARLEY-DAVIDSON 1918-19 7-9h.p., Watsonian coupe sidecar (not enclosed), discs all wheels, Tan-Sad, large lamps, Stewart horn, etc., smart sporting appearance, only wants seeing; £85.—Lyme Villa, Mottingham, S.E.9. [4767

1920 4h.p. Flat Twin Harley Combination, 3-speed, clutch, kick start, Swan sporting sidecar, speedometer, lighting set, horn, etc., most beautiful condition throughout, only needs seeing; £85.—Will, 769, Romford Rd., Manor Park, London, E.12. [5254

HARLEY-DAVIDSON 1918-19 Combination, 1921 Henderson Elite sc. screen, dashboard, clock, speedometer, electric lighting, disc, thoroughly overhauled, repainted, whole outfit in perfect order; 85 gns.—33, Streathbourne Rd., Balham, S.W. [5222

HARLEY-DAVIDSON 1922 7-9h.p., never ridden, latest pattern combination, luxuriously fitted, hood, screen, speedometer, lamps, Klaxon; advertiser cannot take delivery; will sacrifice deposit £25, leaving £184 to pay.—Letters only, C., 41, Ashford Rd., Cricklewood. [3608

SMARTEST Outfit on the Road; Harley 7-9h.p., overhauled, replated, enamelled by Harley's, Cowey, Lucas, new lamps, Bosch, insured £140 March, 1923, year's tax paid, Sandum 1921 2-seater, double hood, front and side screens, £56 car, easily converted to 1-seater; photo; giving up; cash needed, any test; offers.—160, Cowick Rd., Tooting, London. [5681

"TO FULLY APPRECIATE THE OPEN ROAD YOU MUST BUY A MOTOR CYCLE."

# BAMBERS

CAN SUPPLY THE FOLLOWING FROM STOCK.

### SOLO.

| | | |
|---|---|---|
| 1922 | 2¾ h.p. **DOUGLAS**, all on | £68 |
| 1922 | 2¾ h.p. **DOUGLAS**, 3-sp., K.S. | £82 |
| 1922 | 3½ h.p. **DOUGLAS**, Sports | £115 |
| 1922 | 2½ h.p. **ENFIELD**, 2-speed | £55 |
| 1922 | 3½ h.p. **NORTON**, 16H. | £115 |
| 1922 | 3½ h.p. **ARIEL**, 3-sp., K.S. | £95 |
| 1922 | 4½ h.p. **B.S.A.**, all chain | £110 |
| 1922 | 4 h.p. **TRIUMPH**, all chain | £115 |
| 1922 | 4 h.p. **TRIUMPH**, Model H | £105 |
| 1922 | 3½ h.p. **ROVER**, all chain | £100 |
| 1922 | 3½ h.p. **ZENITH-BRADSHAW** | £119 |

### COMBINATIONS.

| | | |
|---|---|---|
| 1922 | 7 h.p. **A.J.S.** Comb. | £175 |
| 1922 | 8 h.p. **ENFIELD** Comb. | £140 |
| 1922 | 8 h.p. **ENFIELD** Comb., dyn. | £158 |
| 1922 | 4 h.p. **DOUGLAS** Comb. | £135 |
| 1922 | 6 h.p. **DOUGLAS** Comb. | £165 |
| 1922 | 8 h.p. **MATCHLESS** Comb. | £170 |
| 1922 | 6 h.p. **B.S.A.** Comb. | £164 |
| 1922 | 4½ h.p. **B.S.A.** Comb. | £142 |
| 1922 | 3½ h.p. **ARIEL** Comb. | £125 |

NO WAITING: ANY MAKE SUPPLIED.

## TIP-TOP PRICES ALLOWED

FOR SECONDHAND MACHINES IN PART PAYMENT.

## DEFERRED PAYMENTS

### SPECIAL BARGAINS.

| | | |
|---|---|---|
| 1922 | 2¾ h.p. **ENFIELD**, shop-soiled | £47 |
| 1921 | 5-6 h.p. **ROVER** Comb., all-chain | £120 |
| 1921 | 2¾ h.p. **DIAMOND-JAP**, 3-sp., etc. | £47 |
| 1920 | 7-9 h.p. **INDIAN** Comb., perfect | £105 |
| 1920 | 6 h.p. **ENFIELD** Comb. | £105 |
| 1920 | 4½ h.p. **B.S.A.** Comb., new 1921 barg'n | £90 |
| 1920 | 2¾ h.p. **METRO-TYLER**, "S" type | £50 |
| 1920 | 2¾ h.p. **EDMUND**, 2-sp. | £45 |
| 1919 | 5-6 h.p. **JAMES** Comb. | £85 |
| 1915-16 | 7-9 h.p. **HARLEY-DAVIDSON** Comb. | £70 |
| 1914 | 3½ h.p. **JAMES** Comb., a gift | £45 |

MANY MORE.

*May we send you full particulars?*

## R. BAMBER & Co., Ltd.,

## 2, EASTBANK ST.,

'Phone 607. **SOUTHPORT.**

## MOTOR CYCLES FOR SALE.

### Harley-Davidson

DISSOLUTION of Partnership Sale.—4h.p. Harley, last year's, unregistered, £103, fully equipped, or best offer; Canoelet K4 sporting sidecar, painted and made specially to fit last year's 7-9h.p. Harley, 28×3 wheel and tyre, £18; Bamco bulbous back sidecar, 7-point attachment, welded chassis, joints painted and made specially to fit last year 7-9h.p. Harley, £28, or best offer.—76, The Mount, York. [5038

*Spare Parts:*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7543

### Hazlewood.

NEW 1921 Hazlewood Combination, 5-6h.p. twin J.A.P., 3-speed; £110, or near offer; exchanges.—Percy and Co., 314, Euston Rd. [5824

### Henderson.

HENDERSON 1920 10h.p., 4-cylinder, 3 speeds, clutch, well equipped; £78.—5, Victoria Av., Surbiton. [5638

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Hendersons; unequalled service, repairs, etc. [3560

1922 Henderson Model de Luxe in stock, £165; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [4602

HENDERSON 4-cyl. Combination, splendid condition, overhauled, new coachbuilt sidecar; £70.—164, Tylecroft Rd., Norbury, S.W.16. [4872

HENDERSON Combination, 10h.p., 4-cyl., very good condition, large sidecar, windscreen, electric light, must sell; £58.—146, Lower Richmond Rd., Putney. [5111

HENDERSON Late 1920 4-cyl. 10h.p. Combination, all accessories, tax paid, splendid condition; £95.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [5890

1916 4-cyl. Henderson Combination, electric lamp, horn, speedometer, tyres good, semi-sporting sidecar; £45, for quick sale.—Flat 17, 122, Southampton Rd., W.C.1. 'Phone Museum 5200 [5999

ROBERTSONS Motors, Ltd., who have handled these famous Henderson machines since 1911, can give trial runs with the latest model at any time by appointment. 1922 De Luxe model in stock at the new reduced price of £165.—157b, Great Portland St., W.1. [1092

ROBERTSONS Motors, Ltd., the original Henderson Importers, offer the following: 1921 Standard, in perfect order, tax paid, £110; 1920 electric combination, Tan-Sad, just completely overhauled, £135; 1920 Standard Capjon and Mudd, £80; sidecar, Cowey trip, and all accessories, £135; 1920 Standard combination, all accessories, tax paid, £120; 1915 Standard, with luxurious sidecar, speedometer and accessories, £70.—157b, Gt. Portland St., W.1. [6078

*Spare Parts:*

ROBERTSONS Motors, Ltd., the Henderson Experts, have the most representative stock in the country.—157b, Gt. Portland St., W.1. [6079

### Hobart.

HOBART, 2-speed Villiers, Mark 3, lamps, tax paid; £31.—Davis, 22, Tooting Bec Rd. [5029

1920 2¾h.p. Hobart-Jap, Sturmey-Archer, in splendid condition, tax paid; £47.—Jordon, Shelley, Netherwittou, Morpeth. [5661

HOBART, new, shop soiled, single speed, £39; 2-speed, kick start, £59.—Shepherd, Enfield Highway. Tel.: Waltham X 31. [0875

1920 Hobart-Villiers, 2-speed, all accessories, magnificent condition; trial will convince; £32/10, or near.—36, Ulleswater Rd., Southgate, N.14. [5638

1922 Hobarts, all models. Catalogues with pleasure from the agent, Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [4633

### Humber.

15 GNS.—2¾h.p. Twin Humber, light, fast, privately owned.—Flitt, Ampthill, Beds. [5089

2½h.p. Humber, 3 speeds, clutch, perfect; bargain, £18.—Fisher, Springwell Rd., Heston, Hounslow. [5266

T.T. Humber Twin 2¾h.p., 3-speed and sidecar, lamps, new belt, etc.; £20.—Write, 19, Linden Grove, Peckham, S.E. [5056

HUMBER 4½h.p. Sports Model, £100; immediate delivery.—Shepherd and Co., Enfield Highway. Tel.: Waltham Cross 31. [0877

HUMBBR 4½h.p. Flat Twin Combination, new machine, slightly shop-soiled; £125.—P. J. Evans, John Bright St., Birmingham. [5133

1921 Humber 4½h.p. Combination, perfect condition, Klaxon, electric lighting, speedometer; £110.—Glencairn, Chase Green Avenue, Enfield. [5198

HUMBER Agents.—All 1922 Models; write for catalogues and full particulars by return post free; exchanges and special payment terms arranged; correspondence invited.—Herbert Robinson, Ltd., Green St., Cambridge. [6114

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Humber.

3½h.p. Humber, M.O.V., motor cycle, Bosch, B. and B., new tyres (Dunlop), spring forks, running order, cheap; £16.—Hall, Preston Rd., Chorley. [5205

3½h.p. Humber, late 1919, flat twin, 3 speeds, clutch, kick start, carefully used, and as new, equipped, licensed; £60.—Malvern Road Garage, Thornton Heath. [6019

1915 Humber Combination 3½h.p., 3-speed, clutch, kick starter, windscreen, hood, splendid condition and appearance; £45, or nearest.—10, Grove Av., Hanwell, W.7. [4873

HUMBER 1914 3½h.p., 3-speed, splendid order and condition, with Bramble coachbuilt sidecar—combination or separately—what offers?—Gemmell, 8, Maybole Rd., Ayr. [4930

HUMBER 3½h.p., in splendid running condition, 2-speed, lamps, tools, and new pillion seat, tyres good; £25, or near offer.—Write or call, C. J. Tonkin, 17, Cleveland Rd., South Woodford. [4916

### Indian.

WAUCHOPE'S, 9, Shoe Lane, London, for new Indians on easy terms. [5955

INDIAN Combination, 7-9h.p., perfect order, all on; £55.—27, Warren Rd., Merton. [4913

7-9h.p. Indian Powerplus, new condition, electric, perfect; £65.—19, Bristol Drive, Lincoln. [5386

7-9h.p. Indian, clutch model, tax paid; £40, or near offer.—18, Horsell Rd., Highbury. [5274

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Indians; unequalled service, repairs, etc. [3561

INDIAN 7-9h.p., 2-speed, clutch, sporting sidecar; £45, or offer.—Bridge House Garage, Crayford, Kent. [4755

7-9h.p. Indian Combination, excellent condition; £70, or offers.—15, Acre Rd., Collier's Wood, Merton. [5163

7-9h.p. Powerplus Indian Combination, fully equipped, good running order, taxed and insured; £65.—Shoobridge, Hoo. [4854

£40.—7-9h.p. Indian coachbuilt combination, 2-speed, clutch, electric lamps, running.—30, Canning Crescent, Wood Green. [4957

1914 2-speed 7-9h.p. Indian Combination; £45; exchange lightweight.—42, Coombe Rd., New Malden, near Kingston. [4902

INDIAN Combination 7-9h.p. 2-speed, clutch, perfect, just overhauled, all on; £48; solo part.—28, Bourne Rd., Bexley. [6000

1916 5-6h.p. Indian Combination, 3-speed, kick start; £45.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [5373

1919 Indian 7-9h.p. Powerplus, 3 speeds, clutch, kick starter, new 1921 sidecar; £79.—101, Adelaide Rd., Chalk Farm, N.W.3. [5471

£55.—Combination 1916 5-6h.p. Indian, T.T. bars, 3-speed, Canoelet sports sidecar, fast, any trial.—121, Wilton Rd., Victoria. [4792

INDIAN 7-9h.p. Powerplus Combination, 3-speed, equipped, licensed, good condition; 70 gns.—13, Vambery Rd., Plumstead. [3985

INDIAN, 1919, 7-9h.p., 3 speeds, perfect order, as new; 58 gns.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [4266

INDIAN 7-9h.p. Combination, 1915-16, 3 speeds, spring frame, electric lighting; £65.—Eagles and Co., 275, High St., Acton, London. [5775

INDIAN Combination, 7-9h.p., spring frame, electric lighting, spare tyre, tax paid, speedometer; 40 gns.—11, Avenue Gardens, Acton. [5308

INDIAN 7-9h.p. Powerplus, 1916 model, and sidecar, good order; £100, or nearest offer.—Petersen, 46, King's Rd., Willesden Green, N.W.10. [4883

INDIAN 5-6h.p. Combination, 3-speed, kick start, etc., insured, tax paid, splendid condition, hood, screen; £75.—46, Aldborough Rd., Seven Kings. [4892

1919 7-9h.p. Indian and sidecar, 3-speed, K.S., speedometer, Easting, lamps, etc., like new; £75; tax paid.—Monk, Sun St., Waltham Abbey. [5260

INDIAN 1919 Powerplus, handsome spring wheel sidecar, with child's seat, screen, lamps, etc., perfect order; £75.—Owen, 94B, High Rd., East Finchley. [5763

OFFERS.—1915 7-9h.p. Indian Roadster, new Wex carburetter, new tyres, very fast; any trial; perfect.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [5771

LATE Electric Powerplus Indian Combination, every desirable gadget, handsome condition; best offer.—Call or write, 19, Clipstone Rd., Attercliffe, Sheffield. [4836

INDIAN 1918-19 Powerplus, 3-speed, K.S., electric lighting, Middleton sidecar, Klaxon, excellent condition; £70.—Lees, 17, Fairbridge Rd., Highgate, N.19. [4784

INDIAN Powerplus Combination, dynamo lighting, new chains and tyre, mileage 5,000, speedometer, as new, unscratched; £85.—8, Barmouth Rd., Wandsworth. [5364

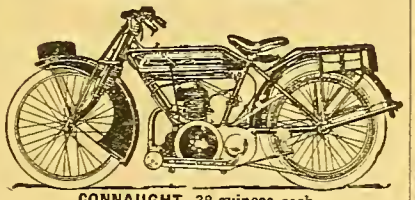

THIS

# Motor Cycle

FOR

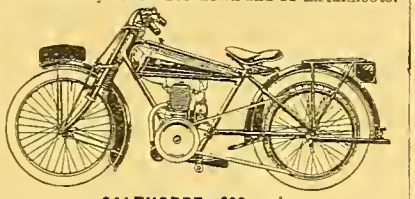
# £10

down and 12 instalments.



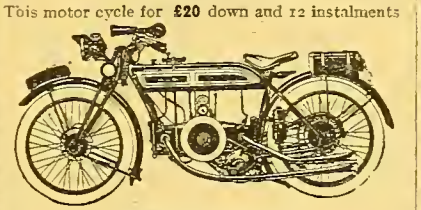
**CONNAUGHT, 38 guineas cash.**

This motor cycle for **£10** down and 12 instalments.



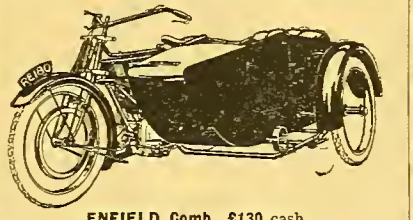
**CALTHORPE, £36 cash.**

This motor cycle for **£20** down and 12 instalments



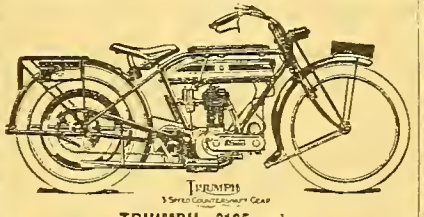
**DOUGLAS, £68 cash.**

This combination for **£25** down and 12 instalments.



**ENFIELD Comb., £130 cash.**

This motor cycle for **£30** down and 12 instalments.




**TRIUMPH, £105 cash.**

# LAMB'S Ltd

**WALTHAMSTOW, LONDON, E., 151, High St**
'Phone Walthamstow 169 (2 lines).
**WOOD GREEN. LONDON, N., 50, High Road.**
'Phone: Hornsey 1956.
**EUSTON ROAD, LONDON, N.W.** (Opposite Gt. Portland St. Stn.) 'Phone: Museum 4978.


## MOTOR CYCLES FOR SALE.

### Indian.

INDIAN 7-9h.p., 3-speed spring frame model, overhauled by makers at cost of £33, unused since, with Montgomery-Indian sidecar; £95, bargain.—Moss, Wem. [5806

1920 7-9h.p. Powerplus Indian Combination, good condition, P. and H. lamps, Lucas horn, tax paid; bargain to clear, £80.—Crabtree, Bridgefoot, Warrington. [5693

1915 5-6h.p. Indian Combination, 3-speed, electric light, new tyres, new Binks, splendid condition; £75, or nearest offer.—74, Hunsdon Rd., New Cross, S.E.14. [5152

£35.—Indian 7-9h.p., 2-speed, clutch, kick start, engine overhauled, lamps, Klaxon horn, tax paid, insurance, beautiful machine.—Penny, Post Office Rd., Cobham, Surrey. [3609

REAL Bargain.—Indian combination, splendid condition; any reasonable offer considered; just thoroughly overhauled.—Spencer, 123, Whiteley St., Milnsbridge, Huddersfield. [4952

1919 Indian 7-9h.p. Combination, spring frame, 3-speed, double clutch, kick starter, lamps, complete set of tools, in excellent condition; bargain, £75.—Lewin, 25, Athelstan Rd., Kettering. [4950

SCOUTS.—Indian Scouts actually in stock. Dynamo, £130; second-hand (one), £85. Your present machine in exchange. Call for demonstration.—"Parwood" Garage, Indian Agents, 89, East Hill, Wandsworth. [5348

INDIAN 7-9h.p. Combination, dynamo lighting, 2 large head lamps, Ace disc wheels, speedometer, tax, insurance, condition as new; £138.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5615

1920 Indian Powerplus Electrical Combination, De Luxe sidecar, with hood and windscreen, perfect order, tax and insurance paid, stored 16 months, mileage 3,600; £125; or exchange for 2-seater.—Alexander, R.G.A. Mess, Sheerness. [4787

LATE 1921 spring frame Indian 7-9h.p., dynamo lighting, 3 speeds, clutch, and kick starter, real drive speedometer, tax paid, practically new and in perfect running order; £90.—M.C. Dept., Juno Cycle and Motor Co., 248, Bishopsgate, London, E.C.2. [4541

SPECIAL Racing, low centre of gravity, 3-speed, 7-9h.p. Indian, Ricardo pistons, drilled rods, 4¼ gallon petrol tank, new condition, tyres, chains, pistons, etc., not done 300 miles, English controls; £80, or offers.—115, Rosebery Rd., Muswell Hill, N.10. [5195

FOR Latest 1922 Indians, try Scouts, from £112; standards from £140; and Chiefs £160. Try Horswill's, Indian Specialists. Overhauls a speciality; over 10 years' experience with Indians. Large stock of spares always kept in stock.—Horswill, 42, Bridge St., Chester. 'Phone: 943. [2595

SNIP!—1915 3½h.p. twin Indian, 3 speeds, kick starter, lamp sets, horn, tax paid, recently completely overhauled, enamelled, and plated, fitted Binks carburetter, brand new studded Dunlop tyres, English controls, fast, in perfect order, appearance like new; £43.—Walbro Motor Cycle Co., Saffron Walden. 'Phone 45. [6096

1921 Super-Sports 7-9h.p. big valve Indian Combination, well-known Tourist Trophy rider's nicked competition machine, 1922 Claudel-Hobson carburetter, £50 de luxe sidecar, magnificently equipped, speedometer, Easting, Lov and Lucas generators, Tan-Sad, powerful Klaxon, large plated head lamp, many spares, chains, etc.; price £95; privately owned.—67, Fennlea Rd., Balham. [5998

LANGFORD'S, Indian Specialists, can supply all 1922 models. In stock.—4h.p. Scout, £112; Millford Junior sidecar, £134; Swan sports, £137/10; De Luxe, £147; 7h.p. combination, £175, with dynamo and speedometer; Chief, £199, with ditto; exchange your present machine for one of these magnificent models; we can allow you highest prices; write, call, or 'phone for full particulars.—Langford's, 37, Cricklewood Broadway, N.W.2. Hampstead 8616. [3373

*Spare Parts:*

INDIAN Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7544

GODFREYS', Ltd., 208, Great Portland St., London W.1.—Complete stock of all Indian spare parts always in stock. Write for free spare part list, stating year of manufacture. [0752

INDIAN.—The Dennis Accessories Stores 89, Brixton Rd., London ('Phone: Brixton 3129), supply all parts from stock, new and second-hand. They also specialise in Indian repairs [6788

INDIAN Spares.—New and second-hand for all models; all second-hand spares sent on approval; write, call, or 'phone; we can save you money.—Langford's, 37, Cricklewood Broadway, N.W.2. Hampstead 8616. [3374

### Invicta.

3½h.p. Invicta, smart coachbuilt sidecar with adjustable seat and locker at back, new outfit offered as shop-soiled at clearance price; £100.—Harrods Motor Sales Rooms, 118, Brompton Rd., London. [5929

## MOTOR CYCLES FOR SALE.

### Invicta.

INVICTA, Villiers engine, 2-speed, Cowey speedometer, horn, lamp, not done 3,000; bad health; £50.—386, Hoe St., Walthamstow. [5480

### Ivy.

IVY 1920 2½h.p., 2-speed, lamps, horn, tax paid, excellent condition; £42; evenings.—71, Manor Park, Lee, S.E. [5046

IVY 2¼h.p., Lucas lamps, tyres, plating, enamel perfect, small mileage, tax paid; must realise, £33.—36, Erpingham Rd., Putney. [5396

IVY 1921, 2-stroke, Sturmey 2-speed, clutch and kick starter; £45.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5621

### James

JAMES 4¼h.p., good order; £25.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [5331

£25.—2¾h.p. James 2-stroke, 2-speed, just overhauled, perfect condition.—King, Egrove, Oxford. [5542

1917-18 James 5-6h.p., sporting sidecar, 3 speeds, lamps, horn; £90.—2, Forest Glade, Leytonstone. [5301

F.O.C.H. have a James 4½h.p. Combination, Lucas dynamo set.—5, Heath St., Hampstead (nr. Tube). [3802

1919 6h.p. James Combination, equipped, windscreen, good condition, 67 gns.—Edwards, 101, Gt. Portland St., W.1. [5907

5-6h.p. 1919 James Combination, electric, speedometer, repainted, in fine condition; £70.—Watts, 200, Horold Rd., Ilford. [5041

JAMES 1918 Combination, 5-6h.p. twin, 3-speed, countershaft, electric light, tax paid; £65.—18, Burma Rd., Green Lanes. [5984

1922 7h.p. James Combination, as new, dynamo, spare wheel, dickey, best offer; seen any time.—253, Munster Rd., Fulham. [5245

JAMES 1917 4¼h.p. Combination, 3-speed, kick-start, lamps, hood, screen, speedometer, etc.; £55.—127, Wards Av., Fulham. [5261

1920 3½h.p. Twin James, 3-speed and kick start, tax paid, for quick sale; £45.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [6067

W. WHITBY and Son.—Immediate delivery of new James models; no waiting; list free on request.—7, The Vale, Acton, W.3. [3312

JAMES Late 1920 Model 5-6h.p. Combination, in perfect condition, lamps, windscreen, and full kit; £85.—Male, Hendford, Yeovil. [5037

JAMES 5-6h.p. Combination, in first-class condition; £88.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5614

JAMES 4¼h.p. Combination, 3 speed, all-chain, equipped, exceptional condition; 55 gns.—21, Mostyn Gardens, Kensal Rise, N.W.10. [5426

JAMES.—All 1922 models in stock; call and inspect.—The Agents, Storer and Tait, 20, Bourdon St., Bond St., W.1. Mayfair 625. [5933

3½h.p. Sporting Twin James, 3-speed, clutch, K.S., all-chain, excellent condition, 100 m.p.g., insured; £47/10.—25, Cranley Gardens, N.10. [4935

3½h.p. 1921 Sports Twin James, fast machine, good condition, tax paid; bargain, £70; no offers; cost £145.—Crabtree, Bridgefoot, Warrington. [5690

1920 James 2-stroke, 2-speed, all lamps, horn, knee grips, tax paid; £35; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [5852

JAMES 2¼h.p., 2-speed, 2-stroke, shop-soiled only; special price, £45; exchanges; easy payments.—Geo. Smith, 268-270, Lavender Hill, Clapham Junction. [5129

JAMES 5-6h.p. 1920 Combination, electric lighting, horn, screen, good sound bus, tyres excellent; £100; seen after 6 p.m.—63, Amesbury Av., Streatham Hill. [5359

JAMES Big Single Combination, Canoelet, 3-speed, clutch, kick start, guaranteed perfect mechanical condition, full accessories, spares; £55.—Priddy, St. Michael's Av., Yeovil. [5434

JAMES 4¼h.p. Combination, 1918, just overhauled, replated, sidecar repainted, renpholstered, lamps, 3-speed, kick-starter, very smart; £75.—42, Sandtoft Rd., Charlton. [5259

JAMES Combination, 4¼h.p., 3-speed, countershaft gears, clutch, kick starter, enclosed chain drive throughout, Lucas dynamo lighting set, Easting windscreen, machine in perfect condition; £65.—Jackson, Jeweller, Wolverhampton St., Willenhall. [4901

*Spare Parts:*

JAMES Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4830

WHITBY'S for James spares and service; agents for last 16 years.—7, The Vale, Acton. 'Phone: Chiswick 1513 [3311

### J.E.S.

J.E.S. Lightweight, splendid condition; £14.—50, Church Rd, North Wimbledon, S.W.19. Tel.: Wim. 2270. [5489


# RIDEEZI SIDECARS

## APPROVAL.
## EXTENDED PAYMENTS.
## CARRIAGE PAID.

**No. 2.**
**£24**

**No. 5.**
**£16 10 0**

**No. 7.**
**£26 10 0**

## Models for all Makes
EXTENDED PAYMENT TERMS.

| | Deposit. | 12 monthly payments of | Or with Standard Easting windscreen. |
|---|---|---|---|
| Model 2. | £6 4 0 | £1 11 8 | £1 18 8 |
| Model 3. | £9 15 0 | £2 8 11 | £2 15 11 |
| Model 4. | £8 5 0 | £2 1 3 | £2 8 3 |
| Model 5. | £5 10 0 | £1 0 0 | £1 7 0 |
| Model 6. | £6 9 0 | £1 11 8 | £1 18 8 |
| Model 7. | £7 0 0 | £1 15 0 | £2 2 0 |
| Model 8. | £6 10 6 | £1 12 8 | £1 19 8 |

**RIDEEZI SALES LIMITED,**
**5, VICTORIA STREET,**
**S.W. 1.**


## MOTOR CYCLES FOR SALE.

### Kenilworth.

1¼h.p. 1921 Kenilworth Cyclette, suitable for lady or gentleman; £35.—Wauchope's, 9, Shoe Lane, London. [5974

### Kingsbury.

1920 Kingsbury 2¾h.p., all on, tax paid; £35.—119, Eleanor Rd., Hackney. [5045

1921 2¾h.p. Kingsbury 2-speed, clutch, equipped; 33 gns.—Edwards, 101, Gt. Portland St., W.1. [4457

KINGSBURY Junior, October, 1921, De Luxe model, dynamo lighting, 5 lamps, special windscreen, nickel finish, as new; £210.—35, Northey Rd., Coventry. [4969

### Lea-Francis

LEA-FRANCIS, twin J.A.P., 2-speed, electric, spares; £44.—Cyril Mills, Sawley, Derby. [5292

NEW 1921 Lea-Francis Combination, 3½h.p. twin J.A.P.; £95 or near offer.—Percy and Co., 314, Euston Rd. [5825

LEA-FRANCIS 5h.p. Combination, M.A.G. engine, 3-speed, kick starter, Dunlop Magnum tyres, lamps, trip speedometer, horn, Cameo windscreen, tools, tax paid, purchased new last February, not run 200 miles; ill-health; bargain, £130.—Frost, 172, Effra Rd., Wimbledon, S.W.19. [4959

### Levis.

PREMIER Motor Co. for 1922 Levis.

POPULAR 2¼h.p. Single-gear Levis, £48; Model S, 2¼h.p., 2-speed, clutch, £58; Model G, 247 c.c., 2-speed, clutch, £61; kick starter £2 extra; easy payments 4% extra; carriage paid to any address; all models in stock for immediate delivery.—Premier Motor Co., Aston Rd., Birmingham. [5881

LEVIS Popular 2¾h.p., 1918, perfect running; £25.—1, Priory Rd., Kew. [5652

LEVIS 2½h.p., single-speed, excellent running order; £25.—Phillip, 155, Lessingham Av., S.W.17. [5429

WE are the Agents for London, S.W. Choose from our stock.—Knight's, 126, Upper Tooting Rd., S.W.17. [0778

WAUCHOPE'S, 9, Shoe Lane, London, for new 1922 Levis motor cycles on easy terms; delivery from stock. [5956

LEVIS Popular, excellent order, taxed, equipped; 26 gns.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [5876

LEVIS Lightweight, 2-speed, in splendid running order and condition as new; £35.—Bramlea, Charlton Rd., Shepperton-on-Thames. [5580

FOR 1922 Levis, the most reliable and neatest 2-stroke upon the road, send or call at Jones Garage, The Broadway, Muswell Hill, N.10. [0788

LEVIS. All 1922 models. Send your orders along; catalogues with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10 [7943

LEVIS 1921, 2-stroke, 2-speed and clutch, excellent order; £45.—Newnham Motor Co., 223, Hammersmith Rd., W.6 'Phone: Hammersmith 80 [5622

1922 Levis, 2 speeds, Sturmey, hand clutch, for immediate delivery; £58; exchanges or deferred 4% extra.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [5853

LATE Model Levis 2½h.p. 2-stroke, all chain, Enfield gear, cush hub, perfect mechanical condition, aluminium rims, Dunlops, enamel rough; £28; any trial any time.—13, Terrace Rd., South Hackney. [6029

LEVIS.—New 1922 models; 2¼h.p. Popular, £48; 2¼h.p., 2 speeds and clutch, £58; Levis Sports model, £56. All models supplied on easy terms and exchange, one-fifth down.—Wauchope's, 9, Shoe Lane, London. [5957

1920 Levis, exceptionally fine machine, £29; Rudge coachbuilt combination, lamps, etc., £38; 2¾h.p. Douglas, long exhaust pipe, largest size lamps, nice condition, £37/10.—Rhind and Co., Stone Place, Rusholme, Manchester. [5141

*Spare Parts:*

LEVIS.—All spares or complete 1922 model cycles from stock, carriage paid.—Jones Garage, Broadway, Muswell Hill, N.10. [0807

GODFREYS, Ltd., 208, Gt. Portland St., London, W.1.—Complete stock of all Levis spare parts always in stock. Write for free spare part list, stating year of manufacture. [0753

### Lincoln-Elk.

LINCOLN-ELK 4¼h.p., 2-speed, K.S., good order; £24.—Margrave, Dean Head, Audenshaw, Manchester. [5455

LINCOLN-ELK; £12/10; 3h.p., a perfect and speedy machine, just overhauled.—Warden, 24, Lister St., Rotherham. [5420

### Martinsyde.

MARTINSYDES.—All models; immediate delivery; easy terms.—Clifford Motories, Eastwood, Notts. [5384

MARTINSYDE.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [4835



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Martinsyde.

LATE 1921 6h.p. Martinsyde Combination, lavishly equipped, run few miles; £110; exchanges.—24, Balliol Rd., North Kensington. [5466

ROBERTSONS Motors, Ltd., are the London Martinsyde Service Agents; trial runs arranged; spares stocked.—157b, Gt. Portland St., W.1. [6080

FOR a 1922 Martinsyde 3½h.p. Sports or 6h.p. Combination get in touch with the North London agents, Jones Garage, The Broadway, Muswell Hill, N.10. [0789

MARTINSYDE Solo and Combination for immediate delivery; cash or exchange.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5600

### Massey-Arran.

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Massey-Arrans; unequalled service, repairs, etc. [3562

MASSEY-ARRAN 2¾h.p., J.A.P., 2-speed, K.S., slightly shop-soiled.—P. J. Evans, John Bright St., Birmingham. [5134

### Matchless

CROSS, Effingham Sq., is agent for Matchless motors in Rotherham. [5779

MATCHLESS for Sale, 5-6h.p.; £60.—16, Bronner Av., Shirebrook, nr. Mansfield. [4851

7-9h.p. Matchless Combination, splendid condition; genuine bargain, £90.—22, Queen's Rd., Basingstoke. [4948

8h.p. 1917 Matchless Combination, 3 speeds, clutch and kick starter; £75.—Wauchope's, 9, Shoe Lane, London. [5975

MATCHLESS Combination, 6-8h.p. J.A.P., perfect condition; sacrifice, £55.—Furminger, Hackendeo, East Grinstead. [5497

LATE 1920 Model H Matchless Combination, windscreen, etc., genuine bargain; 100 gns. for quick sale.—67, Fernlea Rd., Balham. [5993

MATCHLESS 8h.p. Combination, 2-speed, overhauled, new tyres, pillion, lamps, taxed; £55.—84, Meeting House Lane, Peckham. [4837

WAUCHOPE'S, 9, Shoe Lane, London.—Matchless new 1922 models always in stock; easy terms and exchange. 'Phone: Holborn 5777. [5958

MATCHLESS Combination 8h.p., 2-seater, sidecar, spare wheel, electric light, ridden 500 miles; £140.—109, High St., Walthamstow. [4779

MATCHLESS, 8h.p. J.A.P. twin, S.C., every accessory, splendid condition; seen evening, Sunday morning.—H., 553D, Lordship Lane, Dulwich. [5985

SHEFFIELD Agent for Matchless. All models in stock. Sporting models £130, standard models £170.—A. J. Stacey, 12, Ecclesall Rd., Sheffield. [0574

MATCHLESS 1917, M.A.G., Tan-Sad, carriers, hood, screen, electric lighting, re-enamelled; £85.—39, Kyrle Rd., Clapham Common, S.W.11. [5181

£150 is the price of a new Matchless Combination; see our showrooms, all models in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17 [0756

MATCHLESS Combination 1920, Model H, Lucas dynamo lighting, spare wheel, hood, screen; £125 —J. Hillier, 216, Portobello Rd., North Kensington. [3974

1922 Matchless, all models; cash, exchange, or easy terms. The agent to serve you best is Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5863

TASSELL, 1a, Bloomfield Rd., Plumstead, for Matchless Combinations; deferred payments; spares of all dates; trade supplied where agents not appointed. [2241

1920 Matchless-M.A.G. Combination, Lucas dynamo lighting, speedometer, electric horn, mechanically perfect; £115.—Tassell, 1A, Bloomfield Rd., Plumstead. [5171

MATCHLESS 1921 J Combination 8h.p., Magdyno lighting, all accessories, hood, spare wheel; £135; exchanges.—Geo. Smith, 268-270, Lavender Hill, Clapham Junction. [5124

LATE Victory Matchless Combination, detachable wheels, equipped; 75 gns.; photograph; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [5877

MATCHLESS, 1920, Model H, J.A.P., Lucas, acetylene lighting, spare wheel, screen, etc., tax paid; £105.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5864

1915 Matchless-M.A.G. Combination, excellent condition, just overhauled throughout, triplex screen, good sidecar; £85.—Write, 149, Brudenell Rd., Upper Tooting. [5153

MATCHLESS.—Immediate delivery all models. We allow best prices for exchanges or liberal easy terms. Enquiries invited.—Edwards, 50, Harrington Rd., South Kensington. [4546

MATCHLESS 1922 Solo and Combinations for immediate delivery; prices from £150; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5601

# GUARANTEED SECONDHAND MACHINES.

**EVERY ONE OF THE MOTOR-CYCLES LISTED BELOW HAVE BEEN THOROUGHLY OVERHAULED, AND CARRY OUR FULL GUARANTEE. MAY WE SEND YOU FULL PARTICULARS OF ANY OF THEM?**

**ROVER,** 1919, 3½ h.p., 3 speeds, clutch and kick-starter, lamps, horn and Millford Skiff sidecar.. **£78**

**ROVER,** 1920, 5-6 h.p., Countershaft, 3-speed gear, all-chain drive, lamps, horn, speedometer, windscreen, Tan-Sad seat and Millford Empress sc... **£115**

**ARIEL,** 1920, 3½ h.p. Combination, 3 speeds, clutch and kick-starter, tax paid ..... **£80**

**F.N.,** 1920, 2½ h.p., 2 speeds, clutch and kick-starter, shaft drive, lamps and horn ..... **£40**

**CLYNO,** 1916, 6 h.p. Combination, 3 speeds, clutch and kick-starter, detachable wheels ..... **£90**

**ENFIELD,** 1916, 6 h.p. Combination, lamps, horn, luggage grid ..... **£65**

**DOUGLAS,** 1916, 4 h.p. Combination, 3 speeds, clutch and kick-starter, lamps, horn ..... **£68**

**DOUGLAS,** 1913, 2¾ h.p., 2 speeds, lamps, horn, tax paid ..... **£30**

**DOUGLAS,** 1916, 2¾ h.p., 2 speeds, lamps and horn.. **£37**

**LEVIS,** 1919, 2¼ h.p., Popular Model, lamps, horn, tax paid ..... **£35**

**JUNO,** 1918, 2½ h.p., 2-stroke, Villiers engine, tax paid, new condition ..... **£29**

**ROVER,** 1921, 8 h.p. Light Car, dynamo lighting, hood, screen, horn, speedometer, spare wheel and tyre, finished in grey, tax paid ..... **£160**

**WOLF,** 1915, 2½ h.p., 2-stroke, 2 speeds, clutch and kick-starter, lamps, horn, tax paid ..... **£25**

**TRIUMPH,** 1919, 4 h.p., and sidecar, 3 speeds, clutch and kick-starter, lamps, horn, Easting screen, tax paid ..... **£73**

**EXCELSIOR,** 1921, 2¾ h.p., Blackburne engine, 2 speeds, clutch and kick-starter, tax paid .... **£52**

**DOUGLAS,** 1922, 2¾ h.p., 2 speeds, lamps, horn, accoce holder, tax paid, indistinguishable from new ..... **£60**

**B.S.A.,** 1920, 4 h.p. Combination, 3 speeds, clutch and kick-starter, all-chain drive, hood, luggage grid, tax paid ..... **£85**

WE ARE ALWAYS PREPARED TO EFFECT

# EXCHANGE

**TRANSACTIONS, AND IF YOU WILL SEND US DETAILS OF YOUR MACHINE WE WILL QUOTE YOU BY RETURN AN APPROXIMATE ALLOWANCE PRICE FOR IT, IN PART PAYMENT FOR A NEW ONE.**

# 1922 MODELS.

**WE CAN GIVE IMMEDIATE DELIVERY OF PRACTICALLY ALL MODELS OF THE FOLLOWING FIRST CLASS MAKES:**

**A.J.S., ARIEL, ALLON, B.S.A., DOUGLAS, DIAMOND, HAWKER, INDIAN, LEVIS, MATCHLESS, MARTINSYDE, METRO-TYLER, N.U.T., NEW IMPERIAL, QUADRANT, ROYAL ENFIELD, RALEIGH, RUDGE, ROVER, SCOTT, SUNBEAM, SIRRAH, TRIUMPH, ZENITH.**

# DEFERRED PAYMENTS

**CAN BE ARRANGED FOR THE PURCHASE OF EITHER NEW OR SECONDHAND MACHINES TO SUIT THE CONVENIENCE OF EACH INDIVIDUAL CUSTOMER, PROVIDED A MINIMUM DEPOSIT OF ONE-FOURTH IS PAID DOWN, AND THE INSTALMENTS DO NOT EXCEED TWELVE MONTHS.**

# THE EASTERN GARAGE CO.

(Official Repairers to R.A.C., A.C.U., A.A. & M.U.),

**418 Romford Road, Forest Gate, E.7.**

Telephone: 490, East Ham. Telegrams: "Egaraco, London."

## MOTOR CYCLES FOR SALE.

### Matchless.

1921 Matchless, Magdyno, spare wheel, hood, screen, legshields, Lucas, horn, speedometer, heaps of spares, guaranteed; £140.—51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [5194

1921 Matchless-M.A.G. Family Combination, hood, 2 screens, leg shields, lamps, horn, taxed, insured splendid condition, spare wheel; £150, or reasonable offer.—Kelly, 25, Chatsworth Rd., Bournemouth. [5439

1921 (July) 8h.p. Matchless Combination, Lucas dynamo lighting, spare wheel, windscreen, etc., absolutely equal new, unscratched; bargain, £150.—31, Claremont Rd., Alexandra Park, Manchester. [4621

MATCHLESS Victory Model, spare wheel, Lucas best gas lamps, windscreen, speedometer, privately owned, and in splendid condition; £115.—Batchelor, 18, Duke St., South Normanton, Alfreton. [5419

MATCHLESS 8h.p., August,, 1921, 2-seater sidecar, M.A.G. engine, Magdyno lighting, horn, speedometer, hood, side curtains, spare wheel unused, absolutely perfect; £156.—Drapper, 40, Royston Rd., Penge, S.E. [5234

1921 Matchless Combination, dynamo lighting, speedometer, hood, spare wheel, very nice order, £145, tax paid; also 1920 Model H, dynamo lighting, £130, tax paid.—Ross, 86, High Rd., Lee. [5668

MATCHLESS Combination, September, 1921, M.A.G. engine, Magdyno, Lucas horn, speedometer, spare wheel, hood, screen, extra spares, done about 1,200 miles; £160, or exchange modern light car.—29, Fitzwarren Gardens, N.19. [5210

MATCHLESS, 1921, M.A.G. engine, very little used, in good condition, guaranteed perfect, spare wheel, Magdyno lighting, horn, Easting windscreen, and £10 worth extras; £140 lot.—A.G.L., 468, Harrow Rd., Paddington, W.9. [3642

NEW 8h.p. 1922 Matchless Combination, 2-seater model, spring frame, £187; 8h.p. standard model, £170; sports model, £160; easy payments, one-fifth down, remainder in 12 equal monthly payments or more.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5962

MATCHLESS Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4931

MATCHLESS Combinations.—T. J. Ross, of 86, High Rd., Lee, S.E. ('phone Lea Green 744), will be pleased to take your orders for prompt delivery. Exchanges and deferred payments arranged; demonstration model always in stock. Purchasers taught free. Large assortment of new and second-hand motor cycles always in stock. [5669

MATCHLESS 8h.p. Model H Combination, only done 5,000 miles, in excellent condition, new Palmer cord tyres, spare wheel and luggage carrier, windscreen, lamps, tools, speedometer, etc.; genuine bargain, £110; any trial or examination.—Eric Goapp and Harrison, Montpelier Rd., Queen St., Hammersmith. 'Phone: Hammersmith 2432. [5122

*Spare Parts:*

MATCHLESS Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4828

MATCHLESS Spares for J.A.P. or M.A.G. by return, post free.—Jones Garage, Matchless Agent, Broadway, Muswell Hill, N.10. [0808

### Metro.

1919 Metro-Tyler Sports, fast, perfect order, taxed, insurance; £27.—Firholme, Hurstpierpoint, Sussex. [5727

25 GNS.—Metro-Tyler 1919 2¾h.p., fine condition, tyres as new, tax paid to 1923.—Delancey St. Garage, Camden Town, N.W.1. [5647

1920 Metro-Tyler 2¾h.p., single speed, in perfect order, tax paid; £27/10.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [5854

25 GNS.—Metro-Tyler 1920 2¾h.p., disc wheels, long plated exhaust, tax paid for the year, ready to ride away; bargain.—Smith's, 86, Chalk Farm Rd., N.W.3. [5564

### McKenzie.

McKENZIE-HOBART Ultra Lightweight Motor Cycles; 26 gns. ex works; immediate deliveries of these wonderful little machines.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [4800

McKENZIE-HOBART Ultra Lightweight Motor Cycles, 26 gns. ex works; immediate deliveries of these wonderful little machines.—Colonial Motors, 104a, Finchley Rd. Hampstead 7822. [5925

### Minerva.

£14, or offer.—3½h.p. Minerva, Bosch, B.B., ride away.—56, Manor Rd., Enfield. [5633

MINERVA 3½h.p., running condition, sporty, Bosch, licensed; £15.—12, Clapham Terrace, Leamington Spa. [5043

£12.—3½h.p. Minerva, dropped frame, variable gear, waterproof magneto, smart, good running order.—Bacon, Offington Lane, Worthing. [5352

## MOTOR CYCLES FOR SALE.

### Mohawk.

MOHAWK Cycles new, or second-hand, at lowest prices, for cash or easy payments.—Mohawk Cycle Co., Ltd., 276, Alexandra Rd., Hornsey, N.8. [1924

### Moto-Reve.

*Spare Parts:*

MOTO-REVE Spares for all models, also repairs, overhauls.—Motor Supply Co., Sole Concessionnaires, 223a, High St., Lewisham, S.E. [6107

### Ner-a-Car.

NER-A-CAR, new Nov. 1921, perfect condition, pillion, new back tyre; £45, or near offer.—Miller, 3, Church St., Basingstoke. [4861

NER-A-CAR.—The 1922 wonder, 2¼h.p. 2-stroke, electric and gas lighting, excellent finish, perfected friction drive; £65. We can give a limited number of immediate deliveries.—Sooth Eastern Garage, Herne Hill, S.E.24. [3495

### New Comet.

2¾h.p. New 1922 New Comet, lady's machine, fitted with Comet sidecar; £80; easy terms arranged. —Wauchope's, 9, Shoe Lane, London. [5964

### New Hudson.

NEW HUDSON 4h.p., 3-speed, C.S., sporting outfit, all on; £45.—Davis, 22, Tooting Bec Rd. [5030

1921 New Hudson De Luxe, accessories, tax, excellent; 31 gns.—10, King's Rd., Kingston-on-Thames. [5283

6h.p. Hudson Combination, countershaft, 3-speed, hand clutch, speedometer; £50.—23, Countess Rd., Walthamstow. [5756

1921 (August) 2¼h.p. New Hudson, all accessories, licensed, any trial; £37.—Paul, 7, Victoria Place, Bourne, Lincs. [4849

NEW HUDSON 3½h.p., clutch model, fine sporting machine; £22.—74, Brighton Rd., Surbiton. 'Phone: Kingston 3025. [5894

2¼h.p. 2-speed New Hudson, bought new 1921, beautiful condition, licensed; bargain, £33.—Jeavons, Draper, Lye, Stourbridge. [6084

NEW HUDSON, 2-stroke, new, shop-soiled; £35; exchanges; easy payments.—Geo. Smith, 268-270, Lavender Hill, Clapham Junction. [5126

4h.p. 3-speed New Hudson, hub gear, coachbuilt sidecar, lamps, horn, good running order; 30 gns. —Owen, 94B, High Rd., East Finchley. [5766

NEW HUDSON motor cycles.—London Depôt, 45, Gray's Inn Rd., London, W.C.2. Immediate delivery all models. Spares stocked. Trade supplied. [0851

NEW HUDSON 6h.p. Combination, splendid condition; £55; tax paid; will take Douglas 2¾h.p. as part payment.—Vialls, Murrow, Wisbech. [6123

1920 New Hudson, 2-stroke, 2-speed, lamps, horn, tax paid, in fine running order; £35.—Rhind and Co., Stone Place, Rusholme, Manchester. [5137

1922 Hudson de luxe, £63; also Popular model, £50; 3 new lightweights, 1921 models, brand new, to clear, £53.—Shepherd, Enfield Highway. Tel.: Waltham Cross 31. [0876

NEW HUDSON Outfit, 3½h.p., Cancelet, 3-speed, clutch, K.S., aluminium boards, just overhauled, neat, economical, reliable, low tax, accessories, etc.; £39; or separate.—Sayers, 76, Langham Rd., Teddington. [4890

NEW HUDSON 4½h.p. Combination, late 1920, nearly new condition, screen, speedometer, electric and acetylene lighting, fully equipped; £110; 50 miles' trial.—Collett's Garage, opposite Norwood Junction Station, S.E.25. [5246

BRAND New 1922 4-5h.p. New Hudson Combination in stock, wonderful value, £125; also shop-soiled New Hudson de Luxe lightweight, all-chain, kick starter, £53.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [6089

NEW HUDSON Combination, 4½h.p., 1922, tax paid to December, and full accessories, cost approximately £135, only run 200 miles; owner visiting U.S.A.; will sell £115, or near offer.—Apply, White Bungalow, Bernards Heath, St. Albans. [4926

1922 New Hudson 10h.p light car, £230; 4½h.p combinations, £125, solo, £100; 2¼h.p. 2-speed Popular, £50, De Luxe, £63; exchanges and deferred payments entertained; sole agents for Cambridge.—Wallis and Easton, 104, Mill Rd., Cambridge. [0824

### New Imperial.

NEW IMPERIAL 2¾h.p., 2-speed, splendid condition; £24.—163, Lower Kennington Lane. [5316

1919 New Imperial, 2¾h.p. J.A.P., 2-speed; £33, trial evening.—27, Doneraile St., Fulham. [5023

NEW IMPERIAL (new) 2¾h.p. model; immediate delivery; £73.—Harrison and Bunkall, Chichester. [4753

NEW IMPERIAL 2¾h.p., 1916, 2-speed, lamps, overhauled, running order; £26.—Tennant, Masham, Yorks. [5591

SHEFFIELD Agent for New Imperial Motor Cycles; all models in stock.—J. A. Stacey, Ecclesall Rd., Sheffield. [0813


# WATERPROOF CLOTHING FOR ALL WEATHER CONDITIONS

WATERPROOF MOTOR CYCLE SUIT (Fig. 1)
With Plaited Leather Belt.

SPECIFICATION

MADE from hard wearing double texture material with an interlining of Rubber.
Double Breasted Jacket, with all-round plaited Leather Belt, large Patch Pockets, and converted collar to button right up to neck, to fasten with Throat Tab. Wind Cuffs in sleeves. All seams of the Suit are rubber cemented and taped with extra material, making the garment absolutely waterproof.
Overall Trousers with spat-shaped leg; wind gussets to keep the wind from the leg and boots; fastened with patent clasp fasteners, enabling the trousers to be pulled off in a moment.

Fig. 1.

SUIT COMPLETE
35/-
Jacket only . . . . 25/-
NO EXTRA CHARGE FOR CARRIAGE

OUR ILLUSTRATED LIST AND PATTERN BUNCH OF CLOTHS, TOGETHER WITH SELF-MEASUREMENT FORM, WILL BE SENT POST FREE AND WITHOUT ANY OBLIGATION UPON RECEIPT OF YOUR NAME AND ADDRESS.

Waterproof Trench Coat 25/-

Fig. 2. Fawn material, rubber lined, wind cuffs, guaranteed waterproof.

Fig. 2.

SEAT-LESS Trousers Fawn double texture material rubber interlined wind gusset & clasp fasteners. All sizes. Guaranteed Waterproof.

18/- per pair.

WATERPROOF OVERALLS.
Double texture material, clasp fasteners, perfectly waterproof.
12/6 pair

THESE GARMENTS ARE NEWLY MADE FROM FRESHLY PROOFED MATERIAL BY EXPERIENCED WORKMEN AND NOT HALF-PERISHED CLEARANCE LINES OR W.D. SURPLUS

*If you cannot call, send money with breast measurement and height.*

*POST YOUR ORDER EARLY*

*Satisfaction guaranteed or money refunded if garments are returned to us within 7 days.*

CARRIAGE PAID ON ALL ORDERS

Actual Manufacturers:
**Martin Waterproof Co.,**
**208 Oldham Rd., New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### New Imperial.

NEW IMPERIAL 2¾h.p., 2-speed, 1917, lamps, horn, good condition; £26.—65, Shrewsbury Rd., New Southgate. [5097

1921 2¾h.p. New Imperial, 3-speed, equipped, excellent condition; 53 gns.—Edwards, 101, Gt. Portland St., W.1. [5910

NEW 1921 New Imperial Combination, 8h.p., 3-speed; £115, or offer; exchanges.—Percy and Co., 314, Euston Rd. [5826

OFFERS.—1919 2¾h.p. New Imperial-Jap, equipped, perfect condition; trial.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [5772

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. New Imperial-Jap's, 1922, No. 3 £73, No. 2 £60; easy terms and exchange. [5941

2¾h.p. Countershaft New Imperial, 1915, accessories, licensed; £29; exchange Rudge-Multi; after 5. —12, Dulverton Mansions, Grays Inn Rd. [5185

NEW IMPERIAL, 2¾h.p. J.A.P., K.S., 1921, small mileage, perfect, lamps, horn, spares; £45.—King 10, North Mews, W.8. Museum 6632. [6058

NEW IMPERIAL, 2¾h.p., 1916, speedometer, all on, engine almost entirely renewed makers last year, trial; 29 gns.—Write, Wallace, 11, Crusoe Rd., Erith. [5168

LATE 1919 New Imperial, Mills-Fulford sidecar, electric lighting (accumulator), excellent condition; £95.—P. R. Buckingham, 1, South Place, Worthing. [5344

29 GNS.!—Late Model 2¾h.p. New Imperial-Jap, 2-speed, etc., taxed, equipped, and guaranteed; deliberate sacrifice.—Clifton Garage, Ab...don St., Blackpool. [4986

1916 2¾h.p. New Imperial-Jap, 2-speed, engine rebushed, new valves, piston and rings, Dunlop tyres nearly new, lamps, horn; £30, near offer.—53, Warham Rd., Harringay, N.4. [5986

NEW IMPERIAL 2¾h.p., specially picked J.A.P. engine, 2 speeds, kick start, lamps, horn, speedometer, perfect condition, just repainted; £40; after 7.—7, Albert Bridge Rd., Battersea. [4773

2¾h.p. New Imperial No. 2, 3-speed, as new, £52/10; also 2¾h.p. 1916 model, 2 speeds, clutch and kick start, £35; insured for 12 months.—Wauchope's, 9, Shoe Lane, London. [5952

1922 New Imperials in Stock.—No. 3, 2¾h.p., chain drive, £73; No. 3 with Maglita, £83; easy payments 4% extra; free delivery and tuition.—Premier Motor Co., Aston Rd., Birmingham. [5882

1922 New Imperial 2¾h.p., 3 speeds, C. and K.S., all-chain drive, for immediate delivery; £73; exchanges or deferred 4% extra.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [5855

1922 New Imperial, model No. 4, 2¾h.p., all chain, 3-speed, clutch, K.S., all on, tax paid December, insurance, done 500 miles; £65, or offers; Highgate district.—Box 1930, c/o *The Motor Cycle*. [4807

1920 New Imperial Combination, 8h.p. J.A.P., 3 speeds, C. and K.S., all lamps, horn, Easting screen, an exceptional bargain, tax paid; £85; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [5856

*Spare Parts:*

NEW IMPERIAL Spare Parts.—London stockist's, Rey, 173, Gt. Portland St. 'Phone: Langham 1257. Open till 7.30 p.m., 4 o'clock Saturdays. [0855

### Newton.

1921 Newton, Villiers engine, flywheel magneto, 2-speed, Amac, lamps; £35.—S. Lambert, Heathleigh Cotts, Horsmonden, Kent. [5368

### Norton.

PREMIER Motor Co. for 1922 Nortons.

NO. 9, 3½h.p., £80; 16H., 3-speed, £115; Big Four, 3-speed, £120; sidecars from £22; easy payments, 4 per cent. extra; free delivery to any address.—Premier Motor Co., Aston Rd., Birmingham. [0865

NORTON 1921 Big 4, shop-soiled only; best offer.—Stour Cycle Depot, Stourbridge. [5270

3½h.p. Norton, Brooklands model, Philipson, Binks, perfect order; £50.—Ayres, Ashwell, Herts. [4772

F.O.C.H. have 1922 Norton 16H, new condition, hardly used, licensed.—5, Heath St., Hampstead (nr. Tube). [3806

1921 (July) Norton, C17, low mileage, perfect condition; snip at £80.—15, Boundary Rd., Tunbridge Wells. [4847

NORTON, Isle of Man model, used in the 1922 T.T., guaranteed absolutely perfect; £115.—Box 2003, c/o *The Motor Cycle*. [4975

NORTONS.—All models from stock; supplied upon deferred payments; exchanges arranged.—King and Harper, Bridge St., Cambridge. [5817

NORTON Big Four, 1920, Lucas lamps, Cowey, Klaxon, Tan-Sad, tax paid, insured; 80 gns.; offers.—Head, Midgehole, Hebden Bridge. [5631

## MOTOR CYCLES FOR SALE.

### Norton.

NORTON.—New 1922 models, Big Four and De Luxe sidecar, £153; also 3½h.p. 3-speed, all-chain drive, £115; exchange and easy terms arranged. —Wauchope's, 9, Shoe Lane, London. [5953

NORTON 1921 16H, speedometer, taxed, winner many speed trials, £85; 1920 Big 4, Magdyno, 1921 Norton sidecar, taxed, mechanically perfect, £105.—Clark, 7, Exhibition Rd., S.W.7. [4611

1921 3½h.p. Norton Racing Combination, close ratio, Ricardo, etc., fully equipped, winner over dozen open speed events, excellent condition.—Williams, Beechlea, Springfield Rd., Altrincham. [5051

1922 16H Norton 3½h.p., 3-speed, clutch, kick start, Brooklands special engine and certificate for 75 m.p.h., complete with all possible accessories value £20, 1922 tax paid, brand new; £130.—Will, 769, Romford Rd., Manor Park, London, E.12. [5256

1920 Big Four Norton, luxurious sidecar, fitted windscreen, etc., oversize 700×80 tyre, new chain, valves, spare sprocket for solo, perfect mechanical condition; best offer secures; or accept 4-stroke lightweight part.—Spalding, Photographer, Chelmsford. [5417

NORTON Big Four (June, 1917) Coachbuilt Combination, 3-speed, 700×80 tyres, 3 lamps, 2 generators, horn, in perfect condition, 75 m.p.g., as docile as a lamb and fast as the modern flapper, licensed and insured; £75.—30, Crystal Palace Park Rd., Sydenham. [5403

NORTON Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4929

BUY your new Norton from the rider agent. Carriage paid to any address in British Isles. Machines for competition tuned free of charge; good results guaranteed. I specialise in Norton motor cycles. Send for catalogue.—G. H. Tucker, Norton Specialist, Redcliffe Hill, Bristol. 'Phone: 4042. [6509

### N.S.U.

5h.p. Twin N.S.U. motor cycle, 2-speed, Bosch, fine machine; bargain, £22/10.—Speechley, 86, Churchfield Rd., Acton, W.3. [5731

### N.U.T.

1920 (Oct.) 3½h.p. Twin N.U.T., Brooks cantilever, lamps; a snip at £75.—Boulton, Saffron Walden. [5481

N.U.T. 1920 3½h.p., Magdyno, Lucas horn, licensed, tyres excellent, guaranteed perfect condition; £85.—51, Cairns Rd., Sheffield. [5555

N.U.T. 2¾h.p. o.h.v. Twin, 3-speed, clutch, K.S., very fast, condition excellent, equipped and taxed; £45.—52, Barons Court Rd., W. [5744

N.U.T. 1920 3½h.p., Magdyno, condition as new, year's tax; £80; exchange Douglas or Harley combination.—Dickinson, Thorne Rd., Doncaster. [5424

N.U.T. 3h.p., sports model, twin J.A.P. overhead valve engine, Binks carburetter, copper exhaust pipes, fast; £60.—Green and Co., Haslemere, Surrey. [4815

### O.K.

LATE 1920 O.K.-Villiers 2½h.p., 2-speed, licensed, perfect; £36.—Davis, 212, Stapleton Rd., Bristol. [4734

1921 O.K. 2¾h.p., kick start, 2-speed, clutch, perfect condition; £37/10.—Kays, 8, Bond St., Ealing. [5501

25 GNS.—O.K. 1920 2¾h.p., P. and H. lamps, horn, tax paid until 1923; any trial; bargain. —Smith's, 86, Chalk Farm Rd., N.W.3. [5563

BRAND New 1922 2½h.p. O.K.-Villiers, 2 speeds, kick starter, slightly shop-soiled only; £50.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [6091

### Omega.

1918 Omega-Jap, 2-speed, nicely equipped, guaranteed; £27/10.—67, Fernlea Rd., Balham. [5994

1921 Omega, 2-speed, kick start, lamps, Klaxon, as new; £45.—120, Fairbridge Rd., Highgate, N.19. [4983

2¾h.p. Omega-Jap, 1919, 2-speed, clutch, all on, grand condition; £35; offer.—Ansell, 184, New North Rd., Islington, N.1. [5786

OMEGA-J.A.P. 2¾h.p., 1920, 2-speed, clutch and kick start, speedometer, lamps, etc., tax paid December; £40.—6, Exeter Rd., Walthamstow. [5272

OMEGA-VILLIERS 1921 2¾h.p. Combination (box body), 2-speed, clutch, kick start, flywheel magneto, lamps, taxed, as new; 40 gns.—18, Marlborough Rd., Old Kent Rd., S.E.1. [5898

### P. and M.

1918 P. and M., £25, less magneto and few bits.—26R, Ingleton St., Brixton. [5483

1920 4h.p. P. and M., perfect condition; £57/10.—Kays, 8, Bond St., Ealing. [5503

P. and M., good order; £28.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [5330

**AMAZING OFFER**
PERFECTLY NEW
**PALMER**
MOTOR CYCLE COVERS.
**FULLY GUARANTEED.**
These covers are not "W.D." Although offered as "Clearance" are *guaranteed* by us to be fresh and ordinary
**STANDARD STOCK.**

| Size. | Pattern. | Our Price. | List Price. |
|---|---|---|---|
| 26×2¼ | Cord | 32/6 | 43/4 |
| " | Cord, Heavy | 35/10 | 47/9 |
| 26×2⅜ | Cord | 34/3 | 45/8 |
| 26×2½×2½ | Cord | 36/- | 48/- |
| " | Cord, Heavy | 42/5 | 56/6 |
| 28×3 | Cord | 47/3 | 63/- |
| " | Cord, Heavy | 53/- | 71/6 |
| 700×80 | Light Car | 45/- | 60/- |

If you require a reliable article you must pay a reasonable price. All these special clearance lines are sent on 7 days' approval against remittance, carriage paid.

| Size. | Make. | Our Price. | List Price. |
|---|---|---|---|
| 24×2 | Palmer, ribbed | 18/6 | 29/6 |
| 24×2¼ | Clincher de luxe, ex. heavy | 28/9 | 40/3 |
| 26×2 | Englebert, passenger, R.S. | 17/6 | 53/- |
| " | Englebert, touring, rub. std. | 14/- | 46/3 |
| 26×2¼ | Bates, special bvy., wired-on | 32/6 | 38/6 |
| " | Dunlop, heavy, rub. std. | 28/6 | 37/3 |
| " | Bates, special bvy., beaded | 27/6 | 40/- |
| " | Clincher de Luxe, heavy | 24/6 | 35/6 |
| 26×2⅜ | Dunlop, heavy, rub. std. | 29/6 | 41/6 |
| " | Hutchinson, rubber stud | 25/- | 49/6 |
| 26×2¼ / ×2½ | Clincher de Luxe, ex. heavy / Clincher de Luxe, heavy | 35/6 / 32/- | 49/- / 47/- |
| 26×2½ | Goodrich, safety tread | 40/- | 52/6 |
| " | Bates, special heavy | 29/6 | 56/- |
| " | Clincher de Luxe, heavy | 25/- | 28/3 |
| 28×3 | Clincher, Dreadnought | 57/6 | 70/- |
| 650×65 | Goodrich, safety tread | 40/- | 67/6 |
| " | Clincher de Luxe, ex. heavy | 30/- | 64/6 |
| " | Soly, rubber, non-skid | 21/6 | 63/- |
| 700×80 | Beldam, Bulldog | 61/- | — |

**MOTOR CYCLE TUBES. Best Quality Guaranteed.** 24×2, 4/9; 26×2, 5/3; 26×2¼, 5/9; 26×2⅜, 6/-; 26×2¼×2¼, 6/9; 26×2½, 6/9; 28×3, 7/11; 700×80, 7/8.

**MOTOR CYCLE BELTS. In Standard Lengths.** Per foot ⅝in. 1/-, ¾in. 1/5, ⅞in. 1/9, 1in. 2/-, 1¼in. 2/6.

*Special Line.* **CLINCHER BELTS FOR DOUGLAS MACHINES**
**6 ft. 6 ins. × ¾ in. 5/9 each.**
Carriage 9d. extra.

In order to encourage post trade we are prepared to refund the cash on every 100th order—no matter the amount. Counter customers excepted.

'Phone: Victoria 6553. ELITE RUBBER Co LTD Tyre Specialists 'Grams: "Tyreliday, London."

*LONDON'S LEADING TYRE HOUSE.*
266, VAUXHALL BRIDGE ROAD, S.W.1.
to where all post orders should be addressed.

And at 44, Surbiton Road, Kingston-on-Thames.
Telephone—Kingston 3355.

Steele Publicity.


## MOTOR CYCLES FOR SALE.

### P. and M.

P. and M., 1917, minus a few parts; £18.—1, Springfield Park Cres., Catford, S.E.6. [5327

3½h.p. 1919 P. and M. Solo, fully equipped; £55.—Wauchope's, 9, Shoe Lane, London. [5961

1918 3½h.p. P. and M., 2-speed, clutch, kick start; £37.—21, Linton Crescent, Hastings. [5710

P. and M. Combination, 1918; £45.—Miles, 11, Chichester Rd., West Kilburn, N.W.6. [6048

1914 P. and M. Combination, 3½h.p.; real bargain, £32/10.—Kays, 8, Bond St., Ealing. [5502

P. and M. Combination, perfect condition, all on; £65.—94, Aldborough Rd., Seven Kings. [5389

P. and M. 3½h.p., good order; £21, or offer, quick sale.—Davey, 6, High St., Lewisham, S.E.13. [2725

£22.—3½h.p. P. and M., 2-speed, clutch, splendid running order.—King, Egrove Farm, Oxford. [5544

P. and M., Standard Model, running order, ride away; £15.—Hockerill Works, Bishops Stortford. [5794

1918 P. and M. Combination, fully equipped; £45.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [5374

P. and M. 4h.p. Combination, overhauled by makers, licensed; £75, offers.—Walmsley, Lumley St., Grangemouth. [5165

P. and M., 1919, good order, condition, tax paid, insurance; £45; appointment.—2, Risingholme Rd., Wealdstone. [4939

P. and M., 1918, completely reconditioned, equipped, electric light, Tan-Sad, tyres, spares; £53.—Styvechale, Borrowash. [5287

P. and M., 1919, taxed, fully equipped, perfect condition throughout; 40 gns.—38, Sherriff Rd., W. Hampstead, N.W.6. [6057

WAUCHOPE'S, 9, Shoe Lane, London, supply P. and M. motor cycles and combinations on exchange and easy terms. [5965

P. and M., 1918, in good condition, £30; sidecar complete, £6.—Apply, Mrs. Edwards, 8, York Terrace Mews, Regent's Park, N.W. [5982

1917 3½h.p. P. and M. Combination, excellent condition, tax paid; exchange with £10 cash for good 4¼h.p. James combination.—141, Cambridge St., Norwich. [4942

P. and M. Late 1920 Combination, electric light, ratchet hand brake, Cowey speedometer, horn, tyres nearly new; £75.—Scrase, 234, Battersea Park Rd., S.W.11. [5729

P. and M., new July, 1921, mileage under 2,000, new C.B. sidecar, Sandum screen, Lucas lamps, horn, as new; nearest to £85.—Write A.W., 34, Fairhazel Gardens, Hampstead. [5987

1920 3½h.p. P. and M. Motor Cycle, complete with lamps, horn, tool kit, and sidecar lugs, all in beautiful condition, done 2,000-3,000 miles; £65.—Pytchley Autocar Co., Ltd., Northampton. [5582

1920 P. and M. Combination, electric and acetylene lighting, Cameo screen, insured, low mileage, very carefully used, exceptional condition; accept £70.—Hare, 15, Caird St., Queen's Park, W.10. [5672

1920 3½h.p. Phelon and Moore, 2 speeds, kick starter, late type, delivered November, lamp sets and horn, little used, condition and appearance exceptionally good, tax paid; £65.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [6099

*Spare Parts.*

P. and M. Spares' Specialist. Every part stocked. Stamp brings list.—Inman, Durham Rd., Seaforth, Liverpool. [4484

P. and M.—All parts in stock for P. and M.'s; send stamp.—P. and M. Specialist, H. Beardwood, 147, Burlington St., Liverpool. [0839

### P. and S.

1920 Pearson and Sopwith, 2¾h.p. Villiers 2-stroke, 2-speed, lighting set, horn, etc., beautiful running engine, and in splendid condition; £32.—Will, 769, Romford Rd., Manor Park, London, E.12. [5255

### Paragon.

1922 New Paragon 3h.p. Motor Cycle, as new, been used for demonstrating only; £25; any trial or examination.—Motor Works, Cressing Rd., Braintree. [4868

### Peugeot.

5-6h.p. Peugeot Combination, 3-speed, Bosch, B. and B., windscreen; £30; any trial after 6.30. —French, 2, Lisburne Rd., Hampstead, N.W.3. [5379

### Premier.

3½h.p. Premier, 3-speed, drop frame; snip, £16.—16, Mason St., Walworth. [5200

£18.—4h.p. twin Premier, splendid running order, taxed.—King, Egrove Farm, Oxford. [5543

PREMIER 1915 3½h.p., 3-speed, lamps, Klaxon, tax paid, perfect condition, any trial; £35; exchanges; cash either way.—Daley, 154, Burdett Rd., Bow, E.3. [4856



All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### Premier.

£32.—4h.p. Premier Combination, 2-speed box, equipped, perfect.—17, Heaton Rd., Mitcham. [5337

£15.—Premier 2½h.p., sporting model, low, fast, fully equipped, splendid condition.—65, Solon Rd., Brixton. [5354

PREMIER Combination, countershaft, 2-speed, condition like new; £55.—Chapman, 58, Grand Parade, Harringay. [4738

PREMIER 2½h.p., fully equipped, tax paid, ready to ride away, excellent condition, overhauled; £20, or offer.—2, Mascotte Rd., Putney, S.W.15. [3978

1915 Premier 3½h.p. 3-speed, countershaft, C. and K.S., coachbuilt sidecar, windscreen, splendid condition; £50, near offer.—S. Tite, 115, Lavender Hill, S.W. [5362

1915 Premier Combination 3½h.p., countershaft, H.S., new Dunlop, Binks, horn, lamps, etc., splendid condition; offers.—31, Oliver Grove, South Norwood, S.E.25. [4893

PREMIER Coachbuilt Combination, 3½h.p., 3-speed, countershaft, clutch, Bosch, electric, pillion, spares, excellent condition, smart set, expert examination, trial; 55 gns.; buying car.—18, Kinver Rd. S., Sydenham. [5492

PREMIER T.T. 3½h.p., Philipson, Bosch, Senspray, tyres new, re-enamelled, replated, engine completely overhauled, specially tuned, and racing cams fitted, £10 worth spare and equipment; owner bought car; inspection after 7 p.m.; £60.—Dykes, 23, Mount Park Rd., Ealing. [4915

*Spare Parts:*

PREMIER.—All parts in stock. By Return Service.—Ald. Holland, Hearsall Lane Corner, Coventry. 'Phone: 1945. [5550

PREMIER Spares and Repairs.—We claim to be the most competent firm to supply spares and execute repairs to Premier motor cycles. We served in the Premier works, and know this machine from A to Z We hold the most varied stock of parts for it in the world. We are the only traders who can claim to supply every part for a Premier machine. Our prices are rock bottom, and our service unsurpassable. Write us full requirements; you will receive our reply per return.—Forfield Motors, Forfield Place, Leamington Spa. [3167

### P.V.

NEW spring frame P.V.-Villiers 2¾h.p., kick starter, H.B. clutch, Burman 2 speeds; £55.—Write 81, Greyswood St., Streatham, S.W. [3284

P.V. 1914 Combination, J.A.P. engine, 2-speed, new B. and B. carburetter, Bosch magneto, new Easting windscreen, all on; £35; or exchange for solo.—County Motors, Whyteleafe. [4735

### Quadrant.

CLIFFORD WILSON Company, 16 years' experience with Quadrants. [9925

3h.p. Quadrant, single-speed, tax paid; £17/10.—Whyman, 33, Prospect Rd., Cheshunt. [4793

WAUCHOPE'S, 9, Shoe Lane, London.—4½h.p. Quadrant combination, 3 speeds, kick start and clutch, 1920; £77/10. [5963

1922 Quadrant 4½h.p. Combinations; £100 Agents for Cambridge.—Wallis and Easton 104, Mill Rd., Cambridge. [0825

2¾h.p. Quadrant, a.i.v., magneto, spring forks, running order; bargain, £9, carriage paid.—Kenwell, 56, Lewrence Hill, Bristol. [5294

FRANK WHITWORTH, Ltd., Distributors, 139, New St., Birmingham.—Quadrant £100 4½h.p. Combination, delivery from stock. [0767

£25.—Quadrant 1915 4½h.p. 3-speed Solo, works overhauled.—Clifford Wilson Manufacturing Co., 177, Westminster Bridge Rd., S.E.1. [2463

QUADRANT Combination, 1919, lamps, horn, B.S.A. 3-speed gear, perfect condition, mileage 2,000; £68, nearest offer.—3, Elmbrook St., Well Hall, S.E.9. [5264

CLIFFORD WILSON Mfg. Company, Quadrant Works Representatives and Sole Wholesale Distributors for London, Southern and Eastern Counties; official repairers and spare part stockists; deferred payments; exchanges; all models in stock. Special insurance facilities applicable to Quadrants only.—177, Westminster Bridge Rd., London, S.E.1, opposite Waterloo Station Approach. Telephone: Hop 210. [9926

### Radco.

2¾h.p. Radco, 2 speeds, drip oiling; bargain, £20.—Fisher, Springwell Rd., Heston, Hounslow. [5267

RADCO 2-stroke, in perfect order; £25; before 7.—6, Fulton Mews, Porchester Terrace, W.2. [6025

NEW 1922 Radco 2½h.p., 2-speed, clutch, kick starter, £47/5; easy payments 4% extra; free delivery.—Premier Motor Co., Aston Rd., Birmingham. [5883

1921 Radco 2½h.p., 2-stroke, 2-speed, good condition, lamp, horn, speedometer, accessories, tax paid, run 1,000 miles; £40.—Ferguson, 154, Chobham Rd., Stratford. 'Phone: Maryland 1612. [4874

Bertie's Testimonials

Are his Satisfied Clients

Dear Sirs,

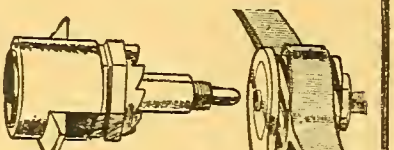
The 4 h.p. Douglas "Clutch Conversion Set" you supplied me with has given complete satisfaction.

Having had to take the clutch down on five occasions last year to replace a broken draw bolt, I decided upon trying your "Patent," which. I may add, has since given splendid results.

I have a perfect sense now of confidence and security, instead of, as previously, getting the "wind up," as to when I should get let down with a broken draw bolt. From my personal experience, therefore, I can most highly recommend it and add that the "Conversion Set" is simply IT.

Yours faithfully,

(Sgd.) C. G. EMERY.



To 4 h.p. Douglas Owners

No more broken drawbolts.

A new form of operating mechanism for the 4 h.p. Douglas Motor Cycle, by which the Drawbolt is entirely eliminated.

*We shall be pleased to forward you our descriptive leaflet upon request.*

BURLINGTON UNDERSHIELDS.

Enamelled black and with fittings for 2¾ h.p. and 4 h.p. Douglas, 5/- each. Postage, 1/- and 1/3 respectively.

TRADE SUPPLIED.

BURLINGTON MOTOR CYCLE Co., Ltd.

7, South Side, CLAPHAM COMMON, S.W.4.

Phone: Brixton 2417. Wires: Burlington Motors, Clapham.

Just by Clapham Common Underground Station.


## MOTOR CYCLES FOR SALE.

### Radco.

£17.—Radco 2½h.p., equipped, good order; bargain. —W.J.C. Motor Exchange, Addison Av., Holland Park, W.11. Park 2071. [5922

RADCO, 2-speed, 2-stroke, as new, perfect; £35; exchanges; easy payments.—Geo. Smith, 268-270, Lavender Hill, Clapham Junction. [5127

### Raleigh.

PREMIER Motor Co. for 1922 Raleighs.

IMMEDIATE delivery of 2¾h.p. 4-stroke lightweight, 2-speed, £68; 3-speed, £73; also 5-6h.p. flat twin, spring frame, detachable wheels, solo, £130; sidecar combination, £165; easy payments, 4 per cent. extra; free delivery to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0866

2¾h.p. Raleigh in stock.—Parks, 10, Sangley Rd., Catford. 'Phone: Lee Green 2011. [5176

RALEIGH 2¾h.p., 2-speed, kick start, in stock; £68.—Clark, 7, Exhibition Rd., S.W.7. [1280

RALEIGH, new, 1922 2¾h.p. lightweight model, actually in stock; £68.—Moss, Wem. [5807

RALEIGHS.—All models; delivery now.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3693

2¾h.p. Raleigh in stock; £68.—Read Bros., Tunbridge Wells. Tel. Rebro. 'Phone: 1139. [4482

RALEIGH.—Immediate delivery of 1922 models. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [4836

RALEIGHS.—1922 2¾h.p. and combinations always in stock delivery anywhere.—Clifford Motories, Eastwood, Notts. [3383

1921 5-6h.p. Raleigh Combination, excellent condition; any inspection; £140. — Rusholme, Petergate, York. [5385

RALEIGH 5-6h.p. Combination, spare wheel, electric light, licensed; £120, offers.—Walmsley, Lumley St., Grangemouth. [5164

RALEIGH.—Immediate delivery of 1922 models; exchanges or deferred payments arranged.—Edwards, 50, Harrington Rd., South Kensington. [4547

NEW 1922 3h.p. 3-speed Sports Raleigh, £78; or with Hughes aluminium sidecar, £99; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [4607

RALEIGH 5-6h.p. Solo and Combination for immediate delivery; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5599

RALEIGH 2¾h.p. models in stock for immediate delivery; 2-speed model, £68; 3-speed, £73; spare parts in stock. We secured 2 more gold medals in the London-Edinburgh run at Whitsun, showing 100% efficiency. Catalogue on request. Raleigh agents and specialists for many years.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5598

### Reading-Standard.

READING-STANDARD 10h.p., 1921, shop-soiled, with Canoelet M.M.4 sidecar to match, dynamo lighting; must clear; exchanges.—Brockbank, 58, Lord St., Southport. [5685

### Rex.

20 GNS.—Ride away, 5-6h.p. Rex, 2 speeds, good running order.—Ives, Longfield Rd., Tring. [4844

REX Combination, 8h.p. twin, coachbuilt sidecar, free engine, Grado gears; £38.—66, Brook Rd., Brentford. [5243

1922 New Rex-Acme 2¾h.p., 3-speed model; £66/10; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. [5969

REX Combination 6h.p., 2-speed, handle start, in perfect running order; £22/10.—S. E. Porter and Co., Whitchurch, Salop. [4798

REX Combination (1914), 6-7h.p., good condition, Bosch, Amac carburetter, 2 speeds, lamps, and spares; £35.—B., 66, Stanmore Rd., Harringay, N. [5211

1922 Rex-Acme, all models. Note performance in lightweight T.T. race. A marvellous production.—The agent is Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3498

### Reynolds.

REYNOLDS Runabont, 2¾h.p. slightly shop-soiled only, 2-speed, kick starter; £45.—Main, 36, Parade, Leamington. [5493

### Roc.

4h.p. Roc, 2-speed, clutch, Bosch, Z.E.1, Amac, Saxon forks; appointment; £30.—10, Brisbane Rd., Reading. [5202

### Rover.

ROVER 1919 Combination, well equipped, taxed; £70.—Clark, 7, Exhibition Rd., S.W.7. [4614

1919 Rover, 3-speed, excellent condition; £65, offer.—Fairhurst, behind 68, Standishgate, Wigan. [5444



**All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Rover

ROVER 3½h.p. Combination, countershaft, Tan-Sad, all on, as new; £75.—10, Chalk Farm Rd., N.W.1. [4732

4h.p. Rover C.B. Combination, 1914, Easting, Tan-Sad, excellent condition; £35.—130, Beulah Hill, Norwood, S.E. [5641

ROVER 1920 3½h.p., T.T., Philipson, fast, reliable, condition perfect; £56.—Tinson, Ronalda, Station Rd., Netley. [5009

1920 Rover, 5-6h.p. J.A.P., semi-T.T. handle-bars, tax paid, splendid condition; £100.—Carver, 52, Eastover, Bridgwater. [5841

£35.—1914-18 Rover 3½h.p., 3 speeds, clutch, starter, lamps, licensed, new condition, perfect.—89, East Hill, Wandsworth. [5347

1917 Rover, single-speed, 3½h.p., excellent condition cutside and inside; £33; exchanges.—Brockbank, 58, Lord St., Southport. [5682

1921 Rover 3½h.p., road racer, Philipson pulley, including accessories and tax paid; £65.—Seen at Wanchope's, 9, Shoe Lane, London. [5971

ROVER 3½h.p., 3-speed, all on, including Tan-Sad and electric lighting, in splendid condition; £37.—7, Teddington Park, Teddington. [5839

ROVER, ridden in 1921 T.T., close ratio gear box, accessories, spares; £80, or exchange chain drive Triumph.—Stannah, Ranworth, Horley. [5220

3½h.p. T.T. Rover, complete with exception of power unit and tyres, just re-enamelled and tank painted; £20.—Snow, Laurel St., Dalston, E.8. [6015

5-6h.p. Twin Rover 1919 Combination, dynamo lighting, scuttle dash, windscreen, luggage carrier, excellent condition; £100.—22, Leyhourne Rd., Leytonstone. [5187

ROVER 1919 3½h.p. Combination, excellent sound condition; any trial given; lamps, spare tube, tyre, valves, ring; £75.—47, St. John's Park Mansions, N.19. [4997

ROVER 6h.p. Combination, with Lucas dynamo lighting, in excellent condition; £105.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5613

1919 3½h.p. Countershaft Rover Combination, lamps, horn, Easting, extra heavy Dunlops, splendid condition; £60.—37, Arlington Rd., Surbiton. 'Phone: Kingston 1274. [5637

3½h.p. Rover Combination, Mabon variable gear, kick start, electric lamps, Best and Lloyd mechani al lubrication, good order throughout; £32, or exchange.—Malvern Road Garage, Thornton Heath. [6021

1921 Rover 8h.p., dynamo lighting, spare wheel, speedometer, small mileage, any trial; £155, or exchange combination and cash.—Hillier, Side Bell, 9, Wallingford Av., North Kensington. [5659

*Spar Parts*

ROVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4832

### Royal Ruby.

1918 8h.p. Royal Ruby, like new; £65.—Ross, 86, High Rd., Lee. [5667

ROYAL RUBY 2½h.p., new engine, electric lighting; £25.—31, Hosack Rd., Balham. [5630

ROYAL RUBYS—Prompt delivery from Barlow and Son Monton, Eccles Tel.: 160 Eccles. [3694

NEW 1421 Royal Ruby, 3h.p., 2-speed, spring frame; £70, or offer.—Percy and Co., 314, Euston Rd. [5827

ROYAL RUBY 1921 (June) 2¾h.p., sports model, fully equipped, excellent condition; £50.—Whittaker, 39, Owen Rd., Wolverhampton. [5556

1921-22 Royal Ruby Sports, 2-speed, clutch, kick start, mileage 800, absolutely unscratched; bargain, 44 gns.—67, Fernlea Rd., Balham. [5997

ROYAL RUBY (late 1921), spring frame, 3h.p., clutch, 2-speed, kick start, just overhauled, tax paid to December, everything as new; £68.—Burberry, back of 4, Primrose Hill St., Coventry. [6080

£65.—Royal Ruby Combination, 1918-19, 8h.p., J.A.P., 3 speeds, clutch, kick starter, all chain, Dunlops, large Millford touring sidecar, thoroughly overhauled, splendid condition.—63, Solon Rd., Brixton. [5355

1922 (April) Royal Ruby 2¾h.p., touring model, 2-speed, complete with lamps and horn, as new, only run 2,500 miles, licence paid to end of year, owner going on foreign service, must sacrifice for quick sale; £50; original cost £86/2.—Birch, Littlecot, Sutton-at-Hone, Dartford, Kent. [4799

1922 8h.p. Royal Ruby—the spring frame combination par excellence—fitted with interchangeable and spare wheel, luggage and petrol carrier, Easting Sandum screen, lamps, horn, etc., all on, at £185; immediate delivery from the agent for all high-class makes, as usual.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich 'Phone, 751 [5893

### Rudge

RUDGE-MULTI, new, in stock; £77.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [5914


# Harrods MOTOR CYCLES

## ON EASY TERMS

## ANY MAKE SUPPLIED

Details and latest lists free

### NEW SOLO MACHINES

| | | |
|---|---|---|
| 2¾ h.p. | **ALLDAYS ALLON,** Model de Luxe | £60 0 |
| 4¼ h.p. | **B.S.A.,** 3-speed, belt drive | £107 0 |
| 4¼ h.p. | **B.S.A.,** 3-speed, chain drive | £110 0 |
| 2¼ h.p. | **ENFIELD,** 2-speed | £55 0 |
| 2¾ h.p. | **FRANCIS-BARNETT,** J.A.P. | £73 0 |
| 2¼ h.p. | **LEVIS,** Popular model | £48 0 |
| 2¾ h.p. | **NEW IMPERIAL,** 3-speed, chain drive | £73 0 |
| 1¾ h.p. | **McKENZIE** Lightweight | £27 6 |
| 2½ h.p. | **O.K.,** single speed | £39 18 |
| 2½ h.p. | **O.K.,** 2-speed, clutch, etc | £60 18 |
| 2½ h.p. | **RADCO,** 2-speed | £42 0 |
| 2½ h.p. | **RADCO,** single speed | £35 14 |
| 3½ h.p. | **RUDGE,** Multi gear | £77 0 |
| 3½ h.p. | **RUDGE,** 3-speed, chain drive | £94 0 |
| 2½ h.p. | **SPARK,** single speed | £39 18 |
| 2¼ h.p. | **TRIUMPH,** Lightweight 2-speed | £65 0 |
| 4 h.p. | **TRIUMPH,** 3-speed, belt | £105 0 |
| 4 h.p. | **TRIUMPH,** 3-speed, chain | £115 0 |

### NEW COMBINATIONS

| | | |
|---|---|---|
| 2¾ h.p. | **ALLDAYS ALLON,** de Luxe | £85 0 |
| 4¼ h.p. | **B.S.A.,** belt drive, No. 3 sidecar | £139 0 |
| 4¼ h.p. | **B.S.A.,** chain drive, No. 3 sidecar | £142 0 |
| 8 h.p. | **ENFIELD,** 2-speed | £149 0 |
| 8 h.p. | **MATCHLESS,** 3-speed | £170 0 |
| 8 h.p. | **NEW IMPERIAL,** 3-speed | £145 0 |
| 4 h.p. | **TRIUMPH,** 3-sp., belt drive | £145 0 |

### SLIGHTLY SHOP-SOILED

| | | |
|---|---|---|
| 4¼ h.p. | **B.S.A.,** belt drive, No. 2 sidecar | £130 0 |
| 3½ h.p. | **INVICTA,** 3-speed, Classic sidecar | £100 0 |

### SECOND-HAND

| | | |
|---|---|---|
| 4 h.p. | **TRIUMPH** Combination 1921. Many extras | £120 0 |
| 2½ h.p. | **CLYNO,** 2-speed and clutch 1922 | £37 10 |

***All machines sent Carriage Paid from London to nearest Railway Station.***

**HARRODS MOTOR SALES DEPT**

**116–118 Brompton Road London SW1**

*(Opposite the Main Building)*


## MOTOR CYCLES FOR SALE.

### Rudge.

RUDGE, late 1919, Canoelet sidecar, excellent condition; £65, offer.—61, Mesnes St., Wigan. [5447

NEW 1922 Rudge 3-speed; £94; exchanges or easy terms.—Percy and Co., 314, Euston Rd. [5820

RUDGE 3½h.p., fine machine, any trial; £19/10.—Speechley, 86, Churchfield Rd., Acton, W.3. [5733

1920 I.O.M. Rudge-Multi, fully equipped, as new; accept £55.—L. Sharp, 2, West Drive, Brighton. [5214

RUDCE-MULTI, 1921, as new, all on, guaranteed; bargain, £60.—Wright, Pavement, Burnham-on-Crouch. [4741

WANCHOPE'S, 9, Shoe Lane, London.—New 1922 Rudge 3½h.p., I.O.M.; £77; easy terms arranged. [5944

RUDGE 3½h.p. Combination, 2-speed, all on, excellent running order; £32.—50, Tayhridge Rd., Clapham. [5228

1919 I.O.M. Rudge-Multi, equipped, taxed, spares; 49 gns. or exchange.—284, South Lambeth Rd., Stockwell. [6003

55 GNS.—1921 I.O.M. Rudge-Multi, taxed, absolutely like new, snip.—284, South Lambeth Rd., Stockwell. [6001

RUDGE-MULTI 1916 3½h.p., good condition, licensed; £30.—Tilling and Judd, Beacon Hill, Hindhead. [5746

1920 Rudge-Multi, excellent condition; £50, or near offer.—Green, 2, Howard Rd., Morpeth, Northumberland. [4763

RUDGE-MULTI 3½h.p., 1917-18, lamps, just overhauled, inspection invited; £35; no offers.—25, High St., Reigate. [4780

RUDGE-MULTI, excellent condition, all on, insurance; must sell; £36.—12, Alexandra Villas, Finsbury Park, N. [5081

1919 Cns.—1913 3½h.p. T.T. Rudge, fast, reliable, tax paid; bargain.—Spencer, Potter St., Bishop's Stortford. [5295

1922 I.O.M Rudge-Multis in stock at the latest reduced prices. £77.—Jones Garage, Broadway, Muswell Hill, N.10 [0791

5-6h.p. Rudge-Multi Combination, 1920, equipped, excellent condition; £60, close offer.—C., 19, Church St., Trowbridge. [5300

1922 3½h.p. T.T. Rudge, brand new, in stock; £77; easy payments arranged.—Wilkins Simpson, Opposite Olympia, London. [5068

RUDGE-MULTI 1916 3½h.p., overhauled and plated, good condition, very little used; £35.—10, Barrington Rd., Colchester. [5473

£77 is the price of a new Rudge. Get it from the Agents; in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17 [0838

3½h.p. Rudge-Multi Combination, good condition; seen by appointment; £40, or nearest.—G.P.C., 7, Florence Terrace, Ealing, W.5. [4746

1912 3½h.p. Rudge, 2-speed and clutch, fully equipped, tax paid, excellent condition; £35.—Edwards, 101, Gt. Portland St., W.1. [5911

£52/10 Secures Special Sporting Rudge, 1920-21, 68 m.p.h., perfect, fully equipped; exchange considered.—134, Bromham Rd., Bedford. [4759

3½h.p. 1916 or 1917 Rudge-Multi, excellent condition, new Dunlop, brilliant enamel and plate; £37.—Cross, 20, Carey Place, Watford. [6030

1919 (Sept.) 3½h.p. Rudge-Multi, clutch, pedal start, sound condition (stored 1921), new heavy Dunlops; £45.—Morris, Printer, Worcester. [5442

RUDGE-MULTI 3½h.p., lamps, spares, little used, as new; £65; exchanges; easy payments.—Geo. Smith, 268-270, Lavender Hill, Clapham Junction. [5128

RUDGE-MULTI, 5-6h.p. Combination (removable dickey seat), spares, guaranteed perfect condition; £65.—29, Aveling Park Rd., Walthamstow. [5172

1922 Rudge-Multi, I.O.M. model, not done 500 miles, lamps, horn, speedometer; sacrifice, £67/10.—33, Hackford Rd., Brixton. 'Phone: Brixton 3062. [6079

RUDGE-MULTI 3½h.p. Combination, good order and appearance; £50.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5611

RUDGE 1922 I.O.M. model in stock for immediate delivery; £77; or exchange.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5603

1916 3½h.p. Rudge-Multi, just thoroughly overhauled, re-enamelled and plated; £42; exchange considered.—Pittuck, Rly. Station House, East Ham, E.6. [5001

1922 Rudge-Multi, touring, lamps, horn, Tan-Sad, guaranteed perfect; selling through illness; £70.—Fuller, 603, Chorley New Rd., Horwich, Lancashire. [5083

7-9h.p. Rudge-Multi Standard Combination, 1920, fine condition; 80 gns; photograph, exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [4269

## MOTOR CYCLES FOR SALE.

### Rudge.

RUDGE-MULTI, 3½h.p., June, 1921, I.O.M., kick start, completely equipped, new tyres, first-class condition; £55.—Roy, 12, St. Andrews Square, Surbiton. [5988

3½h.p. Rudge, Mabon gear, kick start, licensed, lamps, new tyres, perfect condition throughout; £28, or exchange.—Malvern Road Garage, Thornton Heath. [6018

RUDGE-MULTI, August, 1921, condition and appearance as new, electric light, speedometer, Klaxon, tools, spares, insurance; £70.—91, Grove Park, Denmark Hill, S.E.5. [5725

RUDGE-MULTI, I.O.M. model, very good order; £55; or exchange lighter machine.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80 [5623

RUDGE-MULTI 3½h.p., 1920, clutch, kick starter, electric lighting, many extras, perfect condition throughout, unused last 14 months; £48.—Dixon-Bate, Dee Banks, Chester. Tel.: 243. [4829

RUDGE-MULTI.—5-6h.p., shop soiled, £79; 7-9h.p. Combination, shop soiled, £105; 3½h.p., 1922, I.O.M., £77; 3½h.p., £27/10.—Shepherd, Enfield Highway. Tel.: Waltham X 31. [0874

RUDGE-MULTI I.O.M., 1922 (February), starter, lamps, Klaxon, belt and tubes case, insured, mileage about 1,000; £70, or nearest; Highgate district.—Box 2002, c/o *The Motor Cycle*. [4979

499 c.c. Single Speed Rudge, in sound mechanical order, makers overhaul cost £11, guaranteed. £30; N.S.U. gear to suit if wanted, £5/5.—Ashley House, Glastonbury, Somerset. [5431

3½h.p. Rudge-Multi and Sidecar, 1917, fully equipped, perfect, just repainted, £50, offer; also unused aluminium sidecar, less tyre, £12.—Jones, 251, Cromwell Rd., Kensington. 'Phone: Western 1203. [5263

1922 Rudge 7-9h.p. Combination, 3-speed, all-chain drive, electric light, horn, mirror, Easting, Tan-Sad, aluminium discs, spare wheel, licence, insurance, any demonstration; £170.—Sidebotham, Berwyn, Wednesfield. [4812

1920 I.O.M. T.T. Rudge, taxed, equipped, speedometer, etc., spares, condition and appearance good as new, ridden carefully, open to expert examination, guaranteed; nearest £55; exchange.—Rapley, C.F.S., R.A.F., Upavon, Wilts. [5054

3½h.p. Rudge-Multi, pedal start, 1915, just overhauled makers, £10 worth new parts, speedometer, 2 lamps, D.A. cylinder, new tubes, belt, copper exhaust, last, sporty; £40; write first (moving).—C. Patrick, 7, Poppleton Rd., Leytonstone. [5631

ABSOLUTE Gift.—Rudge-Multi 3½h.p., late 1916, recently overhauled, enamelled, fitted new gear, clutch, tyres, tubes, belt, silencer, exhaust, etc., sporting bars, foot oiler, excellent machine, unused 2 years, health and financial reasons selling.—8 Riverdale Rd., Plumstead. [4834

GUARANTEED 60 m.p.h.!—Special 3½h.p. Rudge-Multi, 1920, Ricardo piston, Schebler carburetter, Harley twist grips, Showell mechanical pump, 2 saddles, 4 good tyres, lamps, horn, speedometer, A.J.S. silencer, loads of spares, mileage 6,000, condition perfect, the fastest Rudge on the road! Quick sale, £62; any trial.—Apply, 45, Queen's Gate Gardens, S.W.7. [5031

*Spare Parts:*

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3163

### Ruffles.

1920 Ruffles-Villiers 2-speed, very smart little machine; bargain 26 gns.—67, Ferulea Rd., Balham. [5991

### Scott.

SCOTT, just arrived, new 1922, Squirrel model; £105.—Simister, Jordaugate, Macclesfield. [4977

1922 Scott Sociables and Motor Cycles.—Scott Service Depot, 99, Gt. George St., Liverpool. [4477

1920 Scott Sporting Combination, new condition, all on; £72.—48, Plough Lane, South Wimbledon. [5507

SCOTT, 1920, complete Lucas accessories, tax paid, condition as new; £60.—Stour Cycle Depot, Stourbridge. [5269

SCOTT Squirrel 1921 3¾h.p., 2-speed, all chain, kick start, tax paid; £80.—Maudes', Walsall Garage, Walsall. [6127

1919 Scott, in splendid order, licensed, 1922, lamps, etc.; £52.—5, St. Peter's Rd., Hammersmith, W.6. [5829

SCOTT Combination, perfect order; £40; licence paid; must sell.—Wright, 79, Chesterfield Rd., Staveley Town. [4737

3¾h.p. Scott, 2-speed, kick start, condition as new, guaranteed; £55.—Beesley, Warford St., Newtown, Manchester. [5377

SCOTT (July, 1921), mechanically perfect, done 4,000 miles, Dunlop 26×3 back, Cowey, Lucas horn, semi-T.T. bars; £75.—Seen Stevenage, 10, Crag Path, Aldeburgh, Suffolk. [5418

## MOTOR CYCLE TYRES.

*All perfectly new—we guarantee every tyre ourselves, and if you are not perfectly satisfied with our tyres we will refund your money.*

| | | |
|---|---|---|
| 26×2 | Englebert Touring | 18/6 |
| 26×2 | Englebert Passenger | 20/6 |
| 26×2½ | Hutchinson Tourist Trophy | 22/6 |
| 26×2½ | Hutchinson Passenger | 25/- |
| 26×2¼ | Wood-Milne Combination, Steel Studded | 26/- |
| 26×2½ | Firestone Rubber Non-skid | 28/6 |
| 26×2½ | Dunlop Heavy Rubber Studded | 27/6 |
| 26×2½ | Avon Tricar Rubber Studded | 27/8 |
| 26×2⅝ | Palmer Cord Heavy | 32/6 |
| 26×2⅝ | Dunlop Heavy Rubber Studded | 32/6 |
| 26×2¾ | Dunlop Extra Heavy Rubber Std. | 35/- |
| 26×2½ | Bates Special Heavy Ribbed | 29/- |
| 26×2½×2½ | Extra Heavy Rubber Studded | 27/- |
| 650×65 | Lutetia Ribbed | 20/- |
| 650×65 | Wood-Milne Extra Strong | 30/- |
| 650×65 | Bergougnan voiturette | 40/- |
| 650×65 | Michelin square voiturette | 42/6 |
| 650×75 | Hutchinson Light Car | 33/6 |
| 700×80 | to fit 650×65 The Enston Special Super Chain Extra Heavy Rubber Stud | 42/6 |
| 700×80 | Excelsior voiturette | 47/6 |
| 28×2½ | Clincher Dreadnought | 30/- |

**SPECIAL OFFER OF 28×3 AMERICAN TYRES for American Rims.**

All perfect stock in original wrappers.

| | |
|---|---|
| Republic Rubber Non-skid | 43/- |
| Portage Rubber Non-skid | 43/- |
| Federal Rubber Non-skid | 43/- |
| Goodrich Safety Tread | 44/- |
| USCO (United States) RNS | 44/- |
| Firestone Rubber Non-skid | 44/- |
| Goodyear All Weather Tread | 45/- |

*Any of the above tyres will be despatched by next passenger train immediately after receipt of order, accompanied by remittance and 1/6 for carriage.*

**MOTOR CYCLE TUBES.**—All sizes in 24" and 26" at **5/6** each. Butt ended **1/6** extra. 28"×3" and 28"×2½" at **6/6**; 650×65 at **6/6**; 700×80 at **6/6**; Butt ended **1/6** extra.

Euston Special Inner Tubes, extra superfine quality.—26×2¼ at **7/6**; 26×2⅜ at **7/9**; 26×2½×2¼ at **8/-**; 26×2½ at **8/3.**

Firestone, Dominion and Puncture Proof tubes.—26×2¼, 26×2⅜, 26×2½, 650×65 at **6/9.**

*All Tubes post free.*

**MOTOR CYCLE BELTS.**—Clipper, regular stock, in original boxes. 8'×¾" at **10/-**; 8'6"×¾" at **10/6**; 8'6"×⅞" at **12/6.**

Sensational offer in ⅞" belting, any length ordered, at **9d.** per foot.

Clearance stock of 6'6"×⅞" at **7/11** each; 10'3"×⅞" at **12/6.**

**PEGAMOID WATERPROOF MOTOR CYCLING SUITS** for "all weather" motor cyclists, **15/-** per suit.

**MOTOR CYCLING HELMETS.**—We can offer you a splendid assortment at low prices—send for our illustrated leaflet.

**MOTOR CAR TYRES.**—We are the cheapest in the trade—send for our price list.

**OUR REPUTATION ENSURES THAT YOU WILL HAVE THE UTMOST SATISFACTION.**


## MOTOR CYCLES FOR SALE.

### Scott.

F.O.C.H have a 1920 Scott, brand new condition; also 1914 combination.—5, Heath St., Hampstead (nr. Tube). [3800

SCOTT 3¾h.p., 1920, Binks semi-T.T. bars, little used, and in excellent condition; offers.—Thomson, Glassville, Markinch. [6083

SCOTT SQUIRREL, 1921, fully equipped, taxed, new condition throughout; £72.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [3486

1920 Scott Combination, lamps, horn, tax paid, in perfect order; bargain, £70.—Rhind and Co., Stone Place, Rusholme, Manchester. [5136

SCOTT 3¾h.p., 1921 (August), speedometer, tyres new, perfect running order; £65; any trial.—S. Hall, 91, St. Peter's St., St. Albans. [5142

SCOTT, 1920, little used, Lucas lamps, electric tail, Watford speedometer, lovely condition; £65.—Fred Hogg, 111, Coton Rd., Nuneaton. [4924

1922 Scott-Squirrel, not done 500 miles, carrier, extra air, powerful electric lighting and other extras, perfect; £95.—101, Holly Rd., Northampton. [5252

1919 Scott, with 60 gn. R34 Rennoc sidecar, fully equipped, discs, windscreen, absolutely perfect all round; a real bargain; 73 gns.—Edwards, 50, Harrington Rd., South Kensington. [4548

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8352

SCOTT 1920 3¾h.p., Binks carburetter, 3in. tyres, T.T. bars, Bonniksen, total mileage 2,100, thoroughly overhauled, excellent condition, tax and insurance paid; £75.—Newell, Carlton Hotel, Southend. [4774

ROTARY Valve Scott, extremely smart, Parker frame, beautifully enamelled royal blue, discs, fully equipped, recently overhauled by Parker's at cost of £80, receipt shown; sacrifice, £65; exchanges.—Brockbank, 58, Lord St., Southport. [5688

*Spare Parts:*

SOUTH London Scott Service Depot.—Scott Spares; Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone: 1129. [8353

GODFREYS', Ltd., 208, Gt. Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list, stating year of manufacture. [0751

### Sheffield-Henderson.

SHEFFIELD-HENDERSON. — Henderson Motors, Ltd., 73, Fitzwilliam St., Sheffield, have for disposal a limited number of genuine T.T. machines as used in Tourist Trophy Races.

ALSO 4h.p. Combinations (demonstration models). Enquiries for these machines solicited from agents and riders. [4964

### Singer.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. Singer, 1910; £20. [5945

£18.—Singer 2¾h.p., good condition.—Baldwin, 105, Marsala Rd., Lewisham. By appointment. [4886

SINGER Combination, condition as new; sacrifice, £45.—Willmott, 242, Markhouse Rd., Walthamstow. [4781

SINGER 2¾h.p., 2 speeds, countershaft, clutch, enclosed valves, cheap; offers.—53, Swaffield Rd., Wandsworth. [5837

SINGER 2¾h.p., 1914, good running order, ready for road, lamps, tools, any trial; £19.—Hill, Berewyk Hall, Earl's Colne. [4811

4¼h.p. 3-speed Singer Coachbuilt Combination, new cylinder, piston, rebushed, fully equipped, excellent condition; no reasonable offer refused.—20, Fitton St., Nuneaton. [5903

4¼h.p. Singer Combination, 1914, only had 3 years' actual use, engine perfect, 2-speed gear box, B.B. carburetter, Bosch, new belt, good tyres, spares, tools, lamps, whole newly painted Matchless colour, good reliable bus, quite smart appearance; owner wishes dispose, special circumstances; will accept first 38 gns., and at this snip price would buy back if not entirely satisfied of fortnight's trial; any evening.—Engineer, 349, Goldhawk Rd., Shepherd's Bush. [4980

*Spare Parts:*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

GENUINE Singer Parts by Return Service.—Alf. Holland, Hearsall Lane Corner, Coventry. 'Phone 1945. [5551

### Sirrah.

SIRRAH 1922 2¾h.p., 2-speed, clutch and kick starter, as new; £48.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5624

### Sparkbrook.

SPARKBROOK 1918, fast, 2½h.p. Sports, single, countershaft, lamps, horn, tax; £25.—279, Hither Green Lane, S.E.13. [4981

## MOTOR CYCLES FOR SALE.

### Sparkbrook.

SPARKBROOK 1918 2¾h.p., 2-speed, all accessories, perfect condition; £30.—Taylor, 45, Walm Lane, Cricklewood, N.W. [4739

SPARKBROOK, 1920, Villiers engine, flywheel magneto, 2 speeds, all accessories, little used; £38.—Eagles and Co., 275, High St., Acton, London. [5776

### Sun.

SUN-V.T.S. 2¾h.p. 2-stroke; £20.—Atherton, Balgore's Sq., Gidea Park. 'Phone: East Ham 721. [4775

SUN-V.T.S., believed 1918, 2¾h.p., 2-stroke, new tyres, guaranteed perfect; £22/10.—1, Priory Rd., Kew. [5670

SUN-VILLIERS, 2-stroke, single speed, good going order, all oo; £19/10.—Davies, 75, Gosberton Rd., Balham, S.W.12. [5915

FOR Sun-J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., 60 gns. Send for catalogues. Trade supplied.—Jones Garage, Broadway, Muswell Hill, N.10. [0790

### Sunbeam.

SUNBEAMS.—All models.—Try Clifford Motories, Eastwood, Notts. [3385

CROSS, Effingham Sq., is agent for Sunbeams in Rotherham. New models from stock. [5780

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs, etc. [3558

£75.—3½h.p. Sunbeam, 3-speed, clutch, K.S., overhauled, re-enamelled, perfect.—King, Egrove, Oxford. [5545

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Sunbeam, 1917, 3 speeds; £65; extended payments taken. [5946

1921 Smart Sunbeam, sidecar with apron and windscreen, as new; £30, or nearest offer.—E. Hind, The Rise, Sunningdale, Berks. [5053

BRAND new 1922 3½h.p. Sunbeam, £126, in stock, exchanges; easy payments.—Walbro Motor Cycle Co., Saffron Walden. Phone: 45. [6086

8h.p. Sunbeam Combination, 1919, Swan sporting sidecar, electric lighting, discs; cost over £230; bargain, £110.—Bygott, Wem, Shropshire. [5275

3½h.p. Sunbeam Combination, late 1914, unused during war, perfect condition; first reasonable offer; no dealers.—46, Victory Rd., Wimbledon. [5237

SUNBEAM 1922 3½h.p. Combination, Binks carburetter, 6-volt accumulator lighting, speedometer, screen; £140.—Box 2024, c/o *The Motor Cycle*. [5215

3½h.p. Light Solo Sunbeam; immediate delivery of this exclusive model; 130 gns.—Sunbeam Agents: The Spalding Motor Co., Ltd., Spalding. [4769

3½h.p. Sunbeam Combination, late 1918, excellent condition, carefully kept, all accessories; £90.—Wilson, 82, Farquhar Rd., Edgbaston, Birmingham. [5558

1921 8h.p. Sunbeam Combination, Magdyno lighting, Cowey speedometer, spare wheel, windscreen, etc., splendid condition; £185.—Walbro, Ely, Cambs. [5842

SPEED Model Sunbeam, 1922, done 400 miles, holder of several awards in speed trials, etc., will do 75 m.p.h., as new; £125.—L.J., 11, High St., Purley. 'Phone: 1152. [5017

SPECIAL Sporting Sunbeam 3½h.p., twin M.A.G. engine, delivered June last; cost £175; evenings; £98, near offer.—120, Marlborough Flats, Walton St., Chelsea, S.W.3. [5388

6h.p. Sunbeam, 1914, with Gloria coachbuilt spring wheel sidecar, several replacements; £95; trial in East Finchley by appointment.—Box 2020, c/o *The Motor Cycle*. (D) [5109

3½h.p. 1915 semi-T.T. Sunbeam, Lucas accessories, mechanical and general condition excellent, licensed December, 1922; £65.—R. W. Lovell, 71, Thurlow Park Rd., Dulwich. [5341

SUNBEAM Combination, 1919, 4h.p., 3-speed, kick start, hand clutch, chain-cum-belt drive, Burbury coachbuilt sidecar, luggage grid, all lamps; £85.—Maudes' Walsall Garage, Walsall. [6130

3½h.p. T.T. Long Stroke Sunbeam, 1922, only done 200 miles, unscratched, licensed, lamps, etc., very fast engine, owner buying car, cost £145; will accept £130.—44, Barbourne, Worcester. [4765

3½h.p. Sunbeam Combination, excellent mechanical condition, overhauled makers (receipt), tax paid December, lamps, speedometer, Tan-Sad; death cause sale.—Vincer, Boreham Wood, Herts. [4818

1919 (late) 8h.p. Sunbeam Combination, dynamo lighting, electric horn, all accessories, spare wheel unused, tax and insurance paid, perfect condition; £160.—31, Thursby Rd., Northampton. [4507

SNIP!—3½h.p. Sunbeam Combination, brand new February, 1921, detachable wheels, spare wheel and tyre, lamp sets and horn, tax paid, apron, windscreen, good tyres, ready to ride away, and in excellent condition; £110.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [6097


# Why Not

## Select your motor cycle in comfort at home?

## Send to us for our lists.

### Wherever you live we can serve you best.

We can send you catalogues and full particulars of any of the well-known makes, or, if you are desirous of purchasing a second-hand motorcycle, you may rely upon the descriptions of our machines being absolutely accurate, and the machines themselves beyond reproach.

Our Extended Payment system will bring the machine you require within your reach.

We can accept a minimum deposit of one-fifth of the cash price and the balance paid, while you ride, in 12, 15 or 18 equal monthly instalments. The extra charge for credit is very small and carries a bonus for regular payment.

Any make may be purchased on these terms, and our present stock of 1922 models available for immediate delivery include:—

**A.J.S., Allon, B.S.A., Douglas, Enfield, Hawker, Martinsyde, Matchless, McKenzie, New Imperial, New Comet, Norton, O.K. Junior, P. & M. Rudge, Ruby, Stanger, Triumph, Zenith, etc., etc.**

Before buying elsewhere let us know the make of machine you wish to purchase, the accessories you require, the amount of deposit you wish to pay and how you require the balance. We can then send you quotations which we are certain will appeal to you. A list of second-hand machines sent post free on request.

**We have the goods at a price you can pay.**

The Service Company Ltd. LONDON

289-293, HIGH HOLBORN, LONDON, W.C.1


## MOTOR CYCLES FOR SALE.

### Sunbeam.

1919 (September) 3½h.p. Sunbeam Combination, Easting, Tan-Sad, luggage carrier, Klaxon, Lucas head lamp, 2 new Dunlop tyres, mileage 4,500; £100.—Homedale, Saxton St., Gillingham, Kent. [4132

1921 Sunbeam 3½h.p., interchangeable wheels, leaf springing, Bonniksen, lamps, legshields, Henderson sidecar, knee grips, spares, tax paid; price £115.—22, Johnson Ter., New Washington, S.O. [5423

1921 Semi-Sports Sunbeam, good condition, complete with Bonniksen speedometer, acetylene and electric lamps, tax paid, Klaxon horn, etc.; £100, or nearest offer.—Crabtree, Bridgefoot, Warrington. [5692

8h.p. Sunbeam Combination, 1920 model, electric lighting, spare wheel, hood, screen, speedometer, Tan-Sad, etc., just overhauled, perfect condition, tax paid; £160.—Edmunds, Oatlands, Church Lane, Aldershot. [5474

3½h.p. Sunbeam, brand new, 1921, touring model, Lucas head, tail lamps and horn, mirror, licence, and full insurance paid to December, 1922, detachable wheels; £115, complete.—G. Schebesta, 4, Hatterslay St., Burnley. [4954

1919 8h.p. Sunbeam Combination, lamps, speedometer, spare wheel complete, shields, screen, etc.; trial willingly; £98, or near offer.—86, Church Rd., Upper Norwood, S.E.19. 'Phone: Sydenham 2363. [4995

SUNBEAM, 3½h.p., T.T. Sports, purchased June, 1922, Cowey speedometer, fully insured, tax paid, run 200 miles, exceptionally fast; cost £150, will sell £130 or near offer.—173, Longfellow Road, Worcester Park, Surrey. [5990

1922 Isle-of-Man Sunbeam, same as won the race, lapped in race in 40.34, special petrol and oil tanks, automatic and foot pump oiling, tax paid, many other gadgets, condition as new; £150.—Crabtree, Bridgefoot, Warrington. [5691

1917 Sunbeam Combination, 8h.p., 3 speeds, C. and K.S., Lucas dynamo lighting, Lucas electric horn, Cowey, Bioks, leg shields, tyres excellent; £110; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [5857

1921 3½h.p. (499c.c.) Sunbeam, new April, makers' sidecar, screen, apron, tank, front chain case, just works-enamelled, nearly new 3in. Dunlop Magnum cord tyres on detachable, interchangeable wheels, leaf-spring fork, speedometer, Cowey horn, all lamps, luxurious outfit, perfect order; driven only by original owner, who loves her; medical reasons for disposal; rare opportunity for wise buyer; £135.—Write, C. F. Plowman, A.C.U. Consul, 6, Clarence Crescent, Windsor. [3755

### Swift.

F.O.C.H. have 3½h.p. Swift Combination, 3-speed, excellent condition, licensed, lamps, Easting, etc.; £27/10; bargain.—5, Heath St, Hampstead (Near Tube). [5149

### T.D.C.

T.D.C. 2-stroke, good condition, good tyres, tax paid; £22, or offer.—Soames, 34, Cyprus St., London, E.2. [5482

T.D.C. De Luxe 2½h.p. 2-stroke, 2-speed, licensed; best offer; ride away.—H.W.S., 59, Victoria St., Belvedere, Kent. [5384

### Torpedo

TORPEDO 2h.p., 2-stroke, excellent condition and appearance; £19.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80 [5625

### Triumph.

EFFRAMOTA.—Irish M.T. surplus.

TRIUMPHS, countershaft; £48 each.

£60.—Triumph 4h.p. countershaft motor cycles, completely renovated as new, stove enamelled and finished in makers' colours, Bosch magneto, new tyres and tubes, guaranteed 3 months.—Effra Motor Works, Ltd., 59-63, High St., Clapham, S.W.4. 'Phone: Brixton 1115. [6120

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE delivery of type H, 4h.p., 3-speed, £105; type S.D., chain drive, £115; type R., 3½h.p., overhead valve, £120; type L.W., lightweight, £65; sidecars from £20 to £50; easy payments, 4 per cent. extra; free delivery to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0867

1917 4h.p. Triumph, 3-speed, K.S., good condition; 52 gns.—Below.

1913 3½h.p. Triumph, electric lighting, equipped; 23 gns.—Edwards, 101, Gt. Portland St., W.1. [5909

TRIUMPH for Sale; £35.—16, Brunoer Av., Shirebrook, nr. Mansfield. [4850

1921 Baby Triumph, fully equipped, tax paid, absolutely as new; £48.—Below.

1918 4h.p. Triumph, little used, accessories, tax paid; £62—Daw, Triumph Agent, 114, Brixton Hill. [6032

TRIUMPHS, solo or combinations.—Try Clifford Motories, Eastwood, Notts. [3382

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH and Sidecar, clutch model, perfect order; £35.—109, Beam St., Nantwich. [5801

TRIUMPH, Ricardo, new 1922 model in stock; also S.D. and H.—Moss, Wem. [5808

TRIUMPH 1917 4h.p., countershaft; £60, or offer.—230, Underhill Rd., Dulwich, S.E. [4911

1918 Countershaft Triumph, perfect; £43.—24, Balliol Rd., North Kensington. [5462

F.O.C.H. for Triumphs; latest models in stock.—5, Heath St., Hampstead (nr. Tube). [3801

TRIUMPH-RICARDO in stock; £120.—Premier Motor Co., Aston Rd., Birmingham. [0868

SPORTING Triumph 3½h.p., perfect condition;; bargain, £20.—1, Priory Rd., Kew. [5671

GENUINE 1918 Triumph, very fine condition, perfect; £55.—9, Church Rd., Harlesden. [6008

£15.—3½h.p. Triumph, Bosch, new B. and B., good running order.—King, Egrove, Oxford. [5546

1913 3-speed Triumph, complete lamps, horn; £28.—Cross, Effingham Sq., Rotherham. [5783

LATE 1917 Triumph Combination, perfect throughout; £58.—64, Church St., Edgware Rd. [5700

TRIUMPH-RICARDO in stock.—Parks, 10, Sangley Rd., Catford. 'Phone: Lee Green 2011. [5177

TRIUMPH, clutch model, 1911, guaranteed, tax paid; cheap.—59, High St., Hampton Hill. [5096

MODEL H 1922 Triumph, new, £105; also S.D. Model, £115; cash or extended payments.—Below.

WE have several 1918-1919 C.S. Triumphs, fitted new tyres, tubes, etc., and many fitted with 1922 S.A. gear boxes, splendid value, enamelled and plated, £65.—The Hackford Engineering Co., 33, Hackford Rd., Brixton, S.W.9. 'Phone: Brixton 3062. [6077

TRIUMPHS.—Prompt delivery and service.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3692

1917 Countershaft Triumph, fully equipped; £45.—11, Blechynden Mews, Lancaster Rd., W.11. [6044

TRIUMPH 3½h.p., 3-speed, clutch, just overhauled, splendid goer; £30.—Davis, 22, Tooting Bec Rd. [5028

TRIUMPH Countershaft, 1919, new gear box; £58.—Miles, 11, Chichester Rd., West Kilburn, N.W.6. [6047

CROSS, Effingham Sq., is agent for the trusty Triumph in Rotherham. All models from stock. [5782

1918 Triumph Combination, excellent condition; cash, £65.—Tann, 120, Chippenham Rd., W.9. [5262

1920 Countershaft Triumph for late Harley or Henderson.—Fish Market, Shipston-on-Stour. [5522

3½h.p. Triumph, splendid order throughout; bargain, £22.—Speechley, 86, Churchfield Rd., Acton, W.3. [5732

BABY Triumph, 1921, 2-speed, hardly soiled, lamps and horn; £55/10.—Stanley and Sons, Marden, Kent. [4910

1918 Triumph Combination, just overhauled, perfect condition; £72/10.—Kays, 8, Bond St., Ealing. [5504

£22/10.—Triumph 3½h.p., sporting model, fully equipped, fast, splendid condition.—63, Solon Rd., Brixton. [5356

TRIUMPH 1920 Gloria Combination, electric lighting, absolutely perfect; £95.—Davis, 22, Tooting Bec Rd. [5026

TRIUMPH 3½h.p., Philipson pulley, perfect order, fast; £22.—Margrave, Dean Head, Audenshaw, Manchester. [5454

TRIUMPH-GLORIA Combination, S.A., electric lamps, perfect order; £65.—120, Sutherland Rd., W. Croydon. [5714

1912 3½h.p. Triumph, fitted drop frame, countershaft, tank, etc.; £22.—Box 2037, c/o *The Motor Cycle*. [5711

TRIUMPH Countershaft Models, £45 each. Come early and take your choice.—Broadway Motor Co., Tooting. [5406

£88.—Triumph combination, 1920, fully taxed, all on; a bargain.—11, Warwick St., Oxford. 'Phone: 833. [4898

TRIUMPH, 1913, clutch, lamp, horn, good tyres, splendid order, tax paid; 27 gns.—15, King's Rd., Hitchin. [5251

£48/10.—Late Countershaft Triumph, perfect condition, fast, reliable, renovated; snip.—7, Cowdrey Rd., Wimbledon. [5737

TRIUMPH 3½h.p. Combination, C.B. sidecar, variable gear, splendid machine; £32/10.—Davis, 22, Tooting Bec Rd. [5027

1918 Countershaft Triumph, in splendid condition all round; £46.—164, Revelstoke Rd., Wimbledon Park, S.W.18. [5361

JUNIOR Triumph, 1921, perfect order, small mileage, lamps, tax paid; £52/10.—Minihane, King's Parade, Isleworth. [3829


# TURNERS

SPECIAL PURCHASE OF
COWEY SPEEDOMETERS
(Not Trip)

£3 3s. 0d. each.

Send make of machine and size of tyre

*We are stockists for the following Manufacturers' goods:*

AMAC, BINKS, BROWN & BARLOW, SENSPRAY — Carburetters and Parts
BOWDEN WIRE Ltd. — Brakes & Parts
BRAMPTON, DRUID — Fork Parts
BRITISH HUB CO. — Hub Parts
B.S.A., DOUGLAS, J.A.P., LEVIS, TRIUMPH, VILLIERS — Engines and Machine Parts
BEST & LLOYD — Lubricators and Parts
LUCAS, MILLERS, POWELL & HANMERS — Lamps & Parts
RENOLDS - Chains & Parts
STURMEY ARCHER Gear Parts
TAN-SAD - Seats & Parts

*NOTE:—*
**London Agents for LEVIS SPARES**
SIDECAR LUGS and FITTINGS in endless variety
CAMEO, EASTING — Windscreens and Fittings

*We also have large stock of Accessories and one of the most varied assortments in London. We shall be pleased to quote you for your requirements.*

**180, 181, 182, Railway Approach**
Est. 1901. **SHEPHERD'S BUSH, W. 12.** 'Phone: Western 6177


## MOTOR CYCLES FOR SALE.

### Triumph.

MOFFAT, Yeovil, Official Triumph Service Agents.—1922 models from stock; exchanges; all spare parts. 'Phone: 50. [5725

£48/10.—Triumph 4h.p., countershaft, as new, lamps, horn, ride 50 miles to purchaser.—211, Garratt Lane, Wandsworth. [5832

1919 Triumph Countershafts, guaranteed brand new; £72/10.—204, Ladbroke Grove, W.10. 'Phone: Park 5541. [5381

4h.p. Triumph, countershaft, 1919, last used October, 1920, splendid condition; nearest £65.—Box 2032, c/o *The Motor Cycle*. [5708

1918 Triumph Countershaft Combination, fully equipped, tax, £68; 1917, three, £50.—155, Ladbroke Grove, W.10. [5383

1912 Clutch Model Triumph, just overhauled and all accessories; £25.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [6065

3½h.p. Triumph, Grado gear, handle start, splendid condition, any trial; £24.—Jarvis, 202, Uxbridge Rd., Hanwell, W 7. (D) [4860

1914 Triumph Combination, overhauled and renovated, tax paid; £45.—Della, 104, St. John's Hill, Clapham Junction. [5201

TRIUMPH 1921 Model H Combination, fully equipped and spares; any trial; £100, or near.—71, North Rd., Brentford. [5242

1920 Triumph Combination, Gloria sidecar, fully equipped, condition as new; price £110.—A. Foreman, Chelsfield, Kent. [5443

4h.p. Countershaft Triumph and sidecar, all accessories; £45.—50, Church Rd., North Wimbledon, S.W.19. Tel.: Wim. 2270. [5487

1922 4h.p. Trimph Combination, H model, new February, fully equipped; what offers?—Billett, 22, Sutton Rd., Southend. [4838

TRIUMPH-GLORIA 1921 Combination, all-chain, in perfect order; £110; will separate.—Harvey, 47, South Lambeth Rd., S.W.8. [0885

£65.—Triumph countershaft combination, lamps, horn, licence, ride 50 miles to purchaser.—211, Garratt Lane, Wandsworth. [5834

IN Stock.—Triumph-Ricardo; highest exchange allowance or deferred payment.—Edwards, 50, Harrington Rd., South Kensington. [4551

TRIUMPH Combination 1921, electrically equipped, tax paid, as new; £82/10.—J. Hillier, 216, Portobello Rd., North Kensington. [3977

£22.—3½h.p. Triumph, clutch model, Bosch, new piston, cylinder, and Senspray; any trial.—47, Bandon Rd., Victoria Park, E.2. [4989

COUNTERSHAFT Triumphs from £45; renovated and guaranteed, £55.—Rhind and Co., Stone Place, Rusholme, Manchester. [5139

1920 4h.p. Triumph and Sidecar, Easting, fully equipped, tax paid; £75; exchanges.—Brockbank, 58, Lord St., Southport. [5684

1919 2½h.p. Baby Triumph, all lamps and tax paid, in nice order; £40.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [6092

TRIUMPH 3½h.p., equipped, new Philipson, D.R. bars, lamp, horn, taxed; £27/10.—"Cartref," St. Paul's Terrace, Colwyn Bay. [5451

4h.p. 1914 Triumph and Sidecar, 3 speeds, £50; and 1914 solo Triumph, 3 speeds, £45.—Wauchope's, 9, Shoe Lane, London. [5970

TRIUMPH Combination, 4h.p., engine 51561, C.S. 3 speeds, C.B. sidecar, Easting, all on, ready for tour.—22, Estelle Rd., N.W.3. [5435

1919 Triumph Combination, tax paid, bargain, £77; also one at £60, and several solo models in stock.—Ross, 86, High Rd., Lee. [5665

£32.—1914 4h.p. Triumph, 3 speeds, clutch, starter, lamps, licensed, horn, condition perfect.—89, East Hill, Wandsworth. [5346

1918 Triumph and Coachbuilt Sidecar, splendid condition, lamps, accessories, nearly new Dunlops; £63.—52, Bancroft, Hitchin. [4760

£120.—Brand new Triumph-Ricardo 3½h.p., overhead valve model in stock.—Triumph Agents: The Spalding Motor Co., Ltd., Spalding. [4768

TRIUMPH Combination, C.B., countershaft, as new, all on, spares; £65, or exchange higher power.—Grou, 73, Duncombe Rd., Holloway. [5981

1921 2¼h.p. Triumph, splendid condition, lamps, horn, tools, etc.; a bargain, £40.—R. E. Hall, 27, Lee Crescent, Portobello, N.B. [5090

TRIUMPH Gloria 4h.p., all-chain Combination; £95.—Newham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5612

TRIUMPH-RICARDO, delivery ex stock; cash, exchange, or easy payment; demonstration if necessary.—Meeten, Triumph Agent, Dorking. [5345

1918 Triumph Coachbuilt Combination, excellent condition, equipped; £65; will separate.—1A, Marie House, Brockley View, Forest Hill. [5391

## MOTOR CYCLES FOR SALE.
### Triumph.

TRIUMPH Combination, new sidecar, 3-speed, clutch, kick starter; bargain, £67/10.—Rhind and , Stone Place, Rusholme, Manchester. [5138

)18 4h.p. Triumph, Montgomery combination, tip-top condition, tax paid year, any trial, any e.—13, Terrace Road, South Hackney. [6028

ROYDON Agents Triumphs, all new models and large range of second-hand in stock.—Moore's sto Motor Works, North End, Croydon. [0864

)18 Triumph Combination, fully equipped, licensed, lovely condition; £65; guaranteed.—37, Canter-y Rd., Balls Pond Rd., Dalston, N.1. [6054

25.—3½h.p. Triumph, fully equipped, speedometer, 1920 tank, carouretter, etc., appearance, condition ellent.—Bacon, Offington Lane, Worthing. [5351

.O.C.H. have 1913 Triumph Combination, 3-speed, excellent condition, equipped, licensed; £35, bar-n.—5, Heath St., Hampstead (near Tube). [5148

)19 Triumph-Gloria Combination, Easting screen, luggage grid, tax paid; £78.—Hillier, Side l, 9, Wallingford Av., North Kensington. [5656

)18 Triumph Combination, coachbuilt sidecar, complete with all accessories, excellent condition; 5.—Morris's Garage, Rosenau Rd., Battersea, S.W. [5677

ATE 1919 Triumph Combination, fully equipped, splendid condition; Rennoc sidecar, hood and en, tax paid; £85.—83, High St., Hampstead. [5432

HEFFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stacey. umph Service Depot, 12, Ecclesall Rd., Sheffield. [0812

RIUMPH Combination, all-chain drive, 1921, Magdyno lighting set, Cowey speedometer, all spares, eage 500; £145.—Stour Cycle Depot, Stourbridge. [5271

)20 Triumph Combination, equipped every possible accessory, fully licensed, condition equal new; 2.—37, Canterbury Rd., Balls Pond Rd., Dalston. [6053

6 GNS.!—Renovated T.T. Triumph, Philipson pulley, Ace discs, lamps, horn, tax; a beauty, ranteed.—Clifton Garage, Abingdon St., Black-l. [4984

RIUMPH, 3-speed, Tan-Sad, lamps, horn, tax paid, £25; another clutch model, £20.—Noving-Terrace Garage, Turnham Green Terrace, Chis-k. [5802

)20, Renovated by Triumph, not run 5,000 miles, perfect condition, Cowey, College shields and res; £65, or offer.—R. P. W., "Barra," Chisle-st. [5162

)20 Triumph-Gloria Combination, electric lighting, disc wheels, magnificent outfit, condition as ; £90.—37, Canterbury Rd., Balls Pond Rd., Dal-n, N.1. [6052

)20 Baby Trinmph, fully equipped, licensed for year, absolutely as new; 40 gns.; exchanges or erred.—Edwards, 50, Harrington Rd., South Ken-gton. [5869

)20 Triumph and Bulbous Sidecar, Lucas lamps, horn, in perfect order; £95; exchanges.—mac's, 243, Lower Clapton Rd., N.E. 'Phone: ston 2408. [5858

)21 Triumph Coupette Combination 4h.p., countershaft, brand new sidecar, the sidecar with ppearing hood; come and see one; £110; deferred ns.—Below.

)20 Triumph 4h.p., countershaft, literally new, fully equipped; £70; deferred terms.—Below.

)13 Triumph, fully equipped, 3 speeds, etc.; £28/10.—Goad, Norman Lodge, 122, Maida e, W.9. 'Phone: Hampstead 1353. [5937

RIUMPH 3½h.p., sports model, with Philipson pulley, first-class condition throughout; £55.—rnham Motor Co., 223, Hammersmith Rd., W.6. one: Hammersmith 80. [5626

)21 4h.p. chain-drive Triumph, with Henderson lightweight sidecar, splendid condition, all accessories, extra wide mudguard, copper exhaust, etc.; .—Tippen, Marden, Kent. [5304

RIUMPHS.—Only a limited number, few parts missing. Call early and have your pick; £35.—e Hackford Eng. Co., 33, Hackford Rd., Brixton, V.9. 'Phone: Brix. 3062. [5901

RIUMPH Combination, unscratched, aluminium Swan sporting sidecar, licensed, accessories, very art, engine guaranteed; £82, bargain.—Dixon, 60, on Rise, Ealing. Tel.: 560. [6004

RIUMPH-RICARDO Model, nearly new, dynamo lighting, speedometer, magnificent machine, to sold for a client at great loss, enormous bargain; 20.—Longman Bros., 17, Bond St., Ealing. Tel.: 0. [5862

RIUMPH 3½h.p. Very Late 1920 Combination, lighting set, perfect in every way, only used few es, tax paid for 1922, complete with all tools; ier going abroad, will accept £78 cash.—Seen at nner's Garage, 70, Camden Mews, Cantilowes Rd., nden Rd., London, N.W.1. [6363

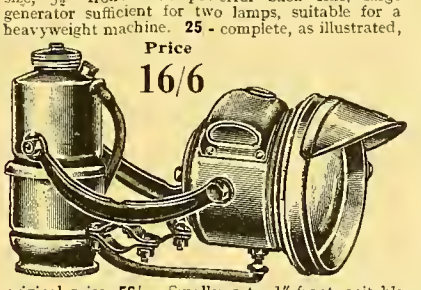
## WATCH THIS COLUMN
EVERY WEEK FOR
## BANCROFTIAN CO.'S
## BARGAINS.
**Advertisers in "The Motor Cycle" from its first publication.**

**TYRES.**—Manufacturers' clearance stock, not W.D. Although clearance, they are new and perfect. Wood Milne extra heavy, 4-ply, 26 × 2½, combination, **35/-**. Hutchinson, 26 × 2½, heavy T.T., **27/6**: Passenger, 26 × 2½ for 2½, **39/6**; 700 × 80 to fit 650 × 65 small car, heavy, **49/6**; extra strong Passenger, 28 × 3, **63/6**; 24 × 2 T.T. heavy, **25/-**; extra heavy, 3-ribbed, 700 × 65, **35/-**; 650 × 65 steel studded car type, **52/-**; Firestone, 20 × 2, Auto wheel, **21/-**; original, **45/-**; tube, **6/6**. Palmer, 26 × 2, light, **22/6**; 650 × 65 cord, **42/-**; 26 × 2½ coast, **42/-**. Oylers, 650 × 65, ribbed square tread, heavy, in original packing, **27/6**; original, **45/-**. Clincher de Luxe, very heavy, 26 × 2½, **37/6**; 26 × 2 Junior de Luxe, **22/6**; 26 × 1⅜, **17/6**. Hutchinson wired edge cover, 26 × 2½ and 26 × 2¼, **30/-** each. Postage 1/6.

**TUBES.**—24 × 2¼, **4/6**; 24 × 2, **4/6**; 26 × 2¼, **5/6**; 26 × 2½, **5/9**; 26 × 2⅝, **5/6**; 28 × 3, extra heavy, **7/6**; 700 × 80, **7/6**. Postage 9d.

**BELTS.**—Clincher clearance line, new, not W.D. ⅞" × 7' 6", **9/6**; 1" × 7' 6", **11/3**. Bates' short lengths, ⅞" × 5', **4/6**; 5' 6", **5/-**; ⅞" × 4' 6", **5/-**; 5', **5/6**; 5' 6", **6/-**; 1" × 2' 6", **3/-**; 3', **3/9**. Leather belts, ⅞" at **2/6** per ft. Belt fasteners, **9d.** and **1/-**. Postage 1/-.

**GREAT PURCHASE of Genuine "BOBJON" LAMPS** Nickel-plated on brass or black and plated. Large size, 5½" front with powerful back lens, large generator sufficient for two lamps, suitable for a heavyweight machine. **25/-** complete, as illustrated,




original price, **56/-**. Smaller set, 4½" front, suitable for lightweights, **16/6**. The greatest bargain ever offered. When cleared can never be repeated at near the price. Postage and packing, 1/6 extra. Special quotation for quantities.

**SPECIAL PURCHASE of SMITH'S JACKS.**

| | | |
|---|---|---|
| No. 7. | 7¼" extend 11½"..... | 7/6 |
| „ 8. | 8½" „ 13¾"..... | 8/6 |
| „ 9. | 9½" „ 15½"..... | 9/6 |

Above half usual prices.

**SPEEDOMETERS.**—Slightly shop soiled. Cowey with trip, **£4 15s.**; Stewart with trip (£6 6s. model), **£4 10s.**; Smith's with trip, **£4 10s.** Also Bonniksen in stock. All speedometer replacements in stock. Postage 1/6.

**TAN-SAD,** with back seat, **28/6**; original, **57/-**; only limited quantity. Carriage 3/6 extra.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined, **7/11**; lined, **10/6**; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, **3/6**; Gloves, leather, wool lined, **4/6**. Above lines worth more than double. Limited quantities only. Order at once. Postage 6d.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coat with belt, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality, extra heavy, double texture waterproof material, dark fawn, new and fresh, only been made recently, not half-perished W.D. Our price to clear, **£2 2s.** Postage 1/6 extra. Could not be bought elsewhere under £4 10s. The greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**HORNS.**—Reliable Electric, Motor Cycle, up to 4-volt only, complete with wire and switch; usual price, 29/6, our price, **15/6**. Postage 1/3 extra. Smith's Electric Horns, black and nickel, in 6, 8, or 12 volts, large size, suitable for heavy combinations; original price, £2 15s.; our price, **30/-**. Postage 1/6. The greatest bargain ever offered. All new and perfect.

We can supply anything for the motor cyclist at competitive prices.

**BANCROFTIAN CO.,**
78 BISHOPSGATE, LONDON, E.C.2.
'Grams: "Chaikel, London." 'Phone: London Wall 897

## MOTOR CYCLES FOR SALE.
### Triumph

TRIUMPH.—Immediate delivery of all 1922 models. Sidecars to suit from £20. Write for catalogue and full particulars of easy payments.—P. J. Evans, John Bright St., Birmingham. [5132

TRIUMPH 4h.p., late 1921, only done 1,500, lamps, speedometer, footboards,; snip, £90; before 6 o'clock, 62, Virginia Rd., Shoreditch; after, 45, Warneford St., Hackney, E.9. [5157

TRIUMPH Combination, Model H, mileage 1,100, lamps, Bonniksen, horn, new June, 1921, unused September to April; £110.—Rathbone, 211, Barton Rd., Stretford, Manchester. [3112

1920 Sports Triumph, condition equal to new, licence, lamps, horn, knee grips, tools; for sale or exchange lightweight, clutch and gears, not earlier than 1921.—Hillary, Mortimer, Berks. [5678

31h.p. Triumph, 1913, free engine model, good condition and running order, tax paid 1922, ride away; best offer; seen any time.—W. H. Sedgwick, Station View, Armitage, nr. Rugeley. [4946

1920 W.D.B. Triumph, Swan sporting combination, 3 speeds, kick starter, disc wheels, speedometer, luggage grid, fully equipped, tax paid, perfect outfit; £85.—66, Marsham St., Westminster. [5061

1919 Triumph-Gloria Combination, Cameo screen, hood, luggage grid, electric lighting, tools, etc., tax and insurance paid, excellent condition; £90.—Cooper, 15, Gloucester Rd., Kingston Hill. [5020

TRIUMPHS. Triumphs.—Countershaft, 1918, fully equipped, perfect condition, carry guarantee, from £45; 1917 from £40; we have 30 to pick from.—204, Ladbroke Grove, W.10. 'Phone: Park 5541. [5382

TRIUMPH 4h.p., late 1917, 3-speed Sturmey, clutch, kick start, new lamps, toolbags, etc., very fast; nearest £55.—Station Hotel, Bramley Rd., Latimer Rd., Station, Metropolitan. 'Phone: Park 3875. [5519

WE have several 1918 Triumphs at £60, in good condition, not renovated; 1918 combination, £73.—Light Car and Motor Cycle Engineering Co., Ltd., 26, Tulse Hill, Brixton. 'Phone: Brixton 1292. [6066

1921 Triumph, all-chain model, exceptional engine, 110 m.p.g., perfect throughout, low mileage, speedometer, horn, lamps, 95 gns.; C.B. sidecar, 10 gns.; Maidenhead.—Box 2028, c/o *The Motor Cycle*. [5696

RICARDO-TRIUMPH, 1922, special machine, foot oiler, 2 tanks, 3 carburetters, 5 sprockets, 2 cylinders, 3 pistons, etc., ideal competition rider's machine, winner many firsts, cost £156; accept 112 gns.—Below.

TRIUMPH, 1921, all chain, as new, 83 gns.; Triumph 1921 2-stroke, 42 gns.; Triumph 4h.p., 3-speed, 32 gns., all equipped, licensed, and guaranteed; photographs on request.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. Tel.: Putney 2865. (Open Sundays.) [5878

1919 Triumph Countershaft Combination, fitted with late type bulbous back sidecar, glass windscreen, trip speedometer, new Dunlop Magnum tyres, guaranteed perfect; £75.—239, Goldhawk Rd., Shepherd's Bush. [5005

SPORTING Triumph, Model H, countershaft, 39990, Lucas lamps and horn, Cowey speedometer, aluminium number plates, the whole in exceptional condition and guaranteed perfect; £60.—2, Montrose Av., West Kilburn. [5494

TRIUMPH Agents.—All Models from stock; catalogues and full particulars by return post free; exchanges and special payment terms arranged; correspondence invited.—Herbert Robinson, Ltd., Green St., Cambridge. [6115

BRAND new 1922 4h.p. Triumph, model S.D., all chain, in stock; exchanges, easy payments; also used 1921 4h.p. model S.D., all chain, in sound order, £85.—Walbro Motor Cycle Co., Saffron Walden. 'Phone: 45. [6085

1919 4h.p. Triumph, overhauled twice by makers (receipts shown), spare engine chain and sprocket, valve, belt, plugs, etc., pillion seat and footrests, excellent order; £65.—115, Blenheim Gardens, Wallington, Surrey. [4891

TRIUMPHS.—Cambridgeshire Service Agents. Complete stock of spares. All model machines, including 3½h.p. Ricardo, from stock. Supplied upon deferred payment. Exchanges.—King and Harper, Bridge St., Cambridge. [5815

1921 Triumph-Gloria all-chain Combination, Lucas lamps with extra electric rear and side, Cowey horn, Easting, spares include new chain, cover, etc., good as new, expert examination welcomed; £115.—Barker, Norwood Court, Southall. [4862

4h.p. Triumph Combination, 1921, Gloria sidecar, Easting screen, Tan-Sad pillion seat, speedometer, electric lamps and set of accumulators, horn, etc., tax paid 1922; £120; easy payments if desired.—Harrods Motor Sales Rooms, 118, Brompton Rd., London. [5927

SOUTHPORT.—1921 Triumph, Millford S.D. Combination, all chain, electric lighting, splendid condition, £108; also 1920 renovated countershaft Triumph combination, 1921 R34 sidecar, windscreen, all on, 72 gns.; exchanges.—Kents, 417, Lord St., Southport. [5278

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments, see column advertisement.—Bambers, 2, Eastbank St., Southport. 'Phone: 607. [4928

TRIUMPHS.—New 1922 4h.p. Combination, all-chain drive, £155; chain-cum-belt Combination, £145; 4h.p. S.D. all-chain, £115; Model H chain-cum-belt, £105; Junior 2¾h.p., £65; also several second-hand Triumphs from £40; and one 3½h.p. 1922, o.h.v., done 500 miles, £115. Second-hand machines taken in exchange, remainder on easy terms. Value allowed on old machine accepted as first payment down.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [5947

*Spare Parts:*

TRIUMPH Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7545

COMPLETE stock Triumph and Sturmey-Archer spares, no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [1247

TRIUMPH Agents since 1906.—All Triumph Spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Spare Parts for all models; also Sturmey-Archer gear parts from stock, post free; gear overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10. [0809

SEND to the Rhosha Motor Garage, South St., Romford, for Triumph and Sturmey-Archer spares. No disappointing delays; every part in stock. Repairs by skilled mechanics. We are official service agents. Telephone: Romford 584. [7766

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Velocette.

PREMIER Motor Co., for 1922 Velocettes.

IMMEDIATE delivery of Model E.2 2-speed, £65; E.3 3-speed, £72/10; E.L.2 lady's open frame, £68; all with clutch and kick starter; easy payments, 4% extra; carriage paid to any address.—Premier Motor Co., Aston Rd., Birmingham. [4609

2½h.p. Velocette, 2-speed, good condition; £17/17 secures.—R. Belcher, 7, Station Rd., Southwold. [4962

VELOCETTE 1922, perfect, as new, licensed, horn, speedometer, tools; £55.—439, Foleshill Rd., Coventry. [4852

VELOCETTE, 1921, shop-soiled, 2¼h.p., 2-speed, all chain, complete with tools; £56.—Maudes' Walsall Garage, Walsall. [6125

1921 (October) Sports Velocette, 3-speed, special engine, several firsts, 64 m.p.h., P. and H. lamps, also electric lighting, horn, tools, mileage negligible, unscratched, perfect condition throughout, guaranteed; £55.—Goad, 122, Maida Vale. 'Phone: Hampstead 1353. [5773

### Verus.

1920 Verus-Blackburne 2¾h.p., 3-speed, clutch, kick starter, taxed; 49 gns. or exchange.—284, South Lambeth Rd., Stockwell. [6002

### Victoria.

1920 4h.p. Victoria-Jap Combination, 3-speed, clutch, K.S., equipped and licensed, as new; 55 gns.—Edwards, 101, Gt. Portland St., W.1. [4455

### Victory.

1921 Victory 2¾h.p., 2-speed, K.S., hand clutch, 2-stroke, everything on, in A1 condition; £45, offers, exchanges.—118, Cricklade Rd., Swindon. [5236

### Wanderer.

£25.—Wanderer 3½h.p. 3 speeds, Burman countershaft, kick start; snip.—211, Garratt Lane, Wandsworth. [5833

### Wilkin.

1920 4h.p. Wilkin-Blackburne, 3-speed, clutch, K.S., Millford touring sc., full equipment, excellent condition; any trial; cost £160; sell £85, a gift.—Newitt, 52, South St., Romford, Essex. [5034

1921 Wilkin 4h.p., Blackburne, 3-speed, Lucas dynamo lighting, electric horn, automatic oiler, really perfect, licensed for year; 73 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [4550

### Williamson.

8h.p. Williamson Combination, perfect condition; £70; or exchange.—5, Tidy St., Brighton. [4231

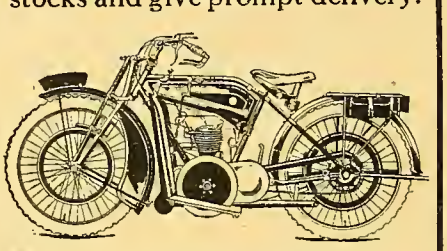
1915 8h.p. Williamson Combination, hood, screen, speedometer, tax paid, perfect; cash or instalments, £65.—20, The Archway, Walmer Rd., N. Kensington. [5115


# IVY MOTORS

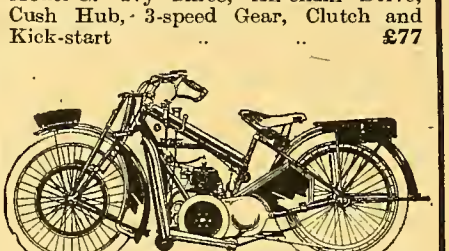
## give another proof of their reliability.

## In the London Edinburgh Trials TWO Standard Ivy Three's were entered and secured TWO Gold Medals.

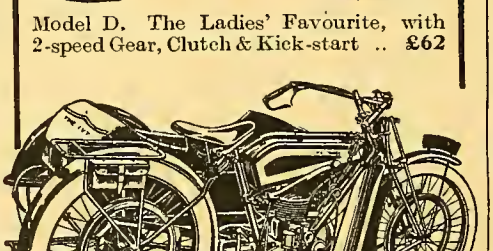
We make various models, but only in *one* quality. Send for Art Catalogue and select your machine now. We carry heavy stocks and give prompt delivery.



Model G. Ivy Three, All-chain Drive, Cush Hub, 3-speed Gear, Clutch and Kick-start .. .. **£77**



Model D. The Ladies' Favourite, with 2-speed Gear, Clutch & Kick-start .. **£62**



Model K. Combination, All-chain Drive, Cush Hub, 3-speed Gear, Clutch and Kick-start .. .. **£103**

## S. A. NEWMAN, Ltd.,

IVY MOTOR,

LICHFIELD ROAD,

BIRMINGHAM.


## MOTOR CYCLES FOR SALE.

### Williamson.

WILLIAMSON Combination, with 8h.p. Dong engine, magnificent machine, fully equipp very comfortable, any trial.—20, Maxwell R Bournemouth. [08

1920 Williamson Jap 8h.p. Combination, Sturm Archer gear box, all-chain drive; exceptio hargain, £55.—Norrington, Terrace Garage, Turnh Green Terrace, Chiswick. [58

### Wolf.

3h.p. Wolf, 1915, overhauled; must clear, £17.—Fa hurst, behind 68, Standishgate, Wigan. [54

£35.—Wolf-Jap 4h.p., Bosch, Senspray, excellent c dition, sporty.—Stott, 28, Grove Terrace, Hori Rd., Bradford. [52

2¾h.p. 2-speed Wolf, 2-stroke, 1916, overhaul licensed, equipped legshields, smart appe ance; £24.—Malvern Road Garage, Thornton Heath [60

£19.—As new, Wolf 2¾h.p., replated and enamell refitted throughout, new tyres, unridden, rea for road; must be sold to clear debt.—Box 2022, *The Motor Cycle.* [51

### Wooler.

1920 Wooler; £35; must sell; good order.—Wri B., 14, Lampton Rd., W. Wimbledon. [48

1920 Woolers, equipped; £28 and £32 each; changes.—Brockbank, 58, Lord St., Southpo [56

WOOLER, May, 1921, Flat Twin, spring fra little used, beautiful mount; hargain, £45 Beck, 41, Aubrey Rd., Small Heath, Birmingham. [56

### Zenith.

ALLAN GRUZELIER

OFFERS you very early delivery of the new 8h chain drive model.

THE Price, £130, with Super-Sports engine.

WE maintain that this model is the finest d purpose mount yet produced, and we stron advise you to place your order early and avoid crush.

WE are Zenith Specialists, and can give you best service; 5h.p. countershaft models, 19 new; 84 gns.

ALLAN GRUZELIER, Ulster Chambers, 168, Reg St. Works, Knight and Wheatley's Gara Coulsdon. [57

F.O.C.H. for Zeniths; latest models in stock.- Heath St., Hampstead (nr. Tube). [37

ZENITH 3½h.p., Gradua gears; £27; good order 68, Gloucester Rd., Camden Town. [47

ZENITH Sports, 6h.p., Magdyno, Canoelet; £55, exchange.—11, Chesterton Rd., Plaistow. [51

1916 4h.p. Zenith-Gradua, lamps, speedometer, e excellent order; £32.—114, Brixton Hill. [60

SPORTING Zenith-Gradua, discs, long exhau sporty 'bus £38.—323, Queen's Rd., Peckha S.E.14. [49

1915 Zenith-Gradua 5h.p., fully equipped, tax pa £33; exchanges.—Brockbank, 58, Lord Southport. [56

1920 Sports Zenith 6h.p., excellent condition, fu equipped; 50 gns.—69, Kingston Rd., New M den, Surrey. [52

ZENITH Combination 1916 4½h.p., J.A.P., Ros £65.—Write appointment, Owner, 48, Barmest Rd., Catford. [52

ZENITH.—New 1922 models on easy terms; list application; exchanges.—Wauchope's, 9, Sh Lane, London. [59

ZENITH-BRADSHAW, new model B, specia tuned; immediate delivery; £119.—Harrison a Bunkall, Chichester. [47

ROBERTSONS Motors, Ltd.—1922 shop-soi Zenith-Bradshaw, Gradua gear; £100.—157b, Portland St., W.1. [60

ZENITH 5h.p. Countershaft, new and guarante few only left; 84 gns.—R. B. Clark and 7, Exhibition Rd., S.W.7. [59

ZENITH-J.A.P. 1920 Sports Combination, fu equipped, speedometer; £100, nearest.—Monagh Telephone Exchange, Walden. [5

ZENITH-GRADUA, 6-8h.p. J.A.P., very power fully equipped; £45, or offers; sidecar.—Gilm 5, Aldred St., Chorley, Lancs. [47

5-6h.p. Zenith, clutch, kick start, in first-class con tion, complete, taxed; £60, offer, or exchang Easter, Five Ways, Swanley, Kent. [5

ZENITH 1920 Countershaft Combination, Lucas e tric lighting, first-class condition; £85.—R. Clark and Co., 7, Exhibition Rd., S.W.7. [5

ZENITH-BRADSHAW, Gradua gear, 1922 mo shop-soiled; £95; exchange entertained.—Ea and Co., 275, High St., Acton, London. [5

## MOTOR CYCLES FOR SALE.

### Zenith.

ZENITH 1919 6h.p. Sports Combination, fully equipped, licensed 1922, condition guaranteed; £70.—Hobart, Park Rd., Farnboro, Hants. [5227

1920 8h.p. Zenith Sports Motor Cycle, run only 2,000 miles, complete with full range of accessories, electric lighting, disc wheels., etc.; £80.

1920 8h.p. Kick Start Clutch Zenith Combination, with 2-seater sidecar, Tan-Sad saddle, condition new, run only 200 miles; £110.—Wray Park Garages, London Rd., Reigate, Surrey. [4966

ZENITH C.S. Combination, 5h.p., 1917, screen, fully equipped, many improvements, excellent condition; £65, or near offer.—8, The Avenue, Chingford. [5238

1921 5h.p. Zenith, countershaft, clutch, K.S., brand new, makers' guarantee; our price 88 gns; ted £118.—Edwards, 101, Gt. Portland St., W.1. [4451

ZENITH, 1920 (late), 8h.p. Sports Combination, completely equipped, low generator, as new, aranteed; £74.—51, Upper Richmond Rd., Put- . [5193

1h.p. Zenith-Gradua, excellent order, lamps, horn, tyres good, any trial, £25; coachbuilt sidecar suit, £10.—Christall, 43, Stafford Rd., Wallington. rrey. [5310

ZENITH-BRADSHAW, 1922 model, shop-soiled only, 3-speed, chain-drive model; £110.—Newnham tor Co., 223, Hammersmith Rd., W.6. 'Phone: mmersmith 80. [5627

ZENITH 5-6h.p. Sports, 1921, excellent condition, run 500 miles, fully equipped and licensed for r, very fast; £80.—Braine, Church St., Staveley wn, Derbyshire. [5293

ZENITH Combination, 4h.p. J.A.P., Gradua gear, Lucas lamps, horn, etc., guaranteed; £55; exanges.—Homac's, 243, Lower Clapton Rd., N.E. one: Dalston 2408. [5859

1920 8h.p. Zenith, clutch, K.S., Gloria spring wheel sidecar, screen, hood, electric lighting, edometer, excellent condition; 89 gns.—Edwards, 1. Gt. Portland St., W.1. [5908

ZENITH-GRADUA 1919 4h.p., countershaft, kick start, 52 gns., or with coach sidecar, hood, screen, gns.; photograph.—Peter Gordon, Ltd., 110, Upper chmond Rd., East Sheen. [5879

NEW 1921 Zeniths at bargain prices.—8h.p. sports, model G, £100; 8h.p., clutch model H, £110; p., clutch model D, £88.—Storer and Tait, 20, rdon St., Bond St., W.1. Mayfair 625. [5933

ZENITH 6h.p. 1914 Sports Coachbuilt Combination, new Gradna gear, new tyres, tubes, and t, electric lights, horn, Klaxon, all in splendid der, tax paid; bargain £65.—34, Seymour Rd., 8. [5059

ZENITH Canoelet Sports Combination, late 1920, special plating and finish, windscreen, electric hting, and all accessories, as new; any trial or ex- t examination; 90 gns.—53, Chetwynd Rd., Tufnell rk. [5173

GENUINE Bargain.—1919 8h.p. Zenith-Jap, with Dunhill sidecar, hood, screen, lamps, horn, etc., paid till 1923; make sure and secure now; 9/15.—Wilkins Simpson, Opposite Olympia, Lon- . [5069

ZENITH Combination 8h.p., 1920, countershaft, clutch and K.S., Milford sidecar, with luggage d, 2 lockers, original tyres, spare cover and tube. listinguishable from new, tax paid; 85 gns.—145, dmore Rd., Bromley. [5437

1921 5-6h.p. Zenith, countershaft, sold new April last, still carrying makers' full guarantee, istingnishable from new, lamps, Klaxon, etc., nsed June; £88; exchanges or deferred.—Edwards, Harrington Rd., South Kensington. [5870

OUTHPORT.—Two special competition 1922 Zenith-Bradshaws, all chain, few weeks old, one actual mer Scarisbrick Cup, other speed model; hargains, gns. and 94 gns. respectively; exchanges.—Kents, , Lord St., Southport. [5277

ZENITH 1920 6h.p., countershaft, clutch, kick starter, in very fine condition, Dunhill triangued sidecar, with superh limousette body, dove oured upholstery, electric lighting throughout, hood, een, Lucas horn, spare tube and belting, tools, np, etc., tax paid to 1923; 85 gns.—Delancey St. rage, Camden Town, N.W.1. [5648

*Spare Parts:*

ZENITH Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4829

### Ladies' Motor Cycles.

LADY'S 2¾h.p. Douglas, 3-speed, K.S., lamps, horn, good running order and condition; £47/10.—67, gorn Rd., Bearwood, Birmingham. (D) [4879

VELOCETTE 1922 Models, with clutch and kick starter, for immediate delivery; 2-speed, £68; peed, £75; all black weatherproof finish, all-chain ve, open frame, giving very low positioo; the ideal ies' mount; easy payments, 4% extra; illustrated logue free on request.—Premier Motor Co., Aston , Birmingham. [4610

# J. M. MILLET & SONS.

**LARGEST GOVERNMENT SURPLUS CONTRACTORS SUPPLYING GOODS DIRECT TO THE PUBLIC. HUGE DELIVERIES DIRECT FROM THE STORES TO OUR WAREHOUSES FROM ALL PARTS, IRELAND, SCOTLAND AND ENGLAND. WE OFFER SAME TO THE PUBLIC AT GREATLY REDUCED PRICES.**

**1,000 PAIRS FLANNEL TROUSERS,** of best workmanship, permanent turn-ups, light and dark grey. 34 to 44in. waist meas., length 28 to 32in. Best quality at **12/6** pair

**WE HIGHLY RECOMMEND THESE.**

**10,000 LEATHER HELMETS.** New. At. **5/6** each
**5,000 NEW SPORTS COATS.** Donegal Tweeds (also other tweeds). All wool. 34in. to 36in. At ..... **25/-** „
**20,000 LONG GAUNTLET GLOVES.** 17½in. Leather (lined) ..... **10/-** pair
**20,000 LEATHER JERKINS.** Without sleeves. New. At ..... **7/6** each
**5,000 CANADIAN LEATHER GLOVES.** At **3/-** pair
**7,500 GAUNTLET GLOVES, LEATHER.** At ..... **1/9** „
**5,000 GOVERNMENT BOILER SUITS. JEANS.** Sizes 3's to 8's ..... **12/11** suit
**10,000 OFFICERS' TRENCH COATS.** Oilskin underlined. Fleeced lining. Most wonderful value ever been offered. At.. **55/-** each
**1,000 NAVAL BLUE TRENCH COATS.** Oilskin underlined check or shot silk lining. At ..... **55/-** „
**1,000 PAIRS REAL WITNEY BLANKETS, WHITE.** All wool. 11 lbs. ..... **32/6** pair
**5,000 PAIR REAL WITNEY BLANKETS.** 70in.×90in. At ..... **27/6** „
**5,000 GOVERNMENT COLOURED BLANKETS.** Part worn. Condition good. At **4/-** each
**20,000 GROUND SHEETS.** 6ft.×3ft. Part worn. Condition good ..... **2/6** „
**5,000 GROUND SHEET CAPES.** 6ft.×3ft. (Either as ground sheets or capes) ..... **3/6** „
**1,000 OFFICERS' KHAKI SHIRTS.** Breast pockets and shoulder straps. All wool. New ..... **5/6** „
**7,350 UNBLEACHED TWILL SHEETS.** 70in.×90in. Heavy quality ..... **10/6** pair
**Do.** 80in.×100in. do. ..... **12/6** „
**1,000 OFFICERS' KNEE TRENCH BOOTS.** Willow calf. New. Lace up to front.. **37/6** „
**Do. do.** (Black) ..... **20/-** „
**5,000 OFFICERS' BROWN BOOTS.** Willow box calf glacé ..... **27/6** „
Do. do. **SHOES.** (Brown) ... **25/-** „
**1,000 FUR-LINED HELMETS.** Short pattern. New ..... **12/6** each
**50,000 FELT SOCKS FOR BOOTS.** (In 1 dozen bundles). At ..... **1d.** pair
**20,000 OILSKIN JACKETS.** New ..... **4/6** each
Do. **TROUSERS.** New .... **4/6** pair
Do. **GREAT COATS.** New . **7/6** each
**10,000 R.I.C. MACKINTOSHES.** Part worn. Condition good ..... **7/6** „
**20,000 R.I.C. JACKETS.** (Suitable for car cleaning.) All wool ..... **3/6** „
**5,000 WOOL GABARDINE RAINCOATS.** Shot silk lining. All wool ..... **50/-** „
**5,000 GENUINE ARMY MOTOR LEGGINGS.** Wool-lined to knee ..... **12/6** pair
**10,000 KILTS.** Part worn, Reduced price. 7 yds. material ..... **7/6** each
**5,000 GENUINE ARMY LEATHER WAISTCOATS.** With sleeves ..... **22/6** „
**2,500 GENUINE ARMY LEATHER WAISTCOATS.** With sleeves. Wool-lined. (Most wonderful value) ..... **25/-** „

**WE HAVE A HUGE QUANTITY OF YEOMANRY HARNESS WHICH WE SHALL BE PLEASED TO GIVE PARTICULARS OF UPON RECEIPT OF YOUR REQUIREMENTS. ALL GOODS CARRIAGE PAID AND MONEY RETURNED IF NOT SATISFIED**

**TERMS: NETT CASH WITH ORDER ONLY.**

**J. M. MILLET & SONS,**
*GOVERNMENT CONTRACTORS,*
**SOUTHAMPTON.**

## MOTOR CYCLES FOR SALE.

### Lady Motor Cycles.

FRANK WHITWORTH, Ltd., 139, New St., Birmingham, distributing agents for the Lady's Ivy, daintiest of all ladies' machines; £62, complete. Send for list. [0724

### Miscellaneous.

£17.—Precision Junior, 2-speed, tax paid, perfect order.—17, Heaton Rd., Mitcham. [5338

2¾h.p. J.A.P. engine motor cycle; £12/10.—Speechley, 86, Churchfield Rd., Acton, W.3. [5730

JONES Garage, The Broadway, Muswell Hill, N.10, and Woodside Parade, North Finchley.

HERE You Are!—We are open all day every Saturday, and have all makes in stock. Write, call, or 'phone Hornsey 2917 for big bargain list.

RUDGE I.O.M., new; £70.

1919 4¼h.p. B.S.A., Model K, large Canoelet sidecar, fully equipped, licence paid; £79/10.

1920 Ariel 3½h.p., equipped, £72/10; also second-hand and new sidecars, from £7/10.

1919 4h.p. Douglas Combination, first-class condition, any trial given; £79/10.

1918 4h.p. Triumph, coachbuilt sidecar, fully equipped; £75.

1915 Douglas 2¾h.p., equipped; £25.

1922 Matchless Combination, 7-9h.p. M.A.G. engine, indistinguishable from new, spare wheel, etc.; £160.

VERY Special.—1919 3½h.p. Ariel, in perfect condition, with brand new Ariel sidecar (1922); this week's bargain, £79/10.

8h.p. Enfield Combination, Lucas Magdyno electric lighting equipment, brand new 1921, unused outfit, complete; £140.

1919 3½h.p. Ariel Solo, a beautiful machine, in perfect condition; £62/10.

1920 2¾h.p. Douglas, 3-speed, equipped, very smart, K.S. and clutch; £50.

2½h.p. Connaught, 2-speed, fully equipped, leg-shields, taxed for 1922, perfect; £45.

3h.p. Precision, excellent condition, tax paid, starts easily and climbs anything; £15.

ANY of the above can be had on our easy payment system. It is the easiest of all; simply fill in a simple form, pay your deposit, wait two or three days, and in 99 cases out of a 100 the machine is yours. You are missing the best if you have not seen our terms, etc., and list of hargains.

ALL Guaranteed 3 Months.—Jones Garage, Broadway, Muswell Hill, N.10. Motor 'bus from Highgate or Finsbury Park. [4620

TRIUMPH Engined 3½h.p. Motor Cycle, running order; £18, quick sale.—50, Westbourne Rd., Forest Hill. [5144

2¾h.p. 1917 Villiers, 2-stroke, overhauled, licensed, equipped; £18.—Malvern Road Garage, Thornton Heath. [6023

2½h.p. Precision Junior, 2-speed, tax paid, all on, perfect mechanically, take two; £17.—Collins, Clock Arcade, Nuneaton. [5085

J.A.P. 2¾h.p., excellent condition; £20; would consider exchange, cash adjustment.—10, Mildmay Grove, Canonbury, N.1. [5203

£15, or nearest offer; 1915 motor cycle, 3½h.p., just re-enamelled, licence paid, good running order.—Selway, 47, Victoria Rd., Frome, Somerset. [4821

2¾h.p. Precision, Bosch magneto, B.B. carburetter, new Hutchinson tyres and belt, ride away; 22 gns.—Buck, "Holmside," Finboro' Rd., Tooting Junction. [4816

DIAMOND 2-stroke, like new, 1919, all on, tax paid, £28/10; Motor-Reve lightweight, £10/10, good running order.—Jennings, Garage, Broadwater, Stevenage, Herts. [4971

3½h.p., Palmer spring frame, Humber engine, Bosch, B. and B., variable pulley, recently overhauled, enamelled and plated, lamps, good condition; £35.—Lippiatt, Bell Hotel, Radstock. [4744

SPARKBROOK 2½h.p., cost £52/12/6; Sun-Jap 2¾h.p., cost 63 gns.; both purchased May 3rd, 1922; owing to unforeseen circumstances, must sell; best offer.—R. Pettitt, Builder, Upper Dicker, Sussex. [4877

HALIFAX.—Cash bargains: Premier 3½h.p., Grado gear, £22/10; ditto 2-speed, £27/10; 6h.p. Rex, 2-speed, and sidecar, £24/10; Ariel 3½h.p., Grado gear, £24/10; 2¾h.p. New Imperial, £22/10; 8h.p. Matchless Combination, £39/10.—Collier's Motories, Horton St., Halifax. [5787

1921 M.A.G. 4h.p. Twin, 3-speed, kick start, hand clutch (Sturmey gear box), nickelled wheels, sloping tank, etc., handsome mount, fast, reliable, guaranteed absolutely faultless, appearance indistinguishable from new, mileage under 2,000, fully equipped, expert examination, absolutely any trial, licensed for year, engineer owner selling through illness; £65, no offers; guarantee given.—1, The Nooks, Dorset Rd., Mottingham, Eltham, S.E.9. [5689

## MOTOR CYCLES FOR SALE.

### Miscellaneous.

BLACKPOOL Bargains.—1922 Rudges, 1922 Ariels, 1922 O.K.'s, 1922 New Imperials, 1922 Quadrants, 1922 Royal Rubys. Quick deliveries. Good price for your machine; exchange.—Booths' Motories, Waterloo Rd., Blackpool.

BLACKPOOL Bargains.—New 1921 4h.p. Bradbury, all chain, £78/10, with sidecar £95/10. —Booths' Motories.

BLACKPOOL Bargains.—3½h.p. Triumph, £18/10/6; ditto, 2-speed, £22/10/6; countershaft model, £65/10/6.—Booths' Motories.

BLACKPOOL Bargains.—3½h.p. Humber, £20/10/6; 1920 Wooler, £39/10/6; 6h.p. 3-speed Rudge, £29/10/6; 3½h.p. Premier, £24/10/6.—Booths' Motories.

BLACKPOOL Bargains.—3½h.p. Singer, speed gear, clutch, £27/10/6; Phelon and Moore, £19/10/6; 3½h.p. Triumph, 3-speed, £22/10/6.—Booths' Motories.

BLACKPOOL Bargains.—1¼h.p. J.E.S., £10/10/6; N.S.U. lightweight, £13/10/6; 2-speed O.K., £23/10/6; 6h.p. 2-speed Rex, with Montgomery sidecar, £25/10/6.—Booths' Motories.

BLACKPOOL Bargains.—2¾h.p. Douglas, £25/10/6; 4h.p. Douglas, new sidecar, £69/10/6; A.J.S. combination, £49/10/6; 8h.p. Premier combination, £47/10/6; 6h.p. Enfield combination, £39/10/6.—Booths' Motories.

BLACKPOOL Bargains.—120 G.N., dynamo lighting, spare wheel, £110/10/6; 1920 Tamplin, £59/10/6; Morgan de Luxe, £147/10/6; two 1920 Matchless combinations, £115/10/6 and £120/10/6; 1920 Rudge combination, dynamo lighting, £79/10/6; 1920 Rudge, £55/10/6; Indian Combination, £45/10/6; 1920 Sun, £35/10/6; another, £39/10/6; Alldays' Allon, £36/10/6; another, £42/10/6; 1922 O.K., mileage 600, £34/10/6; several others cheap; push cycles taken in exchange.—Booths' Motories, 294, Waterloo Rd., Blackpool. [4538

PRECISION 4¼h.p., 3-speed, K.S., with latest 2-seater sidecar, windscreen, apron, tools, spare tyre, overalls, etc., an absolutely perfect combination, ready for 1,000 miles' tour, powerful hill-climber; any trial; £75, or near.—11, Cottage Green, Southampton St., Camberwell, S.E.5. [4936

F.O.C.H for secondhand cycles, combinations and runabouts at bargain prices. Exchanges arranged. Any new cycle, combination or car supplied, cash or deferred payments.—Fair Offer Car House, 5, Heath Street, Hampstead (near Tube) 'Phone: Hampstead 3752. Hours 9-7, including Saturdays. [1611

## MOTOR CYCLES FOR HIRE.

HIRE Latest Models cycles and combinations, any period.—Write terms, Fowler Brigdeo, 130, Enston Rd. [0795

G.N. Light Car and Douglas Motor Cycle and Sidecar for hire; 8 gns. and £5 per week respectively; fully insured.—Rodwell, 8, Red Lion Sq., Holborn, W.C.1. Chancery 7272. [8776

ROBERTSONS Motors, Ltd., for many years have specialised in this class of work. If machine is purchased, full amount of hire up to one week is allowed.—157b, Gt. Portland St., W.1. [6083

## MOTOR CYCLES WANTED.

H

F

EDWARDS and Co.,

101, Gt. Portland St., W., are cash buyers of solos, combinations, and Morgans. Highest prices given, distance no object. Call, write, or 'phone: Mayfair 4027. [0870

T.B

WANT

500 COMBINATIONS and Solos, any make, guarantee top prices given.—T. and B. Motor Co., Ltd., 372, Euston Rd. Museum 6581. [5664

WE

ARE

ACTUAL Buyers.

PLEASE Offer Us your motor cycle or combination. We pay cash on sight.—Write, call, or 'phone Museum 1337.—Percy and Co., 314, Euston Rd. [0815

BEST

PRICES

GIVEN

H. F. EDWARDS and Co., 50, Harrington Rd., South Kensington, will purchase for spot cash your motor cycle or combination. Call, write, or 'phone Ken 3709. [0604

# BASTONES

**Established 16 Years.**

***No Better or Cheaper House***

## SPECIAL LINE.

### 28 × 3 Extra Heavy Covers

| | |
|---|---|
| **Goodrich** Safety Tread ..... | 44/- |
| **Goodyear** All Weather Tread | 45/- |
| **Firestone** Rubber Non-Skid... | 44/- |

| | | |
|---|---|---|
| 24×2 | **Clincher de Luxe,** Heavy..... | 22/6 |
| 24×2¼ | **Hutchinson,** T.T., Rubber Stud ..... | 22/6 |
| 26×2 | **Englebert,** Passenger Rubber Stud..... | 17/6 |
| | **Bergougnan,** 3-ribbed, Heavy ..... | 18/6 |
| 26×2¼ | **Hutchinson,** T.T., Rubber Stud ..... | 23/- |
| | **Spencer Moulton,** Sq. ribbed..... | 18/6 |
| | **Clincher de Luxe,** Heavy ..... | 24/6 |
| | **Midland,** Rubber Stud, Heavy ..... | 24/- |
| | **Goodrich,** Safety Tread, ex-Heavy .. | 28/- |
| | **Michelin,** Semelle Steel Stud..... | 25/- |
| | **Rom** Combination ..... | 37/- |
| 26×2½ | **Hutchinson,** T.T., Rubber Stud ..... | 25/- |
| | **Midland,** Rubber Stud, Heavy ..... | 25/- |
| | **Kempshall,** Anti-skid, Heavy ..... | 30/- |
| | **Clincher de Luxe,** Heavy ..... | 25/- |
| | **Clincher de Luxe,** ex-Heavy ..... | 27/- |
| 26×2¼ to fit 26×2¼ | **Goodrich,** Safety Tread ex-Heavy... | 36/- |
| | **Clincher Dreadnought,** ex-Heavy.... | 36/- |
| | **Dominion,** UscoRubber, non-skid, Heavy | 28/6 |
| | **Dominion,** Corrugated, Heavy ..... | 30/- |
| | **Dominion,** Nobby Tread, ex-heavy .. | 36/- |
| | **Hutchinson,** T.T., Ribbed ..... | 30/- |
| | **Midland,** Ribbed, Heavy ..... | 30/- |
| | **Hutchinson,** Super Stud, ex-Strong .. | 55/3 |
| 26×2½ | **Bergougnan,** 3-ribbed, Heavy ..... | 23/- |
| | **Goodrich,** Safety Tread ..... | 35/- |
| | **Midland,** Rubber Non-skid, Heavy .. | 28/- |
| | **Hutchinson,** T.T., Rubber Stud ..... | 28/6 |
| | **Spencer Moulton,** 3-ribbed ex-Heavy | 22/6 |
| | **Michelin,** Fine Ribbed ..... | 20/- |
| | **Spencer Moulton,** Steel Stud ..... | 25/- |
| | **Skew,** Rubber, Non-skid ..... | 30/- |
| | **Englebert** (Wired Edge) ..... | 25/- |
| | **Clincher de Luxe,** ex-Hvy.(Wired Edge) | 39/- |
| 26×3 | **Midland,** Ribbed, ex-Heavy ..... | 35/- |
| 650×65 | **Goodrich,** Safety Tread, ex-Heavy .. | 40/- |
| | **Clincher Dreadnought**..... | 36/- |
| | **Clincher de Luxe,** ex-Heavy ..... | 35/- |
| 700×80 | **Clincher,** 3-ribbed, ex-Heavy..... | 47/- |
| | **Goodrich,** Safety Tread, ex-Heavy .. | 48/- |
| | **Super Chain,** ex-Heavy ..... | 42/- |
| | **Clincher Cross,** ex-Heavy..... | 48/- |
| | **Clincher Cross,** Fine Ribbed ..... | 44/- |
| | **Hutchinson,** Super Stud, ex-Strong .. | 61/- |
| 28×3 | **Goodrich,** Safety Tread, ex-Heavy .. | 44/- |
| | **Hutchinson,** Super Studded, ex-Heavy | 64/3 |
| | **Goodyear,** Allweather Tread, ex-Heavy | 45/- |
| 29×2½ | **Goodyear,** Rubber Stud, ex-Heavy .... | 40/- |

## TUBES.

**Goodrich, Clincher, Hutchinson,** and **Red Fox.**

| | | |
|---|---|---|
| 24×2 and 24×2¼ ..... | each | 4/3 |
| 26×2¼ and 26×2½ ..... | each | 5/6 |
| 700×80, 28×3 and 650×65 ..... | each | 7/6 |
| Goodyear Butted 28×3 ..... | each | 7/6 |

*The above New Clearance Covers and Tubes are sent on approval against remittance CARRIAGE PAID.*

**Large stock of Sidecar Bodies and complete Sidecars to be cleared at low prices, also full range of MONTGOMERY Sidecars in stock.**

## BELTS.

**Dunlop** Round Top, ¾" **1/10,** ⅞" **2/2,** 1" **2/8,** 1¼" **3/2** per foot.
**John Bull,** ¾" **1/11,** ⅞" **2/3,** 1" **2/8,** 1¼" **3/2** per foot.
**Buffalo Hide and Chrome,** ⅞" **1/9,** 1"**2/-,** 1¼ **2/3** per foot.

## SIDECAR SCREENS.

| | |
|---|---|
| **Sandum V type** ..... | £2 15s. |
| **Easting Standard** ..... | £3 18s. |
| **Easting Baby**..... | £3 0s. |
| **Montgomery Bo Peep** ..... | £3 10s. |

**HOURS—9 till 6: Saturdays 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

Phone: 2481 North. 'Grams: Bastones, London.

## MOTOR CYCLES WANTED.

WE

ALWAYS Buy

SOLOS, combinations, cycle cars. If in town, write, 'phone, or call. If country, send to London terminus. We collect free and send best cash offer.—W. T. Dunn, Ltd., 326, Euston Rd., London. Museum 5391. [0332

A

MAUDES' Motor Mart are purchasers for spot cash of late models Sunbeam, Triumph, Douglas, Norton, and Morgans.—Maudes', 100, Great Portland St., London. [1128

INDIANS, late and early type, cheap for cash.—17, Heaton Rd., Mitcham. [5339

PALMER'S Garage, Tooting.—The pre-eminent place for disposing of motor cycles.

PALMER'S Garage, Tooting, will make you a cash offer at sight.

PALMER'S Garage, Tooting.—You will be sure of a good cheque if you sell your machine at Palmer's Garage.

PALMER'S Garage, Tooting.—Thousands of men have sold their machines here.

PALMER'S Garage, Tooting, make a speciality of motor cycles in the weekly auction sale every Thursday at 2.

PALMER'S Garage, Tooting.—No garage charge is incurred until 7 days' notice is given.

PALMER'S Garage, Tooting, will collect machines from any London railway station. The auction sale is held every Thursday, commencing 2 p.m.

PALMER'S Garage, Tooting.—If cash offer not accepted machine can be included in auction sale held every Thursday.

PALMER'S Garage, Tooting.—You fix the price and we do the rest.

PALMER'S Garage, Tooting.—Terms: Selling commission 7½%, not chargeable unless machine is sold. If no sale a nominal auction fee is charged—for motor cars 20/-, motor cycles under £50 value 5/-, ditto over £50 value 10/-. When we effect a sale these charges are cancelled and commission charged.

PALMER'S Garage, Tooting.—Catalogue free. Tel.: 208 Streatham. T.A.: Palmer's Garage, Tooting. [5579

MODERN 2¾h.p. A.J.S., Scott Squirrel, or 2¾h.p. Levis.—51, Queen St., Sheffield. [5758

WANTED, Scott, not earlier 1920, good condition; cheap.—29, Friars Rd., Stafford. [5008

TRIUMPH 4h.p., 1920 or later; duds ignored; cash. —Ashworth, 26, Brett St., Sheffield. [5755

OLD Quadricycle wanted. State particulars.—Adams, 43, St. Anne St., Liverpool. [4795

SUNBEAM, modern, equipped; reasonable; no dealers.—Write 6, Limes Grove, S.E.13. [4830

WANTED, countershaft Triumph and good combination.—24, Balliol Rd., North Kensington. [5470

WANTED, Levis or Velocette, 2-speed, clutch, not earlier 1920.—Box 2004, c/o *The Motor Cycle.* [4974

WANTED, motor cycle, 2¾h.p., 4-stroke, about £16.—Reg. Knapp, Bourton, Shrivenham, Berks. [5235

WANTED, 3½h.p. Rudge-Multi, Norton, Rover, Philipson or similar.—Write 24, The Broadway, N.8. [5539

WANTED, 2¾h.p. Douglas Motor Cycle, 2-speed, in good running order.—Box 2001, c/o *The Motor Cycle.* [4978

GOOD Motor Cycle or Combination, Norton preferred, cash waiting.—Green, Wine Merchant, Reigate. [5414

MODERN Solos and Combinations for cash, or in exchange.—R. B. lark and Co., 7, Exhibition Rd., S.W.7. [3492

WANTED, Triumph combination or solo, 1918 or later; lowest price.—Western, 7, Artillery Rd., Guildford. [5560

WANTED, late 6h.p. Zenith Sports; exchange late B.S.A. and cash.—V. Quertier, Slinfold, Horsham. [5367

JAMES 4¼h.p. Cylinder, 1915, new or good second-hand preferred.—Bailes, Thornhill Garage, West Hartlepool. [4953

WANTED, good W.D. renovated Triumph.—Write full particulars, engine No., etc., 34, Amwell St., Hoddesdon. [5581

WANTED, motor cycle, and condition, not earlier than 1913; cheap, cash waiting.—61, Grand Parade, Harringay. [4161

WANTED, modern solo, 2¾h.p. New Imperial preferred.—Write, Deacon, St. Joseph's Terrace, High St., St. Mary Cray. [5342

SINGLE-CYLINDER Combination, countershaft gears, K.S., recent model, known make.—Allsop, Rosengrave St., Derby. [5536

 All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).

THE MOTOR CYCLE

ESTABLISHED IN 1903

· TWENTIETH YEAR OF PUBLICATION ·

EDITORIAL, ADVERTISING, AND PUBLISHING OFFICES: DORSET HOUSE, TUDOR STREET, LONDON, E.C.4.
*Telegrams:* "Cyclist, Fleet, London." *Telephone:* City 2847 (13 lines).

COVENTRY: Hertford Street. *Telegrams:* "Motorcycle, Coventry." *Telephone:* 10 Coventry (5 lines).

BIRMINGHAM: Guildhall Buildings, Navigation Street. *Telegrams:* "Autopress, Birmingham." *Telephone:* 2970 and 2971 Midland.

MANCHESTER: 199, Deansgate. *Telegrams:* "Iliffe, Manchester." *Telephone:* 8970 and 8971 City.

Subscription Rates: Home, 23s. 10d.; Canada, 23s. 10d.; other countries abroad, 28s. 2d. per annum.

## Motor Cycle Patrols for I.O.M.

A REPORT which has just been presented to the Isle of Man Government recommends the adoption of motor cycle police patrols. We agree, with the Departmental Committee of the Isle of Man Constabulary, that considerable financial economy and additional efficiency can be derived from abandoning the present practice of stationing police in isolated rural localities. With motor cycle patrols the policing of rural districts could be more effectively carried out by attaching to the police stations at the important towns police officers to act as motor cycle patrols, the motor cycles being provided with sidecars for the conveyance of additional officers, when necessary.

## Sidecar Skids.

IN several ways the regulation which necessitated the fitting of skids to the chassis of machines entered in the recent 200 miles sidecar races is worthy of notice.

Primarily it would seem to be but a sorry commentary on the security of sidecar axles when subjected to the stresses of continued high speed. In actual fact no occasion arose during the event which called the skid into action; thus a regulation praiseworthy in its effort to safeguard the riders was just a little over-anxiously conceived.

Stub axles on cars very, very seldom come adrift, and, although there are occasional instances, no one regulates that racing cars shall be fitted with skids. In the earlier days of sidecars a stand was actually marketed which had a small wheel at its foot, so that in the event of the axle breaking, the chassis would run on the safety wheel until the outfit could be pulled up. With the high tensile and shock-resisting steels available to-day no open-sided wheel need be carried on an axle so lacking in strength and reliability as to need the safeguard of a skid.

If sidecar stub axles could not be relied upon, the logical remedy would be to enclose the wheel, using a spindle of the cycle type supported at both ends. The regulations of the 200 mile races apparently took no cognisance of this type of sidecar chassis.

## Ladies in Colonial Type Trials.

WHILE no one can fail to acknowledge the pluck of ladies who enter some of the more arduous trials, instances frequently occur where the wisdom of ladies competing in severe events is questionable.

Despite unlimited courage, riding ability, and grit, the physique of many ladies who can handle a machine to perfection is not such as to enable them to deal effectively with every situation which may arise. A case in point came under our observation in a recent trial of the frame-smashing variety. On a particularly difficult section a lady competitor led a string of seven or eight solo riders; at the culminating point of the observed section the lady fell and had insufficient strength to lift her machine clear of the course. Before she could do so, indeed, six riders had been stopped, and one at least definitely lost half-a-dozen places.

It is only in such circumstances as these that the lady competitor is out of place. In club events, of course, she may ride for sport and do no serious harm. In open trials of the rougher variety her presence is seldom of value from a propaganda point of view, for the general public is not edified by the sight of one of the fair sex struggling with a barely controllable machine amidst rocks and boulders—it is not in this phase of competition work in which ladies will find their best sphere of activity.

An index to the advertisements in this issue will be found on the page facing the back cover.

## The Scottish Light Car Trials.

THIS recent event attracted several entries of interest to motor cyclists, amongst which the brace of G.N.'s certainly stand first. The new sports model G.N. driven by L. A. Cushman was one of the select seven (out of 44 starters) to register an absolute non-stop. I am told that this model (actually one of Frazer Nash's own competition cars) is to be standardised and sold under a speed guarantee of 70 m.p.h., though the price, I fear, must be proportionate to the guarantee. The trials route pointedly evaded Inverfarigaig Corkscrew, though passing, so to speak, within inches of it. Incidentally, there is good news for our competition riders, for I hear that the cars widened the top corner on Amulree quite perceptibly, knocking large slabs off the bank just at the crucial point. Several of the modern "baby four" cycle cars competed—a Salmson, two Amilcars, and two Mathis, and they all did tolerably well. George Griffiths, the famous Zenith expert, handled a 12 h.p. Talbot with consummate skill, and was one of the wee band of non-stoppers; but I am sorry he has fallen from grace. Two wheels for sport, George, you know; three for safety; and four for swank. Or so they say. But Griffiths taught the car men something. The hill-climbing marks went by formula. Car formulæ, as we all know, put an absurd value on weight. Griffiths naturally had to accept any old observer the club might choose to give him. But he collected the best-fed assortment of passengers you ever saw. Regular Glaxos, both of them. You cannot do an old hand like G. G. by forbidding competitors to stack lead in the bottom of the body.

## A Question of History.

SURELY our contributor's memory slipped up in a recent issue when he called the Levis the "great-grandfather of all two-strokes." In its early phases it did not frequent the competition world, and I am unable to trace from our files the date at which the first Levis took the road. But A. A. Scott patented his engine in 1904, and was riding an experimental machine with front wheel drive before that date. The Scott, much as we know it to-day, complete with the famous frame, kick-starter, two-speed gear, and water-cooling, made its trials bow in 1908, when it created a positive furore at two northern hill-climbs, finally making Coventry sing rather small on formula at the Newnham hill-climb, as a direct result of which the A.C.U. formula was modified to keep two-strokes in their place. When did the first Levis appear on the road? I have rather wobbly memories of riding one a mile or two in 1906, but am rather foggy about the date.

## A Frank Opinion of the Scott Sociable.

A LONG, interesting letter to hand from a Scott Sociable enthusiast, who has never before kept a mount over the second year or placed a repeat order. He sings its praises most judiciously. Economy its strong point—70 m.p.g.; oil consumption negligible, tyres still showing their high spots so that 10,000 miles per set seems assured. He doesn't object in the least to its lopsided appearance—"no good horse was ever yet a bad colour." To his thinking the chief crabs are that, like the rest of passenger machines, it has only one driving wheel, which it is apt to spin on greasy gradients, whilst it is less skidproof than a sidecar. Slightly faster on hills than a 550 c.c. single-cylinder outfit, but not capable of living with a good 1,000 c.c. It cannot wisely be hosed down at random, as the hubs and brakes are not waterproof. The joints of the suspension are exposed to mud. But he prefers it to anything else he has driven, and will continue to ride it until somebody brings out *a three-wheeler with two driving wheels*, which he regards as the ultimate mount for the seven-day-a-week economist who lives on nasty roads.

## Where We Score.

I SPENT the other day watching a car trial in the chamois country. You should hear some of these four-wheeler experts change gear. You couldn't create a nastier noise if you dropped a Ford car off the Eiffel Tower. Thank heaven I am merely a motor cyclist. When my sports single is doing fifty I can declutch and drop in second gear with the calm certainty that no shrieks of agonised steel will rend the heavens. But what *are* the car designers doing? We must lend them a motor cycle engineer or two.

## Some Engine.

FEW experiences are more interesting than a trial of some standard engine adapted by a clever engineer to his own peculiar purposes. One of my acquaintances still clings to the single gear belt

*Ixion's "MOTOR CYCLE REMINISCENCES" are available in book form, price 2s. 9d. post free, from "The Motor Cycle" Offices, Dorset House, Tudor Street, E.C.4.*

**Occasional Comments.—**

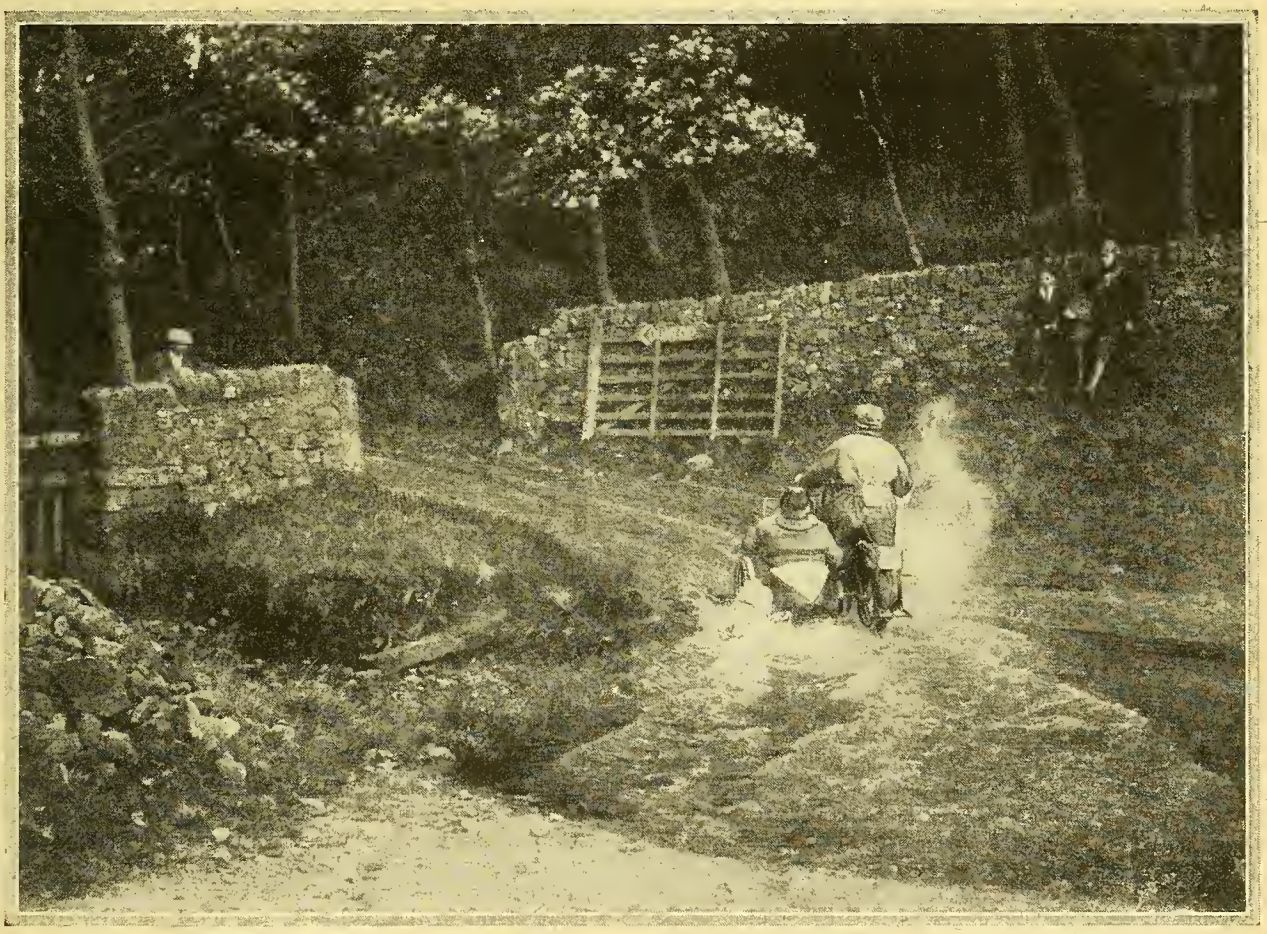
drive, which he employs on an elderly Matchless with a 1913 6 h.p. J.A.P. twin engine. Internally there is very little of the original engine left. Ricardo pistons, steel flywheels, special cams, and air-tight inlet valve guides are a few of his gadgets. The nett result is a machine which can be paddled off on a 3½ to 1 gear, ridden round a small flower-bed with the engine firing regularly, and accelerated to 65 m.p.h. He has a penchant for Continental touring, and spends his holidays—still single-geared—on Alpine passes, all of which he can climb. How is it done? Certainly. He has juggled with his carburetter so that he gets a very strong mixture at small throttle openings, thus the engine will slog round the elbow of a Tyrolese hairpin at 5 m.p.h. As you open up, the mixture is weak over the remainder of its range. Needless to say, I found the bus rather puzzling to handle on first acquaintance.

### Acceleration.

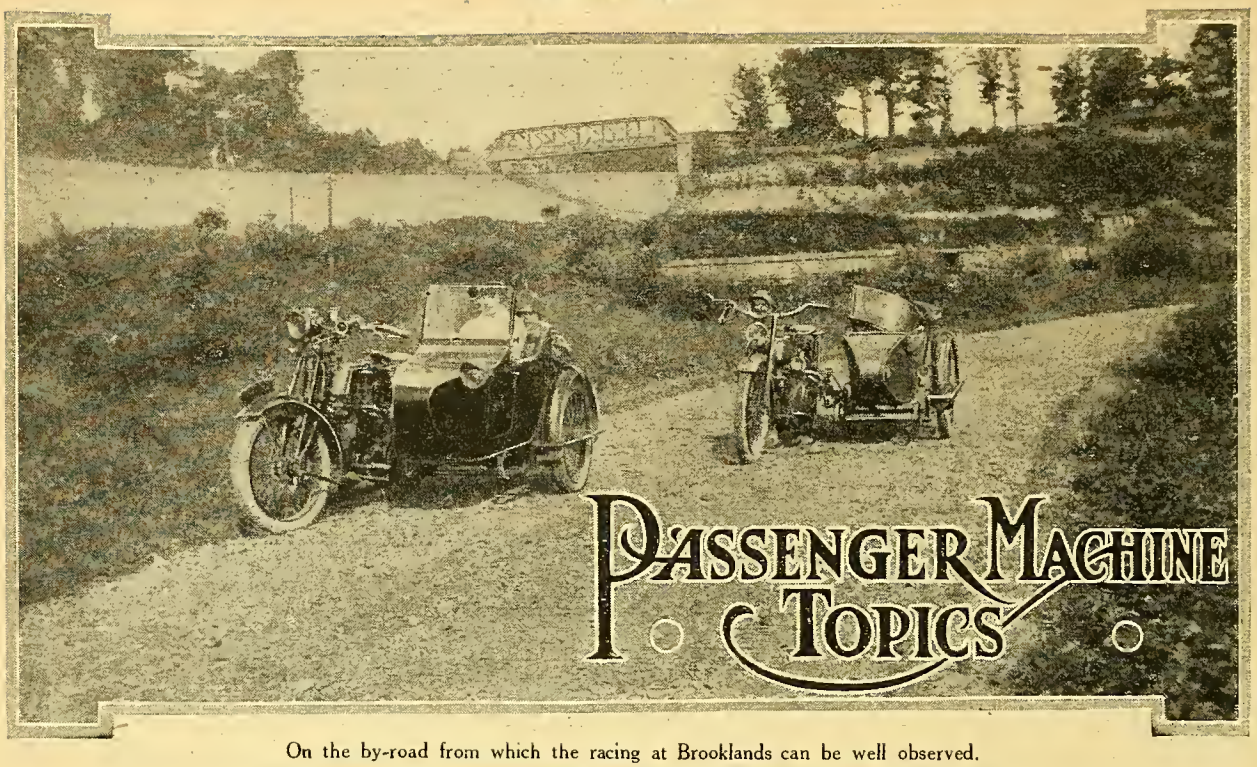
I HAVE just been looking through a batch of *The Autocar* photographs taken during the recent Scottish light car trials, and I notice that the wily Scots adopted a simple test which would assist motor cycle clubs to find a winner. The cars were stopped, and one end of a 50-yard cord was hitched to their tails. The rest of the cord was wound round a drum mounted on ball bearings and coupled to a rev. counter, the far end having a drop-off attachment. Drivers were then encouraged to tread on everything, and the man whose car spun the drum fastest got a banana or something. The fifty yards being ended, the cars were once more stopped whilst the cord was retrieved.

### The Two-jet Mouse Trap.

THERE is, of course, only one mousetrap carburetter, and for years past the speed boy's wail has been that you couldn't use a mousetrap Binks on the road, because it really hardly functions at all except at track speeds. Maison Binks has now evolved a touring mousetrap, complete with pilot jet for the tick-over. I am playing with one now, and am inclined to accept the inventor's claim that it puts several m.p.h. on to any sports 'bus. We are still in the honeymoon stage, and I haven't quite eliminated a bit of a flat when the engine hops over from the "*Nice* Mr. Policeman!" to the "Horizon, get out!" gait. But I think we are going to be pals for life.



AT THE YORKSHIRE CENTRE COLONIAL TRIAL. A certain method of stopping rushing tactics on hills is to find one with a watersplash at the foot. That illustrated even necessitated a left turn in the water before the ensuing grassy slope was negotiated. The rider is P. Pehrson (499 c.c. Dunelt sidecar) who made the best 500 c.c. sidecar performance.



# PASSENGER MACHINE TOPICS

On the by-road from which the racing at Brooklands can be well observed.

## Brooklands Impressions of the 200 Mile Sidecar Races.

By "FRIAR JOHN."

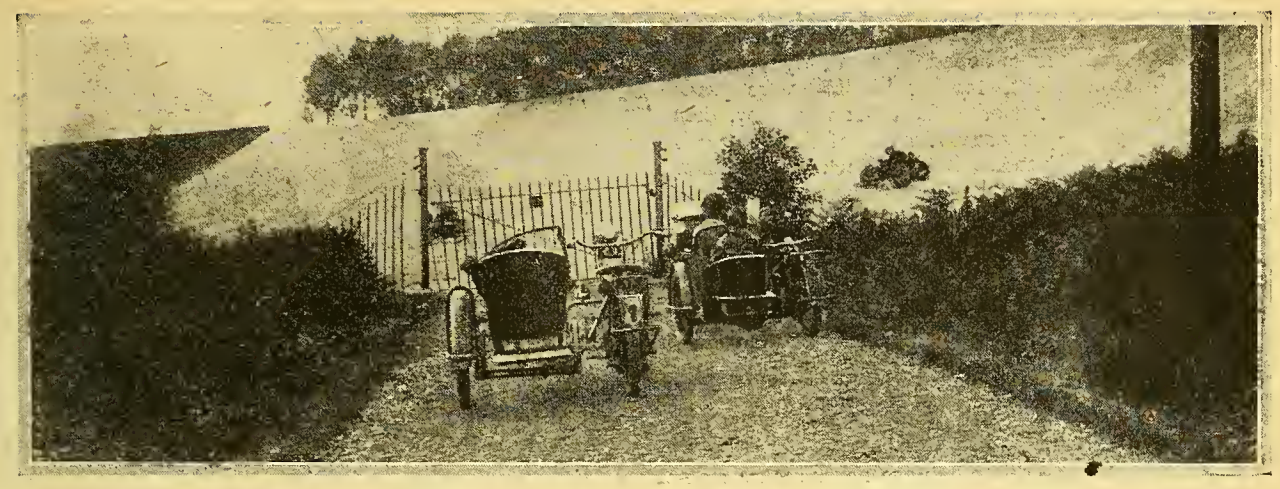
A COMBINATION of healthy exhausts, some high-pitched and screaming like great circular saws cutting pinewood, others resonant and deep-throated, booming or roaring, as the wind varied its direction. Such were the sounds on Brooklands at the recent 200-mile sidecar race.

In the paddock I watched the procession passing and repassing, and passing again—the winners actually encircling the tremendous lap 74 times. Occasionally a lame duck would be seen pushing his outfit round the distant bend. This sight would galvanise the watchers at the replenishing depôts of that particular make into instant activity, and off they would sprint to aid the disconsolate driver. Sometimes it would be plug trouble, sometimes petrol shortage, but often it was a "Blighty one" and meant complete retirement. And all the while the yellow, blue, and crimson sidecars streaked by, a roaring, screaming procession.

FOR one hour, two hours, three hours, four hours, the engines of some of the lightweights propelled at 50 miles an hour a loaded outfit—prodigious! There is no other word for it; the more I see of these prolonged tests at abnormal speeds the more I respect the engines. The mile and the short distance records at phenomenal speeds may receive greater acclaim, but these long distance tests play, unquestionably, an important part in the evolution of the motor cycle engine. I wonder if the J.A.P. experts during their great experience have found that prolonged track tests reveal more than speed bursts over short distances, or whether the test bench, so far as the engine, plugs, magneto, and gear estimating are concerned, answers just as well. Nothing, of course, can take the place of the track for a test of the complete machine, and I am inclined to think the bench never can give the necessary varying conditions that the track or road offers even for testing engines alone.

SUCH were the thoughts provoked as the procession filed by. A group of lightweights came along at what seemed a terrific speed, then a yellow sidecar—maybe Le Vack or Davidson—streaked by them with a roar, and was gone. The riders of the lightweights glanced out of the corners of their eyes at the passing 70 m.p.h. whirlwinds, and then settled down again to potter along at a comfortable 50 m.p.h. And of all that crowd one man appeared to be just a little faster than the rest. It was Le Vack steering a course round that vast amphitheatre apparently on his own particular route, for he varied his course but little.

MERITORIOUS as were the 350 c.c. and 500 c.c. outfits, one's interest was focussed on the "big ones"—on the pilots that shot like an arrow up the steep banking when passing the slower moving craft on the lower reaches below. But the most exciting instances of this nature were not for those who took their stand in the paddock, the most thrilling part of the racing was witnessed from the little branch road leading to the left just before passing under the tunnel when leaving the course.

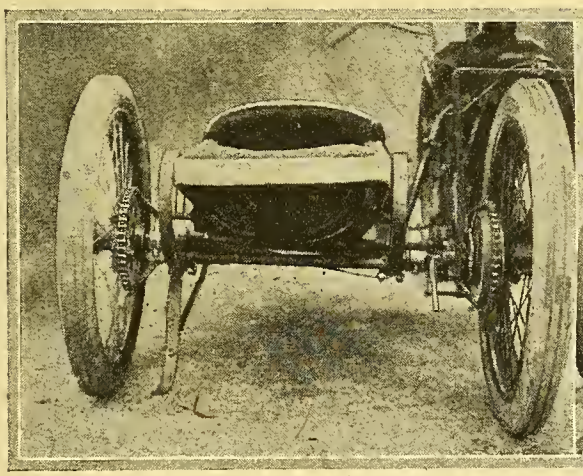


From this point the steep banking slopes down gradually to the "railway straight," and it is at this spot that the fastest speeds are made when the wind is following.

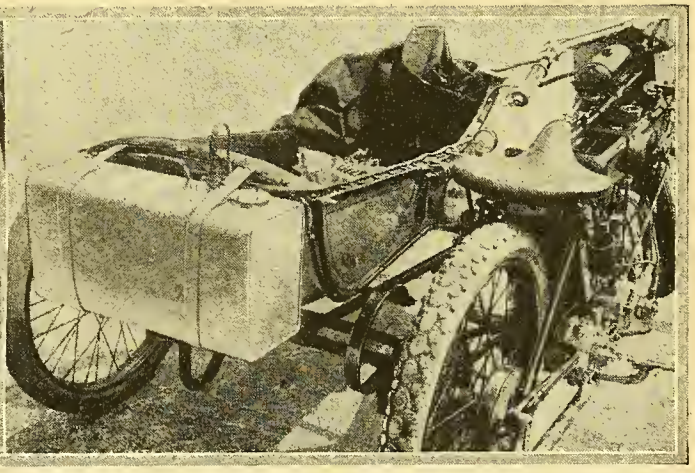
On one occasion Fenn (739 Martinsyde), Allchin (989 Harley Davidson), Davidson (998 Indian), Le Vack (998 Zenith J.A.P.), Horsman (596 Norton), Tucker (588 Norton), and two or three lightweights came from under the bridge together. The little chaps kept their low course, but Le Vack and Davidson took the lead up the steep banking, and with a roar passed Fenn and the rest of the crowd. No! Fenn drew up again, and neck and neck the three swooped down the bank. But Le Vack had most in hand, he opened the throttle a fraction and drew ahead.

FROM this spot one faces the steep banking which looks like a great wall of cement, and standing close to the iron gate leading directly on to the track, the riders are only a yard or so away. Just beyond the high banking there towers a clump of pine trees, and on the right is a cliff of sandstone—a quiet and beautiful spot—quiet, that is, except for the roar of exhausts. Here in sylvan solitude and miles away—apparently—from the bookies and the mild commotion of the paddock was the best part of the racing witnessed. Here were well staged private tussles, meaningless, true, but most interesting, and it was here on the last lap or so that the best duel of the day was witnessed. Two light-coloured sidecars came tearing along high up the banking—Le Vack and Davidson, the former several yards behind, but creeping up foot by foot. Davidson knew that it could only be "the one" as louder and louder became that inevitable roar. They were both high up on the concrete wall, surely too high for a sidecar! Neck-and-neck they raced for a yard and then the Zenith drew away, and as suddenly dropped behind, giving way to Davidson; then up came Le Vack again and swooped down the hill with a mighty rush on to the level again, with everything behind him.

THEN again, Fenn arrived with his right-handed sidecar sitting his mount more firmly than many; at his heels were two big twins gradually drawing nearer. He climbed high up the banking



In order to maintain contact with the track when passing over the bad portions, F. W. Dixon (989 c.c. Harley-Davidson) fitted a drive to his sidecar wheel from the countershaft. Observe also the skid which was required by the regulations governing the race.



Capt. L. F. Peaty, obviated frequent stoppages for petrol by fitting this big auxiliary petrol tank. The fuel was supplied to the motor cycle tank through the drain tap by a pressure pump fitted on the sidecar and worked by the passenger.

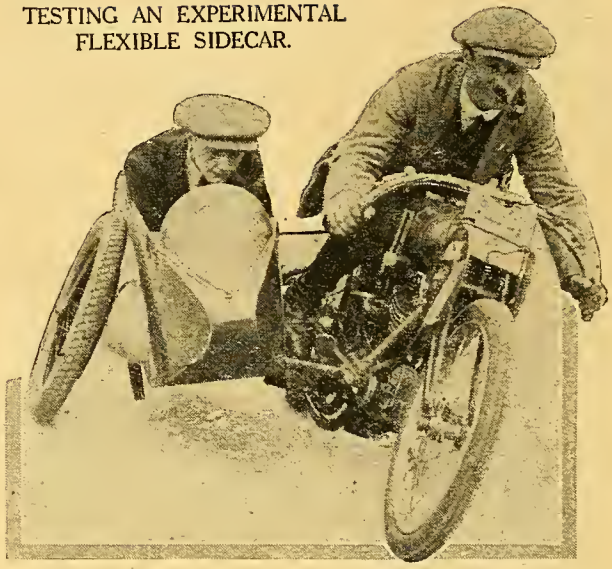
**Passenger Machine Topics.—**

until it seemed as if the sidecar must topple over, but he kept his lead and swooped at a mighty speed on to the railway straight, leaving his followers yards behind. For a moment or so the track was clear, then one or two lightweights passed, a few of the 600 c.c.'s and half-a-dozen big twins, but Le Vack was missing. Surely trouble could not have overtaken this intrepid rider once again? But fate deemed that it was to be a day of ill-luck for him, his tyre had given up. And so the race went on until the end, when the drivers, free from their mad ride, walked from their machines dazed by the sudden change from a roaring gale to a gentle summer breeze, and the passengers crawled from their cramped quarters straightening their limbs and unkeying their tensioned nerves.

◇ ◇ ◇ ◇

THOUSANDS of sidecarists have never seen a sidecar travel at 70 m.p.h., yet very few availed themselves of this opportunity. But then there is no wonder, Brooklands attractions are not meant to be popular. To charge 10s. admission for driver, passenger and machine is more than absurd. However, it is a most effective method of keeping Brooklands private and secluded—it is *such* a peaceful retreat.

TESTING AN EXPERIMENTAL FLEXIBLE SIDECAR.



A Martinsyde outfit on Brooklands track. This type of sidecar is used on the dirt tracks of America where there is no banking at the corners of the course.

It is quite easy, at the present time, to imagine Ireland an impossible country in which to tour, but such is a false estimation. Motoring, whilst not to be compared with its pre-war activity, is much in evidence. The scene depicted is in the Ballagh-Bema Pass, Co. Kerry, a district of wild grandeur.

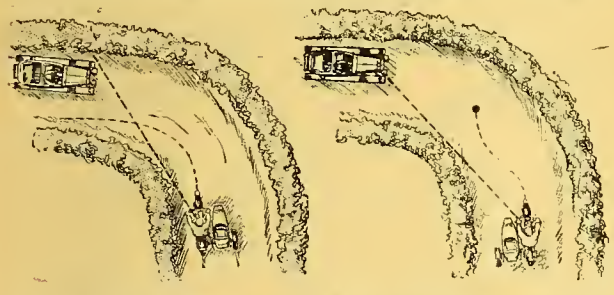
# Which Side for the Sidecar?

## Points in Favour of a Passenger Attachment on the Right-hand Side of the Machine.

THE writer has always held a strong preference for sidecars attached to the right-hand side of the motor cycle, instead of to the left, as is customary by British practice. There may be disadvantages in the right-hand sidecar, but most of them are trivial, and often a matter of personal taste, whereas the advantages are important ones. The chief reason why sidecars are fitted to the left is for the comparative safety of the passenger in case of collision, but surely the first thing to aim at is eliminating the collision!

### Left-hand Bends.

We may take it that the most dangerous turns are to the left. One cannot see round a left-hand corner without transgressing the rule of the road on approaching the bend. The wise rider, of course, does this so far as prudence permits, but if his sidecar be on the customary left hand side, he may be called upon to make a sudden swerve in order to avoid an approaching vehicle, which, possibly, he is prevented from seeing sooner owing to the fact that the other driver is slightly on his wrong side. The sudden swerve may result in the lifting of the sidecar wheel, especially if there is no passenger, and once the wheel is up all control is lost. More likely than not a collision occurs, and, moreover, it occurs in the other man's favour—that is, on his right side of the road and on your wrong side. You have to foot the bill.



On a left-hand corner the restricted vision of the driver is offset by the fact that the sudden lifting of the sidecar wheel is impossible if a sharp swerve be made to avoid oncoming traffic.

Under similar circumstances the driver of a left-hand sidecar has only a little better view and has the danger of the sidecar lifting. The dotted line shows the course taken in the latter event.

Now the man with his sidecar on the right is, admittedly, in an even worse position as regards seeing round the corner, but this disadvantage is more than counterbalanced by the fact that he can make any kind of swerve in absolute safety. Thus a slight disadvantage is offset by a big advantage. He is really the safer of the two where danger is most likely to occur.

### Turning to the Right.

So much for left-hand corners, and now as regards turning to the right.

Should the sidecar be on the right-hand side, and should it lift—the greatest danger in sidecaring—the vehicle is turned off the road instead of being thrown out of all control into the traffic. Generally speaking, it is less undesirable to run into hedges and the like than it is to run into other vehicles. Also it is cheaper. It might be added for the benefit of the uninitiated that the danger of a lifting sidecar is not so much in capsizing the vehicle as in the fact that the driver, instinctively striving to keep his sidecar wheel on the road, is forced on in more or less his original line of travel.

In spite of the fact that the camber of the road increases the tendency of a right-hand sidecar to lift in turning to the right, it is nevertheless seldom that embarrassing circumstances occur when turning in this direction, as the rider, by adhering strictly to his proper side of the road, obtains the first possible glimpse round the corner. The man whose sidecar is on the left, on the other hand, is really in greater danger of the sidecarist coming in the opposite direction. He sees him a few seconds later, and if a smash is imminent owing to the other man's sidecar lifting, he is more likely to be in the middle of it.

With the sidecar on the left the driver has a restricted and late view round the corner on right-hand bends.

On the same bend with right-hand sidecar, although the wheel may lift, the driver has an earlier view round the corner.

**Which Side for the Sidecar ?—**

Thus it will be seen that, so far as corners are concerned, the major advantage is with the man having his sidecar on the right, even though the minor disadvantages may be his lot.

**Other Points.**

Quite apart from the question of mishap, however, there are other advantages in the right-hand sidecar. Lifting does not occur when a passenger is carried, unless, of course, one is riding at an excessive and dangerous speed. It is, however, likely to occur in a sudden emergency when the sidecar is empty, and my point is that with the left-hand sidecar the effect of lifting is likely to lead to far more serious results.

In addition, chain and magneto adjustments have generally to be made at the left-hand side of the machine, and with the sidecar on that side inaccessibility is much increased. Indeed, one has to undertake most adjustments in a more or less inverted posture !

Finally—a motor cyclist was very severely injured recently and his wife killed through the sidecar wheel striking an obtrusion of the kerb on the left-hand side. The result was that the whole outfit was spun to the left, and bouncing up the kerb crashed into a stone wall. I have myself narrowly escaped one or two bad crashes, particularly at night time, through not noticing some obstruction on the kerb side, such as an out-jutting stone on the hillside, of the kind carters are supposed to make use of for resting their horses. It may be argued that moving traffic constitutes a greater danger in the unorthodox fitting, but this is not so, as one naturally watches the traffic, while obstructions on the far side easily escape notice.

H. MORTIMER BATTEN.

# LIGHT CAR *v.* MOTOR CYCLE.

## Comparing Two-Wheeler and Four-Wheeler Experiences in the Scottish Trials.

By B. H. DAVIES.

IN the course of Press duties it fell to the writer's lot to go round the Edinburgh M.C.C. Six Days on one of the most comfortable motor bicycles made (an o.h.v. Triumph), and a month later to accompany the R.S.A.C. Light Car Trials over much the same course at the wheel of a small car. A comparison of the two experiences may be of interest to some readers, and is possibly not without its lessons for designers. The weather during the two trials was by no means identical, the cycle trial being run under cold, wettish climatic conditions, whilst the small car trials enjoyed almost unbroken sunshine over dry and rather dusty roads.

So far as average speed is concerned, no comparison is possible. The motor cycle is infinitely the faster machine over such a course. Its acceleration is tremendously superior. It requires far less space and can therefore be cornered more boldly. It climbs hills almost as fast as safety permits. The car, on the other hand, picks up very slowly, must approach blind corners at a crawl, and creeps up really steep ascents. Where a high average is necessary or desirable, the motor bicycle is without a rival over difficult roads.

**Fatigue of Muscle and Mind.**

From the standpoint of fatigue, it might be thought that the motor cycle would again display an advantage. On paper it is easy to argue that the physical exertion of steering and braking a cycle is less than the corresponding effort which a car imposes. Similarly, it might be thought that the mental concentration of handling a broad vehicle over narrow and dangerous roads would prove very exacting. Actually, although the total mileage of the car trials considerably exceeded that of the cycle event, taking a car over the course is a positive picnic to any rider accustomed to drive a bicycle. After a comparatively short day on the motor cycle, it is a relief to dismount and to feel that driving is over for the day, whereas a longer day at the helm of a car over the same roads engenders no perceptible fatigue of muscle or mind. Endeavouring to analyse this contrast, two factors stand out quite decidedly. The first is that on the good main roads and the gritty moor tracks of which the Scottish course is compounded, sideslip is practically unknown with a car, whereas in bad weather it is an ever-present peril with a motor bicycle. The second is that the rider is far better insulated from road shock on a car of ordinary suspension than he is on one of our most comfortable motor bicycles.

Finally, of course, there is a contrast in economy. The upkeep of a solo motor cycle for a thousand miles is trivial. Such a week leaves no real mark on the tyres. The petrol replenishments are a matter of a shilling or two. The sole impression of expense which such a week leaves is due to the hotel bills. With a car, even if no covers are destroyed, no tubes burst, no springs are broken, the week feels costly from start to finish. The daily replenishment at a garage leaves little, if any, change out of a pound note. And this contrast is emblematical of similar differences in the overhead charges—depreciation, insurance, wear and tear, and the like.

So the motor cycle scores on the grounds of superior speed and economy. But until motor cycles become more comfortable and require less "holding up," the car makes far less demand on the rider's physique.

NEXT WEEK.

THE MOTOR CYCLE

ENLARGED SUMMER NUMBER.

Many Special Articles of interest to all who use Motor Cycles and the Open Road.

To avoid disappointment an order should be placed with a newsagent.

THURSDAY. JULY 6th.

# ON A NEW DEVONSHIRE HILL.

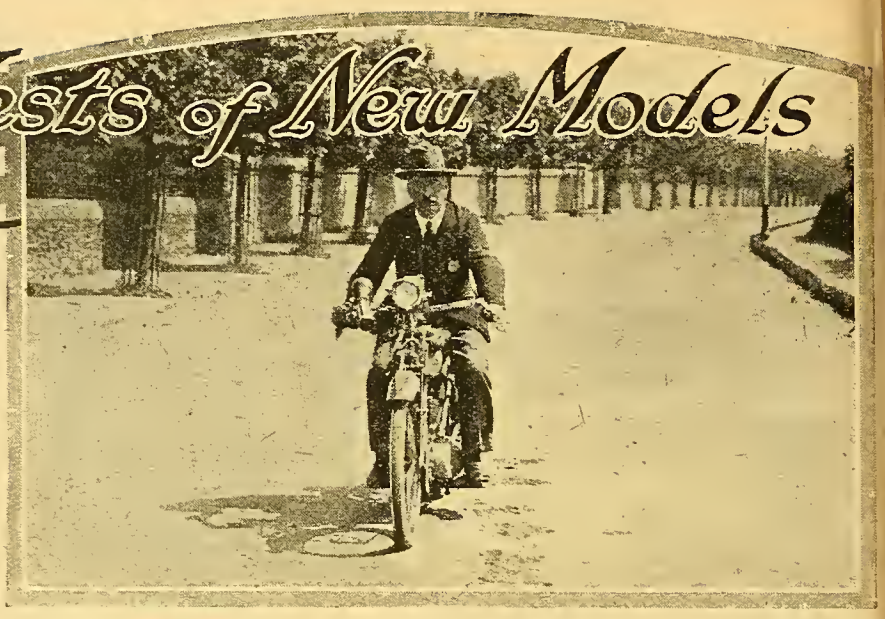
## A Gradient Discovered which is Claimed to be Steeper than Beggar's Roost.

BEGGAR'S ROOST has been considered to be Devon's steepest hill, with its gradient of 3.6 to 1 on a small section, but the discovery by Exeter motorists of Sim's Hill, Islington, seems to oust the Roost from the premier position. The new discovery is not a by-road or one in occasional use on a farm, but an old main road running to Ashburton from Hey Tor. Its surface is extremely good when the gradient of 2.8 is taken into consideration. (This, by the by, is the approximate gradient of the entire hill, not a small section.)

The hill is approached from the village of Islington; at the foot is an acute right-hand bend, and then the steep portion, some 500 yards, is enconntered. It is narrow, and like many of the Devonshire roads, has high wooded banks at either side, but it was climbed by Triumph and Norton sidecar machines. In fact, both made the ascent with three up. What proved a problem was the difficulty in getting the machines down again, and resort was made to a rope on which six or more people hung.

(1) A Triumph rider making a good ascent of Sim's Hill, Islington, Devon. (2) Taking no chances with the Norton sidecar. (3) Ladies preventing the too swift descent of Man. (4) A spectacular ascent by a Triumph sidecar.

# Road Tests of New Models



## The 349 c.c. Royal Ruby.

TAKING a machine to the Isle of Man for the Tourist Trophy races, as was done with the 349 c.c. Royal Ruby under review, involves a far more thorough test than can ordinarily be given a machine submitted for editorial approval. First comes the 180 mile journey to Liverpool, and then nearly a week's strenuous riding in the island—probably amounting to 300 miles in all.

Delivered brand new, the machine was collected at Euston, then divested of its wrappings and heavy coating of vaseline, filled with petrol at a neighbouring garage and the kick-starter vigorously and, we regret to say, fruitlessly applied. Finally we discovered that the high tension wire had been torn from the magneto in transport, and once this was replaced the first trip of 25 miles was accomplished without incident; the flexibility of the semi-automatic carburetter was all that could be desired, and the power and acceleration quite remarkable for so small an engine.

*SPECIFICATION.*

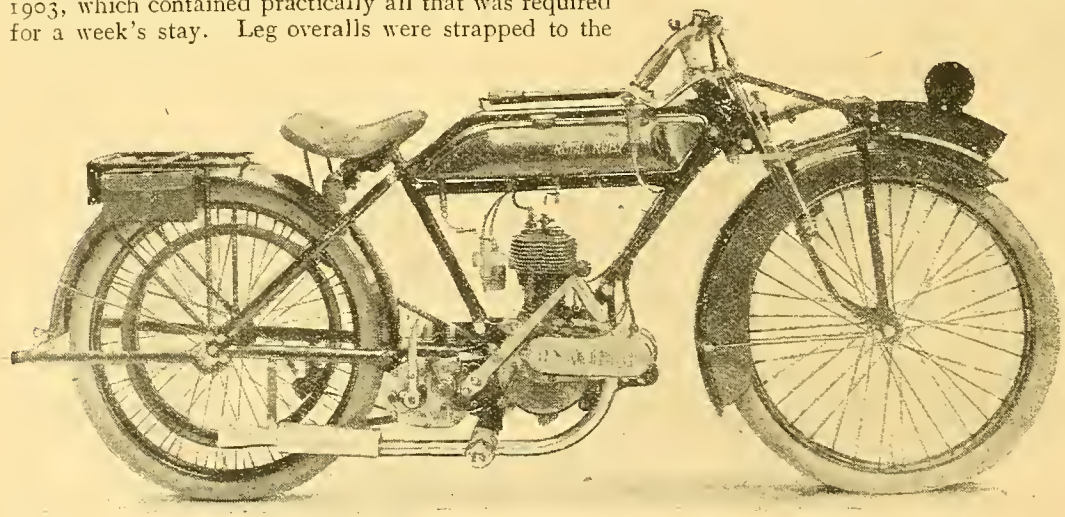
*ENGINE: Royal Ruby, single, four-stroke, 74·5 × 80 m.m.; side by side valves.*
*GEAR: Royal Ruby 3-speed clutch and kick-starter.*
*TRANSMISSION: chain and belt.*
*TYRES: 26 × 2¼in.*
*CARBURETTER: two-lever semi-automatic.*
*FORKS: Royal Ruby.*
*PRICE: £70.*

### The Run to Liverpool.

Another feature of our road test was the carrying of luggage, as the little mount had to carry an old and favourite bag first initiated to the joys of motoring in 1903, which contained practically all that was required for a week's stay. Leg overalls were strapped to the top tube, as the weather was warm and they were only for use in rain.

The first 20 miles of the journey were not particularly successful, as one of those runs of bad luck ensued which befalls us all at some time or other. Stoppage in the petrol supply occurred before 7 miles had been covered, which involved half-an-hour's delay. This entailed clearing not only the petrol pipe, but the tap, which had to be detached from the tank and cleaned with one finger blocking the tank orifice. Why this did not happen in the 25 miles of the previous day is difficult to understand. At last we re-started, but the obstruction had been only partially removed, as the air had to be kept closed all the

Passing through Hemel Hempstead the machine suddenly shot ahead, the air lever was shoved wide open and mentally we shouted for joy that all was clear. But, alas! we shouted too



A well-tried lightweight built throughout in one works, the 349 c.c. four-stroke Royal Ruby.

**Road Tests of New Models.—**

soon. Mounting a steep hill on the way to a friend's house, we were suddenly bumped in the air and landed on the ground with the sickening thud which proclaims a deflated tyre. Our friend's house was almost in sight, and as he possessed a large motor house, a tiled yard, and a chauffeur, we pushed on and on up a 1 in 20 grade until the lightweight seemed to turn the scale at the same point as a big twin. Investigation showed that a flint had penetrated the cover once and the tube twice. However, the John Bull outfit's largest patch carefully applied made a satisfactory repair, and we restarted at least 1h. 20m. behind schedule, accompanied by our friend on his two-seater car.

### A Swift Means of Transport.

The route lay through Tring, Aylesbury, and Bicester. The Royal Ruby clearly "had the legs" of our friend's small car which followed it. After Bicester we passed through Aynho and Banbury up to the summit of the Edge hills, down Sunrising, and on to Stratford-on-Avon, Alcester and Kidderminster. After the latter town two good main road hills are encountered which were special observation points in one of the early A.C.U. Six Days' Trials. These were successfully surmounted on top. Remarkably pretty country was traversed on approaching Bridgnorth and the quaint village of Quatford, approached through a cutting in the rocks, will long be remembered. The roads were not altogether ideal, but much good work was being done to improve them. Passing through Whitchurch we made for Chester, and there stayed the night.

Leaving early next morning we made for Birkenhead, and nearing there were overhauled by a colleague who had left Kenilworth in the early hours of the morning. We both caught the ferry comfortably from Birkenhead, and shipped our machines on the *Mona's Isle* with no trouble.

### Serious Work in the Island.

During our stay on the island the machine was used as a hack and for serious work in viewing the T.T. at different points. This entailed climbing mountain paths strewn with boulders, and as bad as any found in a Scottish Six Days, in dodging up rough by-roads and in getting from place to place as quickly as possible. On not one single occasion did the machine fail to do its duty.

Now as regards the machine itself, we were particularly pleased to find that the engine was really oiltight. During the ten days it was in our possession leg overalls were not worn, and during the last week hardly a trace of oil was to be found on a pair of new grey flannel trousers. This is an exceedingly important feature, as no one wishes to wear extra leg coverings in such heat as was experienced during the latter part of May and the early part of June. The engine developed plenty of power, was reasonably flexible, and controllable in the densest traffic.

### Points of Criticism.

So far as points of criticism are concerned, both tool-bags and carrier were on the small side, the carrier only being just able to accommodate our luggage, which, however, it must be mentioned, was on the generous side. It is a pity also that the tool roll was too large for the tool-bag, and considerable effort had to be exerted to insert it. It was also very hard to find accommodation for all the necessities required on tour, and when the machine was delivered certain important parts of the repair outfit were not packed in the tool-bags.

Some improvement is necessary in both brakes. The stopping powers of the front brake were negligible, and those of the rear brake none too good, and also the latter had to be entirely removed when the rear wheel had to be withdrawn—this being necessary owing to the damaged tyre previously referred to.

## REAR LIGHTS ON VEHICLES.

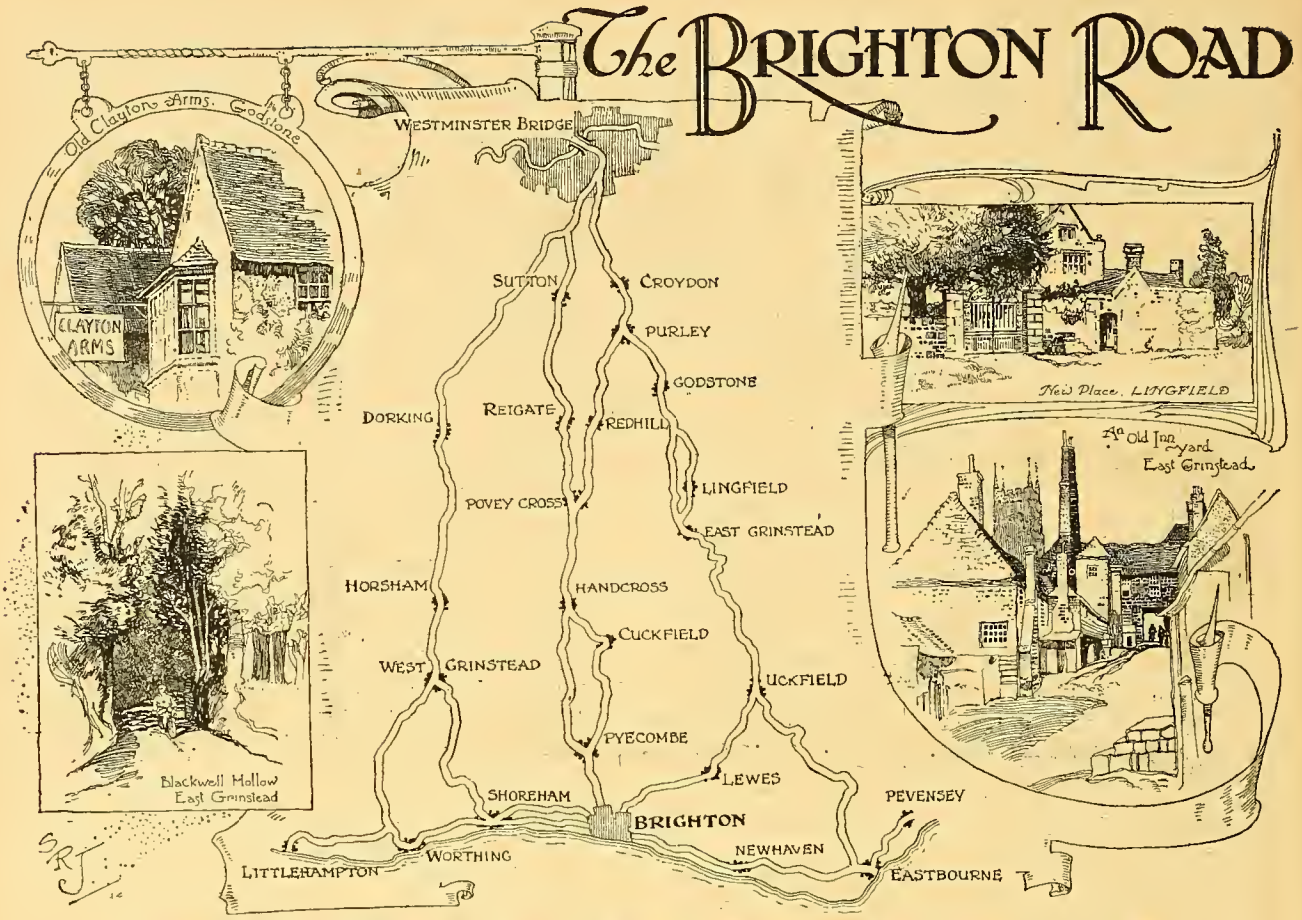
RECENTLY in the House of Commons Mr. T. Thomson asked the Parliamentary Secretary to the Ministry of Transport whether he was aware that since the committee on lights on vehicles reported considerable improvements had been and were still being effected in reflectors and similar mechanical catch-light devices; and whether, before introducing any Bill amending the law on lights on road vehicles, he would further investigate the efficiency of these methods of protection as compared with the best rear lamps, which experience showed were difficult to keep alight on certain classes of roads.

Mr. Neal said that he should be happy to instruct a technical officer to attend a demonstration of any new reflectors and similar mechanical catch-light devices which it might be desired to bring to his notice. A reply to this effect had been addressed to a letter from the National Cyclists' Union, dated January 30th last, but at present no proposal for any such demonstration had been received from them.

## THE PARIS-PYRENEES TRIAL.

THREE competitors riding, respectively, a solo machine, a sidecar and a cycle car, alone succeeded in going through the reliability trials from Paris to the Pyrenees and returning without the loss of a single mark. They were Ring (557 B.S.A.), Sigrand (1,000 D.S. sc.) and De Belleville (Derby cycle car). Ring, who is a B.S.A. agent in Alsace, punctured about 20 miles from home and finished on the rim. Owing to there being snow on the mountains, the event had to be postponed, and the change of date caused several competitors to drop out. There were only seventeen starters, of whom nine were on motor cycles or sidecars and eight on cycle cars. Of this group eleven returned to Paris; they comprised six solo machines or sidecar combinations and five cycle cars. In addition to Ring on the B.S.A., Vattier (499 B.S.A.) finished with a loss of 28 points and Berrenger (557 B.S.A.) lost 107 points.

# The BRIGHTON ROAD




## Records of long ago on Foot, Horse, Velocipede, and Steam Carriage.

OF route-books, helping the driver to find his way, there are many; and the local guide has been written for every part of England. But none of these served the same purpose as the Motor-Coach Shilling Route Books issued by our sister journal, *Motor Transport*.

These little handbooks have been designed primarily for the ever-increasing number of persons who enjoy their motoring in a modern motor coach, but secondly they serve as a guide to all who use the roads.

One volume is devoted to the various roads to Brighton, regarding which the author says:—

One always speaks of "The Brighton Road" as if there were but one, but actually there are several roads to Brighton. Probably the one most spoken of as "THE" Brighton Road is that through Redhill, which is actually the shortest, though not by far the most picturesque. But even this road is not one and undivided; many prefer to use the older loop in Sussex and go through Cuckfield. A third alternative section is the road through Sutton and Reigate, joining the first at Povey Cross.

All these really count as variants of the Brighton Road; but there are two other roads, often called the "Worthing" and the "Eastbourne" Roads, both of which lead to Brighton by short branches.

Sporting records have ever been made between London and Brighton. The very first of them was on July 25th, 1784, when the then Prince of Wales, afterwards King George the Fourth, rode horseback from his new Marine Palace, the Pavilion, to his residence at Carlton House, London, and back again. We have the time in which he made this performance: 4h. 30m. going, 5h. 30m. returning. The earliest coaching record was that of June 19th, 1831, when the "Red Rover" coach, leaving the "Elephant and Castle" at 4 p.m., reached Brighton at 8.31: time, 4h. 31m. In 1834 this feat was beaten, and the record then set up has never since been equalled by coach: on February 4th the "Criterion" coach took the King's Speech down from London to Brighton in 3h. 40m.

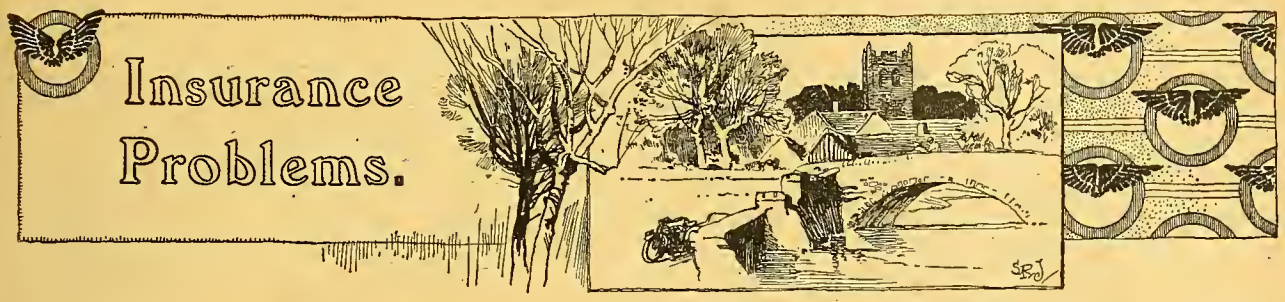
### Some Other Records.

In October, 1833, Walter Hancock ran his "Autopsy" steam carriage to Brighton in 8h. 30m. A "record," one may exclaim, "in a record long time!" But wait a while, we have to deduct three hours for his being obliged to halt that time on the road.

Cyclists have had a special fury after record making and breaking on the Brighton Road. The first of them, the Old Master, so to speak, was John Mayall, junior, who on February 17th, 1869, rode a velocipede from Trafalgar Square to Brighton in "about" twelve hours. On March 6th of the same year W. M. and H. J. Chinnery walked to Brighton in 11h. 25m. The latest of the many organised walks was that of April 29th, 1922, when there were nineteen competitors, the best performance being that of H. B. S. Rhodes in 9h. 13m. 55s.

Mayall's initial velocipede ride was followed in that same year of 1869, on April 14th, by C. A. Booth, who got down to Brighton on a machine of the same description in 9h. 30m. On September 19th, 1872, came the first amateur bicycle club's race, won by A. Temple, on the then new 44in. bicycle, in 5h. 25m.

It would be a long story to tell all these struggles, which went on for years. The present Brighton and back unpaced bicycle record is that by T. H. Grubb, 5h. 9m. 41s., June 19th, 1912.




## A New Feature in which Insurance Questions are Answered and Discussed.

*It is now generally accepted that insurance is a vital necessity in the case of every motor cyclist. The number of communications received on insurance matters, too, indicates that readers are very keenly interested in this subject; some of the questions require expert advice, and this new feature has been formed to deal impartially with the various problems that are presented to us.*

*The close associations of "The Motor Cycle" and our sister journal, "The Autocar," with the Autocar Fire and Accident Insurance Co., Ltd. (a company evolved from the old Autocar Insurance Department, founded 18 years ago) enables "The Motor Cycle" to keep in very close touch with all matters pertaining to insurance—an undoubted advantage to our readers.*

*Enquiries will be welcomed and should be marked "Insurance" on the left-hand corner of the envelope and addressed to "The Motor Cycle," Dorset House, Tudor Street, E.C.4.*

**A Boundary Hit and Broken Spokes.** "Sportsman" asked last week if an insurance company should make good damage to a motor cycle sustained at a cricket match whilst the machine was parked near the boundary line.

This is a long question which can be answered in a few words. It is not within our knowledge that any company issues policies using terms "Accidental damage whilst on the road under ordinary riding conditions." We do not say that no company has ever done it, but if they have they are certainly a company to avoid. Accidents of the nature indicated by your correspondent would most certainly come within the scope of the accidental damage section of the policies issued by any reputable company.

* * * *

**After Twelve Months' Wear.** Mr. C. Canthall, Croydon, asks what amount an insurance company would pay on a machine insured for £100 in January and stolen in December after twelve months' running.

The question of the value stated in the form of proposal, or in the policy when issued, is for purpose of guidance only, the determining fact at the time of loss being present market value.

* * * *

**Presuming Non-recovery.** Immediately a motor cycle is stolen the very first question the owner asks, and quite reasonably too, is, how long will it be before he can replace the machine. Mr. W. Wilkinson, of Liverpool, sends us the query: "How long after the theft of a motor cycle is an insurance company entited to wait before the machine is presumed to be irrecoverable and the company pays the claim?"

The reply here is that generally the insurance companies act according to circumstances. It is usually possible to ascertain in the course of two to four weeks whether a recovery is likely to be made of a stolen machine.

It occurs in some cases that clues are obtained which involve some difficulty in following up, and until the possibility of recovery is exhausted, naturally the company withholds payment. Generally speaking, four weeks is ample time in which to ascertain a definite position.

* * * *

**Physical Disabilities.** An owner of Douglas sidecar outfit writes: "I have been refused a policy by a well-known company owing to the fact that my leg has been amputated. The controls of my motor cycle are easy to operate and are most effective; the tone of the company's letter, too, was objectionable and independent to a degree. They did not even offer to accept me at a higher premium. Do all companies object to insuring disabled men?"

A great deal of sympathy is due to the disabled man desiring to insure, and the difficulty arises how to accord that sympathy which will, from the insurance company's standpoint, keep the risk on the basis of fair insurable hazard. The attitude of the Autocar Fire and Accident Insurance Company is to accord sympathetic consideration to each case and deal with the insured equitably. Where the degree of disability is of a minor nature, or such, even if of a major nature, as not to increase unduly the hazard, they generally agree to grant policies, subject to the insured bearing, say, a small portion of each claim arising under the accidental damage and third party sections. This would appear to be the only solution possible. It will be appreciated that there is a possibility of the degree of disability being such as to make the proposition quite impossible from an insurance company's standpoint.

## FILING TEMPERED STEEL.

TAKE an old file (a smooth or second-cut is best). Put on it some thick grease and dip it in a tin of fine carborundum powder. The file so charged will bite dead hard steel, and ordinary tempered steel it will take down at a very fair speed.

If it is desired to re-colour the steel, support it on a piece of thin iron plate over a bunsen flame, having first removed all trace of grease (*e.g.*, with petrol), and taking care to avoid fingering it. Stop just before the original colour is reached, and let it cool in the air.

# THE BONUS BUGBEAR.

## Opinions of Chain and Tyre Manufacturers and those of a Private Owner. A Unique Scheme for Awarding Marks.

IN our issue for June 15th we gave some particulars of the very unsatisfactory measures adopted in the Isle of Man in connection with bonuses and subsidies paid to riders by manufacturers of accessories.

As we anticipated, our remarks have aroused great interest in the pernicious bartering which threatens to undermine the present high position motor cycle racing holds in the sporting world. We pointed out that there was a danger that in future races the question of bonus might weigh more with the rider than the quality or suitability of the equipment used.

Several letters have now been received which endorse the sentiments expressed in our article. Below we give a selection of these.

### A Tyre Firm's View.

"The pernicious bartering was certainly more in evidence this year," writes Mr. Jack Randle, the competitions manager for the Leicester Rubber Co. "Speaking on behalf of my firm, who stood aloof from all matters of bonus simply because they had spent a great deal of time and money in producing a specially designed tyre for tourist trophy work, I think that the time has come when either the British Cycle and Motor Cycle Manufacturers and Traders' Union, Ltd., or the Auto Cycle Union, should take a firm stand against what is unquestionably a deterrent against the sport of motor cycling and the best interests of the motor cycle tyre trade.

"At present, as your article ably points out, it is merely a question of the largest purse which shall get the best results—quality, the obvious deciding factor, is not allowed to play its part.

"Some assistance to the winner of these events is obviously due, but when such actions take place as they did in the Island this year and offers made reach such senseless proportions, it is time some standard rate of bonus was instituted, and no firm allowed to exceed this figure under penalty. Then we should see tyres fitted to machines entirely on their merits, which after all is the whole essence of the need for the Tourist Trophy Races.

"Might I, with your permission, congratulate the number of motor cycle tyre manufacturers who disassociated themselves from the hectic bidding and counter-bidding, and express the hope that they will join hands with us in an endeavour to get the matter brought on a normal level, and enter into competition with the watchword not 'Money First' but 'Quality First.'"

### From a Famous Chain House.

The following letter has been received from Mr. H. M. Andrew, the technical manager of Hans Renold, Ltd.:

"As you specifically mention chains in the general indictment, we venture to ask of your courtesy sufficient space to make it clear that the chain makers cannot by any possibility be classed as offenders in this matter.

"We have been strongly recommended by officials of the A.C.U. to give more publicity to our particular scheme of awards, as they are good enough to say that they entirely approve of them, and this seems to us to be a suitable opportunity of giving a little explanation of the 'Renold' award scheme.

"The object of the scheme is to support the invaluable work of the A.C.U. in developing the motor cycle on suitable lines as a touring machine, and we feel that awards of this kind, of which the primary object is to encourage the use of accessories under proper conditions, can only be of benefit to the community as a whole.

"The scheme does not confine itself to the winner of the race, nor to the rider of the machine, *nor to the particular make of chain employed*. It is an award made to the manufacturer of the machine according to the degree of attention such manufacturer has given to those requirements essential for securing the best practice in the chain drive.

"The method of operating the scheme is to make a full examination of the chain drive on the machines as entered for the actual race and award each machine a certain number of marks based on the number of teeth in the chain wheels employed, the method and degree of lubrication, and the existence, or otherwise, of cranked links. The marks for the wheel teeth increase with the number of teeth employed, and the relative classes of lubrication are awarded marks in the order of their value. No award is made unless the entrant obtains at least 250 marks, and the award is confined to gold medal winners, the amount awarded being £1 per 25 marks, which worked out this year at from £10 minimum to £21 maximum per machine. The only distinction we make as regards the winning machine is that its award is doubled.

"It will be seen that this scheme is a direct incentive to the manufacturer to embody in his machine those features which we, as experts, consider are essential to the proper development of chain transmission, and the scheme is more than justified when it is considered that some valuable applications have been lost to chain driving not because the method of transmission was wrong but solely because of the trouble caused by improper application and use.

| Number of Teeth in Pinions. | Countershaft or High Gear Drive. | | Rear Drive. | |
|---|---|---|---|---|
| | ½in. | ⅝in. | ½in. | ⅝in. |
| 14 .. .. | 0 | 0 | 0 | 0 |
| 15 .. .. | 32 | 40 | 16 | 20 |
| 16 .. .. | 60 | 74 | 30 | 37 |
| 17 .. .. | 82 | 102 | 41 | 51 |
| 18 .. .. | 100 | 126 | 50 | 63 |
| 19 .. .. | 116 | 146 | 58 | 73 |
| 20 .. .. | 128 | 160 | 64 | 80 |
| 21 .. .. | 138 | 172 | 69 | 86 |
| 22 .. .. | 148 | 184 | 74 | 92 |
| 23 .. .. | 156 | — | 78 | — |
| 24 .. .. | 164 | — | 82 | — |
| 25 .. .. | 170 | — | 85 | — |

| Lubrication. | Countershaft or High Gear Drive. | | | Rear Drive. | | |
|---|---|---|---|---|---|---|
| 1. Oil bath .. .. .. | 270 | | | 270 | | |
| | Completely Encl. | Semi-Encl. | Open. | Completely Encl. | Semi-Encl. | Open. |
| 2. Oil drip feed .. .. | 200 | 90 | 60 | 200 | 90 | 60 |
| 3. Occasional oil feed from tank .. .. .. | 100 | 50 | 30 | 100 | 50 | 30 |
| 4. Crankcase release or timing gear case release .. | 75 | 40 | 20 | 75 | 40 | 20 |

| | Countershaft or High Gear Drive. | Rear Drive. |
|---|---|---|
| No cranked links .. | 50 | 50 |

How the Hans Renold Co. awarded Marks in their Bonus Scheme for the 1922 T.T.

A Kendal motor cyclist signing himself "Interested" writes:

"I was pleased to see the article commenting on the 'Bonus and Subsidy scandals' in connection with the T.T. What is wanted is the elimination of the bartering, of which everyone connected with the trade is fully aware, at the same time assuring successful competitors of substantial monetary rewards. I would suggest that the A.C.U. makes a rule that no monetary or other prize be offered to competitors by accessory firms, except through the A.C.U., the amounts or value of such prizes to be notified to that body at least fourteen days before the race."

# Letters to the Editor

The Editor does not hold himself responsible for the opinions of his correspondents.

**Correspondence should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, E.C.4, and must be accompanied by the writer's name and address.**

## *THE HARE THAT JUMPED.*

Sir,—Referring to the above incident reported in last week's issue of *The Motor Cycle* by Mr. W. A. Fell-Smith, whom I had the pleasure of accompanying as the passenger he mentions, I would like to state that, extraordinary as the accident may appear to be, it is hard fact. Personally, I found it such a very hard one and, driven into my face with so unexpected and considerable force, it was impossible for me to argue or withstand it.

It has struck me on many occasions (not the hare) that a man will expend a considerable amount purchasing the bus of his choice, but when it comes to buying the goggles a low-priced pair of rubber and glass is deemed good enough. Surely the wonderful gift of sight is so valuable, particularly to our younger "brethren of the road" who have all their life before them, with all the consequent joys of many years of motor cycling, that the choice of goggles, it would be thought, would be as important as the bus, if not more so. Even in the mildest of crashes there is always the very grave danger of glass goggles imperilling the sight by becoming broken and splintered. It is worth consideration, and I bring this point of equipment forward, as the accident which befel me would have left me a blind man to-day had I been wearing the ordinary glass goggles. Mr. Fell-Smith and those who have seen the ones I was wearing, are firmly convinced that it is solely due to the fact of their being Triplex that I retain my sight, and as a measure of gratitude that I still retain full vision I felt I could not do less than utter a warning word to all motor cyclists to take proper precautions in this part of their outfit.

May I trespass a little further in order to record my appreciation of the very efficient services rendered by Patrol Bull of the A.A.? (With Hares and Bulls running about I cannot agree that the run was monotonous.) He seemed to arrive on the scene in a most miraculous way—perhaps he also jumped—and examined my eyes in a most careful and capable manner for broken glass, and gave us all the help possible under the circumstances.

Tae the kindly Scots leddy wha produced the whisky Ah wud also tender ma verra sincere thanks—twice ower—aince for the first drink that brocht me round and again for the second which by then Ah was in ma richt senses tae enjoy. Aye, it was guid.

GEO. TEMPLE.

Sir,—Seeing your article on the above I thought my experience of May 31st, 1922, might be of interest.

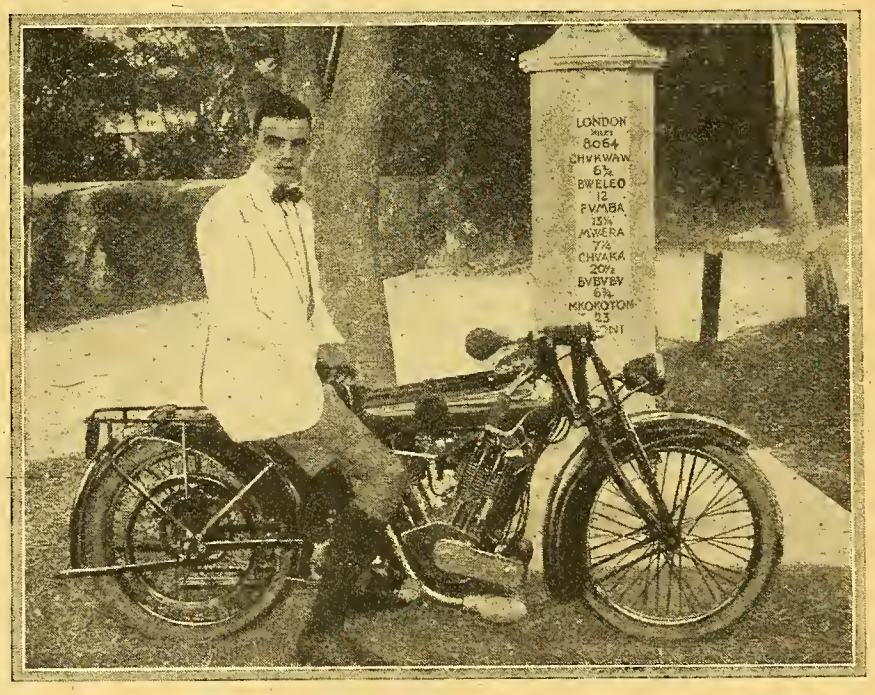
Returning home from Hunstanton on my James outfit, and on taking a hill at about 30 miles per hour, a hare suddenly appeared from the fence in front on the motor side of the outfit. Finding that it could not clear the machine it tried to jump it, and succeeded. Passing between myself and the lamp set, it struck the top of the sidecar windscreen, bending the metal beading and leaving a lock of its fur on the screen screws. Needless to say, my passenger's nerves were a bit upset for a few minutes, and I must confess I felt a bit queer for a time.

We turned back to see if the hare was damaged, but evidently no vital parts were hurt, as Sally was gone.

J. CLIFFORD THOMPSON.

Sir,—I think I can equal, or even better, the incident described by Mr. Fell-Smith.

On April 29th last my twelve-year-old son and myself were returning from Sutton Bank hill climb via Thirsk, and




A rider of a 976 c.c. Brough Superior in Zanzibar, who speaks in high praise of his mount, eulogizing both its speed capabilities and comfort. An interesting point about the milestone is that it gives London 8,064 miles. What an adventure to ride to London by motor cycle, touching the sea only in crossing to the mainland, at the Suez Canal and the Dover Straits.

Until quite recently screens on sidecars used in America were in the minority, but the advent of the Easting in that country will no doubt mark the commencement of greater appreciation of the unquestioned comfort a screen affords. A Henderson owner with a fully equipped outfit.

as is usual, there was some chasing one another to get clear of the front man's dust. We were travelling about 20 m.p.h. when a black hen came out of a gateway on our left, and made across our track. Without warning it rose into the air and made as if to fly over us, then disappeared. I feared that it had got into the sidecar wheel when, to my surprise, it flew out of the sidecar amidst a shower of feathers. What really had occurred was that I had hit the hen first as it was passing the windscreen, and my speed had caused it to crash through the celluloid screen into my boy's face, and it dropped into his lap. The impact had evidently not killed it. Luckily the screen was not glass. We were like the men with the hare—we were disappointed that we did not secure a Sunday dinner on the cheap.

R. T. SWIFT.

## A SCIENTIFIC LAYMAN CRITICISES.

Sir,—Having followed the profession of chemistry for a good many years, I read with interest the article written by "Kemist" and published by you last week.

As regards the metallic part of the question, I think he is perfectly correct in saying, well—(in a nutshell)—"Prevention is better than cure."

I once pointed out to a representative of a very well-known oil firm the formation of these fatty acids and the probable liberation of water, and the detrimental properties to the metals to which they come into contact. He said very little, probably he didn't understand, or perhaps he agreed. At the same time, when we drained castor oil from my crankcase it has been castor oil through and through, and no watery fluid whatsoever, as far as my eye could detect. Also, the users of "Castrol R" in the T.T. Before they have completed a circuit of 37 miles the oil should be hot enough to have undergone this chemical change.

Why, in this case, does it lubricate?

The oil is of practically uniform temperature, and each molecule of it is as liable to chemical change as the next one, therefore, why not empty H.COOH into the oil chamber and save the engine the trouble of converting the oil expressed from *Ricinus Communis* into this.

If, of course, the engine is driven in the correct manner for manufacturing these acids and chemicals generally, we shall be very much surprised, on draining the crankcase, to find crystals of oxalic acid, which in formulae is very close to formic acid.

Perhaps "Kemist" would some time mention if the change is chemical or physical. Because, if castor oil is used (pure) and fatty acids are formed to the maximum degree, do they re-dissolve in the remaining 100 per cent. oil on cooling, so as to avoid being detected on inspection?

Having turned over a few pages of the same issue, I see Castrol has been mentioned for its efficiency, and has been used by the winners of the T.T. race for years and years (and it is used by many other speedmen too).

I should think the "Castrol" firm have in their employment chemists who pass their opinion on the subject, and surely no firm would sell formic acid as an oil indirectly.

I suppose if castor oil could be thrown out, prior to its reaching the temperature of changing chemically, it would be absolutely perfect as a lubricant, as in aero-engines.

Doncaster. METALLIC.

Sir,—In an article in your issue of June 15th under the title "A Scientific Layman Criticises," one is given to understand that castor oil, or oil containing castor, is inferior to mineral oil as a lubricant. That being so, it would be interesting to hear the views of manufacturers who market such an oil for racing purposes. Castrol "R" and Speedwell "White Ideal" are both of vegetable nature; surely these oils do not possess all the disadvantages named by your contributor. ARTHUR S. COOK.

Sir,—Your correspondent "Kemist" commences and concludes his article with marks of interrogation, a sign which leads one to suppose that his criticisms are not criticisms at all, but a subtle way of interesting his readers in a subject which has created much discussion of recent years, and which has been settled in no indefinite way by experts of proved ability in the motor racing world. One cannot believe that a scientific layman would be so dogmatic as to say that castor oil is not only a poor lubricant, quite unfitted for internal combustion engines, but is extremely detrimental, in view of the overwhelming evidence in its favour.

Flights to Australia and across the Atlantic have been made using Castrol "R," an oil which contains a large proportion of castor oil, and not a small percentage, as suggested; it has enabled records to be beaten and races to be won. The ever present smell of castor oil at all motor race meetings proves that it has gained a popularity over pure mineral oils which will not readily be eclipsed. Not only is it used in the racing engines where the very last unit of energy is extracted from the engine, and where it is important that the piston should not be corroded right away or the bearings wholly disappear before the race is finished, but upon the touring cars, which on such occasions often have their strength taxed to the uttermost, and change their oil after several thousand miles running.

I have seen drums of castor oil which have stood several years untouched, but still they are quite sound and no corrosion is apparent. One ventures to suggest that the castor oil which Kemist had examined had the "blues" and was anxious to part with them.

True, many people imagine that castor oil is one of the most viscous oils—so it is as far as motor oils are concerned. If one endeavoured to use an oil whose viscosity were greater than castor oil at a temperature of 140° F. or 200° F., it would be very thick indeed at atmosphere

temperature, so thick, in fact, that in cold weather it would not flow and in warm weather would offer serious resistance to the moving parts of the engine until the oil had become hot, a resistance which would prove fatal to the racing man. But viscosity is not a direct measure of the lubricating value of an oil, and cannot therefore be relied upon as the only guide. To deal with the obscure advantages of castor oil is a lengthy, highly scientific subject.

C. C. WAKEFIELD & CO., LTD.,
E. A. EVANS, *Chemist.*

### *LIGHTWEIGHT TWO-STROKES FOR LONG DISTANCE TOURING.*

Sir,—I have noticed, in your recent issues, riders' remarks on the performance of lightweight two-stroke machines; and since there seems to be some doubt as to the suitability of lightweight two-strokes for long-distance touring, I would like to give particulars as to the performance of a real ultra lightweight machine, viz., the 1¾ h.p. J.E.S., which, as you know, has a cubical capacity of 169 c.c. only, and we think that the performances of these tiny machines should leave no question as to their suitability for long distance touring.

On December 31st last the London-Gloucester-London Reliability Trial took place. A J.E.S. was driven from Gloucester to London, a distance of 115 miles; on the next day was driven from London to Gloucester and back, over a route of 130 miles, completed the course within the scheduled time, and on the next day was driven back to Gloucester.

Then, again, in the recent London-Edinburgh run, a 1¾ h.p. J.E.S. was driven from Gloucester to Hendon, and in the evening at 7.20 p.m. left Hendon for Edinburgh, arriving there dead on scheduled time, having checked in at each section exactly to time; not one second's trouble of any sort was experienced. The machine was driven next day into Kilmarnock and then back to Gloucester, a distance altogether of well over 1,000 miles, and without the slightest trouble.

Just one other instance of the capabilities of the modern small two-stroke. In a freak trial recently held over the Cotswold Hills, which included the most freakish hills that could be found, one of these little machines succeeded in completing the course according to schedule, very much to the surprise of all the competitors. As a matter of fact, not one of them expected the machine ever to get through the course. However, it not only succeeded in doing this, but succeeded in obtaining a silver medal, together with a gold centre medal, for the second best performance of the run.

J. E. SMITH.

Sir,—I do not think that there is anything in the least remarkable in touring long distances on lightweight two-strokes. By taking adequate time for meals it is neither tiring nor difficult to do 300 miles in a day. Twice I have ridden from the Midlands to Edinburgh between sunrise and sunset, once on a 220 c.c. Velocette (distance 325 miles, time 15½ hours, less 3 hours for meals), the second time on a 249 c.c. Velocette (distance 320 miles, time 14 hours less 2 hours 10 minutes for meals). On the 220 c.c. machine I rode a total of 1,285 miles in eight successive days.

Nuneaton. "63×80."

Sir,—I have observed recently in your columns discussion as to the demerits of the lightweight two-strokes as a potterbus; but really, why they are held up to ridicule by a certain section of motor cyclists I fail to appreciate. One must admit that modern two-strokes are remarkably reliable, and whilst I continue to ride solo I should never think of procuring any other grade of motor cycle. True, they have disadvantages, combined with advantages, over four-strokes, but I certainly can boast of some remarkably fine rides on my 2¼ h.p. De Luxe sports model New Hudson. In the course of three to four thousand miles' riding I have never had a suggestion of a breakdown, except for adjustments, and since using a "K.L.G." H.S.1 plug I have never had a case of overheating, although I am constantly averaging over 20 m.p.h. over fairly lengthy journeys. Recently I went from Finchley to Brighton, 60 miles, in 2½ hours.

I should certainly recommend two-stroke riders to make use of Castrol "C" oil and "K.L.G." H.S.1 plugs. I can hardly explain the improved running on my machine since using them.

PERFECTLY SATISFIED.

London, N.1.

That the French are masters at carnival decoration is generally admitted, and this snapshot confirms the statement. The elaborate device depicted won a prize at the recent Fête de Narciss at Montreux.

### *PILLION RIDING AND INSURANCE.*

Sir,—I think F. M. Davidson's letter on pillion riding calls for a reply from us, as we are the only firm in a position to advertise "No extra premium for pillion riding." This concession we won for motor cyclists after conclusively proving to the General Accident Fire and Life Assurance Corporation that pillion riding was safe on a Tan-Sad.

Mr. Davidson could surely never have investigated this offer, and cannot be the least acquainted with the standing of the firm who issue the policy, or he would never have offered such advice to others. A perusal of the proposal form will convince the most sceptical of the genuineness of the offer; a glance at the name of the company backing it is also in the highest degree convincing.

Yes, we know pillion riding is safe; we made it so, and converted one of the largest and most important insurance companies in the country to our view, and all for the benefit of F. M. Davidson and his fellow motor cyclists, and we are hoping to gain a still further concession for them in the near future.

W. T. O'BRIEN, London Manager,
"Tan-Sad" Works.

### *3-inch TYRES AND SIDESLIP.*

Sir,—I admire our old friend Ixion for the candour which has impelled him to ventilate his one doubt about 3 in. tyres on a 500 c.c. machine, after the eulogy he has expressed for this size of tyre. My experience has been that these tyres, on a medium-weight machine, are a mistake. Being too large for the weight they carry, they create bouncing and rolling, and without any question they are more liable to sideslip under conditions that the 2⅜ in. tyre. The latter, however, I have found too small. My mileage with all sorts and sizes of tyres exceeds 70,000. From experience, I have found that an extra heavy 2½ in. tyre fitted to a 2¼ in. rim is the best size for a medium-weight machine, being faster,

and more comfortable and resilient, than the 650×65 fitted to a round base rim. For road gripping qualities, extreme comfort, and for fast cornering, the new super-studded 26×2½×2¼ T.T. Hutchinsons, with their double rows of studs each side of the large central studs, are indeed a revelation in tyres. "ENTENTE."

Sir,—Mr. Harry G. Bell, having shaft drive cycles to sell, can see no virtue in a chain direct and parallel drive, but has, as good salesman, nothing but praise and clever publicity for spur and right-angle drives.

I can imagine nothing more efficient than direct chain drive from the engine to the back wheel. The maintained efficiency of an enclosed chain drive is over 98%. Engineers are agreed that spur or mangle gearing (which Mr. Bell advocates because it happens to be *present* car practice) under ideal conditions, conditions which do not exist in the motor cycle, lose in each reduction not less than from 8% to 10%. A. E. PARNACOTT, M.I.Auto.E.

*TEMPERAMENTAL ENGINES.*

Sir,—"Ixion," in your issue of June 15th, puts forward another theory regarding the "Rudge Mad Moment," *i.e.*, the use of a certain type of inlet spring causing the valve to seat unevenly and work "cock-eyed." Since starting this correspondence I have tried most remedies, and they include:

(1) A standard conical Rudge spring.

(2) A Perry, with top and bottom coils of equal diameter.

(1) Is much stronger than (2), and the running is not perceptibly affected by the change, the "mad moment" not being affected at all.

The theory put forward in your issue of June 8th concerning wear in the exhaust rocker causing the inlet cam to lift the exhaust valve, thus forming a decompressor, struck me as hitting the nail on the head: however, I've inserted new rockers, in which there is no lateral play whatever, and retimed, without improvement. I don't think I've missed any possible explanations, and I've exploited all my own, and I have not, as yet, in three months' trying, touched the trouble. R. S. L. BOOTE.

Sir,—I think there is something in your reader's solution of rarefied air being the cause of mad engines. I use my priming tap as an extra air valve, and some days on opening it the engine goes mad, at other times no difference is noticed. The air lever on my carburetter (Senspray) is hardly any use once the engine is warm, being full open all the time. I get 90 m.p.g. on petrol, and 100 on benzole.
South Bank. SPARKS R.E.

Sir,—Re "Ixion's" remarks on Rudges' "super-Rudging it." Yes! Mine did, before I left England, of course. One would be tootling along like a little old gentleman, when suddenly she seemed to gather her skirts about her knees (N.B.—This is not a mixed metaphor), and fairly "beat it" for a few yards, and then settle down again. Everything was well-nigh perfect, yet most things were renewed, as every brain-wave was put to practical use. The carburetter was changed to no effect, and air leaks so eliminated, that with the jet stopped up the whole carburetter inlet dome and valve complete would hang pendulous from one's mouth if one sucked hard enough. *Everything* was tried, until the one thing, of necessity, possible of doubt was the magneto, a C.A.V. that would have blushed if it thought I didn't trust it, from sheer pride. But I had to be firm, and couldn't have trusted Lloyd George himself at that time. The makers returned it as perfect. A local repairer said he rarely had the pleasure of seeing a "machine" in such delightful order. The *third* time I took it to the repairer I took a Service revolver with me, and dared him to say it was all right, and also to understand that to mention "petrol supply," "valve-timing," or "compression" was certain death. When I called a week later he wore that awful smile that tells of perfect confidence, and beyond telling me to try it, wouldn't utter a word. The Rudge started over the first compression and ran quite well for the rest of the time I had her, with no sign of "super-Rudging." In the absence of data I am wondering if now she always "super-Rudges" or just 'Rudges." Anyway, I quite fail to see how a magneto could cause the trouble, but that was my experience. Can some of our magneto Marconis enlighten us?

I should be delighted to give "Ixion's" friend the repairer's address, but don't know if he can do it again! He has completed his masterpiece, and now peacefully awaits the end.

The last straw would be to find "Ixion's" friend has my machine—if journalist's friends ever have such a thing as a second-hand one. But that is too cruel, almost, for Fate. The registration number, I think, was HC-1664.
Karachi. CECIL W. USHER.

*THE AMATEUR ROAD RACE.*

Sir,—Much paper and ink has been used in discussing an amateur road race without running up against the one thing which would, to my mind, put the "kybosh" on it—"the question of expense." How many real amateurs are there who could afford £30 (the very minimum) for the pleasure of hurtling round the Island at about 60 m.p.h. for four or five hours?

My scheme rests on two facts. First, that practically every other body governing various sports allows an amateur to have his expenses paid by his club without loss of status. Secondly, that most clubs offer some sort of trophy for the best amateur rider.

The thing to do is to combine the two. I am not suggesting that every club is wealthy enough to provide the necessary funds, but different clubs in the same city, county, or even the different centres, might combine with this object, or alternatively the rider might pay a certain portion of the expenses. I would suggest the following rules as necessary:

That the secretary of the entering club must guarantee the following:

(1.) That the rider is a bona-fide amateur (*i.e.*, that he is not in any way riding for profit, neither has he in any way done so, and if he is engaged in the motor trade he must not use any machine, accessory, etc., in which his firm is in any way interested).

(2.) That he must have qualified by obtaining a gold medal in any centre one-day trial or a M.C.C. trial or such others as the A.C.U. may determine, such trial not to be organised by the entering club.

(3.) That his machine is capable of, say, 50 m.p.h.

(4.) That the same machine will be used throughout without any alteration and without being overhauled by the manufacturer.

(5.) That the machine is a standard machine, such as can be bought by the general public.

The actual selection of the rider would be left to the club.

The club would, of course, be heavily penalised in the event of their statement being incorrect.

J. L. HANMAN.


**Books & Maps for Motor Cyclists.**

Issued in conjunction with *The Motor Cycle.*

**"MOTOR CYCLES AND HOW TO MANAGE THEM."**
The standard handbook on the motor cycle.
Price net, 2/6. By post, 2/10.

**"HINTS AND TIPS FOR MOTOR CYCLISTS."**
Eighth Edition. Price net, 2/-. By post, 2/3.

**"TRACING MOTOR CYCLE TROUBLES."**
A system for tracing motor cycle faults and of remedying them when found. Fourth Edition.
Price net, 2/-. By post, 2/3.

**"TWO-STROKE MOTOR CYCLES."**
A reliable treatise on Two-strokes, from the rider's point of view. Price net, 3/-. By post, 3/3.

**"MOTOR CYCLE REMINISCENCES."**
By "Ixion," of *The Motor Cycle.*
Cloth Bound. Price, 5/-. By post, 5/3.
Paper Boards. Price, 2/6. By post, 2/9.

**"THE MOTOR CYCLE" ROAD MAPS.**
**Set of Three Maps—England and Wales, Scotland, London.** Set of three, complete in case. Price net, 5/6. Book post, 5/10. **Set of Two Maps—England and Wales, London.** Price net, 4/6. By post, 4/8.

**"THE MOTOR CYCLE" ROUTE BOOK.**
With 32 pages of Road Maps. Price net, 2/6. By post, 2/10.

Obtainable by post (remittance with order) from ILIFFE & SONS Ltd., Dorset House, Tudor Street, London, E.C.4, or of leading Booksellers and Railway Bookstalls.

# Front Wheel Driving and Steering

A front view of the Autogear three-wheeler, which has been tested on rough roads and farm tracks.

## The Autogear Three-Wheeler, a Three-four Seater Runabout of Individual Design.

SERIOUS efforts to seek and adhere to first principles have characterised the planning of the vehicle under review.

Undoubted advantages are associated with front wheel driving, but so far the cycle car industry in this country has eschewed the arrangement, with the exception of one designer, whose earlier products are fairly familiar in West Yorkshire. The Stanhope three-wheelers, driven and steered on the single front wheel, were lively and stable little machines, chiefly handicapped by lack of wide gear ratios.

The Autogear three-wheeler is the logical outcome of the principles tried out in the same designer's earlier machines, but it is manufactured by Autogears, Spring Grove Works, Hyde Park Road, Leeds.

### Advantages of the Lay-out.

Before describing the machine in detail some passing remark may be made on the advantage of front wheel driving, combined with steering on the same wheel or wheels. The most valuable point in its favour obviously is the fact that on a corner the power is directed round the bend, the mass of the vehicle following—thus steering stresses on the chassis are much reduced in comparison with the ordinary back wheel driving machine, where the whole mass of the machine has to be deflected from the straight path against the tendency of the power-driven wheels to continue to run forward without deviation. It is this latter consideration which necessitates the stiff springing of most three-wheeled machines to avoid rolling of the back wheel. Apart from any mechanical advantage, the location of the entire power, transmission, and steering mechanism in front leaves the rear of the machine free for almost unlimited length and carrying capacity.

### All Wheels Interchangeable.

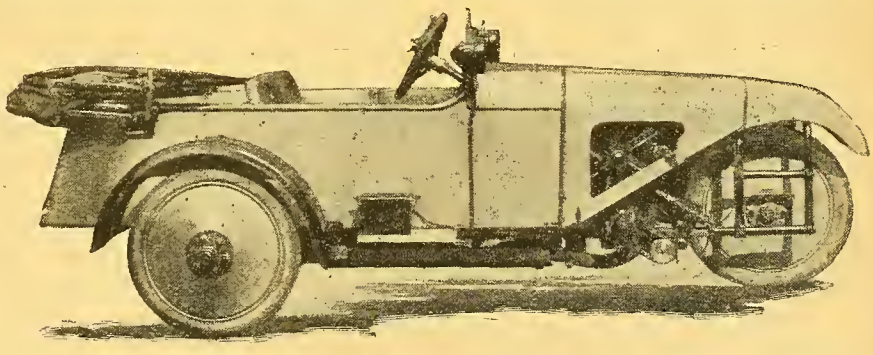
Hitherto, the employment of front driving and steering has involved the use of a comparatively inaccessible wheel, but in the Autogear the difficulty has been cleverly overcome and open-sided wheels are used throughout, all being interchangeable with the spare carried beneath the body.

A tubular chassis consisting of two 1½-in. parallel members 18 in. apart, connected by suitable cross tubes, is employed, and in front of the engine are two inverted U-shaped tubes which bridge the front wheel. These U tubes are joined by two horizontal tubes parallel with the chassis and about 12 in. high and by a similar tube at the top immediately above the wheel.

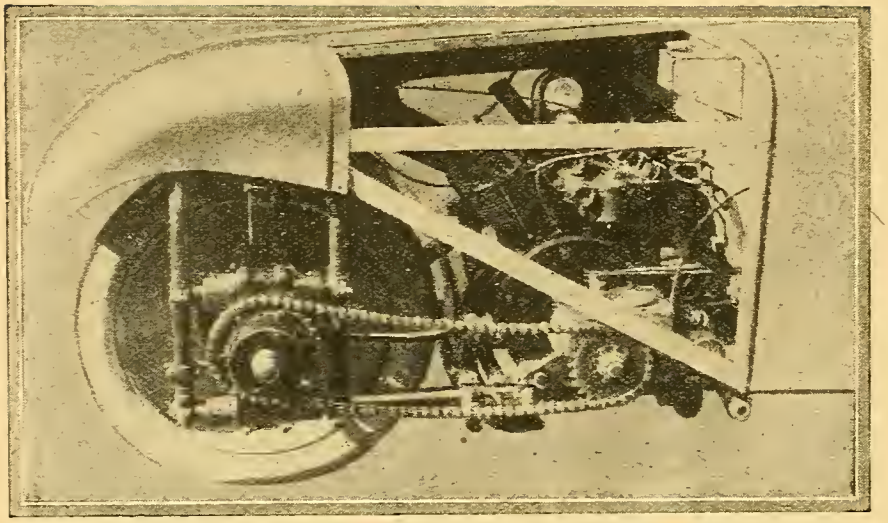
Swinging on the near side of the chassis and on the short horizontal tube above it, between the U members, are two malleable brackets, which at their free ends carry in trunnion bearings a large axle box in which, on heavy ball bearings, runs the live spindle of the wheel. On the hub is an internally toothed ring, and also running in the axle box is a short shaft carrying a pinion engaging with the ring. Joining the two tubes on which the brackets swing is another casting, on which runs, also on large diameter self-aligning ball races, a shell carrying the chain sprocket. The drive is conveyed from the sprocket to the small gear in the axle box by means of a short shaft having universal joints of the ball and yoke type at each end. None of this mechanism is exposed.

### Seeking Ideal Springing Conditions.

So far we have not dealt with the springing. The upward movement of the swinging brackets carrying the front axle box is controlled by a C spring secured to the tube bridging the top of the inverted U tubes and to the upper bracket



Having the whole of the power plant and transmission in front of the dash, advantage is taken of the possibility of fitting a three-four seater body.



The entire mechanism of the 1,098 c.c. Autogear revealed by lifting the bonnet. A chain case is fitted normally.

at a point immediately above the steering pivot; by employing deeply dished Lynton steel wheels, the points of spring attachment, the steering pivots and the centre of the tyre tread are all in the same straight line without canting the wheel or tilting the pivots.

Steering is effected by a rocking lever mechanism actnated by a quick thread on the base of the steering column.

A 1,098 c.c. air-cooled Blackburne twin engine supplies the power, and it is mounted behind the front wheel, slightly to the off-side. In the flywheel is a single-plate fabric clutch, and in the centre of the flywheel is a ball bearing in which fits an extension of the gear box mainshaft. The gear box is specially produced by the makers of the Autogear and is of the usual car type, having three speeds forward and reverse (gear ratios, 5, 8, and 14 to 1, and 15 to 1 reverse). Two lugs on the gear box engage with two lugs on the near-side chassis tube, bolts passing through clearance holes in each, the gear box being located by the shaft in the flywheel bearing above mentioned. This original method of mounting appears to be quite satisfactory and ensures self-centering alignment.

On each end of the tubular rear axle are ball-bearing axle boxes, in which run live spindles carrying the rear wheel hubs. Springing from the chassis tubes outwardly at a point just behind the back of the driving seat are two long laminated springs with practically no camber; these springs are bolted to the axle boxes, again, as at the front, immediately above the point of contact between tyre and road. Internal expanding brakes are fitted, a pedal control being used, with an interconnected hand lever beside the central gate change.

**An "Occasional" Four-Seater.**

Although not recommended for four adults (with the standard springing), a body of the type known to the car world as the occasional four-seater has been adopted. Two adults and two children would find ample room, and even so there is still some luggage accommodation, while the hood covers everything.

Having driven the machine, which incidentally costs £215 with Lucas dynamo lighting, we can vouch for its comfort, silence, and easy steering. The driving tyre (700×80) appeared to receive amazingly little wear, and good climbing powers were exhibited. Very much more powerful brakes, we think, might be incorporated, for a machine capable of fairly high speeds needs ample stopping power. Unfortunately, we could not try the machine on a wet, greasy hill, but with a lighter body it gave the impression of being a most likely mount for freak trial work. A large diameter cooling fan permits long periods of low gear work without overheating.

## ANOTHER CHAIN-DRIVEN SPORTS TWIN.

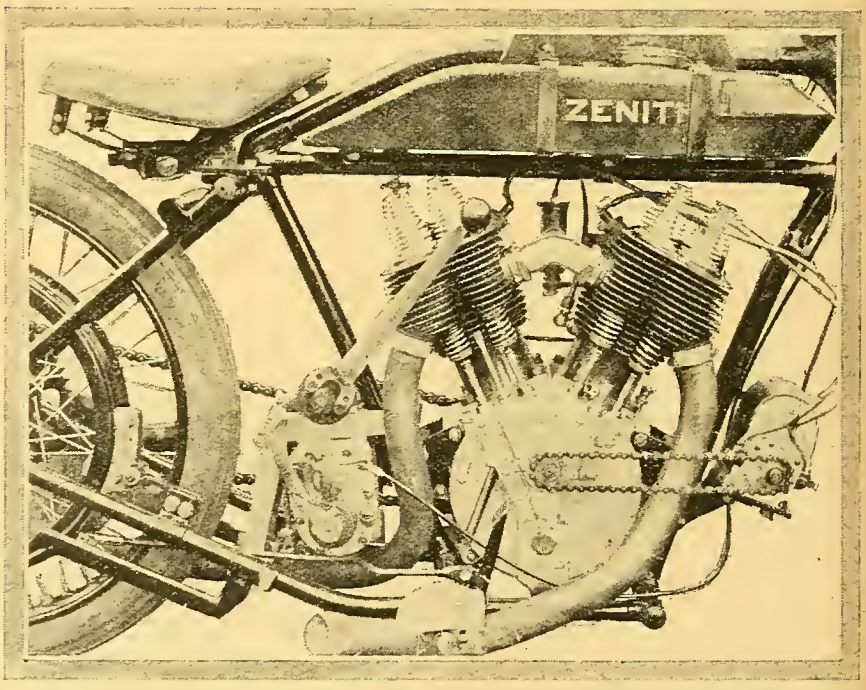
### Zenith Three-Speed Model with 976 c.c. J.A.P. Engine.

A DEPARTURE from Zenith standard practice has been introduced in the shape of a 976 c.c. J.A.P. engined machine with all-chain drive.

The bottom portion of the frame is of the duplex variety, the chain stays extending forward to a cross member beneath the front engine lug. The Sturmey-Archer gear box is carried on a special bracket extending from the top of the rear engine plates to a cross stay joining the duplex members behind the box. A special bracket which carries the change speed lever is fixed above the gear box by two of the clamping bolts; thus the control slides with the box for chain adjustment purposes, without interfering with the operating rod adjustment.

The particular machine illustrated is a special racing variety of the model under consideration; it took part in last Saturday's 200-mile sidecar race. The main design of the standard model is essentially the same, except that the exhaust pipes lead first of all into a large expansion chamber underneath the magneto, and terminate in a long exhaust.

Manufactured by Zenith Motors, Ltd., Hampton Court, Middlesex, the price is £126 with standard J.A.P. engine, or £130 with the special super-sports unit.




Close-up view of the engine and transmission units of the 976 c.c. all-chain drive Zenith This machine is actually a racing model, but is practically identical with that to be supplied as a standard sports model.

# FRANCE'S PREMIER EVENT.

## The Grand Prix at Strasbourg on July 12th. List of Entries. Particulars of the Course—and How to Reach It.

ENTRIES have now definitely closed for the French Grand Prix Motor Cycle Race, to be run at Strasbourg on July 12th, with 44 machines in the three classes. Unless last minute entries have been received in England on behalf of the French Club, there will be 23 machines in the 500 c.c. class, 6 in the 350 c.c. section, and 15 in the 250 c.c. class. Many of the riders have not yet been announced, so that the following list, while complete so far as the machines are concerned, is incomplete for the men:

**500 C.C.**

1. Norton.
2. Norton.
3. Norton.
4. Alcyon.
5. Alcyon.
6. Alcyon.
7. Peugeot (Gillard).
8. Peugeot.
9. A.B.C. (Bartlett).
10. A.B.C. (Naas).
11. Sunbeam (Bennett).
12. Sunbeam (de la Hay).
13. Sunbeam (Chappaz).
14. Triumph (Pitney).
15. Triumph (Edmond).
16. Triumph.
17. Motosacoche (Pélisier).
18. Motosacoche (Zind).
19. Griffon (Borgotti).
20. Norton (Bastide).
21. Norton (Francisquet).
22. Norton (Hollowell).
23. Koehler (Escoffier).

**350 C.C.**

1. Alcyon.
2. Alcyon.
3. Garelli.
4. Garelli.
5. Garelli.
6. Terrot.

**250 C.C.**

1. Armor.
2. Thomann.
3. Motosolo, Clech.
4. Massey Arran.
5. New Imperial (Bert Kershaw).
6. Levis (G. S. Davison).
7. Isoard Liaudois (Isoard).
8. Velocette (Cottin).
9. Velocette (Nel).
10. Yvel's (Fromeut).
11. Yvel's (Vernisse).
12. Chauvière (Chauvière).
13. Terrot.
14. O.K. (Handley).
15. O.K. (Woods).

Undoubtedly the start of the race will be made at eight o'clock on the morning of Wednesday, July 12th, in three groups, with a very short interval between them. The course, which is about $8\frac{3}{10}$ miles round (exactly 8.3158 miles), has to be covered 20 times by the small machines, 25 times by the 250 c.c. mounts, and 30 times by the 500 c.c. racers. It is not intended to publish times lap by lap, as is usually done in French road races, but to show the number of laps covered by the individual machines, the time only being given at the end of the race.

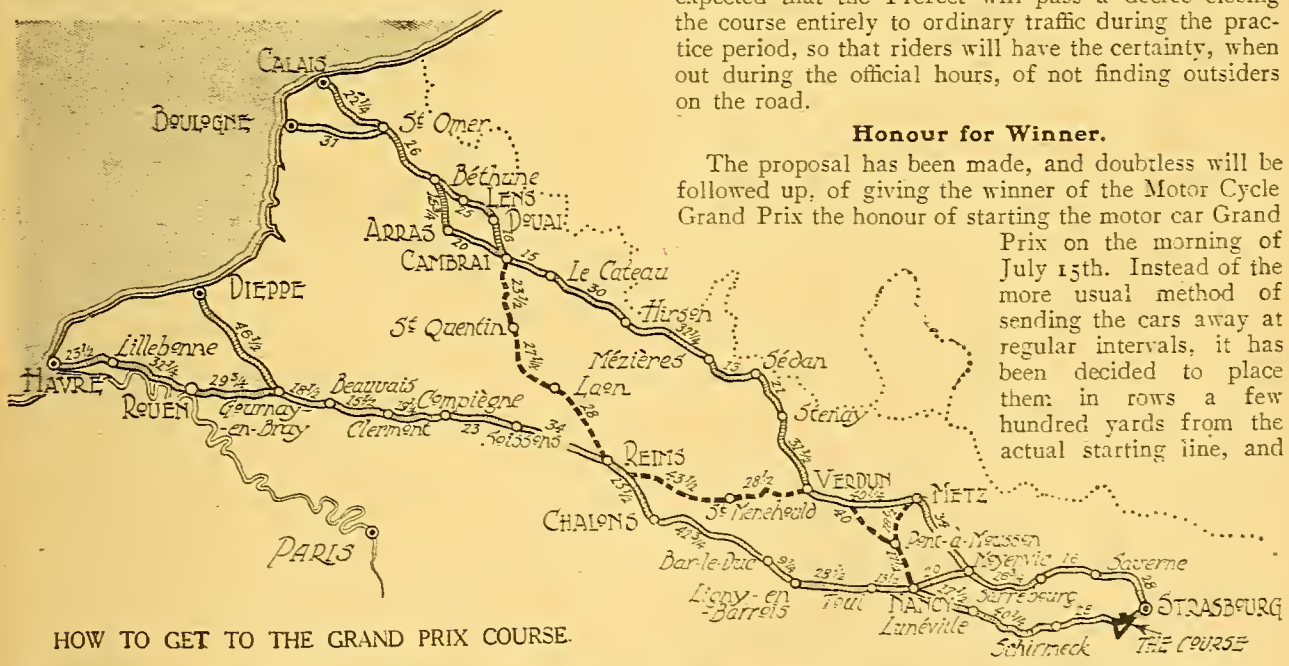
### Course in Good Condition.

The Strasbourg course promises to be in excellent condition for the race next month. The whole of the surface has been relaid, hard granite from the Vosges mountains being used, and there will be a final treatment with calcium chloride in order to render the surface absolutely dustless. The fact that this race is followed by a couple of motor car races on the 15th and the 16th makes it possible to prepare the roads much more thoroughly than could be done if the motor cycle event only were on the programme. As an indication of the elaborate nature of the preparations, one of the local authorities has granted 150,000 francs (more than £3,000 at present exchange) for the relaying of the roads only, while the Municipality of the City of Strasbourg has voted a subsidy of more than £6,000 towards general expenses.

It is expected that the practice period will be from July 1st to 8th, certain of these days being for cars and others for motor cycles. In former years practice has only been tolerated by the local authorities, the public being warned that cars and motor cycles would be on the road at certain hours, but no power existing to keep people off the highway. This year it is expected that the Prefect will pass a decree closing the course entirely to ordinary traffic during the practice period, so that riders will have the certainty, when out during the official hours, of not finding outsiders on the road.

### Honour for Winner.

The proposal has been made, and doubtless will be followed up, of giving the winner of the Motor Cycle Grand Prix the honour of starting the motor car Grand Prix on the morning of July 15th. Instead of the more usual method of sending the cars away at regular intervals, it has been decided to place them in rows a few hundred yards from the actual starting line, and




HOW TO GET TO THE GRAND PRIX COURSE.

"THE AUTOCAR" ROUTE. Calais—Strasbourg (*via* Arras), 372¾ miles; Boulogne—Strasbourg, 381½ (*via* Douai, 5¼ miles further). *Via* Cambrai, Reims and R.A.C. Route, Calais—Strasbourg, 374 miles; Boulogne—Strasbourg, 382¾ miles. R.A.C. ROUTE. Havre—Strasbourg (*via* Sarrebourg), 406 miles; Dieppe—Strasbourg, 367 miles. The Luneville Route saves 5 miles; Verdun—Metz Route adds 6¼ miles.

**France's Premier Event.—**

to send them off in a group. The winner of the motor cycle race will be placed at the head of the group, and will lead the racers down to the starting line at a fairly rapid pace. Immediately the line has been cut, the motor cyclist will pull well over to the right and allow the racing cars to go past. This method has been adopted as an honour to the winner of the motor cycle event, and also because a two-wheeler can slip out of the way of the oncoming racers much quicker than a car While the drivers of the racing cars cannot change their positions until the motor cyclist has given the signal, it is obvious that they will remain hard on the heels of the starter.

### The Course Described.

Entzheim, a village 6¼ miles south-west of Strasbourg, is the nearest point of the course to that city. It is interesting that the whole of the circuit is on by-roads (*chemins vicinaux*), which are very different from the by-roads in England, being mostly straight and with fine surfaces. Half-way between Entzheim and Duttlenheim is Duppigheim, where the start and finish take place and where the grand stand and replenishment booths are situated.

The race proceeds in an easterly direction, and then turns an acute angle southwards along a perfectly straight road to Innenheim. Here is a right-angle bend forming the base of the triangle, where there is another right-angle turn bringing the competitors back to the start, a distance of just over 8 miles.

From the grand stand the road falls away slightly, but after the Entzheim turning rises about rooft., and then falls down towards the southern end of the triangle. After that point it rises slightly, falls to Duttlenheim, and is slightly on the down grade to the grand stand. These gradients are very slight, the maximum up-grade being no worse than five per cent. (1 in 20).

Last year's winner of this French classic race was A. Bennett (Sunbeam), the winner of this year's Senior T.T. His speed was 59.9 m.p.h., as compared with 58.3 m.p.h. averaged in the T.T.

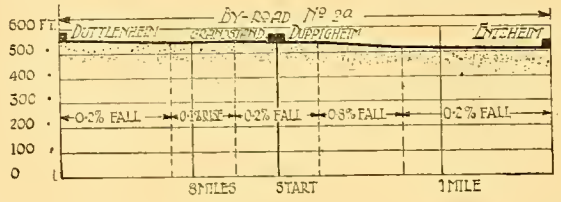
Thus it will be seen that, irrespective of twelve months' advancement in engine efficiency, the figures reveal that the Grand Prix course is nearly 2 m.p.h. faster than the Isle of Man circuit. Considering that there are no serious hills, one may estimate that the race this year will be won at a speed exceeding 60 m.p.h.

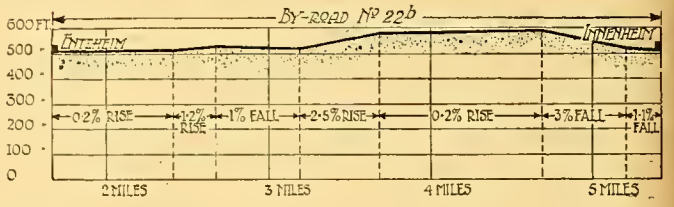
### How to Get to the Course.

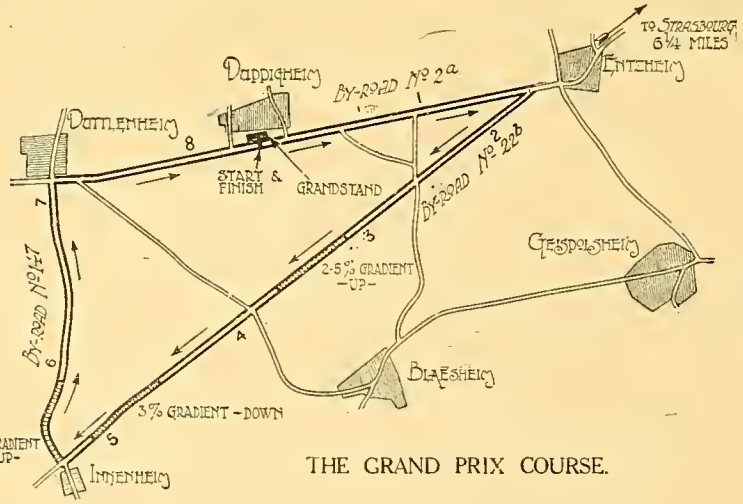
Strasbourg is just over 400 miles from the coast, and is most conveniently reached from Dieppe or Havre. The roads are mostly in good condition, and pass through many towns on the late French front, but it is not necessary to pass through Paris.

Readers of *The Motor Cycle* who contemplate visiting either Strasbourg for the Grand Prix, or Geneva in connection with the International Six Days, are reminded that an article which appeared early this year gives full information as regards the formalities for taking a machine to the Continent. This article has now been brought up to date and reprinted, and a copy will be sent on application to anyone interested.

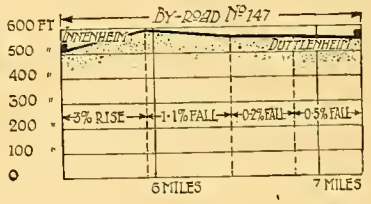
An excellent route from the coast to Strasbourg was published by our sister journal *The Autocar* on June 17th. This route is shown in the map together with an alternative, available from either Dieppe or Havre. The dotted lines in the map show alternatives passing through various places of interest. It will be seen that of the most direct routes *The Autocar* route from Calais to Strasbourg is just over 372 miles, while the most direct route from Dieppe is 367 miles.




THE GRAND PRIX COURSE.




CONTOUR SECTIONS OF THE STRASBOURG CIRCUIT.

It will be seen that the route of the Grand Prix is totally different from that of the T.T. in the Isle of Man. The contours above are of the three sides of the triangular course; the start and finishing point is indicated on the first contour.

# ALL-NIGHT RUN INTO SCOTLAND.

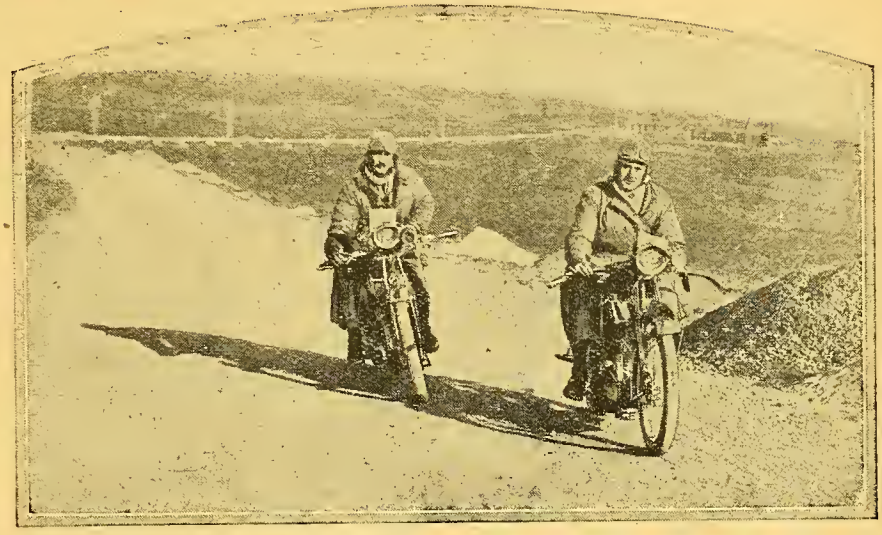
## Newcastle Motor Club's 224 Miles Trial.

FULLY fifteen hundred spectators assembled in the Haymarket, Newcastle, on June 17th, to witness the departure of the sixty competitors in the Newcastle and District Motor Club's 17th All-night Reliability Trial, which covered a course of 224 miles with Edinburgh as the farthest point.

Policemen struggled hard to keep an opening for the competitors, but with little avail, for, immediately a competitor had little more than "squeezed" his way through, the crowd, with craning necks, closed in again in an endeavour to get a glimpse of the next man and hazard a guess as to what his mount was. Brewis (N.U.T.) shot off at speed, wobbled badly in the crowd, and came off—to the amusement of the onlookers—but fortunately escaped serious injury.

### An Early Secret Check.

The first check was at Alnwick, and the main North Road being, on the whole, in good condition, many of the competitors were soon ahead of time and were neatly caught at a secret check which was being worked at Newton-on-the-Moor, about two miles from the old Northumbrian county town. At Berwick the competitors were more watchful, the first man, R. Reid (Scott), passing into Scotland at 11.6. Here W. Richardson had trouble with the electric lighting of his N.U.T., and although he managed to purchase another set of lamps, decided to retire, having lost almost an hour. A head wind had now developed, and, despite the late—or early—hour, a goodly crowd of enthusiasts was assembled at the Dunbar check. In Musselburgh a secret check was in operation, but became a fiasco, the checker, though aided by two policemen who seemed to enjoy the little diversion from their usual round, failing to distinguish the numbers on the majority of the machines. The outward journey—120 miles—terminated at Edinburgh, where one hour was allowed.



A pair of Norton riders on Otter Caps during the All-Night Trial to Scotland organised by the Newcastle and District M.C.

As dawn was breaking the first man was despatched on the return journey, the route through the Lowlands being via Dalkeith, Soutra Hill, Lander, Earlstown, and St. Boswell's to Jedburgh—and a second breakfast stop. Three secret check sections of ten miles each were included in the remaining fifty-six miles, the first commencing four miles from Jedburgh, and the second on the climb over the Otter Caps after leaving Otterburn. The morning was gloriously fine, and the gorgeous moorland scenery provided an excellent tonic for the now tiring riders, who had to keep a sharp look out for the sheep which, grazing by the roadside, became greatly alarmed and galloped for miles along the road.

Punctures, from which the competitors had been practically immune, now began to cause trouble, S. Fullerton (Rover), who up to this time had been well on schedule, losing his chance of a gold 25 miles from the finish, whilst nearer home still J. Stewart (A.J.S. sc.) also fell a victim, but, speedily slipping in the spare wheel, made up his lost time. A badly cut up road, with huge pot holes, provided the last stretch, the competitors being timed in a mile from Newcastle.

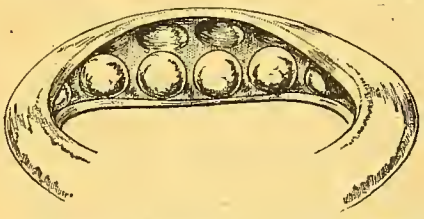
# AUSTRALIAN SOLUTION OF THE TYRE PROBLEM.

## Puncture-free and Unburstable Construction Evolved by a Sydney Inventor.

HERALDED as the "last word in pneumatic tyres," the tyre invented by Mr. J. H. Channon, of Sydney, is at any rate something out of the ordinary. The inventor has tested it severely, and claims it to be unpuncturable and unburstable under present-day conditions.

The principle of the tyre is the enclosing of a number of air inflated balls made of stock tubing within a specially moulded rubber tyre having perfect spherical cavities. These balls can be inflated to any pressure, and are placed in the rim under pressure, the method being adaptable to the ordinary tyre, and it is claimed that it is possible to put on the tyres quite easily.

The new idea, the inventor claims, eliminates all ordinary tyre worries and troubles. There being a series of balls, if one should happen to burst, which it would do only under extremely hard conditions, it is scarcely feasible to believe that the whole lot would burst at once. Even allowing for the very remote possibility of the lot bursting the machine might be run home without injury to the



Claimed to be unpuncturable, the Channon tube, cut open to show how the air inflated balls are moulded with the tube.

bead of the tyre because of the support accorded by the rubber between the balls. It will be seen from the illustration that the cavities are of such a shape that they completely consolidate the air in the balls to a given space, with thin rubber supports in between, which directly take the weight of the load, the air-balls taking the pressure gradually, thus offering a cushion and a resiliency to the shock on the axles.

Four years is said to be the life of the tyre, and it is to be guaranteed 20,000 miles.

The ultimate object of the inventor is to produce a combination tyre with a higher rim than the present-day one, which will lend support to the balls under weight, thus doing away with, or taking the place of, the present-day cover. The tyre will be known as the "Channon-Marshall."

# A CHANNEL ISLES CLASSIC.

## Inter-Island Reliability Trial; 54 Entries for the A.C.U. Cup.

An American Excelsior at Pleinmont. A typical Guernsey country lane.

TRIALS in the Channel Isles have a fascination and environment all their own, and early this month 54 machines were brought up to the starter for an 80-mile run for the A.C.U. Cup in Guernsey, the isle where every road is a hill and every hill a corner.

The riders were dispatched in pairs at one minute intervals. The first observed hill—Petit Bot—occurred at the end of 13 miles, and was composed of hard gravel to the first of five hairpins, all particularly nasty, along little more than a goat track. Two of the three lady competitors, Miss Niles and Mrs. Mauger (Guernsey), fell on the worst bend. E. Le Caudey (Jersey) also fell, but E. Winterflood, M. Slaytor (Guernsey), S. T. Blundell (Jersey), were all good.

In the Talbot Valley a freak hill, The Niaux, caused a thousand or so spectators to gather to watch the climbs. A. Holland (654 Coventry Eagle, Guernsey), E. Pirouet (678 Martinsyde sc., Jersey), P. Mauger (499 Verus), Miss Niles (348 Wolf), E. Winterflood (499 Coventry Eagle, Guernsey), and B. Ellett (490 Norton), E. C. Oldham (633 Norton), E. Charlton (490 Norton), were all clean and steady in their attempts.

Following a lunch interval at the western point of Pleinmont, a resumption was made with a climb up the ragged surface of a grass lane. Mrs. E. Oldham (550 Triumph sc., Jersey) made a clean ascent here, but both S. Peek (595 Douglas) and E. de Putron (633 Norton, Guernsey) came off on the 1 in 4 portion. The Griffon hill gave trouble to F. Touzel (499 Rudge, Jersey), who konked out, and to E. Le Maitre (293 Connaught, Guernsey). Clean ascents were effected by T. Le Cheminant (499 Coventry Eagle), W. Blondel (348 Coulson), A. Gorman (550 Triumph sc., Guernsey), and V. Bryant (496 Brough), A. Kempster (550 Triumph), and D. Le Caudey (550 Triumph, Jersey).

Pluck and sand must be in the make-up of a rider who can complete such a run on a 1910 fixed geared Win-Precision

Mrs. P. Mauger (left) and Miss N. Niles, Guernsey's two most accomplished lady motor cyclists.

—a feat accomplished by E. H. Le Brocq (Jersey), and almost equalled by C. Millard (Guernsey) on an old two-speed Clyno two-stroke. The home riders were very clean on hills, but in the majority of instances too early in controls. Steadiness sent the A.C.U. Cup to Jersey.

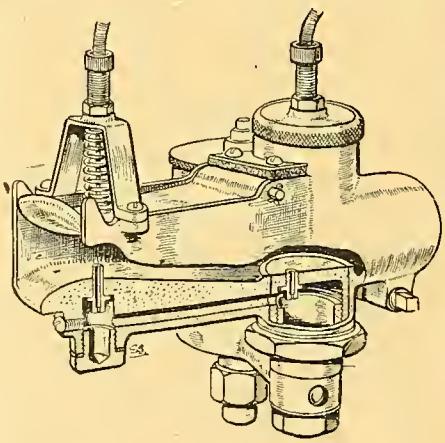
Results.—A.C.U. Cup and gold medal: E. Pirouet (678 Martinsyde, Jersey). Silver medals: A. Holland (654 Coventry Eagle sc., Guernsey), B. Ellett (490 Norton), E. Le Brocq (1913 348 Douglas), H. L. Cutbush (633 Douglas sc.), all Jersey. Ladies, first: Miss N. Niles (349 Wolf, Guernsey).

# A FULL POWER CARBURETTER.

## A New Binks Model for Sporting Mounts.

FOR some years past the Binks "rat-trap" carburetter has held a high position amongst the racing fraternity. Unfortunately, the racing Binks carburetter being built for racing purposes was not sufficiently flexible for use in more normal circumstances. Nevertheless, there have been steady demands for such an instrument in a modified form, and this demand is now being met by the latest product of C. Binks, Ltd.

Similar in most respects to the racing models, the new carburetter has a piston throttle in the normal position, and directly below this throttle but somewhat to the rear of the barrel is fitted a pilot jet; the expanding choke is arranged in much the same manner as before—that is to say, the top portion of the rectangular section passage is hinged at the front end, the rear end being controlled over a fairly wide range by a separate cable control. Just inside the mouth of the air intake at the point of highest air speeds lies the main jet, which is easily accessible should a change be necessary. The float chamber is detachable and adjustable for position, and a filter is fitted above the petrol inlet to the carburetter body.



A modified form of the racing type Binks carburetter for use on any sporting mount.

This new carburetter has been subjected to tests on a modern high efficiency engine, and we have found that it bears out the claims of the manufacturers in every respect. The slow running on the pilot jet is good, and with the throttle open and the main jet in action, it is possible to obtain very high speed, since the air passage is entirely unrestricted, except for a very slight choke near the main jet. In addition the acceleration is very rapid. The makers do not claim that the new carburetter is exceptionally economical or automatic in action, but it has been produced with the idea of supplying the need of a carburetter for sporting machines—that is, an instrument which will enable the highest speeds and good acceleration to be obtained while the engine can be throttled down and easily controlled in traffic and other normal road conditions.

# CURRENT CHAT

## Times to Light Lamps.

| | | |
|---|---|---|
| June 29th | .. .. | 10.19 p.m. |
| July 1st | .. .. | 10.18 „ |
| „ 3rd | .. .. | 10.18 „ |
| „ 5th | .. .. | 10.17 „ |

### Next Thursday.

Next week's issue of *The Motor Cycle* is the annual Summer Number.

### Distinctions.

"Two wheels for sport, three for safety, and four for swank," writes "Ixion" in chiding an old motor cyclist for abandoning his earlier love for a motor car.

### The Bonus Bugbear.

A unique system of awarding marks of merit has been devised by Hans Renold, Ltd., to overcome the bonus bugbear, referred to in our issue of the 15th. Particulars of it will be found on page 872 of this issue.

### Loss to Motor Cycle Sport in Ireland.

It is with sincere regret that we have to announce the death following an accident of Mr. Bernard M'Givern, son of Mr. Peter M'Givern, J.P., Newry Street, Banbridge, and vice-captain of Banbridge and District M.C.C., a photograph of which appeared in the March 16th issue of *The Motor Cycle*.

### Relativity.

Americans always assume an innocence regarding the size of Great Britain, and pretend that in motoring in our country they are always in fear of "going over the edge." British motor cyclists who have not visited the Isle of Man sometimes refer in similar terms to motoring in the I.O.M. What will the majority of our readers think of the 80 mile trial in the little island of Guernsey, referred to on page 882.

### Trials not Prohibited.

Mention was made last week at the Bromsgrove Rural Council of the danger occasioned to the public by motor cyclists using narrow lanes in the Romsley district, and taking corners at high speeds. It was suggested that motor testers should be controlled, and that motor charabancs should not be permitted to use unsuitable roads. Eventually it was decided that permission should be given for motor cycle trials on condition that the course was properly policed, and that a contribution of £5 was made towards the damage to the roads.

### Finality not in Sight.

Those who sometimes express the opinion that finality in motor cycle design will soon be reached may not live to see the day. So far as reliability is concerned British motor cycles have certainly reached a high standard, but today there is no more indication that design is settling down to one pattern than was the case a decade ago.

A SUMMER NUMBER
OF
THE MOTOR CYCLE
WILL BE PUBLISHED NEXT
*Thursday, July 6th.*
Special articles and illustrations of an appropriate nature are in course of preparation for this enlarged issue.
**To prevent disappointment definite orders should be placed with Newsagents.**

## Special Features.

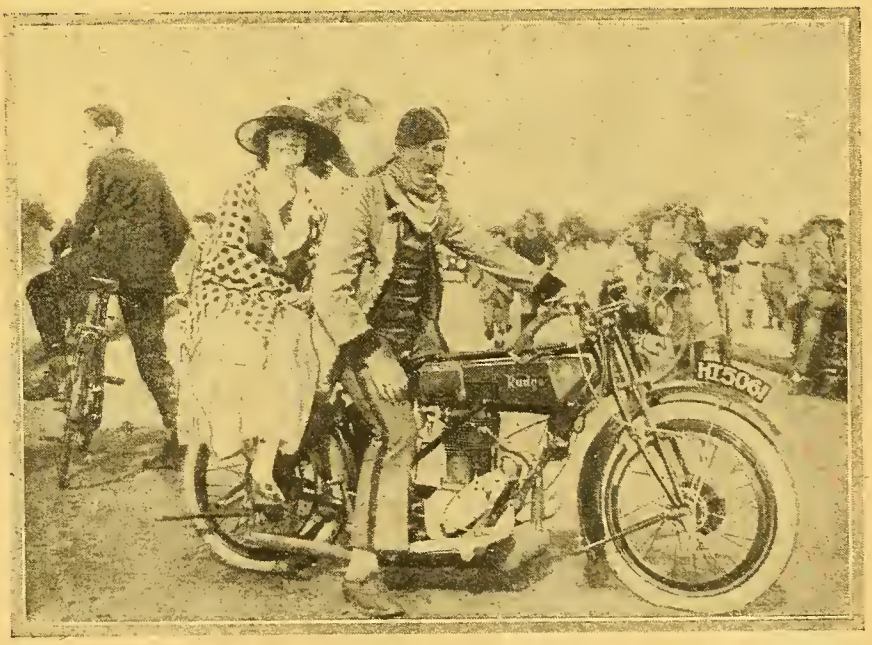
A FOUR-SEATED THREE WHEELER.
THE BONUS QUESTION.

### Motor Works Purchased.

The well-known motor cycle manufacturers, A. J. Stevens, Ltd., of Wolverhampton, have purchased the Briton Motor Works from the receiver in liquidation, Mr. R. H. Johnston. The Briton Motor Company was established in 1906 in Stewart Street, Wolverhampton, and moved in August, 1920, to the present large premises in Lower Walsall Street.

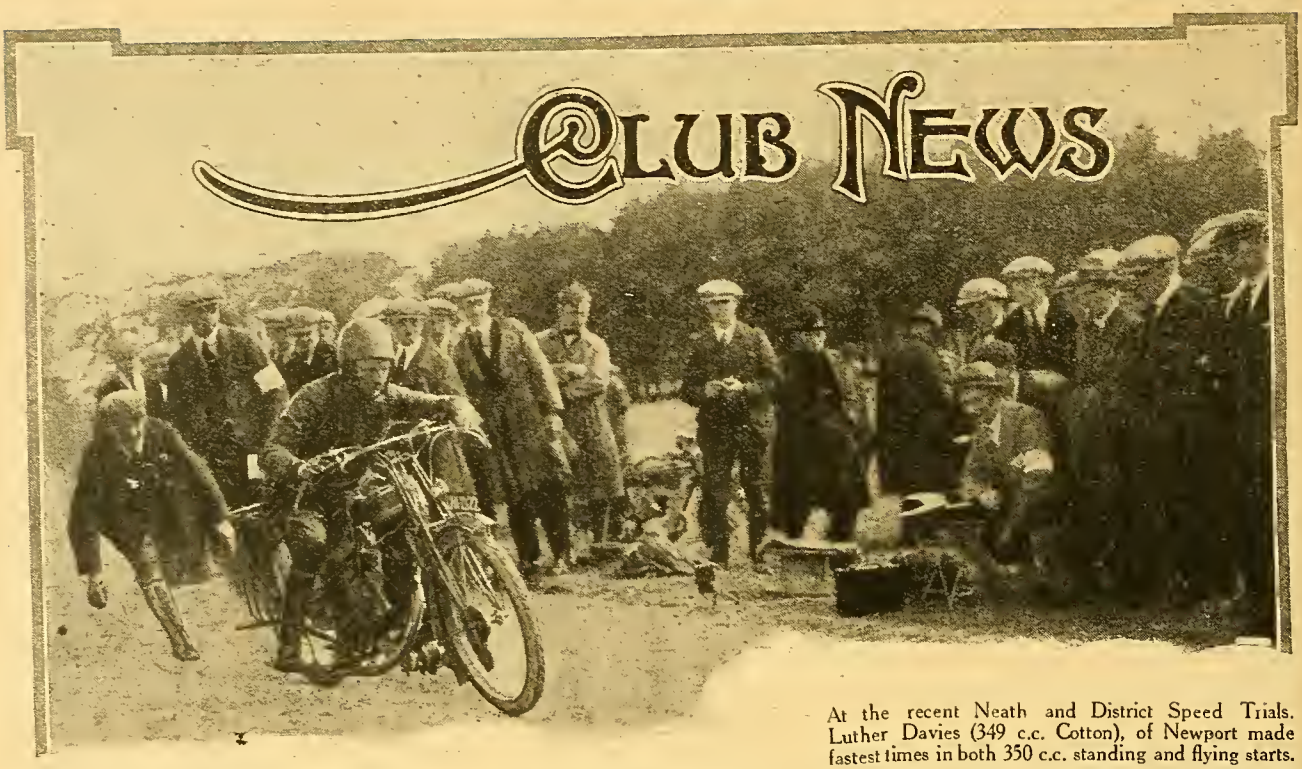
### Presentation to T.T. Riders.

An interesting gathering took place on Monday, June 19th, at the offices of the Triumph Cycle Company, Ltd., when W. W. Brandish, Jun., and F. B. Halford were presented with gold chronometers suitably inscribed in recognition of their successful efforts in the recent Tourist Trophy Race. Brandish (499 o.h.v. Triumph), it will be remembered, finished second in the Senior Race at an average speed of over 56½ m.p.h.



THE "COSTER AND GAL." Mr. and Mrs. Le Brun (499 c.c. Rudge-Multi) who won first prize for solo mounts in the Fancy Dress procession organised by the Bristol M.C.C. on the recent Hospital Saturday.

# CLUB NEWS



At the recent Neath and District Speed Trials. Luther Davies (349 c.c. Cotton), of Newport made fastest times in both 350 c.c. standing and flying starts.

## Loughborough and District M.C.C.

Readers will be interested to learn that Clipstone Drive, the well-known speedway, has again been granted for the use of the Club for the Speed Trials which are being held on July 29th under the auspices of the Mansfield and Loughborough Clubs.

## Sutton Coldfield and North Birmingham A.C.

Permission has been obtained to held a hill-climb on Angel Bank, a main road hill near Cleobury Mortimer, and numerous classes will be run in this event. Full particulars may be obtained from Mr. W. S. Banner, 30, Cromer Road, Balsall Heath; or Mr. W. Watson, 40, Edmund Street, Birmingham.

## Southport M.C.

Birkdale Sands was the scene of the race meeting held by this club, when some excellent performances were put up. The following riders gained prizes:—C. H. Foster (349 New Scale), H. Porter (499 Sunbeam), E. Headlam (998 Zenith-Bradshaw), A. Houlding (349 Matador-Bradshaw), C. Waterhouse (499 Sunbeam) and S. Ollerhead (494 Douglas), who made fastest time of the day.

## Neath and District M.C.

Competitors for the Margam Trials on July 22nd will be interested to learn that, in addition to the Silver Cups offered by the Port Talbot Fête and Gala Committee, the Neath Club intends putting up the Evans-Bevan Silver Cup for the competitor making fastest time on the Margam course for motor cycles and sidecars.

## Lichfield and District M.C.C.

F. H. Twyman (499 Sunbeam) gained a 1st class award, and H. Hines (998 Blackburne) a 2nd class award in the reliability trial held recently at Lichfield. Another trial of a similar nature is being held on July 2nd, starting at 2 p.m., particulars of which may be obtained from the Hon. Sec., Mr. H. Hoskison, "Fradley," Lichfield.

## Keighley M.C.C.

A strenuous course was selected for the reliability trial which took place on June 18th. Some difficult hills were encountered, both from the ascending and descending point of view, and several retirements had to be recorded. Creditable performances were made by W. Smith and E. Ackroyd (499 Sunbeams) and R. Green (349 A.J.S.). H. Pearson (486 Scott Squirrel sc.) had to retire in the early part of the trial with a broken sidecar spring, and G. Shore (557 B.S.A. sc.) met with brake trouble and had to drive into the moorland bordering the track to avoid worse results.

## The Motor Cycling Club.

The ninth members' race meeting of this club is being held on Brooklands track, Weybridge, on Saturday, July 8th, full particulars of which can be obtained from Mr. J. A. Masters, 22, Norland Square, Kensington, W.11. Three prizes will be given for each event if sufficient entries are received; there will be twelve races, the first of which is timed to start at 1.30 p.m.

## Keighley M.C.

The course chosen for the reliability trial held on June 18th was rather strenuous, and eventually proved too much for the sidecar class, which was completely eliminated from various causes. In the solo class there were only three survivors, and they received awards as follows: 1, W. Smith (499 Sunbeam), trophy and gold medal; 2, R. Green (349 A.J.S.), silver medal; 3, E. Ackroyd (499 Sunbeam), bronze medal.

## Grimsby M.C.C.

On Saturday, July 1st, at 3 p.m., a Gymkhana will be held in aid of the Grimsby and District Hospital. Entries for the various events are free, but a silver collection will be taken. A number of sporting events and competitions have been arranged, and tea will be provided free of charge. Intending competitors are asked to notify Mr. F. Plastow (Chairman of the Humberstone Fitties Syndicate) as soon as possible at 13-15, Osborne Street, Grimsby.

## Cookstown M.C.C.

Excellent weather conditions favoured the 30-mile Road Race held recently, and considerable interest in the event was displayed by a large number of spectators. Results were as follows:—(1) Mallon (499 Sunbeam), scr., 38½m.; (2) Fearon (490 Norton), 2m., 40m. 45s.; (3) Hamilton (490 Norton), 46m. 47s. The average speed of the winner was 48 m.p.h., who also put up the fastest lap (about 6 miles) in 7½ minutes. In the Half-mile Speed Handicap, Weir (499 Triumph) was first, Mallon (499 Sunbeam) second and Forsythe (499 Sunbeam) third.

## Northern Centre A.C.U.

Organised by the Barrow and District M.C., the formula results of the Speed Trials held at Eskmeals are as follows, the numbers after each name indicating the "figure of merit":—Class B: (1) G. W. Shepherd (292 Edmund), 990; (2) K. Sayer (249 Velocette), 1559; (3) W. G. Hardman (349 Coulson B.), 2063. Class C: (1) G. W. Shepherd (292 Edmund), 1084; (2) H. Baxter (490 Norton), 1440; (3) F. Dunning (499 Triumph), 1500. Class D: (1) G. W. Shepherd (292 Edmund), 967-9; (2) F. Dunning (499 Triumph), 1303. Class E: (1) G. W. Shepherd (292 Edmund), 1092; (2) H. Baxter (490 Norton), 1374. Class L: (1) H. Jackson (499 Sunbeam), 1356; (2) P. Barron (998 Indian), 2065.

## Sussex County and Eastbourne A.C.

Tuesday, July 4th, has been chosen for holding a Motor Gymkhana at Gildredge Park, Eastbourne, in connection with Eastbourne Carnival Week, and the event should prove both interesting and amusing. Particulars and entry forms can be had from the Club Secretary at 41, Terminus Road, Eastbourne.

## Western M.C.C., Glasgow.

The official results of the "Bates" Trophy Trial held on Saturday, June 17th, are given as follows:—Winner of the Cup: G. Hope-Wilson (New Gerrard B. and S.), with a time-error of 3m. 16s.; First Class Awards: H. Mackie, 3m. 55½s.; T. Currie (799 A.J.S., sc., 4m. 5⅕s.; J. C. Trotter (490 Norton), 4m. 21⅕s.; B. Campbell (799 A.J.S. sc.), 4m. 21⅘s. There were several retirements from various causes.

## Essex M.C.

Joint Open Speed Trials are being held on Wednesday, July 5th, at Westcliff-on-Sea, for all clubs belonging to the Eastern Centre A.C.U., when special attention is being given to the private owner. The trials will take place on the Western Esplanade, commencing at 2 p.m., the distance being one kilometre, standing start. A special prize is offered for the winner of a match between the fastest car and the fastest motor cycle. Details are available from Mr. E. J. Boss, 40, Chancery Lane, London, W.C.

## Natal M.C.C.

Below we give the results of the Speed Trials held at Durban on May 27th, when much interest was displayed in the event. Fastest time of the day was made by J. H. Nicoll (998 Indian). D. A. Scott (349 A.J.S.), 15⅘s., 56.96 m.p.h.; D. Brink (349 A.J.S.), 16⅖s., 54.22 m.p.h. 500 c.c. Class:—L. Van Bergen (490 Norton), 12s., 75 m.p.h.; T. Kenyon (499 Triumph), 12⅖s.; 72.58 m.p.h.; A. V. Baker (499 Triumph), 13⅕s., 68.18 m.p.h.; C. H. Young (499 Triumph), 13⅖s., 67.17 m.p.h.; C. A. Woodward (490 Norton), 14s., 64.29 m.p.h.; J. H. Moulder (499 Sunbeam), 14s., 64.29 m.p.h.; E. J. Bell (486 Scott Squirrel), 14⅕s., 63.38 m.p.h.

## Wallington and District M.C. and L.C.C.

The night trial held on June 17th proved quite successful, the course being from Coulsdon to Brighton and back, when competitors were required to ride to a schedule speed of 20 m.p.h. Only three competitors succeeded in gaining awards, secret checks being responsible for the downfall of the remainder. The winner of the Silver Cup for the best solo performance was E. C. Gordon (499 o.h.v. Triumph), whose time error was only 1m. 50s. Bronze medals were won by G. Baxter (998 Harley-Davidson sc.), 2m., and E. Vallis (976 Matchless sc.), 2m. 30s.

### To Club Secretaries.

Trials secretaries of motor cycle and cycle car clubs are requested by the competitions manager of John Jardine, Ltd., of Nottingham, the makers of the Jardine four-speed gear-box, to forward fixture lists of their competitions and events for the present year.

### North Western Centre A.C.U.

Permission has been obtained to hold a hill-climb on July 29th on a good stretch of road over 20ft. wide and in excellent condition. Situated between Garstang Station and Oakenclough Village, the road is easily accessible from Garstang, which is on the main Preston to Lancaster road. Applications for entry forms should be addressed to Mr. J. H. Peace, "Girsee," 258, Manchester Road, Burnley.

### Ealing and District M.C.C.

The first annual joint hill-climb between this club and the Surbiton Motor Club has been arranged to take place at Kop Hill on Saturday, July 1st, starting at 1.30 p.m., and is open to members of either of these clubs. The programme includes classes for solo machines, sidecars, three-wheelers, and cars. All entries and other communications should be sent to Mr. Frank A. Longman, organising secretary, 17, Boud Street, Ealing, W.5.

### Nottingham & District M.C. & L.C.C.

The results of the Dennis-Bayley Challenge Cup reliability trial, which has been held annually since 1908, are as follows, there being 27 starters for the event. The course was over a 100 miles of varying country. The best performance on time was made by F. W. Stevenson (496 Brough), who won the trophy last year, whilst other principal finishers in order of merit were: J. Cohen (225 Campion), A. G. Robinson (976 Matchless sc.), and S. S. Debenham (976 Campion sc.).

### Coatbridge, Airdrie and District M.C.C.

Saturday, July 8th, has been chosen for the open fast hill-climb on Bowhouse Brae, Thankerton. Members are requested to assemble at Kyle Bros.' Garage, Coatbridge, not later than 2 p.m. All classes are being catered for in the programme, and a prize will be awarded to the competitor obtaining the fastest time in each class, and a special gold medal for the fastest time of the day. Further particulars may be obtained from the hon. sec., Mr. W. A. Morris, Carradale House, Coatbridge.

### Aberdeen and District M.C.

A large number of members and their friends attended the speed trials which took place near Aberdeen on June 17th, when some creditable speeds were accomplished. The distance of half a mile was over an excellent road surface, rendering high speeds safe.

350 c.c. CLASS.—1, G. K. Ferries (349 Massey-Arran), 24⅗s.; 2, T. Smith (225 New Imperial), 28⅖s.; 3, C. Farquharson (349 Sheffield-Henderson), 29⅕s.

1,000 c.c. CLASS.—1, A. Brown (490 Norton), 21⅖s., a speed of 84 m.p.h.; 2, G. K. Ferries (348 Massey-Arran), 24s., a speed of 75 m.p.h.; 3, R. Demster (499 Triumph), 24½s.; 4, W. Cheyne (499 Sunbeam), 24⅘s.

An enjoyable run also took place to the Linn of Dee, leaving the Bridge of Dee at 10 a.m. and arriving at about 1 p.m. Tea was provided by the club during the afternoon.

## Week-End Club Events.

*July 1st.—Bristol M.C. and L.C.C.—Gymkhana at Clifton Zoo Gardens.*
*July 1st.—Gloucester M.C. and L.C.C.—Social Run.*
*July 1st.—Reigate, Redhill and District.—Single Gear Trial.*
*July 1st.—Coatbridge, Airdrie and District M.C.C.C. —Fast Hill Climb on Formula (Open).*
*July 1st.—Dumfries and District M.C. and C.C.—Social Run.*
*July 1st.—Oxford M.C.—Reliability Trial.*
*July 1st.—Coventry and Warwickshire M.C.—Sutton Coldfield Hill Climb (Centre).*
*July 1st.—Coventry and Warwickshire M.C.—Picnic.*
*July 1st.—Yorkshire Centre Speed Trials at Saltburn.*
*July 1st.—Rochester, Chatham and District M.C. and L.C.C.—Brooklands Meeting (Inter-club event).*
*July 1st.—Wolverhampton and District M.C.C.—Competition for Committee's prize.*
*July 1st.—Austin L.C. and M.C.C.—Charity Gymkhana.*
*July 1st.—York and District M.C.—Speed Trials on Saltburn Sands.*
*July 1st and 2nd.—Coventry Triangle M.C.—Matlock and Dovedale (Week-end Run).*
*July 2nd.—Barrow and District M.C.—Speed Trial.*
*July 2nd.—Coventry and Warwickshire M.C.—Church Parade.*
*July 2nd.—Exeter M.C. and L.C.C.—Club Run to Brixham and Berry Head.*
*July 2nd.—York and District M.C. Mr. E. F. Wilson's Run.*
*July 2nd.—Southampton and District M.C.C.—London to Stonehenge.*
*July 2nd.—Colne and District M.C.C.—Run to Redmire.*
*July 2nd.—Bulwell M.C.—Secretary's Run.*
*July 2nd.—Prestwich and District M.C.—Social Run.*
*July 2nd.—Sheffield M.C.C.—Run to Cleethorpes.*
*July 2nd.—Bridgnorth and District M.C.C.—Run to Clent Hills.*
*July 2nd.—Manchester M.C.—Social Run.*
*July 2nd.—Atherton and District M.C.C.—Run to Colwin Bay.*
*July 2nd.—Leeds Motor Union.—Run to Pateley Bridge and Stump Cross.*
*July 4th.—Gloucester M.C. and L.C.C.—Championship Trial for Gibb and Box Cups.*
*July 4th.—Worcestershire M.C. and District M.C.C. —Evening Main Road (Reliability) Competition. Amateurs only.*
*July 4th.—Sussex County and Eastbourne A.C.—Motor Gymkhana.*
*July 5th.—Essex M.C.—Speed Trials at Westcliff-on-Sea.*
*July 5th.—Leeds Motor Union.—Impromptu Run from City Square.*
*July 5th.—York and District M.C.—Burnsall Trial.*
*July 6th.—Atherton and District M.C.C.—Run to Belmont.*
*July 6th.—Gloucester M.C. and L.C.C.—Visit to Royal Enfield Works, Redditch.*

### Mansfield M.C.C.

In the recent hill-climb held by this club F. Sissons (490 Norton) did the half-mile in 23s. and at a speed of 78.2 m.p.h. O. W. Redgate (499 Sh ffield-Henderson) did the distance in 24s.

### Crystal Palace M.C.C.

The inauguration meeting of this newly formed club was held on June 20th, when it was decided to cater for the requirements of the competition rider and tourist by organising sporting events and various runs and lectures throughout the year. Application for membership should be made to the hon. sec. at the club headquarters, 44, Anerley Hill, Upper Norwood, S.E.

### Bath and West of England M.C.

About thirty members of the club took part in a midnight run to the Druid Stones at Stonehenge recently to watch the sun rise through the table stone. The run commenced at 2 a.m., and the riders were rewarded by seeing the sun on the Druid altar stone, reported to be the first time for eight years that it has been visible from here.

### Stockbridge & District M.C. & L.C.C.

The two-circuit 20 m.p.h. reliability trial held recently over a remarkably strenuous course produced the following results: 1, C. W. Hayward (496 Martinsyde); 2, W. H. Clarke (490 Norton); 3, W. P. Archer (557 B.S.A.). In the lightweights H. Webb was the winner on a 225 c.c. "Webb's Velocity."

### Auto Cycle Union.

The Secretary of the A.C.U. (Mr. T. W. Loughborough, 83, Pall Mall, London, S.W.1.) invites all interested in the motor cycle movement to communicate to him any suggestion for an improved and more equitable scheme for the taxation of motor vehicles. Suggestions will be carefully considered with a view to embodiment in the Union's representations to the Government Committee which will shortly consider the matter.

### Oxford M.C.

A members' map reading and 20 m.p.h. reliability trial is being held on Saturday, July 1st, over a 60-mile course, starting at 2.30 p.m., at Cowley Place, Magdalen Bridge, Oxford. A silver medal will be awarded to all competitors who do not lose more than 8 marks (total error), and a bronze medal to those losing not more than 14 marks (total error). The course, which is in the neighbourhood of the Chiltern Hills, does not include any freak hills, and will not be arrowed. Competitors will receive at the start a list of names of all places occurring in the route, with the distance between each.

### York and District M.C.C.

A successful hill-climb was held June 17th at Garrowby Hill. The entries numbered nearly 100, and the results were as follows. Class 1, 275 c.c.: (1) F. Reyaard (249 Menopole), 1m. 3s.; 2, G. Bower (249 New Imperial), 1m. 10s. Class 2, 350 c.c.: (1) R. Wood (349 Massey-Arran), 57s.; (2) G. W. Shepherd (349 Edmund), 58s. Class 3, 560 c.c.: (1) R. T. Cawthorne (490 Norton), 51s. (fastest time of the day); (2) W. Wilkinson (492 Sunbeam), 54½s. Class 4, 750 c.c.: (1) W. Wilkinson (492 Sunbeam), 53½s; (2) R. T. Cawthorne (490 Norton). Class 5 unlimited c.c.: (1) R. T. Cawthorne (490 Norton) 52s.; (2) G. Bower (490 Norton), 53⅖s. Class 6, standard touring: (1) D. Fletcher (560 Triumph), 1m. 3s.; (2) C. L. Burley (560 Triumph), 1m. 8⅕s.

## YORKSHIRE CENTRE COLONIAL TRIAL—RESULTS

IN our report of the Yorkshire Centre (A.C.U.) open trial last week, the principal trophy winners were given. A full printed list is now to hand from the Centre; this shows the total number of marks allotted to each finisher. In addition, it gives such useful information as the weight and price of all the machines, and the instances in which the timed hill-climb figures were used to decide between the performances of riders who were equal on marks in other respects.

Separate trophies, to be won outright, were offered in each class. The full results are:

FIRST PRIZE TROPHIES: B. Kershaw (249 New Imperial), J. Whalley (349 Massey-Arran), H. Langman (486 Scott), C. B. Haigh (532 Scott), J. A. Watson-Bourne (976 Brough Superior), P. Pehrson (499 Dunelt), B. L. Bird (557 B.S.A. sc.), A. R. Stacey (989 Harley-Davidson sc.), W. Ridley (1098 New Hudson).

SECOND PRIZE TROPHIES: P. L. Mayo (249 Coventry Eagle), H. Gibson (349 Raleigh), H. S. Moorhouse (499 Triumph), W. Moore (532 Scott), G. M. Townsend (555 P. and M. sc.).

THIRD PRIZE TROPHIES: C. F. Nott (349 Raleigh), W. Westwood (499 Triumph), G. S. Boston (532 Scott), E. H. Gifford (678 Martinsyde sc.).

CERTIFICATES: J. W. Moffatt (349 Beardmore-Precision), H. J. Greathead (349 Ivy), W. H. Hadfield (349 Raleigh), W. E. Hope (349 Cotton), R. P. Walker (349 Excelsior), J. A. Newman (496 Douglas), A. R. Evans (499 Sunbeam), C. W. Ward (499 Triumph), W. Backhouse (499 Triumph), E. L. Boston (486 Scott), S. Lawrence (499 Sunbeam), W. Smith (499 Sunbeam), J. T. Bashall (678 Martinsyde), W. Brandish (600 Humber), S. Duxbury (532 Scott), W. Clough (532 Scott), J. M. Younie (678 Martinsyde), T. A. R. Arthurs (550 Triumph), J. H. Holmes (532 Scott), A. Greenwood (976 Brough Superior), H. Hainsworth (499 Sunbeam sc.), R. Lewis (555 P. and M. sc.), H. S. Perrey (770 B.S.A. sc.), F. Smith (925 Clyno sc.), W. A. Carr (1,098 Morgan), C. R. Waddington (1,098 Morgan).

NO AWARD: T. H. Blackburn (249 Diamond).

RETIRED: A. Lucas (249 Coventry Eagle, J. Ball (225 Sun-Vitesse), Mrs. G. M. Janson (211 Levis), C. Dodson (349 Royal Ruby), W. Marriott (349 Coventry Eagle), A. Bowie (349 Wooler), E. Searle (349 Sheffield-Henderson), L. Dixon (490 Norton), R. May (490 Norton), J. S. Whitley (499 Sunbeam), J. R. Wilkinson (486 Scott), J. H. Walker (557 B.S.A.), A. K. Filton (976 Brough Superior), W. Wells (499 Sunbeam sc.), W. Kantlehner (499 Wilkin sc.), R. Horsley (633 Norton sc.), G. E. Jackson (598 Beardmore-Precision sc.), G. E. Booth (598 Beardmore-Precision sc.), W. E. Grange (750 Bradbury sc.), C. F. Swaine (976 L.S.D.), J. Robinson (976 L.S.D.).

NEXT THURSDAY
THE MOTOR CYCLE
SUMMER NUMBER.
IT WILL BE AN ISSUE WORTHY OF "THE MOTOR CYCLE"—ORDER YOUR COPY EARLY!

On a steep bye-road near Tring, W. R. Haggas (499 c.c. Triumph sidecar), followed by another Triumph rider. This short incline caused more low-gear work than Kop Hill.

## Seven Teams accomplish non-stop runs in M.C.C. Inter-Team Trial. "The Motor Cycle" Cup won by a few seconds only over a thirty-three mile course traversed three times.

THE Woolwich, Plumstead, and District M.C. holds the Club Team Championship for 1922 by a win in one of the closest contested events which have ever been run for *The Motor Cycle* Cup.

The scene in the courtyard of the Rose and Crown Hotel, Tring, and the space in front of the hotel on Saturday last was the subject, as usual, of considerable local interest and keen rivalry when no fewer than twenty-seven clubs assembled to compete for the club championship this year.

At the crest of Kop Hill where a good number of spectators gathered. F. James (1,098 c.c. Morgan) and J. A. Stacey (976 c.c. Matchless sidecar), both members of the Sheffield and Hallamshire M.C. and L.C.C.

As evidence of the keenness with which the M.C.C. team trial is contested year after year, it is only necessary to call attention to the mileage which clubs will accomplish in order to participate in the event. From Yorkshire alone there were three representative clubs competing, as well as many teams from other far distant centres, but the sporting members of the Ilkley M.C. and L.C.C., mounted without exception on Scott machines, and the Bradford M.C. and L.C.C. hold the record for long distance.

### 159 Competitors.

One hundred and fifty-nine competitors assembled at the starting point, and it was observed that the sidecars were chiefly occupied by male members for time-keeping purposes. No club was leaving anything to chance. The results of the trial, in which seven teams accomplished non-stop runs, show how remarkably close several of the teams were, particularly the first three:

| Club. | Total Time Error. |
|---|---|
| (1) Woolwich, Plumstead, and District M.C. ... ... | 3m. 11s. |
| (2) Worcester and District M.C.C. | 3m. 43s. |
| (3) Nottingham and District M.C.C. | 3m. 46s. |
| (4) Coventry and Warwickshire M.C. ... ... ... | 4m. 29s. |
| (5) North-West London M.C. ... | 6m. 24s. |
| (6) Norfolk M.C. and L.C.C. ... | 6m. 42s. |
| (7) Ilkley M.C. and L.C.C. ... | 9m. 16s. |

**1922 Club Championship.—**

The scores of the Woolwich, Plumstead, and District M.C. were as follows, and the riders are to be congratulated upon a very excellent performance:

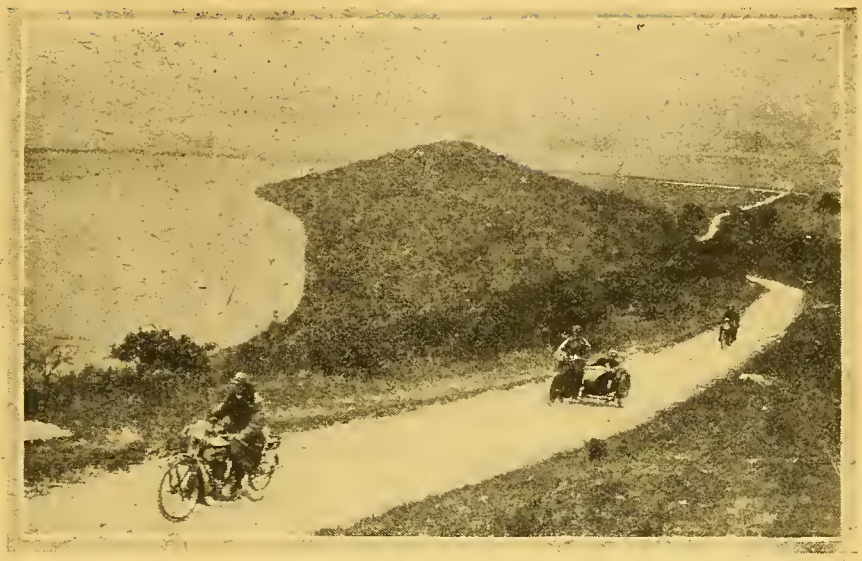
B. J. Sims (499 Triumph), 9s. error.
F. Macdonald (976 Matchless sc.), 57s. error.
E. Atkins (498 Ariel), 23s. error.
T. J. Ross (976 Matchless sc.), 17s. error.
C. Clease (499 Triumph), 1m. 9s. error.
F. J. Ellis (976 Matchless), 16s. error.

They were closely followed by the Worcester and District M.C.C., whose time error only totalled 3m. 43s., a difference of just 32s., and these in turn only beat the Nottingham and District M.C.C. by 3s., their time error amounting to 3m. 46s. The Worcester team were as follows:—

J. A. Newman (494 Douglas).
R. Brown (496 Martinsyde sc.).
J. M. Dosher (976 Royal Enfield).
E. W. Choldcroft (799 A.J.S. sc.).
J. A. Chadwick (—).
E. Williams (799 A.J.S. sc.).

### A Last Minute Change.

Rather a curious incident marked the introduction of the Martinsyde sidecar into the Worcester team. R. Brown intended riding a 499 c.c. Sunbeam sidecar in place of B. Bladder (976 New Imperial J.A.P. sc.), who was unable to compete, but on Saturday morning his gear box seized, rendering the machine unfit for use Nothing daunted, however, Reg. Brown set off on a tour of the local garages in search of a substitute, and was eventually rewarded by discovering a Martinsyde solo. Further search produced a sidecar from another source, and with this hurriedly assembled outfit he pluckily prepared to distinguish himself and his club. But his troubles were not yet over. During the last few minutes before the start, whilst demonstrating the capabilities of his new mount, the clutch cable elected to die a natural death. Even a catastrophe such as this, however, failed to vanquish him, and he eventually started—and finished—on the exhaust valve lifter. The Worcester Club ought to be, and probably are, proud to number such an indomitable rider amongst their members.



A trio of the Oxford Motor Club on Kop Hill. Observe the curious formation of the rising ground which projects into the fertile valley like a cape into the sea. N. V. Colegrove (550 c.c. Triumph), L. Avery (998 c.c. Harley-Davidson sidecar), and J. A C. Kempster (550 c.c. Triumph).

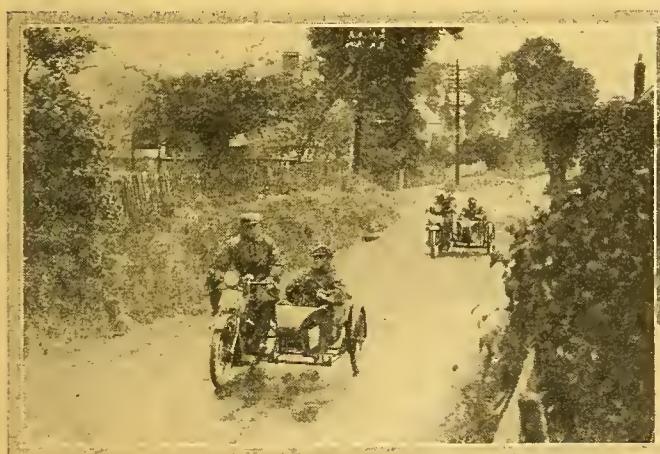
The Nottingham and District M.C.C. were represented by:—

H. Karslake (976 Brough-Superior).
I. Cohen (976 Campion sc.).
F. W. Stevenson (692 Brough).
J. R. Sylvester (698 Raleigh sc.).
G. Brough (976 Brough-Superior).
S. S. Debenham (976 Campion sc.).

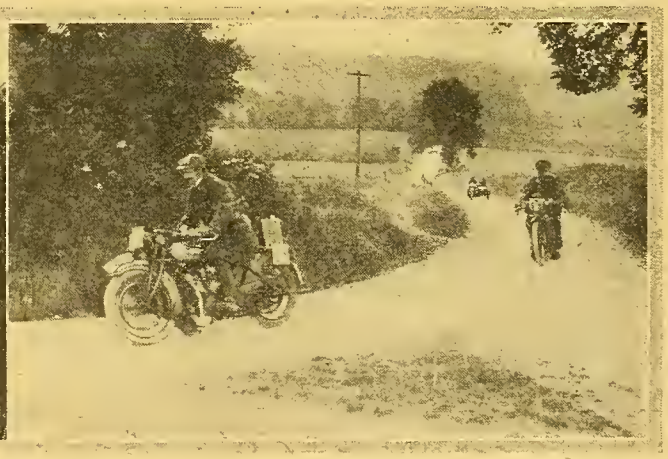
Starting about half a mile south of Tring, the course totalled 100 miles in all, competitors covering three circuits of just over 33 miles.

The roads, where the course included winding lanes and sudden hills, were bad owing to the previous dry weather; the surface being dangerously loose and very rough. We say "previous" dry weather with some truth, as no doubt the competitors will agree, because the trial was finished at about 7.30 in a mild form of flood. The weather, which had been threatening during the earlier part of the day, broke at 2.30.

From 2.30 onwards it rained without stopping, and yet to say that it rained seemed hardly to describe the exact condition of the elements. It deluged. At first it was more or less ignored, as the roads certainly required a little moisture to "settle" them, but things passed the possibility of "ignoring" when competitors splashed past, soaked from head to foot, covered in mud, and raising a miniature tidal wave as they plunged from puddle to puddle. This was a great pity as many of the riders, starting in fine weather, were hatless, and, in many cases, inadequately dressed to cope with the downpour. But such is the nature of the motor cyclist that this did not appear to trouble them in the slightest, and everybody, except perhaps the time-keeper, judges, and spectators seemed perfectly happy.



In a Chiltern village, Butler's Cross. A. S. Bagshaw (799 c.c. A.J.S. sidecar), of the Norfolk M.C. and L.C.C., and J. Hector (799 c.c. A.J.S. sidecar), of the Birmingham University.



Members of the Nottingham and District M.C.C. at the turning into Aylesbury road from Kop Hill. H. Karslake (976 c.c. Brough Superior) and F. W. Stevenson (692 c.c. Brough).

ON KOP HILL.

W. Backhouse (499 c.c. Triumph) and H. S Moorhouse (499 c.c. Triumph).

H. W. Glendinning (976 c.c. Zenith sidecar) and H. B. Browning (349 c.c. A.J.S.).

In the first round Kop Hill did not present a very serious obstacle, and quite a number of machines roared up on top gear without turning a hair. The surface this year was very loose, but some excellent climbs were made in spite of it.

**Kop Hill Not a Serious Obstacle.**

The Scotts, ridden chiefly by members of the Ilkley team, did remarkably well here, and several "Sports" Humbers made a very good show.

George Brough on a Brough Superior solo could hardly be described as dawdling on the hill. His machine with the polished petrol-tank flashed past at an amazing speed—and this at the worst part of the hill too. No. 144 of the Ipswich and District M.C.C. riding a 976 cc. Matchless and sidecar succumbed to the 1-5 gradient, that spiteful last 30 yards of the climb, and commenced running backwards, but spectators and observers came to the rescue and the machine was pushed on to the grass sidetrack with a flat sidecar tyre. C. M. Bowen (398 A.B.C.), a member of the Wallington and District M.C. and L.C.C., was forced to retire with back tyre trouble. An Enfield two-stroke belonging to the Camberley Club was making a plucky ascent when, on getting within about twenty yards of the summit, the gear lever slipped into neutral position. The rider jammed it back into gear again, but it was done too suddenly. The strain on the engine, already labouring severely, was too much, and it stopped dead. G. Bickerton (490 Norton sc.) was beaten on almost identically the same spot that finished the little Enfield.

These were the only mishaps that occurred on the hill, and it speaks volumes for the efficiency of the present-day motor-cycle that 156 out of 159 competitors should be able to make non-stop climbs on a hill of this gradient, and at the speed at which many of them took it. George Brough raised a laugh in the second round when he shot over the top of the hill between 35 and 40 m.p.h. with a cheerful "There you are then!" and disappeared in a shower of stones and grit round the next corner. Some very pleasing ascents were made by one or two of the A.J.S. machines and sidecars and the Matchless outfits as well.

Fairly early in the trial H. B. Browning (349 A.J.S.), of the Public Schools M.C.C., had the misfortune to snap his clutch cable, making some of the tricky corners none too easy to manage; in fact, he nearly came to grief on one or two occasions, but pulled out of them skilfully.

On the whole, Chalk Hill was climbed very well, taking into consideration the roughness and looseness of the surface and the difficulty of some of the corners.

A. Bowerman (220 Velocette), the only Velocette entered, as it happens, was forced to retire with magneto trouble, and was towed home about 5 miles by a non-competitor's sidecar.

**Avoiding Stops at all Costs.**

Certainly some wonderful feats of endurance are achieved by competitors during a run of this kind in order to complete non-stop runs and so gain marks for their clubs. A case in point occurred this year which is worthy of note. S. Sawer, a member of Sheffield and Hallamshire M.C. and L.C.C., riding a 633 c.c. Norton and sidecar, was unlucky enough to break a sidecar spring in the second circuit, but this was not considered a sufficient reason for retiring by any means. The sidecar passenger, to prevent the mudguard from bearing on the sidecar wheel, held it up with his hands for many miles until it seemed that after all they might yet do a non-stop run. In the end, however, they were obliged to give in.

It is interesting that S. Wright (600 Humber sc.), of the Coventry and Warwickshire M.C., has ridden in every team trial for Coventry dating from as

This year's winners of "The Motor Cycle" Challenge Cup in the M.C.C. Team Trial—The Woolwich, Plumstead, and District Motor Club. From the left E. Atkins (498 c.c. Ariel), F. J. Ellis (976 c.c. Matchless sidecar), C. Clease (499 c.c. Triumph), T. T. J. Ross (976 c.c. Matchless sidecar), B. J. Sims (499 c.c. Triumph), F. MacDonald (976 c.c. Matchless sidecar). They won by a margin of 32 seconds.

In the picturesque Chilterns; a scene on Kop Hill. H. O. Goldsmith (692 c.c. Brough sidecar), followed in the distance by E. C. Lunniss (976 c.c. Matchless sidecar) and L. C. Solomon (482 c.c. Sunbeam).

far back as the old days when trailers took the place of the 1922 sidecar. Also, P.W. Moffat (494 Douglas), of the M.C.C., has succeeded in scoring his seventh consecutive non-stop in the trial.

Complete teams at the end of the first circuit and second circuit give a fair idea of the progress of the trial. At the end of the first round the following clubs were complete:—

Sheffield and Hallamshire M.C. and L.C.C.
Coventry and Warwickshire M.C.
Leicester and District M.C.
Nottingham and District M.C.C.
Worcester and District M.C.C.
Bucks County M.C.
North-West London M.C.
Norfolk M.C.C. and L.C.C.
Woolwich, Plumstead, and District M.C.
Ilkley M.C. and L.C.C.
Public Schools M.C.C.
Lewes and District M.C.C.
Oxford M.C.

The finish of the second round saw the following teams entire:—

Coventry and Warwickshire M.C.
Nottingham and District M.C.C.
Worcester and District M.C.C.
Bucks County M.C.
North-West London M.C.
Norfolk M.C. and L.C.C.
Woolwich, Plumstead, and District M.C.
Ilkley M.C. and L.C.C.
Lewes and District M.C.C.
Oxford M.C.

As a matter of fact, the first complete team to finish the 100-mile course was the Coventry and Warwickshire M.C.C., followed by Nottingham and District M.C.C. and Worcester and District M.C.C.; then came North-West London M.C., Norfolk M.C. and L.C.C., Woolwich, Plumstead and District M.C., and Ilkley M.C. and L.C.C. Oxford M.C. would have made an eighth club finishing complete had it not been for a piece of extraordinarily bad luck. One of their members, N.V. Young (550 Sunbeam sc.), who has only one arm, dropped his spare petrol-can a few miles from home on the last circuit and stopped to recover it, thus spoiling the chance of a non-stop run.

Another little incident illustrating clearly the lengths to which competitors will go in their anxiety to secure the coveted trophy concerns one of the M.C.C. team, G. W. Nott (976 Matchless sc.). He finished the last 20 miles of the course on a flat front tyre. Although sporting in the extreme, had he but known it the ordeal could have been avoided, because F. J. Watson (796 Ariel sc.), another member of the M.C.C. team, had retired with a puncture during the first lap.

### Tam o' Shanters the Vogue.

Various styles of clothing were adopted by the competitors, and tam o' shanters of wonderful hues were immensely popular. Stocking caps were also worn, but the majority of the riders were wearing the favourite flying helmet. One sportsman, regardless of custom or anything else, carried out the trial in a Sidcot flying-suit and a battered felt hat, much to the amusement and enjoyment of some of the spectators, but there was a certain reckless air of ill-concealed triumph about the riders who had taken the precaution of wearing overalls, as they passed their less fortunate brethren, churning through the mud and water in what had once been handsome and delicately coloured golf stockings—"as now worn."

It was certainly a pity that the weather turned out as wet as it did, but it cannot be said that the rain in any way interfered with the event; in addition to this, it was not altogether unexpected, with the result that many of the competitors had set out prepared for the ducking which they received.

Amongst the other competing teams a number of individual non-stop runs were made which were highly creditable to the riders concerned, although, unfortunately, of no value as far as actual team results go. They are given below.

SHEFFIELD AND HALLAMSHIRE M.C. AND L.C.C. (holders of the trophy for 1921).—C. E. Turner (678 Martinsyde), E. Searle (349 Sheffield-Henderson), J. A. Staccy (976 Matchless sc.), E. Wheatley (550 Triumph), F. James (10 Morgan).

LEICESTER AND DISTRICT M.C.—J. Simpson (481 Scott-Squirrel), L. Baxter (494 Douglas sc.), F. Hatton (749 Douglas sc.), J. Dearden Smithie (225 Royal Enfield).

BIRMINGHAM UNIVERSITY M.C.C.—J. H. Park (349 A.J.S.), J. Hector (976 A.J.S. sc.), E. Poppe (White and Poppe).

BUCKS COUNTY M.C.—R. Pugh (550 Triumph), C. B. Smith (998 Indian sc.), R. Hewitt (494 Douglas), G. Slade (490 Norton sc.).

LUTON AND SOUTH BEDS. A.C.—C. Dickenson (498 Ariel), F. H. Burley (499 Sunbeam), C. Bourlet (498 Ariel).

HERTS M.C. AND L.C.C.—G. G. Smith (499 Sunbeam), P. H. Jones (499 Sunbeam), S. Hall (10 Morgan), H. Rear (498 Ariel).

WALLINGTON AND DISTRICT M.C. AND L.C.C.—A. B. Lavy (499 Sunbeam), E. Vallis (976 Matchless sc.), G. Gilbertson (654 Rover), G. Baxter (998 Harley-Davidson sc.).

BRADFORD M.C. AND L.C.C.—W. Backhouse (499 Triumph), W. R. Haggas (499 Triumph sc.), G. M. Townsend (555 P. and M. sc.), W. Marriott (293 Coventry-Eagle.)

LEWES AND DISTRICT M.C.C.—W. H. Law (349 Verus), E. Chandler (490 Norton), S. H. Colbourne (998 Harley-Davidson sc.), J. H. Duart (499 Sunbeam). G. E. Stacey (490 Norton sc.).

OXFORD M.C.—E. Colegrove (550 Triumph), M. Pearson (550 Triumph), L. Avery (998 Harley-Davidson sc.), J. A. C. Kempster (550 Triumph), J. G. Avery (998 Harley-Davidson sc.).

NORTH LONDON M.C.—R. W. Greaves (976 Brough-Superior sc.), L. P. Walter (550 Triumph). L. V. Freeman (976 Sunbeam sc.).

EALING AND DISTRICT M.C.C.—P. Cunningham (555 P. and M.), F. H. Douglass (749 Bradbury sc.), Hall (350 Trump-J.A.P.), J. A. Masters (993 Harley-Davidson sc.).

CAMBERLEY CLUB.—P. W. White (976 Sunbeam sc.), A. H. S. Love (490 Norton), E. O. Spence (998 Harley-Davidson sc.), G. Green (532 Scott).

BASINGSTOKE M.C.C.—G. Gammon (490 Norton sc.), W. Osmond (499 Triumph).

NEXT THURSDAY THE MOTOR CYCLE SUMMER NUMBER.

# A JOURNEY WITH AN OBJECT.

## The Midland Centre Open One-Day Trial to Bala and Back.

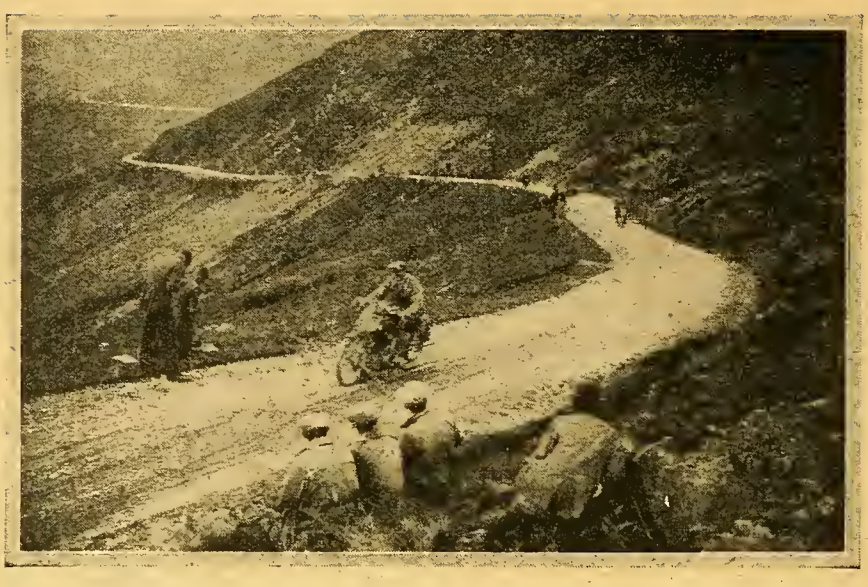
OF 85 starters in the Midland Centre (A.C.U.) One Day Trial, only nine failed to check in at the finish.

Summed up by several riders as the easiest trial in the year, the event was nevertheless not without interest, and formed a welcome change from the already too well known routes in the Cotswolds and Clent hills.

In brief the route may be described as a main road journey from Birmingham to Bala and back with two severe non-stop sections, totalling about twenty miles, thrown in. These sections, from Dinas Mawddwy to the top of Bwlch-y-Groes, and from Bala to Lake Vyrnwy, over the Hirnant Pass, were the object of the long trip, and under the prevailing conditions of mist and torrential rain proved a severe contrast to the otherwise easy outward and homeward trips. True, a third observed hill (Lincoln Hill,, near Ironbridge) was included, but after the Welsh passes its steep, dry surface was a negligible quantity.

### An Optimist.

Amongst the starters at the "Parson and Clerk" at Streetley, on the Chester Road, were one or two interesting machines. No. 1 was a 2 h.p. Argson invalid's chair. Its owner was undoubtedly a sportsman, but if he took the trial seriously he was also an optimist. The vehicle is a very neat little concern, with a tiny two-stroke engine geared to the rear axle, all gears being enclosed in an aluminium case. The suitability of this little three-wheeler in its own particular sphere was amply proved by the fact that it toddled merrily along the road at something below the set average for a very considerable distance, and though we lost sight of it some sixty miles from the start, for all we know it may still be sticking it somewhere round the course. George Dance, on his T.T. Sunbeam, was trying out a Senspray carburetter and also a frameless saddle supported on leaf springs both front and rear. W. G. Hough rode a Diamond-B. and S. instead of the A.B.C. on which he was entered, and Frank Smith appeared on a 925 c.c. Clyno and sidecar. The route through Brownhills, Shrewsbury, Welshpool, Cann Office, and Mallwyd to Dinas Mawddwy is fortunately well known, so that the almost entire lack of route marking caused but little trouble. On the return journey, however, in spite of a rather more liberal display of "Dunlop" arrows, we came across several groups discussing possible roads, and a few more arrows would certainly have been beneficial. Seventeen miles beyond Shrewsbury was the first time check, and large groups of riders were waiting outside so as to run in on time. Near Welshpool, typical Welsh scenery and also typical Welsh weather were encountered, a light rain beginning to fall, which by the time the non-stop section was reached had converted the surface of the narrow lanes into a treacherous slime.



Bwlch-y-Groes is one of the most famous test hills in Great Britain. This pass, which commences with an acute bend on a single figure gradient and rises 1,790 feet in two miles, is considered to be the most fair and severe test for air cooled engines.

Bwlch-y-Groes, with its two miles of steady gradient averaging about 1 in 7, still remains one of the most fair test hills in the country, and since the last half-mile is also the steepest there is but little chance for an engine in poor tune.

### On Bwlch-y-Groes.

On this occasion the performances on the top steep stretch were characterised by a few surprising failures, an average performance by the majority, and one or two outstanding climbs, notably those of A. Webster (349 Calthorpe sc.) and T. H. Weaver (269 Sirrah sc.). Besides these all the New Hudson, T.B., and Morgan three-wheelers climbed well, and further first-class ascents were made by B. Kershaw (249 New Imperial), J. T. Bashall and A. A. Symes (678 and 496 Martinsydes), R. W. Duke (499 Triumph), R. E. Pugh and Mrs. Janson (211 Levises), H. Stretton-Ward (499 Triumph), A. Bennett and G. Dance (499 Sunbeams), W. Hough (349 Diamond-B. and S.), T. Whalley (349 Massey Arran), J. Watson-Bourne (976 Brough-Superior), A. R. Evans (499 Sunbeam), J. N. Roberts (249 New Imperial), B. Aldridge and H. V. Collings (976 Brough-Superiors), P. Platts (688 Coventry Victor), the Connaught team, and G. Kuhn (595 Douglas). Two of the little 225 c.c. Sun-Vitesses also climbed wonderfully, but W. Parkes, on a similar machine, was in trouble and had to run.

Of the sidecars H. G. Uzzell (976 New Imperial), W. H. Bashall (678 Martinsyde sc.), F. W. Giles (800 A.J.S. sc.), T. F. Blumfield (796 Ariel sc.), were the best, though P. W. Bischoff (550 Sunbeam sc.), Frank Smith (925 Clyno sc.), and L. A. Bees (598 Beardmore-Precision sc.) put up excellent performances. Amongst the failures were: F. Downs (349 Hobart), T. L. Handley (398 A.B.C.), H. G. Catterall (596 Indian-Scout), and A. T. Wilson (269 Monopole), while on the winding descent to the main Bala road B. Aldridge's Brough-Superior was being pushed along.

### Officials in Hiding (?)

There had been mist and rain during most of the ascents, but during the lunch stop at Bala rain began to fall heavily, and steadily increased on the homeward journey till at Lake Vyrnwy the downpour assumed the proportions of a cloudburst, and the roads were under water for long stretches. Under these conditions the long, rough, and gully-besprinkled ascent of the Hirnant Pass was most trying. If there were any observers on this hill during the early climbs they were so well hidden as to be invisible, and it is to be hoped that they were present, as it seems a pity to take competitors a 190-mile trip for the purpose of climbing two severe hills and then to leave one unobserved. It is true that there were officials on the reverse slope, which was almost more trying for the rivers of water flowing down the hill made it impossible to pick a path. Near the foot of the descent the surface was appalling, and many riders steadied with their feet, and there were several stops in the prohibited section for flooded magnetos and drenched sparking-plugs. Most of these passed unnoticed.

The Hirnant Pass, which was included in the 1919 Six Days' Trials, is now in

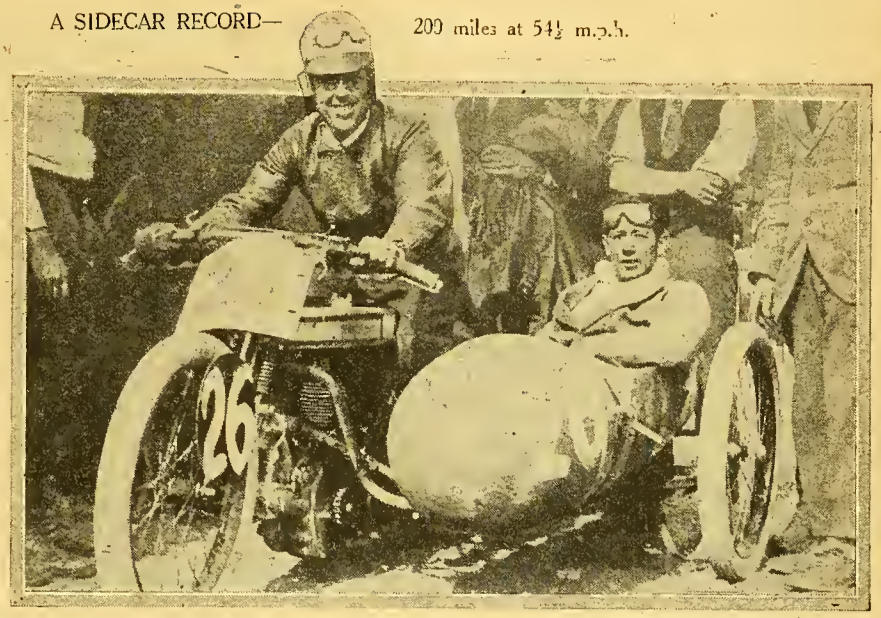
**A Journey with an Object.—** poor order, and since the surface is rough and there is a considerable drop on the right-hand side, it is not a place to practise passing. Near the top the gradient is fairly severe, but not sufficiently steep to cause serious trouble.

After the fearful downpour near Lake Vyrnwy the rain eased off and stopped, and the journey home was without much incident. Near Shrewsbury, however, W. Hadfield (349 Raleigh), who had previously experienced magneto trouble, fell on rounding a corner and damaged his fork and front wheel. He was forced to retire, but though bruised and shaken he was not seriously hurt. Soon after leaving Shrewsbury a right-hand turn led to Ironbridge and Lincoln Hill, which as previously mentioned was not a very severe test, though the gradient is considerable. Onward thence to Bridgenorth and along the Stourbridge Road led to the finish at the Stewponey Hotel, where the checking-in process was well and expeditiously handled.

Of those who failed to finish to time the case of Hadfield has just been mentioned. It was particularly unfortunate, as it spoiled the fine team performance of his stable companions Hugh Gibson and F. W. Viles. F. Downs (349 Hobart) rode on No. 13, and his engine was badly out of time, so he threw his hand in at Bwlch-y-Groes. H. R. Millington (269 Federation) had not much power in hand as he crept over the summit of the hill, and his engine did not sound healthy, but C. Webb (269 Robust) climbed well, and the cause of his delay was unknown. Wilson (269 Monopole) was in trouble on the hills, Aldridge (Brough Superior) struck trouble on the descent to Bala, and W. H. Bashall (678 Martinsyde sc.) struck a patch of tyre trouble directly after the lunch stop, and was last seen festooned with tubes and with two wheels detached. S. R. Philpott (678 Martinsyde sc.) finished to time, but reported losing his watch during the morning run, and T. H. Weaver (269 Sirrah sc.) pluckily finished with a badly damaged sidecar. The fearful surface after the descent of the Hirnant Pass proved too much for his little sidecar frame, which was badly damaged at this point of the run, with the result that at Ironbridge the axle parted, and some thirty miles were covered in this condition.

It is difficult to summarise an impression of the trial as a whole; one hundred and ninety miles is a long way to take the entrants for only two severe hills, but on the other hand, it was a trip that might have been undertaken by any enthusiastic motor cyclist, and freak surfaces were confined to a few yards, while both Bwlch-y-Groes and the Hirnant Pass are hills worth going a long way to try. The reason for the sparse route-marking may have been due to laudable motives of economy or some other motive, but it is not an experiment which should be repeated, for, though everyone succeeded in following the course, there was considerable delay at certain points, which led to much making up time at others.

A SIDECAR RECORD— 200 miles at 54½ m.p.h.




G. H. Tucker who, on his 588 c.c. Norton sidecar, won the recent 600 c.c. 200 mile sidecar race at Brooklands, and at the same time broke the 200 mile record in Class F. His protest against disqualification was upheld by the committee, and consequently E. A. Bridgman (499 c.c. Indian sidecar), who was awarded the race in the first instance, takes second place.

Competing against, amongst others, F. W. Dixon and E. Searle, R. T. Cawthorne (490 c.c. Norton) made fastest time of the day (80 m.p.h.) at the Bridlington speed trials on Wednesday of last week. Cawthorne winning the sidecar class.

## TWELVE-HOUR 500 c.c. RECORD BROKEN.

ON Monday, June 19th, a 490 c.c. Norton, ridden by D. R. O'Donovan and R. N. Judd, broke the 300 mile, 5 hours, 600 mile and 12 hour records. The two riders changed over about every thirty laps, and the figures would have been considerably better, but for delays due to tyre repairs and a broken valve rocker. The machine was a side valve model, and Dunlop tyres, Speedwell oil, C.A.V. magneto and Shell Spirit were used. The times and distances are as follows :—

| | | |
|---|---|---|
| 300 miles | 4h. 48m. 10⅗s. | 62.46 m.p.h. |
| 600 miles | 10h. 22m. 52⅖s. | 57.79 ,, |
| 5 hours | 313 miles 365 yards | 62.63 ,, |
| 12 hours | 683 miles 1,651 yards | 56.99 ,, |

## A NEW 24-HOUR RECORD.

WHILST English riders have been busy breaking records in the Isle of Man and at Brooklands, a remarkably fine performance has been achieved in America. Wells Bennett, mounted on a four-cylinder Henderson (De Luxe Model), celebrated Decoration Day on the Tacoma speedway by completing 1,652.54 miles during twenty-four hours' continuous riding, at an average speed of 65.1 m.p.h. His speed for the first 1,000 miles averaged 63 m.p.h., whilst at some periods of the ride he touched 76 m.p.h. Bennett also succeeded in creating a new time record on the 1,000 miles, covering this distance in 15h. 47m. 15s., the previous record, set up by Baker, being 16h. 14m. 15s. The track, which is two miles all but 254 feet, was covered 806 times in the twenty-four hours. It is interesting to note that owing to the poor condition of the track, which is a board one, six rear wheels were required during the event.

# CURRENT CHAT.

(continued from p. 883)

### Caught Napping.

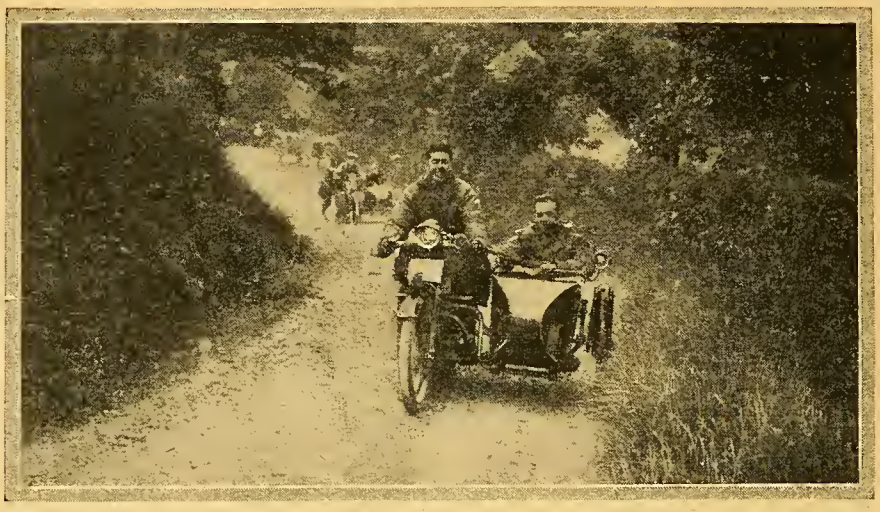
Sudden showers, drenching downpours, and gusty winds found many riders and their passengers unprotected against cold and wet over the week-end.

### Misleading Advertisements and the T.T.

A stand against the practice of certain motor cycle manufacturers in issuing misleading advertisements in connection with the classic A.C.U. competitions, is being taken by the organising body. Several advertisements bearing upon the results of the Tourist Trophy Races have been observed, to which strong exception is taken. These advertisements are so worded that to the casual reader it would appear that the machines advertised gained successes, which, in fact, they did not; in one case, indeed, the machine advertised was not even entered for any of the T.T. Races.

### Clyno in the Field Again.

After a lengthy absence from competition work, the Clyno machines will once again be prominent in motor cycle events; the new 925 c.c. spring-frame outfit has already made its appearance in the hands of that famous hill-climber of the past, Frank Smith, who is managing director of the reconstructed Clyno Engineering Co., of Wolverhampton. Mr. Smith is being assisted by two other well-known riders, G. E. Stanley and J. Cocker. Both the 225 c.c. two-stroke lightweight and the 925 c.c. sidecar outfit have been much improved, and will be dealt with in our columns in the near future.



Out of some thirty Sunbeam private owners who competed in a trial organised by the Birmingham depot for that make of machine—Watsons, Chamberlain Square—only seven retained clean sheets. Eventually the awards went to W. H. Fortington (sidecar) and E. M. Tomkinson (solo). C. D. Jones making a good ascent of Flagstaff Hill.

### A Family Outfit.

Elsewhere in this issue is described a family three-wheeler which provides the same accommodation as the "three-four" seater cars. It should appeal strongly to the "family" driver.

### British Team in International Six Days.

It has been previously announced that the three T.T. winners—G. S. Davison (Levis), T. M. Sheard (A.J.S.), and A. Bennett (Sunbeam)—had been invited to represent England in this trial. The invitation has been accepted by the makers of the machines concerned.

### Local Support.

In the team trial last Saturday all members of the Nottingham team rode machines of local manufacture, as did the representative of the Coventry and Warwickshire Motor Club and the Ilkley M.C. and L.C.C.

### To Keep the Sport Clean.

To avoid the possibility of further confusion, the A.C.U. is approaching the British Motor Cycle Racing Club with a view to preventing in future years certain manufacturers advertising successes in the Brooklands T.T. Race in such a way as to imply that the successes were gained in the classic road contests. Next year the B.M.C.R.C. will probably alter the title of its track race open to T.T. machines.

Two riders well known in Scottish trials circles: R. Wilson (349 c.c. A.J.S.) and R. Watson (496 c.c. Martinsyde) in Baytswood Square, at the start of the Glasgow Western M.C.C. twelve hours reliability trial.

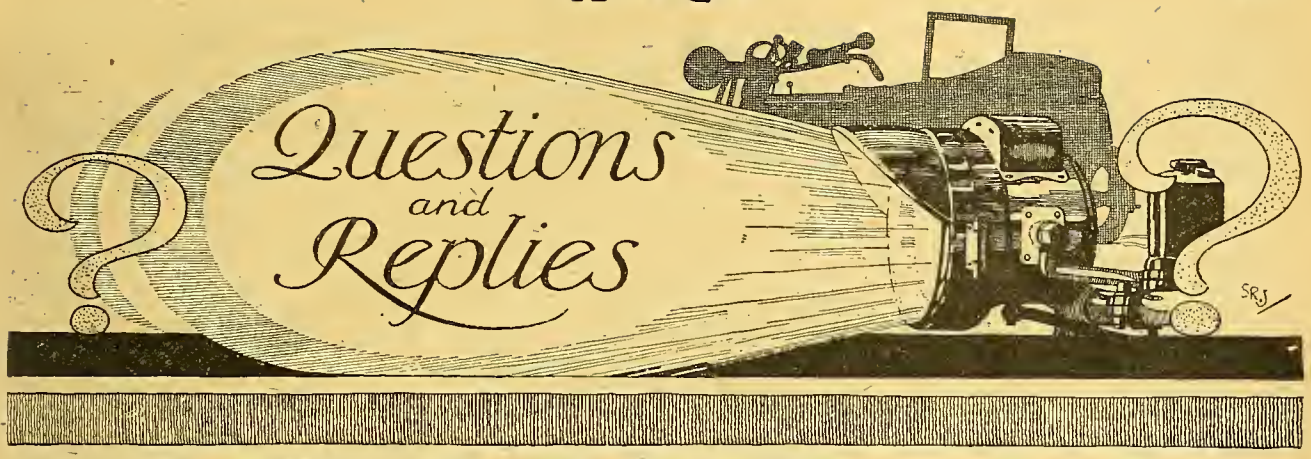
SMALL CAR PROGRESSION

*"THE AUTOCAR"—published from the offices of "THE MOTOR CYCLE" and conducted on the same enterprising lines—is the complete automobile journal embracing small, medium, and large cars. Every motor cyclist contemplating the purchase of a light car should read*

The Autocar

Every Friday **4d.**

*Founded in 1895, "THE AUTOCAR" is the largest and most successful automobile paper and enjoys the greatest circulation. It is universally accepted as the representative British motoring journal.*




A selection of questions of general interest received from readers and our replies thereto. All questions should be addressed to the Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, and whether intended for publication or not **must be accompanied by a 2d. stamped addressed envelope for reply.** Correspondents are urged to write clearly and on one side of the paper only, numbering each query separately, and keeping a copy for ease of reference. Letters containing legal questions should be marked "Legal" in the top left-hand corner of the envelope, and should be kept distinct from questions bearing on technical subjects.

ROUTES.—By special arrangement with the Automobile Association and Motor Union, readers of "The Motor Cycle" desiring routes may enjoy the benefit of the Road Service Department of that organisation. Queries should be addressed to the Editor in the ordinary way (enclosing a 2d. stamp), and will be dealt with by the A.A. and M.U., who are regularly in receipt of reports from their representatives all over the country as to the existing state of the roads in any particular locality.

### BATTERY CHARGING FROM MAGNETO.

Please tell me if I can charge a 4 volt accumulator off the magneto, and if so, where can I get the necessary fittings.—W.S.C.

You cannot charge an accumulator from a magneto unless some special form of commutator or low tension collector giving a uni-directional flow of current is used; that employed in the B.T.H. Sparklite equipment is an example. It cannot be applied to any kind of twin-cylinder motor cycle magneto.

### OLD ENGINE VIBRATES BADLY.

How does one test the balance of a 2¾ h.p. Precision engine (single-cylinder, four-stroke), as it vibrates badly at speeds over 15 m.p.h. ?—E.W.H.

If the engine has not been altered since it left the makers the vibration is probably due to wear of the bearings, or it may be caused by the engine not being securely fixed in the frame. Examine the engine-holding bolts and also the holes through which they pass, as both may be worn slightly. The fitting of a non-standard piston, of course, would alter the balance if the weight was not carefully adjusted to coincide with that of the old one. To test balance accurately would probably be beyond you, and your best plan would be to return the engine to the makers if none of the above suggestions provide a clue to the trouble.

### GEAR RATIOS.

My machine has gears similar to the P. and M., having two sprockets on the engine shaft with 18 teeth on each. On the countershaft there are two sprockets and one belt pulley; the high gear has 40 teeth, the low gear has 28 teeth, and the pulley is 6in. in diameter, but the belt sinks in the pulley and makes it only about 4½in. The belt rim on back wheel is 20in. As far as I can judge the countershaft belt pulley and back wheel rim give a ratio of about 4½ to 1, and I want a top gear of 5¼ to 1.—A.E.J.

The present gear ratios are 7 to 1 and 10 to 1 respectively; if you wish to have a 5¼ to 1 top gear you need a 24-tooth sprocket on the engine shaft driving to the 28-tooth sprocket on the countershaft. You will understand, of course, that if you fit a new belt which rides higher in the countershaft pulley the gear will be raised. It is very unlikely that the final belt drive will be satisfactory specially on low gear, if the effective diameter of the countershaft pulley is only 4½in.

### SPARK GAPS.

Are the "spark intensifiers" at present on the market much use, and have they any detrimental effect on the magneto?—M.W.

Spark intensifiers or gaps will not do any harm to the magneto, and, although they do not necessarily improve the running, they may be of considerable assistance in preventing the sooting up of the sparking plug, or the short circuiting of the points in an over-lubricated cylinder.

### PETROL-PARAFFIN MIXTURES.

A friend states that it is possible to run my two-stroke on paraffin oil, so I tried it by squirting some into the air intake after starting the machine on the stand. It ran as long as the paraffin lasted. Do you think that if I run my machine on half petrol and half paraffin it would make any difference to the lubrication or to any other part of the machine?—W.W.

It is quite possible to run a motor cycle engine on paraffin, but it is not advisable, as the running is usually very harsh. It is necessary, of course, to use petrol for starting purposes, and it is also advisable to retard the ignition considerably to obtain smooth running. A mixture of half petrol and half paraffin is fairly satisfactory, but the running is still rather harsh. During the war many machines were run on paraffin and paraffin-petrol mixtures, but no one did this for choice.

### CRANK-CASE JOINTS LEAKING.

(1.) The small bolt-holes of my Triumph crank case leak lubricating oil. Could this be stopped? I have already fitted leather washers, and still there is no change after tightening up. (2.) Is this the cause of the engine overheating?—J.P.

(1.) Unless you are prepared to dismantle the crank case completely and make sure that it is properly jointed, preferably using seccotine or shellac as a jointing material, there is probably no permanent cure. (2.) The leakage of oil would have to be excessive before it caused overheating, and it is scarcely likely to escape through the bolt-holes to such an extent as to cause the engine to run dry.

## Important Dates.

**Sat., July 1st—East S. Wales Centre A.C.U. Open Speed Trials.**
**Wed., July 5th—Eastern Centre A.C.U. Open Speed Trials.**
**Sat. July 8th—M.C.C. Meeting at Brooklands.**
**Wed., July 12th—French Grand Prix.**
**Sat., July 15th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sun., July 23rd—Belgian Grand Prix.**
**Fri., July 28th, to Mon., July 30th—Anglo-Dutch Trial in Holland.**
**Thurs., Aug. 3rd, to Wed., Aug. 9th—International Six Days Trials.**
**Sat., Aug. 5th, and Mon., Aug. 7th—Irish Two-day Open Trial.**
**Mon., Aug. 7th—West S. Wales Centre A.C.U. Open Speed Trials at Pendine.**
**Sat., Aug. 12th—B.M.C.R.C. Members' Meeting at Brooklands.**
**Sat., Aug. 12th—North Wales Centre A.C.U. Open Reliability Trial.**
**Sat., Aug. 12th—Motor Cycle Races in Phœnix Park, Dublin.**
**Mon., Aug. 21st, to Sat., Aug. 26th—A.C.U. Six Days Trials.**
**Sat., Sept. 16th—The Scott Trial.**
**Sat., Sept. 23rd—500 Mile Race at Brooklands.**
**Sat., Oct. 21st—B.M.C.R.C. Championship Meeting at Brooklands.**

### ENGINE REPLACEMENTS.

[?] Having recently purchased new pistons for a 595 c.c. Douglas, I find the gudgeon pin boss (inside piston) is shorter on one side than the other. Is there a particular way to fit these pistons, and what is the reason for this? Also I have new gudgeon pins and bushes, and find the gudgeon pins will not go into the bushes. Are the bushes reamered out after being fitted into the connecting rods?—T.C.

The connecting rod small ends on this engine are slightly off-set in order to bring the pistons as near to the centre line as possible, and this necessitates the bosses inside the piston being of unequal length; examination of the parts when the crankshaft assembly is replaced in the crank case will enable you to replace the pistons correctly. The bushes usually need to be reamered after they are fitted into the connecting rods.

## EXPERIENCES WANTED.

*Readers' replies to questions published under this heading should be addressed c/o The Editor, "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4, when they will be forwarded direct to the querists concerned.*

W.G. (Stockton-on-Tees).—Method of reducing valve clatter on 557 c.c. B.S.A.

G.H.S. (Tipton).—Gibbons cycle car.

R.M.H. (Gerrards Cross).—4.5h.p. New Hudson and sidecar. 654 c.c. Quadrant and sidecar.

"L.C." (Liverpool).—Orto windscreen.

"J.T.K." (Battersea).—225 c.c. Royal Enfield with featherweight sidecar. Strength of frame, hill-climbing capacity.

"J.H.D." (Rochester).—499 c.c. Rudge-Multi. Lubrication system, belt slip and wear, speed.

"J.E.B." (Streatham).—Indian Scout and Harley-Davidson flat twin, solo, with pillion.

"L.C." (Wavertree).—4¼ h.p. Beardmore-Precision. solo and sidecar.

"J.S.H." (Northwich).—654 Hazlewood-J.A.P. and sidecar.

"G.A." (Devon).—225 c.c. Royal Enfield; 293 New Imperial; 398 A.B.C.

"G.W.-T." (Westcliff).—770 c.c. Zenith-J.A.P. (direct drive). "Quadruple belt. Wear and grip on low gear.

"M.A.C." (Kent).—318 c.c. Dalm, power, speed, and petrol consumption.

"F.V.D." (Bradford). — 499 c.c. Triumph. Showell or Best mechanical oil pump; W.S.R. variable jet adaptor.

"X.Y.Z." (Hendon).—490 c.c. Norton, 494 c.c. Douglas; 499 c.c. Sunbeam. Hill-climbing ability; suitable gear ratios for touring in hilly country.

"K.P.G." (Golders Green).—499 c.c. Triumph, suitability of 3-jet Binks carburetter; correct jets for fast touring.

"H.H.C." (West Lothian).—976 Royal Ruby and sidecar; 698 c.c. Raleigh and sidecar; 598 Beardmore-Precision and sidecar. Dependability of frames, etc., for touring work.

"C.F.B." (Rutherglen). — McKenzie Lightweight. Petrol consumption; correct proportions of petrol mixture; reliability.

A NEW HOME FOR THE WESTERN M.C.C., GLASGOW. Following the lead of other big motor cycle clubs the Western M.C.C., of Glasgow, has now been formed into a limited company and will in future be known as the Scottish Western M.C., Ltd.

## READER'S REPLY.

### CHANGES TO A TWO-STROKE TWIN.

As I purchased a second-hand "Scott" sidecar 15 months ago, and experienced the same trouble as "P. O.," perhaps my solution of the problem might interest him?

If "P. O.'s" engine is later than 1912 he will find two plugs with hexagon heads screwed into the cylinder-heads. I first of all removed these and replaced them with two compression taps, short type, with sparking plug threads; these will enable him to prime each cylinder before starting. I then removed the leather washer from a petrol can cap and trimmed it to an exact fit in the main air intake cap; finally, I bored a small hole in the centre of this washer and inserted a loop of wire to project on the outside, and fastened the washer to the carburetter by means of a valve-cap chain so that it cannot be lost.

When starting I prime both cylinders and place the leather plug in the air intake cap and open the throttle about half way; the engine then invariably starts at first or second kick.

"P. O." should not attempt to open the extra air inlet until the engine is well under way; he should also verify his jet sizes. I find 000, 2, and 9 the best for sidecar work, and a "long reach" plug to project slightly into the combustion chamber might improve matters.—F.N. 2861.

SPARKLETS

### T.T. Machines on Exhibition.

Davison's Levis and Langman's Scott machines are on exhibition during the present week at Godfrey's, Ltd., 208, Great Portland Street, London, W.1.

### A Saddle and Tank Cover.

Delivery of the "Alldry" combined saddle and tank cover is now being made at a cost of 7s. 6d. This article is supplied by Mr. G. J. Coverly, 25, Deyncourt Gardens, Upminster, Essex.

### An Efficient Magneto.

An "M-L" magneto was used by M. Cottin (249 Velocette) when he secured the second position on the Circuit de Montargis, a distance of 167½ miles. His average speed was 46 m.p.h. He also covered the fastest lap at 49½ m.p.h.

### Valve Coolers.

In the 200 mile sidecar race at Brooklands on June 17th, D. H. Davidson (998 Indian sc.), winner of the class not exceeding 1,000 c.c., used spiral valve coolers manufactured by Beard and Fitch, Ltd., 34, Aylesbury Street, London, E.C.

### Price Reduction.

We have received a communication from Buckland and Burrell, engineers, Foots Cray, Kent, to the effect that the Burland dimmer and economiser, described in our issue of March 30th, has been reduced in price to 9s., inclusive of gasbag.

### A Good Performance.

A folder has been issued by Douglas Motors, Ltd., Kingswood, Bristol, in commemoration of C. G. Pullin accomplishing 100.61 m.p.h. on a 500 c.c. machine on March 23rd last. It is illustrated with a facsimile of the Brooklands certificate and various photographs.

### Agents for Spare Parts.

Being aware of the difficulty of obtaining spare parts by certain riders, the Villiers Engineering Co., Ltd., Blakenhall, Wolverhampton, has started a spare part service. In most important towns motor cycle agents have been appointed, and the prices of the spare parts are now as low as possible.

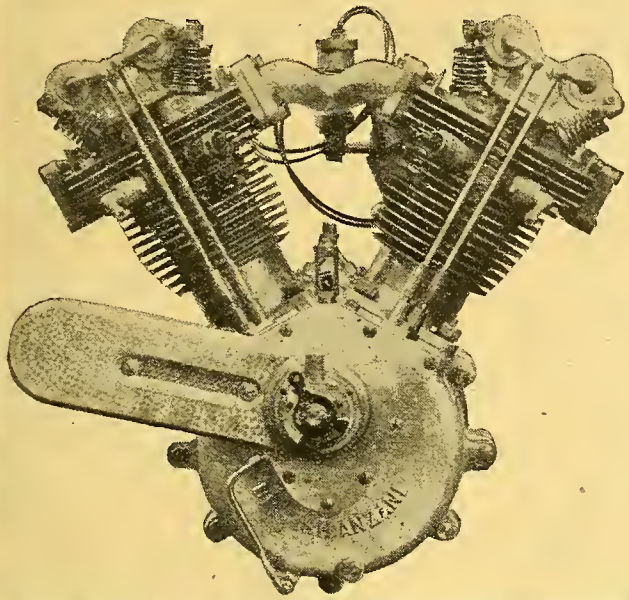
### Catalogues Received.

HUGH MASON AND CO., LTD., N.U.T. Works, Derwenthaugh, Newcastle-upon-Tyne.—An illustrated booklet giving full particulars and prices of the various models of N.U.T. motor cycles.

Light Production Co., Ltd., 60-66, Rochester Row, Westminster, S.W.—A catalogue of L.P.C. piston rings and price list of gudgeon pins.

F.R.S. Lamps, Ltd., Beam Works, Vere Street, Birmingham.—An illustrated leaflet containing particulars and prices of their various productions in lamps, horns, and other accessories.

# Another Record Falls to the Invincible British Anzani Engine




8h.p. Overhead 8 valve British Anzani Engine Standard Sports Model

ON June 14th, 1922, COLONEL STEWART riding a Trump machine fitted with an **8 h.p. British Anzani Engine** broke the 2 hours record in Class E. 1,000 c.c.

**SPEED 78·85 m.p.h.**
Total distance 156 miles 301 yds.
**Previous record 73·48 m.p.h.**

**Write for details—**

## The British Anzani Engine Co., Ltd.

## 32, Scrubbs Lane, Willesden, N.W.10

'Phone: 2214 Willesden.

***Manufacturers of high grade engines for Light Cars, Cycle Cars and Motor Cycles.***

# A COLONIAL'S OPINION

**of the FAMOUS**

**"JAMES"**

*Durban, South Africa.*
*May 29th, 1922.*

*Dear Sirs,*

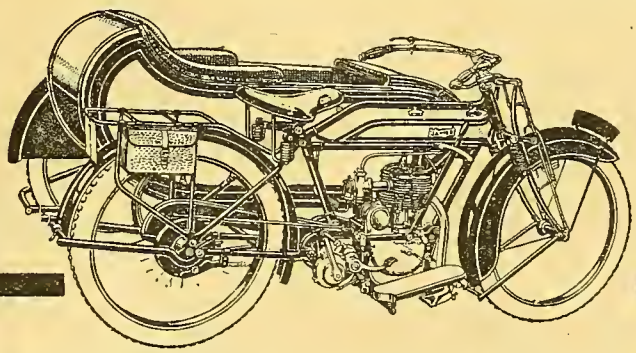
*As a constant user of one of your 4¼ h.p. motor cycles and sidecar, I would like to express my satisfaction of the serviceability of this mount. I have had the machine constantly on the road for the last three years in all weathers and on roads of all descriptions, and although at times it has not been possible to give the machine any attention, it has never failed me and repairs have been very light.*

*I have on occasions carried a load of 30 cwt. to the highest point of the Berea (the residential suburb of this city) on top gear, which takes some beating.*

*With nothing to say except in praise of your machines.*

*I am, yours faithfully, R. T. Johnson.*

**No. 6 4¼ h.p. COMBINATION, £135**
**—the economical Combination.**



**Powerful Big Single Cylinder Engine 600 c.c., economical on oil and petrol. 3-speed countershaft gear and heel clutch, all chain drive, etc.**

**IMMEDIATE DELIVERY**

## THE JAMES CYCLE Co., Ltd., GREET, BIRMINGHAM.

LONDON SHOWROOMS—22, HOLBORN VIADUCT, E.C.1.

# Extended manufacturing facilities and a huge turnover enable us to cut Ferodo Prices

## by 10%

***The quality remains the same.***

On and after July 1st the list prices of FERODO BONDED ASBESTOS, FEROBESTOS, AND FERODO FIBRE will be reduced by 10%.

The reduction is solely due to the savings effected by large production and extended manufacturing facilities.

The quality of Ferodo Friction Linings will remain as before—the very best possible—and this reduction in price is not being made at the expense of quality. Our first principle has always been and always will be to put the finest possible materials into our product, and upon this principle the Ferodo reputation has been built. Ferodo Fabrics are just as superior to competitive materials to-day as they were 10 years ago.

It may be that Ferodo Fricton Linings are slightly higher in price than certain competitive materials, colourable imitations of our own; but the extra durability and the perfect reliability of Ferodo Linings repay the extra first cost a hundredfold. Hundreds of thousands of motor drivers all over the world show their appreciation of this fact by their continuous use of Ferodo Friction Linings for Brakes and Clutches.

***See the name on every piece.***

**FERODO** REGISTERED **FRICTION LININGS.**

***Sole Manufacturers;***

**FERODO Ltd., Chapel-en-le-Frith.**

*Service Depots: London, Birmingham, Manchester, Leeds, Bristol, Belfast, Coventry, Newcastle, Llandrindod Wells, Glasgow.*

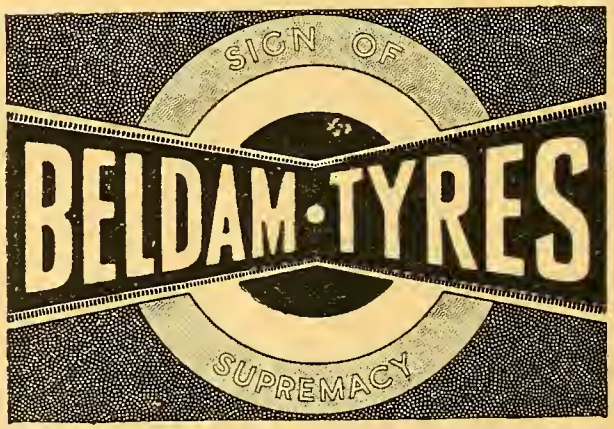
CP17



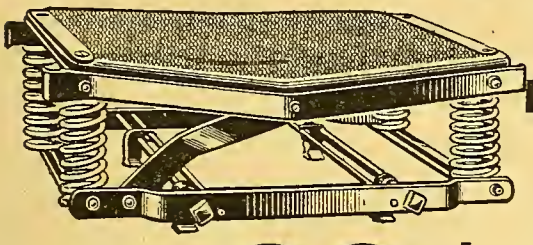
# Eat more good toffee e.g.-

TOFFEE DE LUXE
MACKINTOSH'S
REGISTERED ORIGINAL QUALITY TRADE MARK
TOFFEE DE LUXE
MANUFACTURED BY JOHN MACKINTOSH & SONS LTD HALIFAX, ENGLAND





# PILLION RIDING



# Price 30/-

**Back Rest 7/- Foot Rest 5/- Handle 2/-**

Get particulars of the Tan-Sad Insurance Policy—it will protect you against all risks and provide a considerable saving, there being no extra premium for Pillion Riding.

*Get particulars straight away from your local agent, The General Accident, Fire and Life Insurance Company Depots, or direct from*

## TAN-SAD, LTD.
**FREEMAN ST.**
## BIRMINGHAM

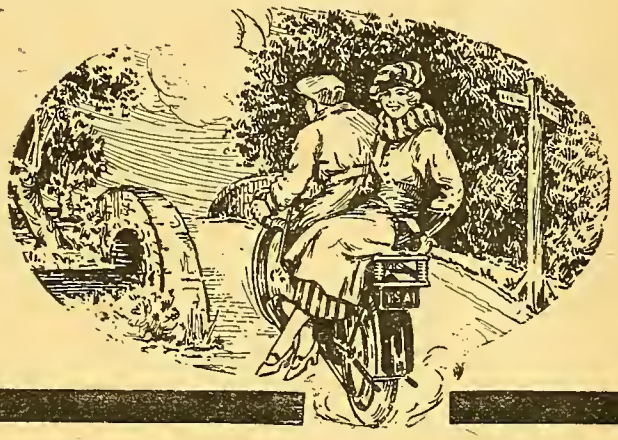
Makers of the famous Tan-Sad Chair and Pram (F. H. Headley's Inventions).

# "Safety First" then Comfort

The *safety* of Pillion Riding depends entirely upon the *Seat*. That "cushion on the carrier" method is dangerous both to body and health. The safe way—the only safe way—is the Tan-Sad way.

Fit a Tan-Sad Pillion Seat to your Machine. The responsiveness of its springing to every pothole, to every bump, frees the Pillion rider of the possibility of nerve-wrack, and obviates the Driver's risk of jolting his passenger off the Machine—even on the most potholed roads.

And isn't your passenger's *comfort* as important as your own? *Your* seat is sprung, isn't it? ... Well, then, for safety's sake, for comfort's sake—fit a Tan-Sad.



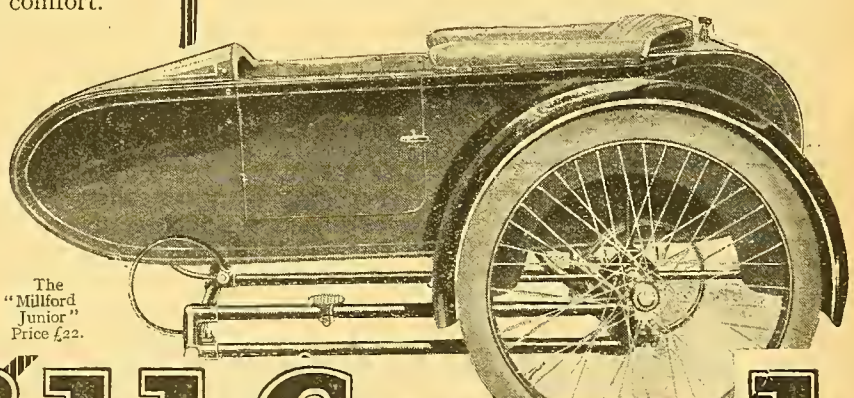
# For 20 Years—

FOR twenty years Millford Sidecars have been famous for quality and comfort.

There are 8 models for 1922.

A Millford Sidecar costs from £22. You know what your favourite solo machine costs. Add the two and see what you save compared with the price of a *Combination*.

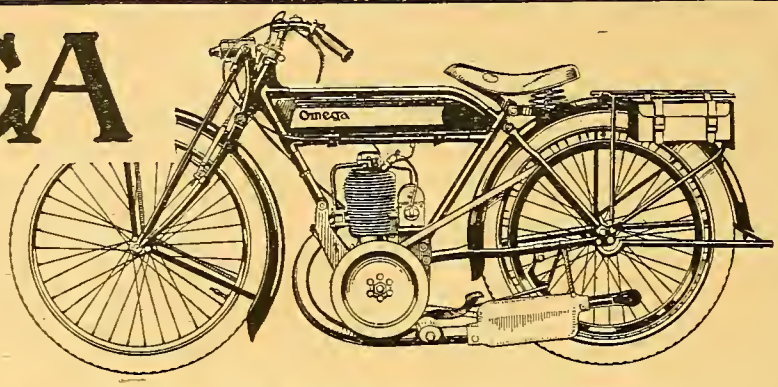
*Write for Folder B,*
MILLS-FULFORD, LTD., COVENTRY.
The Original Sidecar Makers.
(*Established* 1899.)



The "Millford Junior" Price £22.

# Millford
## QUALITY & COMFORT SIDECARS

# OMEGA




*the motor cycle you can be sure of*

The Omega Model 6, depicted above, stands in a class by itself for value and efficiency. Its Engine is the 3 h.p. two-stroke, designed and constructed exclusively in our now Works, and is the happy result of years of experience and study of two-stroke principles. The frame also is an Omega production, has a one piece head lug, web strengthened, and guaranteed to stand up to the ravages of the roughest roads. Throughout, the finish and workmanship of Model 6 are of the best, and the *tout ensemble* of such value as to fully merit "The Motor Cycle's" verdict of "amazingly cheap." Send now for full details of this and other Omega Models.

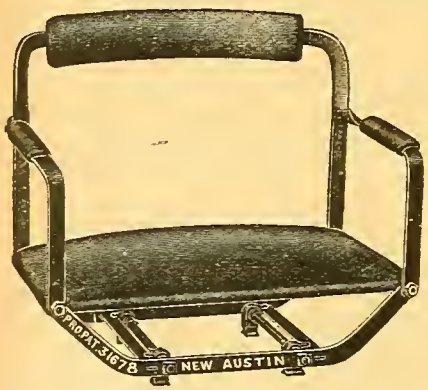
**three h.p.**

**£39-10-0**

EASY PAYMENTS ARRANGED.

**W. J. GREEN LTD.,**
**Omega Works, COVENTRY.**

**Birmingham Depot: - - 183a, Broad Street.**
**London Agents: Bartletts, 92, Great Portland St., W.**




*The*
## *"NEW AUSTIN"* PILLION SEAT

**LIGHT. NEAT. COMFORTABLE.**

Entirely new method of springing, weighs 6 lbs. only. No side rock whatever. Finished in Solid Saddle Leather.

Low Saddle Position only 4" from top of carrier.

Seat - - 26/6 each | Foot Rest - 4/9 each | State width of carrier
Back Rest - 7/- ,, | Hand Grip - 2/- ,, | when ordering.

**W. H. JENKS, Snow Hill, Birmingham.**

# P.V.

**You RIDE in COMFORT and obtain QUALITY and VALUE**

IF YOUR MOUNT IS A

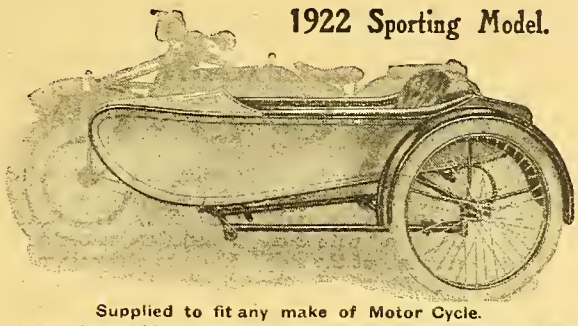
## SPRING FRAME MOTOR CYCLE.

2½ h.p. 2-Stroke, from **£45.** | 2¾ h.p. JAP, from **£51.** | 3 h.p. Barr & Stroud, from **£60.**

*OTHER MODELS AT EQUALLY FAVOURABLE PRICES. WRITE FOR LISTS.*

**P.V. MOTOR CYCLES, LTD., Forest Hill, London, S.E.23.**

1922 Sporting Model.



Supplied to fit any make of Motor Cycle.

The product of 20 years' riding and manufacturing experience. More comfortable than most heavy touring models. Graceful and distinctive appearance. Strong enough for use with 8 h.p. machines, light enough for use with 3½ h.p. sporting mounts. £23 10 0 ready for the road.

COMPREHENSIVE CATALOGUE FREE ON REQUEST.

"DOUBLE YOUR PLEASURE"

MONTGOMERY SIDECARS

W. Montgomery & Co., Coventry

PRATT'S

PERFECTION SPIRIT

*To ensure Perfection Get "Perfection."*

Insist on having Pratt's—the Motor Spirit that always ensures a vigorous, even pull for your engine—easy acceleration and clean running—economy and dependability at all times.

From the Golden Pump

(*Approved by the Standards Dept. of the Board of Trade.*)

or in the Green Can.

AVAILABLE EVERYWHERE.

ANGLO-AMERICAN OIL COMPANY, LTD.,
Head Office: 36, Queen Anne's Gate, London, S.W. 1.

PATENT SELF LOCKING WATER AND WIND TIGHT FRONTS
TRADE MARK
PATENT SELF LOCKING WATER AND WIND TIGHT OPENING.
FLEECE LINING

# Your shield

## Against RAIN, WIND, & DUST is—

# "AQUAMAC"

Adequate protection is assured in the worst of weather if you are a wearer of "AQUAMAC"—the **real** waterproof. Every garment is built by an expert craftsman. The TRIPLE fly side openings are fitted with Non (water) Conductors and PNEUMATIC edges throughout the suit. You are also assured of the best style and fit. We cater for the "particular" man by our "made-to-measure" offer. No extra charge for this. Money refunded in full if not satisfied. "AQUAMAC" is the suit for Protection with Comfort.

Price per Suit .. **£2 15 0.** Coat Full Fleece Lined .. **37/6**
Trousers .. .. **25/6** Overalls .. .. .. **17/6**

When ordering give Chest for Coat, Height, Waist and Inside Leg Measurements from fork to floor.

**This Suit can be inspected at our LONDON SHOWROOMS:**

**The SERVICE COMPANY LONDON, LTD., 289-293, HIGH HOLBORN, LONDON, W.C.1**

*The Aquamac Suit is exclusively the invention of the actual Manufacturers.*

**SEND NO MONEY** until you have seen our Patterns and Illustrated Catalogue, free on request to

**THE EXPRESS MANFG. CO. (M/C), LTD.,**
Manufacturing Waterproof Motor Clothing Experts,
"AQUAMAC" WORKS,
**431-7, Rochdale Road, MANCHESTER.**

Agencies open—Write for Terms.

# "BRAMPTON" CHAINS

**The new models of Brampton Motor Cycle Chain which have been evolved to meet the ever increasing load and speed conditions of the modern motor cycle, possess larger wearing areas and greater breaking loads than the chains they supersede to ensure maximum durability, and can be relied upon to take their full share of responsibility for the efficient service of machines on which they are used.**

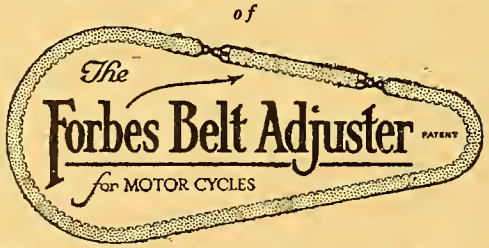
When you buy a chain look for the name "BRAMPTON" on each outer plate, the chain that has made good by GOOD MAKING.

**BRAMPTON BROS. LTD.,**
**Oliver Street Works,**
**BIRMINGHAM.**

Our booklet **"CHAT ON CHAIN,"** which contains a fount of invaluable hints for chain users, will be forwarded post free on request, applications for which are invited.

## THE CASE-HARDENED IMPROVED MODEL

*of*




The wearing parts of this Adjuster have been case-hardened. This gives them tremendous wearing power, and leaves the rider free to get the maximum life out of them by intelligent use.

**PRICE**
**4/- each**

*If your trader does not stock it, write to*

**TIMSON BROTHERS**
**7 Grape St., Shaftesbury Ave., London, W.C.2**
**Moor Street, Birmingham Duke Street, Liverpool**
**Strawberry Lane, Newcastle-on-Tyne**
*or*
**EDINBURGH RUBBER CO.**
**178-182 Rose Street, Edinburgh**

FBA7

# MISCELLANEOUS ADVERTISEMENTS.

## PRICES.

**ADVERTISEMENTS** in these columns —First 12 words 3/–, and 3d. for every additional word. Paragraphs of under 8 words are charged double rate. Each paragraph is charged separately. Name and address must be counted. Series discounts, conditions, and special terms to regular trade advertisers will be quoted on application.

Postal Orders and Cheques sent in payment for advertisements should be made payable to ILIFFE & SONS Ltd., and crossed & Co. Treasury Notes, being untraceable if lost in transit, should not be sent as remittances.

All advertisements in this section should be accompanied with remittance, and be addressed to the offices of "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. To ensure insertion letters should be posted in time to reach the offices of "The Motor Cycle," by the first post on Friday morning previous to the day of issue. Advertisements that arrive too late for a particular issue or that are crowded out will automatically be inserted in the following issue unless accompanied by instructions to the contrary.

All letters relating to advertisements should quote the number which is printed at the end of each advertisement, and the date of the issue in which it appeared.

The proprietors are not responsible for clerical or printers' errors, although every care is taken to avoid mistakes.

## NUMBERED ADDRESSES.

For the convenience of advertisers, letters may be addressed to numbers at "The Motor Cycle" Office. When this is desired, the sum of 6d. to defray the cost of registration and to cover postage on replies must be added to the advertisement charge, which must include the words Box ooo, c/o "The Motor Cycle." Only the number will appear in the advertisement. All replies should be addressed No. ooo, c/o "The Motor Cycle," Dorset House, Tudor Street, London, E.C.4. *Readers who reply to Box No. advertisements are warned against sending remittance through the post except in registered envelopes; in all such cases the use of the Deposit System is recommended, and the envelope should be clearly marked "Deposit Department."*

**In the case of motor cycles offered for sale under a box number, as it is unusual for these to be sold without first being inspected by the intending purchaser, advertisers will facilitate business by embodying in their advertisements some mention of the district in which the machine offered may be seen and tried.**

## DEPOSIT SYSTEM.

Persons who hesitate to send money to unknown persons may deal in perfect safety by availing themselves of our Deposit System. If the money be deposited with "The Motor Cycle," both parties are advised of this receipt.

The time allowed for a decision after receipt of the goods is three days, and if a sale is effected we remit the amount to the seller, but, if not, we return the amount to the depositor. Carriage is to be paid by the buyer, but in the event of no sale each party pays carriage one way. The seller takes the risk of damage in transit. For all transactions up to £10, a deposit fee of 1/- is charged; on transactions over £10 and under £50, the fee is 2/6; over £50 and under £75, 5/-; over £75 and under £100, 7/6 and on all transactions over £100, 1%. All deposit matters are dealt with at Dorset House, Tudor Street, London, E.C.4, and cheques and money orders should be made payable to Iliffe & Sons Limited.

The letter "D" at the end of an advertisement is an indication that the advertiser is willing to avail himself of the Deposit System. Other advertisers may be equally desirous, but have not advised us to that effect.

## SPECIAL NOTE.

**Readers who reply to advertisements and receive no answer to their enquiries are requested to regard the silence as an indication that the goods advertised have already been disposed of. Advertisers often receive so many enquiries that it is quite impossible to reply to each one by post.**

## MOTOR CYCLES FOR SALE.

### A.B.C.

F.O.C.H have A.B.C., dynamo lighting, excellent condition, licensed, bargain.—5, Heath St., Hampstead (near Tube). [6532

AN

## O.K. JUNIOR

for

**£10**

and 12 payments of £2 12 6
or 38 gns. cash.

A SPORTS

## MATCHLESS

Combination for

**£25**

and 12 payments of £11 15 8
or £160 cash.

A

## DOUGLAS

Motor Cycle for

**£20**

and 12 payments of £4 4 7
or £68 cash.

A

## TRIUMPH

Motor Cycle for

**£30**

and 12 payments of £6 12 0
or £105 cash.

An

## ENFIELD

Combination for

**£30**

and 12 payments of £9 12 8
or £140 cash.

A

## MORGAN

Runabout for

**£50**

and 12 instalments of £8 16 8
or £150 cash.

Any make of Motor Cycle supplied on DEFERRED PAYMENTS at only 4% extra.
DISCOUNT allowed if account paid in two, four, or six months.

## LAMB'S Ltd

**WOOD GREEN, LONDON, N., 50, High Road.** 'Phone Hornsey 1956.
**EUSTON ROAD, LONDON, N.W.** (Opposite Gt. Portland St. Stn.) 'Phone: Museum 4978.
Close 7.30 Monday to Friday. 4 o'clock Saturday.
**WALTHAMSTOW, LONDON, N.E., 151, High St.** 'Phone Walthamstow 169 (2 lines).

## MOTOR CYCLES FOR SALE.

### A.B.C.

A.B.C. 1921, mileage 1,000, as new; £70; cash wanted.—Sheppard, 108, The Crescent, Slough. [6495

A.B.C., 1921, Lucas dynamo lighting, Apollo horn, splendid condition; £70.—605, Garratt Lane, Earlsfield, S.W.18. [7146

1920 A.B.C., lamps, horn, speedometer, splendid condition, taxed; £65; seen after 7 p.m.—64, Balloch Rd., Catford. [6680

ROBERTSON'S Motors, Ltd.—1920 A.B.C. (new in 1921) standard, with Henderson sidecar, accessories; £68.—157b, Gt. Portland St., W.1. [6072

A.B.C. 1921, lamps, horn, spares, in splendid condition, recently overhauled, very small mileage; £70. —Larcombe, Margaretting, Ingatestone, Essex. [6354

1921 A.B.C., Grecesmill 50-gn. sidecar, Lucas Magdyno lighting, tax paid for the year, Bonniksen speedometer, Klaxon horn, excellent condition; price 76 gns.—Edwards, 50, Harrington Rd., South Kensington. [7355

SPORTING A.B.C. 3½h.p., 1914 type, but only erected this year, leaf sprung, licensed for year, new extra heavy tyres, etc., all in perfect condition and open to closest inspection and trial; price £55.—Dowell, Pyrford, Surrey. (Byfleet Station, 1 mile.) [6663

*Spare Parts*

A.B.C. Spare Parts.—We are the largest stockists of these parts; trade supplied.—Maudes', 100, Great Portland St., W.1. [7203

### Acme.

1920 8h.p. Acme-Jap Combination, fully equipped, spare wheel, Lucas lamps, speedometer, etc.; bargain, £98.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5866

### Aero.

AERO-GREEN 2¾h.p., o.h.v., Sturmey gears, practically new, exceedingly fast; £55; exchange Norton.—Weybourne Cottage, Farnham. [6881

### A.J.S.

CROSS, Effingham Square, is agent for A.J.S.'s in Rotherham. [7240

2¾h.p. B1 Sports A.J.S., in stock; £85.—Wilderspin, Chatteris. 'Phone: 34. [6876

A.J.S. 1922, latest 2¾h.p. model; £85.—Wilkins Simpson, opposite Olympia, London. [6455

6h.p. 1914 A.J.S. Combination; £55; easy terms.—Wauchope's, 9, Shoe Lane, London. [7257

A.J.S., the Invincible. Free delivery.—Merrick's Stores, Listerhills Rd., Bradford. 'Phone: 2439. [6310

1919 6h.p. A.J.S. Combination, complete, lamps and tax paid; £92.—Cross, Agent, Rotherham. [7246

1914 A.J.S., thoroughly sound throughout; offers.—244, Old Christchurch Rd., Bournemouth. [6212

A.J.S. 2¾h.p., brand new, actually in stock.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. [4562

1916 A.J.S., mechanical condition excellent, new chains; £85.—Ackrill, Bishop's Castle, Salop. [6697

1922 2¾h.p. A.J.S. and sidecar, complete, equal to new; £105.—Carnforth Motor Co., Carnforth. [6523

DAN GUY, Weymouth.—1922 7h.p. A.J.S. Combination, £175; in stock. Dorset trade supplied. [0817

A.J.S. 1922 2¾h.p. Sports and 7h.p. Combinations in stock.—Clifford Motories, Eastwood, Notts. [6508

A.J.S. 2¾h.p., T.T. model, very fast, tax paid; £38/10.—Guest, Unionist Club, High St., Guildford. [6210

1921 A.J.S. Combination, equipped regardless, £140; ditto 1920, £115.—24, Balliol Rd., North Kensington. [6640

MOFFAT, Yeovil, Official A.J.S. Agents.—Get in touch with us for prompt deliveries. Exchanges. 'Phone: 50. [5723

6h.p. A.J.S. Combination, good running order, tax paid; privately owned; £70.—On view, Cripp's Garage, Sidcup. [6399

A.J.S. 6h.p. Combination, complete, excellent condition, mechanically perfect.—Lines, Broad St., Alresford, Hants. [7040

A.J.S. 7h.p. Combination; £175. Immediate delivery can be obtained from P. J. Evans, John Bright St., Birmingham. [6521

A.J.S. (1914) Combination, 6h.p. twin, coachbuilt sidecar, as new; £70; ride away.—254, St. Ann's Rd., Tottenham, N.15. [6287

A.J.S. Combination, 1920, as new, spare wheel, lamps, windscreen, tax paid; £125.—Flitt, Wellington Rd., Watford. [6184

All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue. b45
Motor Cycles advertised by private owners are, when desired, marked (P).

## MOTOR CYCLES FOR SALE.

### A.J.S.

A.J.S. 2¾h.p., 1914, 2 speeds, clutch, all chain, in A1 condition, lamps, horn, etc.; £35.—Penney, Brinscall, nr. Chorley, Lancs. [6182

A.J.S. Combination, 1920, splendid condition, fully equipped, tax paid; £112.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. [7336

1922 A.J.S., all models. Again the sensation of Tourist Trophy races. Catalogues with pleasure. —Sam E. Clapham (Motors), Greenwich. [3499

1922 A.J.S. 2¾h.p., model B1, equipped Lucas lamps, horn, variable jet, tax paid, ridden 50 miles; 80 gns.—27, Sidmouth St., Devizes. [7313

FOR A.J.S. 1922 models. 2¾h.p. solo, or 7h.p. combinations, get in touch with the N. London agents. —Jones Garage, The Broadway, Muswell Hill. [0785

1919 A.J.S. Combination, spare wheel, Lucas lighting, licensed; £100, or exchange lower power and cash.—Warwick, Hinckley Rd., Leicester. [6809

1919 A.J.S. 6h.p Combination, spare wheel, speedometer, screen; splendid condition; £90.—Hillier (side bell), 9, Wallingford Ave., North Kensington. [7054

A.J.S. Combination, 1921, Magdynamo, electric horn, speedometer, hood and screen, mileage 800; £135. —M. Hillier, 216, Portobello Rd., North Kensington. [7028

A.J.S. B1 and Sports Models actually in stock, £85; 7h.p. combination, £175.—Ward and Co., 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [7443

A.J.S. 1921 Combination, full equipment, under 1,000 miles, spare wheel never used, insurance, condition as new; £150.—16, Devonshire Place, Chester. [6910

A.J.S. 6h.p. Combination, 3-speed, lamps, horn, screen, speedometer, all accessories, mileage 9,000, taxed and insured; £70.—Hope Villa, Church St., Edmonton. [6737

1922 A.J.S. 7h.p. Combination, hood, curtains, Lucas accessories, tax paid, insured December; £160; buying car.—Noyes, Leighton, Ironbridge, Shropshire. [6251

A.J.S., 1921, dynamo, speedometer, hood and cover, side curtain, Tan-Sad, expert examination; £155; tax and insurance paid.—Angus, 119, Woodwarde Rd., Dulwich, S.E.22. [6596

1914 5-6h.p. A.J.S. and Sidecar, lamps, hood, screens, horn, speedometer, insurance, tax paid, tyres new, ride away; bargain, £75.—D., 12, Ambleside Rd., Willesden. [6196

£47.—A.J.S. combination, 5-6h.p., 2 speeds, hand clutch, kick starter, Cancelet touring sidecar, fully equipped, splendid condition; exchanges.—63, Solon Rd., Brixton. [6723

1921 7h.p. A.J.S. Combination, electric lighting, electric horn, Bowden air inlet, small mileage, beautiful condition, only ridden by an expert; £160.—52, Sidbury, Worcester. [6841

A.J.S. 1921 Combination, Lucas dynamo lighting, hood, screen, side screen, speedometer, electric horn, spare wheel, etc.; £160.—112, Stroud Green Rd., Finsbury Park, N.4. [7129

SOUTHPORT.—A.J.S. 6h.p. 1917 combination, spare wheel, lavishly equipped, including hood, windscreen, luggage carrier; snip, £79; exchanges.—Kents, 417, Lord St., Southport. [6712

A.J.S.—Distributing Agents for Cambridgeshire, Huntingdonshire, and Bedfordshire. All models from stock; complete stock of spares.—King and Harper, Bridge St., Cambridge. [5816

1922 Brand New A.J.S. 7h.p. Combination, £183, including spare wheel, windscreen, etc.; easy payments; free delivery to any address.—Premier Motor Co., Aston Rd., Birmingham. [4599

1921 7h.p. A.J.S. Combination, fully equipped, celluloid side screen, spare wheel, absolutely as new, tax paid; £145.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7217

A.J.S. 1920 Combination, 6h.p., spare wheel, speedometer, hood, side curtains, D.A. lighting, Tan-Sad, back rest, Lucas horn, fine condition; bargain, £100.—W. Fowell, 37, Avondale Rd., Luton, Beds. [6385

A.J.S. Combination (Aug. 1920), spare wheel, Lucas accessories, etc., guaranteed unscratched and equal brand new, £30 overhaul at makers; bargain, £130.—31, Claremont Rd., Alexandra Park, Manchester. [6197

1914 6h.p. A.J.S. Combination, 3-speed, Binks carburetter, detachable spare wheel, speedometer, electric lighting, legshields, windscreen, excellent condition, insured; £72.—269, Copsterhill, Oldham. [7041

2¾h.p. A.J.S., 1916, K.S., 3-speed, clutch, new tyres, engine just overhauled, excellent condition, all spares, Binks, 100 mile to gallon; what offers? By appointment.—"M.," 1, Hempstead Rd., Walthamstow. [6574

1921 A.J.S. 7h.p. Combination, 2-seater sidecar De Luxe, windscreen, spare wheel, Cowey speedometer, watch, legshields, Tan-Sad, Lucas lighting, horn, mirror, spares, etc., perfect condition, tax and insurance end of year, Tufnell Park; £150 or offer.—Box 2137, c/o *The Motor Cycle.* [6375

# BASTONES

Established 16 Years.

*No Better or Cheaper House*

## SPECIAL LINE.

### 28 × 3 Extra Heavy Covers

| | |
|---|---|
| **Goodrich** Safety Tread ..... | 47/6 |
| **Goodyear** All Weather Tread | 55/- |
| **Firestone** Rubber Non-Skid... | 45/- |
| **Portage** Rubber Non-Skid ... | 43/- |

| | | |
|---|---|---|
| 24×2 | **Clincher de Luxe,** Heavy..... | 22/6 |
| 24×2¼ | **Hutchinson,** T.T., Rubber Stud ..... | 22/6 |
| 26×2 | **Englebert,** Passenger Rubber Stud..... | 17/8 |
| | **Bergougnan,** 3-ribbed, Heavy ..... | 18/6 |
| 26×2¼ | **Hutchinson,** T.T., Rubber Stud ... . | 23/- |
| | **Spencer Moulton,** Sq. ribbed..... | 18/6 |
| | **Clincher de Luxe,** Heavy ..... | 24/6 |
| | **Midland,** Rubber Stud, Heavy ..... | 24/- |
| | **Goodrich,** Safety Tread, ex-Heavy .. | 28/- |
| | **Michelin,** Semelle Steel Stud..... | 25/- |
| | **Rom** Combination ..... | 37/- |
| 26×2½ | **Hutchinson,** T.T., Rubber Stud ..... | 25/- |
| | **Midland,** Rubber Stud, Heavy ..... | 25/- |
| | **Kempshall,** Anti-skid, Heavy ..... | 30/- |
| | **Clincher de Luxe,** Heavy ..... | 25/- |
| | **Clincher de Luxe,** ex-Heavy ..... | 27/- |
| 26×2¼ to fit 26×2½ | **Goodrich,** Safety Tread, ex-Heavy .. | 36/- |
| | **Clincher Dreadnought,** ex-Heavy.... | 36/- |
| | **Dominion,** UscoRubber, non-skid, Heavy | 28/6 |
| | **Dominion,** Corrugated, Heavy ..... | 30/- |
| | **Dominion,** Nobby Tread, ex-heavy .. | 36/- |
| | **Hutchinson,** T.T., Ribbed ..... | 30/- |
| | **Midland,** Ribbed, Heavy ..... | 30/- |
| 26×2½ | **Hutchinson,** Super Stud, ex-Strong .. | 55/3 |
| | **Bergougnan,** 3-ribbed, Heavy..... | 23/- |
| | **Goodrich,** Safety Tread ..... | 35/- |
| | **Midland,** Rubber Non-skid, Heavy .. | 28/- |
| | **Hutchinson,** T.T., Rubber Stud ..... | 26/6 |
| | **Spencer Moulton,** 3-ribbed ex-Heavy | 22/6 |
| | **Michelin,** Fine Ribbed ..... | 20/- |
| | **Spencer Moulton,** Steel Stud..... | 25/- |
| | **Skew,** Rubber, Non-skid ..... | 36/- |
| | **Englebert** (Wired Edge) ..... | 25/- |
| 26×3 | **Midland,** Ribbed, ex-Heavy ..... | 35/- |
| 650×65 | **Goodrich,** Safety Tread, ex-Heavy .. | 40/- |
| | **Clincher Dreadnought**..... | 36/- |
| | **Clincher de Luxe,** ex-Heavy ..... | 35/- |
| 700×80 | **Clincher,** 3-ribbed, ex-Heavy..... | 47/- |
| | **Goodrich,** Safety Tread, ex-Heavy .. | 48/- |
| | **Super Chain,** ex-Heavy ..... | 42/- |
| | **Clincher Cross,** ex-Heavy..... | 48/- |
| | **Clincher,** Fine Ribbed..... | 44/- |
| 28×3 | **Hutchinson,** Super Stud, ex-Strong .. | 61/- |
| | **Hutchinson,** Super Studded, ex-Heavy | 64/3 |

### TUBES.

**Goodrich, Clincher, Hutchinson,** and **Red Fox.**

| | | |
|---|---|---|
| 24×2 and 24×2¼ ..... | each | 4/3 |
| 26×2¼ and 26×2½ ..... | each | 6/6 |
| 700×80, 28×3 and 650×65 ..... | each | 7/6 |
| Goodyear Butted 28×3 ..... | each | 7/6 |

*The above New Clearance Covers and Tubes are sent on approval against remittance CARRIAGE PAID.*

**Large stock of Sidecar Bodies and complete Sidecars to be cleared at low prices, also full range of MONTGOMERY Sidecars in stock.**

### BELTS.

**Dunlop** Round Top, ¾" 1/10, ⅞" 2/2, 1" 2/8, 1⅛" 3/2 per foot.
**John Bull,** ¾" 1/11, ⅞" 2/3, 1" 2/8, 1¼" 3/2 per foot.
**Buffalo Hide and Chrome,** ¾" 1/9, 1"2/-, 1¼ 2/3 per foot.

### SIDECAR SCREENS.

| | |
|---|---|
| **Sandum V type** ..... | £2 15s |
| **Easting Standard** ..... | £3 18s |
| **Easting Baby**..... | £3 0s |
| **Montgomery Bo Peep** ..... | £3 10s |

**HOURS—9 till 6 : Saturdays 9 till 1.**

**228, Pentonville Road, King's Cross, London, N.1.**

Phone: 2481 North. 'Grams: Bastones, London.

## MOTOR CYCLES FOR SALE.

### A.J.S.

1921 7h.p. A.J.S., sidecar, D.A. lighting, spare wheel, Tan-Sad, W.R.S., aluminium plates, many spares, insurance; £145; appearance, mechanical condition, and running really exceptional.—Salmon, Stationer, 6, High St., Sydenham. 'Phone: Syd. 375. [7434

A.J.S. Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments. (See column advertisement.)—Bamber's, 2, Eastbank St., Southport. 'Phone: 607. [7325

*Spare Parts:*

A.J.S. Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7538

### Alldays.

ALLDAYS' 2-stroke, fully equipped, taxed, perfect; £23.—51, Upper Richmond Rd., Putney. [7441

NEARLY New Alldays' Allon 2¾h.p., lamps, horn; bargain, £34.—Cobby, Felpham, Bognor. [7098

1918 Alldays' Allon, good condition, kick start and clutch, 2-speed; £35, offers.—Strond, Lechlade. [6775

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Allons; unequalled service, repairs, etc. [3559

ALLON 1922 Engine 2¾h.p.; £25; tax paid, good order, new tyres.—68, Gloucester Rd., Camden Town. [7123

1918 Alldays' Allon Combination, 2-speed, kick start, good condition; £52.—Chesham Lodge, Sudbury, Harrow. [6246

4h.p. Alldays-Matchless Combination, new Sturmey 3-speed hub, new tyres; £40, or near.—37, Orchard St., Dorchester. [6677

£35.—1920 Allon, 2-speed, clutch, kick starter, tax paid for the year, trial; exchanges.—Smith's, 86, Chalk Farm Rd., N.W.3. [6870

2¾h.p. Alldays Allon, 2-speed, hand clutch and K.S., splendid mechanical condition, late model; £34. —26, Tulse Hill, Brixton. 'Phone Brixton 1292. [7285

WAUCHOPE'S, 9, Shoe Lane, London.—Allon 2-stroke, new 1922 motor cycles: 2-speed gear model, £60; 3-speed gear model, £65; easy payments and exchange. [7258

1921 Alldays' Allon 2¾h.p., 2 speeds, clutch and K.S., fully equipped, tax paid; £52/10; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7216

3½h.p. Alldays' Matchless 1914, engine recently overhauled, as new, Lucas lighting; £25, or exchange, with cash, 3h.p. Enfield; ride 30 miles purchaser.—52, Lodge Rd., West Bromwich. [6759

### American X.

ROBERTSON'S Motors, Ltd.—1921 American X, shop-soiled, £88; 1921 combination, accessories, tax paid, £115.—157b, Gt. Portland St., W.1. [6074

COMBINATION 7-9h.p., 1922, American X, C.A.V., accumulator, electric lighting, Klaxon and Bull horns, full equipment, mileage under 300; £135.—Pioneer Motors, Grindlay St., Edinburgh. [6219

### Antoine.

ANTOINE 3½h.p., less magneto; £7/10.—Captain Collins, Sunbury Common. [7465

### Ariel.

ARIELS from Stock from the live agents, Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3691

ARIEL 3½h.p., Bosch magneto, good running order; £17.—Chemist, 40, Seymour St., Euston, N.W.1. [6500

ARIEL Combination, good condition; £50; apply after 6.—Smith, 443, Green Lanes, Harringay, N.4. [6557

£30.—3½h.p. Ariel Combination, nice condition, splendid order, all on; bargain.—50, Lowfield St., Dartford. [6561

ARIEL 6-7h.p. Combination, about 1920, thoroughly reliable and smart; bargain, £100.—Jones, Broadway, Newbury. [6818

ARIEL 1920 3½h.p. Combination, complete and in first-class condition; £75.—The Layton Garages, 30, Holywell St., Oxford. [7180

1921 Ariel 3½h.p. and Sidecar, licensed for year, under 3,000 miles, condition perfect; £80.—Richardson, Rayne Lodge, Braintree. [6168

ARIEL 3½h.p. 1920 Combination, in first-class condition and well cared for; 60 gns.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. [4561

SOUTHPORT.—Superb 1920-21 Ariel countershaft combination, excellent condition, all on; £78; exchanges.—Keats, 417, Lord St., Southport. [6713

ARIEL 3½h.p. 1919-1920 Combination, 3-speed, kick starter, lamps, horn, tools, spares; any trial; £72/10.—Guiver, 6, Broadway, Fleet, Hants. [7097

## MOTOR CYCLES FOR SALE.

### Calthorpe.

**22**h.p. Calthorpe motor cycles, new 1922 models; £36, or £7 down and 12 monthly payments of £2/9/6.—Wauchope's, 9, Shoe Lane, London, E.C.4. [7263

CALTHORPE Combination, 4-5h.p. twin J.A.P., Sturmey countershaft gears, hood, screen, smart; 58 gns.; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. Photograph. [7291

CALTHORPE-J.A.P. 1917 2¾h.p., 2-speed, clutch, tyres excellent, electric lighting, horn, spares, taxed December, ride 40 miles to buyer; £37/10.—Pledger, Satanita Rd., Westcliff. 'Phone: Avenue 2166. [6221

### Campion.

CAMPION Lightweight, countershaft gear smart; accept any machine with cash.—Box 2184, c/o *The Motor Cycle.* [7312

CAMPION 1920 3h.p. 2-seater Combination, Magdyno, new condition, licensed 1922; £150.—Bradley, 23, Madeira Rd., Margate. [6683

CAMPION-J.A.P. Combination 8h.p., 1920, in perfect order, windscreen, speedometer, lamps, horn, luggage grid, tools, spares, tax paid; £80.—176, Walmer Rd., North Kensington. [6620

### Cedos.

CEDOS 2¼h.p., 2-speed, new condition, all accessories, tax paid, cost £170; cash offer.—Smith, British Arms, Irthlingboro'. [6823

### Chater-Lea.

**19**14 Chater-Lea 3½h.p., 3-speed, sidecar, all accessories, J.A.P. engine; £35.—Gilbert, Binfield Heath, Henley-on-Thames. [6617

BARGAIN.—3½h.p. Chater-Lea, White and Poppe, Bosch, B. and B., 2-speed, running order; £22.—107, Mitcham Rd., East Ham. [6136

CHATER-LEA 8h.p., 2-speed, forward and reverse; £85, or near offer, tax and insurance paid.—Thorpe, Pyports, Cobham, Surrey. [6615

8h.p. Chater-Lea Combination, 3-speed, excellent condition, fully equipped; must sell, £60.—B., 106, St. Donatts Rd., New Cross, S.E.14. [6170

**19**21 Chater-Lea, 2¾h.p. Villiers engine, 2-speed gear, lamps, horn, licensed, guaranteed perfect; £32.—37, Arlington Rd., Surbiton. 'Phone: Kingston 1274. [6769

### Chater-Lea-Jap.

**19**15 4h.p. Chater-Lea-Jap, 2-speed.—570, High St., Sydenham. [6179

### Chater-Lea Villiers.

CHATER-LEA-VILLIERS 2¾h.p., 2-stroke, 2-speed, splendid condition, all on, tax paid, trial; £22/10; after 6.—31, Cromer Rd., Watford. [6558

### Cleveland.

3h.p. Cleveland, 2 speeds, kick start, chain drive, as new; cost £95 1920; accept £39/10.—93, Ormerod Rd., Burnley. [7080

CLEVELAND 1921 3h.p., 2-stroke, 2-speed, clutch and kick starter, run about 50 miles, as new; £47.—Newnham Motor Co., 223, Hammersmith Rd. W.6. 'Phone: Hammersmith 80. [5618

### Clyno.

**19**20 Clyno, 2½h.p., 2speed, clutch, new condition; £35.—172, Eastcombe Av., Charlton, S.E.7. [7002

**19**20 Clyno Lightweight, 2-speed and clutch, perfect condition; £37/10.—Kays, 8, Bond St., Ealing. [5499

**19**17-18 6h.p. Clyno, 3-speed, K.S., and clutch, renovated; £35.—Captain Collins, Sunbury Common. [7464

CLYNO C.B. 5-6h.p., any trial; £45; no reasonable offer refused.—Railway Hotel Garage, Wembley, Middlesex. [6313

**19**18 Clyno Combination, 5-6h.p., 3-speed, kick starter, new, unused; £50.—204, Ladbroke Grove, W.10. [6993

CLYNO 1920 2½h.p., very little used, 2-speed and clutch, lamps, horn, etc., excellent condition; £35.—Stubbs' Garages, Loughborough. [6148

£47/10.—1918 5-6h.p. Clyno combination, good order; bargain.—W.J.C. Motor Exchange, Addison Av., Holland Park, W.11. Park 2071. [7156

CLYNO 1921 8h.p. Combination, detachable wheels and spare wheel, fully equipped and tax paid; £100.—The Layton Garages, 30, Holywell St., Oxford. [7184

CLYNO Combination, 1918, spare wheel, clutch, K.S., lamps, also trade box body, excellent condition; £60.—Urquhart, 371, Earlsfield Rd., London, S.W. [6303

CLYNO 5-6h.p. 3-speed, Clyno sidecar, detachable wheels, spare wheel, complete, hood, screen, beautiful turnout, not W.D.; photograph; guaranteed; 58 gns.

ALSO Clyno Lightweight, 2½h.p., 2-speed, clutch, mileage 3,000, as new; 33 gns.; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [7294


MANUFACTURERS' STOCK

MAKINKOT BRAND

*TO BE CLEARED.*

**Fawn double texture, interlined rubber,**

MOTOR SUITS

**THESE suits are made of Fawn double texture cloth, interlined rubber.**

**The seams are cemented, sewn and taped, making these absolutely waterproof.**

**Will stand any amount of hard wear.**

**The jackets are made double-breasted, with belts and wind cuffs.**

**The Motor Leggings are made fastening with clips and straps, and have wind gussets in leg.**

**These suits actually cost over 30/- to manufacture without any profit, but we have several thousands to clear.**

Every suit is guaranteed absolutely waterproof, and should these not meet entirely with your approval, we guarantee to return your money in full, if returned within seven days.

**SPECIAL PRICE,**

**29/11** Carriage 1/- extra.

We have also several thousands heavy Twill Suits to offer. These are made of the heavy Twill used for making Motor Hoods, and are one of the finest suits made for motor cycling, interlined rubber. They are made with sewn and cemented seams, and taped, also the seams of these suits are striped, making these garments absolutely waterproof, and we are prepared to give a guarantee that these are absolutely impossible for water to penetrate through. The Motor Leggings are made in the same way with wind gussets, fastening with clips and straps. The Suits are in sizes 34, 36, 38, 40, 42 and 44 chest, lengths inside leg are 27, 29, 31. Please state when ordering by post, measurements of chest, length inside.

50/- Carriage 1/- extra.

**Orders to be addressed—**

*The* LANCASHIRE and CHESHIRE RUBBER Co.

MAKINKOT HOUSE,

30, Thomas Street,

LIVERPOOL.

'Phone 4891 Bank, Liverpool.


## MOTOR CYCLES FOR SALE.

### Clyno.

CLYNO 8h.p. J.A.P. Combination, spare wheel, all original tyres still on and unscratched, tax paid, fully equipped, new condition; £80.—Bunting's Motors, Wealdstone. [7383

**19**18 Clyno 8h.p., J.A.P., C.B. sidecar, interchangeable wheels, lamps, windscreen, excellent condition, trial, engine No. 62354; 68 gns.—72, Pembroke Rd., Kensington. [6171

**19**17-18 Clyno Combination, 3-speed, kick start, all on, spare wheel, 700×80 tyres, new engine, 1921, receipt shown, condition as new, tax paid; any trial; £65.—337, Devon Buildings, Tooley St., London, S.E.1. [6987

CLYNO 5-6h.p., 1916-17 models, rebuilt, replated, enamelled black, 3 speeds, kick start, foot clutch, interchangeable wheels, chain drive, aluminium cases; combinations, £68; solo, £57, as new; deferred terms, exchanges.—Hearn Bros., 94, Brixton Hill, S.W.2. [4842

*Spare Parts.*

CLYNO Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7540

### Comet.

£42.—New Comet 2½h.p., 2-stroke, 2-speed, clutch and kick starter, tax paid, done 600 miles, like new; or exchange with cash for A.B.C., Sunbeam, or 16H. Norton.—C. P., 107, Highbury New Park, N.5. [7037

### Connaught.

WAUCHOPE'S, 9, Shoe Lane, London.—2½h.p. Connaught 1921, 2 speeds; £45. [7264

**19**21 Connaught, 2 speeds, equipped, tax paid, guaranteed perfect; £28/10.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7219

**19**22 Connaught, the super 2-stroke, for sidecar or solo; cash or easy terms; inquiries invited.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3259

**19**22 Connaughts.—All models for immediate delivery: single-speed, £39/18; Sturmey 2-speed, clutch and kick starter, £57/10; 3½h.p., 3 speeds, clutch and K.S., all-chain drive, £75; 3½h.p. combination, 3 speeds, clutch and K.S., £95; deferred 4% extra.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7218

### Cotton.

COTTON-VILLIERS, 2-speed, 1921 model, flywheel magneto, footboards, discs, lamps, horn, sporty machine, good condition, licensed 1922; 38 gns., bargain.—Atkinson, Heathfield, Sussex. [6274

### Coulson.

**22**¾h.p. Coulson, 2-speed, equipped, excellent condition; 43 gns.—Pembrook, Grange Rd., Deal. [6333

APRIL.—Coulson 2¾h.p., o.h.v., 3-speed, extra racing cam, piston, Lucas lamps, horn, excellent condition; nearest £80.—Hanman, Eastgate, Gloucester. (D) [5158

COULSON-B 1920 2¾h.p., 2-speed, h.b.c. clutch, tax paid, complete with accessories; £42.—Elce, Ltd., 13, 15, and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0068

COULSON-BLACKBURNE, 1920, 2¾h.p., 2-speed, spring frame, taxed, equipped, guaranteed; 42 gns.; photograph.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [7292

COULSON-B 2¾h.p., 2-speed, absolutely unscratched, as new throughout, oversize tyres unpunctured, semi-T.T. bars, footboards; £58; exchange sloping tank Levis, Velocette, Ivy.—Box 2169, c/o *The Motor Cycle.* [7236

### Coventry Eagle.

NEW 1921 Coventry Eagle, 4h.p., 3-speed; £75, or near offer.—Percy and Co., 314, Euston Rd. [7164

**19**21 Coventry Eagle, 2¾h.p. J.A.P., absolutely perfect, clutch, K.S.; nearest 45 gns.—62, Market St., Watford. [6962

COVENTRY EAGLE-J.A.P., 1920, 2¾h.p., Sturmey 2-speed, K.S., hand-foot clutch, all on; £38/10.—80, Lonise Rd., Stratford, E.15. [7118

COVENTRY EAGLE, 2½h.p. Villiers, not done 200 miles, tax paid, all on, like new; accept £50; cost £78/15.—Bell, 36, Station Rd., Blackpool. [6268

### Coventry Victor.

**19**21 Coventry Victor-engined 5-7h.p. Twin Combination, perfect condition, all on, tax paid, windscreen and pillion; exchange considered for lightweight.—Abby, Watton, Norfolk. [6502

### Dalm.

DALM 1921 2-speed, clutch, kick start; £40, or exchange.—Kinch, 1, Allison Rd., Acton, W.3. [6760

### Dayton.

**19**14 Dayton, 2-stroke, splendid order, 120 to the gallon, modern low frame; £14; trial; no objection to dealers; exchanges considered.—34, Glengall Rd., S.E.15. [6545

### De Luxe.

£20.—De Luxe 2¾h.p., almost new tyres, in first-class condition; bargain.—61, Grand Parade, Harringay. [6733

**All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue.** b49

**Motor Cycles advertised by private owners are, when desired, marked (P)**

## MOTOR CYCLES FOR SALE.

### Diamond.

**19**20 Diamond, perfect order; 20 gns.; real bargain.—Royal Garage, Castle Gate, Blackpool. [6413

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Diamonds; unequalled service, repairs, etc. [3556

**19**21 Diamond-Jap, 2 speeds, clutch, all accessories, splendid condition, unpunctured; great bargain, what offers?—Horne, 166, Chancery Lane, St. Helens, Lancs. [7128

ROBERTSON'S Motors, Ltd., are the London and Home Counties Agents for the famous Diamond motor cycles, fitted with Barr and Stroud or J.A.P. engines.—157b, Great Portland St., W.1. [8443

### Douglas.

H·

F·

EDWARDS and Co.

**50** Harrington Rd., South Kensington, offer several new unused 2¾h.p. Douglases at bargain price; 47 gns.! Your machine taken in part exchange; or £20 down and 12 instalments of £2/12/6. [4544

**£**17 Cash,

**12** MONTHLY Payments of £4/11, will secure a brand new fully guaranteed 1922 model Douglas, 2¾h.p., 2-speed, including lamps, horn, etc., ready for the road.

ALL other models on similar terms. Write for proposal form and full particulars.

A. H. LAKEMAN, Ltd., Douglas Distributors, 26, Long Acre, London, W.C.2. [6342

EFFRA Motor Works for Douglas Machines.

**£**12/5.—Douglas 2¾h.p. 2-speed, completely reconstructed, stove enamelled and finished in maker's colours, new tyres, tubes, guaranteed 3 months, secures, and 12 monthly payments £3/1/4; cash £45.—Below.

**£**85.—Douglas 4h.p. Combination, completely renovated as new, stove enamelled and finished in makers' colours, new sidecar body finished in Douglas saxe blue, and fully equipped, guaranteed for 3 months.—Below.

**£**68.—Douglas 4h.p. motor cycles, completely renovated as new, stove enamelled and finished in makers' colours, new magneto, tyres and tubes, and fully equipped, guaranteed 3 months.—Effra Motor Works, Ltd., 59-63, High St., Clapham, S.W.4. 'Phone: 1115 Brixton. [6539

FEW New Douglases, all on; £52.—Clark, 7, Exhibition Rd., S.W.7. [3490

**19**15 2¾h.p. Douglas; real bargain, £27/10.—Kays, 8, Bond St., Ealing. [5500

**19**19 Douglas 2¾h.p., all on; £50, near offer.—16, Waltham Rd., Southall. [6351

**2¾**h.p. Douglas 1921, 3-speed, good condition; £50.—Bewley, Church St., Ipswich. [6794

**19**19 Douglas 4h.p., all on, good condition; £55.—38, Payne St., Deptford, S.E.8. [6986

**2¾**h.p. Douglas, 1916, fast, excellent condition, all on.—French, Plumpton, Sussex. [6423

DOUGLAS 1916 2¾h.p., perfect condition, all on.—E., 125, High Rd., S. Tottenham. [6634

DOUGLAS, brand new, 2¾h.p., ex-W.D.; £42/10.—R. Toms, 307, Euston Rd., N.W.1. [6235

DOUGLAS, brand new, 2¾h.p., ex-W.D.; £42/10.—33, Flask Walk, Hampstead, N.W.3. [6234

**2¾**h.p. Douglas, buffer forks, accessories, perfect; 29 gns.—17, Vernon Rd., Mortlake. [6989

**£**30.—1915 2¾h.p. Douglas, 2 speeds, smart machine, fully equipped.—King, Egrove, Oxford. [7087

**19**16 Douglas 2-speed, good condition, fully equipped; £32.—49, Brooke Rd., Walthamstow. [6777

**£**28.—2¾h.p. Douglas, 2 speeds, new condition, real bargain.—106, Church St., Chelsea, S.W.3. [6850

**19**19 2¾h.p. Douglas, 2-speed, new condition; £40.—53, Cleveland Park Av., Walthamstow. [6178

DOUGLAS 2¾h.p., 1917, perfect condition, must sell; 35 gns.—25, Ravensbourne Rd., Catford. [6481

**2¾**h.p. Douglas 1914, 2-speed, good condition; bargain, £29.—66, Raglan Rd., Bromley, Kent. [6846

DOUGLAS 2¾h.p., in good running order, new belt and back tyre; £25.—93, St. Clements, Oxford. [6588

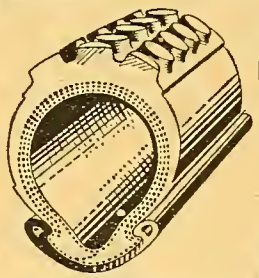
**19**17 Douglas Combination, good condition, equipped, trial; £40.—77, Haverstock Hill, Hampstead. [6889

DOUGLAS 2¾h.p., 1916, beautifully equipped, Dunlops, perfect; £39.—56, Ormeley Rd., Balham. [6633

**19**19 Douglas Combination, excellent condition, guaranteed; 58 gns.—67, Fernlea Rd., Balham. [7420


# WILLIAM NICHOLS & CO.

**GLOUCESTER MANSIONS, CAMBRIDGE CIRCUS**
Tel.: Ger. 6472. **LONDON, W.C.2**



Hutchinson Rubber-Studded.

## MOTOR CYCLISTS!

**Bargains: Clearance Line.**

**NEW MOTOR CYCLE TYRES.**

| Size. | Make. | Our Price. |
|---|---|---|
| 26×2 | Hutchinson, Brookland, rubber-studded | 16/6 |
| 26×2¼ | Hutchinson, Brookland, rubber-studded | 19/6 |
| 26×2¼ | Hutchinson, Tourist-Trophy, rubber-studded | 23/6 |
| 26×2¼ | Hutchinson, Tourist-Trophy, three-ribbed | 29/6 |
| 26×2¼ | Hutchinson Passenger, rubber-studded | 33/6 |
| 26×2⅜ | Hutchinson, Tourist-Trophy, rubber-studded | 24/9 |
| 26×2⅜ | Hutchinson, Passenger, rubber-studded | 30/6 |
| 26×2½ | Hutchinson, Brookland, rubber-studded | 22/6 |
| 26×2½ | Hutchinson, Tourist-Trophy, rubber-studded | 30/9 |
| 26×2½ | Hutchinson, Passenger, rubber-studded | 34/- |
| 650×65 | Hutchinson, Light Car, three-ribbed | 32/- |
| 700×75 | to fit 650×65 rim, Hutchinson, Light Car, T-ribbed | 36/6 |
| 750×75 | to fit 750×75 rim, Hutchinson, Light Car, T-ribbed | 39/- |

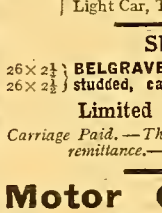
**SPECIAL.**

26×2¼ } **BELGRAVE,** rubber-
26×2½ } **studded, cable-cord** **30/- each**

**Limited Quantity Only.**

*Carriage Paid.—Three days' approval against remittance.—All goods guaranteed.*

## Motor Cyclists ! ! !



**Replace** your exhaust valve caps with our aluminium air-cooled plug.
As used in the T.T.
Keeps your valve and engine cool.
Increases your power.
Reduces petrol consumption.
Stops pinking.
Supplied to fit any engine.
Made of pure aluminium.
Machined all over.
Aero-engine quality.

Price **5/-** Post free. Any engine
When ordering—state make of engine and H.P.

## Leather Driving Gloves

Soft and pli[illegible], gusseted at wrist with tab & press button fastener.

Made of best selected skins. Will stand the tests of heat, steam, water and washing.

Price **3/9** Ideal for Motorists, Cyclists, etc.


## MOTOR CYCLES FOR SALE.

### Douglas.

**19**16 Douglas 2¾h.p., 2 speeds, all on, tax, as new, perfect; 30 gns.—1, St. George's Rd., Beckenham. [6165

**19**16 Douglas 2¾h.p., 2-speed, splendid condition, tax paid; £36.—Robinson, Green St., Royston, Herts. [6646

DOUGLAS 4h.p. Combination, fully equipped, Binks, Easting; £60.—46, Vernon Gardens, Seven Kings. [7034

**19**20 Douglas Combination; £70, or near; first-class condition.—244, Old Christchurch Rd., Bournemouth. [6211

**30** GNS.—1918 2¾h.p. 2-speed Douglas, very fast; bargain; trial.—Smith's, 86, Chalk Farm Rd., N.W.3. [6867

DOUGLAS 2¾h.p. 1915, perfect condition, tax paid June, also Zenith-Green.—19, Trafalgar Sq., Chelsea. [7111

DOUGLAS Combination, 4h.p., 3-speed, 1921, well equipped, nearly new; £80.—19, Valnay St., Tooting. [6928

DOUGLAS Combination, perfect; £55; after 7 o'clock.—Wilkins, 41, Crusoe Rd., Mitcham. Tel.: City 628. [7416

**19**19 4h.p. 3-speed Douglas, fully equipped; £45.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [6997

DOUGLAS 2¾h.p. 1913, countershaft, ride away; £22/10; gift.—Capt. Collins, Fairholme, Sunbury-on-Thames. [6339

DOUGLAS.—R. B. Clark and Co.—Brand new 2¾h.p. 2-speed, 47 gns.; few only left.—7, Exhibition Rd., S.W.7. [3489

VERY Good 1919 4h.p. Douglas Combination, complete equipment; £67.—24, Balliol Rd., North Kensington. [6639

A GIFT.—2¾h.p. Douglas, Bosch magneto, splendid order, quick sale; 19 gns.—Holt, 4, Poplar Av., Great Harwood. [6252

DOUGLAS.—1922 models for immediate delivery. Cash, exchange, or deferred payments.—Kays, 8, Bond St., Ealing. [4834

DOUGLAS 2¾h.p., 1918, 2-speed, accessories, hardly used, splendid order; £42, offer.—Stewart, 2, Auriol Rd., W.14. [6280

**2¾**h.p. Douglas, 1916, splendid condition; £33; ride 40 miles to definite purchaser.—50, Claremont Rd., Luton, Beds. [6133

DOUGLAS 4h.p., 1915, 3 speeds, clutch, renovated, £45; also 1917, £50.—Eagles and Co., 275, High St., Acton, London. [7322

DOUGLAS Combination, 4h.p., 1920, as new, insurance and tax paid; £90, near offer.—Hunter, 20, Acacia Rd., Norbury. [6918

F.O.C.H. have 1919 4h.p. Douglas Solo, 1920 clutch, fully equipped, licensed; bargain.—5, Heath St., Hampstead (near Tube). [6537

DOUGLAS.—1922 Models ready for instant despatch, all complete with lamps, horn, licence-holder, pump, tools, etc.

**£**82.—2¾h.p. 3-speed, clutch, Douglas, all on.

**£**110.—4h.p. 3-speed solo Douglas, all on.

**£**115.—3½h.p. Sports Douglas, all on.

**£**135.—4h.p. Combination Douglas, all on.

EXCHANGES and special payment terms arranged; correspondence invited; catalogues and full particulars by return post free.

HERBERT ROBINSON, Ltd., Green St., Cambridge. [6112

**2¾**h.p. Douglas, 2-speed, 1916, fully equipped and exceptionally fast; real bargain, £34.—42, Tranmere Rd., Earlsfield, S.W. [6983

DOUGLAS 1920 3¾h.p., 3-speed, clutch, kick starter, tax paid and as new; £65.—The Layton Garages, 50, Holywell St., Oxford. [7189

DOUGLAS 1920 2¾h.p., 3-speed, fully equipped, and tax paid for 1920; £50.—The Layton Garages, 50, Holywell St., Oxford. [7188

**£**18.—Douglas 2¾h.p. 2-speed, tax paid, good tyres, belt, stand, carrier, etc., perfect, ride away.—15, Achilles Rd., W. Hampstead. [6345

**19**20 Douglas 2¾h.p., 3-speed, fully equipped, practically brand new; £55.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [7438

**4**h.p. Douglas Combination, coachbuilt, late model, splendid condition; £55.—4a, St. John's Wood Rd., Maida Vale, London, N.W. [4511

**19**18 2¾h.p. Douglas, Bosch, Klaxon, 2 tool bags, equipped, splendid condition, very fast; after 6.—68, Lytton Rd., Leytonstone. [6820

**19**21 Douglas, mileage 2,500, tax, insurance paid, any inspection; first £48 secures.—Paddington, Box 2136, c/o *The Motor Cycle*. [6374

## MOTOR CYCLES FOR SALE.

### Enfield.

8h.p. Royal Enfield Combination, new 1922, £140; dynamo lighting model, £158; 2¼h.p. Sports model, 2-stroke, £55 with kick-starter, £57. Easy payments, one-fifth down; exchanges arranged.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [7268

ROYAL ENFIELD 1921 model Combination, dynamo lighting, interchangeable wheels, complete equipment, speedometer, etc., first-class turnout, condition and appearance as new, very little used; £155.—Smith Motors, Ltd., High Rd., Goodmayes. 'Phone: Ilford 1082. [6228

ENFIELD Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments. (See column advertisement.)—Bamber's, 2, Eastbank St., Southport. 'Phone: 607. [7324

1921 2¼h.p. Royal Enfield, tax paid, all-chain drive, 2-speed and clutch, fitted with F.R.S. lamps and horn, original tyres, machine has done about 400 miles only, plating and enamel in very fine condition, complete with all tools and spares; £38, bargain.—Allen, Station House, Aldeburgh, Suffolk. [5761

*Spare Parts.*

ENFIELD Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7542

ENFIELD Spares and Repairs a speciality.—Pulling's Garage, London Rd., Croydon. 'Phone: 1619. [6300

### Excelsior.

EXCELSIOR-J.A.P., 2 speeds, all on, splendid condition, speedy; bargain, £48.—Roper, Birstall, Leicestershire. [6487

1921 Excelsior 8h.p. Combination, only in use two months, lamps, D.A. cylinder, Easting screen, licence to end of year; only £95.—Blake, 4, Park Crescent Mews (East), Gt. Portland St., W.1. [6973

EXCELSIOR 2-stroke, 2¼h.p. Villiers, 2-speed, tyres and coudition as new, only ridden 300 miles, owner having car, accessories bargain, £35; apply after 6.—10, Tideswell Rd., Putney or telephone 1370 Putney. [6318

### F.N.

F.N. 5-6h.p., 4-cyl., 2-speed, recent £25 overhaul, guaranteed, running as new; £30.—110, York Rd., Southend. [6544

INCREDIBLE.—2¼h.p. F.N., 2-speed, clutch, h.b.c., good condition; only £16.—40, Malden Rd., Kentish Town. [7406

F.N. (England), Ltd., have several second-hand machines for sale, used only for competition or demonstration purposes.—For prices and particulars apply, F.N. Works, Kimberley Rd., Willesden Lane, London, N.W.6. [4965

LANGFORD'S, 37, Cricklewood Broadway, London, N.W.2.—1922 8h.p. 4-cylinder F.N., with new o.h.i.v. engine, 3-speed gear, and no-trouble shaft drive, £135; 2½h.p., £55 Highest price for your present machine in exchange. [3369

F.N.'s 9h.p., new type, overhead valves £135, with sidecar £174; 3h.p., new type, overhead valves with kick starter, hand-controlled clutch and 2-speed gear, £72; a 2½h.p. 2-speed hand-controlled clutch and kick-start, side valves, £55; easy terms and exchange.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [7269

*Spare Parts:*

F.N.—We can supply spares for all models from 1904. Please send frame number or old parts 37, Cricklewood Broadway, London, N.W.2: [3370

### Grandex.

GRANDEX-J.A.P. 2¼h.p., 2-speed, very good order; £28.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5620

### Harley-Davidson.

SHEFFIELD Agent for Harley-Davidsons; from £120 Stacey 12 Ecclesall Rd [0577

1919 Harley 7-9h.p., fine runner, perfect; real cheap, £60.—9, Church Rd., Harlesden. [6766

4h.p. Harley-Davidson Combination, cost £190, scarcely used; £125.—10, Alexandra Gardens, Folkestone. [6736

HARLEY 7-9h.p. Combination, late 1919, new condition, not W.D., equipped; £85.—Clark, 7, Exhibition Rd., S.W.7. [4533

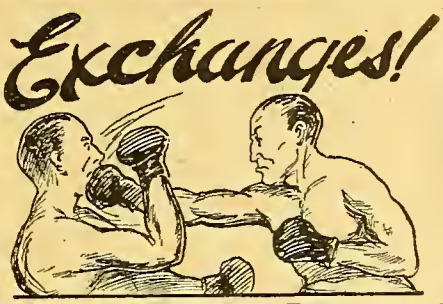
DOUBLE-SEATER Harley Combination, 3-speed, 2 clutches, K.S., excellent condition; 53 gns.—67, Fernlea Rd., Balham. [7419

HARLEY Combination 7-9h.p., 1917, all on model and spares; £70; by appointment.—Wallis, 7, Shenley Rd., Camberwell. [6958

HARLEY Combination, in thorough order, 1919, in present owner's hands 12 months; £85.—76, Dalling Rd., Hammersmith. [6768

HARLEY Combination, overhauled and renovated as new; £105; lower power part.—The Haven, 120, Sutherland Rd., Croydon. [6912

£85.—1917 Harley-Davidson, accessories, brand new model de luxe Millford sidecar.—Premier Motor Co., Aston Rd., Birmingham. [7346




## NEW OR SECOND HAND

**Prompt quotations combined with expeditious delivery. Deferred payments quoted.**

## NEW 1922 LIGHT CARS

**B.S.A., CALTHORPE, COVENTRY PREMIER, LAGONDA, L.S.D. AND RHODE.**

## NEW 1922 MOTOR CYCLES

**B.S.A., BRADBURY, DOUGLAS, ENFIELD, EDMUND, LEVIS, MARTINSYDE, NEW IMPERIAL, NORTON, QUADRANT, RALEIGH, REX, ROYAL RUBY, SCOTT, SUNBEAM and TRIUMPH.**

## SECOND-HAND BARGAINS

### *SOLOS.*

| | |
|---|---|
| **A.V. MONOCAR, 8 h.p., J.A.P., 2 speeds....** | **£75 0** |
| **ARIEL, 3½, 2-speed** | **£29 10** |
| **ARIEL, 1920, 3½, 3-speed countershaft ..** | **£69 10** |
| **B.S.A., 3½, single speed** | **£25 0** |
| **DOUGLAS, 2¾, 2-speed, tax paid** | **£35 0** |
| **DOUGLAS, 1921, 2¾, 3-speer, tax paid** | **£65 0** |
| **ENFIELD, 2¼, 2-speed, 2-stroke, tax paid..** | **£37 10** |
| **EXCELSIOR, 2½, 2-speed, k.-s., tax paid** | **£37 10** |
| **HUMBER, 1914, 3½, 3-speed** | **£35 0** |
| **HUMBER, 3½, wants attention** | **£14 10** |
| **1916 2¾, 2-speed J.A.P., tax paid** | **£29 10** |
| **LEVIS, 1922, 2-speed, tax paid** | **£51 0** |
| **NEW IMPERIAL, 2¾, tax paid** | **£27 10** |
| **O.K.-J.A.P., 2¾, 2-speed, tax paid** | **£29 10** |
| **PREMIER, 3½, 3-speed, spring forks** | **£32 10** |
| **RADCO, 2½ Lightweight** | **£22 10** |
| **RUDGE, 3½ clutch model, wants attention** | **£19 10** |
| **RUDGE MULTI, late 1919, 3½, tax paid** | **£49 10** |
| **RUDGE MULTI, 1920, 3½ T.U.M.** | **£55 0** |
| **RUDGE MULTI, 1920, 5-6 h.p., tax paid .** | **£62 10** |
| **RUDGE MULTI, 1920, 7-9 h.p.** | **£70 0** |
| **SAROLEA, 3½, Belt-drive, Low frame ..** | **£24 10** |
| **PREMIER, 3½, 2-speed F.E.** | **£35 0** |
| **WOOLLER, 1920, 2¾, flat rim, tax paid** | **£47 10** |

## PASSENGER MACHINES

| | |
|---|---|
| **ARIEL, 3½, 1920, 3-speed comb.** | **£79 10** |
| **COVENTRY VICTOR, 5-6, 1921, flat twin** | **£97 10** |
| **DOUGLAS, 1921, 4 h.p. comb.** | **£105 0** |
| **HARLEY, 1918, 7-9, 1920 Grindlay s.c.** | **£105 0** |
| **HARLEY, 1919, electric comb.** | **£115 0** |
| **JAMES, 4½, 2-speed comb.** | **£49 10** |
| **MATCHLESS, 8 h.p. coach combination** | **£57 10** |
| **P. & M., 3½, 2-speed and s.c., tax paid ..** | **£47 10** |
| **REX M.O.V., 6 h.p., 2-speed comb.** | **£39 10** |
| **REX J.A.P., 8 h.p., 2-speed comb.** | **£52 10** |
| **ROVER, 5-6, 1920, unused, 1920. New Rover sidecar. Electric Lighting....** | **£120 0** |
| **RUDGE, 1920, 5-6, and sidecar, tax paid** | **£75 0** |
| **RUDGE, 7 h.p., 1920 comb.** | **£89 10** |
| **SUNBEAM, 8 h.p. M.A.G., 3-speed comb.** | **£105 0** |
| **TRIUMPH, 3½, 2-speed comb., tax paid. ..** | **£39 10** |
| **TRIUMPH, 3½, 3-speed comb.** | **£42 10** |

## WHY WALK?

**£7 10 deposit and 10s. weekly buys**

| | |
|---|---|
| **REX, 1911, 6 h.p., 2-speed comb.** | **£32 10** |
| **REX, 1912, 6 h.p., 2-speed comb.** | **£37 10** |
| **REX, 1913, 6 h.p., 2-speed comb.** | **£42 10** |
| **REX-J.A.P., 8 h.p., 2-speed comb.** | **£47 10** |
| **B.S.A., 1912, 3½, single gear** | **£25 0** |
| **PREMIER, 3½, Grado gear** | **£25 0** |
| **BRADBURY, 3½, 3-speed, tax paid** | **£32 10** |
| **BRADBURY, 3½, single gear** | **£25 0** |
| **HUMBER, 1914, 3½, 3-speed** | **£32 10** |

## HALIFAX MOTOR EXCHANGE

**25, Horton Street, HALIFAX.**

**'Phone 1400 Grams "Perfection"**

## MOTOR CYCLES FOR SALE.

### Harley-Davidson

HARLEY 1918 7-9h.p. Combination, hood, screen, splendid condition; £75.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [6995

HARLEY, late model, electric light, roomy sidecar, dickey seat, in perfect order; owner buying car.—Smith, 109, Moyser Rd., Streatham. [6832

1920 Harley-Davidson with sidecar, chassis fully equipped, in good mechanical order, London; price £90.—Box 2100, c/o *The Motor Cycle*. [6237

HARLEY, 1919, Canoelet sidecar, Bosch magneto, re-enamelled and plated, not used for two years; price £80.—Hainault, The Crescent, Croydon. [6386

1919 Harley Combination, electric model, roomy sidecar to match, Easting, perfect condition; £100; quick sale.—43, Ashcroft Rd., Cirencester. [6682

HARLEY-DAVIDSON 7-9h.p., 1919, 3-speed and clutch, electric lighting, splendid condition, tax paid; £67/10.—Cope, 15, Upper Hagley Rd., Birmingham. [6693

HARLEY-DAVIDSON Combination, 1919, not W.D., excellent condition, fully equipped; great bargain, £75.—Longman Bros., 17, Bond St., Ealing. Tel.: 689. [7477

F.O.C.H. have 1919 Harley Combination, 7-9h.p., electric model, Henderson sidecar, licensed, excellent condition, bargain.—5, Heath St., Hampstead (near Tube). [6533

HARLEY-DAVIDSON 1918 Combination, excellent condition, fast, new sprocket, accumulator lighting; £95; dynamo £10 extra.—Blakeney, Stanley Rd., Orpington. [6494

1915 Harley Combination, electric model, olive brown, in excellent condition, recently overhauled; any trial; £65.—2, George Place, Dongola Rd., N.15. [6657

HARLEY-DAVIDSON 1918 Combination, new sporting sidecar, well tyred, equipped, licensed, perfect; 70 gns.—43, Turnham Green Terrace, Chiswick, S.W. [6304

1919 Harley Combination, 7-9h.p., electric lights, Klaxon, discs, Easting, tools, etc., tax and insurance paid; £105.—" George," 36, Pelham St., S.W.7. Tel.: 7213. [6393

HARLEY 1915 7-9h.p., 3-speed, bulbous sidecar, hood and screen, magneto model, splendid condition; any trial; £55.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [6996

1919 Electric Model Harley Sporting Combination, nearly new, oversize tyres, disc wheels, windscreen, apron, tax paid; £85, or exchange.—198, King St., Hammersmith. 'Phone: 2474. [6785

1922 Harley-Davidson; book now for early delivery, all models; also a few 1921 at special prices; catalogue with pleasure.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5986

HARLEY Combination, 7-9h.p., electric model, discs, 2-seater sidecar, hood, windscreen, thoroughly overhauled recently by makers; £100.—N.C., 43, Gloucester Rd., Regent's Park, N.W. [7425

NEW 7-9h.p. Harley De Luxe Electric Combination, delivered late May, fitted £85 Harley sidecar with disappearing hood, screen, discs, Tan-Sad; accept £185, near.—Parsons, 1, Acton Lane, Chiswick. [7012

HARLEY-DAVIDSON, 1918, with 1920 improvements, 2 bodies, sporting and touring; real bargain, £120 cash, all in; seen any time after 7 p.m.—Young's, 22, Racton Rd., Fulham, S.W.6. [6404

HARLEY-DAVIDSON 7-9h.p., June, 1921, standard sidecar, hood and screen, dynamo lighting, electric horn, Tan-Sad, small mileage, splendid condition; £130.—Levers, 37, Daleham Mews, Belsize Lane, Hampstead. [6848

1918 Sports Harley 7-9h.p., magneto model, 3-speed, Swan sporting sidecar, Easting, electric lights, discs, taxed, perfect condition and recently re-enamelled; £78.—164, Revelstoke Rd., Wimbledon Park, S.W.18. [6965

1920-21 7-9h.p. Harley-Davidson Combination, hood, Autoscreen, acetylene and electric lamp sets, speedometer, in perfect condition, mileage 2,000, guaranteed; £145, or near offer.—'Phone appointment: Hammersmith 1035. [6925

HARLEY-DAVIDSON, exceptional chance, latest 1922 model combination, 7-9h.p., brand new but slightly shop-soiled, unused, usual price £188/10; first £165 secures; usual guarantee.—Motoria, Regent Parade, North Finchley. [6358

HARLEY 1919 Combination, 7-9h.p., 3-speed, clutch, kick start, lighting set, horn, Easting windscreen, large coachbuilt sidecar, speedometer, in most splendid condition throughout £95.—Will, 769, Romford Rd., Manor Park, London, E. [7046

HARLEY Combination, Bosch magneto, electric and gas lights, 3 each, Orto windscreen, hood, recently overhauled, perfect order; sacrifice, £90, inclusive of portable garage; seen any time.—Carpenter, 31, Haslemere Av., W. Ealing. 'Phone: 1664 Ealing. [7142

1919 Harley, guaranteed, licensed December, 1922, good condition, fully equipped, fitted legshields, separate dynamo lighting, speedometer, rear drive, 2-seater sidecar, hood, screen; £105.—198, King St., Hammersmith. 'Phone: 2474 Hammersmith. [6789

## MOTOR CYCLES FOR SALE.

### Harley-Davidson.

1921 7-9h.p. electric Harley Sporting Combination, dynamo lighting set, disc wheels, T.T. bars, R38 sidecar, choice of 2 screens, engine guaranteed perfect, extremely fast and powerful, any trial; £120.—At Ralph's Garage, Bathurst Mews, Sussex Sq., W.2. [6232

1920 Harley-Davidson Combination, electric light model, in perfect condition, complete with all accessories, and licensed to the end of the year; bargain, £125; deferred payments if desired.—The Pytchley Autocar Co., Ltd., 216, Great Portland St., W.1. 'Phone: Museum 7964-6. [6877

1921 Harley Combination and £60 C. and M. sidecar, 7-9h.p., 3-speed, clutch, kick start, dynamo lighting, electric horn, speedometer, screen, disc wheels, 1922 tax paid. This combination did over 69 m.p.h. on Brooklands. In beautiful condition throughout; £125.—Will, 769, Romford Rd., Manor Park, London, E. [7045

*Spare Parts:*

HARLEY Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7543

### Hazlewood.

NEW 1921 Hazlewood Combination, 5-6h.p. twin J.A.P., 3-speed; £110, or near offer; exchanges.—Percy and Co., 314, Euston Rd. [7166

### Henderson.

KICKHAM, Stakes Croft, Bristal, Sole District Agent for Hendersons; unequalled service, repairs, etc. [3560

1920 Henderson Solo, real good condition, mileage 5,000, lamps, horn, tax paid; £80.—11, Osborne Rd., Birkenhead. [6337

1920 Henderson Combination, fully guaranteed, approval willingly; particulars.—R. Dunstan, Kingsand, Plymouth. [6819

1922 Henderson Model de Luxe in stock, £165; easy payments 4% extra.—Premier Motor Co., Aston Rd., Birmingham. [4602

HENDERSON 1921 Coupe Combination, dynamo; cost £350, accept £200; solo £125; any trial.—13, Victoria Rd., Sheffield. [6503

45 GNS.—Henderson, 1916, with sporting sidecar, 10h.p., 4-cylinder, 2-speed, clutch, kick starter, lamps, speedometer, tax paid, running order, but wants tuning; exchanges.—Smith's 86, Chalk Farm Rd., N.W.3. [6865

ROBERTSONS Motors, Ltd., who have handled these famous Henderson machines since 1911, can give trial runs with the latest model at any time by appointment. 1922 De Luxe model in stock at the new reduced price of £165.—157b, Great Portland St., W.1. [1092

SPORTING Henderson Combination, Swan Sports sidecar, Lucas lamp set, disc wheels, T.T. bars, long exhaust pipes with cut-out; this machine has been well kept and in perfect mechanical condition; real bargain, £65.—Richardson, Rosslyn Mews, Rosslyn Hill, Hampstead (near Tube). [6847

ROBERTSONS Motors, Ltd., the original Henderson Importers, offer the following: 1921 Standard, in perfect order, tax paid, £110; 1920 electric combination, Tan-Sad, just completely overbauled, £135; 1920 Standard Capion and Madd, £80; sidecar, Cowey trip, and all accessories, £135; 1920 Standard combination, all accessories, tax paid, £120; 1915 Standard, with luxurious sidecar, speedometer, and accessories; £68.—157b, Gt. Portland St., W.1. [6078

*Spare Parts:*

ROBERTSONS Motors, Ltd., the Henderson Experts, have the most representative stock in the country.—157b, Gt. Portland St., W.1. [6079

### Hobart.

HOBART 2¾h.p., 3-speed, clutch, nice condition, trial; £18.—17, Heaton Rd., Mitcham. [7062

HOBART, new, shop soiled, single speed, £39; 2-speed, kick start, £59.—Shepherd, Enfield Highway. Tel.: Waltham X 31. [0875

1922 Hobarts, all models. Catalogues with pleasure from the agent, Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [4633

1920 Hobart-Villiers, 2-speed, electric lighting, Klaxon, tax and insurance to December, magnificent condition; £40.—Box 2170, c/o *The Motor Cycle*. [7237

HOBART-VILLIERS 1919 2½h.p., 2-speed, all on, good condition, Tan-Sad, insured September, taxed year, £30, or offers; also lightweight chassis, nearly new, £4/10.—26, Enfield Rd., Acton. [6398

### Holroyd.

HOLROYD 2¼h.p., sports model, 1922, 2-speed, handle-bar clutch, specially tuned for racing, only done 170 miles, as new; £60.—Baxter, "Sunnyhurst," East St., Farnham, Surrey. [6516

### Hoskinson.

2¾h.p. Hoskinson-Blackburne Sporting Combination, 1920, lamps, speedometer, horn, tax paid, insured, any trial; real bargain, £75.—Gwennap, Stafford. [6722

# "Try Bambers"

## "They'll have it" IN STOCK

### SOLO.

| | | |
|---|---|---|
| 1922 | 2¾ h.p. **DOUGLAS,** all on | £68 |
| 1922 | 2¾ h.p. **DOUGLAS,** 3-sp., K.S. | £82 |
| 1922 | 3½ h.p. **DOUGLAS,** Sports | £115 |
| 1922 | 2¼ h.p. **ENFIELD,** 2-speed | £55 |
| 1922 | 3½ h.p. **NORTON,** 16H. | £115 |
| 1922 | 3½ h.p. **ARIEL,** 3-sp., K.S. | £95 |
| 1922 | 4½ h.p. **B.S.A.,** all chain | £110 |
| 1922 | 4 h.p. **TRIUMPH,** all chain | £115 |
| 1922 | 4 h.p. **TRIUMPH,** Model H | £105 |
| 1922 | 3½ h.p. **ROVER,** all chain | £100 |
| 1922 | 3½ h.p. **ZENITH-BRADSHAW** | £119 |

### COMBINATIONS.

| | | |
|---|---|---|
| 1922 | 7 h.p. **A.J.S.** Comb. | £175 |
| 1922 | 8 h.p. **ENFIELD** Comb. | £140 |
| 1922 | 8 h.p. **ENFIELD** Comb., dyn. | £158 |
| 1922 | 4 h.p. **DOUGLAS** Comb. | £135 |
| 1922 | 6 h.p. **DOUGLAS** Comb. | £165 |
| 1922 | 8 h.p. **MATCHLESS** Comb. | £170 |
| 1922 | 6 h.p. **B.S.A.** Comb. | £164 |
| 1922 | 4½ h.p. **B.S.A.** Comb. | £142 |
| 1922 | 3½ h.p. **ARIEL** Comb. | £125 |

NO WAITING: ANY MAKE SUPPLIED

## USED MACHINES.

| | | |
|---|---|---|
| 1922 | 2¼ h.p. **ENFIELD,** shop-soiled | £47 |
| 1921 | 5-6 h.p. **ROVER** Comb., all-chain | £120 |
| 1921 | 3½ h.p. **RUDGE-MULTI,** bargain | £55 |
| 1920 | 7-9 h.p. **INDIAN** Comb., perfect | £105 |
| 1920 | 6 h.p. **ENFIELD** Comb. | £105 |
| 1920 | 4½ h.p. **B.S.A.** Comb., new 1921 | £90 |
| 1920 | 2½ h.p. **METRO-TYLER,** "S" type | £50 |
| 1920 | 2¾ h.p. **EDMUND,** 2-sp., all-chain | £45 |
| 1919 | 5-6 h.p. **JAMES** Comb. | £80 |
| 1915 | 7-9 h.p. **HARLEY-DAVIDSON** Comb. | £70 |
| 1914 | 4½ h.p. **JAMES** Comb., a gift | £45 |

ALL MACHINES LICENSED.
MANY MORE.
*May we send you full particulars?*

CASH
EXCHANGES
DEFERRED PAYMENTS

**R. BAMBER & Co., Ltd.,**
**2, EASTBANK ST.,**
'Phone 607. **SOUTHPORT.**

## MOTOR CYCLES FOR SALE.

### Humber.

HUMBER 3½h.p. Combination; £40.—90, Warwick Rd., New Southgate. [6396

HUMBER 3½h.p.; £14; good order, tax paid.—68, Gloucester Rd., Camden Town. [7124

3½h.p. Humber, Bosch, Binks, clutch; £20, or offer.—Winter, High St., Minster, Sheerness. [6429

TWO 3½h.p. Humbers, 2-speed; £18 each.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [6949

2¾h.p. Humber, 3 speeds, clutch, perfect; £24, offers; bicycle part.—255, South Lambeth Rd., S.W.8. [6921

HUMBER Combination, 2-speed, starter, coach sidecar; given, 19 gns.—Royal Garage, Castle Gate, Blackpool. [6409

HUMBER 2¾h.p., twin, 3-speed, lamp, horn, licensed 1922; bargain, £20.—Atkinson, Heathfield, Sussex. [6276

HUMBER Lightweight, all on; £20; seen by appointment.—S. E., 72, Radcliff, Bourne Estate, Holborn, E.C. [6828

HUMBER 1920 4¼h.p. Flat Twin, fully equipped and tax paid; £60.—The Layton Garages, 30, Holywell St., Oxford. [7175

HUMBER 4¼h.p. Sports Model, £100; immediate delivery.—Shepherd and Co., Enfield Highway. Tel.: Waltham Cross 31. [0877

HUMBER, 4½h.p. Flat Twin Combination, new machine, slightly shop-soiled; £125.—P. J. Evans, John Bright St., Birmingham. [6519

HUMBER 4½h.p. Flat Twin Combination, November, 1920, insured, licensed, lamps, horn, splendid condition; £75.—County Motors, Whyteleafe. [6175

3½h.p. Humber, engine rebuilt for speed, new pis ton, etc., very fast, sporty bike, any trial after 7.30; £20.—W. Rix, 149, Broadway, Cricklewood, London. [6564

HUMBER Combination, 1916-17, 6h.p. flat twin, water-cooled, 3 speeds, clutch, kick starter, fully equipped, splendid condition; £65; exchanges.—63, Solon Rd., Brixton. [6726

HUMBER Agents.—All 1922 Models; write for catalogues and full particulars by return post free; exchanges and special payment terms arranged; correspondence invited.—Herbert Robinson, Ltd., Green St., Cambridge. [6114

### Indian.

WAUCHOPE'S, 9, Shoe Lane, London, for new Indians on easy terms. [7270

INDIAN 7-9h.p. Road Racer, tax paid, perfect; £30.—17, Heaton Rd., Mitcham. [7060

INDIAN Combination, good condition; reasonable offer.—83, Glenparke Rd., Forest Gate. [6369

INDIAN, 1920, dynamo, speedometer, as new; £87.—Smith, 38, Sydenham Hill, S.E.26. [6576

£28.—1915 7-9h.p. Indian, clutch, splendid running order.—King, Egrove Farm, Oxford. [7089

7-9h.p. Indian Combination, spring frame, 2-speed; £45; separate.—17, Heaton Rd., Mitcham. [7061

1915 7-9h.p. Indian Combination, overhauled, good condition; £64.—Walter, West Moors, Dorset. [6801

1916 5-6h.p. 3-speed Indian, fully equipped, licensed year; £40.—Cyril Rawlins, Rugeley. [6689

5-6h.p. Indian Combination 1915, 3-speed, clutch, K.S., good order; £55.—"Fairlight," Brookwood. [6660

INDIAN 1916 Combination, fully equipped; offers.—7, Goldsmith Lane, Roe Green, Kingsbury, N.W.9 [6267

INDIAN 7-9h.p. Combination, 3-speed, perfect condition; £63.—34, Beechwood Av., Thornton Heath. [6579

INDIAN Combination, 7-9h.p., 3 speeds, English controls; £67.—23, Alexandra Park Rd., Muswell Hill. [6392

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Indians; unequalled service, repairs, etc. [3561

INDIAN Combination, 7-9h.p., splendid mechanical order and condition; £60.—'Phone: Streatham 1596. [6257

INDIAN Solo, 1919, practically unused, 300 miles only; £70.—Manley, Cleve Hall, Denmark Hill, S.E.5. [6578

£45.—Indian Coachbuilt Combination, 2-speed, clutch, perfect order.—Dudley, 77, High St., Putney (side entrance). [6325

1919 Indian 7-9h.p. Combination, fully equipped; £65.—Hillier (side bell), 9, Wallingford Ave., North Kensington. [7056

1914 7-9h.p. Indian with sidecar, clutch model, splendid condition; £50.—2, Empress Av., Manor Park, E.12. [6555

INDIAN 7-9h.p., 1915, 2-speed, clutch, horn, good running order; offers.—Houghton, "Grove," Asforby, Melton Mowbray. [6366

## MOTOR CYCLES FOR SALE.

### Matchless.

WAUCHOPE'S, 9, Shoe Lane, London.—Matchless new 1922 models always in stock; easy terms and exchange.—'Phone: Holborn 5777. [7275

MATCHLESS 6h.p. Twin Combination, 1912 J.A.P. engine, V.S., 2-speed gear; £34; tax paid.—Eagles and Co., 275, High St., Acton, London. [7320

MATCHLESS Combination, 1919, D.A. lighting, spare wheel, luggage grid, all accessories, trial; 74 gns.—Box 2168, c/o *The Motor Cycle*. [6591

SHEFFIELD Agent for Matchless. All models in stock. Sporting models £130, standard models £170.—A. J. Stacey, 12, Ecclesall Rd., Sheffield. [0574

£150 is the price of a new Matchless Combination; see our showrooms, all models in stock; cash or payments.—Knight's, 126, Upper Tootiog Rd., S.W.17. [0759

1921 (October) Model H2 Matchless Combination, acetylene lighting, spare wheel, windscreen, perfect order; trial; £135.—86, Market St. Poole, Dorset. [6744

1920 Matchless, Magdyno, all on, sidecar step, Tan-Sad, Watford trip, Stewart horn, spare chain, valve, etc.; £120.—Taylor, 14, Radley Rd., Tottenham, N.17. [6562

MATCHLESS. Matchless.—Seabridge can supply you and take your old machine in exchange.—Seabridge, Hansler Rd., East Dulwich. Sydenham 2452. [6940

MATCHLESS Model H, Combination, late 1920, Magdyno lighting, engine as new, fully equipped, tax; £112; bargain.—143, Ravensbury Rd., Earlsfield, S.W.18. [7392

1920 Matchless Combination, fully equipped, electric lighting, etc., excellent condition, mileage 6,000; £135.—Bradford, 66, Chardmore Rd., Upper Clapton. [6807

1922 Matchless, all models; cash, exchange, or easy terms. The agent to serve you best is Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5863

TASSELL, 1a, Bloomfield Rd., Plumstead, for Matchless Combinations; deferred payments; spares of all dates; trade supplied where agents not appointed. [2241

1920 Matchless-M.A.G. Combination, Lucas dynamo lighting, speedometer, electric horn, mechanically perfect, £115.—Tassell, 1A, Bloomfield Rd., Plumstead. [6171

MATCHLESS Combination, Model H, 1920, spare wheel, Easting screen, lamps, etc., good condition, trial run; £90.—Featherstone, Ninfield Rd., Sidley, Bexhill. [6780

1921 Matchless-Jap Combination, small mileage, exhausts untarnished, complete except head lamp, guaranteed, appearance all new; £150.—82, Market St., Colne. [6226

MATCHLESS, 1920, Model H, J.A.P., Lucas, acetylene lighting, spare wheel, screen, etc., tax paid; £105.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [5864

MATCHLESS.—Immediate delivery all models. We allow best prices for exchanges or liberal easy terms. Enquiries invited.—Edwards, 50, Harrington Rd., South Kensington. [4546

MATCHLESS 1922 Sports Combination, complete with Lucas Magdyno and equal to new, originally cost £178; accept £147/10.—The Layton Garages, 30, Holywell St., Oxford. [7176

O.H.V. 8h.p. Sporting Matchless, Zenith racing gear, tax paid year, speedometer, tyres as new, very fast; £52/10, or exchange.—198, King St., Hammersmith. 'Phone: 2474. [6784

MATCHLESS 1922 Solo and Combinations for immediate delivery; prices from £150; exchanges.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5601

MATCHLESS 1920 Model H Combination, Lucas dynamo lighting, perfect condition; £120.—Elce, Ltd., 13, 15, and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0067

1921 Electric Model Matchless Combination, spare wheel, tyres as new, full equipment, first-class order, tax paid; £140, quick sale.—198, King St., Hammersmith. 'Phone: 2474. [6788

MATCHLESS Combination, late 1917, 8h.p. J.A.P., spare wheel, lamp, horn, tools, windscreen, etc., lovely condition, any trial given; £70.—Young, 1238, Coventry Rd., Yardley, Birmingham. [6207

MATCHLESS Combination, 1921, M.A.G., splendid condition, Magdyno, electric horn, speedometer, spare wheel, hood, screen, 6,000 miles; bargain, £140.—4, Kenilworth Gardens, Seven Kings, Ilford. [6648

MATCHLESS Combination, 1919 Victory model, 8h.p. J.A.P., year's licence paid, new tyre on spare wheel, acetylene and battery lighting, perfect, owner buying car; £100.—Carr Brothers, Purley. [6344

MATCHLESS, late 1921, M.A.G. special engine, guaranteed perfect, any trial, equipped, cost nearly £200; accept 128 gns.—Hynard, Farmer, Eynsford, Kent. 'Phones: Farningham 43, or Padd. 5788. [7044


# WATERPROOF CLOTHING FOR ALL WEATHER CONDITIONS

Fig. 1.

**WATERPROOF MOTOR CYCLE SUIT (Fig. 1)**
With Plaited Leather Belt.

**SPECIFICATION**

**MADE from hard wearing double texture material with an interlining of Rubber.**
**Double Breasted Jacket, with all-round plaited Leather Belt, large Patch Pockets, and converted collar to button right up to neck, to fasten with Throat Tab. Wind Cuffs in sleeves. All seams of the Suit are rubber cemented and taped with extra material, making the garment absolutely waterproof.**
**Overall Trousers with spat-shaped leg; wind gussete to keep the wind from the leg and boots; fastened with patent clasp fasteners, enabling the trousers to be pulled off in a moment.**

**SUIT COMPLETE 35/-**
**Jacket only . . . . 25/-**
**NO EXTRA CHARGE FOR CARRIAGE**

**OUR ILLUSTRATED LIST AND PATTERN BUNCH OF CLOTHS, TOGETHER WITH SELF-MEASUREMENT FORM, WILL BE SENT POST FREE AND WITHOUT ANY OBLIGATION UPON RECEIPT OF YOUR NAME AND ADDRESS.**

Fig. 2.

**Waterproof Trench Coat 25/-**
**(Fig. 2.) Fawn material, rubber lined, wind cuffs, guaranteed waterproof.**

**SEAT-LESS Trousers Fawn double texture material rubber interlined wind gusset & clasp fasteners. All sizes. Guaranteed Waterproof.**

**18/-** per pair.

**WATERPROOF OVERALLS.**
**Double texture material, clasp fasteners, perfectly waterproof.**
per **12/6** pair
**THESE GARMENTS ARE NEWLY MADE FROM FRESHLY PROOFED MATERIAL BY EXPERIENCED WORKMEN AND NOT HALF-PERISHED CLEARANCE LINES OR W.D. SURPLUS**
*If you cannot call, send money with breast measurement and height.*

*POST YOUR ORDER EARLY*

*Satisfaction guaranteed or money refunded if garments are returned to us within 7 days.*

**CARRIAGE PAID ON ALL ORDERS**

Actual Manufacturers:
**Martin Waterproof Co., 208, Oldham Rd., New Cross, Manchester**


## MOTOR CYCLES FOR SALE.

### Matchless.

MATCHLESS 1922 Combination, double seat sidecar, M.A.G. engine, Lucas electric lighting set, electric horn, tax paid; cost £118 seven weeks ago; accept £185.—Cope, 15, Upper Hagley Rd., Birmingham. [6692

MATCHLESS, late Victory model, 8h.p. J.A.P., interchangeable wheels, coachbuilt sidecar, equipped, guaranteed; 75 gns.; photograph, exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [7297

MATCHLESS, 1922, Model J, Super J.A.P., Magdyno, front band brake, Bonnilksen, electric Klaxon, sports sidecar fitted, Easting, luggage grid, spare wheel, mileage 3,000; £170.—Pullings Garage, Croydon. [6608

1920 Matchless Model H Combination, recently overhauled, excellent condition, legshields, Magdyno lighting, speedometer, Easting, 2 new covers, spare wheel, latest Binks; £125.—E.A.G., 31, Auerley Park, S.E.20. [6863

MATCHLESS, Model J, late 1920, Easting, electric lighting, spares, Klaxon, insured to 1923, mileage 7,000, just recently overhauled, sidacar re-painted, outfit as new and guaranteed, any trial; £120.—Ripper, Bowmans Lodge, Crayford. [6902

MATCHLESS 1920 8h.p. Combination, M.A.G., dynamo lighting, horn, speedometer, hood, screen, spare wheel and tyre, tools, tyres practically new, condition excellent; a genuine bargain, £125; tax paid.—Jenkins, 27, Gt. Darkgate St., Aberystwith. [7471

NEW 8h.p. 1922 Matchless Combination, 2-seater model, spring frame, £187; 8h.p. standard model, £170; sports model, £160; easy payments, one-fifth down, remainder in 12 equal monthly payments or more.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [7276

MATCHLESS Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments. (See column advertisement.)—Bamber's, 2, Eastbank St., Southport. 'Phone: 607. [7329

MATCHLESS Combination, 1920, excellent condition, perfect running order, just been overhauled, tyres practically new, low-seatad sidecar, spare wheel, all accessories and spares, mileage 6,500, tax paid 1922; £115; view by appointment any day after 4.30 p.m.—12, St. John's Park Rd., Blackheath. [7006

MATCHLESS Combinations.—T. J. Ross, of 86, High Rd., Lee, S.E. ('phone Lee Green 744), will be pleased to take your orders for prompt delivery. Exchanges and deferred payments arranged; demonstration model always in stock. Purchasers taught free. Large assortment of new and second-hand motor cycles always in stock. [5869

1922 8h.p. Matchless Combination, Model H2, M.A.G. engine, fully equipped, Magdyno lighting, speedometer, horn, spare wheel and tyre, legshield, luggage grid, sidecar step, hood, hood cover, windscreen, etc., front brake, external compression type, tax and insurance paid, perfect condition; great bargain, cost £217, accept £156; seen by appointment.—Apply to Hy. Bath, 7, Bronghton Rd., West Ealing, W.13. [6462

*Spare Parts:*

MATCHLESS Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4828

MATCHLESS Spares for J.A.P. or M.A.G. by return, post free.—Jones Garage, Matchless Agent, Broadway, Muswell Hill, N.10. [0808

### Metro.

METRO-TYLER for sale, special model; cost £75; take £52/10, bargain; mileage about 400.—17, Mile St., Hammersmith. [6542

METRO-TYLER Motor Cycle, 1920, in perfect condition: view any time; no reasonable offer refused.—Apply 90, Old St., E.C. [6582

METRO-TYLER 1921 2-speed, tax paid; £42.—Howard's, 72 and 74, Chase Side, Enfield, and 246, Lordship Lane, Wood Green. [6433

1920 Metro-Tyler 2¾h.p., single-speed, in perfect ordar, tax paid; £27/10.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7223

1921 Metro-Tyler Sports Model, 2¾h.p., 2-speed, lamps, horn, discs, long exhaust, tax paid, splendid condition throughout; £33.—161, Kaw Rd., Richmond, S.W. [6288

1922 Metro-Tylar Sports Model, 2-speed, specially tuned 45-50 m.p.h., long plated exhaust, taxed, fully equipped, small mileage, as new; bargain, £45.—W.J.C. Motor Exchange, Addison Av., Holland Park, W.11. Park 2071. [7157

### McKenzie.

1923 McKenzie, new, equipped, licensed; £26 cash; or deferred payments.—Godfrey's Garage, Cranbrook Rd., Ilford. 'Phone: 83. [7210

MCKENZIE-HOBART Ultra Lightweight Motor Cycles; 26 gns., ex works; immediate deliveries of these wonderful little machines.—Colonial Motors, 104A, Finchley Rd. Hampstead 7822. [7317

## MOTOR CYCLES FOR SALE.

### McKenzie.

MCKENZIE Lightweight, perfect, run 100 miles, bought combination; 25 gns.; all on, cost £31.—Willis, 364, High St., Plumstead, S.E.18. [6382

### Minerva

MINERVA 2¼h.p., running order, suit learner; £5; after 6.—16, Christie Rd., E.9. [7036

MINERVA 3½h.p., 1920 frame, tax paid; 18 gns.; a gift.—Royal Garage, Castle Gate, Blackpool. [6414

MINERVA 2¾h.p., M.A.G., Amac, lamps, horn, ride away; £16.—9, Barlby Gardens, North Kensington. [6988

MINERVA Combination, 3½h.p., 2-speed, handle start; any trial; £32; lightweight part.—57, Kenbury St., Camberwell, London. [7018

### Mohawk.

MOHAWK Cycles new, or second-hand, at lowest prices, for cash or easy payments.—Mohawk Cycle Co., Ltd., 276, Alexandra Rd., Hornsey, N.8. [1924

### Moto-Reve.

*Spare Parts:*

MOTO-REVE Spares for all models, also repairs, overhauls.—Motor Supply Co., Sole Concessionnaires, 223a, High St., Lewisham, S.E. [6107

### Motosacoche.

2½h.p. Motosacoche, variable gear, free engine, Amac, Bosch, excellent condition, 40 m.p.h., 110 m.p.g.; £15.—Herbage, 28, High St., Hampstead. [6308

MOTOSACOCHE 2½h.p., Bosch, Amac, Druids, variable gear, mechanical valves, all on, licensed, ride away, looks new; 20 gns.—4, Coniston Rd., Muswell Hill London. [6685

### Ner-a-Car.

NER-A-CAR, good condition and better running order than new; £53.—W. Johnson, Station Rd., Long Sutton, Lincs. [6225

NER-A-CAR, 1921, October, fitted with 1922 handlebar and clutch controls, perfect condition; £45.—244, Old Christchurch Rd., Bournemouth. [6470

NER-A-CAR.—The 1922 wonder, 2¼h.p. 2-stroke, electric and gas lighting, excellent finish, perfected friction drive; £65. We can give a limited number of immediate deliveries.—South Eastern Garage, Herne Hill, S.E.24. [3495

### New Comet.

NEW 1922 New Comet 2-stroke, single-speed; £34.—Percy and Co., 314, Euston Rd. [7171

### New Hudson.

£50.—New Hudson 2¼h.p., shop-soiled; £45.—Atkinson, Agent, 102, High St., Mexboro'. [6826

1914 New Hudson 2½h.p., 3 speeds, excellent; £25.—Captain Collins, Sunbury Common. [7467

NEW HUDSON 4h.p., overhauled, solo or combination; what offers?—3, Roland Mews, S.W.7. [6826

1914 New Hudson, 3-speed, clutch, all on, as new; a bargain. £30.—2, Lillian Rd., Barnes, S.W.13. [6140

LATE 1920 New Hudson Lightweight, 2 speeds, fully equipped, legshields; £30.—7, Cowdrey Rd., Wimbledon. [7138

NEW HUDSON Lightweight De Luxe, 1920, new condition, complete; £40.—Baker, 54, Viaduct St., Widnes. [6249

NEW HUDSON Motor Cycles.—London Depot, 45, Gray's Inn Rd., London, W.C.2. Immediate delivery all models Spares stocked. Trade supplied. [0851

NEW HUDSON 1920 6h.p., Mills-Fulford sidecar, tax paid; £65; genuine; seen Sunday morning or evening next week.—115, St. Stephen's Rd., Hounslow. (P) [6612

1922 Hudson de luxe, £63; also Popular model, £50; 3 new lightweights, 1921 models, brand new, to clear, £53.—Shepherd, Enfield Highway. Tel.: Waltham Cross 31. [0876

NEW HUDSON 1921 2-stroke, 2-speed, absolutely as new, taxed, equipped, guaranteed; 35 gns.; photograph.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [7298

5-6h.p. New Hudson Combination, 3-speed, hub geared, kick start and clutch, lamps, horn, windscreen, and in perfect condition; £45.—Rhind and Co., Stone Place, Wilmslow Rd., Rusholme, Manchester. [6379

1922 New Hudson 10h.p light car, £230; 4½o.p combinations, £125, solo, £100; 2¼h.p. 2-speed Popular, £50, De Luxe, £63; exchanges and deferred payments entertained; sole agents for Cambridge.—Wallis and Easton, 104, Mill Rd., Cambridge. [0824

### New Imperial.

NEW IMPERIAL, No. 3 model, in stock.—Wigfield, Goldthorpe, Yorks. [6187

1919 2¾h.p. New Imperial-Jap, equipped, 2-speed, perfect, any trial; £35.—Below.

1920 2¾h.p. New Imperial-Jap, 2-speed, fully equipped, perfect condition, as new, any examination; £43.—25, Canterbury Terrace, Maida Vale. [6861

**H. F.**

# EDWARDS

**& CO.,**

**101, GREAT PORTLAND STREET, W.1**

Tel. Mayfair 4027.

**We have been appointed Sole Distributing Agents for London and 50 miles Radius for the PRIORY 2¾-H.P. J.A.P. 2-Speed, Clutch, Kick Start. Price 52 Gns. Also, the 2¾-H.P. PRIORY 2-Stroke, 2-Speed, Price £38. Specification on request.**

**SEVERAL NEW (shop-soiled)**

# 2¾ DOUGLAS 47 Gns.

**TRADE SUPPLIED.**

**Several Brand New 5-6**

# ZENITH COUNTERSHAFT

**Models, Clutch, Kick-Start,**

# 84 Gns.

**Listed £118. Maker's Guarantee.**

**1922 3½ h.p.**

# ZENITH-BRADSHAW

**Belt drive, Brand New (shop soiled),**

# 82 Gns.

**Listed £113.**

## SECONDHAND COMBINATIONS.

| | | Gns. |
|---|---|---|
| 1920 | American **EXCELSIOR** Comb. 7 h.p., electric model, speedometer, hood | 75 |
| 1920 | 8 h.p. **ZENITH** and G'oria s.c. speedo, wind screen, hood, electric light, excellent order | 89 |
| 1920 | 4 h.p. **VICTORIA J.A.P.** 3-speed, clutch, and k/starter. Equipped and licensed. | 55 |
| 1919 | 6 h.p. **JAMES** Combination, equipped with licence | |
| 1920 | **B.S.A.** Combination. Lucas Magdyno, speedo | 80 |

## SECONDHAND SOLOS.

| | | |
|---|---|---|
| 1922 | **ZENITH-BRADSHAW,** belt drive. indistinguishable from new | 75 |
| 1921 | 2¾ h.p. **NEW IMPERIAL,** 3-speed, equipped, excellent condition | 53 |
| 1921 | 8 h.p. **BLACKBURNE,** excellent condition | 80 |
| 1917 | 4 h.p. **TRIUMPH,** 3-speed, clutch, kick start | 52 |
| 1913 | **RUDGE, N.S.U.,** 2-speed, clutch | 33 |
| 1913 | 3½ h.p. **ARIEL,** equipped, taxed | 20 |

**Deferred Payments & Exchanges on any of the above.**

**WANTED—SOLOS and COMBINATIONS.**

Cash waiting.

## MOTOR CYCLES FOR SALE.

### New Imperial.

1917 New Imperial 2¾h.p., 2-speed, fully equipped; £29.—Broadway Motor Co., Tooting. [7067

1919 New Imperial 8h.p., fine condition, perfect, a real bargain; £65.—9, Church Rd., Harlesden. [6765

2¾h.p. Imperial-Jap 1916, 2-speed, clutch, K.S., speedometer, etc.; £35.—"Fairlight," Brookwood. [6661

SHEFFIELD Agent for New Imperial Motor Cycles; all models in stock.—J. A. Stacey, Ecclesall Rd., Sheffield. [0813

1918 New Imperial 2¾h.p., fully equipped, tax paid; £30.—James, c/o Bradmore's, 482, Harrow Rd., Paddington. [7335

NEW 1921 New Imperial Combination, 8h.p. twin J.A.P.; £115, or near offer.—Percy and Co., 314, Euston Rd. [7168

LATE 1919 New Imperial, 2¾h.p., 2-speed, complete, trial, perfect; £39.—80, Mysore Rd., Clapham Junction. [6756

WAUCHOPE'S, 9, Shoe Lane, London.—2¾h.p. New Imperial-Japs, 1922, No. 3, £73; No. 2, £60; easy terms and exchange. [7278

NEW IMPERIAL 8h.p. Combination, 3-speed, countershaft gear, tax paid; £75, or close offer.—Petersen, 51, Archer St., N.W.1. [6900

NEW IMPERIAL 1922 2¾h.p. Sports Model, tax paid for 1922, equal to new; £75.—The Layton Garages, 30, Holywell St., Oxford. [7187

NEW IMPERIAL, 2¾h.p. J.A.P., K.S., 1921, small mileage, perfect, lamps, horn, spares; £45.—King, 10, North Mews, W.C.1. Museum 6632. [6058

1919 2¾h.p. New Imperial-Jap, 2-speed, clutch, kick start, lamps, discs, spare tube, tools, tax paid, perfect condition; £45.—11, Uphall Rd., Ilford. [6586

40 GNS.—New Imperial, 1920, 2-speed, 2½h.p. J.A.P., indistinguishable from new, tax paid for the year, any trial; exchanges.—Smith's, 86, Chalk Farm Rd., N.W.1. [6869

1919 2¾h.p. New Imperial, 2 speeds, clutch, kick start, fully equipped, excellent order; £35.—Maynard, 161, Bowes Rd., Bowes Park, N.11. 'Phone: Palmers Green 19. [6952

NEW IMPERIAL 2¾h.p., J.A.P. free engine, speeds and all on; £26; has been lightly used, take any hill with passenger.—Hunt, 24, Sekforde St., St. John's St., Clerkenwell. [6575

SOUTHPORT.—1917 8h.p. New Imperial combination, 3-speed, kick starter, all-chain, electric lighting, Cowey horn, wonderful puller; £68; exchanges.—Kents, 417, Lord St., Southport. [6710

1922 New Imperials in Stock.—No. 3, 2¾h.p., chain drive, £73; No. 3 with Maglita, £83; easy payments 4% extra; free delivery and tuition.—Premier Motor Co., Aston Rd., Birmingham. [5882

NEW IMPERIAL 2¾h.p., 2-speed, engine, tyres, enamel and plating as new, licensed, lamps, horn, tools, spares, long copper exhaust, no reasonable offer refused.—60, Doggett Rd., Catford, S.E. [6216

FOR Sale.—8h.p. New Imperial, dynamo lighting, electric horn, good tyres, nice sidecar, screen, good condition, any trial; £80; reason selling, bought car; seen after 6 o'clock.—11, Standish Rd., Hammersmith. [6541

1920 New Imperial Combination 8h.p., J.A.P., 3 speeds, clutch and K.S., all lamps, horn, Easting screen; an exceptional bargain, tax paid, £85; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7224

*Spare Parts:*

NEW IMPERIAL Spare Parts.—London stockist's, Rev, 173, Gt. Portland St. 'Phone: Langham 1257. Open till 7.30 p.m., 4 o'clock Saturdays. [0855

### Norton.

PREMIER Motor Co. for 1922 Nortons.

NO. 9, 3½h.p., £80; 16H, 3 speed, £115; Big Four, 3-speed, £120; sidecars from £22; easy payments, 4 per cent. extra; free delivery to any address.—Premier Motor Co., Aston Rd., Birmingham. [0865

NORTON 1920 3½h.p., 3-speed, Lucas lamps, horn, tax; 75 gns.—H. Rock, Cradley, Staffs. [7402

NORTON Big Four with sidecar, in stock for immediate delivery; £153.—Robbins Garage, Rugby. [6202

1922 unridden 16H Norton, large wheels, 3in. tyres, tax paid; £110.—Green, Wine Merchant, Reigate. [6753

F.O.C.H. have a 1922 Norton, 16H model, little used, excellent condition, licensed, bargain.—5, Heath St., Hampstead (near Tube). [6531

LATE 1921 Norton, with close ratio gear, in new condition, very fast; price £79; no offers.—Lewis, 21, London St., Basingstoke. [6242

NORTONS.—All models from stock; supplied upon deferred payments; exchanges arranged.—King and Harper, Bridge St., Cambridge. [5817

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Reading-Standard.

READING STANDARD 1922 Combination, 8-10h.p., as new throughout, dynamo lighting, electric horn, etc., mileage under 600, guaranteed perfect; £125 or offer.—1, Wellmeadow Rd., Hither Green, S.E. [7430

### Rex.

REX Combination 1914 6h.p., good condition; £50, or near offer.—25, Montagu Gardens, Wallington. [6270

1922 new Rex-Acme 2¾h.p. 3-speed model; £66/10; easy terms and exchanges.—Wauchope's, 9, Shoe Lane, London. [7249

REX, 2¾h.p., Bosch, stand, carrier, etc.; first £8 secures; carriage paid.—Guinchard, 179, York Rd., Islington. [6960

REX Combination 6h.p., 2-speed, handle start, in perfect running order; £22/10.—S. E. Porter and Co., Whitchurch, Salop. [4798

1922 Rex-Acme, all models. Note performance in lightweight T.T. race. A marvellous production.—The agent is Sam E. Clapham (Motors), 27, Stockwell St., Greenwich, S.E.10. [3498

REX fine coachbuilt Combination 6h.p., twin, 3-speed gear box, clutch, kick, chain drive, lamps; cheap, 49 gns.; exchanges; easy terms.—Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). [7454

### Reynolds.

REYNOLDS Runabout, quite new, list price £75; any reasonable offer accepted.—Smith, Garage, Redditch. [6478

REYNOLDS Runabout, 2¾h.p. slightly shop-soiled only, 2-speed, kick starter; £45.—Main, 36, Parade, Leamington. [5493

REYNOLDS, new February, tyres unscratched, Lucas lighting, perfect condition, licence paid, designer's own machine.—Apply Reynolds Jackson, Sarratt, Herts. [6250

### Roc.

5-6h.p. Roc, 2-speed, clutch, handle starter; £20.—Box 2171, c/o *The Motor Cycle*. [7305

### Rover.

ROVER 1919 Combination, well equipped, taxed; £70.—Clark, 7, Exhibition Rd., S.W.7. [4614

1920 Rover Combination, 3½h.p., excellent condition; 75 gns.—180, Grangehill Rd., Eltham. [6603

3½h.p. Road Racer Rover, with free engine clutch, £37/10.—Wauchope's, 9, Shoe Lane, London. [7248

£28.—Rover 3½h.p., 2-speed, clutch, lamps, etc., licensed (£4); inspect.—89, Rectory Lane, Tooting. [6220

3½h.p. Rover, 3-speed hub model, running, accessories; £18.—Cranleigh, College Slip, Bromley, Kent. [6420

ROVER Sports Combination, 3½h.p., in stock for immediate delivery; £137/10.—Robbins Garage, Rugby. [6204

ROVER 3½h.p., Philipson pulley, clutch, perfect running order; £30.—Premier Motor Co., Aston Rd., Birmingham. [7349

ROVER 1920 3½h.p., T.T., Philipson, fast, reliable, condition perfect; £56.—Tinson, Ronalda, Station Rd., Netley. [5009

ROVER 1914 Combination, hood, screen, fully equipped, taxed, fine condition; bargain, £58.—505, High Rd., Tottenham. [7003

£55.—3½h.p. Rover combination, insured, genuine, spares; trial run after 6 or week-ends.—Dowell, 13A, Moye Street, Shoreditch. [6498

ROVER 1921 3½h.p., Philipson pulley, lamps, mechanical horn, tools, tax paid; £55.—Cope, 15, Upper Hagley Rd., Birmingham. [6694

ROVER, 8h.p., 1921, dynamo, speedometer, unscratched; £155.—Hillier (side bell), 9, Wallingford Avenue, North Kensington. [7059

1921 Rover 3½h.p. road racer, Philipson pulley, including accessories and tax paid; £65.—Seen at Wauchope's, 9, Shoe Lane, London. [7250

£35.—Rover 3½h.p. 1917, lamps, Klaxon, faultless condition, low mileage.—Hole, The Shrubberie, Buckingham Rd., Hampton, Middlesex. [6673

ROVER Combination, 3½h.p., splendid condition; 80 gns.; complete accessories, tax paid; seen by appointment.—1, Coteford St., Tooting. [3833

ROVER 1920 3½h.p., 3-speed, clutch, kick starter, completely equipped and in excellent order; £60.—The Layton Garages, 30, Holywell St., Oxford. [7177

1921 (July) 5-6h.p. Rover, Grindlay Tourist sidecar, all accessories, as new; £150.—Particulars, Huddleston, 98, Hawcoat Lane, Barrow-in-Furness. [6796

£50.—Rover combination, 1915-16, 3½h.p., countershaft, 3 speeds, clutch, kick starter, fully equipped, splendid condition.—63, Solon Rd., Brixton. [6727

1919 5-6h.p. Rover Combination, in perfect mechanical condition, looks like new, tax paid, lamps, horn; £85.—98, First Av., Bush Hill Park, Enfield. [6602


NOTE THIS!

OWING TO LOWER COST OF MATERIAL AND LABOUR WE ARE NOW ABLE TO ANNOUNCE A FURTHER

REDUCTION

OF APPROXIMATELY

15%

IN THE PRICE OF

PHILIPSON'S

PATENT AUTOMATIC GOVERNOR

PULLEY

AND GEAR COMBINED

for

2 and 4 STROKE ENGINES

No gear box friction.
No grinding noises.
No wheels or pinions to chew up.

The lightest, speediest, and simplest gear on the market for direct belt-driven 2 and 4 stroke engines.

We are now in a position to supply the Philipson Pulley to fit J.A.P. engines without any alteration to the machine or "staggering" of the engine.

IMMEDIATE DELIVERY.

*Send for Illustrated Booklet.*

*What is your make?* *Write us.*

NEW REDUCED PRICE

£6-6-0

CARRIAGE PAID

PHILIPSON & CO., LTD.

Astley Bridge, BOLTON, Lancs.

(Established over 50 years.)

'Phone, 147 Eagley. 'Grams, 'Safety, Bolton.


## MOTOR CYCLES FOR SALE.

### Rover.

1919-20 6h.p. Rover, Henderson Elite sidecar, disc wheels, electric lighting, Watford speedometer, Binks, condition as new; any trial; £100.—Burgess, 2, Middle Hill, Egham. [6907

ROVER, 5-6h.p. Combination, August, 1919, lamps, Bonniksen trip, horn, collapsible luggage grid, spare covers, tube, chain, excellent condition; £80; Coventry.—Box 2175, c/o *The Motor Cycle*. [7316

ROVER 6h.p. Twin J.A.P. Combination, fully equipped, tax paid, original tyres still on and in first-rate order, 1919 model, not W.D.; 85 gns.—Bunting's Motor Exchange, Wealdstone, Middlesex. [7384

*Spare Parts.*

ROVER Spares. Immediate delivery.—Kays, 8, Bond St., Ealing. [4832

### Royal Ruby.

ROYAL RUBYS.—Prompt delivery from Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3694

NEW 1921 Royal Ruby 3h.p., 2-speed, spring frame; £65, or near offer.—Percy and Co., 314, Euston Rd. [7169

1921 Royal Ruby 3h.p., spring frame, as new, perfect, mileage 100; £70.—76, Lichfield Rd., Stafford. [6813

ROYAL RUBY 2¾h.p., 1915; £25; good condition; tax paid.—Hall, 15a, Chatterton Rd., Bromley, Kent. [6844

2¾h.p. Royal Ruby-Jap, late model, racing cams, long exhaust, dynamo lighting, very fast, tax paid year; £38, offers exchanges.—115, Holland Park Av., W.11. [6428

1919 Royal Ruby, 2½h.p. J.A.P. engine, 2-speed, electrically equipped, any trial; £32/10.—99, Cannon Hill Lane, Merton, S.W.19. [6771

1922 8h.p. Royal Ruby—the spring frame combination par excellence—fitted with interchangeable and spare wheel, luggage and petrol carrier, Easting Saodum screen, lamps, horn, etc., all on, at £185; immediate delivery from the agent for all high-class makes, as usual.—Sam E. Clapham (Motors), 27, Stockwell St., Greenwich. 'Phone, 751. [5895

### Rudge.

RUDGE-MULTI 5h.p., good condition; £50.—Hyfrydle, Glan Conway, North Wales. [6189

RUDGE 1919 5-6h.p., speedometer, all on, splendid condition; £55.—3, London Rd., Buxton. [6778

3½h.p. Rudge, single gear model, in fine order; £25.—Cross, Effingham Square, Rotherham. [7245

RUDGE-MULTI 5-6h.p., Henderson, 1915; any trial; £48.—41, Florence Rd., Smethwick. [6408

WAUCHOPE'S, 9, Shoe Lane, London.—New 1922 Rudge 3½h.p. I.O.M. £77 easy terms arranged. [7251

1919 I.O.M. Rudge-Multi, equipped, excellent condition; £47.—Stevens, 8, Upton Park, Slough. [6926

£40.—5-6h.p. Rudge-Multi Combination, kick starter, splendid condition.—King, Egrove Farm, Oxford. [7092

RUDGE-MULTI actually in stock; exchanges, deferred.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7363

RUDGE Coach Combination, 2-speed, kick, guaranteed order; 25 gns.—Royal Garage, Castle Gate, Blackpool. [6410

NEW 1922 Rudge, 3-speed, chain drive; £94; exchanges or easy terms.—Percy and Co., 314, Euston Rd. [7170

RUDGE Combination, superb condition; nearest £35.—Wright, Inglewood House, Norlington Rd., Leyton. (P) [3610

1921 (late) I.O.M. Rudge-Multi, lamps, horn, tax paid, absolutely as new; £60.—Jowett, Brook Lane, Chester. [6153

1922 I.O.M. Rudge-Multis in stock at the latest reduced prices, £77.—Jones Garage, Broadway, Muswell Hill, N.10. [0791

1922 3½h.p. T.T. Rudge, brand new, in stock; £77 cash, or easiest of easy payments.—Wilkins Simpson, opposite Olympia, London. [6449

£77 is the price of a new Rudge. Get it from the Agents; in stock; cash or payments.—Knight's, 126, Upper Tooting Rd., S.W.17. [0836

1916 Rudge-Multi, excellent condition, fast, good tyres, taxed; £39; exchange.—Brookes, Mill House, Upperhulme, Leek, Staffs. [6504

£60, or near offer.—Practically new 3½h.p. I.O.M. Rudge, fully equipped; snip.—Kensington Park Hotel, 139, Ladbroke Grove, W.10. [6695

1921 5-6h.p. Rudge-Multi Combination, almost new, tax paid; £98, or offer; seen 1 to 3 Saturday.—8, Redoubt Rd., Eastbourne. [6468

RUDGE-MULTI Touring Model, splendid condition and appearance, tax paid; £32.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [7007

## MOTOR CYCLES FOR SALE.

### Rudge.

RUDGE-MULTI 5-6h.p. 1917 Combination, Easting, complete; offer; accept part exchange late 4h.p. Triumph.—47, Victoria Rd., Finsbury Park. [6585

RUDGE 1922 Combination, 7-9h.p., 3-speed, spare wheel; £150. Immediate delivery, deferred payments.—Mororia, Regent Parade, North Finchley. [6360a

RUDGE-MULTI 3½h.p. Combination, good order and appearance; £50.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5611

1922 I.O.M. 3½h.p. Rudge-Multi, speedometer, lamps, Klaxon, Tan-Sad, insured, mileage 915, appearance as new; £69.—25, Clifden Rd., Brentford. W. [6353

RUDGE 1922 I.O.M. model in stock for immediate delivery; £77; or exchange.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5603

1922 Rudge-Multi, I.O.M. model, only done a few miles, fully equipped, as new throughout; £65, or best offer.—Pride, 156, Stockwell Rd., Brixton, S.W.9. [7104

3½h.p. Rudge, clutch, adjustable pulley, thoroughly overhauled, enamelled, new parts, pillion, lamps; trial; £28.—6, Bolden St., St. John's, Deptford. [6144

RUDGE, 2-speed, sidecar, new Easting, satisfaction guaranteed; any trial; drive 100 miles to purchaser; £39, or near.—9, King's Parade, Church End, Finchley. [6630

RUDGE-MULTI Combination, 1917, 3½h.p., very sporting outfit, tyres good, discs, long exhaust, excellent condition; cheap.—Castle Garage, Camden Rd., N.7. [6738

RUDGE 1921 I.O.M. 3½h.p. Multi, equipped, licensed, new appearance; £54 cash; or deferred payments.—Godfrey's Garage, Cranbrook Rd., Ilford. 'Phone: 83. [7209

1921 I.O.M. Rudge-Multi, enamel unscratched, mileage under 1,000, fully equipped, licensed; £54; exchange higher power.—17, Sussex Rd., New Malden, S.W. [6159

RUDGE-MULTI 3½h.p. 1914, coachbuilt sidecar, tyres, belt, engine good, insured till June, 1923, lamps; £37 or offer; would separate.—17, Mayfair Ave., Ilford. [6355

RUDGE-MULTI, 1921, special Brooklands gear, full equipment, speedometer, spare belt, etc., hardly used; £60, or offer; too heavy for owner.—Horsley House, Dudley. [6424

1921 Rudge Combination, 7-9h.p., all-chain drive, spare wheel, windscreen, all accessories, condition perfect; near Weymouth; £120.—Box 2068, c/o *The Motor Cycle.* [6156

RUDGE-MULTI, I.O.M. model, very good order; £55; or exchange lighter machine.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80 [5623

RUDGE 7-9h.p. Combination, 1920, new condition, little used, taxed, equipped, guaranteed; 80 gns.; photograph.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [7299

RUDGE-MULTI T.T. 1920 3½h.p., starter, Lucas lamps, Cowey horn, Tan-Sad, knee grips, tools, etc., tax paid, excellent condition; £55.—121, St. George's Rd., Coventry. [6779

RUDGE-MULTI, T.T., pedal start, August, 1921, condition and appearance as new, electric light, speedometer, Klaxon, tools, insurance; £65.—91, Grove Park, Denmark Hill, S.E.5. [6975

RUDGE-MULTI.—5-6h.p., shop soiled, £79; 7-9h.p. Combination, shop soiled, £105; 3½h.p., 1922, I.O.M., £77; 3½h.p., £27/10.—Shepherd, Enfield Highway. Tel.: Waltham X 31. [0874

3½h.p. Rudge, fitted with Grado gear, good condition, 1920 Senspray, new tank, drip feed lubrication, lamps, horn, spare belt; first £33 secures; no offers.—152 Union St., Dunstable. [7016

1921-22 Rudge 7-9h.p., 3-speed, all chain, latest 1922 improvements, P. and H. lamps, Klaxon, Terry saddle, oversize tyres, just overhauled, perfect for sidecar; 80 gns.—40, Inverness Terrace, Bayswater, W.2. [6854

RUDGE-MULTI 1920 3½h.p. I.O.M. Model, kick starter, handle-bar controlled clutch, all accessories, mileage 2,000, tyres as new, guaranteed perfect condition; £50.—Premier Motor Co., Aston Rd., Birmingham. [7350

RUDGE-MULTI 1919 3½h.p., excellent condition, tyres almost new, Smith speedometer, Klaxon, 6in. Miller head light, £10 worth spares; owner abroad; £50, or offers. Also lightweight sidecar; £10; used 2 months.—Pearson, The Downs, Ashtead, Surrey. [6670

*Spare Parts:*

THE Promptest Firm for Rudge Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3163

### Scott.

SCOTT Combination, good running order; £38.—Gillett, 9, Spencer Rd., Acton, W.3. [6622


# EXTENDED PAYMENTS

**Spread over**

# EIGHTEEN MONTHS.

We will supply you with any make of Motor Cycle, Solo or Combination, completely fitted with Lamps, Licence Holder, Horn, all to your own choice, fully insured and tax paid, on payment of quarter deposit and balance spread over

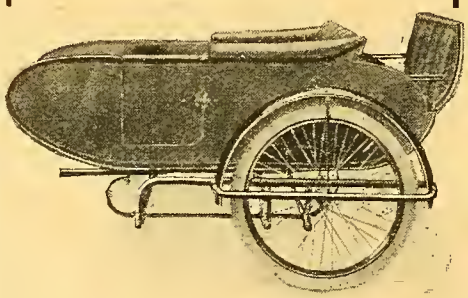
# 18 MONTHS.

Send for our Application Form and full particulars of this new scheme, it places you under no obligation whatsoever.

## If you only require a SIDECAR

on the Extended Payment System, send for our latest Art Catalogue; prices include colours to choice, fittings for any make and carriage paid; there are seven models.

**EXAMPLE:—**



**£26 . 10 . 0, or £7 down and twelve payments of £1.15.0.**

*CALL AND INSPECT.*

## RIDEEZI SALES,

**5, VICTORIA STREET, LONDON, S.W.1.**


## MOTOR CYCLES FOR SALE.

### Scott.

1921 Scott Squirrel, perfect order; price £65.—Welford's, St. James's St., Brighton. [6143

2¾h.p. Scott, standard model, with sidecar attachment; £22.—7, High St., Roehampton. [6405

75 GNS.—Scott Combination, excellent condition, late model.—31, Underhill Rd., Dulwich. [6312

1922 Scott Sociables and Motor Cycles.—Scott Service Depot, 99, Gt. George St., Liverpool. [4477

SCOTT 1914-15, engine, gear, overhauled, all on, sound; offers.—Hawell, Eskdale, Cumberland. [6261

SCOTT 1921 3¾h.p., fully equipped and tax paid; £80.—The Layton Garages, 30, Holywell St., Oxford. [7178

£55.—Scott 3¾h.p., 2-speed, kick start, condition as new, guaranteed perfect.—Beesley, 40, Warley Rd., Blackpool. [6671

SCOTT Squirrel 1922 actually in stock, very special engine, £105.—The Layton Garages, 30, Holywell St., Oxford. [7196

1922 Scott Squirrel, licensed, 1,000 miles, carrier, Lucas horn; £85.—Johnson, 2, Cecil St., Greenheys, Manchester. [6186

SCOTT 1916 Combination, perfect; 48 gns.; would separate.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [7300

I.O.M. Scott, Amac, racing gears, special features; offers or exchange Ner-a-Car; Bradford.—Box 2101, c/o *The Motor Cycle.* [6236

1920 Scott Combination, lamps, horn, perfect running order; £70.—Rhind and Co., Stone Place, Wilmslow Rd., Rusholme, Manchester. [6376

SCOTT, 2 speeds, Bosch, T.T. bars, beautiful condition, photo; £25/10; exchange Levis, similar.—20, Frankfort St., Birmingham. [7099

SCOTT 3¾h.p., as new, guaranteed perfect, Cowey trip speedometer, large Lucas lamps and horn, complete with spares; £92—50, St. John's Rd., Birkdale, Southport. [6193

1919 Scott, with 60 gn. R34 Rennoc sidecar, fully equipped, discs, windscreen, absolutely perfect all round; a real bargain; 73 gns.—Edwards, 50, Harrington Rd., South Kensington. [4548

SCOTT Combination, July, 1920, perfect running order, cost £150, any trial, speedometer, windscreen, electric lighting, lamps, and horn; rare bargain, £75.—B., 76, Minories, E.1. [7406

SOUTH London Scott Service Depôt.—'Phone Croydon 1129 for demonstration runs; immediate delivery; prices from £105.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. [8352

*Spare Parts:*

SOUTH London Scott Service Depot.—Scott Spares; Scott Repairs.—John R. Kinsey and Co., Ltd., 350-352, Lower Addiscombe Rd., Croydon. 'Phone: 1129. [8353

GODFREYS', Ltd., 208, Gt. Portland St., London, W.1.—Complete stock of all Scott spare parts always in stock. Write for free spare part list, stating year of manufacture. [0751

### Singer.

WAUCHOPE'S, 9, Shoe Lane, London.—2¼h.p. Singer 1910; £25. [7252

25 GNS.—Singer 3½h.p., 3-speed, fine condition, year's tax paid.—Delancey Street Garage, Camden Town, N.W.1. [6708

*Spare Parts:*

THE Promptest Firm for Singer Spares.—Forfield Motors, Forfield Place, Leamington Spa. [3164

GENUINE Singer Parts.—"By return service."—All. Holland, Hearsall Lane Corner, Coventry. 'Phone: 1945. [6666

### Sirrah.

1921 Sirrah, clutch, kick starter; must sell; bargain, £50.—C. H. Barradell, Brome, Eye, Suffolk. [6505

SIRRAH 1922 2¾h.p., 2-speed, clutch and kick starter, as new; £48.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [5624

### Sparkbrook.

2½h.p. Sparkbrook, 2-speed, fast, good condition, licensed; £28.—Young, Mount Aden, Hamilton, Scotland. [6137

BRAND New 2¾h.p. Sparkbrook, 2-speed, clutch, lamps and accessories, tax paid, beautifully fitted up, ride away, cost £66; a bargain at £63/10; owner buying combination.—D. Kingsland, 42, Leigham Court Rd., Streatham. 'Phone: 539. [6323

### Sun.

1920 Sun-Vitesse, lamps, tax, horn, 2-speed; £27/10; exchanges.—1, Park Hill Rd., Ewell. [6525

SUN-VITESSE, late 1920, 2-speed clutch, kick start, lamps, horn, etc., mileage 1,000, tax paid December 22nd; £33.—Hilder, Sackville Rd., Bexhill. [6335

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Sun.

2¾h.p. Sun, T.T. bars, tax paid, etc., nice condition; £22/10.—3, Parker Lane, Burnley. [7079

FOR Sun-J.A.P., or Sun-Vitesse, get in touch with the sole North London agents. Models in stock, single Special, 42 gns.; 2¾h.p. J.A.P., 2-speed, K.S., 60 gns. Send for catalogues. Trade supplied.—Jones Garage, Broadway, Muswell Hill, N.10. [0790

### Sunbeam.

1920 3½h.p. Sunbeam, complete and licensed; £80. —Carnforth Motor Co., Carnforth. [7197

CROSS, Effingham Square, is agent for Sunbeams in Rotherham. New models from stock. [7242

SUNBEAMS.—All models.—Try Clifford Motories, Eastwood, Notts. [3385

3½h.p. Sunbeam Combination; £65.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [6948

KICKHAM, Stokes Croft, Bristol, Sole District Agent for Sunbeams; unequalled service, repairs, etc. [3558

SUNBEAM 3½h.p., late model, beautiful condition, accessories; £66.—61, Clarence Rd., Teddington. [6613

1920 3½h.p. Sunbeam, all on, perfect; £90.—2, Ramillies Rd., Chiswick. Call after 8 p.m. [6790

WAUCHOPE'S, 9, Shoe Lane, London.—3½h.p. Sunbeam, 1917, 3 speeds; £65; extended payments taken. [7253

SUNBEAM 1922 Light Sporting Model, very little used, guaranteed as new; bargain, £118.—Moss, Wem. [7389

SUNBEAM 6h.p. 2-seater, sidecar, hood, speedometer, lamps, horn; £75; good order, tax paid.—Wood, 10, Station Rd., Henley. [6627

SUNBEAM Combination, twin J.A.P. engine, new condition, perfect order, trial; £85.—54, Forthbridge Rd., Clapham, S.W.11. [6319

1922 Sports Sunbeam, mileage 800, Lucas accessories, Bonniksen speedometer; £120.—Goodman, Ellesmere, Northampton. [6837

1920 3½h.p. Sunbeam, Montgomery sidecar, Easting screen, electric lamps; £105.—Jefferies, 37, Fraser St., Bedminster, Bristol. [6556

1915 6h.p. Sunbeam, large sidecar, fully equipped, ready for tour, entertain solo exchanges; £75.—Lear, 1, Thornbury Rd., Isleworth. [7106

1919 Sunbeam Combination, 8h.p., electric lighting, speedometer, fully equipped; £130, or offers.—Camroyd Motor Co., Ltd., Leeds Rd., Dewsbury. [6139

WHAT Cash Offers.—Special sporting 3½h.p. twin Sunbeam, M.A.G., cost £175, delivered June last. Evenings.—120, Marlborough Flats, Walton St., Chelsea, S.W.3. [7025

SUNBEAM 3½h.p., 1921 model, long exhaust, 3-speed, Lucas lamps, horn, tax paid, in new condition.—Hesselgrave, Shray Hill, Waters Upton, Wellington, Salop. [6806

SUNBEAM 3½h.p. Sports 1922, unscratched, fully insured, tax paid; sacrifice, 116 gns; reason for selling, owner buying car.—Wright, Lion Hotel, Uttoxeter, Staffs. [6688

SUNBEAM Combination, 1916, 8h.p. M.A.G. engine, just been overhauled, new tyres, tax paid; nearest £85; owner buying car.—Richardson, 5, Lowerhead Row, Leeds. [6437

3½h.p. Sunbeam Combination, new last year, lamps, horn, windscreen, small mileage, perfect condition; £130, or nearest.—Senior, West End Villas, Horbury, Wakefield. [6367

CASS'S Motor Mart, Ltd.—Sunbeam combination, late 1920, 3½h.p., spare wheel and tyre, complete equipment, tax paid Dec.; £112/10.—5, Warren St., W.1. Museum 623. [6239

1916 3½h.p. Sunbeam, not used during the war, perfect order, new tyres, 3-speed, clutch, K.S., lamps, tools, recently overhanled; bargain, £75.—F. Matthews, 29, Cople Beds. [6732

SPORTS Sunbeam 3½h.p., June, 1921, electric lighting, Cowey horn, Bonniksen, speedometer, tax paid, new covers; 100 gns.—Houghton, "Grove," Asfordby, Melton Mowbray. [6365

8h.p. Sunbeam, sidecar outfit, late model with dynamo, had little use, not used this year, owner must sacrifice; £125, or nearest; any inspection.—101, High St., Shirley, Southampton. [6338

1919 (late) 8h.p. Sunbeam Combination, dynamo lighting, electric horn, all accessories, spare wheel unused, tax and insurance paid, perfect condition; £160.—31, Thursby Rd., Northampton. [4507

1922 (April) Sports Sunbeam, kick starter, Lucas lamps, horn, knee-grips, tax, insurance, condition perfect, very fast, mileage 1,500, just decarbonised; cost £144; accept £120.—Hill, Yelverton Rectory, Norwich. (D.) [7117

3½h.p. Touring Sunbeam, fully equipped, run 5,000, excellent condition; £80. 1922 light solo, Lucas equipment, speedometer, as new, £135; all guaranteed; new models from stock.—Dosser's, Sunbeam Agents, Slingsby, Yorks. [7096


# WATCH THIS COLUMN
EVERY WEEK FOR
# BANCROFTIAN CO.'S
# BARGAINS.

**Advertisers in "The Motor Cycle" from its first publication.**

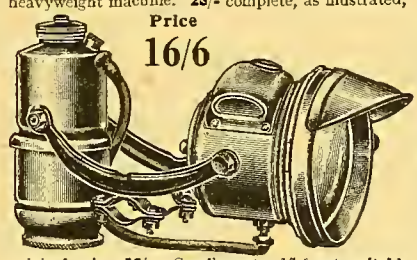
**TYRES.**—Manufacturers' clearance stock, not W.D. Although clearance, they are new and perfect. Wood Milne extra heavy, 4-ply, 26×2½, combination, **35/-**. Hutchinson, 26×2⅜, heavy T.T., **27/6**; Passenger, 26×2½ for 2½, **39/6**; 700×80 to fit 650×65 small car, heavy, **49/6**; extra strong Passenger, 28×3, **53/6**; 24×2 T.T. heavy, **25/-**; extra heavy, 3-ribbed, 700×65, **35/-**; 650×65 steel studded car type, **52/-**; Firestone, 20×2, Auto wheel, **21/-**; original, **45/-**; tube, **6/6**. Palmer, 26×2, light, **22/6**; 650×65 cord, **42/-**; 26×2½ cord, **42/-**. Oylers, 650×65, ribbed square tread, heavy, in original packing, **27/6**; original, **45/-**. Clincher de Luxe, very heavy, 26×2½, **37/6**; 26×2 Junior de Luxe, **22/6**; 26×1¾, **17/6**. Hutchinson wired edge cover, 26×2½ and 26×2⅜, **30/-** each. Postage 1/6.

**TUBES.**—24×2¼, **4/6**; 24×2, **4/6**; 26×2¼, **5/6**; 26×2½, **5/9**; 26×2⅜, **5/6**; 28×3, extra heavy, **7/6**; 700×80, **7/6**. Postage 9d.

**BELTS.**—Clincher clearance line, new, not W.D. ¾"×7'6", **9/6**; 1"×7'6", **11/3**. Bates' short lengths, ¾"×5', **4/6**; 5'6", **5/-**; ¾"×4'6", **5/-**; 5', **5/6**; 5'6", **6/-**; 1"×2'6", **3/-**; 3', **3/9**. Leather belts, ¾" at **2/6** per ft. Belt fasteners, **9d.** and **1/-**. Postage 1/-.

**GREAT PURCHASE of Genuine "BOBJON" LAMPS** Nickel-plated on brass or black and plated. Large size, 5½" front with powerful back lens, large generator sufficient for two lamps, suitable for a heavyweight machine. **2S/-** complete, as illustrated,

**Price 16/6**



original price, **55/-**. Smaller set, 4½" front, suitable for lightweights, **16/6**. The greatest bargain ever offered. When cleared can never be repeated at near the price. Postage and packing, 1/6 extra. Special quotation for quantities.

**SPECIAL PURCHASE of SMITH'S JACKS.**

| | | | |
|---|---|---|---|
| No. 7. | 7½" extend 11½" | ..... | 7/6 |
| „ 8. | 8½" „ 13½" | ..... | 8/6 |
| „ 9. | 9½" „ 15½" | ..... | 9/6 |

Above half usual prices.

**SPEEDOMETERS.**—Slightly shop soiled. Cowey with trip, **£4 15s.**; Stewart with trip (£6 6s. model), **£4 10s.**; Smith's with trip, **£4 10s.** Also Bonniksen in stock. All speedometer replacements in stock. Postage 1/6.

**TAN-SAD**, with back seat, **28/6**; original, **57/-**; only limited quantity. Carriage 3/6 extra.

**GAUNTLETS.**—Extraordinary bargains. Tan leather gauntlets unlined, **7/11**; lined, **10/6**; new and fresh. The greatest bargain ever offered. Chrome leather gauntlets with finger and thumb, wrist strap, **3/6**; Gloves, leather, wool lined, **4/6**. Above lines worth more than double. Limited quantities only. Order at once. Postage 6d.

**WATERPROOF SUITS.**—Less than pre-war prices. Great purchase of manufacturers' stock, consisting of double-breasted coat with belt, storm cuffs, and collars, and seatless trousers with gussets, patent fasteners, and leather bound seats. Finest quality, extra heavy, double texture waterproof material, dark fawn, new and fresh, only been made recently, not half-perished W.D. Our price to clear, **£2 2s.** Postage 1/6 extra. Could not be bought elsewhere under £4 10s. The greatest bargain ever offered. Order immediately to save disappointment. All stock sizes.

**HORNS.**—Reliable Electric, Motor Cycle, up to 4-volt only, complete with wire and switch; usual price, 29/6, our price, **15/6**. Postage 1/3 extra. Smith's Electric Horns, black and nickel, in 6, 8, or 12 volts, large size, suitable for heavy combinations; original price, £2 15s.; our price, **30/-**. Postage 1/6. The greatest bargain ever offered. All new and perfect.

We can supply anything for the motor cyclist at competitive prices.

**BANCROFTIAN CO.,**
**78, BISHOPSGATE, LONDON, E.C.2.**
'Grams: "Chaikel, London." 'Phone: London Wall 9807


## MOTOR CYCLES FOR SALE.

### Sunbeam.

3½h.p. Sports Sunbeam, April, 1921, speedometer, lamps, horn, fully equipped, only done 4,500, unscratched and unpunctured, carefully driven, and in beautiful condition; seen any time; £110.—L. Bailey, 72, Mitcham Rd., Croydon. [6618

1921 Sunbeam 3½h.p. Combination, Magdyno, electric horn, Cowey speedometer, Binks carburetter, Flexekas, Brooks cantilever saddle, spare wheel, Easting Royal, luggage carrier, legshields, quantity tools, spares, in beautiful condition, £135; private.—Write Avenue House, Cranford, Hounslow. [6397

SUNBEAM 3½h.p. and Super-sidecar, July, 1921, 2,500 miles, 4 interchangeable wheels, speedometer, and many extras, tyres unpunctured, tax paid, insured; to be sold with specially strongly-built sectional shed; £180, or close offer; owner buying car; a really exceptional offer.—Turner, 14, Underbank, Stockport. [6626

### Swift.

F.O.C.H. have 3½h.p. Swift Combination, 3-speed, excellent condition, licensed, lamps, Easting, etc.; £25; bargain.—5, Heath St., Hampstead (near Tube). [6534

### T.D.C.

£15.—T.D.C. 2-stroke Thomson-Bennett, magneto, black tank, smart appearance.—King, Egrove, Oxford. [7093

2¾h.p. T.D.C. 2-stroke, 2 speeds, good condition; trial or photo; £22.—Broadfields, Letchworth, Herts. (D) [6467

### Torpedo.

£17/10.—Torpedo 2¼h.p., late model, T.T. bars, very smart machine, Lucas lamps, tax paid, any trial. —Smith's, 86, Chalk Farm Rd., N.W.3. [6866

### Triumph.

PREMIER Motor Co. for 1922 Triumphs.

IMMEDIATE delivery of type H, 4h.p., 3-speed, £105; type S.D., chain drive, £115; type R., 3½h.p., overhead valve, £120; type L.W., lightweight, £65; sidecars from £20 to £50; easy payments, 4 per cent. extra; free delivery to any address.—The Premier Motor Co., Aston Rd., Birmingham. [0867

EFFRA Motor Works.—Countershaft Triumphs.

£16/7/7.—Triumph 4h.p. countershaft motor cycles, completely reconstructed, stove enamelled and finished in makers' colours, Bosch magneto, new tyres, tubes, guaranteed 3 months, secures, and 12 monthly payments £4/1/11; cash £60.—Effra Motor Works, 59-63, High St., Clapham, S.W. 'Phone: Brixton 1115. [6538

TRIUMPH and Sidecar, clutch model, perfect order; £35.—109, Beam St., Nantwich. [5801

10h.p. Triumphs, 1918; from £50.—9, Church Rd., Harlesden. [6767

LATE Countershaft Triumph, perfect; £45.—62, Princess Rd., Kilburn, N.W.6. [6894

NEW Ricardo-Triumph from stock, tax paid: £113.—Box 2167, c/o *The Motor Cycle*. [7244

1917 4h.p. Triumph, good condition; £44.—77, Haverstock Hill, Hampstead. [6878

TRIUMPH, 1918, perfect, C.S.—Lobban, 34, Burton St., near St. Pancras Church. [6402

TRIUMPH-RICARDO in stock; £120.—Premier Motor Co., Aston Rd., Birmingham. [0868

3½h.p. Triumph, 2-speed, free, new belt, excellent condition; £28.—63, Surrey Sq., S.E. [6776

TRIUMPH-GLORIA Combination, 1920, Lucas lamps; 80 gns.—H. Rock, Cradley, Staffs. [7401

MODEL H 1922 Triumph, new, £105; also S.D. model, £115; cash or extended payments.—Below.

WE have several 1918-1919 C.S. Triumphs, fitted new tyres, tubes, etc., and many fitted with 1922 S.A. gear boxes, splendid value, enamelled and plated, £65.—The Hackford Engineering Co., 33, Hackford Rd., Brixton, S.W.9. 'Phone: Brixton 3062. [7407

TRIUMPHS.—Prompt delivery and service.—Barlow and Son, Monton, Eccles. Tel.: 160 Eccles. [3692

3½h.p. T.T. Triumph, lamps, horn, tax paid, nice condition; 25 gns.—3, Parker Lane, Burnley. [7078

CROSS, Effingham Square, is agent for the Trusty Triumph in Rotherham. New models from stock. [7243

TRIUMPH, 1919, new sidecar, Easting, lamps; £73. —18, Bawdale Rd., Lordship Lane, E. Dulwich, S.E. [8802

1918 Triumph 4h.p. Countershaft, in perfect order, fully equipped; £47/10.—204, Ladbroke Grove, W.10. [6990

F.O.C.H. for Triumphs, new end second-hand, in stock at tempting prices.—5, Heath St., Hampstead (near Tube). [6535

TWO Triumph Combinations, one £70, other £38.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [6950

## MOTOR CYCLES FOR SALE.

### Triumph.

TRIUMPH, 4h.p., fitted N.S.U. 2-speed gear; £25.—Geiger, 24, Mansfield Rd., Gospel Oak, London, N.W.3. [7343

1918 Triumph Combination, just overhauled, perfect condition; £72/10.—Kays, 8, Bond St., Ealing. [5504

1914 Triumph, 3-speed, Tan-Sad, and suit, little used; £45; after 7 p.m.—20, Grandison Rd., S.W.11. [6464

TRIUMPH 2-stroke, 1920, 2-speed, fully equipped; £37/10.—M. Hillier, 216, Portobello Rd., North Kensington. [7032

TRIUMPH-GLORIA Combination, electric lamps, Klaxon, new condition; £65.—120, Sutherland Rd., Croydon. [6911

1921 Triumph combination, complete, accessories, year's licence; 80 gns.—Fersfield, Westbury Rd., New Malden. [6982

TRIUMPH Combination, good condition, go anywhere, tax paid; £42/10.—30, Vestris Rd., Forest Hill, S.E. [6241

JUNIOR Triumph, 1919, perfect condition, £40; also Binks carburetter, £2/10.—24, Hartley St., West Hartlepool. [6466

1918 Triumph-Gloria Combination, perfect condition, fully equipped, any trial; £60.—77, Haverstock Hill, Hampstead. [6890

TRIUMPH 1910 3½h.p., Bosch, adjustable pulley, good condition, tax paid; £19.—Donnelly, Kotree, Caterham, Surrey. [6981

JUNIOR Triumph, 1921, perfect order, small mileage, lamps, tax paid; £52/10.—Minihane, King's Parade, Isleworth. [3829

£38, or near.—1914 Triumph combination 3-speed, clutch, perfect, spares.—Davies, 73, Furness Rd., Harlesden, N.W.10. [6391

MOFFAT, Yeovil, Official Triumph Service Agents.—1922 models from stock; exchanges; all spare parts. 'Phone: 50. [5725

1918 Triumph Combination, in perfect order, fully equipped; £57.—155, Ladbroke Grove, W.10. 'Phone: Park 5541. [6992

TRIUMPH, re-enamelled, many new parts, clutch, Bramton gear; £30, all on.—17, Grenville Rd., Hornsey Rise, N.19. [7005

TRIUMPH Combination 1917-18, 4h.p., lamps, horn, tax June, splendid condition; £62.—Fuller, 19, Trafalgar Sq., Chelsea. [7110

1921 Triumph Lightweight, not done 500 miles, guaranteed as new; £45.—Premier Motor Co., Aston Rd., Birmingham. [7352

COUNTERSHAFT Triumph, not renovated, as new, mileage 500; £65; evenings 8.—2, Camden Hill Rd., Upper Norwood, S.E. [6655

£45.—Countershaft Triumph, good order; bargain.—W.J.C. Motor Exchange, Addison Av., Holland Park, W.11. Park 2071. [7158

1918 Triumph Combination, engine No. 38076, D.A. lighting, Cowey, spares; any trial; £70.—2, St. Nicholas Mansions, Balham. [6607

TRIUMPH-GLORIA 1921 Combination, all-chain, in perfect order; £110; will separate.—Harvey, 47, South Lambeth Rd., S.W.8. [0885

TRIUMPH 1918 Sporting Combination, all on, accessories; offer wanted.—17A, Dean Rd., Cricklewood, between 6 and 8 p.m. [6401

TRIUMPH 1918, T.T., single-speed, splendid condition, lamps, horn, tax; £35; after 7.—Duffield, 22a, Cornwall Rd., Lambeth. [6593

1920-21 Triumph Combination, splendid condition; any test; spares and accessories; £85.—3, Albert Rd., Walthamstow. [6418

TRIUMPH 3½h.p. Fast Roadster, new overhead valve engine, in stock for immediate delivery; £120.—Robbins Garage, Rugby. [6201

TRIUMPH Countershaft, Lucas lamps, heavy Dunlops, horn, sidecar, tax, perfect condition; £65; exchanges.—1, Park Hill Rd., Ewell. [6526

TRIUMPH, 1918, Millford sidecar, tax paid, well equipped; £85; not W.D.—Bunting's Motor Exchange, Wealdstone, Middlesex. [7386

TRIUMPH Junior, 1922, new, slightly shop-soiled, £58, or deferred payments arranged.—Motoria, Regent Parade, North Finchley. [6359

3½h.p. Triumph Lightweight Combination, 2-speed, excellent condition, lamps, speedometer; £30.—Sharp, 11, Vorley Rd., Highgate. [6908

TRIUMPH Countershaft, late model, perfect, £49/10; with sidecar, £56; guaranteed.—Ward and Co., 61, Upper Richmond Rd., Putney. [7444

TRIUMPH 1921 Combination, tax paid, beautifully equipped, unscratched; £82/10.—M. Hillier, 216, Portobello Rd., North Kensington. [7032

1918 Countershaft Triumph, speedometer, all accessories, licensed; appointment.—Shipway, 32 King's Rd. Ealing. 'Phone: 1773. [6672


# Messrs. W. J. Green Limited :: Coventry

the Manufacturers of the well-known

## "OMEGA" MOTOR CYCLES, GIVE NOTICE

that it is their intention to

## STOP THE UNAUTHORISED

use by Manufacturers of Motor Cycle parts of their

## REGISTERED TRADE MARK "OMEGA"

and the following is a copy of an undertaking which has been given to them in avoidance of legal proceedings

19th June, 1922.

To Messrs. W. J. Green Limited.

I the undersigned Arthur John Avery of Gordon Street Works, Coventry, hereby undertake that I will not in the future advertise or offer for sale, or sell any tank or other article under the name "Omega" which is your registered trade-mark, or in any way to give the impression that such article is made by you, and I apologise for the unauthorized use of this trade-mark. I agree to this undertaking being published by you.

A. J. AVERY.

All enquiries for parts for "Omega" Motor Cycle should be addressed to the Makers, Messrs. W. J. Green Limited . . . Coventry


## MOTOR CYCLES FOR SALE.

### Triumph.

1920 Triumph Combination, equipped, every possible accessory, new condition; £80.—37, Canterbury Rd., Balls Pond Rd., Dalston, N.1. [7437

TRIUMPH Combination, 1918, 4h.p., tax paid, insurance, coachbuilt sidecar, good running order; £57.—11, St. Stephen's Rd., Ealing. [6650

TRIUMPH Combination, 2 speeds, clutch, lamps, good tyres, tax paid, machine in good condition; £22/10.—27, Sidmouth St., Devizes. [7314

1918 Triumph Combination, tax paid, Canoelet sidecar; £65, or near; all on, good condition; would separate.—32, Pitcairn Rd., Mitcham. [6290

£72.—Triumph, 1918 Sturmey-Archer, exhibition C.B. sidecar, fully equipped, condition perfect.—V., 37, Bruce Rd., London, N.W.10. [7069

TRIUMPH, 1921, belt driven, fully equipped, tax paid, every detail in good order; £80.—Bunting's Motor Exchange, Wealdstone, Middlesex. [7387

£25.—Triumph 3½h.p., clutch, Philipson pulley, fully equipped, taxed, splendid order; bargain.—143, Ravensbury Rd., Earlsfield, S.W.18. [7394

TRIUMPH 1920 Model H., fully equipped, tax paid, perfect mechanical condition, mileage under 5,000; £75.—White 9, Park Rd., Ipswich. [6190

CROYDON Agents Triumphs, all new models and large range of second-hand in stock.—Moore's Presto Motor Works, North End, Croydon. [0864

1911 3½h.p. F.E. Triumph, re-enamelled, tyres, belt good, lamps, horn, engine perfect; any trial; £25.—Ford, Sotwell, nr. Wallingford, Berks. [6905

TRIUMPH Combination, 1918, in splendid running order; £60, or near offer; seen and tried in London.—Write Box 2163, c/o *The Motor Cycle*. [6570

1918 4h.p. countershaft Triumph, splendid condition; 40 gns.; apply between 6 and 8 p.m.—7a, Northwick Ter., Maida Vale, London, W. [7432

TRIUMPH, 1914, modernised, re-enamelled, new Amac, hot stuff, top-hole condition; £40, or near offer.—Webb, 78, Osborne Rd., Forest Gate. [7138

1919 Triumph-Gloria Combination, Easting screen, luggage grid, condition perfect; £78.—Hillier (side bell), 9, Wallingford Ave., North Kensington. [7055

SHEFFIELD Agent for Triumphs; all models in stock for immediate delivery.—J. A. Stacey, Triumph Service Depot, 12, Ecclesall Rd., Sheffield. [0812

TRIUMPH 4h.p., 1914, 3-speed, clutch, light sidecar, speedometer, all on, tax paid; ride away; bargain, £38.—17, Springfield Rd., East Ham, E.6. [6651

1920 4h.p. Triumph, fully equipped, tax paid and in tip-top condition; £68.—Maynard, 161, Bowes Rd., Bowes Park, N.11. 'Phone: Palmers Green 19. [6954

1919 Triumph Combination, in excellent condition, under 2,000 mileage, new tyre, tax paid; £74, bargain.—Hibberd, "Oaklands," Farnham Rd., Slough. [6674

25 GNS.—Clutch Model Triumph, 1913, 3½h.p., Lucas lamps and horn; exchanges.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [7358

TRIUMPH 4h.p., 1920, Model H, countershaft, excellent condition, including accessories; £70; tax paid.—Eagles and Co., 275, High St., Acton, London. [7319

TRIUMPHS.—Immediate delivery of all 1922 models. We allow best prices for exchange, or liberal easy terms.—Edwards, 50, Harrington Rd., South Kensington. [7356

TRIUMPH 1915 4h.p., countershaft, thorough overhaul makers, costing £32; must dispose; £60, or nearest offer.—Budge, 42, Bridge Rd., Hammersmith. [6435

1918 Countershaft Triumph Coachbuilt Combinations, £60, £65 and £75; absolute bargains.—Rhind and Co., Stone Place, Wilmslow Rd., Rusholme, Manchester. [6378

1918 Countershaft Triumphs, 3-speed, K.S. models, in first-class condition, guaranteed; £57.—Rhind and Co., Stone Place, Wilmslow Rd., Rusholme, Manchester. [6377

TRIUMPH 3½h.p., clutch model, horn, pump, tyres good, new back tyre and tube, tax paid, condition good; ride away; £30, or nearest offer.—T. Taylor, Carlisle. [6509

TRIUMPH, 1921, model H, Terry's saddle, Miller 31H, lamp. Lucas horn, mirror, spares, engine carefully run in; bargain, £85.—Dean, The Swan, Crawley. [6886

TRIUMPH, Type R, Ricardo engine, 1922 machine, guaranteed, winner of two cups this season; accept £110 to clear; tax paid for 1922.—Smith, Garage, Redditch. [6477

TRIUMPH, Precision 3½h.p. engine, countershaft, clutch and kick start 1919, engine 1921, condition perfect; £55.—Billingshurst, Wordsworth Rd., Worthing. [6328

1918 Countershaft Triumphs, 10 to pick from, guaranteed for 6 months, £45; 1917, 10 to pick from, £40.—204, Ladbroke Grove, W.10. 'Phone: Park 5541. [6991

 **All letters relating to advertisements should quote the number at the end of each advertisement, and the date of the issue. Motor Cycles advertised by private owners are, when desired, marked (P).**

## MOTOR CYCLES FOR SALE.

### Triumph.

UNSCRATCHED Triumph Solo or Combination, late model, all accessories, speedometer, tax paid; £70; ride out to customer.—Seen 106, North End Rd., West Kensington. [6681

£47/10.—Triumph, countershaft, lamps, horn, renovated, overhauled, perfect, fast; ride 50 miles to purchaser, or can be seen any time.—406, York Rd., Wandsworth. [6772

TRIUMPH 4h.p. 3-speed Combination, absolutely new condition throughout, accessories; £95.—Newnham Motor Co., 223, Hammersmith Rd., W.6. 'Phone: Hammersmith 80. [7361

COUNTERSHAFT Triumph, Model H, 1921, light sidecar, all on, bought July 1921, price £85; solo, £75, bargain; any trial.—6, Lytton Rd., Clarendon Park, Leicester. [7134

TRIUMPH, 1918, renovated, never been used since renovated; everything new except tank, engine, and gear box; £55.—D. and S. Autocar Co., 33, The Parade, Golders Green. [7323

TRIUMPH, W.D., Watsonian sidecar, renovated makers, delivered 1921, Easting, lamps, accessories, tax paid; £80, or near offer.—Evans, 19, Barforth Rd., Peckham Rye. [6822

TRIUMPH-RICARDO, as new, 300 miles, Bonniksen trip, Lucas head, tail and generator, D.A. cylinder, knee grips licensed, cost £135, accept £115.—Vos, Spring Bank, Bradford. [7077

1921 4h.p. chain-drive Triumph, with Henderson lightweight sidecar, splendid condition, all accessories, extra wide mudguard, copper exhaust, etc.; £98.—Tippen, Marden, Kent. [5304

TRIUMPH.—Immediate delivery of all 1922 models. Sidecars to suit from £20. Write for catalogue and full particulars of easy payments.—P. J. Evans, John Bright St., Birmingham. [6518

TRIUMPH C.B. Combination, 1914, 3-speed, clutch, Bosch, good tyres and condition, lamps, horn, tools; £28.—Burns, 16, Trafalgar Sq., White Horse Lane, Mile End, London, E.1. [6426

TRIUMPH, 1921, 3-speed and clutch, Mills-Fulford sidecar, Brooks cantilever saddle, Lucas lamps, horn, numerous accessories, tax paid; £85.—Cope, 15, Upper Hagley Rd., Birmingham. [6691

48 GNS.—Triumph 4h.p., countershaft, 1918, engine No. 54278, renovated, nearly new Dunlop tyres; exchanges.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station). [7359

TRIUMPH, 1919 (not W.D.), fully equipped, tax paid, Rennoc tandem sidecar, every detail in excellent condition; £90, or terms.—Bunting's Motor Exchange, Wealdstone, Middlesex. [7385

£57/10.—Triumph combination, countershaft, lamps, horn, renovated, overhauled, perfect, fast, reliable; ride 50 miles to purchaser, or can be seen any time.—406, York Rd., Wandsworth. [6773

COUNTERSHAFT Triumph Combination, 1919-20, indistinguishable from new, new tyre, belt, accessories, taxed, really reliable machine; £78.—88, Gloucester Place Mews, Portman Sq., W.1. [7476

TRIUMPH, 1920, model H, 3-speed, countershaft, with Swan sidecar, equipped with lamps, hooter, and licensed; £77 cash; or deferred payments.—Godfrey's Garage, Cranbrook Rd., Ilford. 'Phone: 83. [7211

1920 Triumph-Gloria Combination, Brooks cantilever saddle, Easting, speedometer, lamps, footboards, spares, licensed, insured, carefully used, perfect condition; £100.—G. Ashurst, Fyfield, Ongar. [6849

TRIUMPH Agents.—All Models from stock; catalogues and full particulars by return post free; exchanges and special payment terms arranged; correspondence invited.—Herbert Robinson, Ltd., Green St., Cambridge. [6115

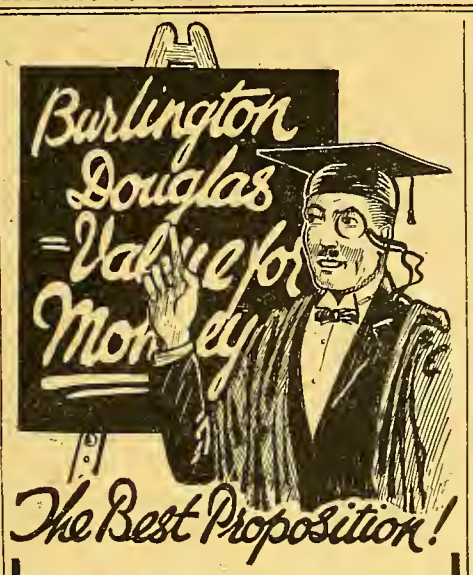
1922 Triumph, 4h.p., S.D. model, brand new, but used twice only; 10% under list price, tax paid, insured, Lucas lighting, horn, speedometer, at valuation if desired; owner buying combination.—Oakleigh, Edgware. 'Phone: 8. [7340

TRIUMPHS.—Cambridgeshire Service Agents. Complete stock of spares. All model machines, including 3½h.p. Ricardo, from stock. Supplied upon deferred payment. Exchanges.—King and Harper, Bridge St., Cambridge. [5815

1921 Triumph-Gloria chain-drive Combination, Lucas electric lighting, Cameo screen, legshields, Bonniksen speedometer, perfect condition throughout, tax paid; £140.—Premier Motor Co., Aston Rd., Birmingham. [7351

TRIUMPHS.—They are all here in stock. Model H, £105; model SD, chain drive, £115; Ricardo, £120; Model H and special sidecar, £125. Approval anywhere, easy payments, exchanges.—The Layton Garages, 30, Holywell St., Oxford. [7193

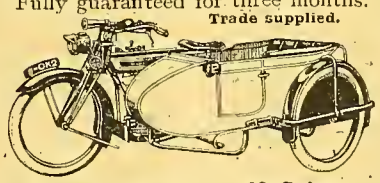
TRIUMPH, 1919, model H, 3-speed, countershaft, with Middleton sprung wheel sidecar, Lucas lamp set, Easting windscreen, licensed, speedometer, good mechanical order; £70 cash; or deferred payments.—Godfrey's Garage, Cranbrook Rd., Ilford. 'Phone: 83. [7213




**Here is a brief specification of the BURLINGTON RECONDITIONED 4 h.p. DOUGLAS COMBINATION.**
**We leave you to judge for yourself.**

ENGINE—595 c.c. With the exception of a few minor parts, this unit is entirely new.
GEAR BOX—entirely new, 3-speed, kick-start and clutch, fitted with Ferodo Rings.
CARBURETTER—1922 Amac.
MAGNETO—C.A.V., re-conditioned by the manufacturers.
TANK—new 1922 type with all new fittings.
HANDLEBARS—new, semi T.T.
TYRES—new, 26" × 2⅜" Hutchinson's or other first-class make.
TRANSMISSION—new Sprockets, new chain, new Belt.
FORKS—entirely new 1922 pattern.
WHEELS—all new.
MUDGUARDS—valanced front and rear and undershield, all new.
FOOTBOARDS—new lino covered, brass edging.
EQUIPMENT—(new) Acetylene head lamp, tail lamp, sidecar lamp, two generators, two toolbags, tool kit, pump, horn, licence holder.
SIDECAR—chassis fitted with new springs, mudguard and wheel.
"BURLINGTON" No. 2 touring body complete with apron.
Fully guaranteed for three months.

Trade supplied.



**Prices: Cash - - 93 Guineas.**
**Deferred Payment Terms: Deposit £25 16 6, and Twelve Monthly Instalments of £6 9 6.**

SPARES.—If it's for a Douglas—we have it.

**Burlington Motor Cycle Co., Ltd.,**
**7, South Side, Clapham Common, S.W.4.**
'Phone: Brixton 2417.
Wires: Burlington Motors, Clapham.
Just by Clapham Common Underground Station.

## MOTOR CYCLES FOR SALE.

### Triumph.

LATE Model Triumph-Montgomery combination, in nice condition, full equipment, registered, speedometer, spare tyre, 59 gns.; also 1921 Triumph, renovated, as new, fully equipped, registered, bargain for quick sale, £95; after 5 p.m.—4, Elm Gardens, Hammersmith. [6829

SOUTHPORT.—1921 Triumph-Millford S.D. combination, all-chain, electric lighting, splendid condition, 100 gns.; also 1920 renovated countershaft Triumph-Montgomery combination, Easting windscreen, all on; 69 gns.; exchanges.—Kents, 417, Lord St., Southport. [6711

3½h.p. Triumph, single-speed, clutch, kick starter, recently overhauled by Triumph Co., and fitted with £35 worth new parts (receipts shown), complete with lamps, horn, tools, spares, 30/- tax paid for 1922, guaranteed perfect; any trial; £35.—Beaney, 122, St. George's Rd., Hastings. (P) [6756

TRIUMPH Specialists.—Wanted, your present motor cycle in part exchange for any new model from stock. No waiting. Distance no object. Best prices allowed for second-hand machines. Deferred payments. (See column advertisement.)—Bamber's, 2, Eastbank St., Southport. 'Phone: 607. [7326

TRIUMPH, great bargain.—Brand new Model H, Whitley sporting sidecar, specially selected engine, No. 81964, Ricardo bars, ace dark blue discs, Lucas best equipment, a fast and powerful outfit, cost over £146; genuine reasons for sale; reasonable offers invited.—S. Metcalf, Mold, Flintshire. [6684

TRIUMPHS.—1921 4h.p. chain drive combination, 102 gns.; ditto solo, 84 gns.; another, 4h.p., chain-cum-belt, Sturmey 3-speed countershaft, 42 gns.; another, 4h.p., 3-speed solo, 32 gns.; another, 4h.p., 3-speed solo, 27 gns.; another, 3½h.p. 3-speed combination, 38 gns. All equipped, taxed for year, and guaranteed; photographs free; exchanges.—Below.

RICARDO-TRIUMPH, 1922, well-known racing model, 75 m.p.h. guarantee, winner many events, £30 worth racing spares, 2 spare carburetters, spare cylinder, 3 pistons, 2 tanks, 5 sprockets, and other parts too numerous to mention; ideal speed merchant's machine; cost £156; small mileage; 112 gns.; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. Open Sundays. Tel.: Putney 2868. [7301

TRIUMPHS.—New 1922 4h.p. combination, all-chain drive, £155, chain-cum-belt combination, £145; 4h.p. S.D. all-chain, £115; Model H, chain-cum-belt, £105; Junior 2¼h.p., £65; also several second-hand Triumphs from £40 and one 3½h.p. 1922, o.h.v., done 500 miles, £110. Second-hand machines taken in exchange; remainder on easy terms. Value allowed on old machine accepted as first payment down.—Wauchope's, 9, Shoe Lane, London. 'Phone: Holborn 5777. [7254

LIGHT Car and Motor Cycle Engineering Co., Ltd.—To prospective buyers of countershaft Triumphs, the following will interest you. Special offer for the week: 4-speed and K.S. countershaft Triumph, £65; 1918 Triumph, exceptional condition, not renovated, £60; 1917 Triumph, new tyres, mechanically perfect, £50; countershaft Triumph, 1922 renovation, £70, with shop-soiled semi-sports sidecar, £82; countershaft Triumph, overhauled and renovated, all accessories, and taxed, £50. Liberal allowances for your old 3½h.p. Triumph.—26, Tulse Hill, Brixton. 'Phone: Brixton 1292. (½ minute from Brixton Skating Rink.) [7283

*Spare Parts.*

TRIUMPH Spares.—Immediate delivery.—Kays, 8, Bond St., Ealing. [7545

COMPLETE Stock Triumph and Sturmey-Archer spares; no waiting.—Ward's, 51, Upper Richmond Rd., Putney. 'Phone: Putney 2754. [1247

TRIUMPH Agents since 1906.—All Triumph spares at new reduced prices from stock; principal Birmingham agents and service depot.—Premier Motor Co., Aston Rd., Birmingham. [0798

TRIUMPH Spare Parts for all Models; also Sturmey-Archer gear parts from stock, post free; gear overhauls by specialist.—Jones Garage, Triumph Agents, Broadway, Muswell Hill, N.10. [0809

SEND to the Rhosha Motor Garage, South St., Romford, for Triumph and Sturmey-Archer spares. No disappointing delays; every part in stock. Repairs by skilled mechanics. We are official service agents.—Tel.: Romford 584. [7766

TRIUMPH Parts, 1904-21, every part in stock, new or second-hand. Why not second-hand in place of new till prices drop? Half the price, satisfaction guaranteed. Hundreds of testimonials. Triumph repairs and renovations a speciality, under personal supervision of our proprietor, late with Triumph and Premier cycle companies. Cylinder regrinding on latest machinery.—Forfield Motors, Forfield Place, Leamington Spa. [7361

### Velocette.

PREMIER Motor Co., for 1922 Velocettes.

IMMEDIATE delivery of Model E.2 2-speed, £65; E.3 3-speed, £72/10; E.L.2 lady's open frame, £68; all with clutch and kick starter; easy payments 4% extra; carriage paid to any address.—Premier Motor Co., Aston Rd., Birmingham. [4609

## MOTOR CYCLES FOR SALE.

### Velocette.

VELOCETTE, 2-speed, chain-drive, guaranteed; 19 gns.—Royal Garage, Castle Gate, Blackpool. [6412

2¼h.p. Velocette, 1921 model, shop-soiled; price to clear, £50.—Stevenson's Garage, Tunbridge Wells. 'Phone: 425. [6231

1921 Velocette, new November, 2-speed, equipped, licensed, splendid condition; £48.—Blake, Surveyor, Westbury, Wilts. [6245

FINAL Clearance Offer.—Brand new 1921 Model D2 2-speed Velocette, £50; model D3 3-speed, £55; the last 2 machines; unbeatable value.—Premier Motor Co., Aston Rd., Birmingham. [7353

1921 Velocette, 3-speed, sports 249 c.c. engine, 64 m.p.h., Lucas and electric lighting, mileage negligible, unscratched, perfect, any examination; £53.—35, Canterbury Terrace, Maida Vale. [6862

VELOCETTE, 3-speed, October, 1921, special competition machine, electric lighting, handle-bar watch, special legshields, etc., specially tuned; nearest £50.—Len. Judge, Veloce, Ltd., Aston, Birmingham. [6326

### Verus.

1920 Verus 2¼h.p., single-speed, good as new, done under 1,000 miles, electric light outfit, good accessories, insurance, tax paid; £40; no offers; appointment only.—25, Santos Rd., Wandsworth, S.W.18. [1020

### Vindec.

VINDEC 2-stroke, 1921, all on, nice condition, 2 speeds; £25.—Naylor and Kirk, 406, Garratt Lane, Earlsfield, S.W. [7012

6h.p. Vindec Special, Bosch, free engine, dropped frame, broken cylinder; £6/10.—Ball, 49, Riverside, Kingston-on-Thames. [6340

### Wanderer.

3½h.p. Wanderer, 3-speed countershaft; £28.—59, Palfrey Place, Dorset Rd., Clapham Rd., S.W.8. [6947

### Werner.

£22.—Werner 4h.p. low, powerful; trial; lower power part.—57, Kenbury St., Camberwell, London. [7019

WERNER 2¾h.p., new T.B. magneto, recently overhauled.—A. Baker, 40, West St., Croydon. [6880

### Wilkin.

1921 Wilkin 4h.p., Blackburne, 3-speed, Lucas dynamo lighting, electric horn, automatic oiler, really perfect, licensed for year; 73 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [4550

### Williamson.

WILLIAMSON Combination, with 8h.p. Douglas engine, magnificent machine, fully equipped, very comfortable, any trial.—20, Maxwell Rd., Bournemouth. [0883

1920 Williamson Combination, 6h.p. J.A.P. engine, 3-speed Sturmey-Archer gear box, chain drive, F.R.S. lamps, horn, guaranteed mechanically sound; £76.—37, Arlington Rd., Surbiton. 'Phone: Kingston 1274. [6770

### Wolf.

2¾h.p. Wolf, 2-stroke, 2-speed, licensed, lamps, fine condition; £24; exchange.—Malvern Road Garage, Thornton Heath. [6740

£19.—As new, Wolf 2¾h.p., replated and enamelled, refitted throughout, new tyres, unridden, ready for road; must be sold to clear debt.—Box 2022, c/o *The Motor Cycle*. [5108

### Wooler.

1921 Specially Built Actual I.O.M. T.T. Wooler, small mileage; £43.—22, Brent St., Hendon. [6436

BRAND New 2¾h.p. Wooler, unregistered; £45.—28, Woodford Rd., Forest Gate. 'Phone: Maryland 2598. [6998

WOOLER, 1920, tax paid, speedometer, every accessory, spares, splendid order; £38, or offer.—Menzies, 170, High St., Montrose. [6742

### Zenith.

200 MILES.

ALLAN GRUZELIER, Ulster Chambers, 168, Regent St., W., can supply you with a similar all-chain "Eight" Zenith to those which put up such a remarkable performance for £130.

WE can also supply you with any other model, new or second-hand.

WE are the specialists, pay us a visit. [6875

5-6h.p. Zenith, Gradua gears; bargain, £29.—12, Garfield St., Leicester. [6810

1922 shop-soiled 3½h.p. Zenith-Bradshaw; £102.—Carnforth Motor Co., Carnforth. [6524

BARGAIN.—Zenith-Gradua, sporting sidecar; must sell, £35.—144, Clarence Rd., Wimbledon. [3987

4h.p. Zenith, in new condition, fully equipped, tax paid, any trial.—268, High Rd., Lee, S.E.13. [7004

NEW 1921 Zeniths at Bargain Prices.—8h.p. sports, Model G, £100; 8h.p., clutch Model H, £110; 5h.p., clutch Model D, £88.—Storer and Tait, 20, Bourdon St., Bond St., W.1. Mayfair 625. [7370


# Motor Cycle STOLEN.

3½ h.p. 1922
TRIUMPH
No. 79938

Frame No. 318358

Registered No.
H.P. 3460

**Triumph colour, Lucas Magdyno Lighting Set, Double Handle-bar Grips.**

**Stolen from John Carpenter Street, Tudor Street, London, E.C.**

# A Reward of £10:0:0

**will be paid by**

**The AUTOCAR FIRE and ACCIDENT INSURANCE COMPANY, LIMITED, 77, Cheapside, London, E.C.2, to the first person giving such information as will lead to the recovery of the machine and the apprehension of the thief or thieves.**


## MOTOR CYCLES FOR SALE.

### Zenith.

F.O.C.H. for Zeniths, new and second-hand, in stock at tempting prices.—5, Heath St., Hampstead (near Tube). [6536

ZENITH 1920 8h.p. Sports Combination, all on, as new, guaranteed; £72.—51, Upper Richmond Rd., Putney. [7445

ZENITH.—New 1922 models on easy terms; list on application; exchanges.—Wauchope's, 9, Shoe Lane, London. [7255

ZENITH 1919 Sports, 8h.p., with 1920 sidecar, very fast machine; £69; will separate.—2, Belvoir Rd., E. Dulwich. [6842

ZENITH Sporting Combination 6h.p., late model, all on; £45.—Luckins, 12, Churchfield Rd. East, Acton, London. [6624

ROBERTSONS Motors, Ltd.—1922 shop-soiled Zenith-Bradshaw, Gradua gear; £100.—157b, Gt. Portland St., W.1. [6082

ZENITH-GRADUA 6h.p., sports model, perfect condition; any trial; £40.—Weeks, 7, Church Rd., Bagshot, Surrey. [6501

ZENITH 1920 8h.p. Sports Model, fully equipped and in new condition; £70.—The Layton Garages, 30, Holywell St., Oxford. [7179

ZENITH New All-chain 8h.p. Super Sports in stock; £130; exchanges.—Agents, R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [7367

ZENITH 5h.p. Countershaft, new and guaranteed, few only left; 84 gns.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [5913

ZENITH, 1921, 90 mm bore, O.H.V., very little used, perfect condition; £75 or near offer.—Box 2168, c/o *The Motor Cycle*. [7239

5-6h.p. sports Zenith, condition, appearance, perfect, all on, very fast; £45, would exchange combination.—40, Walford Rd., N.16. [7436

BRAND New 1922 5h.p. Sports Zenith; no reasonable offer refused; makers' guarantee.—5, Bexhill Rd., St. Leonards-on-Sea. [6422

ZENITH 1921 5h.p. Sports, mileage 800, unpunctured, any examination; £85.—Faber, 19, Parkfield Rd., Manningham, Bradford. [6364

SUPER-SPORTS 8h.p. Zenith, exceptionally fast, 6 speed awards, fully equipped, purchased March; £110.—43, The Avenue, Egham. [6445

ZENITH Combination, 8h.p. Gradua, 1920, excellent condition, all accessories, trial; £95.—"Lochvoil," Gloucester Rd., New Barnet. [6317

1922 (April) Zenith 2¾h.p. Flat Twin, lamps, horn, tax paid, only ridden 1,500 miles; £50; evenings.—16, Rotherwick Rd., Golders Green. [6463

ZENITH 1920 Countershaft Combination, Lucas electric lighting, first-class condition; £85.—R. B. Clark and Co., 7, Exhibition Rd., S.W.7. [5912

6h.p. Zenith combination, two-seater, C.B. sidecar, all on, many refinements perfect running order, bargain; £60.—Baker, High St., Ealing, W.13. [7108

ZENITH-GRADUA 5h.p. twin, countershaft, clutch, kick start, Binks, fully equipped, little used; £48; seen any time.—98, Hardley Rd., Streatham. [6927

ZENITH sports, 1920, 5h.p., very hot, all complete; £68, or exchange.—Moore's Presto Motor Works, Ltd., North End, Croydon. 'Phone: 2624. [7397

1921 6h.p. Sports Zenith, beautifully equipped, mileage negligible; 62 gns.; only wants seeing; after 5 p.m.—4, Elm Gardens, Hammersmith. [6830

1919 8h.p. Zenith-Gradua, Phœnix sidecar, fully equipped, excellent condition, 20 miles to purchaser; £70.—Write Hart, 77, Darnley Rd., Gravesend. [6306

ZENITH 6h.p., sports model, fully equipped, disc wheels, recently successful at Eastbourne hill-climb; 35 gns.—Longman Bros., 17, Bood St., Ealing. Tel.: 689. [7478

ZENITH 8h.p. Combination, 1920, first registered March, 1921, electric light, speedometer, etc., condition perfect; £90.—Kemp, 40, Fairmile Av., Streatham. [6559

1914 6h.p. Zenith Coachbuilt Combination, fully equipped, tax paid, Cameo screen; £38.—Maynard, 161, Bowes Rd., Bowes Park, N.11. 'Phone: Palmers Green 19. [6953

ZENITH Combination 4h.p., J.A.P., Gradua gear, Lucas lamps, horn, etc., guaranteed; £55; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7225

1920 Zenith 8h.p. Clutch Combination, electric light, all on, licensed, condition perfect; £95; no offers; owner buying car; seen by appointment.—H.S., 165, Church St., Kensington. [6227

ZENITH 8h.p. late 1921 countershaft Milford favourite, 1922 sidecar, child's seat, mileage only 1,300, as new, full equipment; best cash offers.—5, Hatchlands Rd., Redhill, Surrey. [6571

ZENITH-GRADUA 6h.p. Combination, hood, screen, grid, equipped, taxed, guaranteed; 55 gns., sole 45 gns.; photograph; exchanges.—Peter Gordon, Ltd., 110, Upper Richmond Rd., East Sheen. [7302

## SIDECAR ATTACHMENTS.

COLLINS and Son for Sidecars, new bulbous back models complete with renovated underslung chassis, with fittings for any machine, from £12/10.—Below.

COLLINS and Son.—2-seater bulbous back coachbuilt models, with renovated underslung chassis, from £15.—Below.

COLLINS and Son.—New Montgomery Chassis, fitted with our 1922 bulbous De Luxe coachbuilt body, supplied with fittings for any machine, £18/10.—Below.

COLLINS and Son.—New Mills-Fulford Chassis, with bulbous back coachbuilt body, supplied with fittings for any machine; £17/10.—Below.

COLLINS and Son specialise in frame and chassis repairs; all work guaranteed; send for catalogue. Open weekdays till 8.30, Sunday mornings till 1 o'clock.—Below.

COLLINS and Son will take your present sidecar in part payment of any model; a few second-hand sidecars in stock.—Collins and Son, rear of 84, High St., Putney, S.W. [6200

GREATEST Bargain Ever Offered.—18 gn. sidecar chassis, complete less tyre and body; £5/10; remains of contract, limited number.—Durant, Bourne, Farnham. [6513

LATEST New Underslung Bulbous Coach, £10/10; chassis, £7; bodies £3/10; repairs, alterations; 9 years' experience.—Taylor, 637, Seven Sisters Rd., Tottenham. [6782

FOR Sale.—Genuine Indian sidecar, fitted with Easting windscreen, for 7-9h.p. Indians, perfect order; only £15; owner leaving country.—Davies, 7, Stanley St., Blackwood, Mon. [6531

SIDECAR.—Have a Hopley folding sidecar. Saves garage worry and expenses. Attached to motor will go through passage 26in. Tandem and single bodies fitted.—Hopley.

FOLDING Sidecar.—When ordering your motor specify a Hopley folder. Suits motors up to 9h.p. Can be changed from pleasure to commercial in few seconds. Detachable wheels can be fitted. Tested 7 years.—Hopley, Upper Highgate St., Birmingham. [0152

2 GNS.—Practically new large semi-sporting sidecar, underslung chassis, complete; another at 8 gns.; chassis at 3 gns.; a sporting body at 2 gns.—Smith's, 56, Chalk Farm Rd., N.W.3. [6871

D. and M. Sidecars with new £12 bodies, chassis stove enamelled, plated fittings, tube and tyre, complete, all fittings, also 2 second-hand, £9; sent on approval against cash.—55, St. James' Rd., Bermondsey, S.E. [7426

LANCASTER Sidecars.—Superb coachbuilt sidecars complete from 14 gns.; bodies only from 4 gns. A good selection in stock. Call and inspect.—The Lancaster Motor Co., 158, Norwood Rd., West Norwood, S.E.27. 'Phone: Streatham 2541. [3328

SPECIAL Purchase.—Manufacturers' stock to be cleared at unheard of prices (stock soiled). Complete sidecars with coachbuilt body, tyre and fittings, £11/10; coachbuilt bodies, £3/10; limited quantity; cannot be repeated.—Bastones, 228, Pentonville Rd., King's Cross, London, N.1. [7342

SORWAY Folding Sidecar, saves garage. When folded (10 seconds) combination passes through 30in. doorway. Ordinary unnoticeable appearance when open, no freakishness; demonstration any time. Send for full description.—Retail agents, Frank Whitworth, Ltd., 139, New St., Birmingham. [6064

SARAGON (patent) Folding Sidecar saves storage, has 7 years to its credit, and has proved itself absolutely reliable. Fits any make of motor cycle, and, when folded, combination will pass through a 30in. doorway. Call and see it demonstrated.—Wincycle Co., Ltd., 236, High Holborn, W.C.1. [0388

SOLD Man Hep. nas 1,000 Douglas underslung chassis, renovated and complete, to suit all makes machines, for £5; or fitted with a brand new Douglas type bulbous backed body, for £10/10 (these bodies are upholstered with good quality Rexine, but require a last coat of paint); this has been left for travelling on rail; send for photo, enclosing stamp. We cannot be beaten for our prices. 'Phone: 1958 Brixton. (See Body column.)—19, Wilcox Rd., South Lambeth, London, S.W.8. [2591

SOUGLAS Chassis, shop-soiled bodies, special offer, £12/10; P. and M. outfits, new bulbous back bodies, fittings, etc.; £14; sports outfits for P. and M.'s, £14; outfit for Triumphs, B.S.A.'s, etc., new bodies, £15; lightweights, complete, brand new, from £11/10; 2-seaters, complete, from £14; bodies only, £9; extended payments; outfits, complete, brand new, for Indians, £24; second-hand outfits, complete, from £5; bodies only from £3. Write for particulars.—Sobini Manfc. Co., 1 and 3, Tulse Hill, Effra Rd., Brixton, S.W.2. 'Phone: Brixton 1585. [7233

## RUNABOUTS AND CYCLE CARS.

A.C. Sociable; £35; any trial allowed.—86, King St., Maidstone. [6298

A.N., touring model, immediate delivery; £225.—J. Ratcliffe Bros., 200, Great Portland St., W. [4396

# WHY YOU SHOULD WRITE US

If you are buying a Motor-Cycle or Light Car, either now, or at some time—we shall be glad to hear from you. ¶ We believe that our service, our resources, our "out-of-the-rut" way of doing business can be of help to you; that we can save money for you, and give you a measure of satisfaction in any purchase you may make from us that will come to you as a pleasing revelation.

Therefore we ask you to let us hear from you. Of course, we want to sell you a machine, if we can—but more than that we hope to have the pleasure of adding YOUR name to the already very long list of those who—from all over the British Isles—have come to Layton's—and having come once have come again and tell their best friends to do likewise.

¶ We have these 1922 models for earliest possible delivery:—

**ARIEL, B.S.A., BROUGH-SUPERIOR, DIAMOND, DOUGLAS, EDMUND, ENFIELD, HUMBER, INDIAN, MASSEY-ARRAN, MATCHLESS, NORTON, RUDGE, SCOTT, TRIUMPH, VELOCETTE:**

while our to-day's stock of high-quality used machines comprises many exceptional bargains.
Ask for details.

# Layton Garages

**90, High Street, OXFORD, and BICESTER.**

'Phones: 581 and 784 Oxford: 35 Bicester.
'Grams: "Integrity," Oxford and Bicester.

**J. W. Tollady,**
*General Manager.*


## RUNABOUTS AND CYCLE CARS.

MORGAN Runabouts, new Grand Prix and Popular models in stock.—Moss, Wem. [7390

1920 8h.p. A.V., absolutely unscratched; 48 gns.—67, Fernlea Rd., Balham. [7421

A.C. Sociable 6h.p., good running order; £45, or offer.—27, Eastnor Rd., Reigate. [6913

SCOTT Sociable, late 1921, in new condition.—Somerville, 30, Ormidale Terrace, Edinburgh. [6417

BEDELIA.—The new 1922 model 8-10h.p., air-cooled or water-cooled to choice. Immediate deliveries.

BEDELIA.—Air-cooled model £185, water-cooled model £195; side-by-side armchair seats, 3 speeds and reverse, 5 detachable wheels, hood, screen, lamps, tools, jack and pump included; trial free.

BEDELIA.—Cash or easy terms. Your old car or motor cycle taken part payment.

BEDELIA.—Catalogue free from L. N. Palmer, Sole Concessionnaire for the British Empire, Palmer's Garage, Tooting. [6966

4h.p. Carden Monocar, licensed, 2 new tyres, sporty looking; £35; exchange.—Fowler, Ash, Surrey. [6383

£68.—Morgan, 8h.p. J.A.P. a.c., well equipped, good condition.—Seen, 4A, County Grove, Camberwell. [6644

1921 Coventry Premier, dynamo lighting, spare wheel; £148.—24, Balliol Rd., North Kensington. [6642

MORGAN Sporting, 1915, M.A.G. engine, A.C., fully equipped; £70.—Mylam, 197, London Rd., Croydon. [7133

MORGAN, 1915, a.c., special body, reupholstered, engine rebushed; £70.—Highdene, Ridgeway, Enfield. [6698

1921 Grahame White 2-seater, lamps, horn, etc., splendid condition; £55.—J. Bowskill, Arlesey, Beds. [6883

G.N., 1920, standard model, dynamo lighting set, spare wheel, finished blue; £127/10.—Elce, Ltd. (below).

MORGAN, 1921, De Luxe model, w.c. M.A.G. engine, Lucas dynamo lighting set; £152/10.—Elce, Ltd. (below).

CARDEN, 1921, electric lighting, just overhauled; £77/10.—Elce, Ltd., 13, 15, and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0069

1920 Morgan de Luxe, beautiful condition, very carefully used; quick sale, £115.—33, Granville Rd., Watford. [6957

1921 Scott Sociable, speedometer, spare wheel, perfect order; price £155.—Welford, St. James's St., Brighton. [6142

MORGAN, A.C. J.A.P. engine, good running order, tyres good; £85, or near offer.—Evans, 137, Queen St., Rushden, Northants. [6188

SEAL Sociable, black model, bought June, 1921, full fitment, spare wheel unused, tax paid; £137/10.—20, Redlam, Blackburn. [7082

MORGAN.—New 1922 Models in stock.—Agents, Birkenhead Motor Works, Old Bidston Rd., Birkenhead. 'Phone: 2047. [2389

100 GNS.—1914 Morris-Oxford 2-seater, 4 cylinders, W.C., perfect condition, tax paid, insured.—King, Egrove, Oxford. [7094

1921 Bleriot Whippet, dynamo lighting, latest starter; £85; exchange combination.—24, Balliol Rd., North Kensington. [6643

£25.—A. C. Sociable, new tyres, hood, screen, good order.—W.J.C. Motor Exchange, Addison Av., Holland Park, W.11. Park 2071. [7150

A.V. Bicar, 1920, 8h.p., new cylinders, electric lights, good condition, seen A.V. Works, Teddington; £75.—4, Stratford Sq., Nottingham. [6937

BLERIOT Whippet, late 1920, overhauled, repainted, excellent condition, insured; £100.—G., 3, Parkholme Rd., Dalston, E.8. [6598

3-WHEEL Car for Sale, with or without engine, or exchange Ford car, or lathe and cash.—13, Wolverhampton St., Darlaston, S. Staffs. [6195

COVENTRY-PREMIER, 1922, latest model, brand new, just arrived; £230. Trials and tuition free.—Wilkins Simpson, opposite Olympia, London. [6455

8-10h.p. J.A.P. Cycle Car, 4-wheeler, friction drive, 2-seater, hood, spares, very smart; any trial; £85.—Write, 18, Ree Lane, Kingsbury, N.W. [6839

GILBON'S Cycle Car, 4h.p. Precision, very economical, exceptionally good condition throughout, any trial; £40.—105, High St., Colliers Wood, Merton. [5077

1921 Morgan De Luxe, M.A.G engine, water-cooled, dvoamo lighting, fully equipped; £160.—Hillier (side bell), 9, Wallingford Ave., North Kensington. [7058

MORGAN Grand Prix, w.c.; 70 gns.; excellent condition, discs, hood, screen, 1915-16, trial after 7 or all week-end.—5, Kingsdown Av., S. Croydon. [6878

BARGAIN.—8h.p. J.A.P. cycle car, torpedo body shaft drive; £25, offers; separate; exchange with cash, Zenith.—Webb, Church Sq., Leighton Buzzard. [6720

## RUNABOUTS AND CYCLE CARS.

WANDSWORTH Motor Exchange have some nice light cars, going cheap. Exchange motor cycles; also easy terms.

A.C. Sociable 2-seater, hood, screen, overhauled, newly painted; 49 gns.; exchanges; easy terms.

VIOLETTE Bogey 2-seater, 4 speeds, hood, screen, lamps; 68 gns.; exchanges; easy terms.

DUO 2-seater, 8h.p. twin J.A.P., 4 speeds, hood, screen, lamps; 49 gns.; terms.

TRIBET 2-seater, 10h.p., 4 cylinders, 4 speeds, spare wheel, lamps; 68 gns.; easy terms.

HUMBERETTE 1914 2-seater, 8.7h.p., hood, screen, speedometer, lamps, overhauled; 69 gns.; easy terms.

HUMBERETTE 1915 Beautiful 2-seater, 8.7h.p., hood, screen, speedometer, lamps; 79 gns.; easy terms.

CARDEN 1921 2-seater, hood, screen, dynamo lighting, nearly new; offers; easy terms.

GIRLING 2-seater, good tyres, shaft drive; who wants? gift, 29 gns.; exchanges; terms.

WANDSWORTH Motor Exchange, Ebner St., York Rd., Wandsworth (Town Station). 'Phone: Latchmere 4686. [7458

BLERIOT WHIPPET, 1921, November, reverse, electric light, speedometer, luggage grid, practically new; offers.—Dr. Gibson, Guisborough, Yorkshire. [6979

MORGAN 1922 Popular, complete lamp, horn, hood, screen, side door, tax; £125; exchanges, solo or combination and cash, good makes.—H. Rock, Cradley, Staffs. [7403

RILEY 3-wheeler, 3-speed and reverse, in running order, experimental 2-seat body fitted, short trial given; £27.—Gill, 51, Nassington Rd., Hampstead, N.W.3. [6933

CASTLE THREE 1921, dynamo lighting, spare wheel (unused), mileage only 800, guaranteed; £170.—Hillier (side bell), 9, Wallingford Ave., North Kensington. [7057

NEW and Second-hand Light Cars and Cycle Cars, all makes; good selection in stock; cash, easy payments, or exchange.—Service Co., 292, High Holborn, W.C.1. [0673

CARDEN 2-seater 1921, fully equipped, hood, screen, lamps, tax paid; £77/10; ready to drive away; motor cycle as part payment.—Wauchope's, 9, Shoe Lane, London. [7256

BAYLISS-THOMAS 1922 10h.p. Model, 4-cylinder water-cooled engine, 3 speeds, Magdyno; 300 gns.; immediate delivery.—Godfrey's, Ltd., 208, Gt. Portland St., London, W.1. [0736

1922 Morgan Popular, £150; Grand Prix, £180 8h.p. Rover, £220; in stock for immediate delivery easy payments only 4% extra.—The Premier Motor Co. Aston Rd., Birmingham. [0775

1921 Carden 2-seater, electric lighting, tyres perfect, hood and screen, perfect order; £70; exchanges.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7227

56 GNS.; exchange, cash either way.—Buckingham 1914 streamline 2-seater, 8h.p. twin, water-cooled, hood, screen, lamps.—Seabridge, Hansler Rd., East Dulwich. Sydenham 2452. [6941

£120.—Morris-Oxford 2-seater, 10h.p., electric lamps, speedometer, detachable wheels, tax paid; exchange for motor cycle and cash.—Smith's, 86, Chalk Farm Rd. (opposite Chalk Farm Tube Station.) [7357

2-SEATER 1921 Coulsen 8h.p., 3-speed, hood, screen, D.A. lighting, Smith's speedometer, clock, taxed, brand new, absolute bargain; £105; solo combination part.—27, Wandle Rd., Upper Tooting, S.W.17. [7141

COVENTRY PREMIER, new March, 1922, 4-wheeler, dickey, tax and insurance paid; £210, or nearest offer; would take good solo motor cycle in part payment.—Barker, West Mersea, Colchester. [6479

1922 Morgan De Luxe 10h.p., a.c. M.A.G., Standard equipment; delivery from stock; £182/10; easy payments 4%.—Homac's, Morgan Service Depot, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7228

RICHARDSON Light Car, new September, 1921, dynamo lighting, spare wheel and tyre, dickey seat, tax paid to year end, petrol consumption 50 miles per gallon; £135.—Dawes, 60, Park St., Farnworth, Bolton. [7084

2-Seater J.A.P. Cyclecar, 10h.p., fan-cooled engine, Bosch, Solex carburetter, dynamo lighting, friction drive, hood, screen, fast and reliable; best offer, or exchange modern twin combination.—18, Darley Rd., Wandsworth Common. [6589

COVENTRY PREMIER 4-wheeled super runabout, 8h.p. water-cooled, spare wheel, dyname, fully insured, etc.; £230. Motor cycles, etc., taken in part exchange; instalments if desired.—Frank Whitworth, Ltd., 139, New St., Birmingham. [6063

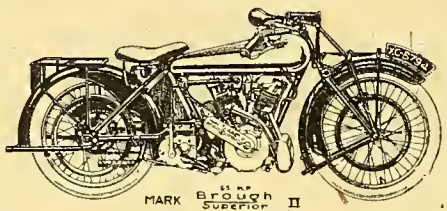
J.A.P. 8h.p. Special Overhead Valve Cycle Car, friction drive, 3 speeds and reverse, detachable wheels, beautiful, comfortable 2-seater body, only done 300 miles; £55; exchange motor cycle.—88, Gloucester Place Mews, Portman Sq., W.1. [7475


# The Home of the BIG TWIN Motor Cycles

—where examples of magnificent Motorcycle Engineering are always on view—including such notable mounts as the 6·5 h.p.

## BROUGH-SUPERIOR

**The Super Twin**




Fitted with M.A.G. Engine, 3-speed gear, Heavy Dunlop Tyres. Petrol consumption 80 m.p.g. Speed—Solo 65 m.p.h., with Sporting Side-car 55 m.p.h.

The "Brough-Superior" is superlatively finished.

**PRICE,** Complete with Pump and Tools **£125**

with Sporting Side-car - - - - **£150**

**BROUGH-SUPERIOR** Mark I - - **£150**

—and the 7-9 h.p. Electrically Equipped

## HARLEY-DAVIDSON

**THE WORLD'S MOTORCYCLE.**

3-speed, Clutch with hand and foot control, Goodyear Tyres.

**PRICE,** with luxurious Sidecar 1921 Model - - - - - **£188 10**

7·9 h.p. with Speedometer and Highest Grade Sidecar 1921 Model - - - **£175**

4 h.p. Sports, complete with Lamp, Horn, Speedometer, etc., 1921 Model - - **£115**

Special 2-Seater Sidecar - - - - - **£38**

**Sidecars of all Types to suit**

**ONLY A FEW 1921 MODELS LEFT AT ASTOUNDING PRICES**

We have other famous Motor Cycles including:—

16H 3½ h.p. **NORTON** - - - - - **£115**

3½ h.p. Sports **ARIEL** - - - - - **£87 10**

3 h.p. **RALEIGH** - - - - - - **£73**

2¾ h.p. Sports **RALEIGH** - - - **£68**

Two-stroke **VELOCETTE** - - - **£65**

Special T.T. Model **LEVIS** - - - **£61**

*All Brand New—Ask for complete List and Prices.*

**SOLE MIDLAND AGENT and Super Service Depot** for the above Big Twins.

## FRANK HALLAM

**Dalton Street**

(2 doors from Bull Street)

**and 88, Bristol Street, BIRMINGHAM.**

'PHONES:
Dalton St., Cent. 7317. Bristol St., Mid. 1472.


## RUNABOUTS AND CYCLE CARS.

1921½ Morgan, Aero model, J.A.P., special body, hood, Lucas dynamo lighting, electric horn, discs, speedometer, Van den Plas rings, demonstration model; 200 gns.; exchanges or deferred.—Edwards, 50, Harrington Rd., South Kensington. [4552

1916 Morgan, Grand Prix model, w.c, J.A.P. engine, hood, screen, discs, all lamps, speedometer, mileage to date only 6,000, in exceptional condition; £120.—Homac's, Morgan Service Depot, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7226

*Spare Parts:*

MORGAN.—All spares from stock.—Maudes', Great Portland St., W.1. [7206

MORGAN Spare Parts Depot.—Spares for all models from stock; list free.—Elce, Ltd., 13, 15, and 16, Bishopsgate Av., Camomile St., E.C.3. 'Phone: Avenue 5548. [0070

MORGAN Service Depot.—Officially appointed by the Morgan Motor Co.; overhauls and repairs executed; every conceivable spare in stock.—Homac's, 243, Lower Clapton Rd., N.E. 'Phone: Dalston 2408. [7229

## TAXI-COMBINATIONS AND CABS.

"COUNTY," 8h.p. B.S.A. Sidecar Taxis, as licensed throughout the country.—Write for full particulars, County Cycle and Motor Co., "Originators," 300, Bread St., Birmingham. [5353

## CARS FOR SALE.

RILEY 2-seater Chassis, ride away; £25.—Fred Collins, Nesten, Cheshire. [6859

8h.p. Rover, 2 seat, Zenith, magneto, hood, screen; £35.—9, Waldegrave Rd., Teddington. [6758

PREMIER Car, 2-seater, perfect running order; £85 or clear offer.—109, Beam St., Nantwich. [5800

ROVER 1922, brand new 8h.p.; £220. Trials and tuition free.—Wilkins Simpson, opposite Olympia, London. [6451

1914 Briton 2-seater, dickey, perfect order; sale or exchange; 75 gns.—Royal Garage, Castle Gate, Blackpool. [6416

ROVER Cars.—1922 8h.p. model; price £220; early delivery.—Godfreys', Ltd., 208, Gt. Portland St., London, W.1. [0350

WEST Norwood! 60 cars, absolute bargains, list free, exchanges.—Douglas S. Cox, Lansdowne, West Norwood. [1932

PALMER'S Garage, Tooting.—£35 down and 12 monthly payments £5 secures smart 12.15h.p. Panhard Landaulet.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £5 secures 12-14h.p. Swift Limousine, seats 5 inside.

PALMER'S Garage, Tooting.—£25 down and 12 monthly payments £5 secures 2-ton Karrier Lorry chassis, new tyres.

PALMER'S Garage, Tooting.—£125 down and 12 monthly payments £10 secures modern 15.9h.p. Swift Touring Car, dynamo lighting.

PALMER'S Garage, Tooting.—£20 down and 12 monthly payments £5 secures 12-14h.p. Fiat Light Van.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £7 secures 20h.p. Studebaker Landaulet, dynamo lighting, self-starting.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £8/10 secures Picard Pictet ¾ Landaulet, dynamo lighting.

PALMER'S Garage, Tooting.—£25 down and 6 monthly payments £5 secures excellent Renault Taxicab.

PALMER'S Garage, Tooting.—£10 down and 12 monthly payments £3 secures 12h.p. Talbot 4-seater, 4 cylinders.

PALMER'S Garage, Tooting.—£150 cash secures modern 15.9h.p. Napier 30-cwt Van, coverod body.

PALMER'S Garage, Tooting.—£150 cash secures 1914 10h.p. Unic 2-seater, dickey, 4 speeds, dynamo lighting; extra smart.

PALMER'S Garage, Tooting.—£90 cash secures modern 10-12h.p. Belsize light 4-seater, 4-cylinder bloc engine, gate change.

PALMER'S Garage, Tooting.—£60 cash secures 8h.p. Humberette light 2-seater, equipped.

PALMER'S Garage, Tooting.—£50 down and 12 monthly payments £6 secures 12-16h.p. Standard Cabriolet, 4 cylinders, detachable wheels.

PALMER'S Garage, Tooting.—£40 down and 12 monthly payments £10 secures 30h.p. Berliet Touring Car, small six.

PALMER'S Garage, Tooting.—£75 down and 12 monthly payments £10 secures 16-20h.p. modern Wolseley Touring Car.

PALMER'S Garage, 187, High St., Tooting, will accept your old car or motor cycle as part payment for any car in stock. For cash price deduct 10 per cent. from above totals. [6972

## CARS FOR SALE.

917 Calthorpe 2-seater, egg back, discs, as new; sale or exchange; 100 gns.—Royal Garage, Castle Gate, Lackpool. [6415

10h.p. Singer, dynamo, spare wheel, repainted as new; £125, or exchange.—Clayhall Tavern, Old Ford Rd., Bow, E. [6748

ROVER 1922, Model de Luxe, 8h.p., brand new; £245. Trials and tuition free.—Wilkins Simpson, Opposite Olympia, London. [6452

ROVER Cars.—The famous 8h.p. model in stock, £220; for immediate delivery.—Eagles and Co., 5, High St., Acton, London. [0761

COVENTRY PREMIER, 1922, 4-wheel model; £230. Immediate delivery; cash or deferred payments.—Ratcliffe Bros., 200, Gt. Portland St., W. [0730

HAND 10h.p., 4-cylinder, water-cooled, dynamo lighting and starter, double dickey; £300.—Ratcliffe Bros., 200, Great Portland St., W. [4395

ROVER 8h.p. Light Car, 1922 models, dynamo lighting; £220 cash, deferred payments 4% extra.—Ratcliffe Bros., 200, Gt. Portland St., W.1. [0729

HALIFAX.—1922 B.S.A., Calthorpe, Coventry Premier, Lagonda, and Rhode, latest models; cash or exchange.—Halifax Motor Exchange, Horton St., Halifax. [7201

HUMBERETTE, 8h.p., fine mechanical condition and appearance, spare wheel, speedometer, etc.; 0 gns., or offer.—Woodcote, Beohill-wood Rd., Sutton, Surrey. [6595

919 Ford Van, complete with lamps and detachable wheels, in absolute perfect condition, or exchange motor cycle; £65.—Rhind and Co., Stone Place, Wilmslow Rd., Rusholme, Manchester. [6381

J.N., 1922, Touring, £225; All-Weather, £260; fully equipped; inspection and trial invited. Deferred payments arranged. From Agents and Show Rooms, 222, Gt. Portland St. Museum 2271. [1629

1921 Ford ½-ton, English body, hood and windscreen for sale, cheap, or exchange for smart touring car body complete; cash adjustments.—H. Wood, White House Farm, West Ardsley, Wakefield. [6205

VIONIS 2-seater Car, 4 cylinders, water-cooled, new tyres, tax paid, spare wheel, dynamo lighting, in splendid condition; £125, or near offer, or exchange late Harley-Davidson combination.—16, Seldon St., Battersea. [6324

SCRIPPS-BOOTH Coupe, 13.2h.p., 1916, dynamo lighting, self-starter, fully equipped, appearance and condition as new; £175, or exchange good combination or light car and cash.—Owen, 94B, High Rd., East Finchley [5767

4-SEATER Alldays, 12h.p., flush top body, fully equipped, many spares, £35 just spent, dark blue, unscratched, excellent condition; £130; driving taught free; exchange 2-seater Morgan or motor cycle.—63, Solon Rd., Brixton. [6728

1920 Emscote 2-seater, 8.9h.p., W.C., J.A.P. engine, 3-speed, reverse, dynamo lighting, spare wheel, complete, hood, screen, an absolute bargain; £140, or nearest offer.—Rhind and Co., Stone Place, Wilmslow Rd., Rusholme, Manchester. [6380

WAVERLEY 1915 Roomy 2-seater with dickey, 13.9h.p., perfect running order, 5 detachable wheels, electric lighting, 5 brass lamps, Chapuis Dornier engine, speedometer, new hood, trial any time by appointment; £145, or offer.—M., 76, Huron Rd., Balham, S.W.17. [6174

## MOTOR TRANSPORT VEHICLES.

4-CYLINDER Darracq Van; 25h.p. Ziedle motor cycle, large sidecar with Magnum tyre; what offers?—6, Halls Terrace, Hillingdon Heath, Middlesex. [6384

10-CWT. Chassis, covered van body, pneumatic, 2 spare covers and tubes, 3-speed, reverse, new gears, with radiator, sound; would sell cheap, or exchange with cash for combination.—80, Bishopric, Horsham. [6476

## EXTENDED PAYMENTS.

TRY Wauchope's, 9, Shoe Lane, London, E.C.4, for easy terms. 'Phone, Holborn 5777. [7218

ROBERTSONS Motors, Ltd.'s hire purchase terms could not be simpler.—157B, Gt. Portland St., W.1. [7375

HALIFAX.—£7/10 deposit, 10/- weekly, purchases 6h.p., 2-speed, Twin Rex and sidecar.—Halifax Motor Exchange, Horton St., Halifax. [7199

FOR Best Treatment and best terms for light cars, cycle cars, or motor cycles of any make, new or second-hand, write Service Co., 292, High Holborn, W.C.1 [0672

EASIEST of Easy Payments for any make of motor cycle or car. Ask us to quote you for easy payments on any make.—Wilkins Simpson, opposite Olympia, London. [6457

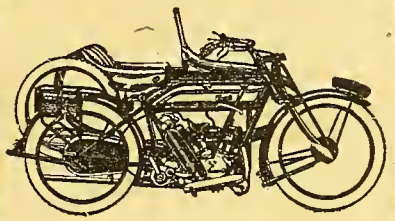
ANY make of cycle or any combination completely equipped; licensed, insured on 12, 15, 18 months' extended payments system.—Write for particulars. Rideezi Sales, Ltd., 5, Victoria St., S.W.1. [0830

# RATCLIFFE BROS.

## 200, GT. PORTLAND ST., W

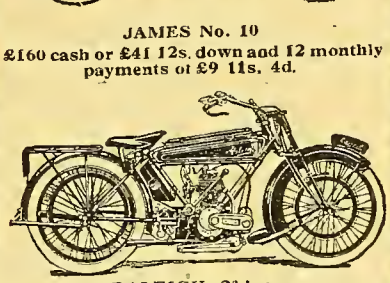
'Phone—Langham 1701.

**Any make of machine can be supplied on our Payment out of Income Scheme. Write for full particulars, and state machine you are interested in.**



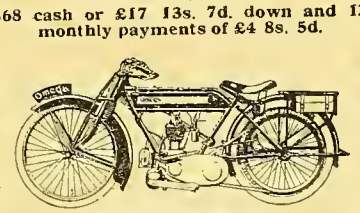
**JAMES No. 10**

**£160 cash or £41 12s. down and 12 monthly payments of £9 11s. 4d.**



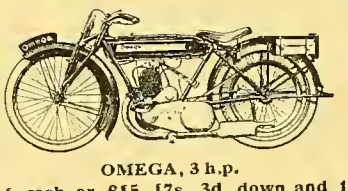
**RALEIGH, 2¾ h.p.**

**£68 cash or £17 13s. 7d. down and 12 monthly payments of £4 8s. 5d.**



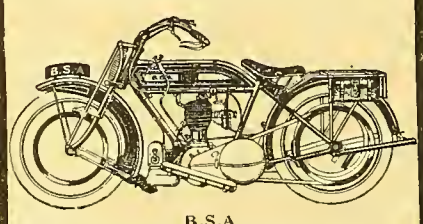
**OMEGA, 2¾ h.p. Jap.**

**£66 cash or £17 3s 3d. down and 12 monthly payments of £4 5s. 9d.**



**OMEGA, 3 h.p.**

**£61 cash or £15 17s. 3d. down and 12 monthly payments of £3 19s. 3d.**



**B.S.A.**

**£107 cash or £27 16s. 5d. down and 12 monthly payments of £6 19s. 1d.**

**TRADE SUPPLIED.**

## ENGINES.

BROLER 3½h.p. 2-stroke, runs on ball and roller bearings. The engine you cannot overheat.

WHAT Users say.—"Pulls with sidecar like a 5h.p. twin."—Birmingham.

"YOUR engine is the only 2-stroke we have found that will not overheat, and is 10 miles per hour faster than any we have yet handled."—London.

"I HAVE the pleasure writing you to let you know I raced a 2¾h.p. —— the other day. I was doing over 50 m.p.h. with two up."—Loughborough.

WE have a pile of these unsolicited testimonials in our office.

THE best value for money on the market; less magneto and carburetter, £10/15. Frames to suit, will take sidecar, £4/17/6.

OUR goods are not cheap rubbish, but sound engineering practice, and cannot be produced under the price.—Broler Engines, Narborough, near Leicester. [6719

PEUGEOT Twin Engine, 2 Minerva engines; cheap.—P., 602, King's Rd., Fulham, S.W.6. [6834

2¾h.p. Precision engine, good running order; £6/10.—Read, Waterloo St., Burton-on-Trent. [6332

J.A.P. 2¾h.p., March, 1922, roller bearings; £16; offers.—Dempster, 864, Argyle St., Glasgow. [6181

1914 Sunbeam, magneto and carburetter, frame, forks; £30, offers.—Belmont Garage, E.10. [7144

6h.p. Water-cooled Single, magneto; £9.—Particulars, Agate, Durrants Hill, Hemel Hempstead. [6931

CLYNO Twin, good second-hand, no magneto or carburetter; £5.—West, 50, Maldon Rd., Acton, W.3. [7071

P. and M. Engines, £4/10; overhauled and completed, £6/10; spares.—7, Hereford Rd., Bayswater. [6104

3½h.p. Engine, 1917, new magneto, off Premier, complete; £14.—Heaps, Ellerslie, Davenport Park, Stockport. [6138

WHATEVER type of engine you require, we can supply.—Forfield Motors, Forfield Place, Leamington Spa. [8453

F.N. 4-cylinder Engine, Bosch, carburetter, good condition; £6/10, near offer.—Wright, 111, New St., Ashford, Kent. [6269

STATIONARY Engines to drive machine tools, pumps, dynamos, etc.; see displayed advert.—Holland, Macclesfield. [6371

TRIUMPH Engine, 3½h.p., about 1916, with magneto and silencer, in good order; cheap, £16.—Baron's, Ltd., Wood St., Accrington. [6256

2¼h.p. Minerva, re-bored, m.o.i.v., B. and B., h.b.c., £3; complete machine, less above unit, £2; lot £4/10, all sound.—25, Briton St., Leicester. [6705

8h.p. De Dion, water-cooled, perfect order, ideal stationary engine, big flywheel, magneto and carburetter and tank; £10.—55, St. James' Rd., Bermondsey. [7427

VILLIERS, Blackburne, and A.B.C. engine spares from stock; trade supplied; 8h.p. 1919 air-cooled J.A.P. engine, new, £32; also new water-cooled 10h.p. M.A.G., £35.—Maudes', 100, Great Portland St., W.1. [7205

TRIUMPH Countershaft Engines, complete, perfect, £15, carriage extra; Sturmey-Archer 3-speed gear box complete, perfect, £10, carriage extra.—Hackford Engineering Co., 33, Hackford Rd., Brixton, S.W.9. 'Phone: Brixton 3062. [7408

LOOK.—New 1½h.p. air-cooled Whippet scooter, engine suitable cycle attachment, scooter, mowing machine, dynamo, pump, etc. Note: 4-stroke and brand new, with carburetter and magneto; £8/10; worth treble; offered subject unsold.—Wortham-Blake and Co., Waltham Cross. [5123

HEPPELTHWAITE'S 5-6h.p. N.S.U. (twin), £4/15; 5-6h.p. Clyno and magneto, £9; 8-10h.p. W.C. Twin Rex, £8; 2h.p. F.N., £2; 4h.p. W.C. J.A.P., as new, £10; and all the 5h.p. J.A.P. spares at low prices. 'Phone: 1958 Brixton.—19, Wilcox Rd., South Lambeth, S.W.8. [5868

## IGNITION, LIGHTING, ETC.

H.B. I. Co.

H.B. for new and second-hand magnetos; all spares stocked.

H.B. Specialise in Thomson-Benoett, complete for fixing to Triumph.

P.M., J.A.P., Douglas, 2-stroke engines, etc.; £3.

C.A.V., New, twin and single, clock and anti; £3.

DIXIE, single and twin, all degrees; £2/5.

H.B. Guarantee all magnetos one year.

H.B. will take your old machine in part payment.

H.B. Despatches all goods per return, carriage paid, on approval against cash, or through *The Motor Cycle* deposit system.

H.B. Ignition Co., 78, New Park Rd., Brixton Hill, London. 'Phone: Brixton 610. [0694

## IGNITION, LIGHTING, ETC.

A REAL Bargain

IN Magnetos can be secured from the Marble Arch Motor Exchange.

650 Motor Cycle Magnetos to be cleared.—See below.

PLEASE Note our stock consists of genuine motor cycle magnetos, not converted or reconstructed aeroplane starter magnetos.

WE Guarantee we can supply you a magneto cheaper than anyone.

SINGLE-CYLINDER Anti-clock Splitdorf, 35/-; C.A.V., 38/-; Ruthardt, 40/-; Thomson-Bennett, 45/-; U.H., 35/-; Berling, 30/-; Dixie, 30/-.

SINGLE-CYLINDER Clock Dixie, 30/-; Berling, 30/-.

180° Anti-clock Thomson-Bennett Type AC2, brand new, 45/-; C.A.V., 37/6, suit Douglas.

180° Clockwise Splitdorf, 35/-; C.A.V., 37/6, suit Douglas; Thomson-Bennett, 40/-, suit Douglas.

SPLITDORF 55° and 42° Clock, 35/-; Dixie, 30/-; and hundreds of others in stock, all guaranteed and sent on approval against cash.—Marble Arch Motor Exchange, 135, Edgware Rd., W.2. 'Phone: Padd. 789. 'Grams: Archmotex, Edge, London. [4676

BROWN, Gardiner and Co.

C.A.V. 2-cylinder, clockwise, aeroplane starting magnetos, platinum points, guaranteed unused, all working parts interchangeable with C.A.V. type KU2.

THESE Magnetos can be converted for use on any 1- or 2-cylinder engine of less than 5h.p.; 25/- each, carriage paid.

SPECIAL Prices for quantities.

CASTINGS and brass armature ends; 10/6 per set.

LONG Cams necessary for single cylinders; 3/- each.

SAMPLES sent on approval against cash.

BROWN, Gardiner and Co., 8, Bevis Marks, E.C.3. [0826

THE Central Ignition Works.

LOOK, Look, Look.

JUST Arrived, large consignment.

NOT Converted, starter magnetos.

ALL Enclosed, waterproof, and variable ignition.

TO Suit all Makes of Motor Cycles.

BOSCH, Type ZA2, enclosed, twins; £3/5.

BOSCH, Type ZEV, enclosed, twins; £3/7/6.

BOSCH ZE1, enclosed, single; £3/7/6.

G.A. Singles, same as Bosch; £3.

M-L Singles, same as Bosch; £3.

C.A.V. Singles Only; £3.

E.I.C. Singles and Twins; £3.

THOMSON-BENNETT Single and Twins; £2/10.

TRIUMPH Magneto Sprockets, genuine; 4/-.

THOMSON-BENNETT New Contact Breakers; 10/6.

HIGH-TENSION Wire, 7mm., 5d. per yard, new, unperished.

BOSCH Sparking Plugs; 1/6, in boxes.

ALL Goods Forwarded on Approval on receipt of cash. All monies refunded if dissatisfied.

ALL Magnetos guaranteed for 12 months.

CARRIAGE on Magnetos, 1/6.

THE Central Ignition Works, 14, Longhborough Rd., Brixton, S.W. London. Tel.: Brixton 210. [7452

BOSCH and M-L Singles 30/-, C.A.V. 37/6, variable ignition, guaranteed.—84, Greenside Rd., Croydon. [7014

MAGNETO Repairs and Spare Parts, all types.—R. J. Loverock, 151, High St., Itchen, nr. Southampton. [6247

PRACTICALLY New C.A.V. Magneto, off Douglas; bargain, £3/10.—Thomas, Twycross, Tenby, Pembrokeshire. [6215

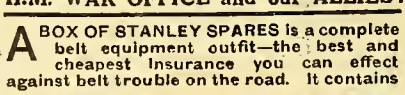
BLIC, T.B. and Nilmiltor; 32/6 each, carriage paid; guaranteed perfect.—A. Baker, 40, West St., Croydon. [6879

MAGNETO Sprocket Manufacturers.—7-tooth to 24-tooth stocked.—Ridington, 202-4, Southampton St., Camberwell. [3584

# STANLEY BELTS AND FASTENERS.

**MILLIONS ordered and in use by H.M. WAR OFFICE and our ALLIES.**

**A BOX OF STANLEY SPARES is a complete belt equipment outfit—the best and cheapest Insurance you can effect against belt trouble on the road. It contains**

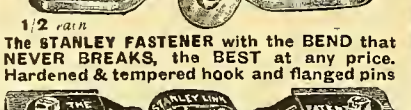



1/2 *rain*

**The STANLEY FASTENER with the BEND that NEVER BREAKS, the BEST at any price. Hardened & tempered hook and flanged pins**

1/1

**The STANLEY SPARE LINK which is the best belt length adjuster yet invented. Saveatime, trouble & money. Saves the cost of a new belt**




**The STANLEY SHIELD, which protects the belt fastener, prevents wear of the pulley, and conserves power. Specially designed for use with the Philipson Pulley. 9d.**

**STANLEY ADJUSTING HOOKS, for adjusting the length of your belt in one second. Set of 3, 6d.**

*"Never be without a box of Stanley Spares."*

*Price 3/6 post free. Send size of belt when ordering.*

**The LION FASTENER, guaranteed for 5,000 miles—11d.**

**Our Goods are World-renowned for their Reliability. A STANLEY FASTENER free with each belt.**

**Belt Punches 1/6**
**Adjustable Punches 2/-**

| Per ft. | |
|---|---|
| 5/8" | 1/2 |
| 3/4" | 1/5 |
| 7/8" | 1/9 |
| 1" | 2/- |
| 1 1/4" | 2/6 |

**Stanley Motor Belts & Fasteners**
BRITISH THROUGHOUT
**(STANLEY WEBB, inventor of the original Hook Belt Fastener and other Practical Belt Aids.)**
**32, London Road,**
**BROMLEY, KENT.** 'Phone, Bromley 806

## The VRIL STICK MECHANICAL DECARBONISER

Prov. Patent No 22127—21.

By using the VRIL STICK, Cylinder Heads may be easily and rapidly decarbonised. Used either in an ordinary hand drill brace or portable electric drill holder. A few turns under pressure decarbonises and burnishes the cylinder head in a few seconds. **Will last for years.**

4 h.p. Triumph and 3½ h.p. Standard Sunbeams (other makes shortly).

Price **16/9** Post free **17/6**

**R. B. ENGINEERING CO., 25, Clyde Rd., West Didsbury, MANCHESTER.**

## IGNITION, LIGHTING, ETC.

COUNTY of London Engineering Works, Ltd.

MAGNETO Factors and Repairers.

ALL Magneto Spares Stocked.

BOSCH Single, Type D.A.L., variable ignition; £3/

M-L Single, enclosed, waterproof, variable ignitio £3/15.

THOMSON-BENNETT, single or twin, enclose waterproof, variable ignition, all degrees; £2/1 each.

THOMSON-BENNETT, large type, single or twi enclosed, waterproof, variable ignition, all d grees; £3/10.

C.A.V., single or twin, enclosed waterproof, variab ignition; £2/15.

RUTHARDT, single, enclosed, waterproof, variab ignition; £2/5 each.

BERLING, single, enclosed, waterproof, variab ignition; £2/5.

SPLITDORF, single, enclosed, waterproof, variab ignition; £2/5.

DIXIE, single or twin, enclosed, waterproof, va able ignition; £2.

ANY of the above single-cylinder magnetos can supplied with the special long driving spindl suitable for Rudge.

THESE Magnetos are fitted with leads and ba plates, ready to be immediately fitted; sprocke can be supplied if required. Please state make engine when ordering.

GUARANTEE.—We guarantee all our magnetos 12 months, and will willingly replace or repa any that should prove defective within that period.

ALL Repairs Guaranteed. Send your magneto us for quotation. It will pay you. We c despatch all repairs within 3 days, and, if requir 24 hours, and guaranteed for 12 months.

SPECIAL Terms to Trade. Write for list.

COUNTY of London Engineering Works, Ltd., Stockwell Rd., London, S.W. (1 min. from Stoc well Underground Station). T.A.: Ignitionac, Cls rnad, London. Tel.: Brixton 2841. [27

VALE Engineering Syndicate, 8-11, Brown's Bui ings, St. Mary Axe, E.C.3.

C.A.V. Magnetos, 1- or 2-cylinder, clock or an variable ignition, with short-circuiting termin and platinum points; price 50/- each; all worki parts are standard, and interchangeable with C.A. types KU1 and 2.

THOMSON-BENNETT, types A.M. 1 and 2, varia ignition, clock or anti, fitted with short-circuiti terminal and platinum points; price 52/6 each.

THOMSON-BENNETT, and M-L's of Coventry, cylinder, types A.D.S. or P.L.R., especially su able for stationary engines, price 35/- each, fitt with variable ignition, 10/- extra.

THOMSON-BENNETT 4-cylinder, variable ignitio clock or anti, fitted with short-circuiting termin price £4/10.

GUARANTEE.—All magnetos are guaranteed give satisfaction, and are despatched in perfe working order; any machine not in accordance wi our guarantee will be replaced or money refund if returned to us as sent, and within 30 days receipt.

TERMS.—Net cash with order; samples sent on proval against cash; all goods carriage paid.

BEFORE ordering elsewhere, write for samples, a compare our quality and finish with other su plies.

VALE Engineering Syndicate, 8-11, Brown's Bui ings, St. Mary Axe, E.C.3. 'Phone: Avenue 45 [06

THE Largest Organisation in Europe for igniti and automobile electrical equipment.

THE Runbaken Repair Service has eight fully staf and equipped Service Depots throughout country, each ready and competent to carry out most difficult repair to any make or type of magne dynamo, starter, accumulator, or battery.

COMPLETED Work is fully guaranteed and of highest finish. Send your machine for a examination and quotation.

THE Runbaken Magneto Co., Ltd. Head office works: Cheetwood Lane, Derby St., Manches (City 8266) (3 lines). Manchester: 288, Deansg (Central 7342). London: 142, Gt. Portland W.1 (Museum 3905). Leeds: 94, Albion St. (2721 Liverpool: 16, Colquitt St. (Royal 605). Birmi ham: 192, Corporation St. (2059 Central). Brist 14, Colston St. (3728). Glasgow: 134, West Nile (1605). Paris: 7, Rue Brunel (Wagram 50-11) [0

C.A.V. Magneto, B. and B. carburetter, Best Lloyd lubricator, all as new; £5 lot.—Homeste Sharnal St., Rochester. [6

BOSCH Magnetos, enclosed waterproof, type ZE and 2, guaranteed, a few only; £4 each.—Luck 12, Churchfield Rd. East, Acton, London. [

PERFECTLY SIMPLE. B&B SIMPLY PERFECT.

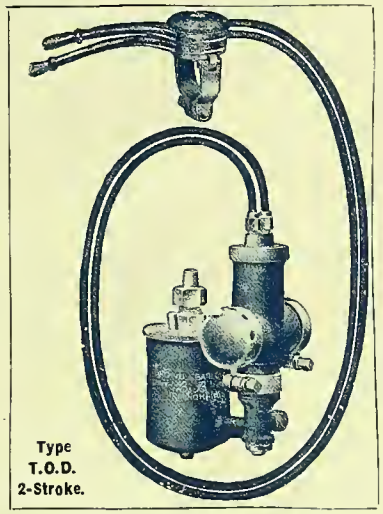
# CARBURETTERS.

For Heavyweights, Lightweights, Two-strokes.

THEY GET THE BEST RESULTS FROM YOUR ENGINE.

**SEND FOR DESCRIPTIVE BOOKLETS (Post Free).**

Telephone—East 301.
Telegrams—"Carburet, Birmingham."



Type T.O.D. 2-Stroke.

**BROWN & BARLOW, LTD.,**
Carburet Works, Witton, Birmingham.

## "Ixion" knows how to keep dry!

*"Finally I bought a first-grade suit of grey Oilskins made by Barbours "of South Shields, and found I could ride my 200 miles of a trial, "stand in a steady downpour through two hill-climbs per diem, sit on "wet grass banks when my legs wearied, and get into the hotel at night "bone-dry; moreover, if the oilies were hung up over night in a wall- "less stable for the draughts to play around them, they were invariably "bone-dry long before the first competitor got away next morning."*

"Ixion," in his Occasional Comments—"The Motor Cycle."

*Money back in full if they go sticky, leak, or tail on any point*

# Beacon Oilskins

**DON'T GO STICKY OR LEAK.**

The Beacon Motor Cycling Suit will keep you as dry as it does "Ixion," and will enable you to drive all day against wind-driven Rain and Sleet without letting you get wet or chilled.
Black double lightweight Jackets with Windcuffs, double fronts, and two roomy pockets, **27/6** semi-buttoned Legging Overalls, **15/-.**

**SUIT COMPLETE** (post free) **42/6**

In Bronze — Jackets **32/6** Semi-buttoned Legging Overalls, **17/6** Suit complete, post free, **50/-**; with Seated Trouser Overalls in place of leggings, **55/-** and **62/6** the suit respectively.

Prices given are for Jacket length 33". For 36" & 39" length please add 2/6 and 5/- per jacket respectively. Overalls: Prices are for 28" to 33" inside leg, and for Seated Trouser Overalls up to 40" waist.

*Postage Free U.K.; extra abroad (Allow also extra time for special Seasoning of Overseas Orders.)*

*To order, kindly state colour needed, give jacket length, chest and inside leg measures, and enclose remittance*

**ILLUSTRATED LIST POST FREE**

Send a postcard to-day for this Booklet of "Weather Comfort."

**J. BARBOUR & SONS, Ltd., 26, Beacon Buildings, South Shields, England.** (1)

## A Telegram:

T.T. RACES,
DOUGLAS, 30/5/22

"Davison on Levis Winner Light-weight, **using Summer Huile de Luxe,** broke all records for light-weights, averaging 50 miles per hour."

## An Editorial:

(*The Motor Cycle*, June 1/22.)

"……Immediately after, the winning Levis purred in, its engine running with much the same smooth power as at the start.…*Judging by Davison's jaunty appearance, the Levis had given him a very comfortable ride; he seemed tolerably fresh and full of smiles.*"

**SUMMER HUILE DE LUXE** had much to do with this splendid result.

## An Offer:

We gladly place at the disposal of Motor Cyclists a gratis supply of helpful literature dealing with all problems of lubrication.

Remember, Price's are practical people on these points.

*P.S.:*

**SUMMER HUILE DE LUXE,** sold by Motor Agents everywhere, is identical with that used on the winning Levis.

PRICES' Company Limited,
**BATTERSEA, S.W.11**

# Sooted Plugs

The insulator is expressly designed to withstand excessive lubrication.

**A common error is to suppose that it is the sparking points that soot up and cause misfiring.**

**It is very seldom the points. — It is nearly always the insulation.**

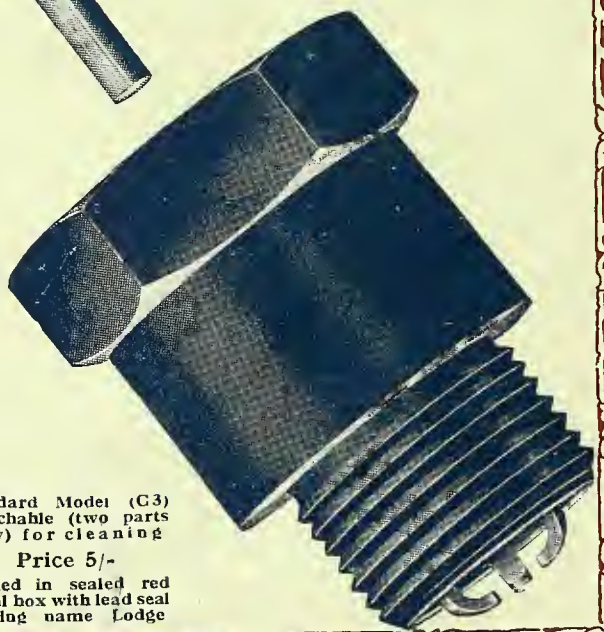
**You should be able to clean the surface of the insulator inside the plug in case of any over-oiling.**

Look at this illustration of

## THE LODGE PLUG

It is detachable (2 parts only).

See how easy it is to get at the interior and wipe over the insulation should it require cleaning. The plug can then simply be screwed together again as tight and as good as new.



**CAUTION.**

*War Surplus Lodge plugs advertised for sale by jobbers and others outside the motor trade are unsuited for use on cars or motor cycles. They were made for special aeroplane engines, from three to six years ago, and are now obsolete. Motorists can, however, make sure of getting up-to-date designs of Lodge plugs by buying them in their sealed metal boxes of all dealers in high-class motor accessories.*

**LODGE PLUGS LTD., RUGBY.**

**Standard Model (G3) Detachable (two parts only) for cleaning**

**Price 5/-**

**Packed in sealed red metal box with lead seal bearing name Lodge**

Printed for the Proprietors, ILIFFE & SONS LTD., Dorset House, Tudor Street, London, E.C.4, by the Cornwall Press, Ltd., Paris Garden, Stamford Street, London, S.E.1.

COLONIAL AND FOREIGN AGENTS:
CANADA—Toronto News Co., Ltd., Toronto; Montreal News Co., Ltd., Montreal; Winnipeg News Co., Winnipeg; British Columbia News Co., Vancouver; Gordon & Gotch, Ltd., 132, Bay Street, Toronto.
UNITED STATES—The International News Agency, New York.
AUSTRALIA Gordon & Gotch, Ltd., Melbourne (Victoria), Sydney (N.S.W.), Brisbane (Queensland), Adelaide (S.A.), Perth (W.A.), and Launceston (Tasmania).
NEW ZEALAND—Gordon & Gotch, Ltd., Wellington, Auckland, Christchurch, and Dunedin.
INDIA—A. H. Wheeler & Co., Bombay, Allahabad, and Calcutta.
SOUTH AFRICA—Central News Agency Ltd.
PARIS—Smith's English Library 248 Rue Rivoli

BOSTON PUBLIC LIBRARY
3 9999 05495 793 9

FEB 24 1923